BME ASSOCIATES

ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS

February 13, 2026

Planning Board
Town of Perinton
1350 Turk Hill Road
Fairport, New York 14450

Re: Hartwell Heights **2850**

Dear Board Members:

On behalf of the owner/applicant, WDG2 LLC, and as a follow up to our appearance before the Planning Board at the December 17, 2025 meeting, we submit this letter and updated site plans. We request to be placed on the Planning Board's March 18, 2026 meeting agenda.

To date, the Planning Board conducted the public hearing and subsequently closed the hearing. This letter, and the enclosures, are provided to address comments raised at this hearing from the Planning Board members, the public, and Town staff.

For the Board's review, we provide updated site plans (BME Dwgs. #2850-03 thru -15) last revised February 13, 2026. These plans and this letter supplement the application materials submitted on November 14, 2025.

The site plans have been revised as follows:

1. Revised per comments of the Town Engineer and Department of Public Works as outlined in our December 15, 2025 letter in response to their comment letter of December 12, 2025.

2. Revised per comments received from Planning Board members at the December 17 public hearing including:

    a. Increased individual driveway lengths to a minimum 22' deep, with the exception of the south facing apartment unit of the 10-unit building. However, this driveway is at the end of the private road and thus no conflict with traffic on the road.

    b. Added site lighting consisting of 16' high pole mounted LED dark sky compliant fixtures. The lighting contour isometrics are provided on Dwg. #2850-11 along with specifications for the light fixture.

    c. Additional landscape plantings were added to the west of the 6-unit apartment building to break up the massing of the 2-story building. These plantings combined with the existing mature pine trees and the chapel building will effectively screen the 2-story buildings from the eastbound Route 96 traffic. Dwg. #2850-11 identifies these plantings along with other additional plantings that have been added to the plan. The revised plan adds an additional 5 trees to the proposed landscape plan.

The landscape plan is prepared by a licensed landscape architect (RLA). The RLA in preparing this plan utilized planting standards of the American Nursery & Landscape Association, including those trees proposed for planting on the slope at the rear (south) property line. Planting on a slope is viable with proper planting techniques, including excavation for the tree, placing of the root ball, and installation of mulch for stabilization and erosion control. We have added a detail for this slope planting technique.

d. The landscape plan identifies those specific trees to be saved, primarily the large pine trees at Route 96 and Thornell Road. Healthy specimen trees along the perimeter boundary will also be saved.

e. Snow storage areas have been noted on the site plan. The developer successfully manages multi-family communities, including premier communities in Perinton, and manages snow plowing effectively.

f. The site plan identifies the location of a proposed project sign at the Route 96 entrance. This sign will be subject to HAC and Planning Board approval per a separate application.

g. The site plan identifies the proposed geometry of the improved NYS Route 96 curb cut with a median, as approved by NYSDOT. The curb cut will be constructed per the NYSDOT standard to allow both eastbound and westbound entrance from Route 96, and allow only right turn (eastbound) exits. There will be no left turn exiting movement onto Route 96. The DPW will be copied on all permit correspondence with NYSDOT.

h. The Engineer's Report submitted includes the turning movement template exhibit which illustrates the private road layout design including radii can accommodate large wheelbase vehicles such as school buses, emergency vehicles, and trucks. The private road is of a width and includes turnarounds in compliance with the requirements of the NYS Fire Code.

i. The spacing between the single-story cottage unit #4 and the existing single-family home proposed to remain on site per HAC recommendation has been expanded.

j. The site plan identifies a visitor parking area along with the cluster mailbox location. Adequate parking is provided, in excess of the Town Code requirement. Each unit in the two apartment buildings will be assigned two spaces, one garage space and one driveway space. The single unit cottages and the duplex will each be assigned four spaces, two garage spaces and two driveway spaces.

In addition to the above descriptions of the plan updates, we provide the following additional information for consideration:

- On February 10, 2026, the applicant submitted the application for a Certificate of Appropriateness to the Historic Architecture Commission and will appear before the HAC at their March 10, 2026 meeting. The application materials including architectural elevations, colors & materials, and photo simulations are on file with the Town. We will update the Planning Board at your March 18th meeting as to the outcome of the HAC review. The HAC in their review for the C of A will consider factors such as setbacks, building separation, site development, landscaping, scale of new construction in relation to the historic district and visual compatibility all as identified in Section 149-7.C of the Town Code.

- The proposed 24 residential units (23 new units and 1 existing unit to remain) on the proposed residential lot of 2.59 acres represents a residential density of 9.26 units/acre, and a density a density of 7.02 units/acre for the overall 3.42 acre project area, which is consistent with the multi-

family residential density parameters of the Town of Perinton, and Mixed Use Development Goals of the Town's Comprehensive Plan (the "Plan"). The Plan identifies Mixed Use character as areas where:

> "development is designated in areas where infrastructure and utilities are present to allow for higher density and more intensive land uses."

The Plan also states as an Action for Land Use & Community Character to:

> "promote infill development…of multi-family homes in character and scale…"

The HAC will review character and scale through the C of A process. The Town Board issued the required Special Use Permit to include multi-family residential units at one and 2-story heights.

As identified by the Town DPW, Engineering, and Planning Review letter, dated December 12, 2025, the proposed residential use is compatible in density with other mixed-use development zones in the Town, including Whitney Town Center and The Glen at Perinton Hills. The proposed residential density meets the standards of the zoning district, and no variances are required.

- This site provides opportunity to introduce the desired multi-family residential uses into Bushnell's Basin. This site provides multiple opportunities for easy access to park and recreation facilities including Kreag Road Park, The Erie Canal and its towpath, the Crescent Trail, Powder Mills Park, and the Horizon Hill Conservation area. The applicant will also pay a Parks and Recreation fee on a per unit basis as required by Town Code in lieu of on-site recreation amenities. As an infill project, there are limitations to on-site recreation facilities, but the project is able to connect with existing recreation areas in the immediate area, including by foot and by bike. This is a key tenet of mixed-use design which is to foster development of multiple uses on multiple properties that are planned to encourage interaction between the various uses in lieu of creating self-contained all-inclusive development parcels.

We will be in attendance at the Planning Board's March 18th meeting to continue the site plan review. We believe with the updated plans, written responses to comments and review by the HAC, the Planning Board could be in the position to move forward with site plan approval.

If you require any additional information, please contact our office.

Sincerely,
BME Associates

Ryan T. Destro

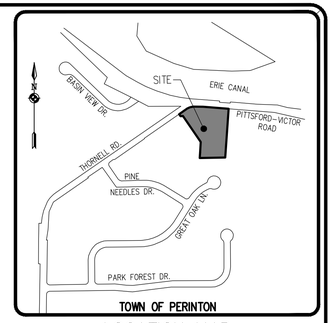
Ryan T. Destro, P.E.

Encl.

c: Dennis Wilmot; WDG2 LLC
Jim Barbato; Pride Mark Homes

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LOCATION MAP
NOT TO SCALE

PRELIMINARY/FINAL SITE PLANS

HARTWELL HEIGHTS

DWG. No.	TITLE
2850-03	COVER SHEET
2850-04	CONSOLIDATION PLAN
2850-05	SITE PLAN
2850-06	EXISTING CONDITIONS AND DEMOLITION PLAN
2850-07	UTILITY PLAN
2850-08	GRADING PLAN
2850-09	CONSTRUCTION EROSION CONTROL PLAN
2850-10	LATERAL PLAN
2850-11	LANDSCAPE PLAN
2850-12	PROFILE SHEET
2850-13	DETAIL SHEET 01 (SHEET 1 OF 3)
2850-14	DETAIL SHEET 02 (SHEET 2 OF 3)
2850-15	DETAIL SHEET 03 (SHEET 3 OF 3)

HARTWELL HEIGHTS

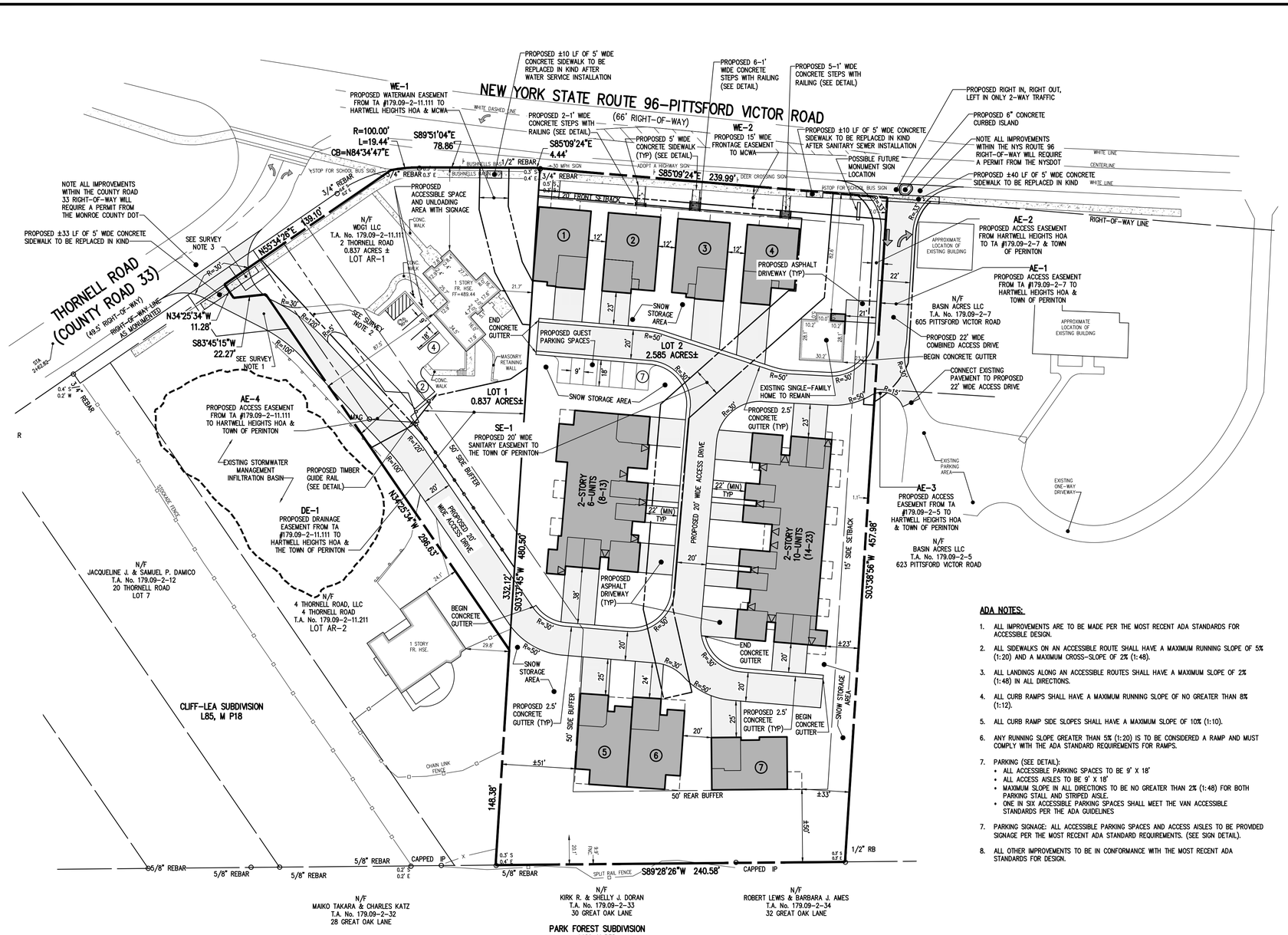
TOWN OF PERINTON, MONROE COUNTY, NEW YORK

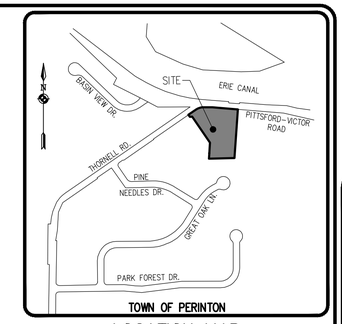
PREPARED FOR:
WDG2, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534

SCALE: 1" = 40'

DRAWING NUMBER: 2850–03
DATED: NOVEMBER 14, 2025
LAST REVISED: FEBRUARY 13, 2026

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FAX 585-377-7309





LOCATION MAP
NOT TO SCALE

LEGEND

- BOUNDARY LINE
- PROPOSED LOT LINE
- SETBACK LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- PROPOSED TIMBER GUIDERAIL
- PROPERTY MARKER FOUND
- CONCRETE HIGHWAY MONUMENT FOUND
- WOOD FENCE POST FOUND

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SURVEY NOTES:

1. LOT 1 IS BENEFITED BY AN ACCESS EASEMENT FROM LOT AR-2 AS FILED IN THE MONROE COUNTY CLERK'S OFFICE AT LIBER 9711 OF DEEDS, PAGE 16.
2. LOT 1 IS SUBJECT TO A WATER MAIN EASEMENT AS FILED IN THE MONROE COUNTY CLERK'S OFFICE AT LIBER 11575 OF DEEDS, PAGE 296.
3. LOT 1 IS SUBJECT TO A UTILITY EASEMENT PER REFERENCE 3.
4. THE PROJECT BOUNDARY SURVEY WAS MADE USING PROCEDURES NECESSARY TO ACHIEVE A HORIZONTAL ACCURACY OF 1 PART IN 20,000 (1:20,000) OR BETTER PROPORTIONAL ACCURACY AND A NETWORK POSITIONAL ACCURACY AT 95% CONFIDENCE LEVEL NOT EXCEEDING 0.05 FEET.
5. THE HORIZONTAL DATUM SHOWN HEREON IS REFERENCED TO THE NEW YORK STATE PLANE COORDINATE SYSTEM OF 1983, WESTERN ZONE, TRANSVERSE MERCATOR PROJECTION, NAD 83 (2011) UTILIZING GLOBAL POSITIONING SYSTEM (GPS) (OR) GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) OBSERVATIONS FROM NYSDOT REFERENCE NETWORK CORS STATION (NYPF 0032).

MONUMENTATION:	PUBLISHED NAD '27':	MEASURED NAD '83':
STATION TP 9134 (1982)	N= 1,116,519.33 E= 793,104.25	N= 1,116,558.83 E= 1,441,462.63
STATION TP 4739 (1982)	N= 1,117,070.96 E= 795,958.39	N= 1,117,110.57 E= 1,444,316.83

BEARINGS SHOWN HEREON ARE GRID
DISTANCES SHOWN HEREON ARE GRID
COMBINED FACTOR = 1.000012

6. **THE PURPOSE OF THIS PLAN IS TO CONSOLIDATE LOTS 1, 2, & 3 OF THE CLIFF-LEA SUBDIVISION IN TO ONE PARCEL & SHOW LOT AR-1 OF THE H. ROBERT SCHOENBERGER RESUBDIVISION AS A SEPARATE LOT.**

REFERENCES:

1. A PLAN ENTITLED "CLIFF LEA SUBDIVISION" AS FILED IN THE MONROE COUNTY CLERK'S OFFICE AT LIBER 85 OF MAPS, PAGE 18
2. A PLAN ENTITLED "PARK FOREST SUBDIVISION" AS FILED IN THE MONROE COUNTY CLERK'S OFFICE AT LIBER 189 OF MAPS, PAGE 38.
3. A PLAN ENTITLED "SUBDIVISION MAP FOR H. ROBERT SCHOENBERGER SUBDIVISION," AS FILED IN THE MONROE COUNTY CLERK'S OFFICE AT LIBER 304 OF MAPS, PAGE 36.
4. A PLAN ENTITLED "RESUBDIVISION OF LOTS 1 & 2 OF THE H. ROBERT SCHOENBERGER SUBDIVISION," AS FILED IN THE MONROE COUNTY CLERK'S OFFICES AT LIBER 365 OF MAPS, PAGE 89.
5. A PLAN ENTITLED "H. ROBERT SCHOENBERGER RESUBDIVISION OF LOTS R-1 & R-2," AS FILED IN THE MONROE COUNTY CLERK'S OFFICE AT LIBER 367 OF MAPS, PAGE 20.
6. A PLAN ENTITLED "H. ROBERT SCHOENBERGER RESUBDIVISION OF LOT AR-2 & CLIFF-LEA SUBDIVISION OF LOT 7," PREPARED BY BME ASSOCIATES, HAVING DRAWING No. 2850-102, LAST REVISED JULY 25, 2023.
7. A PLAN ENTITLED "MAP OF A SURVEY OF LOT BR-2," PREPARED BY BME ASSOCIATES, AS FILED IN THE MONROE COUNTY CLERK'S OFFICE IN LIBER 12847 OF DEEDS, PAGE 301.
8. A PLAN ENTITLED "BASELINE AND ALIGNMENT DATA" BY NYSDOT DATED JANUARY 13, 2012
9. AN ABSTRACT OF TITLE WAS NOT PROVIDED FOR THE COMPLETION OF THIS SURVEY.

ADA NOTES:

1. ALL IMPROVEMENTS ARE TO BE MADE PER THE MOST RECENT ADA STANDARDS FOR ACCESSIBLE DESIGN.
2. ALL SIDEWALKS ON AN ACCESSIBLE ROUTE SHALL HAVE A MAXIMUM RUNNING SLOPE OF 5% (1:20) AND A MAXIMUM CROSS-SLOPE OF 2% (1:48).
3. ALL LANDINGS ALONG AN ACCESSIBLE ROUTES SHALL HAVE A MAXIMUM SLOPE OF 2% (1:48) IN ALL DIRECTIONS.
4. ALL CURB RAMPS SHALL HAVE A MAXIMUM RUNNING SLOPE OF NO GREATER THAN 8% (1:12).
5. ALL CURB RAMP SIDE SLOPES SHALL HAVE A MAXIMUM SLOPE OF 10% (1:10).
6. ANY RUNNING SLOPE GREATER THAN 5% (1:20) IS TO BE CONSIDERED A RAMP AND MUST COMPLY WITH THE ADA STANDARD REQUIREMENTS FOR RAMPS.
7. PARKING (SEE DETAIL):
   - ALL ACCESSIBLE PARKING SPACES TO BE 9' X 18'
   - ALL ACCESS AISLES TO BE 9' X 18'
   - MAXIMUM SLOPE IN ALL DIRECTIONS TO BE NO GREATER THAN 2% (1:48) FOR BOTH PARKING STALL AND STRIPED AISLE.
   - ONE IN SIX ACCESSIBLE PARKING SPACES SHALL MEET THE VAN ACCESSIBLE STANDARDS PER THE ADA GUIDELINES
8. PARKING SIGNAGE: ALL ACCESSIBLE PARKING SPACES AND ACCESS AISLES TO BE PROVIDED SIGNAGE PER THE MOST RECENT ADA STANDARD REQUIREMENTS. (SEE SIGN DETAIL).
9. ALL OTHER IMPROVEMENTS TO BE IN CONFORMANCE WITH THE MOST RECENT ADA STANDARDS FOR DESIGN.

NOT APPROVED

This plan has not received final approval of all reviewing agencies. This plan is subject to revisions until all approvals are obtained and should not be used for construction purposes.

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

SITE NOTES:

1. EXISTING ZONING: MU: MIXED-USE DISTRICT
2. TOTAL PROPERTY AREA: ±3.4 ACRES (±149,572 S.F.)
3. PROPOSED DEVELOPMENT: ONE (1) 10-UNIT 2-STORY MULTI-FAMILY APARTMENT BUILDINGS (10 UNITS TOTAL)
   ONE (1) 6-UNIT 2-STORY MULTI-FAMILY APARTMENT BUILDINGS (6 UNITS TOTAL)
   ONE (1) 2-UNIT, TOWNHOUSE BUILDING (SINGLE-STORY (2 UNITS TOTAL)
   ONE (1) EXISTING SINGLE-FAMILY HOME (TO REMAIN) (1 UNIT TOTAL)
   FIVE (5) SINGLE-FAMILY COTTAGES (SINGLE-STORY) (5 UNITS TOTAL)
   24 RESIDENTIAL UNITS TOTAL

   ONE EXISTING OFFICE STRUCTURE (TO REMAIN)
4. APPLICABLE DEVELOPMENT STANDARDS PROPOSED ARE AS FOLLOWS

	REQUIRED (MUD)	PROPOSED
MIN. LOT SIZE	10,000 SF	±36,460 S.F. (LOT 1)
MIN. LOT WIDTH	80'	±200'
SETBACKS		
FRONT	10' MIN./30' MAX.	20'
SIDE	15'	15'
REAR	15'	15'
SIDE AND REAR ABUTTING RESIDENTIAL	50'	50'
MAX. LOT COVERAGE	75%	±47% TOTAL (LOT 1=35.1%, LOT 2=50.3%)
MIN. BLDG. HEIGHT	22'	>22'
MAX. BLDG. HEIGHT	40'	<40'
PARKING STALL SIZE:	9'X18'	9'x18'
PARKING STALL QTY:		
TOWNHOUSES:	2 SPACES/UNIT 1 GUEST SPACE/UNIT 2 UNITS = 6 SPACES	8 SPACES PROVIDED (2 SPACES PER GARAGE) (2 SPACES PER DRIVEWAY)
MULTI-FAMILY:	2 SPACES/UNIT ½ GUEST SPACE/UNIT 16 UNITS = 40 SPACES	40 SPACES PROVIDED (20 GARAGE SPACES) (20 DRIVEWAY SPACES)
SINGLE-FAMILY:	2 SPACES/UNIT 6 UNITS = 12 SPACES	22 SPACES PROVIDED (2 SPACES PER GARAGE) (2 SPACES PER DRIVEWAY)
GUEST PARKING:	N/A	7 SPACES PROVIDED
TOTAL PARKING:	58 SPACES	77 SPACES PROVIDED

5. THE SETBACK LINES AND NOTES RELATING TO SETBACKS SHOWN HEREON ARE INTENDED TO SHOW APPLICABLE ZONING REQUIREMENTS OF THE TOWN OF PERINTON AS OF THE DATE OF THIS MAP AND ARE NOT INTENDED TO IMPOSE ANY ADDITIONAL RESTRICTIONS OTHER THAN SAID ZONING REQUIREMENTS.
6. ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE MOST RECENT STANDARDS AND SPECIFICATIONS OF THE TOWN OF PERINTON AND THE APPROPRIATE MONROE COUNTY AND NEW YORK STATE AGENCIES, UNLESS OTHERWISE NOTED.
7. THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD AND PRESERVE ALL SURVEY CONTROL MONUMENTS. FOR DESCRIPTIVE AND SURVEY DATA ON THE CONTROL MONUMENTS, CALL THE MONROE COUNTY SURVEY OFFICE.
8. THE DEVELOPER'S AND CONTRACTOR'S ATTENTION IS DIRECTED TO LOCAL LAW NO. 6 OF 1971 REGARDING LIABILITY INCURRED THROUGH DISTURBANCES OR DESTRUCTION OF GEODETIC SURVEY MONUMENTS.
9. THIS PROPERTY LIES WITHIN A DESIGNATED ZONE X AREA OF MINIMAL FLOOD HAZARD BASED UPON MAPPING INFORMATION FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY AS PART OF THE NATIONAL FLOOD INSURANCE PROGRAM, TOWN OF PERINTON, COMMUNITY No. 360428, AS SHOWN ON PANEL No. 0386G, DATED AUGUST 28, 2008,
10. THE PERINTON TOWN BOARD GRANTED A SPECIAL USE PERMIT TO ALLOW THE PROPOSED MIXED USE DEVELOPMENT ON AUGUST 13, 2025.

APPROVALS

BY: _____ DATE: _____
TOWN ENGINEER

BY: _____ DATE: _____
COMMISSIONER OF PUBLIC WORKS

BY: _____ DATE: _____
PLANNING BOARD ATTORNEY

BY: _____ DATE: _____
FIRE CHIEF

BY: _____ DATE: _____
CHAIRMAN OF THE PLANNING BOARD

BY: _____ DATE: _____
TOWN CLERK

Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

	DATE	BY
7		
6		
5		
4		
3		
2	2/13/26	DTT
1	REVISED PER TOWN AND AGENCY COMMENTS	
	REVISIONS	

BME ASSOCIATES
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PHONE 585-377-7360
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STATE OF NEW YORK
BRIAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

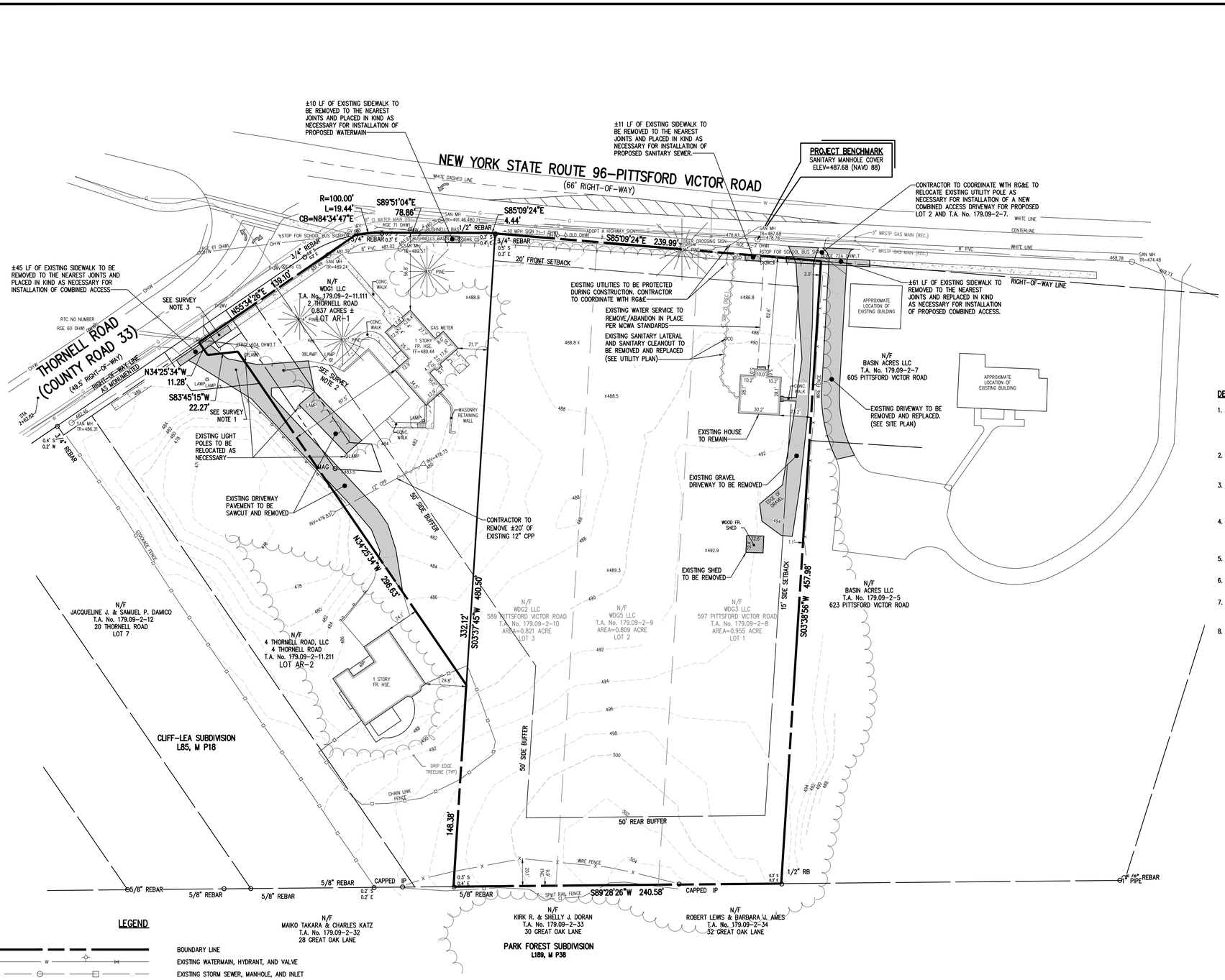
HARTWELL HEIGHTS
TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE

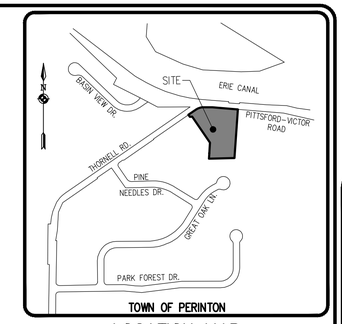
PROJECT
LOCATION
CLIENT
WDG2, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534
DRAWING TITLE
PRELIMINARY/FINAL
SITE PLAN

PROJECT MANAGER
P. VARS/R. DESTRO
PROJECT ENGINEER
F. SHELLEY
DRAWN BY
D. TURNER
SCALE 1" = 40'
DATE ISSUED NOVEMBER 14, 2025
PROJECT NO. 2850
DRAWING NO. 05

PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 63, TAX MAP NUMBER 179.09-2-8, 179.09-2-9, 179.09-2-10, 179.09-2-11.111

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LOCATION MAP
NOT TO SCALE

LEGEND

- BOUNDARY LINE
- EXISTING WATERMAIN, HYDRANT, AND VALVE
- EXISTING STORM SEWER, MANHOLE, AND INLET
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING TREE LINE
- PROPERTY MARKER FOUND
- EXISTING CONTOUR W/ ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING GAS MAIN
- EXISTING UNDERGROUND ELECTRIC/CONDUIT
- EXISTING STRUCTURE, FULL DEPTH ASPHALT/CONCRETE PAVEMENT, AND GRAVEL DRIVEWAY TO BE REMOVED AS SHOWN
- LIMITS OF EXISTING UNDERGROUND UTILITY TO BE REMOVED AS SHOWN

DEMOLITION NOTES:

1. CONTRACTOR SHALL ABANDON AND/OR REMOVE EXISTING UTILITIES, STRUCTURES, AND APPURTENANCES AS SHOWN ON THE PLANS AND/OR AS DIRECTED. THE CONTRACTOR SHALL COORDINATE THE WORK WITH THE ENGINEER AND THE AGENCY HAVING JURISDICTION, PRIOR TO COMMENCING WITH ABANDONMENT AND REMOVALS. THE CONTRACTOR SHALL DISPOSE OF MATERIALS OFF-SITE IN ACCORDANCE WITH ALL CURRENT REGULATIONS AND REQUIREMENTS.
2. EXISTING UNDERGROUND UTILITIES SHOWN HEREIN WERE PLOTTED FROM FIELD LOCATIONS AND/OR UTILITY COMPANY RECORDS PLANS. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL CALL THE UFPO HOTLINE AT 1-800-962-7962 FOR STAKE-OUT OF EXISTING UTILITIES.
3. EXISTING UNDERGROUND UTILITIES SHOWN HEREIN WERE PLOTTED FROM FIELD LOCATIONS AND/OR AVAILABLE UTILITY COMPANY RECORD PLANS. EXISTING UTILITIES WHETHER FUNCTIONAL OR ABANDONED WITHIN THE PROJECT AREA MAY NOT BE SHOWN ON THE DRAWINGS. IF UNKNOWN UTILITIES ARE ENCOUNTERED IT SHALL BE COORDINATED WITH THE ENGINEER AND OWNER.
4. THE CONTRACTOR SHALL DETERMINE EXACT LOCATION AND ELEVATION OF UNDERGROUND UTILITIES BEFORE COMMENCING CONSTRUCTION. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS TO LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS AS REQUIRED TO MEET THE EXISTING CONDITIONS.
5. THE CONTRACTOR SHALL CALL THE UFPO HOTLINE AT 1(800)962-7962 OR 811 FOR STAKE-OUT OF EXISTING UTILITIES.
6. THE CONTRACTOR SHALL SAWCUT TO FULL DEPTH FOR REMOVAL OF EXISTING SIDEWALK, CURBING AND PAVEMENT AS DELINEATED ON THIS PLAN AND AS NECESSARY FOR CONSTRUCTION.
7. WHERE NEW PAVEMENT, CURBING OR SIDEWALK MEETS WITH EXISTING, THE CONTRACTOR SHALL MAKE FULL DEPTH SAWCUTS TO CREATE A SMOOTH EDGE AND MEET SURFACES FLUSH. WHERE NEW PAVEMENT MEETS EXISTING, THE EXISTING PAVEMENT SHALL BE TREATED WITH TAC COAT PER MANUFACTURES RECOMMENDATION.
8. ALL MATERIALS REMOVED FROM THE PROJECT SHALL BE DISPOSED OF ACCORDING TO NEW YORK STATE AND TOWN OF PERINTON REQUIREMENTS UNLESS OTHERWISE NOTED.

NOT APPROVED

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GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

APPROVALS

BY: _____ DATE: _____
TOWN ENGINEER

BY: _____ DATE: _____
COMMISSIONER OF PUBLIC WORKS

BY: _____ DATE: _____
PLANNING BOARD ATTORNEY

BY: _____ DATE: _____
FIRE CHIEF

BY: _____ DATE: _____
CHAIRMAN OF THE PLANNING BOARD

BY: _____ DATE: _____
TOWN CLERK

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	BY	DATE	REVISIONS
1	DTT	2/13/26	REVISED PER TOWN AND AGENCY COMMENTS
2			
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6			
7			

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PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: WDG2, LLC. P.O. BOX 34 PITTSFORD, NY, 14534
DRAWING TITLE: PRELIMINARY/FINAL EXISTING CONDITIONS AND DEMOLITION PLAN

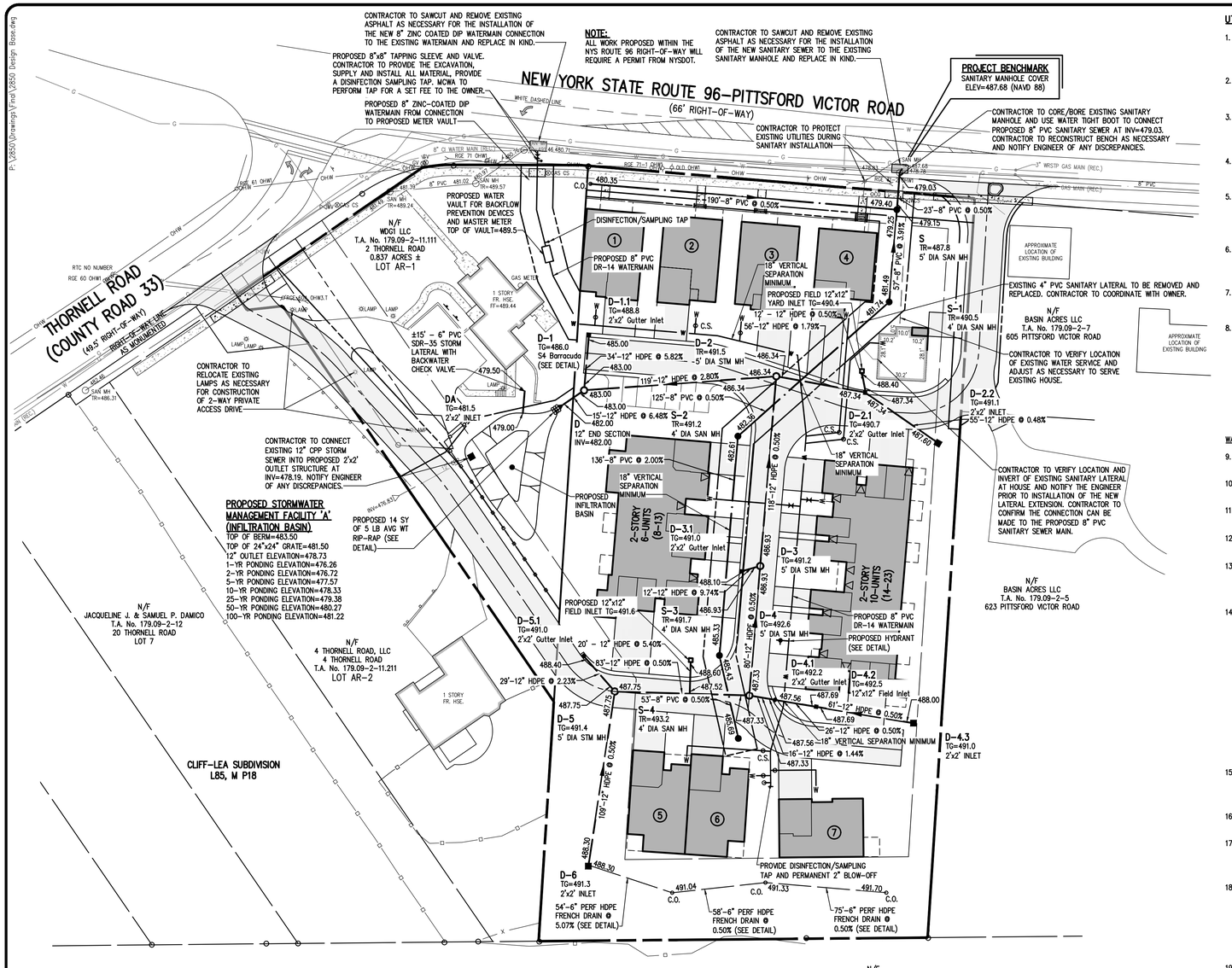
PROJECT MANAGER	P. VARS/R. DESTRO
PROJECT ENGINEER	F. SHELLEY
DRAWN BY	D. TURNER
SCALE	1" = 40'
DATE ISSUED	NOVEMBER 14, 2025
PROJECT NO.	2850
DRAWING NO.	06

PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 63, TAX MAP NUMBER 179.09-2-8, 179.09-2-9, 179.09-2-10, 179.09-2-11.111

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P:\2850\Drawings\Final\2850 Layout Base.dwg

P:\2850\Drawings\Final\2850 Design Base.dwg



4" AND LARGER WATER SERVICE LINE NOTES

1. Water service lines shall be constructed in accordance with the regulations and specifications of the Water Authority.
2. Water service lines shall have a minimum of five feet of cover from finished grade in lawn areas and six feet of cover from finished grade in paved areas.
3. Water service lines shall be separated at least ten feet, measured from the outside of the pipes, from sewer mains or septic systems.
4. Water service lines shall be identified as:

DESCRIPTION	SIZE	MATERIAL[a]	TYPE [b]
MCWA Portion: from the water main to and including the control valve on the ROW/property/easement line	8"	ZINC-COATED D.I.P.*	CMB
Private Portion: from the control valve to the meter	8"	ZINC-COATED D.I.P.	CMB

[a]Acceptable material is *Class 52 cement mortar lined Ductile Iron Pipe.
[b]Service Types include: Domestic = DS, Fire = FS, or Combined = CMB

5. The Water Authority's portion of the water service line shall be installed prior to the private portion of the service line.
6. Water meter(s) to be located on the interior of exterior walls(s) immediately upon service entrance into the building(s). A by-pass assembly is not required around the installation of 5/8-inch through 1-inch meters. 1 ½-inch + 2-inch Meter installations may require a by-pass assembly around the meter. Meter installation 3-inch or greater require a bypass assembly around the meter.
7. Water service lines sized 4-inches or greater shall be:
   - Pressure tested in accordance with the latest specifications of the Monroe County Water Authority. **A Water Authority representative must witness this test.**
   - Disinfected by using the continuous feed method according to AWWA Standard Specifications. After flushing and disinfecting the service line, water samples shall be collected in accordance with the Department of Health that has jurisdiction of the areas requirements. Approval and notification by the Health Department of passing health sample test(s) must be received before the service will be activated by the Water Authority.

LEGEND

- BOUNDARY LINE
- PROPOSED LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- PROPERTY MARKER FOUND
- EXISTING WATERMAIN, HYDRANT, AND VALVE
- PROPOSED WATERMAIN, HYDRANT, AND VALVE
- EXISTING STORM SEWER, MANHOLE, AND INLET
- PROPOSED STORM SEWER, MANHOLE, AND INLET
- EXISTING SANITARY SEWER AND MANHOLE
- PROPOSED SANITARY SEWER AND MANHOLE

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BME Associates

NOT APPROVED

This plan has not received final approval of all reviewing agencies. This plan is subject to revisions until all approvals are obtained and should not be used for construction purposes.

Irondequoit Bay South Central Pure Waters District
Review Number _____
Conforms to Monroe County Pure Waters Master Plan
Signature Date

MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH
THESE PLANS FOR PUBLIC SANITARY SEWER EXTENSION / IMPROVEMENT ARE HEREBY APPROVED PURSUANT TO ARTICLE 17 OF THE NYS ENVIRONMENTAL CONSERVATION LAW SUBJECT TO CONDITIONS OF APPROVAL.
DIRECTOR OF PUBLIC HEALTH
BY PUBLIC HEALTH ENGINEER DATE

MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH
THESE PLANS FOR PUBLIC WATER SYSTEM EXTENSION / IMPROVEMENT ARE HEREBY APPROVED PURSUANT TO 10NYCRR5 OF THE STATE SANITARY CODE SUBJECT TO CONDITIONS OF APPROVAL.
DIRECTOR OF PUBLIC HEALTH
BY PUBLIC HEALTH ENGINEER DATE

GRAPHIC SCALE

40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

UTILITY NOTES:

1. THE SETBACK LINES AND NOTES RELATING TO SETBACK SHOWN HEREON ARE INTENDED TO SHOW APPLICABLE ZONING REQUIREMENTS OF THE TOWN OF PERINTON AS OF THE DATE OF THIS MAP AND ARE NOT INTENDED TO IMPOSE ANY ADDITIONAL RESTRICTIONS OTHER THAN SAID ZONING REQUIREMENTS.
2. ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE MOST RECENT STANDARDS AND SPECIFICATIONS OF THE TOWN OF PERINTON, THE APPROPRIATE AGENCIES (IE, MONROE COUNTY WATER AUTHORITY, AND THE MONROE COUNTY HEALTH DEPARTMENT) UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD, AND PRESERVE ALL SURVEY CONTROL MONUMENTS AND RIGHT-OF-WAY MONUMENTS IN THE AREAS OF CONSTRUCTION. FOR DESCRIPTIVE AND SURVEY DATA ON THE CONTROL MONUMENTS, CALL THE MONROE COUNTY GEODETIC SURVEY OFFICE.
4. THE DEVELOPER'S AND CONTRACTOR'S ATTENTION IS DIRECTED TO LOCAL LAW NO. 6 OF 1971 REGARDING LIABILITY INCURRED THROUGH DISTURBANCES OR DESTRUCTION OF GEODETIC SURVEY MONUMENTS.
5. EXISTING UNDERGROUND UTILITIES SHOWN HEREIN WERE PLOTTED FROM FIELD LOCATIONS AND/OR AVAILABLE UTILITY COMPANY RECORD PLANS. EXISTING UTILITIES WHETHER FUNCTIONAL OR ABANDONED WITHIN THE PROJECT AREA MAY NOT BE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL CALL THE UFPO HOTLINE AT 1(800)962-7962 OR 811 FOR STAKE-OUT OF EXISTING UTILITIES.
6. THE CONTRACTOR SHALL DETERMINE EXACT LOCATION AND ELEVATION OF UNDERGROUND UTILITIES BEFORE COMMENCING CONSTRUCTION. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS TO LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS AS REQUIRED TO MEET EXISTING CONDITIONS.
7. HIGHWAY DRAINAGE ALONG NYS ROUTE 96 AND COUNTY ROAD 33 IS TO BE MAINTAINED. OWNER TO FURNISH AND PLACE DRIVEWAY CULVERT PIPE (IF REQUIRED) OF A SIZE AND TYPE, AT A LINE AND GRADE TO BE DETERMINED BY THE COUNTY SUPERINTENDENT OF HIGHWAYS.
8. UTILITY RECORD MAPPING LOCATED ON OR ADJACENT TO PROJECT SITE:

AGENCY	UTILITY TYPE	CONTACT NUMBER
CHARTER COMMUNICATIONS	CATV, FIBER	(317) 575-7800x2
FRONTIER TELEPHONE	FIBER, TELEPHONE	(203) 694-4183
MCWA	WATER	(585) 442-2000x285
NYSDOT	FIBER, HIGHWAY, TRAFFIC SIGNALS	(585) 753-7793
RG&E	ELECTRIC	(585) 694-5999
RG&E	GAS	(585) 315-0301
TOWN OF PERINTON DPW	CLUVERTS, HIGHWAY, SANITARY/STORM SEWERS	(585) 223-5115

WATERMAIN:

9. WATERMAINS AND APPURTENANCES TO BE CONSTRUCTED TO THE MOST RECENT STANDARDS AND SPECIFICATIONS OF THE (WATER AUTHORITY). (SEE MCWA PUBLIC WATER SYSTEM NOTES).
10. FOR WATERMAIN CONSTRUCTION, ALL MECHANICAL JOINT FITTINGS, TEES, BENDS, PLUGS, ETC. SHALL BE BACKED WITH 3,000 PSI CONCRETE THRUST BLOCKS
11. WATERMAINS SHALL BE ZINC COATED (MCWA ONLY) DUCTILE IRON CEMENT LINED CLASS 52 (DIP), PVC DR-14 (PRIVATE), PVC DR-18 (PRIVATE) OR AS NOTED ON THE PLANS.
12. WATERMAINS AND APPURTENANCES SHALL BE INSTALLED PER THE MOST RECENT AWWA (C600 FOR DIP)/(C900 FOR PVC) STANDARDS.
13. THE WATERMAIN SHALL BE PRESSURE/LEAKAGE TESTED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF THE AWWA (C600 FOR DIP)/(C605 FOR PVC) STANDARDS (LATEST REVISION) OR IN ACCORDANCE WITH MORE STRINGENT REQUIREMENTS IMPOSED BY THE (MONROE COUNTY WATER AUTHORITY).
14. THE WATER MAIN SHALL BE DISINFECTED PER THE MOST RECENT AWWA C651 STANDARDS. FOLLOWING DISINFECTION, THE WATER MAIN SHALL BE FLUSHED UNTIL THE CHLORINE CONCENTRATION IN THE WATER LEAVING THE MAIN IS NO HIGHER THAN THAT GENERALLY PREVAILING IN THE SYSTEM. THE SAMPLING POINT(S) MUST BE DECONTAMINATED BY FLAMING.

    FIRE HYDRANTS ARE NOT ACCEPTABLE SAMPLING POINTS.

    THE MONROE COUNTY/NYS DEPARTMENT OF HEALTH MUST RECEIVE AT LEAST 48-HOUR ADVANCE NOTIFICATION REQUESTING SAMPLING SERVICES. THE HEALTH DEPARTMENT/ CONTRACTOR (IF NYS) WILL COLLECT SAMPLES FOR FREE CHLORINE RESIDUAL, TOTAL AND FECAL COLIFORM AND 24-HOUR BACTERIAL PLATE COUNT.

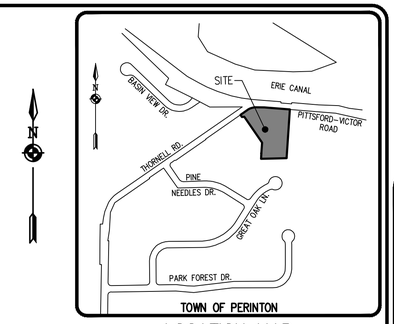
    ALL WATER MAIN FITTINGS NOT RECEIVING 24-HOUR CHLORINE DISINFECTION CONTACT TIME MUST BE SWAB DISINFECTED 30 MINUTES PRIOR TO INSTALLATION.

    THE WATER MAIN SHALL NOT BE PLACED INTO SERVICE UNTIL SO AUTHORIZED BY THE MONROE COUNTY DEPARTMENT OF HEALTH/NYS DEPARTMENT OF HEALTH.
15. ALL WATERMAINS SHALL HAVE A MINIMUM OF FIVE FEET OF COVER FROM FINISHED GRADE IN LAWN AREAS AND A MINIMUM OF SIX FEET OF COVER FROM FINISHED GRADE IN PAVED AREAS. THE CONTRACTOR SHALL CHECK ALL CUT STAKES BEFORE TRENCHING TO INSURE THAT ALL INSTALLED WATERMAINS WILL HAVE THE REQUIRED COVER.
16. WHEN INSTALLING FIRE HYDRANTS, SHOULD GROUNDWATER BE ENCOUNTERED WITHIN SEVEN (7') FEET OF THE FINISH GRADE, FIRE HYDRANT WEEPHOLES (DRAINS) SHALL BE PLUGGED.
17. PRIOR TO INSTALLATION OF THE WATERMAIN, THE CONTRACTOR SHALL PROVIDE RESULTS OF A 10 POINT SOIL TEST EVALUATION PER ANSI-AWWA C105-A21.5-82 TO DETERMINE THE NEED FOR POLYETHYLENE ENCASEMENT. SOIL TESTS ARE TO BE PERFORMED BY AN APPROVED SOIL TESTING LABORATORY IN ACCORDANCE WITH MCWA STANDARDS.
18. MINIMUM SEPARATION BETWEEN WATERMAIN AND SEWER MAINS TO BE 18" VERTICALLY MEASURED FROM THE OUTSIDE OF THE PIPES AT THE POINT OF CROSSING. MINIMUM HORIZONTAL SEPARATION BETWEEN WATERMAINS AND STORM/SANITARY SEWER MAINS TO BE 10 FEET MEASURED FROM THE OUTSIDE OF THE PIPES. ONE FULL LENGTH OF WATERMAIN SHALL BE CENTERED UNDER OR OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHERE A WATERMAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT (COMPACTED SELECTED FILL) SHALL BE PROVIDED FOR THE SEWERS TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING ON AND BREAKING THE WATERMAINS.
19. THE FOLLOWING COMPUTER SIMULATED FLOW TESTS WERE PERFORMED BY THE MONROE COUNTY WATER AUTHORITY.

    TEST LOCATION: 589 PITTSFORD VICTOR ROAD
    PRESSURE ZONE: 790W
    TEST ELEVATION: 490'
    MAIN SIZE: 8" CI

    SIMULATED SUPPLY CURVE:

Q (GPM)	PRESSURE (PSI)	HEAD (FT)
0	61.1	141.1
500	52	120.1
1,000	39.1	90.3
1,500	22.5	52.0
2,100	0	0.0



LOCATION MAP
NOT TO SCALE

SANITARY SEWER:

20. ALL SANITARY SEWERS ARE IN COMPLIANCE WITH THE SPECIFICATIONS AND SEWER POLICY OF THE TOWN OF PERINTON.
21. SANITARY SEWERS, HOUSE LATERALS AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO THE SPECIFICATIONS OF THE TOWN OF PERINTON AND MONROE COUNTY PURE WATERS (MCPW).
22. SANITARY SEWER PIPE SHALL BE 8" PVC SDR-35 OR AS NOTED ON THE PLAN.
23. FLOOR DRAINS TO BE CONNECTED TO THE SANITARY SEWER. FLOOR DRAINS DO NOT INCLUDE FOUNDATION OF FOOTER DRAINS INSTALLED TO INTERCEPT UNCONTAMINATED GROUNDWATER. ALL DISCHARGES TO THE SANITARY SEWER MUST COMPLY WITH THE EFFLUENT LIMITS OF THE LOCAL AND/OR THE MONROE COUNTY SEWER USE LAW.
24. INFILTRATION AND EXFILTRATION SHALL BE LIMITED TO 100 GALLONS PER MILE PER INCH DIAMETER OF PIPE PER 24 HOURS FOR SANITARY SEWERS. IF AN AIR TEST IS USED, THE TEST AS A MINIMUM SHALL CONFORM TO THE PROCEDURE DESCRIBED IN ASTMF-1417, ENTITLED "STANDARD PRACTICE FOR INSTALLATION ACCEPTANCE OF PLASTIC NON-PRESSURE SEWER LINES USING LOW-PRESSURE AIR." SANITARY MANHOLES SHALL BE TESTED FOR EXFILTRATION

    VACUUM TESTING - EACH MANHOLE SHALL BE SUBJECTED TO A VACUUM OF 10 INCHES OF HG FOR ONE MINUTE WITH AN ALLOWABLE LOSS OF 1 INCH OF HG.
25. THE FOLLOWING TESTS SHALL BE PERFORMED ON PVC SANITARY SEWER PIPE:

    A) DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACK FILL HAS BEEN IN PLACE AT LEAST 30 DAYS.

    B) NO PIPE SHALL EXCEED A 5% DEFLECTION.

    C) IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDREL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.
26. NEW SEWERS ARE TO BE PLUGGED WHEN CONNECTED TO EXISTING MANHOLES UNTIL THE NEW SEWERS ARE FLUSHED, TESTED, AND READY FOR SERVICE.

STORM SEWER:

27. STORM SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO THE SPECIFICATIONS OF THE TOWN OF PERINTON.
28. STORM SEWER PIPE SHALL BE HIGH-DENSITY POLYETHYLENE (HDPE) SMOOTH INTERIOR, OR AS NOTED ON THE PLAN.
29. CHECK VALVES TO BE PROVIDED ON SUMP PUMPS.
30. DOWNSPOUTS SHALL DISCHARGE ON SPLASH BLOCKS. FOUNDATION DRAINS SHALL DISCHARGE ON SPLASH BLOCKS VIA SUMP PUMPS
31. ROOF RUNOFF LEADERS AND CELLAR INFILTRATION LINES SHALL NOT BE DISCHARGED TO THE COUNTY HIGHWAY DRAINAGE DITCH OR COUNTY HIGHWAY STORM DRAIN.

LATERALS AND SERVICES:

32. ALL LATERALS OR SERVICES SHALL BE AS NOTED BELOW UNLESS OTHERWISE NOTED ON THE PLANS:

    WATER - 1" PE #4710 FOR UNIT NUMBERS 1-7
    6" PE #4710 FOR APARTMENT BUILDINGS
    SANITARY - 4" PVC SDR-21 INSTALLED AT 2.00% MIN SLOPE FOR UNIT NUMBER 1-7
    6" PVC SDR-21 INSTALLED AT 1.00% MIN SLOPE FOR APARTMENT BUILDINGS

    EXTEND LATERALS TO 10 FEET BEYOND THE RIGHT-OF-WAY, OR 10 FEET BEYOND THE EASEMENT LINES, WHICHEVER IS GREATER.
33. NO CURB VALVE BOXES (WATER LATERAL) ARE ALLOWED IN DRIVEWAYS. THE SERVICE OR DRIVEWAY WILL BE RELOCATED IF THIS CONFLICT ARISES.
34. SANITARY LATERALS' WITNESS STAKES SHALL BE 2"x4" HARDWOOD, EXTENDED 2-3' ABOVE GRADE AND PAINTED GREEN.
35. ANY LAUNDRY WASTEWATER SHALL BE DIRECTED TO THE SANITARY SEWER.
36. CLEANOUTS FOR STORM LATERALS SHALL BE INSTALLED AT RIGHT-OF-WAY OR EASEMENT LINES, ALL HORIZONTAL BENDS AND AT 90' INTERVALS ALONG THE LATERAL. CLEANOUTS FOR SANITARY LATERALS SHALL BE INSTALLED AT THE RIGHT-OF-WAY OR EASEMENT LINE, AT ALL BENDS 45° OR GREATER, AND AT 90' INTERVALS THEREAFTER.

APPROVALS

BY: _____ DATE: _____
TOWN ENGINEER

BY: _____ DATE: _____
COMMISSIONER OF PUBLIC WORKS

BY: _____ DATE: _____
PLANNING BOARD ATTORNEY

BY: _____ DATE: _____
FIRE CHIEF

BY: _____ DATE: _____
CHAIRMAN OF THE PLANNING BOARD

BY: _____ DATE: _____
TOWN CLERK

BY: _____ DATE: _____
MONROE COUNTY WATER AUTHORITY

Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

BY	DATE	REVISIONS
DTT	2/13/26	1 REVISED PER TOWN AND AGENCY COMMENTS
		2
		3
		4
		5
		6
		7

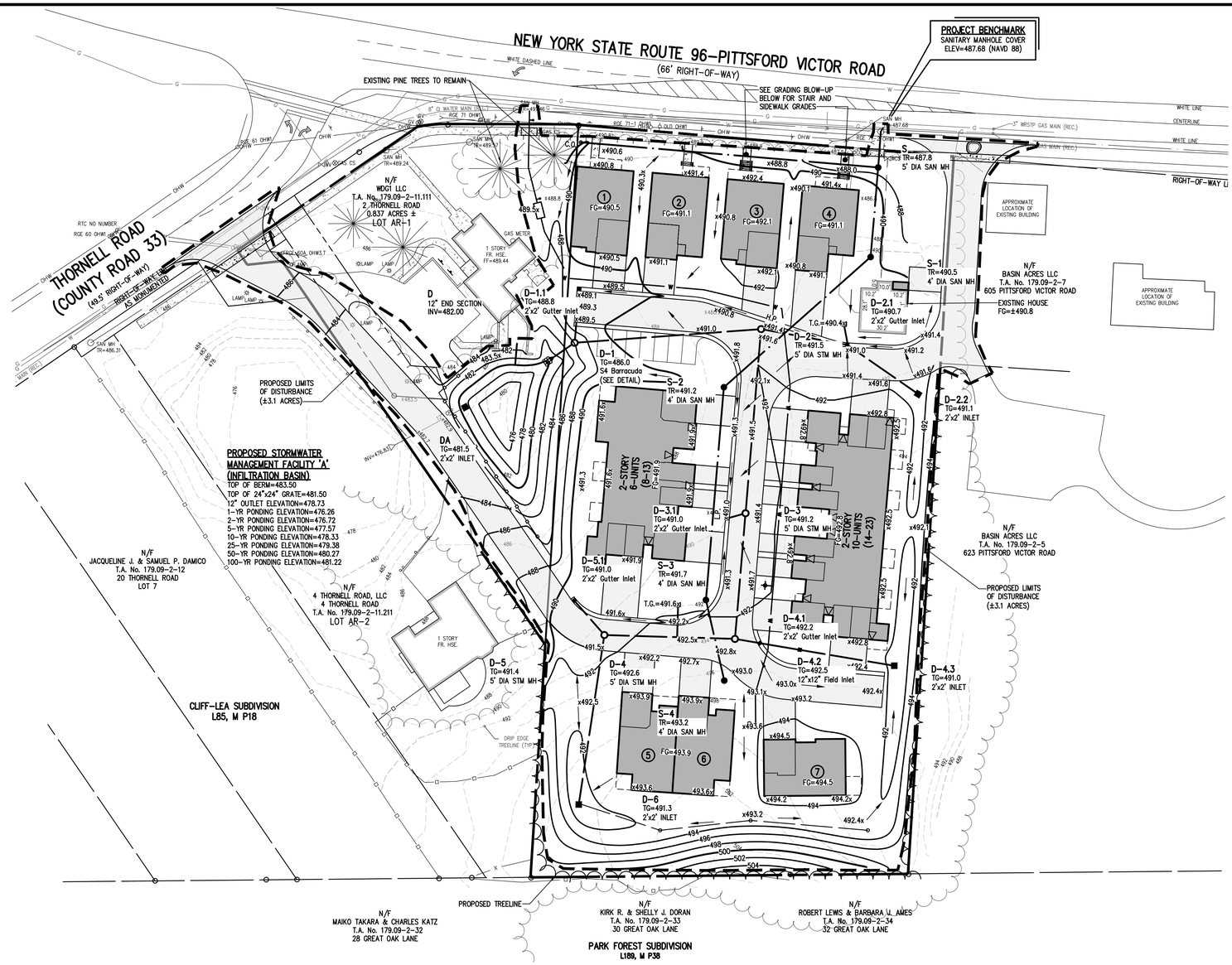
BME ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
10 LIFT BRIDGE LANE EAST
FAIRPORT, NEW YORK 14450
PHONE 585-377-7360
FAX 585-377-7309
WWW.BMEPC.COM

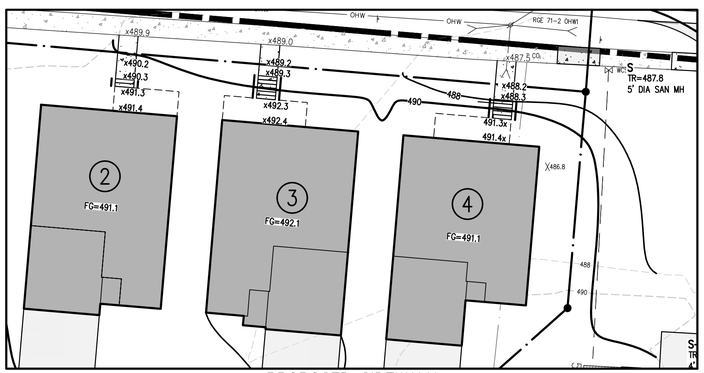
STATE OF NEW YORK
BRIAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

HARTWELL HEIGHTS
PROJECT
TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
LOCATION
WDGI, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534
CLIENT
PRELIMINARY/FINAL
UTILITY PLAN
DRAWING TITLE

PHELPS & CORNHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 63, TAX MAP NUMBER 179.09-2-8, 179.09-2-9, 179.09-2-10, 179.09-2-11.111

PROJECT MANAGER
P. VARS/R. DESTRO
PROJECT ENGINEER
F. SHELLEY
DRAWN BY
D. TURNER
SCALE 1" = 40'
DATE ISSUED NOVEMBER 14, 2025
PROJECT NO. 2850
DRAWING NO. 07





PROPOSED SIDEWALK
(UNIT NUMBER'S 2, 3 & 4)
SCALE: 1" = 20'

LEGEND

- BOUNDARY LINE
- PROPOSED LOT LINE
- CENTERLINE
- EXISTING WATERMAIN, HYDRANT, AND VALVE
- PROPOSED WATERMAIN, HYDRANT, AND VALVE
- EXISTING STORM SEWER, MANHOLE, AND INLET
- PROPOSED STORM SEWER, MANHOLE, AND INLET
- EXISTING SANITARY SEWER AND MANHOLE
- PROPOSED SANITARY SEWER AND MANHOLE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING CONTOUR W/ ELEVATION
- PROPOSED CONTOUR W/ ELEVATION
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- PROPOSED FINISHED GRADE ELEVATION AT GARAGE DOOR
- PROPOSED LIMITS OF DISTURBANCE

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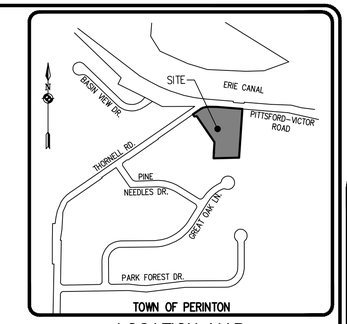
SEQUENCE OF CONSTRUCTION STEPS:

TOTAL DISTURBED ACREAGE = ±3.1 ACRES

STEP 1: (SITE PREPARATION)
- INSTALL AND MAINTAIN STABILIZED CONSTRUCTION ENTRANCE AND CONSTRUCTION STAGING AREA (SEE DETAIL).
- CLEAR AND GRUB AS REQUIRED FOR SILT FENCE INSTALLATION.
- INSTALL AND MAINTAIN PERIMETER SILT FENCE, COMPLETE CLEARING AND GRUBBING OPERATIONS AS NECESSARY OR PROVIDE BRUSH HOGGING OF LANDS TO MAINTAIN GROUND COVER.

STEP 2: (CONSTRUCTION ACTIVITY)
- STRIP AND STOCKPILE TOPSOIL AS REQUIRED FOR INSTALLATION OF THE PROPOSED STORMWATER MANAGEMENT FACILITIES. COMPLETE GRADING, FINE GRADE AND SEED. SEDIMENT BASIN TO BE INSTALLED UPSTREAM OF PROPOSED INFILTRATION BASIN. INFILTRATION BASIN TO BE PROTECTED WITH ORANGE CONSTRUCTION FENCE AND NOT BE EXCAVATED TO FINAL GRADE UNTIL ALL UPLAND AREAS ARE STABILIZED.
- STRIP AND STOCKPILE TOPSOIL; TOPSOIL TO BE STRIPPED FROM ALL PROPOSED PAVEMENT AND BUILDING AREAS AND STOCKPILED IN DESIGNATED AREA. INSTALL SILT FENCE AROUND PERIMETER OF TOPSOIL PILE AND SEED WITH TEMPORARY SEEDING MIX. MULCH IS REQUIRED BETWEEN NOVEMBER 15TH AND APRIL 1ST.
- COMMENCE MASS GRADING OPERATIONS, COMPLETE REQUIRED CUTS AND FILLS. UPON COMPLETION OF THE MASS GRADING OPERATIONS, INSTALL ADDITIONAL EROSION CONTROL MEASURES INCLUDING STONE CHECK DAMS, INTERCEPTOR SWALES, AND TEMPORARY SEDIMENT TRAPS. SWALES TO BE STABILIZED WITHIN 2 DAYS OF COMPLETION AND SEDIMENT TRAPS TO BE STABILIZED IMMEDIATELY. MEASURES ARE TO BE MAINTAINED BY THE CONTRACTOR UNTIL GROUND COVER HAS BEEN ESTABLISHED.
- CONTRACTOR MAY INSTALL UTILITIES DURING GRADING OPERATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO STABILIZE THE SITE AND VERIFY GRADING ELEVATIONS PRIOR TO UTILITY CONSTRUCTION. ADDITIONAL EROSION CONTROL MEASURES, INCLUDING STONE CHECK DAMS, INTERCEPTOR SWALES AND TEMPORARY SEDIMENT TRAPS SHALL BE PROVIDED AS SHOWN IN THE PLANS, OR AS DIRECTED.
- COMPLETE EARTHWORK, INCLUDING FINE GRADING OF SLOPES. SLOPES TO BE REPLACED WITH 6" OF TOPSOIL, MULCHED AND SEEDED WITHIN 2 DAYS OF COMPLETION. SILT FENCE TO BE INSTALLED AT TOE OF SLOPE (IF APPLICABLE).
- COMPLETE INSTALLATION OF UNDERGROUND UTILITIES AND ROAD BOX. RESTORE AND RE-SEED RIGHT-OF-WAY AREAS AS NEEDED. INSTALL PAVEMENT DIVERSION ONCE THE BINDER ASPHALT IS INSTALLED.
- INSTALL CONCRETE TRUCK WASHOUT PRIOR TO CONCRETE POURING ACTIVITIES (SEE DETAIL).
- INSTALL ROAD BASE, GUTTERS AND PAVEMENT WITH EROSION CONTROL MEASURES AS NECESSARY TO MINIMIZE SILT DISTRIBUTION ON EXISTING AND CONSTRUCTED ROADWAYS.

STEP 3: (STABILIZATION & MONITORING)
- SEED AND MULCH ALL DISTURBED AREAS AS REQUIRED BY GP-0-25-001. SEED WITH A SEED MIX AS INDICATED IN CONSTRUCTION EROSION CONTROL NOTES, AND MULCH.
- SEED ALL SLOPES 3:1 OR STEEPER WITH STEEP SLOPE SEEDING MIX AND STABILIZE WITH EROSION CONTROL BLANKET – ECS-1B (EASTCOAST) OR AN APPROVED EQUIVALENT.
- FROM NOVEMBER 15TH TO APRIL 1ST, 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.
- MONITOR STORMWATER MANAGEMENT FACILITY, AND SEDIMENT TRAPS DURING CONSTRUCTION OPERATIONS FOR SILT ACCUMULATION. CONTRACTOR TO CLEAN AS NECESSARY.
- MAINTAIN PERIMETER SILT FENCE AND INLET PROTECTION UNTIL THE ADJACENT SOILS HAVE ACHIEVED 80% STABILIZATION.
- SEE CONSTRUCTION EROSION CONTROL NOTES FOR REQUIRED SEED MIXES AND TEMPORARY/WINTER STABILIZATION METHODOLOGY.
- DUST SHALL BE CONTROLLED DURING CONSTRUCTION BY THE CONTRACTOR TO MINIMIZE EFFECT ON THE ADJACENT PROPERTIES. THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES AS NEEDED AND/OR AS DIRECTED BY THE TOWN ENGINEER OR OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE EXISTING ROADWAYS, PAVED AREAS, AND CHANNELS FREE OF MUD, DIRT, AND DEBRIS. THE CONTRACTOR WILL CLEAN THESE AREAS AS NECESSARY OR AS REQUIRED BY THE OWNER OR TOWN OF PERINTON.



LOCATION MAP
NOT TO SCALE

GRADING NOTES:

1. THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD, AND PRESERVE ALL SURVEY CONTROL MONUMENTS AND RIGHT-OF-WAY MONUMENTS IN THE AREAS OF CONSTRUCTION. FOR DESCRIPTIVE AND SURVEY DATA ON THE CONTROL MONUMENTS, CALL THE MONROE COUNTY GEODETIC SURVEY OFFICE.
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4. THE CONTRACTOR SHALL CONTROL DUST ONSITE AS DIRECTED BY THE TOWN OF PERINTON.
5. THE OWNER AND THE CONTRACTOR SHALL HAVE COMPLETE KNOWLEDGE OF THE CURRENT BLASTING POLICY FOR THE TOWN OF PERINTON, AND THEY WILL CONFORM TO THIS POLICY AT ALL TIMES.
6. HIGHWAY DRAINAGE ALONG PITTSFORD VICTOR ROAD (NYS ROUTE 96) AND THORNELL ROAD (COUNTY ROAD 33) TO BE MAINTAINED AS DIRECTED BY NYSDOT AND MCDOT.
7. FILL MATERIAL PLACED IN THE PAVEMENT AND BUILDING AREA SHALL BE SELECT MATERIAL AND COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS MEASURED BY THE MODIFIED PROCTOR TEST (ASTM D1557) AND/OR THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL SUPPLY THE ENGINEER AND THE TOWN OF PERINTON WITH COMPACTION TEST RESULTS PRIOR TO PLACING THE STONE SUBBASE
8. CONTRACTOR SHALL INSTALL STONE SUBBASE AND THE ASPHALT CONCRETE BINDER COURSE. PRIOR TO PLACING THE BINDER COURSE, THE ROAD BASE SHALL BE REVIEWED BY THE ENGINEER AND THE TOWN.

NOT APPROVED

This plan has not received final approval of all reviewing agencies. This plan is subject to revisions until all approvals are obtained and should not be used for construction purposes.

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

APPROVALS

BY: _____ DATE: _____
TOWN ENGINEER

BY: _____ DATE: _____
COMMISSIONER OF PUBLIC WORKS

BY: _____ DATE: _____
PLANNING BOARD ATTORNEY

BY: _____ DATE: _____
FIRE CHIEF

BY: _____ DATE: _____
CHAIRMAN OF THE PLANNING BOARD

BY: _____ DATE: _____
TOWN CLERK

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"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

7									
6									
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1	REVISED PER TOWN AND AGENCY COMMENTS							DATE	BY
	REVISIONS								

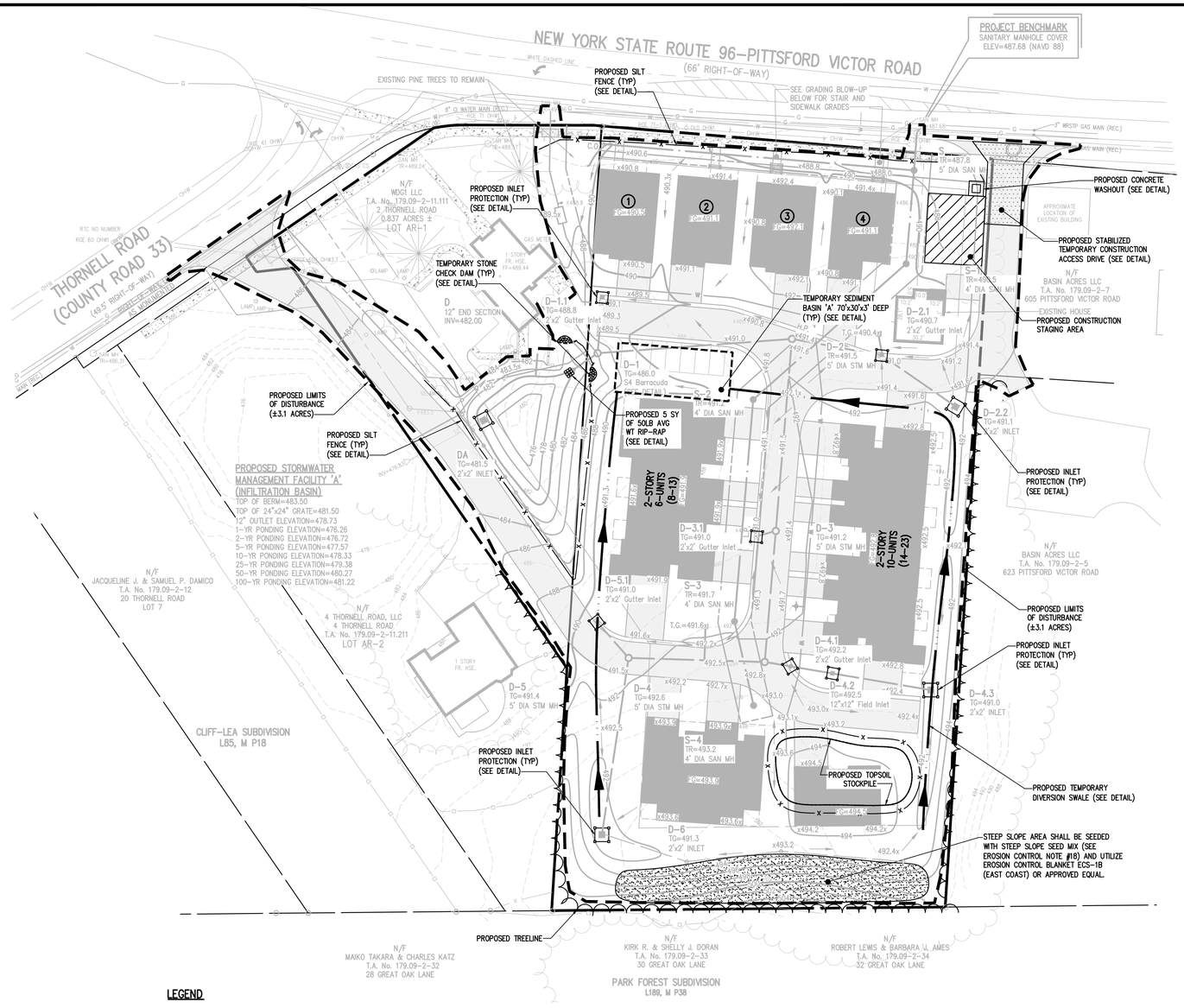
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STATE OF NEW YORK
BRIAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

HARTWELL HEIGHTS
PROJECT
TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
LOCATION
WDG2, LLC.
P.O. BOX 34
PITTSFORD, NY. 14534
CLIENT
PRELIMINARY/FINAL
GRADING PLAN
DRAWING TITLE

PHELPS & CORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 63, TAX MAP NUMBER 179.09-2-8, 179.09-2-9, 179.09-2-10, 179.09-2-11.111

PROJECT MANAGER	P. VARS/R. DESTRO
PROJECT ENGINEER	F. SHELLEY
DRAWN BY	D. TURNER
SCALE	1" = 40'
DATE ISSUED	NOVEMBER 14, 2025
PROJECT NO.	2850
DRAWING NO.	08



LEGEND

- BOUNDARY LINE
- PROPOSED LOT LINE
- EXISTING WATERMAIN, HYDRANT, AND VALVE
- PROPOSED WATERMAIN, HYDRANT, AND VALVE
- EXISTING STORM SEWER, MANHOLE, AND INLET
- PROPOSED STORM SEWER, MANHOLE, AND INLET
- EXISTING SANITARY SEWER AND MANHOLE
- PROPOSED SANITARY SEWER AND MANHOLE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING CONTOUR W/ ELEVATION
- PROPOSED CONTOUR W/ ELEVATION
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- PROPOSED FINISHED GRADE ELEVATION
- PROPOSED FINISHED FLOOR ELEVATION
- PROPOSED FABRIC INLET PROTECTION
- PROPOSED SILT FENCE
- PROPOSED TEMPORARY STONE CHECK DAM
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED STEEP SLOPE SEED MIX (SEE CONSTRUCTION EROSION CONTROL NOTE #18)
- PROPOSED TEMPORARY DIVERSION SWALE

SEDIMENT TRAP VOLUMES

SEDIMENT TRAP I.D.	DRAINAGE AREA TO INLET	SEDIMENT TRAP VOLUME (REQUIRED) (3600 CF/ACRE)	TRAP DIMENSIONS* (L x W x D)	SEDIMENT TRAP VOLUME (PROVIDED)
A	±1.8 ACRES	6,480 CU. FT	70'x30'x3'	6,750 CU. FT.

NOTE:
SEDIMENT TRAPS TO BE CONSTRUCTED WITH A MINIMUM LENGTH TO WIDTH RATIO OF 2:1 AND A MINIMUM DEPTH OF 3 FEET. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 1' IN ACCORDANCE WITH THE NYSDEC REGULATIONS, WHICH REQUIRES 3,600 CF PER DRAINAGE AREA IN ACRES AND 1,000 CF PER DISTURBANCE AREA IN ACRES TO THE INLET.

*TRAP DIMENSIONS PRESENTED AS GUIDANCE FOR CONTRACTOR ONLY. ACTUAL DIMENSIONS MAY VARY BASED UPON FIELD CONDITIONS. HOWEVER, MINIMUM "REQ'D SEDIMENT TRAP VOLUME" MUST BE PROVIDED.

SEE GRADING PLAN (BME DWG#2850-08) FOR SEQUENCE OF CONSTRUCTION NOTES

CONSTRUCTION EROSION CONTROL NOTES:

1. THE CONSTRUCTION ACTIVITIES FOR THIS PROJECT REQUIRE THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT ONLY INCLUDES EROSION & SEDIMENT CONTROLS. THIS SWPPP CONSISTS OF THE PROJECT PLANS, INCLUDING THE GRADING, CONSTRUCTION EROSION CONTROL PLAN AND DETAIL SHEET, AND THE TOWN OF PERINTON DESIGN AND CONSTRUCTION SPECIFICATIONS REGARDING STORMWATER CONTROL. THE PLANS FOR THIS PROJECT ARE INTENDED TO CONFORM WITH THE NYSDEC GENERAL PERMIT GP-0-25-001 AND THE REQUIREMENTS OF LOCAL AND NYSDEC AUTHORITY.
2. THE OWNER IS RESPONSIBLE FOR IMPLEMENTING THE REQUIRED SWPPP. THE OWNER'S CONTRACTOR, SUB-CONTRACTOR AND ALL OTHERS ASSOCIATED WITH THE IMPLEMENTATION OF THE PLAN SHALL BE FAMILIAR WITH THE PLAN AND THE CONDITIONS OF THE NYSDEC GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES.
3. ANY MODIFICATIONS OR DEVIATIONS FROM THE SWPPP, INCLUDING EROSION CONTROL MEASURES AND STORMWATER MANAGEMENT FACILITIES, SHALL BE DOCUMENTED IN THE INSPECTION REPORT AND CONSIDERED PART OF THE SWPPP FOR THE PROJECT.
4. THE OWNER IS RESPONSIBLE FOR FILING THE NOTICE OF INTENT (NOI) FOR CONSTRUCTION ACTIVITY WITH NYSDEC PRIOR TO COMMENCING ANY CONSTRUCTION. A COPY OF THE NOI SHALL BE KEPT ON-SITE AND PROVIDED TO THE MUNICIPALITY.
5. THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING ON SITE INSPECTIONS BY A LICENSED PROFESSIONAL REGARDING EROSION CONTROL DURING CONSTRUCTION. INSPECTIONS ARE TO BE PROVIDED AT A MINIMUM OF TWICE A WEEK FOR DISTURBANCES OF 5 ACRES AND GREATER AND ONCE A WEEK FOR DISTURBANCES LESS THAN 5 ACRES. AN INSPECTION REPORT LOG AND THE SWPPP ARE TO BE KEPT ON-SITE BY THE OWNER.
6. FOR SITES WHERE SOIL DISTURBANCE ACTIVITIES HAVE BEEN TEMPORARILY SUSPENDED (E.G. WINTER SHUTDOWN) AND TEMPORARY STABILIZATION MEASURES HAVE BEEN APPLIED TO ALL DISTURBED AREAS, THE OWNER/OPERATOR MAY REDUCE THE SELF-INSPECTION FREQUENCY, BUT SHALL MAINTAIN A MINIMUM OF MONTHLY INSPECTIONS. (30 CALENDAR DAYS)
7. THE OWNER'S CONTRACTOR/REPRESENTATIVE SHALL IDENTIFY AT LEAST ONE INDIVIDUAL TO BE TRAINED FROM THEIR COMPANY THAT WILL BE RESPONSIBLE FOR IMPLEMENTATION OF THE SWPPP. THE INDIVIDUAL MUST RECEIVE (4) HOURS OF NYSDEC TRAINING EVERY (3) YEARS. THE OWNER/OPERATOR SHALL ENSURE THAT AT LEAST ONE OF THE TRAINED INDIVIDUALS IS ON SITE ON A DAILY BASIS WHEN SOIL DISTURBANCE ACTIVITIES ARE BEING PERFORMED.
8. FOR DISTURBANCES OF 5 ACRES AND GREATER, 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 7 DAYS. FROM THE DATE THE CURRENT SOIL DISTURBANCE ACTIVITY CEASED. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY GROUNDCOVER, THE DISTURBED AREAS SHALL BE MULCHED WITH STRAW OR EQUIVALENT MATERIAL. ADDITIONAL TIME FRAMES FOR STABILIZATION ARE SUBJECT TO THE REQUIREMENTS OF A REGULATED TRADITIONAL LAND USE MS4.
9. FOR DISTURBANCES LESS THAN 5 ACRES, 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 14 DAYS. FROM THE DATE THE CURRENT SOIL DISTURBANCE ACTIVITY CEASED. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY GROUNDCOVER, THE DISTURBED AREAS SHALL BE MULCHED WITH STRAW OR EQUIVALENT MATERIAL. ADDITIONAL TIME FRAMES FOR STABILIZATION ARE SUBJECT TO THE REQUIREMENTS OF A REGULATED TRADITIONAL LAND USE MS4.
10. THE OWNER'S CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT, MAINTENANCE, CLEANING, REPAIR AND REPLACEMENT OF EROSION CONTROL MEASURES DURING SITE CONSTRUCTION.
11. INFILTRATION BASIN EXCAVATION SHOULD BE CARRIED TO WITHIN 2 FEET OF THE FINAL ELEVATION OF THE BASIN FLOOR. FINAL EXCAVATION TO THE FINISHED GRADE SHOULD BE DEFERRED UNTIL ALL DISTURBED AREAS ON THE WATERSHED HAVE BEEN STABILIZED OR PROTECTED. SEE APPENDIX C-4 (DESIGN MANUAL).
12. THE BIORETENTION FACILITY MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.
13. ALL DISTURBED AREAS TO BE RESTORED PER TABLE 5.2 SOIL RESTORATION REQUIREMENTS FOUND IN CHAPTER 5: RUNOFF REDUCTION TECHNIQUES OF THE NYSDEC STORMWATER MANAGEMENT DESIGN MANUAL. PLEASE REVIEW WITH PROJECT MANAGER.
14. ALL DISTURBED AREAS TO BE RECLAIMED WITH A MINIMUM OF 6" TOPSOIL.
15. AREAS OR EMBANKMENTS REQUIRING AN EROSION CONTROL BLANKET SHALL UTILIZE ECS-1B (EASTCOAST) OR AN APPROVED EQUIVALENT.
16. TEMPORARY SEEDING OF DISTURBED AREAS SHALL BE PROVIDED AS FOLLOWS:

    THE SURFACE TWO INCHES OF SOIL SHOULD BE LOOSENED BY DISKING, RAKING, OR BACK-BLADING WITH A BULLDOZER. IMMEDIATELY FERTILIZE WITH 300 LBS PER ACRE (OR 7 LBS. PER 1000 SQ. FT.) OF 10-10-10 FERTILIZER. IMMEDIATELY SEED WITH THE FOLLOWING MIX:

	LBS./ACRE	LBS./1000 SQ. FT.
ANNUAL RYEGRASS	40	1
PERENNIAL RYEGRASS	40	1
OATS	40	1
WHITE CLOVER (+ INOCULANT)	4	0.1

    SEED SHOULD HAVE A GERMINATION RATE OF AT LEAST 85 PERCENT AND MINIMAL INERT MATERIAL.

17. DISTURBED AREAS SHALL BE STABILIZED USING PERMANENT LAWN SEEDING MIX UPON COMPLETION OF GRADING AND CONSTRUCTION:

	LBS/ACRE	% BY PURITY	% GERM
PERENNIAL RYE GRASS	35	85	85
RED FESCUE	35	97	80
KENTUCKY BLUEGRASS	30	85	80

    SEEDING RATE: 6.0 LBS PER 1,000 SQ FT.
    MULCH: STRAW OR WOOD FIBER MULCH USED WITH HYDROSEEDING METHOD, AT TWO TONS PER ACRE WITH TACKIFIER
    STARTING FERTILIZER: 5-10-10 AT 20 LBS PER 1,000 SQ. FT

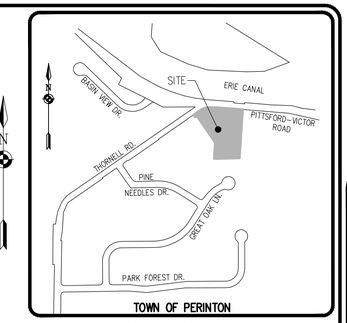
18. SLOPES 3:1 OR GREATER SHALL UTILIZE AN EROSION BLANKET ECS-1B (EAST COAST) OR AN APPROVED EQUIVALENT. SLOPES TO BE SEEDED WITH HEAVY MULCH AND MAY REQUIRE ADDITIONAL STABILIZATION MEASURES. SLOPES SHALL BE FINE GRADED WITH A MINIMUM OF 6" TOPSOIL AND SEEDED WITH FOLLOWING SEED MIX:

    NATIVE STEEP SLOPE MIX WITH ANNUAL RYE GRASS – ERNMX-181

29.0%	ANDROPOGON GERARDII	BIG BLUESTEM, 'PRAIRIE VIEW'-IN ECOTYPE
20.0%	LOLIUM MULTIFLORUM	ANNUAL RYEGRASS
15.5%	SORGHASTRUM NUTANS	INDIANGRASS, PA ECOTYPE
13.4%	ELYMUS VIRGINICUS	VIRGINIA WILDRYE, MADISON-NY ECOTYPE
6.60%	ELYMUS CANADENSIS	CANADA WILDRYE
4.00%	AGROSTIS PERENNANS	AUTUMN BENTGRASS, ALBANY PINE BUSH-NY ECOTYPE
2.80%	PANICUM CLANDESTINUM	DEERTONGUE, TIOGA
2.80%	PANICUM VIRGATUM 'HABITAT'	SWITCHGRASS, 'HABITAT'-NJ ECOTYPE'
1.20%	TRIDENS FLAVUS	PURPLETOP, FORT INDIANTOWN GAP-PA ECOTYPE
1.00%	CHAMAECRISTA FASCICULATA	PARTRIDGE PEA, PA ECOTYPE
1.00%	RUDBECKIA HIRTA	BLACKEYED SUSAN
0.70%	COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS
0.70%	ECHINACEA PURPUREA	PURPLE CONEFLOWER
0.60%	HELIOPSIS HELIANTHOIDES	OXEYE SUNFLOWER, PA ECOTYPE
0.30%	ASTER PILOSUS	HEATH ASTER, PA ECOTYPE
0.20%	MONORADA FISTULOSA	WILD BERGAMONT, FORT INDIANTOWN GAP-PA ECOTYPE
0.10%	APOCYNUM CANNABINUM	INDIANHEMP, PA ECOTYPE
0.10%	ASCLEPIAS SYRIACA	COMMON MILKWEED, PA ECOTYPE

    SEEDING RATE: 60 LBS PER ACRE OR 1 LB PER 1000 SF
    INOCULANT: RATE AS RECOMMENDED BY THE MANUFACTURER (FOR HYDROSEEDING USE FOUR TIMES MANUFACTURER'S RECOMMENDED RATE)
    MULCH: STRAW OR WOOD FIBER MULCH USED WITH A HYDROSEEDING METHOD, AT TWO TONS PER ACRE WITH TACKIFIER.

19. THE STORMWATER POND AREA SHALL BE SEEDED TO AN ELEVATION 2 FT. ABOVE THE NORMAL PONDING LEVEL WITH 'OBL WETLAND SEED MIX' (ERNMX-131) BY ERNST CONSERVATION SEEDS, OR APPROVED EQUAL.
20. ALL SEEDED AREAS ARE TO BE MONITORED FOR GERMINATION AND EROSION. ERODED AREAS ARE TO BE BACKFILLED, FINE GRADED AND RE-SEEDED. AREAS THAT FAIL TO GERMINATE A MINIMUM OF 80% SHALL BE RE-SEEDED.
21. ANY EXCAVATIONS THAT MUST BE DEWATERED SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE BEFORE ENTERING AN ACTIVE DRAINAGE SYSTEM OR DISPERSED TO AN UNDISTURBED AREA.
22. THE OWNER SHALL BE RESPONSIBLE FOR REMOVING EXISTING EROSION CONTROL MEASURES THAT ARE LOCATED WITHIN ESTABLISHED AREAS. MATERIALS ARE TO BE DISPOSED OF PROPERLY.
23. UPON COMPLETION OF CONSTRUCTION AND FINAL STABILIZATION THE OWNER MAY FILE A NOTICE OF TERMINATION (NOT) WITH NYSDEC PER THE REQUIREMENTS OF THE GENERAL PERMIT GP-0-25-001.



LOCATION MAP
NOT TO SCALE

APPROVALS

NOT APPROVED

This plan has not received final approval of all reviewing agencies. This plan is subject to revisions until all approvals are obtained and should not be used for construction purposes.

BY: _____ DATE: _____
TOWN ENGINEER

BY: _____ DATE: _____
COMMISSIONER OF PUBLIC WORKS

BY: _____ DATE: _____
PLANNING BOARD ATTORNEY

BY: _____ DATE: _____
FIRE CHIEF

BY: _____ DATE: _____
CHAIRMAN OF THE PLANNING BOARD

BY: _____ DATE: _____
TOWN CLERK

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

	DATE	BY
7		
6		
5		
4		
3		
2	2/13/26	DTT
1	REVISED PER TOWN AND AGENCY COMMENTS	

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STATE OF NEW YORK
BRIAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

HARTWELL HEIGHTS
PROJECT
TOWN OF PERINTON, MONROE COUNTY, NEW YORK
LOCATION
WDGT, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534
CLIENT
PRELIMINARY/FINAL
CONSTRUCTION EROSION CONTROL PLAN
DRAWING TITLE

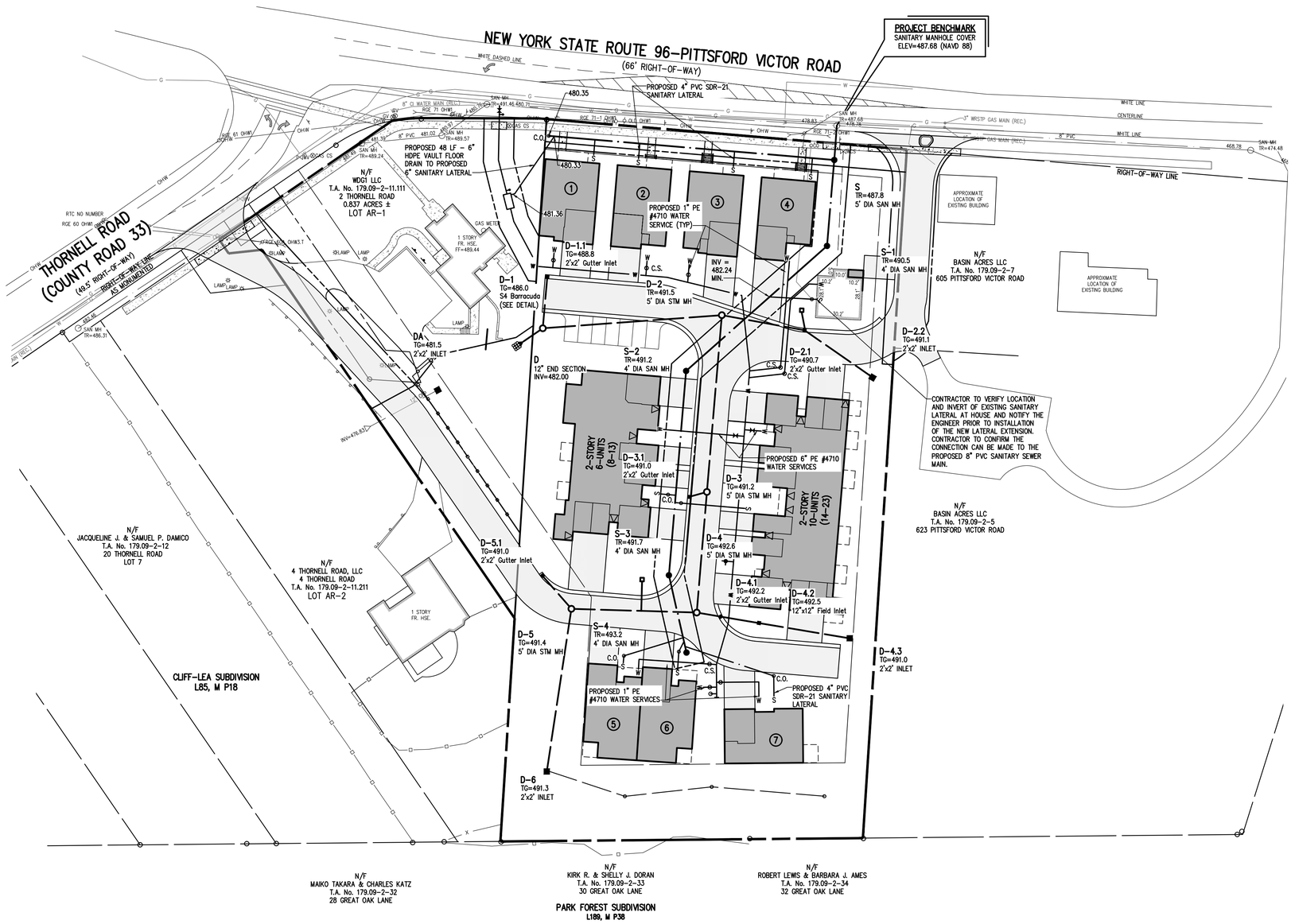
PROJECT MANAGER
P. VARS/R. DESTRO
PROJECT ENGINEER
F. SHELLEY
DRAWN BY
D. TURNER
SCALE 1" = 40'
DATE ISSUED NOVEMBER 14, 2025
PROJECT NO. 2850
DRAWING NO. 09

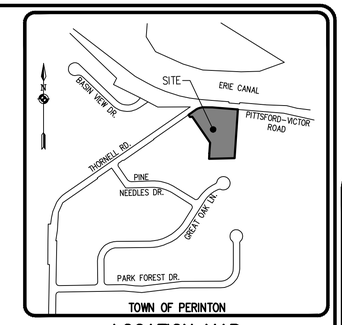
PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 63, TAX MAP NUMBER 179.09-2-8, 179.09-2-9, 179.09-2-10, 179.09-2-11.111

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BY	DATE	REVISIONS
DTT	2/13/26	1 REVISED PER TOWN AND AGENCY COMMENTS
		2
		3
		4
		5
		6
		7

LATERALS AND SERVICES:

1. ALL LATERALS OR SERVICES SHALL BE AS NOTED BELOW UNLESS OTHERWISE NOTED ON THE PLANS:
   - WATER – 1" PE #4710 FOR UNIT NUMBERS 1–7
     6" PE #4710 FOR APARTMENT BUILDINGS
   - SANITARY – 4" PVC SDR-21 INSTALLED AT 2.00% MIN SLOPE FOR UNIT NUMBER 1–7
     6" PVC SDR-21 INSTALLED AT 1.00% MIN SLOPE FOR APARTMENT BUILDINGS

   EXTEND LATERALS TO 10 FEET BEYOND THE RIGHT-OF-WAY, OR 10 FEET BEYOND THE EASEMENT LINES, WHICHEVER IS GREATER.
2. NO CURB VALVE BOXES (WATER LATERAL) ARE ALLOWED IN DRIVEWAYS. THE SERVICE OR DRIVEWAY WILL BE RELOCATED IF THIS CONFLICT ARISES.
3. SANITARY LATERALS' WITNESS STAKES SHALL BE 2"x4" HARDWOOD, EXTENDED 2–3' ABOVE GRADE AND PAINTED GREEN.
4. ANY LAUNDRY WASTEWATER SHALL BE DIRECTED TO THE SANITARY SEWER.
5. CLEANOUTS FOR STORM LATERALS SHALL BE INSTALLED AT RIGHT-OF-WAY OR EASEMENT LINES, ALL HORIZONTAL BENDS AND AT 90° INTERVALS ALONG THE LATERAL. CLEANOUTS FOR SANITARY LATERALS SHALL BE INSTALLED AT THE RIGHT-OF-WAY OR EASEMENT LINE, AT ALL BENDS 45° OR GREATER, AND AT 90° INTERVALS THEREAFTER.

LEGEND

- BOUNDARY LINE
- PROPOSED LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- PROPERTY MARKER FOUND
- EXISTING WATERMAIN, HYDRANT, AND VALVE
- PROPOSED WATERMAIN, HYDRANT, AND VALVE
- EXISTING STORM SEWER, MANHOLE, AND INLET
- PROPOSED STORM SEWER, MANHOLE, AND INLET
- EXISTING SANITARY SEWER AND MANHOLE
- PROPOSED SANITARY SEWER AND MANHOLE
- PROPOSED WATER SERVICE
- PROPOSED SANITARY LATERAL

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GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

APPROVALS

BY: _____ DATE: _____
TOWN ENGINEER

BY: _____ DATE: _____
COMMISSIONER OF PUBLIC WORKS

BY: _____ DATE: _____
PLANNING BOARD ATTORNEY

BY: _____ DATE: _____
FIRE CHIEF

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CHAIRMAN OF THE PLANNING BOARD

BY: _____ DATE: _____
TOWN CLERK

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STATE OF NEW YORK
BRIAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: WDG2, LLC. P.O. BOX 34 PITTSFORD, NY, 14534
DRAWING TITLE: PRELIMINARY/FINAL LATERAL PLAN

PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 63, TAX MAP NUMBER 179.09-2-8, 179.09-2-9, 179.09-2-10, 179.09-2-11.111

PROJECT MANAGER	P. VARS/R. DESTRO
PROJECT ENGINEER	F. SHELLEY
DRAWN BY	D. TURNER
SCALE	1" = 40'
DATE ISSUED	NOVEMBER 14, 2025
PROJECT NO.	2850
DRAWING NO.	10



16' MOUNTING HEIGHT LIGHT POLE DETAIL
N.T.S.

LEGEND

BOUNDARY LINE
PROPOSED LOT LINE
EXISTING WATERMAIN, HYDRANT, AND VALVE
PROPOSED WATERMAIN, HYDRANT, AND VALVE
PROPOSED WATER SERVICE AND CURBSTOP
EXISTING STORM SEWER, MANHOLE, AND INLET
PROPOSED STORM SEWER, MANHOLE, AND INLET
PROPOSED STORM LATERAL AND CLEANOUT
EXISTING SANITARY SEWER AND MANHOLE
PROPOSED SANITARY SEWER AND MANHOLE
PROPOSED SANITARY LATERAL AND CLEANOUT
EXISTING TREE LINE
PROPOSED TREE LINE
EXISTING EASEMENT LINE
PROPOSED EASEMENT LINE

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LANDSCAPE NOTES:

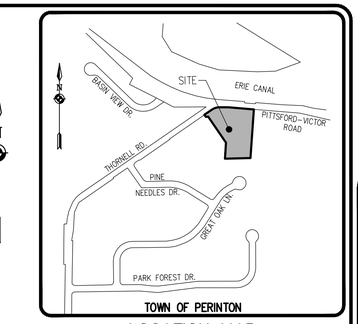
1. ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS AS NOTED IN THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION, ANSI Z60.1–2004.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY TAKEOFFS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.
4. ALL TREES SHALL BE LOCATED A MINIMUM DISTANCE OF FIVE FEET (5') FROM THE HORIZONTAL LINE OF UNDERGROUND UTILITIES TO THE PLANT BALL.
5. ALL TREES SHALL BE LOCATED A MINIMUM DISTANCE OF TEN FEET (10') FROM THE HORIZONTAL LINE OF OVERHEAD UTILITIES TO THE PLANT BALL.
6. PLANTING SOIL MIXTURE SHALL HAVE A RATIO BY VOLUME OF FOUR PARTS TOPSOIL TO ONE PART COMPOST. SOIL AMENDMENTS TO BE MODIFIED PER INDIVIDUAL PLANT MATERIAL REQUIREMENTS.
7. STAKE TREES IMMEDIATELY AFTER PLANTING. REFER TO DETAIL.
8. SEED ALL AREAS NOT PAVED, PLANTED OR SPECIFIED OTHERWISE WITH LAWN SEED.

   LAWN SEED MIXTURE SHALL BE PROVIDED AS FOLLOWS:

	LBS/ACRE	% BY PURITY	% GERM
'REPELL', 'CITATION' & 'MORNING STAR' PERENNIAL RYE GRASS	35	85	85
'JAMESTOWN II', 'FORTRESS', 'ENSYLVA' RED FESCUE	35	97	80
'BARON' & 'MIDNIGHT' KENTUCKY BLUEGRASS	30	85	80

   SEEDING RATE: 6.0 LBS PER 1,000 SF.
   MULCH: STRAW AT TWO TONS PER ACRE, OR WOOD FIBER MULCH USED WITH A HYDROSEEDING APPLICATION METHOD, WITH TACKIFIER.
   STARTING FERTILIZER: 5:10:10 AT 20 LBS PER 1,000 SF.

   PLEASE REFER TO BME DRAWING # 2850–09 / EROSION CONTROL PLAN FOR FURTHER SEEDING REQUIREMENTS IE. : TEMPORARY SEEDING AND SPECIALIZED SEED MIXES.
9. PROPOSED PLANT MATERIALS SHALL BE FIELD LOCATED, AND THE CONTRACTOR SHALL PERFORM A ROUGH STAKEOUT OF PLANTINGS FOR REVIEW AND APPROVAL BY OWNER PRIOR TO PLANTING.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARE AND MAINTENANCE OF PLANT MATERIALS AND SEEDED AREAS UNTIL FINAL ACCEPTANCE.
11. A MINIMUM 1 YEAR GUARANTEE SHALL BE PROVIDED ON ALL PLANT MATERIALS FROM DATE OF FINAL ACCEPTANCE.

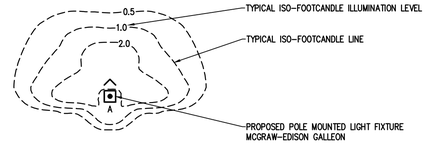


LOCATION MAP
NOT TO SCALE

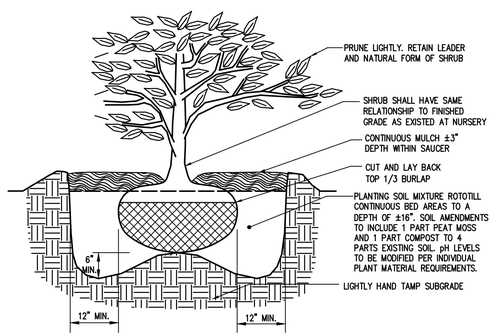
LIGHTING NOTES:

1. SITE LIGHTING TO BE PROVIDED AS DETAILED IN PROVIDED LUMINAIRE SCHEDULE, OR APPROVED EQUIVALENT.
2. ALL FIXTURES TO HAVE BLACK FINISH.
3. ALL SITE LIGHTING TO BE DARK SKY COMPLIANT.
4. ALL SITE LIGHTING TO BE CONTROLLED WITH DUSK TO DAWN PHOTO CONTROLS.
5. ALL POLES TO BE PROVIDED A 120 VOLT LIGHTING CIRCUIT.
6. ALL LIGHT POLES TO BE COOPER LIGHTING ROUND STRAIGHT STEEL POLES OR APPROVED EQUIVALENT (SEE LIGHT POLE DETAILS)

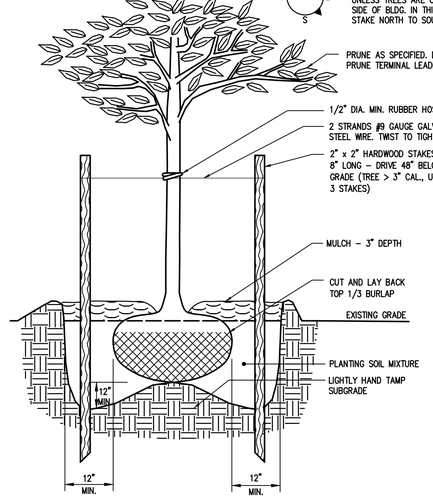
   FIXTURE 'A' POLE CATALOGUE NUMBER: RSS–20–3–11–AB
7. CONTRACTOR IS RESPONSIBLE FOR ALL QUANTITIES AND TAKEOFFS.
8. OWNER / CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRICAL SERVICE DISTRIBUTION AND LIGHTING CIRCUITRY DESIGN.
9. CONTRACTOR TO REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING MOUNTED LIGHT FIXTURE LOCATIONS.
10. IF AN EQUIVALENT FIXTURE IS PROPOSED, THE CONTRACTOR SHALL SUPPLY SPEC. SHEETS FOR ALL LIGHT FIXTURES AND LIGHT POLES. CONTRACTOR SHALL SUPPLY LIGHTING PLAN FOR EQUIVALENT FIXTURES FOR OWNER REVIEW AND APPROVAL PRIOR TO INSTALLATION.



TYPICAL ISO–FOOTCANDLE PLOTS
N.T.S.



SHRUB PLANTING DETAIL
N.T.S.



TREE PLANTING DETAIL
N.T.S.

SITE PLANT MATERIALS LIST

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
XX XX	TREES					
11	AC	Abies concolor	Concolor Fir	5–6' Ht.	B&B	
4	AF	Acer x freemanii 'Autumn Blaze'	Autumn Blaze Maple	2–2.5" cal	B&B	
1	CK	Cornus kousa	Kousa Dogwood	1.5–2" cal	B&B	
5	GT	Gleditsia triacanthos var. inermis 'Shademaster'	Thornless Honeylocust	2–2.5" cal	B&B	
11	PG	Picea glauca	Black Hills Spruce	5–6' Ht.	B&B	
5	QR	Quercus rubra	Red Oak	2–2.5" cal	B&B	

GROUNDCOVER SEEDING LEGEND

STORMWATER MANAGEMENT INFILTRATION BASIN SEED MIX; "THREE–WAY TALL FESCUE MIX", ERNST CONSERVATION SEEDS, ERNMX–136; SEEDING RATE: 7–10 LBS/1,000 S.F.

LUMINAIRE SCHEDULE

KEY	SYMBOL	QTY.	MANUFACTURER CATALOGUE NUMBER	WATTAGE	LUMENS/WATT	ARRANGEMENT	MH	POLE	BUG RATING	DESCRIPTION
A		2	UTLD–PA1–100–740–U–T4W–BK	96	107	SINGLE	16'	20'	B2–U0–G3	POLE MOUNTED AREA LIGHT FIXTURE

NOT APPROVED

This plan has not received final approval of all reviewing agencies. This plan is subject to revisions until all approvals are obtained and should not be used for construction purposes.

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

STAKING DETAIL
STAKES TO BE LOCATED NORTHWEST TO SOUTHEAST UNLESS TREES ARE ON EAST SIDE OF BLDG. IN THIS CASE STAKE NORTH TO SOUTH.

APPROVALS

BY: _____ DATE: _____
TOWN ENGINEER

BY: _____ DATE: _____
COMMISSIONER OF PUBLIC WORKS

BY: _____ DATE: _____
PLANNING BOARD ATTORNEY

BY: _____ DATE: _____
FIRE CHIEF

BY: _____ DATE: _____
CHAIRMAN OF THE PLANNING BOARD

BY: _____ DATE: _____
TOWN CLERK

Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

	DATE	BY
3	1/29/26	JRS
2	12/8/25	JRS
1	12/3/25	JRS

REVISIONS
3 REVISED PER GENERAL COMMENTS
2 REVISED TO ADD ADDITIONAL TREE PLANTING
1 REVISED PER TOWN COMMENTS

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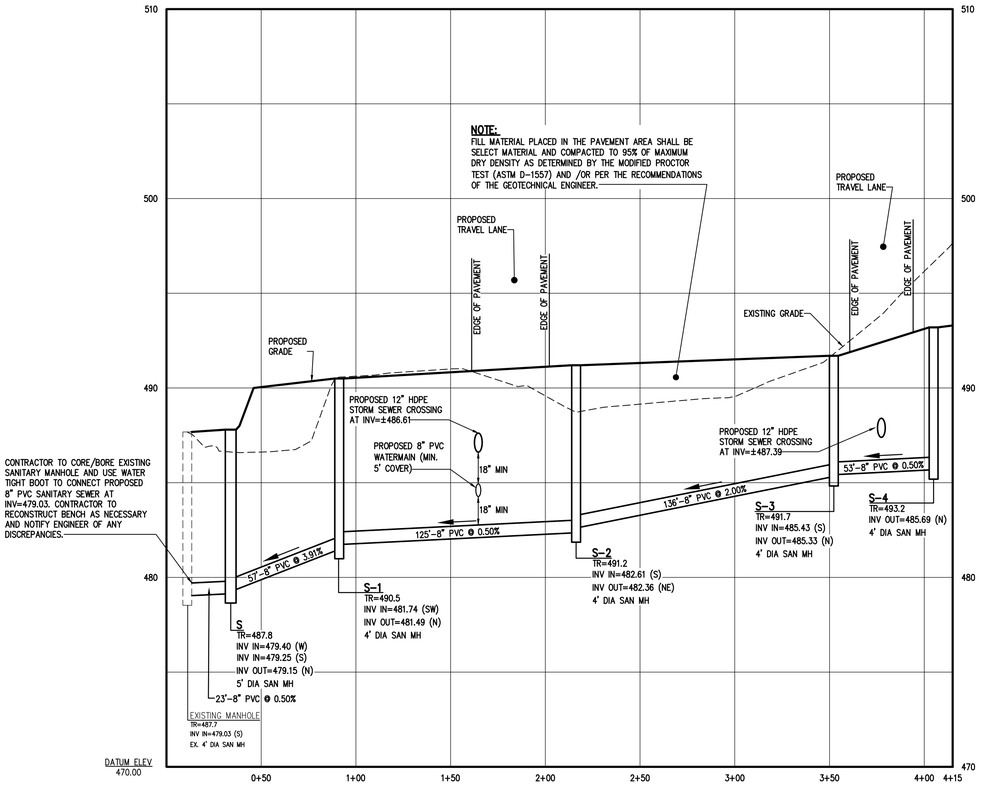
REGISTERED LANDSCAPE ARCHITECT — JAMES R. STEVENS — NEW YORK

PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: WDCJ, LLC. P.O. BOX 34 PITTSFORD, NY, 14534
DRAWING TITLE: LANDSCAPE AND LIGHTING PLAN

PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 63, TAX MAP NUMBER 179.09–2–8, 179.09–2–9, 179.09–2–10, 179.09–2–11.111

PROJECT MANAGER	P. VARS/R. DESTRO
PROJECT ENGINEER	F. SHELLEY
DRAWN BY	J. SQUIER
SCALE	1" = 40'
DATE ISSUED	NOVEMBER 14, 2025
PROJECT NO.	2850
DRAWING NO.	11

P:\2850\Drawings\Final\2850 Landscape Base.dwg



PROPOSED SANITARY SEWER PROFILE

SCALE: HOR: 1"=40'
VER: 1"=4'

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	DATE	BY
7		
6		
5		
4		
3		
2	2/13/26	DTT
1	REVISED PER TOWN AND AGENCY COMMENTS	

REVISIONS

BME ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
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FAIRPORT, NEW YORK 14450
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PHONE 585-377-7360
FAX 585-377-7309



PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: WDG2, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534
DRAWING TITLE: PRELIMINARY/FINAL PROFILE SHEET

PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 63, TAX MAP NUMBER 179.09-2-8, 179.09-2-9, 179.09-2-10, 179.09-2-11.111

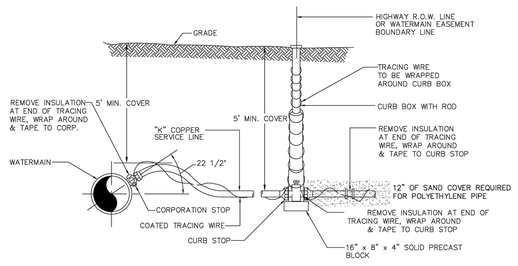
PROJECT MANAGER	
P. VARS/R. DESTRO	
PROJECT ENGINEER	
F. SHELLEY	
DRAWN BY	
D. TURNER	
SCALE	DATE ISSUED
1" = 40'	NOVEMBER 14, 2025
PROJECT NO.	
2850	
DRAWING NO.	
12	

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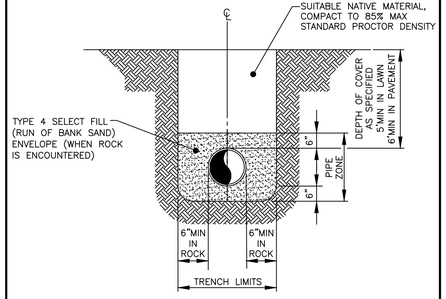
WATER SERVICE INSTALLATION DETAIL

N.T.S.



NOTE:
INSULATED 10 OR 12 GAUGE TRACING WIRE AND SAND INCASEMENT TO BE USED WITH POLYETHLENE PLASTIC SERVICE ONLY. SAND COVER TO BE 6" BELOW/ 6" ABOVE.

D28
JANUARY 2021



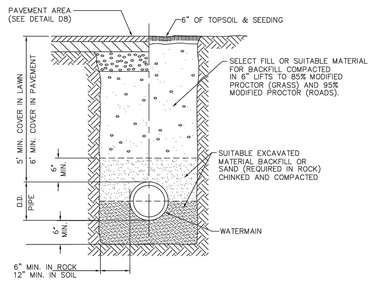
NOTE: EXCAVATION TO MEET OSHA REQUIREMENTS.

DIP TRENCH

NOT TO SCALE

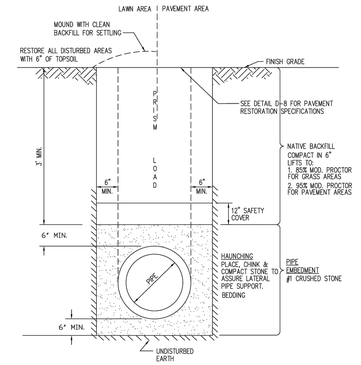
WATERMAIN TRENCH DETAIL

NTS



SEWER TRENCH DETAIL

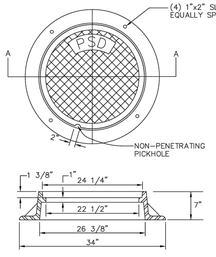
NTS



NOTE:
SAFETY COVER IS DEFINED AS NATIVE, CLEAN BACKFILL MATERIAL THAT IS FREE OF ORGANICS OR OTHER DELETERIOUS MATERIAL, INCLUDING ROCKS SIZED OVER 3-INCHES IN ANY DIRECTION.

D36
JANUARY 2021

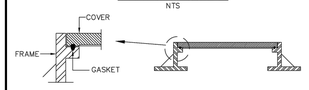
SANITARY MANHOLE STANDARD FRAME AND COVER DETAIL



SECTION A – A

WATERTIGHT SANITARY SEWER MANHOLE COVER

NTS



D27
JANUARY 2021

Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
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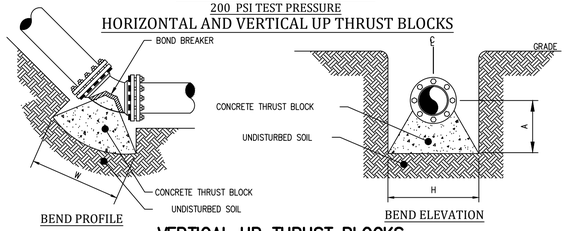
	DATE	BY
REVISIONS		
1 REVISED PER TOWN AND AGENCY COMMENTS	2/13/26	DTT
2		
3		
4		
5		
6		
7		

PIPE DIAMETER	BEND OR FITTING																	
	11¼ DEGREE			22½ DEGREE			45 DEGREE			90 DEGREE			TEE*, CAP OR PLUG					
	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)			
8"	1.0	1.0	1.5	1.0	1.5	1.5	1.5	2.0	1.5	2.0	2.5	1.5	1.5	2.5	1.0			

* SIZE BLOCK BASED ON BRANCH DIAMETER.

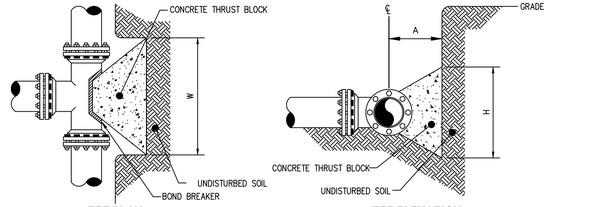
SOIL BEARING STRENGTH - 2,000 PSF
200 PSI TEST PRESSURE

HORIZONTAL AND VERTICAL UP THRUST BLOCKS



VERTICAL UP THRUST BLOCKS

NOT TO SCALE

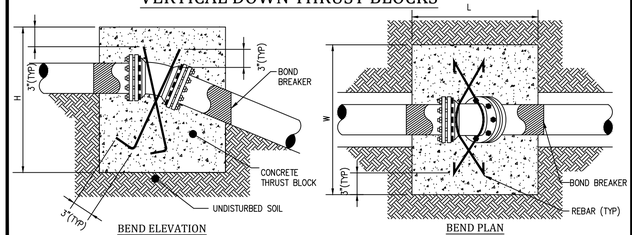


HORIZONTAL THRUST BLOCKS

PIPE DIAMETER	BEND															
	11¼ DEGREE				22½ DEGREE				45 DEGREE				90 DEGREE			
	L (FT)	W (FT)	H (FT)	VOL (CY)	L (FT)	W (FT)	H (FT)	VOL (CY)	L (FT)	W (FT)	H (FT)	VOL (CY)	L (FT)	W (FT)	H (FT)	VOL (CY)
8"	3.0	3.0	3.0	1.0	4.0	3.0	3.5	1.6	6.0	3.0	4.2	2.8	6.2	3.0	4.5	3.1

SOIL BEARING STRENGTH - 2,000 PSF
200 PSI TEST PRESSURE

VERTICAL DOWN THRUST BLOCKS

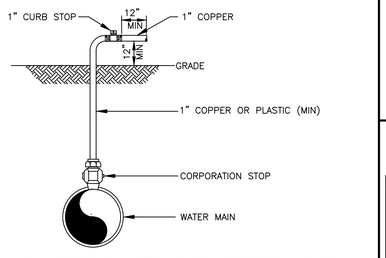


NOTES:
1. THRUST BLOCKS SHALL BE CENTERED HORIZONTALLY ON BENDS.
2. VOLUMES SHOWN IN CHART ARE MINIMUMS.

VERTICAL DOWN THRUST BLOCKS

NOT TO SCALE

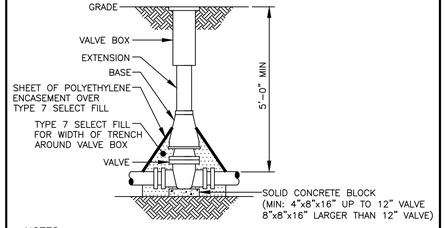
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NOTE: IN THE PRESENCE OF A WATER AUTHORITY REPRESENTATIVE REMOVE ALL CORPORATIONS ASSOCIATED WITH TEMPORARY DISINFECTION/SAMPLE TAPS AND REPLACE WITH THREADED BRASS PLUGS.

DISINFECTION/BLOW-OFF/SAMPLING TAP (TEMPORARY)

NOT TO SCALE



NOTES:

1. VALVE BOX SHALL BE CENTERED ON VALVE AND SET ON COMPACTED BACKFILL.
2. VALVE SHALL NOT SUPPORT VALVE BOX.
3. ALL VALVES SHALL BE OPEN LEFT EXCEPT:
   TOWN OF WEBSTER – VALVES 12" AND SMALLER SHALL OPEN RIGHT.
   TOWN OF HENRIETTA – SHALL OPEN RIGHT

VALVE

NOT TO SCALE

CONDITION	SCHEMATIC	REQUIREMENTS
I WATER LINE ABOVE SEWER LINE	WL. MORE THAN 18" SL	A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING. EACH LENGTH OF PIPE TO BE 10 FT. MINIMUM. B) BACKFILL WITH COMPACTED CRUSHER RUN STONE.
II WATER LINE ABOVE SEWER LINE	WL. 18" MIN. SL	A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING. EACH LENGTH OF PIPE TO BE 10 FT. MINIMUM. B) WHEN BOTH WATER LINE AND SEWER LINE ARE NEW, SLEEVE SEWER LINE WITH STEEL CASING FOR 10 FT. EACH SIDE OF CROSSING. WHEN ONE LINE IS EXISTING, SLEEVE PIPE BEING INSTALLED WITH STEEL CASING FOR 10 FT. EACH SIDE OF CROSSING. C) BACKFILL WITH COMPACTED CRUSHER RUN STONE.
III SEWER LINE ABOVE WATER LINE	SL 18" MIN. WL	A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING. EACH LENGTH OF PIPE TO BE 10 FT. MINIMUM. B) SLEEVE SEWER LINE WITH STEEL CASING FOR 10 FT. EACH SIDE OF CROSSING. C) PROVIDE CRADLE OF CONCRETE OR CRUSHER RUN STONE (SEE TRENCH DETAIL BELOW) FOR WATER LINE AND SEWER LINE FOR 10 FT. EACH SIDE OF CROSSING.

NOTES
WL (WATER LINE)
SL (SEWER LINE)
D (OUTSIDE DIAMETER OF PIPE)
IN NO CASE SHALL PIPES BE CLOSER THAN 18" APART. DISTANCES ARE MEASURED BETWEEN OUTSIDES OF PIPE.

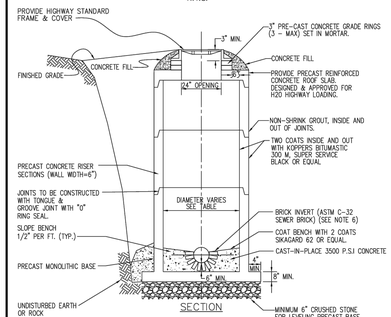
CAREFULLY TAMPED BACKFILL
CRADLE OF CONCRETE OR CRUSHER RUN STONE
1/4 D
1/4 D (4" MINIMUM)
D + 8"

WATERMAIN/SEWER CROSSING DETAIL

N.T.S.

SANITARY / STORM MANHOLE DETAIL

N.T.S.



SECTION

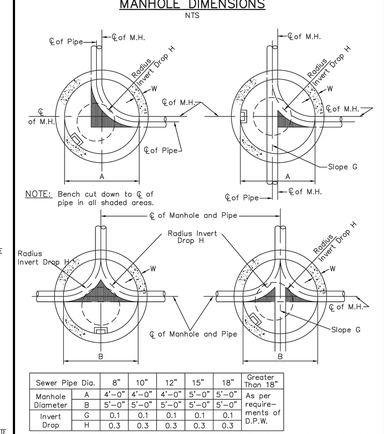
NOTES:
1. USE REINFORCED CONCRETE RISERS AS MANUFACTURED BY KISTNER CONCRETE PRODUCTS, INC. OR APPROVED EQUAL.
2. PROVIDE TOWN STANDARD FRAME & COVER.
3. ALL PIPE CONNECTIONS TO MANHOLE SHALL BE MADE WITH KOR-N-SEAL BOOT.
4. MAXIMUM MANHOLE SPACING TO BE 300'.
5. USE MANHOLE ADJUSTMENT RINGS AS NEEDED. MAXIMUM, 3 COURSES.
6. WITH PRIOR WRITTEN APPROVAL FROM THE COMMISSIONER OF PUBLIC WORKS, HALF CLAY TILES OR HALF PVC SDR-35 PIPE SECTIONS EMBEDDED IN CONCRETE MAY BE USED INSTEAD OF A BRICK INVERT. THE BENCH MUST BE BUILT UP WITH SEWER BRICK.

SEWER SIZE	MANHOLE DIAMETER
8"–14"	4'–0"
15"–27"	5'–0"
30"–36"	6'–0"
3&4 WAY	5'–0" MIN. SPECIAL INV. DETAIL REQ'D

D23
JANUARY 2021

STANDARD MANHOLE DIMENSIONS

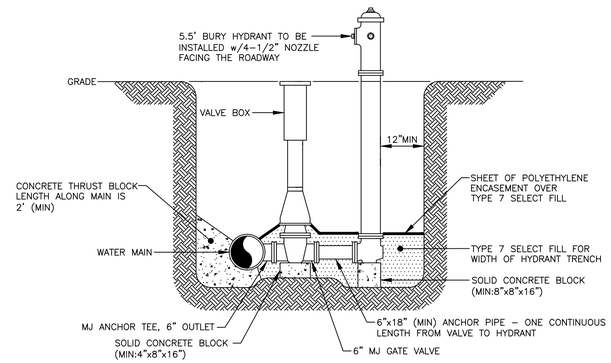
NTS



Sewer Pipe Dia.		8"	10"	12"	15"	18"	Greater Than 18"
Manhole Diameter	A	4'–0"	4'–0"	4'–0"	5'–0"	5'–0"	As per require-ments of D.P.W.
	B	5'–0"	5'–0"	5'–0"	5'–0"	5'–0"	
Invert Drop	G	0.1	0.1	0.1	0.1	0.1	
	H	0.3	0.3	0.3	0.3	0.3	

NOTE: 1) Where inlet and outlet pipes are DIFFERENT diameters the slope must not be less than the difference in diameter or greater than 9 inches. Maximum drop across a manhole invert for matching diameters shall be 9 inches.
2) Minimum inside diameter for inside drop manholes shall be 5 foot for straight through configurations and 6 foot for all others.

D26
JANUARY 2021

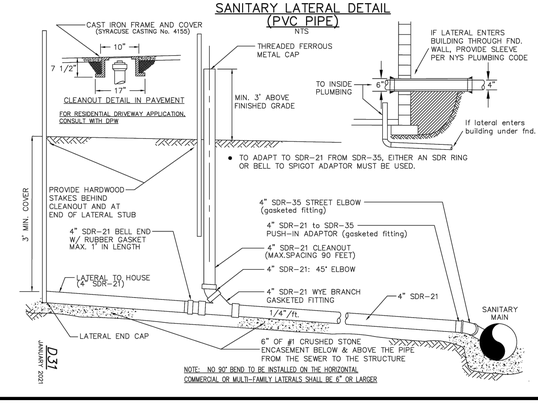


PERPENDICULAR HYDRANT ASSEMBLY

NOT TO SCALE

SANITARY LATERAL DETAIL (PVC PIPE)

NTS



NOTE: NO 90° BEND TO BE INSTALLED ON THE HORIZONTAL COMMERCIAL OR MULTI-FAMILY LATERALS SHALL BE 6" OR LARGER

D21
JANUARY 2021

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STATE OF NEW YORK
RYAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

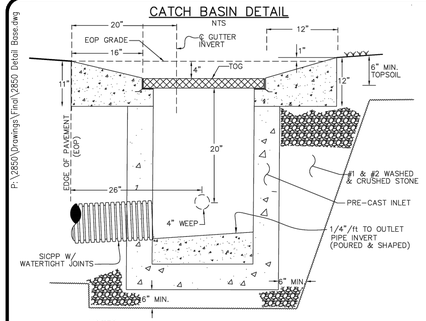
HARTWELL HEIGHTS
PROJECT
TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
LOCATION
WDS2, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534
CLIENT
PRELIMINARY/FINAL
DETAIL SHEET
DRAWING TITLE

PROJECT MANAGER	
P. VARS/R. DESTRO	
PROJECT ENGINEER	
F. SHELLEY	
DRAWN BY	
D. TURNER	
SCALE	DATE ISSUED
N.T.S.	NOVEMBER 14, 2025
PROJECT NO.	
2850	
DRAWING NO.	
13	
(SHEET 1 OF 3)	

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CATCH BASIN DETAIL

NTS



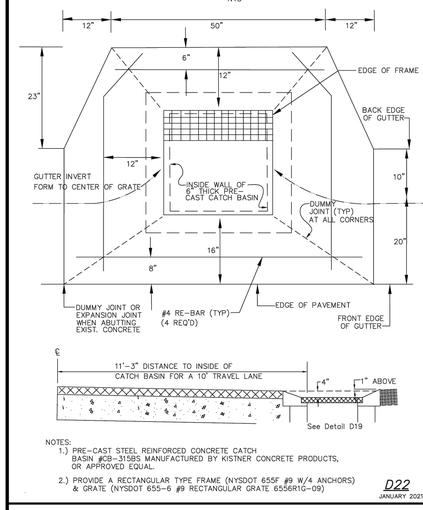
NOTES:

1. PRECAST STEEL REINFORCED CONCRETE CATCH BASIN #CB-3158S MANUFACTURED BY KISTNER OR APPROVED EQUAL (24" SQUARE).
2. MINIMUM INSIDE DEPTH 36" (TOP OF GRATE TO INVERT)
3. MAXIMUM INSIDE DEPTH 48"(TOP OF GRATE TO INVERT)
4. ALL GRADE ADJUSTMENTS SHALL BE MADE WITH MANUFACTURED RINGS OR FORMED & POURED CONCRETE (4000 PSI).
5. 4" WEEP PIPES INSTALLED 20" BELOW GUTTER INVERT AND SHALL EXTEND 10" IN EITHER DIRECTION. PROVIDE MANUFACTURED CAP.
6. MAX PIPE SIZE INTO OR OUT OF CATCH BASIN 12".
7. UNUSED KNOCKOUTS TO BE FILLED WITH BRICK & MORTAR TO A FULL 6" THICKNESS.
8. CATCH BASIN EXTERIOR SHALL BE COATED WITH BITUMASTIC 300M OR SUPER SERVICE BLACK, MANUFACTURED BY KOPPERS OR APPROVED EQUAL. THE INTERIOR SHALL BE COATED WITH 2 COATS OF EPOXY RESIN DAMP PROOFING.

D19
JANUARY 2021

GUTTER & CATCH BASIN APRON DETAIL

NTS



NOTES:

1.) PRE-CAST STEEL REINFORCED CONCRETE CATCH BASIN #CB-3158S MANUFACTURED BY KISTNER CONCRETE PRODUCTS, OR APPROVED EQUAL.

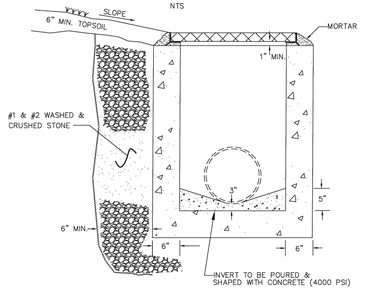
2.) PROVIDE A RECTANGULAR TYPE FRAME (NYSDOT 655F #9 W/4 ANCHORS) & GRATE (NYSDOT 655-6 #9 RECTANGULAR GRATE 6556R1G-09)

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D20
JANUARY 2021

FIELD INLET DETAIL

NTS



NOTES:

1. PRECAST STEEL REINFORCED CONCRETE CATCH BASIN MANUFACTURED BY KISTNER (CB-3158S) OR APPROVED EQUAL.
2. MINIMUM INSIDE DEPTH 36"
3. MAXIMUM INSIDE DEPTH 48" (TOP OF GRATE TO INVERT)
4. ALL GRADE ADJUSTMENTS SHALL BE MADE WITH MANUFACTURED RINGS OR FORMED & POURED CONCRETE (4000 PSI).
5. MAX PIPE SIZE INTO OR OUT OF CATCH BASIN 18".
6. UNUSED KNOCKOUTS TO BE FILLED WITH BRICK & MORTAR TO A FULL 6" THICKNESS.
7. CATCH BASIN EXTERIOR SHALL BE COATED WITH BITUMASTIC 300M OR SUPER SERVICE BLACK, BOTH MANUFACTURED BY KOPPERS OR APPROVED EQUAL. THE INTERIOR SHALL BE COATED WITH 2 COATS OF EPOXY RESIN DAMP PROOFING.

D20
JANUARY 2021

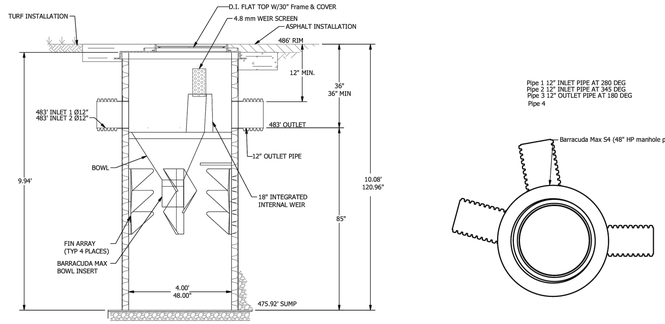
BARRACUDA MAX S4	
UNIT ID	Barracuda
PEAK FLOW RATE (CFS)	
TREATMENT FLOW RATE (CFS)	0.22

ATTENTION

THIS TREATMENT UNIT WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON GROUNDWATER LEVELS. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE GROUNDWATER LEVEL RELATIVE TO THE BURIED DEPTH OF THE UNIT. IF THE GROUNDWATER DEPTH ABOVE THE BOTTOM OF THE SUMP EXCEEDS ONE-THIRD THE DEPTH OF THE UNIT, CONTACT ADS FOR SOLUTIONS. SEE TECHNICAL NOTE 5.22 FOR GUIDANCE.

PRODUCT SPECIFICATIONS

- THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.
- THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 mg/L INFLUENT CONCENTRATION. SAID FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.
  -OR-
  THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS USING A MEDIA MIX WITH ø50×75 MICRON AND 200 MG/L INFLUENT CONCENTRATION.
  -OR-
  THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS PER PREVIOUS 2013 NJDEP/NJCAT HDS PROTOCOL.



SECTION VIEW A-A
N.T.S.

PLAN VIEW
N.T.S.

HARTWELL HEIGHTS
PERINTON,NY
DATE: 11/12/25
DRAWING: XX
PROJECT: 2850

Barracuda Max
Stormwater Separator

ADS
4640 TRUEMAN BLVD
HILLIARD, OH 43026

NOT TO SCALE

SHEET
2 OF 2

THIS DRAWING AND DESIGN PRESENTED HEREON ARE PROPRIETARY TO ADS, UNDER THE LIMITS OF THE SITE FOR WHICH IT WAS PREPARED AND PUBLISHED. ITS USE FOR ANY OTHER PURPOSE IS PROHIBITED. THE SITE DESIGN ENGINEER SHALL REVIEW THE DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE ENGINEER TO ENSURE THE PROPER SELECTION AND PERFORMANCE OF THE STORMWATER TREATMENT UNIT.

STORM WATER MANAGEMENT FACILITY OUTLET STRUCTURE DETAIL

N.T.S.

CONCRETE SIDEWALK DETAIL

NTS

NOTES:

1. CONSTRUCTION EXPANSION JOINTS TO BE INSTALLED EVERY 25 FEET.
2. DUMMY JOINTS MINIMUM 1" DEEP TO BE SCORED EVERY 5 FEET.
3. ALL EXPOSED CONCRETE SURFACES SHALL BE BROOM FINISHED.
4. ALL EXPOSED CONCRETE TO RECEIVE TWO COATS OF A COMBINATION CURING COMPOUND-SEALER.
5. ALL WORK SHALL CONFORM TO ADA REQUIREMENTS

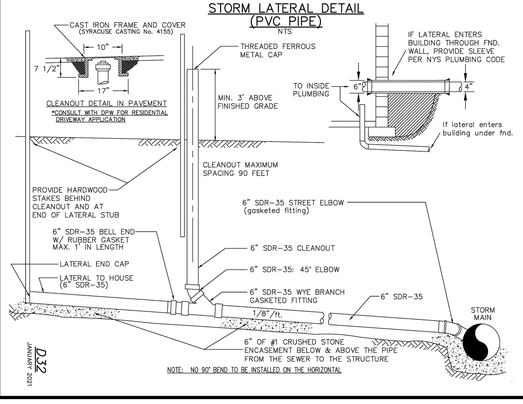
*SPECIAL NOTE

UNLESS OTHERWISE APPROVED BY THE COMMISSIONER OF PUBLIC WORKS, AT NO TIME SHALL THE SIDEWALK BACK EDGE BE LOWER THAN THE EDGE OF PAVEMENT OF ADJACENT ROADWAYS. ALL SIDEWALKS SHALL BE DESIGNED TO ALLOW FOR POSITIVE DRAINAGE OF ROADWAYS OR ADJACENT PROPERTIES AND NOT CREATE A BARRIER FOR POSITIVE DRAINAGE. PROPER DRAINAGE MAY BE MAINTAINED THROUGH THE USE OF YARD INLETS OR PROPER SIZE STORM CROSSOVER PIPE OF ADEQUATE LENGTH WITH END SECTIONS.

D17
JANUARY 2021

STORM LATERAL DETAIL (PVC PIPE)

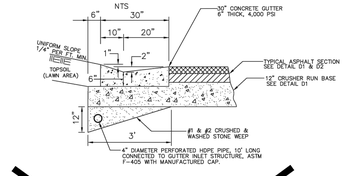
NTS



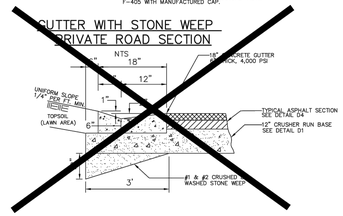
NOTE: NO 90° BEND TO BE INSTALLED ON THE HORIZONTAL

D24
JANUARY 2021

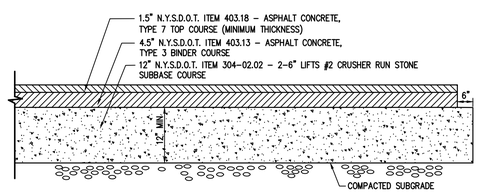
GUTTER WITH STONE WEEP & UNDERDRAIN STANDARD / COLLECTOR ROAD SECTION



GUTTER WITH STONE WEEP PRIVATE ROAD SECTION

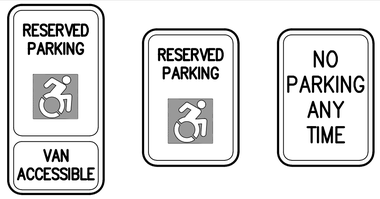


D6
JANUARY 2021



DRIVE LANE PAVEMENT SECTION

N.T.S.

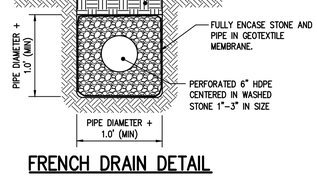


NOTES:

1. SIGN TO BE MOUNTED TO A 2" DIA. STEEL PIPE SET IN 3'6" DEEP BY 10" DIA. CONCRETE 3000 PSI. BASE, SET BELOW GRADE.
2. SIGN TO BE MOUNTED 6.0' FROM FINISHED GRADE TO BOTTOM OF SIGN.
3. ONE (1) OUT OF EVERY SIX (6) ACCESSIBLE SPACES SHALL BE VAN ACCESSIBLE.

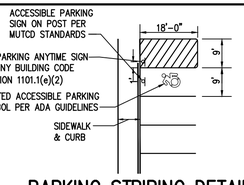
ACCESSIBLE PARKING SIGNS DETAIL

N.T.S.



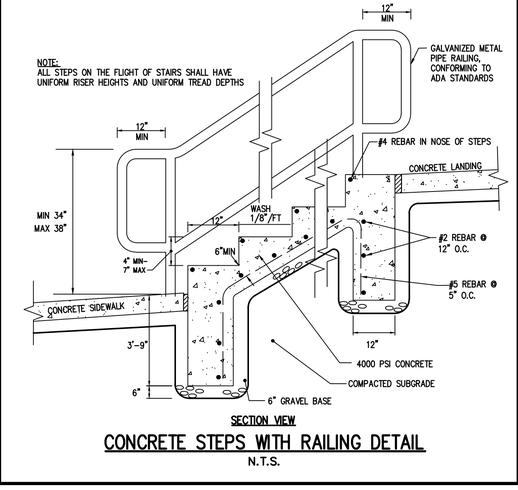
FRENCH DRAIN DETAIL

N.T.S.



PARKING STRIPING DETAIL

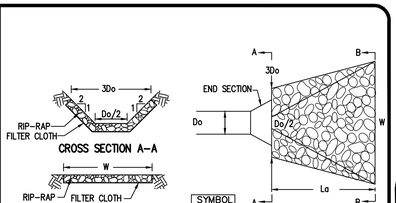
N.T.S.



SECTION VIEW

CONCRETE STEPS WITH RAILING DETAIL

N.T.S.



RIP-RAP OUTLET DIMENSIONS

DESIGNATION	DIA. OF PIPE Do	3Do	La	W
D	12"	3'	14'	15'

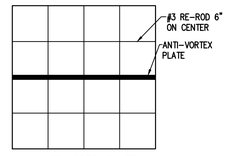
RIP-RAP OUTLET PROTECTION DETAIL

N.T.S.

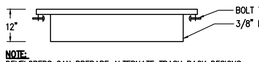


ACCESSIBLE PARKING SYMBOL DETAIL

N.T.S.



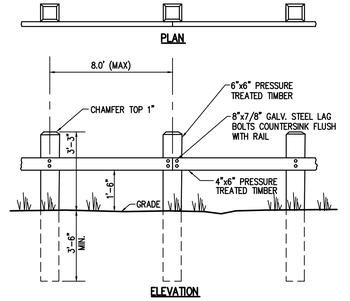
ANTI-VORTEX PLATE



NOTE:
DEVELOPERS CAN PREPARE ALTERNATE TRASH RACK DESIGNS. (MANUFACTURED GRATES, ETC.)

TRASH RACK DETAIL

N.T.S.



TIMBER GUIDE RAIL

NTS

Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

NO.	REVISIONS	DATE	BY
1	REVISED PER TOWN AND AGENCY COMMENTS	2/13/26	DTT
2			
3			
4			
5			
6			
7			

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STATE OF NEW YORK
BRIAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

HARTWELL HEIGHTS
TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE

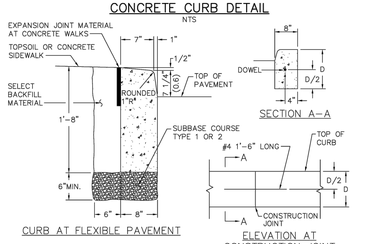
PROJECT
LOCATION
CLIENT
WDG2, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534

PRELIMINARY/FINAL
DRAWING TITLE
DETAIL SHEET

PROJECT MANAGER	
P. VARS/R. DESTRO	
PROJECT ENGINEER	
F. SHELLEY	
DRAWN BY	
D. TURNER	
SCALE	DATE ISSUED
N.T.S.	NOVEMBER 14, 2025
PROJECT NO.	
2850	
DRAWING NO.	
14	
(SHEET 2 OF 3)	

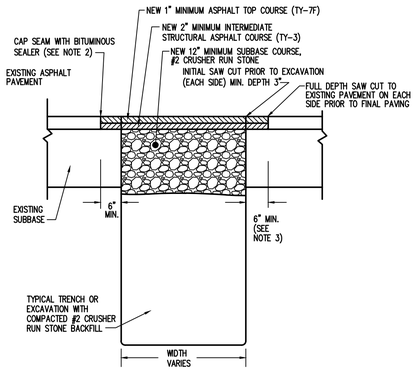
P:\2850\Drawings\Final\2850 Detail Base.dwg

CONCRETE CURB DETAIL
NTS



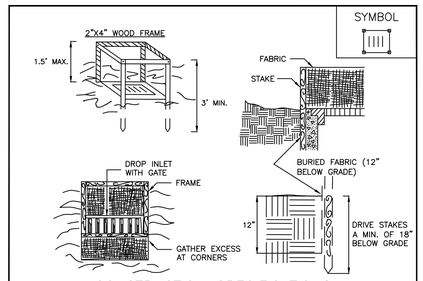
NOTES:
1. GRADED STONE BACKING SHALL BE PLACED ONLY WHERE SIDEWALK DOES NOT ABUT CURB.
2. PROVIDE 0" REVEAL FOR HEADER CURB AT SIDEWALK RAMPS, AND 1" REVEAL FOR HEADER CURB AT DRIVEWAYS.

D14
JANUARY 2021



NOTES:
1. EXISTING PAVEMENT SHALL BE SAW CUT TO OBTAIN A STRAIGHT AND NEAT EDGE FOR PAVING. FINAL SAW CUT SHALL BE MADE PRIOR TO PAVING AFTER BACKFILL OF TRENCH TO BOTTOM OF NEW PAVEMENT
2. ALL SEAMS BETWEEN EXISTING AND NEW ASPHALT SURFACES SHALL BE SEALED WITH AN ASPHALT FILLER CORRESPONDING TO THE MATERIAL REQUIREMENTS OF N.Y.S.D.O.T. TABLE 702-5 MATERIAL DESIGNATION 702-3401. COST TO FURNISH AND APPLY THIS MATERIAL SHALL BE INCLUDED IN THE PRICE BID FOR ASPHALT TOP
3. 6" MIN. TO BE FROM EDGE OF UNDISTURBED EARTH

PAVEMENT RESTORATION – TRENCH DETAIL
N.T.S.

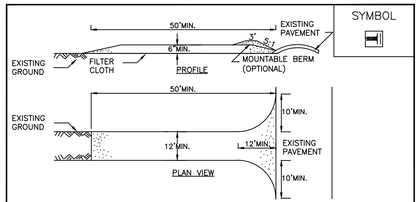


CONSTRUCTION SPECIFICATIONS

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

MAXIMUM DRAINAGE AREA 1 ACRE

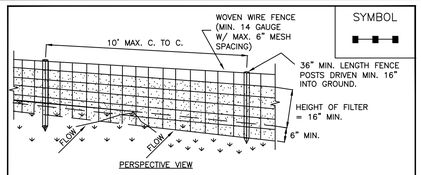
ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	FABRIC DROP INLET PROTECTION



CONSTRUCTION SPECIFICATIONS

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

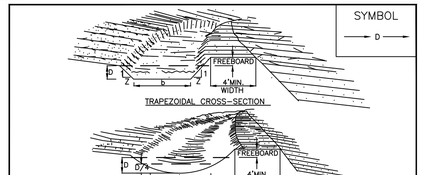
ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	STABILIZED CONSTRUCTION ACCESS



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER–LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

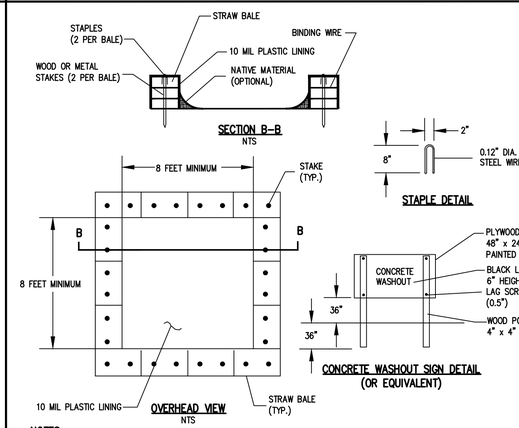
ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	SILT FENCE



CONSTRUCTION SPECIFICATIONS

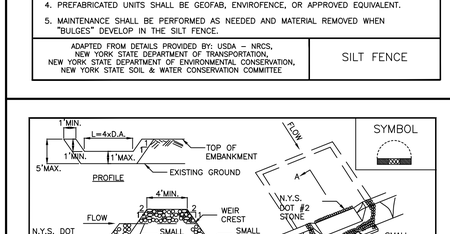
1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIVERSION.
2. THE DIVERSION SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETE DIVERSION.
4. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIVERSION.
5. STABILIZATION SHALL BE DONE ACCORDING TO THE APPROPRIATE STANDARD AND SPECIFICATIONS FOR VEGETATIVE PRACTICES.
   A. FOR DESIGN VELOCITIES OF LESS THAN 3.5 FT. PER. SEC., SEEDING AND MULCHING MAY BE USED FOR THE ESTABLISHMENT OF THE VEGETATION. IT IS RECOMMENDED THAT, WHEN CONDITIONS PERMIT, TEMPORARY DIVERSIONS OR OTHER MEANS SHOULD BE USED TO PREVENT WATER FROM ENTERING THE DIVERSION DURING THE ESTABLISHMENT OF THE VEGETATION.
   B. FOR DESIGN VELOCITIES OF MORE THAN 3.5 FT. PER. SEC., THE DIVERSION SHALL BE STABILIZED WITH SOD, WITH SEEDING PROTECTED BY JUTE OR EXCELSIOR MATTING OR WITH SEEDING AND MULCHING INCLUDING TEMPORARY DIVERSION OF THE WATER UNTIL THE VEGETATION IS ESTABLISHED.

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	DIVERSION



NOTES:
1. DETAIL SHOWS AN ABOVE GRADE CONCRETE WASHOUT. THE MINIMUM SIZE SHALL BE 8 FEET BY 8 FEET AT THE BOTTOM AND 2 FEET DEEP. IF EXCAVATED, THE SIDE SLOPES SHALL BE 2 HORIZONTAL TO 1 VERTICAL.
2. ACTUAL LAYOUT DETERMINED IN THE FIELD. LOCATE THE FACILITY A MINIMUM OF 100 FEET FROM DRAINAGE SWALES, STORM DRAIN INLETS, WETLANDS, STREAMS AND OTHER SURFACE WATERS.
3. WASHOUT STATION SHOULD BE CLEANED WHEN CONCRETE ACCUMULATES TO 75% OF THE STORAGE VOLUME. ANY EXCESS WASH WATER SHALL BE PUMPED INTO A CONTAINMENT VESSEL AND PROPERLY DISPOSED OF OFF SITE.
4. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
5. THE PLASTIC LINER SHALL BE REPLACED WHENEVER THE LINER IS TORN, PUNCTURED, OR THE WASHOUT IS EMPTIED.

CONCRETE WASHOUT DETAIL
N.T.S.



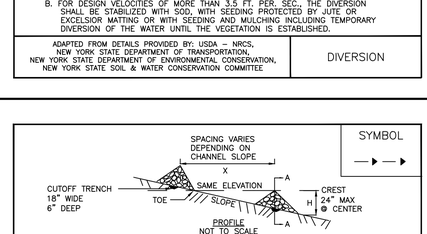
OPTION: A ONE FOOT LAYER OF N.Y.S. DOT #2 STONE MAY BE PLACED ON THE UPSTREAM SIDE OF THE RIPRAP INPLACE OF THE EMBEDDED FILTER CLOTH.

CONSTRUCTION SPECIFICATIONS

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER–SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"–8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UP–GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMEN–SIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. IT SHALL BE PLACED ON SITE AND STABILIZED.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND SEDIMENT ARE CONTROLLED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

MAXIMUM DRAINAGE AREA 5 ACRES

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	STONE OUTLET SEDIMENT TRAP ST–II

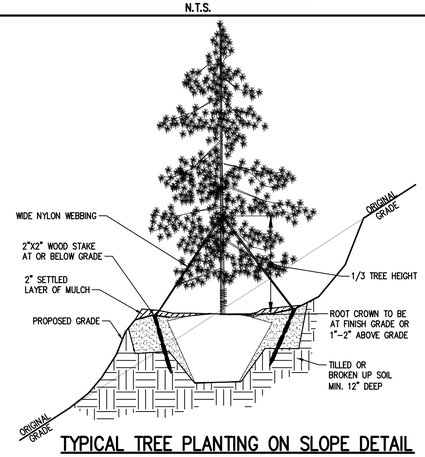


CONSTRUCTION SPECIFICATIONS

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

MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	STONE CHECK DAM



TYPICAL TREE PLANTING ON SLOPE DETAIL
N.T.S

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BME Associates

Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

NO.	REVISIONS	DATE	BY
1	REVISED PER TOWN AND AGENCY COMMENTS	2/13/26	DTT
2			
3			
4			
5			
6			
7			

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STATE OF NEW YORK
RYAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

HARTWELL HEIGHTS
PROJECT
TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
LOCATION
WDG2, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534
CLIENT
PRELIMINARY/FINAL
DETAIL SHEET
DRAWING TITLE

PROJECT MANAGER	
P. VARS/R. DESTRO	
PROJECT ENGINEER	
F. SHELLEY	
DRAWN BY	
D. TURNER	
SCALE	DATE ISSUED
N.T.S.	NOVEMBER 14, 2025
PROJECT NO.	2850
DRAWING NO.	15
	(SHEET 3 OF 3)

Engineer's Report
for
Hartwell Heights

Town of Perinton, Monroe County, New York

Prepared for:

WDG2, LLC
P.O. Box 34
Pittsford, NY 14534

Prepared by:

BME ASSOCIATES
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November 14, 2025
Last Revised February 12, 2026

Project No. 2850

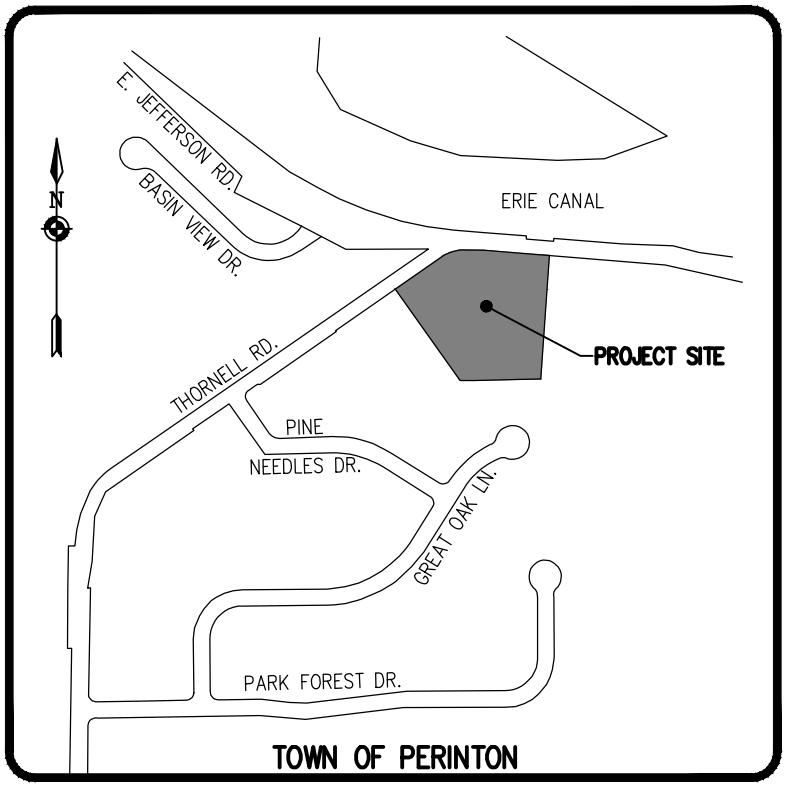


FIGURE 01 – LOCATION MAP

NOT TO SCALE

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A. Introduction

On behalf of WDG2, LLC, the owner/applicant of the subject property(s), we submit this Engineer's Report with a Preliminary & Final Site Plan application to allow for a mixed-use development located at 2 Thornell Road which consists of an existing office building and a mixture of proposed residential units.

The project consists of four (4) tax parcels, totaling ±3.42 acres located within the Town of Perinton's Mixed-Use zoning district. The proposal includes the following permitted uses within the Mixed-Use District:

- One (1) 10-unit, two story multifamily apartment buildings (10 units total)
- One (1) 6-unit, two story multifamily apartment buildings (6 units total)
- One (1) 2-unit townhouse building (2 units total)
- One (1) existing single story, single-family home (to remain) (1 unit total)
- Five (5) single story, single-family cottages (5 units total)
- 24 total residential rental units

- One (1) existing 1,900 sf office building (to remain at 2 Thornell Road under the current use)

On August 13, 2025, the Perinton Town Board issued a SEQR Negative Declaration and granted a Special Use Permit (SUP) to allow for a mixed-use development on the subject property. The property is currently zoned MU (Mixed-Use). The proposed residential uses (townhome units and apartments units) and existing office use are permitted in the Town of Perinton Mix-Use District.

The following provides the technical data to support the proposed action. The report includes sanitary sewer discharge estimate and water supply analysis, a comprehensive stormwater management report, and a discussion on soils, wetlands and floodplain areas, and construction practices. The design herein has been completed per the Town of Perinton standards.

B. Site Access and Parking

The subject property has frontage along both Thornell Road (County Road 33) and Pittsford Victor Road (NYS Route 96). The subject property includes an existing access onto Thornell Road (currently serving the office located at 2 Thornell Road & a single-family home at 4 Thornell Road), and another existing curb cut onto NYS Route 96. Both access points are proposed to remain to serve the development with 2-way vehicular access and to allow pedestrian access to the existing Town of Perinton public sidewalk system along the limits of the property frontage. A Traffic Study was prepared and reviewed by both the Monroe County Department of Transportation (MCDOT) and the New York State Department of Transportation (NYSDOT) as part of the SUP application. Following their review, the Thornell Road access will remain as a full 2-way access, while the Pittsford Victor Road access is proposed to include geometry for right in/right out and left in only from NYS Route 96 as approved by the NYSDOT.

The NYSDOT also reviewed the traffic study for the proposed development and issued a comment letter on July 2, 2025 which states: "We agree there will not be any significant impacts to the intersections of Route 96 with Thornell Road, Marsh Road, or Kreag Road as a result of this development."

The current site development proposal remains consistent with previous agency submissions and two (2) Vehicle Turning exhibits are provided within Appendix D of this report demonstrating vehicular movement through the site of an aerial fire truck. Referenced correspondence is also included in Appendix D.

C. Water Supply

Water supply will be provided from a proposed 8" PVC DR-14 private combined water service connection to the existing 8" ductile iron watermain, operated by the Monroe County Water Authority (MCWA), located along Pittsford-Victor Road. The 8" PVC DR-14 main will serve one (1) on-site private hydrant.

Each of the two (2) apartments buildings (equipped with a sprinkler systems) will connect to the private main via 6" PVC DR-18 services. Each of the five (5) remaining new buildings will be served by individual 1" PE #4710 services from the proposed private combined service. The existing residential building and office building will maintain existing individual connections to the public water main and are not analyzed.

A simulated hydrant flow test was provided by MCWA on November 11, 2025, located at the hydrant near 589 Pittsford-Victor Road. A copy of the flow test is located within Appendix A, which was utilized in the hydraulic modeling for the project.

The water will be metered, and a backflow prevention device will be installed on the proposed service within an underground vault located at the north end of the site prior to the first point of use for the development. A backflow application will be submitted to MCWA for review and approval.

Analysis of the proposed conditions shows that all proposed units for this development meet the required pressure minimums of 35 psi at the first-floor elevation under domestic flow conditions and 20 psi within the public and private system under fire flow conditions. The estimated daily demand for the residential component of the development is 5,610 gallons per day (gpd), based on 110 gpd/bedroom x 51 new bedrooms. A total domestic demand of 69 gallons per minute (gpm) (3 gpm/unit x 23 new residential units) and a total fire demand of 1,023 gpm (1 gpm/unit, plus 1,000 gpm at the private onsite hydrant). Water supply calculations are provided in Appendix A and are also summarized below.

New Domestic Demand = 69 gpm
Lowest Domestic Pressure = 58 psi at Cottage/Townhome 6
Fire Demand = 1,023 gpm
Lowest Fire Pressure = 20 psi within public and private mains

D. Sanitary Sewer

The property is within a Town of Perinton sanitary sewer district, and an existing sanitary sewer system runs east/west within the southerly right-of-way of Pittsford-Victor Road to serve the project site. The Town has indicated that the existing sanitary sewer can accept additional flow from the proposed project.

A proposed 8" PVC sanitary sewer will be connected to the existing sanitary sewer and extended south to serve the project site. The proposed sanitary will be public, and individual private 4"/6" PVC sanitary laterals will be extended to each proposed building as shown on the plan.

The anticipated new sanitary sewer flow contribution to the Town of Perinton is ±5,610 gallons per day (gpd) (based upon 110 gpd per new bedroom). The anticipated hourly flow is ±935 gallons per hour (gph) (with a peak factor of 4.0, per Figure 1 of the 10-State Standards).

E. Stormwater Management

Overview:

Stormwater runoff associated with the proposed project will be treated during and after construction to meet New York State Department of Environment Conservation (NYSDEC) water quality and quantity requirements. One new permanent infiltration basin stormwater management facility will be constructed to capture and infiltrate runoff from the developed areas of the property at controlled rates. The stormwater management plan for the project is designed in accordance with the current rules and regulations set in the NYSDEC Stormwater Management Design Manual (July 2024) and the Town of Perinton requirements.

Methodology:

The stormwater management facility proposed for the project has been designed in basic compliance with the *New York State Stormwater Management Design Manual* (January 2024). The Design Manual provides specifications and sizing criteria for stormwater management practices that ensure compliance

with the NYSDEC water quality and water quantity requirements for stormwater discharges. The proposed stormwater management facilities for this project have been designed to meet the five key criteria outlined in the Design Manual:

- Water quality volume to meet pollutant removal goals (WQv);
- Runoff Reduction volume (RRv) to meet runoff reduction goals;
- Channel protection volume (Cpv) to reduce channel erosion;
- Overbank flood protection (Qp) to prevent overbank flooding; and
- Extreme storm protection (Qf) to help control extreme floods.

The existing and proposed drainage conditions at the project site were analyzed following the methods outlined in Soil Conservation Service Technical Release No. 55. Peak runoff rates for existing and post-development conditions were modeled for the 1, 2, 5, 10, 25, 50, and 100-year storm events using the HydroCAD 10.20-5c software. Runoff rates were determined based on the hydrologic characteristics of the site (soil conditions, existing and proposed land cover, time of concentration for the contributing drainage areas) and the hydraulic characteristics of the proposed stormwater management facility (type of storage, size of facility and outlet structure features and sizing as applicable). Twenty-four (24) hour extreme storm event precipitation amounts were obtained from Northeast Regional Climate Center online web tool and have been included in Appendix B for reference. Appendix B contains stormwater hydrographs and subarea information. These stormwater hydrograph reports show the subarea routings, subarea data, stormwater management facility and outlet structure sizing, estimated detention times, storage volumes, peak ponding elevations, and discharge rates.

Soils:

The Natural Resources Conservation Service (NRCS) indicates that the project site and adjoining areas contain soils of hydrologic soil group (HSG) “A”. NRCS mapping indicated the site contains Colonie loamy fine sand. A Hydrologic Soil Group map obtained from the Natural Resource Conservation Service, Web Soil Survey, has been included in Appendix B.

Based upon field investigations by this office, the site appears well-drained and suited for the infiltration practice where proposed. A geotechnical evaluation and report summary by Foundation Design, dated November 6, 2025, has been completed for the project and is included in Appendix B. The geotechnical report includes infiltration results and test pit / soil sample data which identify a typical soil profile consisting of topsoil underlaid by sand or silt. These findings support the occurrence of the loamy fine sand identified NRCS Web Soil Survey mapping.

Existing Conditions:

The analyzed watershed for the project totals approximately 5.01 acres, and under existing conditions consists of three drainage subareas (see Figure 02 in Appendix b). The project site is gently sloped/rolling terrain from the south to the west and south to the northeast and includes two residential-styled buildings and driving surfaces consisting of pavement and stone/grave driveways and parking space and concrete sidewalks. The designated analysis points were selected to provide a comparison of pre- and post-development flows within and leaving the project, as shown on the Existing and Proposed Drainage Maps contained in Appendix B. Table 1 provides a summary of the existing subareas, and are described in further detail below:

Table 1: SCS Hydrologic Data, Existing Conditions

Subarea	HydroCAD Node	Area	Curve Number (CN)	Time of Concentration (Tc)
A-1	1	2.36 acres	33	22.3 minutes
A-2	2	2.05 acres	43	17.3 minutes
B	5	0.60 acres	53	21.3 minutes

Existing Subarea A-1 includes the central portion of the site which currently slopes to a low area north/east of the existing driveway between #2 and 4 Thornell Road and any generated runoff would be directed to a driveway culvert discharging into an existing low area between house 4 Thornell Road and the public roadway with no outlet which effectively acts as a stormwater infiltration basin. The area is gently rolling, and ground cover includes wooded, impervious surfaces (driveways, buildings, roadway and sidewalks), and maintained lawn areas. Under existing drainage conditions analysis, this sub area does not discharge into the driveway culvert under the 1 through 50-year design storm events and the 100-year design storm does not generate any appreciable runoff downstream.

Existing Subarea A-2 includes the south and westerly limit of the analyzed overall drainage study and contains a small portion of the southwest corner of the project site. This area includes a high point at the approximate midpoint of the proposed development which slopes westerly and offsite to the existing infiltration basin area referenced in Subarea A-1. This area is gently sloping from the east to west and includes areas of impervious surfaces (driveways, buildings, roadway and sidewalks). Lack of perched water within the infiltration basin suggests the presence of permeable soils, allowing the runoff from this subarea to infiltrate into the ground. Under existing drainage conditions analysis, this sub area does not discharge downstream under any of the analyzed design storm events.

Existing Subarea B includes the northeasterly portion of the site which includes gentle slopes from the south to northeast where runoff enters the public roadway of Pittsford Victor Road. Ground cover in this subarea includes areas of impervious surfaces (driveways, buildings, roadway and sidewalks), wooded, and maintained lawn areas.

Proposed Conditions:

The drainage subareas for the post-development conditions (see Figure 03 in Appendix B) have been delineated per the proposed grading of the site development. The analyzed drainage area includes approximately 5.01 acres, which is consistent with the existing area analyzed, and is composed of 4 subareas. Drainage under proposed conditions will continue to drain toward the analysis point to allow for a comparison to pre-development flow rates. Table 2 provides a summary of the proposed subareas, and are described in further detail below:

Table 2: SCS Hydrologic Data, Proposed Conditions

Subarea	HydroCAD Node	Area	Curve Number (CN)	Time of Concentration (Tc)
A-1	101	2.83 acres	68	15.5 minutes
A-2	103	1.92 acres	44	17.6 minutes
B	106	0.26 acres	53	18.2 minutes

Proposed Subarea A-1 contains the majority of the proposed site development and includes an increase of area (+0.46 acre) directed to the driveway culvert referenced in Existing Subarea A. This subarea consists of new impervious areas and existing/proposed maintained lawn areas. A proposed Infiltration Basin is located at the upstream end of the existing driveway culvert representing the subarea analysis point.

Proposed Subarea A-2 contains the remaining western portion of the project site that drains toward the existing infiltration basin described in Existing Subarea A-2. This area includes minor areas of pavement removal and installation which represent no appreciable increase in impervious areas over existing conditions. The boundary of the subarea is reduced from existing conditions (-0.13 acre) and ground cover remains consistent with existing conditions.

Proposed Subarea B contains the northeastern portion of the project site proposed to be developed and continues to slope to the northeast corner of the site where runoff enters the Pittsford Victor Road right of

way. This subarea includes a reduction in area from existing conditions (-0.34 acre) is proposed to include ground surface cover of impervious surfaces and maintained lawn areas.

Stormwater Management Facility (Infiltration Basin):

The Proposed Stormwater Management Facility (SWMF) located at the analysis point for proposed Subarea A-1 is designed and will be constructed as an infiltration basin for runoff entering the facility. The proposed facility has been sized to treat (water quantity and quality) the proposed easterly portion of the development and drainage area directed to the practice.

The design includes a proposed 2'x2' outlet structure constructed on the existing 12" driveway culvert proposed to direct stormwater more than the 100-year design storm event into the existing infiltration basin in Subarea A-2. This overflow structure will only be anticipated to be utilized under flow volumes more than the 100-year storm event. The proposed infiltration basin will contain the 100-year design storm volume at least 1' below a proposed berm between the basin and #2 Thornell Road. The low point of the private driveway to #4 Thornell Road will also serve as an additional spillway for any event over the 100-year storm that will not be conveyed by the driveway culvert. These spillways will direct overflow drainage into the existing infiltration basin south of the private driveway.

Practice pretreatment is provided in the amount of 100% of the required water quality volume using a proprietary water quality unit installed within a concrete manhole upstream of the infiltration basin. The project plans include details for an ADS "Barracuda Max" unit, which has been sized based on the calculated pond inflow during a 1-year storm event. This 1-year design storm was utilized for sizing in lieu of the standard first flush water quality storm event as the 1" water quality storm event resulted in no runoff.

Specific planting and seeding treatments for the facility have been identified on the design plans and will promote biofilm absorption of dissolved pollutants and nutrients.

As referenced above, test pits were completed for this property by Foundation Design. Per their report, the site consists of permeable sandy/silt soils. Infiltration rates observed, documented, and identified in the Foundation Design report and within the basin ranged between 4" and 24" per hour and the basin was modeled with a conservative 4" per hour infiltration rate

Storage volume for detention purposes will be provided between the bottom of the infiltration basin and the proposed emergency outflow structure rim. The pond berm is designed to be at least one foot above the emergency pipe. Sufficient storage volume is provided in the facility to effectively detain and infiltrate the 1, 2, 5, 10, 25, 50, and 100-year design storms. The overflow is located above the proposed 100-year ponding elevation; therefore, it should only be needed for storms having an intensity greater than a 100-year storm. Table 3 below contains the ponding elevation data for the ponding volume areas and the outflow data.

Table 3: SWMF (Infiltration Basin) Summary

Design Storm Event	Post-Dev. Inflow (cfs)	Post Dev. Outflow (cfs)	Ponding Elevation (ft)	Storage Volume Used (cf)
1-yr	0.22	0.0	476.26	188
2-yr	0.53	0.0	476.72	585
5-yr	1.29	0.0	477.57	1,569
10-yr	2.15	0.0	478.33	2,750
25-yr	3.68	0.0	479.38	4,965
50-yr	5.28	0.0	480.27	7,395
100-yr	7.25	0.0	481.22	10,555

Infiltration Rate (modeled)	4.0 in/hr	Total Available Storage Volume @ Elev = 483.0 (cf)	18,470
Top of Berm Elev.	483.5		
2'x2' Outlet Structure Rim	481.5		

Table 4: Comparison of Existing and Proposed Peak Runoff Rates

	Design Storm	Existing Peak Runoff Rate (cfs)	Proposed Peak Runoff Rate (cfs)
Analysis Point A-1 (Proposed Infiltration Basin)	1	0.00	0.0
	2	0.00	0.0
	5	0.00	0.0
	10	0.00	0.0
	25	0.00	0.0
	50	0.00	0.0
	100	**0.02**	0.0
Analysis Point A-2 * (Existing Infiltration Basin/Area)	1	0.0	0.0
	2	0.0	0.0
	5	0.0	0.0
	10	0.0	0.0
	25	0.0	0.0
	50	0.0	0.0
	100	0.0	0.0
Analysis Point B (Northeast corner site discharge)	1	0.00	0
	2	0.00	0
	5	0.00	0
	10	0.01	0.01
	25	0.08	0.06
	50	0.20	0.13
	100	**0.40**	0.24

* Rate as noted is based on the estimated infiltration rate within the existing infiltration basin.

Stormwater Quality and Runoff Reduction:

The July 2024 NYSDEC Stormwater Management Design Manual outlines numerous practices that can be constructed to improve the water quality and reduce the runoff volume of stormwater runoff. Reduced Runoff Volume (RRv) is the reduction of the total Water Quality Volume (WQv) by application of green infrastructure techniques and standard management practices to replicate pre-development hydrology. The stormwater plan includes an infiltration basin to meet the WQv and minimum allowable RRv requirements.

The intent of the green infrastructure measures is to replicate the pre-construction infiltration, peak runoff flow and discharge volume, as well as minimization of concentrated flow by using runoff control techniques to provide treatment in a distributed manner before runoff reaches offsite discharge locations. The green infrastructure practices have been designed to comply with the NYSDEC guidelines. Calculations were completed to show that the project site can effectively meet the overall WQv and minimum allowable RRv requirements, and these calculations have been provided in Appendix C. The calculations have also been summarized below.

Infiltration Basin (SWMF) is proposed within the low area north/east of the existing private drive at the existing driveway culvert and receives runoff from proposed drainage Subarea A1. Infiltration testing rates are anticipated to be between 4" and 24" per hour and therefore the facility requires pretreatment of 100% of the WQv contributing to it. Pre-treatment is provided within a pre-treatment water quality unit as described in the Stormwater Management Facility Section of this report.

RRv Provided: 3,813 cf (0.088 ac-ft)
WQv Provided: 3,813 cf (0.088 ac-ft)

Detailed calculations for the infiltration basin have been included in Appendix B.

Remaining Site Drainage Areas A-2 and B are anticipated to maintain total impervious area compared to existing (A-2) or reduce impervious area prior to offsite discharge by more than 25%, thus, no additional water quality controls are required for treatment per the NYS Stormwater Design Manual.

Stormwater Quantity and Quality Summary:

The proposed stormwater quality and quantity practice in the form of an infiltration basin satisfies both of the NYSDEC's Stormwater Design Manual key criteria relating to stormwater quality.

The information calculations provided within the report and appendices show that the proposed project complies with all key criteria of the latest NYSDEC Stormwater Design Manual. A summary of the existing vs. proposed runoff rates at the Analysis Points has been summarized with Table 4 in the previous section. Table 5 below summarizes each of the key criteria and how the project complies.

Table 5. Compliance with NYSDEC Sizing Requirements

New York Stormwater Sizing Criteria	Compliance
Overbank Flood Protection (Qp) *Control peak discharge from 10-year storm to 10-year pre-development rates*	Qp Existing: 0.01 cfs Qp Proposed: 0.01 cfs *(taken at Analysis Point B)*
Extreme Storm Protection (Qf) *Control peak discharge from 100-year storm to 100-year pre-development rates*	Qf Existing: 0.40 cfs Qf Proposed: 0.24 cfs *(taken at Analysis Point B)*
Channel Protection Volume (Cpv)	CPv Required: 1,265 cf CPv Provided: 1,265 cf
Water Quality Volume (WQv) *(based on full build-out of the site)*	WQv Required: 3,813 cf (0.088ac-ft) WQv Provided: 3,813 cf (0.088ac-ft) **OK**
Runoff Reduction Volume (RRv) *(based on full build-out of the site)*	Minimum allowable RRv: 22,972 cf (0.53 ac-ft) RRv Provided: 69,587 cf (1.60 ac-ft) > 22,972 cf **OK**

See Appendix B for detailed water quantity, WQv, and RRv calculations.

Based on the above information, the proposed stormwater management design for the project satisfies the key criteria of the Stormwater Management Design Manual guidelines and will require a five-day Notice of Intent review to acquire permit coverage from NYSDEC under General Permit GP-0-25-001.

F. Erosion and Sediment Control

The proposed stormwater management facility and a comprehensive erosion control plan have been designed to control silt runoff and provide water quality treatment during and after construction. As required by the NYSDEC, the project will include a Stormwater Pollution Prevention Plan (SWPPP) that will combine the design presented in this report and on the plans with the requirements of NYSDEC GP-0-25-001 to outline how the owner will address the construction and post construction stormwater condition. The construction erosion control plan has been designed per the New York Standards and Specifications for Erosion and Sediment Control.

Additional erosion control measures will be implemented during construction to control silt and minimize disturbance to the existing swales and drainage conditions. Typical practices include the installation and maintenance of silt fence, stone check dams, temporary interception swales, rip rap outlet protection, and sediment traps. The disturbed areas will be seeded and mulched as soon as possible to control erosion.

Another facet of the erosion control plan will be the re-establishment of sloped areas disturbed during construction via establishment of vegetative cover. These areas have been identified on design plans. Pipe outlet control rip-rap measures are proposed with the storm sewer system. Appendix D includes the rip-rap sizing calculations for pipe outlet dissipation control.

The design plans include sequence of construction notes, as well as specific construction erosion control notes and details. The design plans will be reviewed at the pre-construction meeting with all parties involved as requested by the Town. Silt fence, stabilized construction entrance, and stone check dams are shown on the construction erosion control plans and detailed on the detail sheet. The details are per the New York State Standards and Specifications for Erosion and Sediment Control.

The final component of the erosion control plan will be maintenance. The contractor will be responsible for installing the erosion control features, as well as maintaining and replacing them as necessary throughout construction. As required, the Town of Perinton will review the erosion control measures to determine their efficiency, need for replacement, or need for additional measures. The developer and contractor will review the erosion control measures at a minimum of once per week depending on the total disturbed area. A SWPPP will be prepared for the project and is to be kept on-site along with the weekly reports which shall be copied to the Town of Perinton.

G. NY State Historic Preservation Office (SHPO)

Per the New York State Office of Parks, Recreation & Historic Preservation (SHPO), Cultural Resource Information System (CRIS), the property is located within an archaeological sensitive area. A copy of the CRIS mapping has been provided in Appendix E for reference. The applicant is coordinating review for potential effect to historic/prehistoric resources with SHPO and correspondence from this office will be submitted to the Town of Perinton under separate cover upon receipt.

H. NYS Natural Heritage Program

Per the NYSDEC EAF Mapper Summary Report and the NYSDEC Environmental Resource Mapper, the property does not include rare plants or animals, nor any endangered or threatened species. The Environmental Resource Map is located in Appendix E.

I. Wetlands

The project site does not contain any visible or identified surface water features, regulated wetland areas or Town identified LDD areas. Therefore, no disturbance is proposed to any surface water features, LDD areas and/or wetlands.

J. Floodplain

Per the FEMA Flood Insurance Rate Map (map number 36055C0386G with an Effective Date of August 28, 2008), the subject property does not contain a mapped FEMA Floodway or associated 100-year floodplain area. A copy of the Flood Insurance Rate Map is enclosed within Appendix E.

Appendix A

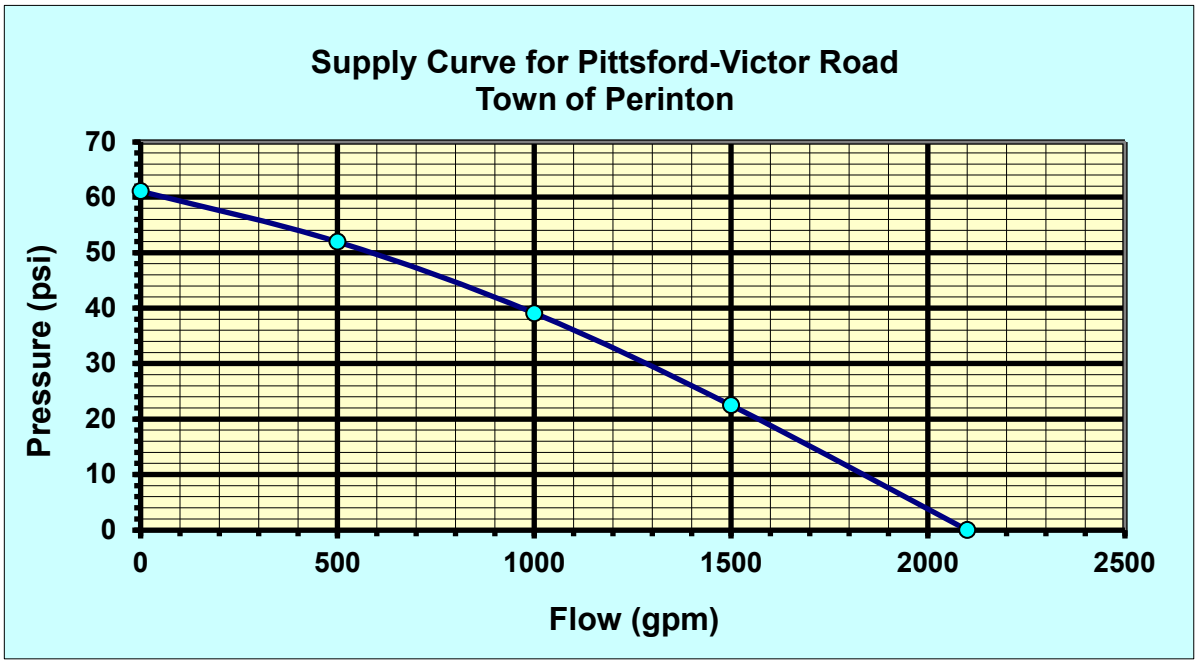
Water Supply Calculations

Computer Simulated Fire Flow Test/Supply Curve

Location: 589 Pittsford Victor Rd
Town of Perinton
Main: 8" CI
Elevation: 490'
Pressure Zone: 790W

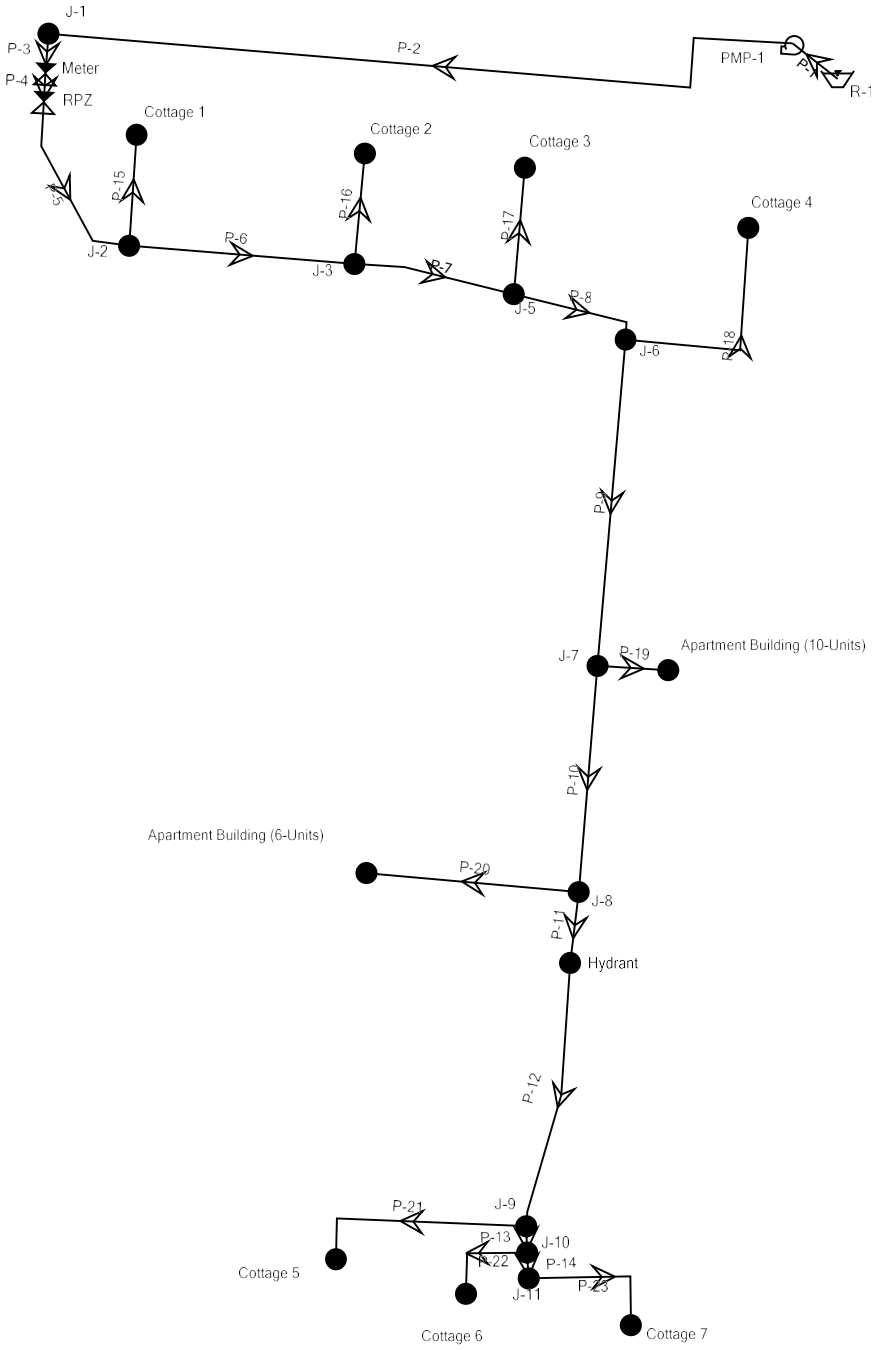
Supply Curve

Q	***PSI***	***H***
0	61.1	141.1
500	52	120.1
1000	39.1	90.3
1500	22.5	52.0
2100	0	0.0



The pressure and flow data provided herein represents a computer simulated average estimated value at this location in the distribution system from known and/or estimated system variables. The flow values indicated by the supply curve may vary greatly depending on demands, operational parameters, system configurations, subsequent modifications and other related criteria.

DOMESTIC


J-1
P-3
Meter
P-4
RPZ
P-2
PMP-1
R-1
Cottage 1
Cottage 2
Cottage 3
Cottage 4
P-15
P-16
P-17
P-18
J-2
P-6
J-3
P-7
J-5
P-8
J-6
P-9
J-7
P-19
Apartment Building (10-Units)
P-10
Apartment Building (6-Units)
P-20
J-8
P-11
Hydrant
P-12
P-21
J-9
P-13
J-10
P-22
P-14
P-23
J-11
Cottage 5
Cottage 6
Cottage 7

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
Apartment Building (6-Units)	491.90	<Collection: 1 item>	18	604.38	49
Apartment Building (10-Units)	492.80	<Collection: 1 item>	30	604.38	48
Cottage 1	490.50	<Collection: 1 item>	3	604.18	49
Cottage 2	491.20	<Collection: 1 item>	3	604.17	49
Cottage 3	492.10	<Collection: 1 item>	3	604.14	48
Cottage 4	491.10	<Collection: 1 item>	3	603.91	49
Cottage 5	493.90	<Collection: 1 item>	3	603.92	48
Cottage 6	493.90	<Collection: 1 item>	3	604.18	48
Cottage 7	494.50	<Collection: 1 item>	3	604.08	47
Hydrant	492.00	<Collection: 0 items>	0	604.38	49
J-1	488.50	<Collection: 0 items>	0	629.41	61
J-2	490.50	<Collection: 0 items>	0	604.40	49
J-3	490.00	<Collection: 0 items>	0	604.40	49
J-5	490.00	<Collection: 0 items>	0	604.39	49
J-6	489.50	<Collection: 0 items>	0	604.39	50
J-7	489.00	<Collection: 0 items>	0	604.39	50
J-8	492.00	<Collection: 0 items>	0	604.38	49
J-9	494.00	<Collection: 0 items>	0	604.38	48
J-10	493.50	<Collection: 0 items>	0	604.38	48
J-11	493.50	<Collection: 0 items>	0	604.38	48

Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Headloss (ft)
P-1	1	R-1	PMP-1	8.0	Ductile Iron	130.0	69	0.00
P-2	229	PMP-1	J-1	8.0	Ductile Iron	130.0	69	0.03
P-6	62	J-2	J-3	8.0	PVC	150.0	66	0.01
P-7	44	J-3	J-5	8.0	PVC	150.0	63	0.00
P-8	36	J-5	J-6	8.0	PVC	150.0	60	0.00
P-9	89	J-6	J-7	8.0	PVC	150.0	57	0.01
P-10	62	J-7	J-8	8.0	PVC	150.0	27	0.00
P-11	19	J-8	Hydrant	8.0	PVC	150.0	9	0.00
P-12	73	Hydrant	J-9	8.0	PVC	150.0	9	0.00
P-13	7	J-9	J-10	8.0	PVC	150.0	6	0.00
P-14	7	J-10	J-11	8.0	PVC	150.0	3	0.00
P-15	30	J-2	Cottage 1	1.0	PVC	150.0	3	0.23
P-16	30	J-3	Cottage 2	1.0	PVC	150.0	3	0.23
P-17	35	J-5	Cottage 3	1.0	PVC	150.0	3	0.26
P-18	65	J-6	Cottage 4	1.0	PVC	150.0	3	0.48
P-19	19	J-7	Apartment Building (10-Units)	6.0	PVC	150.0	30	0.00
P-20	58	J-8	Apartment Building (6-Units)	6.0	PVC	150.0	18	0.00
P-21	63	J-9	Cottage 5	1.0	PVC	150.0	3	0.47
P-22	27	J-10	Cottage 6	1.0	PVC	150.0	3	0.20
P-23	41	J-11	Cottage 7	1.0	PVC	150.0	3	0.31

Pump Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
31	PMP-1	490.00	MCWA Flow Test Data	On	490.00	629.44	69	139.44

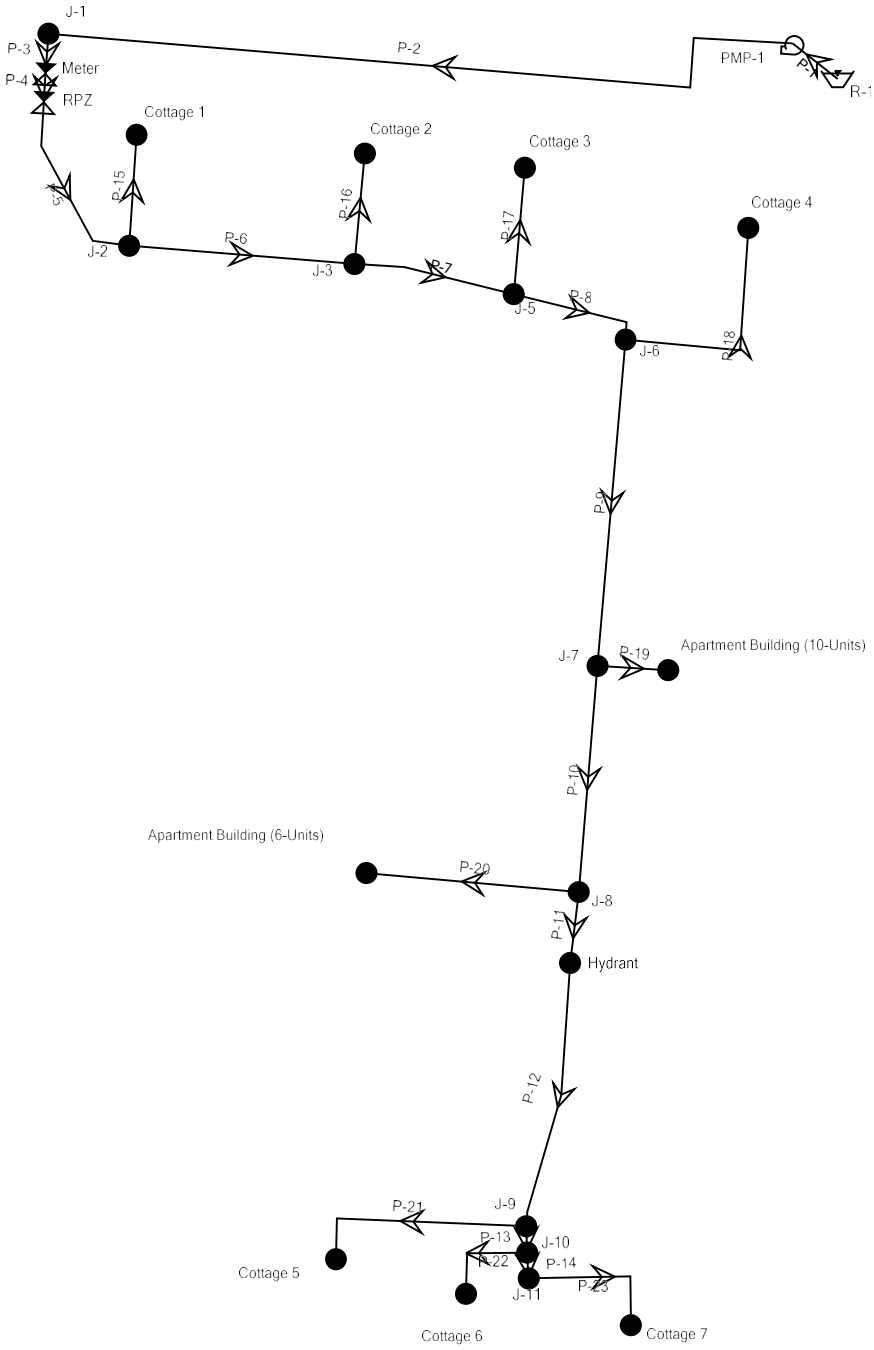
Reservoir Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
30	R-1	490.00	<None>	69	490.00

GPV Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Diameter (Valve) (in)	General Purpose Valve Headloss Curve	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
99	Meter	488.81	6.0	6" Neptune Mach 10 Meter	69	629.41	629.29	0.11
105	RPZ	489.03	6.0	6" Watts 957 RPZ Horz	69	629.29	604.41	24.88

FIRE


J-1
P-3
Meter
P-4
RPZ
P-2
PMP-1
R-1
Cottage 1
Cottage 2
Cottage 3
Cottage 4
P-15
P-16
P-17
P-18
J-2
P-6
J-3
P-7
J-5
P-8
J-6
P-9
J-7
P-19
Apartment Building (10-Units)
P-10
Apartment Building (6-Units)
P-20
J-8
P-11
Hydrant
P-12
P-21
J-9
P-13
J-10
P-22
P-14
P-23
J-11
Cottage 5
Cottage 6
Cottage 7

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
Apartment Building (6-Units)	491.90	<Collection: 1 item>	6	541.52	21
Apartment Building (10-Units)	492.80	<Collection: 1 item>	10	542.40	21
Cottage 1	490.50	<Collection: 1 item>	1	545.73	24
Cottage 2	491.20	<Collection: 1 item>	1	544.84	23
Cottage 3	492.10	<Collection: 1 item>	1	544.19	23
Cottage 4	491.10	<Collection: 1 item>	1	543.63	23
Cottage 5	493.90	<Collection: 1 item>	1	541.18	20
Cottage 6	493.90	<Collection: 1 item>	1	541.22	20
Cottage 7	494.50	<Collection: 1 item>	1	541.20	20
Hydrant	492.00	<Collection: 1 item>	1,000	541.24	21
J-1	488.50	<Collection: 0 items>	0	573.72	37
J-2	490.50	<Collection: 0 items>	0	545.76	24
J-3	490.00	<Collection: 0 items>	0	544.87	24
J-5	490.00	<Collection: 0 items>	0	544.22	23
J-6	489.50	<Collection: 0 items>	0	543.69	23
J-7	489.00	<Collection: 0 items>	0	542.40	23
J-8	492.00	<Collection: 0 items>	0	541.52	21
J-9	494.00	<Collection: 0 items>	0	541.24	20
J-10	493.50	<Collection: 0 items>	0	541.24	21
J-11	493.50	<Collection: 0 items>	0	541.24	21

Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Headloss (ft)
P-1	1	R-1	PMP-1	8.0	Ductile Iron	130.0	1,023	0.02
P-2	229	PMP-1	J-1	8.0	Ductile Iron	130.0	1,023	4.36
P-6	62	J-2	J-3	8.0	PVC	150.0	1,022	0.90
P-7	44	J-3	J-5	8.0	PVC	150.0	1,021	0.65
P-8	36	J-5	J-6	8.0	PVC	150.0	1,020	0.53
P-9	89	J-6	J-7	8.0	PVC	150.0	1,019	1.29
P-10	62	J-7	J-8	8.0	PVC	150.0	1,009	0.88
P-11	19	J-8	Hydrant	8.0	PVC	150.0	1,003	0.27
P-12	73	Hydrant	J-9	8.0	PVC	150.0	3	0.00
P-13	7	J-9	J-10	8.0	PVC	150.0	2	0.00
P-14	7	J-10	J-11	8.0	PVC	150.0	1	0.00
P-15	30	J-2	Cottage 1	1.0	PVC	150.0	1	0.03
P-16	30	J-3	Cottage 2	1.0	PVC	150.0	1	0.03
P-17	35	J-5	Cottage 3	1.0	PVC	150.0	1	0.03
P-18	65	J-6	Cottage 4	1.0	PVC	150.0	1	0.06
P-19	19	J-7	Apartment Building (10-Units)	6.0	PVC	150.0	10	0.00
P-20	58	J-8	Apartment Building (6-Units)	6.0	PVC	150.0	6	0.00
P-21	63	J-9	Cottage 5	1.0	PVC	150.0	1	0.06
P-22	27	J-10	Cottage 6	1.0	PVC	150.0	1	0.03
P-23	41	J-11	Cottage 7	1.0	PVC	150.0	1	0.04

Pump Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
31	PMP-1	490.00	MCWA Flow Test Data	On	489.98	578.08	1,023	88.10

Reservoir Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)
30	R-1	490.00	<None>	1,023	490.00

GPV Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Diameter (Valve) (in)	General Purpose Valve Headloss Curve	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
99	Meter	488.81	6.0	6" Neptune Mach 10 Meter	1,023	573.29	570.33	2.96
105	RPZ	489.03	6.0	6" Watts 957 RPZ Horz	1,023	570.31	546.95	23.37

Superior Accuracy. Zero Maintenance.

Neptune® MACH 10® Ultrasonic Meter



The MACH 10® ultrasonic water meter features solid state ultrasonic technology including a factory-calibrated, replaceable unitized measuring element (UME) with no degradation of accuracy over time. Combined with a corrosion-resistant, lead free, high-copper alloy maincase, the MACH 10 is built to withstand demanding service conditions and deliver sustained accuracy over the life of the meter.

- Sizes 3” through 12”
- Extended low-flow range for superior leak detection
- Accuracy sustained over meter life
- Can be installed in both horizontal and vertical applications
- Open flow path design with low pressure loss
- Advanced ultrasonic technology with easily replaceable UME design
- Lead free, high-copper alloy maincase
- UL Listed and FM Approved (standard)
- Available in standard turbine and compound lay lengths
- No maintenance

NEPTUNE
TECHNOLOGY GROUP

#winyourday

Specifications

AWWA C715 Compliant

NSF/ANSI 61 Certified

UL Listed/FM Approved (Standard)

Maximum Operating Water Pressure

- 175 psi

Operating Water Temperature Range

- +33°F to +122°F (+0.5°C to +50°C)

Environmental Conditions

- Operating temperature: +14°F to +149°F (-10°C to +65°C)
- Storage temperature: -40°F to +158°F (-40°C to +70°C)

Expected Battery Life

- 10 years

Applications

- Potable water
- Fire service
- Reclaim water

Warranty

- Neptune provides a limited warranty for performance, materials, and workmanship. See warranty statement for details.

System Compatibility

- Compatible with Neptune R900® System. Also available as MACH 10®)R900*i*™ for an integrated radio solution and MACH 10®)TC for Sensus Touch Coupler compatibility.

Operating Characteristics

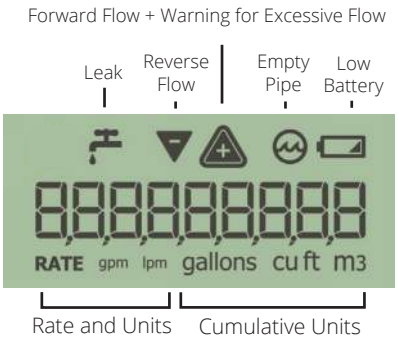
Meter Size	Extended Low Flow @ 100% Accuracy (+/- 3.0%)	Normal Operating Range @ 100% Accuracy (+/- 1.5%)	Safe Maximum Operating Capacity	
			Normal Operation (Non Fire Service)	Fire Service
3″	0.50 U.S. gpm	0.75 to 500 U.S. gpm	500 U.S. gpm	420 U.S. gpm
4″	0.75 U.S. gpm	1.5 to 1250 U.S. gpm	1250 U.S. gpm	1100 U.S. gpm
6″	1.0 U.S. gpm	2.0 to 2000 U.S. gpm	2000 U.S. gpm	1800 U.S. gpm
8″	4.0 U.S. gpm	6.0 to 4000 U.S. gpm	4000 U.S. gpm	4000 U.S. gpm
10″	6.0 U.S. gpm	10.0 to 6500 U.S. gpm	6500 U.S. gpm	6500 U.S. gpm
12″	8.0 U.S. gpm	12.0 to 8000 U.S. gpm	8000 U.S. gpm	8000 U.S. gpm

Registration

High Resolution (8-digit reading)		3″	4″	6″ - 12″
1	U.S. Gallons	√	√	
10	U.S. Gallons			√
0.1	Cubic Feet	√	√	
1	Cubic Feet			√
0.01	Cubic Metres	√	√	
0.1	Cubic Metres			√

LCD Display

9-digit display for extra resolution on manual reads.



Dimensions

Meter Size	Length	Height	Weight
3″	12″	9½″	39 lbs
	17″	9½″	42 lbs
4″	14″	11″	51 lbs
	20″	11″	57 lbs
6″	18″	12¾″	79 lbs
	24″	12¾″	91 lbs
8"	20"	15 ⅜"	160 lbs
10"	26"	17 ⁹⁄₁₀"	264 lbs
12"	19 ⁷⁄₁₀"	20"	292 lbs

Available Units of Measure

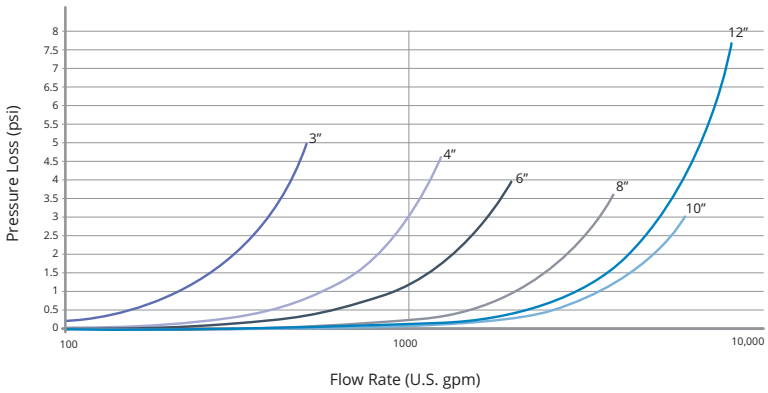
Consumption	Rate
Gallons	GPM
Cubic Feet	GPM
Cubic Metres	LPM



Unitized Measuring Element (UME)

Pressure Loss

This chart shows typical meter performance. Individual results may vary.



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neptunetg.com

Neptune Technology Group
1600 Alabama Highway 229
Tallassee, AL 36078
800-633-8754 f 334-283-7293

Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

LEAD FREE*

Series 957

Reduced Pressure Zone Assembly

2½" – 10"

Series 957 Reduced Pressure Zone assembly provides protection to the potable water system from contamination in accordance with national plumbing codes. The assemblies are normally used in health hazard applications for protection against backsiphonage or backpressure.

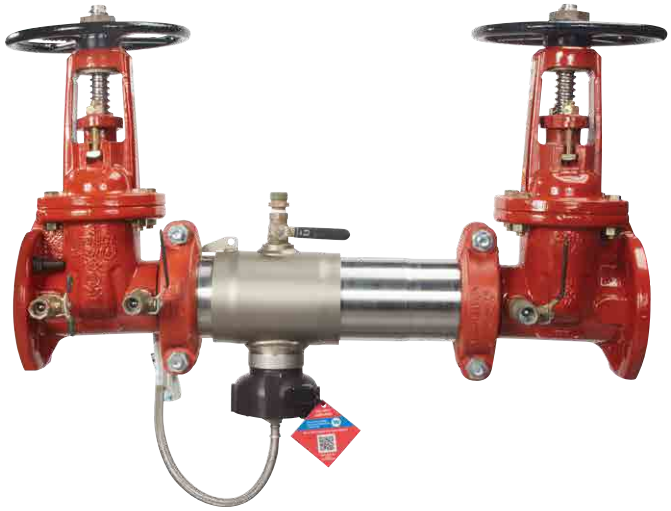
The series includes a flood sensor to detect excessive water discharges from the relief valve. The sensor is installed on the assembly exterior and does not alter assembly functions or certifications. The sensor relays a signal that triggers notification to facility personnel for corrective action, thus limiting flooding and costly damage.

NOTICE

An add-on connection kit is required to activate the flood sensor. Without the connection kit, the sensor is a passive component that has no communication with any other device. (For more information download RP/IS-957/957DCDA.)

Features

- Sizes 2½", 3", and 4" available with quarter-turn ball valve shutoffs
- Replaceable check disc rubber
- Extremely compact design
- 70% Lighter than traditional designs
- 304 (Schedule 40) stainless steel housing and sleeve
- Groove fittings allow integral pipeline adjustment
- Patented torsion spring checks provide lowest pressure loss
- Unmatched ease of serviceability
- Bottom mounted cast stainless steel relief valve
- Available with grooved butterfly valve shutoffs
- Sensor on relief valve for flood detection
- Flood alerts feature activated with add-on sensor connection kit, compatible with BMS and cellular network communication



957-OSY with Flood Sensor

NOTICE

Use of the flood sensor does not replace the need to comply with all required instructions, codes, and regulations related to installation, operation, and maintenance of this product, including the need to provide proper drainage in the event of a discharge.

Watts is not responsible for the failure of alerts due to connectivity issues, power outages, or improper installation.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Inquire with governing authorities for local installation requirements.

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

WATTS®

Specification

The Reduced Pressure Zone assembly shall consist of two independent torsion spring check modules, a differential pressure relief valve located between and below the two modules, two drip tight shutoff valves, and required torsion spring check modules and relief valve shall be contained with a sleeve accessible single housing constructed from 304 (Schedule 40) stainless steel pipe with groove end connections. Torsion spring checks shall have replaceable elastomer discs and in operation produce drip tight closure against the reverse flow of liquid caused by backpressure or backsiphonage. The assembly shall be a Watts Series 957, and shall include a flood sensor on the relief valve for flood detection.

Model/Option

FS	Flood sensor on relief valve for flood detection
NRS	Non-rising stem, resilient seated gate valves
OSY	UL Classified and FM Approved outside stem and yoke resilient seated gate valves
N	N-pattern orientation
Z	Z-pattern orientation
BFG	UL Classified and FM Approved grooved gear operated butterfly valves with tamper switch
QT	2½" - 4" quarter-turn ball valves
OSY FxG**	Flanged inlet gate connection and grooved outlet gate connection
OSY GxF**	Grooved inlet gate connection and flanged outlet gate connection
OSY GxG**	Grooved inlet gate connection and grooved outlet gate connection

Materials

Housing & Sleeve	304 (Schedule 40) stainless steel
Elastomers	EPDM, silicone, and Buna-N
Torsion Spring Checks	Noryl®, stainless steel
Check Discs	Reversible silicone or EPDM
Test Cocks	Lead Free* bronze body
Pins & Fasteners	300 Series stainless steel
Springs	Stainless steel

Pressure — Temperature

Temperature Range	33°F – 140°F (0.5°C – 60°C)
Maximum Working Pressure	175 psi (12.1 bar)

Approvals

- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at The University of Southern California (FCCCHR-USC), excluding 10" N-pattern installation as well as 6" and 10" Z-pattern installations
- AWWA C511-97

1013 B64.4 (**BFG & OSY Only)

For additional approval information, contact the factory or visit watts.com.

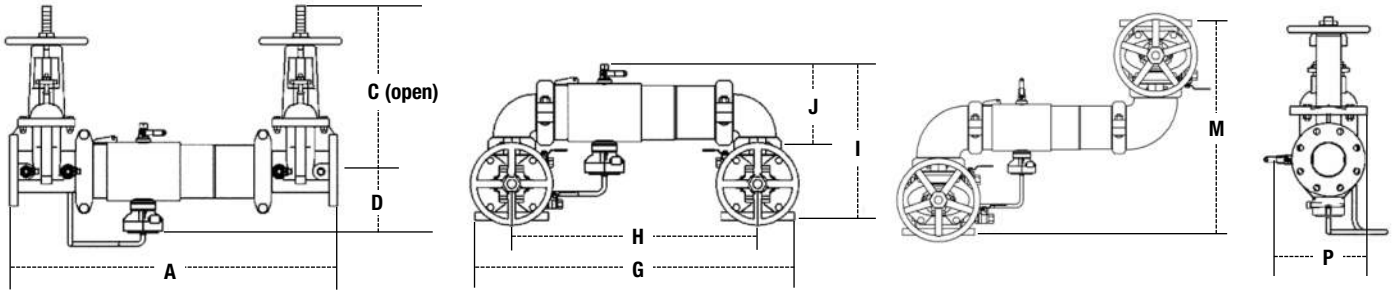
NOTICE

When installing a drain line on Series 957 backflow preventers, use 957AG air gaps. Attach the air gap brackets directly onto the flood sensor. For additional information, refer to ES-AG/EL/TC at watts.com

**Options for the gate valve:
– Consult factory for dimensions.
– Available with grooved NRS gate valves; consult factory.
– Post indicator plate and operating nut available; consult factory.

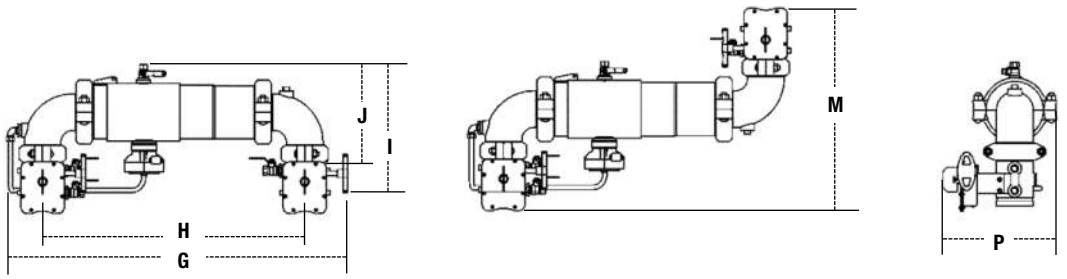
Noryl® is a registered trademark of SHPP Global Technologies B.V.

Dimensions - Weight



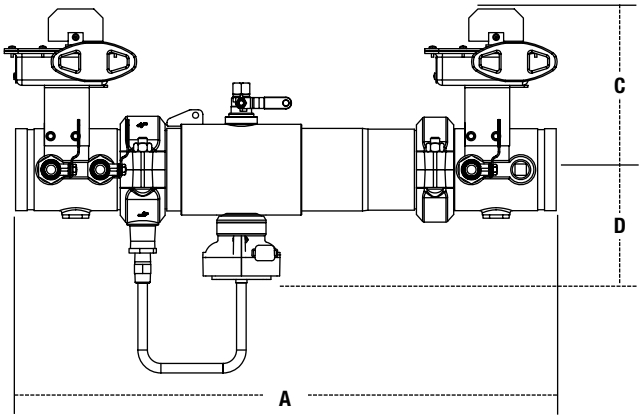
957, 957N, 957Z

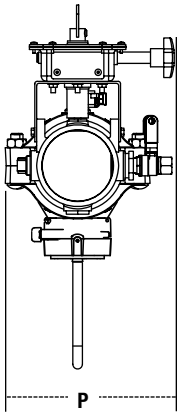
SIZE	DIMENSIONS																		WEIGHT					
	A		C (OSY)		C (NRS)		D		G		H		I		J		M		P		957NRS		957OSY		957N NRS		957N OSY	
in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*	*lb*	*kg*	*lb*	*kg*	*lb*	*kg*
2½	30¾	781	16⅜	416	9⅜	238	6½	165	29 1/16	738	21½	546	15½	393	8 13/16	223	21¼	540	9 3/16	234	118	54	128	58	126	57	136	62
3	31¾	806	18⅞	479	10¼	260	6 11/16	170	30¼	768	22¼	565	17⅛	435	9 3/16	233	23	584	10½	267	134	61	148	67	147	67	161	73
4	33¾	857	22¾	578	12 3/16	310	7	178	33	838	23½	597	18½	470	9 15/16	252	26¼	667	11 3/16	284	164	74	164	74	187	85	187	85
6	43½	1105	30⅛	765	16	406	8½	216	44¾	1137	33½	851	23 3/16	589	13 1/16	332	34¼	870	15	381	276	125	298	135	317	144	339	154
8	49¾	1264	37¾	959	19 15/16	506	9 11/16	246	54⅛	1375	40⅛	1019	27 7/16	697	15 11/16	399	36⅞	937	17 3/16	437	441	200	483	219	516	234	558	253
10	57¾	1467	45¾	1162	23 13/16	605	11 3/16	285	66	1676	49½	1257	32½	826	17 5/16	440	44½	1124	20	508	723	328	783	355	893	405	950	431



957NBFG, 957ZBFG

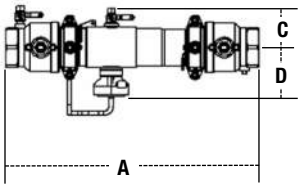
SIZE	DIMENSIONS												WEIGHT	
	G		H		I		J		M		P		957N/957Z	
in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
2½	32½	826	23	584	15½	394	9½	241	19¾	502	11 13/16	300	67	30
3	34	864	24	610	16 5/16	414	10 1/16	256	21¼	540	12⅛	308	70	32
4	35⅝	905	25½	648	17 3/16	437	10 15/16	279	23½	597	12⅝	321	87	39
6	46½	1181	35¼	895	20½	521	13½	343	27¼	692	15	382	160	73

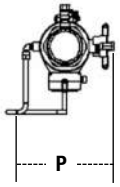


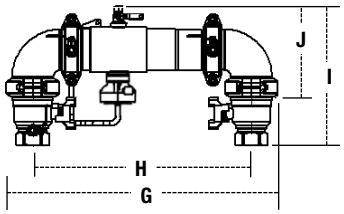


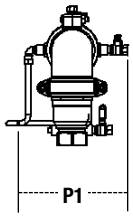
957 BFG

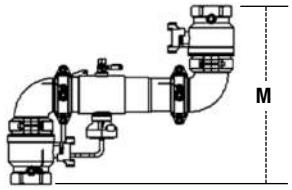
SIZE	DIMENSIONS								WEIGHT	
	A		C		D		P			
in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
4	29	737	7¾	197	6⅜	162	9½	241	66	30
6	36½	927	9 11⁄16	246	7 7⁄16	189	14¼	362	122	55











957QT

SIZE	DIMENSIONS																		WEIGHT	
	A		C		D		G		H		I		J		M		P		P1		QT		QTN	
in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*	*lb*	*kg*
2 1⁄2	27 1⁄2	698	4 7⁄8	124	6 7⁄8	175	30¼	768	21½	546	16 1⁄16	407	11⅜	289	19 7⁄8	505	11 5⁄16	287	11 5⁄16	287	46	21	57	26
3	28	711	4 7⁄8	124	6 7⁄8	175	30¼	768	22¼	565	16 9⁄16	420	11⅜	289	20 7⁄8	531	11 5⁄16	287	11 5⁄16	287	56	25	67	30
4	28 3⁄4	730	4 7⁄8	124	6 7⁄8	175	30¼	768	23½	597	18 5⁄16	465	11⅜	289	24 3⁄8	619	11 5⁄16	287	11 5⁄16	287	76	34	87	39

Capacity

Flow curves as tested by Underwriters Laboratories.

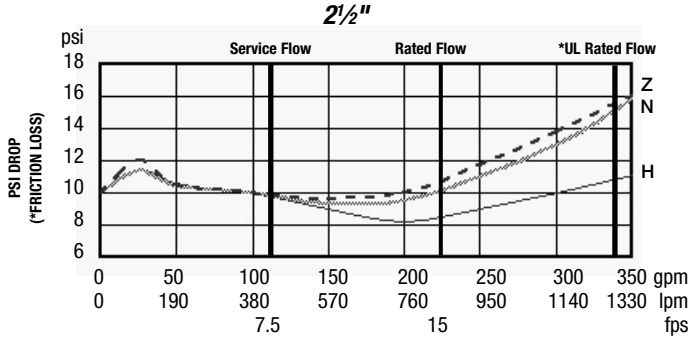
Flow capacity chart identifies valve performance based upon rated water velocity up to 25 fps.

- Service Flow is typically determined by a rated velocity of 7.5 fps based upon schedule 40 pipe.
- Rated Flow identifies maximum continuous duty performance determined by AWWA.
- UL Flow Rate is 150% of Rated Flow and is not recommended for continuous duty.
- AWWA Manual M22 (Appendix C) recommends that the maximum water velocity in services be not more than 10 fps.

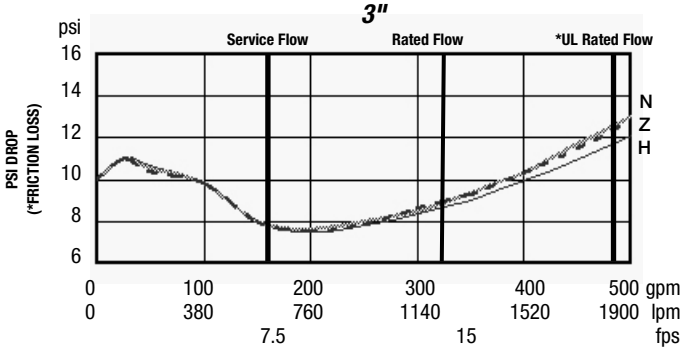
Flow characteristics collected using butterfly shutoff valves.

Horizontal N-pattern Z-pattern

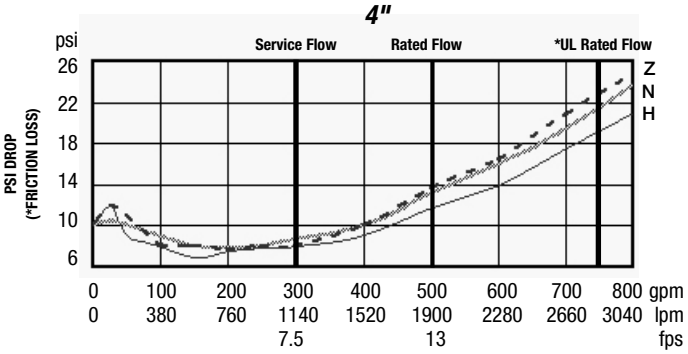
2½"



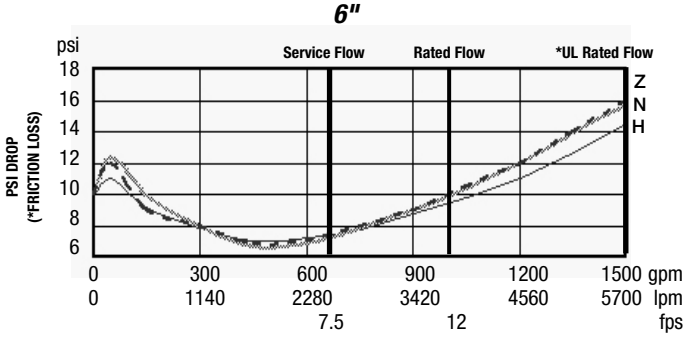
3"



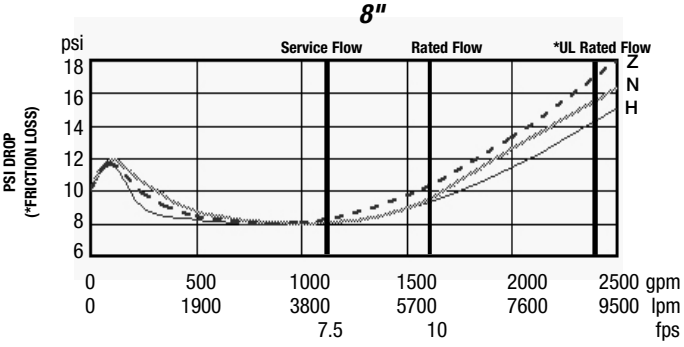
4"



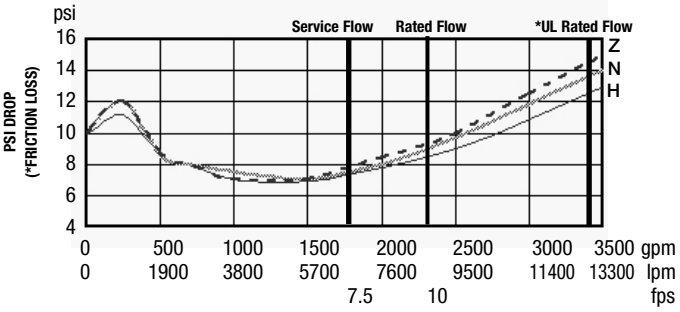
6"



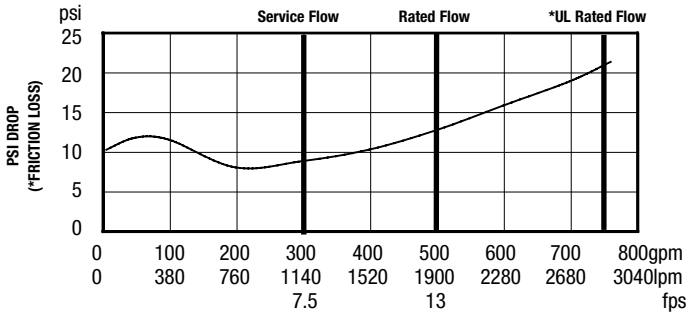
8"



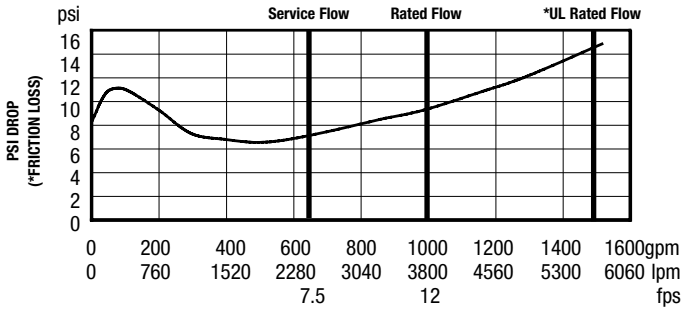
10"



4" BFG Horizontal



6" BFG Horizontal



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Appendix B

Stormwater Management Calculations

Existing and Proposed Drainage Calculations

P:\2850\Drawings\Final\2850 Drainage Base.dwg

NEW YORK STATE ROUTE 96 – PITTSFORD VICTOR ROAD
(66' RIGHT-OF-WAY)

THORNELL ROAD – COUNTY ROAD 33
(49.5' RIGHT-OF-WAY)

ANALYSIS POINT B

EXISTING SUBAREA B
AREA=0.60 ACRES
CN=53
Tc=21.3 MINUTES

EXISTING SUBAREA A-2
AREA=2.05 ACRES
CN=43
Tc=17.3 MINUTES

ANALYSIS POINT 'A-2'
(EXISTING BASIN)

ANALYSIS POINT 'A-1'
(TO PIPE ELEV)

EXISTING SUBAREA A-1
AREA=2.36 ACRES
CN=33
Tc=22.3 MINUTES

Tc FLOW PATH

Tc FLOW PATH

Tc FLOW PATH

N 1,117,598.81
E 1,443,196.23

N 1,117,141.84
E 1,443,167.09

N 1,117,139.55
E 1,442,926.52

APPROXIMATE LOCATION OF EXISTING BUILDING

APPROXIMATE LOCATION OF EXISTING BUILDING

1 STORY FR. HOUSE FF=482.88

LOT 10

LOT 9

LOT 8

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Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

	DATE	BY
7		
6		
5		
4		
3		
2		
1		

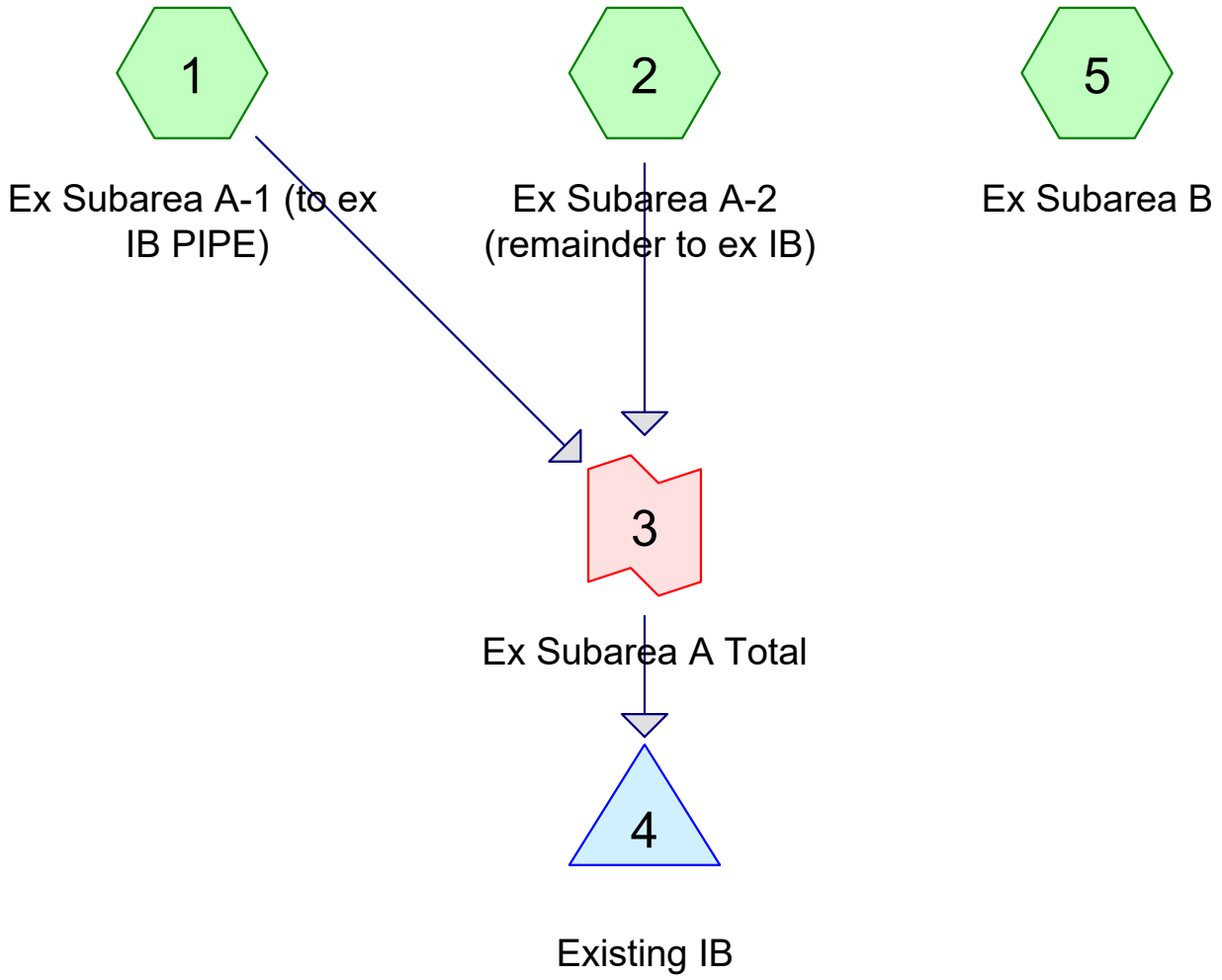
REVISIONS

BME ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
10 LIFTBRIDGE LANE EAST
FAIRPORT, NEW YORK 14450
WWW.BMEPC.COM
585-377-7360

PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: MDG2, LLC
P.O. BOX 14
PITTSFORD, NY, 14534
DRAWING TITLE: EXISTING DRAINAGE MAP

PROJECT MANAGER
P. VARS/R. DESTRO
PROJECT ENGINEER
F. SHELLEY
DRAWN BY
D. TURNER
SCALE: 1" = 40'
DATE ISSUED: NOVEMBER 14, 2025
PROJECT NO.
2850
DRAWING NO.
FIGURE 02

EXISTING DRAINAGE



Subcat Reach Pond Link

Routing Diagram for 2850 Stormwater Calcs
Prepared by BME Associates, Printed 2/11/2026
HydroCAD® 10.20-7a s/n 09860 © 2025 HydroCAD Software Solutions LLC

Summary for Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)

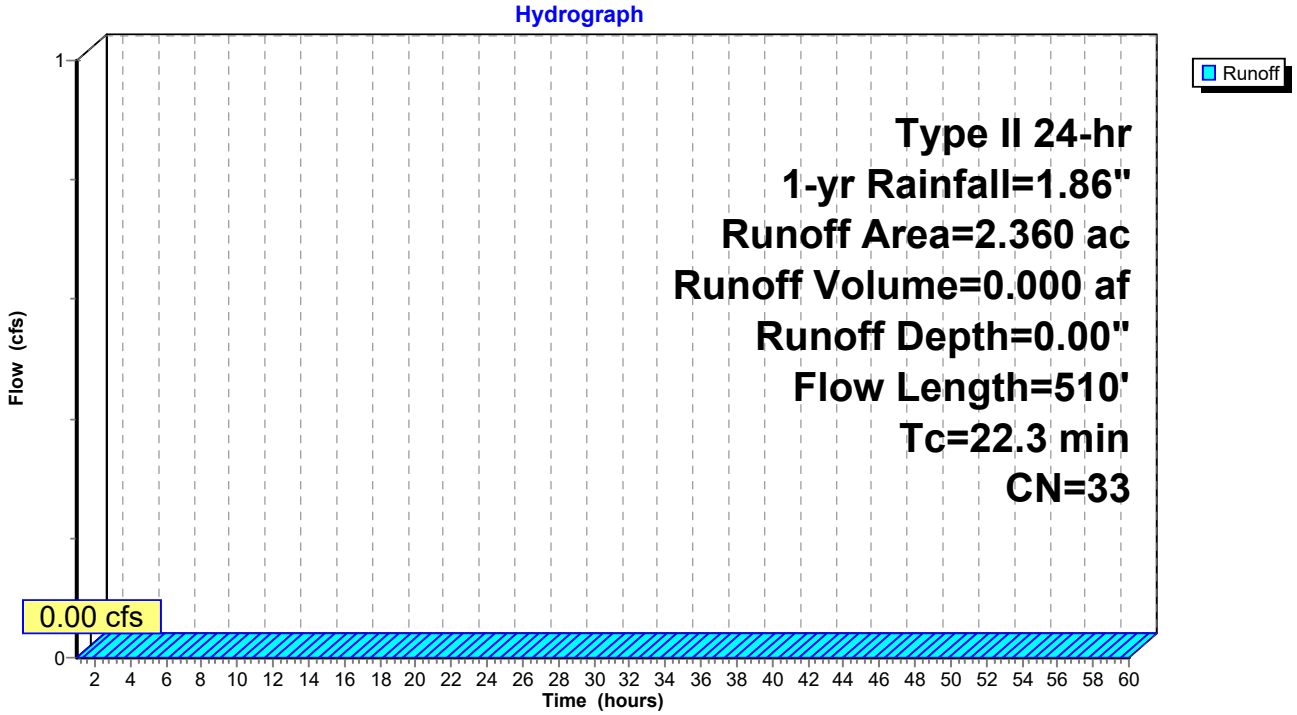
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=1.86"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG A
2.130	30	Woods, Good, HSG A
0.130	39	>75% Grass cover, Good, HSG A
2.360	33	Weighted Average
2.260		95.76% Pervious Area
0.100		4.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
6.5	410	0.0440	1.05		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
22.3	510	Total			

Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)



Summary for Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)

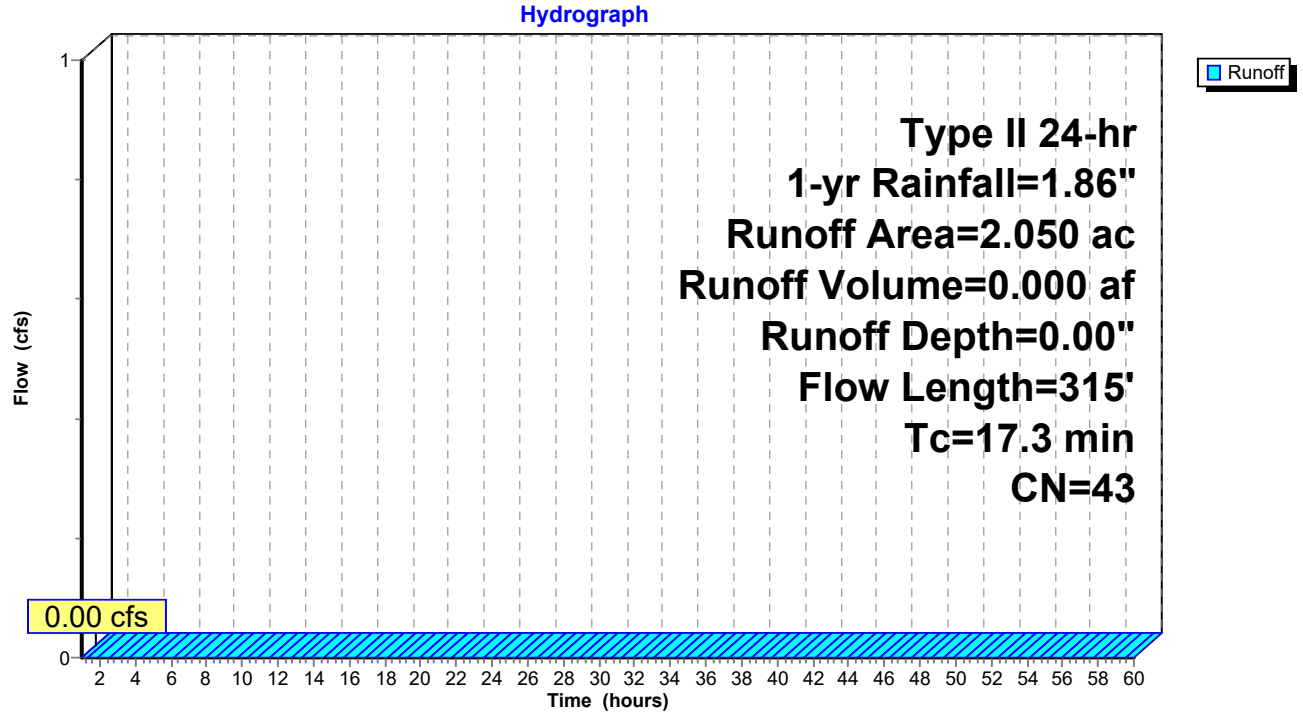
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=1.86"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
1.060	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
2.050	43	Weighted Average
1.760		85.85% Pervious Area
0.290		14.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.6	150	0.0860	4.40		**Shallow Concentrated Flow, lawn** Grassed Waterway Kv= 15.0 fps
17.3	315	Total			

Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)



Summary for Subcatchment 5: Ex Subarea B

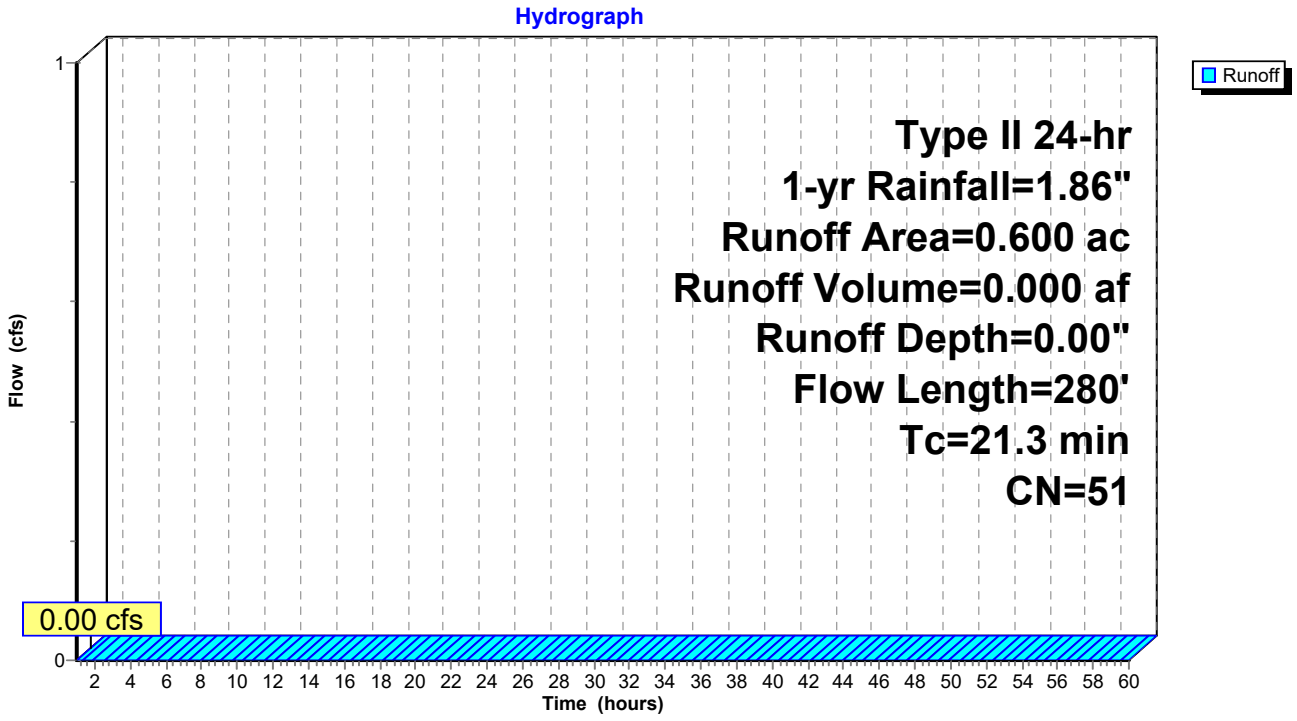
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=1.86"

Area (ac)	CN	Description
0.150	98	Paved parking, HSG A
0.250	39	>75% Grass cover, Good, HSG A
0.200	32	Woods/grass comb., Good, HSG A
0.600	51	Weighted Average
0.450		75.00% Pervious Area
0.150		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	100	0.0400	0.08		**Sheet Flow, sheet** Woods: Light underbrush n= 0.400 P2= 2.16"
1.5	180	0.0150	1.97		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
21.3	280	Total			

Subcatchment 5: Ex Subarea B



Summary for Pond 4: Existing IB

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.00' @ 1.00 hrs Surf.Area= 3,560 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

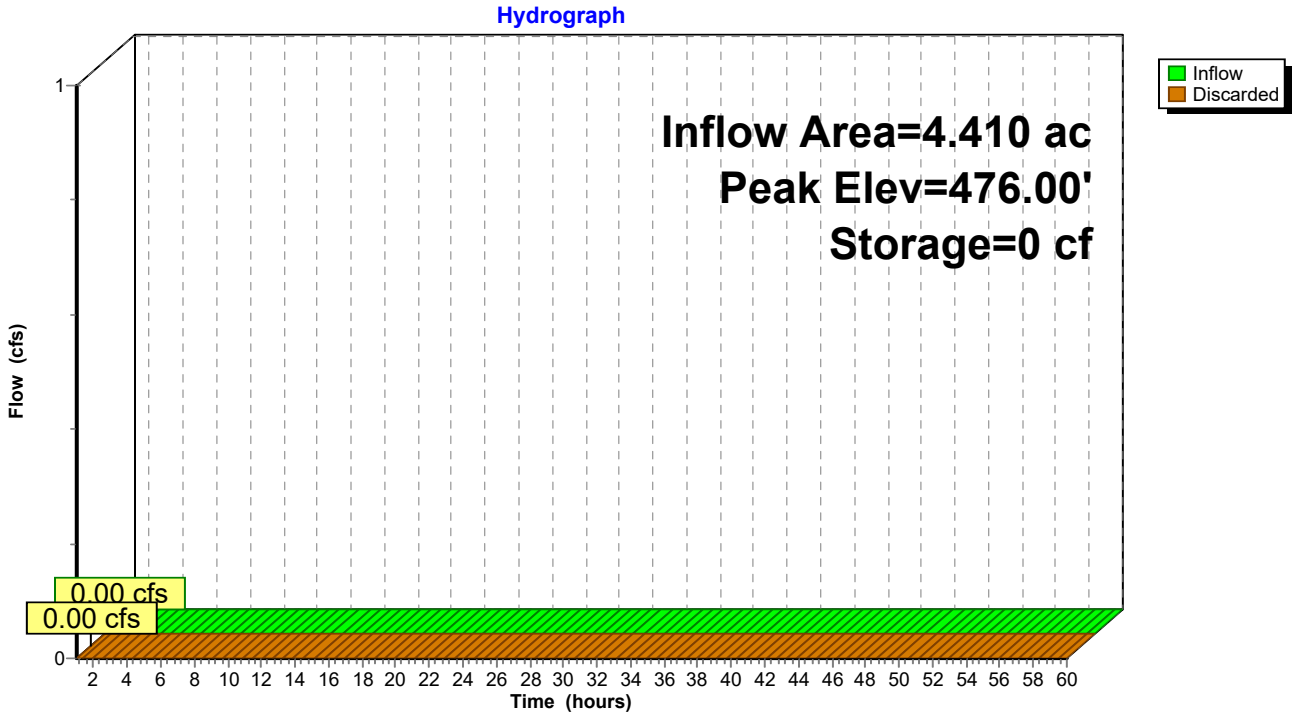
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.00 cfs @ 1.00 hrs HW=476.00' (Free Discharge)
↑**1=Exfiltration (assumed)** (Passes 0.00 cfs of 0.16 cfs potential flow)

Pond 4: Existing IB

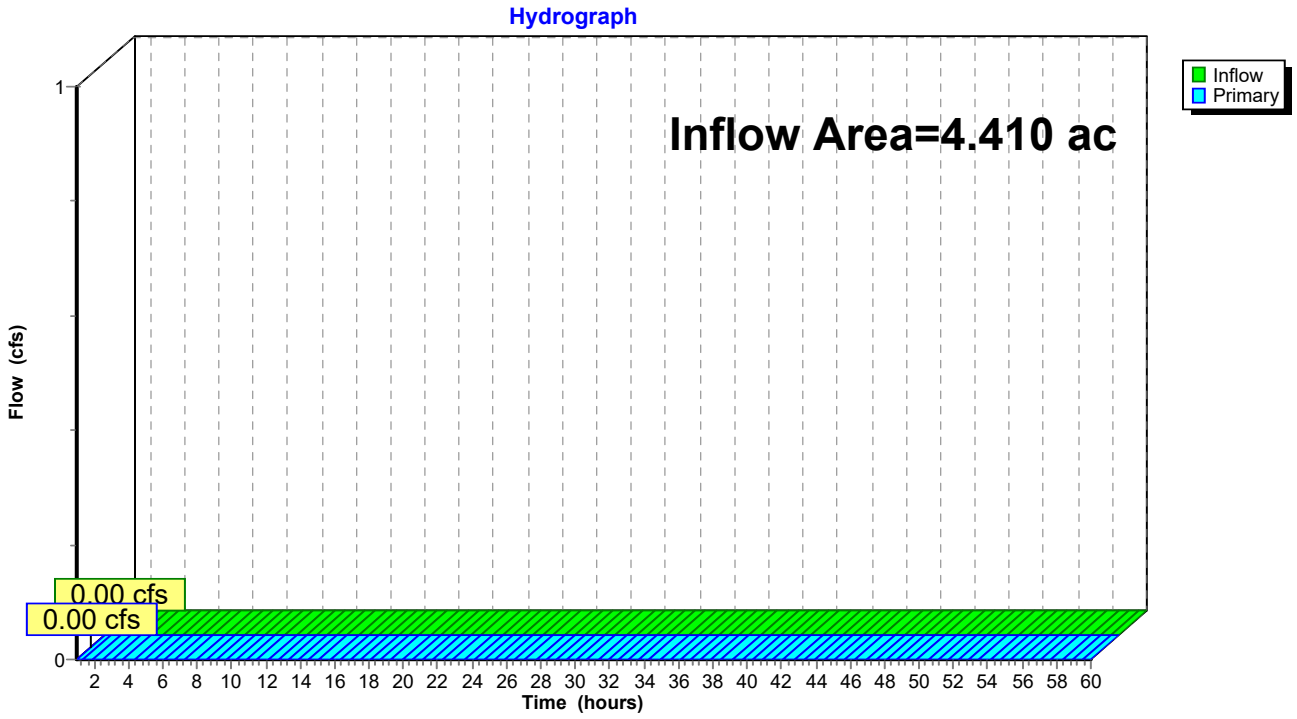


Summary for Link 3: Ex Subarea A Total

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 4 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 3: Ex Subarea A Total



Summary for Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)

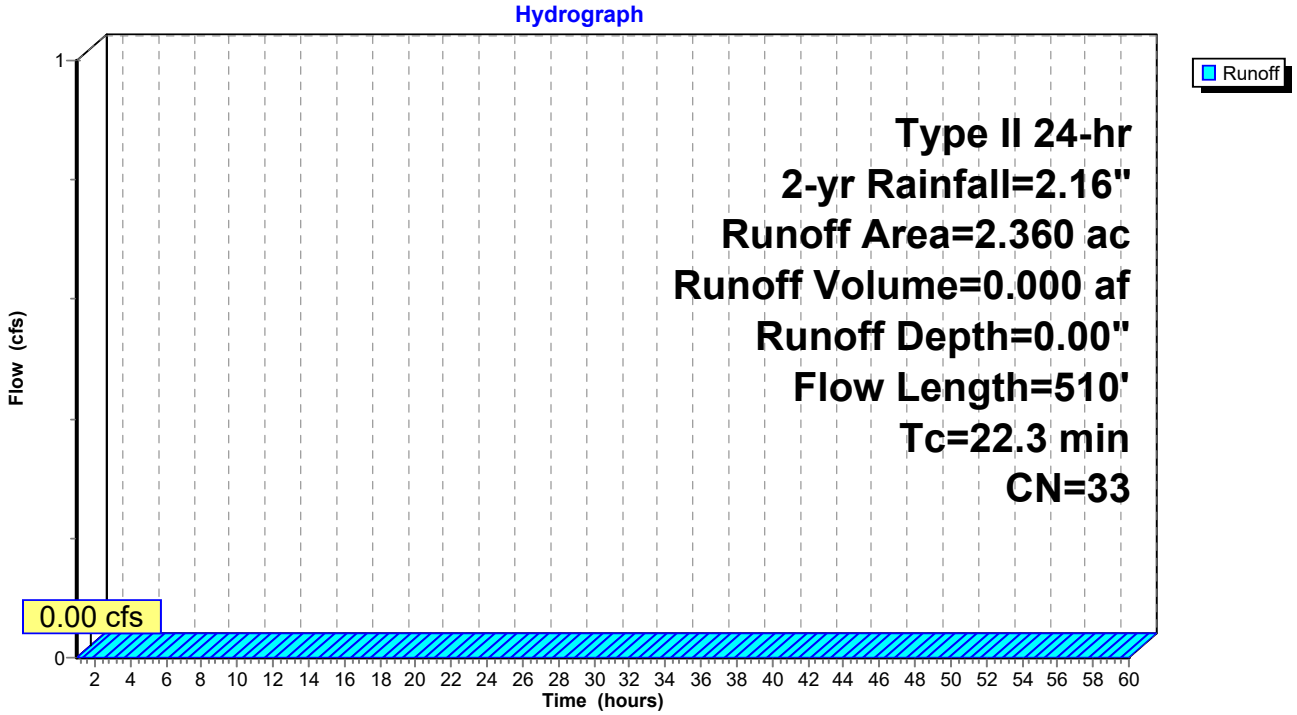
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.16"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG A
2.130	30	Woods, Good, HSG A
0.130	39	>75% Grass cover, Good, HSG A
2.360	33	Weighted Average
2.260		95.76% Pervious Area
0.100		4.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
6.5	410	0.0440	1.05		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
22.3	510	Total			

Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)



Summary for Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)

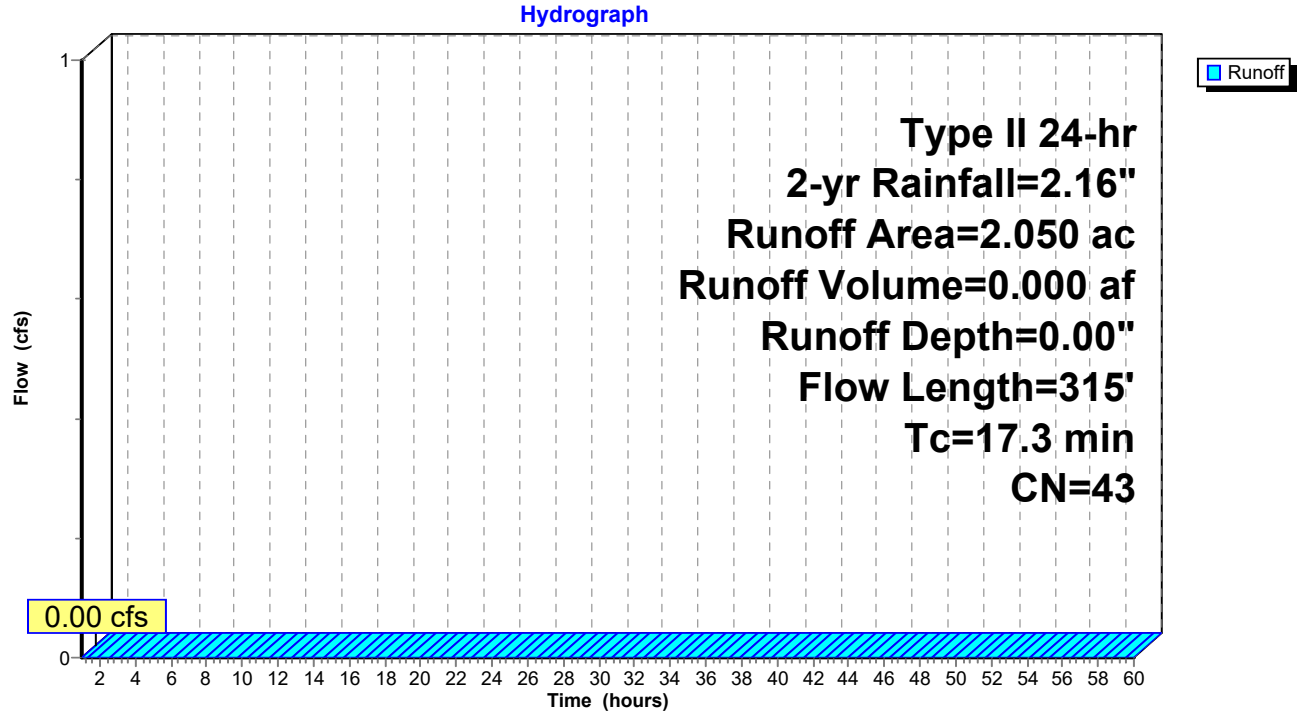
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.16"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
1.060	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
2.050	43	Weighted Average
1.760		85.85% Pervious Area
0.290		14.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.6	150	0.0860	4.40		**Shallow Concentrated Flow, lawn** Grassed Waterway Kv= 15.0 fps
17.3	315	Total			

Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)



Summary for Subcatchment 5: Ex Subarea B

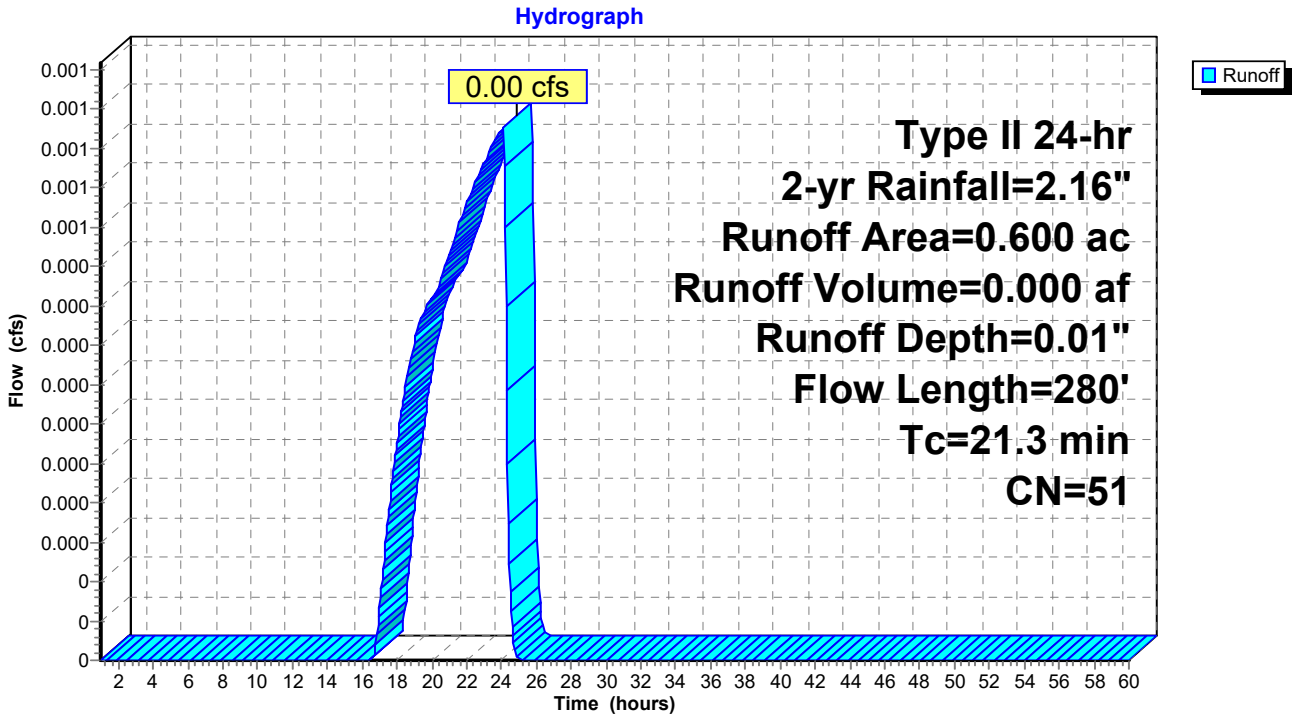
Runoff = 0.00 cfs @ 24.03 hrs, Volume= 0.000 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.16"

Area (ac)	CN	Description
0.150	98	Paved parking, HSG A
0.250	39	>75% Grass cover, Good, HSG A
0.200	32	Woods/grass comb., Good, HSG A
0.600	51	Weighted Average
0.450		75.00% Pervious Area
0.150		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	100	0.0400	0.08		**Sheet Flow, sheet** Woods: Light underbrush n= 0.400 P2= 2.16"
1.5	180	0.0150	1.97		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
21.3	280	Total			

Subcatchment 5: Ex Subarea B



Summary for Pond 4: Existing IB

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.00" for 2-yr event
Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.00' @ 1.00 hrs Surf.Area= 3,560 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

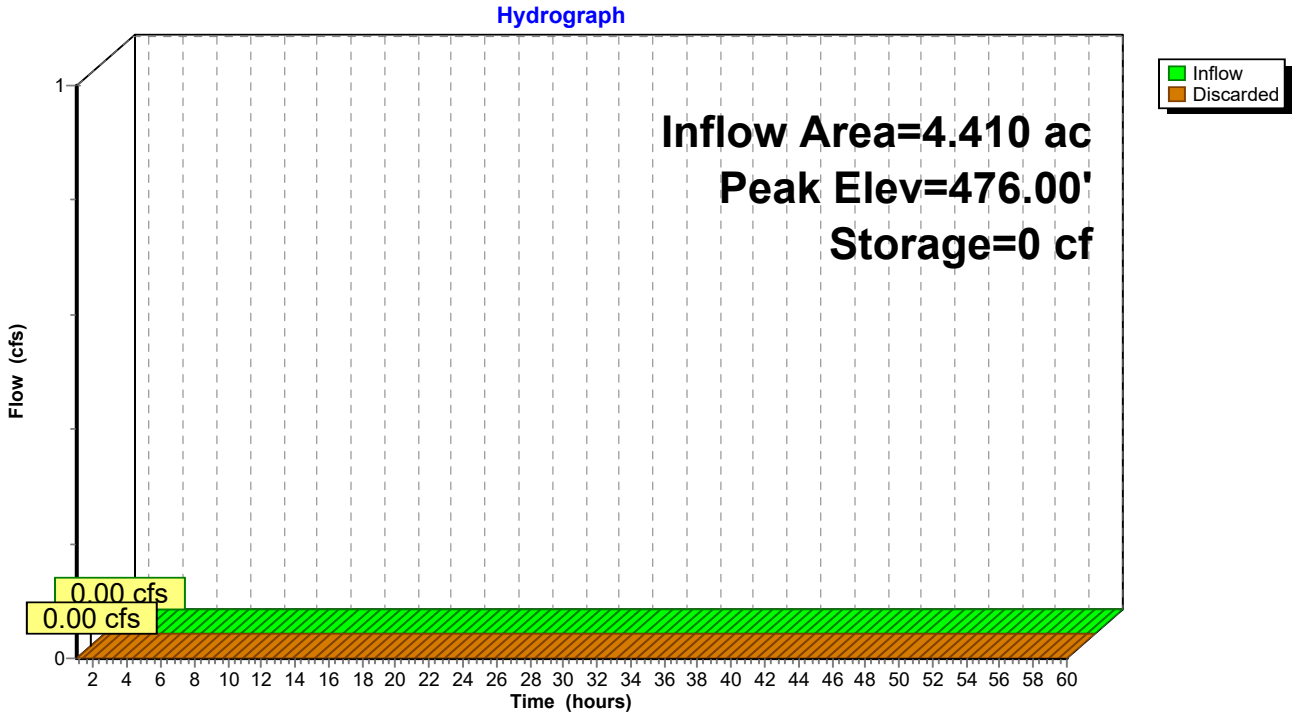
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.00 cfs @ 1.00 hrs HW=476.00' (Free Discharge)
↑**1=Exfiltration (assumed)** (Passes 0.00 cfs of 0.16 cfs potential flow)

Pond 4: Existing IB

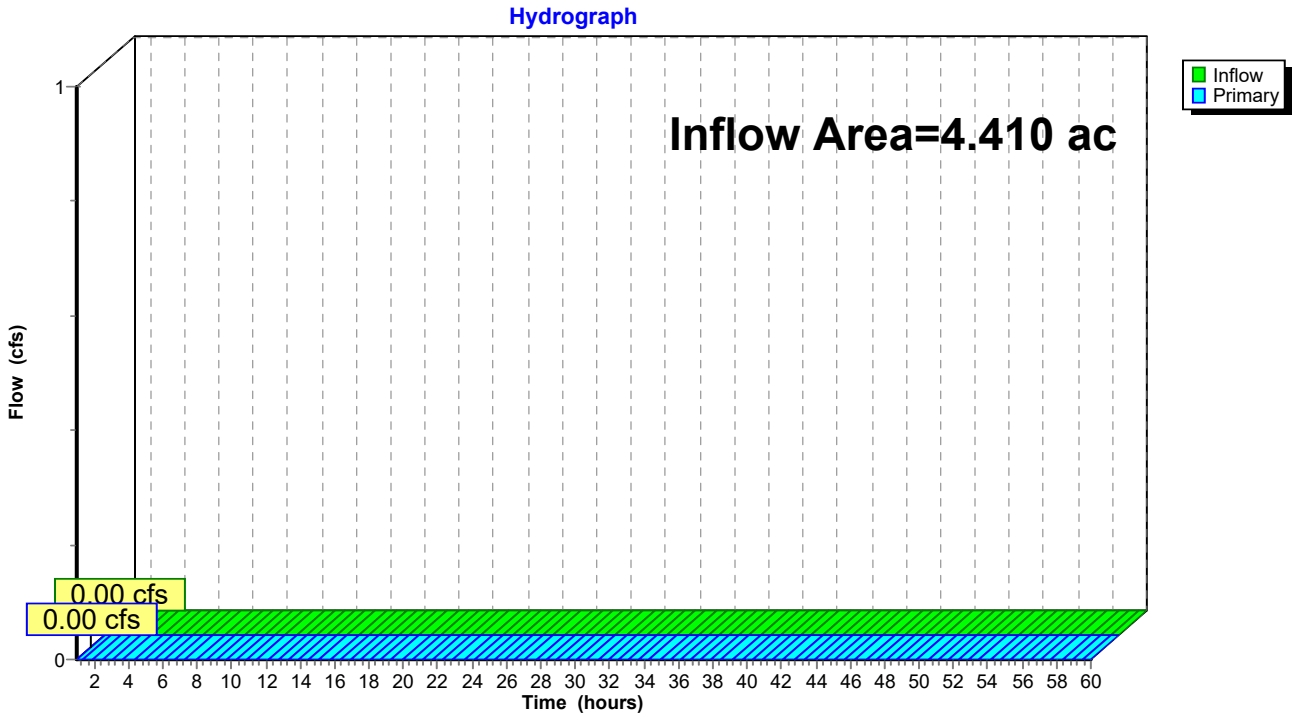


Summary for Link 3: Ex Subarea A Total

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.00" for 2-yr event
Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 4 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 3: Ex Subarea A Total



Summary for Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)

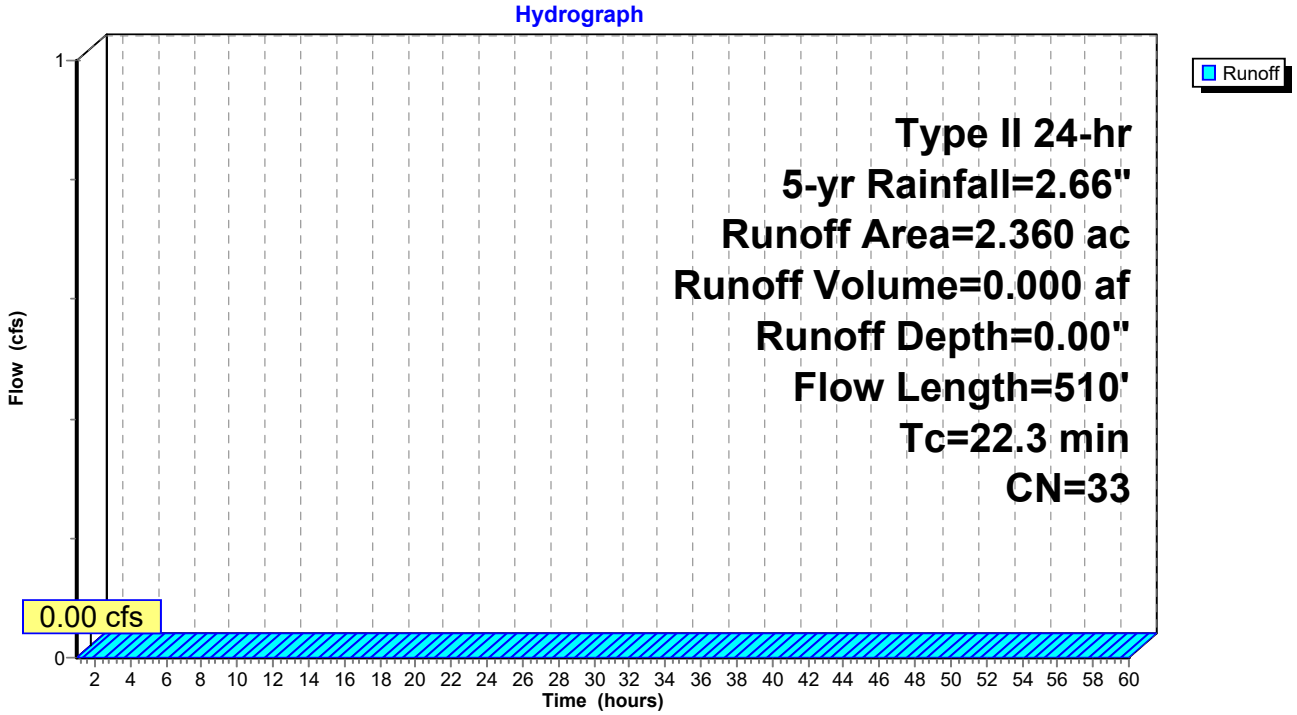
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=2.66"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG A
2.130	30	Woods, Good, HSG A
0.130	39	>75% Grass cover, Good, HSG A
2.360	33	Weighted Average
2.260		95.76% Pervious Area
0.100		4.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
6.5	410	0.0440	1.05		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
22.3	510	Total			

Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)



Summary for Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)

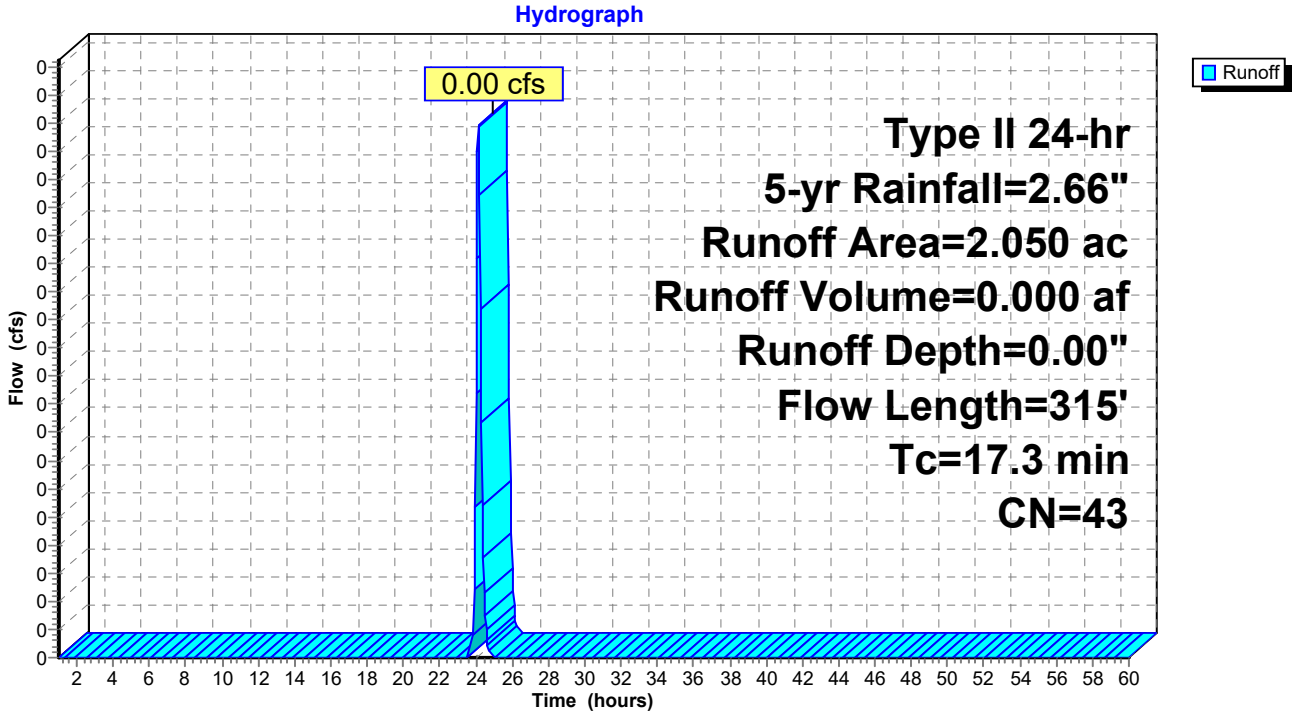
Runoff = 0.00 cfs @ 24.14 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=2.66"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
1.060	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
2.050	43	Weighted Average
1.760		85.85% Pervious Area
0.290		14.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.6	150	0.0860	4.40		**Shallow Concentrated Flow, lawn** Grassed Waterway Kv= 15.0 fps
17.3	315	Total			

Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)



Summary for Subcatchment 5: Ex Subarea B

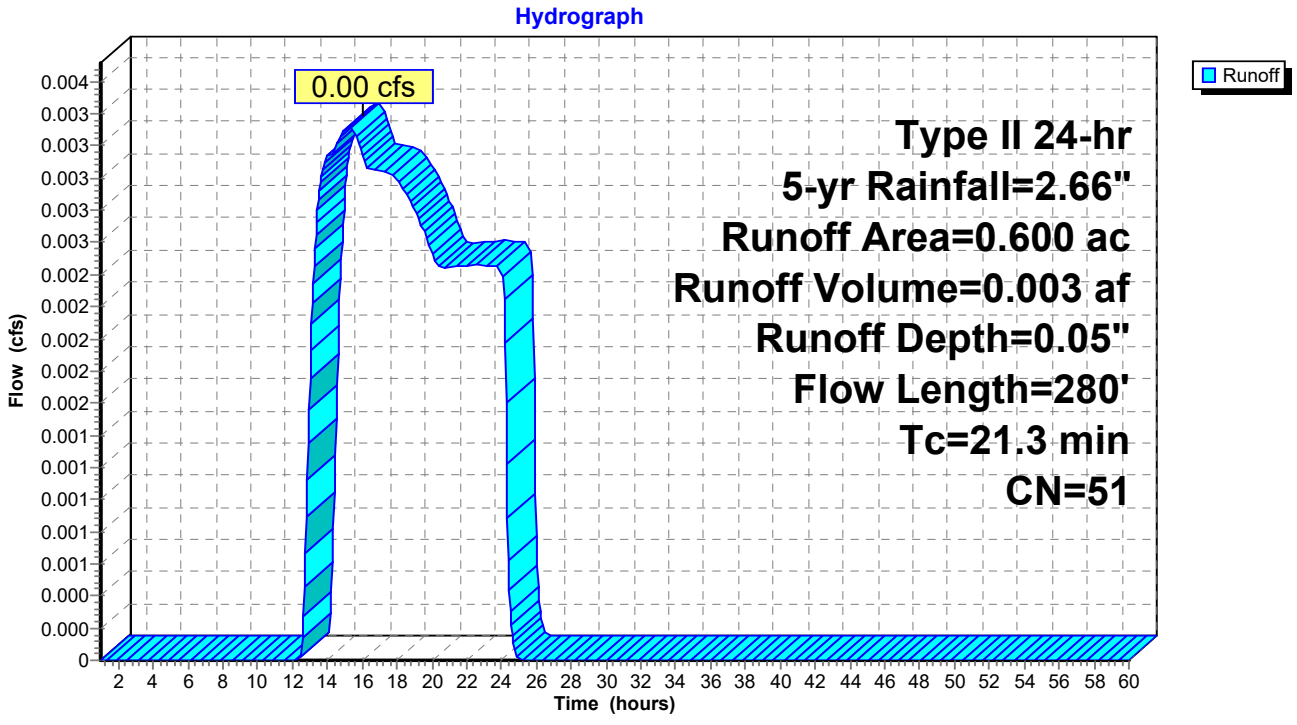
Runoff = 0.00 cfs @ 15.23 hrs, Volume= 0.003 af, Depth= 0.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=2.66"

Area (ac)	CN	Description
0.150	98	Paved parking, HSG A
0.250	39	>75% Grass cover, Good, HSG A
0.200	32	Woods/grass comb., Good, HSG A
0.600	51	Weighted Average
0.450		75.00% Pervious Area
0.150		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	100	0.0400	0.08		**Sheet Flow, sheet** Woods: Light underbrush n= 0.400 P2= 2.16"
1.5	180	0.0150	1.97		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
21.3	280	Total			

Subcatchment 5: Ex Subarea B



Summary for Pond 4: Existing IB

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.00" for 5-yr event
Inflow = 0.00 cfs @ 24.14 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 24.29 hrs, Volume= 0.000 af, Atten= 52%, Lag= 9.4 min
Discarded = 0.00 cfs @ 24.29 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.00' @ 24.29 hrs Surf.Area= 3,560 sf Storage= 0 cf

Plug-Flow detention time= 20.7 min calculated for 0.000 af (100% of inflow)
Center-of-Mass det. time= 20.8 min (1,470.8 - 1,450.0)

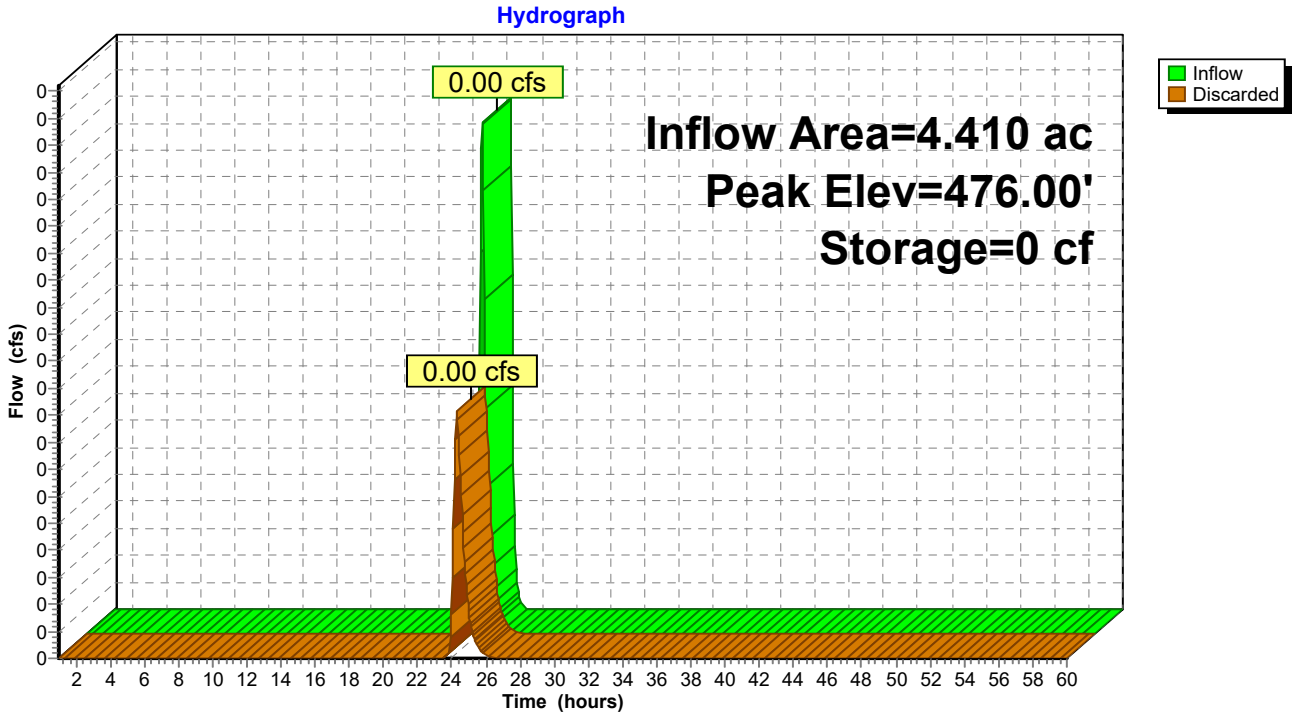
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.16 cfs @ 24.29 hrs HW=476.00' (Free Discharge)
↑**1=Exfiltration (assumed)** (Controls 0.16 cfs)

Pond 4: Existing IB

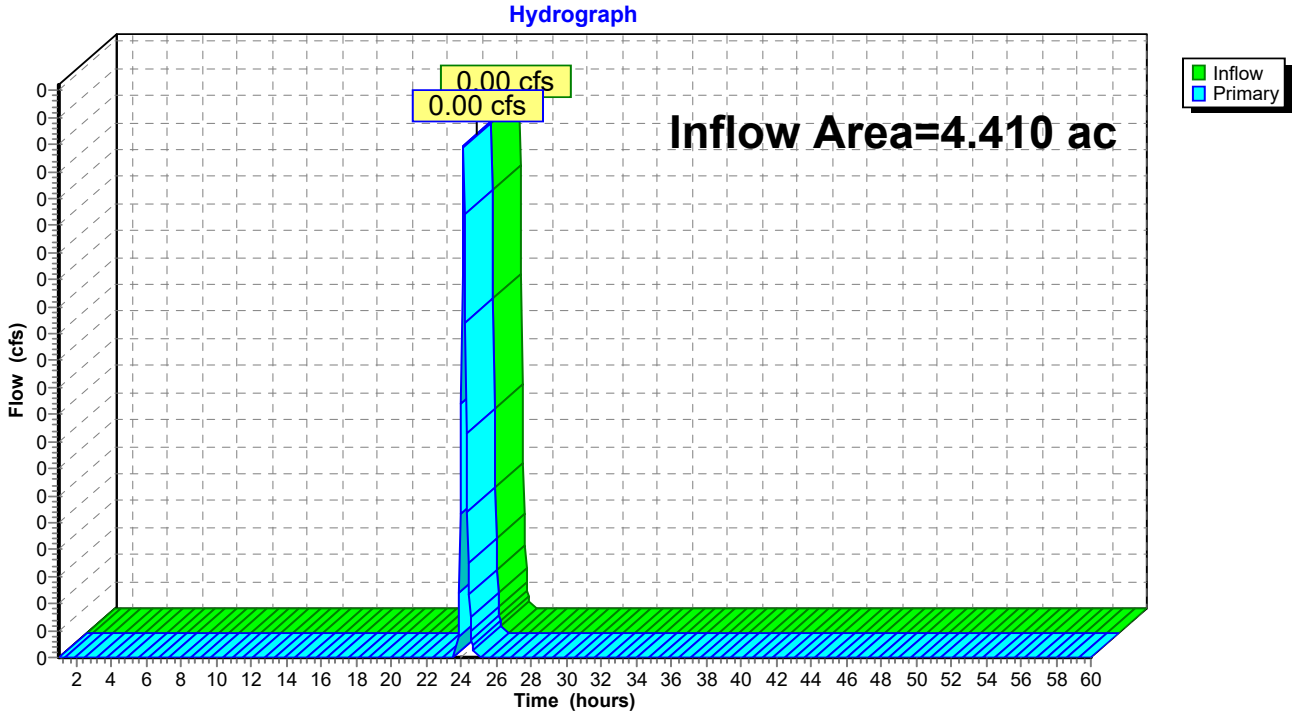


Summary for Link 3: Ex Subarea A Total

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.00" for 5-yr event
Inflow = 0.00 cfs @ 24.14 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 24.14 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 4 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 3: Ex Subarea A Total



Summary for Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)

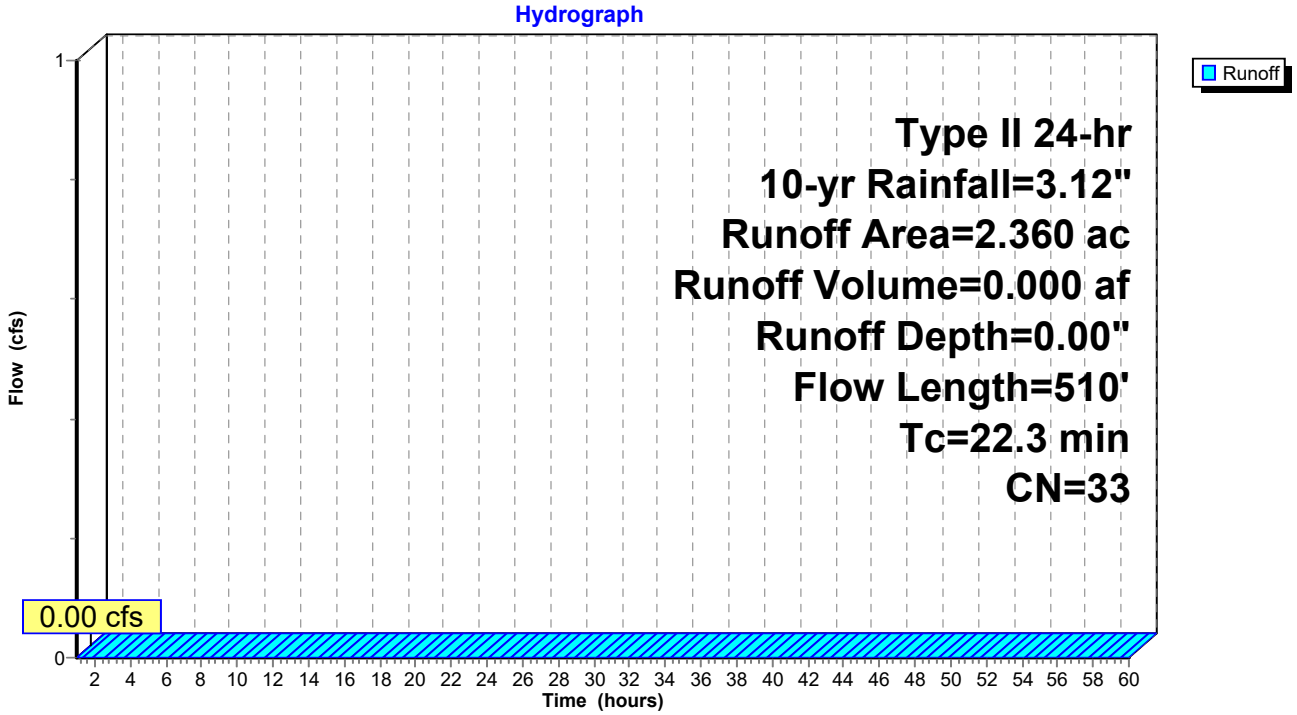
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.12"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG A
2.130	30	Woods, Good, HSG A
0.130	39	>75% Grass cover, Good, HSG A
2.360	33	Weighted Average
2.260		95.76% Pervious Area
0.100		4.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
6.5	410	0.0440	1.05		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
22.3	510	Total			

Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)



Summary for Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)

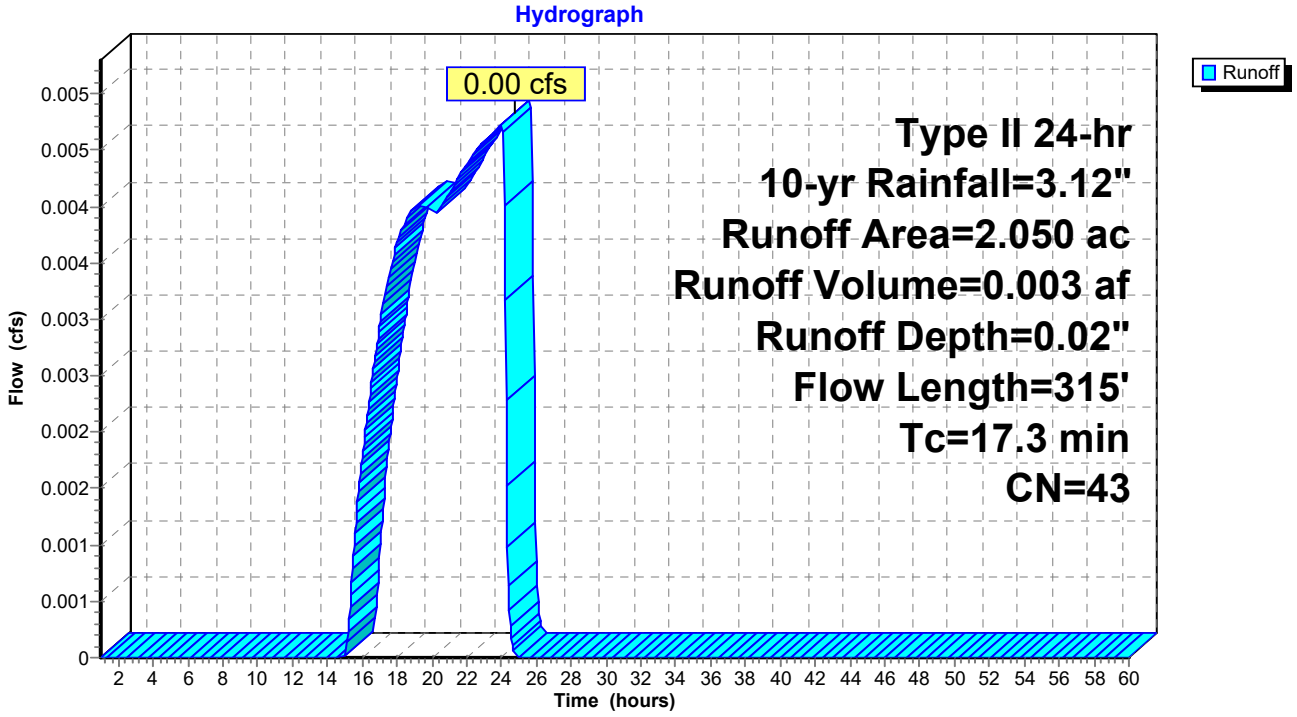
Runoff = 0.00 cfs @ 23.99 hrs, Volume= 0.003 af, Depth= 0.02"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.12"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
1.060	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
2.050	43	Weighted Average
1.760		85.85% Pervious Area
0.290		14.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.6	150	0.0860	4.40		**Shallow Concentrated Flow, lawn** Grassed Waterway Kv= 15.0 fps
17.3	315	Total			

Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)



Summary for Subcatchment 5: Ex Subarea B

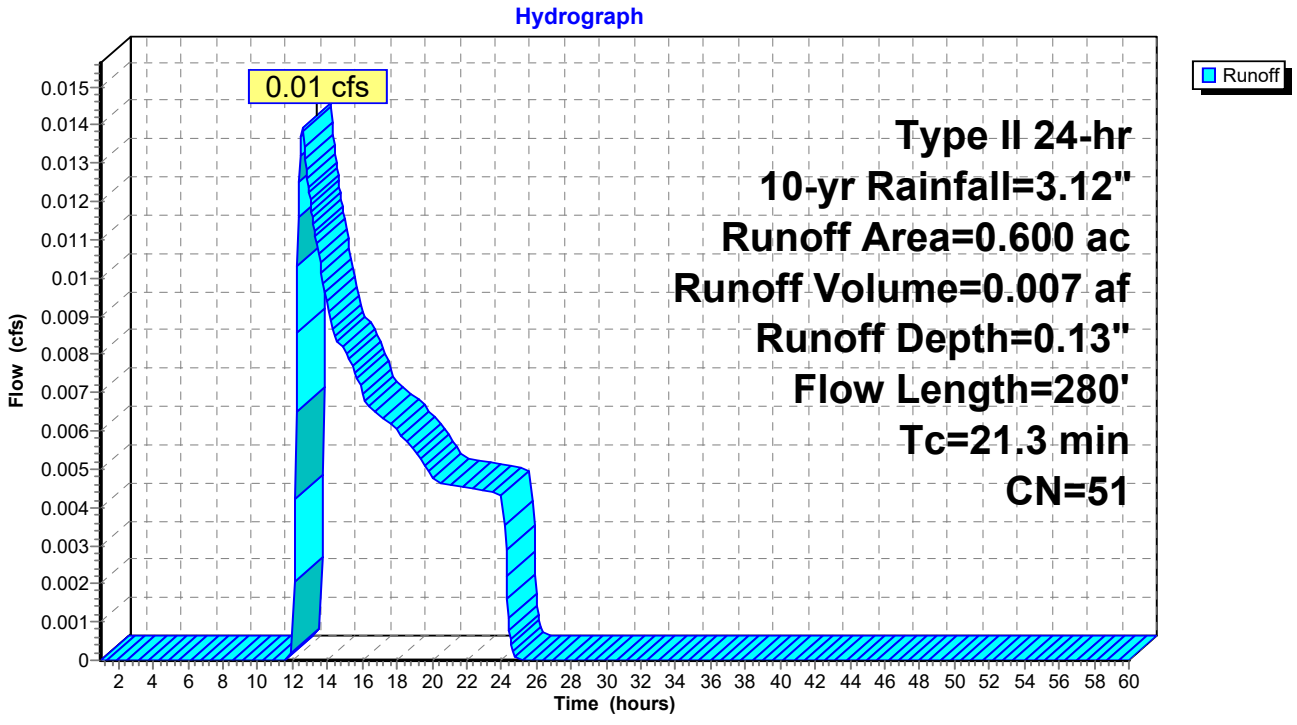
Runoff = 0.01 cfs @ 12.58 hrs, Volume= 0.007 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.12"

Area (ac)	CN	Description
0.150	98	Paved parking, HSG A
0.250	39	>75% Grass cover, Good, HSG A
0.200	32	Woods/grass comb., Good, HSG A
0.600	51	Weighted Average
0.450		75.00% Pervious Area
0.150		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	100	0.0400	0.08		**Sheet Flow, sheet** Woods: Light underbrush n= 0.400 P2= 2.16"
1.5	180	0.0150	1.97		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
21.3	280	Total			

Subcatchment 5: Ex Subarea B



Summary for Pond 4: Existing IB

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.01" for 10-yr event
Inflow = 0.00 cfs @ 23.99 hrs, Volume= 0.003 af
Outflow = 0.00 cfs @ 24.04 hrs, Volume= 0.003 af, Atten= 1%, Lag= 3.5 min
Discarded = 0.00 cfs @ 24.04 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.00' @ 24.04 hrs Surf.Area= 3,566 sf Storage= 6 cf

Plug-Flow detention time= 20.7 min calculated for 0.003 af (100% of inflow)
Center-of-Mass det. time= 20.8 min (1,244.7 - 1,223.9)

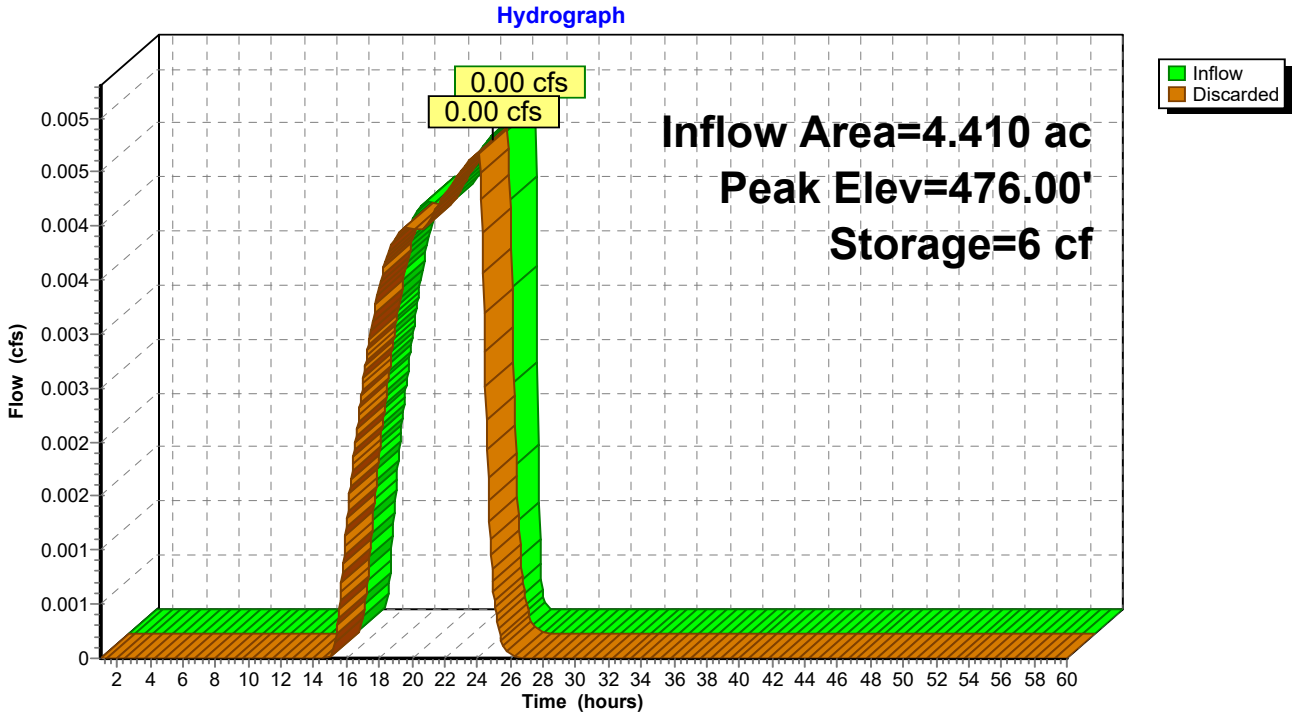
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.17 cfs @ 24.04 hrs HW=476.00' (Free Discharge)
↑**1=Exfiltration (assumed)** (Controls 0.17 cfs)

Pond 4: Existing IB

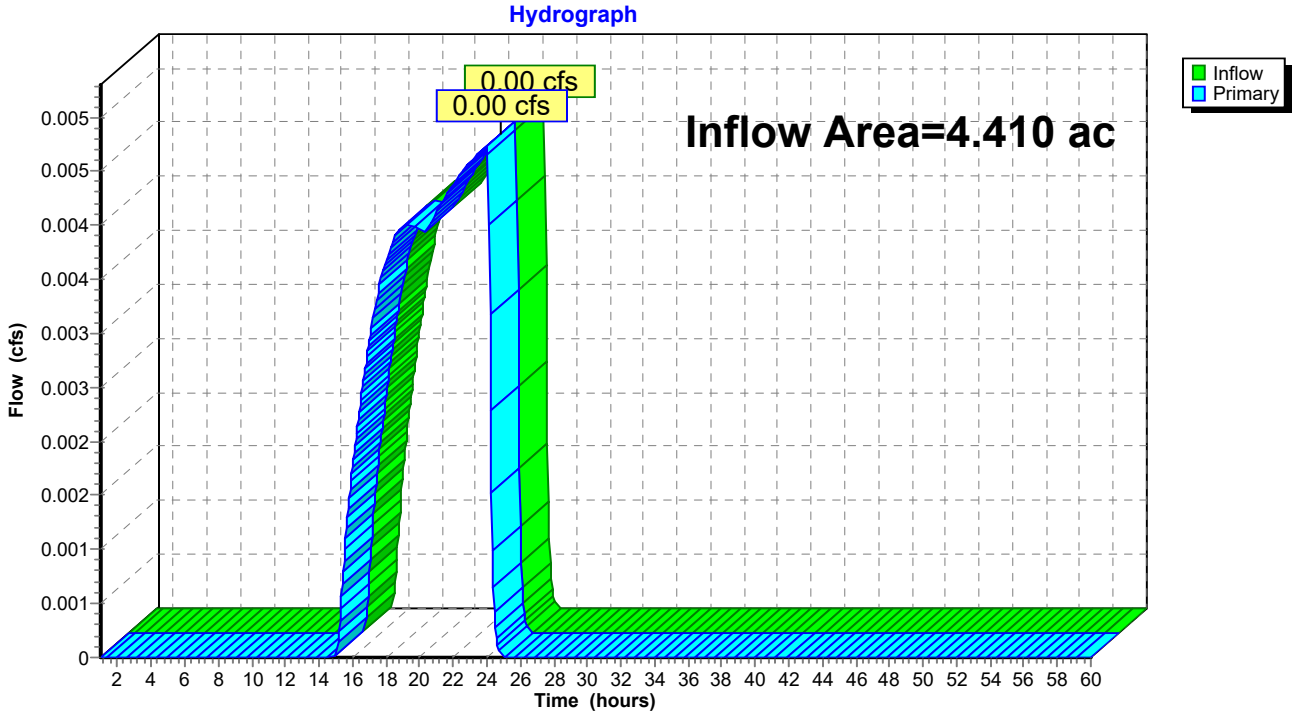


Summary for Link 3: Ex Subarea A Total

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.01" for 10-yr event
Inflow = 0.00 cfs @ 23.99 hrs, Volume= 0.003 af
Primary = 0.00 cfs @ 23.99 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 4 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 3: Ex Subarea A Total



Summary for Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)

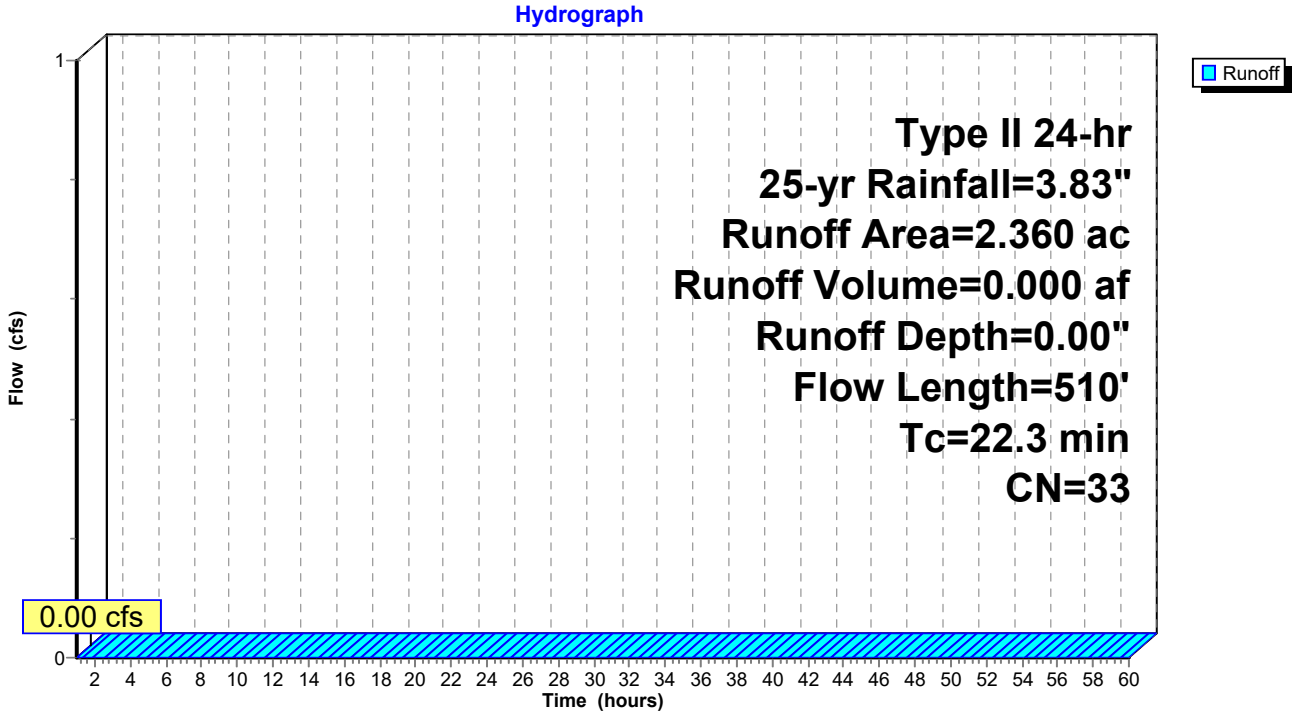
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=3.83"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG A
2.130	30	Woods, Good, HSG A
0.130	39	>75% Grass cover, Good, HSG A
2.360	33	Weighted Average
2.260		95.76% Pervious Area
0.100		4.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
6.5	410	0.0440	1.05		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
22.3	510	Total			

Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)



Summary for Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)

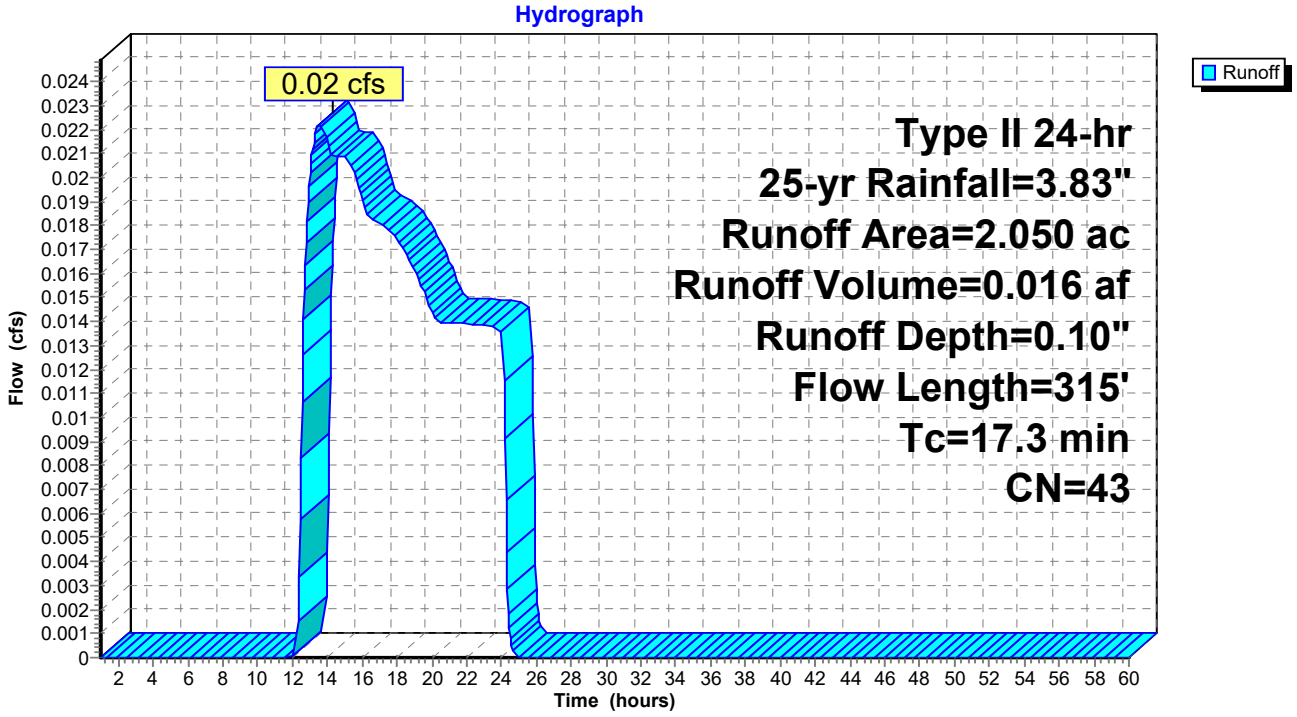
Runoff = 0.02 cfs @ 13.55 hrs, Volume= 0.016 af, Depth= 0.10"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=3.83"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
1.060	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
2.050	43	Weighted Average
1.760		85.85% Pervious Area
0.290		14.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.6	150	0.0860	4.40		**Shallow Concentrated Flow, lawn** Grassed Waterway Kv= 15.0 fps
17.3	315	Total			

Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)



Summary for Subcatchment 5: Ex Subarea B

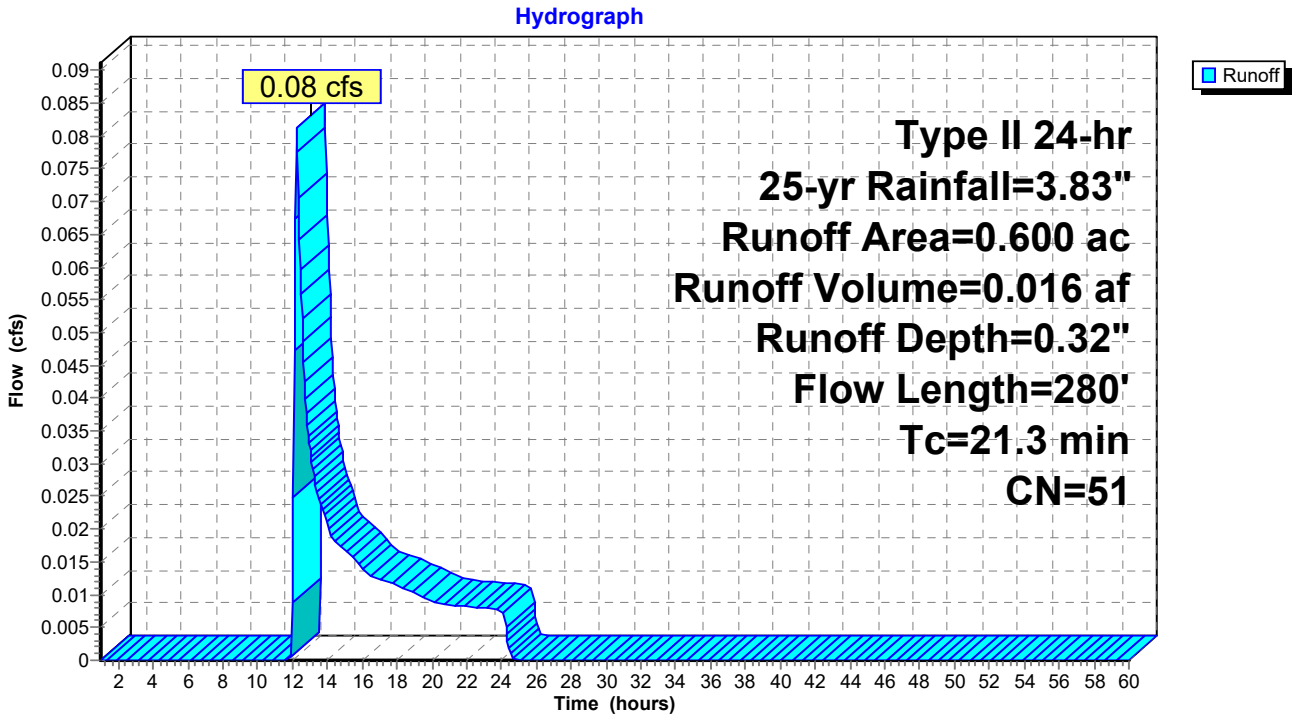
Runoff = 0.08 cfs @ 12.25 hrs, Volume= 0.016 af, Depth= 0.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=3.83"

Area (ac)	CN	Description
0.150	98	Paved parking, HSG A
0.250	39	>75% Grass cover, Good, HSG A
0.200	32	Woods/grass comb., Good, HSG A
0.600	51	Weighted Average
0.450		75.00% Pervious Area
0.150		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	100	0.0400	0.08		**Sheet Flow, sheet** Woods: Light underbrush n= 0.400 P2= 2.16"
1.5	180	0.0150	1.97		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
21.3	280	Total			

Subcatchment 5: Ex Subarea B



Summary for Pond 4: Existing IB

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.04" for 25-yr event
Inflow = 0.02 cfs @ 13.55 hrs, Volume= 0.016 af
Outflow = 0.02 cfs @ 14.04 hrs, Volume= 0.016 af, Atten= 4%, Lag= 29.7 min
Discarded = 0.02 cfs @ 14.04 hrs, Volume= 0.016 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.01' @ 14.04 hrs Surf.Area= 3,586 sf Storage= 26 cf

Plug-Flow detention time= 20.8 min calculated for 0.016 af (100% of inflow)
Center-of-Mass det. time= 20.8 min (1,092.3 - 1,071.5)

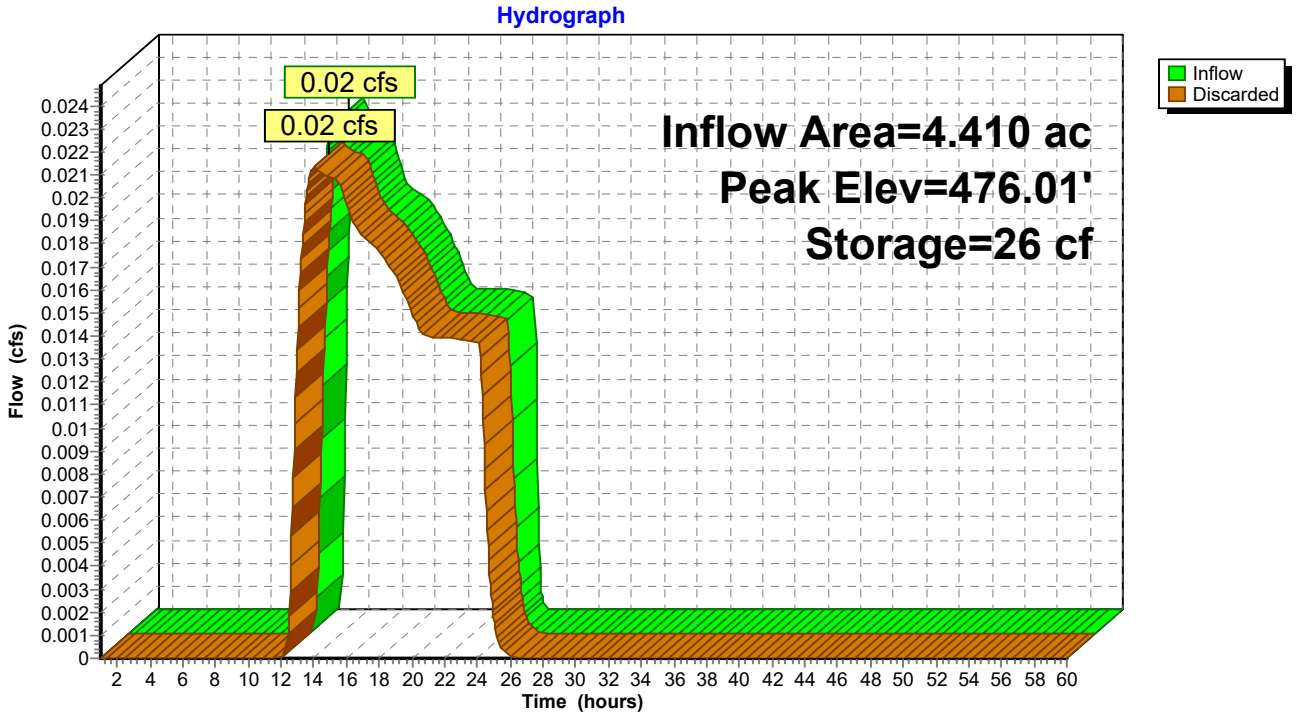
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.17 cfs @ 14.04 hrs HW=476.01' (Free Discharge)
↑**1=Exfiltration (assumed)** (Controls 0.17 cfs)

Pond 4: Existing IB

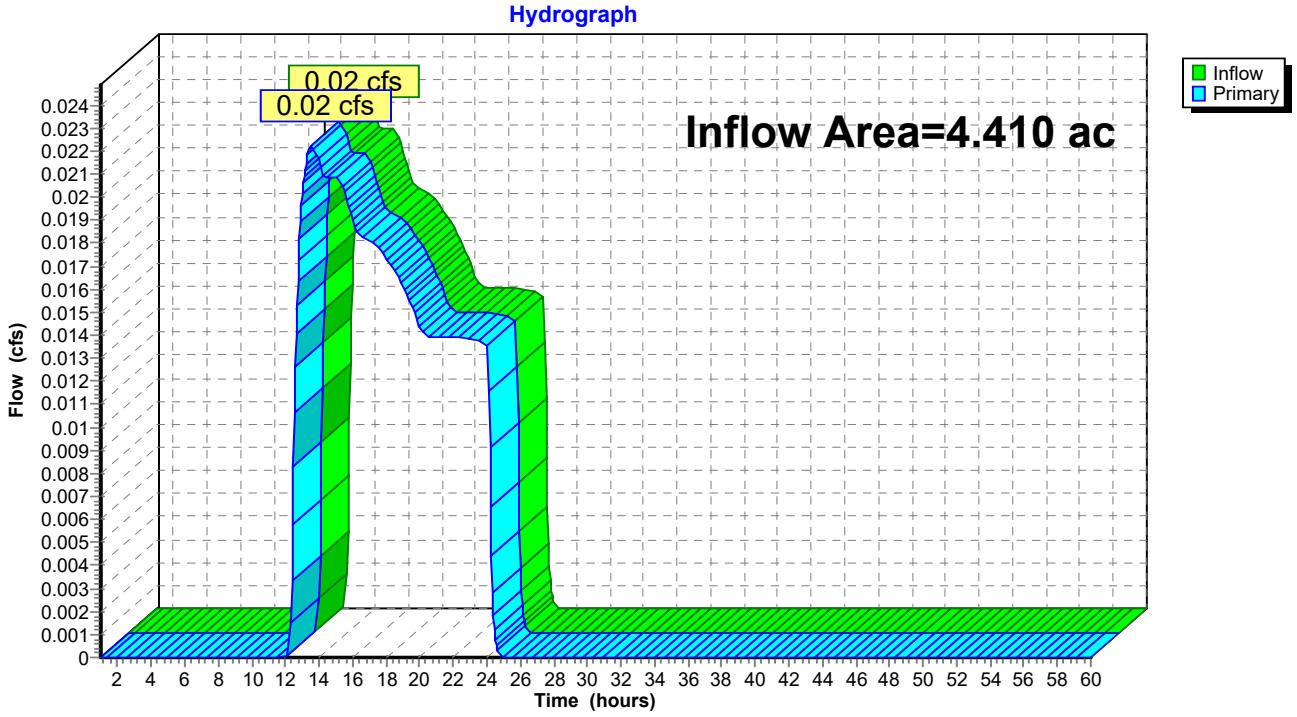


Summary for Link 3: Ex Subarea A Total

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.04" for 25-yr event
Inflow = 0.02 cfs @ 13.55 hrs, Volume= 0.016 af
Primary = 0.02 cfs @ 13.55 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 4 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 3: Ex Subarea A Total



Summary for Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)

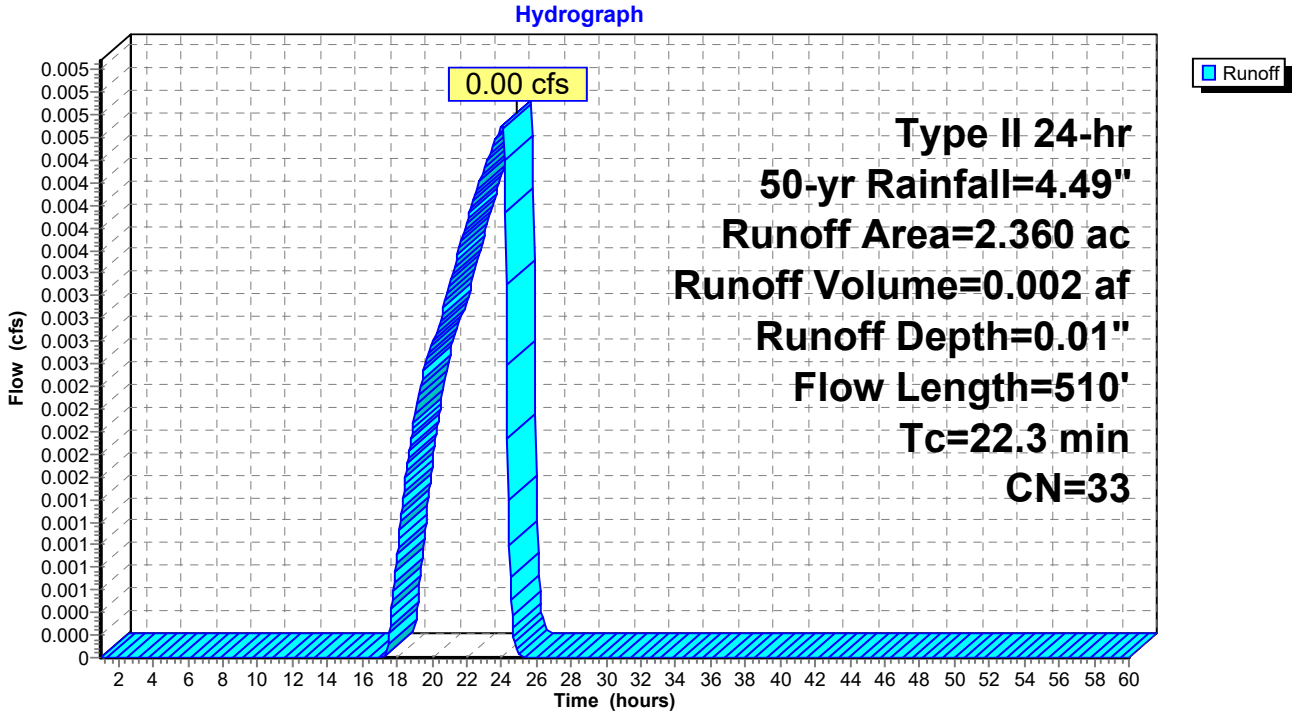
Runoff = 0.00 cfs @ 24.03 hrs, Volume= 0.002 af, Depth= 0.01"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=4.49"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG A
2.130	30	Woods, Good, HSG A
0.130	39	>75% Grass cover, Good, HSG A
2.360	33	Weighted Average
2.260		95.76% Pervious Area
0.100		4.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
6.5	410	0.0440	1.05		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
22.3	510	Total			

Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)



Summary for Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)

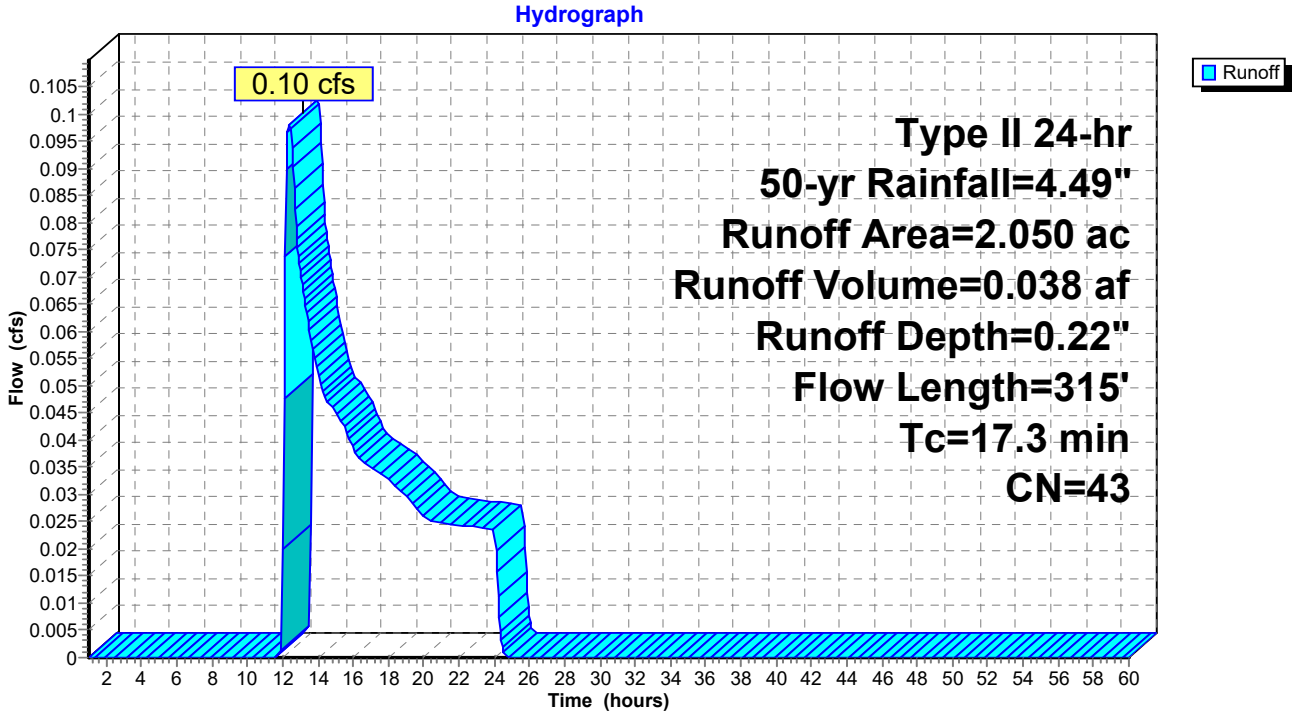
Runoff = 0.10 cfs @ 12.40 hrs, Volume= 0.038 af, Depth= 0.22"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=4.49"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
1.060	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
2.050	43	Weighted Average
1.760		85.85% Pervious Area
0.290		14.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.6	150	0.0860	4.40		**Shallow Concentrated Flow, lawn** Grassed Waterway Kv= 15.0 fps
17.3	315	Total			

Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)



Summary for Subcatchment 5: Ex Subarea B

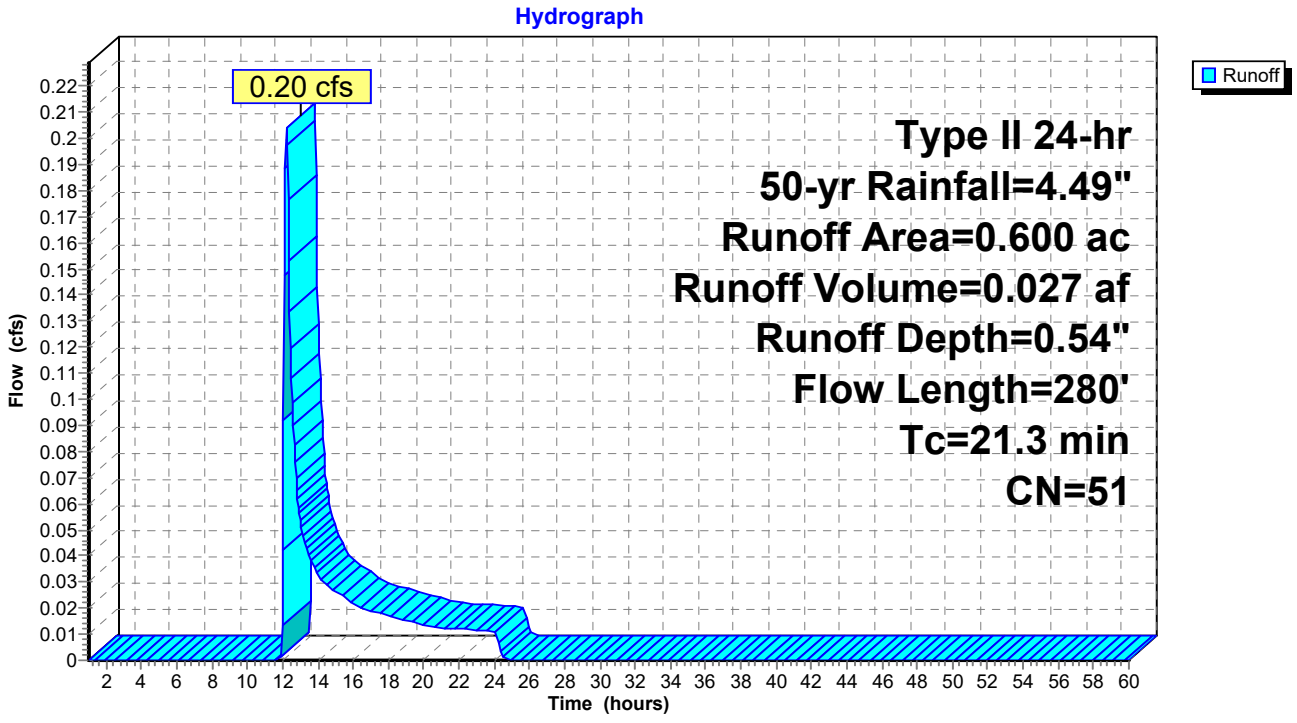
Runoff = 0.20 cfs @ 12.21 hrs, Volume= 0.027 af, Depth= 0.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=4.49"

Area (ac)	CN	Description
0.150	98	Paved parking, HSG A
0.250	39	>75% Grass cover, Good, HSG A
0.200	32	Woods/grass comb., Good, HSG A
0.600	51	Weighted Average
0.450		75.00% Pervious Area
0.150		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	100	0.0400	0.08		**Sheet Flow, sheet** Woods: Light underbrush n= 0.400 P2= 2.16"
1.5	180	0.0150	1.97		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
21.3	280	Total			

Subcatchment 5: Ex Subarea B



Summary for Pond 4: Existing IB

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.11" for 50-yr event
Inflow = 0.10 cfs @ 12.40 hrs, Volume= 0.040 af
Outflow = 0.08 cfs @ 12.81 hrs, Volume= 0.040 af, Atten= 22%, Lag= 24.7 min
Discarded = 0.08 cfs @ 12.81 hrs, Volume= 0.040 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.03' @ 12.81 hrs Surf.Area= 3,652 sf Storage= 94 cf

Plug-Flow detention time= 20.8 min calculated for 0.040 af (100% of inflow)
Center-of-Mass det. time= 20.8 min (1,039.7 - 1,018.9)

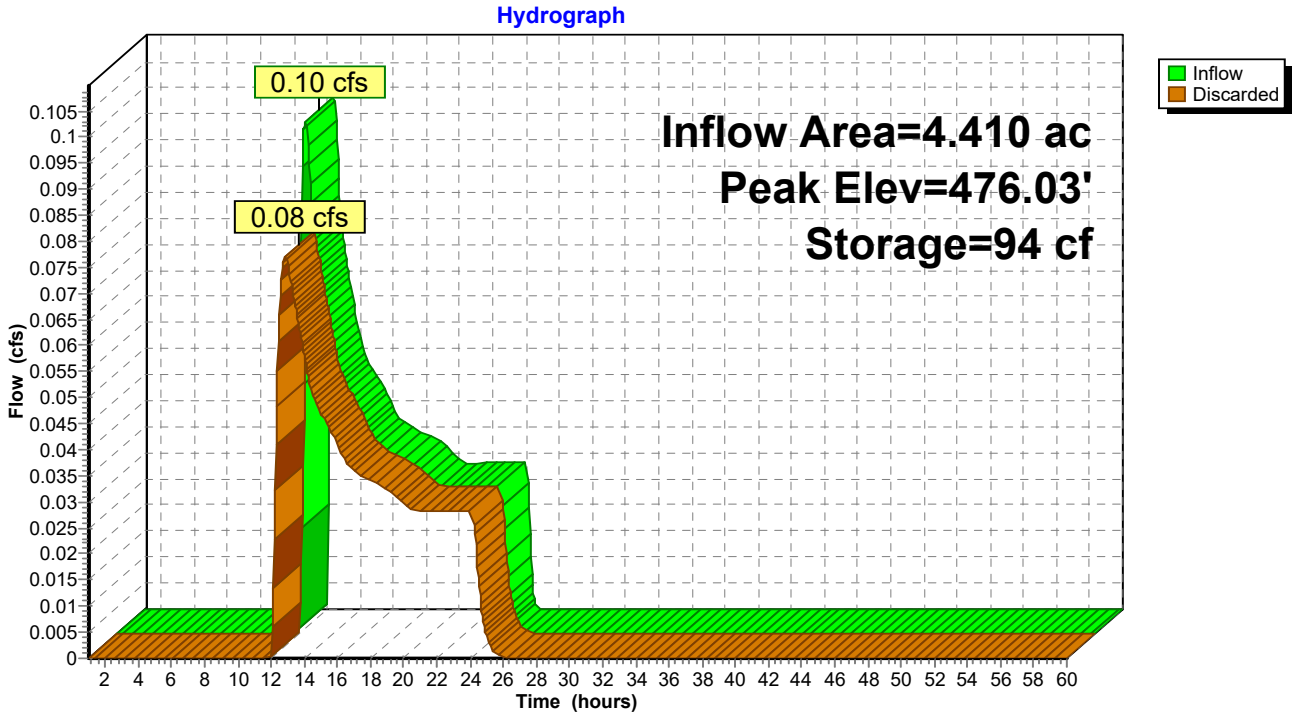
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.17 cfs @ 12.81 hrs HW=476.03' (Free Discharge)
↑**1=Exfiltration (assumed)** (Controls 0.17 cfs)

Pond 4: Existing IB

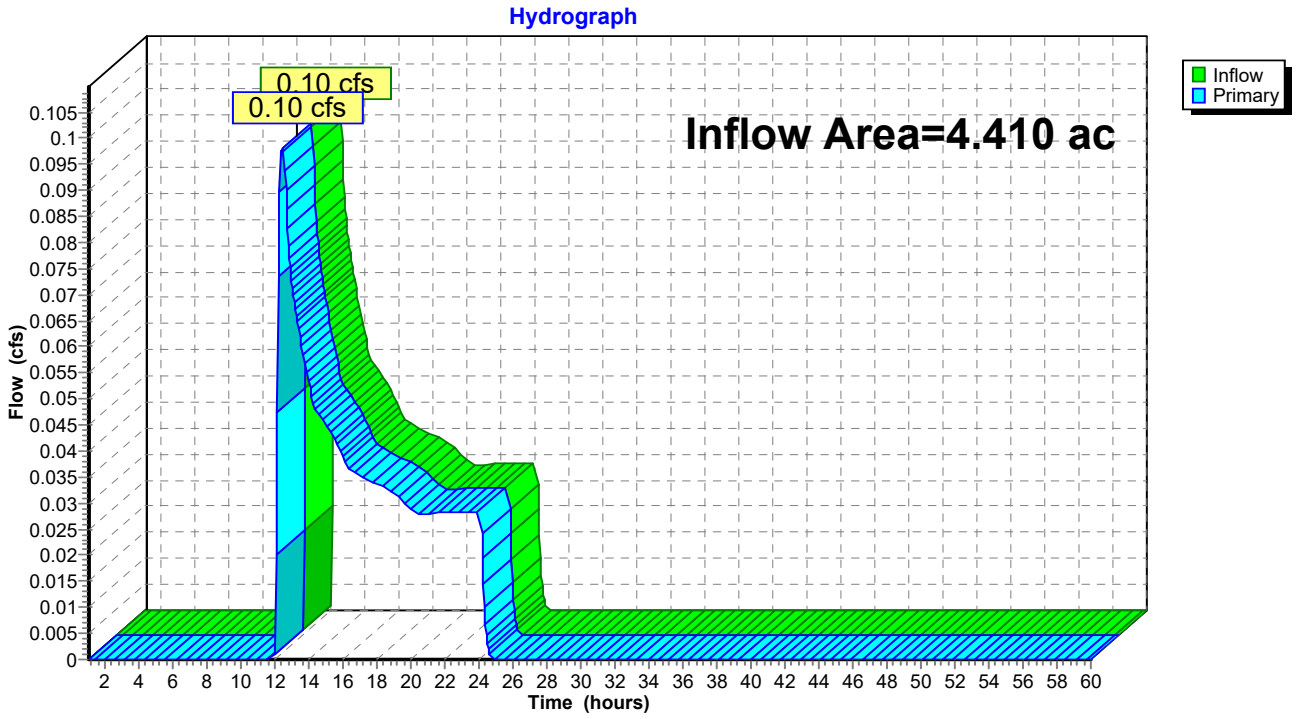


Summary for Link 3: Ex Subarea A Total

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.11" for 50-yr event
Inflow = 0.10 cfs @ 12.40 hrs, Volume= 0.040 af
Primary = 0.10 cfs @ 12.40 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 4 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 3: Ex Subarea A Total



Summary for Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)

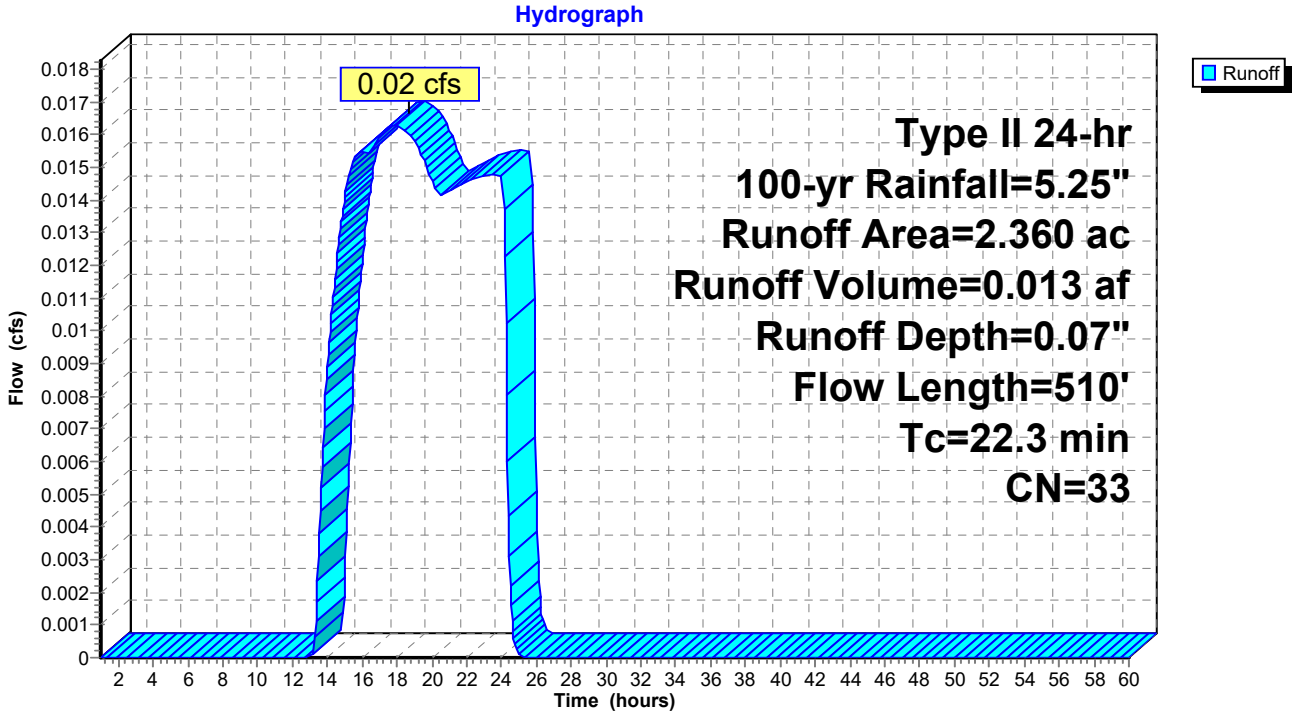
Runoff = 0.02 cfs @ 17.89 hrs, Volume= 0.013 af, Depth= 0.07"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.25"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG A
2.130	30	Woods, Good, HSG A
0.130	39	>75% Grass cover, Good, HSG A
2.360	33	Weighted Average
2.260		95.76% Pervious Area
0.100		4.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
6.5	410	0.0440	1.05		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
22.3	510	Total			

Subcatchment 1: Ex Subarea A-1 (to ex IB PIPE)



Summary for Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)

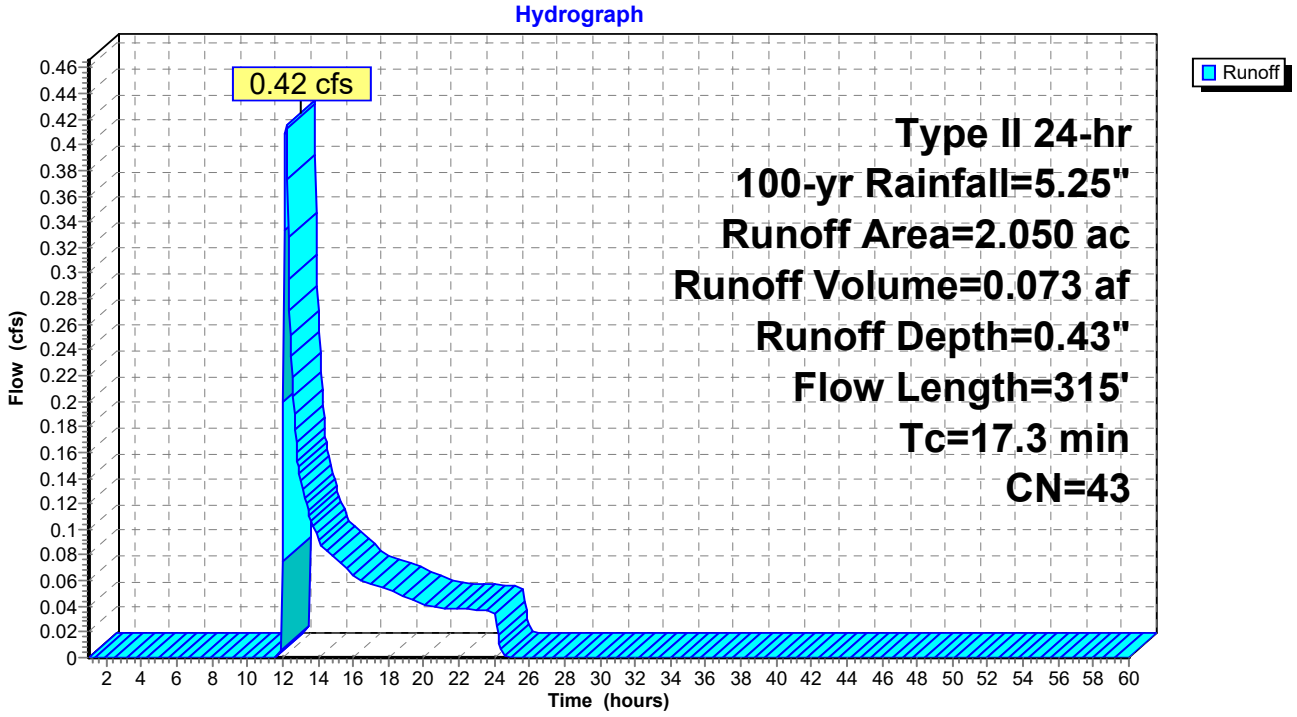
Runoff = 0.42 cfs @ 12.18 hrs, Volume= 0.073 af, Depth= 0.43"
Routed to Link 3 : Ex Subarea A Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.25"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
1.060	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
2.050	43	Weighted Average
1.760		85.85% Pervious Area
0.290		14.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.6	150	0.0860	4.40		**Shallow Concentrated Flow, lawn** Grassed Waterway Kv= 15.0 fps
17.3	315	Total			

Subcatchment 2: Ex Subarea A-2 (remainder to ex IB)



Summary for Subcatchment 5: Ex Subarea B

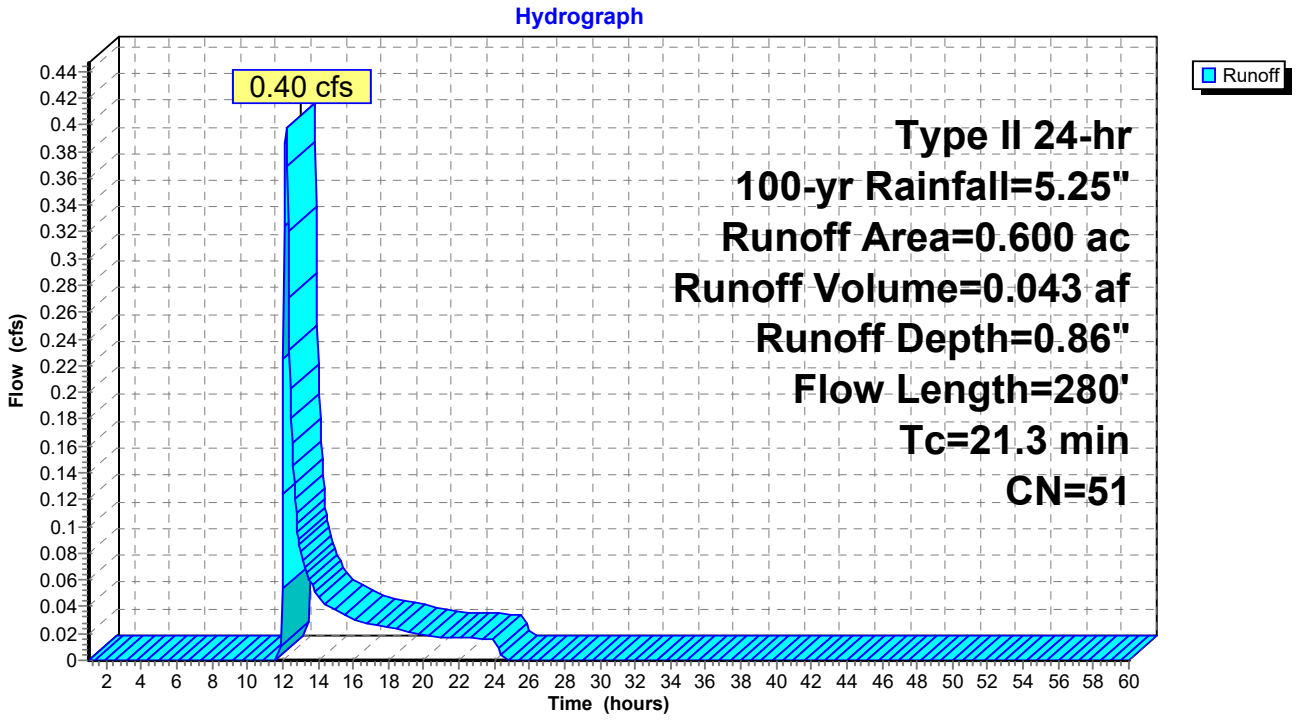
Runoff = 0.40 cfs @ 12.19 hrs, Volume= 0.043 af, Depth= 0.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.25"

Area (ac)	CN	Description
0.150	98	Paved parking, HSG A
0.250	39	>75% Grass cover, Good, HSG A
0.200	32	Woods/grass comb., Good, HSG A
0.600	51	Weighted Average
0.450		75.00% Pervious Area
0.150		25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	100	0.0400	0.08		**Sheet Flow, sheet** Woods: Light underbrush n= 0.400 P2= 2.16"
1.5	180	0.0150	1.97		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
21.3	280	Total			

Subcatchment 5: Ex Subarea B



Summary for Pond 4: Existing IB

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.23" for 100-yr event
Inflow = 0.42 cfs @ 12.18 hrs, Volume= 0.086 af
Outflow = 0.18 cfs @ 12.68 hrs, Volume= 0.086 af, Atten= 56%, Lag= 30.2 min
Discarded = 0.18 cfs @ 12.68 hrs, Volume= 0.086 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.09' @ 12.68 hrs Surf.Area= 3,876 sf Storage= 333 cf

Plug-Flow detention time= 22.3 min calculated for 0.086 af (100% of inflow)
Center-of-Mass det. time= 22.1 min (1,013.7 - 991.6)

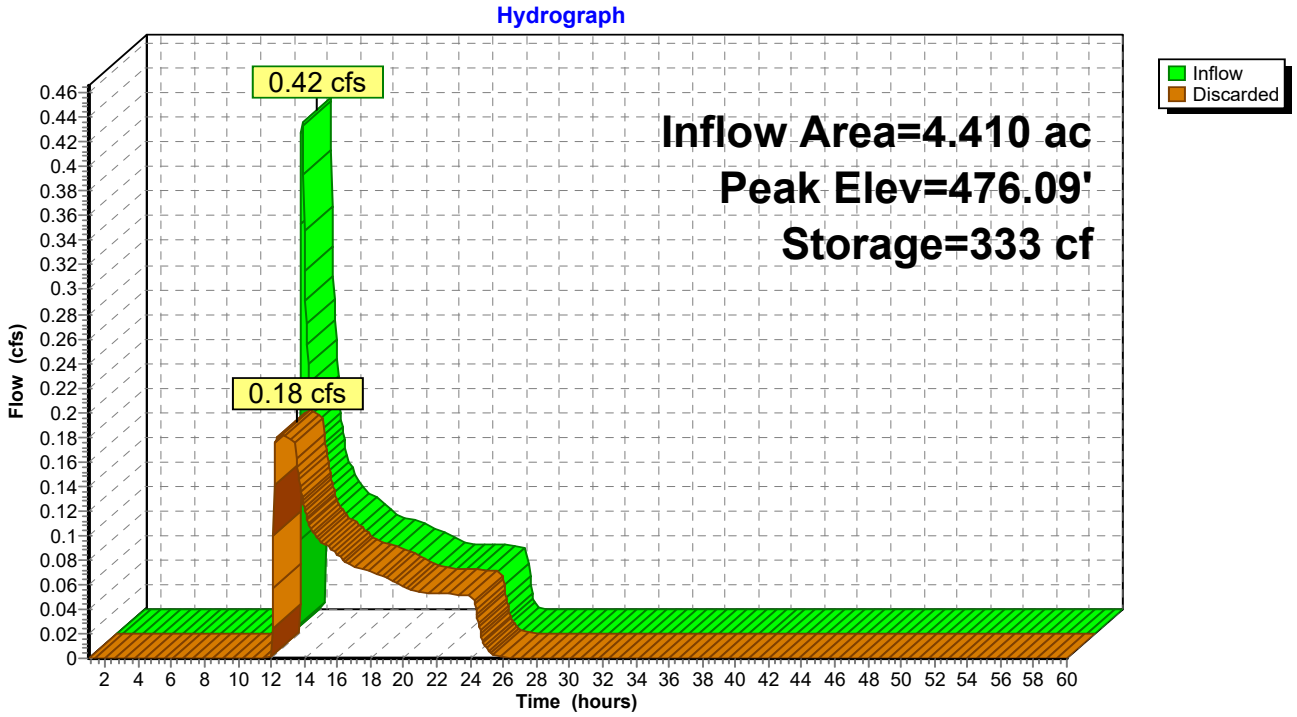
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.18 cfs @ 12.68 hrs HW=476.09' (Free Discharge)
↑**1=Exfiltration (assumed)** (Controls 0.18 cfs)

Pond 4: Existing IB

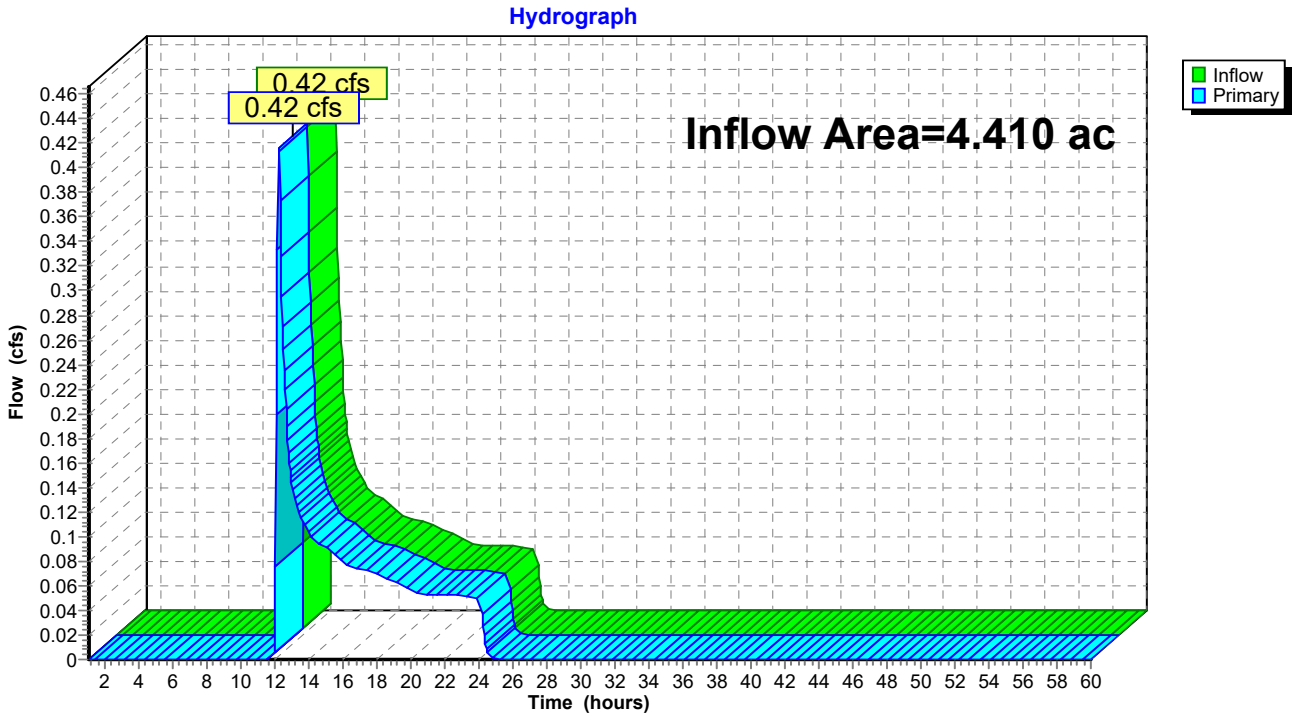


Summary for Link 3: Ex Subarea A Total

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.23" for 100-yr event
Inflow = 0.42 cfs @ 12.18 hrs, Volume= 0.086 af
Primary = 0.42 cfs @ 12.18 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 4 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 3: Ex Subarea A Total



P:\2850\Drawings\Final\2850 Drainage Base.dwg

NEW YORK STATE ROUTE 96 – PITTSFORD VICTOR ROAD
(66' RIGHT-OF-WAY)

THORNELL ROAD – COUNTY ROAD 33
(49.5' RIGHT-OF-WAY)

PROPOSED STORMWATER MANAGEMENT FACILITY 'A' (INFILTRATION BASIN)
TOP OF BERM=483.5
TOP OF GRATE=481.50
12" OUTLET ELEVATION=478.73
1-YR PONDING ELEVATION=476.26
2-YR PONDING ELEVATION=476.72
5-YR PONDING ELEVATION=477.57
10-YR PONDING ELEVATION=478.33
25-YR PONDING ELEVATION=479.38
50-YR PONDING ELEVATION=480.27
100-YR PONDING ELEVATION=481.22

PROPOSED SUBAREA A-2
AREA=1.92 ACRES
CN=44
Tc=17.6 MINUTES

ANALYSIS POINT A-1
(PROPOSED INFILTRATION BASIN)

ANALYSIS POINT A-2
(EXISTING INFILTRATION BASIN)

PROPOSED SUBAREA B
AREA=0.26 ACRES
CN=53
Tc=18.2 MINUTES

ANALYSIS POINT B

PROPOSED SUBAREA A-1
AREA=2.83 ACRES
CN=68
Tc=15.5 MINUTES

N 1,117,598.81
E 1,443,196.23

N 1,117,141.84
E 1,443,167.09

N 1,117,139.55
E 1,442,926.52

APPROXIMATE LOCATION OF EXISTING BUILDING

APPROXIMATE LOCATION OF EXISTING BUILDING

20' FRONT SETBACK

50' REAR BUFFER

15' SIDE SETBACK

CONCRETE WALK

LOT 11 LOT 10 LOT 9 LOT 8

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Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
"It is a violation of this law for any person, unless he is acting under the direction of a licensed professional engineer or land surveyor to alter any item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration."

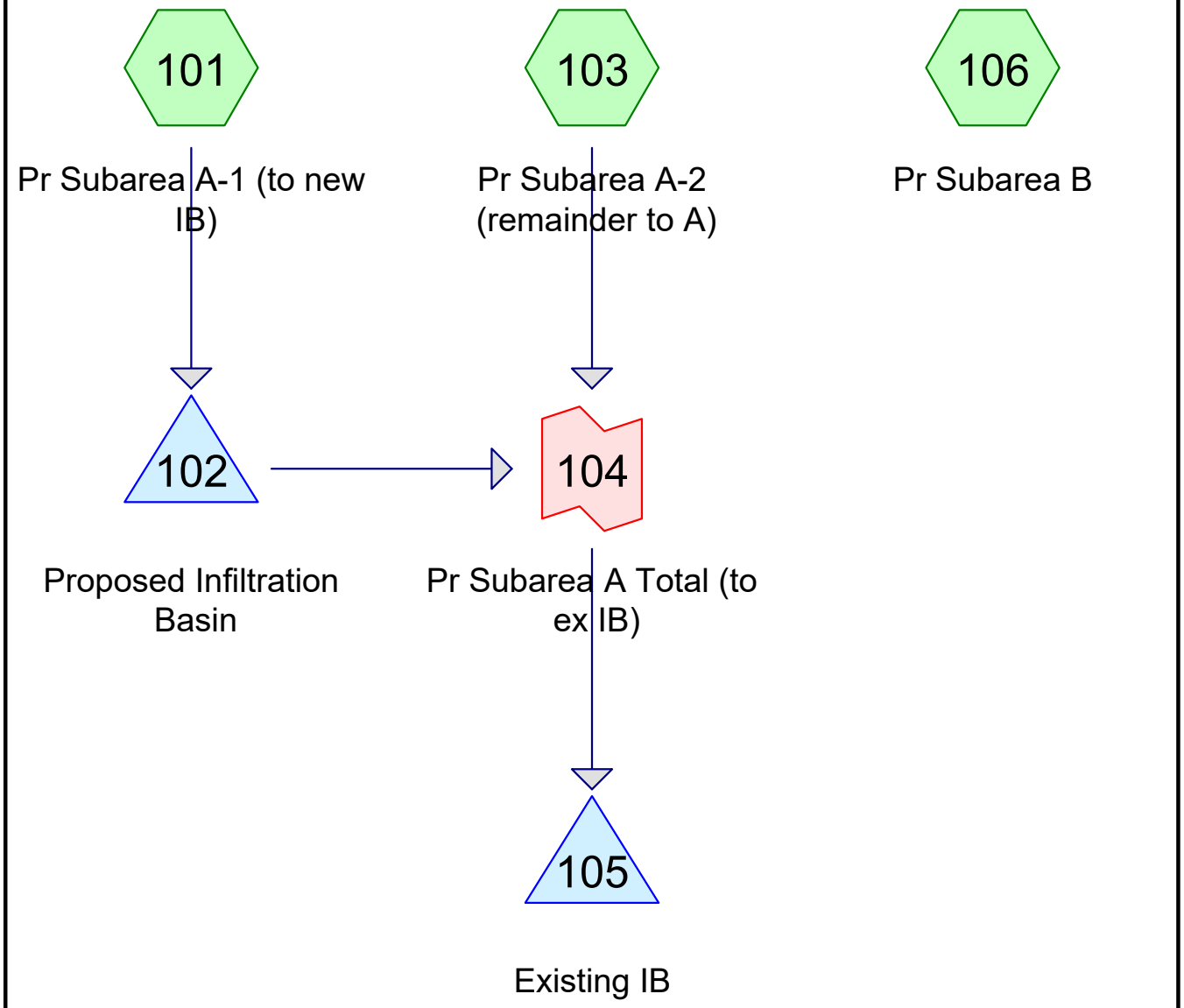
7			
6			
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	REVISIONS	DATE	BY

BME ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
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FAIRPORT, NEW YORK 14450
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585-377-7360

PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: MRGC, LLC
P.O. BOX 34
PITTSFORD, NY, 14534
DRAWING TITLE: PROPOSED DRAINAGE MAP

PROJECT MANAGER
P. VARS/R. DESTRO
PROJECT ENGINEER
F. SHELLEY
DRAWN BY
M SERENI
SCALE: 1" = 80'
DATE ISSUED: NOVEMBER 14, 2025
PROJECT NO.
2850
DRAWING NO.
FIGURE 03

PROPOSED DRAINAGE



Subcat Reach Pond Link

Routing Diagram for 2850 Stormwater Calcs
Prepared by BME Associates, Printed 2/11/2026
HydroCAD® 10.20-7a s/n 09860 © 2025 HydroCAD Software Solutions LLC

Summary for Subcatchment 101: Pr Subarea A-1 (to new IB)

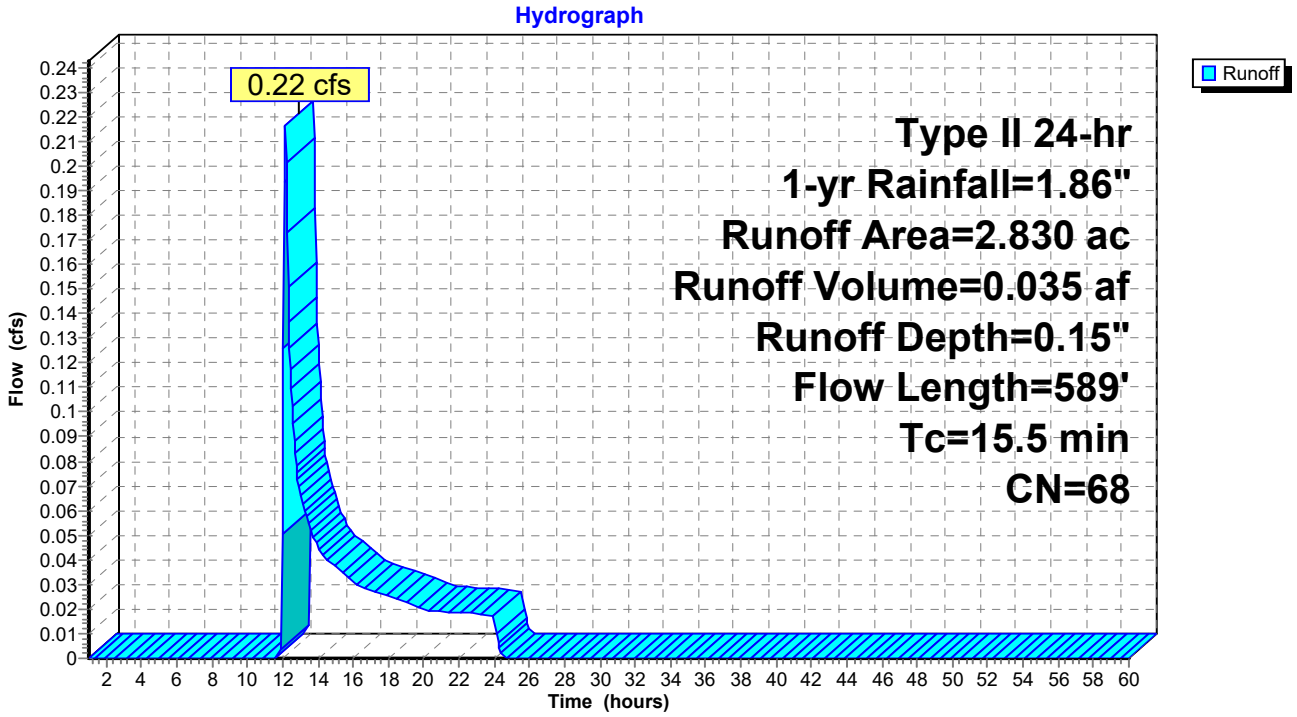
Runoff = 0.22 cfs @ 12.16 hrs, Volume= 0.035 af, Depth= 0.15"
Routed to Pond 102 : Proposed Infiltration Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=1.86"

Area (ac)	CN	Description
1.410	98	Paved parking, HSG A
1.420	39	>75% Grass cover, Good, HSG A
2.830	68	Weighted Average
1.420		50.18% Pervious Area
1.410		49.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0150	0.12		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 2.16"
0.7	75	0.0150	1.84		**Shallow Concentrated Flow, Lawn** Grassed Waterway Kv= 15.0 fps
0.5	87	0.0050	3.21	2.52	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
0.7	187	0.0100	4.54	3.56	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.2	118	0.0414	9.23	7.25	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.0	22	0.0917	13.74	10.79	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
15.5	589	Total			

Subcatchment 101: Pr Subarea A-1 (to new IB)



Summary for Subcatchment 103: Pr Subarea A-2 (remainder to A)

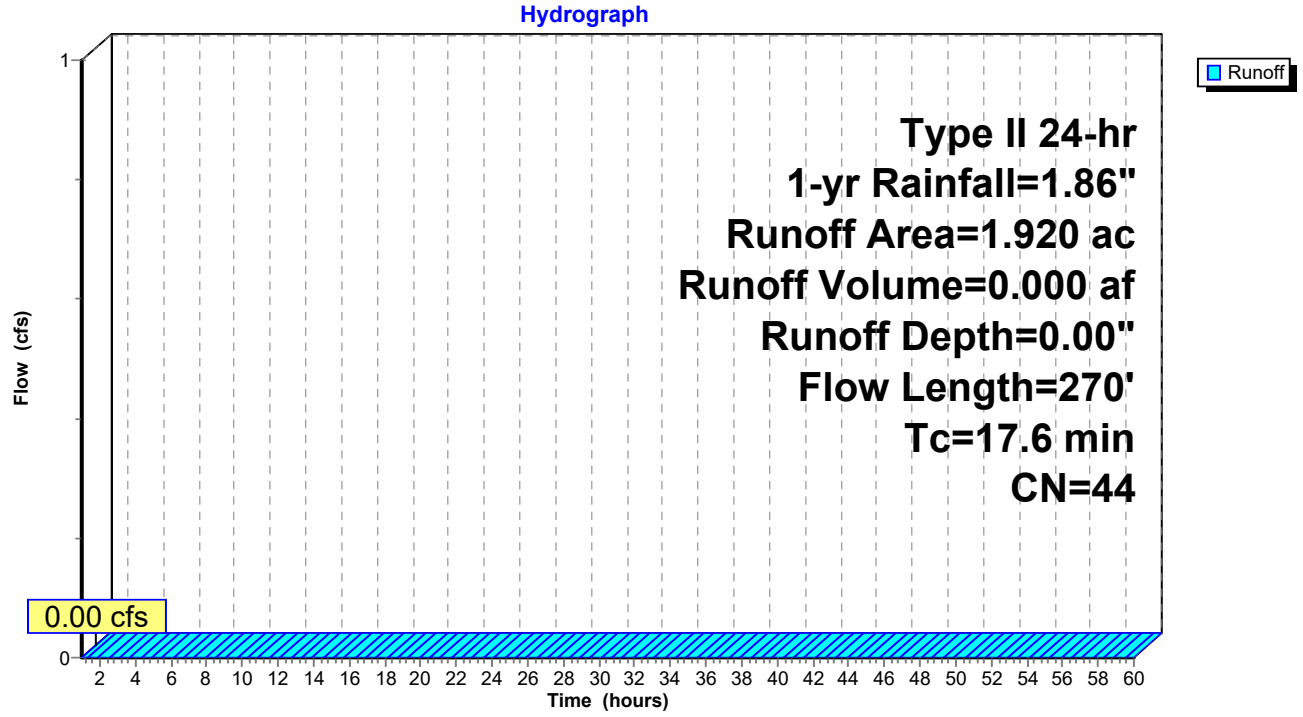
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=1.86"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
0.930	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
1.920	44	Weighted Average
1.630		84.90% Pervious Area
0.290		15.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.9	105	0.0860	2.05		**Shallow Concentrated Flow, lawn** Short Grass Pasture Kv= 7.0 fps
17.6	270	Total			

Subcatchment 103: Pr Subarea A-2 (remainder to A)



Summary for Subcatchment 106: Pr Subarea B

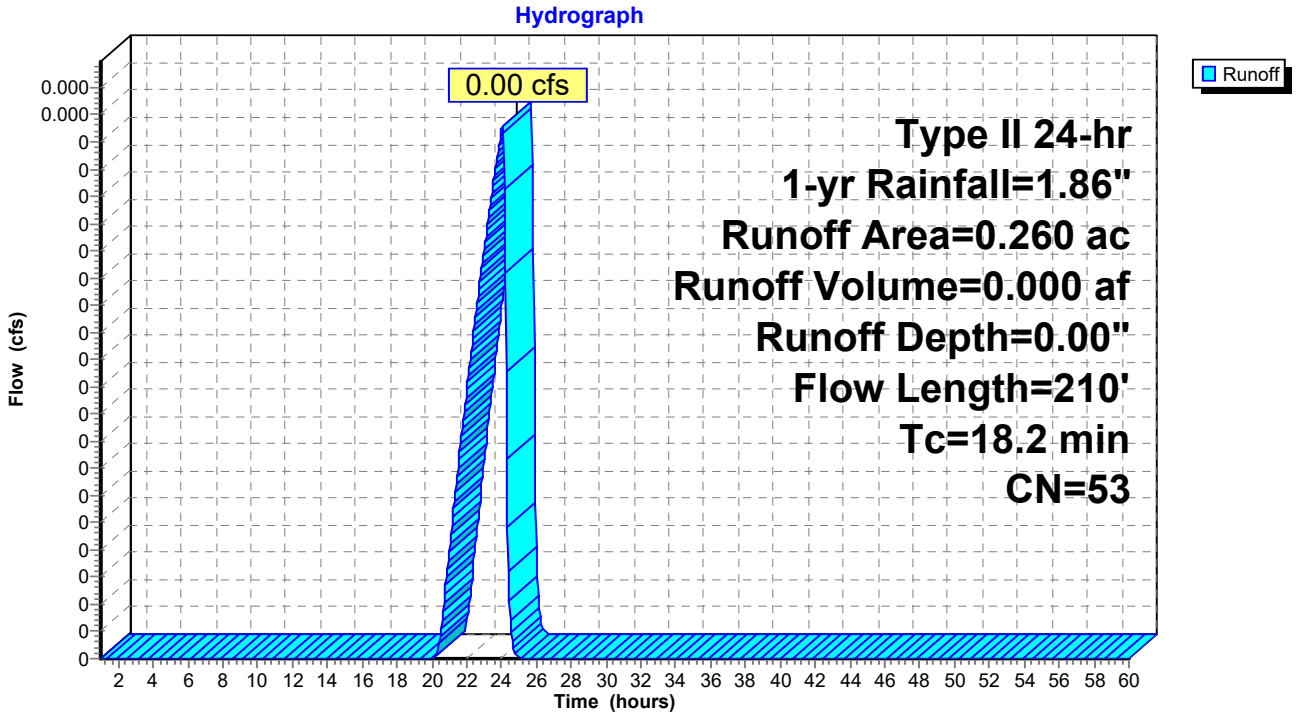
Runoff = 0.00 cfs @ 24.03 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=1.86"

Area (ac)	CN	Description
0.060	98	Paved parking, HSG A
0.200	39	>75% Grass cover, Good, HSG A
0.260	53	Weighted Average
0.200		76.92% Pervious Area
0.060		23.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0200	0.10		**Sheet Flow, sheet** Grass: Dense n= 0.240 P2= 2.16"
0.8	110	0.0230	2.44		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
18.2	210	Total			

Subcatchment 106: Pr Subarea B



Summary for Pond 102: Proposed Infiltration Basin

Inflow Area = 2.830 ac, 49.82% Impervious, Inflow Depth = 0.15" for 1-yr event
Inflow = 0.22 cfs @ 12.16 hrs, Volume= 0.035 af
Outflow = 0.07 cfs @ 12.82 hrs, Volume= 0.035 af, Atten= 66%, Lag= 40.1 min
Discarded = 0.07 cfs @ 12.82 hrs, Volume= 0.035 af
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.26' @ 12.82 hrs Surf.Area= 769 sf Storage= 188 cf

Plug-Flow detention time= 21.1 min calculated for 0.035 af (100% of inflow)
Center-of-Mass det. time= 21.1 min (984.1 - 963.0)

Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	18,470 cf	**Infiltration Basin (Prismatic)** Listed below (Recalc)

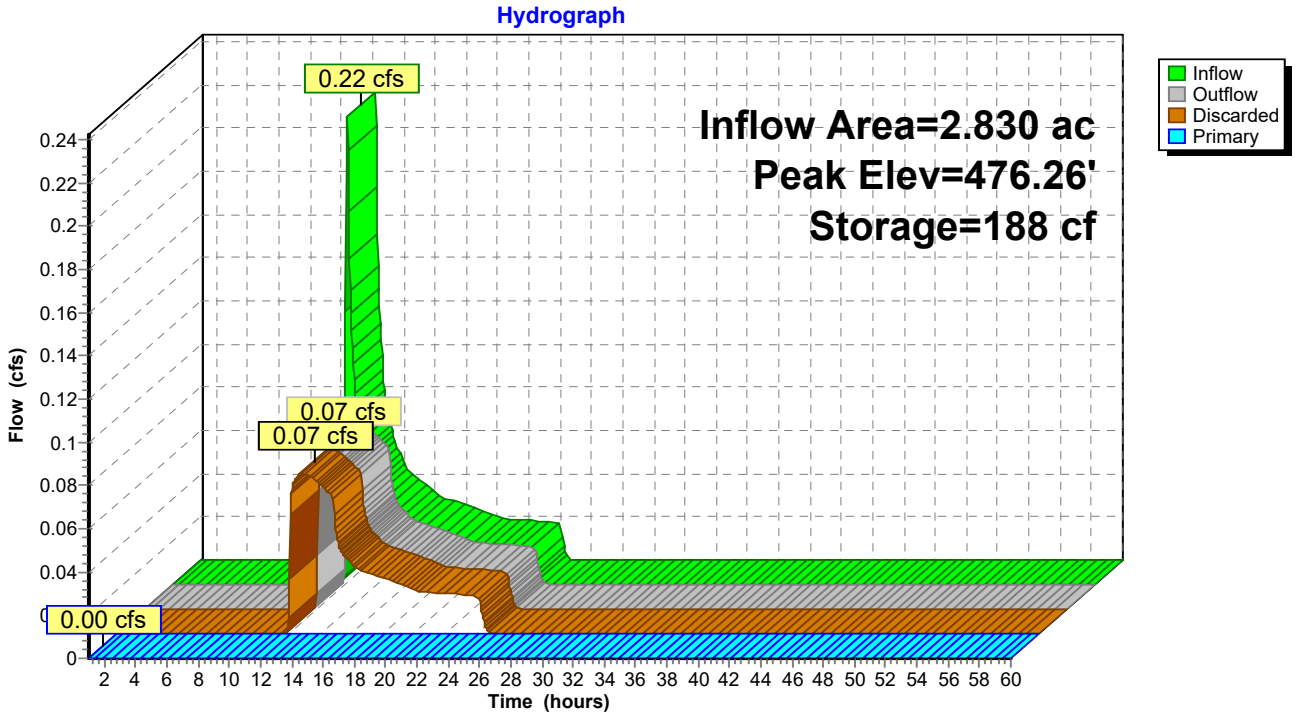
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.19'	**12.0" Round Culvert** L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 478.19' / 476.83' S= 0.0272 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	481.50'	**24.0" x 24.0" Horiz. 2'x2' grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	476.00'	**4.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.07 cfs @ 12.82 hrs HW=476.26' (Free Discharge)
↑└**3=Exfiltration** (Controls 0.07 cfs)

Primary OutFlow Max=0.00 cfs @ 1.00 hrs HW=476.00' (Free Discharge)
↑└**1=Culvert** (Controls 0.00 cfs)
↑└**2=2'x2' grate** (Controls 0.00 cfs)

Pond 102: Proposed Infiltration Basin



Summary for Pond 105: Existing IB

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.00' @ 1.00 hrs Surf.Area= 3,560 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

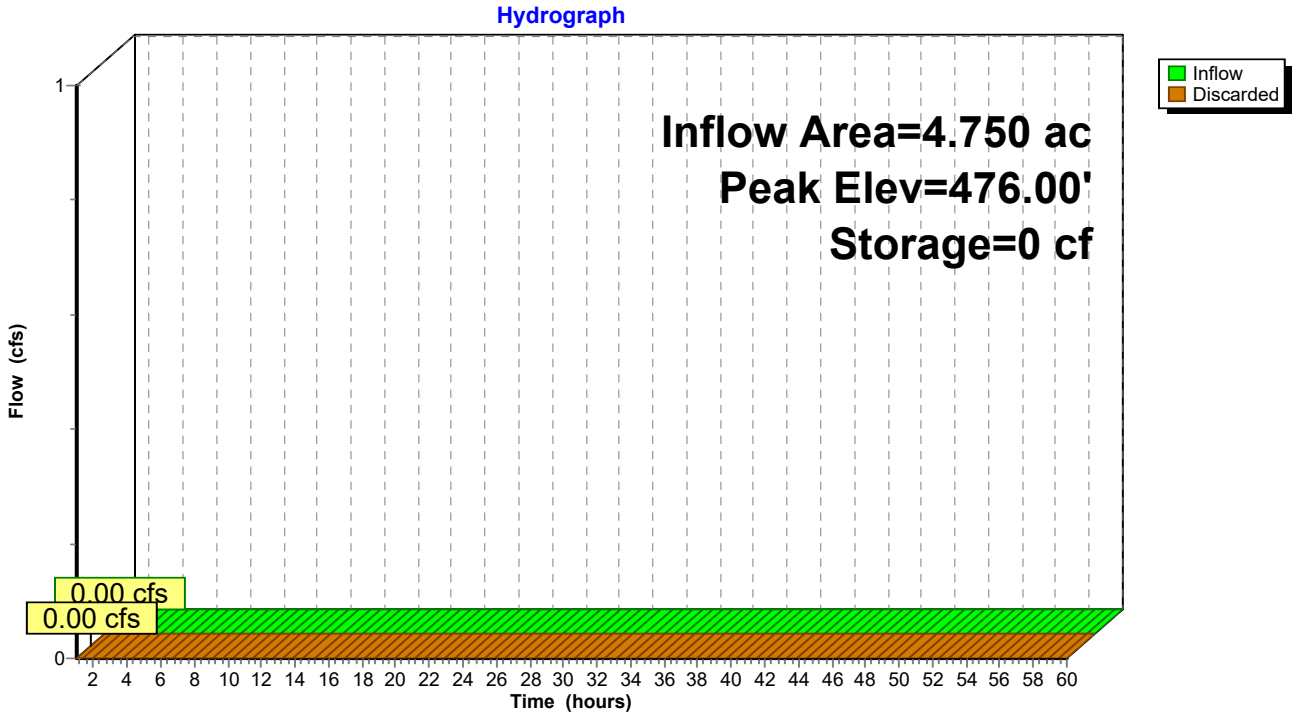
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.00 cfs @ 1.00 hrs HW=476.00' (Free Discharge)
↑**1=Exfiltration (assumed)** (Passes 0.00 cfs of 0.16 cfs potential flow)

Pond 105: Existing IB

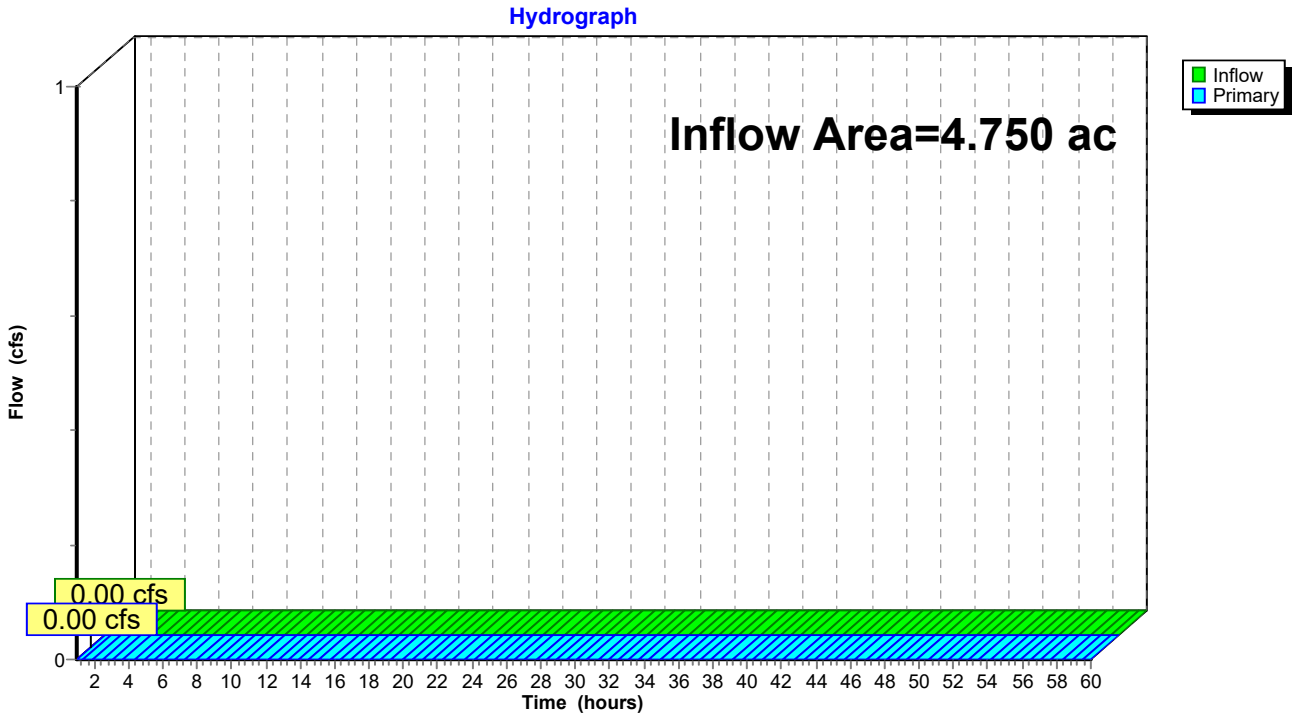


Summary for Link 104: Pr Subarea A Total (to ex IB)

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 105 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 104: Pr Subarea A Total (to ex IB)



Summary for Subcatchment 101: Pr Subarea A-1 (to new IB)

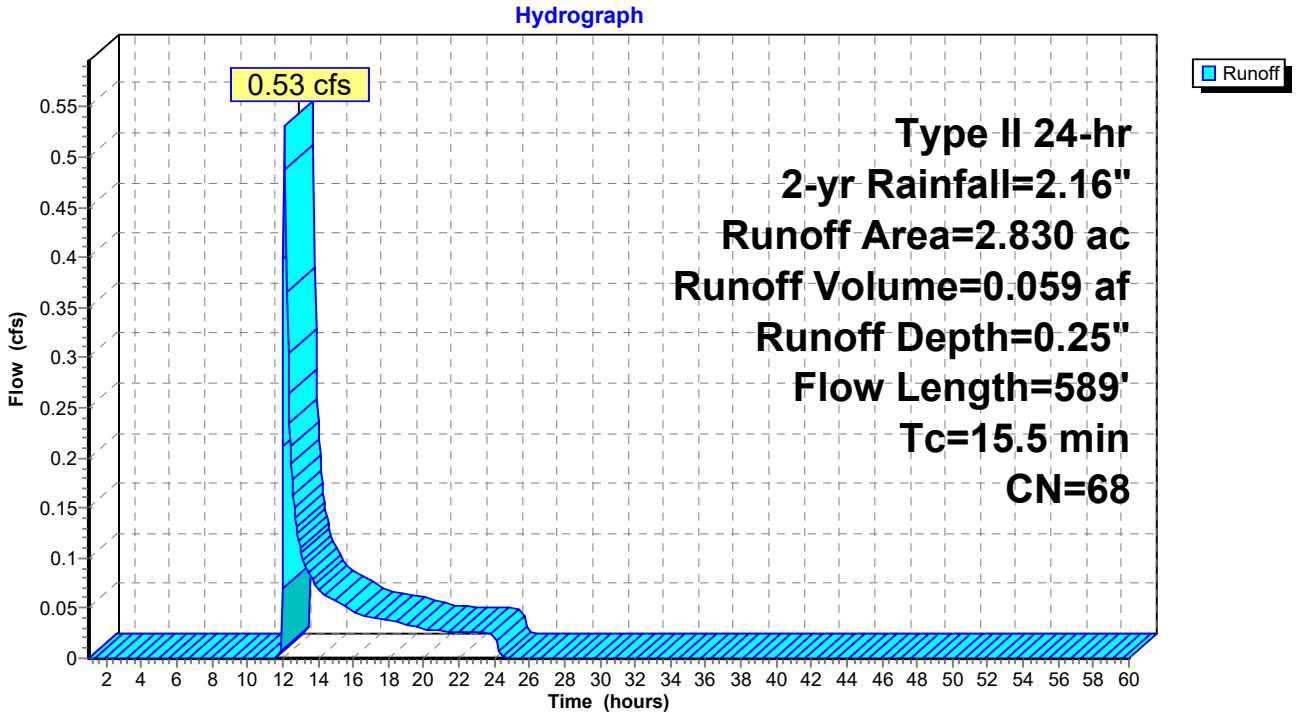
Runoff = 0.53 cfs @ 12.13 hrs, Volume= 0.059 af, Depth= 0.25"
Routed to Pond 102 : Proposed Infiltration Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.16"

Area (ac)	CN	Description
1.410	98	Paved parking, HSG A
1.420	39	>75% Grass cover, Good, HSG A
2.830	68	Weighted Average
1.420		50.18% Pervious Area
1.410		49.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0150	0.12		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 2.16"
0.7	75	0.0150	1.84		**Shallow Concentrated Flow, Lawn** Grassed Waterway Kv= 15.0 fps
0.5	87	0.0050	3.21	2.52	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
0.7	187	0.0100	4.54	3.56	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.2	118	0.0414	9.23	7.25	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.0	22	0.0917	13.74	10.79	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
15.5	589	Total			

Subcatchment 101: Pr Subarea A-1 (to new IB)



Summary for Subcatchment 103: Pr Subarea A-2 (remainder to A)

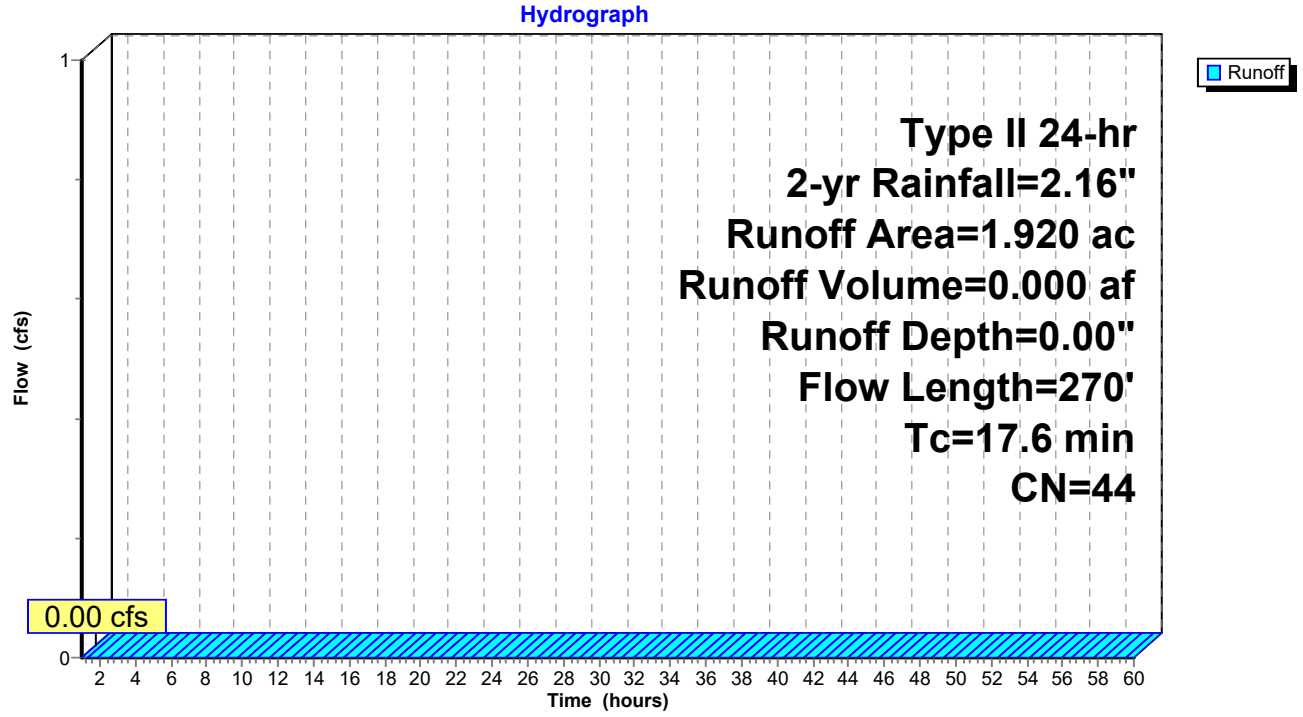
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.16"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
0.930	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
1.920	44	Weighted Average
1.630		84.90% Pervious Area
0.290		15.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.9	105	0.0860	2.05		**Shallow Concentrated Flow, lawn** Short Grass Pasture Kv= 7.0 fps
17.6	270	Total			

Subcatchment 103: Pr Subarea A-2 (remainder to A)



Summary for Subcatchment 106: Pr Subarea B

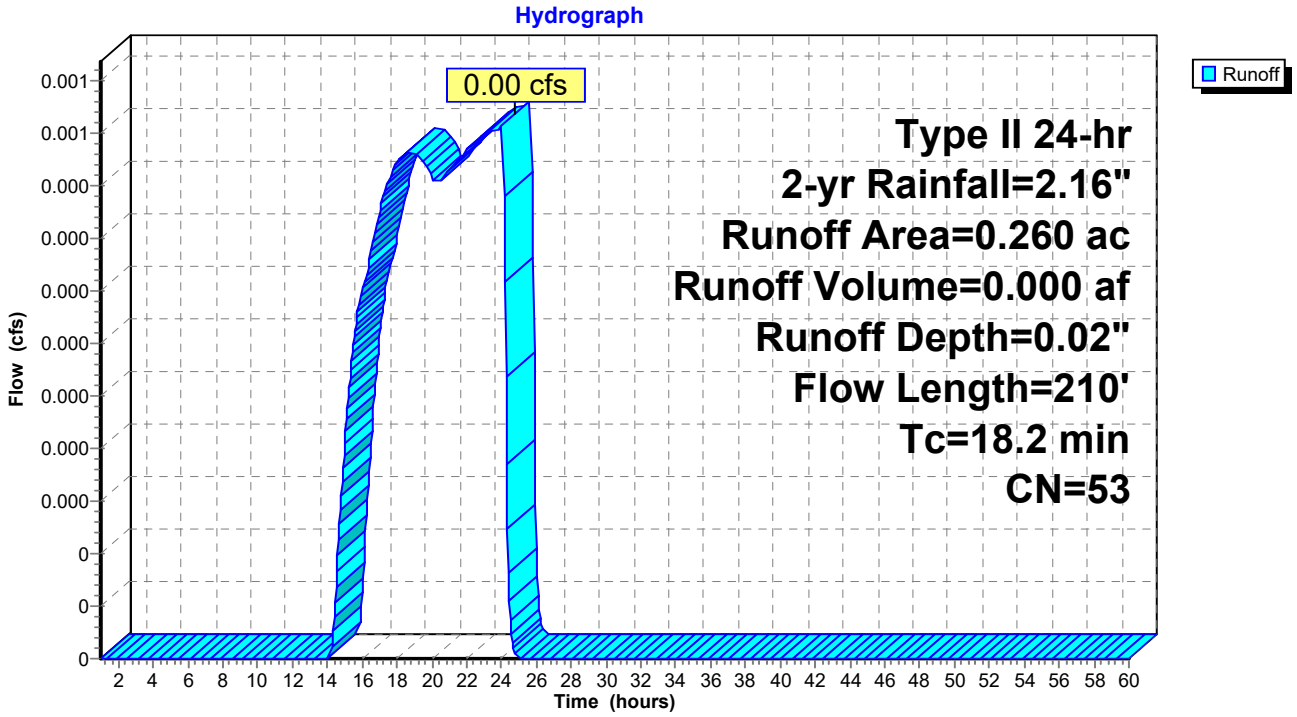
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth= 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.16"

Area (ac)	CN	Description
0.060	98	Paved parking, HSG A
0.200	39	>75% Grass cover, Good, HSG A
0.260	53	Weighted Average
0.200		76.92% Pervious Area
0.060		23.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0200	0.10		**Sheet Flow, sheet** Grass: Dense n= 0.240 P2= 2.16"
0.8	110	0.0230	2.44		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
18.2	210	Total			

Subcatchment 106: Pr Subarea B



Summary for Pond 102: Proposed Infiltration Basin

Inflow Area = 2.830 ac, 49.82% Impervious, Inflow Depth = 0.25" for 2-yr event
Inflow = 0.53 cfs @ 12.13 hrs, Volume= 0.059 af
Outflow = 0.10 cfs @ 13.17 hrs, Volume= 0.059 af, Atten= 81%, Lag= 62.3 min
Discarded = 0.10 cfs @ 13.17 hrs, Volume= 0.059 af
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.72' @ 13.17 hrs Surf.Area= 974 sf Storage= 585 cf

Plug-Flow detention time= 55.6 min calculated for 0.059 af (100% of inflow)
Center-of-Mass det. time= 55.5 min (990.4 - 934.9)

Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	18,470 cf	**Infiltration Basin (Prismatic)** Listed below (Recalc)

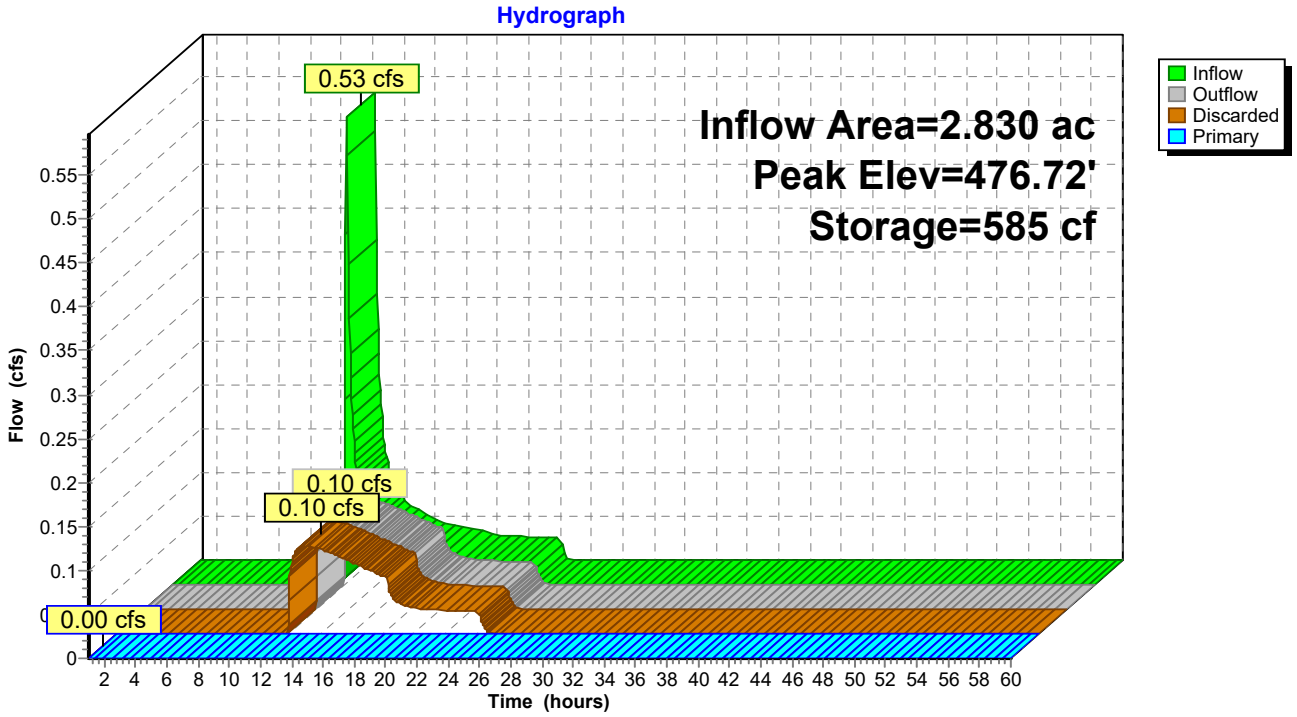
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.19'	**12.0" Round Culvert** L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 478.19' / 476.83' S= 0.0272 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	481.50'	**24.0" x 24.0" Horiz. 2'x2' grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	476.00'	**4.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.10 cfs @ 13.17 hrs HW=476.72' (Free Discharge)
↑└**3=Exfiltration** (Controls 0.10 cfs)

Primary OutFlow Max=0.00 cfs @ 1.00 hrs HW=476.00' (Free Discharge)
↑└**1=Culvert** (Controls 0.00 cfs)
↑└**2=2'x2' grate** (Controls 0.00 cfs)

Pond 102: Proposed Infiltration Basin



Summary for Pond 105: Existing IB

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.00" for 2-yr event
Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.00' @ 1.00 hrs Surf.Area= 3,560 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

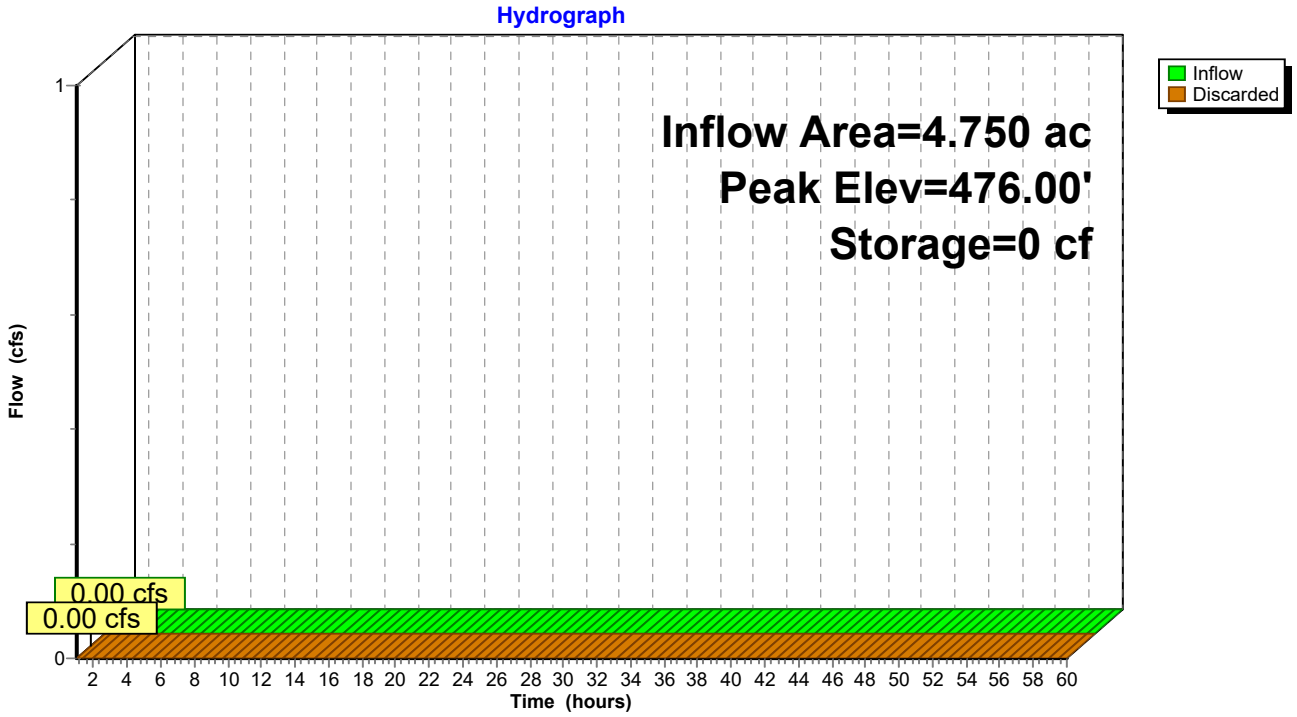
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.00 cfs @ 1.00 hrs HW=476.00' (Free Discharge)
↑**1=Exfiltration (assumed)** (Passes 0.00 cfs of 0.16 cfs potential flow)

Pond 105: Existing IB

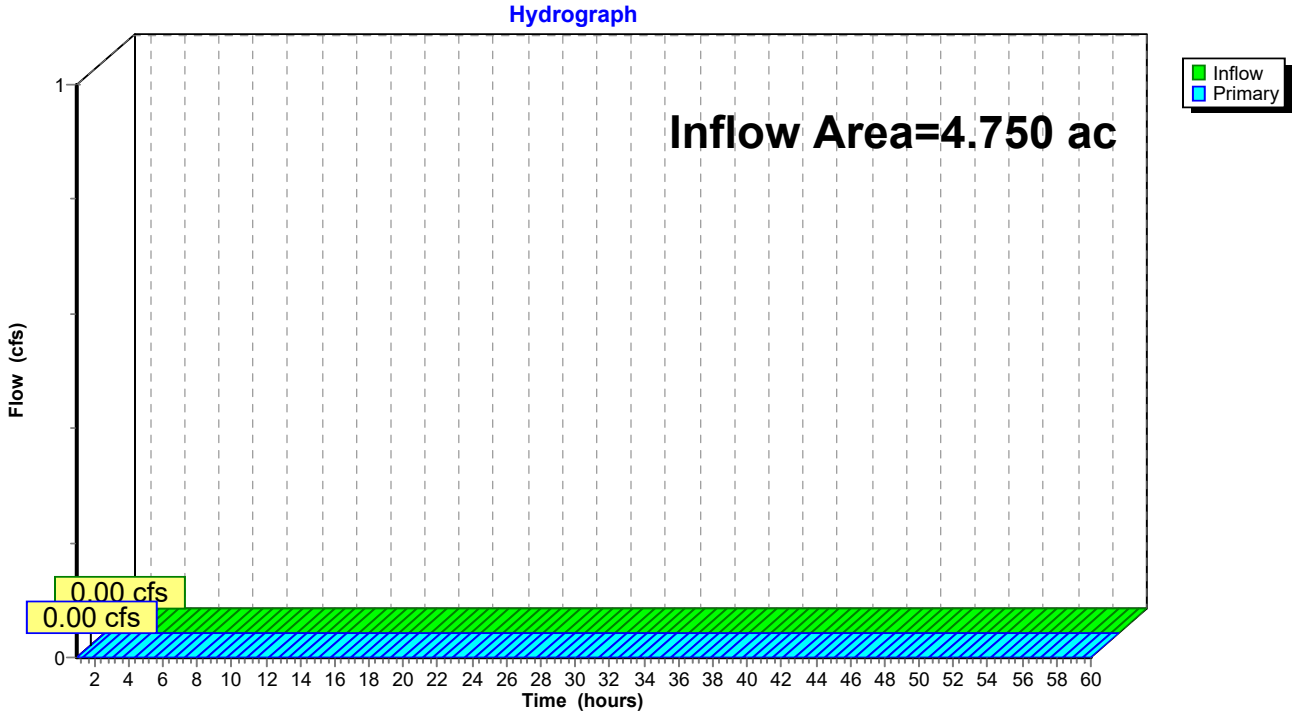


Summary for Link 104: Pr Subarea A Total (to ex IB)

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.00" for 2-yr event
Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 105 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 104: Pr Subarea A Total (to ex IB)



Summary for Subcatchment 101: Pr Subarea A-1 (to new IB)

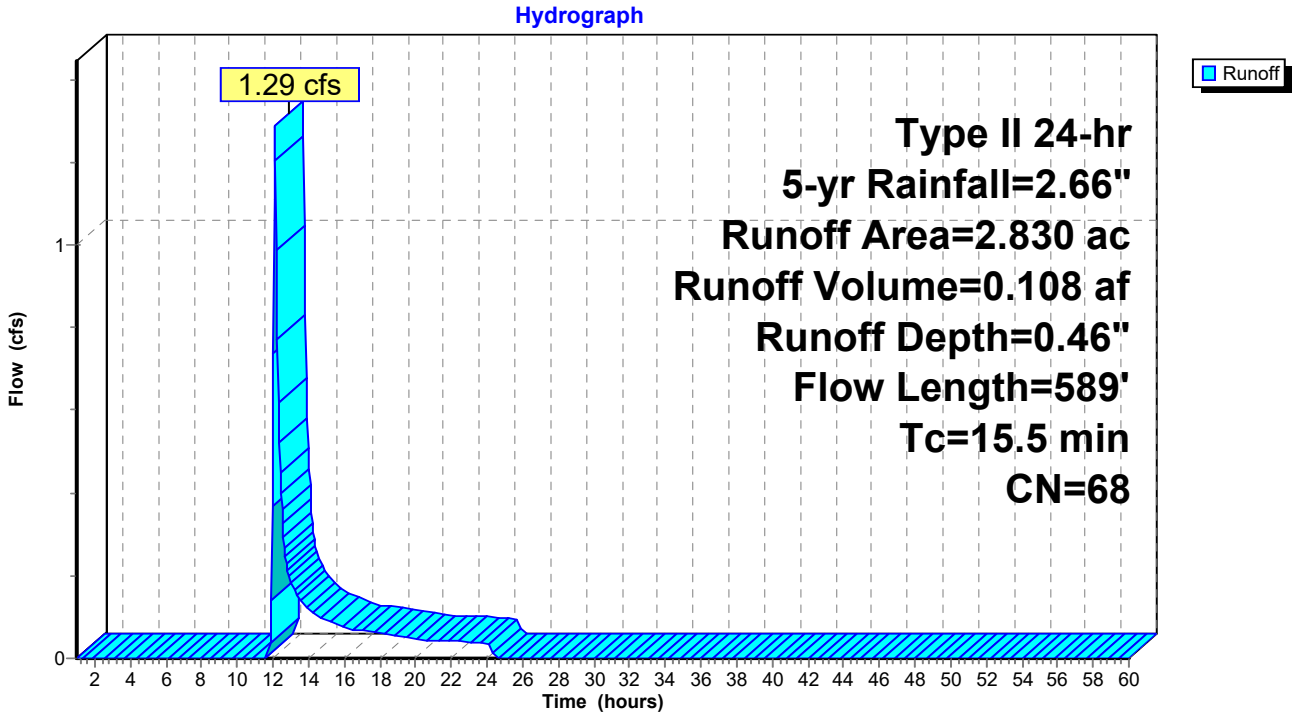
Runoff = 1.29 cfs @ 12.11 hrs, Volume= 0.108 af, Depth= 0.46"
Routed to Pond 102 : Proposed Infiltration Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=2.66"

Area (ac)	CN	Description
1.410	98	Paved parking, HSG A
1.420	39	>75% Grass cover, Good, HSG A
2.830	68	Weighted Average
1.420		50.18% Pervious Area
1.410		49.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0150	0.12		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 2.16"
0.7	75	0.0150	1.84		**Shallow Concentrated Flow, Lawn** Grassed Waterway Kv= 15.0 fps
0.5	87	0.0050	3.21	2.52	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
0.7	187	0.0100	4.54	3.56	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.2	118	0.0414	9.23	7.25	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.0	22	0.0917	13.74	10.79	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
15.5	589	Total			

Subcatchment 101: Pr Subarea A-1 (to new IB)



Summary for Subcatchment 103: Pr Subarea A-2 (remainder to A)

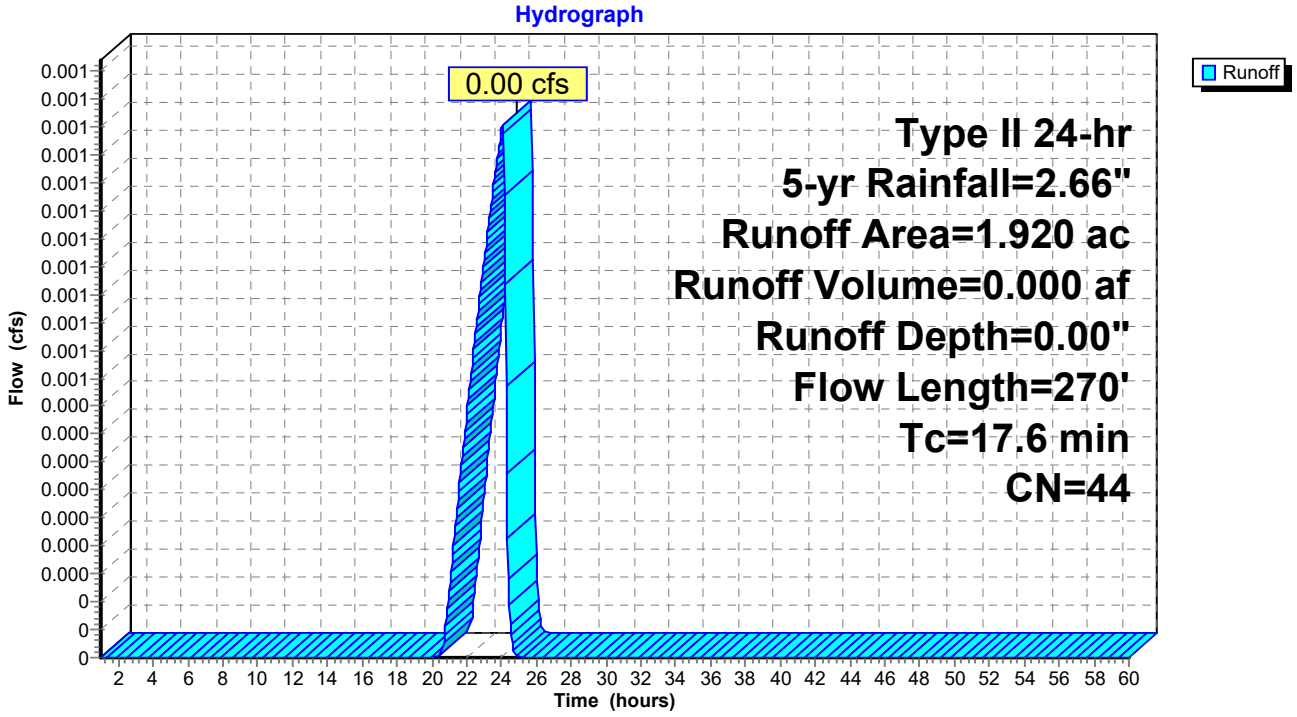
Runoff = 0.00 cfs @ 24.03 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=2.66"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
0.930	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
1.920	44	Weighted Average
1.630		84.90% Pervious Area
0.290		15.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.9	105	0.0860	2.05		**Shallow Concentrated Flow, lawn** Short Grass Pasture Kv= 7.0 fps
17.6	270	Total			

Subcatchment 103: Pr Subarea A-2 (remainder to A)



Summary for Subcatchment 106: Pr Subarea B

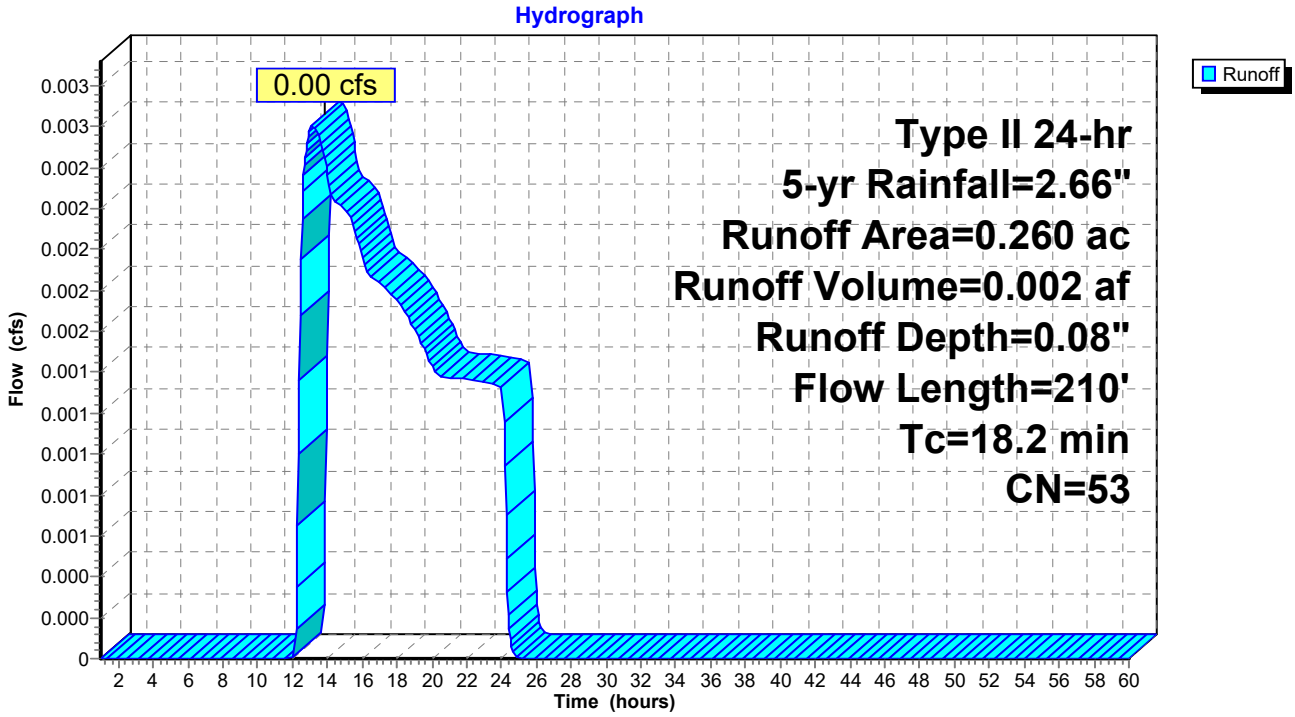
Runoff = 0.00 cfs @ 13.09 hrs, Volume= 0.002 af, Depth= 0.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=2.66"

Area (ac)	CN	Description
0.060	98	Paved parking, HSG A
0.200	39	>75% Grass cover, Good, HSG A
0.260	53	Weighted Average
0.200		76.92% Pervious Area
0.060		23.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0200	0.10		**Sheet Flow, sheet** Grass: Dense n= 0.240 P2= 2.16"
0.8	110	0.0230	2.44		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
18.2	210	Total			

Subcatchment 106: Pr Subarea B



Summary for Pond 102: Proposed Infiltration Basin

Inflow Area = 2.830 ac, 49.82% Impervious, Inflow Depth = 0.46" for 5-yr event
Inflow = 1.29 cfs @ 12.11 hrs, Volume= 0.108 af
Outflow = 0.15 cfs @ 13.44 hrs, Volume= 0.108 af, Atten= 88%, Lag= 79.8 min
Discarded = 0.15 cfs @ 13.44 hrs, Volume= 0.108 af
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 477.57' @ 13.44 hrs Surf.Area= 1,354 sf Storage= 1,569 cf

Plug-Flow detention time= 121.6 min calculated for 0.108 af (100% of inflow)
Center-of-Mass det. time= 121.5 min (1,028.7 - 907.2)

Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	18,470 cf	**Infiltration Basin (Prismatic)** Listed below (Recalc)

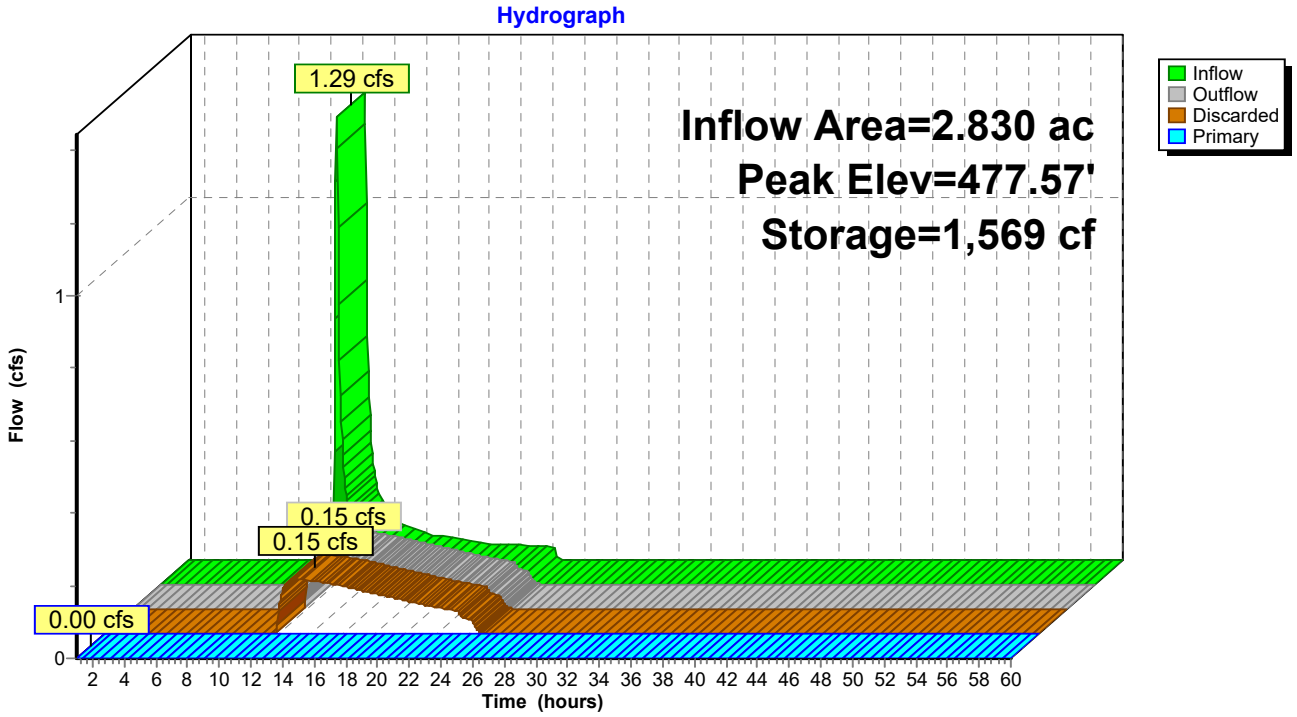
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.19'	**12.0" Round Culvert** L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 478.19' / 476.83' S= 0.0272 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	481.50'	**24.0" x 24.0" Horiz. 2'x2' grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	476.00'	**4.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.15 cfs @ 13.44 hrs HW=477.57' (Free Discharge)
↑└**3=Exfiltration** (Controls 0.15 cfs)

Primary OutFlow Max=0.00 cfs @ 1.00 hrs HW=476.00' (Free Discharge)
↑└**1=Culvert** (Controls 0.00 cfs)
↑└**2=2'x2' grate** (Controls 0.00 cfs)

Pond 102: Proposed Infiltration Basin



Summary for Pond 105: Existing IB

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.00" for 5-yr event
Inflow = 0.00 cfs @ 24.03 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 24.12 hrs, Volume= 0.000 af, Atten= 7%, Lag= 5.1 min
Discarded = 0.00 cfs @ 24.12 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.00' @ 24.12 hrs Surf.Area= 3,561 sf Storage= 1 cf

Plug-Flow detention time= 20.7 min calculated for 0.000 af (100% of inflow)
Center-of-Mass det. time= 20.8 min (1,401.8 - 1,381.0)

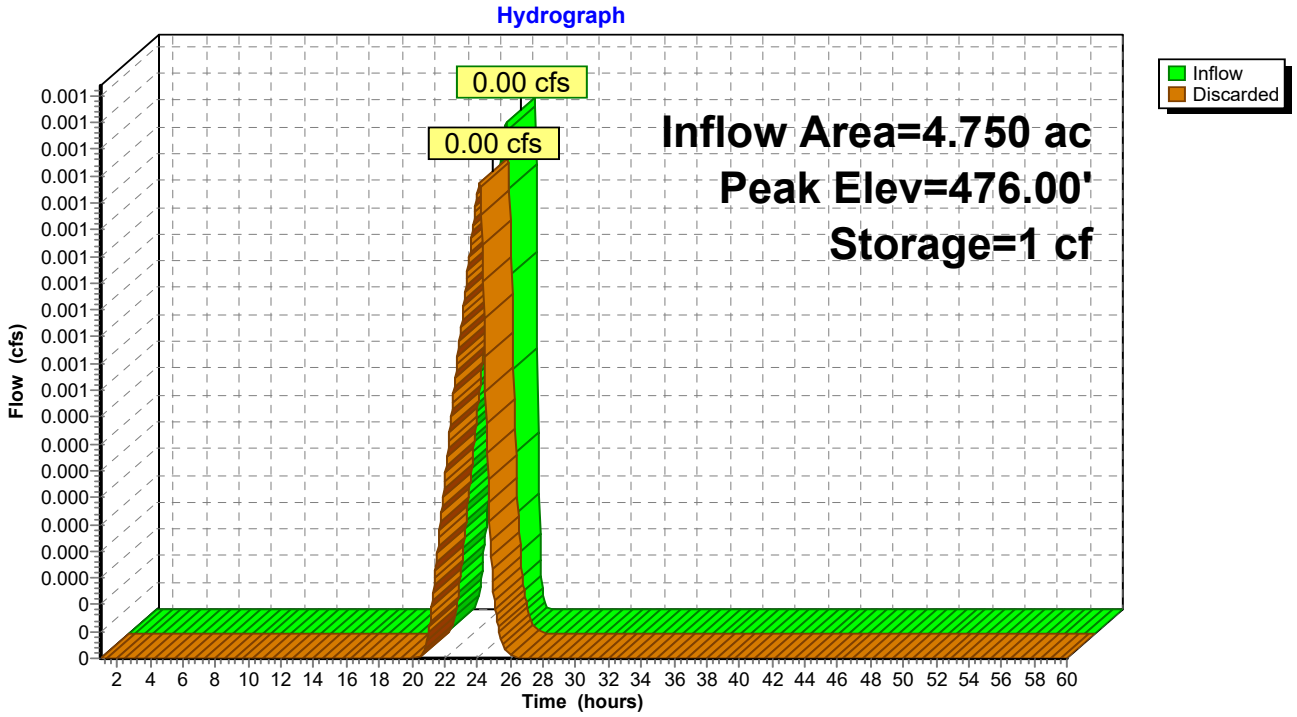
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.16 cfs @ 24.12 hrs HW=476.00' (Free Discharge)
↑**1=Exfiltration (assumed)** (Controls 0.16 cfs)

Pond 105: Existing IB

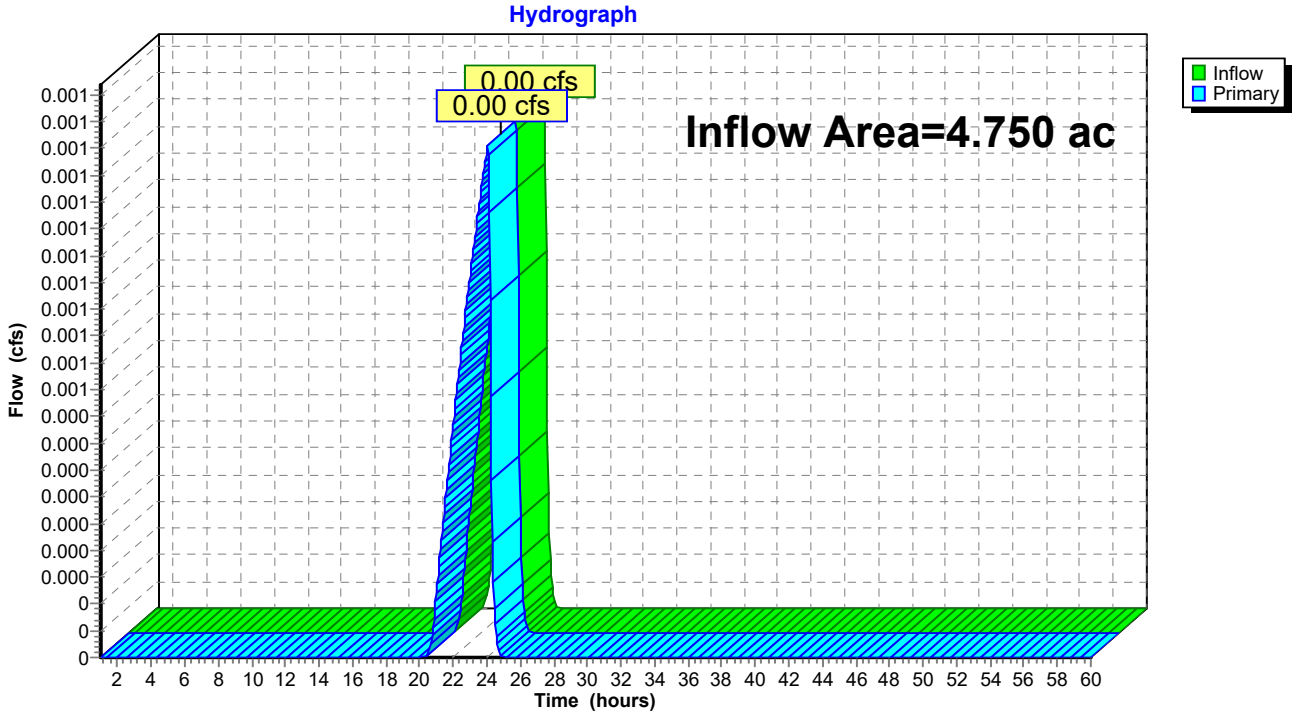


Summary for Link 104: Pr Subarea A Total (to ex IB)

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.00" for 5-yr event
Inflow = 0.00 cfs @ 24.03 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 24.03 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 105 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 104: Pr Subarea A Total (to ex IB)



Summary for Subcatchment 101: Pr Subarea A-1 (to new IB)

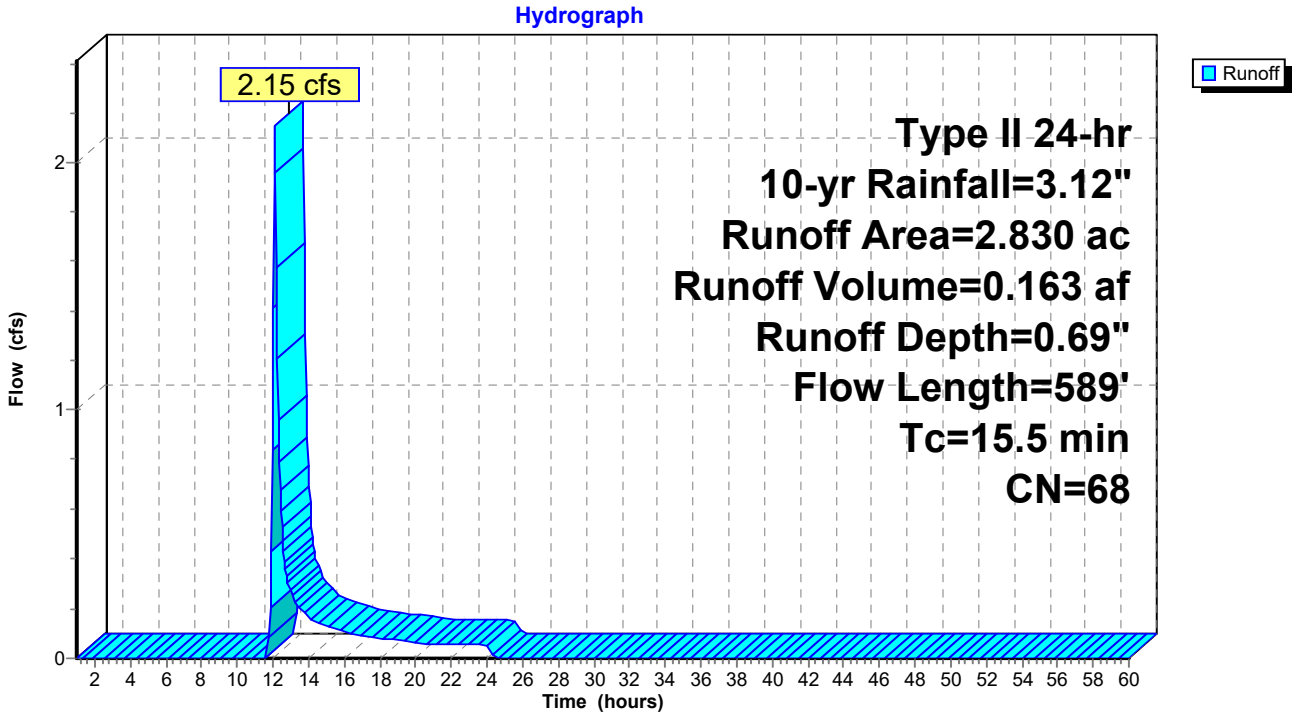
Runoff = 2.15 cfs @ 12.10 hrs, Volume= 0.163 af, Depth= 0.69"
Routed to Pond 102 : Proposed Infiltration Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.12"

Area (ac)	CN	Description
1.410	98	Paved parking, HSG A
1.420	39	>75% Grass cover, Good, HSG A
2.830	68	Weighted Average
1.420		50.18% Pervious Area
1.410		49.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0150	0.12		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 2.16"
0.7	75	0.0150	1.84		**Shallow Concentrated Flow, Lawn** Grassed Waterway Kv= 15.0 fps
0.5	87	0.0050	3.21	2.52	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
0.7	187	0.0100	4.54	3.56	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.2	118	0.0414	9.23	7.25	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.0	22	0.0917	13.74	10.79	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
15.5	589	Total			

Subcatchment 101: Pr Subarea A-1 (to new IB)



Summary for Subcatchment 103: Pr Subarea A-2 (remainder to A)

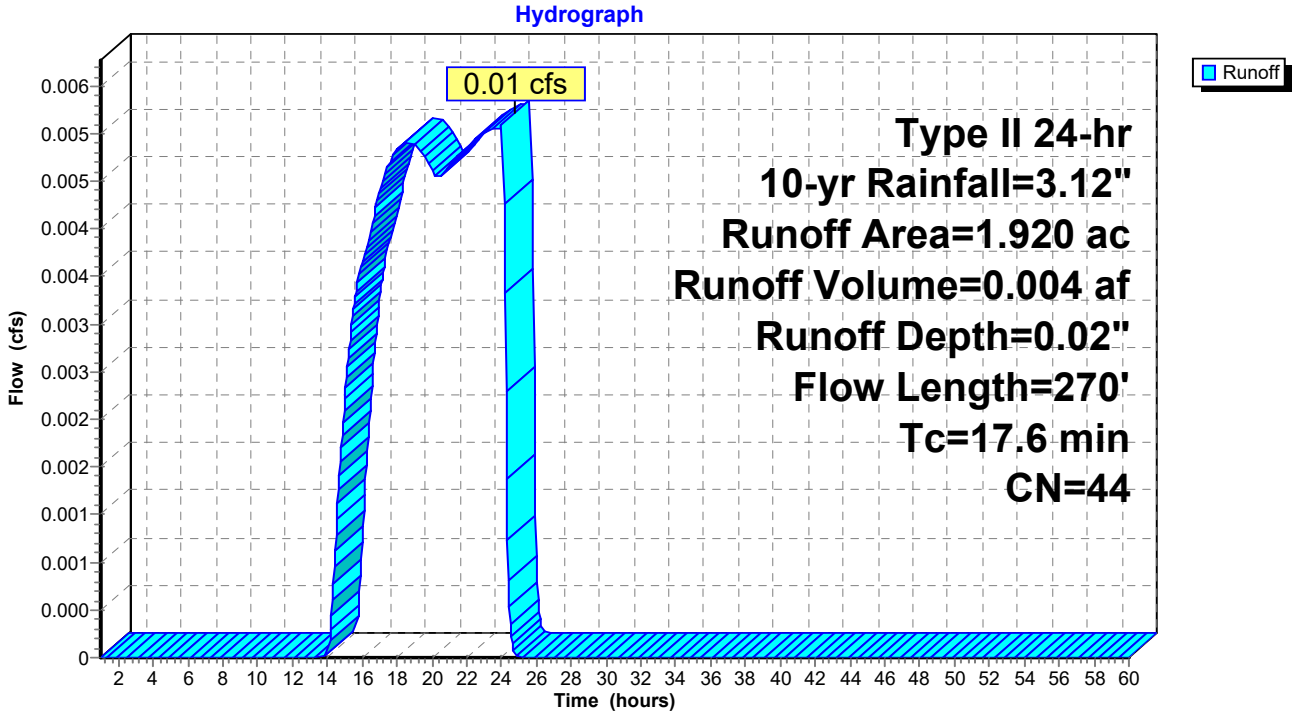
Runoff = 0.01 cfs @ 24.00 hrs, Volume= 0.004 af, Depth= 0.02"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.12"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
0.930	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
1.920	44	Weighted Average
1.630		84.90% Pervious Area
0.290		15.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.9	105	0.0860	2.05		**Shallow Concentrated Flow, lawn** Short Grass Pasture Kv= 7.0 fps
17.6	270	Total			

Subcatchment 103: Pr Subarea A-2 (remainder to A)



Summary for Subcatchment 106: Pr Subarea B

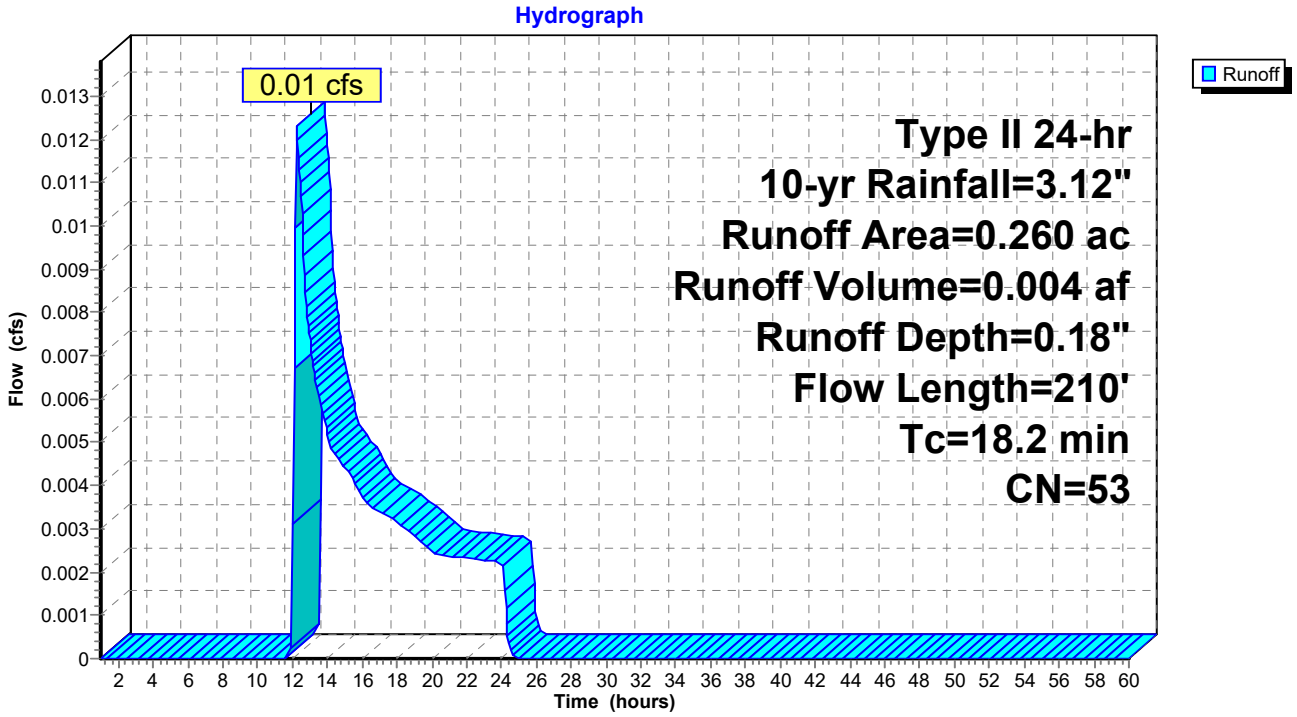
Runoff = 0.01 cfs @ 12.26 hrs, Volume= 0.004 af, Depth= 0.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.12"

Area (ac)	CN	Description
0.060	98	Paved parking, HSG A
0.200	39	>75% Grass cover, Good, HSG A
0.260	53	Weighted Average
0.200		76.92% Pervious Area
0.060		23.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0200	0.10		**Sheet Flow, sheet** Grass: Dense n= 0.240 P2= 2.16"
0.8	110	0.0230	2.44		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
18.2	210	Total			

Subcatchment 106: Pr Subarea B



Summary for Pond 102: Proposed Infiltration Basin

Inflow Area = 2.830 ac, 49.82% Impervious, Inflow Depth = 0.69" for 10-yr event
Inflow = 2.15 cfs @ 12.10 hrs, Volume= 0.163 af
Outflow = 0.20 cfs @ 13.51 hrs, Volume= 0.163 af, Atten= 91%, Lag= 84.8 min
Discarded = 0.20 cfs @ 13.51 hrs, Volume= 0.163 af
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 478.33' @ 13.51 hrs Surf.Area= 1,766 sf Storage= 2,750 cf

Plug-Flow detention time= 172.7 min calculated for 0.162 af (100% of inflow)
Center-of-Mass det. time= 172.6 min (1,063.9 - 891.3)

Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	18,470 cf	**Infiltration Basin (Prismatic)** Listed below (Recalc)

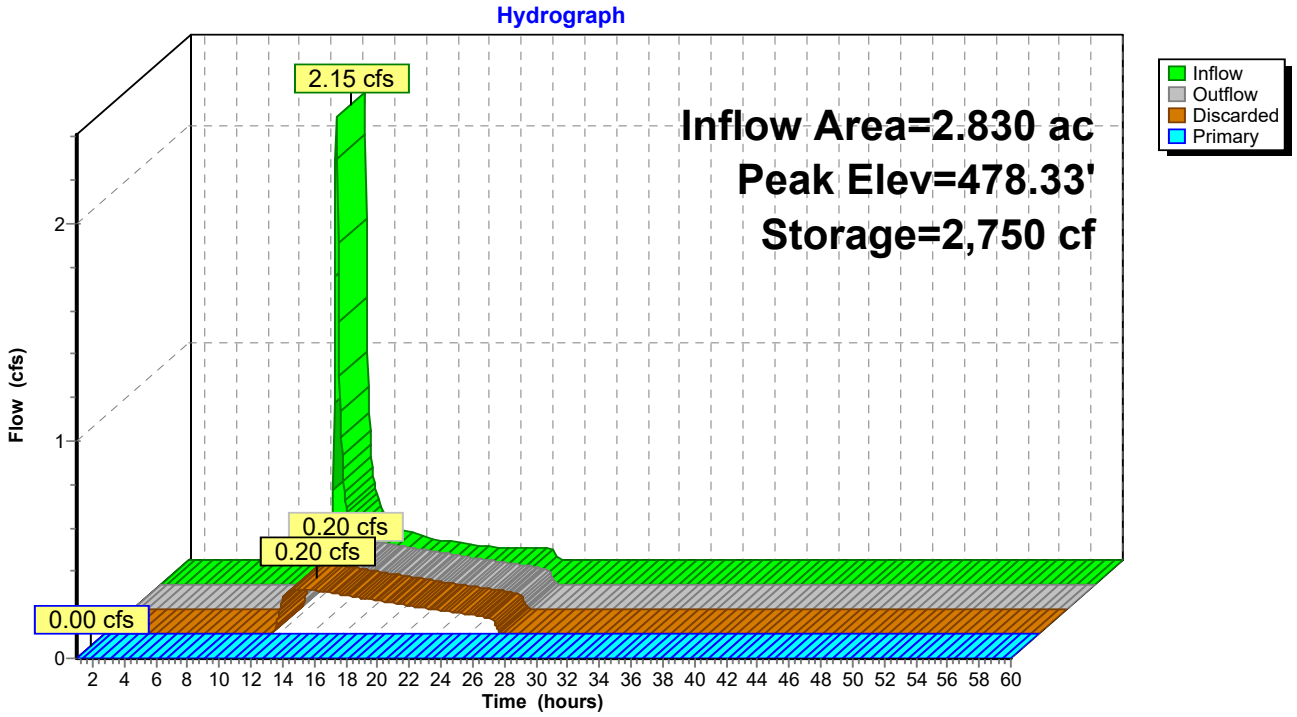
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.19'	**12.0" Round Culvert** L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 478.19' / 476.83' S= 0.0272 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	481.50'	**24.0" x 24.0" Horiz. 2'x2' grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	476.00'	**4.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.20 cfs @ 13.51 hrs HW=478.33' (Free Discharge)
↑└**3=Exfiltration** (Controls 0.20 cfs)

Primary OutFlow Max=0.00 cfs @ 1.00 hrs HW=476.00' (Free Discharge)
↑└**1=Culvert** (Controls 0.00 cfs)
↑└**2=2'x2' grate** (Controls 0.00 cfs)

Pond 102: Proposed Infiltration Basin



Summary for Pond 105: Existing IB

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.01" for 10-yr event
Inflow = 0.01 cfs @ 24.00 hrs, Volume= 0.004 af
Outflow = 0.01 cfs @ 24.03 hrs, Volume= 0.004 af, Atten= 0%, Lag= 1.8 min
Discarded = 0.01 cfs @ 24.03 hrs, Volume= 0.004 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.00' @ 24.03 hrs Surf.Area= 3,567 sf Storage= 7 cf

Plug-Flow detention time= 20.7 min calculated for 0.004 af (100% of inflow)
Center-of-Mass det. time= 20.8 min (1,205.6 - 1,184.8)

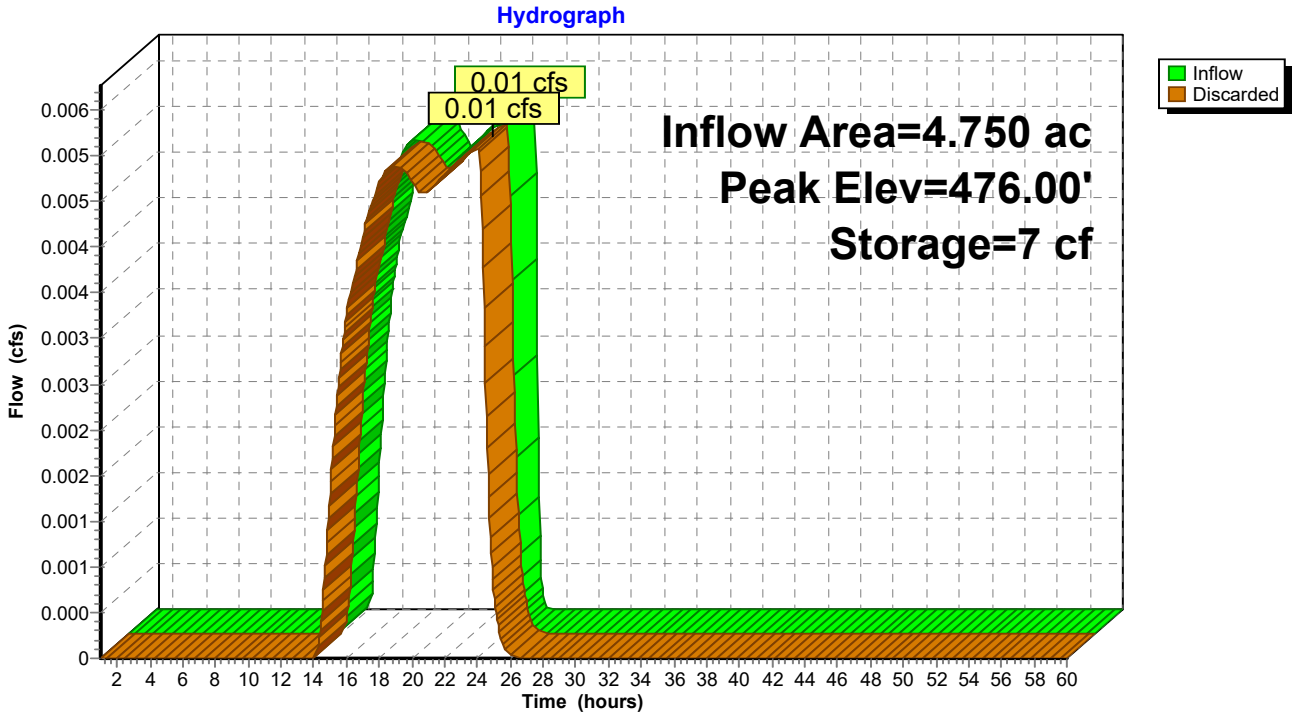
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.17 cfs @ 24.03 hrs HW=476.00' (Free Discharge)
↑**1=Exfiltration (assumed)** (Controls 0.17 cfs)

Pond 105: Existing IB

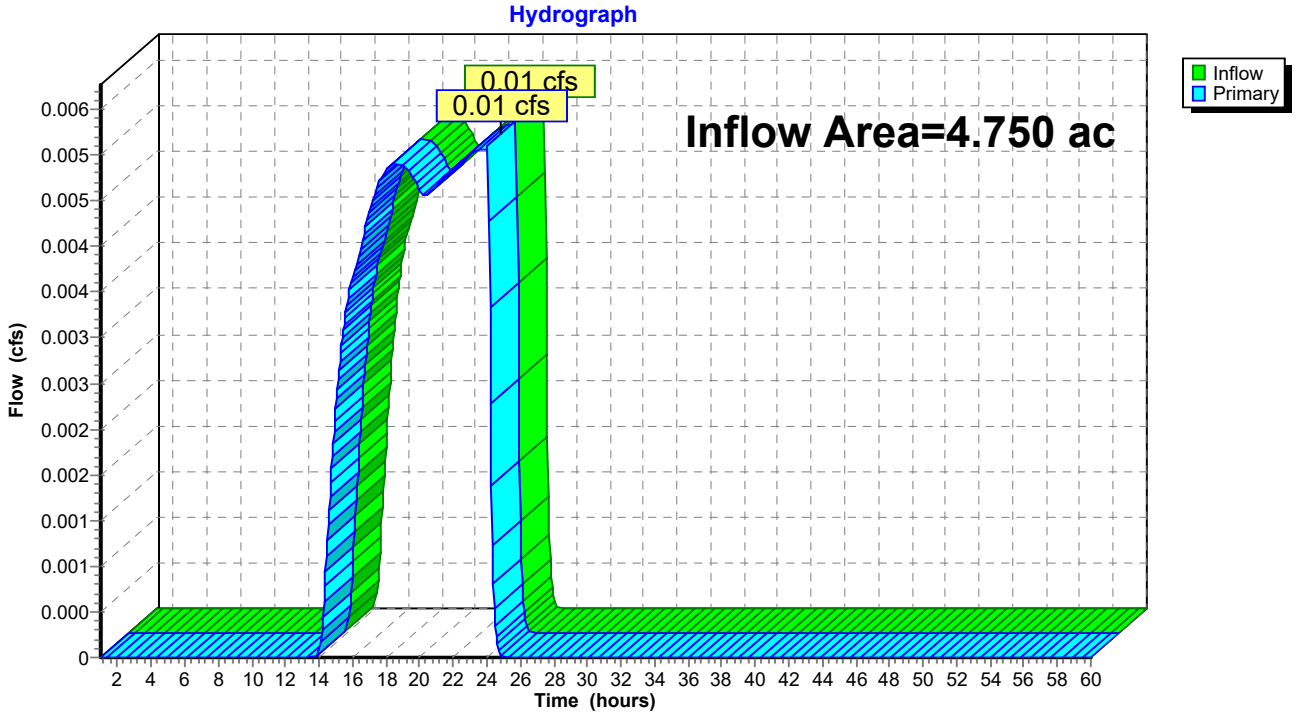


Summary for Link 104: Pr Subarea A Total (to ex IB)

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.01" for 10-yr event
Inflow = 0.01 cfs @ 24.00 hrs, Volume= 0.004 af
Primary = 0.01 cfs @ 24.00 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 105 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 104: Pr Subarea A Total (to ex IB)



Summary for Subcatchment 101: Pr Subarea A-1 (to new IB)

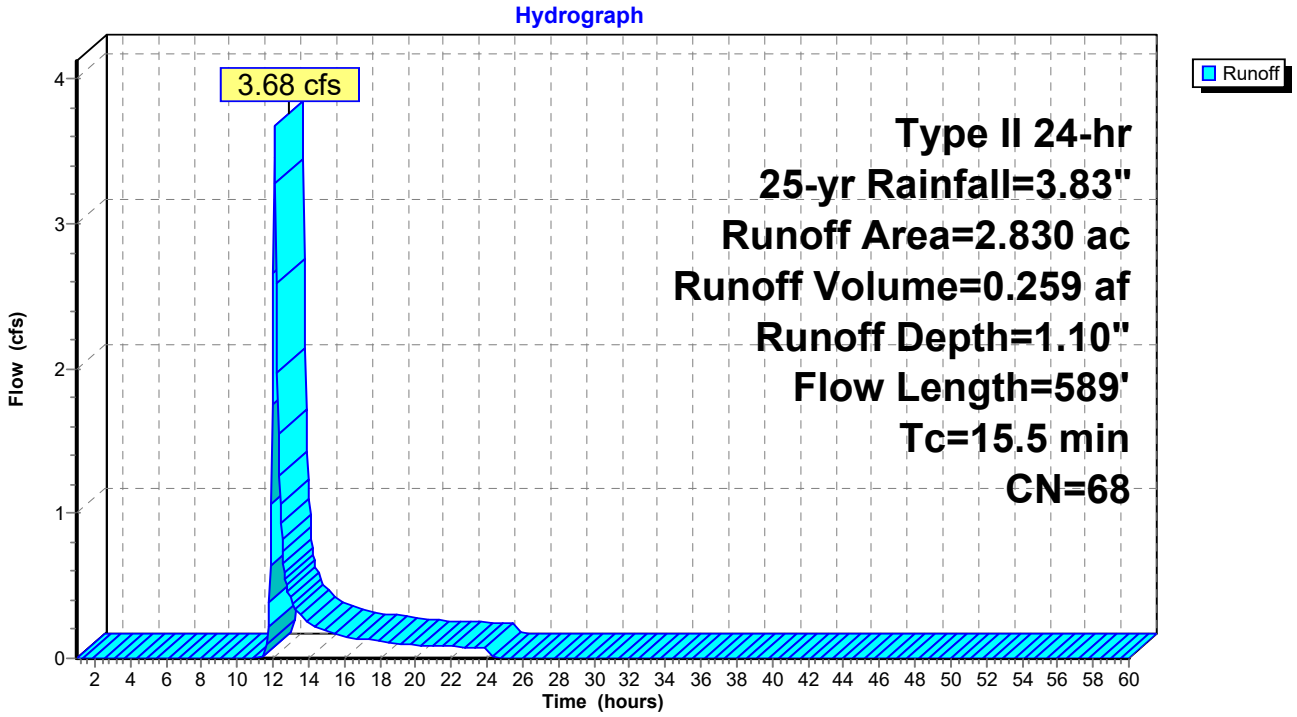
Runoff = 3.68 cfs @ 12.09 hrs, Volume= 0.259 af, Depth= 1.10"
Routed to Pond 102 : Proposed Infiltration Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=3.83"

Area (ac)	CN	Description
1.410	98	Paved parking, HSG A
1.420	39	>75% Grass cover, Good, HSG A
2.830	68	Weighted Average
1.420		50.18% Pervious Area
1.410		49.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0150	0.12		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 2.16"
0.7	75	0.0150	1.84		**Shallow Concentrated Flow, Lawn** Grassed Waterway Kv= 15.0 fps
0.5	87	0.0050	3.21	2.52	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
0.7	187	0.0100	4.54	3.56	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.2	118	0.0414	9.23	7.25	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.0	22	0.0917	13.74	10.79	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
15.5	589	Total			

Subcatchment 101: Pr Subarea A-1 (to new IB)



Summary for Subcatchment 103: Pr Subarea A-2 (remainder to A)

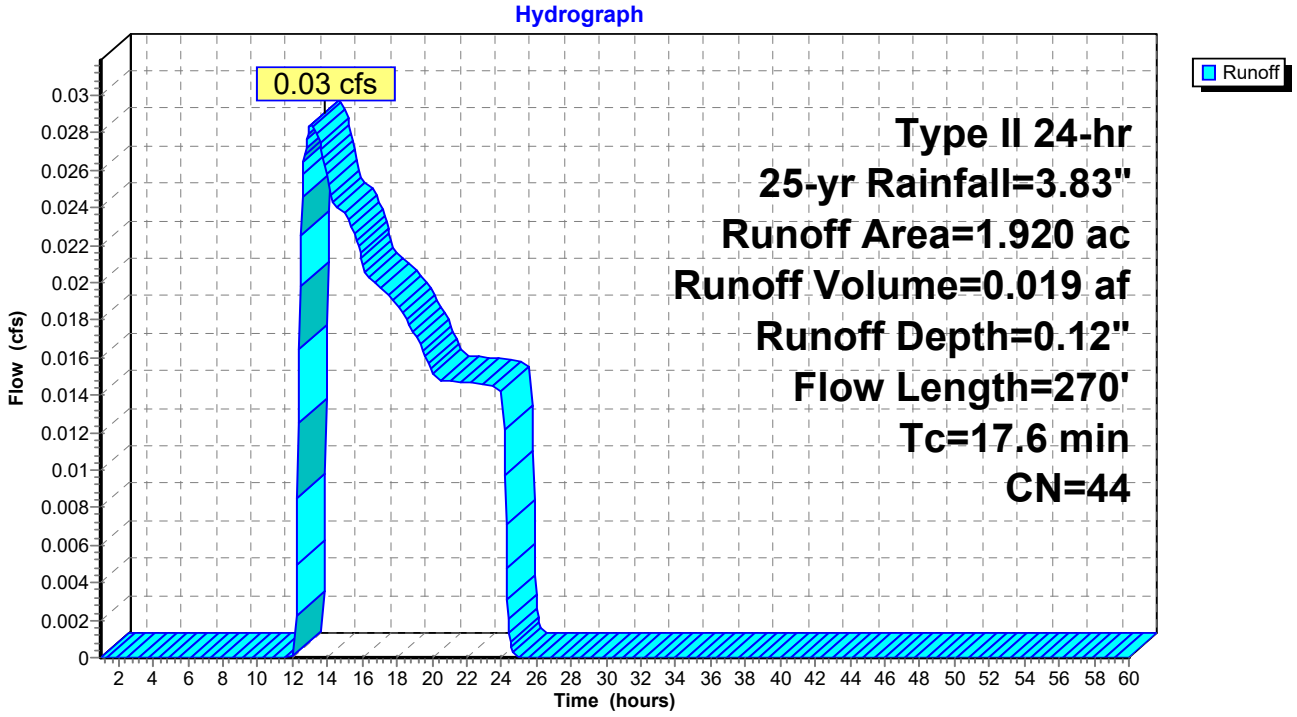
Runoff = 0.03 cfs @ 13.06 hrs, Volume= 0.019 af, Depth= 0.12"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=3.83"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
0.930	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
1.920	44	Weighted Average
1.630		84.90% Pervious Area
0.290		15.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.9	105	0.0860	2.05		**Shallow Concentrated Flow, lawn** Short Grass Pasture Kv= 7.0 fps
17.6	270	Total			

Subcatchment 103: Pr Subarea A-2 (remainder to A)



Summary for Subcatchment 106: Pr Subarea B

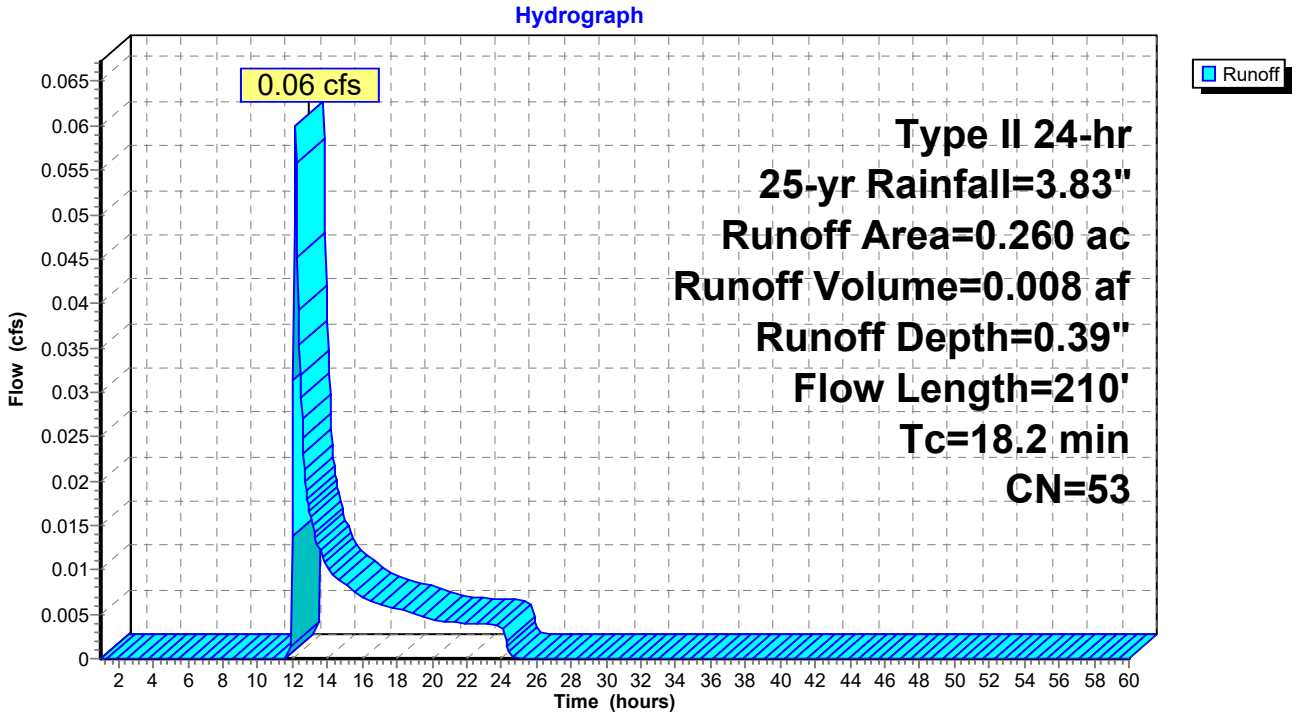
Runoff = 0.06 cfs @ 12.17 hrs, Volume= 0.008 af, Depth= 0.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=3.83"

Area (ac)	CN	Description
0.060	98	Paved parking, HSG A
0.200	39	>75% Grass cover, Good, HSG A
0.260	53	Weighted Average
0.200		76.92% Pervious Area
0.060		23.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0200	0.10		**Sheet Flow, sheet** Grass: Dense n= 0.240 P2= 2.16"
0.8	110	0.0230	2.44		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
18.2	210	Total			

Subcatchment 106: Pr Subarea B



Summary for Pond 102: Proposed Infiltration Basin

Inflow Area = 2.830 ac, 49.82% Impervious, Inflow Depth = 1.10" for 25-yr event
Inflow = 3.68 cfs @ 12.09 hrs, Volume= 0.259 af
Outflow = 0.30 cfs @ 13.56 hrs, Volume= 0.259 af, Atten= 92%, Lag= 88.0 min
Discarded = 0.30 cfs @ 13.56 hrs, Volume= 0.259 af
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 479.38' @ 13.56 hrs Surf.Area= 2,449 sf Storage= 4,965 cf

Plug-Flow detention time= 224.1 min calculated for 0.259 af (100% of inflow)
Center-of-Mass det. time= 224.1 min (1,099.2 - 875.1)

Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	18,470 cf	**Infiltration Basin (Prismatic)** Listed below (Recalc)

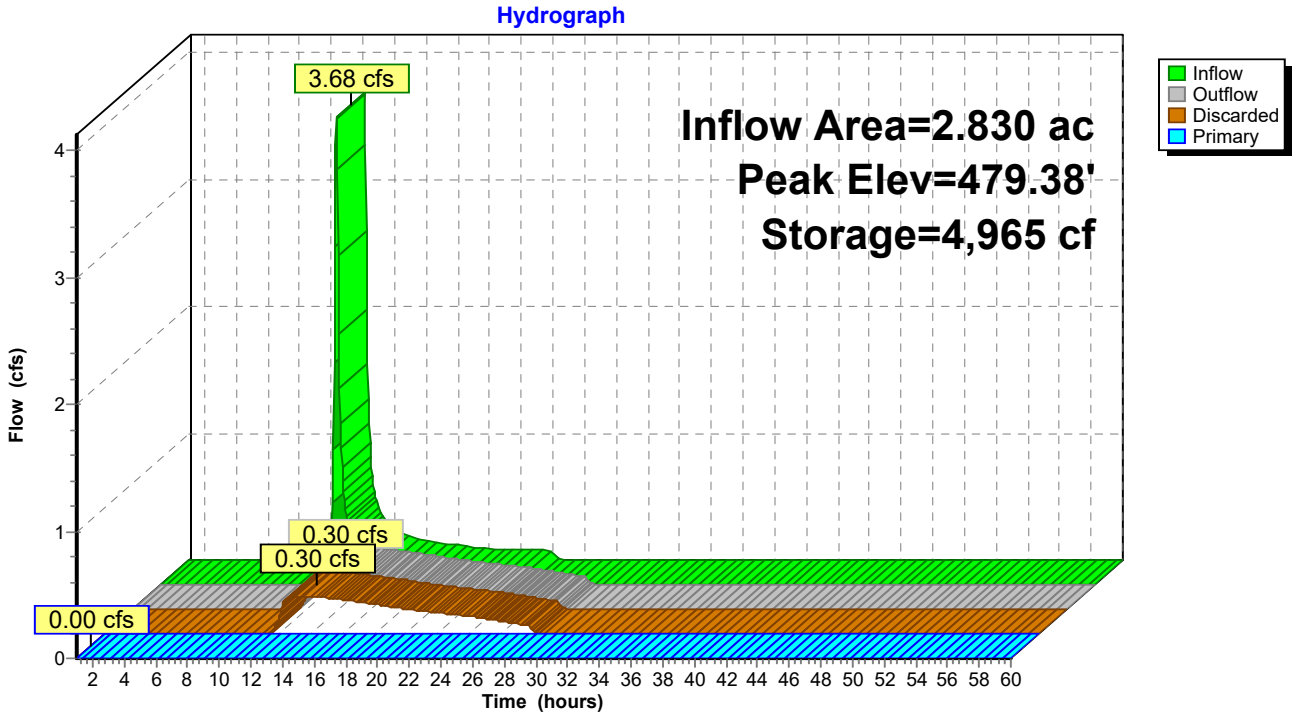
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.19'	**12.0" Round Culvert** L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 478.19' / 476.83' S= 0.0272 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	481.50'	**24.0" x 24.0" Horiz. 2'x2' grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	476.00'	**4.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.30 cfs @ 13.56 hrs HW=479.38' (Free Discharge)
└**3=Exfiltration** (Controls 0.30 cfs)

Primary OutFlow Max=0.00 cfs @ 1.00 hrs HW=476.00' (Free Discharge)
└**1=Culvert** (Controls 0.00 cfs)
└**2=2'x2' grate** (Controls 0.00 cfs)

Pond 102: Proposed Infiltration Basin



Summary for Pond 105: Existing IB

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.05" for 25-yr event
Inflow = 0.03 cfs @ 13.06 hrs, Volume= 0.019 af
Outflow = 0.03 cfs @ 13.68 hrs, Volume= 0.019 af, Atten= 5%, Lag= 37.0 min
Discarded = 0.03 cfs @ 13.68 hrs, Volume= 0.019 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.01' @ 13.68 hrs Surf.Area= 3,592 sf Storage= 33 cf

Plug-Flow detention time= 21.0 min calculated for 0.019 af (100% of inflow)
Center-of-Mass det. time= 20.8 min (1,072.8 - 1,052.0)

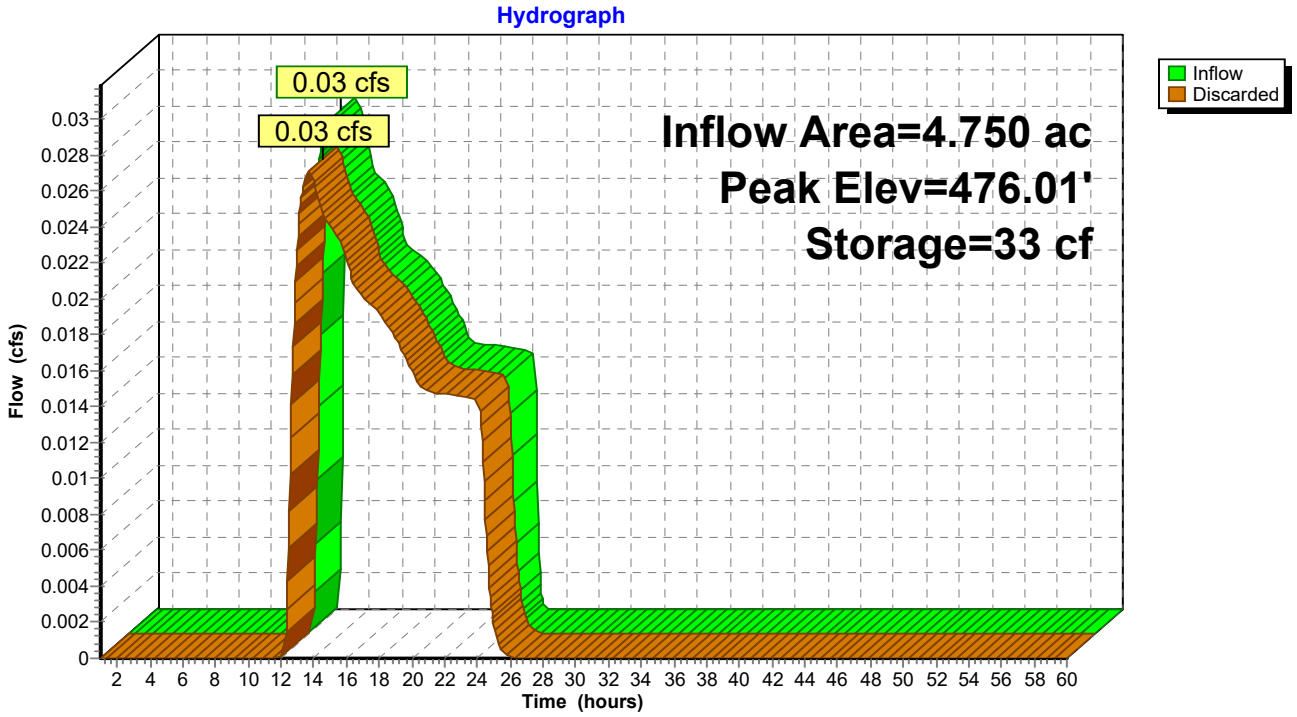
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.17 cfs @ 13.68 hrs HW=476.01' (Free Discharge)
↑**1=Exfiltration (assumed)** (Controls 0.17 cfs)

Pond 105: Existing IB

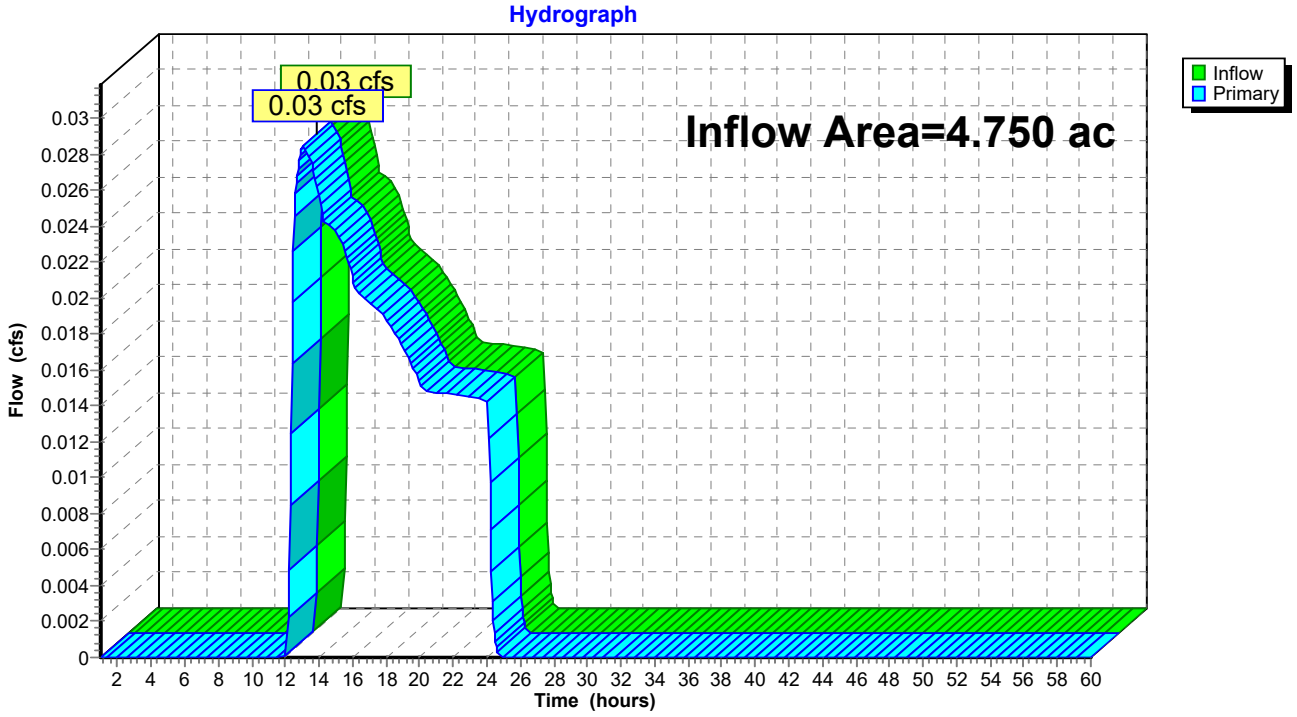


Summary for Link 104: Pr Subarea A Total (to ex IB)

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.05" for 25-yr event
Inflow = 0.03 cfs @ 13.06 hrs, Volume= 0.019 af
Primary = 0.03 cfs @ 13.06 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 105 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 104: Pr Subarea A Total (to ex IB)



Summary for Subcatchment 101: Pr Subarea A-1 (to new IB)

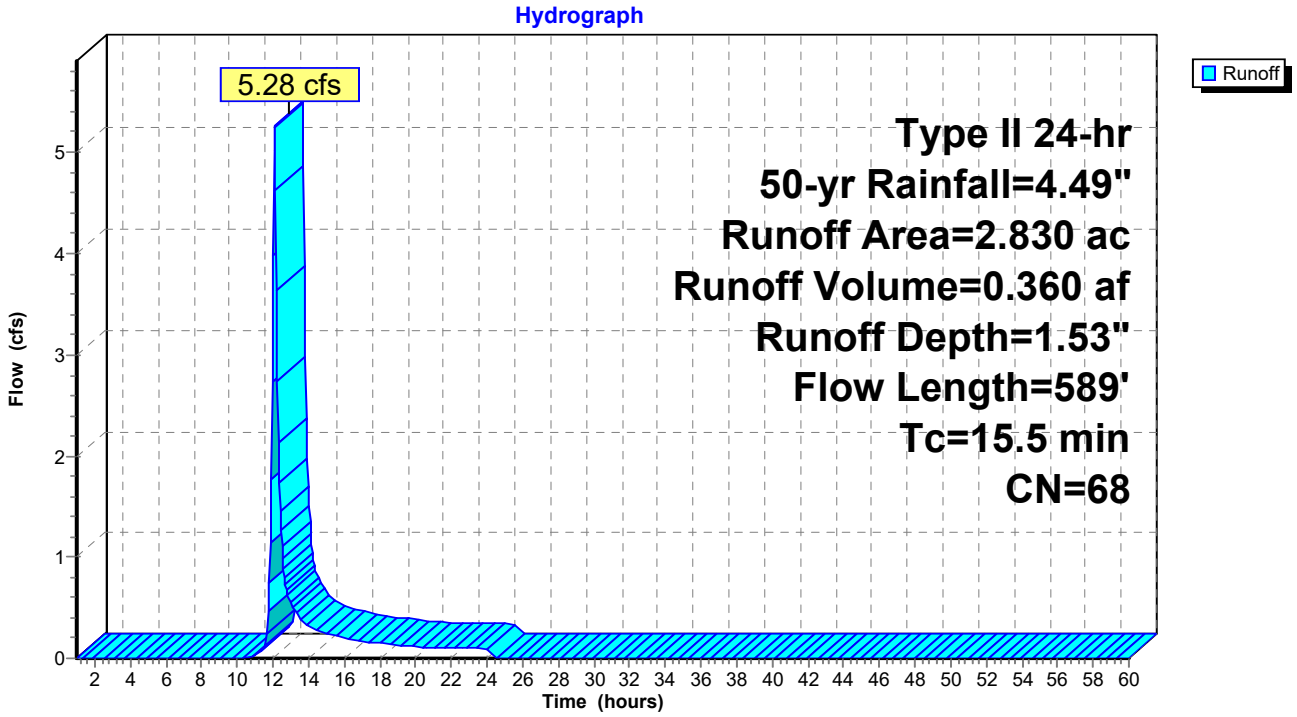
Runoff = 5.28 cfs @ 12.09 hrs, Volume= 0.360 af, Depth= 1.53"
Routed to Pond 102 : Proposed Infiltration Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=4.49"

Area (ac)	CN	Description
1.410	98	Paved parking, HSG A
1.420	39	>75% Grass cover, Good, HSG A
2.830	68	Weighted Average
1.420		50.18% Pervious Area
1.410		49.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0150	0.12		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 2.16"
0.7	75	0.0150	1.84		**Shallow Concentrated Flow, Lawn** Grassed Waterway Kv= 15.0 fps
0.5	87	0.0050	3.21	2.52	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
0.7	187	0.0100	4.54	3.56	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.2	118	0.0414	9.23	7.25	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.0	22	0.0917	13.74	10.79	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
15.5	589	Total			

Subcatchment 101: Pr Subarea A-1 (to new IB)



Summary for Subcatchment 103: Pr Subarea A-2 (remainder to A)

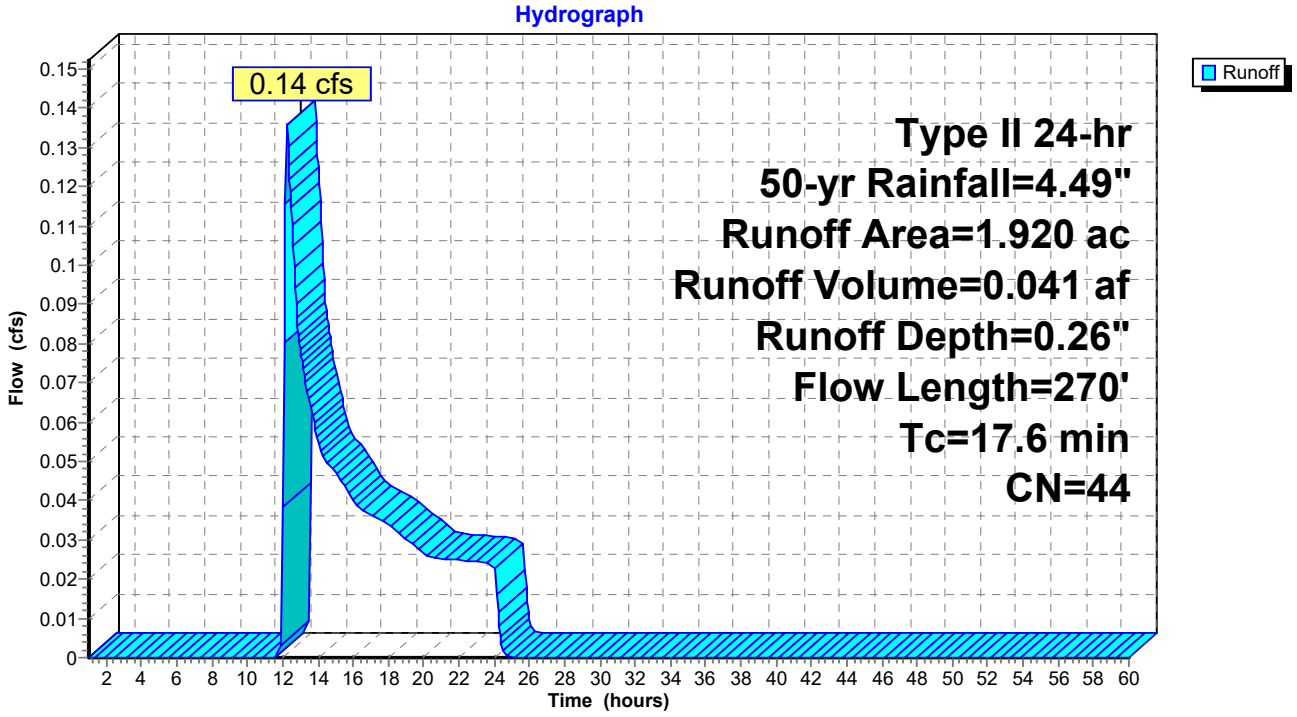
Runoff = 0.14 cfs @ 12.24 hrs, Volume= 0.041 af, Depth= 0.26"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=4.49"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
0.930	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
1.920	44	Weighted Average
1.630		84.90% Pervious Area
0.290		15.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.9	105	0.0860	2.05		**Shallow Concentrated Flow, lawn** Short Grass Pasture Kv= 7.0 fps
17.6	270	Total			

Subcatchment 103: Pr Subarea A-2 (remainder to A)



Summary for Subcatchment 106: Pr Subarea B

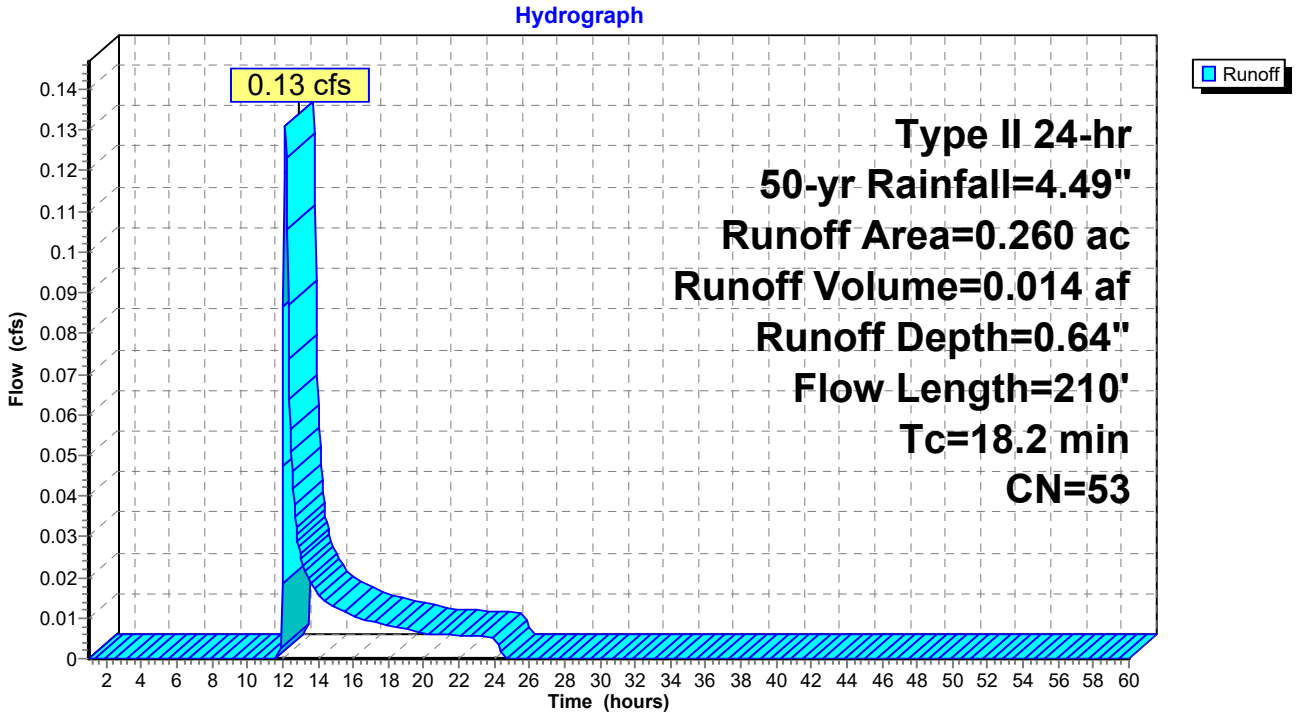
Runoff = 0.13 cfs @ 12.16 hrs, Volume= 0.014 af, Depth= 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=4.49"

Area (ac)	CN	Description
0.060	98	Paved parking, HSG A
0.200	39	>75% Grass cover, Good, HSG A
0.260	53	Weighted Average
0.200		76.92% Pervious Area
0.060		23.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0200	0.10		**Sheet Flow, sheet** Grass: Dense n= 0.240 P2= 2.16"
0.8	110	0.0230	2.44		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
18.2	210	Total			

Subcatchment 106: Pr Subarea B



Summary for Pond 102: Proposed Infiltration Basin

Inflow Area = 2.830 ac, 49.82% Impervious, Inflow Depth = 1.53" for 50-yr event
Inflow = 5.28 cfs @ 12.09 hrs, Volume= 0.360 af
Outflow = 0.38 cfs @ 13.62 hrs, Volume= 0.360 af, Atten= 93%, Lag= 91.8 min
Discarded = 0.38 cfs @ 13.62 hrs, Volume= 0.360 af
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 480.27' @ 13.62 hrs Surf.Area= 3,027 sf Storage= 7,395 cf

Plug-Flow detention time= 261.3 min calculated for 0.360 af (100% of inflow)
Center-of-Mass det. time= 261.4 min (1,126.0 - 864.6)

Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	18,470 cf	**Infiltration Basin (Prismatic)** Listed below (Recalc)

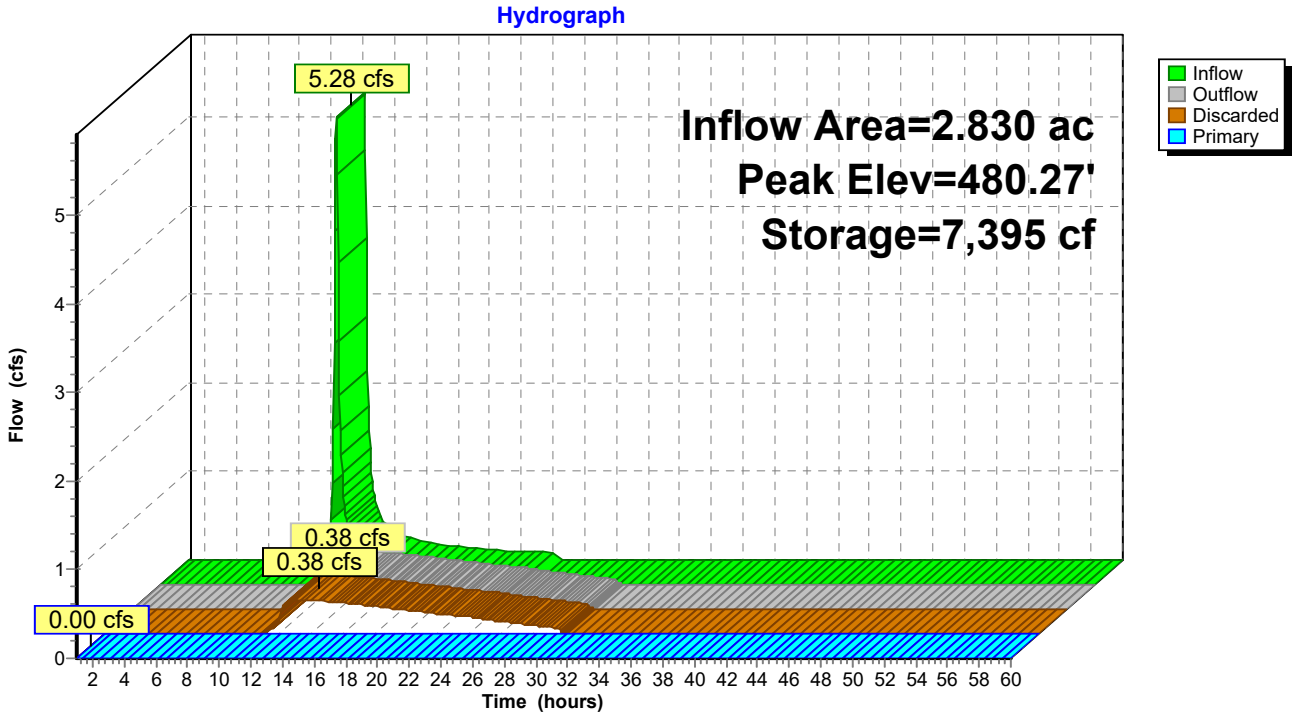
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.19'	**12.0" Round Culvert** L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 478.19' / 476.83' S= 0.0272 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	481.50'	**24.0" x 24.0" Horiz. 2'x2' grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	476.00'	**4.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.38 cfs @ 13.62 hrs HW=480.27' (Free Discharge)
└**3=Exfiltration** (Controls 0.38 cfs)

Primary OutFlow Max=0.00 cfs @ 1.00 hrs HW=476.00' (Free Discharge)
└**1=Culvert** (Controls 0.00 cfs)
└**2=2'x2' grate** (Controls 0.00 cfs)

Pond 102: Proposed Infiltration Basin



Summary for Pond 105: Existing IB

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.10" for 50-yr event
Inflow = 0.14 cfs @ 12.24 hrs, Volume= 0.041 af
Outflow = 0.09 cfs @ 12.70 hrs, Volume= 0.041 af, Atten= 30%, Lag= 27.5 min
Discarded = 0.09 cfs @ 12.70 hrs, Volume= 0.041 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.03' @ 12.70 hrs Surf.Area= 3,673 sf Storage= 117 cf

Plug-Flow detention time= 21.0 min calculated for 0.041 af (100% of inflow)
Center-of-Mass det. time= 20.8 min (1,014.5 - 993.7)

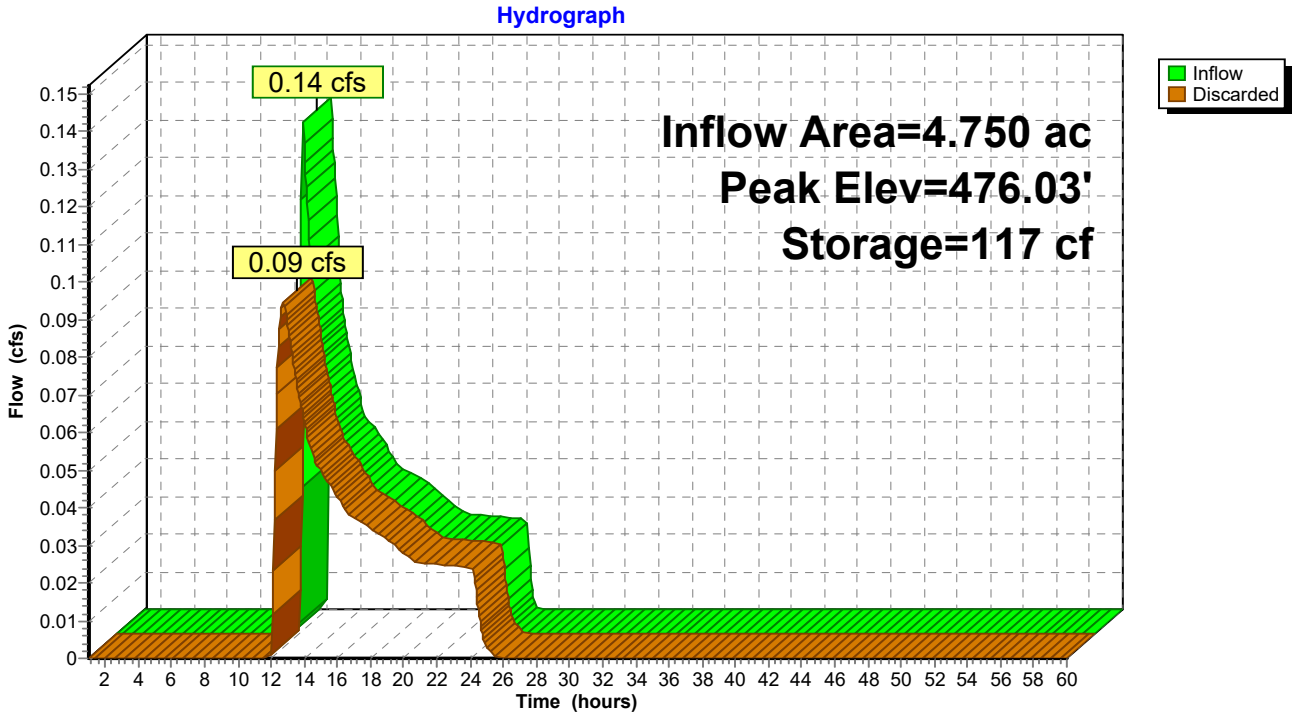
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.17 cfs @ 12.70 hrs HW=476.03' (Free Discharge)
↑**1=Exfiltration (assumed)** (Controls 0.17 cfs)

Pond 105: Existing IB

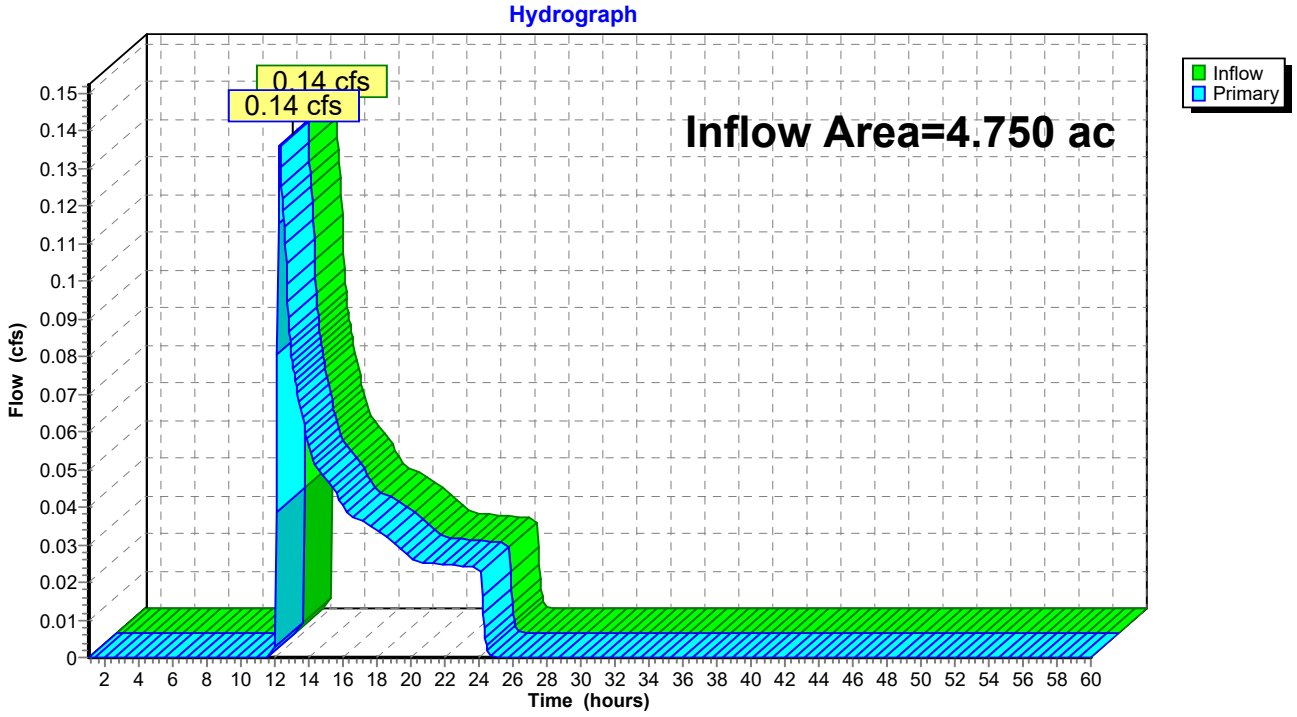


Summary for Link 104: Pr Subarea A Total (to ex IB)

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.10" for 50-yr event
Inflow = 0.14 cfs @ 12.24 hrs, Volume= 0.041 af
Primary = 0.14 cfs @ 12.24 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 105 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 104: Pr Subarea A Total (to ex IB)



Summary for Subcatchment 101: Pr Subarea A-1 (to new IB)

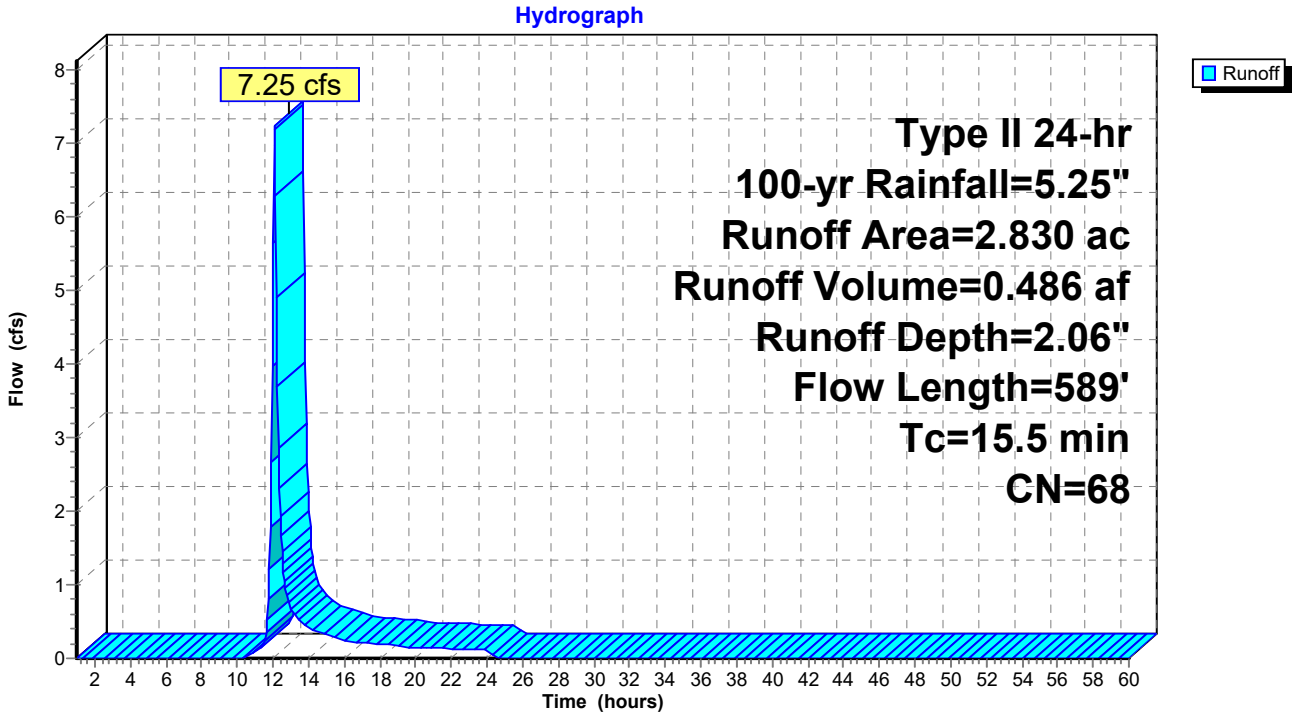
Runoff = 7.25 cfs @ 12.08 hrs, Volume= 0.486 af, Depth= 2.06"
Routed to Pond 102 : Proposed Infiltration Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.25"

Area (ac)	CN	Description
1.410	98	Paved parking, HSG A
1.420	39	>75% Grass cover, Good, HSG A
2.830	68	Weighted Average
1.420		50.18% Pervious Area
1.410		49.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0150	0.12		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 2.16"
0.7	75	0.0150	1.84		**Shallow Concentrated Flow, Lawn** Grassed Waterway Kv= 15.0 fps
0.5	87	0.0050	3.21	2.52	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
0.7	187	0.0100	4.54	3.56	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.2	118	0.0414	9.23	7.25	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.0	22	0.0917	13.74	10.79	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
15.5	589	Total			

Subcatchment 101: Pr Subarea A-1 (to new IB)



Summary for Subcatchment 103: Pr Subarea A-2 (remainder to A)

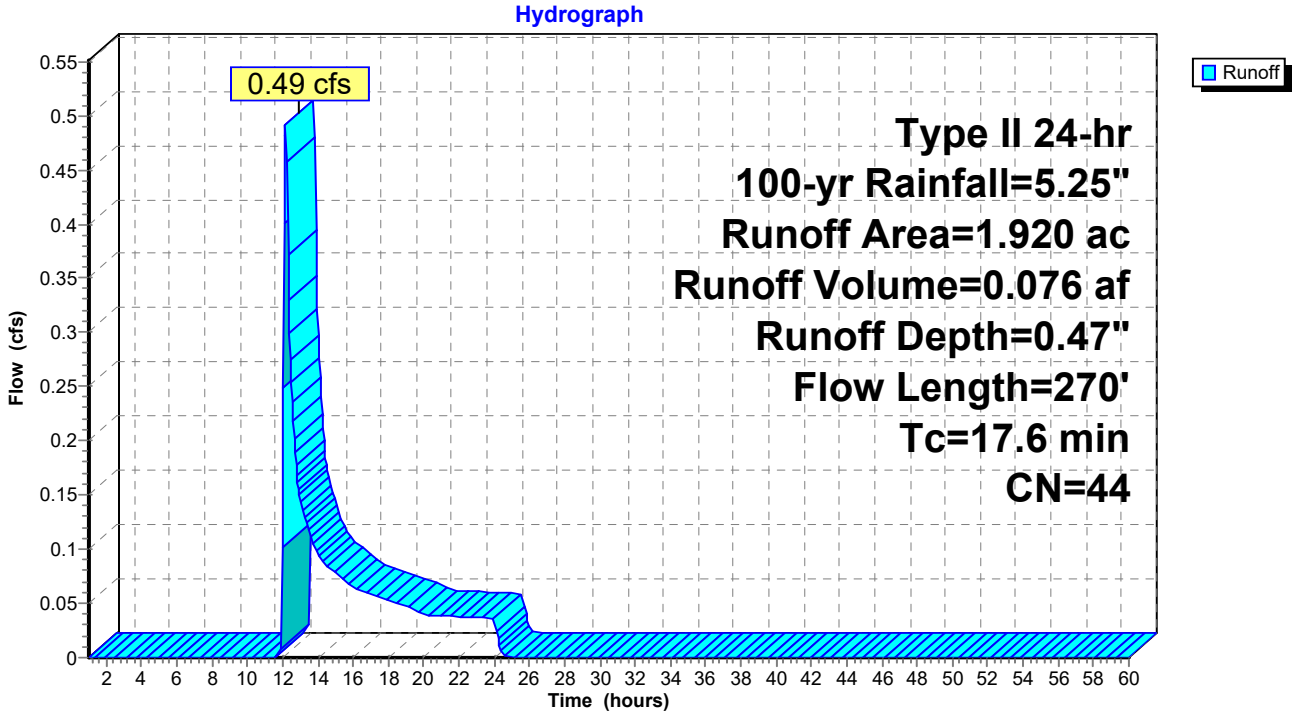
Runoff = 0.49 cfs @ 12.17 hrs, Volume= 0.076 af, Depth= 0.47"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.25"

Area (ac)	CN	Description
0.290	98	Paved parking, HSG A
0.930	30	Woods, Good, HSG A
0.700	39	>75% Grass cover, Good, HSG A
1.920	44	Weighted Average
1.630		84.90% Pervious Area
0.290		15.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	100	0.0700	0.11		**Sheet Flow, woods** Woods: Light underbrush n= 0.400 P2= 2.16"
0.9	65	0.0600	1.22		**Shallow Concentrated Flow, woods** Woodland Kv= 5.0 fps
0.9	105	0.0860	2.05		**Shallow Concentrated Flow, lawn** Short Grass Pasture Kv= 7.0 fps
17.6	270	Total			

Subcatchment 103: Pr Subarea A-2 (remainder to A)



Summary for Subcatchment 106: Pr Subarea B

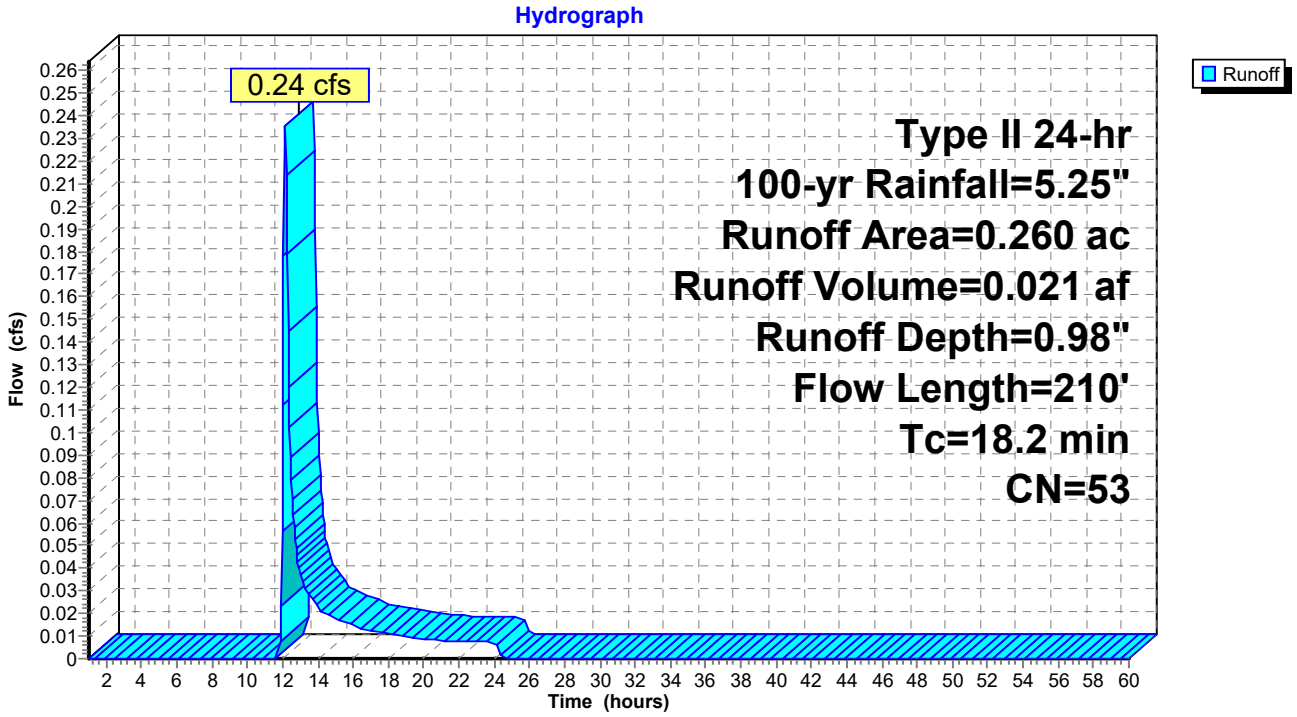
Runoff = 0.24 cfs @ 12.14 hrs, Volume= 0.021 af, Depth= 0.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.25"

Area (ac)	CN	Description
0.060	98	Paved parking, HSG A
0.200	39	>75% Grass cover, Good, HSG A
0.260	53	Weighted Average
0.200		76.92% Pervious Area
0.060		23.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0200	0.10		**Sheet Flow, sheet** Grass: Dense n= 0.240 P2= 2.16"
0.8	110	0.0230	2.44		**Shallow Concentrated Flow, sheet** Unpaved Kv= 16.1 fps
18.2	210	Total			

Subcatchment 106: Pr Subarea B



Summary for Pond 102: Proposed Infiltration Basin

Inflow Area = 2.830 ac, 49.82% Impervious, Inflow Depth = 2.06" for 100-yr event
Inflow = 7.25 cfs @ 12.08 hrs, Volume= 0.486 af
Outflow = 0.47 cfs @ 13.68 hrs, Volume= 0.486 af, Atten= 93%, Lag= 95.8 min
Discarded = 0.47 cfs @ 13.68 hrs, Volume= 0.486 af
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Routed to Link 104 : Pr Subarea A Total (to ex IB)

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 481.22' @ 13.68 hrs Surf.Area= 3,647 sf Storage= 10,555 cf

Plug-Flow detention time= 298.5 min calculated for 0.485 af (100% of inflow)
Center-of-Mass det. time= 298.6 min (1,154.2 - 855.6)

Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	18,470 cf	**Infiltration Basin (Prismatic)** Listed below (Recalc)

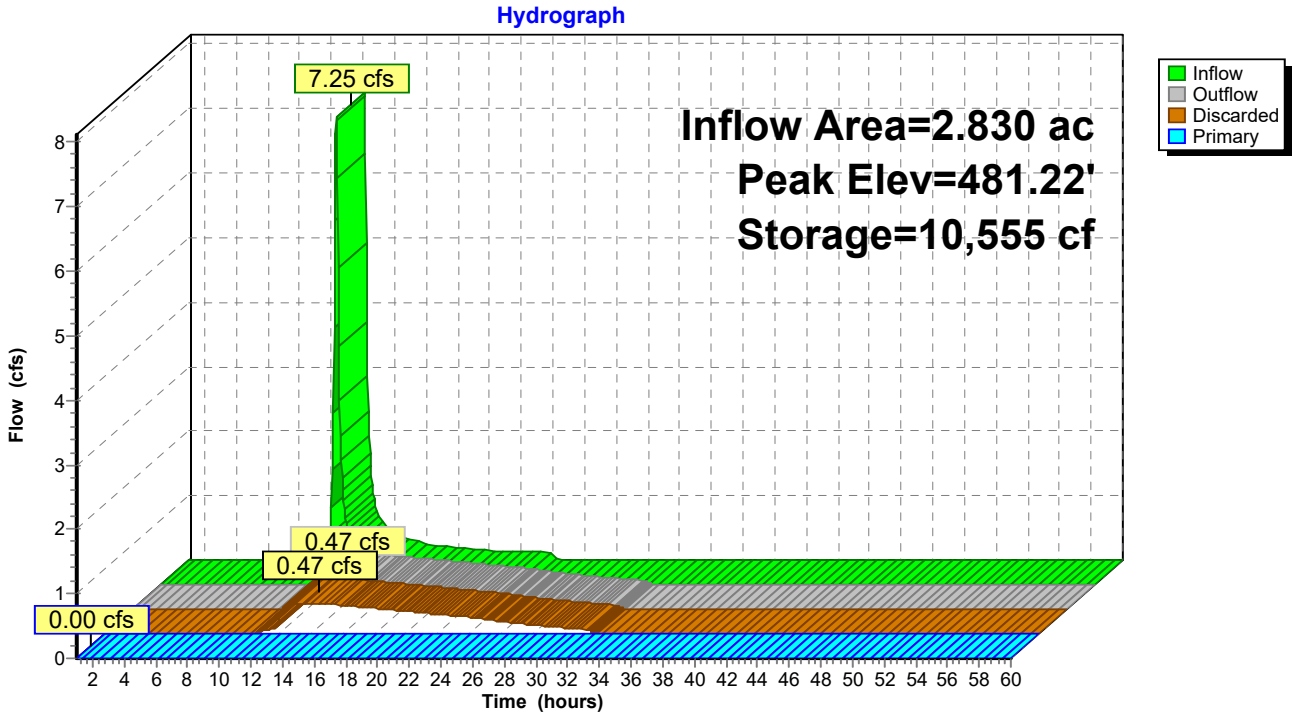
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.19'	**12.0" Round Culvert** L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 478.19' / 476.83' S= 0.0272 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	481.50'	**24.0" x 24.0" Horiz. 2'x2' grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	476.00'	**4.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.47 cfs @ 13.68 hrs HW=481.22' (Free Discharge)
└**3=Exfiltration** (Controls 0.47 cfs)

Primary OutFlow Max=0.00 cfs @ 1.00 hrs HW=476.00' (Free Discharge)
└**1=Culvert** (Controls 0.00 cfs)
└**2=2'x2' grate** (Controls 0.00 cfs)

Pond 102: Proposed Infiltration Basin



Summary for Pond 105: Existing IB

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.19" for 100-yr event
Inflow = 0.49 cfs @ 12.17 hrs, Volume= 0.076 af
Outflow = 0.19 cfs @ 12.71 hrs, Volume= 0.076 af, Atten= 62%, Lag= 32.3 min
Discarded = 0.19 cfs @ 12.71 hrs, Volume= 0.076 af

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 476.11' @ 12.71 hrs Surf.Area= 3,948 sf Storage= 414 cf

Plug-Flow detention time= 24.1 min calculated for 0.076 af (100% of inflow)
Center-of-Mass det. time= 24.2 min (980.2 - 956.0)

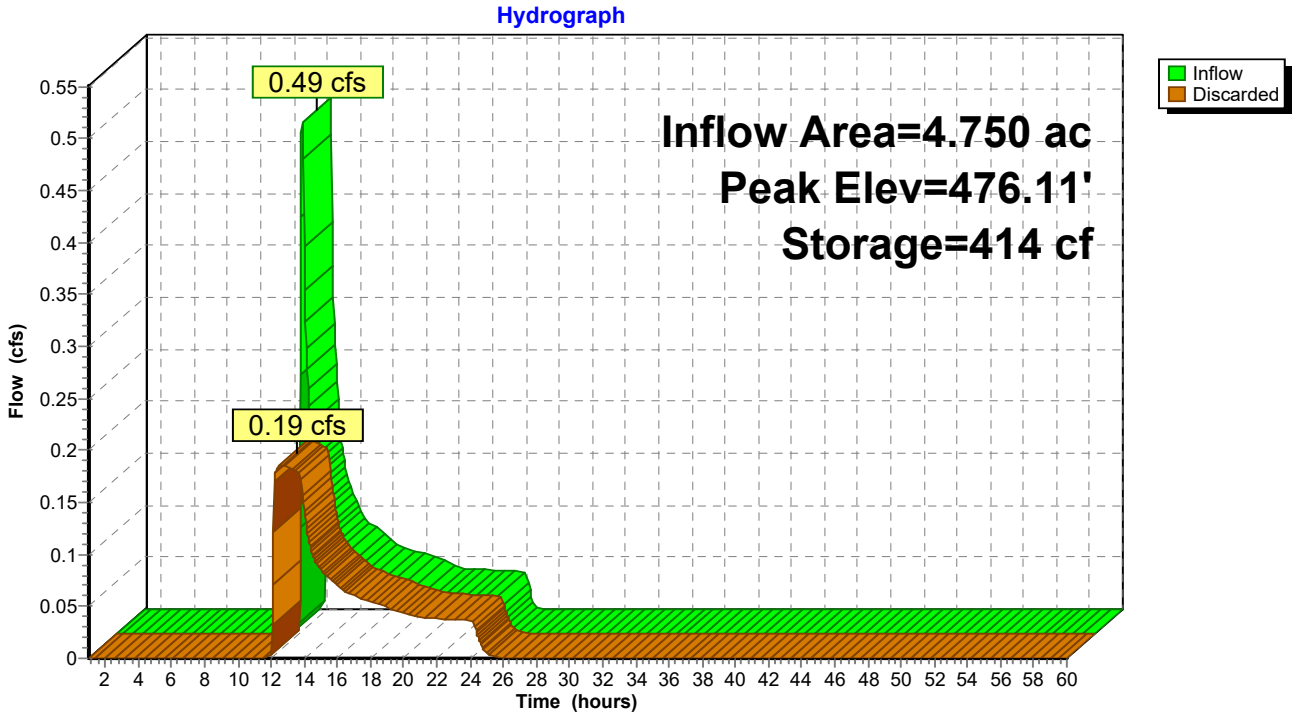
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	3,560	0	0
478.00	10,600	14,160	14,160
480.00	14,130	24,730	38,890
482.00	17,400	31,530	70,420

Device	Routing	Invert	Outlet Devices
#1	Discarded	476.00'	**2.000 in/hr Exfiltration (assumed) over Surface area** Conductivity to Groundwater Elevation = 470.00'

Discarded OutFlow Max=0.19 cfs @ 12.71 hrs HW=476.11' (Free Discharge)
↑**1=Exfiltration (assumed)** (Controls 0.19 cfs)

Pond 105: Existing IB

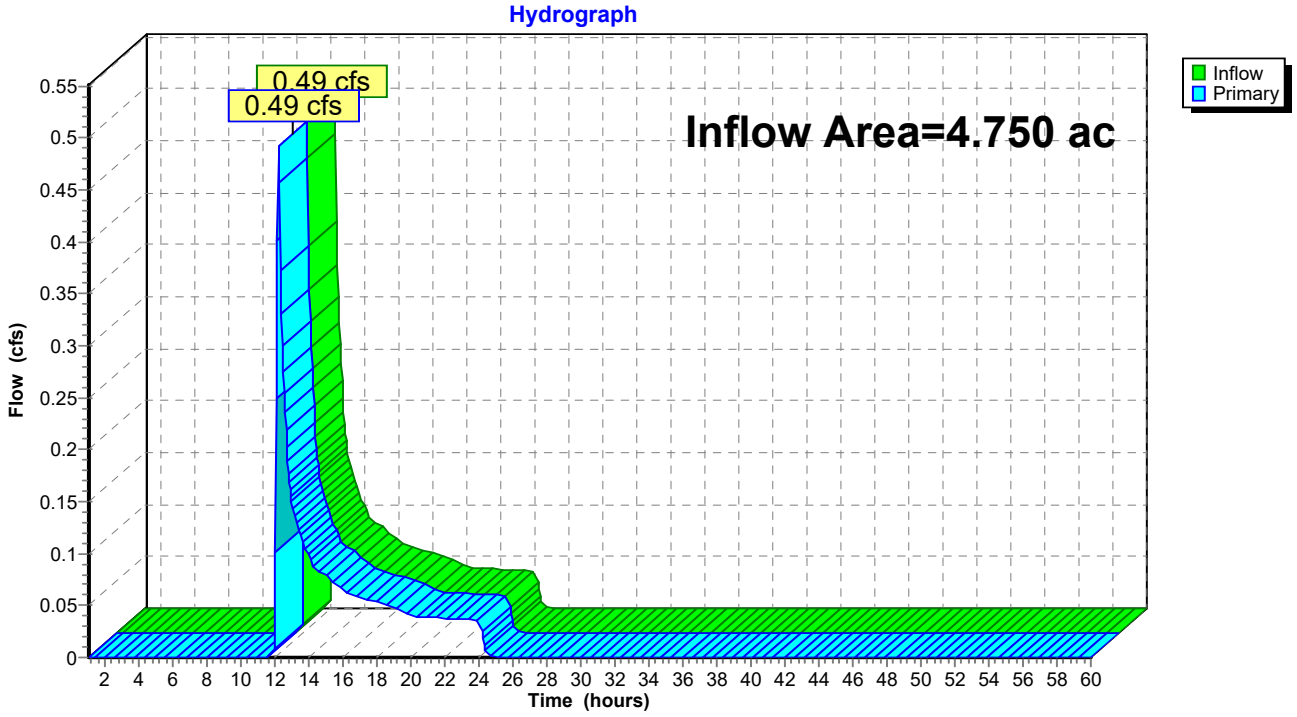


Summary for Link 104: Pr Subarea A Total (to ex IB)

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.19" for 100-yr event
Inflow = 0.49 cfs @ 12.17 hrs, Volume= 0.076 af
Primary = 0.49 cfs @ 12.17 hrs, Volume= 0.076 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 105 : Existing IB

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Link 104: Pr Subarea A Total (to ex IB)



BME ASSOCIATES ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS	***CALCULATIONS*** **:** **Project:** **Channel Protection Volume Calculations** **Hartwell Height**	Project No.: **2850** Date: **11/13/2025** By: **FAS** Sheet **1 of 3**

COMPUTE CHANNEL PROTECTION STORAGE VOLUME - STORMWATER MANAGEMENT FACILITY

Channel Protection Volume: Provide 24 hours of extended detention (T) for one-year event.

Design Storms 1-YEAR (in) **1.86**

1. DETERMINE THE VALUE OF THE UNIT PEAK DISCHARGE (qu) USING TR-55 AND TYPE II RAINFALL

DRAINAGE AREA (A) TO FACILITY= **2.83** **acres**

RUNOFF CURVE NUMBER (CN) = **68**

Ia = (200/CN - 2) **Ia VALUE =** **0.941**

Ia/P **Ia/P VALUE =** **0.506**

TIME OF CONCENTRATION (Tc) = **0.260** **hrs.** (FROM DRAINAGE CALCULATIONS)

Peak Unit Discharge, (qu) (Exhibit 4-II) **qu =** **325** **csm/in**

When T=24 hours, find qo/qi (Figure 3-15) **qo/qi =** **0.050**

$Vs/Vr = 0.683 - 1.43(qo/qi) + 1.64(qo/qi)^2 - 0.804(qo/qi)^3$
where Vs = channel protection storage (Cpv) and Vr = volume of runoff in inches

Vs/Vr **Vs/Vr VALUE =** **0.615**

Direct Runoff, Q (Figure 2-1) **Q VALUE =** **0.20** **inches**

Channel Protection Storage, Vs
Vs = Cpv = (Vs/Vr)(Q)(1/12)(AREA)

Vs **Vs VALUE =** **0.029** **ac-ft**
1265 **CF** **CPv =** **1265** **CF**

Release Rate over 24 Hours 1265 ft^3 / [(24 hr) (3600 sec / hr)] = **0.015** **cfs**

100% CHANNEL PROTECTION VOLUME PROVIDED IN PROPOSED INFILTRATION BASIN

Figure 2-1 Solution of runoff equation.

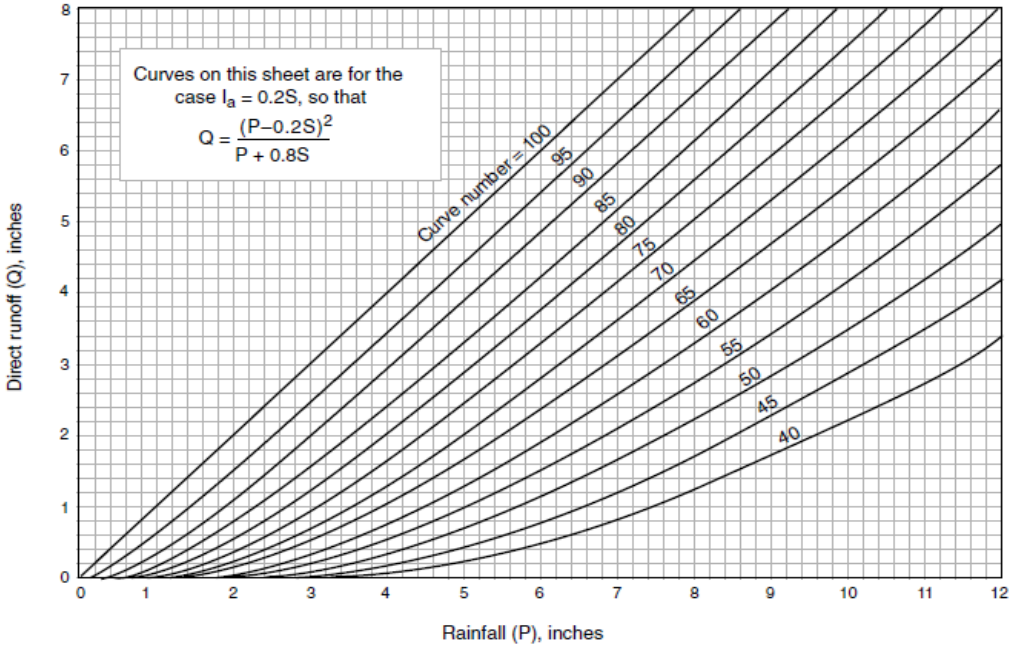


Figure 3-15. Detention Time vs. Discharge Ratios
(Source: Maryland Department of the Environment, 1998)

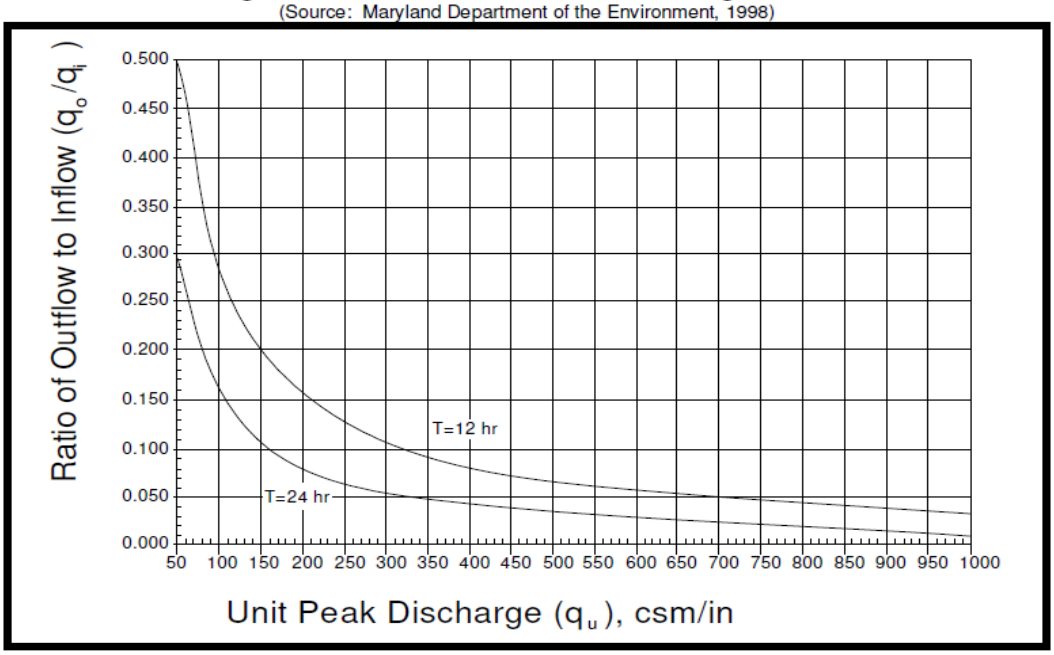
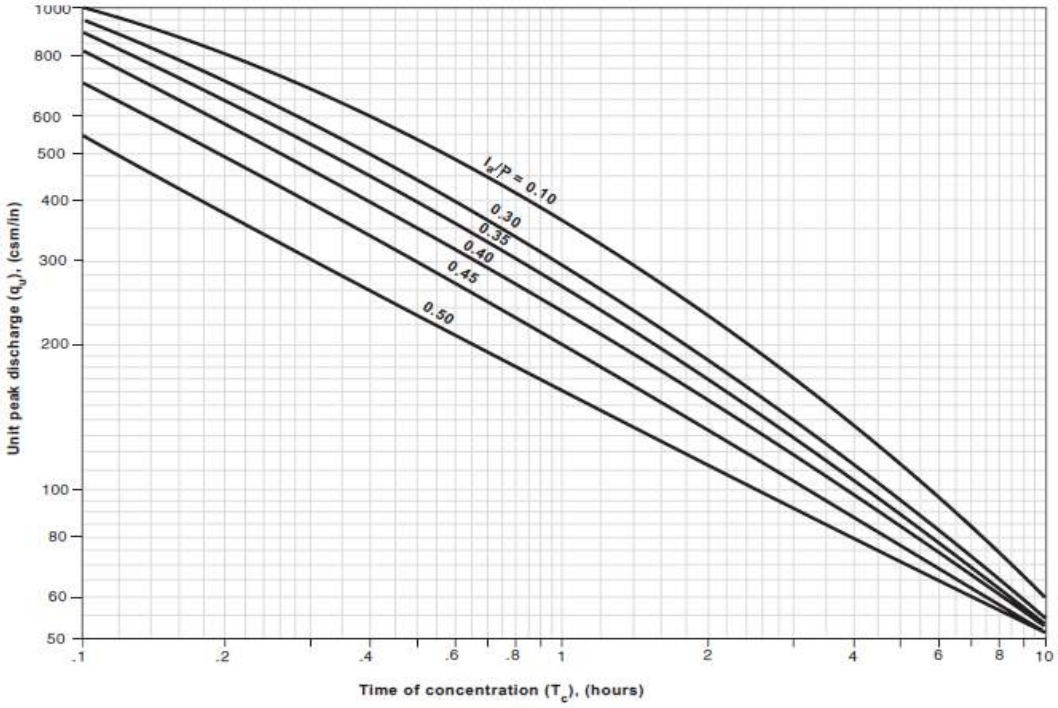


Exhibit 4-II Unit peal discharge (q_u) for NRCS (SCS) type II rainfall distribution



WQv and RRv Calculations

P:\2850\Drawings\Final\2850 Drainage Base.dwg

PROPOSED INFILTRATION BASIN
WQv / RRv REQUIRED = 3,772 CU FT
WQv / RRv PROVIDED = 3,772 CU FT

NEW YORK STATE ROUTE 96 – PITTSFORD VICTOR ROAD
(66' RIGHT-OF-WAY)

EXISTING IMPERVIOUS AREA (TYP)

EXISTING IMPERVIOUS AREA TO BE REMOVED (TYP)

EXIT. IMPERVIOUS AREA TO EXISTING INFILTRATION BASIN = 0.29 ACRES
PROP AREA TO EXIST. INFILTRATION BASIN = 0.29 ACRES

EXIST. IMPERVIOUS AREA TO PUBLIC R.O.W. = 0.15 ACRES
PROP AREA TO PUBLIC R.O.W.=0.06 ACRES

THORNELL ROAD – COUNTY ROAD 33
(49.5' RIGHT-OF-WAY)

WQv AREA TO PROP. INFILTRATION BASIN
A=2.6 ACRES
Ai=1.01 ACRES

PROPOSED IMPERVIOUS (TYP)

N 1,117,598.81
E 1,443,196.23

N 1,117,139.55
E 1,442,926.52

N 1,117,141.84
E 1,443,167.09

APPROXIMATE LOCATION OF EXISTING BUILDING

APPROXIMATE LOCATION OF EXISTING BUILDING

LOT 11 LOT 10 LOT 9 LOT 8

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Drawing Alteration
The following is an excerpt from the New York State Education Law Article 145 Section 7209 and applies to this drawing:
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1	REVISIONS	DATE / BY

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ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
10 LIFTBRIDGE LANE EAST
FAIRPORT, NEW YORK 14450
WWW.BMEPC.COM
585-377-7360

PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: MDG2, LLC
P.O. BOX 14
PITTSFORD, NY, 14534
DRAWING TITLE: WQv MAP

PROJECT MANAGER	
P. VARS/R. DESTRO	
PROJECT ENGINEER	
F. SHELLEY	
DRAWN BY	
D. TURNER	
SCALE	DATE ISSUED
1" = 40'	NOVEMBER 14, 2025
PROJECT NO.	
2850	
DRAWING NO.	
FIGURE 04	

Step 1 - Site Planning

	Practice	Description	Applicable	Project Specific Evaluation
Preservation of Natural Features and Conservation Design	**Preservation of Undisturbed Areas**	Delineate and protect undisturbed forests, native vegetated areas, riparian corridors, water bodies, wetlands, and natural terrain.	No	The project does not propose permanent conservation of this area at this time.
	Preservation of Buffers	Delineate and protect naturally vegetated buffers along perennial streams, rivers, shorelines, and wetlands.	N/A	There are no water bodies located on or adjacent to the project site.
	Reduction of Clearing and Grading	Limit clearing and grading to the minimum amount needed for roads, driveways, foundations, utilities and stormwater management facilities.	Yes	Clearing and grading will be limited to the area of disturbance and will be minimized to the greatest extent practical. The limits of all proposed clearing will be demarcated in the field prior to construction, to prevent unnecessary removal of trees.
	Locating Development in Less Sensitive Areas	Avoid sensitive resource areas such as floodplains, steep slopes, erodible soils, wetlands, mature forests and critical habitats by locating development to fit the terrain in areas that will create the least impact.	N/A	There are no floodplains, steep slopes, erodible soils, wetlands, mature forests or critical habitats located on the project site.
	Open Space Design	Use clustering, conservation design or open space design to reduce impervious cover, preserve more open space and protect water resources.	Yes	The site layout has been designed to maximize open space. Impervious surfaces have been minimized to the greatest extent practical.
	Soil Restoration	Restore the original properties and porosity of the soil by deep till and amendment with compost to reduce the generation of runoff and enhance the runoff reduction performance of post construction practices.	Yes	All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual.
	Roadway Reduction	Minimize roadway widths and lengths, below local requirements, to reduce site impervious area	No	Reducing the roadway width is not feasible for the project's intended use.

Step 1 - Site Planning

Reduction of Impervious Cover	**Sidewalk Reduction**	Minimize sidewalk lengths and widths, below local requirements, to reduce site impervious area	No	Reducing the sidewalk width/length is not feasible for the project's intended use
	Driveway Reduction	Minimize driveway lengths and widths, below local requirements, to reduce site impervious area	No	Reducing the driveway width is not feasible for the intended use.
	Cul-de-sac Reduction	Minimize the number of cul-de-sacs and incorporate landscaped areas to reduce their impervious cover.	Yes	No cul-de-sacs are proposed as part of this projec and NYS Fire Code compliant turnarounds are proposed in leiu of cul de sacs.
	Building Footprint Reduction	Reduce the impervious footprint of residences and commercial buildings by using alternate or taller buildings while maintaining the same floor to area ratio.	Yes	All new building area has been allocated to efficiently implement the intended use.
	Parking Reduction	Reduce imperviousness on parking lots by eliminating unneeded spaces, providing compact car spaces and efficient parking lanes, reducing stall dimensions below local requirements, using porous pavement surfaces in overflow parking areas, and using multi-storied parking decks where appropriate.	No	Reducing the parking stall dimensions or number of stalls is not feasible for the intended use.

Step 2 - Calculate Water Quality Volume

Is this project subject to Section 4.3 of the NYS Design Manual for Enhanced Phosphorus Removal?	No
What is the nature of this construction project?	New Construction

Design Point:	A		*Enter 90% Rainfall Event as P*
P=	1.00	inches	

Calculate Required WQv

Drainage Area Number	Contributing Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (cf)	SMP Description
1	2.60	1.01	39	0.40	3,772	Infiltration Basin
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
Total	2.60	1.01	39	0.40	**3772**	**Required WQv**

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CALCULATIONS :

Project: **Hartwell Heights**

Overall WQv & RRv Calculations

Project No.:	2850
Date:	11/14/2025
By:	DTT
Sheet	1 of 2

Subarea A

P (90% Rainfall Event) =	**1.00**	**inches**
Water Quality Area =	**2.60**	**acres**
Impervious Area =	**1.01**	**acres**
I = % Impervious =	**38.8**	%
Weighted S Value =	**0.50**	

Area = Area to Pracitce

Hydrologic Soil Group (HSG) Specific Reduction Factor "S" =

Soil Classification	Area (ac)	S Factor	Weighted #
A Soils	**2.6**	0.5	1.3
B Soils	**0**	0.4	0
C Soils	**0**	0.3	0
D Soils	**0**	0.2	0

Total Area = 2.60 acres
Total Weighted # = 1.3

Weighted S Value = **0.50**

Rv = 0.05 + 0.009(I)

Rv = 0.3996

WQv Required = P * Area * Rv / 12
WQv = 0.087 AC-FT

WQv = 3,772 CF

Minimum allowable RRv = P * 0.95 * S * Total Impervious Area / 12
RRv Min = 0.040 AC-FT

Min Allowable RRv = 1,741 CF

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CALCULATIONS :

Project: Hartwell Heights
WQv and RRv Summary

Project No.: 2850
Date: 11/14/2025
By: DTT
Sheet 2 of 2

Overall Required WQv =	**3,772**	**cf**	
			Area = Area to Pracitce
Minimum Allowable RRv =	**1,741**	**cf**	

WQv Pretreatment Provided

ADS Unit Outlet Structure	**3,772**	**cf**
Total WQv Pretreatment Provided =	**3,772**	**cf***

RRv Provided

RRv Provided by Infiltration Basin =	**3,772**	**cf**
Total RRv Provided =	**3,772**	**cf**

Total WQv Provided =	**3,772**	**cf**	**>**	**3,772**	**cf**
Total RRv Provided =	**3,772**	**cf**	**>**	**1,741**	**cf**

Infiltration Basin (I-2)

Design Point:	A

Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	**Contributing Area** (Acres)	**Impervious Area** (Acres)	**Percent Impervious** %	**Rv**	**WQv** (cf)	**Precipitation** (in)	**Description**
1	2.60	1.01	39	0.40	3,772	1.00	Infiltration Basin

Design Criteria		
Enter underlying soil infiltration rate (based on geotechnical testing, refer to Appendix D)	4	
Is the contributing area to the practice an "Infiltration Restricted" stormwater hotspot?	No	
Is the contributing area to the practice an "Infiltration Prohibited" stormwater hotspot?	No	
Maximum contributing area (acres)	10	
Is the contributing area greater than the maximum allowed contributing area?	No	
Enter depth to seasonal high water table (ft)	10	
Enter depth to bedrock (ft)	10	
Enter pretreatment volume provided (cf)	3772	
Enter depth of freeboard (ft)	1	
Enter depth of basin (ft)	6	
Enter slope of maintenance access (%)	2	
Enter width of maintenance access (ft)	18	

Sizing Criteria				
		Value	Units	Notes
Water Quality Volume	WQv	3772	cf	
Basin depth	db	6.0	ft	
Required Surface Area	Ab	629	sf	
Enter Surface Area Provided	Ab	650	sf	

Determine Runoff Reduction		
RRv Provided	**3,772**	***cf***

Steps 3 and 5 - Apply RR Techniques and Standard SMPs

Runoff Reduction Volume and Treated Volumes						
	Runoff Reduction Techiques/Standard SMPs		**Total Contributing Area**	**Total Contributing Impervious Area**	**WQv Reduced (RRv)**	**WQv Treated**
			(acres)	**(acres)**	**(cf)**	**(cf)**
RR Techniques	Conservation of Natural Areas	RR-1	0.00		0	
	Sheet Flow to Riparian Buffer/Filter Strip	RR-2	0.00	0.00	0	
	Tree Planting/Tree Pit/Tree Trench	RR-3	0.00	0.00	0	
	Disconnection of Rooftop Runoff	RR-4		0.00	0	
	Vegetated Swale	RR-5	0.00	0.00	0	
	Rain Garden	RR-6	0.00	0.00	0	
	Stormwater Planter	RR-7	0.00	0.00	0	
	Rainwater Harvesting Systems	RR-8	0.00	0.00	0	
	Porous Pavement	RR-9	0.00	0.00	0	
	Green Roof (Extensive & Intensive)	RR-10	0.00	0.00	0	
	Stream Daylighting	RR-11				
Standard SMPs w/ RRv Capacity	Infiltration Trench	I-1	0.00	0.00	0	0
	Infiltration Basin	I-2	2.60	1.01	3,772	0
	Dry Well	I-3	0.00	0.00	0	0
	Underground Infiltration System	I-4	0.00	0.00	0	0
	Infiltration Bioretention	F-4	0.00	0.00	0	0
	Filtration Bioretention	F-5	0.00	0.00	0	0
	Bioslope	F-6	0.00	0.00	0	0
	Dry swale	O-1	0.00	0.00	0	0
Standard SMPs	Micropool Extended Detention	P-1	0.00	0.00		0
	Wet Pond	P-2	0.00	0.00		0
	Wet Extended Detention	P-3	0.00	0.00		0
	Multiple Pond System	P-4	0.00	0.00		0
	Shallow Wetland	W-1	0.00	0.00		0
	Extended Detention Shallow Wetland	W-2	0.00	0.00		0
	Pond/Wetland System	W-3	0.00	0.00		0
	Pocket Wetland	W-4	0.00	0.00		0
	Gravel Wetland	W-5	0.00	0.00		0
	Surface Sand Filter	F-1	0.00	0.00		0
	Underground Sand Filter	F-2	0.00	0.00		0
	Perimeter Sand Filter	F-3	0.00	0.00		0
	Wet Swale	O-2	0.00	0.00		0
Alt. SMPs	Flow Based Alternative Practice	-	0.00	0.00		0
	Volume Based Alternative Practice	-				
Totals by RR Technique		→	0.00	0.00	0	
Totals by Standard SMP w/RRV		→	2.60	1.01	3,772	0
Totals by Standard SMP		→	0.00	0.00		0
	Totals by Alternative SMP	→	0.00	0.00		0
Totals (RR Techniques + all SMPs)		→	2.60	1.01	3,772	0

Step 3 - Evaluation of RR Techniques and Standard SMPs with RRv Capacity

	Practice	Description	Applicable	Project Specific Evaluation
RR Techniques	**Conservation of Natural Areas (RR-1)**	Retain the pre-development hydrologic and water quality characteristics of undisturbed natural areas by permanently conserving these areas on a site. Undisturbed natural areas include: forest retention areas; reforestation areas; stream and river corridors; shorelines; wetlands, vernal pools, and associated vegetated buffers; and undisturbed open space.	No	The project does not propose permanent conservation of these areas at this time.
	Sheet Flow to Riparian Buffer/Filter Strip (RR-2)	Undisturbed natural areas such as forested conservation areas and stream buffers or vegetated filter strips and riparian buffers can be used to treat and control stormwater runoff from some areas of a development project.	N/A	The project site does not contain any riparian buffers.
	Tree Planting/Tree Pit/Tree Trench (RR-3)	Plant or conserve trees to reduce stormwater runoff, increase nutrient uptake, and provide bank stabilization. Trees can be used for applications such as landscaping, stormwater management practice areas, conservation areas and erosion and sediment control.	No	Tree plantings are proposed on site. However, credit for these trees will not be taken toward area reduction/volume reduction in the RRv calculations.
	Disconnection of Rooftop Runoff (RR-4)	Direct runoff from rooftop areas and upland overland runoff flow to designated pervious areas to reduce runoff volumes and rates.	No	The building roof(s) will be directed to downspouts with splash blocks and vegetated areas where feasible, which will promote sheet flow and filtering. However, credit for rooftop disconnect will not be taken toward an impervious area reduction in the RRv calculations.
	Vegetated Swale (RR-5)	The natural drainage paths, or properly designed vegetated channels, can be used instead of constructing underground storm sewers or concrete open channels to increase time of concentration, reduce the peak discharge, and provide infiltration.	No	Vegetatied swales are proposed in some areas of the site however RRv credit is not taken toward RRv
	Rain Garden (RR-6)	Manage and treat small volumes of stormwater runoff using a conditioned planting soil bed and planting materials to filter runoff stored within a shallow depression.	No	Due to the nature of the site development, a infiltration basin will be implemented instead of rain gardens.

Step 3 - Evaluation of RR Techniques and Standard SMPs with RRv Capacity

RR Techniques	**Stormwater Planter (RR-7)**	Small landscaped stormwater treatment devices that can be designed as infiltration or filtering practices. Stormwater planters use soil infiltration and biogeochemical processes to decrease stormwater quantity and improve water quality.	No	EXAMPLES - Due to the existing site grading along the perimeter of the site, a infiltration basin facility will be implemented instead of stormwater planter(s).
	Rainwater Harvesting System (RR-8)	Capture and store stormwater runoff to be used for irrigation systems or filtered and reused for non-contact activities.	No	Rainwater harvesting is not proposed on-site as site uses are proposed which would utilize stored rainwater.
	Porous Pavement (RR-9)	Pervious types of pavements that provide an alternative to conventional paved surfaces, designed to infiltrate rainfall through the surface, thereby reducing stormwater runoff from a site and providing some pollutant uptake in the underlying soils.	No	EXAMPLES - Due to local weather patterns and the need to provide snow removal from all pavements, porous pavement is not feasible for use on the project site.
	Green Roof (RR-10)	Capture runoff by a layer of vegetation and soil installed on top of a conventional flat or sloped roof. The rooftop vegetation allows evaporation and evapotranspiration processes to reduce volume and discharge rate of runoff entering conveyance system.	No	EXAMPLES - Due to the proposed building design, a green roof is not feasible for use on the project site.
	Stream Daylighting (RR-11)	Stream Daylight previously-culverted/piped streams to restore natural habitats, better attenuate runoff by increasing the storage size, promoting infiltration, and help reduce pollutant loads.	No	No stream daylighting opportunities are present on the site.
	Infiltration Trench (I-1)	An infiltration practice that stores the water quality volume in the void spaces of a gravel trench before it is infiltrated into the ground.	No	Due to the proposed construction of an infiltration basin, infiltration trenches are not necessary for use on the project site.
	Infiltration Basin (I-2)	An infiltration practice that stores the water quality volume in a shallow depression, before it is infiltrated it into the ground.	Yes	An infiltration basin(s) is proposed on-site to treat the proposed development area impervious surfaces.
	Dry Well (I-3)	An infiltration practice similar in design to the infiltration trench, and best suited for treatment of rooftop runoff.	No	Due to the proposed construction of an infiltration basin, dry wells are not necessary for use on the project site.

Step 3 - Evaluation of RR Techniques and Standard SMPs with RRv Capacity

Standard SMPs with RRv Capacity	**Underground Infiltration System (I-4)**	An infiltration practice below grade that stores the water quality volume in pre-manufactured pipes, vaults or other modular structures, before it is infiltrated into the ground.	No	Due to the proposed construction of an infiltration basin, underground infiltration systems are not necessary for use on the project site.
	Infiltration Bioretention (F-4)	A shallow depression that treats stormwater as it flows through a soil matrix, before it is infiltrated into the ground.	No	Due to the proposed construction of an infiltration basin, a filtration bioretention will be implemented, instead of an infiltration bioretention.
	Filtration Bioretention (F-5)	A shallow depression that treats stormwater as it flows through a soil matrix and is returned to the storm drain system.	No	Due to the proposed construction of an infiltration basin, an infiltration bioretention will be implemented, instead of a filtration bioretention.
	Bioslope (F-6)	Permeable engineered soil media that is installed along embankments or other slopes, designed to capture and treat stormwater runoff from adjacent paved areas.	No	EXAMPLES - Due to existing and proposed site slopes, bioslopes are not feasible for use on the project site.
	Dry Swale (O-1)	An open drainage channel or depression explicitly designed to detain and promote the filtration of stormwater runoff into the soil media.	No	Due to the proposed construction of an infiltration basin, dry swales are not necessary for use on the project site.

Appendix C

Storm Sewer Calculations

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NEW YORK STATE ROUTE 96 – PITTSFORD VICTOR ROAD
(66' RIGHT-OF-WAY)

THORNELL ROAD – COUNTY ROAD 33
(49.5' RIGHT-OF-WAY)

PROPOSED STORMWATER MANAGEMENT FACILITY 'A' (INFILTRATION BASIN)
TOP OF BERM=483.5
TOP OF GRATE=481.50
12" OUTLET ELEVATION=478.73
1-YR PONDING ELEVATION=476.26
2-YR PONDING ELEVATION=476.72
5-YR PONDING ELEVATION=477.57
10-YR PONDING ELEVATION=478.33
25-YR PONDING ELEVATION=479.38
50-YR PONDING ELEVATION=480.27
100-YR PONDING ELEVATION=481.22

AREA TO D-1.1
A=0.21 AC
C=0.67
Tc=8.5 MIN

D-1.1
TG=489.0
2'x2' Gutter Inlet

D-1
TG=486.0
54 Barracuda
(SEE DETAIL)

DA
TG=481.5
2'x2' INLET

LOT 17
0.837 ACRES±

D
12" END SECTION
INV=482.00

D-2
TR=492.0
5' DIA STM MH

2.58 ACRES±

D-2.1
TG=491.0
2'x2' Gutter Inlet

D-2.2
TG=491.6
2'x2' INLET

N 1,117,598.81
E 1,443,196.23

APPROXIMATE LOCATION OF EXISTING BUILDING

APPROXIMATE LOCATION OF EXISTING BUILDING

AREA TO D-2.1
A=0.25 AC
C=0.79
Tc=10.5 MIN MINIMUM

AREA TO D-2.2
A=0.09 AC
C=0.52
Tc=6 MIN MINIMUM

AREA TO D-3.1
A=0.43 AC
C=0.72
Tc=6 MIN MINIMUM

2-STORY 6-UNITS (6-15)

D-3.1
TG=491.1
2'x2' Gutter Inlet

D-3
TG=491.2
5' DIA STM MH

2-STORY 10-UNITS (14-23)

D-4
TG=492.7
5' DIA STM MH

D-5.1
TG=491.0
2'x2' Gutter Inlet

D-4.1
TG=492.2
2'x2' Gutter Inlet

D-4.2
TG=492.5
2'x2' Field Inlet

D-5
TG=491.8
5' DIA STM MH

D-4.3
TG=491.0
2'x2' INLET

AREA TO D-5.1
A=0.16 AC
C=0.59
Tc=6 MIN MINIMUM

AREA TO D-4.2
A=0.10 AC
C=0.64
Tc=6 MIN MINIMUM

D-6
TG=491.3
2'x2' INLET

N 1,117,139.55
E 1,442,926.52

N 1,117,141.84
E 1,443,167.09

AREA TO D-6
A=0.26 AC
C=0.30
Tc=13.4 MIN

AREA TO D-4.3
A=0.42 AC
C=0.44
Tc=15.4 MIN

LOT 11 LOT 10 LOT 9 LOT 8

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1	REVISIONS	DATE	BY

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FAIRPORT, NEW YORK 14450
WWW.BMEPC.COM
585-377-7360

PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: MRGE, LLC
P.O. BOX 34
PITTSFORD, NY, 14534

DRAWING TITLE: PROPOSED STORM SEWER AREA MAP

PROJECT MANAGER	P. VARS/R. DESTRO
PROJECT ENGINEER	F. SHELLEY
DRAWN BY	D TURNER
SCALE	1" = 80'
DATE ISSUED	NOVEMBER 14, 2025
PROJECT NO.	2850
DRAWING NO.	FIGURE 05

BME ASSOCIATES

Project:	Hartwell Heights
Project No:	2850
Date:	11/14/25
By:	DTT
Sheet	1 of 2

STORM SEWER NETWORK CALCULATIONS

	Drainage Structure		Local				Upstream contribution			Total cA	Controlling Tc	I	Q (cfs)	Pipe			Length of pipe (ft.)	% slope	Diff. In INV	Capacity (cfs)	Ratio of liquid to dia of pipe	velocity (fps)	flow time (min)	Next Point	
	From	To	Tc	c	A	cA	From	Tc	cA					DIA (in)	MATL	n								To	Tc
MH	D-6	D-5	13.4	0.3	0.26	0.08				0.08	13.4	3.98	0.31	12	HDPE	0.012	109	0.50	0.55	2.74	0.23	2.36	0.8	D-5	14.2
INV	488.30	487.75																							
MH	D-5.1	D-5	6.0	0.6	0.16	0.09				0.09	6.0	5.12	0.48	12	HDPE	0.012	29	2.23	0.65	5.78	0.19	4.42	0.1	D-5	6.1
INV	488.40	487.75																							
MH	D-5	D-4	0.0	0	0.00	0.00	D-6	14.2	0.08	0.17	14.2	3.89	0.67	12	HDPE	0.012	83	0.50	0.42	2.74	0.33	2.83	0.5	D-4	14.7
INV	487.75	487.33					D-5.1	6.1	0.09																
MH	D-4.3	D-4.2	15.4	0.4	0.42	0.18				0.18	15.4	3.76	0.69	12	HDPE	0.012	61	0.50	0.31	2.74	0.33	2.86	0.4	D-4.2	15.8
INV	488.00	487.69																							
MH	D-4.2	D-4.1	6.0	0.6	0.10	0.06	D-4.3	15.8	0.18	0.25	15.8	3.72	0.93	12	HDPE	0.012	26	0.50	0.13	2.74	0.39	3.11	0.1	D-4.1	15.9
INV	487.69	487.56																							
MH	D-4.1	D-4	0.0	0	0.00	0.00	D-4.2	15.9	0.25	0.25	15.9	3.70	0.92	12	HDPE	0.012	16	1.44	0.23	4.64	0.29	4.54	0.1	D-4	16.0
INV	487.56	487.33																							
MH	D-4	D-3	0.0	0	0.00	0.00	D-5	14.7	0.17	0.42	16.0	3.70	1.56	12	HDPE	0.012	80	0.50	0.40	2.74	0.55	3.62	0.4	D-3	16.3
INV	487.33	486.93					D-4.1	16.0	0.25																
MH	D-3.1	D-3	6.0	0.7	0.43	0.31				0.31	6.0	5.12	1.58	12	HDPE	0.012	12	9.74	1.17	12.07	0.25	10.70	0.0	D-3	6.0
INV	488.10	486.93																							
MH	D-3	D-2	0.0	0	0.00	0.00	D-4	16.3	0.42	0.73	16.3	3.66	2.68	12	HDPE	0.012	99	0.50	0.50	2.74	0.95	3.80	0.4	D-2	16.8
INV	486.93	486.43					D-3.1	6.0	0.31																
MH	D-2.2	D-2.1	6.0	0.5	0.09	0.05				0.05	6.0	5.12	0.24	12	HDPE	0.012	53	0.50	0.26	2.74	0.20	2.12	0.4	D-2.1	6.4
INV	487.60	487.34																							
MH	D-2.1	D-2	10.5	0.8	0.25	0.20	D-2.2	6.4	0.05	0.24	10.5	4.36	1.07	12	HDPE	0.012	57	1.60	0.90	4.89	0.31	4.90	0.2	D-2	10.7
INV	487.34	486.43																							
MH	D-2	D-1	0.0	0	0.00	0.00	D-3	16.8	0.73	0.98	16.8	3.62	3.53	12	HDPE	0.012	118	2.92	3.43	6.61	0.53	8.60	0.2	D-1	17.0
INV	486.43	483.00					D-2.1	10.7	0.24																

BME ASSOCIATES

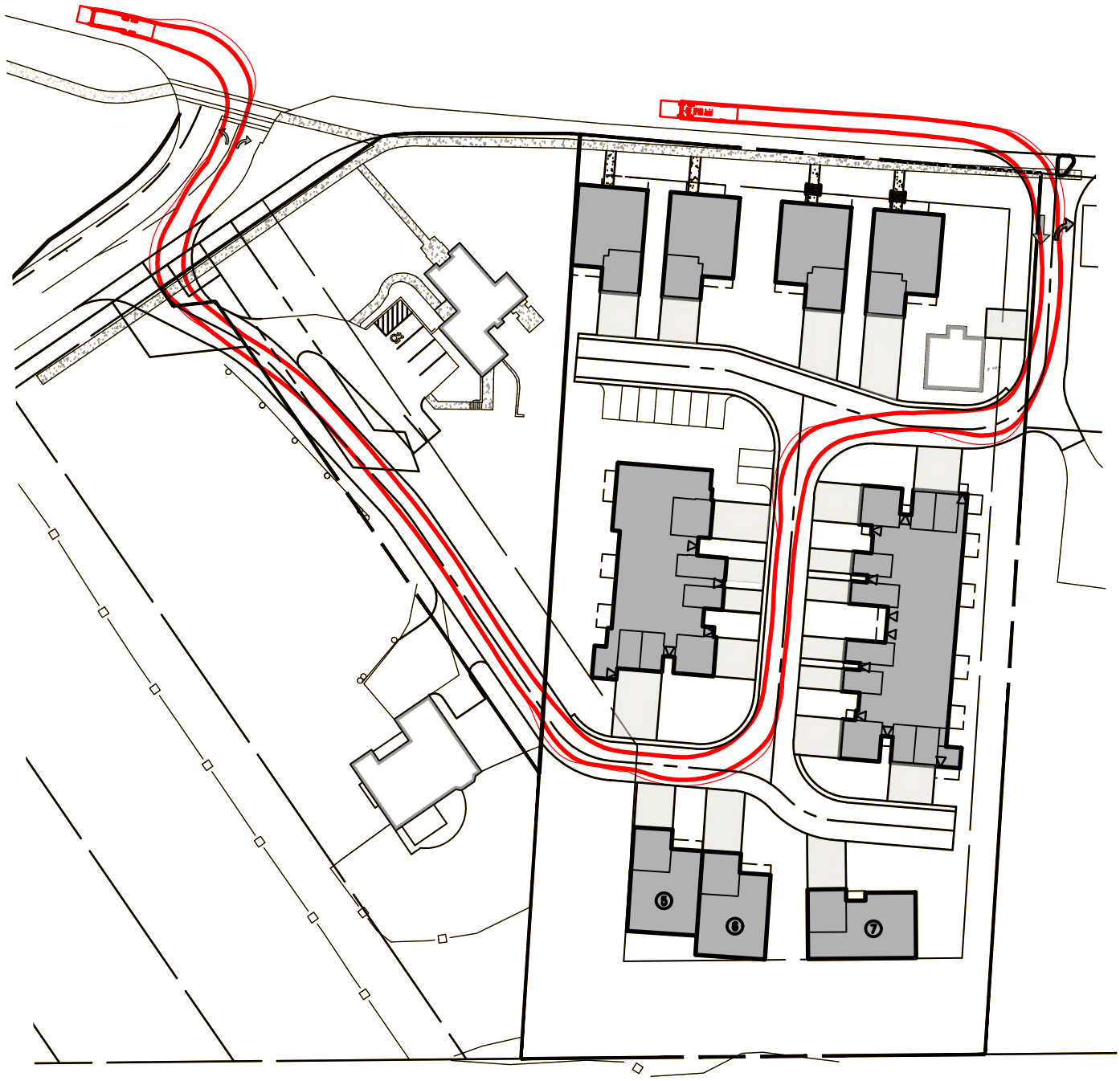
Project:	Hartwell Heights
Project No:	2850
Date:	11/14/25
By:	DTT
Sheet	2 of 2

STORM SEWER NETWORK CALCULATIONS

	Drainage Structure		Local				Upstream contribution			Total cA	Controlling Tc	I	Q (cfs)	Pipe			Length of pipe (ft.)	% slope	Diff. In INV	Capacity (cfs)	Ratio of liquid to dia of pipe	velocity (fps)	flow time (min)	Next Point	
	From	To	Tc	c	A	cA	From	Tc	cA					DIA (in)	MATL	n								To	Tc
MH	D-1.1	D-1	8.5	0.7	0.21	0.14				0.14	8.5	4.67	0.66	12	HDPE	0.012	34	5.82	2.00	9.33	0.18	6.80	0.1	D-1	8.6
INV	485.00	483.00																							
MH	D-1	D	0.0	0	0.00	0.00	D-2	17.0	0.98	1.12	17.0	3.60	4.01	12	HDPE	0.012	15	6.48	1.00	9.85	0.44	11.82	0.0	D	17.0
INV	483.00	482.00					D-1.1	8.6	0.14																

Appendix D

Site Access and Correspondence



80 0 40 80 160

Graphic Scale

Date: 11/13/2025

Project #: 2850

BME ASSOCIATES

HARTWELL HEIGHTS

E-ONE HP100 AERIAL TURNING TEMPLATE #1

Town of Perinton, Monroe County, New York

P:\2850\Drawings\Final\2850 Layout Base.dwg

Scale: 1" = 80'

EXHIBIT #1



80 0 40 80 160

Graphic Scale

Date: 11/13/2025 Project #: 2850

BME ASSOCIATES

HARTWELL HEIGHTS

E-ONE HP100 AERIAL TURNING TEMPLATE #2

Town of Perinton, Monroe County, New York

P:\2850\Drawings\Final\2850 Layout Base.dwg

Scale: 1" = 80'

EXHIBIT #2

Ryan Destro

From: Raymond, John D <JRaymond@monroecounty.gov>
Sent: Monday, May 19, 2025 9:45 AM
To: David Kruse; Rob Kozarits
Cc: Peter Vars; Ryan Destro; Dennis Wilmot; Oravec, Matthew C (DOT); Herdzik, Henry
Subject: RE: Hartwell Heights - Perinton - Traffic Report

This message was sent securely using Zix®

David & Rob,

MCDOT has reviewed the Traffic Study for the referenced project. The proposed trips does not meet MCDOT's threshold for a full traffic study, and we agree that the proposed project will not result in any significant adverse traffic impacts.

John D. Raymond
Permits Engineer
Monroe County Department of Transportation
City Place, Suite 6100
50 W. Main St
Rochester, NY 14617
Office: 585-753-7711
Fax: 585-324-4326
jraymond@monroecounty.gov

From: David Kruse <dkruse@passero.com>
Sent: Tuesday, May 6, 2025 2:16 PM
To: Rob Kozarits <rkozarits@perinton.org>; Oravec, Matthew C (DOT) <matthew.oravec@dot.ny.gov>; Raymond, John D <JRaymond@monroecounty.gov>; Herdzik, Henry <HHerdzik@monroecounty.gov>
Cc: Peter Vars <pvars@bmepc.com>; Ryan Destro <rdestro@bmepc.com>; Dennis Wilmot <dennis@wilmotdg.com>
Subject: Hartwell Heights - Perinton - Traffic Report

CAUTION: This email originated from outside Monroe County systems. Exercise caution when opening attachments or clicking links, especially from unknown senders.

~~~~~~~~~~~~~~~~~~~~

Good afternoon,

Passero was retained for traffic services for the proposed Hartwell Heights project in Bushnell's Basin at NY-96 and Thornell. Our traffic report and Synchro file are attached for your review.

Please let us know if you have any questions. We look forward to hearing from you. Thank you.

Sincerely,

David Kruse, AICP, PTP, RSP1
~~~~~~~~~~~~~~~~~~~~

Senior Transportation Planner / Project Manager

585-505-6012

PASSERO ASSOCIATES

Service. Solutions. Results.

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NEW YORK STATE OF OPPORTUNITY. Department of Transportation

ANDREW M. CUOMO
Governor

PAUL A. KARAS
Acting Commissioner

KEVIN BUSH, P.E.
Regional Director

July 2, 2025

Mr. David Kruse
Passero Associates
242 West Main St, Suite 100
Rochester, NY 14614

Re: Hartwell Heights
Town of Perinton
Monroe County

Dear Mr. Kruse,

We have completed our review of the Traffic Impact Study for the referenced project. Our review is limited to the impacts to the NYSDOT highway network. In response, we have the following comments.

We agree there will not be any significant impacts to the intersections of Route 96 with Thornell Road, Marsh Road, or Kreag Road as a result of this development. We also agree with limiting the proposed access driveway to Route 96 to a right/left in and a right out. Additionally, we support the future access consolidation between adjacent property owners and the desire to reduce the number of driveways in the corridor.

If there are any questions regarding our review, please contact me at (585) 272-3460.

Sincerely,

Matthew C. Oravec

Matthew C. Oravec, P.E.
Regional Traffic Engineer

MCO

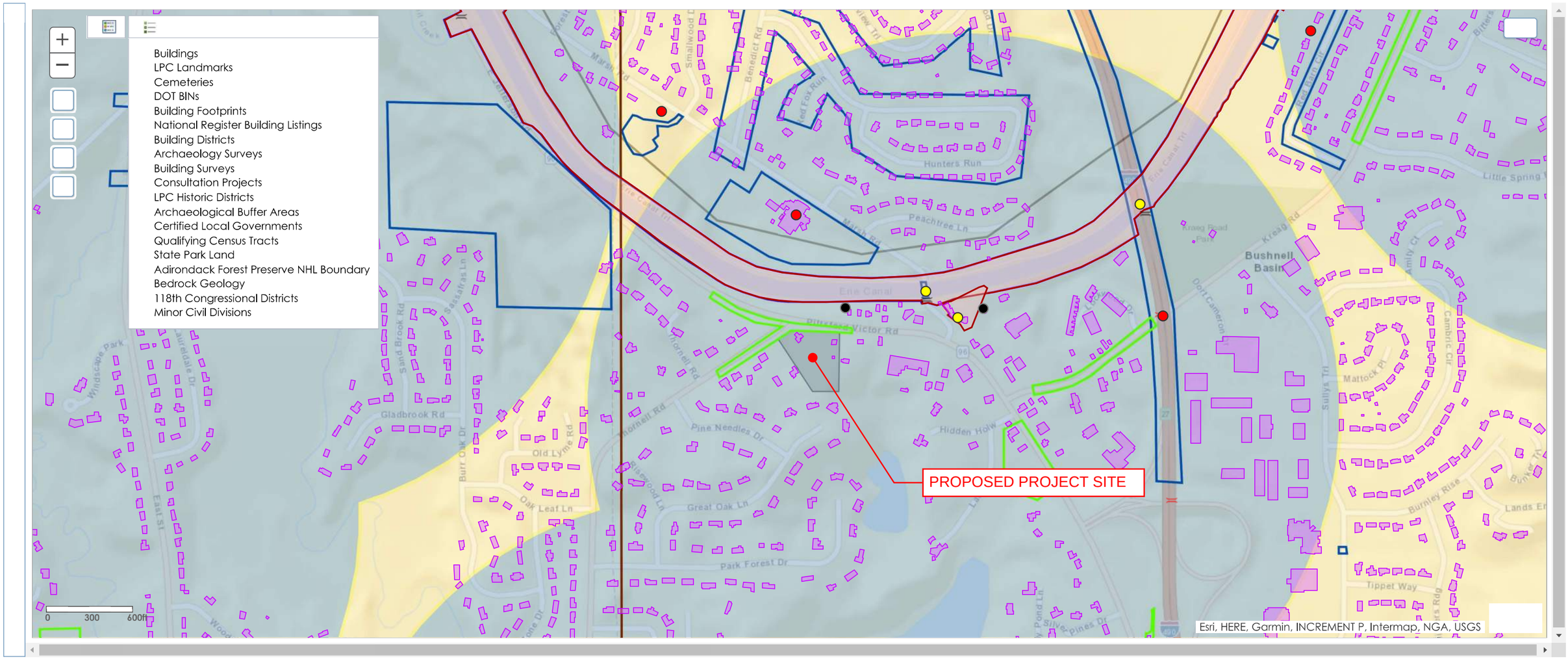
Appendix E

Background Information

NYS CRIS Map

CRIS Cultural Resource Information System

HOME SUBMIT SEARCH COMMUNICATE



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Version 1.2.20

NYSDEC Environmental Resource Map

gisservices.dec.ny.gov/gis/erm/

An official website of New York State. Here's how you know

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Environmental Resource Mapper

Base Map: Topographical Using this map

Search

Tools

Layers and Legend

- Rivers and Streams
- Shorelines
- Imperiled Mussels
- Mussel Screening Ponded Waters
- Mussel Screening Streams
- Significant Natural Communities
- Natural Communities Near This Location
- Rare Plants or Animals
- Ten Year Travel Time
- Special Groundwater Protection Areas
- Base Flood Elevation Plus 72/75 Inches Sea-level Rise
- Limit to Moderate Wave Action

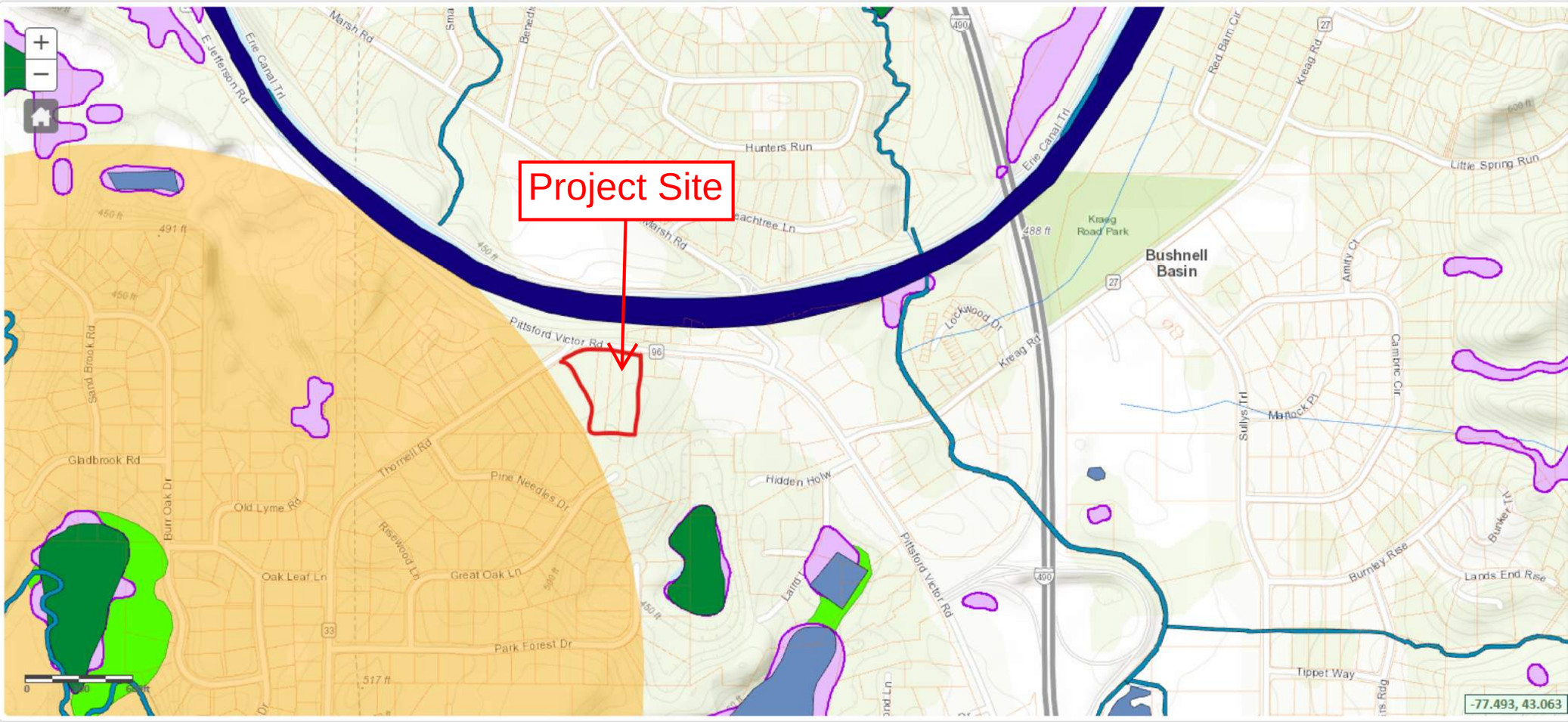
Wetland Layers

Reference Layers

Tell Me More...

Need A Permit?

Contacts



Agencies App Directory Counties Events Programs Services

FEMA Floodplain Map

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 18N. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3182
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from digital orthophotography provided by the New York State Office of Cyber Security & Critical Infrastructure Coordination. This information was provided as 30-centimeter and 60-centimeter resolution natural color orthoimagery from photography dated April-May 2004

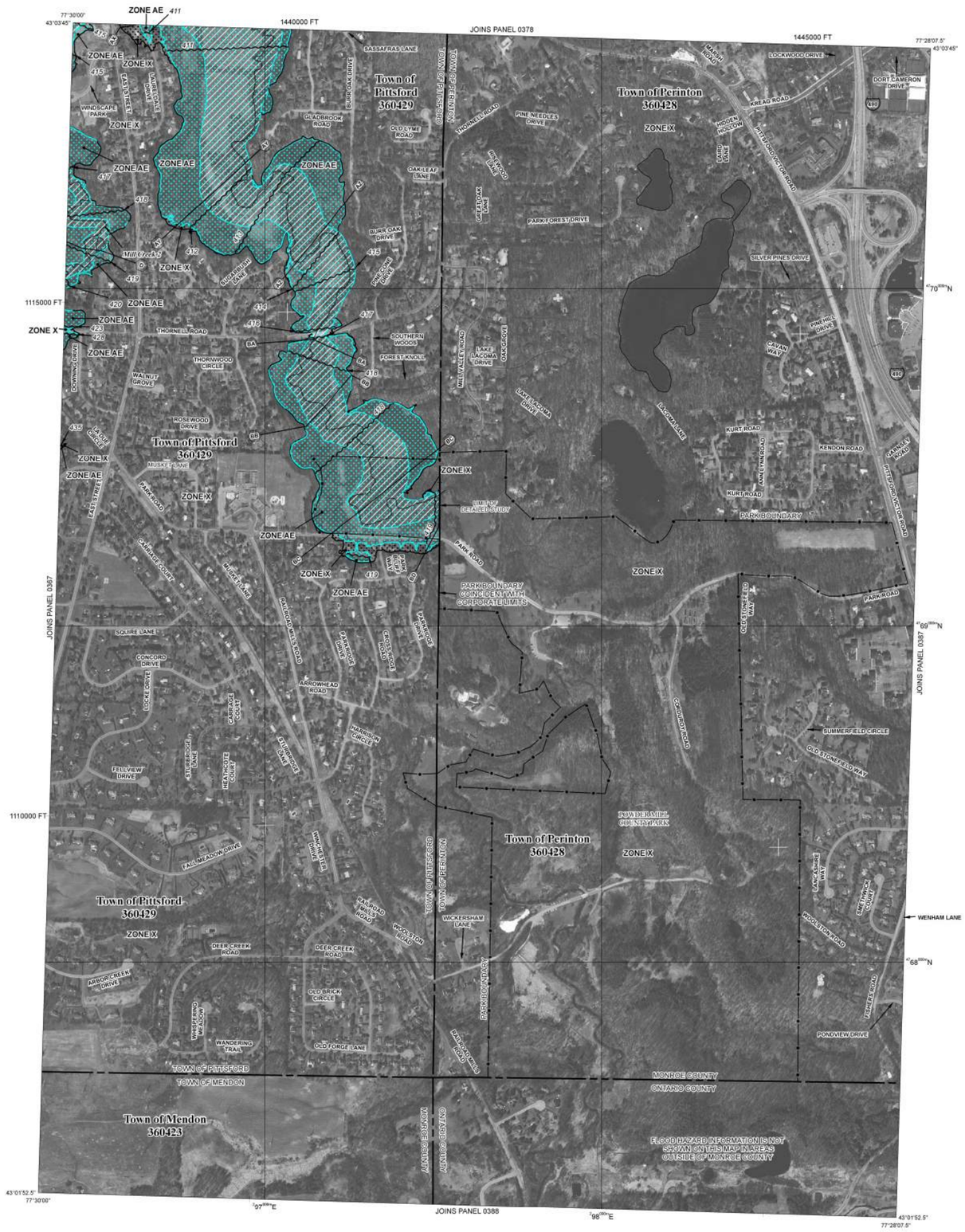
Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Limited detail cross section line
- 97 — 97 — Transect line
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4776000mN — 1000-meter Universal Transverse Mercator grid values, zone 18N
- 600000 FT — 5000-foot grid ticks: New York State Plane coordinate system, West zone (FIPSZONE 3103), Transverse Mercator projection
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
August 28, 2008

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0386G

FIRM
FLOOD INSURANCE RATE MAP

for MONROE COUNTY, NEW YORK
(ALL JURISDICTIONS)

CONTAINS:

COMMUNITY	NUMBER
MENDON, TOWN OF	360423
PERINTON, TOWN OF	360428
PITTSFORD, TOWN OF	360429

PANEL 386 OF 528
MAP SUFFIX: G
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
36055C0386G

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

Geotechnical Report

Foundation Design P.C.

November 6, 2025

WDG2, LLC
PO Box 34
Pittsford, New York 14534

Attention: Dennis Wilmot

Reference: Hartwell Heights
2 Thornell Road, Pittsford, New York
Geotechnical Evaluation, 25.06015

Dear Mr. Wilmot:

This report summarizes our Geotechnical Evaluation for the referenced project. We understand the intent is to construct new apartments, consisting of two, 2-story, 10-unit apartment buildings as well as 7 townhomes. We base this evaluation on our review of U.S.G.S. topographic and geologic mapping; previous work in the nearby area; NRCS soil mapping; soil boring exploration; infiltration testing; laboratory testing of soil samples; and consultation with the design team. WDG2, LLC retained Foundation Design, P.C. to provide the geotechnical services outlined in our November 4, 2025, *Geotechnical Services Proposal, 25P06165.0*. We intend this report exclusively for use on this project.

Site Location

The proposed new apartment complex will be located east of Thornell Road in Pittsford, New York in what is currently a lightly wooded lot. Residential homes lie to the southwest, northwest, and northeast. Thornell Road lies to the west and Pittsford Victor Road lies to the north. A *General Location Plan*, depicting the site on 2023 U.S.G.S. topographic mapping, is enclosed. Surface grades slope modestly across the site from elevation 504 at the south end of the site to elevation 488 at the north end of the parcel.

Exploration

Our exploration program consisted of soil borings B25-1 through B25-10. Soil borings B25-1, B25-2, B25-3, B25-5, and B25-8 were completed on October 15, 2025. Target Drilling provided an ATV drill rig mounted with a safety hammer for the SPT soil sampling. Soil borings B25-4, B25-6, B25-7, and B25-10 were completed on October 22, 2025. Nothnagle Drilling provided a Geoprobe 7822DT drill rig mounted with an auto hammer for the SPT soil sampling. Both drillers advanced the soil borings using hollow stem auger casings, recovering split spoon soil samples in accordance with ASTM D-1586. Soil borings were sampled continuously to 10 feet, then

at 5-foot intervals until completion. The soil borings were advanced to depths ranging between 10.0 feet and 30.0 feet below existing grade. Soil boring B25-9 was deleted in the field due to access constraints. Our staff observed the soil borings on a full-time basis, logging the soil profiles and collecting representative soil samples. BME Associates laid out the test locations and provided the corresponding elevations. Upon completion, the soil borings were backfilled with auger spoils and leveled. An *Exploration Location Plan* and the soil boring logs are attached.

We selected representative soil samples for laboratory testing. Foundation Design, P.C. performed three moisture content determinations and three sieve analyses. The test results are discussed below. Our laboratory report is enclosed.

Infiltration Testing

Two NYSDEC Stormwater Infiltration tests were performed as part of our field exploration. The testing consisted of installing a 4-inch diameter PVC pipe adjacent to B25-1 (IT25-1) and B25-2 (IT25-2) on October 15, 2025. The drillers augered to elevation 474.0, then removed as much of the disturbed soil as possible prior to installing the PVC pipe. The exterior of the pipe bottom was sealed using bentonite pellets, then backfilled with auger cuttings. The hole was pre-soaked with water 24-hours prior to running the tests. We returned to the site the following day and conducted the two infiltration tests on October 16, 2025. The results are shown in Table No. 1 below.

Table No. 1 – Infiltration Test Results

Infiltration Number	Run #1	Run #2	Run #3	Run #4	Average Rate
IT25-1	10″	7″	24″	6″	11.8″/hr
IT25-2	8″	6″	5″	4″	5.8″/hr

Subsurface Conditions

Our interpretations of the soil, bedrock, and groundwater conditions are based on the modestly spaced soil borings and our site observations. Variations from the inferred subsurface profile are possible. See the attached logs for soil descriptions at the test locations. Call us immediately if such variations are found so we may evaluate the impact on our findings.

A typical soil profile consists of topsoil underlaid by sand or silt. The topsoil ranged from 5.0 inches to 8.0 inches, averaging 6.7 inches thick. Underlying the topsoil was sand or silt. SPT N-values of the sand or silt ranged from 2 to 52, classifying the soil as loose to very dense. The upper ten to fifteen feet of the formation was generally loose to firm. The 'dense' condition was at termination at boring B25-3 and was not encountered at the other deep boring, B25-6. Sieve analysis of representative samples of this formation classified as ML (sandy silt) or SM (silty sand) in the Unified Soil Classification System. The tested samples had moisture contents ranging from 3.2 percent to 6.2 percent, near optimum for compaction.

Bedrock was not encountered during exploration. Geologic mapping classifies the bedrock as the Vernon Formation part of the Akron Dolostone, Cobleskill Limestone, and Salina group. This group consists of shale. We do not anticipate bedrock having an impact on construction.

Groundwater was not encountered during exploration. Expect groundwater levels to fluctuate seasonally.

Geotechnical Conclusion

We conclude that the proposed apartment buildings and townhomes can be supported by a shallow foundation system consisting of continuous strip footings on the native soil or new structural fill. The bearing pressure is somewhat limited because of the loose condition of the native soil.

Based on this, we make the following specific recommendations:

1. Clear, grub, and strip the in-place surface topsoil from the development area. Topsoil thickness across the building footprint is between 5.0 inches to 7.0 inches. Avoid stripping topsoil during the wetter times of year (October-May) to limit mixing topsoil with the underlying soil. Remove/reroute utilities that lie within the proposed building footprints. Foundation Design, P.C. should observe a proof roll of the building subgrades to verify that the topsoil has been removed and that the subgrade is acceptable. The contractor should provide a loaded ten-wheel truck for proof rolling. Rework or replace areas that rut, weave, quake or are otherwise deemed to be unsuitable or unstable.

   Demolish and remove the house at the northeast corner of the parcel. This area is "green space", we defer to BME Associates on backfill requirements.

2. The native soil, free of organic matter, frost and/or debris can be used as the structural fill material. Given the proposed grades, we expect the volume of native soil available for reuse as fill will be limited. The native soil should be placed and compacted at moisture levels that are within two percent of optimum for compaction. Sand fill is susceptible to significant consolidation when placed dry of optimum and subsequently saturated. Budget to use an imported granular fill similar in gradation to NYSDOT Item

203.07 (Select Granular Fill). Imported materials should be submitted to Foundation Design, P.C. for review and approval on a case-by-case basis. Maintain good surface drainage.

We define structural fill as the new fill placed under and around footings, floor slabs, sidewalks, and pavements. Place structural fill in lifts of 12 inches or less in loose thickness and within two percent of the optimum moisture content. Compact structural fill to at least 95 percent of maximum dry density as determined by the Modified Proctor test (ASTM D-1557). Compact other fill as otherwise determined by the engineer.

3. Support the apartment buildings and townhomes on spread footing foundations bearing on the native soil/structural fill at a bearing pressure of 2,500 psf. Size footings to be at least two feet wide or square. Size interior load bearing haunches to be at least 18 inches wide and to bear at 1,500 psf on native soil or structural fill. Design footings to bear at least four feet below exterior grade where frost protection is required. Hand-clean the loose/disturbed soil from the bearing surface. Recompact/restabilize the bearing surface with two passes of a vibratory plate tamper prior to setting forms. Based on loads of up to 50 kips/5 klf, we estimate the maximum settlement at the new footings will be less than 1 inch with differential settlement less than ½ inch. The structural engineer should review this settlement estimate to determine if this is tolerable for the new structures.

4. Place eight-inches of imported granular base course under the slab-on-grade. The NYSDOT subbase material 304.12 (crusher-run stone) meets this requirement. Design the floor slab based on a Modulus of Subgrade Reaction, K_{vi}, of 175 psi/in at the bottom of slab/top of stone. The architect and/or structural engineer should review the proposed interior finishes and humidity control requirements to determine whether a vapor barrier is appropriate under the slab and if so, where it should be installed. See the American Concrete Institute Document 302.1R, *Concrete Floor and Slab Construction,* for more information.

5. The NYS Building Code identifies various seismic design criteria for this project. We classify the soil profile as a Site Classification of D (Stiff Soil). Based on ASCE 7-16 or ASCE 7-22 guidelines, we recommend using the following seismic design parameters:

Table No. 2 – Seismic Design Parameters (7-16)					
Spectral Response Acceleration		**MCER Response Spectrum**		**Design Spectral Response Acceleration**	
S_S	**S_1**	**S_{MS}**	**S_{M1}**	**SD_s**	**SD_1**
0.159g	0.048g	0.254g	0.115g	0.169g	0.077g

Table No. 3 – Seismic Design Parameters (7-22)					
Spectral Response Acceleration		**MCER Response Spectrum**		**Design Spectral Response Acceleration**	
S_S	**S_1**	**S_{MS}**	**S_{M1}**	**SD_s**	**SD_1**
0.17g	0.043g	0.21g	0.092g	0.14g	0.061g

6. Box out pavement areas down to design subgrade and proof-roll the areas. The contractor should provide a loaded ten-wheel truck for the pavement proof-rolling. A representative from Foundation Design, P.C. should observe the proof-roll. Re-compact or replace areas that rut, weave, quake, or are otherwise deemed unstable/unsuitable under proof-rolling traffic.

   Install the Standard and Heavy-Duty pavement sections tabulated below. Use the Standard Duty Section in car parking spaces and the Heavy-Duty Section in the access driveway and drive lanes that receive delivery truck traffic.

Table No. 4 - Standard Asphalt Section		
1.5"	Asphalt Topcoat	NYSDOT Item 403.178902
2.5"	Asphalt Binder	NYSDOT Item 403.138902
9.0"	Crusher Run Gravel	NYSDOT Item 304.12
	Geogrid (if needed)	TriAx TX Type 2
	Subgrade	Approved Proof Roll

Table No. 5 – Heavy Duty Asphalt Section		
1.5"	Asphalt Topcoat	NYSDOT Item 403.178902
4.5"	Asphalt Binder	NYSDOT Item 403.138902
12.0"	Crusher Run Gravel	NYSDOT Item 304.12
	Geogrid (if needed)	TriAx TX Type 2
	Subgrade	Approved Proof Roll

   It is our experience that flexible pavements do not perform well in locations where repetitive traffic occurs (i.e., loading docks, dumpster locations, etc.). We recommend installing rigid concrete pavement in these areas.

7. Perform trenching and excavating in accordance with the Occupational Safety and Health Administration (OSHA) and New York State Building Code Standards. The contractor is responsible for determining measures required to meet these standards. Cut unsupported temporary excavations to a stable slope, but in no case steeper than 1 horizontal on 1 vertical. Excavations can be completed with typical construction equipment. Remove groundwater and stormwater that accumulates using open sumps and pumps to keep the exposed subgrade from deteriorating.

8. The NYS Building Code requires special inspection services. The geotechnical inspections will be a combination of in-place soils testing (per ASTM, AASHTO standards) and engineering judgments intended to finalize our design recommendations based on field conditions exposed. As the Geotechnical Engineer of Record, we recommend the following inspections and ask that you include them on your List of Special Inspections developed as part of the Building Permitting Process:

   - We recommend that Foundation Design, P.C. make site visits during construction work to finalize our engineering recommendations. This will include confirming that the conditions are as expected and providing recommendations where conditions differ from those expected.

Specifically, we should observe the following:

A. Observe proof rolling of the building subgrade(s).

B. Review and approve of fill/backfill material submissions. Review the provided soils-related test results and consult on compaction-related issues as they arise.

C. Spot-check the foundation excavations and bearing grade conditions. Confirm appropriate bearing conditions.

D. Observe proof rolling of the pavement subgrade prior to fill placement.

E. Consult on any soil-related issues.

- Retain an independent test agency to perform full-time observation of the mass fill placement where foundations bear on more than 12-inches of new structural fill and periodic observation of backfilling operations below the slab(s)/pavements. The test agency should submit, to both our office and your architect, a copy of all soils-related test reports. Specific testing requirements follow:

  A. Perform appropriate lab testing on soil and subbase samples.

  B. Conduct at least one density test on each 2,500 square feet of mass fill placed under floor slabs, sidewalks, and new pavements with at least two tests for each partial lift.

  C. Conduct at least one density test per 50 lineal feet of foundation backfill and utility trench backfill on alternating lifts.

  D. Place fill in lifts not-to-exceed twelve inches in loose thickness.

  E. Compact structural fill to at least 95 percent of the maximum dry density as determined by the Modified Proctor Test (ASTM D-1557).

Attached is a Geoprofessional Business Association statement entitled *Important Information about This Geotechnical Engineering Report*. This paper describes many of the risks inherent in geotechnical engineering and how, in light of those risks, we intend this evaluation to be used. We will continue to work cooperatively with the project principals and interested parties to achieve win/win solutions that benefit all.

This concludes our formal evaluation. Forward a copy of the near final plans and specifications for our review and comment. It has been a pleasure working with you on this project and we look forward to hearing from you again as the project proceeds toward construction.

Sincerely,

FOUNDATION DESIGN, P.C.

Luke S. Kosciol, I.E.
Staff Engineer

James M. Baker, P.E.
President
Enc.



Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

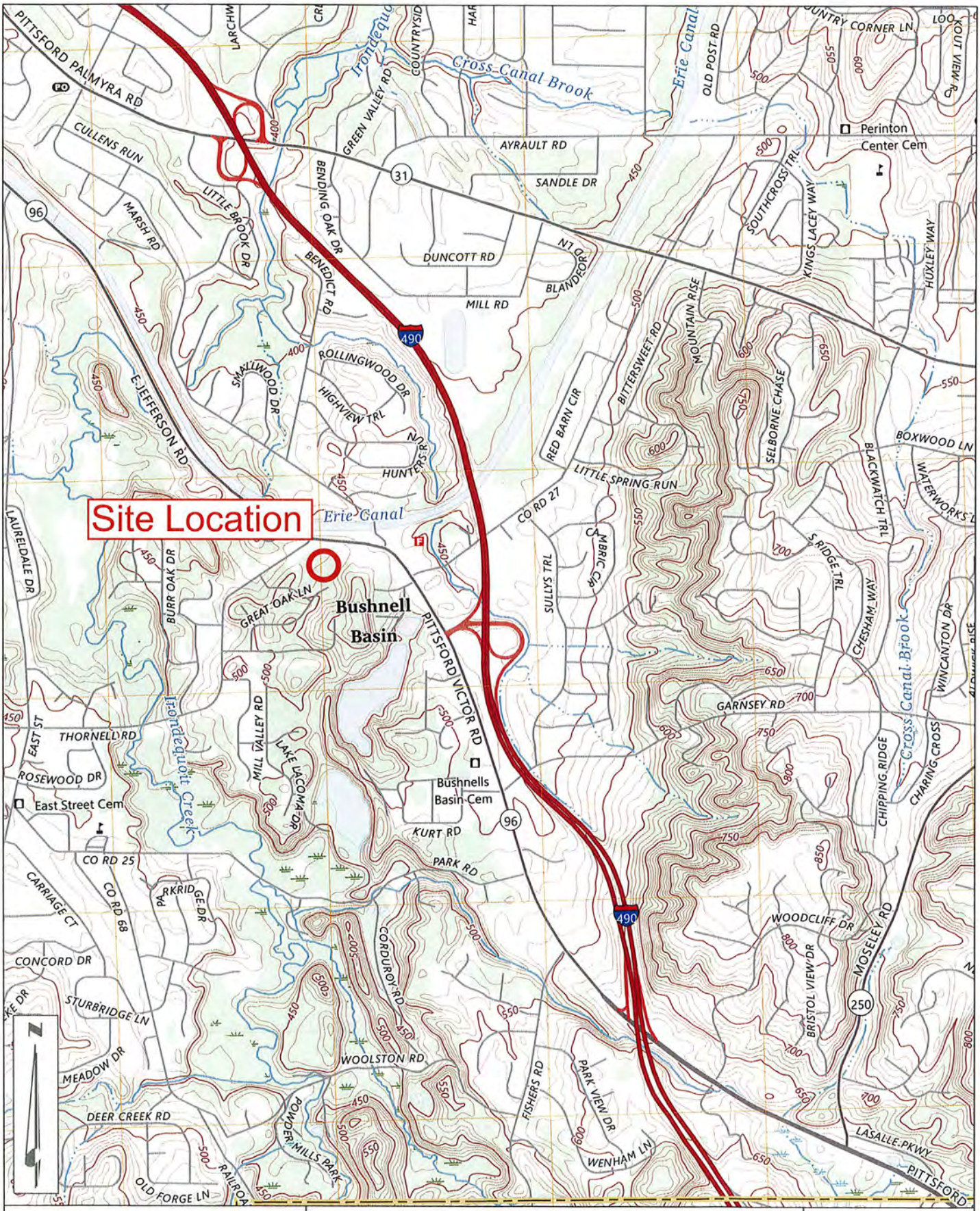
Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

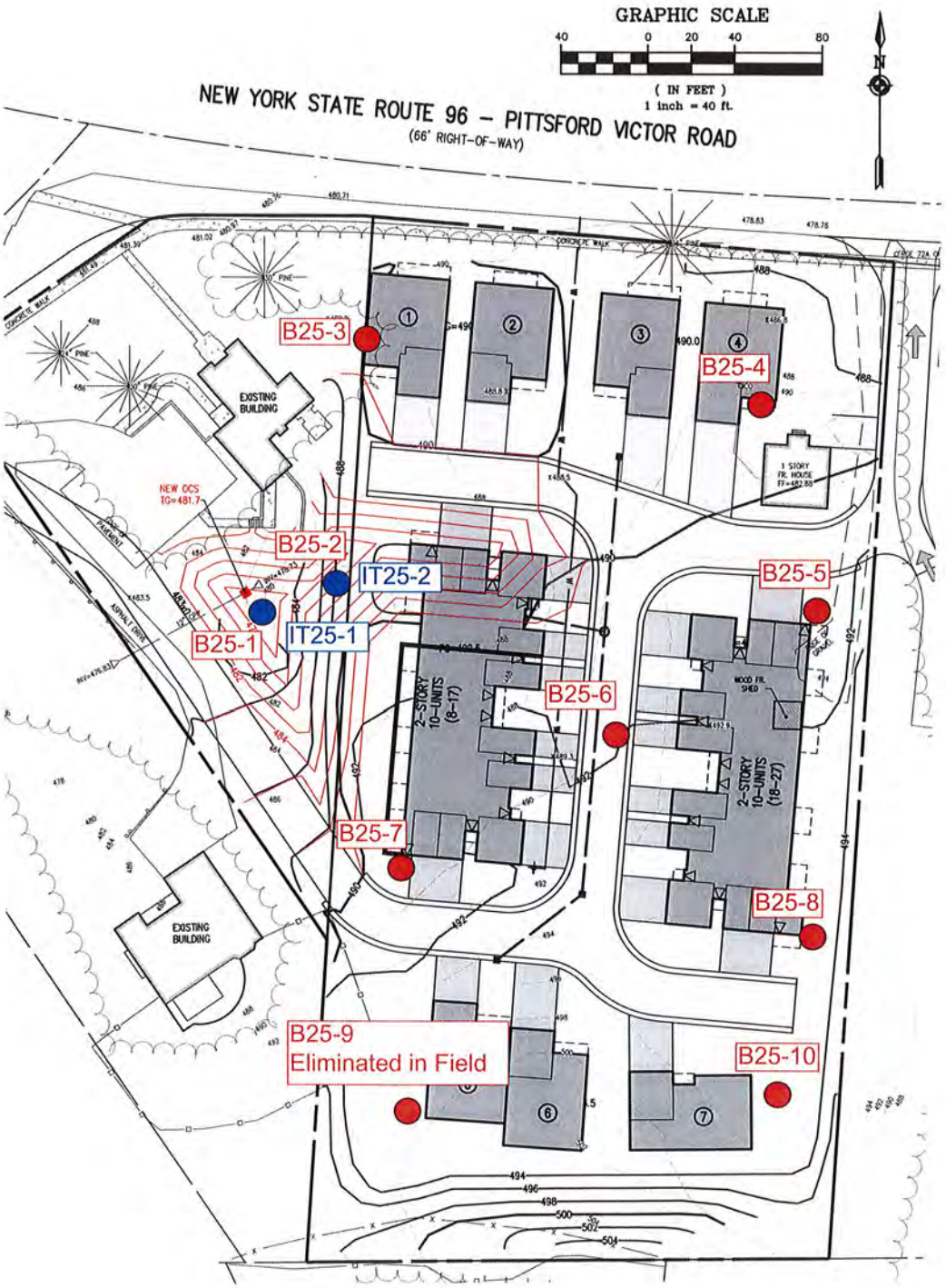
GEOPROFESSIONAL BUSINESS ASSOCIATION

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Foundation Design P.C. 46A Sager Dr, Rochester, NY 14607	**Hartwell Heights** 2 Thornell Road, Pittsford, New York **General Location Plan** Adapted from: USGS Topographic Mapping 2023 Fairport Quadrangle	JOB NO. 25.06015 DATE: 10/30/25
	CHECKED BY: JMB / DRAWN BY: TJB	SCALE: 1"=2000'



Foundation Design P.C. 46A Sager Dr, Rochester, NY 14607	**Hartwell Heights** 2 Thornell Road, Pittsford, New York **Exploration Location Plan** Adapted from: Client provided site layout and grading drawing	JOB NO. 25.06015 DATE: 10/30/25
	CHECKED BY: JMB / DRAWN BY: TJB	SCALE: 1"=80'

Foundation Design P.C.

SOIL DESCRIPTIONS

COHESIVE SOIL

Very fine grained soils. Plastic soils that can be rolled into a thin thread if moist. Clays and silty clays show cohesion.

DESCRIPTION	SPT –BLOWS/FOOT
Very Soft	0-2
Soft	3-5
Medium	6-15
Stiff	16-25
Hard	26 or more

NON-COHESIVE SOIL

Soils composed of silt, sand and gravel, showing no cohesion or very slight cohesion

DESCRIPTION	SPT –BLOWS/FOOT
Loose	0-10
Firm	11-25
Compact	26-40
Dense	41-50
Very Dense	51 or more

SOIL COMPOSITION	DESCRIPTION	ESTIMATED PERCENTAGE
	and	50
	some	30-49
	little	11-29
	trace	0-10

MOISTURE CONDITIONS Dry, Damp, Moist, Wet, Saturated
Groundwater measured in the boring or test pit may not have reached equilibrium

SOIL STRATA:	TERM	DESCRIPTION
	layer	Soil deposit more than 6" thick
	seam	Soil deposit less than 6" thick
	parting	Soil deposit less than 1/8" thick
	varved	Horizontal uniform layers or seams of soil

GRAIN SIZE

MATERIAL		SIEVE SIZE
Boulder		Larger than 12 inches
Cobble		3 inches to 12 inches
Gravel	- coarse	1 inch to 3 inches
	- medium	3/8 inch to 1 inch
	- fine	No. 4 to 3/8 inch
Sand	- coarse	No. 10 to No. 4
	- medium	No. 40 to No. 10
	- fine	No. 200 to No. 40
Silt and Clay		Less than No. 200

Standard Penetration Test: The number of blows required to drive a split spoon sampler into the soil with a 140 pound hammer dropped 30 inches. The number of blows required for each 6-inches of penetration is recorded. The total number of blows required for the second and third 6-inches of penetration is termed the penetration resistance, or the "N" value.

Split Spoon Sampler: Typically a 2-foot long, 2-inch diameter hollow steel tube that breaks apart or splits in two down the tube length.

Refusal: Depth in the boring where more than 100 blows per 5-inches are needed to advance the sample spoon.

Core Recovery (%): The total length of rock core recovered divided by the total core run.

RQD (%): Rock Quality Designation – the total length of all the pieces of the rock core longer than 4-inches divided by the total length of the rock core run.

Foundation Design P.C.

Boring Log

Project No.	25.06015	**Page** 1 **of** 1		**Soil Boring No.**	B25-1
Project Name	Hartwell Heights, 2 Thornell Road, Pittsford, NY				
Client	WDG2 LLC, PO Box 34, Pittsford, NY				
Elevation	480.0	**Weather**	Cloudy 60s	**Engineer**	J. Herrera
Date Started	10/15/2025	**Completed**	10/15/2025	**Driller**	J. Loomis
Drilling Company:	Target Drilling			**Drilling Equipment:**	ATV

Ft.	Blows Per Six Inches 0"/6"	6"/12"	12"/18"	18"/24"	N Value	Sample No.	Depth	Rec	Visual Soil and Rock Classifications / Remarks
	2	2							TOPSOIL 0'7"
			1	3	3	S-1	0'-2'	9"	Loose brown moist SAND, little to some silt (SM) 2'0"
	3	3							Loose tan/brown damp SAND, little silt (SM)
			3	3	6	S-2	2'-4'	12"	
5	5	4							
			4	4	8	S-3	4'-6'	14"	
	6	5							
			4	5	9	S-4	6'-8'	10"	
	9	8							
10			8	10	16	S-5	8'-10'	13"	S-5: Firm, damp to moist 10'0"
									Boring Terminated at 10'0"
15									
20									
25									
30									Notes: 1. Dry upon completion. 2. Advanced hole using hollow stem augers. 3. Bore hole backfilled using auger spoils.

N=No. of blows to Drive 2" Spoon 12" with 140 lb. Wt. 30" Ea. Blow Hammer: Safety Size Rod: 2"

Foundation Design P.C.

Boring Log

Project No.	25.06015	**Page** 1 **of** 1		**Soil Boring No.**	B25-2
Project Name	Hartwell Heights, 2 Thornell Road, Pittsford, NY				
Client	WDG2 LLC, PO Box 34, Pittsford, NY				
Elevation	483.4	**Weather**	Cloudy 60s	**Engineer**	J. Herrera
Date Started	10/15/2025	**Completed**	10/15/2025	**Driller**	J. Loomis
Drilling Company:	Target Drilling			**Drilling Equipment:**	ATV

Ft.	Blows Per Six Inches 0"/6"	6"/12"	12"/18"	18"/24"	N Value	Sample No.	Depth	Rec	Visual Soil and Rock Classifications / Remarks
	1	2							TOPSOIL 0'6"
			2	2	4	S-1	0'-2'	9"	Loose brown moist SILT, little to some sand, trace rootlets (ML) 1'8"
	2	2							Loose tan/brown damp SAND, little to some silt (SM)
			3	4	5	S-2	2'-4'	13"	
5	3	5							
			5	5	10	S-3	4'-6'	19"	S-3: Damp
	2	4							
			4	5	8	S-4	6'-8'	9"	S-4: Trace gravel
	5	6							
10			7	7	13	S-5	8'-10'	10"	S-5: Firm
									10'0"
									Boring Terminated at 10'0"
15									
20									
25									
30									

Notes:
1. Dry upon completion.
2. Advanced hole using hollow stem augers.
3. Bore hole backfilled using auger spoils.

N=No. of blows to Drive 2" Spoon 12" with 140 lb. Wt. 30" Ea. Blow Hammer: Safety Size Rod: 2"

Foundation Design P.C.

Boring Log

Project No.	25.06015	**Page** 1 **of** 1		**Soil Boring No.**	B25-3
Project Name	Hartwell Heights, 2 Thornell Road, Pittsford, NY				
Client	WDG2 LLC, PO Box 34, Pittsford, NY				
Elevation	488.8	**Weather**	Cloudy 60s	**Engineer**	J. Herrera
Date Started	10/15/2025	**Completed**	10/15/2025	**Driller**	J. Loomis
Drilling Company:	Target Drilling			**Drilling Equipment:**	ATV

Ft.	Blows Per Six Inches 0"/6"	6"/12"	12"/18"	18"/24"	N Value	Sample No.	Depth	Rec	Visual Soil and Rock Classifications / Remarks
	1	2							TOPSOIL 0'7"
			1	2	3	S-1	0'-2'	7"	Loose tan/brown damp SILT, little sand, trace gravel (ML)
	3	3							
			3	3	6	S-2	2'-4'	3"	S-2: Poor recovery 4'0"
5	6	5							Firm tan/brown damp SAND, little to some silt (SM)
			6	6	11	S-3	4'-6'	18"	
	5	6							
			6	8	12	S-4	6'-8'	13"	S-4: Some silt
	5	4							
10			5	5	9	S-5	8'-10'	15"	S-5: Loose
									11'6"
									Compact tan/brown damp SILT, some sand (ML)
	11	25							
15			15	13	40	S-6	13'-15'	15"	
									16'6"
									Firm tan/brown damp SAND, little to some silt (SM)
	16	9							
20			10	11	19	S-7	18'-20'	21"	
	50	30							S-8: Very dense, some silt
25			22	50/3"	52	S-8	23'-24'9"	15"	25'0"
									Boring Terminated at 25'0"
30									Notes: 1. Dry upon completion. 2. Advanced hole using hollow stem augers. 3. Bore hole backfilled using auger spoils.

N=No. of blows to Drive 2" Spoon 12" with 140 lb. Wt. 30" Ea. Blow Hammer: Auto Size Rod: 2"

Foundation Design P.C.

Boring Log

Project No.	25.06015	**Page** 1 **of** 1		**Soil Boring No.**	B25-4
Project Name	Hartwell Heights, 2 Thornell Road, Pittsford, NY				
Client	WDG2 LLC, PO Box 34, Pittsford, NY				
Elevation	490.1	**Weather**	Cloudy 50s	**Engineer**	T. Beyer
Date Started	10/22/2025	**Completed**	10/22/2025	**Driller**	T. Mangefrida
Drilling Company:	Nothnagle Drilling			**Drilling Equipment:**	Geoprobe 7822DT

Ft.	Blows Per Six Inches 0"/6"	6"/12"	12"/18"	18"/24"	N Value	Sample No.	Depth	Rec	Visual Soil and Rock Classifications / Remarks
	1	1							TOPSOIL 0'5"
			1	2	2	S-1	0'-2'	16"	Loose light brown damp SAND, some silt
	1	2							
			1	2	3	S-2	2'-4'	18"	
5	2	1							
			2	1	3	S-3	4'-6'	15"	
	1	2							
			5	6	7	S-4	6'-8'	14"	
	2	3							
10			3	4	6	S-5	8'-10'	20"	
	1	4							
15			5	7	9	S-6	13'-15'	19"	
									15'0"
									Boring Terminated at 15'0"
20									
25									
30									

Notes:
1. Dry upon completion.
2. Advanced hole using hollow stem augers.
3. Bore hole backfilled using auger spoils.

N=No. of blows to Drive 2" Spoon 12" with 140 lb. Wt. 30" Ea. Blow Hammer: Auto Size Rod: 2"

Foundation Design P.C.

Boring Log

Project No.	25.06015	**Page** 1 **of** 1		**Soil Boring No.**	B25-5
Project Name	Hartwell Heights, 2 Thornell Road, Pittsford, NY				
Client	WDG2 LLC, PO Box 34, Pittsford, NY				
Elevation	493.5	**Weather**	Cloudy 60s	**Engineer**	R. Strussenberg
Date Started	10/15/2025	**Completed**	10/15/2025	**Driller**	J. Loomis
Drilling Company:	Target Drilling			**Drilling Equipment:**	ATV

Ft.	Blows Per Six Inches 0"/6"	6"/12"	12"/18"	18"/24"	N Value	Sample No.	Depth	Rec	Visual Soil and Rock Classifications / Remarks
	1	3							TOPSOIL 0'7"
			2	3	5	S-1	0'-2'	10"	Loose brown damp SAND, trace to little silt (SM) 2'0"
	2	2							Loose brown damp SILT, little to some sand (ML)
			2	2	4	S-2	2'-4'	13"	
5	15	7							
			8	9	15	S-3	4'-6'	12"	S-3: Firm
	2	2							
			7	9	9	S-4	6'-8'	8"	S-4: Loose
	6	5							
10			6	5	11	S-5	8'-10'	15"	S-5: Trace to little sand
	25	10							
15			9	11	19	S-6	13'-15'	11"	S-6: Firm, light brown 15'0"
									Boring Terminated at 15'0"
20									
25									
30									

Notes:
1. Dry upon completion.
2. Advanced hole using hollow stem augers.
3. Bore hole backfilled using auger spoils.

N=No. of blows to Drive 2" Spoon 12" with 140 lb. Wt. 30" Ea. Blow Hammer: Safety Size Rod: 2"

Foundation Design P.C.

Boring Log

Project No.	25.06015	**Page** 1 **of** 2		**Soil Boring No.**	B25-6
Project Name	Hartwell Heights, 2 Thornell Road, Pittsford, NY				
Client	WDG2 LLC, PO Box 34, Pittsford, NY				
Elevation	490.5	**Weather**	Cloudy 50s	**Engineer**	T. Beyer
Date Started	10/22/2025	**Completed**	10/22/2025	**Driller**	T. Mangefrida
Drilling Company:	Nothnagle Drilling			**Drilling Equipment:**	Geoprobe 7822DT

Ft.	Blows Per Six Inches 0"/6"	6"/12"	12"/18"	18"/24"	N Value	Sample No.	Depth	Rec	Visual Soil and Rock Classifications / Remarks
	WH	1							TOPSOIL 0'8"
			WH	1	1	S-1	0'-2'	14"	Loose light brown damp SAND, some silt
	1	1							
			1	2	2	S-2	2'-4'	16"	
5	2	2							
			2	2	4	S-3	4'-6'	15"	
	3	2							
			2	3	4	S-4	6'-8'	13"	
	2	4							
10			5	6	9	S-5	8'-10'	16"	
	3	7							S-6: Firm
15			8	8	15	S-6	13'-15'	19"	
	4	9							
20			9	11	18	S-7	18'-20'	22"	S-7: Firm
	4	8							
25			9	10	17	S-8	23'-25'	24"	S-8: Firm
	5	8							S-9: Firm
30			10	11	18	S-9	28'-30'	17"	30'0"

N=No. of blows to Drive 2" Spoon 12" with 140 lb. Wt. 30" Ea. Blow Hammer: Auto Size Rod: 2"

Foundation Design P.C.

Boring Log

Project No.	25.06015	**Page** 2 **of** 2		**Soil Boring No.**	B25-6
Project Name	Hartwell Heights, 2 Thornell Road, Pittsford, NY				
Client	WDG2 LLC, PO Box 34, Pittsford, NY				
Elevation	490.5	**Weather**	Cloudy 50s	**Engineer**	T. Beyer
Date Started	10/22/2025	**Completed**	10/22/2025	**Driller**	T. Mangefrida
Drilling Company:	Nothnagle Drilling			**Drilling Equipment:**	Geoprobe 7822DT

Ft.	Blows Per Six Inches 0"/6"	6"/12"	12"/18"	18"/24"	N Value	Sample No.	Depth	Rec	Visual Soil and Rock Classifications / Remarks
									Boring Terminated at 30'0"
35									
40									
45									
50									
55									
60									

Notes:
1. Dry upon completion.
2. Advanced hole using hollow stem augers.
3. Bore hole backfilled using auger spoils.

N=No. of blows to Drive 2" Spoon 12" with 140 lb. Wt. 30" Ea. Blow Hammer: Auto Size Rod: 2"

Foundation Design P.C.

Boring Log

Project No.	25.06015	**Page** 1 **of** 1		**Soil Boring No.**	B25-7
Project Name	Hartwell Heights, 2 Thornell Road, Pittsford, NY				
Client	WDG2 LLC, PO Box 34, Pittsford, NY				
Elevation	489.0	**Weather**	Cloudy 50s	**Engineer**	T. Beyer
Date Started	10/22/2025	**Completed**	10/22/2025	**Driller**	T. Mangefrida
Drilling Company:	Nothnagle Drilling			**Drilling Equipment:**	Geoprobe 7822DT

Ft.	Blows Per Six Inches 0"/6"	6"/12"	12"/18"	18"/24"	N Value	Sample No.	Depth	Rec	Visual Soil and Rock Classifications / Remarks
	1	WH							TOPSOIL 0'5"
			1	WH	1	S-1	0'-2'	18"	Loose brown damp SAND, some silt
	1	1							
			2	2	3	S-2	2'-4'	20"	
5	1	4							S-3: Light brown
			4	5	8	S-3	4'-6'	17"	
	5	4							
			5	6	9	S-4	6'-8'	16"	
	1	2							
10			3	2	5	S-5	8'-10'	19"	
	1	2							
15			1	2	3	S-6	13'-15'	16"	
									15'0"
									Boring Terminated at 15'0"
20									
25									
30									

Notes:
1. Dry upon completion.
2. Advanced hole using hollow stem augers.
3. Bore hole backfilled using auger spoils.

N=No. of blows to Drive 2" Spoon 12" with 140 lb. Wt. 30" Ea. Blow Hammer: Auto Size Rod: 2"

Foundation Design P.C.

Boring Log

Project No.	25.06015	**Page** 1 **of** 1		**Soil Boring No.**	B25-8
Project Name	Hartwell Heights, 2 Thornell Road, Pittsford, NY				
Client	WDG2 LLC, PO Box 34, Pittsford, NY				
Elevation	495.2	**Weather**	Cloudy 60s	**Engineer**	R. Strussenberg
Date Started	10/15/2025	**Completed**	10/15/2025	**Driller**	J. Loomis
Drilling Company:	Target Drilling			**Drilling Equipment:**	ATV

Ft.	Blows Per Six Inches 0"/6"	6"/12"	12"/18"	18"/24"	N Value	Sample No.	Depth	Rec	Visual Soil and Rock Classifications / Remarks
	1	1							TOPSOIL 0'8"
			1	1	2	S-1	0'-2'	16"	Loose brown damp SILT, little to some sand (ML)
	2	2							
			1	1	3	S-2	2'-4'	7"	
5	5	6							S-3: Firm
			7	8	13	S-3	4'-6'	10"	
	8	8							S-4: Firm, trace sand
			8	8	16	S-4	6'-8'	13"	
	6	6							
10			6	7	12	S-5	8'-10'	9"	S-5: Firm, trace sand
	50	20							S-6: Compact
15			11	9	31	S-6	13'-15'	16"	15'0"
									Boring Terminated at 15'0"
20									
25									
30									

Notes:
1. Dry upon completion.
2. Advanced hole using hollow stem augers.
3. Bore hole backfilled using auger spoils.

N=No. of blows to Drive 2" Spoon 12" with 140 lb. Wt. 30" Ea. Blow Hammer: Auto Size Rod: 2"

Foundation Design P.C.

Boring Log

Project No.	25.06015	**Page** 1 **of** 1		**Soil Boring No.**	B25-9
Project Name	Hartwell Heights, 2 Thornell Road, Pittsford, NY				
Client	WDG2 LLC, PO Box 34, Pittsford, NY				
Elevation	499.0	**Weather**	Cloudy 50s	**Engineer**	T. Beyer
Date Started	10/22/25	**Completed**	10/22/25	**Driller**	T. Mangefrida
Drilling Company:	Nothnagle Drilling			**Drilling Equipment:**	Geoprobe 7822DT

Ft.	Blows Per Six Inches 0"/6"	6"/12"	12"/18"	18"/24"	N Value	Sample No.	Depth	Rec	Visual Soil and Rock Classifications / Remarks
									Deleted in field due to access constraints.
5									
10									
15									
20									
25									
30									Notes: 1. Dry upon completion. 2. Advanced hole using hollow stem augers. 3. Bore hole backfilled using auger spoils.

N=No. of blows to Drive 2" Spoon 12" with 140 lb. Wt. 30" Ea. Blow Hammer: Auto Size Rod: 2"

Foundation Design P.C.

Boring Log

Project No.	25.06015	**Page** 1 **of** 1		**Soil Boring No.**	B25-10
Project Name	Hartwell Heights, 2 Thornell Road, Pittsford, NY				
Client	WDG2 LLC, PO Box 34, Pittsford, NY				
Elevation	496.6	**Weather**	Cloudy 50s	**Engineer**	T. Beyer
Date Started	10/22/2025	**Completed**	10/22/2025	**Driller**	T. Mangefrida
Drilling Company:	Nothnagle Drilling			**Drilling Equipment:**	Geoprobe 7822DT

Ft.	Blows Per Six Inches 0"/6"	6"/12"	12"/18"	18"/24"	N Value	Sample No.	Depth	Rec	Visual Soil and Rock Classifications / Remarks
	1	2							TOPSOIL 0'7"
			2	3	4	S-1	0'-2'	12"	Loose light brown damp SAND, some silt
	2	2							
			3	3	5	S-2	2'-4'	15"	
5	2	2							
			3	4	5	S-3	4'-6'	18"	
	2	4							
			5	3	9	S-4	6'-8'	16"	
	2	3							
10			5	8	8	S-5	8'-10'	21"	
	3	9							
15			10	11	19	S-6	13'-15'	17"	15'0"
									Boring Terminated at 15'0"
20									
25									
30									

Notes:
1. Dry upon completion.
2. Advanced hole using hollow stem augers.
3. Bore hole backfilled using auger spoils.

N=No. of blows to Drive 2" Spoon 12" with 140 lb. Wt. 30" Ea. Blow Hammer: Auto Size Rod: 2"

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Laboratory Test Results

Hartwell Heights- Infiltration Testing
2 Thornell Road, Pittsford, New York
25.06015.0

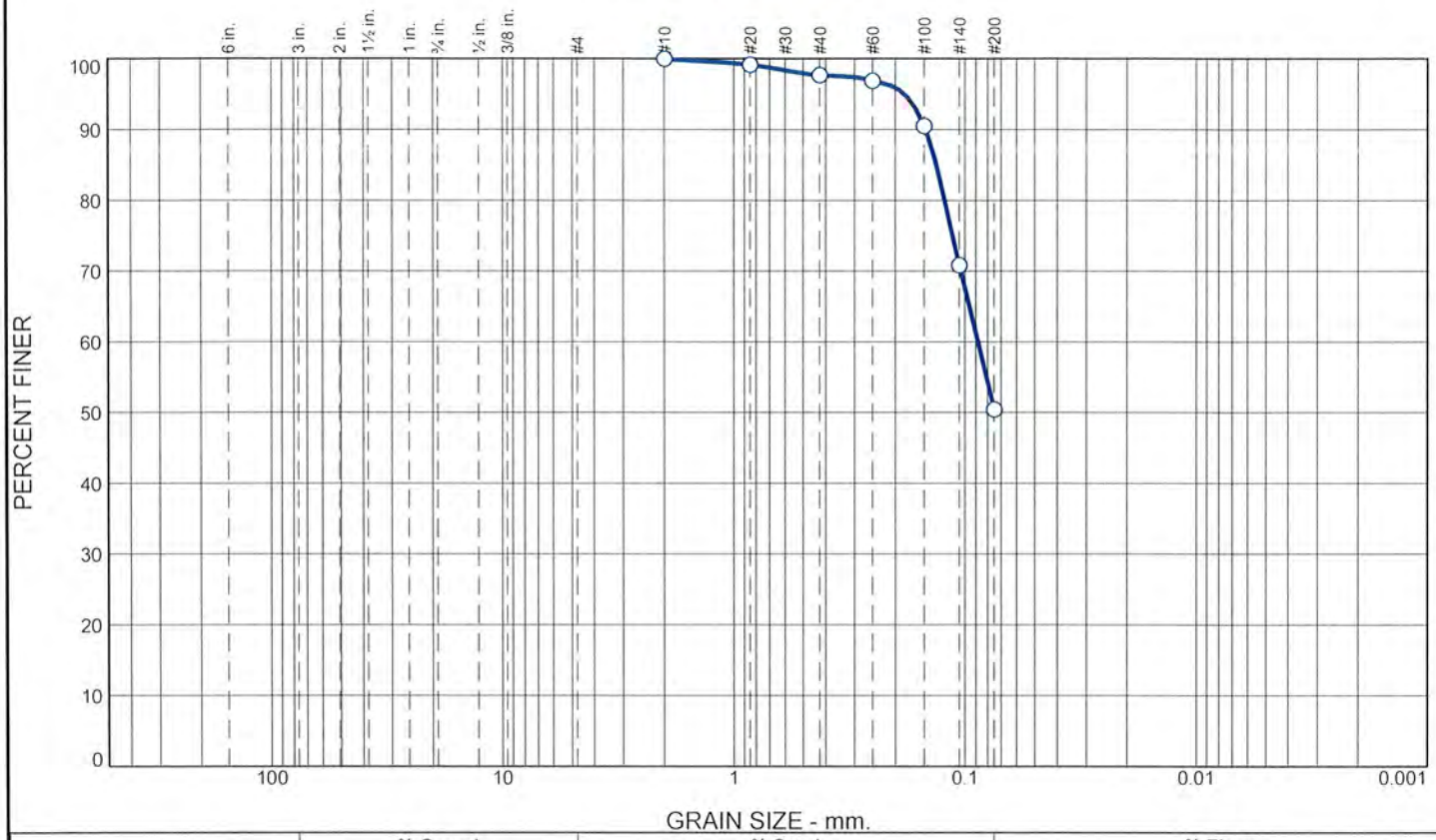
10.27.2025

Moisture Content Test Report
(ASTM D-2216)

Moisture Content Test Results			
Boring/Test Pit Number	B25-3	B25-6	B25-8
Sample Number	S-3	S-3	S-3
Depth	4'-6'	4'-6'	4'-6'
Moisture Content (%)	**6.2**	**4.1**	**3.2**

Particle Size Distribution Report

ASTM D422 & D1140



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	2	48	50	

Test Results (ASTM D422 & D1140)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
#10	100			
#20	99			
#40	98			
#60	97			
#100	91			
#140	71			
#200	50			

* (no specification provided)

Material Description

ML: Light brown sandy silt per ASTM D2488

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.1478 D_{85}= 0.1332 D_{60}= 0.0881
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Test Remarks

Test performed on 205.56 grams of oven dried sample

Source of Sample: B25-3 **Depth:** 4'-6'
Sample Number: S-3 **Sample Date:** 10/22/2025

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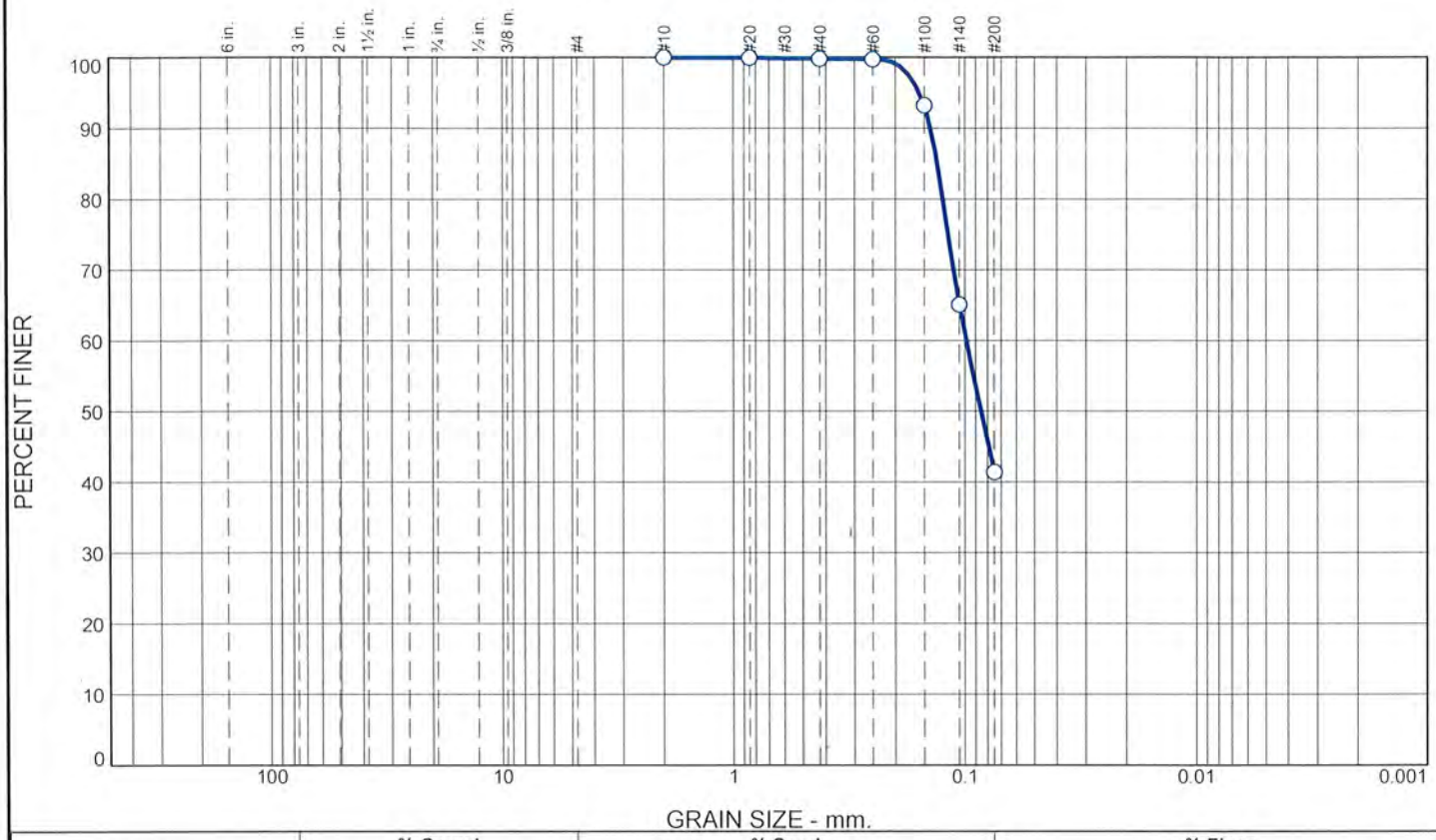
Client: WDG2, LLC, PO Box 34, Pittsford, New York 14534
Project: Hartwell Heights - Infiltration Testing, 2 Thornell Road, Pittsford, New York

Project No: 25.06015.0 **Figure**

Tested By: RLS **Checked By:** RJR

Particle Size Distribution Report

ASTM D422 & D1140



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	0	59	41	

Test Results (ASTM D422 & D1140)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
#10	100			
#20	100			
#40	100			
#60	100			
#100	93			
#140	65			
#200	41			

* (no specification provided)

Material Description

SM: Light brown silty sand per ASTM D2488

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.1410 D_{85}= 0.1321 D_{60}= 0.0988
D_{50}= 0.0853 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Test Remarks

Test performed on 170.57 grams of oven dried sample

Source of Sample: B25-6 **Depth:** 4'-6'
Sample Number: S-3 **Sample Date:** 10/22/2025

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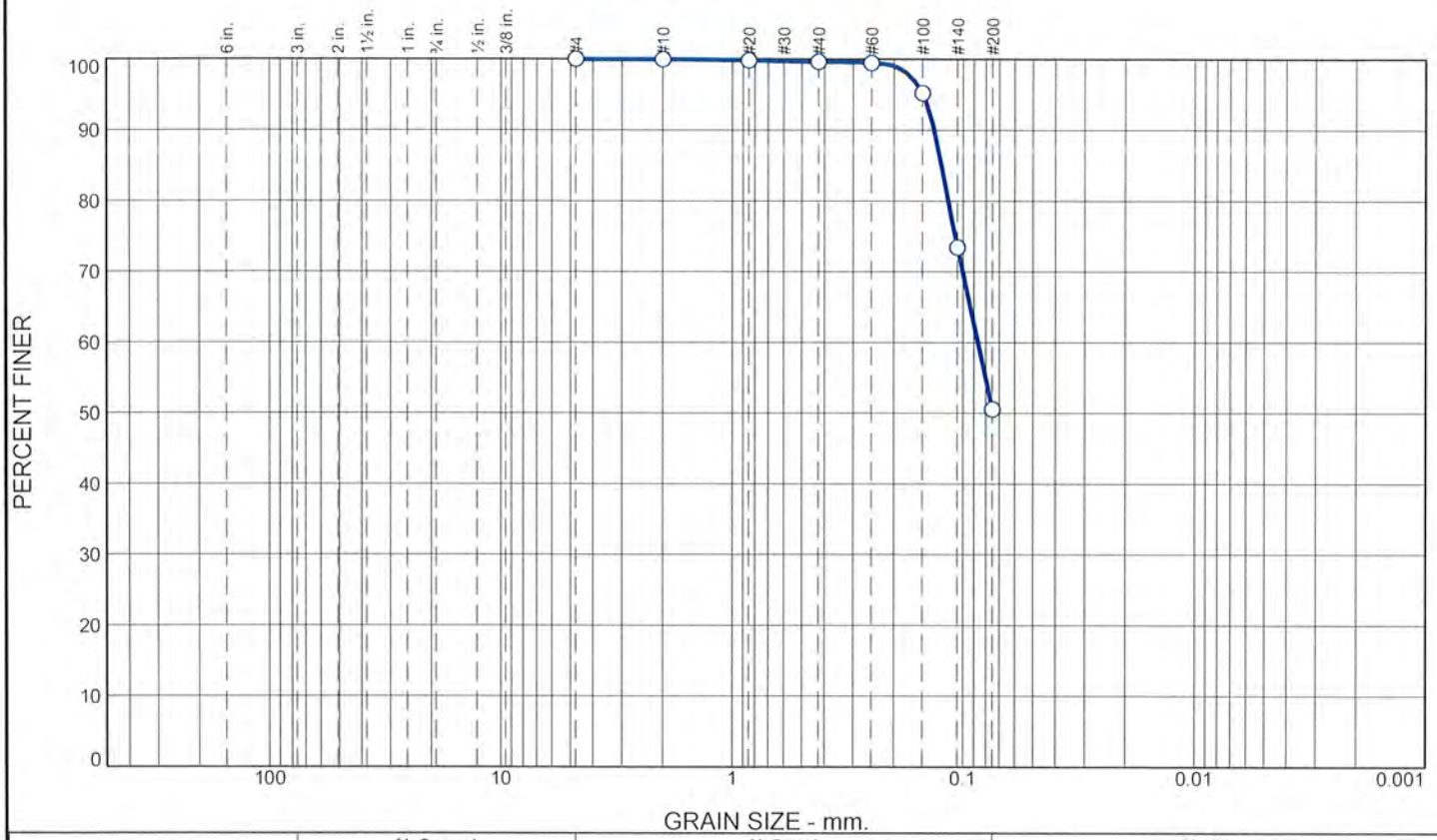
Client: WDG2, LLC, PO Box 34, Pittsford, New York 14534
Project: Hartwell Heights - Infiltration Testing, 2 Thornell Road, Pittsford, New York

Project No: 25.06015.0 **Figure**

Tested By: RLS **Checked By:** RJR

Particle Size Distribution Report

ASTM D422 & D1140



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	0	49	51	

Test Results (ASTM D422 & D1140)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
#4	100			
#10	100			
#20	100			
#40	100			
#60	99			
#100	95			
#140	73			
#200	51			

* (no specification provided)

Material Description

ML: Light brown sandy silt per ASTM D2488

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.1337 D_{85}= 0.1243 D_{60}= 0.0864
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Test Remarks

Test performed on 178.02 grams of oven dried sample

Source of Sample: B25-8 **Depth:** 4'-6'
Sample Number: S-3 **Sample Date:** 10/22/2025

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Client: WDG2, LLC, PO Box 34, Pittsford, New York 14534
Project: Hartwell Heights - Infiltration Testing, 2 Thornell Road, Pittsford, New York

Project No: 25.06015.0 **Figure**

Tested By: RLS **Checked By:** RJR