BME ASSOCIATES

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RECEIVED
NOV 24 2025
TOWN OF PERINTON

November 24, 2025

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

Re: Hartwell Heights **2850**
Thornell Road & NYS Route 96
T.A. #'s 179.09-2-8, 179.09-2-9, 179.09-2-10, and 179.09-2-11.111
Supplemental Information in Support of the August 13, 2025 SEQR Negative Declaration

Dear Board Members:

On behalf of WDG2, LLC, the owner/applicant of the subject property(s), we submit an updated Short Environmental Assessment Form (EAF), Part 1 for the above referenced project. The enclosed updated Short EAF accounts for the proposed reduction of four (4) residential units within the Hartwell Heights development as part of the current Preliminary/Final Site Plan application to the Planning Board from what was proposed for the previous Special Use Permit application to the Town Board.

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 Preliminary/Final Site Plan submitted to the Town on November 14, 2025 was designed to be in substantial conformance with the mixed-use development proposed during the SUP application. Therefore, no further SEQR review is required for the proposed mixed-use development, other than reaffirming that the SEQR Negative Declaration remains valid.

The Concept Site Plan submitted as part of the SUP application included a total of 28 residential rental units. In response to the feedback provided by the municipal boards and public during their review of the SUP application, the applicant has elected to further reduce the residential density on the subject property by eliminating four (4) residential units resulting in the current proposal consisting of 24 total residential units.

A summary timeline of the SEQRA process for the Hartwell Heights project is as follows:

- **February 26, 2025:** SUP application submitted to the Town Board
  - Including Engineer's Narrative
- **May 2, 2025:** Traffic Impact Report prepared by Passero submitted to MCDOT & NYSDOT
- **May 14, 2025:** Town Board declares their intent to be Lead Agency for the coordinated review.
- **May 19, 2025:** MCDOT issued an email following their review of the Traffic Impact Report
  - MCDOT's email stated that "*the proposed project will not result in any significant adverse traffic impacts.*"
- **June 27, 2025:** Town initiates coordinated review with involved agencies, including the Planning Board, and interested agencies including the Conservation Board.

- **July 2, 2025:** NYSDOT issued a letter following review of the Traffic Impact Report
  - NYSDOT's letter stated: *"we agree there will not be any significant impacts at the intersections of Route 96 with Thornell Road, Marsh Road, or Kreag Road as a result of this development."*
  - Based on NYSDOT input, the access onto NYS Route 96 has been modified to be a combined two-way access with the adjoining property to the east consisting of right-in/right-out and left in only turning movements.

- **July 2025:** Updated SUP Concept Plan submitted to the Town Board

- **August 11, 2025:** Supplemental SUP application materials submitted to the Town Board on
  - Including Updated Engineer's Narrative

- **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. All documents prepared and reviewed, and all public meeting minutes of the SEQRA review are incorporated herein for the Planning Board site plan application.

- **November 14, 2025:** The Preliminary/Final Site Plan application was submitted to the Planning Board
  - The application materials include a full project Stormwater Pollution Prevention Plan (SWPPP) which contains the Engineer's Report with a complete Drainage Analysis
    - The Drainage Analysis and project SWPPP have been completed per the requirements of the NYSDEC Stormwater Management Design Manual and the Town of Perinton Design Criteria and Construction Specifications for Land Development.
    - The project has been designed to meet the NYSDEC standards necessary to obtain coverage under the NYSDEC SPDES General Permit for Discharges from Construction Activity (GP-0-25-001)

- **November 20, 2025:** The NYS Office of Parks, Recreation and Historic Preservation Office (OPRHP or SHPO) issued a letter following their review of the project which states: "Based upon this review, it is the opinion of (OPRHP) that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project. A copy of the SHPO letter is enclosed for reference.

The Site Plans have been prepared in conformance with the lot standards established for the Mixed-Use District including a 20' setback to NYS Route 96 and a 50' buffer to the adjoining residential districts to the west and south of the property. As such no area variances are required from the ZBA.

No thresholds that were established as part of the August 13, 2025 Town Board SEQR Negative Declaration have been exceeded with the current proposal. The proposed development's traffic contribution, water demand and sanitary sewer demands will be reduced as a result of the proposed elimination of four (4) residential units. As such, the SEQR Negative Declaration adopted on August 13, 2025 remains valid and should be re-affirmed with no further SEQRA review required.

Please contact our office if you require any additional information concerning this application in advance of the December 17, 2025 Planning Board meeting.

Sincerely,
BME Associates

Ryan T. Destro

Ryan T, Destro, P.E.

Encl.

c: Dennis Wilmot, WDG2, LLC
James P. Barbato, Pride Mark Homes

BME ASSOCIATES

ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS

November 14, 2025

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

Re: Hartwell Heights **2850**
Thornell Road & NYS Route 96
T.A. #'s 179.09-2-8, 179.09-2-9, 179.09-2-10, and 179.09-2-11.111
Preliminary/Final Site Plan

Dear Board Members:

On behalf of WDG2, LLC, the owner/applicant of the subject property(s), we submit this application for a Preliminary & Final Site Plan 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. We request to be placed on the December 17, 2025 Planning Board agenda to present this application. We have enclosed fifteen (15) copies of the following application materials for your use and review:

- Letter of Intent, dated November 14, 2025
- Planning Board Application Form (Preliminary & Final Site Plan)
- Preliminary & Final Site Plan (BME Dwg. #'s 2850 03-15)
- Building Architectural Elevations
- Owner's Authorization Form
- Property Deeds
- Three (3) copies of the Project SWPPP (including Engineer's Report)
- $250.00 Preliminary Site Plan Application Fee
- $250.00 Final Site Plan Application Fee

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 enclosed Preliminary/Final Site Plan has been designed to be in substantial conformance with the mixed-use development proposed during the SUP application. Therefore, no further SEQR review is required for the

proposed mixed-use development. The Concept Site Plan submitted as part of the SUP application included a total of 28 residential rental units. In response to the feedback provided by the municipal boards and public during their review of the SUP application, the applicant has elected to further reduce the residential density on the subject property by eliminating four (4) residential units resulting in the current proposal consisting of 24 total residential units.

The project proposes two lots: a ±0.84 acre lot (Lot 1) for the existing office building and a ±2.59 acre lot (Lot 2) for the proposed residential uses. The existing four tax parcels will be consolidated to create the proposed two lots. A copy of the Consolidation Plat is enclosed for reference. However, the Consolidation Plat will be submitted under separate cover to the Town of Perinton for Administrative review/approval, as no new lots are proposed.

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 Site Plan has been prepared in conformance with the lot standards established for the Mixed-Use District including a 20' setback to NYS Route 96 and a 50' buffer to the adjoining residential districts to the west and south of the property. The project will have a building front presentation to NYS Route 96 as illustrated with the enclosed architectural elevations and will include sidewalk connections from the fronts of these residential units to the existing Route 96 sidewalk. Off-street parking is provided both for the residential units and the office building.

The proposed building architecture has been prepared in recognition of the property's location within the Bushnell's Basin Historic District, and the applicant acknowledges the requirement to obtain a Certificate of Appropriateness from the Historic Architecture Commission (HAC). The applicant will make the requisite application to the HAC.

Public water and public sanitary sewer along the NYS Route 96 frontage will be extended into the development to serve the subject property. The project also includes a stormwater management plan which includes a proposed new onsite infiltration basin stormwater management facility which has been designed per the Town and NYSDEC stormwater management requirements. The outline of the stormwater management plan in the enclosed Stormwater Pollution Prevention Plan (SWPPP).

Please contact our office if you require any additional information concerning this application in advance of the December 17, 2025 Planning Board meeting.

Sincerely,
BME Associates



Ryan T, Destro, P.E.

Encl.

c: Dennis Wilmot, WDG2, LLC
James P. Barbato, Pride Mark Homes

PLANNING BOARD APPLICATION

To: Town of Perinton
1350 Turk Hill Road
Fairport, NY 14450
(585) 223-0770

Please note that members of Town staff and reviewing Board members may visit your property to review your request. Please review Perinton Town Code requirements at:
http://www.perinton.org/codes/

PROJECT NAME Hartwell Heights

Location 2 Thornell Road, 589 Pittsford Victor Road, Pittsford Victor Road & 597 Pittsford Victor Road

APPLICANT WDG2, LLC

Phone 585-721-7463 mailing address P.O. Box 34

City Pittsford Zip 14534 Fax _____ e-mail [redacted]

OWNER WDG2, LLC

Phone [redacted] mailing address _____

City Pittsford Zip 14534 Fax _____ e-mail [redacted]

Person appearing at public hearing for application BME Associates: Peter G. Vars, P.E.

Phone 585-377-7360 mailing address 10 Lift Bridge Lane East

City Fairport Zip 14450 Fax _____ e-mail [redacted]

REASON FOR APPEARING

Subdivision Approval: _____ Concept _____ Preliminary _____ Final

Site Plan Approval: X Preliminary X Final **FEE** $500 **SQ.FT.** _____

Change of Use From _____ to _____

TYPE OF PROJECT Mixed-Use Development

Is this parcel in a flood plain? No Conservation Easement? No

Size of parcel in acreage ±3.4 acres Tax Account Number(s) 179.09-2-8, 179.09-2-9, and 179.09-2-10, 179.09-2-11.111

Present Zoning MU-Mixed Use

James P Barbato · James P Barbato

Applicant Signature - sign & print name

Owner Signature (if other than applicant) - sign & print name

Short Environmental Assessment Form
Part 1 - Project Information

RECEIVED
NOV 24 2025
TOWN OF PERINTON

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information

Name of Action or Project:
Hartwell Heights

Project Location (describe, and attach a location map):
597 Pittsford-Victor Road, Pittsford, NY 14534

Brief Description of Proposed Action:
The proposed action is a mixed-use development consisting of: one (1) 10-unit, 2-story multi-family apartment building, one (1) 6-unit, 2-story multi-family apartment building, one (1) 2-unit, single story townhome structure, five (5) single-family, single-story cottages, and one (1) existing single story single-family home (to remain) (24 total residential rental units). The proposed action also includes an existing ±1,900 SF office building (which is proposed to remain under its current use) at 2 Thornell Road on ±3.42 acres in the Mixed-Use District.

Name of Applicant or Sponsor:	Telephone: [redacted]
WDG2, LLC	E-Mail: [redacted]

Address:
P.O. BOX 34

City/PO:	State:	Zip Code:
Pittsford	NY	14534

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: Perinton Planning Board - Site Plan Approval	☐	☑

3. a. Total acreage of the site of the proposed action? ±3.42 acres
   b. Total acreage to be physically disturbed? ±3.1 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? ±3.42 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

5. ☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☑ Commercial ☑ Residential (suburban)
   ☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):
   ☐ Parkland

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	☑

	NO	YES
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?		
If Yes, identify: _____	☑	☐

	NO	YES
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☑	☐
b. Are public transportation services available at or near the site of the proposed action?	☐	☑
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☑

	NO	YES
9. Does the proposed action meet or exceed the state energy code requirements?		
If the proposed action will exceed requirements, describe design features and technologies:	☐	☑

	NO	YES
10. Will the proposed action connect to an existing public/private water supply?		
If No, describe method for providing potable water: _____	☐	☑

	NO	YES
11. Will the proposed action connect to existing wastewater utilities?		
If No, describe method for providing wastewater treatment: _____	☐	☑

	NO	YES
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	☐	☑
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☐	☑

	NO	YES
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	☐	☑
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☑	☐
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____		
The nearest adjacent waterbody/wetland area is the Erie Canal to the north on the opposite side of NYS Route 96. No wetlands or waterbodies are mapped on the subject property, and no disturbances are proposed to any wetlands or waterbodies.		

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☐ Shoreline ☑ Forest ☐ Agricultural/grasslands ☐ Early mid-successional

☐ Wetland ☐ Urban ☑ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☑	☐
16. Is the project site located in the 100-year flood plan?	☑	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☐	☑
If Yes,		
a. Will storm water discharges flow to adjacent properties?	☐	☑
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☐	☑
If Yes, briefly describe:		
Stormwater runoff will be collected via private storm sewers and conveyed to an on-site stormwater management facility prior to off-site discharge		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)?	☐	☑
If Yes, explain the purpose and size of the impoundment:		
Proposed stormwater infiltration facility		
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?	☑	☐
If Yes, describe:		
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?	☑	☐
If Yes, describe:		

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: WDG2 LLC. (Dennis Wilmot) Date: November 18, 2025

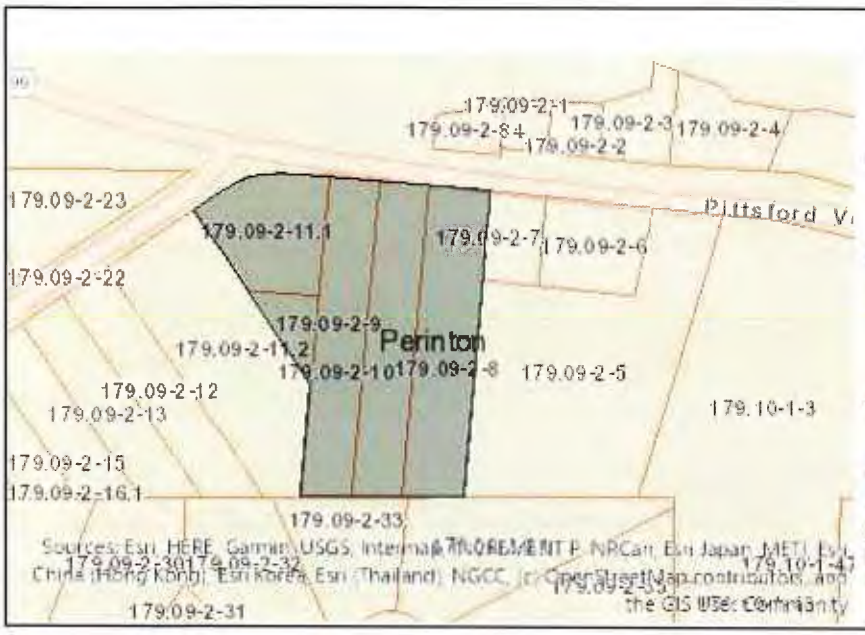
Signature: Ryan T. Deuton BME Associates Title: Project Engineer

(Agent for WDG2 LLC.)

PRINT FORM

EAF Mapper Summary Report

Thursday, February 20, 2025 8:10 AM



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



Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	Yes
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	No

TOWN OF PERINTON
1350 TURK HILL ROAD. FAIRPORT, NEW YORK 14450-8796
(585) 223-0770, Fax: (585) 223-3629, www.perinton.org

Owner Authorization to Make Application

I, Dennis Wilmot of WDG2, LLC **, authorize**
(print owner name legibly)

BME Associates
(applicant/engineer name & company name)

to act as my agent to make application(s) to the Town of Perinton for the purpose of

Special Use Permit, Site Plan, Subdivision
(site plan/subdivision/change of use, etc.)

for the property that I own located at 2 Thornell Road, 589 Pittsford Victor Road, Pittsford Victor Road, 597 Pittsford Victor Road.

T.A #'s 179.09-2-8, 179.09-2-9, 179.09-2-10, and 179.09-2-11.111

Signature

2/25/25
Date

form date – 3/29/12

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

KATHY MOSER
Acting Commissioner

RECEIVED
NOV 24 2025
TOWN OF PERINTON

November 20, 2025

Ryan Destro
10 Lift Bridge Lane East
Fairport, NY 14450

Re: DEC
Hartwell Heights
Town of Perinton, Monroe County, NY
25PR10548

Dear Ryan Destro:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project.

Based upon this review, it is the opinion of OPRHP that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Sara Evenson at the following email address:

Sara.Evenson@parks.ny.gov

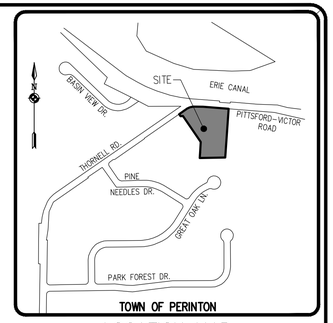
Sincerely,

R. Daniel Mackay

Deputy Commissioner for Historic Preservation
Division for Historic Preservation

P:\2850\Drawings\Final\2850 Cover Sheet.dwg





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
2850-14	DETAIL SHEET 02
2850-15	DETAIL SHEET 03

HARTWELL HEIGHTS

TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE

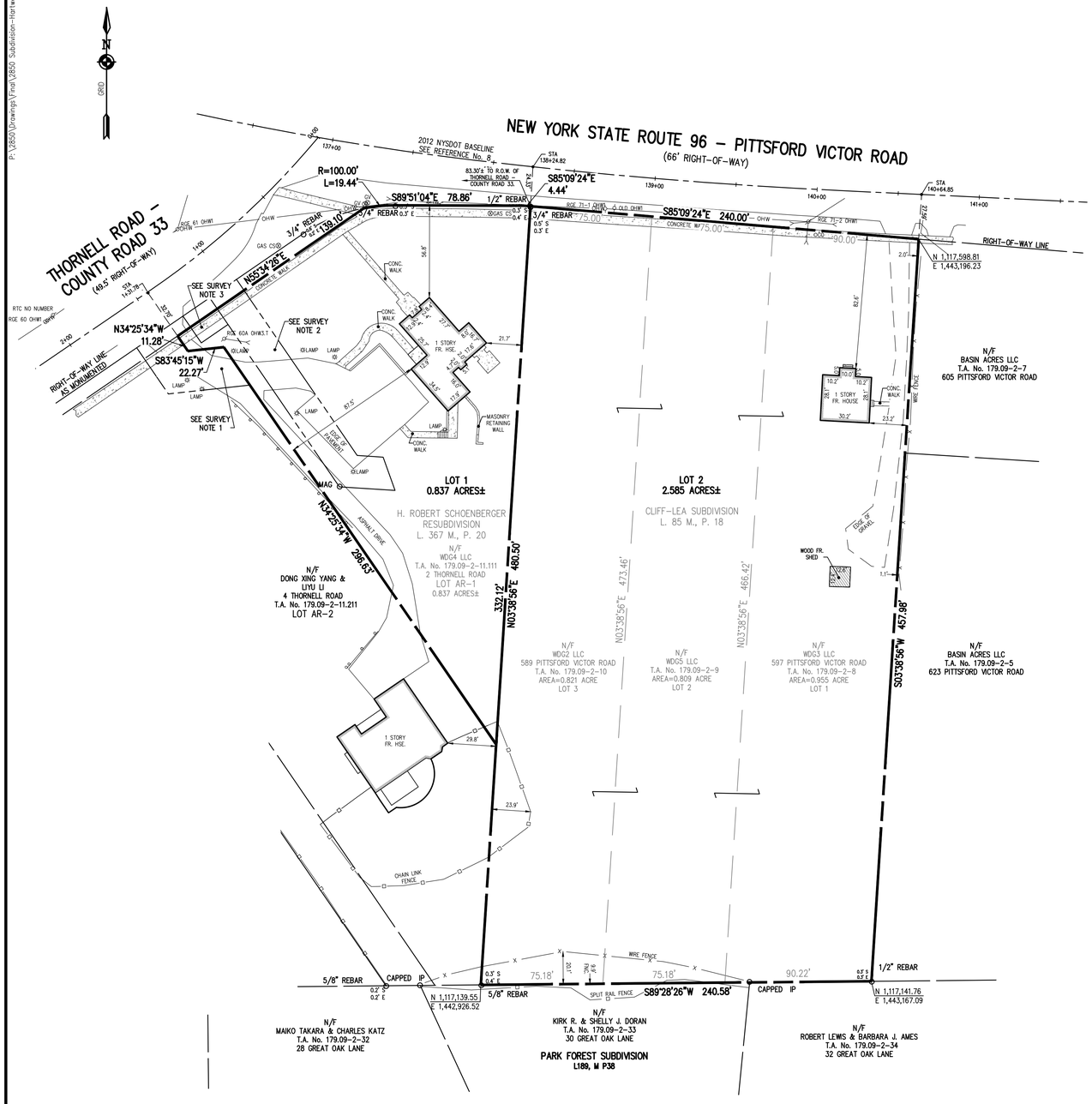
PREPARED FOR:
WDG2, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534

SCALE: 1" = 40'

DRAWING NUMBER: 2850_03
DATED: NOVEMBER 14, 2025
LAST REVISED: NA

BME ASSOCIATES
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FAX 585-377-7309

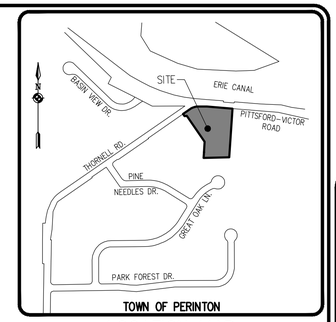
P:\2850\Drawings\Final\2850_Subdivision-Hartwell Heights.dwg



LEGEND

- BOUNDARY LINE
- PROPOSED LOT LINE
- CENTERLINE
- SETBACK LINE
- ORIGINAL DATA LINE
- PROPERTY MARKER FOUND
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- PROPOSED SURVEY MONUMENT

N86°22'15"E 106.47'



LOCATION MAP
NOT TO SCALE

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

SUBDIVISION NOTES:

EXISTING ZONING: MU – MIXED USE.

1. EXISTING SETBACKS/LOT STANDARDS ARE AS FOLLOWS:

MAX. BLDG. AREA	10,000 SF (LESS THAN 1 ACRE LOT SIZE)	
FRONT SETBACK	10 FEET (MIN)	30 FEET (MAX)
SIDE SETBACK (ABUTTING NON-RES. DIST.)	15 FEET	
REAR SETBACK (ABUTTING NON-RES. DIST.)	15 FEET	
SIDE (ABUTTING RES. DIST.)	50 FEET	
REAR (ABUTTING RES. DIST.)	50 FEET	
MAX. BUILDING HEIGHT	40 FEET	
MIN. BUILDING HEIGHT	22 FEET	
TOTAL LOT COVERAGE	<75%	

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.

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.

I, the undersigned Treasurer of Monroe County Pursuant to Sec 334 of the Real Property Law Certify that all Monroe County Taxes and School Taxes against the land described herein have been paid through

Monroe County Treasurer

BY_____Dated:_____

MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH
REALTY SUBDIVISION APPROVAL

THIS IS TO CERTIFY THAT APPROVED PLANS FOR WATER SUPPLY AND SEWAGE TREATMENT FOR THIS PROJECT ARE ON FILE IN THE OFFICE OF THE MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH CONSENT IS HEREBY GIVEN FOR THE FILING OF THIS MAP IN THE MONROE COUNTY CLERK'S OFFICE IN ACCORDANCE WITH ARTICLE III OF THE MONROE COUNTY SANITARY CODE.

DIRECTOR OF PUBLIC HEALTH

BY PUBLIC HEALTH ENGINEER DATE

MONROE COUNTY SURVEYORS OFFICE/DEPT. OF TRANSPORTATION

This plat is approved in accordance with the provisions of Section 239-f, Article 12-b of the General Municipal Law and/or the Monroe County Monumentation Law. A separate approval is required for site construction.

For General Municipal Law:

County Highway Superintendant Date

For the Monroe County Monumentation Law:

Monroe County Surveyors Office Date

WE: BME ASSOCIATES, CERTIFY THAT THIS MAP WAS PREPARED FROM THE NOTES OF AN INSTRUMENT SURVEY COMPLETED BY US ON APRIL 19, 2023, A FIELD EDIT PERFORMED BY US ON JUNE 12, 2023 AND FROM THE REFERENCES NOTED HEREON. THIS MAP OR PLAT AND THE SURVEY UPON WHICH IT WAS BASED MEETS THE GVLSA 2017 MINIMUM STANDARDS FOR A SURVEY MAP.

THIS MAP IS SUBJECT TO ANY FACTS THAT MAY BE REVEALED BY SOURCES OTHER THAN THOSE REFERENCED HEREON.

BY: _____
GREGORY D. BELL, NYSPLS NO. 050661

APPROVALS

BY: _____ DATE: _____
MONROE COUNTY DEPARTMENT OF TRANSPORTATION

BY: _____ DATE: _____
COMMISSIONER OF PUBLIC WORKS

BY: _____ DATE: _____
DIRECTOR OF BUILDING

BY: _____ DATE: _____
PLANNING BOARD CHAIRMAN

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	5	4	3	2	1
REVISIONS							
DATE							
BY							

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

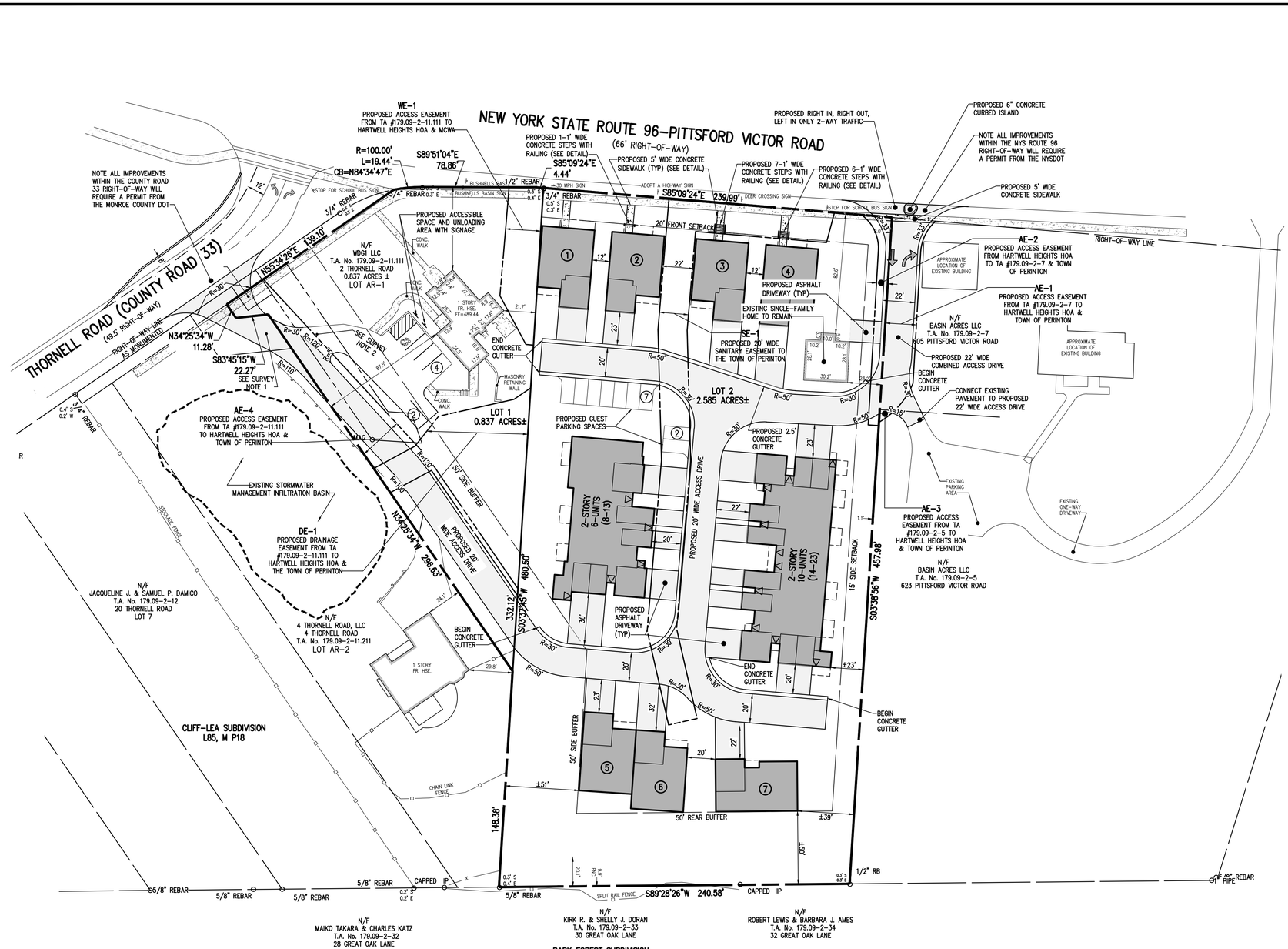
STATE OF NEW YORK GREGORY D. BELL 050661 LICENSED LAND SURVEYOR

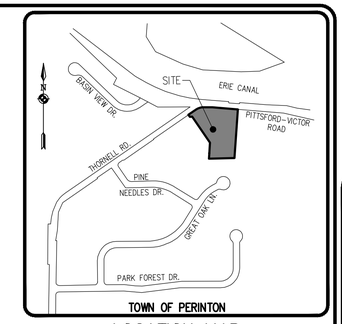
PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: WDG2 LLC
P.O. BOX 14
PITTSFORD, NY 14534
DRAWING TITLE: BEING A CONSOLIDATION OF THE CLIFF-LEA SUBDIVISION, LOTS 1,2,&3 & RESUBDIVISION OF LOT AR-1 OF THE H. ROBERT SCHOENBERGER RESUBDIVISION

PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 63, TAX MAP No. 179.09-2-8, 179.09-2-9, 179.09-2-10, 179.09-2-11.111

PROJECT MANAGER	GD BELL
PROJECT SURVEYOR	GD BELL
DRAWN BY	BC GOODING
SCALE	1"=40'
DATE ISSUED	NOVEMBER 14, 2025
PROJECT NO.	2850
DRAWING NO.	04

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LOCATION MAP
NOT TO SCALE

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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NO.	REVISIONS	DATE	BY
7			
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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	47 SPACES PROVIDED.
SINGLE–FAMILY:	2 SPACES/UNIT 6 UNITS = 12 SPACES	22 SPACES PROVIDED. (2 SPACES PER GARAGE) (2 SPACES PER DRIVEWAY)

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.

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
7. PARKING SIGNAGE: ALL ACCESSIBLE PARKING SPACES AND ACCESS AISLES TO BE PROVIDED SIGNAGE PER THE MOST RECENT ADA STANDARD REQUIREMENTS. (SEE SIGN DETAIL).
8. ALL OTHER IMPROVEMENTS TO BE IN CONFORMANCE WITH THE MOST RECENT ADA STANDARDS FOR DESIGN.

LEGEND

- BOUNDARY LINE
- PROPOSED LOT LINE
- SETBACK LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- ○ PROPERTY MARKER FOUND
- △ CONCRETE HIGHWAY MONUMENT FOUND
- ● WOOD FENCE POST FOUND

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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

BME ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
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PHONE 585-377-7360
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WWW.BMEPC.COM

STATE OF NEW YORK
RYAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

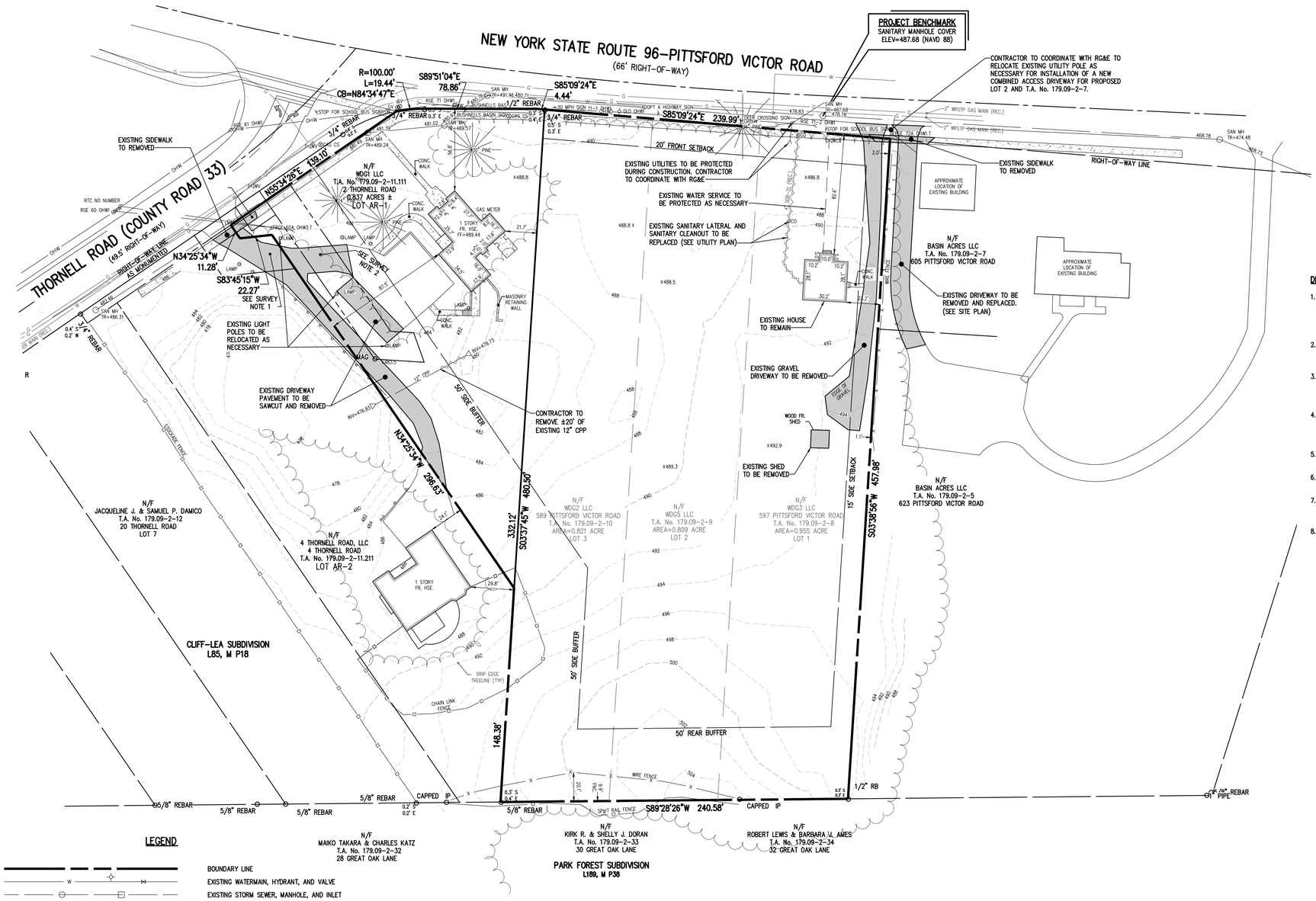
HARTWELL HEIGHTS
TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
WDG2, LLC
P.O. BOX 34
PITTSFORD, NY, 14534

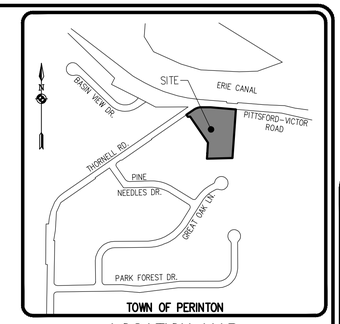
PROJECT
LOCATION
CLIENT
DRAWING TITLE
PRELIMINARY/FINAL SITE PLAN

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.	05

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LOCATION MAP
NOT TO SCALE

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
7			
6			
5			
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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.

LEGEND

- BOUNDARY LINE
- W — EXISTING WATERMAIN, HYDRANT, AND VALVE
- EXISTING STORM SEWER, MANHOLE, AND INLET
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING TREE LINE
- PROPERTY MARKER FOUND
- 336 — EXISTING CONTOUR W/ ELEVATION
- 336x5 — EXISTING SPOT ELEVATION
- G — EXISTING GAS MAIN
- E — 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

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

BME ASSOCIATES
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093805
LICENSED PROFESSIONAL ENGINEER

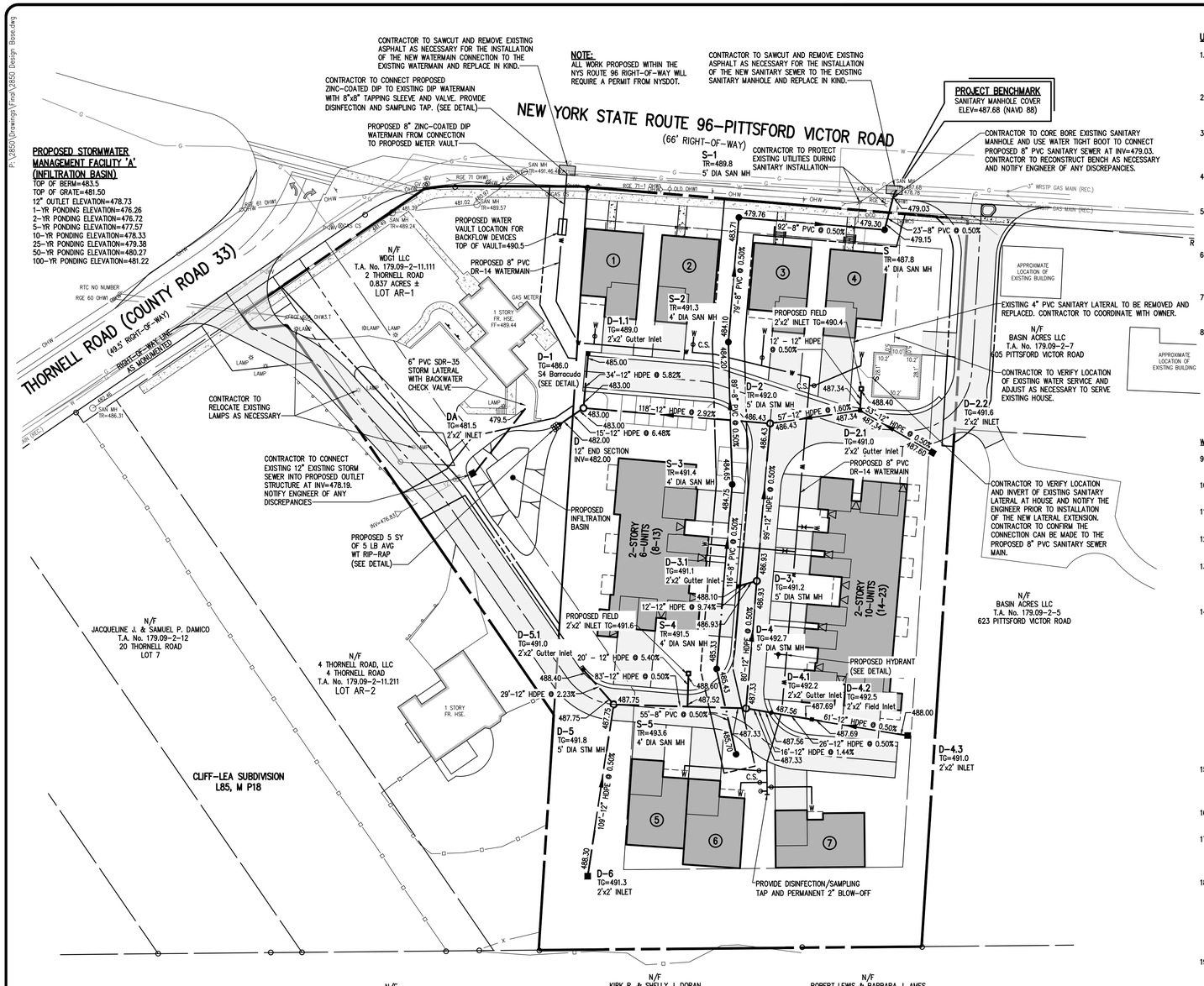
PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW STATE
CLIENT: WDG2, LLC. P.O. BOX 34 PITTSFORD, NY, 14534
DRAWING TITLE: PRELIMINARY/FINAL EXISTING CONDITIONS AND DEMOLITION PLAN

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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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.

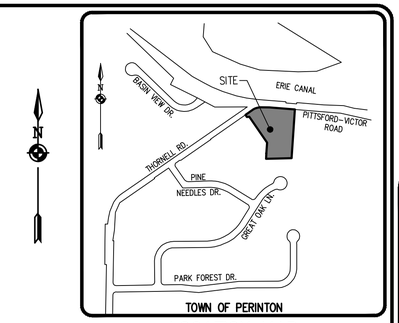
    ALL WATER MAIN FITTINGS NOT RECEIVING 24–HOUR CHLORINE DISINFECTION CONTACT TIME MUST BE SWAB DISINFECTED 30 MINUTES PRIOR TO INSTALLATION.

    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

    WATER TESTING – EACH MANHOLE SHALL BE FILLED WITH A MAXIMUM OF 10 FEET OF WATER, SUBJECTED TO A 24 HOUR TEST AND SHOW A LOSS OF WATER NOT TO EXCEED 15 GALLONS/24 HOURS FOR A 4 FOOT IDMH. INFILTRATION TESTS SHALL ADHERE TO THE SAME LIMITS.

    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 COTTAGE STYLE HOMES
    6" PE #4710 FOR APARTMENT BUILDINGS
    SANITARY – 4" PVC SDR–21 INSTALLED AT 2.00% MIN SLOPE FOR HOMES/TOWNHOUSES
    6" PVC SDR–21 INSTALLED AT 21.00% 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 ALL HORIZONTAL BENDS AND AT XXX' 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 85–100 FOOT 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

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.

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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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.	DATE	REVISIONS	BY
1	10/31/25	PER TOWN COMMENTS	DT
2	11/14/25	PER TOWN COMMENTS	DT
3			
4			
5			
6			
7			

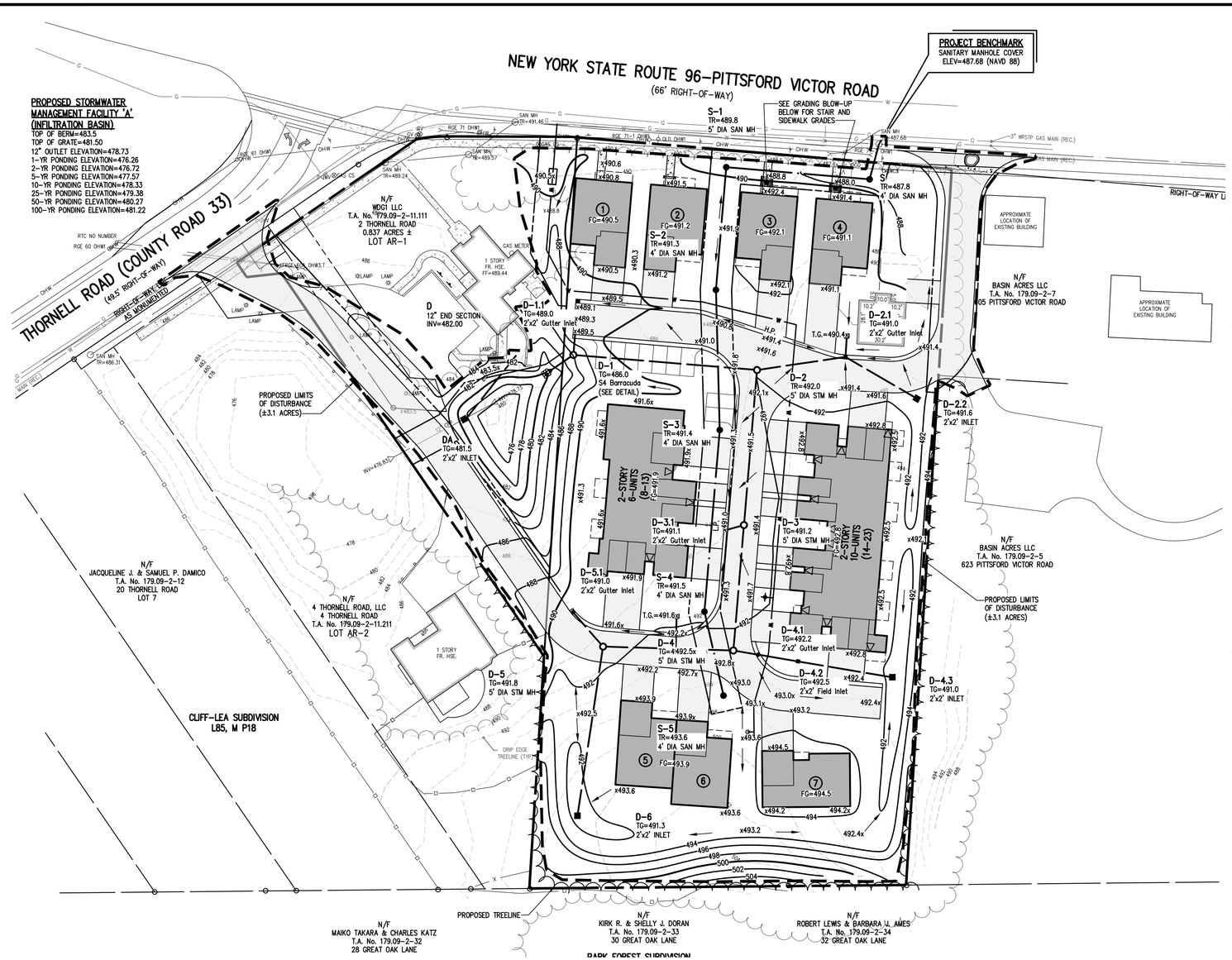
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STATE OF NEW YORK
BRIAN THOMAS DESTRO
093809
LICENSED PROFESSIONAL ENGINEER

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

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.	07



SEQUENCE OF CONSTRUCTION STEPS:

TOTAL DISTURBED ACREAGE = ±3.1 ACRES

STEP 1: (SITE PREPARATION)

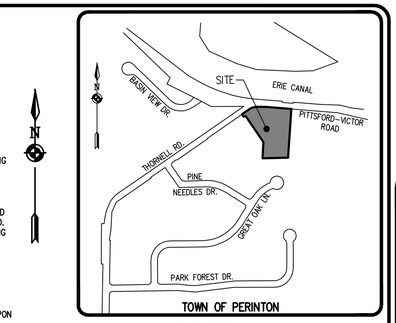
- INSTALL AND MAINTAIN STABILIZED CONSTRUCTION ENTRANCE AND CONSTRUCTION STAGING AREA (SEE DETAIL).
- CLEAR AND GRUB AS REQUIRED FOR SILT FENCE INSTALLATION.
- INSTALL AND MAINTAIN PERIMETER SILT FENCE, COMPLETE CLEARING AND GRUBBING OPERATIONS AS NECESSARY OR PROVIDE BRUSH HOGGING OF LANDS TO MAINTAIN 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. STORMWATER MANAGEMENT FACILITY TO BE UTILIZED AS A SEDIMENT BASIN DURING CONSTRUCTION. CONTRACTOR TO UNDERCUT POND BOTTOM BY 2'.
- 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.
2. THE DEVELOPER'S AND CONTRACTOR'S ATTENTION IS DIRECTED TO LOCAL LAW NO. 6 OF 1971 REGARDING LIABILITY INCURRED THROUGH DISTURBANCE OR DESTRUCTION OF GEODETIC SURVEY MONUMENTS.
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. THE CONTRACTOR SHALL CALL THE UFPO HOTLINE AT 1(800)962-7962 OR 811 FOR STAKE-OUT OF EXISTING UTILITIES.
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.

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 (336)
- PROPOSED CONTOUR W/ ELEVATION (336)
- EXISTING SPOT ELEVATION (336x5)
- PROPOSED SPOT ELEVATION (336x5)
- PROPOSED FINISHED GRADE ELEVATION AT GARAGE DOOR (F.G. = 336.0)
- PROPOSED LIMITS OF DISTURBANCE

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

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

Drawing Alteration
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7	6	5	4	3	2	1	DATE	BY

REVISIONS

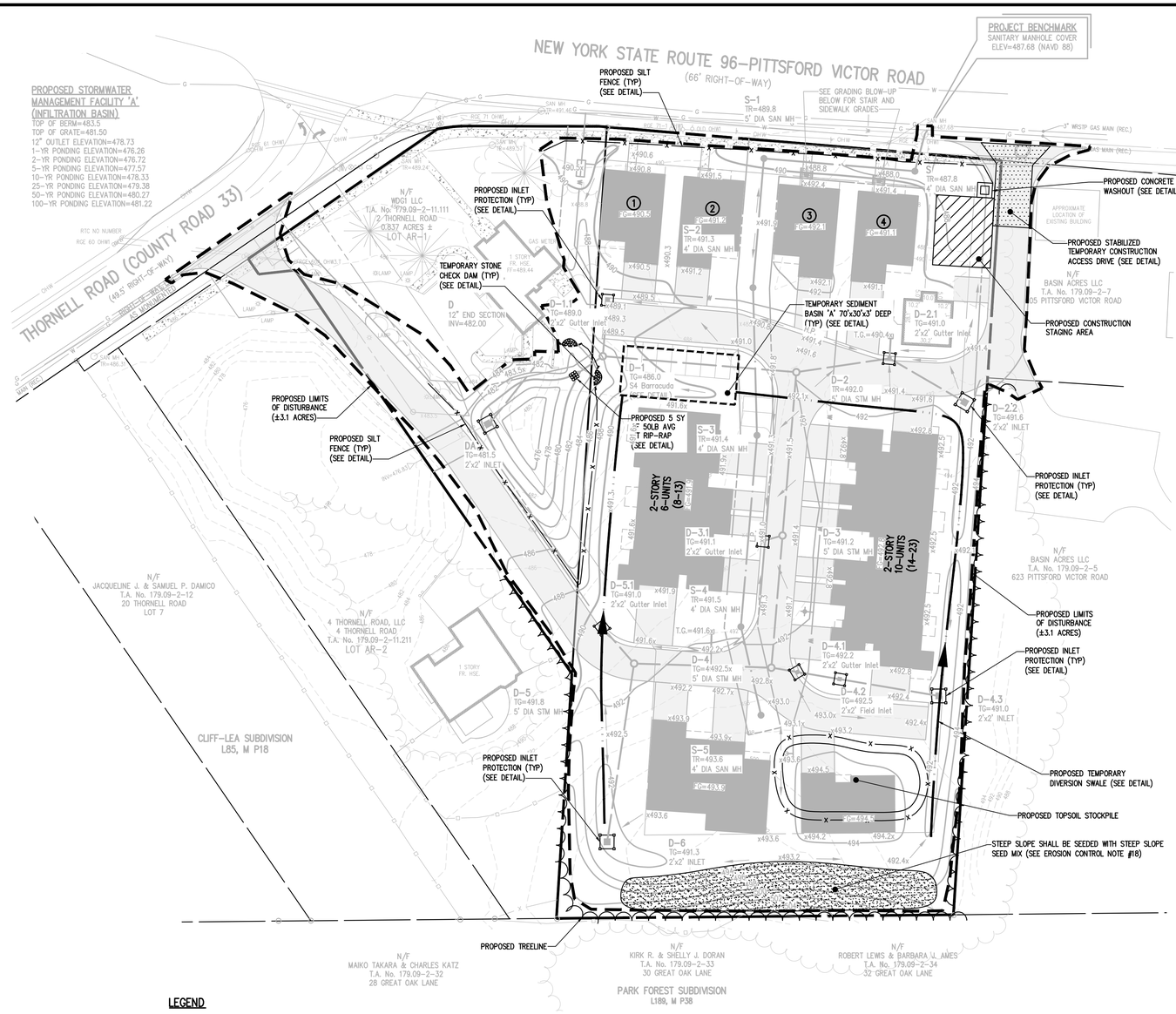
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PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: WOG2, LLC. P.O. BOX 34 PITTSFORD, NY, 14534
DRAWING TITLE: PRELIMINARY/FINAL GRADING PLAN

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.: 08

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

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



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

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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

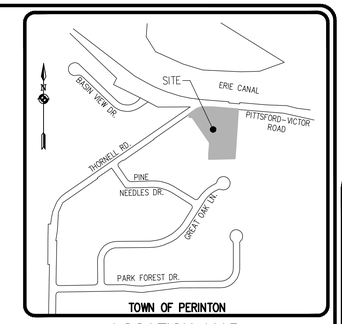
18. SLOPES 3:1 OR GREATER SHALL BE SEEDED WITH HEAVY MULCH AND MAY REQUIRE ADDITIONAL STABILIZATION MEASURES. SLOPES SHALL BE FINE GRADED WITH A MINIMUM OF 6" TOPSOIL AND SEEDED WITH FOLLOWING SEED MIX:

    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
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REVISIONS

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

NEW YORK STATE OF NEW YORK RYAN THOMAS DESTRO 093805 LICENSED PROFESSIONAL ENGINEER

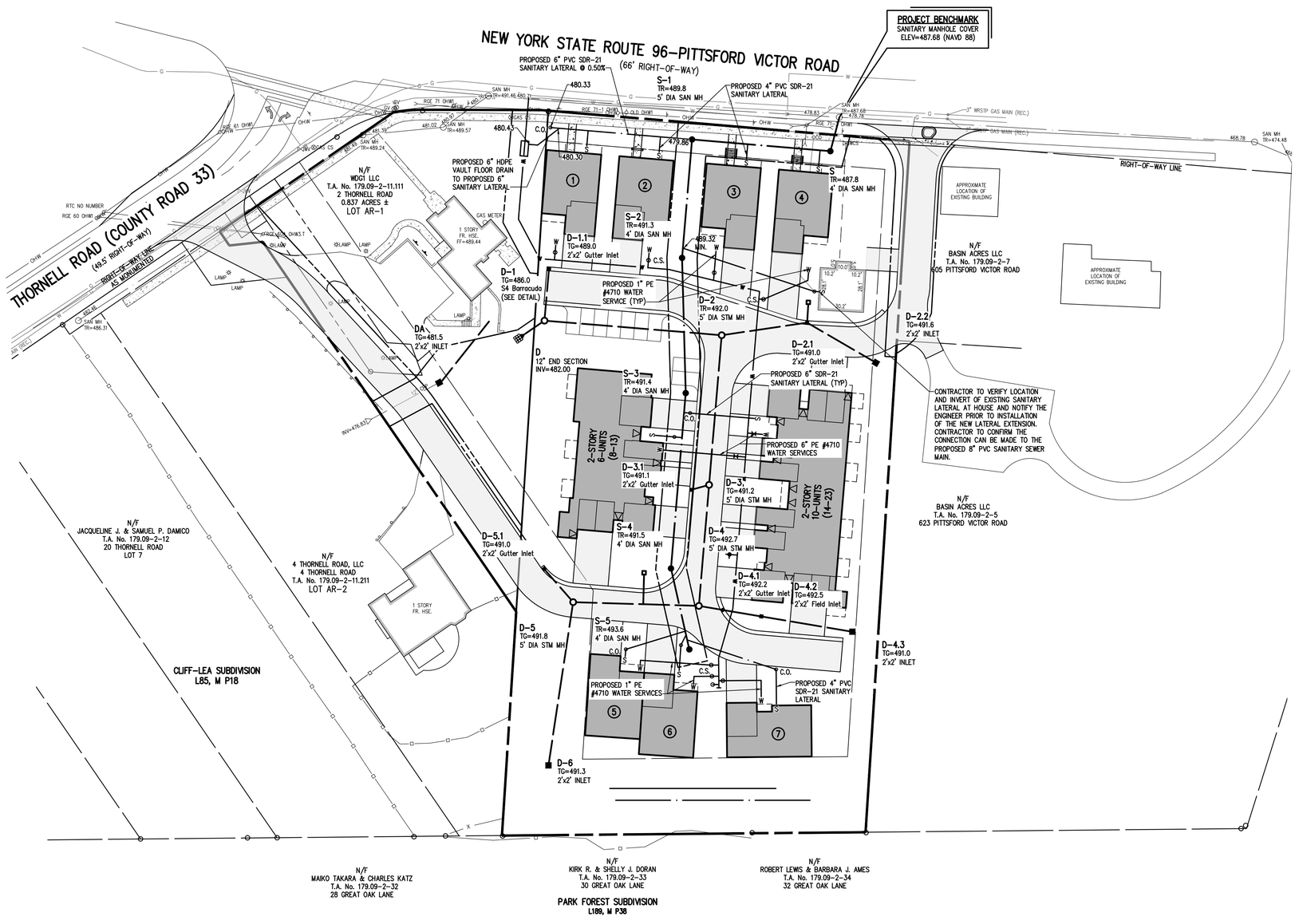
PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: WDG2, LLC. P.O. BOX 34 PITTSFORD, NY, 14534
DRAWING TITLE: PRELIMINARY/FINAL CONSTRUCTION EROSION CONTROL PLAN

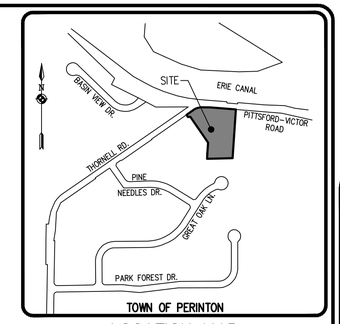
PROJECT MANAGER: P. VARS/R. DESTRO
PROJECT ENGINEER: F. SHELLEY
DRAWN BY: D. TURNER
SCALE: 1" = 40'
DATE ISSUED: NOVEMBER 14, 2025
PROJECT NO.: 2850
DRAWING NO.: 09

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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LOCATION MAP
NOT TO SCALE

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	REVISIONS	DATE	BY

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WWW.BMEPC.COM

STATE OF NEW YORK
BRIAN THOMAS DESTRO
093809
LICENSED PROFESSIONAL ENGINEER

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 LATERAL PLAN

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.	10

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 (C.S.)
- PROPOSED SANITARY LATERAL (C.O.)

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

APPROVALS

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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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LANDSCAPE NOTES:

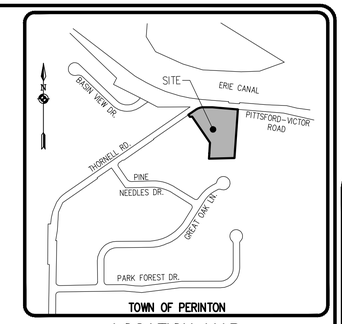
1. ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS AS NOTED IN THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION, ANSI Z60.1–2004.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY TAKEOFFS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE 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:

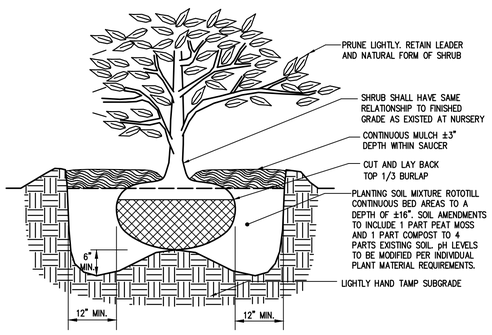
	LBS/ACRE	% BY PURITY	% GERM
'REPELL', 'CITATION' & 'MORNING STAR' PERENNIAL RYE GRASS	35	85	85
'JAMESTOWN II', 'FORTRESS', 'ENSYLVA' RED FESCUE	35	97	80
'BARON' & 'MIDNIGHT' KENTUCKY BLUEGRASS	30	85	80

   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.

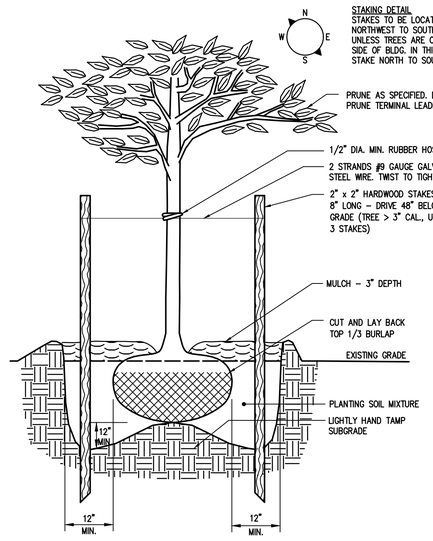
   PLEASE REFER TO BME DRAWING # 2850–09 / EROSION CONTROL PLAN FOR FURTHER SEEDING REQUIREMENTS IE. : TEMPORARY SEEDING AND SPECIALIZED SEED MIXES.
9. PROPOSED PLANT MATERIALS SHALL BE FIELD LOCATED, AND THE CONTRACTOR SHALL PERFORM A ROUGH STAKEOUT OF PLANTINGS FOR REVIEW AND APPROVAL BY OWNER PRIOR TO 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



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	TREES					
XX						
3	AC	Abies concolor	Concolor Fir	5–6' Ht.	B&B	
5	AF	Acer x freemanii 'Autumn Blaze'	Autumn Blaze Maple	2–2.5" cal	B&B	
4	GT	Gleditsia triacanthos var. inermis 'Shademaster'	Thornless Honeylocust	2–2.5" cal	B&B	
2	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.

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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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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REVISIONS

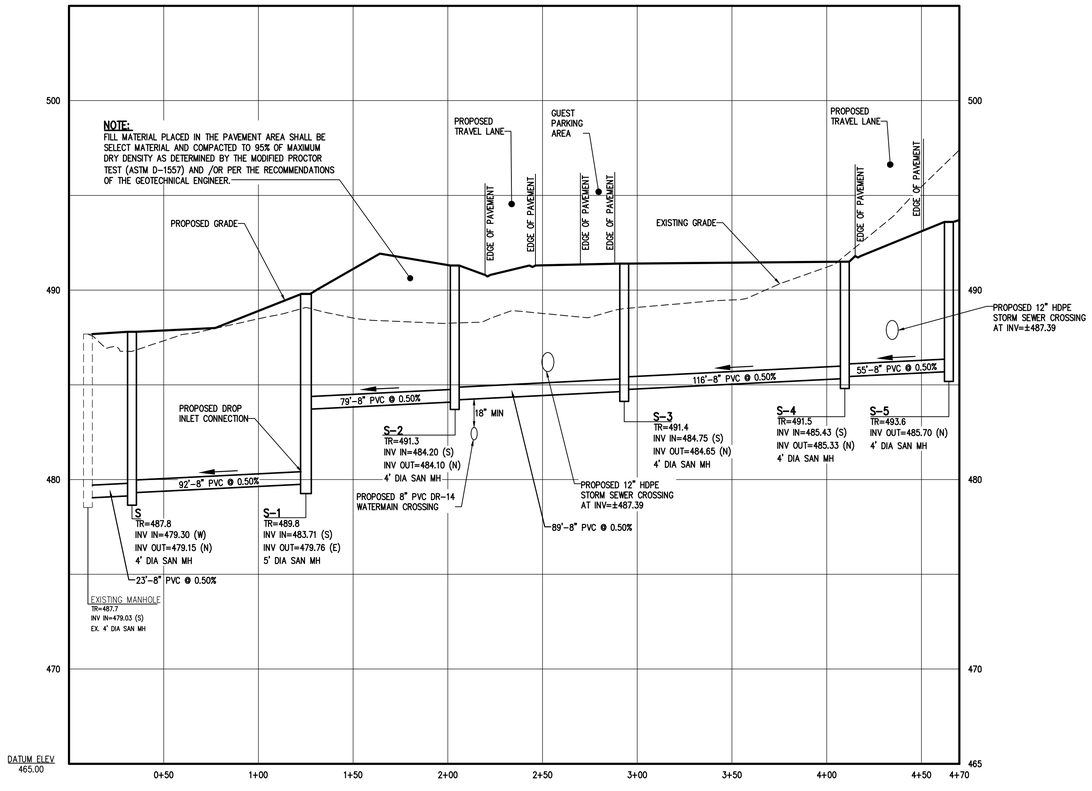
BME ASSOCIATES
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10 LIFT BRIDGE LANE EAST
FAIRPORT, NEW YORK 14450
PHONE 585-377-7360
FAX 585-377-7309
WWW.BMEPC.COM

REGISTERED LANDSCAPE ARCHITECT — JAMES P. ROBINSON — NEW YORK

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: LANDSCAPE 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



PROPOSED SANITARY SEWER PROFILE

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

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	REVISIONS	DATE	BY
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LICENSED PROFESSIONAL ENGINEER
STATE OF NEW YORK
BRIAN THOMAS DESTRO
093805

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

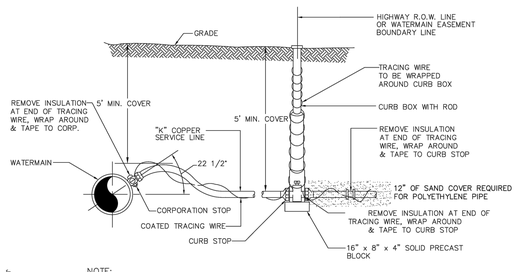
PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 63, TAX MAP NUMBER 179.09-2-8, 179.09-2-9, 179.09-2-10, 179.09-2-11.111

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.

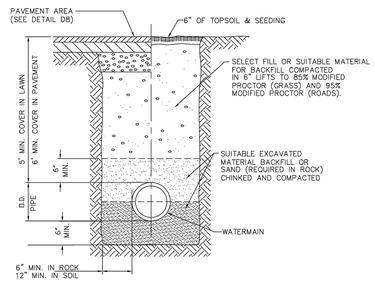


NOTE:
INSULATED 10 OR 12 GAUGE TRACING WIRE AND SAND INCASEMENT TO BE USED WITH POLYETHLENE PLASTIC SERVICE ONLY. SAND COVER TO BE 6" BELOW/ 6" ABOVE.

D28
JANUARY 2021

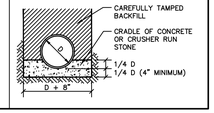
WATERMAIN TRENCH DETAIL

NTS



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.

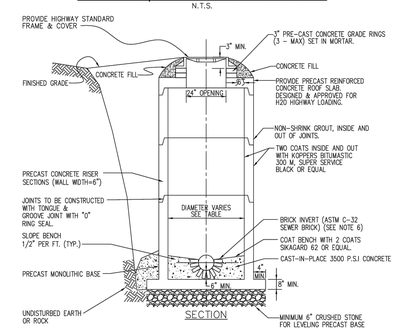


WATERMAIN/SEWER CROSSING DETAIL

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

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."

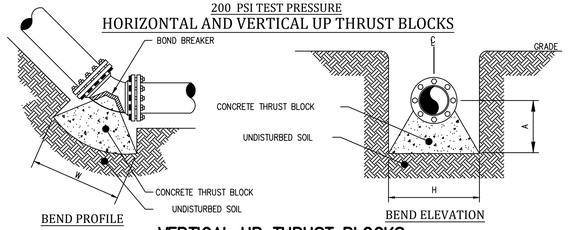
REVISIONS	DATE	BY
7		
6		
5		
4		
3		
2		
1		

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.

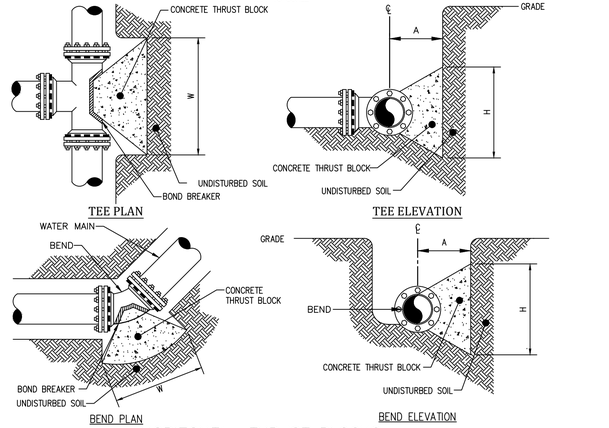
SOIL BEARING STRENGTH - 2,000 PSF
200 PSI TEST PRESSURE

HORIZONTAL AND VERTICAL UP THRUST BLOCKS



VERTICAL UP THRUST BLOCKS

NOT TO SCALE

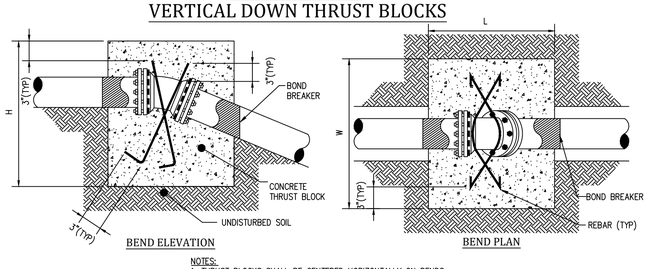


HORIZONTAL THRUST BLOCKS

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

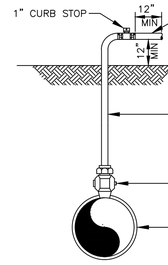


NOTES:
1. THRUST BLOCKS SHALL BE CENTERED HORIZONTALLY ON BENDS.
2. VOLUMES SHOWN IN CHART ARE MINIMUMS.

VERTICAL DOWN THRUST BLOCKS

NOT TO SCALE

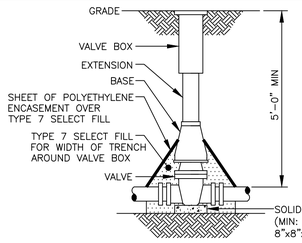
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NOTE: IN THE PRESENCE OF A WATER AUTHORITY REPRESENTATIVE REMOVE ALL CORPORATIONS ASSOCIATED WITH TEMPORARY DISINFECTION/SAMPLE TAPS AND REPLACE WITH THREADED BRASS PLUGS.

DISINFECTION/BLOW-OFF/SAMPLING TAP (TEMPORARY)

NOT TO SCALE

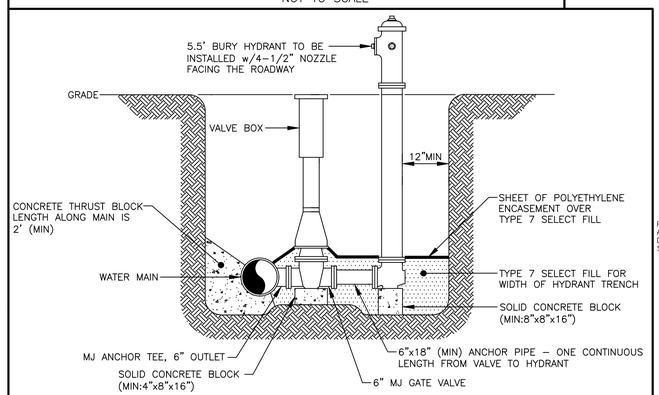


NOTES:

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

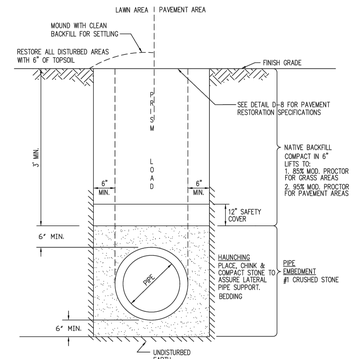


PERPENDICULAR HYDRANT ASSEMBLY

NOT TO SCALE

SEWER TRENCH DETAIL

NTS

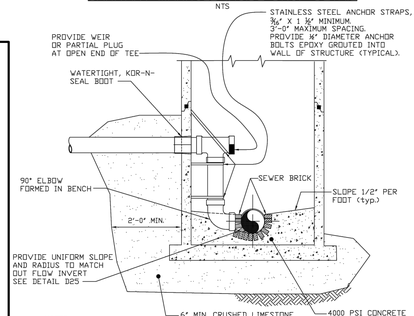


NOTE:
SAFETY COVER IS DEFINED AS NATIVE, CLEAN BACKFILL MATERIAL THAT IS FREE OF ORGANICS OR OTHER DELETERIOUS MATERIAL, INCLUDING ROCKS SIZED OVER 3-INCHES IN ANY DIRECTION.

D36
JANUARY 2021

SANITARY MANHOLE INSIDE DROP DETAIL

NTS



NOTES:

1) FITTINGS TO BE GPK SOLVENT WELD JOINTS MATCHING THE MATERIAL OF THE INCOMING PIPE (SDR–35 OR SDR–21). MINIMUM DROP REQUIRED FOR 8" SDR–35 PIPE IS 32".

2) THIS DETAIL IS INTENDED TO SHOW ONLY ITEMS SPECIFIC TO DROP MANHOLE. REFER TO SANITARY SEWER MANHOLE STANDARD SHEET FOR DETAILED SPECIFICATIONS RELATING TO THE ENTIRE STRUCTURE.

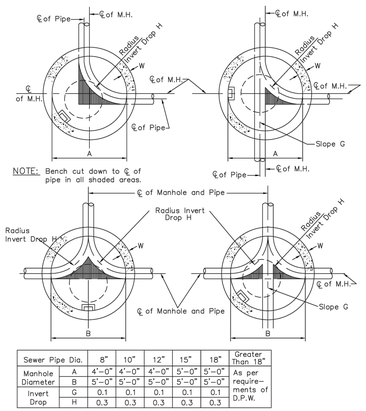
3) ENGINEERED DETAILS ARE REQUIRED IF INCOMING PIPE SLOPE IS 5% OR GREATER.

4) THE COMMISSIONER OF PUBLIC WORKS SHALL DETERMINE THE MINIMUM MANHOLE DIAMETER REQUIRED BASED ON INCOMING PIPE SIZE.

D24
JANUARY 2021

STANDARD MANHOLE DIMENSIONS

NTS



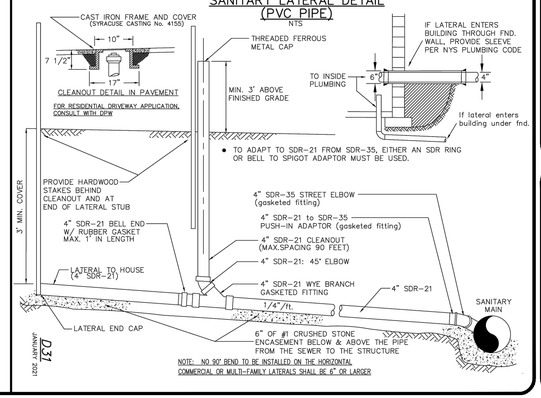
Sewer Pipe Dia.		8"	10"	12"	15"	18"	Greater Than 18"
Manhole Diameter	A	4'–0"	4'–0"	4'–0"	5'–0"	5'–0"	As per require–ments of D.P.W.
	B	5'–0"	5'–0"	5'–0"	5'–0"	5'–0"	
Invert Drop	G	0.1	0.1	0.1	0.1	0.1	
	H	0.3	0.3	0.3	0.3	0.3	

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

SANITARY LATERAL DETAIL (PVC PIPE)

NTS



D31
JANUARY 2021

BME ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
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FAIRPORT, NEW YORK 14450 FAX 585-377-7309
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STATE OF NEW YORK
BRIAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

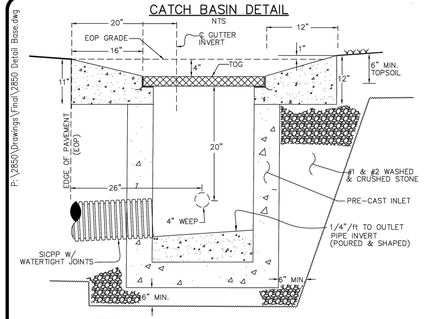
HARTWELL HEIGHTS
PROJECT
TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
LOCATION
WDG2, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534
CLIENT
PRELIMINARY/FINAL
DETAIL SHEET
DRAWING TITLE

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)

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

CATCH BASIN DETAIL

NTS



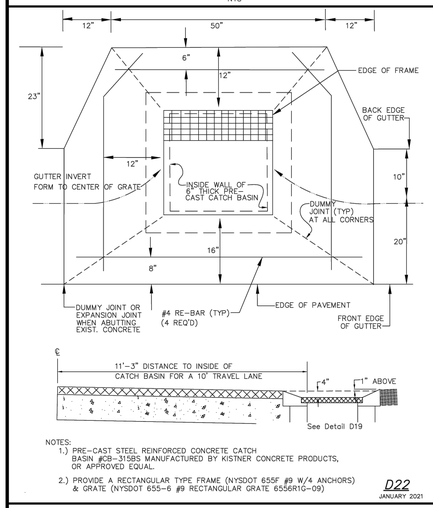
NOTES:

1. PRECAST STEEL REINFORCED CONCRETE CATCH BASIN #CB-315BS 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:

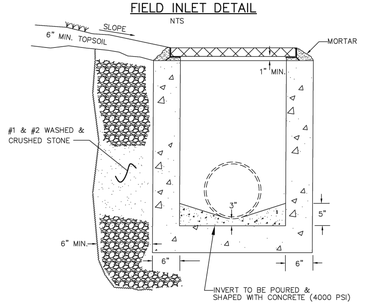
1.) PRE-CAST STEEL REINFORCED CONCRETE CATCH BASIN #CB-315BS MANUFACTURED BY KISTNER CONCRETE PRODUCTS, OR APPROVED EQUAL.

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

D22
JANUARY 2021

FIELD INLET DETAIL

NTS



NOTES:

1. PRECAST STEEL REINFORCED CONCRETE CATCH BASIN MANUFACTURED BY KISTNER (CB-315BS) 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.

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D20
JANUARY 2021

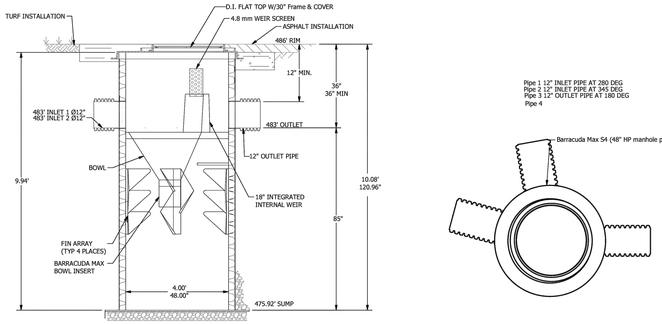
BARRACUDA MAX S4	
UNIT ID	Barracuda
PEAK FLOW RATE (CFS)	
TREATMENT FLOW RATE (CFS)	0.22

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 d50=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
PERRINTON,NY
DATE: 1/13/25
DRAWING:
PROJECT #: 2850
DESIGNED:
DRAWN:
CHECKED:
XX
DATE | DESCRIPTION | BY
REVISIONS

Barracuda Max
Stormwater Separator

ADS
4640 TRUEMAN BLVD
HILLIARD, OH 43026

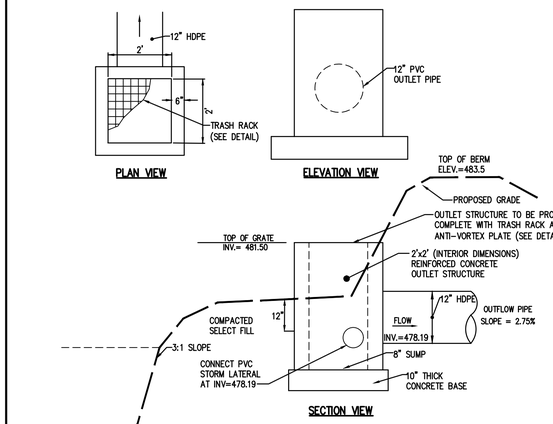
NOT TO SCALE

SHEET
2 OF 2

THIS DRAWING AND DESIGN PRESENTED HEREON ARE PROPRIETARY TO ADS, UNDER THE LAWS OF THE USA. ANY DISCLOSURE OR OTHER USE OF THIS DRAWING OR DESIGN WITHOUT WRITTEN PERMISSION OF ADS IS STRICTLY PROHIBITED AND WILL BE ENFORCED TO THE FULLEST EXTENT OF THE LAW. ADS RESERVES THE RIGHT TO ENFORCE ITS INTELLECTUAL PROPERTY RIGHTS IN ALL APPROPRIATE FORUMS.

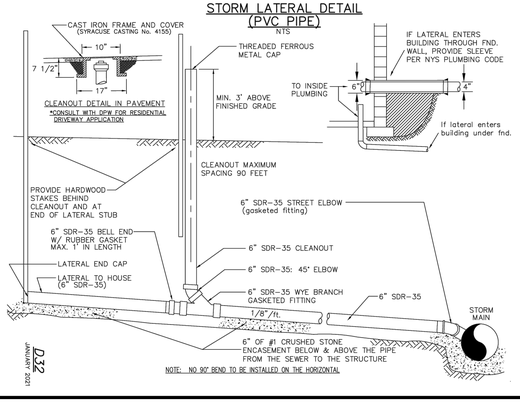
STORM WATER MANAGEMENT FACILITY OUTLET STRUCTURE DETAIL

N.T.S.



STORM LATERAL DETAIL (PVC PIPE)

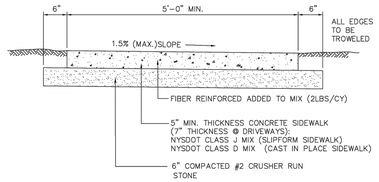
NTS



D17
JANUARY 2021

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

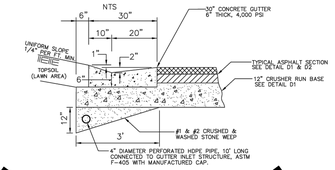
*SPECIAL NOTE

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

GUTTER WITH STONE WEEP & UNDERDRAIN STANDARD / COLLECTOR ROAD SECTION

NTS

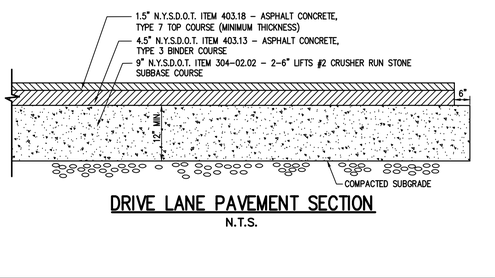


GUTTER WITH STONE WEEP PRIVATE ROAD SECTION

NTS

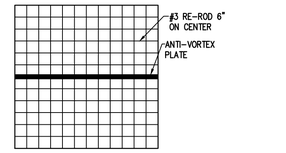


D6
JANUARY 2021

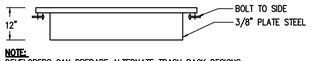


DRIVE LANE PAVEMENT SECTION

N.T.S.



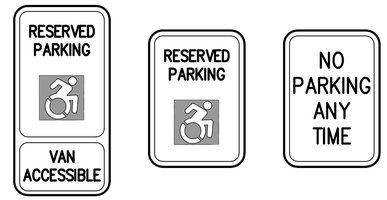
ANTI-VORTEX PLATE



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

TRASH RACK DETAIL

N.T.S.

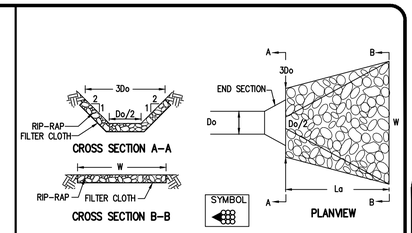


NOTES:

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.



RIP-RAP OUTLET DIMENSIONS

DESIGNATION	DIA. OF PIPE Do	3Do	La	W
D	–	–	–	–
DA	–	–	–	–

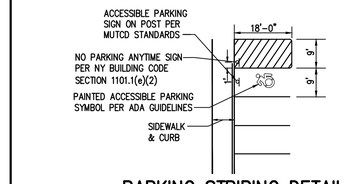
RIP-RAP OUTLET PROTECTION DETAIL

N.T.S.



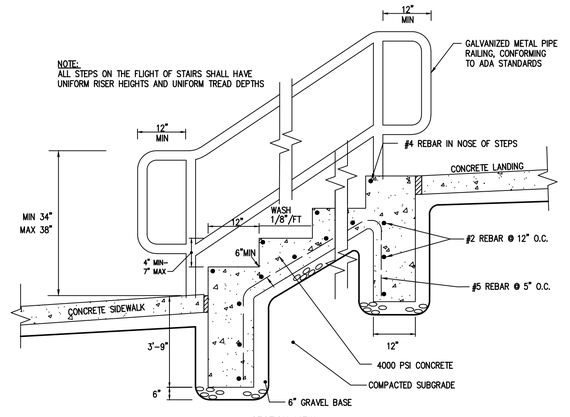
ACCESSIBLE PARKING SYMBOL DETAIL

N.T.S.



PARKING STRIPING DETAIL

N.T.S.



SECTION VIEW

CONCRETE STEPS WITH RAILING DETAIL

N.T.S.

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
7			
6			
5			
4			
3			
2			
1			

BME ASSOCIATES
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STATE OF NEW YORK
RYAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

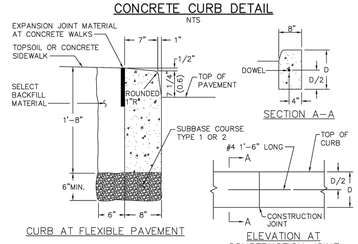
HARTWELL HEIGHTS
PROJECT
TOWN OF TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
LOCATION
WDG2, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534
CLIENT
PRELIMINARY/FINAL
DETAIL SHEET
DRAWING TITLE

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.	
14	
(SHEET 2 OF 3)	

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CONCRETE CURB DETAIL

NTS



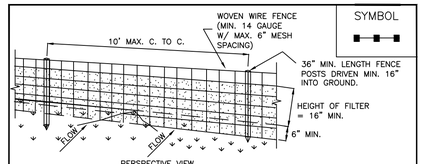
NOTES:

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

SILT FENCE

SYMBOL



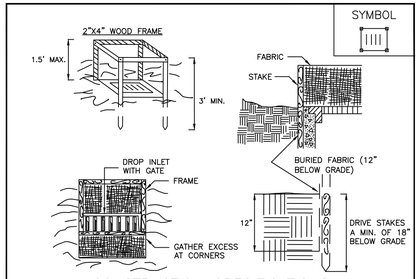
CONSTRUCTION SPECIFICATIONS

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

FABRIC DROP INLET PROTECTION

SYMBOL



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.

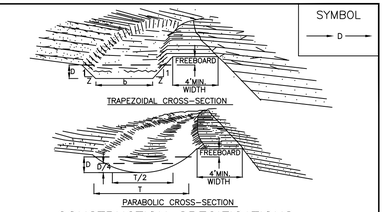
MAXIMUM DRAINAGE AREA 1 ACRE

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

DIVERSION

SYMBOL

D



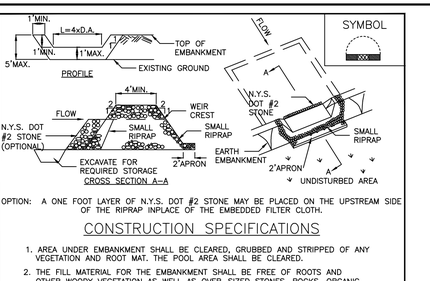
CONSTRUCTION SPECIFICATIONS

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

PAVEMENT RESTORATION – TRENCH DETAIL

N.T.S.



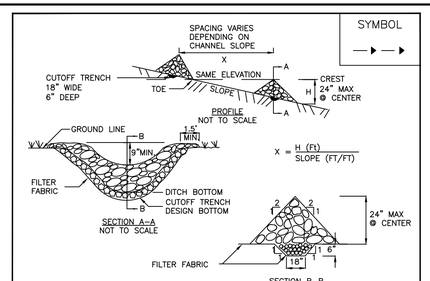
NOTES:

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

DIVERSION

SYMBOL

D



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

STABILIZED CONSTRUCTION ACCESS

SYMBOL

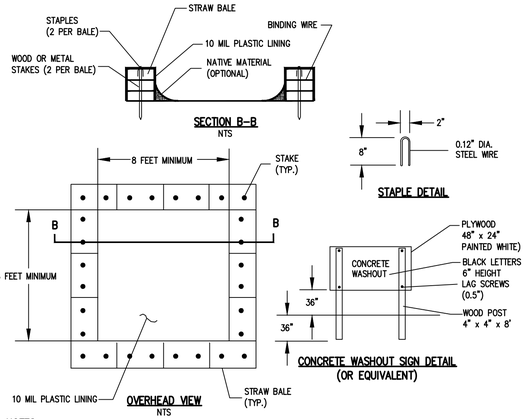
CONSTRUCTION SPECIFICATIONS

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

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

CONCRETE WASHOUT DETAIL

N.T.S.



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.

STONE OUTLET SEDIMENT TRAP ST-II

SYMBOL

XX

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 DIMENSIONS 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 CHECK DAM

SYMBOL

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

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Drawing Alteration

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BY	DATE	REVISIONS
7	6	5	4	3	2	1

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PHONE 585-377-7360
FAX 585-377-7309

STATE OF NEW YORK
BRIAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

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 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.	
15	
(SHEET 3 OF 3)	



Hartwell Heights

Wilmot Development Group, LLC
Pittsford, NY

Street View Along Rt. 96

Looking Northwest

James Fahy Design Associates
Architecture & Engineering P.C.
Rochester, NY



Hartwell Heights
Wilmot Development Group, LLC
Pittsford, NY

Front Elevation
Single Family No. 4 & 3

James Fahy Design Associates
Architecture & Engineering P.C.
Rochester, NY



Hartwell Heights

Wilmot Development Group, LLC
Pittsford, NY

Front Elevation

Single Family No. 2 & 1

James Fahy Design Associates
Architecture & Engineering P.C.
Rochester, NY



Hartwell Heights

Wilmot Development Group, LLC
Pittsford, NY

Front Elevation

10-Unit Apartment

James Fahy Design Associates
Architecture & Engineering P.C.
Rochester, NY



Hartwell Heights
Wilmot Development Group, LLC
Pittsford, NY

Rear Elevation
10-Unit Apartment

James Fahy Design Associates
Architecture & Engineering P.C.
Rochester, NY



Hartwell Heights

Wilmot Development Group, LLC
Pittsford, NY

Front Elevation

6-Unit Apartment

James Fahy Design Associates
Architecture & Engineering P.C.
Rochester, NY



Hartwell Heights

Wilmot Development Group, LLC
Pittsford, NY

Front Elevation

Duplex No. 6 & 5

James Fahy Design Associates
Architecture & Engineering P.C.
Rochester, NY



Hartwell Heights
Wilmot Development Group, LLC
Pittsford, NY

Front Elevation
Single Family No. 7

James Fahy Design Associates
Architecture & Engineering P.C.
Rochester, NY

PRELIMINARY SITE PLAN REVIEW

PROJECT NAME Hartwell Heights

This CHECKLIST is for use by the applicant as a guide to insure that all necessary information has been provided on the maps.

The checklist should be completed by the applicant and submitted along with the application sheet.

If the applicant is proposing a new project of a sizeable nature or a significant change to a current project, if may be to their best interest to appear before the Board for an informal discussion prior to preparing the detailed plans as required below.

If variances will be required from the Zoning Board of Appeals, the applicant should first appear before the Planning Board on an informal basis to obtain a recommendation to the Zoning Board of Appeals. This should help to minimize any future conflicts later on.

This proposal may be required to be reviewed by Monroe County, pursuant to Section 239m of the General Municipal Law. The appropriate referral form may be obtained from the Town of Perinton Planning Board Secretary.

1. Area map of applicant's entire holding, showing subdivisions, streets and easements within 100 feet of applicant's property. Adjacent land use including buildings, pavement, landscaping, topography, ownership and zoning should also be shown.
   ☑ Shown ☐ N/A

2. Topographic Map with 5 feet elevation contours if grades exceed 3% or susceptibility to erosion, flooding or ponding. Otherwise, contours and spot elevations at 1 or 2-foot intervals should be shown.
   ☑ Shown ☐ N/A

3. Also to include:
   a. Title of drawing ☑ Shown ☐ N/A
   b. Name and address ☑ Shown ☐ N/A
   c. North point, scale and date ☑ Shown ☐ N/A
   d. Boundaries of the property, plotted to scale ☑ Shown ☐ N/A
   e. Existing watercourses, Town LDD limits and State Wetland with buffer area must be shown ☐ Shown ☑ N/A
   f. Proposed use and height of all buildings ☑ Shown ☐ N/A
   g. Show parking and truck loading areas, provide breakdown as per square foot uses in the building to meet parking ordinance. ☑ Shown ☐ N/A
   h. Show access and egress drives ☑ Shown ☐ N/A
   i. Location of all outdoor storage ☐ Shown ☑ N/A

4. Show existing and/or proposed site improvements:
   a. Sidewalk easement ☐ Shown ☑ N/A
   b. Sidewalk ☑ Shown ☐ N/A
   c. Drains ☑ Shown ☐ N/A
   d. Culverts ☑ Shown ☐ N/A

e. Retaining walls and fences	☑ Shown	☐ N/A	(Existing Shown)
f. Storm water drainage	☑ Shown	☐ N/A	
g. Sanitary sewage	☑ Shown	☐ N/A	
h. Size and location of all signs	☐ Shown	☑ N/A	
i. Buffer areas	☑ Shown	☐ N/A	
j. Design and location of lighting facilities	☐ Shown	☑ N/A	(Building Mounted Lights)
k. Show building area for retail sales	☐ Shown	☑ N/A	
l. Curbs	☑ Shown	☐ N/A	
5. Landscape plan shall be included	☑ Shown	☐ N/A	
6. Erosion control plan shall be included	☑ Shown	☐ N/A	
7. Conservation Easement	☐ Shown	☑ N/A	
8. Limited Development District, areas indicated	☐ Shown	☑ N/A	

SITE PLAN MAPS

Special attention should be given to the following items, as they are more often excluded from the site plan. Section 208-53B(3) requires these items to be part of the approval process but does not limit consideration to just these items. If an applicant is looking to expedite an application, it is most important that these details are shown on the site plan. Exclusion results in time and money loss with dissatisfied clients.

✓ 1. LANDSCAPING - include location, caliber, species, differentiate between existing and proposed. Show planting schedule.

N/A 2. LIGHTING – include height of pole, style of fixture, foot-candles, area coverage per fixture and location. Poles shall not exceed 16 feet in height.

N/A 3. DUMPSTERS AND REFUSE – location, landscaping, building material enclosure and elevations. Enclosure should be compatible with building.

N/A 4. SIGNAGE – location, true colored rendering drawn to scale showing size of sign, size of lettering, type of construction, lighting, structural details when attached to building, elevation drawing of building face to scale. In addition, signage requires a separate application to the Planning Board Sign Committee.

✓ 5. SIDEWALKS – location, construction, easements. Check Town Sidewalk Map to verify if required.

N/A 6. MECHANICALS – show building or ground mounted locations, show enclosure elevations and construction materials or landscaping to protect from visual pollution on the site and off the side.

✓ 7. EROSION CONTROL PLANS

N/A 8. LIMITED DEVELOPMENT DISTRICT AREAS – show flooding and ponding, wooded areas, steep slopes subject to erosion, areas where development poses a threat to the public health, safety and welfare of the Town of Perinton.

✓ 9. EASEMENTS AND DIMENSION – show and label.

✓ 10. VARIANCES OR SPECIAL PERMITS – when granted by the Board of Appeals, indicate on site plan date granted and type of approval.

The above items **DO NOT EXCLUDE** other items as described under Article X Section 208-53 Site Plan Approval.

Review Completed By BME Associates (Ryan T. Destro, P.E.) Date 11/13/2025

Map No. BME dwg #'s 2850 03-15 Date 11/13/2025

12/9/2019

FINAL SITE PLAN REVIEW

PROJECT NAME Hartwell Heights

This CHECKLIST is for use by the applicant as a guide to insure that all necessary information has been provided on the maps.

The checklist should be completed by the applicant and submitted along with the application sheet.

Preliminary Site Plan Approval was granted on Pending.
If more than six (6) months has lapsed since Preliminary Approval was granted, the Planning Board and/or the applicant may ask to rehear the Preliminary before proceeding with a Final Site Plan hearing.

1. The Final Plan must contain all information as required under the Preliminary phase.
   ☑ Shown ☐ N/A

2. The plan shall address all conditions of Preliminary Approval in accordance with the minutes of that approval and any subsequent meetings or discussions.
   ☐ Shown ☑ N/A

3. All required Zoning Board variances should have been obtained and must be shown in tabular form on the site plan drawing.
   ☐ Shown ☑ N/A

4. If the project is located on a State or County Highway, the applicant must provide some form of acknowledgement from that agency indicating their acceptance for the proposed site plan.
   ☑ Shown ☐ N/A (See Engineer's Report)

The Final set of plans includes the following sheets:

Cover Sheet, Consolidation Plan, Site Plan

Existing Conditions/Demo Plan, Utility, Grading

Construction Erosion Control, Lateral, Landscape Plan

Profile Sheet & Detail Sheets

Final Site Plan Approval Expiration Date _____

Final Site Plan Approval expires one year from the date of approval.
Subsequently re-approval from the Planning Board would be required.
Date _____

Review Completed By BME Associates (Ryan T. Destro, P.E.) Date 11/13/2025

Map No. BME dwg #'s 2850 03-15 Date 11/13/2025

/2005

MONROE COUNTY CLERK'S OFFICE

THIS IS NOT A BILL. THIS IS YOUR RECEIPT.

Receipt # 3086935

Book Page D 12666 0603

No. Pages: 4

Instrument: DEED OTHER

Control #: 202205240783
Ref #: TT0000019195

Date: 05/24/2022

Time: 1:00:33 PM

Return To:
Harris Beach PLLC
99 Garnsey Rd
Pittsford, NY 14534

ME PROPERTY HOLDINGS LLC,

WDG1 LLC,

Recording Fee	$26.00
Pages Fee	$15.00
State Fee Cultural Education	$14.25
State Fee Records Management	$4.75
TP-584 Form Fee	$5.00
RP-5217 County Fee	$9.00
RP5217 State Equal Addit Fee	$241.00
Total Fees Paid:	$315.00

Employee: ED

State of New York

MONROE COUNTY CLERK'S OFFICE
WARNING – THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 317-a(5) & SECTION 319 OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

Consideration: $1.00

JAMIE ROMEO

MONROE COUNTY CLERK



Please record and return to:

BARGAIN AND SALE DEED

THIS INDENTURE made this 12th day of May, 2022, between

ME PROPERTY HOLDINGS LLC, a New York limited liability company, with an address of 4380 Lincolnwood Drive, Canandaigua, New York 14424,

party of the first part, and

WDG1 LLC, a New York limited liability company, with an address of 4380 Lincolnwood Drive, Canandaigua, New York 14424,

party of the second part,

WITNESSETH, that the parties of the first part, in consideration of One and 00/100 Dollar ($1.00) lawful money of the United States, and other good and valuable consideration, paid by the party of the second part, does hereby grant and release unto the party of the second part, their heirs and assigns forever,

ALL THAT PARCEL OF LAND, situate in the Town of Perinton, County of Monroe and State of New York, being more particularly bounded and described on Schedule A attached hereto and made a part hereof (hereinafter called the "Property").

Tax ID No.: 179.09-2-11.1
Property Address: 2 Thornell Road, Perinton, New York 14534
Tax Mailing Address: PO Box 34, Pittsford, NY 14534.

BEING the same premises conveyed to the parties of the first part by Bryce Realty, LLC by Warranty Deed dated January 21, 2010 and recorded in the Monroe County Clerk's Office on February 1, 2010 in Liber 10841 of Deeds at Page 172.

SUBJECT TO all covenants, conditions, easements and restrictions of record and the state of facts a current survey and/or inspection of the premises would reveal.

TOGETHER with the appurtenances and all the estate and rights of the parties of the first part in and to said premises,

TO HAVE AND TO HOLD the premises herein granted unto the party of the second part, his heirs and assigns forever.

AND, the parties of the first part covenants that the parties of the first part has not done or suffered anything whereby the said premises have been encumbered in any way whatever, except as aforesaid.

AND, the parties of the first part covenants that, in compliance with Section 13 of the Lien Law, the grantor will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of

Please record and return to:

the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose.

IN WITNESS WHEREOF, the parties of the first part has duly executed this deed as of the day and year first above written.

ME PROPERTY HOLDINGS LLC

Molly Branch Shill, Sole Member

STATE OF NEW YORK)
) ss.:
COUNTY OF Monroe)

On the 12 day of May, in the year 2022 before me, the undersigned, a Notary Public in and for said State, personally appeared **Molly Branch Shill**, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

Armand A. D'Alfonso
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 02DA6407596
Qualified in Monroe County
Commission Expires June 22, 2024

Schedule A

Legal Description

Property Address: 2 Thornell Road, Town of Perinton, New York 14534

Tax Account No.: 179.09-2-11.1

2 Thornell Road: (Tax ID: 179.09-2-11.1)

ALL THAT TRACT OR PARCEL OF LAND, SITUATE IN THE TOWN OF PERINTON, COUNTY OF MONROE AND STATE OF NEW YORK, DESCRIBED AS FOLLOWS:

LOT 1 OF THE H. ROBERT SCHOENBERGER SUBDIVISION AS SHOWN ON A MAP OF THE SUBDIVISION FILED IN THE MONROE COUNTY CLERK'S OFFICE IN LIBER 304 OF MAPS, PAGE 36.

TOGETHER WITH THE BENEFITS AND SUBJECT TO THE BURDENS OF EASEMENTS ESTABLISHED BY

DECLARATION DATED MAY 23, 2000 AND RECORDED MAY 26, 2000 IN LIBER 9314 OF DEEDS, PAGE 121.

MONROE COUNTY CLERK'S OFFICE

THIS IS NOT A BILL. THIS IS YOUR RECEIPT.

Receipt # 3172428

Book Page D 12709 0413

No. Pages: 4

Instrument: DEED OTHER

Control #: 202208220240
Ref #: TT0000001538

Date: 08/22/2022

Time: 10:05:38 AM

Return To:
Harris Beach PLLC
99 Garnsey Rd
Pittsford, NY 14534

WDG4 LLC,

WDG1 LLC,

Recording Fee	$26.00
Pages Fee	$15.00
State Fee Cultural Education	$14.25
State Fee Records Management	$4.75
TP-584 Form Fee	$5.00
RP-5217 County Fee	$9.00
RP5217 State Equal Addit Fee	$241.00
Total Fees Paid:	$315.00

Employee: XC

State of New York

MONROE COUNTY CLERK'S OFFICE
WARNING – THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 317-a(5) & SECTION 319 OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

Consideration: $1.00

JAMIE ROMEO

MONROE COUNTY CLERK

R&R to:
Harris Beach PLLC
99 Garnsey Road
Pittsford, NY 14534
Attn: Kevin Overton, Esq.

QUIT CLAIM DEED

THIS INDENTURE, made the 15th day of August, 2022, between

WDG4 LLC, a New York limited liability company, having an address of 3 Fitzmot Glen, Pittsford, New York 14534,

Grantor,

WDG1 LLC, a New York limited liability company, having an address of 3 Fitzmot Glen, Pittsford, New York 14534,

Grantee;

WITNESSETH, that Grantor, in consideration of One Dollar lawful money of the United States and other good and valuable consideration paid by Grantee, does hereby remise, release and quitclaim unto Grantee, its successors and assigns forever,

ALL THAT TRACT OR PARCEL OF LAND situate in the Town of Perinton, County of Monroe and State of New York as set forth and described in SCHEDULE "A" attached hereto and made a part hereof.

SUBJECT to all covenants, easements and restrictions of record, if any affecting said premises.

BEING and hereby intending to convey a part of the premises conveyed to Grantor by deed dated May 12, 2022 and recorded in the Monroe County Clerk's Office on May 24, 2022 at Liber 12666 of Deeds, page 607.

Part of Tax Map Number: 179.09-2-11.2

Part of Property Address: 4 Thornell Road
Pittsford, NY 14534

Consideration for this conveyance is less than $100.00.

TOGETHER with the appurtenances and all the estate and rights of Grantor in and to said premises.

TO HAVE AND TO HOLD the premises herein granted unto Grantee, its successors and assigns forever.

The Grantor, in compliance with Section 13 of the Lien Law, covenants that the Grantor will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose.

IN WITNESS WHEREOF, Grantor has executed this deed the day and year first above written.

WDG4 LLC, a New York limited liability company

By: Wilmot Development Group, LLC
Its: Sole Member

By: _____
Name: Dennis A. Wilmot
Title: Sole Member

STATE OF NEW YORK)
COUNTY OF MONROE) ss.:

On the 22nd day of August in the year 2022 before me, the undersigned, a notary public in and for said state, personally appeared DENNIS A. WILMOT, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacities, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

KEVIN L OVERTON
Notary Public, State of New York
No. 02OV6278256
Qualified in Ontario County
Commission Expires March 25, 2025

SCHEDULE A

Parcel 1 to be conveyed to WDG1 LLC

All that tract or parcel of land situated in Town Lot 63, Township 12, Range 4, Phelps and Gorham Purchase, Town of Perinton, County of Monroe, State of New York, bounded and described as follows:

Beginning at the northeast corner of Lot 2 of the H. Robert Schoenberger Subdivision as filed in Liber 304 of Maps, at page 36;

1) thence South 34°25'34" East for a distance of 35.41 feet to a point;
2) thence South 83°45'15" West for a distance of 33.62 feet to a point;
3) thence North 34°25'34" West for a distance of 19.53 feet to a point;
4) thence North 55°34'26" East for a distance of 29.63 feet to the point of beginning;

said parcel having an area of 814 square feet, 0.019 acres more or less.

Parcel 2 to be conveyed to WDG1 LLC

All that tract or parcel of land situated in Town Lot 63, Township 12, Range 4, Phelps and Gorham Purchase, Town of Perinton, County of Monroe, State of New York, bounded and described as follows:

Beginning at the southeast corner of Lot 1 of the H. Robert Schoenberger Subdivision as filed in Liber 304 of Maps, at page 36;

5) thence South 03°38'54" West for a distance of 80.00 feet to a point;
6) thence North 37°32'14" West for a distance of 106.30 feet to a point;
7) thence South 86°21'04" East for a distance of 70.00 feet to the point of beginning;

said parcel having an area of 2800 square feet, 0.064 acres more or less.

MONROE COUNTY CLERK'S OFFICE

THIS IS NOT A BILL. THIS IS YOUR RECEIPT.

Receipt # 3504239

Book Page D 12840 0219

No. Pages: 4

Instrument: CORRECTION DEED

Control #: 202307201575
Ref #: TT0000020767

Date: 07/20/2023

Time: 5:04:31 PM

Return To:
Harris Beach PLLC
99 Garnsey Rd
Pittsford, NY 14534

WDG4 LLC,

WDG1 LLC,

Recording Fee	$26.00
Pages Fee	$15.00
State Fee Cultural Education	$14.25
State Fee Records Management	$4.75
TP-584 Form Fee	$5.00
RP-5217 County Fee	$9.00
RP5217 State Equal Fee	$116.00
Total Fees Paid:	$190.00

Employee: NB

State of New York

MONROE COUNTY CLERK'S OFFICE
WARNING – THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 317-a(5) & SECTION 319 OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

Consideration: $1.00

JAMIE ROMEO

MONROE COUNTY CLERK



R&R to:
Harris Beach PLLC
99 Garnsey Road
Pittsford, NY 14534
Attn: Kevin Overton, Esq.

CORRECTION QUIT CLAIM DEED

[This instrument is being presented to correct the instrument recorded in the Yates County Clerk's Office on July 7, 2023 in Liber 12834 of Deeds, page 332. This instrument corrects the grantor, grantee and property address of the property to be conveyed.]

THIS INDENTURE, made the 18 day of July, 2023, between

WDG4 LLC, a New York limited liability company, having an address of 3 Fitzmot Glen, Pittsford, New York 14534,

Grantor,

WDG1 LLC, a New York limited liability company, having an address of 3 Fitzmot Glen, Pittsford, New York 14534,

Grantee;

WITNESSETH, that Grantor, in consideration of One Dollar lawful money of the United States and other good and valuable consideration paid by Grantee, does hereby remise, release and quitclaim unto Grantee, its successors and assigns forever,

ALL THAT TRACT OR PARCEL OF LAND situate in the Town of Perinton, County of Monroe and State of New York as set forth and described in SCHEDULE "A" attached hereto and made a part hereof.

SUBJECT to all covenants, easements and restrictions of record, if any affecting said premises.

BEING and hereby intending to convey a part of the premises conveyed to Grantor by deed dated May 12, 2022 and recorded in the Monroe County Clerk's Office on May 24, 2022 at Liber 12666 of Deeds, page 603.

Part of Tax Map Number:	part of 179.09-2-11.21
Part of Property Address:	4 Thornell Road (part of - .16 acres) Pittsford, NY 14534
Tax Mailing Address:	3 Fitzmot Glen Pittsford, New York 14534

Consideration for this conveyance is less than $100.00.

TOGETHER with the appurtenances and all the estate and rights of Grantor in and to said premises.

TO HAVE AND TO HOLD the premises herein granted unto Grantee, its successors and assigns forever.

The Grantor, in compliance with Section 13 of the Lien Law, covenants that the Grantor will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose.

IN WITNESS WHEREOF, Grantor has executed this deed the day and year first above written.

WDG4 LLC , a New York limited liability company

By: Wilmot Development Group, LLC
Its: Sole Member

By: _____
Name: Dennis A. Wilmot
Title: Sole Member

STATE OF NEW YORK)
COUNTY OF MONROE) ss.:

On the 18 day of July in the year 2023 before me, the undersigned, a notary public in and for said state, personally appeared DENNIS A. WILMOT, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacities, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

Armand A. D'Alfonso
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 02DA6407596
Qualified in Monroe County
Commission Expires June 22, 2024

SCHEDULE A

Description of Area to be Conveyed from Lot R-2 to Lot R-1

ALL THAT TRACT OR PARCEL OF LAND containing 0.168 Acre more or less, situate in the Phelps and Gorham Purchase, Township 12, Range 4, Town Lot 63, Town of Perinton, County of Monroe, and State of New York, as shown on the map entitled "H. Robert Schoenberger Resubdivision of Lots R-1 & R-2," having dwg No. 2850-100 last revised 5/9/23, being more particularly bounded and described as follows:

Commencing at the intersection of the westerly boundary line of Lot R-1 with the southerly right-of-way line of Thornell Road – County Road 33 (66' Right-of-Way); thence;

A. S 34°25'34" E, along said westerly boundary line of Lot R-1, a distance of 11.28 feet to a point; thence

   N 83°45'15" E, continuing alone said westerly boundary line of Lot R-1, a distance of 22.27 feet to the Point of Beginning; thence

   1. N 83°45'15" E, a distance of 11.35 feet to a point; thence
   2. S 34°25'34" E, a distance of 105.85 feet to a point; thence
   3. S 86°21'04" E, a distance of 36.47 feet to a point; thence
   4. S 37°32'14" E, a distance of 106.30 feet to a point; thence
   5. S 03°38'56" W, a distance of 72.12 feet to a point; thence
   6. N 34°25'34" W, a distance of 296.63 feet to the Point of Beginning.

MONROE COUNTY CLERK'S OFFICE

THIS IS NOT A BILL. THIS IS YOUR RECEIPT.

Receipt # 3086935

Book Page D 12666 0611

No. Pages: 4

Instrument: DEED OTHER

Control #: 202205240785
Ref #: TT0000019197

Date: 05/24/2022

Time: 1:00:35 PM

Return To:
Harris Beach PLLC
99 Garnsey Rd
Pittsford, NY 14534

THORNELL PROPERTIES LLC,

WDG2 LLC,

Recording Fee	$26.00
Pages Fee	$15.00
State Fee Cultural Education	$14.25
State Fee Records Management	$4.75
TP-584 Form Fee	$5.00
RP-5217 County Fee	$9.00
RP5217 State Equal Addit Fee	$241.00
Total Fees Paid:	$315.00

Employee: ED

State of New York

MONROE COUNTY CLERK'S OFFICE
WARNING – THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 317-a(5) & SECTION 319 OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

Consideration: $1.00

JAMIE ROMEO

MONROE COUNTY CLERK



BARGAIN AND SALE DEED

THIS INDENTURE made this 12th day of May, 2022, between

THORNELL PROPERTIES, LLC, a New York limited liability company, with an address of 4380 Lincolnwood Drive, Canandaigua, New York 14424,

party of the first part, and

WDG2 LLC, a New York limited liability company, with an address of 4380 Lincolnwood Drive, Canandaigua, New York 14424,

party of the second part,

WITNESSETH, that the parties of the first part, in consideration of One and 00/100 Dollar ($1.00) lawful money of the United States, and other good and valuable consideration, paid by the party of the second part, does hereby grant and release unto the party of the second part, their heirs and assigns forever,

ALL THAT PARCEL OF LAND, situate in the Town of Perinton, County of Monroe and State of New York, being more particularly bounded and described on Schedule A attached hereto and made a part hereof (hereinafter called the "Property").

Tax ID No.: 179.09-2-10
Property Address: 589 Pittsford Victor Road, Perinton, New York 14534
Tax Mailing Address: PO Box 34, Pittsford, NY 14534.

BEING part of the same premises conveyed to the parties of the first part by Hitching Post Plaza LLC by Warranty Deed dated April 3, 2014 and recorded in the Monroe County Clerk's Office on April 4, 2014 in Liber 11375 of Deeds at Page 565.

SUBJECT TO all covenants, conditions, easements and restrictions of record and the state of facts a current survey and/or inspection of the premises would reveal.

TOGETHER with the appurtenances and all the estate and rights of the parties of the first part in and to said premises,

TO HAVE AND TO HOLD the premises herein granted unto the party of the second part, his heirs and assigns forever.

AND, the parties of the first part covenants that the parties of the first part has not done or suffered anything whereby the said premises have been encumbered in any way whatever, except as aforesaid.

AND, the parties of the first part covenants that, in compliance with Section 13 of the Lien Law, the grantor will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of

the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose.

IN WITNESS WHEREOF, the parties of the first part has duly executed this deed as of the day and year first above written.

THORNELL PROPERTIES, LLC

H. Edward Shill, II, Sole Member

STATE OF NEW YORK)
) ss.:
COUNTY OF Monroe)

On the 12 day of May, in the year 2022 before me, the undersigned, a Notary Public in and for said State, personally appeared **H. Edward Shill, II**, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

Armand A. D'Alfonso
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 02DA6407596
Qualified in Monroe County
Commission Expires June 22, 2024

Schedule A

Legal Description

Property Address: 589 Pittsford Victor Road, Town of Perinton, New York 14534

Tax Account No.: 179.09-2-10

589 Pittsford Victor Road: (Tax ID: 179.09-2-10)

ALL THAT TRACT OR PARCEL OF LAND SITUATE IN THE TOWN OF PERINTON, MONROE COUNTY, NEW YORK, KNOWN AS LOT 3 OF THE CLIFF-LEA SUBDIVISION AS SHOWN ON A MAP THEREOF FILED IN THE MONROE COUNTY CLERK'S OFFICE IN LIBER 85 OF MAPS, AT PAGE 18. SAID PREMISES ARE SITUATE ON THE SOUTH SIDE OF THE PITTSFORD-VICTOR ROAD AND ARE OF THE DIMENSIONS AS SHOWN ON SAID MAP.

MONROE COUNTY CLERK'S OFFICE

THIS IS NOT A BILL. THIS IS YOUR RECEIPT.

Receipt # 3086935

Book Page D 12666 0615

No. Pages: 4

Instrument: DEED

Control #: 202205240786

Ref #: TT0000019198

Date: 05/24/2022

Time: 1:00:36 PM

Return To:
Harris Beach PLLC
99 Garnsey Rd
Pittsford, NY 14534

THORNELL PROPERTIES LLC,

WDG3 LLC,

Recording Fee	$26.00
Pages Fee	$15.00
State Fee Cultural Education	$14.25
State Fee Records Management	$4.75
TP-584 Form Fee	$5.00
Deed Notice Fee	$10.00
RP-5217 County Fee	$9.00
RP5217 State Equal Fee	$116.00
Total Fees Paid:	$200.00

Employee: ED

State of New York

MONROE COUNTY CLERK'S OFFICE
WARNING – THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 317-a(5) & SECTION 319 OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

Consideration: $1.00

JAMIE ROMEO

MONROE COUNTY CLERK



BARGAIN AND SALE DEED

THIS INDENTURE made this 12th day of May, 2022, between

THORNELL PROPERTIES, LLC, a New York limited liability company, with an address of 4380 Lincolnwood Drive, Canandaigua, New York 14424,

party of the first part, and

WDG3 LLC, a New York limited liability company, with an address of 4380 Lincolnwood Drive, Canandaigua, New York 14424,

party of the second part,

WITNESSETH, that the parties of the first part, in consideration of One and 00/100 Dollar ($1.00) lawful money of the United States, and other good and valuable consideration, paid by the party of the second part, does hereby grant and release unto the party of the second part, their heirs and assigns forever,

ALL THAT PARCEL OF LAND, situate in the Town of Perinton, County of Monroe and State of New York, being more particularly bounded and described on Schedule A attached hereto and made a part hereof (hereinafter called the "Property").

Tax ID No.: 179.09-2-8
Property Address: 597 Pittsford Victor Road, Perinton, New York 14534
Tax Mailing Address: PO Box 34, Pittsford, NY 14534.

BEING part of the same premises conveyed to the parties of the first part by Hitching Post Plaza LLC by Warranty Deed dated April 3, 2014 and recorded in the Monroe County Clerk's Office on April 4, 2014 in Liber 11375 of Deeds at Page 565.

SUBJECT TO all covenants, conditions, easements and restrictions of record and the state of facts a current survey and/or inspection of the premises would reveal.

TOGETHER with the appurtenances and all the estate and rights of the parties of the first part in and to said premises,

TO HAVE AND TO HOLD the premises herein granted unto the party of the second part, his heirs and assigns forever.

AND, the parties of the first part covenants that the parties of the first part has not done or suffered anything whereby the said premises have been encumbered in any way whatever, except as aforesaid.

AND, the parties of the first part covenants that, in compliance with Section 13 of the Lien Law, the grantor will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of

the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose.

IN WITNESS WHEREOF, the parties of the first part has duly executed this deed as of the day and year first above written.

THORNELL PROPERTIES, LLC

H. Edward Shill, II, Sole Member

STATE OF NEW YORK)
) ss.:
COUNTY OF Monroe)

On the 12 day of May, in the year 2022 before me, the undersigned, a Notary Public in and for said State, personally appeared **H. Edward Shill, II**, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

Armand A. D'Alfonso
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 02DA6407596
Qualified in Monroe County
Commission Expires June 22, 2024

Schedule A

Legal Description

Property Address: 597 Pittsford Victor Road, Town of Perinton, New York 14534

Tax Account No.: 179.09-2-8

597 Pittsford Victor Road: (Tax ID: 179.09-2-8)

ALL THAT TRACT OR PARCEL OF LAND SITUATE IN THE TOWN OF PERINTON, MONROE COUNTY, NEW YORK, KNOWN AS LOT 1 OF THE CLIFF-LEA SUBDIVISION AS SHOWN ON A MAP THEREOF FILED IN THE MONROE COUNTY CLERK'S OFFICE IN LIBER 85 OF MAPS, AT PAGE 18. SAID PREMISES ARE SITUATE ON THE SOUTH SIDE OF THE PITTSFORD-VICTOR ROAD AND ARE OF THE DIMENSIONS AS SHOWN ON SAID MAP.

MONROE COUNTY CLERK'S OFFICE

THIS IS NOT A BILL. THIS IS YOUR RECEIPT.

Receipt # 3086935

Book Page D 12666 0619

No. Pages: 4

Instrument: DEED OTHER

Control #: 202205240787
Ref #: TT0000019199

Date: 05/24/2022

Time: 1:00:37 PM

Return To:
Harris Beach PLLC
99 Garnsey Rd
Pittsford, NY 14534

THORNELL PROPERTIES LLC,

WDG5 LLC,

Recording Fee	$26.00
Pages Fee	$15.00
State Fee Cultural Education	$14.25
State Fee Records Management	$4.75
TP-584 Form Fee	$5.00
RP-5217 County Fee	$9.00
RP5217 State Equal Addit Fee	$241.00
Total Fees Paid:	$315.00

Employee: ED

State of New York

MONROE COUNTY CLERK'S OFFICE
WARNING – THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 317-a(5) & SECTION 319 OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

Consideration: $1.00

JAMIE ROMEO

MONROE COUNTY CLERK



BARGAIN AND SALE DEED

THIS INDENTURE made this 12th day of May, 2022, between

THORNELL PROPERTIES, LLC, a New York limited liability company, with an address of 4380 Lincolnwood Drive, Canandaigua, New York 14424,

party of the first part, and

WDG5 LLC, a New York limited liability company, with an address of 4380 Lincolnwood Drive, Canandaigua, New York 14424,

party of the second part,

WITNESSETH, that the parties of the first part, in consideration of One and 00/100 Dollar ($1.00) lawful money of the United States, and other good and valuable consideration, paid by the party of the second part, does hereby grant and release unto the party of the second part, their heirs and assigns forever,

ALL THAT PARCEL OF LAND, situate in the Town of Perinton, County of Monroe and State of New York, being more particularly bounded and described on Schedule A attached hereto and made a part hereof (hereinafter called the "Property").

Tax ID No.: 179.09-2-9
Property Address: 0 Pittsford Victor Road, Perinton, New York 14534
Tax Mailing Address: PO Box 34, Pittsford, NY 14534.

BEING part of the same premises conveyed to the parties of the first part by Hitching Post Plaza LLC by Warranty Deed dated April 3, 2014 and recorded in the Monroe County Clerk's Office on April 4, 2014 in Liber 11375 of Deeds at Page 565.

SUBJECT TO all covenants, conditions, easements and restrictions of record and the state of facts a current survey and/or inspection of the premises would reveal.

TOGETHER with the appurtenances and all the estate and rights of the parties of the first part in and to said premises,

TO HAVE AND TO HOLD the premises herein granted unto the party of the second part, his heirs and assigns forever.

AND, the parties of the first part covenants that the parties of the first part has not done or suffered anything whereby the said premises have been encumbered in any way whatever, except as aforesaid.

AND, the parties of the first part covenants that, in compliance with Section 13 of the Lien Law, the grantor will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of

the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose.

IN WITNESS WHEREOF, the parties of the first part has duly executed this deed as of the day and year first above written.

THORNELL PROPERTIES, LLC

H. Edward Shill, II, Sole Member

STATE OF NEW YORK)
) ss.:
COUNTY OF Monroe)

On the 12 day of May, in the year 2022 before me, the undersigned, a Notary Public in and for said State, personally appeared **H. Edward Shill, II**, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Armand A. D'Alfonso
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 02DA6407596
Qualified in Monroe County
Commission Expires June 22, 2024

Notary Public

Schedule A

Legal Description

Property Address: 0 Pittsford Victor Road, Town of Perinton, New York 14534

Tax Account No.: 179.09-2-9

0 Pittsford Victor Road: (Tax ID: 179.09-2-9)

ALL THAT TRACT OR PARCEL OF LAND SITUATE IN THE TOWN OF PERINTON, MONROE COUNTY, NEW YORK, KNOWN AS LOT 2 OF THE CLIFF-LEA SUBDIVISION AS SHOWN ON A MAP THEREOF FILED IN THE MONROE COUNTY CLERK'S OFFICE IN LIBER 85 OF MAPS, AT PAGE 18. SAID PREMISES ARE SITUATE ON THE SOUTH SIDE OF THE PITTSFORD-VICTOR ROAD AND ARE OF THE DIMENSIONS AS SHOWN ON SAID MAP.

Stormwater Pollution Prevention Plan
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
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS

10 LIFT BRIDGE LANE EAST
FAIRPORT, NEW YORK 14450

November 2025

#2850

BME ASSOCIATES

ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS

STORMWATER POLLUTION PREVENTION PLAN
For
Hartwell Heights

SECTION 1: Project Information

- Project Summary & Stormwater Management Objectives
- Vicinity Map
- Letter of Authorization
- Notice of Intent Application
- MS4 SWPPP Acceptance Form
- Certifications Statements
- 5 Acre Waiver Request & Approval (Not applicable)
- Documentation supporting the determination of permit eligibility by the NYS Office of Parks, Recreation and Historic Places (OPRHP)

SECTION 2: Existing and Proposed Mapping and Plans

- Site Plan
- Utility Plan
- Grading Plan
- Cross Sections and Profile Drawings

SECTION 3: Erosion and Sediment Control Plans and Vegetative Measures

- Construction and Erosion Control Plan and Details including Specifications
- Landscape Plan
- Maintenance and Inspection Schedule for Temporary Structural Measures, Permanent Structural Measures, Permanent Vegetative Measures
- New York State Standards and Specifications for Erosion and Sediment Control (Blue Book Details)
- Pollution Prevention Measures & Prohibited Discharges

SECTION 4: BME Engineer's Report

- Hydrologic and Hydraulic Analysis for Structural Components of Stormwater System to include sizing criteria for runoff reduction volume, treatment of remaining total water quality volume, channel protection volume, overbank flood control criteria, and extreme flood criteria.

SECTION 5: Miscellaneous Materials

- Post-Construction Stormwater Management Practice (SMP) Operation & Maintenance Plan
- SMP Level 1 Inspection Checklist(s) (DEC Maintenance Guidance for SMPs, March 31, 2017)
- SPDES General Permit for Stormwater Discharges from Construction Activity – GP-0-25-001
- Notice of Termination Formwork
- Misc. Correspondence, Meeting Minutes, etc.

SECTION 6: Construction Site Log

- Qualified Inspection Monitoring Reports
- SWPPP Modifications (if needed)
- Inspection Frequency Reduction Requests

SECTION 1
Project Information

- Project Summary & Stormwater Management Objectives
- Vicinity Map, showing project boundary and receiving water(s)
- Letter of Authorization
- Notice of Intent Application
- MS4 SWPPP Acceptance Form
- Certifications Statements
- 5 Acre Waiver Request (Not applicable)
- Documentation supporting the determination of permit eligibility by the NYS Office of Parks, Recreation and Historic Places (OPRHP)

STORMWATER POLLUTION PREVENTION PLAN
PROJECT SUMMARY &
STORMWATER MANAGEMENT OBJECTIVES

Hartwell Heights Project Summary:

The owner and applicant WDG2, LLC, is proposing a residential development (Hartwell Heights) located within the Town of Perinton. The property consists of four (4) tax parcels, totaling ±3.42 acres including two (2) existing buildings (to remain) and located within the Town of Perinton's Mixed-Use zoning district. The project proposes a lot consolidation into two (2) individual lots; a 0.84 acre lot for the existing office building and a 2.58 acre lot for the existing residential house and 23 new residential units within eight (8) proposed buildings comprising a total of 53 bedrooms within the development.

Owner/Operator Contact Information: **WDG2, LLC**	
Name:	Dennis Wilmont
Address:	P.O. Box 34, Pittsford, NY 14534
Phone:	[redacted]
Email:	[redacted]

Stormwater Management Objectives:

The Stormwater Pollution Prevention Plan (SWPPP) for **Hartwell Heights** was developed in accordance with the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for stormwater discharges associated with construction activities, General Permit – GP-0-25-001, and stormwater objectives of the State of New York.

The SWPPP is to remain onsite and accessible during normal business hours to individuals performing a compliance inspection. The owner or operator shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the Department receives a complete NOT submitted in accordance with Part VI. of the general permit (GP-0-25-001). Any modifications to the SWPPP will require Town of Perinton approval prior to implementation.

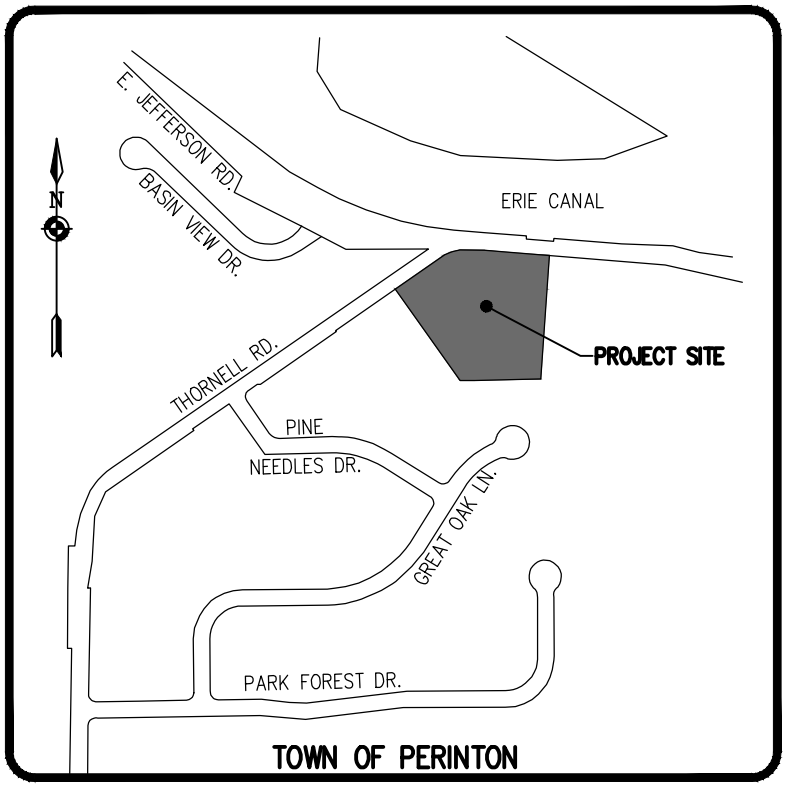


FIGURE 01 – LOCATION MAP

NOT TO SCALE

Construction General Permit (CGP) Electronic Notice of Intent (eNOI) GP-0-25-001

version 1.12

(Submission #: HQH-21JA-F9BET, version 1)

Details

Originally Started By	Dylan Ide
Alternate Identifier	Hartwell Heights—Region 8
Submission ID	HQH-21JA-F9BET
Status	Draft
Active Steps	Form Submitted

Form Input

Eligibility

Disturbance Threshold

1. Will the construction activity involve soil disturbances listed in Part I.A.1 of GP-0-25-001?
Yes

1.a. Will any runoff from the site enter a sewer system classified as a combined sewer?
No

1.b. Is this a remediation project being done under a Department approved work plan (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) with a SWPPP which meets the substantive requirements of GP-0-25-001?
No

1.c. Is the construction activity related to a stormwater discharge that does not require a permit as described in 40 CFR 122.3(e), e.g. non-point source agriculture or silviculture activities?
No

Other SPDES Permits

2. Will the discharge from the construction activity meet all conditions listed in Part I.A.2 of GP-0-25-001?
Yes

Threatened and Endangered Species

3. Will the construction activity potentially adversely affect a species that is endangered or threatened per Part I.A.3.?
No

State Historic Preservation Act (SHPA)

4. Is the construction activity designated by the Commissioner of the Office of Parks, Recreation and Historic Preservation (OPRHP), pursuant to 9 NYCRR §§428.12 or 428.13 as exempt from the SHPA review (see Attachment 2 of the Letter of Resolution between NYSDEC and OPRHP, dated January 9, 2015)?
No

4.a. Will the construction activity:

a) occur within an archeologically sensitive area indicated on the sensitivity map, or

b) have the potential to affect a property that is listed or determined to be eligible for listing on the Na or State Registers of Historic Places, or

c) include a new permanent building on the construction site within the following distances from a building, structure, or object that is more than 50 years old and OPRHP, a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determinec historically/archeologically significant building, structure, or object:

- 1-5 acres of disturbance—20 feet
- 5-20 acres of disturbance—50 feet
- 20+ acres of disturbance—100 feet?

Yes

4.a.i. Have the impacts to historic properties been resolved?
NONE PROVIDED

State Environmental Quality Review (SEQR)

5. Is the construction activity subject to SEQR (Part I.A.5.), or the equivalent environmental review from another NYS or federal agency (Part I.A.6.)?
Yes

5.a. Has the owner/operator obtained documentation that the project review pursuant to SEQR, or the equivalent, has been satisfied per Part I.A.5. or I.A.6. of GP-0-25-001?
Yes

Uniform Procedures Act (UPA) Permits

6. Has the owner/operator obtained all necessary UPA permits from NYSDEC, or the equivalent from another NYS or federal agency per Part I.A.7.a. of GP-0-25-001?
NONE PROVIDED

Steep Slope

7. Is the construction activity within the watershed of surface waters of the State classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website?
No

Owner/Operator Information

8. Owner/Operator Name
WDG2, LLC

9. Owner/Operator Contact Person Information

First and Last Name	Phone	E-mail
Dennis Wilmont	585-721-7463	dennis@wilmontdg.com

10. Owner/Operator Mailing Address

P.O. Box 34
Pittsford, NY 14534
USA

11. Is the billing contact different from the Owner/Operator Contact?
No

12. What type of organization is the owner/operator?
Private Owner

Site Information

13. Project/Site Name
Hartwell Heights

14. Site Address

597 Pittsford-Victor Road
Perinton, NY 14534
Monroe

DEC Region
8

15. Site Latitude & Longitude
43.0620837,-77.4776368

Project Details

16. This eNOI submission is for:
A construction activity not part of a common plan of development or sale in accordance with Part I.D.1.a.

17. Does the project type fall under Table 1 or Table 2 of Appendix B of GP-0-25-001? If any portion of the construction activity falls under Table 2, regardless of the size of the disturbance, select "Table 2".
Table 2

18. Consistent with Part III.B.1.c.i. of GP-0-25-001, provide a concise overview of the project. Describe existing and proposed conditions, and include any other relevant information.
The owner and applicant WDG2, LLC, is proposing a residential development (Hartwell Heights) located within the Town of Perinton. The property consists of four (4) tax parcels, totaling ±3.42 acres including two (2) existing buildings (to remain) and located within the Town of Perinton's Mixed-Use zoning district. The project proposes a lot consolidation into two (2) individual lots; a 0.84 acre lot for the existing office building and a 2.58 acre lot for the existing residential house and 23 new residential units within eight (8) proposed buildings comprising a total of 53 bedrooms within the development.

Enter the total project site acreage, the acreage to be disturbed, and the future impervious area (acreage) within the disturbed area, rounded to the nearest tenth of an acre.

19. Total Site Area (acres)
3.4

20. Total Area to be Disturbed (acres)
3.1

21. Existing Impervious Area to be Disturbed (acres)
0.3

22. Future Impervious Area Within Disturbed Area (acres)
1.8

Nature of the project:
Redevelopment with increase in impervious area

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

---

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

A (%)
100

B (%)
0

C (%)
0

D (%)
0

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

Start Date
03/01/2026

End Date
03/01/2028

26. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.
Erie canal

27. Type of waterbody identified in question 26?
Other Type Off Site

Other Waterbody Type Off Site Description
Canal

28. Has the surface waterbody in question 26 been identified as a 303(d) segment in Appendix D of GP-0-25-001?
No

29. Is this project located in one of the Watersheds identified in Appendix C of GP-0-25-001?
No

30. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area?
No

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

31.a. What is the name of the municipality/entity that owns the separate storm sewer system? If the separate sewer system is owned by an MS4 Operator, enter the MS4 Operator name.
Town of Perinton

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

33. Is this property owned by a state authority, state agency, federal government or local government?
No

Required SWPPP Components

General SWPPP Requirements

34. Has a SWPPP been developed in conformance with the requirements in Part III. of GP-0-25-001?
Yes

35. Does the SWPPP demonstrate consideration of the future physical risks due to climate change pursuant to the CRRA, 6 NYCRR Part 490, and associated guidance per Part III.A.2. of GP-0-25-001?
Yes

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

37. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the NYS Stormwater Management Design Manual?
Yes

37.a. Which version of the NYS Stormwater Management Design Manual was used to develop the SWPPP?
2024

SWPPP Preparer

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

40. Name of the person who prepared the SWPPP
Ryan Destro

41. SWPPP Preparer Organization Name
BME Associates

42. SWPPP Preparer Contact Information

First and Last Name	Phone	E-mail
Ryan Destro	[redacted]	[redacted]

43. SWPPP Preparer Address

10 Liftbridge Lane East
Fairport, NY 14425

Download SWPPP Preparer Certification Form

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

1) Click on the link below to download a blank certification form
2) The certified SWPPP preparer should sign this form
3) Upload the completed form
Download SWPPP Preparer Certification Form

44. Please upload the SWPPP Preparer Certification

NONE PROVIDED

Comment

NONE PROVIDED

44.a. Has the SWPPP Preparer Certification Form been signed by the SWPPP preparer in accordance with Part VII.J of GP-0-25-001?
Yes

Erosion & Sediment Control Criteria

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

Post-Construction Criteria

Site Planning and Soil Restoration

46. Identify all site planning practices that were used to prepare the final site plan/layout for the project.
Roadway Reduction
Sidewalk Reduction
Driveway Reduction
Building Footprint Reduction

47. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6 ("Soil Restoration") of the Design Manual.
All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

Water Quality Criteria

49. Water Quality Sizing Criteria

Total WQv required (acre-feet)	Total RRv provided (acre-feet)	Minimum RRv (acre-feet)	Total WQv provided (acre-feet)	Sum of RRv and WQv provided
0.088	0.088			NaN

Water Quantity Criteria

50. Per Section 9.2.1.C.VI and VII of the 2024 Design Manual, is there 0% change to hydrology that increases the discharge rate and volume from the project site?
No

51. Does one of the waiver conditions apply to the channel protection for this construction activity?
No

51.b.i. CPv Required (acre-feet)
0.029

51.b.ii. CPv Provided (acre-feet)
0.029

52. Does one of the waiver conditions apply to the Qp and Qf for this construction activity?
No

Overbank Flood Control Criteria (Qp)

52.b.i. Pre-Development (CFS)
0.01

52.b.ii. Post-Development (CFS)
0.01

Total Extreme Flood Control Criteria (Qf)

52.b.iii. Pre-Development (CFS)
0.40

52.b.iv. Post-Development (CFS)
0.24

Operation and Maintenance

53. Has a long-term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed?
Yes

53.a. Identify the entity responsible for the long-term Operation and Maintenance.
Hartwell Heights HOA

Post-Construction SMP Identification

54. Post-Construction RR Techniques and Standard SMPs

RR Techniques and SMPs	Contributing Impervious Area (acres)	Total Contributing Area (acres)
Infiltration Basin (I-2)	1.010	

55. Alternative SMPs

Type of Alternative SMP	Manufacturer of the Alternative SMP	Name of the Alternative SMP	Contributing Impervious Area (acres)
Hydrodynamic	ADS	Barracuda	1.01

Other Permits

56. Identify other permits, existing and new, that are required for this project/facility.
None

57. Is this NOI for a change in owner/operator per Part I.G.?
No

MS4 SWPPP Acceptance

59. Will the construction activities be within the municipal boundary(ies) of Traditional Land Use Control MS4 Operator(s) and discharge to the MS4(s)?
Yes

59.a. Which form is required per Part I.D.2.b.ii.?
MS4 SWPPP Acceptance Form

MS4 SWPPP Acceptance Form Download

Download the MS4 SWPPP Acceptance Form from the link below.
MS4 SWPPP Acceptance Form

60. MS4 Acceptance or No Jurisdiction Form Upload

NONE PROVIDED

Comment

NONE PROVIDED

60.a. Has the form been signed by the principal executive officer or ranking elected official—or duly authorized representative of that person—in accordance with Part VII.J. and submitted along with this NOI?

NONE PROVIDED

Owner/Operator Certification

Owner/Operator Certification Form Download

Download the Owner/Operator Certification Form by clicking the link below.
Owner/Operator Certification Form

61. Upload Owner/Operator Certification Form

NONE PROVIDED

Comment

NONE PROVIDED

61.a. Has the Owner/Operator Certification Form from Appendix J been signed by the owner/operator, or a representative of the owner/operator in accordance with Part VII.J of GP-0-25-001 and uploaded to the eNOI?

Yes

Additional Project Information

62. Enter any additional pertinent project information in the text box below.

NONE PROVIDED

Status History

	User	Processing Status
11/12/2025 11:57:37 AM	Dylan Ide	Draft

Processing Steps

Step Name	Assigned To/Completed By	Date Completed
Form Submitted		
Issue SPDES Permit ID	Daniel von Schilgen	

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information	
1. Owner/Operator Name:	WDG2, LLC
2. Contact Person:	Dennis Wilmont
3. Street Address:	P.O. Box 34
4. City/State/Zip:	Pittsford, NY 14534
II. Project Site Information	
5. Project/Site Name:	Hartwell Heights
6. Street Address:	597 Pittsford-Victor Road
7. City/State/Zip:	Perinton, NY 14534
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information	
8. SWPPP Reviewed by:	
9. Title/Position:	
10. Date Final SWPPP Reviewed and Accepted:	
IV. Regulated MS4 Information	
11. Name of MS4 Operator:	Town of Perinton
12. MS4 SPDES Permit Identification Number: NYR20A	385
13. Street Address:	1350 Turk Hill Road
14. City/State/Zip:	Fairport, NY 14450
15. Telephone Number:	585-223-0770

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name[1]:

Title/Position:

Signature:

Date:

VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: Hartwell Heights

eNOI Submission ID: HQH-21JA-F9BET

eNOI Submitted by: ☐ **Owner/Operator** ☑ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Dennis		Wilmont
Owner/Operator First Name	MI	Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:	Hartwell Heights
eNOI Submission ID:	HQH-21JA-F9BET
Owner/Operator Name:	WDG2, LLC

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Ryan		Destro
SWPPP Preparer First Name	MI	SWPPP Preparer Last Name

Signature Date

Revised: January 2025

STORM WATER POLLUTION PREVENTION PLAN
SPDES GENERAL PERMIT FOR CONSTRUCTION ACTIVITY, GP-0-25-001
CONTRACTOR/SUBCONTRACTOR'S CERTIFICATION

Hartwell Heights
PROJECT

Town of Perinton, Monroe County
LOCATION

CONTRACTOR/SUBCONTRACTOR'S CERTIFICATION:

"I hereby certify under penalty of law that I understand and agree to comply with the requirements of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations."

Name: _____
(Print)
Signature: _____

Title: _____

Company Name: _____

Address: _____

Telephone Number: _____

Email Address: _____

Date: _____

Scope of SWPPP Services (Circle all that apply):

Grading Utility Installation Post-Construction Facility Installation BMP Installation

BMP Repairs Final Stabilization

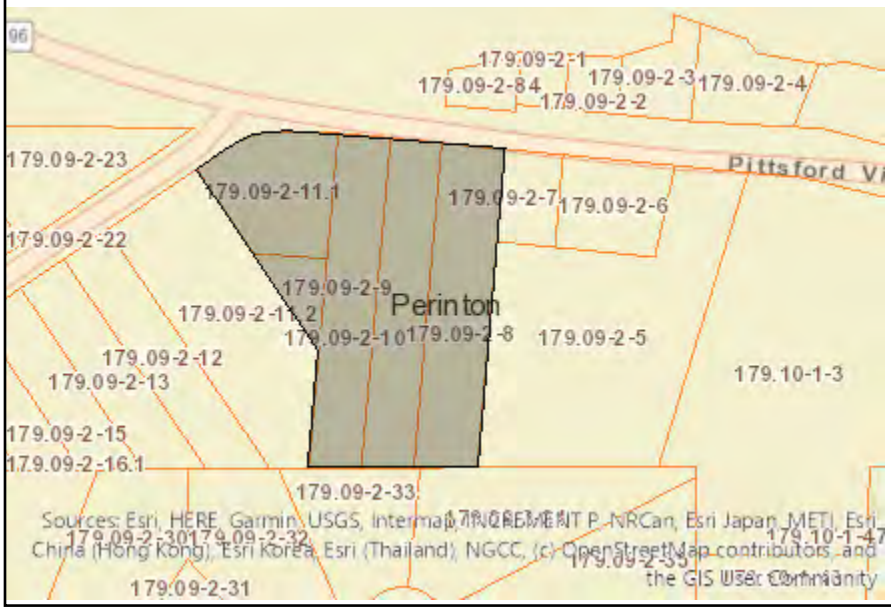
Other: _____

Trained Contractor (4 Hour Erosion & Sediment Control Card Holder): _____

Trained Contractor Title: _____

EAF Mapper Summary Report

Thursday, February 20, 2025 8:10 AM



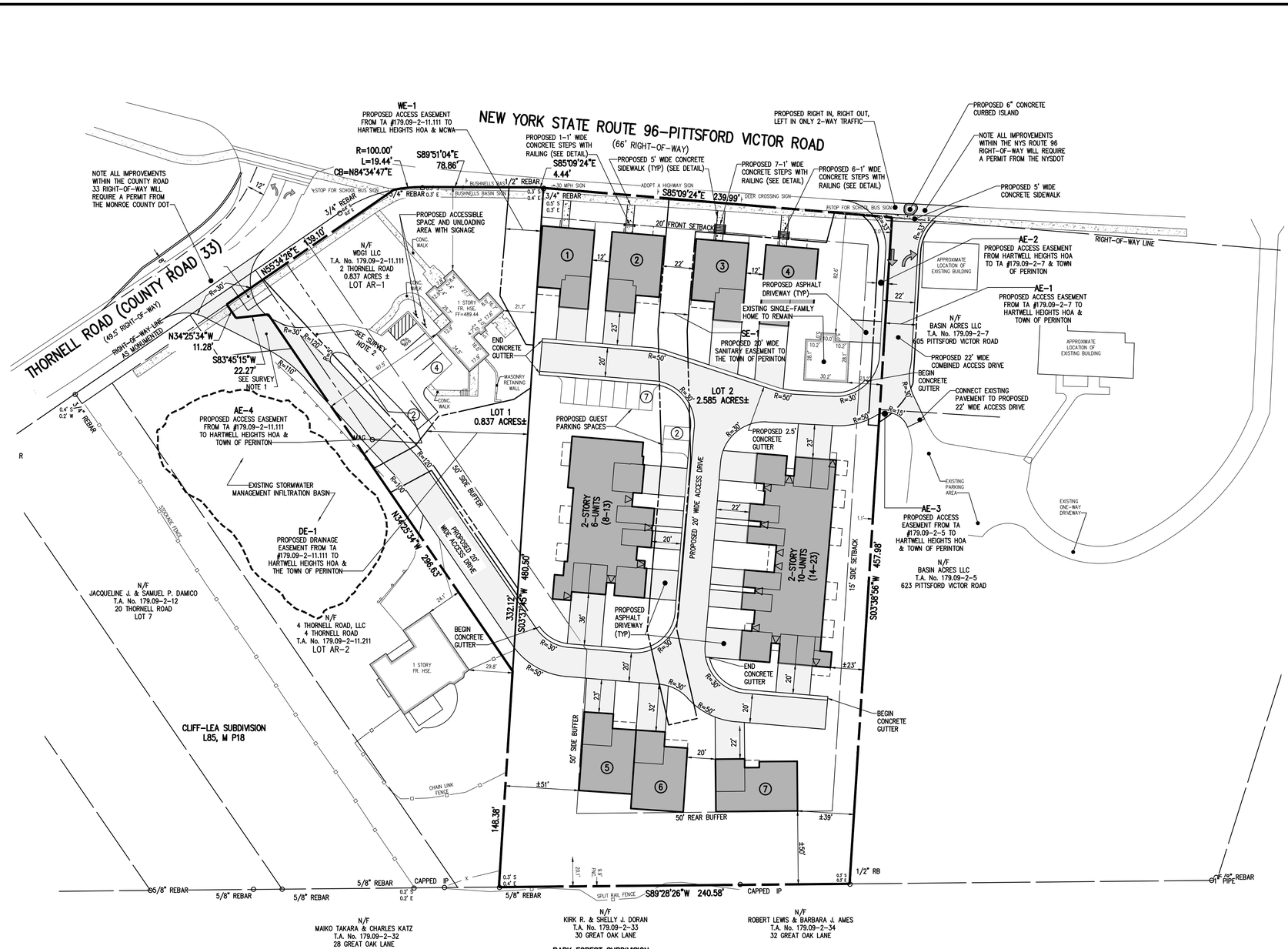
Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the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

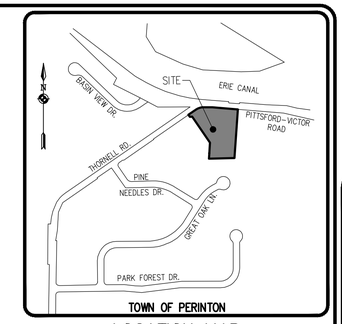


Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	Yes
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	No

SECTION 2
Existing and Proposed Mapping and Plans

- Site Plan
- Utility Plan
- Grading Plan
- Cross Sections and Profile Drawings





LOCATION MAP
NOT TO SCALE

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
7			
6			
5			
4			
3			
2			
1			

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	47 SPACES PROVIDED.
SINGLE–FAMILY:	2 SPACES/UNIT 6 UNITS = 12 SPACES	22 SPACES PROVIDED. (2 SPACES PER GARAGE) (2 SPACES PER DRIVEWAY)

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.

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
7. PARKING SIGNAGE: ALL ACCESSIBLE PARKING SPACES AND ACCESS AISLES TO BE PROVIDED SIGNAGE PER THE MOST RECENT ADA STANDARD REQUIREMENTS. (SEE SIGN DETAIL).
8. ALL OTHER IMPROVEMENTS TO BE IN CONFORMANCE WITH THE MOST RECENT ADA STANDARDS FOR DESIGN.

LEGEND

- BOUNDARY LINE
- PROPOSED LOT LINE
- SETBACK LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- ○ PROPERTY MARKER FOUND
- △ CONCRETE HIGHWAY MONUMENT FOUND
- ● WOOD FENCE POST FOUND

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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

BME ASSOCIATES
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STATE OF NEW YORK
RYAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

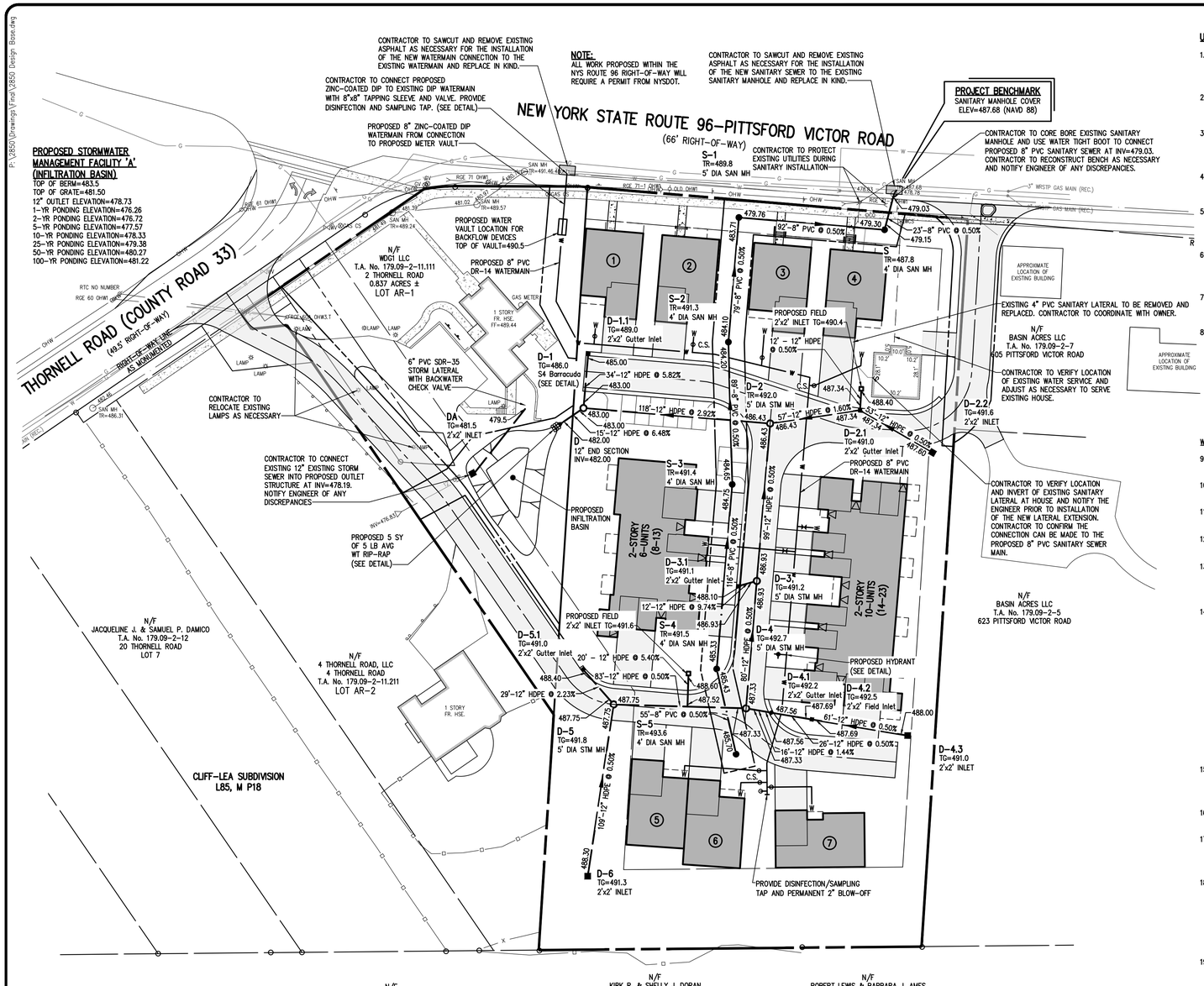
HARTWELL HEIGHTS
TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
WDG2, LLC
P.O. BOX 34
PITTSFORD, NY, 14534

PROJECT
LOCATION
CLIENT
DRAWING TITLE
PRELIMINARY/FINAL SITE 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.	05

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



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.

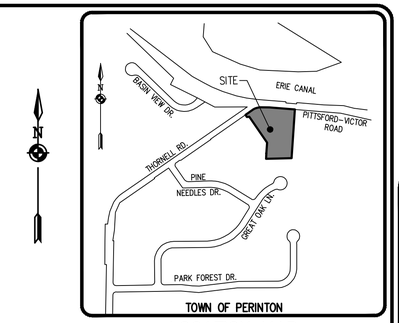
    ALL WATER MAIN FITTINGS NOT RECEIVING 24–HOUR CHLORINE DISINFECTION CONTACT TIME MUST BE SWAB DISINFECTED 30 MINUTES PRIOR TO INSTALLATION.

    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

    WATER TESTING – EACH MANHOLE SHALL BE FILLED WITH A MAXIMUM OF 10 FEET OF WATER, SUBJECTED TO A 24 HOUR TEST AND SHOW A LOSS OF WATER NOT TO EXCEED 15 GALLONS/24 HOURS FOR A 4 FOOT IDMH. INFILTRATION TESTS SHALL ADHERE TO THE SAME LIMITS.

    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 COTTAGE STYLE HOMES
    6" PE #4710 FOR APARTMENT BUILDINGS
    SANITARY – 4" PVC SDR–21 INSTALLED AT 2.00% MIN SLOPE FOR HOMES/TOWNHOUSES
    6" PVC SDR–21 INSTALLED AT 21.00% 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 ALL HORIZONTAL BENDS AND AT XXX' 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 85–100 FOOT 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

NOT APPROVED

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GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

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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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.	DATE	REVISIONS	BY
1	10/31/25	PER TOWN COMMENTS	DT
2	11/14/25	PER TOWN COMMENTS	DT
3			
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6			
7			

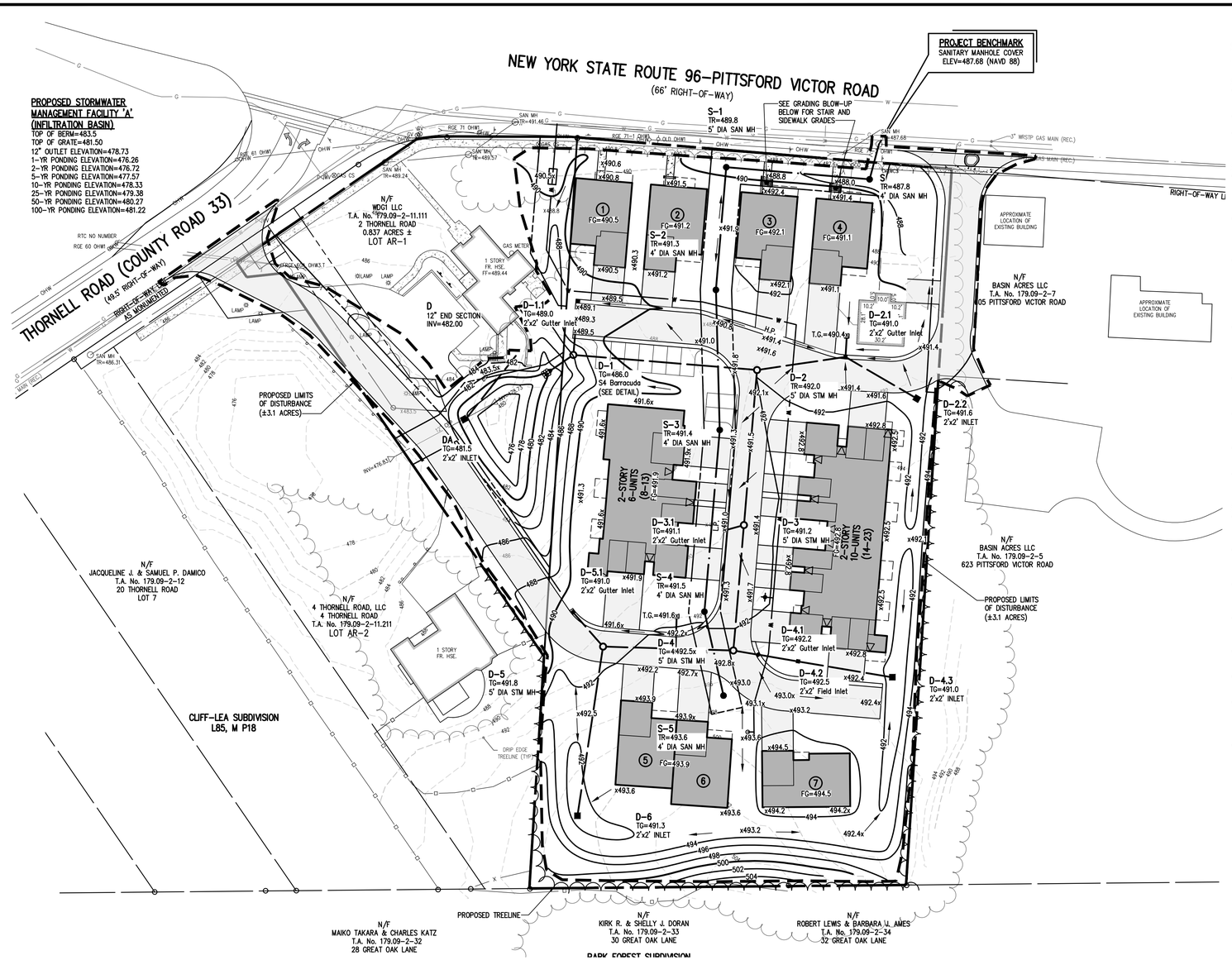
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PHONE 585-377-7360
FAX 585-377-7309
WWW.BMEPC.COM

STATE OF NEW YORK
BRIAN THOMAS DESTRO
093809
LICENSED PROFESSIONAL ENGINEER

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

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.	07



SEQUENCE OF CONSTRUCTION STEPS:

TOTAL DISTURBED ACREAGE = ±3.1 ACRES

STEP 1: (SITE PREPARATION)

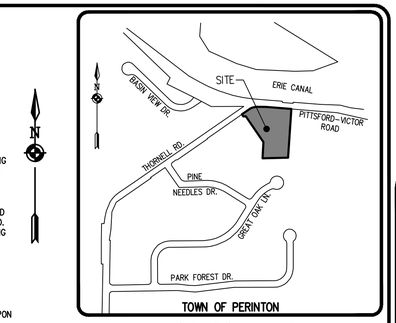
- INSTALL AND MAINTAIN STABILIZED CONSTRUCTION ENTRANCE AND CONSTRUCTION STAGING AREA (SEE DETAIL).
- CLEAR AND GRUB AS REQUIRED FOR SILT FENCE INSTALLATION.
- INSTALL AND MAINTAIN PERIMETER SILT FENCE, COMPLETE CLEARING AND GRUBBING OPERATIONS AS NECESSARY OR PROVIDE BRUSH HOGGING OF LANDS TO MAINTAIN 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. STORMWATER MANAGEMENT FACILITY TO BE UTILIZED AS A SEDIMENT BASIN DURING CONSTRUCTION. CONTRACTOR TO UNDERCUT POND BOTTOM BY 2'.
- 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.
2. THE DEVELOPER'S AND CONTRACTOR'S ATTENTION IS DIRECTED TO LOCAL LAW NO. 6 OF 1971 REGARDING LIABILITY INCURRED THROUGH DISTURBANCE OR DESTRUCTION OF GEODETIC SURVEY MONUMENTS.
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. THE CONTRACTOR SHALL CALL THE UFPO HOTLINE AT 1(800)962-7962 OR 811 FOR STAKE-OUT OF EXISTING UTILITIES.
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.

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 (336)
- PROPOSED CONTOUR W/ ELEVATION (336)
- EXISTING SPOT ELEVATION (336x5)
- PROPOSED SPOT ELEVATION (336x5)
- PROPOSED FINISHED GRADE ELEVATION AT GARAGE DOOR (F.G. = 336.0)
- PROPOSED LIMITS OF DISTURBANCE

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

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

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	5	4	3	2	1	DATE	BY

REVISIONS

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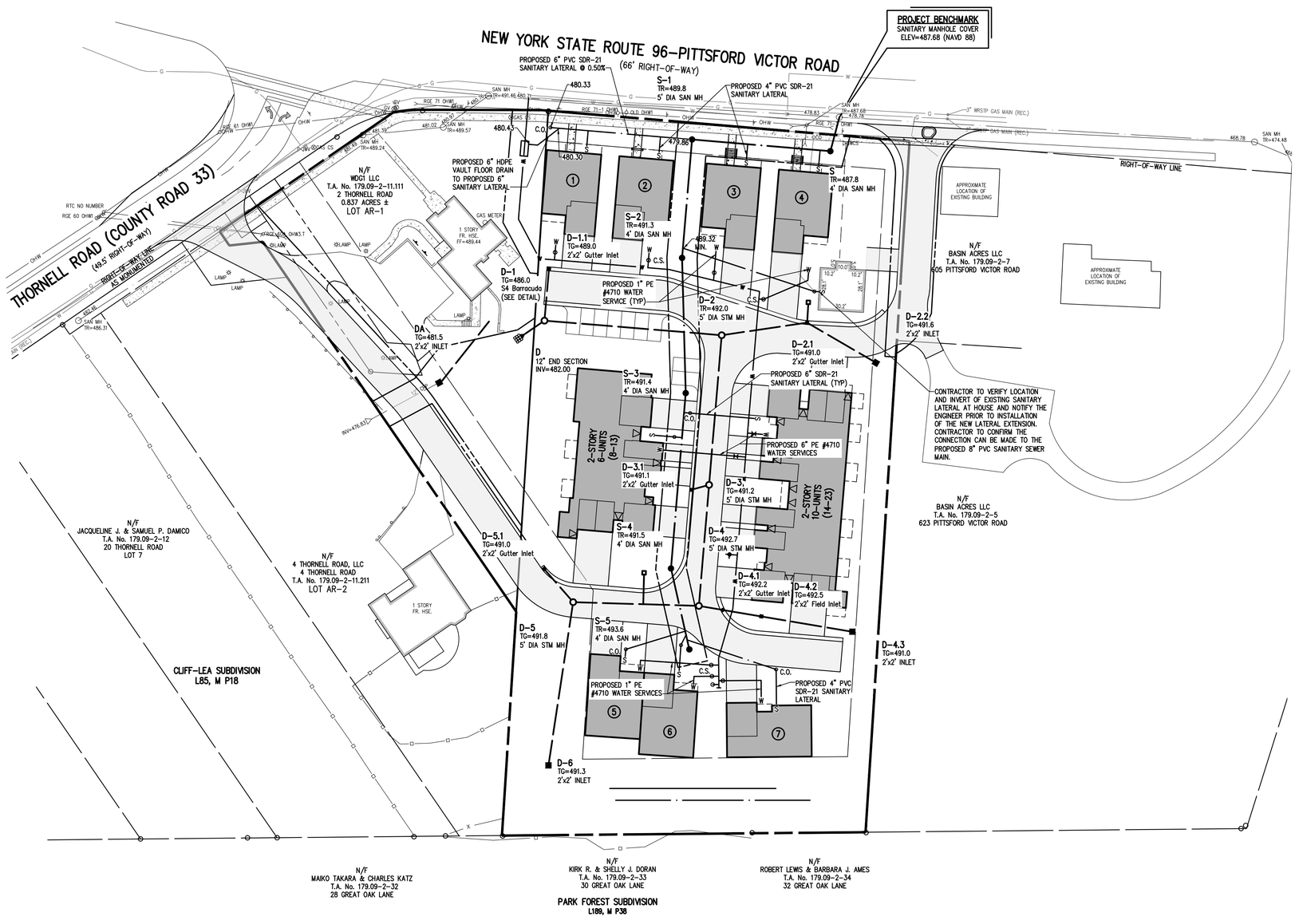
PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
CLIENT: WOG2, LLC. P.O. BOX 34 PITTSFORD, NY, 14534
DRAWING TITLE: PRELIMINARY/FINAL GRADING PLAN

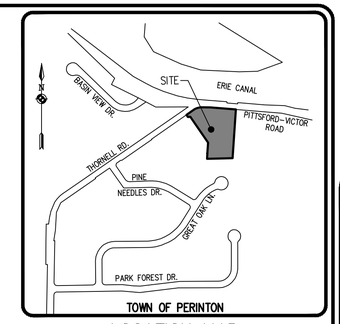
PROJECT MANAGER: P. VARS/R. DESTRO
PROJECT ENGINEER: F. SHELLEY
DRAWN BY: D. TURNER
SCALE: 1" = 40'
DATE ISSUED: NOVEMBER 14, 2025
PROJECT NO.: 2850
DRAWING NO.: 08

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

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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."

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	REVISIONS	DATE	BY

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FAX 585-377-7309
WWW.BMEPC.COM

STATE OF NEW YORK
BRIAN THOMAS DESTRO
093809
LICENSED PROFESSIONAL ENGINEER

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 LATERAL PLAN

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.	10

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 (C.S.)
- PROPOSED SANITARY LATERAL (C.O.)

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

APPROVALS

BY: _____ DATE: _____
TOWN ENGINEER

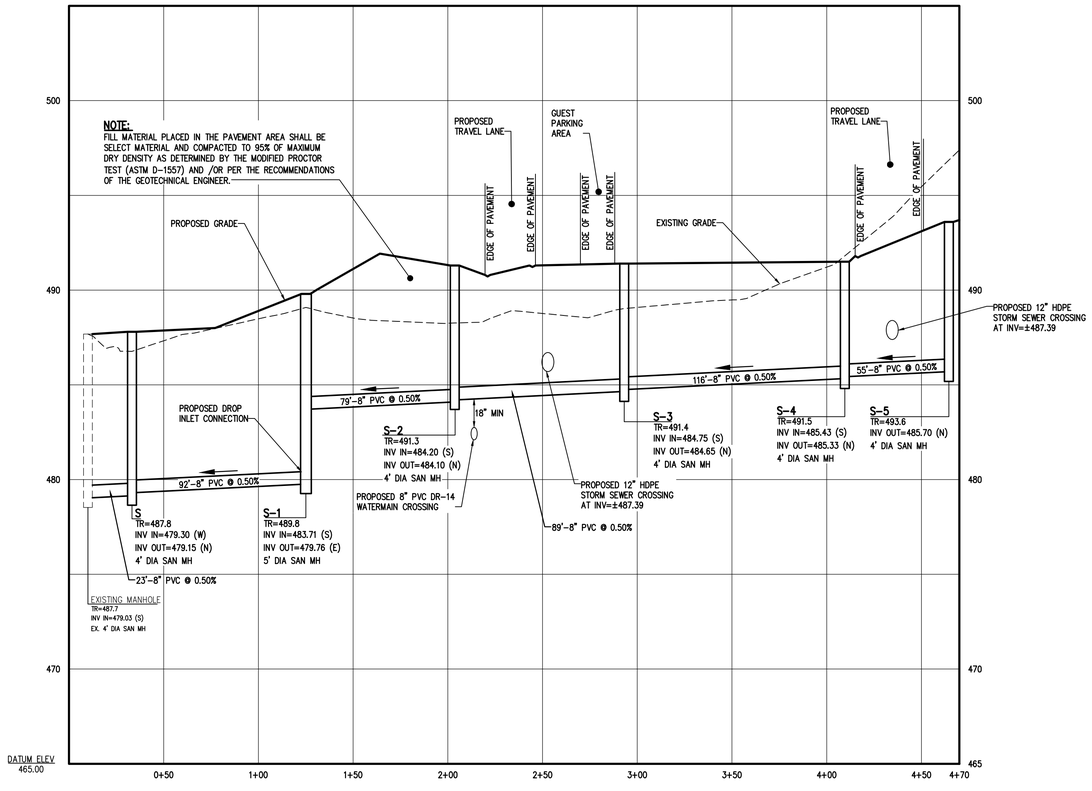
BY: _____ DATE: _____
COMMISSIONER OF PUBLIC WORKS

BY: _____ DATE: _____
PLANNING BOARD ATTORNEY

BY: _____ DATE: _____
FIRE CHIEF

BY: _____ DATE: _____
CHAIRMAN OF THE PLANNING BOARD

BY: _____ DATE: _____
TOWN CLERK



PROPOSED SANITARY SEWER PROFILE

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

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Drawing Alteration
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	REVISIONS	DATE	BY
7			
6			
5			
4			
3			
2			
1			

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FAIRPORT, NEW YORK 14450
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LICENSED PROFESSIONAL ENGINEER
STATE OF NEW YORK
BRIAN THOMAS DESTRO
093805

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

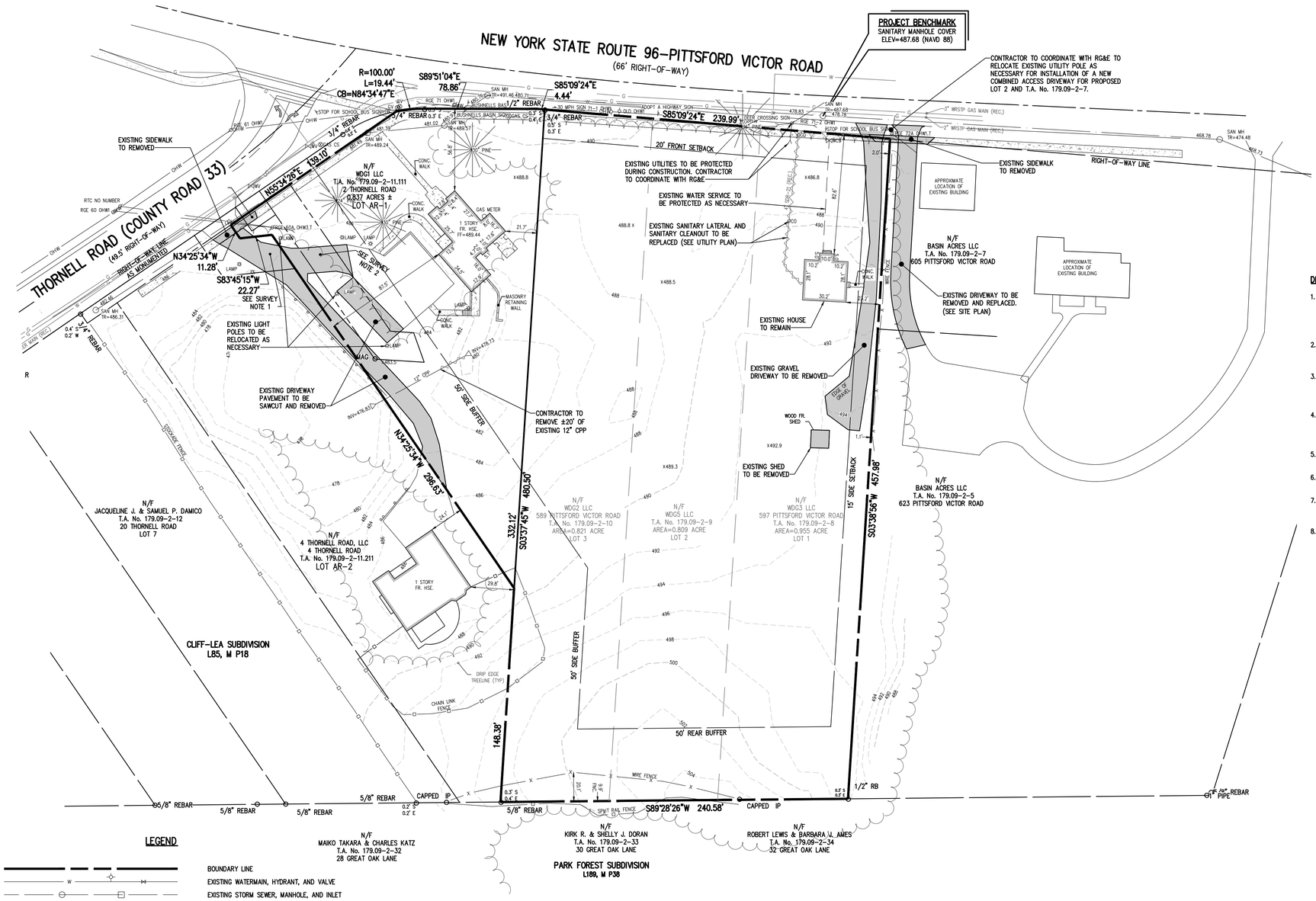
PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 63, TAX MAP NUMBER 179.09-2-8, 179.09-2-9, 179.09-2-10, 179.09-2-11.111

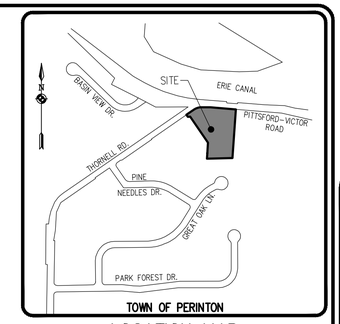
PROJECT MANAGER	
P. VARS/R. DESTRO	
PROJECT ENGINEER	
F. SHELLEY	
DRAWN BY	
D. TURNER	
SCALE	DATE ISSUED
1" = 40'	NOVEMBER 14, 2025
PROJECT NO.	
2850	
DRAWING NO.	
12	

SECTION 3
Erosion and Sediment Control Plans and Vegetative Measures

- Construction and Erosion Control Plan and Details including Specifications
- Landscape Plan
- Maintenance and Inspection Schedule for Temporary Structural Measures, Permanent Structural Measures, Permanent Vegetative Measures
- New York Standards and Specifications for Erosion and Sediment Control (Blue Book Details)
- Pollution Prevention Measures & Prohibited Discharges

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LOCATION MAP
NOT TO SCALE

Drawing Alteration
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	BY	DATE	REVISIONS
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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.

LEGEND

- BOUNDARY LINE
- W — EXISTING WATERMAIN, HYDRANT, AND VALVE
- EXISTING STORM SEWER, MANHOLE, AND INLET
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING TREE LINE
- PROPERTY MARKER FOUND
- 336 — EXISTING CONTOUR W/ ELEVATION
- 336x5 — EXISTING SPOT ELEVATION
- G — EXISTING GAS MAIN
- E — 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

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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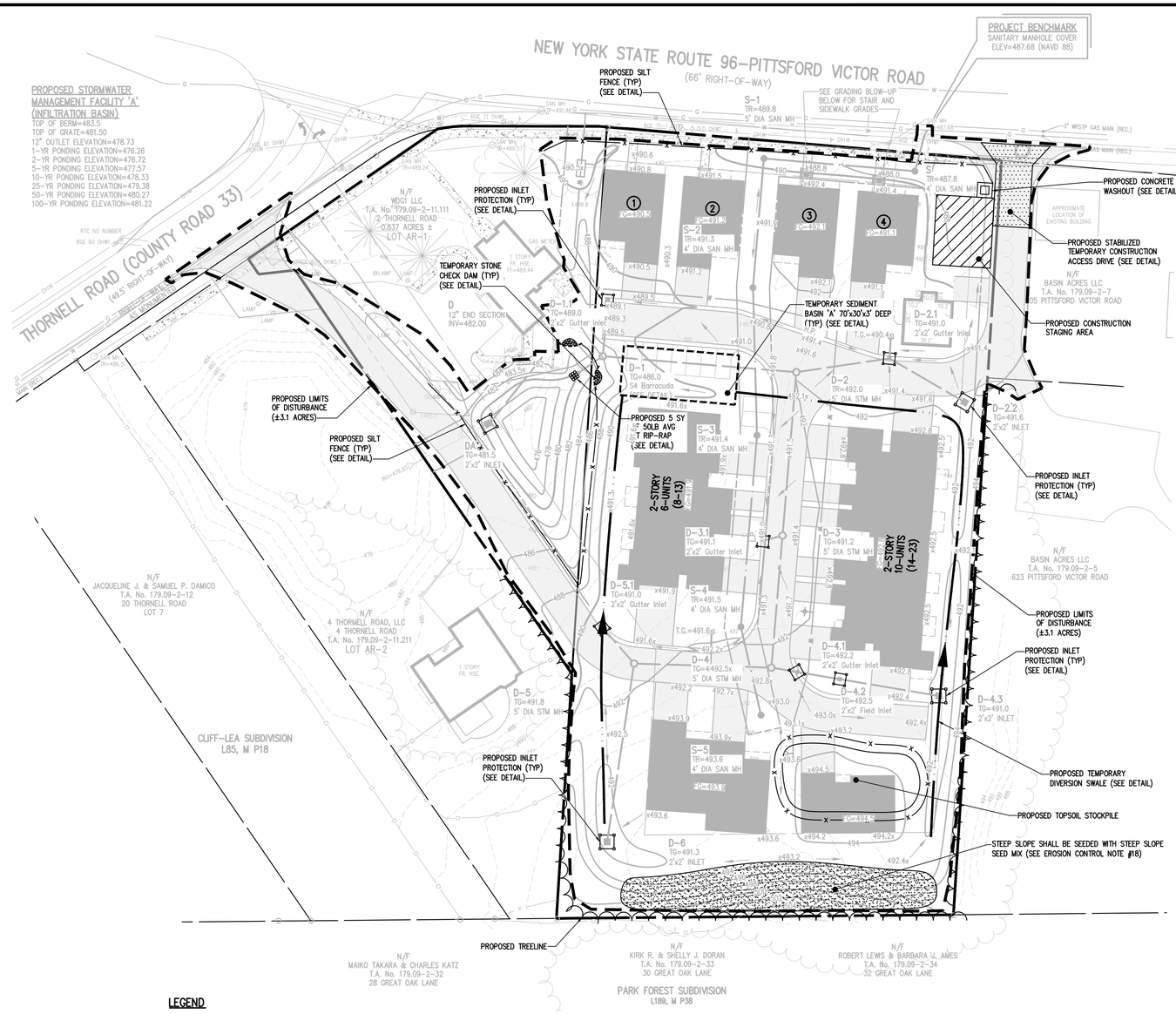
STATE OF NEW YORK
PETER THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

PROJECT: HARTWELL HEIGHTS
LOCATION: TOWN OF PERINTON, MONROE COUNTY, NEW 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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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

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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

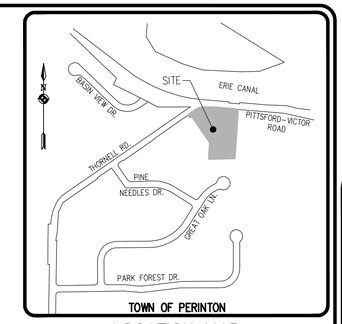
18. SLOPES 3:1 OR GREATER SHALL BE SEEDED WITH HEAVY MULCH AND MAY REQUIRE ADDITIONAL STABILIZATION MEASURES. SLOPES SHALL BE FINE GRADED WITH A MINIMUM OF 6" TOPSOIL AND SEEDED WITH FOLLOWING SEED MIX:

    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		
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3		
2		
1		

REVISIONS

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

NEW YORK STATE OF NEW YORK RYAN 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 CONSTRUCTION EROSION CONTROL 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.: 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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P:\2850\Drawings\Final\2850 Landscape Base.dwg



LANDSCAPE NOTES:

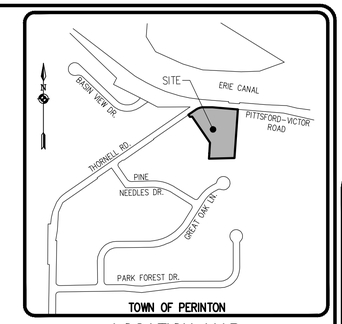
1. ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS AS NOTED IN THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION, ANSI Z60.1–2004.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY TAKEOFFS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE 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:

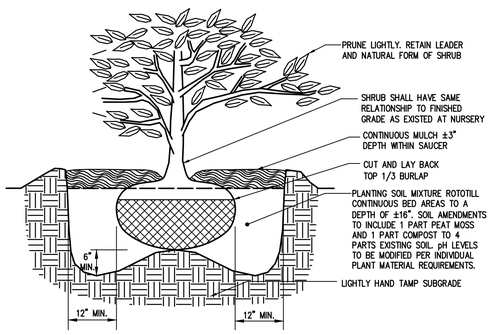
	LBS/ACRE	% BY PURITY	% GERM
'REPELL', 'CITATION' & 'MORNING STAR' PERENNIAL RYE GRASS	35	85	85
'JAMESTOWN II', 'FORTRESS', 'ENSYLVA' RED FESCUE	35	97	80
'BARON' & 'MIDNIGHT' KENTUCKY BLUEGRASS	30	85	80

   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.

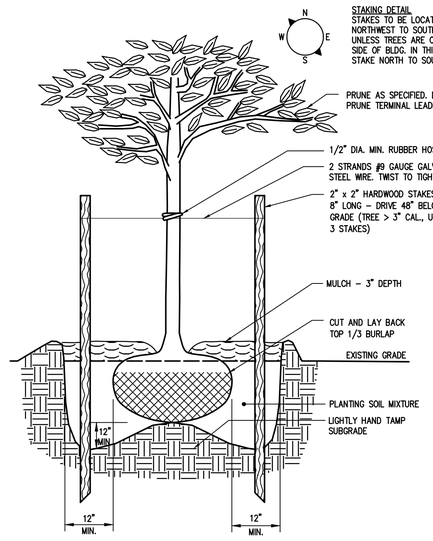
   PLEASE REFER TO BME DRAWING # 2850–09 / EROSION CONTROL PLAN FOR FURTHER SEEDING REQUIREMENTS IE. : TEMPORARY SEEDING AND SPECIALIZED SEED MIXES.
9. PROPOSED PLANT MATERIALS SHALL BE FIELD LOCATED, AND THE CONTRACTOR SHALL PERFORM A ROUGH STAKEOUT OF PLANTINGS FOR REVIEW AND APPROVAL BY OWNER PRIOR TO 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



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	TREES					
XX						
3	AC	Abies concolor	Concolor Fir	5–6' Ht.	B&B	
5	AF	Acer x freemanii 'Autumn Blaze'	Autumn Blaze Maple	2–2.5" cal	B&B	
4	GT	Gleditsia triacanthos var. inermis 'Shademaster'	Thornless Honeylocust	2–2.5" cal	B&B	
2	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.

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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BME Associates

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

Drawing Alteration
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	DATE	BY
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REVISIONS

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

REGISTERED LANDSCAPE ARCHITECT — JAMES P. ROBINSON — NEW YORK

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: LANDSCAPE PLAN

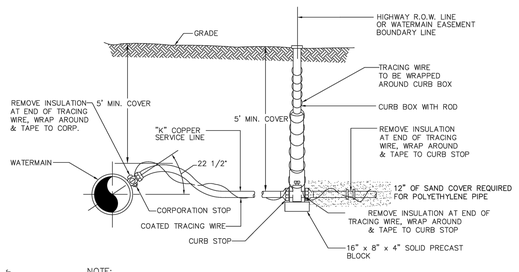
PHELPS & GORHAM PURCHASE, TOWNSHIP 12, RANGE 4, TOWN LOT 63, TAX MAP NUMBER 179.09–2–8, 179.09–2–9, 179.09–2–10, 179.09–2–11.111

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

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WATER SERVICE INSTALLATION DETAIL

N.T.S.

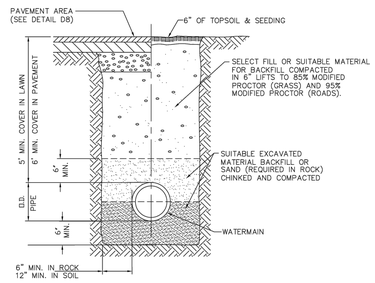


NOTE:
INSULATED 10 OR 12 GAUGE TRACING WIRE AND SAND INCASEMENT TO BE USED WITH POLYETHLENE PLASTIC SERVICE ONLY. SAND COVER TO BE 6" BELOW/ 6" ABOVE.

D28
JANUARY 2021

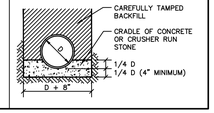
WATERMAIN TRENCH DETAIL

NTS



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.

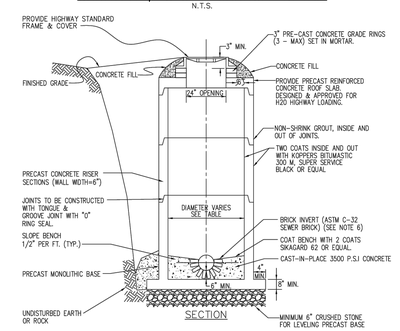


WATERMAIN/SEWER CROSSING DETAIL

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

Drawing Alteration
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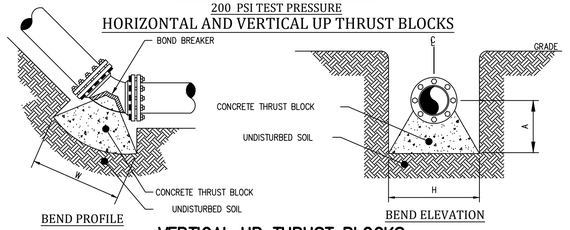
REVISIONS	DATE	BY
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PIPE DIAMETER	BEND OR FITTING															
	11¼ DEGREE			22½ DEGREE			45 DEGREE			90 DEGREE			TEE*, CAP OR PLUG			
	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	
8"	1.0	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.

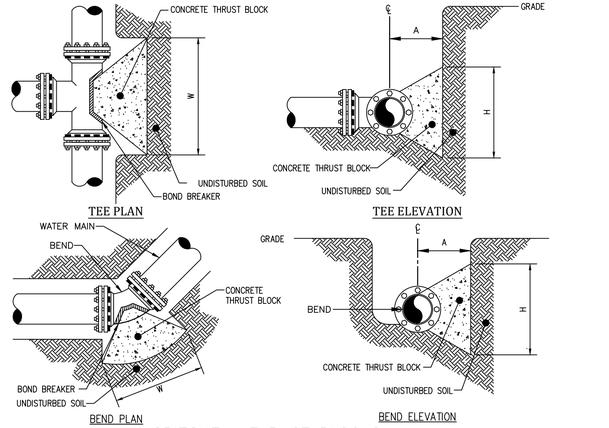
SOIL BEARING STRENGTH - 2,000 PSF
200 PSI TEST PRESSURE

HORIZONTAL AND VERTICAL UP THRUST BLOCKS



VERTICAL UP THRUST BLOCKS

NOT TO SCALE

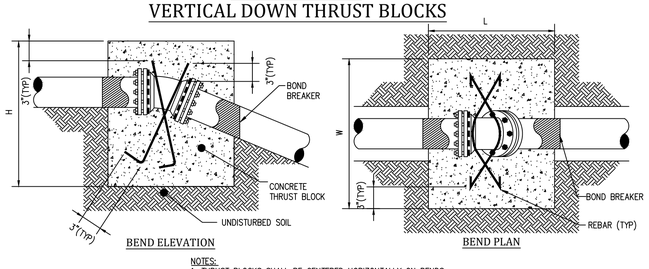


HORIZONTAL THRUST BLOCKS

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

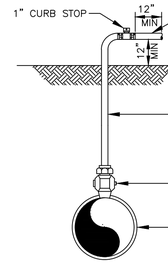


NOTES:
1. THRUST BLOCKS SHALL BE CENTERED HORIZONTALLY ON BENDS.
2. VOLUMES SHOWN IN CHART ARE MINIMUMS.

VERTICAL DOWN THRUST BLOCKS

NOT TO SCALE

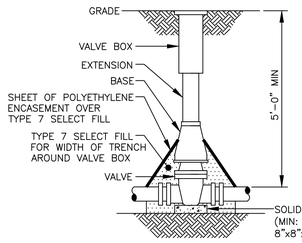
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NOTE: IN THE PRESENCE OF A WATER AUTHORITY REPRESENTATIVE REMOVE ALL CORPORATIONS ASSOCIATED WITH TEMPORARY DISINFECTION/SAMPLE TAPS AND REPLACE WITH THREADED BRASS PLUGS.

DISINFECTION/BLOW-OFF/SAMPLING TAP (TEMPORARY)

NOT TO SCALE

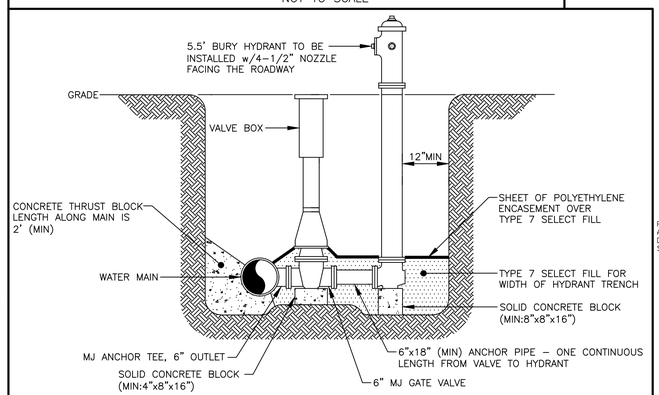


NOTES:

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

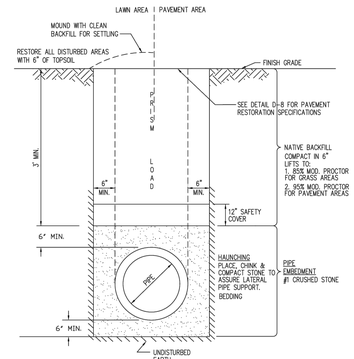


PERPENDICULAR HYDRANT ASSEMBLY

NOT TO SCALE

SEWER TRENCH DETAIL

NTS

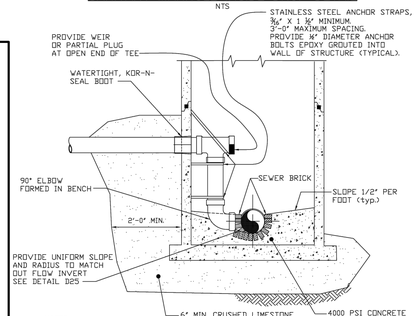


NOTE:
SAFETY COVER IS DEFINED AS NATIVE, CLEAN BACKFILL MATERIAL THAT IS FREE OF ORGANICS OR OTHER DELETERIOUS MATERIAL, INCLUDING ROCKS SIZED OVER 3-INCHES IN ANY DIRECTION.

D36
JANUARY 2021

SANITARY MANHOLE INSIDE DROP DETAIL

NTS



NOTES:

1) FITTINGS TO BE GPK SOLVENT WELD JOINTS MATCHING THE MATERIAL OF THE INCOMING PIPE (SDR–35 OR SDR–21). MINIMUM DROP REQUIRED FOR 8" SDR–35 PIPE IS 32".

2) THIS DETAIL IS INTENDED TO SHOW ONLY ITEMS SPECIFIC TO DROP MANHOLE. REFER TO SANITARY SEWER MANHOLE STANDARD SHEET FOR DETAILED SPECIFICATIONS RELATING TO THE ENTIRE STRUCTURE.

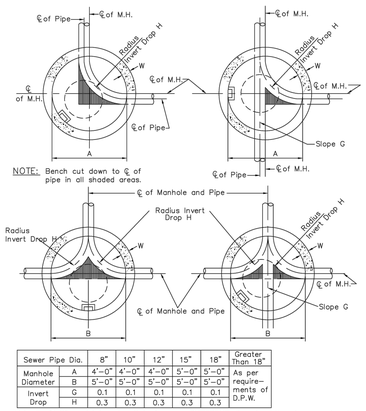
3) ENGINEERED DETAILS ARE REQUIRED IF INCOMING PIPE SLOPE IS 5% OR GREATER.

4) THE COMMISSIONER OF PUBLIC WORKS SHALL DETERMINE THE MINIMUM MANHOLE DIAMETER REQUIRED BASED ON INCOMING PIPE SIZE.

D24
JANUARY 2021

STANDARD MANHOLE DIMENSIONS

NTS



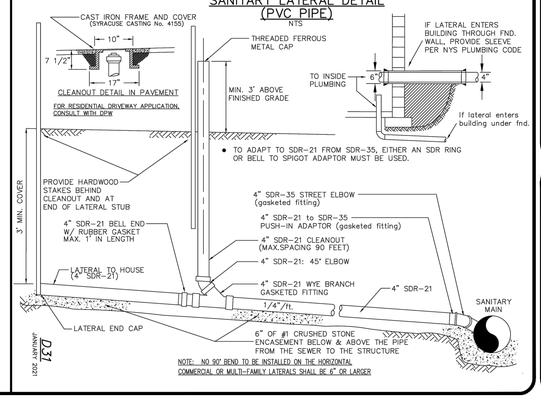
Sewer Pipe Dia.		8"	10"	12"	15"	18"	Greater Than 18"
Manhole Diameter	A	4'–0"	4'–0"	4'–0"	5'–0"	5'–0"	As per require–ments of D.P.W.
	B	5'–0"	5'–0"	5'–0"	5'–0"	5'–0"	
Invert Drop	G	0.1	0.1	0.1	0.1	0.1	
	H	0.3	0.3	0.3	0.3	0.3	

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

SANITARY LATERAL DETAIL (PVC PIPE)

NTS



D31
JANUARY 2021

BME ASSOCIATES
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STATE OF NEW YORK
BRIAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

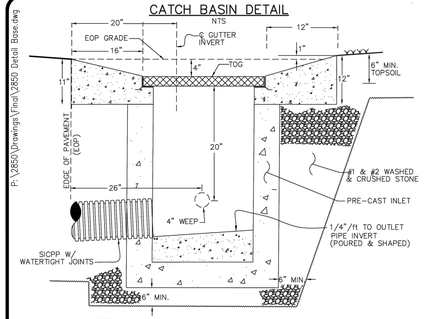
HARTWELL HEIGHTS
PROJECT
TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
LOCATION
WDG2, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534
CLIENT
PRELIMINARY/FINAL
DETAIL SHEET
DRAWING TITLE

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



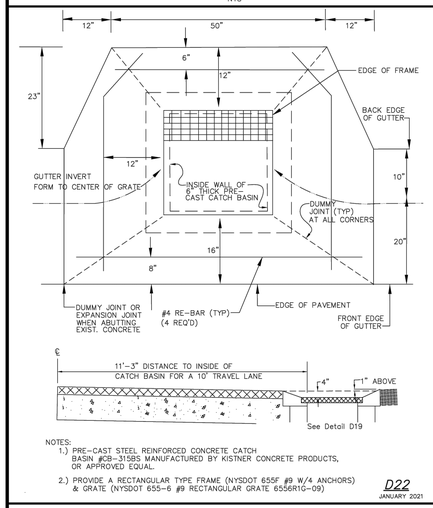
NOTES:

1. PRECAST STEEL REINFORCED CONCRETE CATCH BASIN #CB-315BS 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:

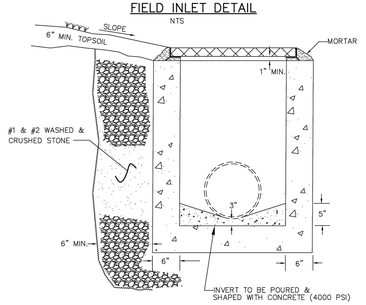
1.) PRE-CAST STEEL REINFORCED CONCRETE CATCH BASIN #CB-315BS MANUFACTURED BY KISTNER CONCRETE PRODUCTS, OR APPROVED EQUAL.

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

D22
JANUARY 2021

FIELD INLET DETAIL

NTS



NOTES:

1. PRECAST STEEL REINFORCED CONCRETE CATCH BASIN MANUFACTURED BY KISTNER (CB-315BS) 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.

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D20
JANUARY 2021

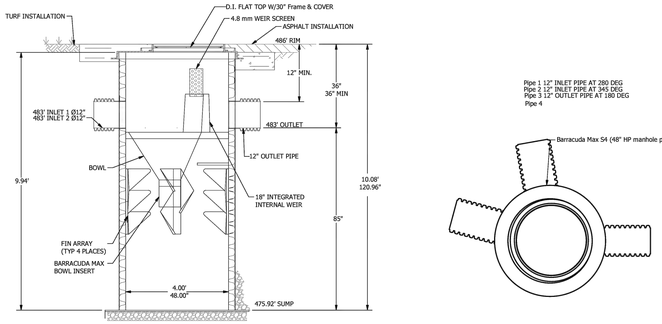
BARRACUDA MAX S4	
UNIT ID	Barracuda
PEAK FLOW RATE (CFS)	
TREATMENT FLOW RATE (CFS)	0.22

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 d50=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
PERRINTON,NY
DATE: 1/13/25
DRAWING:
PROJECT #: 2850
DESIGNED:
DRAWN:
CHECKED:
XX
DATE | DESCRIPTION | BY
REVISIONS

Barracuda Max
Stormwater Separator

ADS
4640 TRUEMAN BLVD
HILLIARD, OH 43026

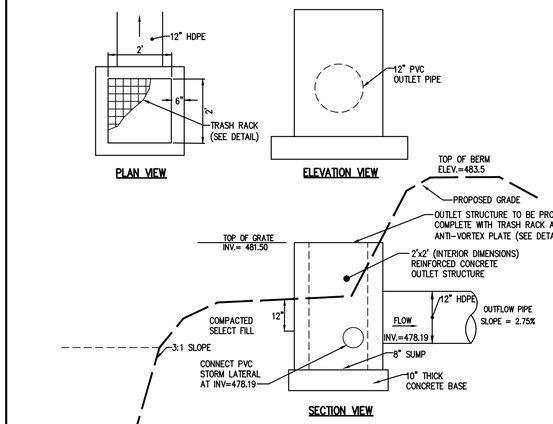
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SHEET
2 OF 2

THIS DRAWING AND DESIGN PRESENTED HEREON ARE PROPRIETARY TO ADS, UNDER THE LAWS OF THE USA. ANY DISCLOSURE OR OTHER USE OF THIS DRAWING OR DESIGN WITHOUT WRITTEN PERMISSION OF ADS IS STRICTLY PROHIBITED AND WILL BE ENFORCED TO THE FULLEST EXTENT OF THE LAW. ADS RESERVES THE RIGHT TO ENFORCE ITS INTELLECTUAL PROPERTY RIGHTS IN ALL APPROPRIATE FORUMS.

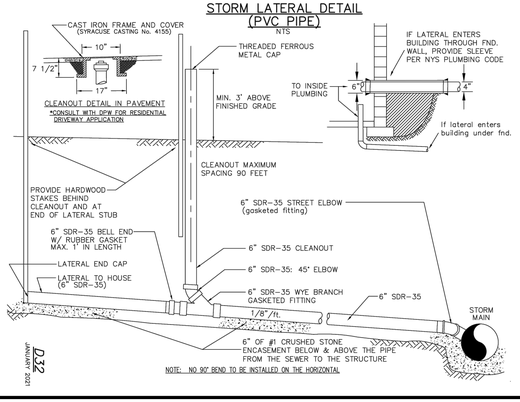
STORM WATER MANAGEMENT FACILITY OUTLET STRUCTURE DETAIL

N.T.S.



STORM LATERAL DETAIL (PVC PIPE)

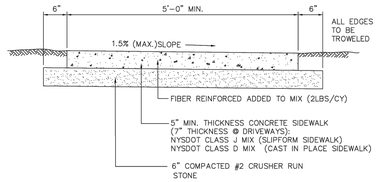
NTS



D17
JANUARY 2021

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

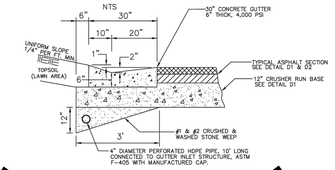
*SPECIAL NOTE

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

GUTTER WITH STONE WEEP & UNDERDRAIN STANDARD / COLLECTOR ROAD SECTION

NTS

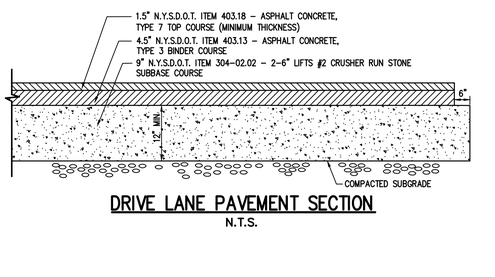


GUTTER WITH STONE WEEP PRIVATE ROAD SECTION

NTS

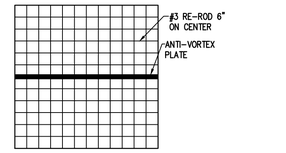


D6
JANUARY 2021

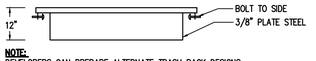


DRIVE LANE PAVEMENT SECTION

N.T.S.



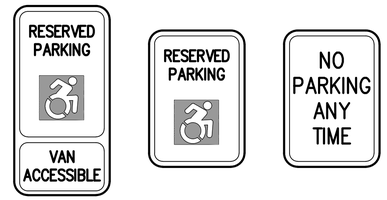
ANTI-VORTEX PLATE



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

TRASH RACK DETAIL

N.T.S.

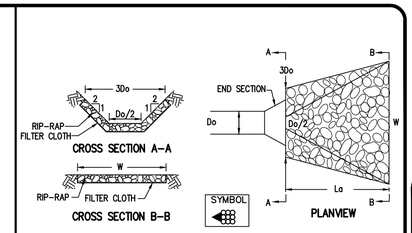


NOTES:

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.



RIP-RAP OUTLET DIMENSIONS

DESIGNATION	DIA. OF PIPE Do	3Do	La	W
D	–	–	–	–
DA	–	–	–	–

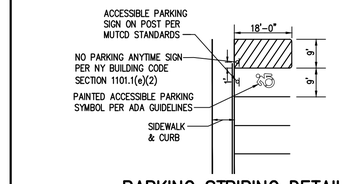
RIP-RAP OUTLET PROTECTION DETAIL

N.T.S.



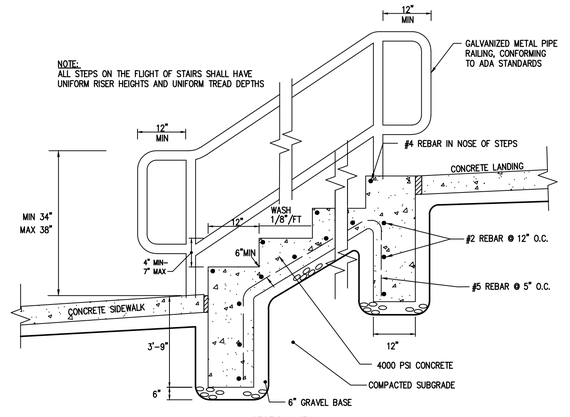
ACCESSIBLE PARKING SYMBOL DETAIL

N.T.S.



PARKING STRIPING DETAIL

N.T.S.



SECTION VIEW

CONCRETE STEPS WITH RAILING DETAIL

N.T.S.

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
7			
6			
5			
4			
3			
2			
1			

BME ASSOCIATES
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STATE OF NEW YORK
RYAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

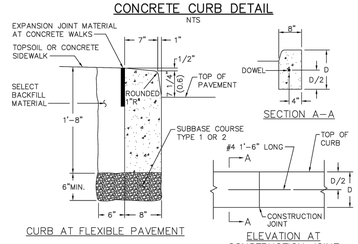
HARTWELL HEIGHTS
PROJECT
TOWN OF TOWN OF PERINTON, MONROE COUNTY, NEW YORK STATE
LOCATION
WDG2, LLC.
P.O. BOX 34
PITTSFORD, NY, 14534
CLIENT
PRELIMINARY/FINAL
DETAIL SHEET
DRAWING TITLE

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.	
14	
(SHEET 2 OF 3)	

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CONCRETE CURB DETAIL

NTS



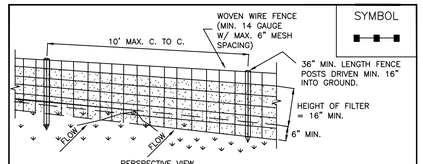
NOTES:

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

SILT FENCE

SYMBOL



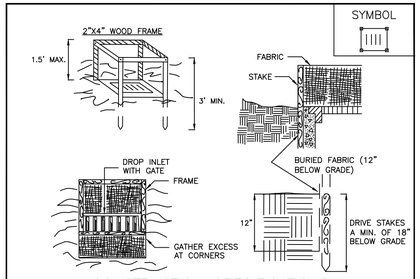
CONSTRUCTION SPECIFICATIONS

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

FABRIC DROP INLET PROTECTION

SYMBOL



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.

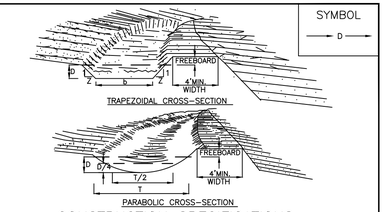
MAXIMUM DRAINAGE AREA 1 ACRE

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

DIVERSION

SYMBOL

D



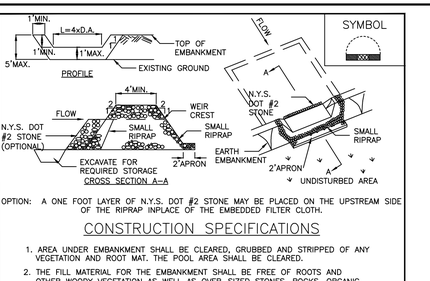
CONSTRUCTION SPECIFICATIONS

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.

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PAVEMENT RESTORATION – TRENCH DETAIL

N.T.S.



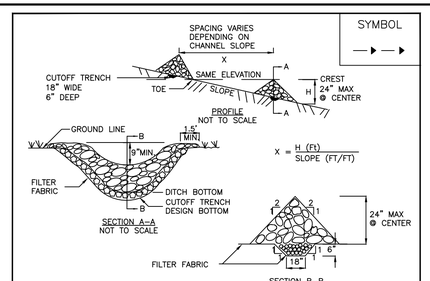
NOTES:

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

DIVERSION

SYMBOL

D



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.

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STABILIZED CONSTRUCTION ACCESS

SYMBOL

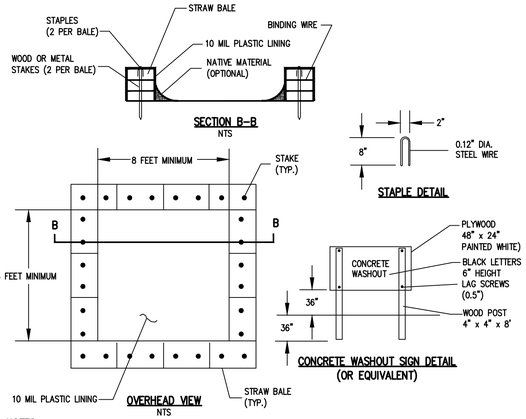
CONSTRUCTION SPECIFICATIONS

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

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CONCRETE WASHOUT DETAIL

N.T.S.



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.

STONE OUTLET SEDIMENT TRAP ST-II

SYMBOL

XX

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 DIMENSIONS 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 CHECK DAM

SYMBOL

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.

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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."

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STATE OF NEW YORK
BRIAN THOMAS DESTRO
093805
LICENSED PROFESSIONAL ENGINEER

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 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.	
15	
(SHEET 3 OF 3)	

Maintenance and Inspection Schedule

2016 NY State Standards & Specifications

Erosion Control Planning & Site Management

Specification	Maintenance Practices	Recommended Schedule of Inspection	Practice Proposed on Project
Construction Road Stabilization	Inspect construction roads and parking areas periodically for condition of surface. Topdress with new gravel as needed. Check ditches for erosion and sedimentation after rainfall events. Maintain vegetation in a healthy, vigorous condition. Areas producing sediment should be treated immediately. See Page 2.23	Daily	
Concrete Truck Washout	Accumulated hardened material shall be removed when 75% of the storage capacity of the structure is filled. Any excess wash water shall be pumped into a containment vessel and properly disposed of offsite. Damaged or leaking facilities shall be deactivated and repaired or replaced immediately. See Page 2.24	Daily	X
Dust Control	Re-apply dust control measures as necessary to keep dust to a minimum. Maintain through dry weather periods until all disturbed areas are stabilized. See Page 2.25	Daily during dry weather	X
Protecting Vegetation During Construction	Ensure placement of sturdy fences, or barriers, of wood, steel, or other protective material around valuable vegetation for protection from construction equipment. See Pages 2.26-2.28	Weekly and following storms	
Site Pollution Prevention	See Page 2.29	Daily	X
Stabilized Construction Access	The access shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately. See Pages 2.30-2.31	Daily	X
Winter Stabilization	See Pages 2.38-2.39	Daily from November 15th through April 1st	X
Erosion & Sediment Control Plan for Small Homesite Construction	See Appendix D, Pages D.3, D.5, D.7, D.9 Erosion Control Plan to be applied as needed and dependent upon site condition.	Daily	

Erosion Control Part 1 - Runoff Control

Specification	Maintenance Practices	Recommended Schedule of Inspection	Practice Proposed on Project
Stone Check Dam	Remove sediment accumulated behind the dam as needed to allow channel to drain through the stone check dam and prevent large flows from carrying sediment over the dam. See Pages 3.2-3.3	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Construction Ditch	Ditches collecting runoff from disturbed areas shall remain in place until the disturbed areas are permanently stabilized. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin until the drainage area above the ditch is adequately stabilized. See Pages 3.4-3.5	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	

Maintenance and Inspection Schedule

2016 NY State Standards & Specifications

Dewatering Sump Pit	Discharge of turbid water pumped from the standpipe should be to a sediment trap, sediment basin, filter bag or stabilized area, such as a filter strip. See Pages 3.7-3.8.	Daily while in use.	X
Diversion	Each diversion must have an adequate outlet. Vegetated outlets shall be installed before diversion construction, if needed, to ensure establishment of vegetative cover in the outlet channel. See Pages 3.9-3.13	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Earth Dike	Inspect for positive drainage to outlet. Adjust location to utilize a stabilized safe outlet. Convey runoff to a sediment trapping device. See Pages 3.14-3.15	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Flow Diffuser	The receiving area shall be stabilized prior to construction of the flow diffuser. See Pages 3.16-3.18	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Flow Spreader	Inspect for sand accumulation and debris. Remove debris when accumulation is approximately 10 to 20% of design volume. See Pages 3.19-3.20	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Grassed Waterway	During growth period, inspect grass after rainstorms. Remove accumulated sediments. Each waterway shall have a stable outlet. Inspect outlets to prevent scouring and erosion. See Page 3.23-3.26	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Lined Waterway (rock)	Pavement or lining should be maintained as built to prevent undermining and deterioration. Existing trees next to pavements should be removed, as roots can cause uplift damage. See Pages 3.27-3.30	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Perimeter Dike/Swale	Inspect to ensure structural integrity. Repair as needed. Perimeter dike/swale shall have a stabilized outlet. See Page 3.35-3.36	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Pipe Slope Drain	Check inlets for undercutting and outlets for erosion after rainstorms. Inspect pipe for damage and for clogging debris. See Pages 3.37-3.38	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Rock Outlet Protection	Once a riprap outlet has been installed, the maintenance needs are very low. It should be inspected after high flows for evidence of scour beneath the riprap or for dislodged stones. Repairs should be made immediately. See Pages 3.39-3.46	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Storm Drain Diversion	See Page 3.47	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Subsurface Drain	Check to ensure drains are not clogged with sediment or plant roots. Prevent heavy truck traffic from crushing piping. See Pages 3.48-3.51	Monthly	

Maintenance and Inspection Schedule

2016 NY State Standards & Specifications

Erosion Control Part 2 – Soil Stabilization

Specification	Maintenance Practices	Recommended Schedule of Inspection	Practice Proposed on Project
Anchored Stabilization Matting - Nets and Blankets	Inspect to ensure good contact with ground and no erosion of soils. Replace damaged material and re-staple where required. Correct erosion problems immediately. Damaged or displaced blankets shall be restored or replaced within 2 calendar days. See Pages 4.5-4.6	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Armored Slope & Channel Stabilization	Riprap shall be inspected periodically for scour or dislodged stones. Control weed and brush growth as needed. See Pages 4.7-4.14	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Fertilizer Application	All application of fertilizer shall be in accordance with Nutrient Runoff Law - ECL Article 17, Title 21. See Page 4.21	N/A	
Fiber Roll	Plant materials missing or damaged should be replaced as soon as possible. Sloughs or breaks in drainage pattern should be reestablished for the site as quickly as possible to maintain stability. See Pages 4.22-4.23	Daily	
Land Grading	All graded or disturbed areas, including slopes, shall be protected during clearing and construction in accordance with the erosion and sediment control plan until they are adequately stabilized. See Pages 4.24-4.28	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Mulching	Maintain specified thickness of mulch cover. Eroded areas must be corrected and re-mulched. Drainage problems must be corrected. See Pages 4.39-4.41	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Loose Stabilization Blankets	Re-seed areas failing to establish 80% cover (during growing season). If re-seeding is ineffective, use sodding or Anchored Stabilization Matting – Nets or Blankets. Eroded areas shall be corrected, re-planted, and irrigated as required. See Pages 4.37 - 4.38	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Permanent Construction Area Planting	Re-seed areas failing to establish 80% cover (during growing season). If re-seeding is ineffective, use sodding or nets/blankets. Eroded areas shall be corrected, re-planted, and irrigated as required. See Pages 4.42-4.44	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Recreation Area Seeding	Re-seed areas failing to establish 80% cover (during growing season). If re-seeding is ineffective, use sodding or nets/blankets. Eroded areas shall be corrected, re-planted, and irrigated as required. See Pages 4.45-4.47	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Retaining Wall	Various Types See Pages 4.48-4.51	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Soil Restoration	Soil Restoration is applied in the cleanup, restoration, and landscaping phase of construction followed by the permanent establishment of an appropriate, deep-rooted groundcover to help maintain the restored soil structure. Soil restoration includes mechanical decompaction, compost amendment, or both. Keep the site free of vehicular and foot traffic or other weight loads.	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X

Maintenance and Inspection Schedule

2016 NY State Standards & Specifications

	Consider pedestrian footpaths. See Pages 4.52 & 4.53		
Stabilization with Sod	Sod shall be watered immediately after rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Keep sod moist for at least two weeks. Avoid excessive watering during applications. See Pages 4.54-4.55	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Surface Roughening	Seed roughened surfaces as soon as possible. Re-grade and re-seed any areas beginning to erode. See Pages 4.56-4.56	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Temporary Construction Area Seeding	Inspect areas for germination. During winter months inspect mulch for quality of coverage. See Page 4.58	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Topsoiling	Topsoil shall be distributed to a uniform depth over the area. It shall not be placed when it is partly frozen, muddy, or on frozen slopes or over ice, snow, or standing water puddles. See Pages 4.59-4.60	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Trees, Shrubs, and Vines	See Pages 4.63-4.65	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Vegetated Rock Gabions	Repairs should be made to gabions as necessary, and all settled areas should be brought back to grade.	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Vegetating Waterways	If rills develop in the centerline of a waterway, prompt attention is required to avoid the formation of gullies. Either stone and/or compacted soil fill with excelsior or filter fabric as necessary may be used during the establishment phase. See Pages 4.78-4.80	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	

Sediment Control

Specification	**Maintenance Practices**	**Recommended Schedule of Inspection**	**Practice Proposed on Project**
Buffer Filter Strip	The minimum buffer filter strip width to protect paved areas during construction is 20 feet. If at any time the width of the buffer filter strip has been reduced by sediment deposition to half its original width or concentrated flow has developed, suitable additional practices should be installed. See Pages 5.3-5.4	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Cofferdam Structure	Particular attention should be given to the foundation support system at perimeter of structural component dams. Any undermined or settled areas shall be restored immediately. See Pages 5.5-5.6	Daily	
Compost Filter Sock	Accumulated sediment shall be removed when it reaches half the above ground height of the sock and disposed of in accordance with the plan. Traffic shall not be permitted to cross filter socks. See Pages 5.7-5.9	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Dewatering Device	Filter fabric or media will be replaced as needed. Any malfunctioning skimmer or its components shall	Weekly and after each runoff event.	

Maintenance and Inspection Schedule

2016 NY State Standards & Specifications

	be repaired or replaced within 24 hours of inspection notification. Sediment shall be removed from the system when it reaches the level marked in a sediment cleanout stake or the top of the skimmer landing area. See Pages 5.10-5.15		
Geotextile Filter Bag	The bag is considered full when remaining bag flow area has been reduced by 75%. At this point, it should be replaced with a new bag. See Page 5.16	Daily	
Sediment Basin	Sediment shall be removed from the basin when it reaches the specified distance below the top of the riser (shall not exceed 50 % capacity). See Pages 5.19-5.41	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Sediment Trap	Remove sediment when it reaches a depth of one foot. Repair damage to trap embankments and slopes. See Pages 5.46-5.54	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	
Silt Fence	Repair damaged fencing immediately. Intercept concentrated flows and reroute. Remove sediment accumulations at 6-inches. Replace deteriorated fencing material. Properly dispose of used fencing. See Pages 5.54-5.56	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Storm Drain Inlet Protection	See Pages 5.57-5.62	Semi-Weekly when >5 acres & Weekly when < 5 acres; and following storms	X
Turbidity Curtain	See Pages 5.65-5.66	Daily	

STANDARD AND SPECIFICATIONS FOR CONCRETE TRUCK WASHOUT



Definition & Scope

A temporary excavated or above ground lined constructed pit where concrete truck mixers and equipment can be washed after their loads have been discharged, to prevent highly alkaline runoff from entering storm drainage systems or leaching into soil.

Conditions Where Practice Applies

Washout facilities shall be provided for every project where concrete will be poured or otherwise formed on the site. This facility will receive highly alkaline wash water from the cleaning of chutes, mixers, hoppers, vibrators, placing equipment, trowels, and screeds. Under no circumstances will wash water from these operations be allowed to infiltrate into the soil or enter surface waters.

Design Criteria

Capacity: The washout facility should be sized to contain solids, wash water, and rainfall and sized to allow for the evaporation of the wash water and rainfall. Wash water shall be estimated at 7 gallons per chute and 50 gallons per hopper of the concrete pump truck and/or discharging drum. 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.

Location: Locate the facility a minimum of 100 feet from drainage swales, storm drain inlets, wetlands, streams and other surface waters. Prevent surface water from entering the structure except for the access road. Provide appropriate access with a gravel access road sloped down to the structure. Signs shall be placed to direct drivers to the facility after their load is discharged.

Liner: All washout facilities will be lined to prevent leaching of liquids into the ground. The liner shall be plastic sheeting with a minimum thickness of 10 mils with no holes or tears, and anchored beyond the top of the pit with an earthen berm, sand bags, stone, or other structural appurtenance except at the access point.

If pre-fabricated washouts are used they must ensure the capture and containment of the concrete wash and be sized based on the expected frequency of concrete pours. They shall be sited as noted in the location criteria.

Maintenance

- All concrete washout facilities shall be inspected daily. Damaged or leaking facilities shall be deactivated and repaired or replaced immediately. Excess rainwater that has accumulated over hardened concrete should be pumped to a stabilized area, such as a grass filter strip.
- Accumulated hardened material shall be removed when 75% of the storage capacity of the structure is filled. Any excess wash water shall be pumped into a containment vessel and properly disposed of off site.
- Dispose of the hardened material off-site in a construction/demolition landfill. On-site disposal may be allowed if this has been approved and accepted as part of the projects SWPPP. In that case, the material should be recycled as specified, or buried and covered with a minimum of 2 feet of clean compacted earthfill that is permanently stabilized to prevent erosion.
- The plastic liner shall be replaced with each cleaning of the washout facility.
- Inspect the project site frequently to ensure that no concrete discharges are taking place in non-designated areas.

STANDARD AND SPECIFICATIONS FOR DUST CONTROL



Definition & Scope

The control of dust resulting from land-disturbing activities, to prevent surface and air movement of dust from disturbed soil surfaces that may cause off-site damage, health hazards, and traffic safety problems.

Conditions Where Practice Applies

On construction roads, access points, and other disturbed areas subject to surface dust movement and dust blowing where off-site damage may occur if dust is not controlled.

Design Criteria

Construction operations should be scheduled to minimize the amount of area disturbed at one time. Buffer areas of vegetation should be left where practical. Temporary or permanent stabilization measures shall be installed. No specific design criteria is given; see construction specifications below for common methods of dust control.

Water quality must be considered when materials are selected for dust control. Where there is a potential for the material to wash off to a stream, ingredient information must be provided to the NYSDEC.

No polymer application shall take place without written approval from the NYSDEC.

Construction Specifications

A. **Non-driving Areas** – These areas use products and materials applied or placed on soil surfaces to prevent airborne migration of soil particles.

Vegetative Cover – For disturbed areas not subject to traffic, vegetation provides the most practical method of dust control (see Section 3).

Mulch (including gravel mulch) – Mulch offers a fast effective means of controlling dust. This can also include rolled erosion control blankets.

Spray adhesives – These are products generally composed of polymers in a liquid or solid form that are mixed with water to form an emulsion that is sprayed on the soil surface with typical hydroseeding equipment. The mixing ratios and application rates will be in accordance with the manufacturer's recommendations for the specific soils on the site. In no case should the application of these adhesives be made on wet soils or if there is a probability of precipitation within 48 hours of its proposed use. Material Safety Data Sheets will be provided to all applicators and others working with the material.

B. **Driving Areas** – These areas utilize water, polymer emulsions, and barriers to prevent dust movement from the traffic surface into the air.

Sprinkling – The site may be sprayed with water until the surface is wet. This is especially effective on haul roads and access route to provide short term limited dust control.

Polymer Additives – These polymers are mixed with water and applied to the driving surface by a water truck with a gravity feed drip bar, spray bar or automated distributor truck. The mixing ratios and application rates will be in accordance with the manufacturer's recommendations. Incorporation of the emulsion into the soil will be done to the appropriate depth based on expected traffic. Compaction after incorporation will be by vibratory roller to a minimum of 95%. The prepared surface shall be moist and no application of the polymer will be made if there is a probability of precipitation within 48 hours of its proposed use. Material Safety Data Sheets will be provided to all applicators working with the material.

Barriers – Woven geo-textiles can be placed on the driving surface to effectively reduce dust throw and particle migration on haul roads. Stone can also be used for construction roads for effective dust control.

Windbreak – A silt fence or similar barrier can control air currents at intervals equal to ten times the barrier height. Preserve existing wind barrier vegetation as much as practical.

Maintenance

Maintain dust control measures through dry weather periods until all disturbed areas are stabilized.

STANDARD AND SPECIFICATIONS FOR SITE POLLUTION PREVENTION





Definition & Scope

A collection of management practices intended to control non-sediment pollutants associated with construction activities to prevent the generation of pollutants due to improper handling, storage, and spills and prevent the movement of toxic substances from the site into surface waters.

Conditions Where Practice Applies

On all construction sites where the earth disturbance exceeds 5,000 square feet, and involves the use of fertilizers, pesticides, petroleum based chemicals, fuels and lubricants, as well as sealers, paints, cleared woody vegetation, garbage, and sanitary wastes.

Design Criteria

The variety of pollutants on a particular site and the severity of their impacts depend on factors such as the nature of the construction activity, the physical characteristics of the construction site, and the proximity of water bodies and conveyances to the pollutant source.

1. All state and federal regulations shall be followed for the storage, handling, application, usage, and disposal of pesticides, fertilizers, and petroleum products.

2. Vehicle and construction equipment staging and maintenance areas will be located away from all drainage ways with their parking areas graded so the runoff from these areas is collected, contained and treated prior to discharge from the site.

3. Provide sanitary facilities for on-site personnel.

4. Store, cover, and isolate construction materials including topsoil, and chemicals, to prevent runoff of pollutants and contamination of groundwater and surface waters.

5. Develop and implement a spill prevention and control plan. The plan should include NYSDEC's spill reporting and initial notification requirements.

6. Provide adequate disposal for solid waste including woody debris, stumps, and other construction waste and include these methods and directions in the construction details on the site construction drawings. Fill, woody debris, stumps and construction waste shall not be placed in regulated wetlands, streams or other surface waters.

7. Distribute or post informational material regarding proper handling, spill response, spill kit location, and emergency actions to be taken, to all construction personnel.

8. Refueling equipment shall be located at least 100 feet from all wetlands, streams and other surface waters.



STANDARD AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ACCESS



Definition & Scope

A stabilized pad of aggregate underlain with geotextile located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area. The purpose of stabilized construction access is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets.

Conditions Where Practice Applies

A stabilized construction access shall be used at all points of construction ingress and egress.

Design Criteria

See Figure 2.1 on page 2.31 for details.

Aggregate Size: Use a matrix of 1-4 inch stone, or reclaimed or recycled concrete equivalent.

Thickness: Not less than six (6) inches.

Width: 12-foot minimum but not less than the full width of points where ingress or egress occurs. 24-foot minimum if there is only one access to the site.

Length: As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).

Geotextile: To be placed over the entire area to be covered with aggregate. Filter cloth will not be required on a single-family residence lot. Piping of surface water under entrance shall be provided as required. If piping is impossible, a mountable berm with 5:1 slopes will be permitted.

Criteria for Geotextile: The geotextile shall be woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydro-carbons, mildew, rot resistant, and conform to the fabric properties as shown:

Fabric Properties[3]	Light Duty[1] Roads Grade Subgrade	Heavy Duty[2] Haul Roads Rough Graded	Test Method
Grab Tensile Strength (lbs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTM D1682
Mullen Burst Strength (lbs)	190	430	ASTM D3786
Puncture Strength (lbs)	40	125	ASTM D751 Modified
Equivalent	40-80	40-80	US Std Sieve
Opening Size			CW-02215
Aggregate Depth	6	10	-

[1]Light Duty Road: Area sites that have been graded to subgrade and where most travel would be single axle vehicles and an occasional multi-axle truck. Acceptable materials are Trevira Spunbond 1115, Mirafi 100X, Typar 3401, or equivalent.

[2]Heavy Duty Road: Area sites with only rough grading, and where most travel would be multi-axle vehicles. Acceptable materials are Trevira Spunbond 1135, Mirafi 600X, or equivalent.

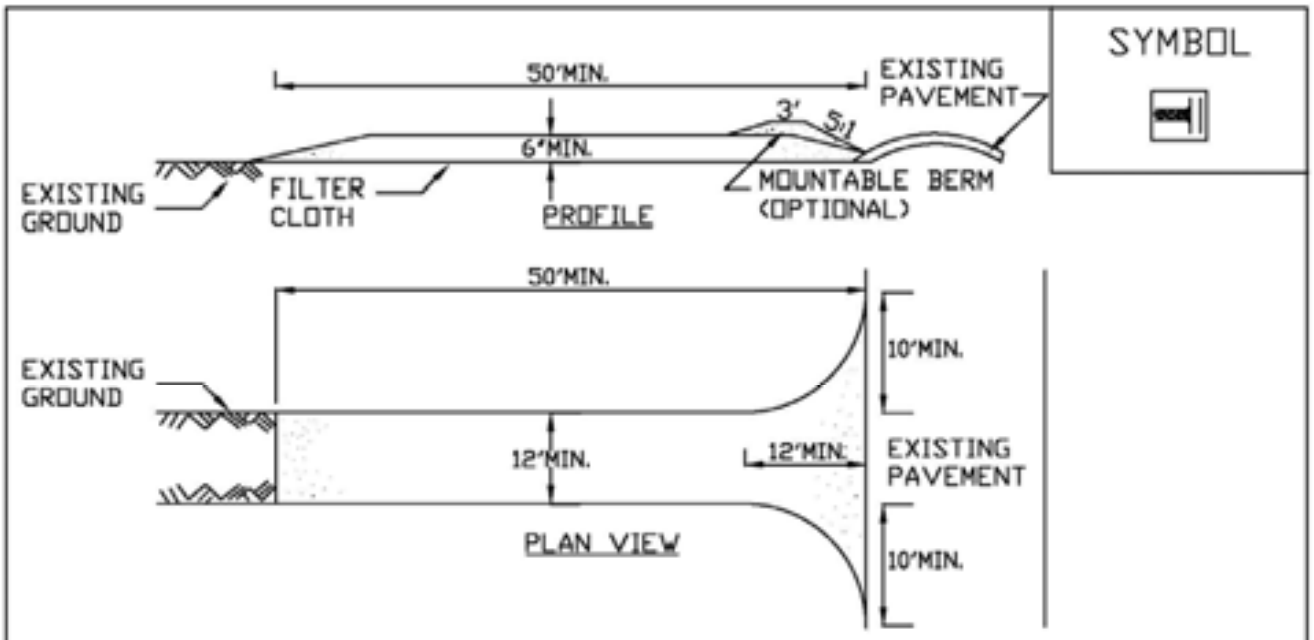
[3]Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric strength.

Maintenance

The access shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately.

When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.

Figure 2.1
Stabilized Construction Access



CONSTRUCTION SPECIFICATIONS

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

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

STABILIZED CONSTRUCTION ACCESS

STANDARD AND SPECIFICATIONS FOR WINTER STABILIZATION



Definition & Scope

A temporary site specific, enhanced erosion and sediment control plan to manage runoff and sediment at the site during construction activities in the winter months to protect off-site water resources.

Conditions Where Practice Applies

This standard applies to all construction activities involved with ongoing land disturbance and exposure between November 15th to the following April 1st.

Design Criteria

1. Prepare a snow management plan with adequate storage for snow and control of melt water, requiring cleared snow to be stored in a manner not affecting ongoing construction activities.

2. Enlarge and stabilize access points to provide for snow management and stockpiling. Snow management activities must not destroy or degrade installed erosion and sediment control practices.

3. A minimum 25 foot buffer shall be maintained from all perimeter controls such as silt fence. Mark silt fence with tall stakes that are visible above the snow pack.

4. Edges of disturbed areas that drain to a waterbody within 100 feet will have 2 rows of silt fence, 5 feet apart, installed on the contour.

5. Drainage structures must be kept open and free of snow and ice dams. All debris, ice dams, or debris from plowing operations, that restrict the flow of runoff and meltwater, shall be removed.

6. Sediment barriers must be installed at all appropriate perimeter and sensitive locations. Silt fence and other practices requiring earth disturbance must be installed before the ground freezes.

7. Soil stockpiles must be protected by the use of established vegetation, anchored straw mulch, rolled stabilization matting, or other durable covering. A barrier must be installed at least 15 feet from the toe of the stockpile to prevent soil migration and to capture loose soil.

8. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures should be initiated by the end of the next business day and completed within three (3) days. Rolled erosion control blankets must be used on all slopes 3 horizontal to 1 vertical or steeper.

9. If straw mulch alone is used for temporary stabilization, it shall be applied at double the standard rate of 2 tons per acre, making the application rate 4 tons per acre. Other manufactured mulches should be applied at double the manufacturer's recommended rate.

10. To ensure adequate stabilization of disturbed soil in advance of a melt event, areas of disturbed soil should be stabilized at the end of each work day unless:

    a. work will resume within 24 hours in the same area and no precipitation is forecast or;

    b. the work is in disturbed areas that collect and retain runoff, such as open utility trenches, foundation excavations, or water management areas.

11. Use stone paths to stabilize access perimeters of buildings under construction and areas where construction vehicle traffic is anticipated. Stone paths should be a minimum 10 feet in width but wider as necessary to accommodate equipment.

Maintenance

The site shall be inspected frequently to ensure that the erosion and sediment control plan is performing its winter stabilization function. If the site will not have earth disturbing activities ongoing during the "winter season", **all** bare exposed soil must be stabilized by established vegetation, straw or other acceptable mulch, matting, rock, or other approved material such as rolled erosion control products. Seeding of areas with mulch cover is preferred but seeding alone is not acceptable for proper stabilization.

Compliance inspections must be performed and reports filed properly in accordance with the SWPPP for all sites under a winter shutdown.

References

1. Northeastern Illinois Soil and Sedimentation Control Steering Committee. October 1981. Procedures and Standards for Urban Soil Erosion and Sediment Control in Illinois.
2. J.F. Rushing, V.M. Moore, J.S. Tingle, Q. Mason, and T. McCaffery, 2005. Dust Abatement Methods for Lines of Communication and Base Camps in Temperate Climates. ERDC/GSL TR-05-23, October 2005.

Figure D.1
Erosion Control Plan Condition 1

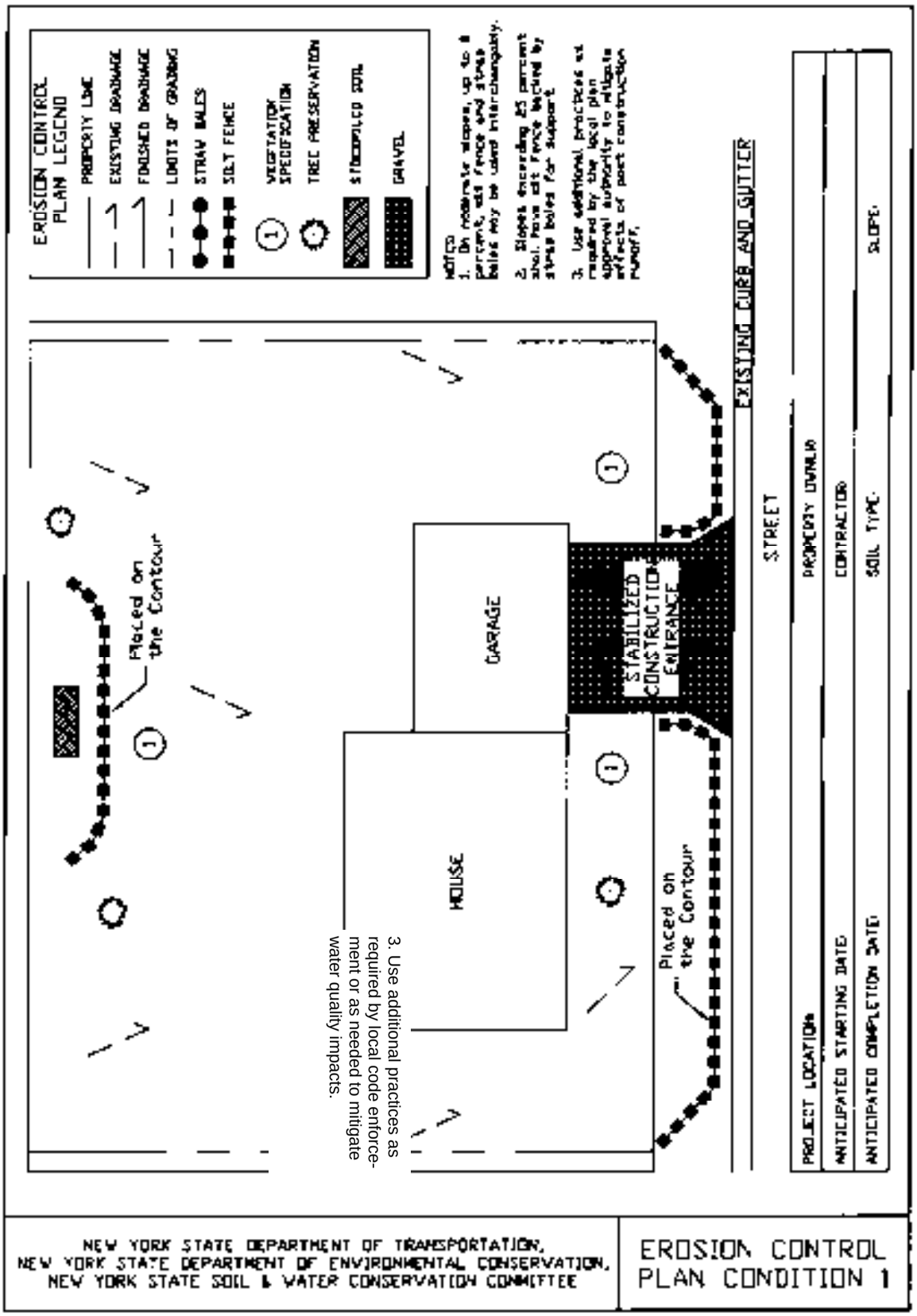


Figure D.2
Erosion Control Plan Condition 2

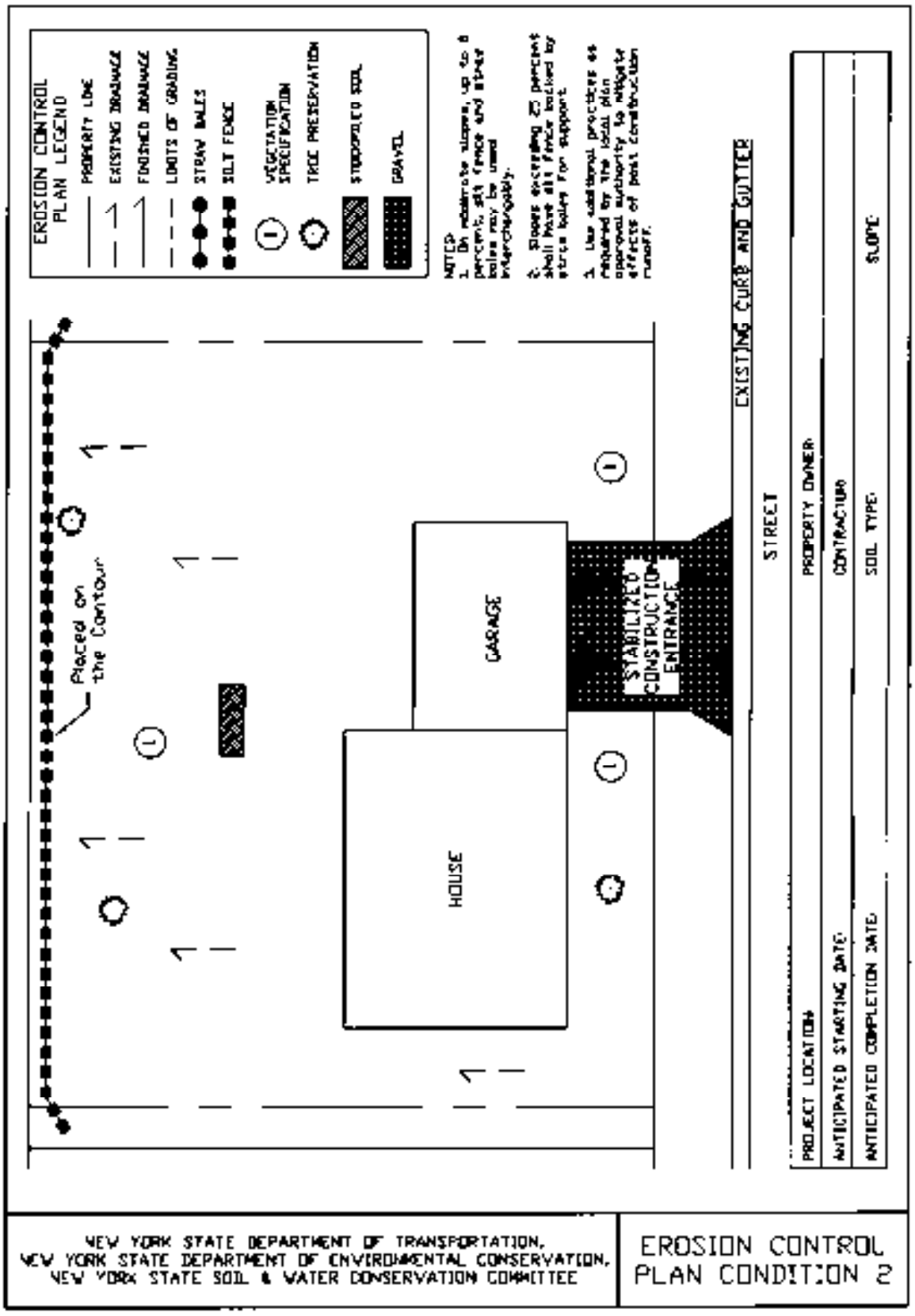


Figure D.3
Erosion Control Plan Condition 3

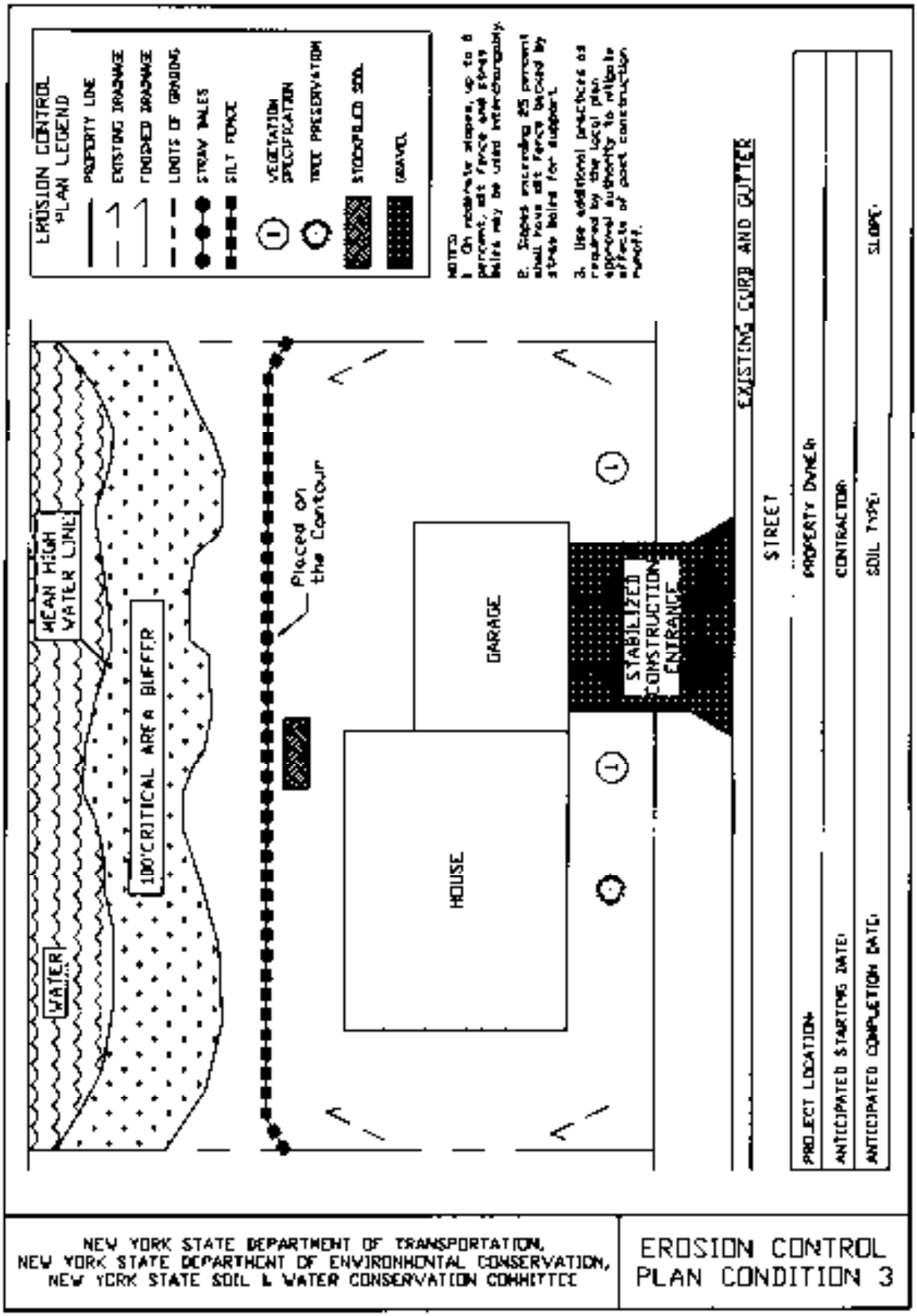
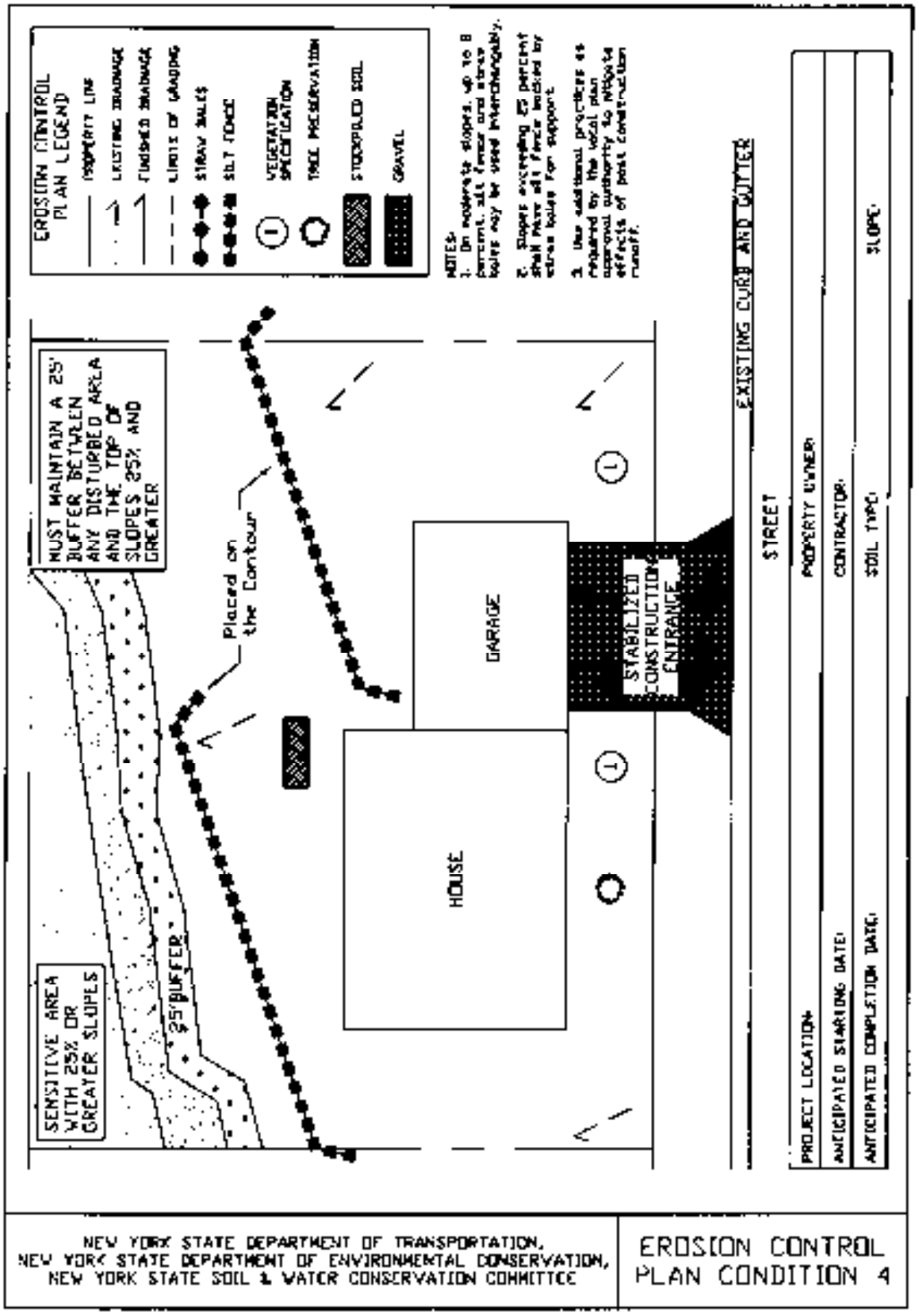


Figure D.4
Erosion Control Plan Condition 4



STANDARD AND SPECIFICATIONS FOR CHECK DAM



Definition & Scope

Small barriers or dams constructed of stone, bagged sand or gravel, or other durable materials across a drainageway to reduce erosion in a drainage channel by reducing the velocity of flow in the channel.

Conditions Where Practice Applies

This practice is used as a **temporary** and, in some cases, a **permanent** measure to limit erosion by reducing velocities in open channels that are degrading or subject to erosion or where permanent stabilization is impractical due to short period of usefulness and time constraints of construction.

Design Criteria

Drainage Area: Maximum drainage area above the check dam shall not exceed two (2) acres.

Height: Not greater than 2 feet. Center shall be maintained 9 inches lower than abutments at natural ground elevation.

Side Slopes: Shall be 2:1 or flatter.

Spacing: The check dams shall be spaced as necessary in the channel so that the crest of the downstream dam is at the elevation of the toe of the upstream dam. This spacing is equal to the height of the check dam divided by the channel slope.

Therefore: $$S = \frac{h}{s}$$

Where: S = spacing interval (ft.)
h = height of check dam (ft.)
s = channel slope (ft./ft.)

Example:

For a channel with a 4% slope and 2 ft. high stone check dams, they are spaced as follows: $$S = \frac{2\ \text{ft}}{0.04\ \frac{\text{ft}}{\text{ft}}} = 50\ \text{ft}$$

For stone check dams: Use a well graded stone matrix 2 to 9 inches in size (NYS – DOT Light Stone Fill meets these requirements).

The overflow of the check dams will be stabilized to resist erosion that might be caused by the check dam. See Figure 3.1 on page 3.3 for details.

Check dams should be anchored in the channel by a cutoff trench 1.5 ft. wide and 0.5 ft. deep and lined with filter fabric to prevent soil migration.

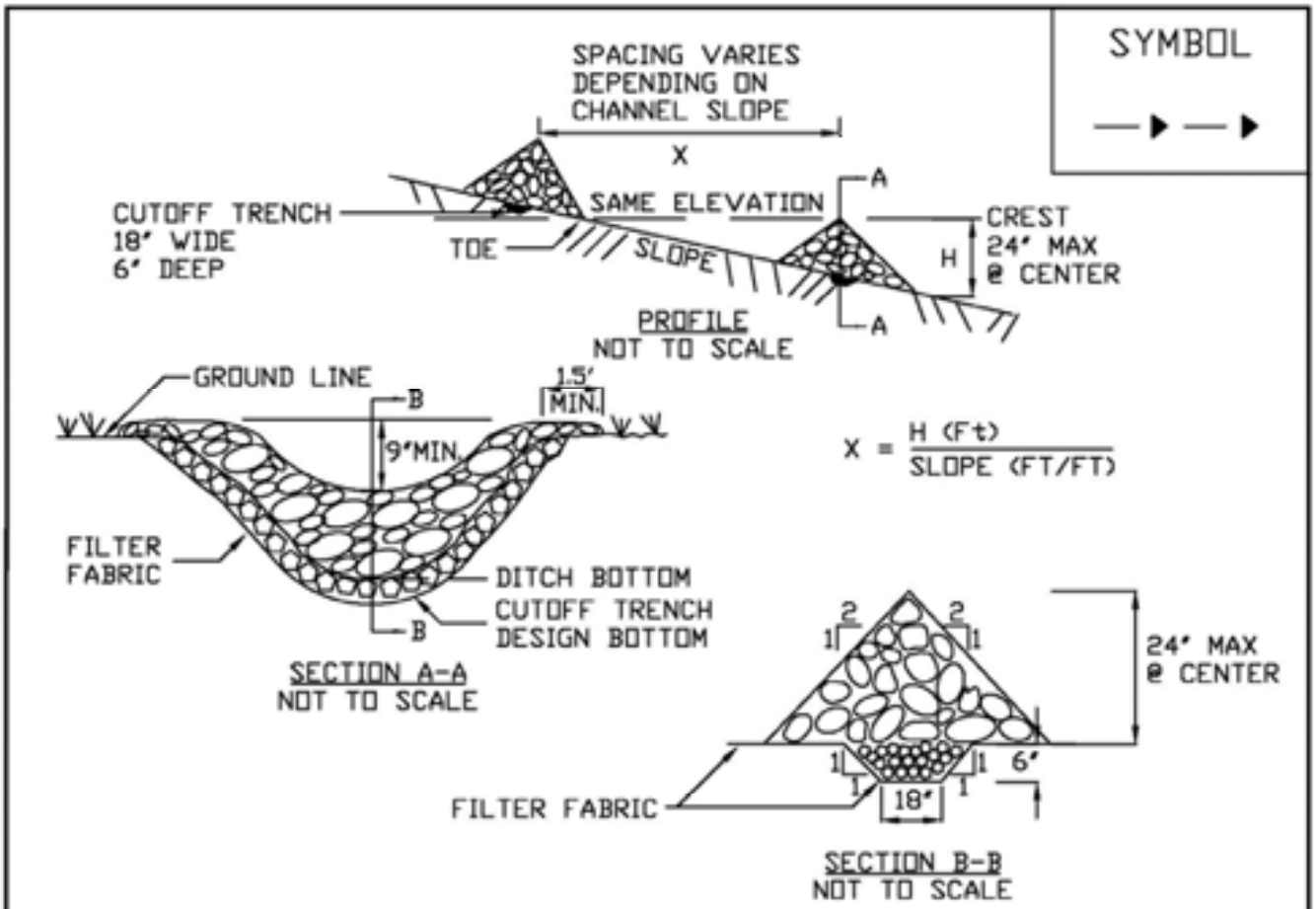
For filter sock or fiber roll check dams: The check dams will be anchored by staking the dam to the earth contact surface. The dam will extend to the top of the bank. The check dam will have a splash apron of NYS DOT #2 crushed stone extending a minimum 3 feet downstream from the dam and 1 foot up the sides of the channel. The compost and materials for a filter sock check dam shall meet the requirements shown in the standard for Compost Filter Sock on page 5.7.

Maintenance

The check dams should be inspected after each runoff event. Correct all damage immediately. If significant erosion has occurred between structures, a liner of stone or other suitable material should be installed in that portion of the channel or additional check dams added.

Remove sediment accumulated behind the dam as needed to allow channel to drain through the stone check dam and prevent large flows from carrying sediment over the dam.

Figure 3.1
Stone Check Dam Detail



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

STANDARD AND SPECIFICATIONS FOR DEWATERING SUMP PIT



Discharge of turbid water pumped from the standpipe should be to a sediment trap, sediment basin, filter bag or stabilized area, such as a filter strip. If water from the sump pit will be pumped directly to a storm drain system, filter cloth with an equivalent sieve size between 40-80 should be wrapped around the standpipe to ensure clean water discharge. It is recommended that ¼ to ½ inch hardware cloth be wrapped around and secured to the standpipe prior to attaching the filter cloth. This will increase the rate of water seepage into the standpipe.

Definition & Scope

A **temporary** pit which is constructed using pipe and stone for pumping excessive water from excavations to a suitable discharge area.



Conditions Where Practice Applies

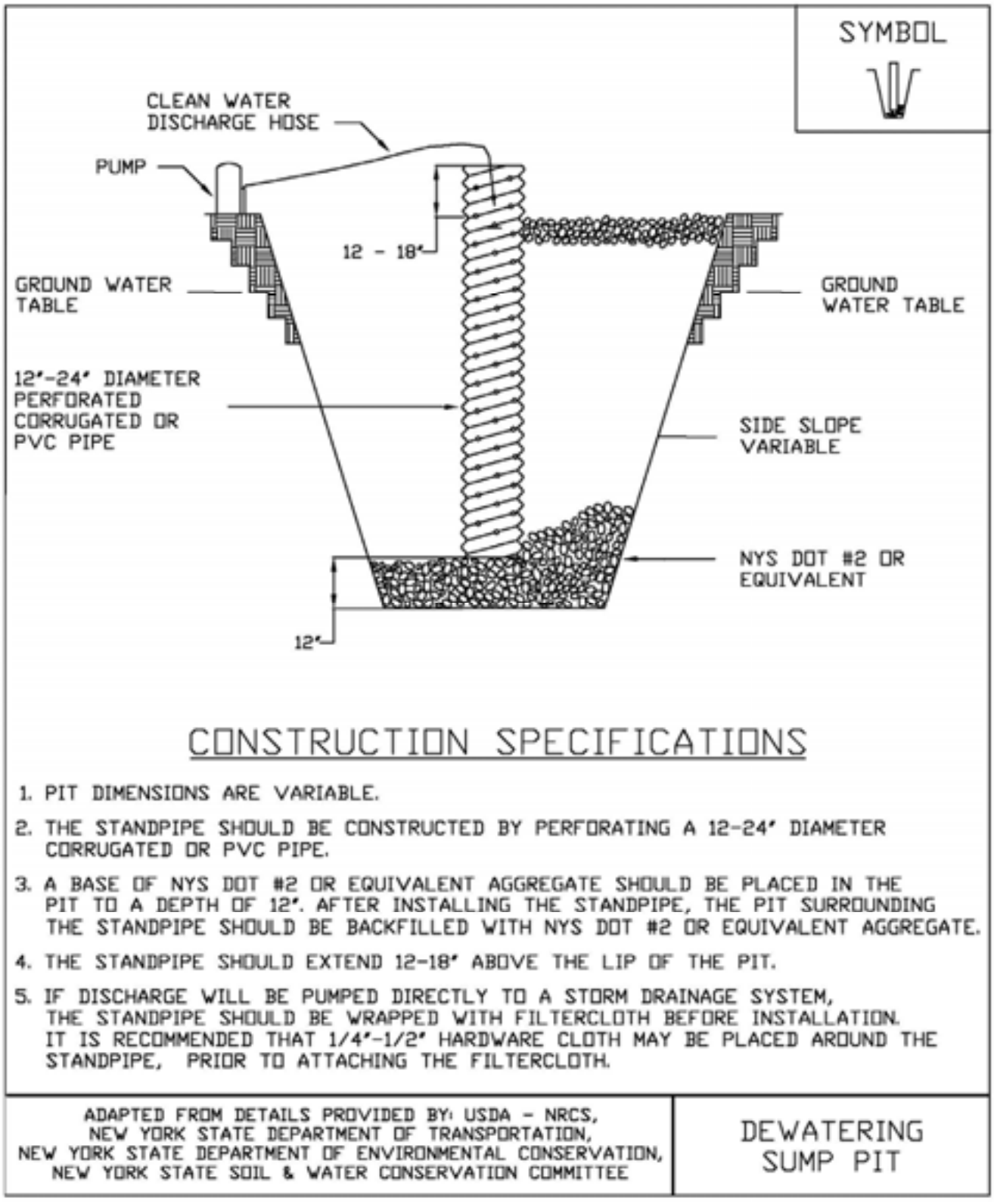
Sump pits are constructed when water collects during the excavation phase of construction. This practice is particularly useful in urban areas during excavation for building foundations. It may also be necessary during construction activities that encounter high ground water tables in floodplain locations.

Design Criteria

The number of sump pits and their locations shall be determined by the contractor/engineer. A design is not required, but construction should conform to the general criteria outlined on Figure 3.3 on page 3.8.

A perforated vertical standpipe is placed in the center of the pit and surrounded with a stone screening material to collect filtered water. Water is then pumped from the center of the pipe to a suitable discharge area.

Figure 3.3
Dewatering Sump Pit Detail



STANDARD AND SPECIFICATIONS FOR ROCK OUTLET PROTECTION



Definition & Scope

A **permanent** section of rock protection placed at the outlet end of the culverts, conduits, or channels to reduce the depth, velocity, and energy of water, such that the flow will not erode the receiving downstream reach.

Conditions Where Practice Applies

This practice applies where discharge velocities and energies at the outlets of culverts, conduits, or channels are sufficient to erode the next downstream reach. This applies to:

1. Culvert outlets of all types.
2. Pipe conduits from all sediment basins, dry storm water ponds, and permanent type ponds.
3. New channels constructed as outlets for culverts and conduits.

Design Criteria

The design of rock outlet protection depends entirely on the location. Pipe outlet at the top of cuts or on slopes steeper than 10 percent, cannot be protected by rock aprons or riprap sections due to re-concentration of flows and high velocities encountered after the flow leaves the apron.

Many counties and state agencies have regulations and design procedures already established for dimensions, type and size of materials, and locations where outlet protection is required. Where these requirements exist, they shall be followed.

Tailwater Depth

The depth of tailwater immediately below the pipe outlet must be determined for the design capacity of the pipe. If the tailwater depth is less than half the diameter of the outlet pipe, and the receiving stream is wide enough to accept divergence of the flow, it shall be classified as a Minimum Tailwater Condition; see Figure 3.16 on page 3.42 as an example. If the tailwater depth is greater than half the pipe diameter and the receiving stream will continue to confine the flow, it shall be classified as a Maximum Tailwater Condition; see Figure 3.17 on page 3.43 as an example. Pipes which outlet onto flat areas with no defined channel may be assumed to have a Minimum Tailwater Condition; see Figure 3.16 on page 3.42 as an example.

Apron Size

The apron length and width shall be determined from the curves according to the tailwater conditions:

Minimum Tailwater – Use Figure 3.16 on page 3.42
Maximum Tailwater – Use Figure 3.17 on page 3.43

If the pipe discharges directly into a well defined channel, the apron shall extend across the channel bottom and up the channel banks to an elevation one foot above the maximum tailwater depth or to the top of the bank, whichever is less.

The upstream end of the apron, adjacent to the pipe, shall have a width two (2) times the diameter of the outlet pipe, or conform to pipe end section if used.

Bottom Grade

The outlet protection apron shall be constructed with no slope along its length. There shall be no overfall at the end of the apron. The elevation of the downstream end of the apron shall be equal to the elevation of the receiving channel or adjacent ground.

Alignment

The outlet protection apron shall be located so that there are no bends in the horizontal alignment.

Materials

The outlet protection may be done using rock riprap, grouted riprap, or gabions. Outlets constructed on the bank of a stream or wetland shall not use grouted rip-rap, gabions or concrete.

Riprap shall be composed of a well-graded mixture of rock size so that 50 percent of the pieces, by weight, shall be larger than the d_{50} size determined by using the charts. A

well-graded mixture, as used herein, is defined as a mixture composed primarily of larger rock sizes, but with a sufficient mixture of other sizes to fill the smaller voids between the rocks. The diameter of the largest rock size in such a mixture shall be 1.5 times the d_{50} size.

Thickness

The minimum thickness of the riprap layer shall be 1.5 times the maximum rock diameter for d_{50} of 15 inches or less; and 1.2 times the maximum rock size for d_{50} greater than 15 inches. The following chart lists some examples:

D_{50} (inches)	d_{max} (inches)	Minimum Blanket Thickness (inches)
4	6	9
6	9	14
9	14	20
12	18	27
15	22	32
18	27	32
21	32	38
24	36	43

Rock Quality

Rock for riprap shall consist of field rock or rough unhewn quarry rock. The rock shall be hard and angular and of a quality that will not disintegrate on exposure to water or weathering. The specific gravity of the individual rocks shall be at least 2.5.

Filter

A filter is a layer of material placed between the riprap and the underlying soil surface to prevent soil movement into and through the riprap. Riprap shall have a filter placed under it in all cases.

A filter can be of two general forms: a gravel layer or a plastic filter cloth. The plastic filter cloth can be woven or non-woven monofilament yarns, and shall meet these base requirements: thickness 20-60 mils, grab strength 90-120 lbs; and shall conform to ASTM D-1777 and ASTM D-1682.

Gravel filter blanket, when used, shall be designed by comparing particle sizes of the overlying material and the base material. Design criteria are available in Standard and Specification for Anchored Slope and Channel Stabilization on page 4.7.

Gabions

Gabions shall be made of hexagonal triple twist mesh with heavily galvanized steel wire. The maximum linear dimension of the mesh opening shall not exceed 4 ½ inches and the area of the mesh opening shall not exceed 10 square inches.

Gabions shall be fabricated in such a manner that the sides, ends, and lid can be assembled at the construction site into a rectangular basket of the specified sizes. Gabions shall be of single unit construction and shall be installed according to manufacturer's recommendations.

The area on which the gabion is to be installed shall be graded as shown on the drawings. Foundation conditions shall be the same as for placing rock riprap, and filter cloth shall be placed under all gabions. Where necessary, key, or tie, the structure into the bank to prevent undermining of the main gabion structure.

Maintenance

Once a riprap outlet has been installed, the maintenance needs are very low. It should be inspected after high flows for evidence of scour beneath the riprap or for dislodged rocks. Repairs should be made immediately.

Design Procedure

1. Investigate the downstream channel to assure that nonerosive velocities can be maintained.

2. Determine the tailwater condition at the outlet to establish which curve to use.

3. Use the appropriate chart with the design discharge to determine the riprap size and apron length required. It is noted that references to pipe diameters in the charts are based on full flow. For other than full pipe flow, the parameters of depth of flow and velocity must be used to adjust the design discharges.

4. Calculate apron width at the downstream end if a flare section is to be employed.

Design Examples are demonstrated in Appendix B.

Construction Specifications

1. The subgrade for the filter, riprap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.

2. The rock or gravel shall conform to the specified grad-

ing limits when installed respectively in the riprap or filter.

3. Filter cloth shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps, whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.

4. Rock for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The rock for riprap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogenous with the smaller rocks and spalls filling the voids between the larger rocks. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

Figure 3.16
Outlet Protection Design—Minimum Tailwater Condition Chart (Design of Outlet Protection from a Round Pipe Flowing Full, Minimum Tailwater Condition: $T_w < 0.5D_o$) (USDA - NRCS)

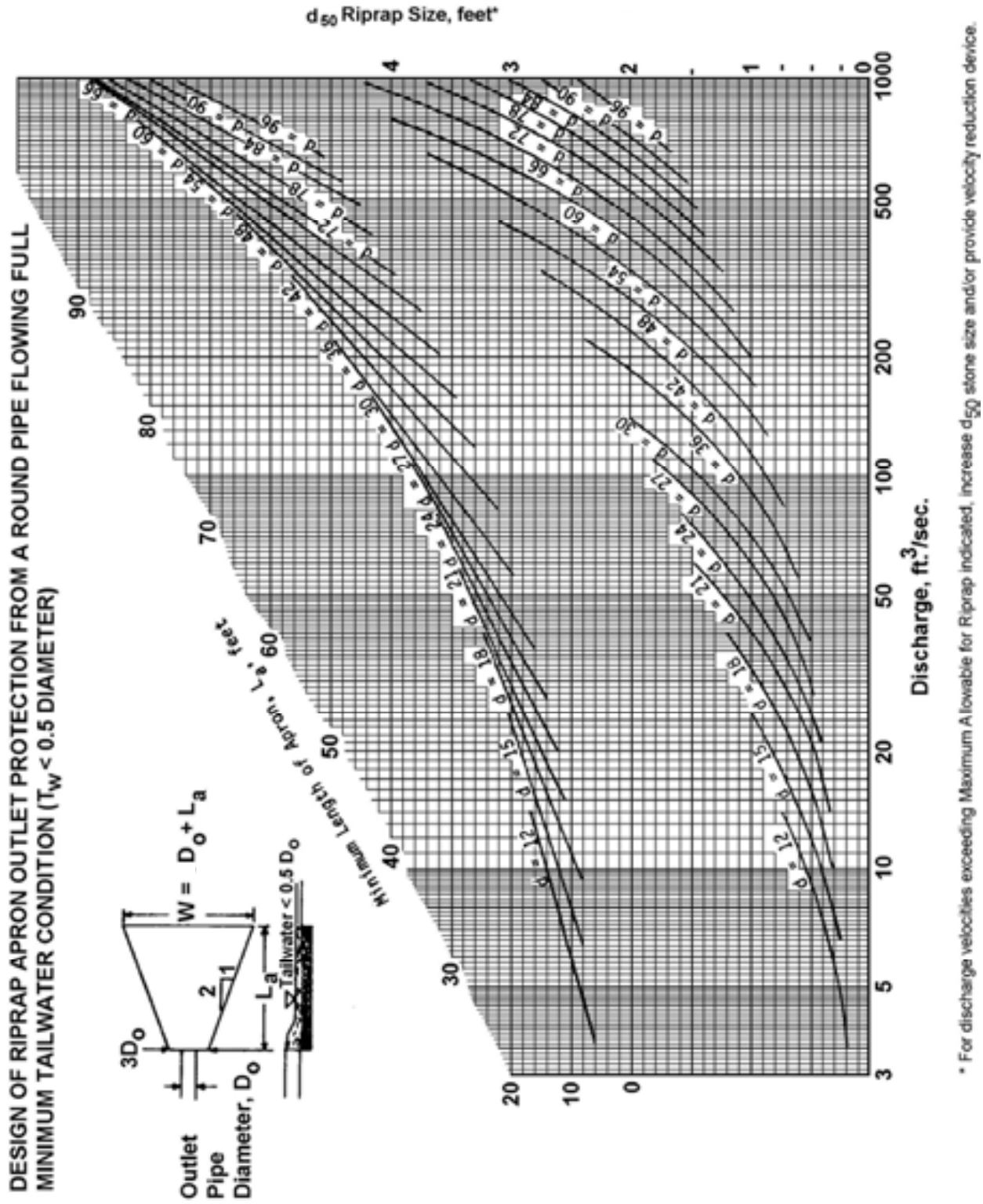


Figure 3.17
Outlet Protection Design—Maximum Tailwater Condition Chart (Design of Outlet Protection from a Round Pipe Flowing Full, Maximum Tailwater Condition: $T_w \geq 0.5D_o$) (USDA - NRCS)

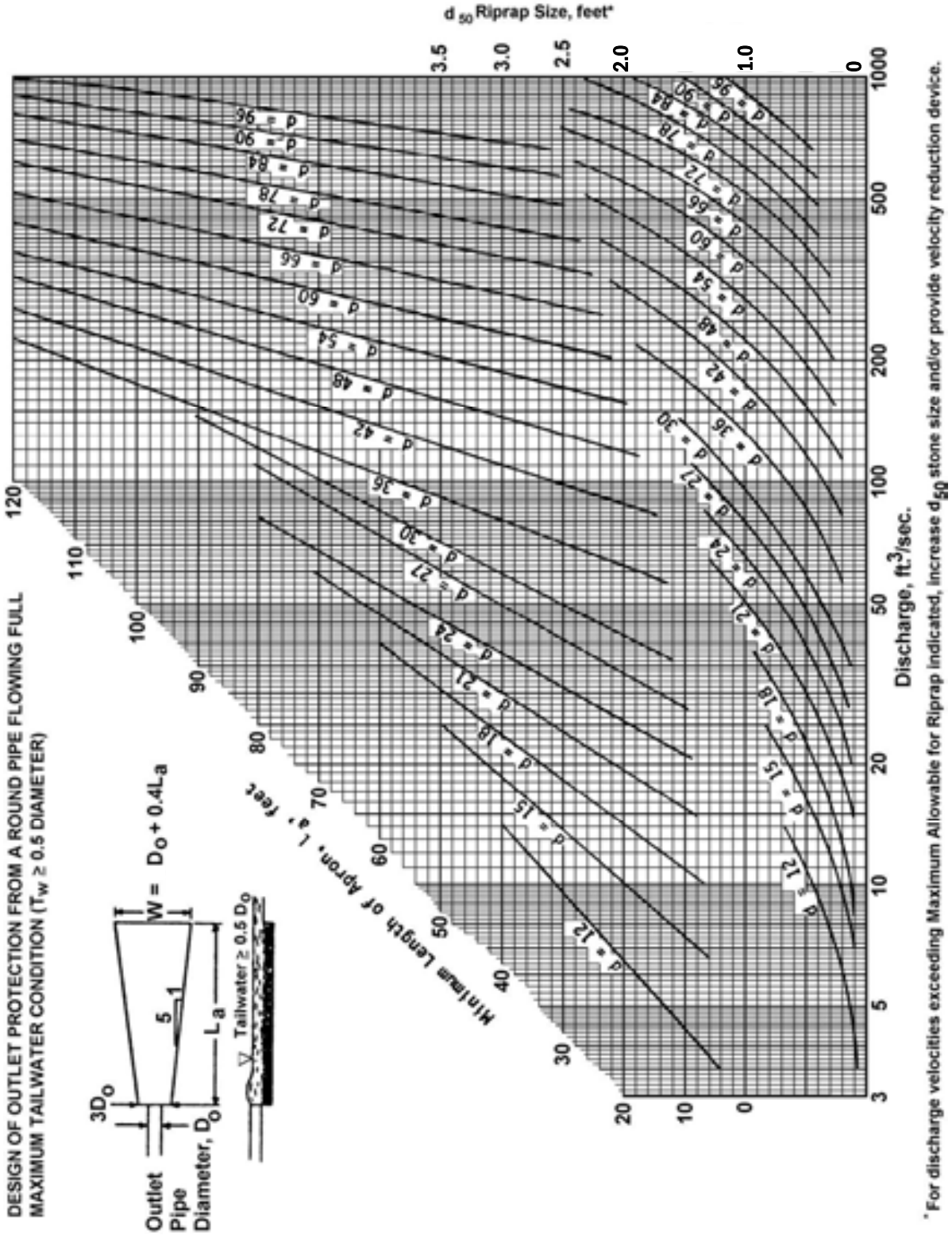


Figure 3.18
Riprap Outlet Protection Detail (1)

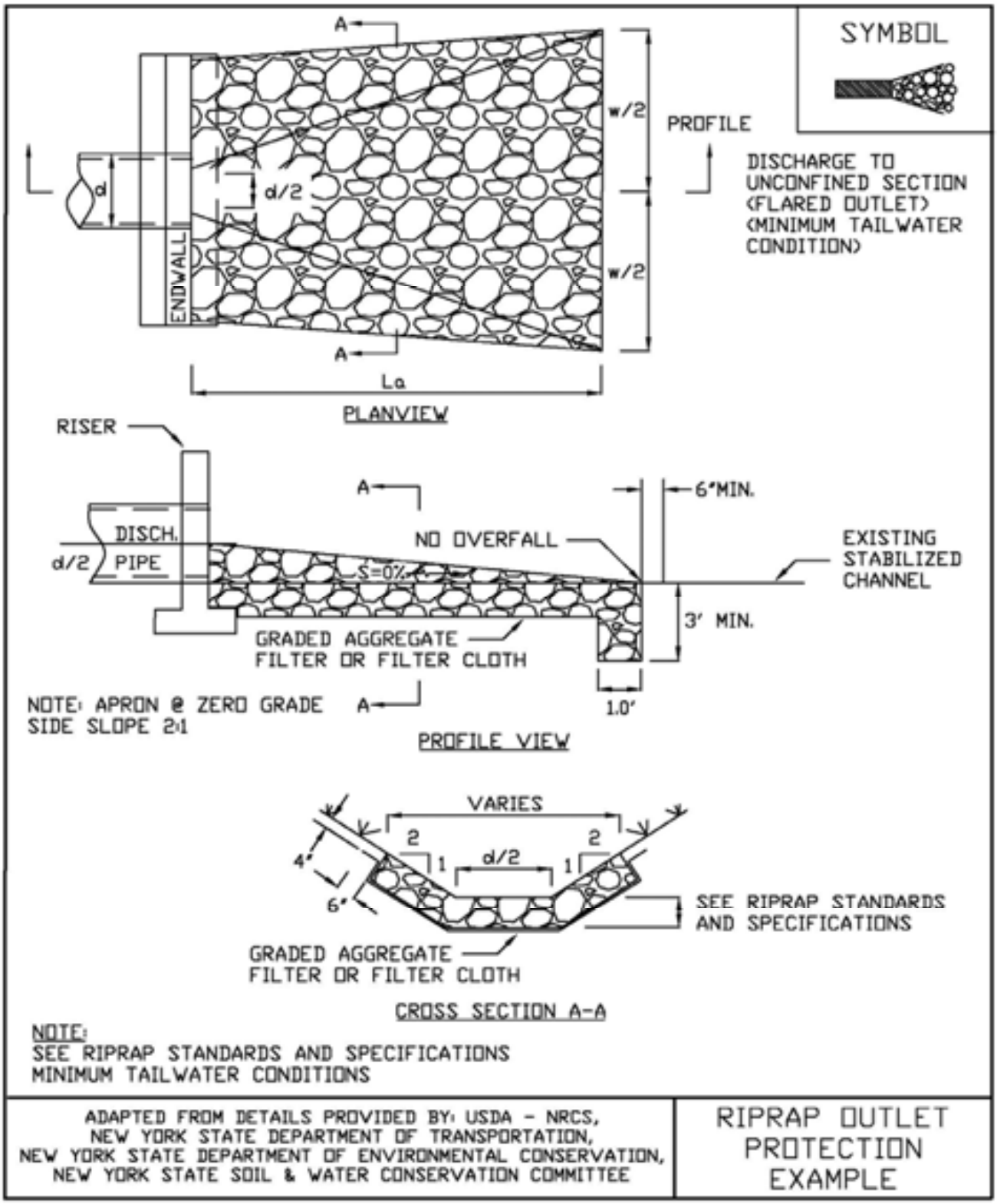


Figure 3.19
Riprap Outlet Protection Detail (2)

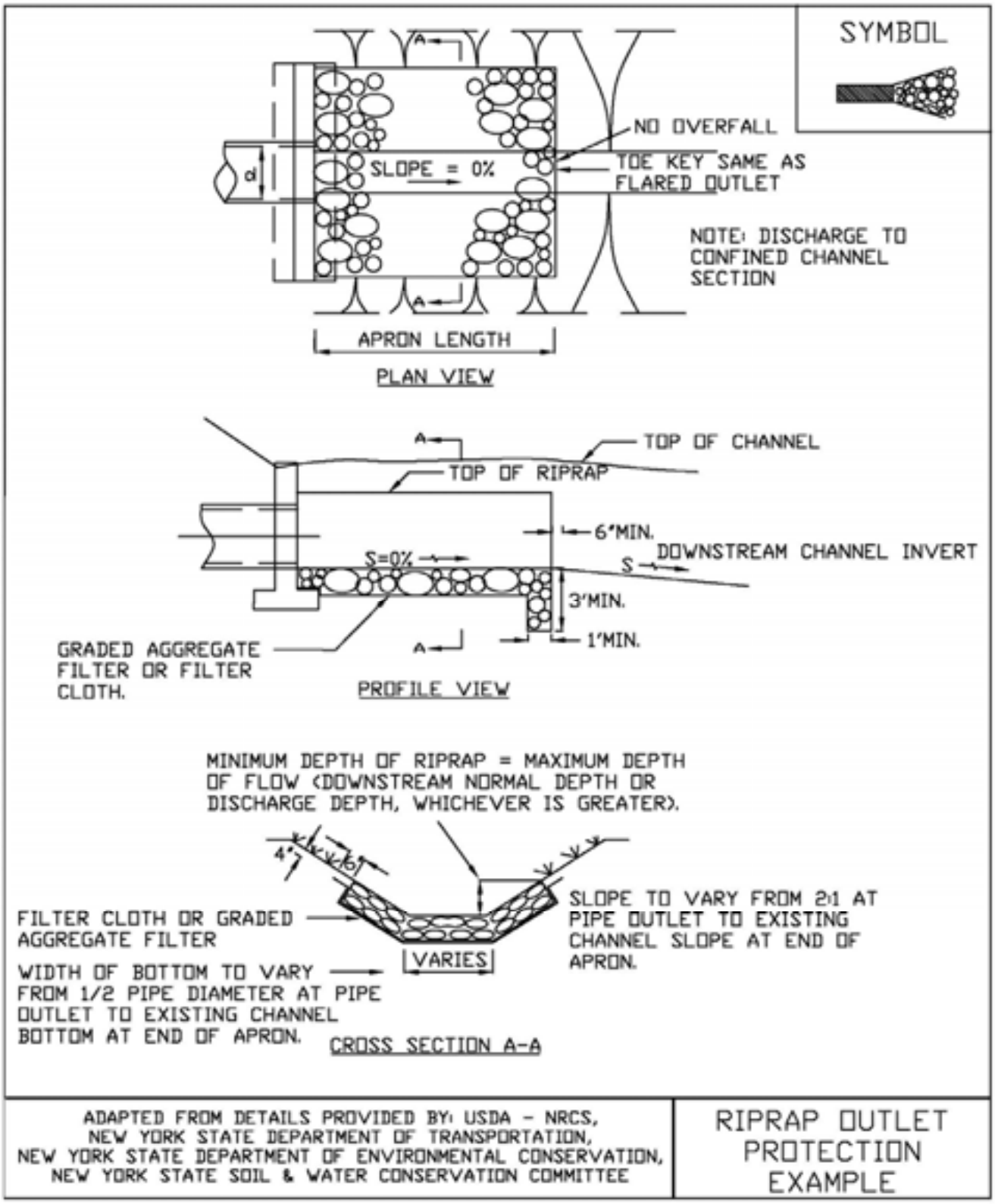
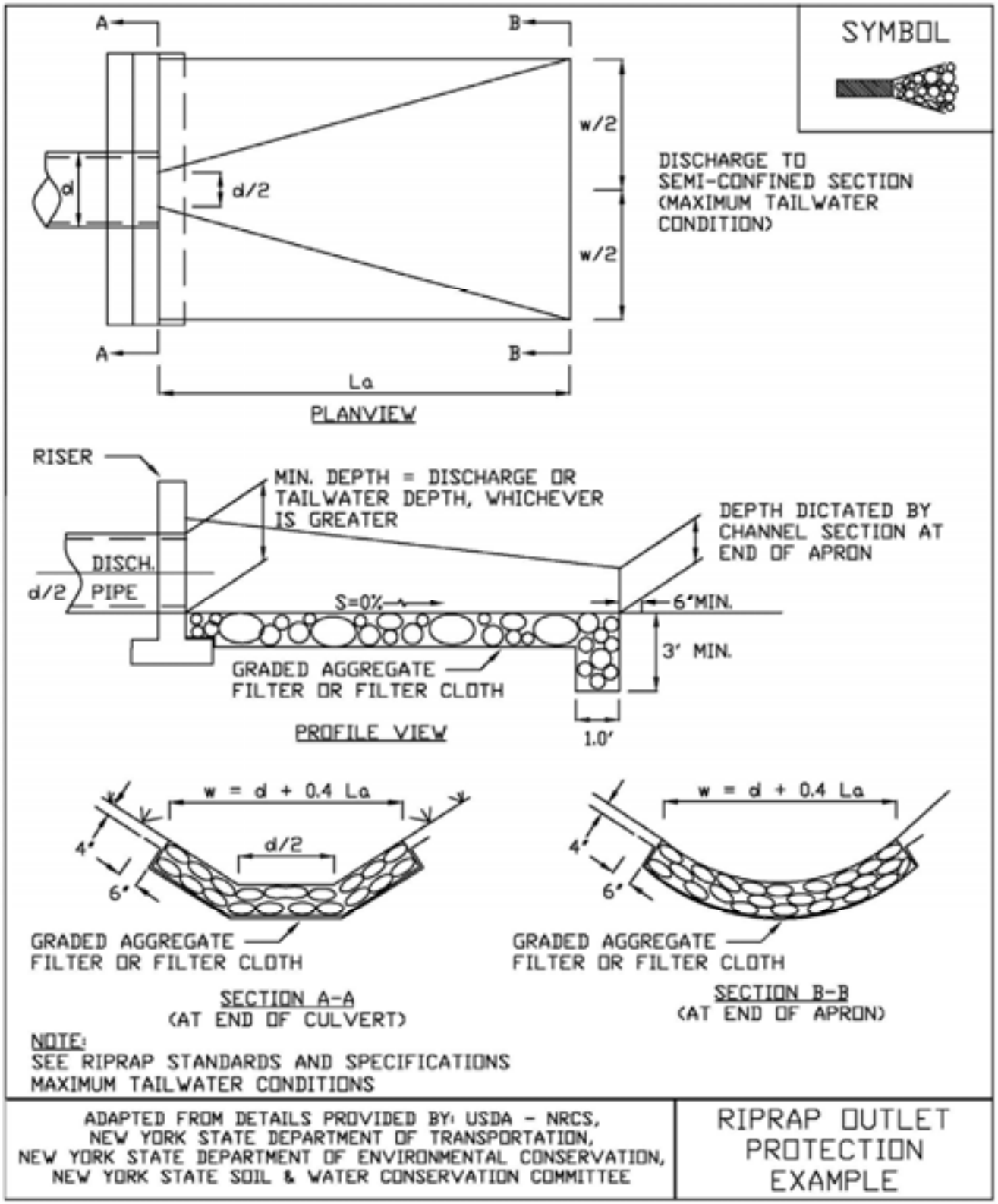


Figure 3.20
Riprap Outlet Protection Detail (3)



STANDARD AND SPECIFICATIONS FOR LANDGRADING



Definition & Scope

Permanent reshaping of the existing land surface by grading in accordance with an engineering topographic plan and specification to provide for erosion control and vegetative establishment on disturbed, reshaped areas.

Design Criteria

The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surrounding to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, effect on adjacent properties and drainage patterns, measures for drainage and water removal, and vegetative treatment, etc.

Many municipalities and counties have regulations and design procedures already established for land grading and cut and fill slopes. Where these requirements exist, they shall be followed.

The plan must show existing and proposed contours of the area(s) to be graded. The plan shall also include practices for erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, lined ditches, reverse slope benches (include grade and cross section), grade stabilization structures, retaining walls, and surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be incorporated into the plan:

1. Provisions shall be made to safely convey surface runoff to storm drains, protected outlets, or to stable water courses to ensure that surface runoff will not damage slopes or other graded areas; see standards and specifications for Grassed Waterway, Diversion, or Grade Stabilization Structure.

2. Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. When slopes exceed 2:1, special design and stabilization consideration are required and shall be adequately shown on the plans. (Note: Where the slope is to be mowed, the slope should be no steeper than 3:1, although 4:1 is preferred because of safety factors related to mowing steep slopes.)

3. Reverse slope benches or diversion shall be provided whenever the vertical interval (height) of any 2:1 slope exceeds 20 feet; for 3:1 slope it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slope face as equally as possible and shall convey the water to a stable outlet. Soils, seeps, rock outcrops, etc., shall also be taken into consideration when designing benches.

   A. Benches shall be a minimum of six feet wide to provide for ease of maintenance.

   B. Benches shall be designed with a reverse slope of 6:1 or flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradient to the outlet shall be between 2 percent and 3 percent, unless accompanied by appropriate design and computations.

   C. The flow length within a bench shall not exceed 800 feet unless accompanied by appropriate design and computations; see Standard and Specifications for Diversion on page 3.9

4. Surface water shall be diverted from the face of all cut and/or fill slopes by the use of diversions, ditches and swales or conveyed downslope by the use of a designed structure, except where:

   A. The face of the slope is or shall be stabilized and the face of all graded slopes shall be protected from surface runoff until they are stabilized.

   B. The face of the slope shall not be subject to any concentrated flows of surface water such as from natural drainage ways, graded ditches, downspouts, etc.

   C. The face of the slope will be protected by anchored stabilization matting, sod, gravel, riprap, or other stabilization method.

5. Cut slopes occurring in ripable rock shall be serrated as shown in Figure 4.9 on page 4.26. The serrations shall be made with conventional equipment as the excavation is made. Each step or serration shall be constructed on the contour and will have steps cut at nominal two-foot intervals with nominal three-foot horizontal shelves. These steps will vary depending on the slope ratio or the cut slope. The nominal slope line is 1 ½: 1. These steps will weather and act to hold moisture, lime, fertilizer, and seed thus producing a much quicker and longer-lived vegetative cover and better slope stabilization. Overland flow shall be diverted from the top of all serrated cut slopes and carried to a suitable outlet.

6. Subsurface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.

7. Slopes shall not be created so close to property lines as to endanger adjoining properties without adequately protecting such properties against sedimentation, erosion, slippage, settlement, subsidence, or other related damages.

8. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers or over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.

9. Stockpiles, borrow areas, and spoil shall be shown on the plans and shall be subject to the provisions of this Standard and Specifications.

10. All disturbed areas shall be stabilized structurally or vegetatively in compliance with the Permanent Construction Area Planting Standard on page 4.42.

Construction Specifications

See Figures 4.9 and 4.10 for details.

1. All graded or disturbed areas, including slopes, shall be protected during clearing and construction in accordance with the erosion and sediment control plan until they are adequately stabilized.

2. All erosion and sediment control practices and measures shall be constructed, applied and maintained in accordance with the erosion and sediment control plan and these standards.

3. Topsoil required for the establishment of vegetation shall be stockpiled in amount necessary to complete finished grading of all exposed areas.

4. Areas to be filled shall be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots, or other objectionable material.

5. Areas that are to be topsoiled shall be scarified to a minimum depth of four inches prior to placement of topsoil.

6. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence, or other related problems. Fill intended to support buildings, structures, and conduits, etc., shall be compacted in accordance with local requirements or codes.

7. All fill shall be placed and compacted in layers not to exceed 9 inches in thickness.

8. Except for approved landfills or nonstructural fills, fill material shall be free of frozen particles, brush, roots, sod, or other foreign objectionable materials that would interfere with, or prevent, construction of satisfactory fills.

9. Frozen material or soft, mucky or highly compressible materials shall not be incorporated into fill slopes or structural fills.

10. Fill shall not be placed on saturated or frozen surfaces.

11. All benches shall be kept free of sediment during all phases of development.

12. Seeps or springs encountered during construction shall be handled in accordance with the Standard and Specification for Subsurface Drain on page 3.48 or other approved methods.

13. All graded areas shall be permanently stabilized immediately following finished grading.

14. Stockpiles, borrow areas, and spoil areas shall be shown on the plans and shall be subject to the provisions of this Standard and Specifications.



Figure 4.9
Typical Section of Serrated Cut Slope

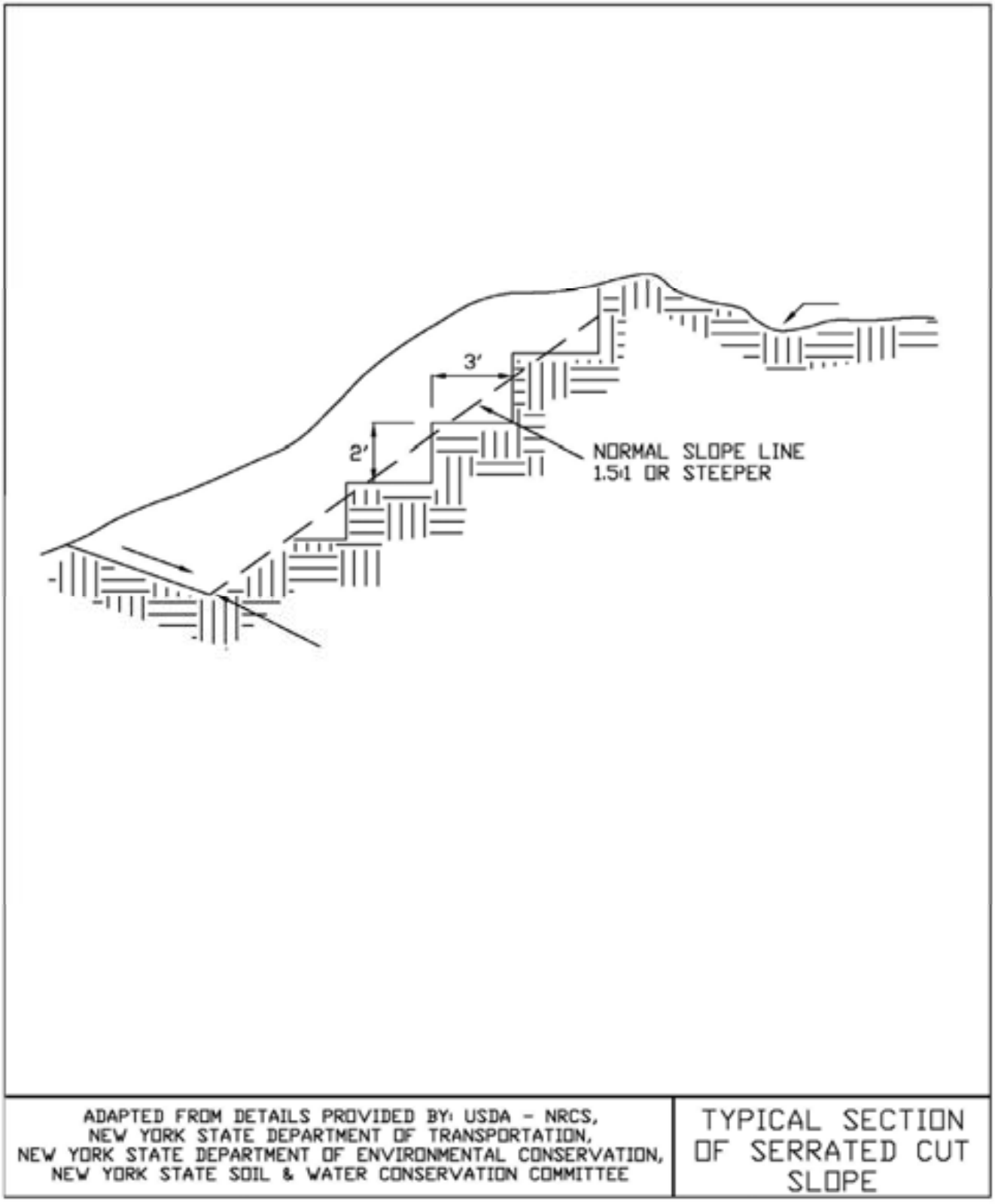


Figure 4.10
Landgrading

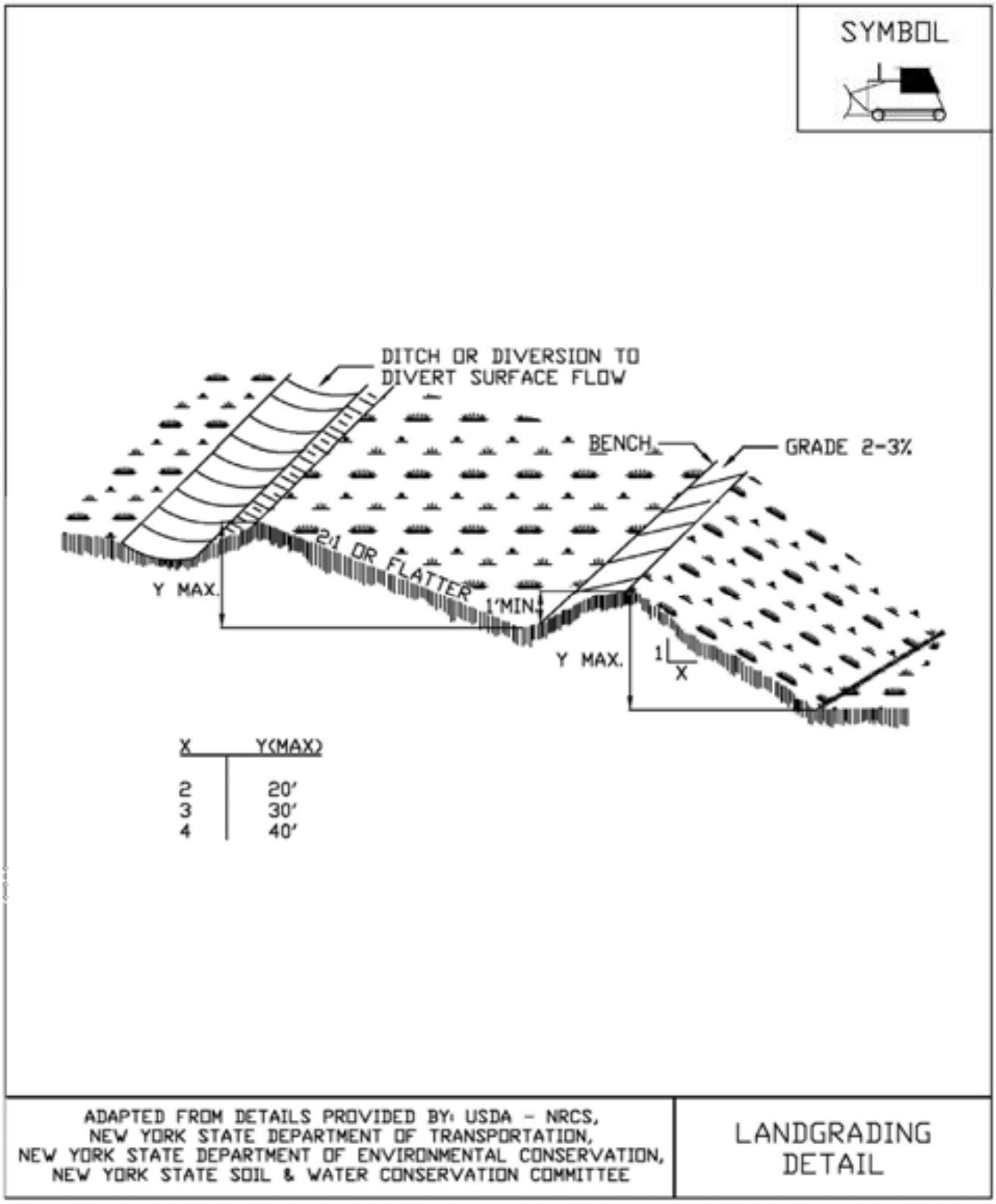
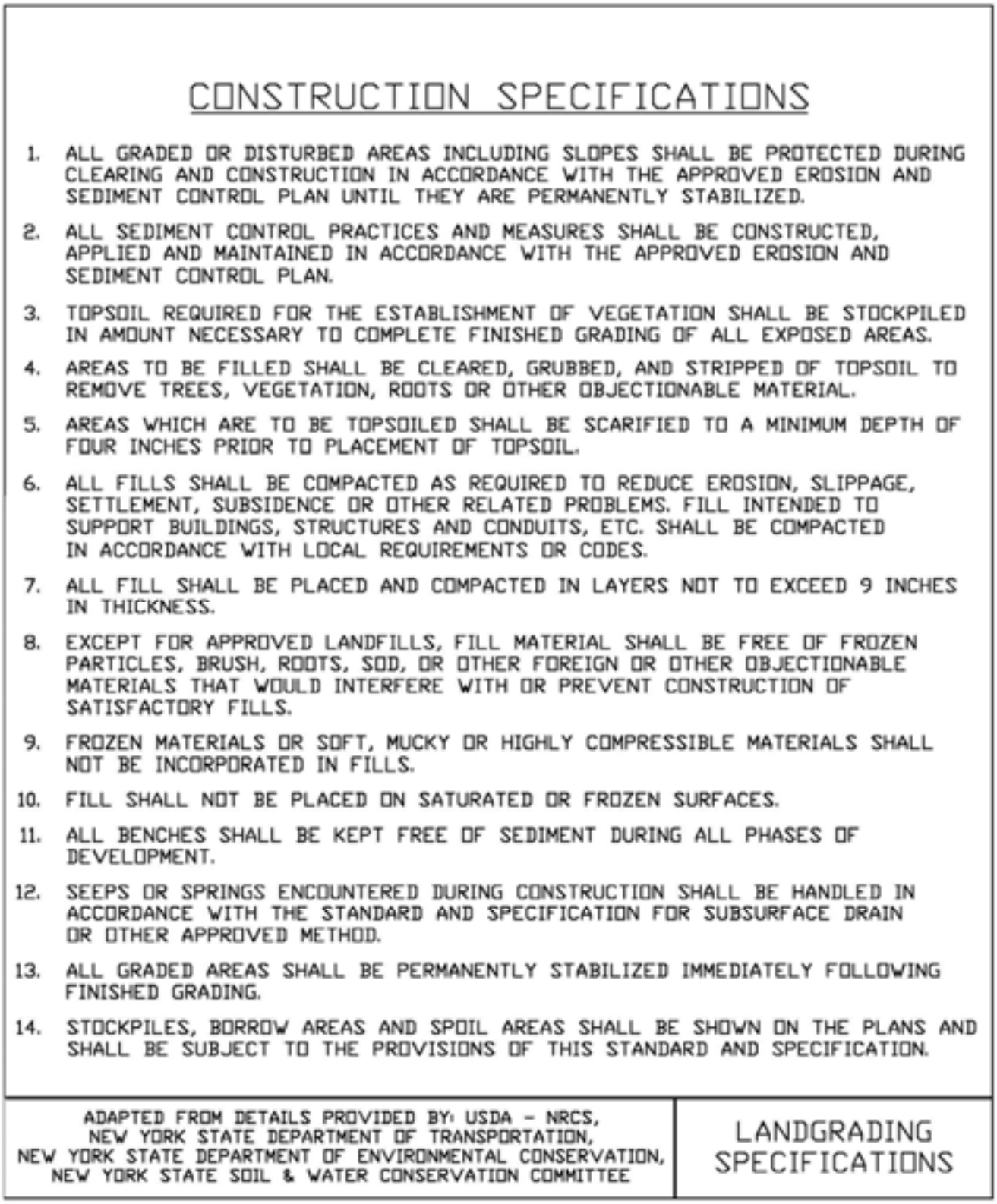


Figure 4.11
Landgrading - Construction Specifications



CONSTRUCTION SPECIFICATIONS

1. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN UNTIL THEY ARE PERMANENTLY STABILIZED.
2. ALL SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
3. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNT NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS.
4. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL.
5. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF FOUR INCHES PRIOR TO PLACEMENT OF TOPSOIL.
6. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
7. ALL FILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
8. EXCEPT FOR APPROVED LANDFILLS, FILL MATERIAL SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
9. FROZEN MATERIALS OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED IN FILLS.
10. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
11. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
12. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
13. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
14. STOCKPILES, BORROW AREAS AND SPOIL AREAS SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATION.

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

LANDGRADING
SPECIFICATIONS

STANDARD AND SPECIFICATIONS FOR LOOSE STABILIZATION BLANKETS



Definition and Scope

Blankets of various materials placed pneumatically, hydraulically, or other means on a prepared planting area or a critical area where existing vegetation can remain to reduce rain splash and sheet erosion and promote vegetative stabilization.

Conditions Where Practice Applies

Loose blankets are an appropriate stabilization practice for any soil surface that is rocky, frozen, flat, or steep. They can be used on streambanks, road cuts and embankments, and construction site areas where stormwater runoff occurs as sheet flow. They should not be used in areas of concentrated flow.

Design Criteria

Compost Blanket

Material: The compost infill shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the standards listed in Table 5.2 - Compost Standards Table. **Note: All biosolids composts produced in New York State (or approved for importation) must meet NYS DEC's 6 NYCRR Part 360 (Soild Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metal content. When using compost blankets adjacent to surface waters, the compost should have a low nutrient value.**

Placement: The method of application and depth of compost depend upon site conditions. Vegetation of the compost blanket is generally archived by incorporating seed into the compost before it is applied. However, seeding may occur after the application if needed.

The compost application rate will be in accordance with the following table. Compost is not recommended for slopes steeper than 2H:1V. Slopes with problem soils and more runoff will require greater application rates.

Compost Application Rates		
Slope Length (ft)	<3H:1V Slopes	3H:1V to 2H:1V Slopes
20 or less	270 cy/acre (2" Layer)	540 cy/acre (4" Layer)
20 to 60	405 cy/acre (3" Layer)	675 cy/acre (5" Layer)
60 to 100	540 cy/acre (4" Layer)	810 cy/acre (6" Layer)*
* For slopes between 2H:1V and 1H:1V use this rate with a max. slope length of 40 ft.		

Construction Specifications

1. Compost shall be placed evenly and must provide 100% soil coverage (no soil visible). On highly unstable soils, use compost in conjunction with appropriate structural measures.

2. Spread the compost uniformly to the design thickness by hand or mechanically (e.g. with a manure spreader, front end loader, dozer, pneumatic blower, etc.) and then track (compact) the compost layer using a bulldozer or other appropriate equipment.

3. When using a pneumatic (blower) unit, shoot the compost directly at soil, to provide a tighter interface between the soil and compost and prevent water from moving between the two layers.

4. Apply compost layer approximately 3 feet beyond the top of the slope or overlap it into existing vegetation.

5. Follow by seeding or ornamental planting as specified.

6. When planting immediate grass, wildflower, or legume seeding or ornamental planting, use only a well composted product that contains no substances toxic to plants.

7. Very coarse composts should be avoided if the slope is to be landscaped or seeded, as it will make planting and crop establishment more difficult. Composts containing fibrous particles that range in size produce a more stable mat.

Hydraulically Applied Blankets

These blankets are formed by mixing different types of materials with water and are then applied using standard hydroseeding equipment. These blankets should not be used in areas of concentrated flow such as ditches and channels.

A. Bonded Fiber Matrix (BFM) - This method makes use of a cross-linked hydrocolloid tackifier to bond thermally processed wood fibers. Application rates vary according to site conditions. For slopes up to 3H:1V the BFM should be applied at a rate of 3,000 lb/ acre. Steeper slopes may need as much as 4,000 lb/ acre in accordance with the manufacturer's recommendations.

   BFMs should only be used when no rain is forecast for at least 48 hours following the application. This is to allow the tackifier sufficient time to cure properly. Once properly applied, a BFM is very effective in preventing accelerated erosion. **Bonded Fiber Matrix should not be applied between September 30 and April 1 to allow for proper curing of the polymer.**

B. Flexible Growth Medium (FGM) - This method has the added component of 1/2 inch long, crimped manmade fibers which add a mechanical bond to the chemical bond provided by BFMs. This increases the blanket's resistance to both raindrop impact and erosion due to runoff. Unlike BFMs, a flexible growth medium typically does not require a curing time to be effective. Properly applied, an FGM is also very effective.

   There is no need to smooth the slope prior to application. In fact some roughening of the surface (either natural or mechanically induced) is preferable. However, large rocks (≥ 9 inches) and existing rills should be removed prior to application. Mixing and application rates should follow manufacturer's recommendations.

C. Polymer Stabilized Fiber Matrix (PSFM) - PSFMs make use of a linear soil stabilization tackifier that works directly on soil to maintain soil structure, maintain pore space capacity and flocculate dislodged sediment that will significantly reduce runoff turbidity. PSFMs can be used in re-vegetation applications and for site winterization and/or dormant seeding - fall planting for spring germination - applications. Application rates vary according to site conditions and should be in accordance with manufacturers recommendations.

Construction Specifications

BFMs, FGMs and PSFMs are typically applied in two stages. Unless specifically recommended to be applied in one application by the manufacturer, the seed mixture and soil amendments should be applied first. If the seed is applied at the same time as the hydraulically applied blankets, the bonded fibers may keep the seed from making sufficient contact with the soil to germinate. After the seed mixture is applied, the hydraulically applied blankets should be sprayed over the area at the required application rate, according to the manufactures recommendations.



STANDARD AND SPECIFICATIONS FOR MULCHING



Definition and Scope

Applying coarse plant residue or chips, or other suitable materials, to cover the soil surface to provide initial erosion control while a seeding or shrub planting is establishing. Mulch will conserve moisture and modify the surface soil temperature and reduce fluctuation of both. Mulch will prevent soil surface crusting and aid in weed control. Mulch can also be used alone for temporary stabilization in non-growing months. Use of stone as a mulch could be more permanent and should not be limited to non-growing months.

Conditions Where Practice Applies

On soils subject to erosion and on new seedings and shrub plantings. Mulch is useful on soils with low infiltration rates by retarding runoff.

Criteria

Site preparation prior to mulching requires the installation of necessary erosion control or water management practices and drainage systems.

Slope, grade and smooth the site to fit needs of selected mulch products.

Remove all undesirable stones and other debris to meet the needs of the anticipated land use and maintenance required.

Apply mulch after soil amendments and planting is accomplished or simultaneously if hydroseeding is used.

Select appropriate mulch material and application rate or material needs. Hay mulch shall not be used in wetlands or in areas of permanent seeding. Clean straw mulch is preferred alternative in wetland application. Determine local availability.

Select appropriate mulch anchoring material.

NOTE: The best combination for grass/legume establishment is straw (cereal grain) mulch applied at 2 ton/ acre (90 lbs./1000sq.ft.) and anchored with wood fiber mulch (hydromulch) at 500 – 750 lbs./acre (11 – 17 lbs./1000 sq. ft.). The wood fiber mulch must be applied through a hydroseeder immediately after mulching.



Table 4.2
Guide to Mulch Materials, Rates, and Uses

Mulch Material	Quality Standards	per 1000 Sq. Ft.	per Acre	Depth of Application	Remarks
Wood chips or shavings	Air-dried. Free of objectionable coarse material	500-900 lbs.	10-20 tons	2-7”	Used primarily around shrub and tree plantings and recreation trails to inhibit weed competition. Resistant to wind blowing. Decomposes slowly.
Wood fiber cellulose (partly digested wood fibers)	Made from natural wood usually with green dye and dispersing agent	50 lbs.	2,000 lbs.	—	Apply with hydromulcher. No tie down required. Less erosion control provided than 2 tons of hay or straw.
Gravel, Crushed Stone or Slag	Washed; Size 2B or 3A—1 1/2”	9 cu. yds.	405 cu. yds.	3”	Excellent mulch for short slopes and around plants and ornamentals. Use 2B where subject to traffic. (Approximately 2,000 lbs./cu. yd.). Frequently used over filter fabric for better weed control.
Hay or Straw	Air-dried; free of undesirable seeds & coarse materials	90-100 lbs. 2-3 bales	2 tons (100-120 bales)	cover about 90% surface	Use small grain straw where mulch is maintained for more than three months. Subject to wind blowing unless anchored. Most commonly used mulching material. Provides the best micro-environment for germinating seeds.
Jute twisted yarn	Undyed, unbleached plain weave. Warp 78 ends/yd., Weft 41 ends/ yd. 60-90 lbs./roll	48” x 50 yds. or 48” x 75 yds.	—	—	Use without additional mulch. Tie down as per manufacturers specifications. Good for center line of concentrated water flow.
Excelsior wood fiber mats	Interlocking web of excelsior fibers with photodegradable plastic netting	4’ x 112.5’ or 8’ x 112.5’.	—	—	Use without additional mulch. Excellent for seeding establishment. Anchor as per manufacturers specifications. Approximately 72 lbs./roll for excelsior with plastic on both sides. Use two sided plastic for centerline of waterways.
Straw or coconut fiber, or combination	Photodegradable plastic net on one or two sides	Most are 6.5 ft. x 3.5 ft.	81 rolls	—	Designed to tolerate higher velocity water flow, centerlines of waterways, 60 sq. yds. per roll.

Table 4.3
Mulch Anchoring Guide

Anchoring Method or Material	Kind of Mulch to be Anchored	How to Apply
1. Peg and Twine	Hay or straw	After mulching, divide areas into blocks approximately 1 sq. yd. in size. Drive 4-6 pegs per block to within 2" to 3" of soil surface. Secure mulch to surface by stretching twine between pegs in criss-cross pattern on each block. Secure twine around each peg with 2 or more tight turns. Drive pegs flush with soil. Driving stakes into ground tightens the twine.
2. Mulch netting	Hay or straw	Staple the light-weight paper, jute, wood fiber, or plastic nettings to soil surface according to manufacturer's recommendations. Should be biodegradable. Most products are not suitable for foot traffic.
3. Wood cellulose fiber	Hay or straw	Apply with hydroseeder immediately after mulching. Use 500 lbs. wood fiber per acre. Some products contain an adhesive material ("tackifier"), possibly advantageous.
4. Mulch anchoring tool	Hay or straw	Apply mulch and pull a mulch anchoring tool (blunt, straight discs) over mulch as near to the contour as possible. Mulch material should be "tucked" into soil surface about 3".
5. Tackifier	Hay or straw	Mix and apply polymeric and gum tackifiers according to manufacturer's instructions. Avoid application during rain. A 24-hour curing period and a soil temperature higher than 45^0 Fahrenheit are required.

STANDARD AND SPECIFICATIONS FOR PERMANENT CONSTRUCTION AREA PLANTING



Definition & Scope

Establishing **permanent** grasses with other forbs and/or shrubs to provide a minimum 80% perennial vegetative cover on areas disturbed by construction and critical areas to reduce erosion and sediment transport. Critical areas may include but are not limited to steep excavated cut or fill slopes as well as eroding or denuded natural slopes and areas subject to erosion.

Conditions Where Practice Applies

This practice applies to all disturbed areas void of, or having insufficient, cover to prevent erosion and sediment transport. See additional standards for special situations such as sand dunes and sand and gravel pits.

Criteria

All water control measures will be installed as needed prior to final grading and seedbed preparation. Any severely compacted sections will require chiseling or disking to provide an adequate rooting zone, to a minimum depth of 12", see Soil Restoration Standard. The seedbed must be prepared to allow good soil to seed contact, with the soil not too soft and not too compact. Adequate soil moisture must be present to accomplish this. If surface is powder dry or sticky wet, postpone operations until moisture changes to a favorable condition. If seeding is accomplished within 24 hours of final grading, additional scarification is generally not needed, especially on ditch or stream banks. Remove all stones and other debris from the surface that are greater than 4 inches, or that will interfere with future mowing or maintenance.

Soil amendments should be incorporated into the upper 2 inches of soil when feasible. **The soil should be tested to determine the amounts of amendments needed.** Apply ground agricultural limestone to attain a pH of 6.0 in the upper 2 inches of soil. If soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 600 lbs. per acre of 5-5 -10 or equivalent. If manure is used, apply a quantity to meet the nutrients of the above fertilizer. This requires an appropriate manure analysis prior to applying to the site. Do not use manure on sites to be planted with birdsfoot trefoil or in the path of concentrated water flow.

Seed mixtures may vary depending on location within the state and time of seeding. Generally, warm season grasses should only be seeded during early spring, April to May. These grasses are primarily used for vegetating excessively drained sands and gravels. See Standard and Specification for Sand and Gravel Mine Reclamation. Other grasses may be seeded any time of the year when the soil is not frozen and is workable. When legumes such as birdsfoot trefoil are included, spring seeding is preferred. See Table 4.4, "Permanent Construction Area Planting Mixture Recommendations" for additional seed mixtures.

General Seed Mix:	**Variety**	**lbs./ acre**	**lbs/1000 sq. ft.**
Red Clover[1] OR	Acclaim, Rally, Red Head II, Renegade	8[2]	0.20
Common white clover[1]	Common	8	0.20
PLUS			
Creeping Red Fescue	Common	20	0.45
PLUS			
Smooth Bromegrass OR	Common	2	0.05
Ryegrass (perennial)	Pennfine/Linn	5	0.10

[1] add inoculant immediately prior to seeding
[2] Mix 4 lbs each of Empire and Pardee OR 4 lbs of Birdsfoot and 4 lbs white clover per acre. All seeding rates are given for Pure Live Seed (PLS)

Pure Live Seed, or (PLS) refers to the amount of live seed in a lot of bulk seed. Information on the seed bag label includes the type of seed, supplier, test date, source of seed, purity, and germination. Purity is the percentage of pure seed. Germination is the percentage of pure seed that will produce normal plants when planted under favorable conditions.

To compute Pure Live Seed multiply the "germination percent" times the "purity" and divide that by 100 to get Pure Live Seed.

$$\text{Pure Live Seed (PLS)} = \frac{\%\,\text{Germination} \times \%\,\text{Purity}}{100}$$

For example, the PLS for a lot of Kentucky Blue grass with 75% purity and 96% germination would be calculated as follows:

$$\frac{(96) \times (75)}{100} = 72\%\ \text{Pure Live Seed}$$

For 10lbs of PLS from this lot =

$$\frac{10}{0.72} = 13.9\ \text{lbs}$$

Therefore, 13.9 lbs of seed is the actual weight needed to meet 10lbs PSL from this specific seed lot.

Time of Seeding: The optimum timing for the general seed mixture is early spring. Permanent seedings may be made any time of year if properly mulched and adequate moisture is provided. Late June through early August is not a good time to seed, but may facilitate covering the land without additional disturbance if construction is completed. Portions of the seeding may fail due to drought and heat. These areas may need reseeding in late summer/fall or the following spring.

Method of seeding: Broadcasting, drilling, cultipack type seeding, or hydroseeding are acceptable methods. Proper soil to seed contact is key to successful seedings.

Mulching: Mulching is essential to obtain a uniform stand of seeded plants. Optimum benefits of mulching new seedings are obtained with the use of small grain straw applied at a rate of 2 tons per acre, and anchored with a netting or tackifier. See the Standard and Specifications for Mulching for choices and requirements.

Irrigation: Watering may be essential to establish a new seeding when a drought condition occurs shortly after a new seeding emerges. Irrigation is a specialized practice and care must be taken not to exceed the application rate for the soil or subsoil. When disconnecting irrigation pipe, be sure pipes are drained in a safe manor, not creating an erosion concern.



80% Perennial Vegetative Cover



50% Perennial Vegetative Cover

Table 4.4
Permanent Construction Area Planting Mixture Recommendations

Seed Mixture	Variety	Rate in lbs./acre (PLS)	Rate in lbs./ 1, 000 ft^2
Mix #1			
Creeping red fescue	Ensylva, Pennlawn, Boreal	10	.25
Perennial ryegrass	Pennfine, Linn	10	.25
*This mix is used extensively for shaded areas.			
Mix #2			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	20	.50
*This rate is in pure live seed, this would be an excellent choice along the upland edge of a wetland to filter runoff and provide wildlife benefits. In areas where erosion may be a problem, a companion seeding of sand lovegrass should be added to provide quick cover at a rate of 2 lbs. per acre (0.05 lbs. per 1000 sq. ft.).			
Mix #3			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	4	.10
Big bluestem	Niagara	4	.10
Little bluestem	Aldous or Camper	2	.05
Indiangrass	Rumsey	4	.10
Coastal panicgrass	Atlantic	2	.05
Sideoats grama	El Reno or Trailway	2	.05
Wildflower mix		.50	.01
*This mix has been successful on sand and gravel plantings. It is very difficult to seed without a warm season grass seeder such as a Truax seed drill. Broadcasting this seed is very difficult due to the fluffy nature of some of the seed, such as bluestems and indiangrass.			
Mix #4			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	10	.25
Coastal panicgrass	Atlantic	10	.25
*This mix is salt tolerant, a good choice along the upland edge of tidal areas and roadsides.			
Mix #5			
Saltmeadow cordgrass (Spartina patens)—This grass is used for tidal shoreline protection and tidal marsh restoration. It is planted by vegetative stem divisions. 'Cape' American beachgrass can be planted for sand dune stabilization above the saltmeadow cordgrass zone.			
Mix #6			
Creeping red fescue	Ensylva, Pennlawn, Boreal	20	.45
Chewings Fescue	Common	20	.45
Perennial ryegrass	Pennfine, Linn	5	.10
Red Clover	Common	10	.45
*General purpose erosion control mix. Not to be used for a turf planting or play grounds.			

STANDARD AND SPECIFICATIONS FOR RECREATION AREA SEEDING



Definition & Scope

Establishing **permanent** grasses, legumes, vines, shrubs, trees, or other plants, or selectively reducing stand density and trimming woody plants, to improve an area for recreation. To increase the attractiveness and usefulness of recreation areas and to protect the soil and plant resources.

Conditions Where Practice Applies

On any area planned for recreation use, lawns, and areas that will be maintained in a closely mowed condition.

Specifications

ESTABLISHING GRASSES (Turfgrass)

The following applies for playgrounds, parks, athletic fields, camping areas, picnic areas, passive recreation areas such as lawns, and similar areas.

1. Time of Planting

Fall planting is preferred. Seed after August 15. In the spring, plant until May 15.

If seeding is done between May 15 and August 15, irrigation may be necessary to ensure a successful seeding.

2. Site Preparation

   A. Install needed water and erosion control measures and bring area to be seeded to desired grades. A minimum of 4 in. topsoil is required.

   B. Prepare seedbed by loosening soil to a depth of 4-6 inches and decompacting required areas per Soil Restoration Standard.

   C. See Standard and Specification of Topsoiling.

   D. Lime to a pH of 6.5. See Lime Application Standard.

   E. **Fertilize as per soil test** or, if soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 850 pounds of 5-5-10 or equivalent per acre (20 lbs/1,000 sq. ft.). See Fertilizer Application Standard.

   F. Incorporate lime and fertilizer in top 2-4 inches of topsoil.

   G. Smooth. Remove sticks, foreign matter, and stones over 1 inch in diameter, from the surface. Firm the seedbed.

3. Planting

Use a cultipacker type seeder if possible. Seed to a depth of 1/8 to 1/4 inch. If seed is to be broadcast, cultipack or roll after seeding. If hyroseeded, lime and fertilizer may be applied through the seeder, and rolling is not practical.

4. Mulching

Mulch all seedings in accordance with Standard and Specifications for Mulching. Small grain straw is the best material.

5. Seed Mixtures

Select seed mixture for site conditions and intended use from Table 4.5.

6. Contact Cornell Cooperative Extension Turf Specialist for suitable varieties.

Turf-type tall fescues have replaced the old KY31 tall fescues. New varieties have finer leaves and are the most resistant grass to foot traffic. Do not mix it with fine textured grasses such as bluegrass and red fescue.

Common ryegrass and redtop, which are relatively short lived species, provide quick green cover. Improved lawn cultivars of perennial ryegrass provide excellent quality turf, but continue to lack winter hardiness.

Common white clover can be added to mixtures at the rate of 1-2 lbs/acre to help maintain green color during the dry summer period; however, they will not withstand heavy traffic. Avoid using around swimming areas as flowers attract bees which can be easily stepped on.

Table 4.5
Recreation Turfgrass Seed Mixture

Site - Use	Species (% by weight)	lbs/1.000 ft^2 (PLS)	lbs/acre (PLS)
Sunny Sites (well, moderately well, and somewhat poorly drained soils)	***Athletic fields and similar areas***		
	80% Hard fescue	2.4-3.2	105-138
	20% Perennial ryegrass	0.6-0.8	25-37
		3.0-4.0	130-175
	OR, for southern and eastern, NY 50% Hard fescue	1.5-2.0	65-88
	50% perennial ryegrass	1.5-2.0	65-87
		3.0-4.0	130-175
	OR, 100% Creeping Red Fescue	3.4-4.6	150-200
	General recreation areas and lawns (Medium to high maintenance)		
	65% Creeping red fescue	2.0-2.6	85-114
	20% Perennial ryegrass	0.6-0.8	26-35
	15% Fine fescue	0.4-0.6	19-26
		3.0-4.0	130-175
	OR, 100% Creeping red fescue	3.4-4.6	150-200
Sunny Droughty Sites (general recreation areas and lawns, low maintenance) (somewhat excessively to excessively drained soils, excluding Long Island)	65% Fine fescue	2.6-3.3	114-143
	15% Perennial ryegrass	0.6-0.7	26-33
	20% Creeping red fescue	0.8-1.0	35-44
		4.0-5.0	175-220
	OR, 100% Creeping red fescue	3.4-4.6	150-200
Shady Dry Sites (well to somewhat poorly drained soils)	65% fine fescue	2.6-3.3	114-143
	15% perennial ryegrass	0.6-0.7	26-33
	20% Creeping red fescue	0.8-1.0	35-44
	OR	4.0-5.0	174-220
	80% blend of shade-tolerant Ceral rye	2.4-3.2	105-138
	20% perennial ryegrass	0.6-0.8	25-37
	OR	3.0-4.0	130-175
	100% Creeping red fescue	3.4-4.6	150-200
Shady Wet Sites (somewhat poor to poorly drained soils)	70% Creeping red fescue	1.4-2.1	60-91
	30% blend of shade-tolerant Hard fescue	0.6-0.9	25-39
	OR	2.0-3.0	85-130
	100% Chewings fescue	3.4-4.6	150-200

For varieties suitable for specific locations, contact Cornell Cooperative Extension Turf Specialist.

Reference: Thurn, M.C., N.W. Hummel, and A.M. Petrovic. Cornell Extension Pub. Info. Bulletin 185 Revised. HomeLawns Establishment and Maintenance. 1994.

7. Fertilizing—First Year

Apply fertilizer as indicated by the soil test three to four weeks after germination (spring seedlings). If test results have not been obtained, apply 1 pound nitrogen/1,000 square feet using a complete fertilizer with a 2-1-1 or 4-1-3 ratio. Summer and early fall seedings, apply as above unless air temperatures are above 85ºF for an extended period. Wait for cooler temperatures to fertilize. Late fall/ winter seedings, fertilize in spring.

8. Restrict Use

New seedlings should be protected from use for one full year or a spring and fall growth cycle where possible to allow development of a dense sod with good root structure.

MAINTAINING GRASSES

1. Maintain a pH of 6.0 - 7.0.

2. Fertilize in late May to early June as follows with 5-5-10 analysis fertilizer at the rate of 5 lbs./1,000 sq. ft. and repeat in late August if sod density is not adequate. Avoid fertilizing when heat is greater than 85ºF. Top dress weak sod annually in the spring, but at least once every 2 to 3 years. **Fertilize in accordance with soil test analysis**, after determining adequate topsoil depth exists.

3. Aerate compacted or heavily used areas, like athletic fields, annually as soon as soil moisture conditions permit. Aerate area six to eight times using a spoon or hollow tine type aerator. Do not use solid spike equipment.

4. Reseed bare and thin areas annually with original seed mix.

STANDARD AND SPECIFICATIONS FOR SOIL RESTORATION



Definition & Scope

The decompaction of areas of a development site or construction project where soils have been disturbed to recover the original properties and porosity of the soil; thus providing a sustainable growth medium for vegetation, reduction of runoff and filtering of pollutants from stormwater runoff.

Conditions Where Practice Applies

Soil restoration is to be applied to areas whose heavy construction traffic is done and final stabilization is to begin. This is generally applied in the cleanup, site restoration, and landscaping phase of construction followed by the permanent establishment of an appropriate ground cover to maintain the soil structure. Soil restoration measures should be applied over and adjacent to any runoff reduction practices to achieve design performance.



Design Criteria

1. Soil restoration areas will be designated on the plan views of areas to be disturbed.
2. Soil restoration will be completed in accordance with Table 4.6 on page 4.53.

Specification for Full Soil Restoration

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following Soil Restoration steps applied:

1. Apply 3 inches of compost over subsoil. The compost shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the standards listed in Table 5.2 - Compost Standards Table, except for "Particle Size" 100% will pass the 1/2" sieve. **Note: All biosolids compost produced in New York State (or approved for importation) must meet NYS DEC's 6 NYCRR Part 360 (Solid Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metals content.**



2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor mounted disc, or tiller, to mix and circulate air and compost into the subsoil.
3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.
4. Apply topsoil to a depth of 6 inches.
5. Vegetate as required by the seeding plan. Use appropriate ground cover with deep roots to maintain the soil structure.
6. Topsoil may be manufactured as a mixture or a mineral component and organic material such as compost.

At the end of the project an inspector should be able to push a 3/8" metal bar 12 inches into the soil just with body weight. This should not be performed within the drip line of any existing trees or over utility installations that are within 24 inches of the surface.

Maintenance

Keep the site free of vehicular and foot traffic or other weight loads. Consider pedestrian footpaths.

Table 4.6
Soil Restoration Requirements

Type of Soil Disturbance	Soil Restoration Requirement		Comments/Examples
No soil disturbance	Restoration not permitted		Preservation of Natural Features
Minimal soil disturbance	Restoration not required		Clearing and grubbing
Areas where topsoil is stripped only - no change in grade	HSG A&B	HSG C&D	Protect area from any ongoing construction activities.
	Apply 6 inches of topsoil	Aerate* and apply 6 inches of topsoil	
Areas of cut or fill	HSG A&B	HSG C&D	
	Aerate* and apply 6 inches of topsoil	Apply full Soil Restoration**	
Heavy traffic areas on site (especially in a zone 5-25 feet around buildings but not within a 5 foot perimeter around foundation walls)	Apply full Soil Restoration (decompaction and compost enhancement)		
Areas where Runoff Reduction and/or Infiltration practices are applied	Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area
Redevelopment projects	Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.		

* Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.
** Per "Deep Ripping and De-compaction, DEC 2008".

STANDARD AND SPECIFICATIONS FOR SURFACE ROUGHENING



Definition & Scope

Roughening a bare soil surface whether through creating horizontal grooves across a slope, stair-stepping, or tracking with construction equipment to aid the establishment of vegetative cover from seed, to reduce runoff velocity and increase infiltration, and to reduce erosion and provide for trapping of sediment.

Conditions Where Practice Applies

All construction slopes require surface roughening to facilitate stabilization with vegetation, particularly slopes steeper than 3:1.

Design Criteria

There are many different methods to achieve a roughened soil surface on a slope. No specific design criteria is required. However, the selection of the appropriate method depends on the type of slope. Methods include tracking, grooving, and stair-stepping. Steepness, mowing requirements, and/or a cut or fill slope operation are all factors considered in choosing a roughening method.

Construction Specifications

1. Cut Slope, No mowing.

   A. Stair-step grade or groove cut slopes with a gradient steeper than 3:1 (Figure 4.18).

   B. Use stair-step grading on any erodible material soft enough to be ripped with a bulldozer. Slopes of soft rock with some soil are particularly suited to stair-step grading.

   C. Make the vertical cut distance less than the horizontal distance, and slightly slope the horizontal position of the "step" to the vertical wall.

   D. Do not make vertical cuts more than 2 feet in soft materials or 3 feet in rocky materials.

Grooving uses machinery to create a series of ridges and depressions that run perpendicular to the slope following the contour. Groove using any appropriate implement that can be safely operated on the slope, such as disks, tillers, spring harrows, or the teeth of a front-end loader bucket. Do not make the grooves less than 3 inches deep or more than 15 inches apart.

2. Fill Slope, No mowing

   A. Place fill to create slopes with a gradient no steeper than 2:1 in lifts 9 inches or less and properly compacted. Ensure the face of the slope consists of loose, uncompacted fill 4 to 6 inches deep. Use grooving as described above to roughen the slope, if necessary.

   B. Do not back blade or scrape the final slope face.

3. Cuts/Fills, Mowed Maintenance

   A. Make mowed slopes no steeper than 3:1.

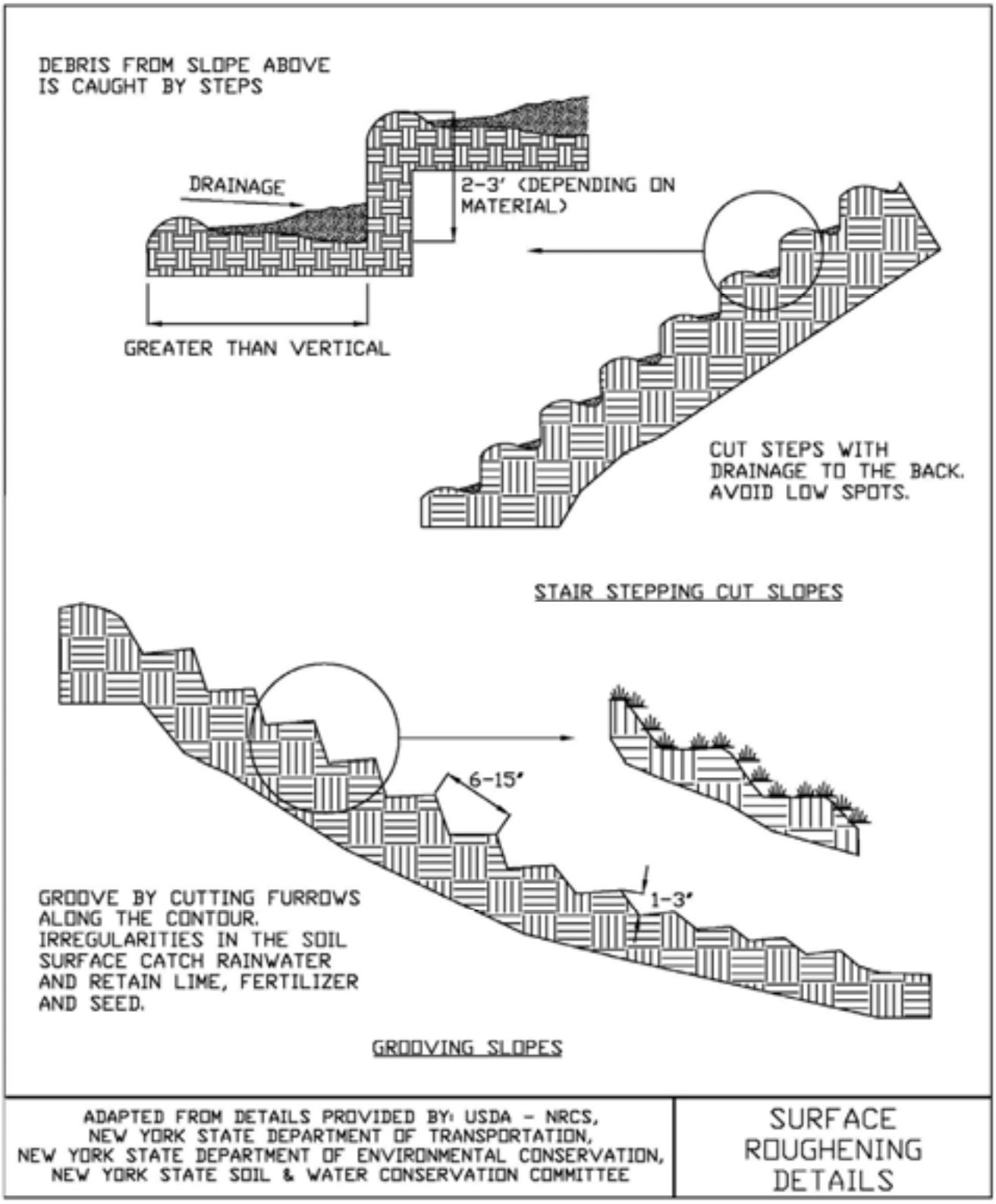
   B. Roughen these areas to shallow grooves by normal tilling, disking, harrowing, or use of cultipacker-seeder. Make the final pass of such tillage equipment on the contour.

   C. Make grooves at least 1 inch deep and a maximum of 10 inches apart.

   D. Excessive roughness is undesirable where mowing is planned.

Tracking should be used primarily in sandy soils to avoid undue compaction of the soil surface. Tracking is generally not as effective as the other roughening methods described. (It has been used as a method to track down mulch.) Operate tracked machinery up and down the slope to leave horizontal depressions in the soil. Do not back-blade during the final grading operation.

Figure 4.18
Surface Roughening



STANDARD AND SPECIFICATIONS FOR TEMPORARY CONSTRUCTION AREA SEEDING



Definition & Scope

Providing temporary erosion control protection to disturbed areas and/or localized critical areas for an interim period by covering all bare ground that exists as a result of construction activities or a natural event. Critical areas may include but are not limited to steep excavated cut or fill slopes and any disturbed, denuded natural slopes subject to erosion.

Conditions Where Practice Applies

Temporary seedings may be necessary on construction sites to protect an area, or section, where final grading is complete, when preparing for winter work shutdown, or to provide cover when permanent seedings are likely to fail due to mid-summer heat and drought. The intent is to provide temporary protective cover during temporary shutdown of construction and/or while waiting for optimal planting time.

Criteria

Water management practices must be installed as appropriate for site conditions. The area must be rough graded and slopes physically stable. Large debris and rocks are usually removed. Seedbed must be seeded within 24 hours of disturbance or scarification of the soil surface will be necessary prior to seeding.

Fertilizer or lime are not typically used for temporary seedings.

IF: Spring or summer or early fall, then seed the area with ryegrass (annual or perennial) at 30 lbs. per acre (Approximately 0.7 lb./1000 sq. ft. or use 1 lb./1000 sq. ft.).

IF: Late fall or early winter, then seed Certified 'Aroostook' winter rye (cereal rye) at 100 lbs. per acre (2.5 lbs./1000 sq. ft.).

Any seeding method may be used that will provide uniform application of seed to the area and result in relatively good soil to seed contact.

Mulch the area with hay or straw at 2 tons/acre (approx. 90 lbs./1000 sq. ft. or 2 bales). Quality of hay or straw mulch allowable will be determined based on long term use and visual concerns. Mulch anchoring will be required where wind or areas of concentrated water are of concern. Wood fiber hydromulch or other sprayable products approved for erosion control (nylon web or mesh) may be used if applied according to manufacturers' specification. Caution is advised when using nylon or other synthetic products. They may be difficult to remove prior to final seeding and can be a hazard to young wildlife species.

STANDARD AND SPECIFICATIONS FOR TOPSOILING



Definition & Scope

Spreading a specified quality and quantity of topsoil materials on graded or constructed subsoil areas to provide acceptable plant cover growing conditions, thereby reducing erosion; to reduce irrigation water needs; and to reduce the need for nitrogen fertilizer application.

Conditions Where Practice Applies

Topsoil is applied to subsoils that are droughty (low available moisture for plants), stony, slowly permeable, salty or extremely acid. It is also used to backfill around shrub and tree transplants. This standard does not apply to wetland soils.

Design Criteria

1. Preserve existing topsoil in place where possible, thereby reducing the need for added topsoil.

2. Conserve by stockpiling topsoil and friable fine textured subsoils that must be stripped from the excavated site and applied after final grading where vegetation will be established. Topsoil stockpiles must be stabilized. Stockpile surfaces can be stabilized by vegetation, geotextile or plastic covers. This can be aided by orientating the stockpile lengthwise into prevailing winds.

3. Refer to USDA Natural Resource Conservation Service soil surveys or soil interpretation record sheets for further soil texture information for selecting appropriate design topsoil depths.

Site Preparation

1. As needed, install erosion and sediment control practices such as diversions, channels, sediment traps, and stabilizing measures, or maintain if already installed.

2. Complete rough grading and final grade, allowing for depth of topsoil to be added.

3. Scarify all compact, slowly permeable, medium and fine textured subsoil areas. Scarify at approximately right angles to the slope direction in soil areas that are steeper than 5 percent. Areas that have been overly compacted shall be decompacted in accordance with the Soil Restoration Standard.

4. Remove refuse, woody plant parts, stones over 3 inches in diameter, and other litter.

Topsoil Materials

1. Topsoil shall have at least 6 percent by weight of fine textured stable organic material, and no greater than 20 percent. Muck soil shall not be considered topsoil.

2. Topsoil shall have not less than 20 percent fine textured material (passing the NO. 200 sieve) and not more than 15 percent clay.

3. Topsoil treated with soil sterilants or herbicides shall be so identified to the purchaser.

4. Topsoil shall be relatively free of stones over 1 1/2 inches in diameter, trash, noxious weeds such as nut sedge and quackgrass, and will have less than 10 percent gravel.

5. Topsoil containing soluble salts greater than 500 parts per million shall not be used.

6. Topsoil may be manufactured as a mixture of a mineral component and organic material such as compost.

Application and Grading

1. Topsoil shall be distributed to a uniform depth over the area. It shall not be placed when it is partly frozen, muddy, or on frozen slopes or over ice, snow, or standing water puddles.

2. Topsoil placed and graded on slopes steeper than 5 percent shall be promptly fertilized, seeded, mulched, and stabilized by “tracking” with suitable equipment.

3. Apply topsoil in the amounts shown in Table 4.7 below:

Table 4.7 - Topsoil Application Depth		
Site Conditions	**Intended Use**	**Minimum Topsoil Depth**
1. Deep sand or loamy sand	Mowed lawn	6 in.
	Tall legumes, unmowed	2 in.
	Tall grass, unmowed	1 in.
2. Deep sandy loam	Mowed lawn	5 in.
	Tall legumes, unmowed	2 in.
	Tall grass, unmowed	none
3. Six inches or more: silt loam, clay loam, loam, or silt	Mowed lawn	4 in.
	Tall legumes, unmowed	1 in.
	Tall grass, unmowed	1 in.

STANDARD AND SPECIFICATIONS FOR COMPOST FILTER SOCK



Definition & Scope

A **temporary** sediment control practice composed of a degradable geotextile mesh tube filled with compost filter media to filter sediment and other pollutants associated with construction activity to prevent their migration offsite.

Condition Where Practice Applies

Compost filter socks can be used in many construction site applications where erosion will occur in the form of sheet erosion and there is no concentration of water flowing to the sock. In areas with steep slopes and/or rocky terrain, soil conditions must be such that good continuous contact between the sock and the soil is maintained throughout its length. For use on impervious surfaces such as road pavement or parking areas, proper anchorage must be provided to prevent shifting of the sock or separation of the contact between the sock and the pavement. Compost filter socks are utilized both at the site perimeter as well as within the construction areas. These socks may be filled after placement by blowing compost into the tube pneumatically, or filled at a staging location and moved into its designed location.

Design Criteria

1. Compost filter socks will be placed on the contour with both terminal ends of the sock extended 8 feet upslope at a 45 degree angle to prevent bypass flow.

2. Diameters designed for use shall be 12" – 32" except that 8" diameter socks may be used for residential lots to control areas less than 0.25 acres.

3. The flat dimension of the sock shall be at least 1.5 times the nominal diameter.

4. The **Maximum Slope Length** (in feet) above a compost filter sock shall not exceed the following limits:

Dia. (in.)	Slope %						
	2	**5**	**10**	**20**	**25**	**33**	**50**
8	225*	200	100	50	20	—	—
12	250	225	125	65	50	40	25
18	275	250	150	70	55	45	30
24	350	275	200	130	100	60	35
32	450	325	275	150	120	75	50
* Length in feet							



5. The compost infill shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the standards listed in Table 5.2 - Compost Standards Table. **Note: All biosolids compost produced in New York State (or approved for importation) must meet NYS DEC's 6 NYCRR Part 360 (Solid Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metals content. When using compost filter socks adjacent to surface water, the compost should have a low nutrient value.**

6. The compost filter sock fabric material shall meet the

7. Compost filter socks shall be anchored in earth with 2" x 2" wooden stakes driven 12" into the soil on 10 foot centers on the centerline of the sock. On uneven terrain, effective ground contact can be enhanced by the placement of a fillet of filter media on the disturbed area side of the compost sock.

8. All specific construction details and material specifications shall appear on the erosion and sediment control constructions drawings when compost filter socks are included in the plan.

Maintenance

1. Traffic shall not be permitted to cross filter socks.

2. Accumulated sediment shall be removed when it reaches half the above ground height of the sock and disposed of in accordance with the plan.

3. Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired in the manner required by the manufacturer or replaced within 24 hours of inspection notification.

4. Biodegradable filter socks shall be replaced after 6 months; photodegradable filter socks after 1 year. Polypropylene socks shall be replaced according to the manufacturer's recommendations.

5. Upon stabilization of the area contributory to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed in accordance with the stabilization plan. For removal the mesh can be cut and the compost spread as an additional mulch to act as a soil supplement.

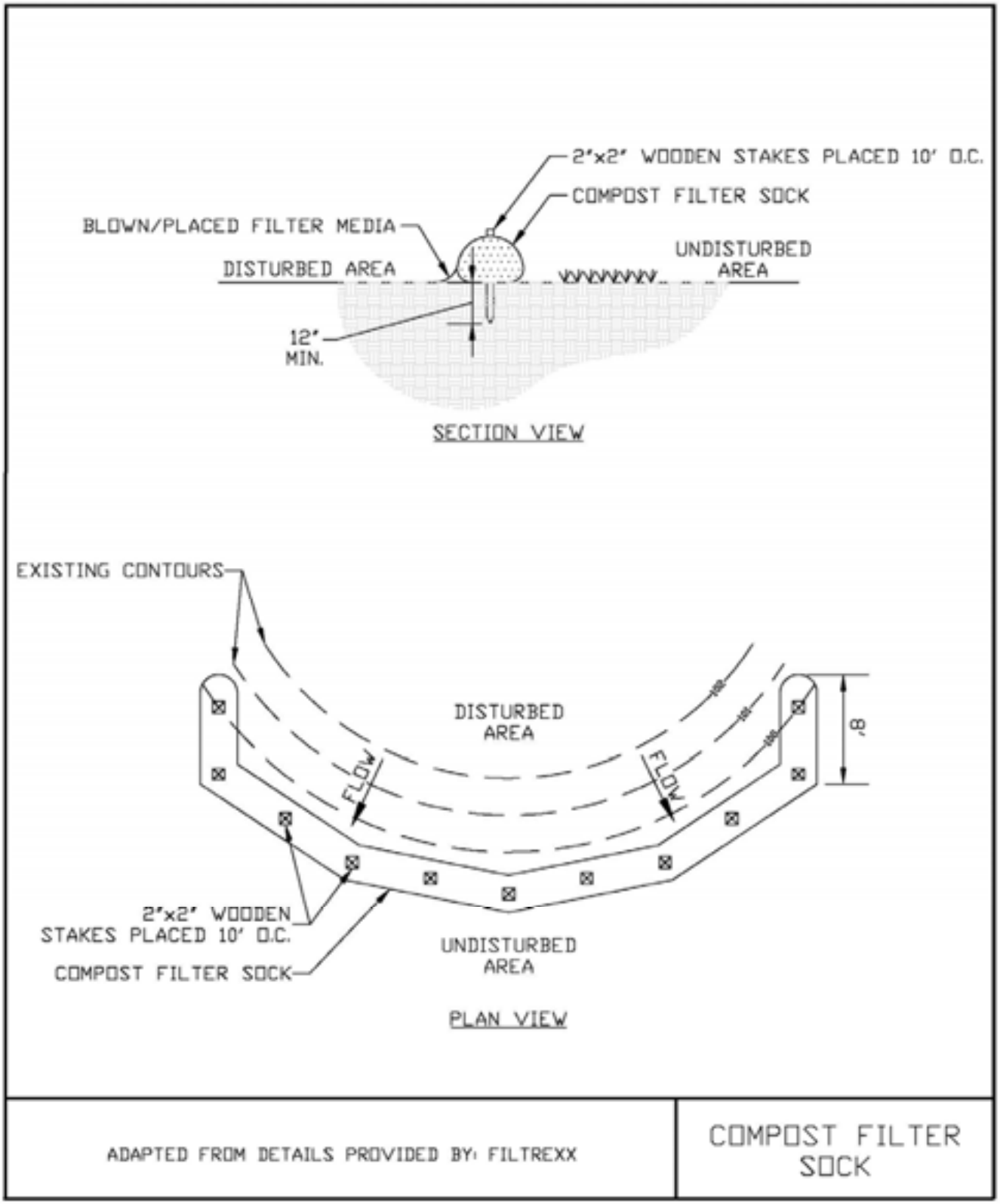
Table 5.1 - Compost Sock Fabric Minimum Specifications Table

Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
Material Characteristics	Photodegradable	Photodegradable	Biodegradable	Photodegradable	Photodegradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

Table 5.2 - Compost Standards Table

Organic matter content	25% - 100% (dry weight)
Organic portion	Fibrous and elongated
pH	6.0 – 8.0
Moisture content	30% - 60%
Particle size	100% passing a 1" screen and 10 - 50% passing a 3/8" screen
Soluble salt concentration	5.0 dS/m (mmhos/cm) maximum

Figure 5.2
Compost Filter Sock



STANDARD AND SPECIFICATIONS FOR SILT FENCE



Definition & Scope

A **temporary** barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil by temporarily ponding the sediment laden runoff allowing settling to occur. The maximum period of use is limited by the ultraviolet stability of the fabric (approximately one year).

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope length and fence length will not exceed the limits shown in the Design Criteria for the specific type of silt fence used ; and
2. Maximum ponding depth of 1.5 feet behind the fence; and
3. Erosion would occur in the form of sheet erosion; and
4. There is no concentration of water flowing to the barrier; and
5. Soil conditions allow for proper keying of fabric, or other anchorage, to prevent blowouts.

Design Criteria

1. Design computations are not required for installations of 1 month or less. Longer installation periods should be designed for expected runoff.
2. All silt fences shall be placed as close to the disturbed area as possible, but at least 10 feet from the toe of a slope steeper than 3H:1V, to allow for maintenance and roll down. The area beyond the fence must be undisturbed or stabilized.
3. The type of silt fence specified for each location on the plan shall not exceed the maximum slope length and maximum fence length requirements shown in the following table:

		Slope Length/Fence Length (ft.)		
Slope	Steepness	Standard	Reinforced	Super
<2%	< 50:1	300/1500	N/A	N/A
2-10%	50:1 to 10:1	125/1000	250/2000	300/2500
10-20%	10:1 to 5:1	100/750	150/1000	200/1000
20-33%	5:1 to 3:1	60/500	80/750	100/1000
33-50%	3:1 to 2:1	40/250	70/350	100/500
>50%	> 2:1	20/125	30/175	50/250

Standard Silt Fence (SF) is fabric rolls stapled to wooden stakes driven 16 inches in the ground.
Reinforced Silt Fence (RSF) is fabric placed against welded wire fabric with anchored steel posts driven 16 inches in the ground.
Super Silt Fence (SSF) is fabric placed against chain link fence as support backing with posts driven 3 feet in the ground.

4. Silt fence shall be removed as soon as the disturbed area has achieved final stabilization.

The silt fence shall be installed in accordance with the appropriate details. Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. Butt joints are not acceptable. A detail of the silt fence shall be shown on the plan. See Figure 5.30 on page 5.56 for Reinforced Silt Fence as an example of details to be provided.

Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance.

Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	110	ASTM D 4632
Elongation at Failure (%)	20	ASTM D 4632
Mullen Burst Strength (PSI)	300	ASTM D 3786
Puncture Strength (lbs)	60	ASTM D 4833
Minimum Trapezoidal Tear Strength (lbs)	50	ASTM D 4533
Flow Through Rate (gal/ min/sf)	25	ASTM D 4491
Equivalent Opening Size	40-80	US Std Sieve ASTM D 4751
Minimum UV Residual (%)	70	ASTM D 4355

2. Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3.5 square inches. Steel posts will be standard T and U section weighing not less than 1.00 pound per linear foot. Posts for super silt fence shall be standard chain link fence posts.

3. Wire Fence for reinforced silt fence: Wire fencing shall be a minimum 14 gage with a maximum 6 in. mesh opening, or as approved.

4. Prefabricated silt fence is acceptable as long as all material specifications are met.

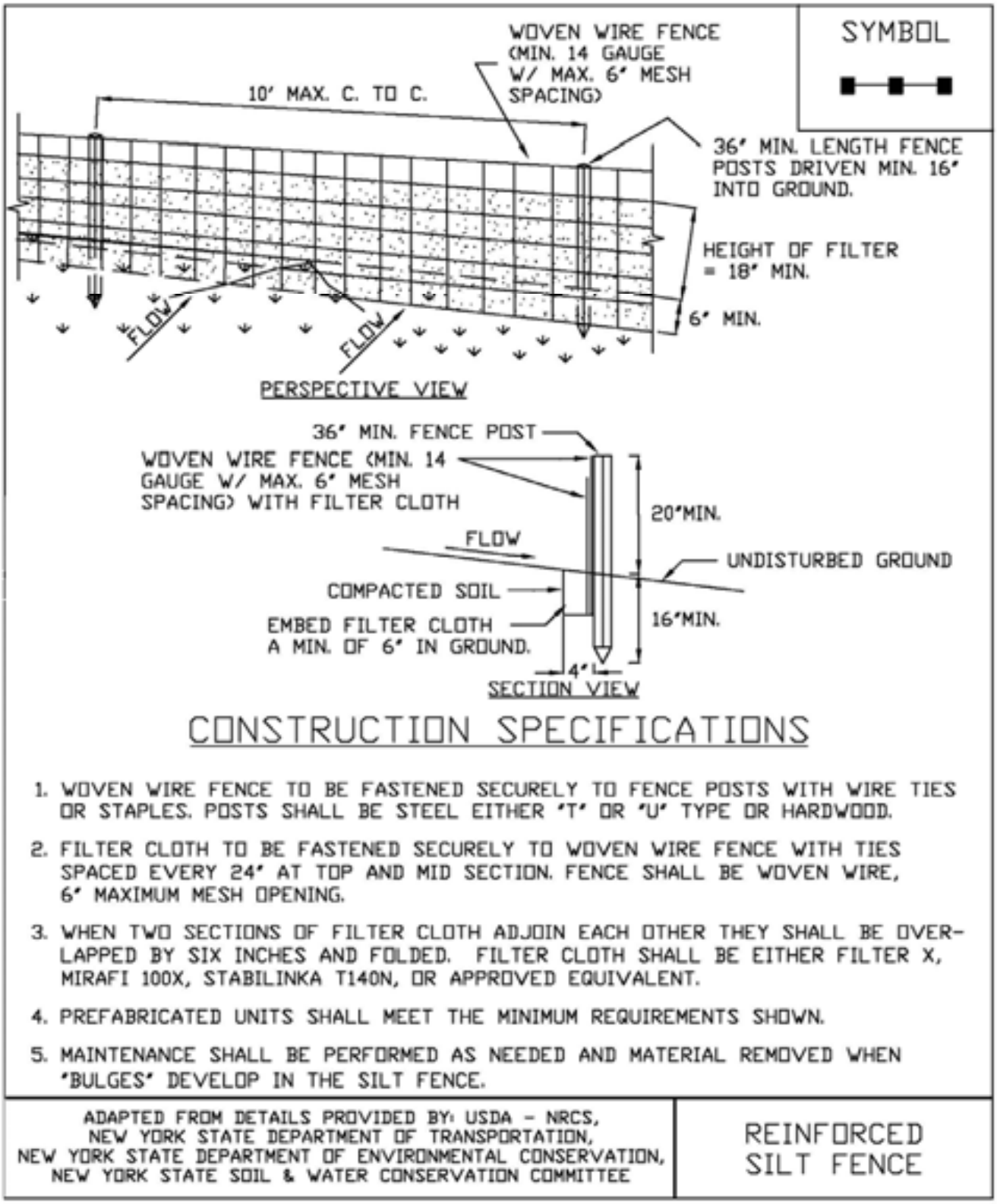
Super Silt Fence



Reinforced Silt Fence



Figure 5.30
Reinforced Silt Fence



STANDARD AND SPECIFICATIONS FOR STORM DRAIN INLET PROTECTION



Definition & Scope

A **temporary** barrier with low permeability, installed around inlets in the form of a fence, berm or excavation around an opening, detaining water and thereby reducing the sediment content of sediment laden water by settling thus preventing heavily sediment laden water from entering a storm drain system.

Conditions Where Practice Applies

This practice shall be used where the drainage area to an inlet is disturbed, it is not possible to temporarily divert the storm drain outfall into a trapping device, and watertight blocking of inlets is not advisable. **It is not to be used in place of sediment trapping devices.** This practice shall be used with an upstream buffer strip if placed at a storm drain inlet on a paved surface. It may be used in conjunction with storm drain diversion to help prevent siltation of pipes installed with low slope angle.

Types of Storm Drain Inlet Practices

There are five (5) specific types of storm drain inlet protection practices that vary according to their function, location, drainage area, and availability of materials:

I. Excavated Drop Inlet Protection
II. Fabric Drop Inlet Protection
III. Stone & Block Drop Inlet Protection
IV. Paved Surface Inlet Protection
V. Manufactured Insert Inlet Protection

Design Criteria

Drainage Area – The drainage area for storm drain inlets shall not exceed one acre. Erosion control/temporary stabilization measures must be implemented on the disturbed drainage area tributary to the inlet. The crest elevations of these practices shall provide storage and minimize bypass flow.

Type I – Excavated Drop Inlet Protection

This practice is generally used during initial overlot grading after the storm drain trunk line is installed.

Limit the drainage area to the inlet device to 1 acre. Excavated side slopes shall be no steeper than 2:1. The minimum depth shall be 1 foot and the maximum depth 2 feet as measured from the crest of the inlet structure. Shape the excavated basin to fit conditions with the longest dimension oriented toward the longest inflow area to provide maximum trap efficiency. The capacity of the excavated basin should be established to contain 900 cubic feet per acre of disturbed area. Weep holes, protected by fabric and stone, should be provided for draining the temporary pool.

Inspect and clean the excavated basin after every storm. Sediment should be removed when 50 percent of the storage volume is achieved This material should be incorporated into the site in a stabilized manner.

Type II – Fabric Drop Inlet Protection



This practice is generally used during final elevation grading phases after the storm drain system is completed.

Limit the drainage area to 1 acre per inlet device. Land area slope immediately surrounding this device should not exceed 1 percent. The maximum height of the fabric above the inlet crest shall not exceed 1.5 feet unless reinforced.

The top of the barrier should be maintained to allow overflow to drop into the drop inlet and not bypass the inlet to

unprotected lower areas. Support stakes for fabric shall be a minimum of 3 feet long, spaced a maximum 3 feet apart. They should be driven close to the inlet so any overflow drops into the inlet and not on the unprotected soil. Improved performance and sediment storage volume can be obtained by excavating the area.

Inspect the fabric barrier after each rain event and make repairs as needed. Remove sediment from the pool area as necessary with care not to undercut or damage the filter fabric. Upon stabilization of the drainage area, remove all materials and unstable sediment and dispose of properly. Bring the adjacent area of the drop inlet to grade, smooth and compact and stabilize in the appropriate manner to the site.

Type III – Stone and Block Drop Inlet Protection

This practice is generally used during the initial and intermediate overlot grading of a construction site.

Limit the drainage area to 1 acre at the drop inlet. The stone barrier should have a minimum height of 1 foot and a maximum height of 2 feet. Do not use mortar. The height should be limited to prevent excess ponding and bypass flow.

Recess the first course of blocks at least 2 inches below the crest opening of the storm drain for lateral support. Subsequent courses can be supported laterally if needed by placing a 2x4 inch wood stud through the block openings perpendicular to the course. The bottom row should have a few blocks oriented so flow can drain through the block to dewater the basin area.

The stone should be placed just below the top of the blocks on slopes of 2:1 or flatter. Place hardware cloth of wire mesh with ½ inch openings over all block openings to hold stone in place.

As an optional design, the concrete blocks may be omitted and the entire structure constructed of stone, ringing the outlet ("doughnut"). The stone should be kept at a 3:1 slope toward the inlet to keep it from being washed into the inlet. A level area 1 foot wide and four inches below the crest will further prevent wash. Stone on the slope toward the inlet should be at least 3 inches in size for stability and 1 inch or smaller away from the inlet to control flow rate. The elevation of the top of the stone crest must be maintained 6 inches lower than the ground elevation down slope from the inlet to ensure that all storm flows pass over the stone into the storm drain and not past the structure. Temporary diking should be used as necessary to prevent bypass flow.

The barrier should be inspected after each rain event and repairs made where needed. Remove sediment as necessary to provide for accurate storage volume for subsequent rains. Upon stabilization of contributing drainage area, remove all materials and any unstable soil and dispose of properly.

Bring the disturbed area to proper grade, smooth, compact and stabilize in a manner appropriate to the site.

Type IV – Paved Surface Inlet Protection



This practice is generally used after pavement construction has been done while final grading and soil stabilization is occurring. These practices should be used with upstream buffer strips in linear construction applications, and with temporary surface stabilization for overlot areas, to reduce the sediment load at the practice. This practice includes sand bags, compost filter socks, geo-tubes filled with ballast, and manufactured surface barriers. Pea gravel can also be used in conjunction with these practices to improve performance. When the inlet is not at a low point, and is offset from the pavement or gutter line, protection should be selected and installed so that flows are not diverted around the inlet.



The drainage area should be limited to 1 acre at the drain inlet. All practices will be placed at the inlet perimeter or beyond to maximize the flow capacity of the inlet. Practices shall be weighted, braced, tied, or otherwise anchored to prevent movement or shifting of location on paved surfaces. Traffic safety shall be integrated with the use of this practice. All practices should be marked with traffic safety cones as appropriate. Structure height shall not cause flooding or by-pass flow that would cause additional erosion.

The structure should be inspected after every storm event. Any sediment should be removed and disposed of on the site. Any broken or damaged components should be replaced. Check all materials for proper anchorage and secure as necessary.

Type V - Manufactured Insert Inlet Protection



The drainage area shall be limited to 1 acre at the drain inlet. All inserts will be installed and anchored in accordance with the manufacturers recommendations and design details. The fabric portion of the structure will equal or exceed the performance standard for the silt fence fabric. The inserts will be installed to preserve a minimum of 50 percent of the open, unobstructed design flow area of the storm drain inlet opening to maintain capacity for storm events.

Figure 5.31
Excavated Drop Inlet Protection

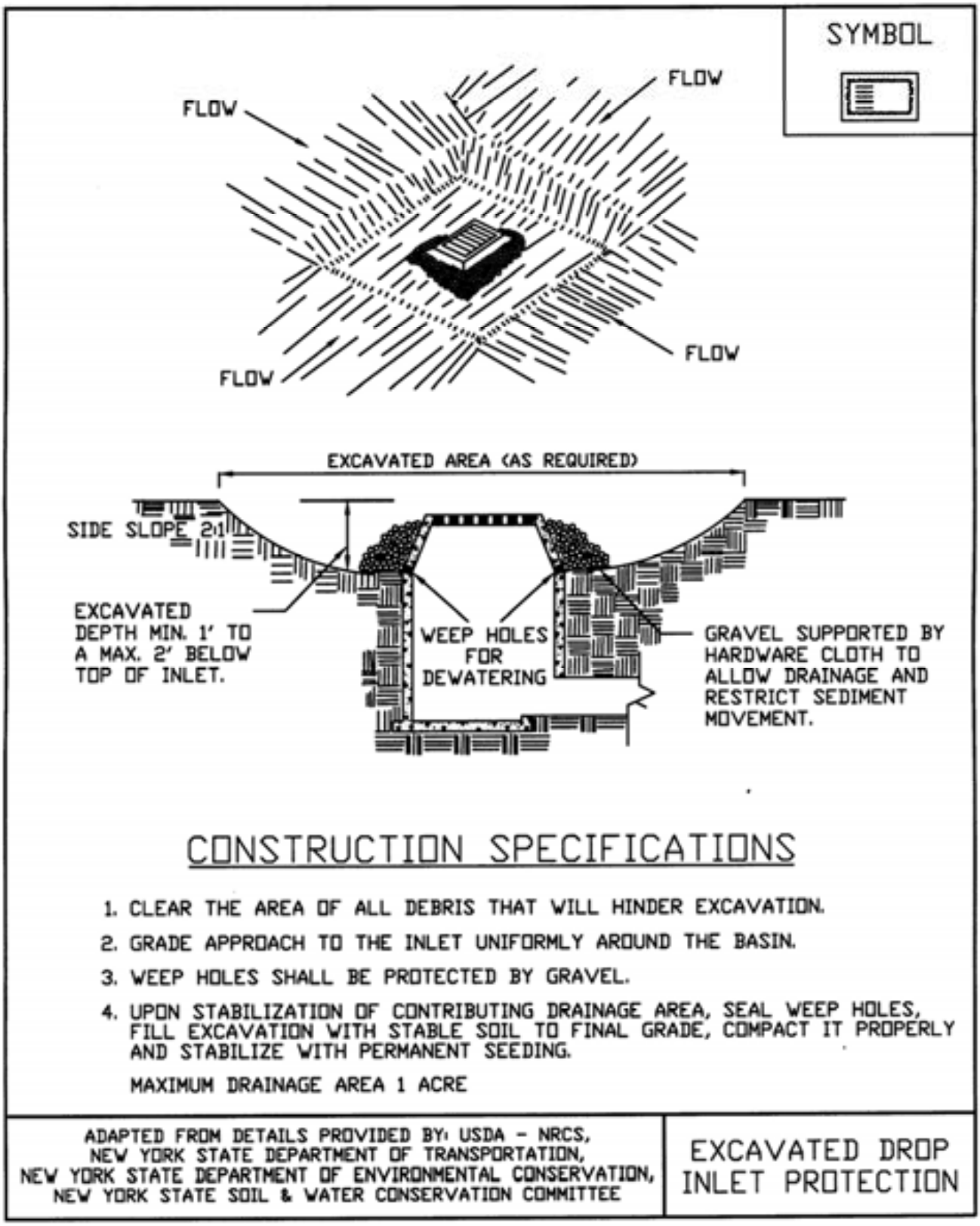


Figure 5.32
Fabric Drop Inlet Protection

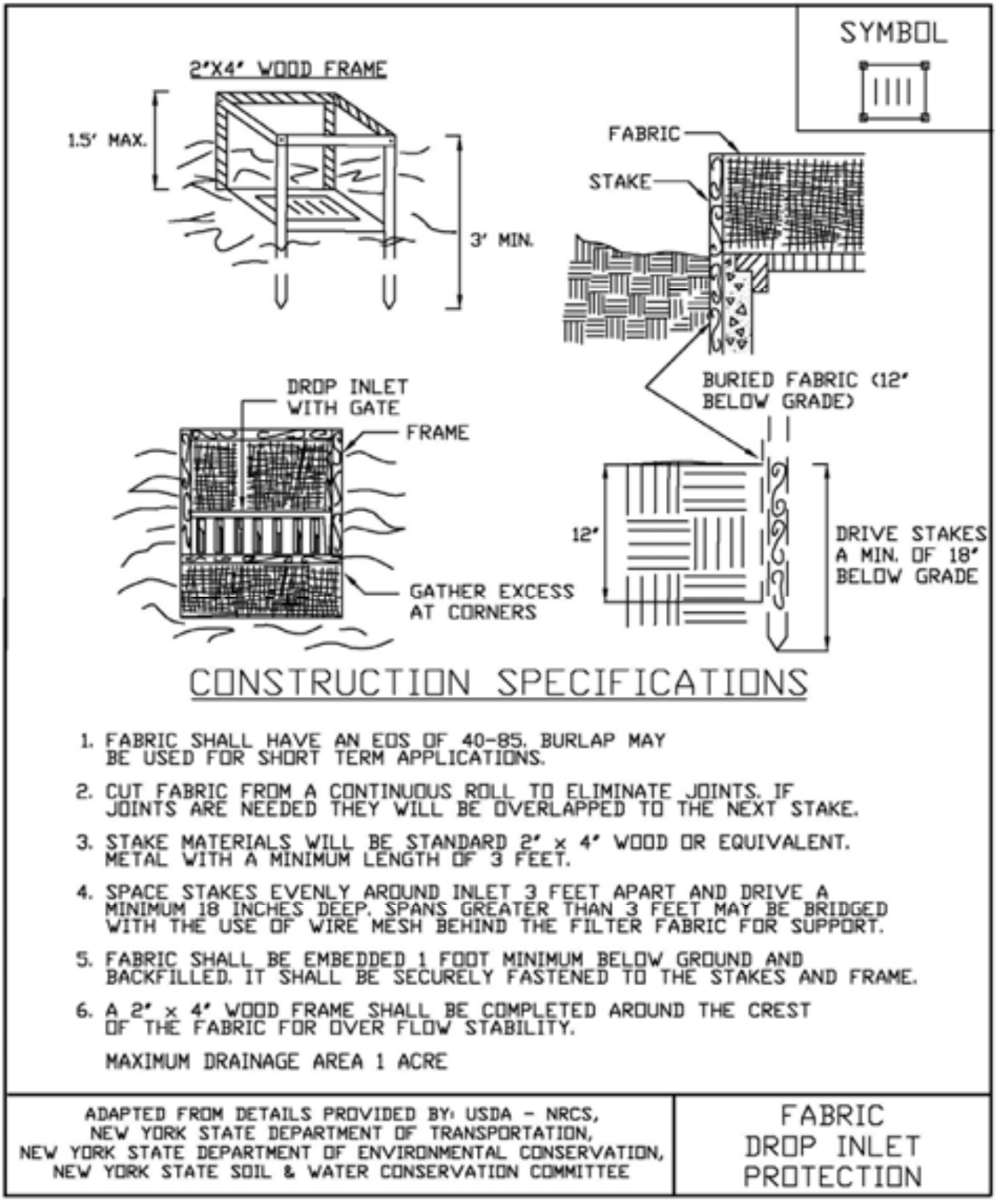
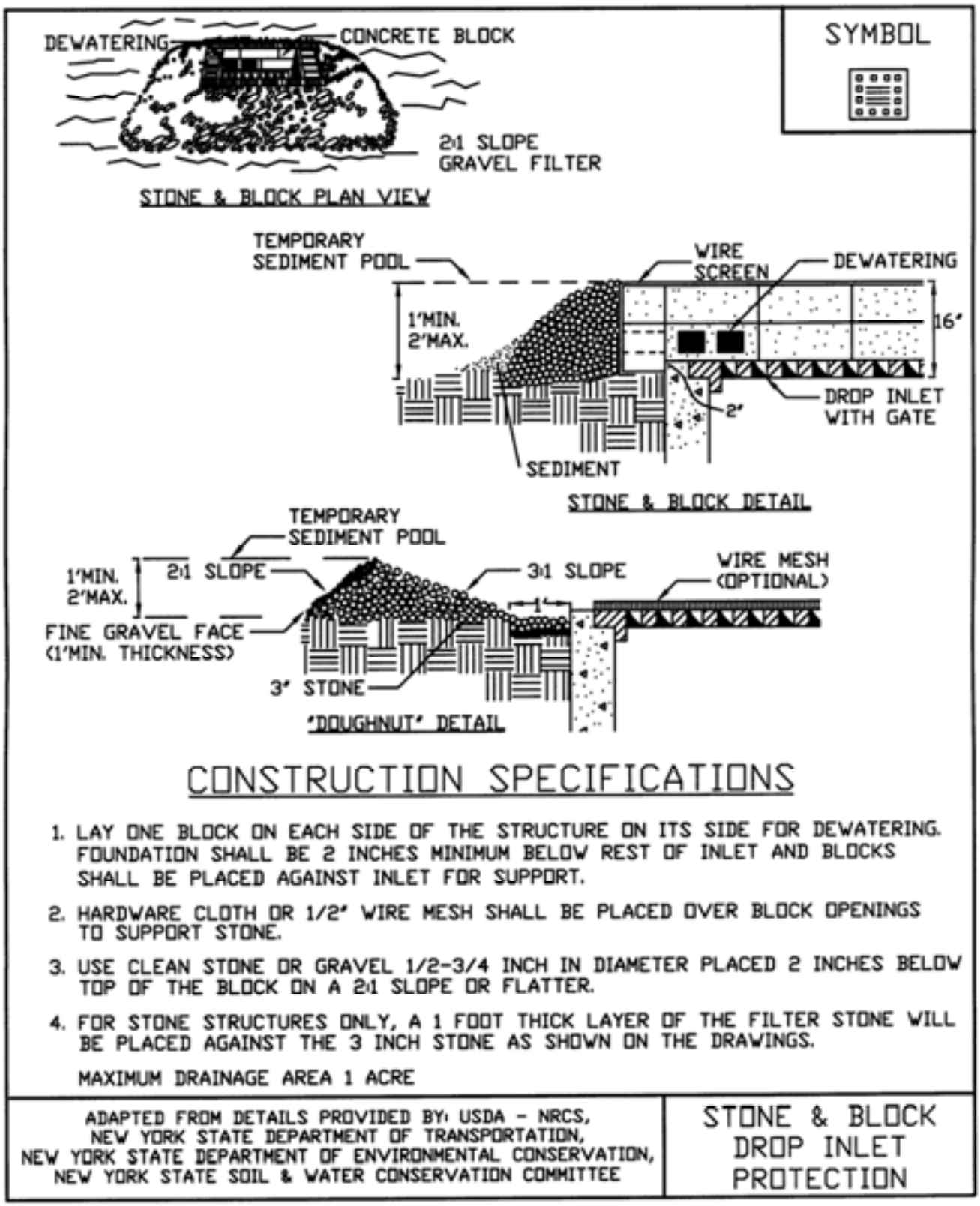


Figure 5.33
Stone & Block Drop Inlet Protection



CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

MAXIMUM DRAINAGE AREA 1 ACRE

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 & BLOCK DROP INLET PROTECTION

Pollution Prevention Measures & Prohibited Discharges

Material Management Practices

All waste materials, including construction debris and trash that occur onsite shall be handled and disposed of in a manner that is in accordance with state and local regulations. No waste material shall be buried on site.

- An effort shall be made to store only enough products required for the project.
- All materials stored within project areas shall be stored in a neat, orderly manner in their appropriate containers and, if possible, in an enclosed area.
- Products shall be kept in their original containers with the original manufacturer's label. Manufacturers' recommendations for proper use and disposal shall be followed.
- Hazardous Materials shall be disposed of in accordance with State and Local regulations.
- Sanitary waste will be collected from the portable units as required.

The following construction materials are expected to be on-site during construction:

- Concrete
- Asphalt
- Masonry Block
- Wood
- Paints (Enamel and Latex)
- Petroleum based products
- Fertilizers
- Metal Studs
- Detergents
- Cleaning Solvents
- Roofing Shingles
- Tar

These materials, and other materials used during construction with the potential to impact storm water, will be stored, managed, used, and disposed of in a manner that minimizes the potential for releases to the environment and especially into storm water.

Emergency contacts for the project will be posted at the project office are included at the end of this section.

Spill Control Practices

The contractor will be responsible for preparing a project area specific spill control plan in accordance with local and NYS DEC regulations. At a minimum this plan should:

- Reduce stormwater contact if there is a spill.
- Contain the spill.
- Stop the source of the spill.
- Dispose of contaminated material in accordance with manufactures procedures, and NYS DEC regulations.
- Identify responsible and trained personnel.
- Ensure spill area is well ventilated.

General Materials Handling Practices

The following general practices will be used throughout the project to reduce the potential for spills.

- Potential pollutants will be stored and used in a manner consistent with the manufacturer's instructions in a secure location. To the extent practicable, material storage areas should not be located near storm drain inlets and should be equipped with covers, roofs, or secondary containment as needed to prevent storm water from contacting stored materials. Chemicals that are not compatible

(such as sodium bicarbonate and hydrochloric acid) shall be stored in segregated areas so that spilled materials cannot combine and react.
- Materials disposal will be in accordance with the manufacturer's instructions and applicable local, state, and federal regulations.
- Materials no longer required for construction will be removed from the site as soon as practicable.
- Adequate garbage, construction waste, and sanitary waste handling and disposal facilities will be provided to the extent necessary to keep the site clear of obstruction and BMPs clear and functional.

Product Specific Practices

The following product-specific practices shall be followed within the project areas:

Petroleum Products

All project related vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers, which are clearly labeled. Any asphalt substances used during construction shall be applied according to the manufacturer's recommendations.

Fertilizers

Fertilizers used shall be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer shall be worked into the soil to limit exposure to stormwater. Fertilizers shall be stored in a covered or other contained area.

Paints

All containers shall be tightly sealed and stored when not required for use. Excess paint shall not be discharged to the storm sewer system but shall be properly disposed of according to manufacturer's instructions or State regulations.

Concrete Trucks

Concrete trucks shall be allowed to wash out within project areas provided that the contractor provides an area which collects and contains any concrete / slurry material washed from trucks for recovery and disposal at a later time. No concrete / slurry shall be discharged from the property at any time of construction. If such washing is anticipated, the contractor shall submit a plan detailing the control of concrete / slurry to the engineer for approval. The following criteria are to be considered when installing a concrete washout area:

- Minimum size 8' x 8' and 2' in depth
- Locate facility at least 100' from storm drainage system or surface waters
- Must be lined to prevent leaching into the ground
- Hardened concrete disposed of in C&D landfill or reused on site
- Remove material when filled to 75% of capacity

Prohibited Discharges

The following discharges are prohibited:

- Wastewater from washout of concrete,
- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials,
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
- Soaps or solvents used in vehicle and equipment washing; and
- Toxic or hazardous substances from a spill or other release.

Spill Response

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize their migration into storm water runoff and conveyance systems. If the release has impacted on-site storm water, it is critical to contain the released materials on-site and prevent their release into receiving waters.

If a spill of pollutants threatens storm water at the site, the spill response procedures outlined below must be implemented in a timely manner to prevent the release of pollutants:

- The site superintendent will be notified immediately when a spill, or the threat of a spill, is observed. The superintendent will assess the situation and determine the appropriate response.
- If spills represent an imminent threat of escaping ESC facilities and entering the receiving waters, facility personnel will respond immediately to contain the release and notify the superintendent after the situation has been stabilized.
- Spill kits containing materials and equipment for spill response and cleanup will be maintained at the site. Each spill kit may contain:
    - Oil absorbent pads (one bale)
    - Oil absorbent booms (40 feet)
    - 55-gallon drums (2)
    - 9-mil plastic bags (10)
    - Personal protective equipment including gloves and goggles
- If an oil sheen is observed on surface water (e.g., settling ponds, detention pond, swales), absorbent pads and/or booms will be applied to contain and remove the oil. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
- The site superintendent, or his designee, will be responsible for completing the spill reporting form and for reporting the spill to the appropriate state or local agency (see Forms at the end of this section).
- Facility personnel with primary responsibility for spill response and cleanup will receive training from the site superintendent. This training will include identifying the location of spill kits and other spill response equipment and the use of spill response materials.
- Spill response equipment will be inspected and maintained as necessary to replace any materials used in spill response activities.

Notification

In the event of a spill, make the appropriate notification(s) consistent with the following procedures:

- Petroleum spills must be reported to NYSDEC at (800) 457-7362 ***unless*** they meet ***all*** of the following criteria:
    1. The spill is known to be less than 5 gallons **and**
    2. The spill is contained and under the control of the spiller; **and**
    3. The spill has not and will not reach the State's waterbodies or any land (spill is on a paved surface); **and**
    4. The spill is cleaned up within 2 hours of discovery.
- Any spill of oil must be reported immediately by telephone to the National Response Center Hotline at (800) 424-8802 if it:
    1. Violates water quality standards,
    2. Produces a "sheen" on a surface water,
    3. Causes a sludge or emulsion.
- Any oil, hazardous substance, or hazardous waste release which exceeds the reportable quantity must be reported immediately by telephone to the National Response Center Hotline at (800) 424-8802.

- Any spill of oil or hazardous substance to **waters of the state** must be reported immediately by telephone to the NYSDEC.
- Any release of a hazardous substance that may be a threat to human health or the environment must be reported to the NYSDEC immediately upon discovery.

Emergency Phone Numbers

Fire, Police, Ambulance: **911**	
NYSDEC**: 800-457-7362**	
National Response Center Hotline: **800-424-8802**	
Owner: WDG2, LLC	Office:
	Cell:
General Contractor: **TBD**	Office:
	Cell:
Subcontractors:	
Sub #1	Office:
Sub #2	Office:
Sub #3	Office:
Sub #4	Office:
City or County Contact: Eric Williams 585-223-5115	

Spill Report Form

LOCATION: _____

Date: _____ Time: _____

Regulatory agencies notified (date, time, person, agency, and how): _____

Material spilled: _____

Quantity spilled: _____

Source: _____

Cause: _____

Extent of injuries (if any): _____

Adverse environmental impact (if any): _____

Immediate remedial actions taken at time of spill: _____

Measures taken or planned to prevent recurrence: _____

Additional comments: _____

This report prepared by: _____

(Signature)

_____ _____

SECTION 4
BME Engineer's Report

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
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS

10 Liftbridge Lane East
Fairport, NY 14450
(585) 377-7360

November 14, 2025

Project No. 2850

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- **(2) Hydrant Flow Test Information**

B. Stormwater Management
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C. Storm Sewers
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E. Background Information
- **(1) NYS Cultural Resource Information System (CRIS) Map**
- **(2) NYSDEC Environmental Resource Map**
- **(3) FEMA Floodplain Map**
- **(4) Geotechnical Report – Foundation Designs**

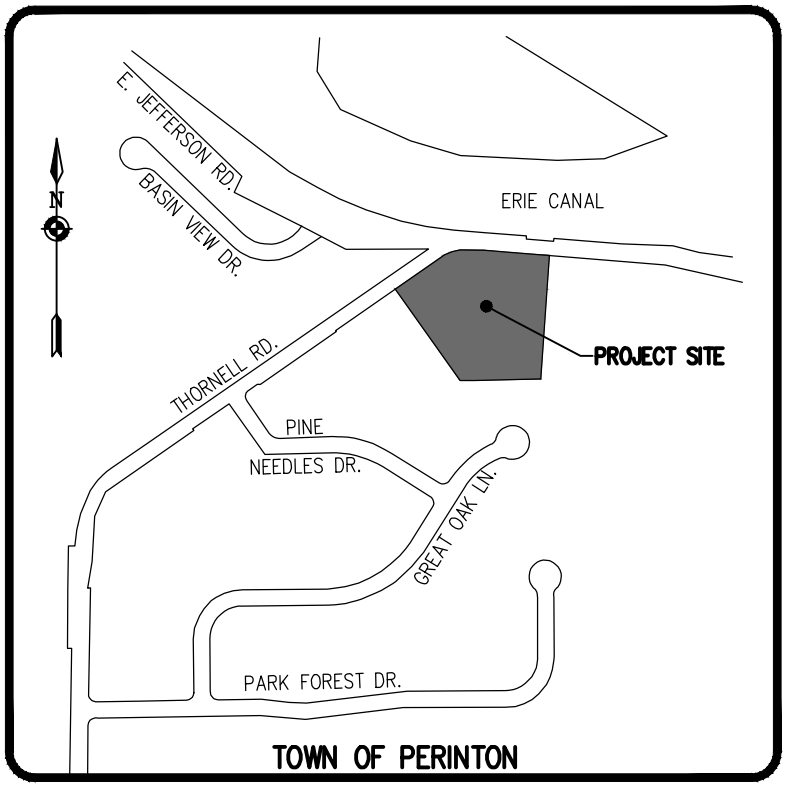


FIGURE 01 – LOCATION MAP

NOT TO SCALE

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 – Based on Analysis #1 (Villager Parcel)

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

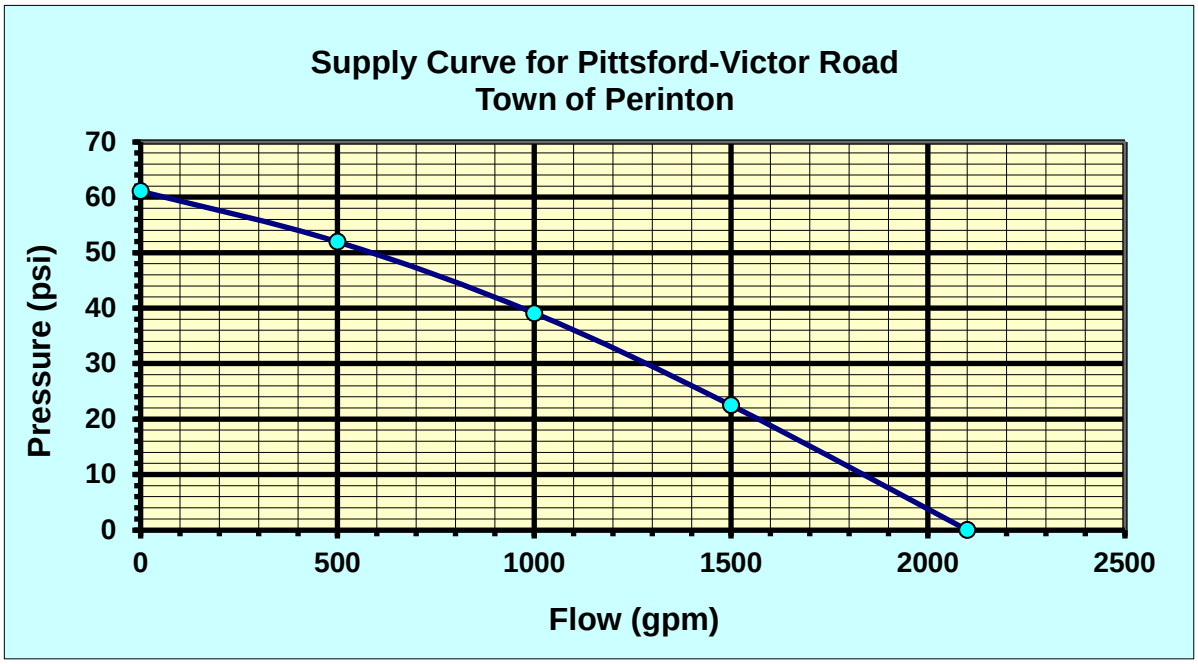
Water Supply Calculations

Computer Simulated Fire Flow Test/Supply Curve

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

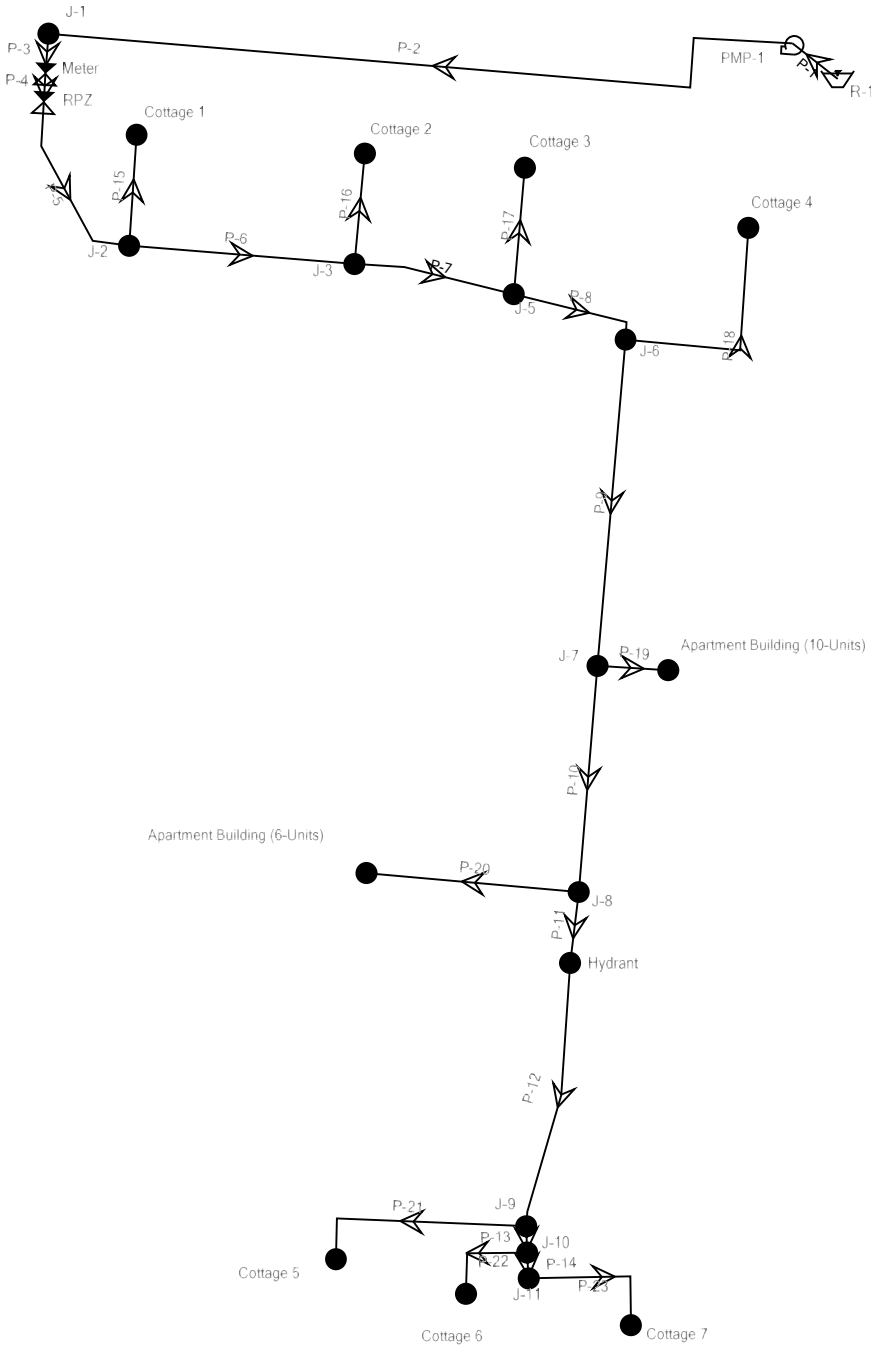
Supply Curve

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
J-11
P-23
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

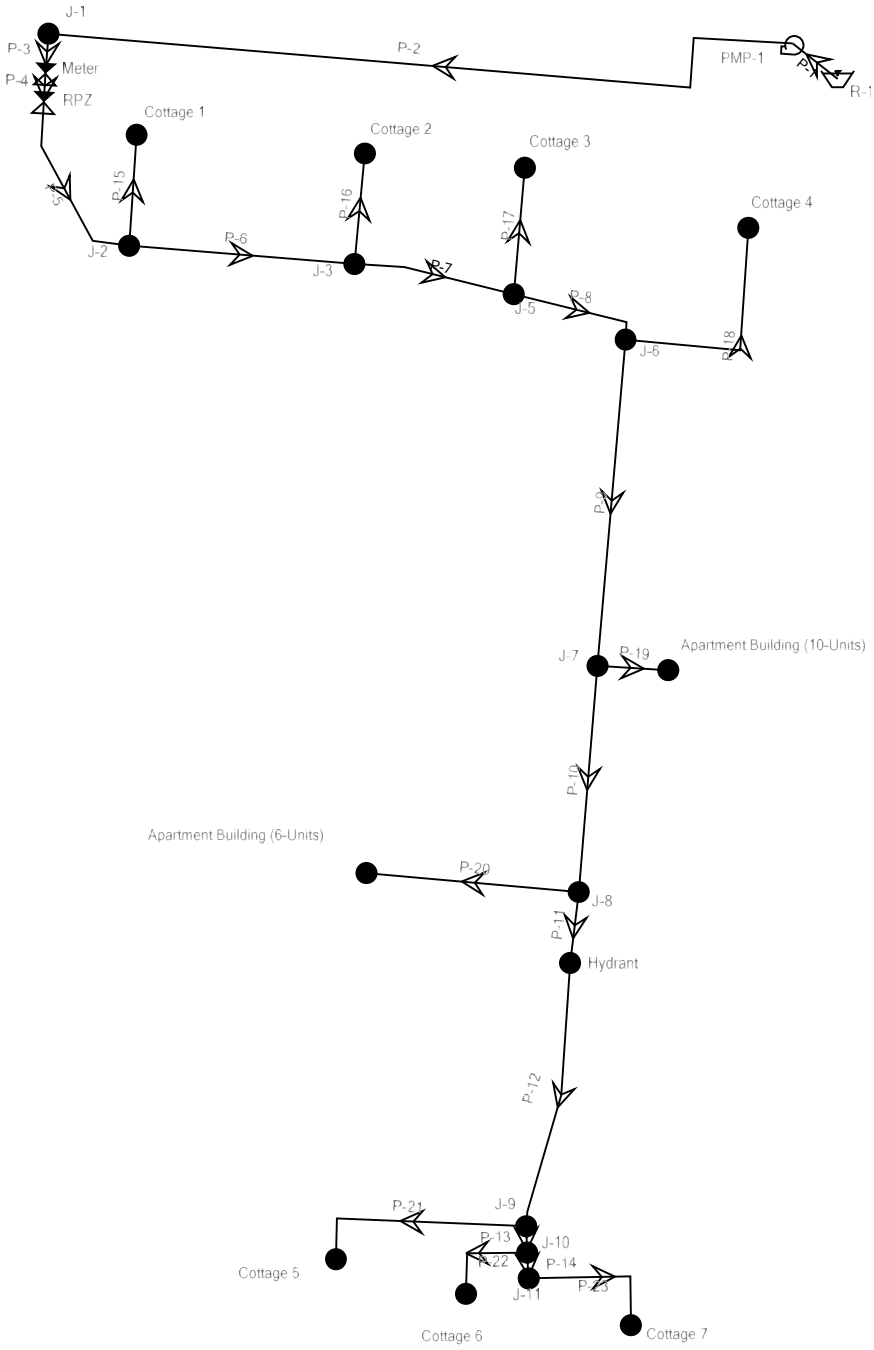
Reservoir Table - Time: 0.00 hours

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
J-11
P-23
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

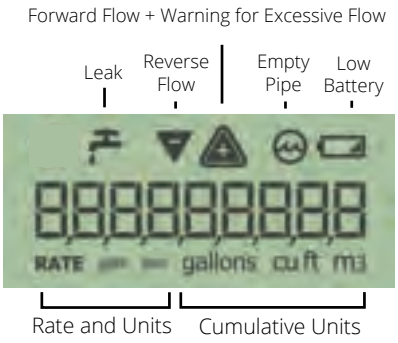
Meter Size	Extended Low Flow @ 100% Accuracy (+/- 3.0%)	Normal Operating Range @ 100% Accuracy (+/- 1.5%)	Safe Maximum Operating Capacity	
			Normal Operation (Non Fire Service)	Fire Service
3″	0.50 U.S. gpm	0.75 to 500 U.S. gpm	500 U.S. gpm	420 U.S. gpm
4″	0.75 U.S. gpm	1.5 to 1250 U.S. gpm	1250 U.S. 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

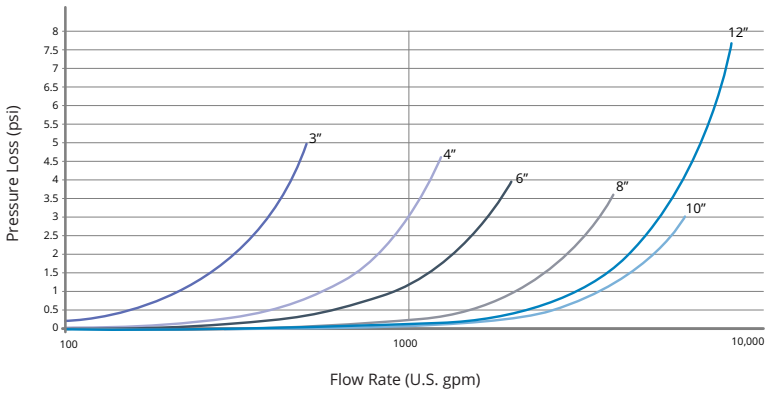
Consumption	Rate
Gallons	GPM
Cubic Feet	GPM
Cubic Metres	LPM



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.

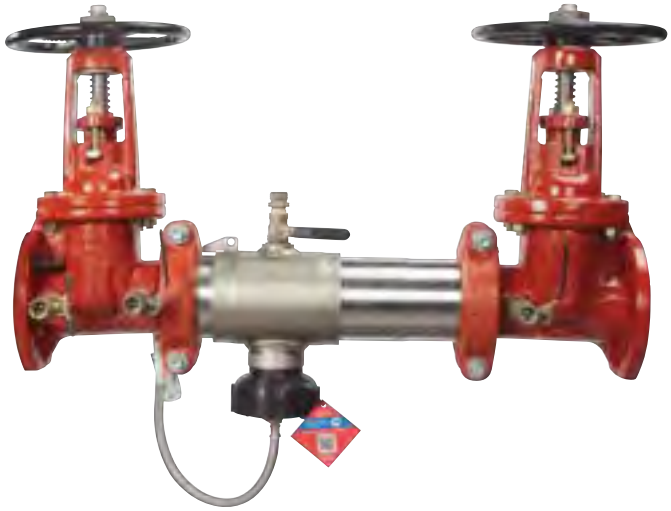
The series includes a flood sensor to detect excessive water discharges from the relief valve. The sensor is installed on the assembly exterior and does not alter assembly functions or certifications. The sensor relays a signal that triggers notification to facility personnel for corrective action, thus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

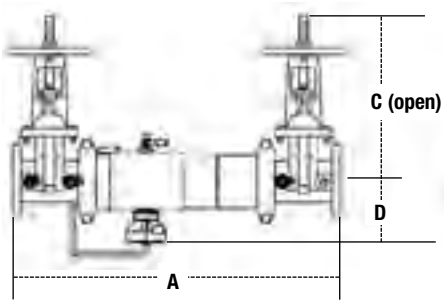
NOTICE

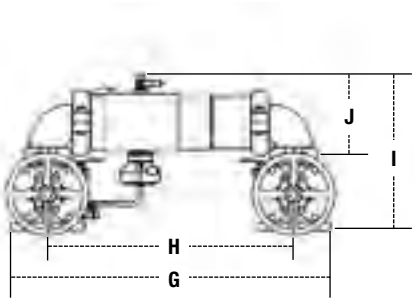
When installing a drain line on Series 957 backflow preventers, use 957AG air gaps. Attach the air gap brackets directly onto the flood sensor. For additional information, refer to ES-AG/EL/TC at watts.com

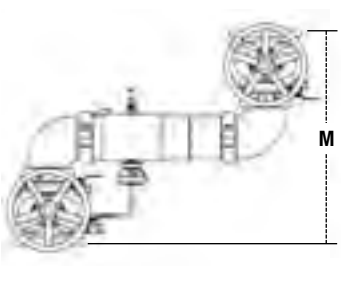
**Options for the gate valve:
– Consult factory for dimensions.
– Available with grooved NRS gate valves; consult factory.
– Post indicator plate and operating nut available; consult factory.

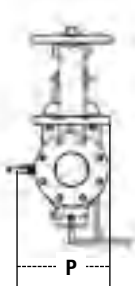
Noryl® is a registered trademark of SHPP Global Technologies B.V.

Dimensions - Weight



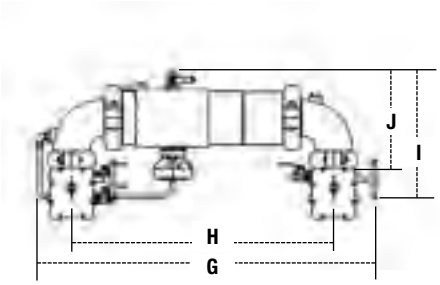


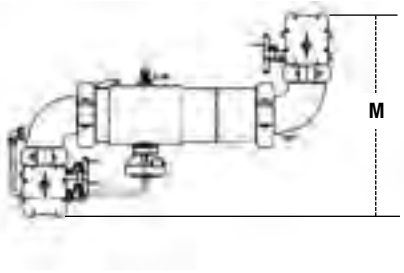


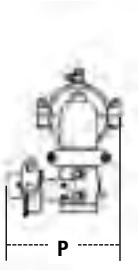


957, 957N, 957Z

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

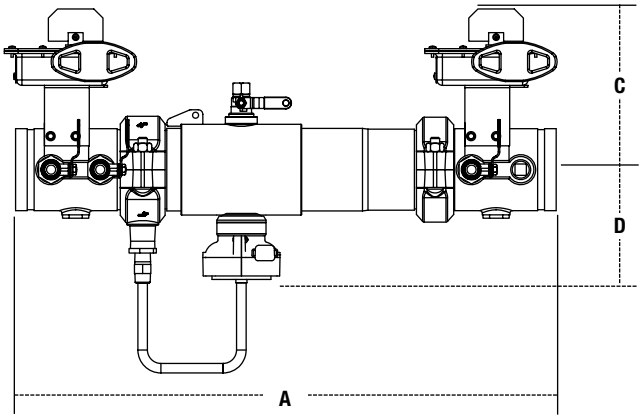


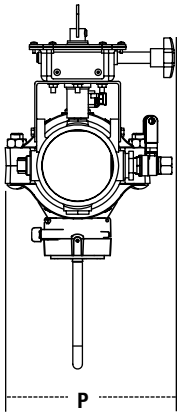




957NBFG, 957ZBFG

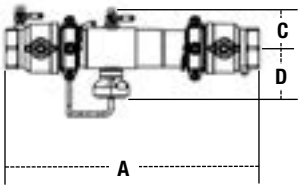
SIZE	DIMENSIONS												WEIGHT	
	G		H		I		J		M		P		957N/957Z	
in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
2½	32½	826	23	584	15½	394	9½	241	19¾	502	11 13/16	300	67	30
3	34	864	24	610	16 5/16	414	10 1/16	256	21¼	540	12⅛	308	70	32
4	35⅝	905	25½	648	17 3/16	437	10 15/16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

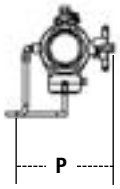


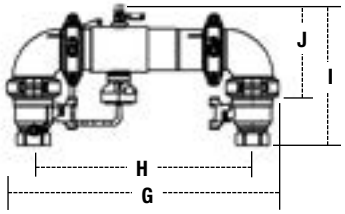


957 BFG

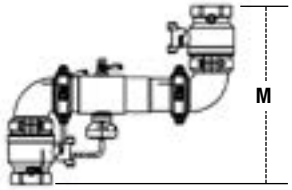
SIZE	DIMENSIONS								WEIGHT	
	A		C		D		P			
in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
4	29	737	7¾	197	6⅜	162	9½	241	66	30
6	36½	927	9 11/16	246	7 7/16	189	14¼	362	122	55











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*
2½	27½	698	4⅞	124	6⅞	175	30¼	768	21½	546	16 1/16	407	11⅜	289	19⅞	505	11 5/16	287	11 5/16	287	46	21	57	26
3	28	711	4⅞	124	6⅞	175	30¼	768	22¼	565	16 9/16	420	11⅜	289	20⅞	531	11 5/16	287	11 5/16	287	56	25	67	30
4	28¾	730	4⅞	124	6⅞	175	30¼	768	23½	597	18 5/16	465	11⅜	289	24⅜	619	11 5/16	287	11 5/16	287	76	34	87	39

Capacity

Flow curves as tested by Underwriters Laboratories.

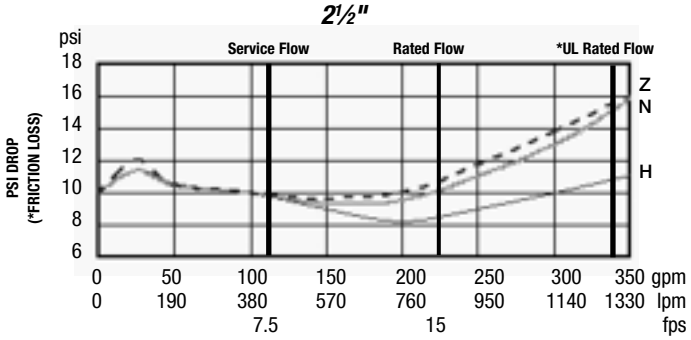
Flow capacity chart identifies valve performance based upon rated water velocity up to 25 fps.

- 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.

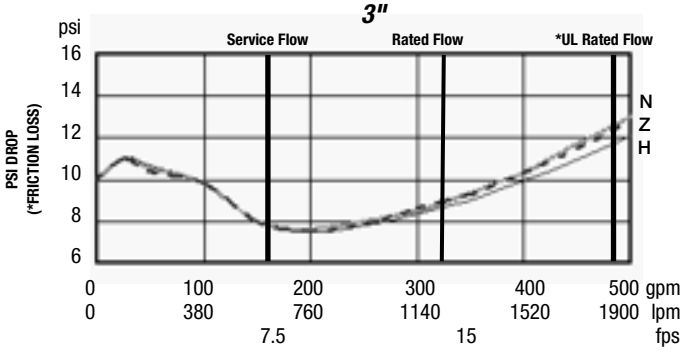
Flow characteristics collected using butterfly shutoff valves.

Horizontal N-pattern Z-pattern

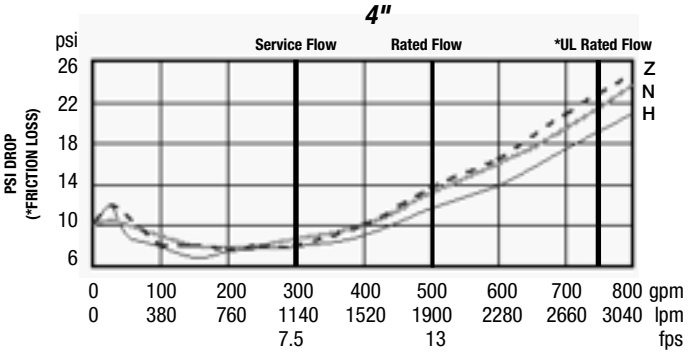
2½"



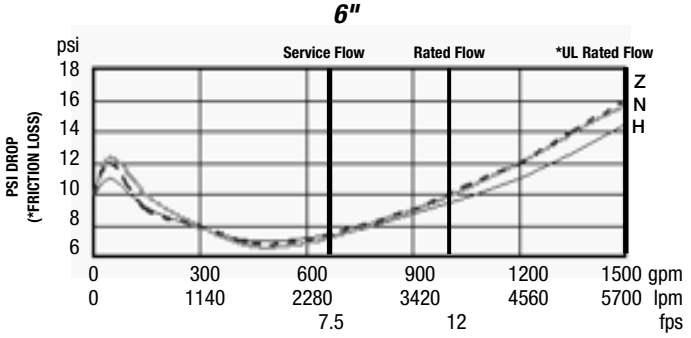
3"



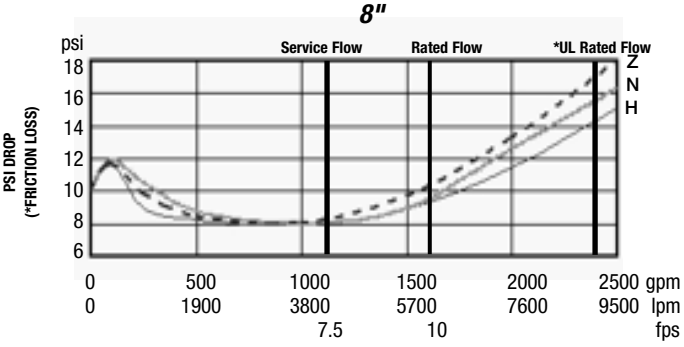
4"



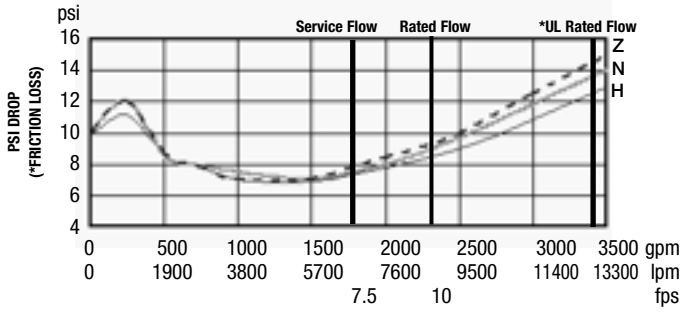
6"



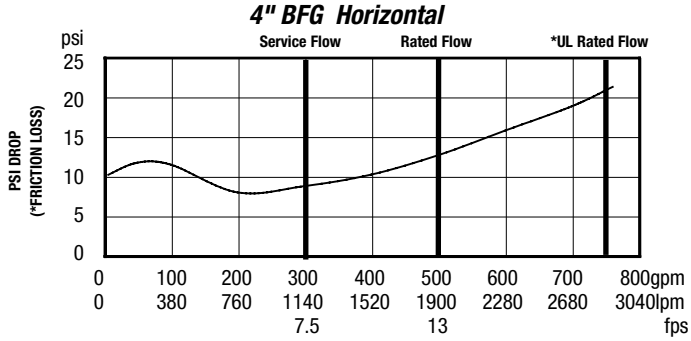
8"



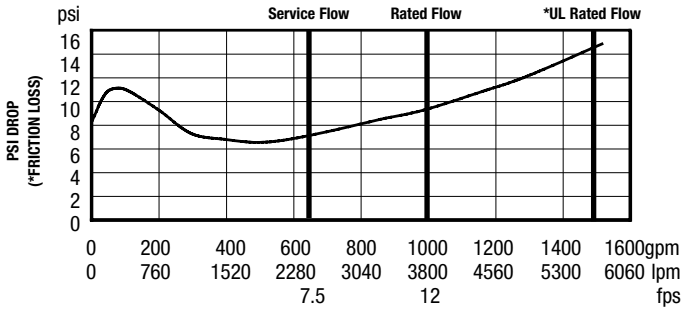
10"



4" BFG Horizontal



6" BFG Horizontal



WATTS®

USA: T: (978) 689-6066 • Watts.com
Canada: T: (888) 208-8927 • Watts.ca
Latin America: T: (52) 55-4122-0138 • Watts.com

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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 1,442,196.23

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

1 STORY FR. HOUSE FF=482.88

LOT 10

LOT 9

LOT 8

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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."

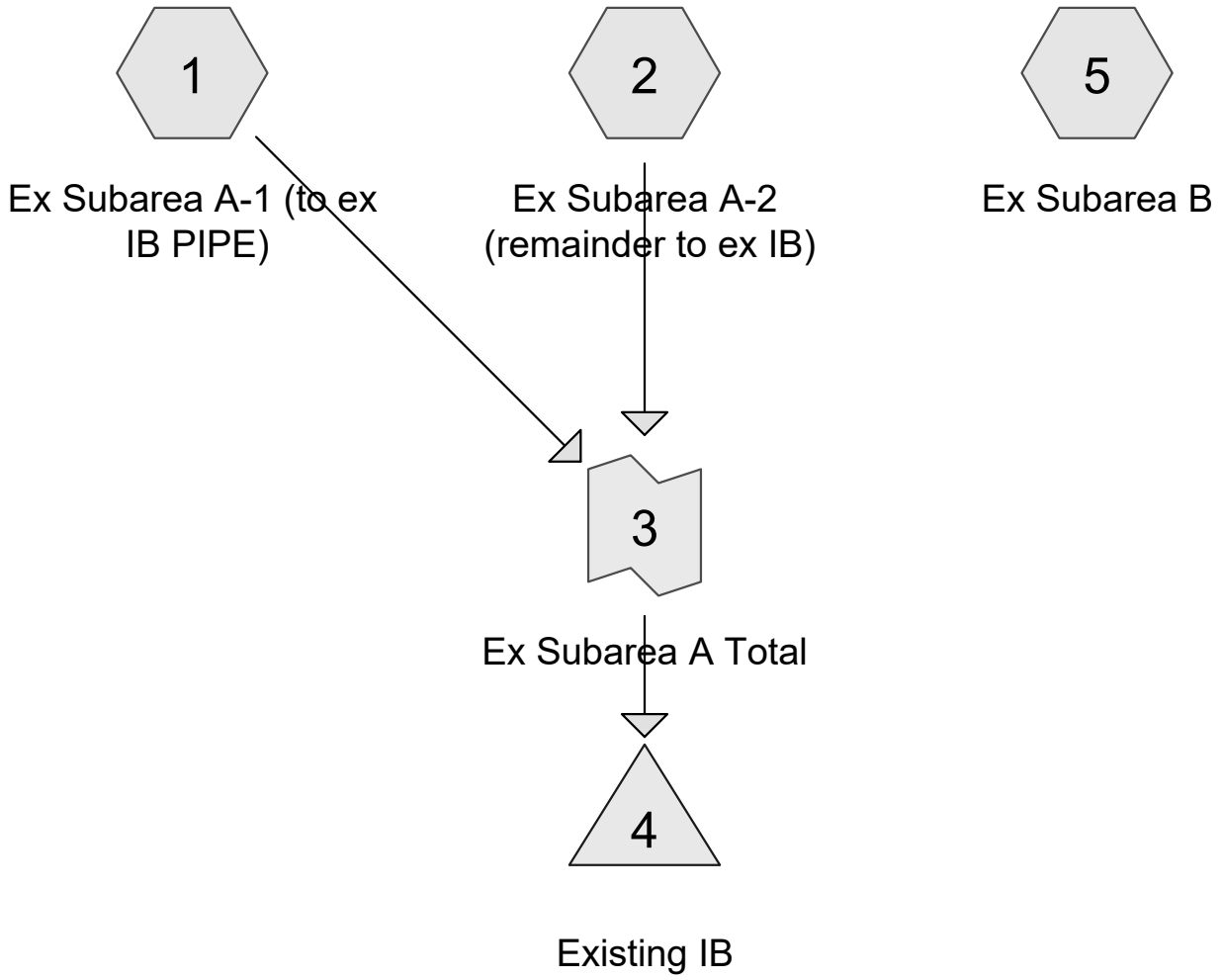
	BY	DATE	REVISIONS
7			
6			
5			
4			
3			
2			
1			

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
1 PUTNAM WAY
PITTSFORD, NY, 14534
DRAWING TITLE: EXISTING DRAINAGE 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 02	

EXISTING DRAINAGE



Subcat Reach Pond Link

Routing Diagram for 2850 Stormwater Calcs
Prepared by BME Associates, Printed 11/13/2025
HydroCAD® 10.20-7a s/n 09860 © 2025 HydroCAD Software Solutions LLC

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

[45] Hint: Runoff=Zero

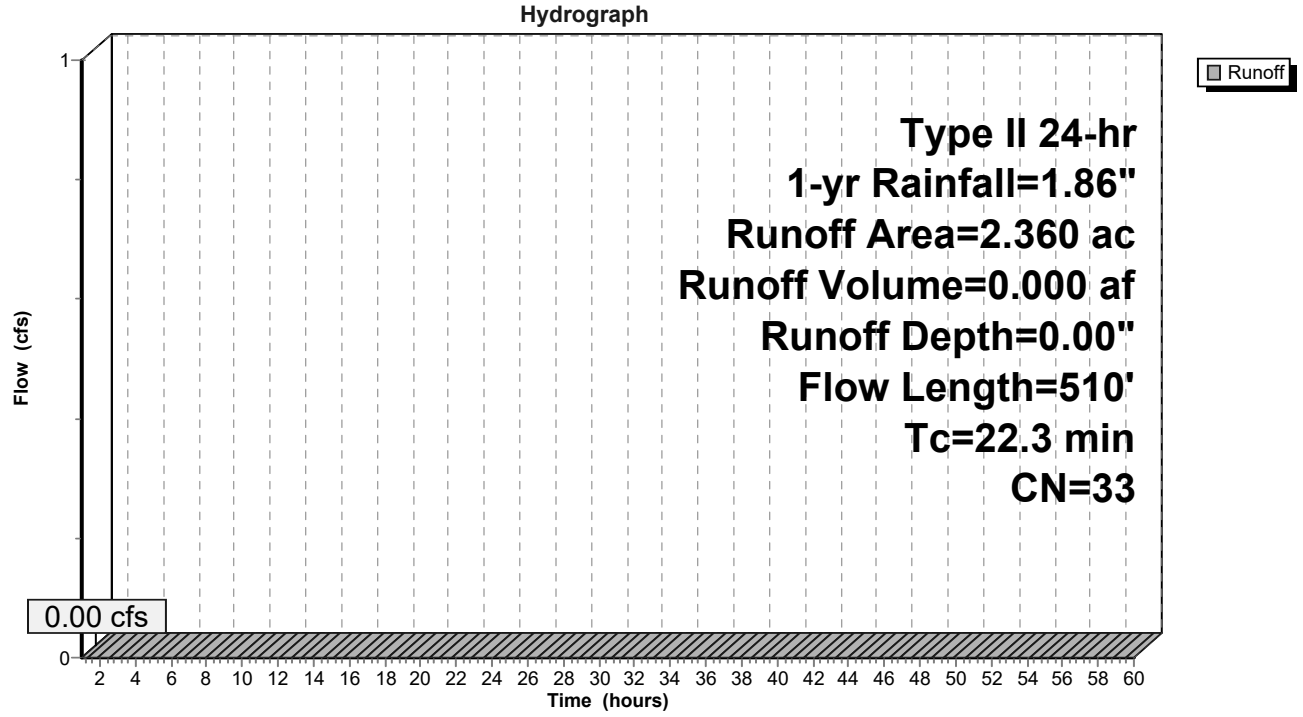
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

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)

[45] Hint: Runoff=Zero

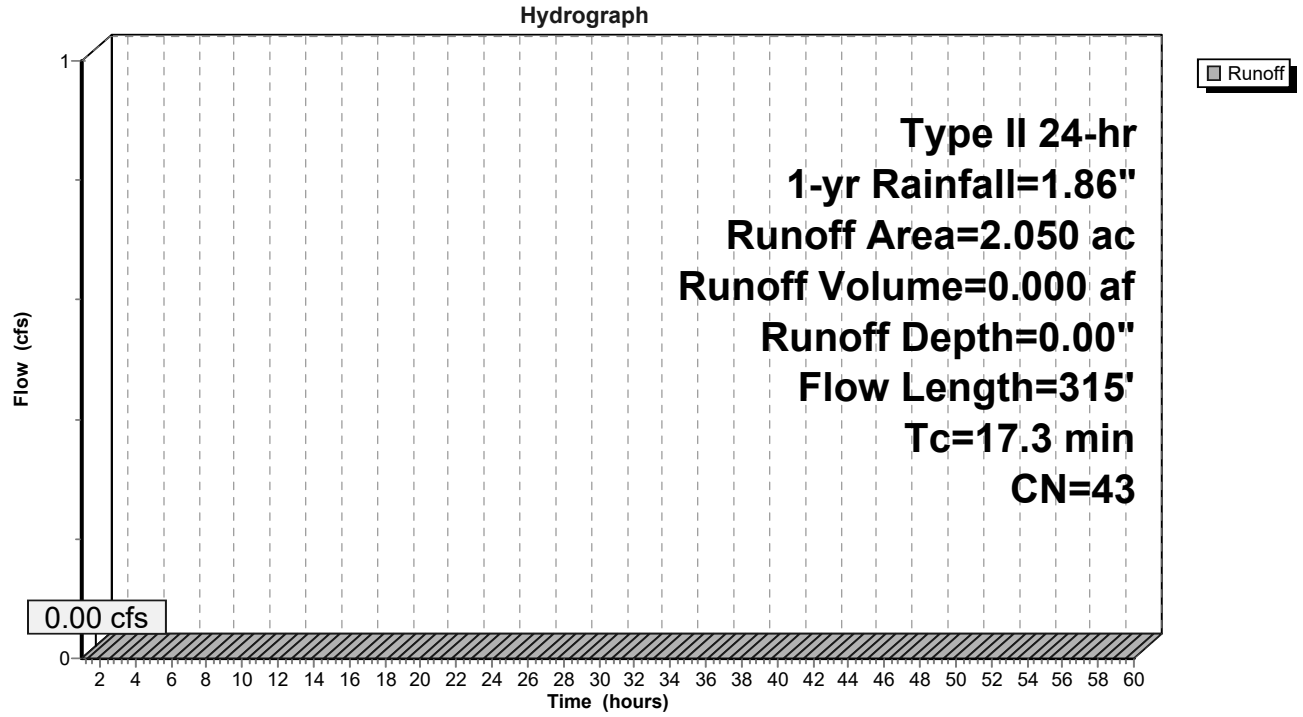
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

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)

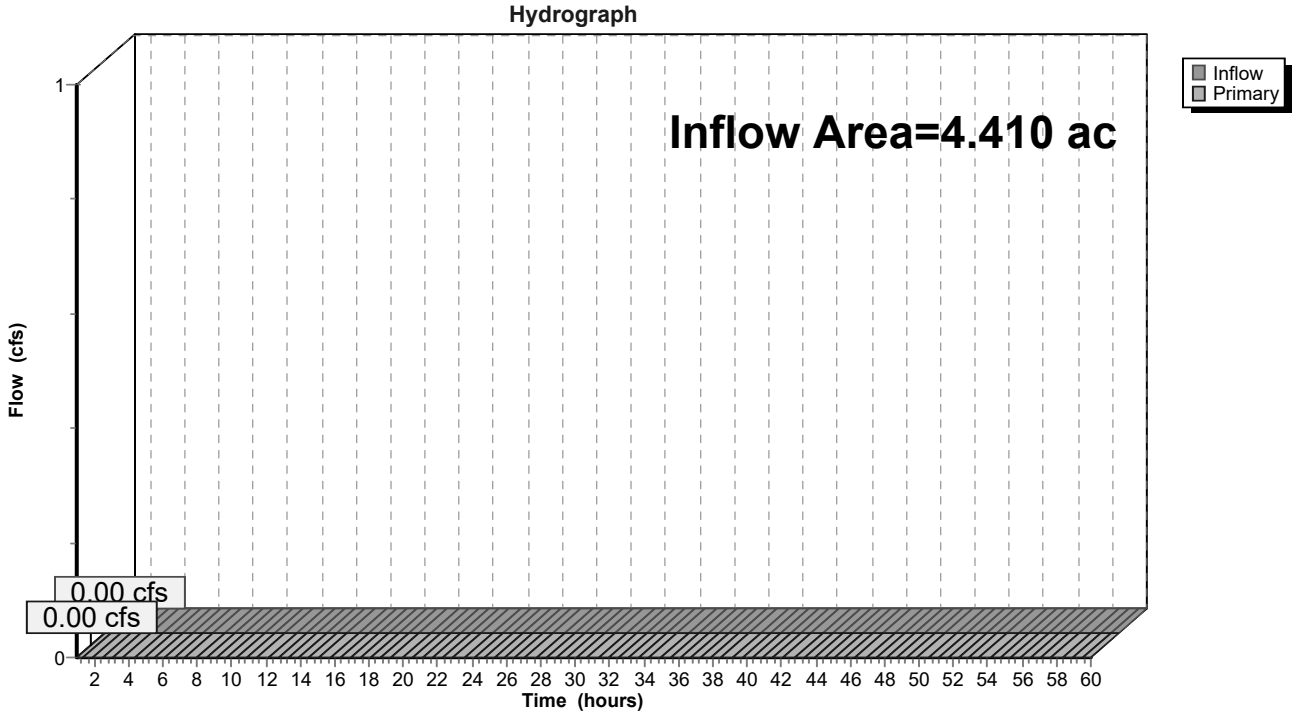


Summary for Link 3: Ex Subarea A Total

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 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)

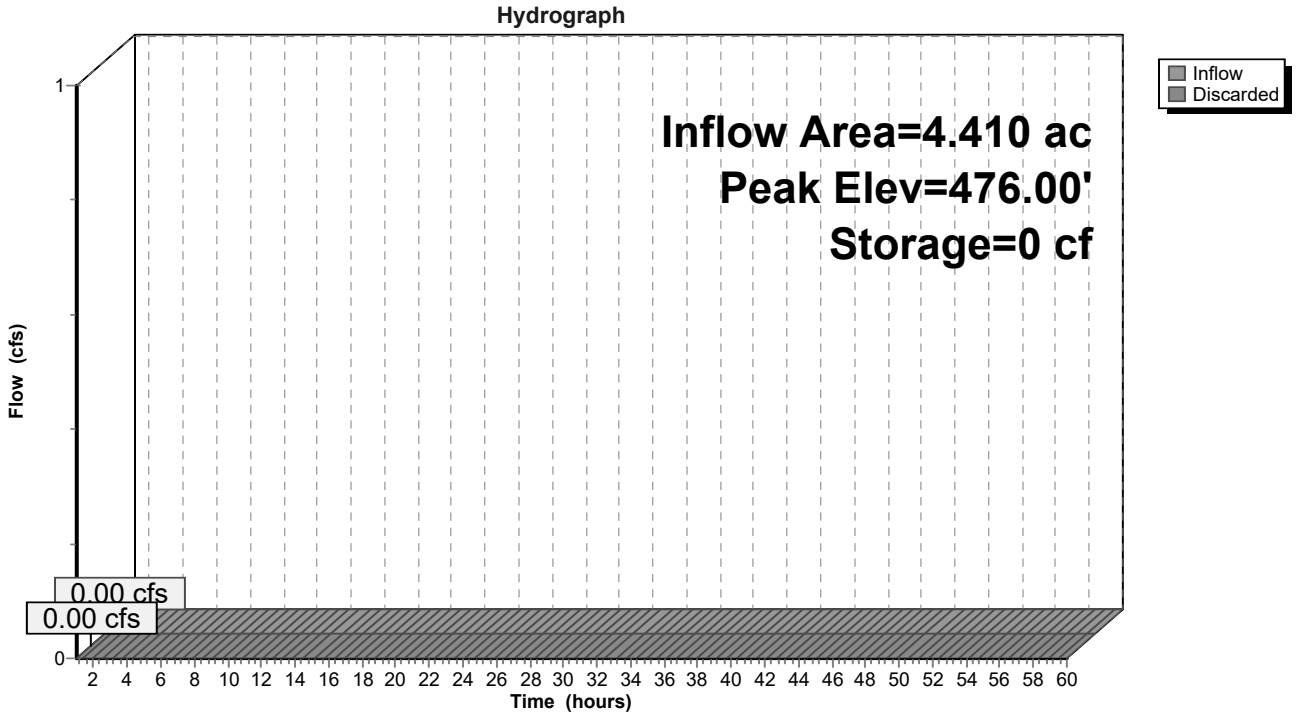
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 5: Ex Subarea B

[45] Hint: Runoff=Zero

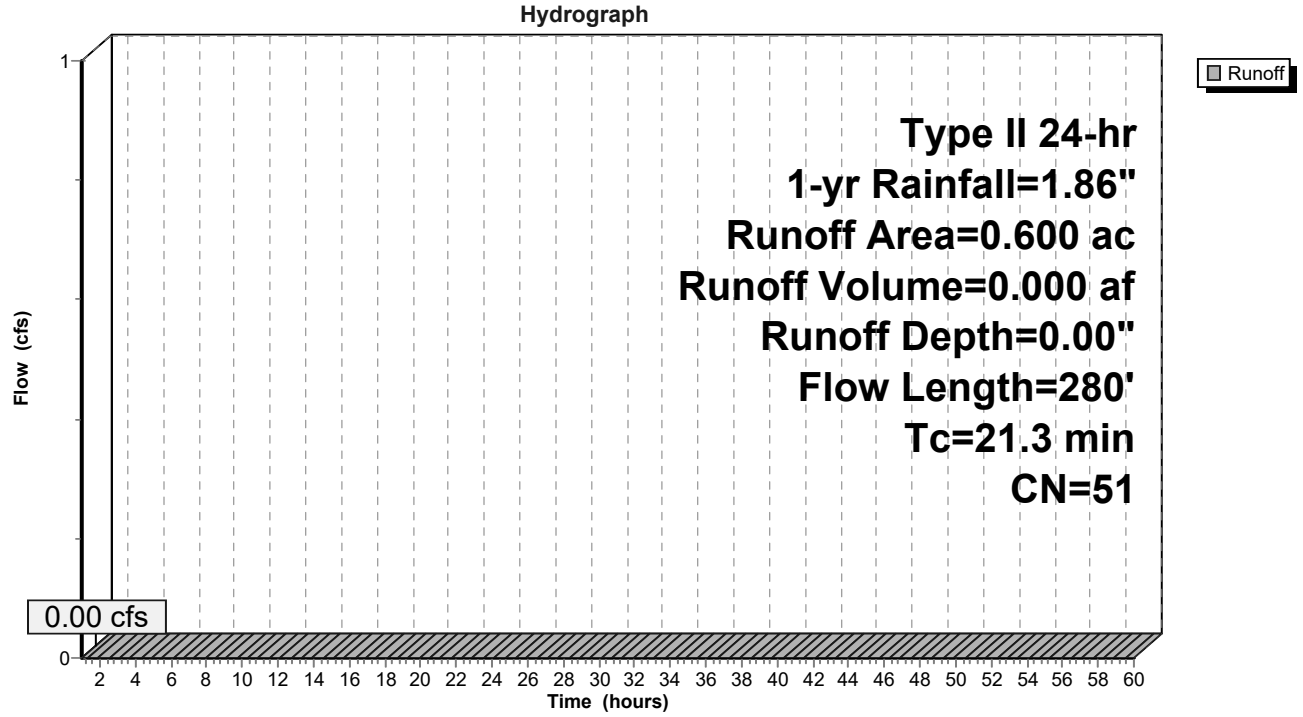
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

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

[45] Hint: Runoff=Zero

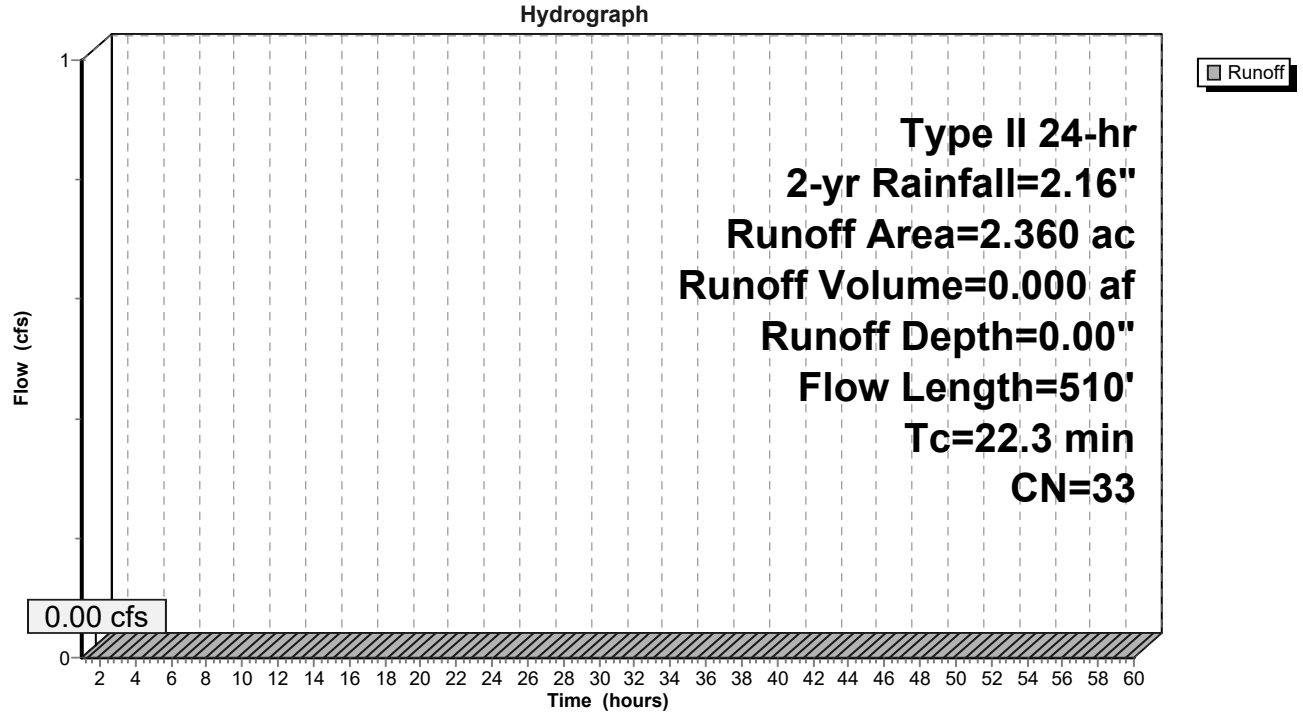
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

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)

[45] Hint: Runoff=Zero

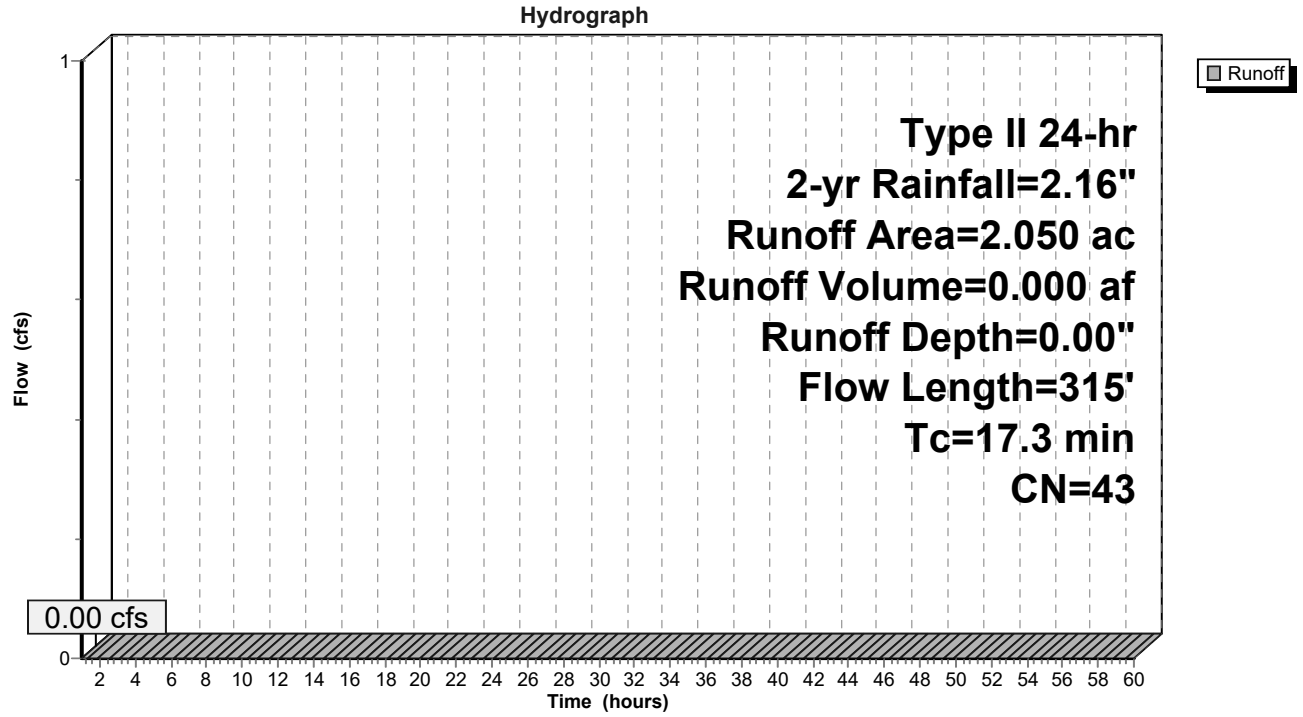
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

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)

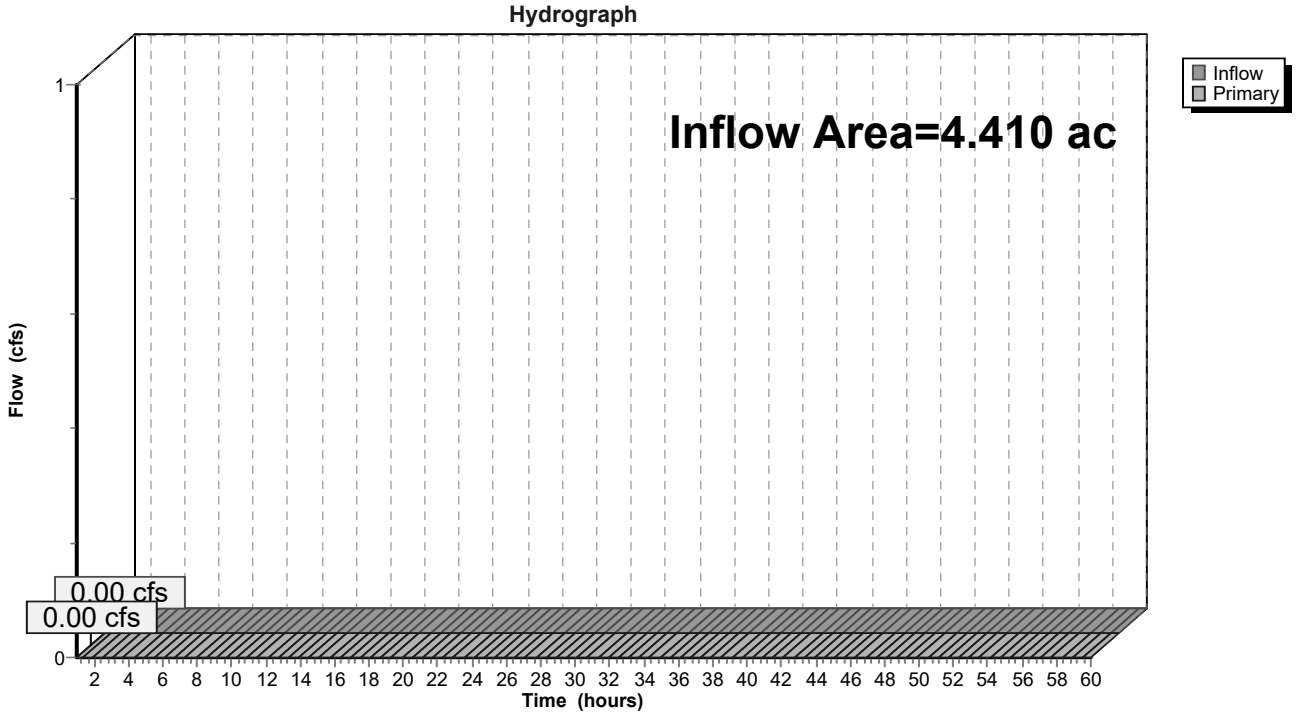


Summary for Link 3: Ex Subarea A Total

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 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)

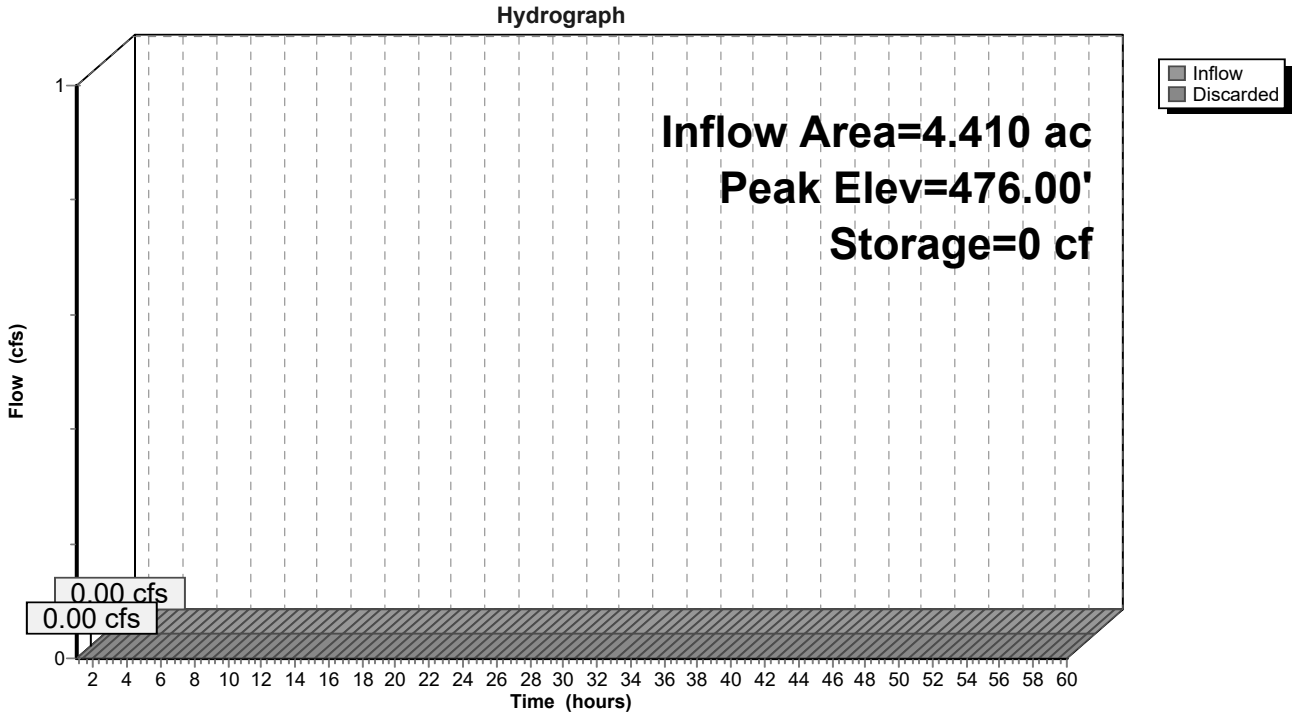
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 5: Ex Subarea B

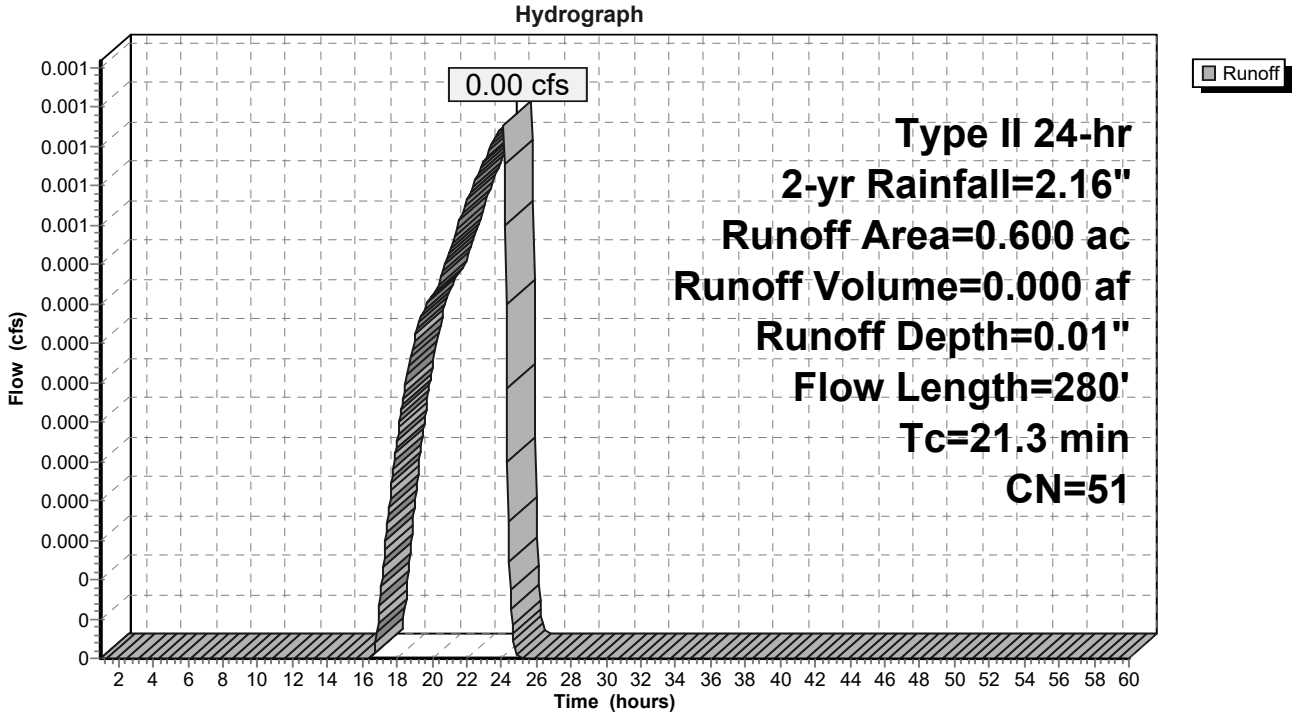
Runoff = 0.00 cfs @ 24.03 hrs, Volume= 0.000 af, Depth= 0.01"

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

[45] Hint: Runoff=Zero

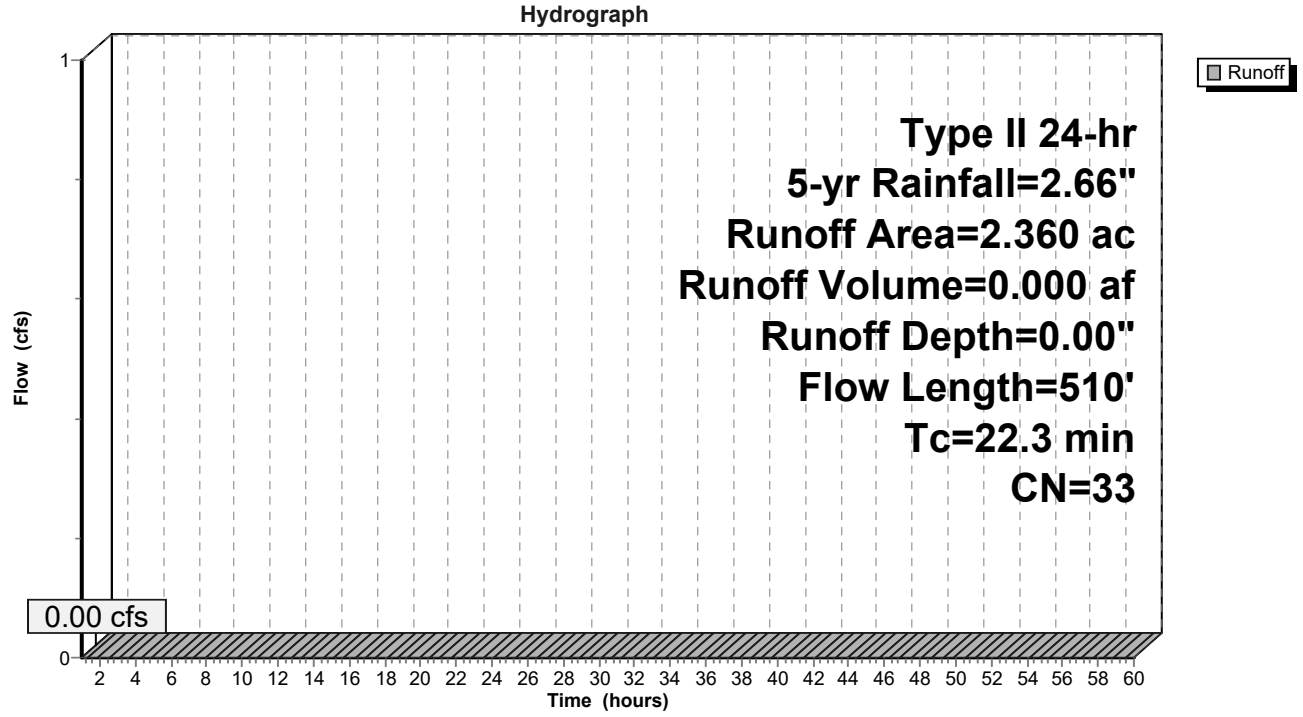
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

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)

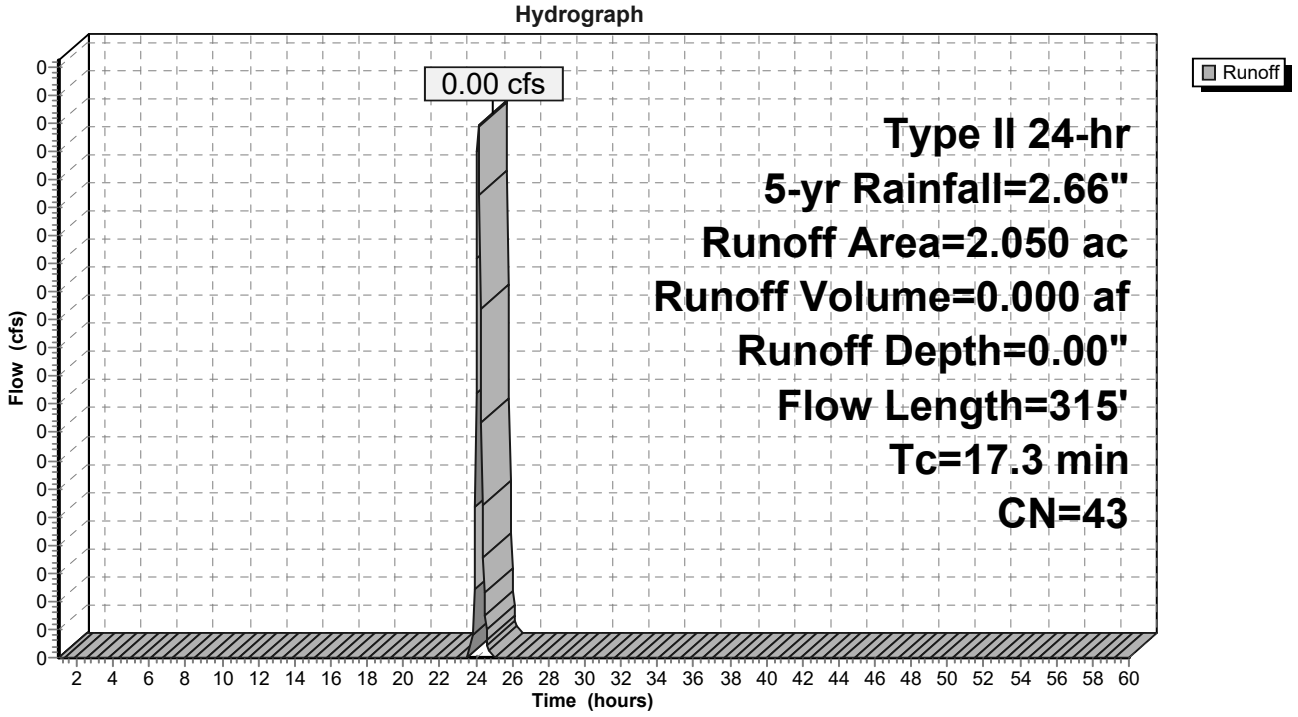
Runoff = 0.00 cfs @ 24.14 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

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)

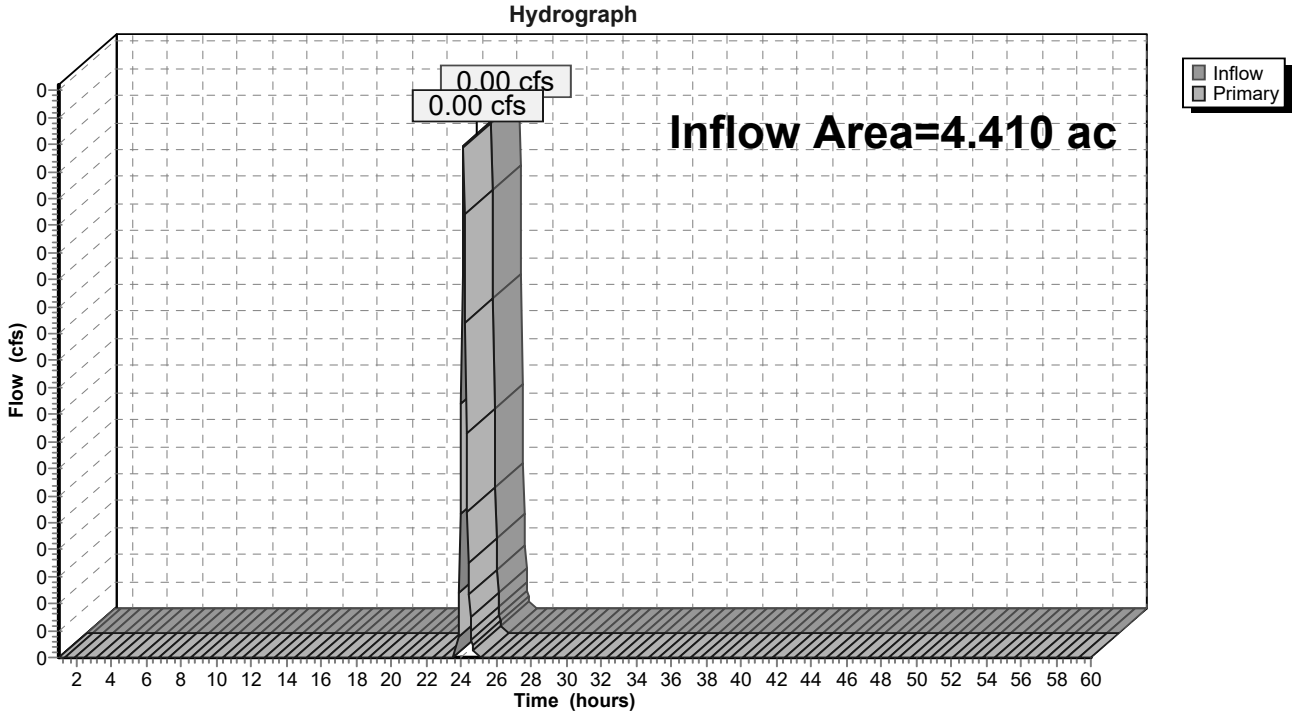


Summary for Link 3: Ex Subarea A Total

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 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)

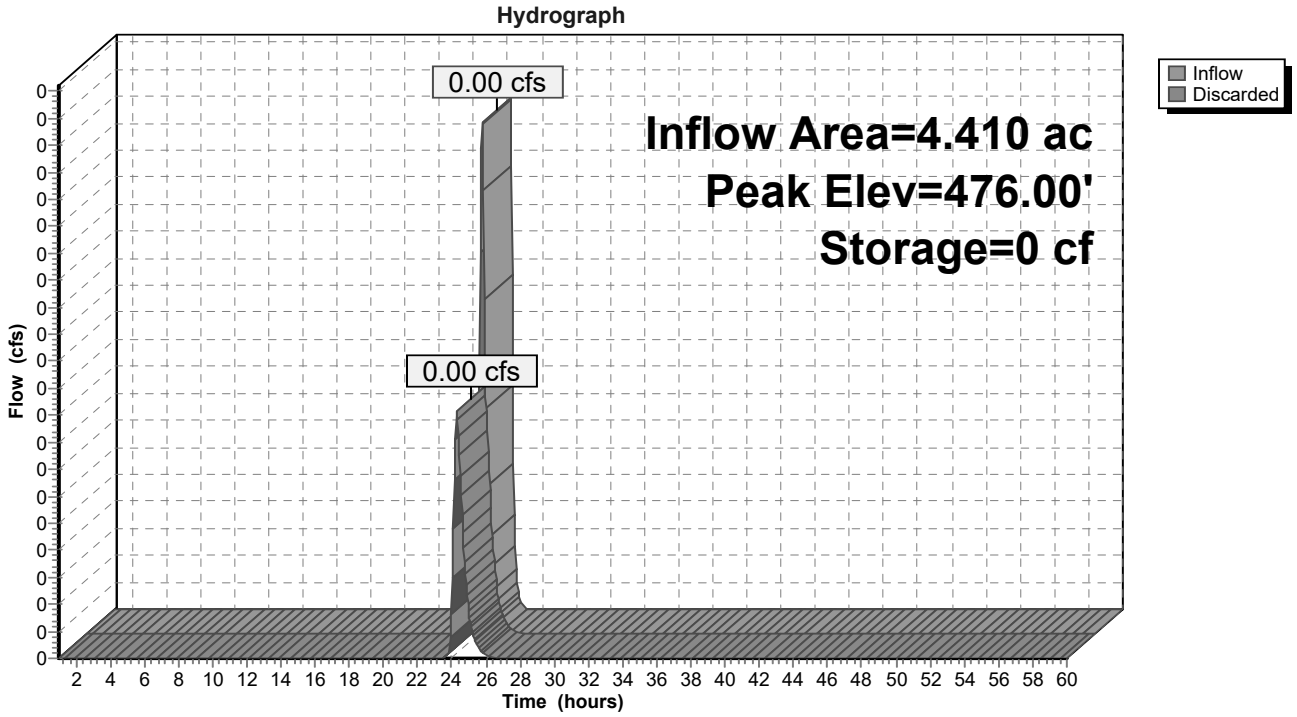
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 5: Ex Subarea B

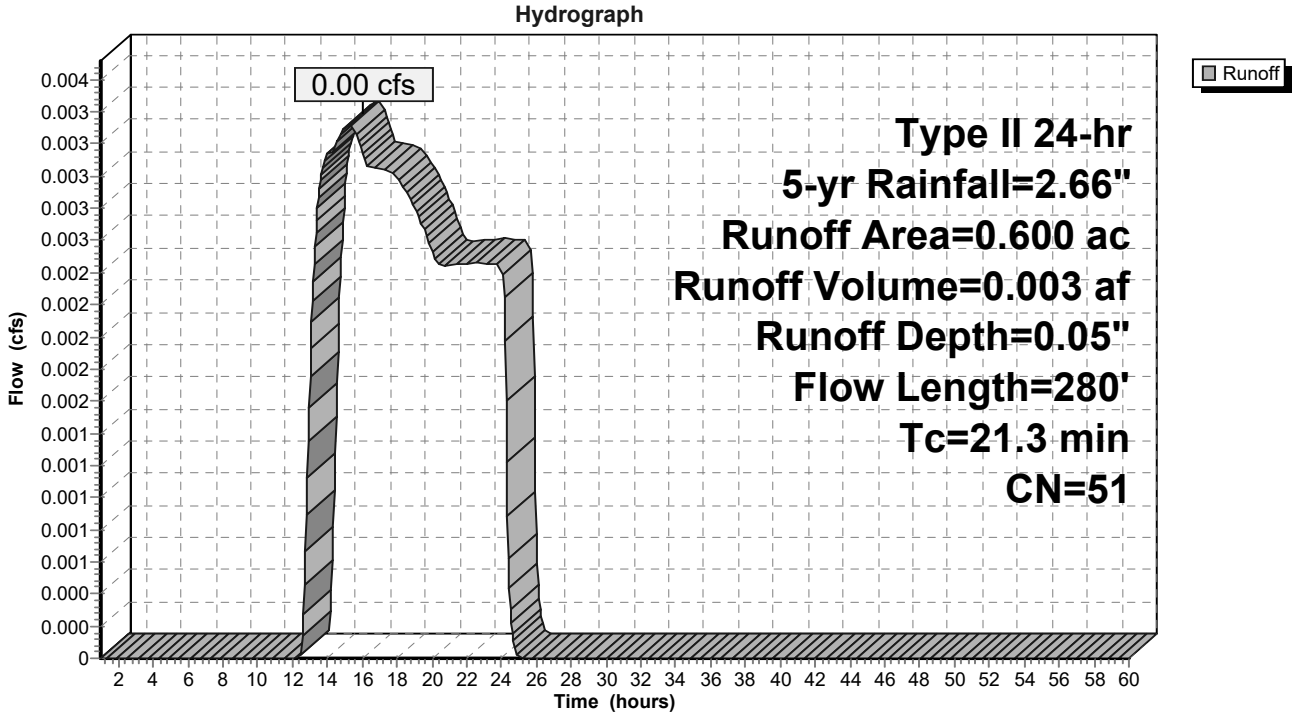
Runoff = 0.00 cfs @ 15.23 hrs, Volume= 0.003 af, Depth= 0.05"

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

[45] Hint: Runoff=Zero

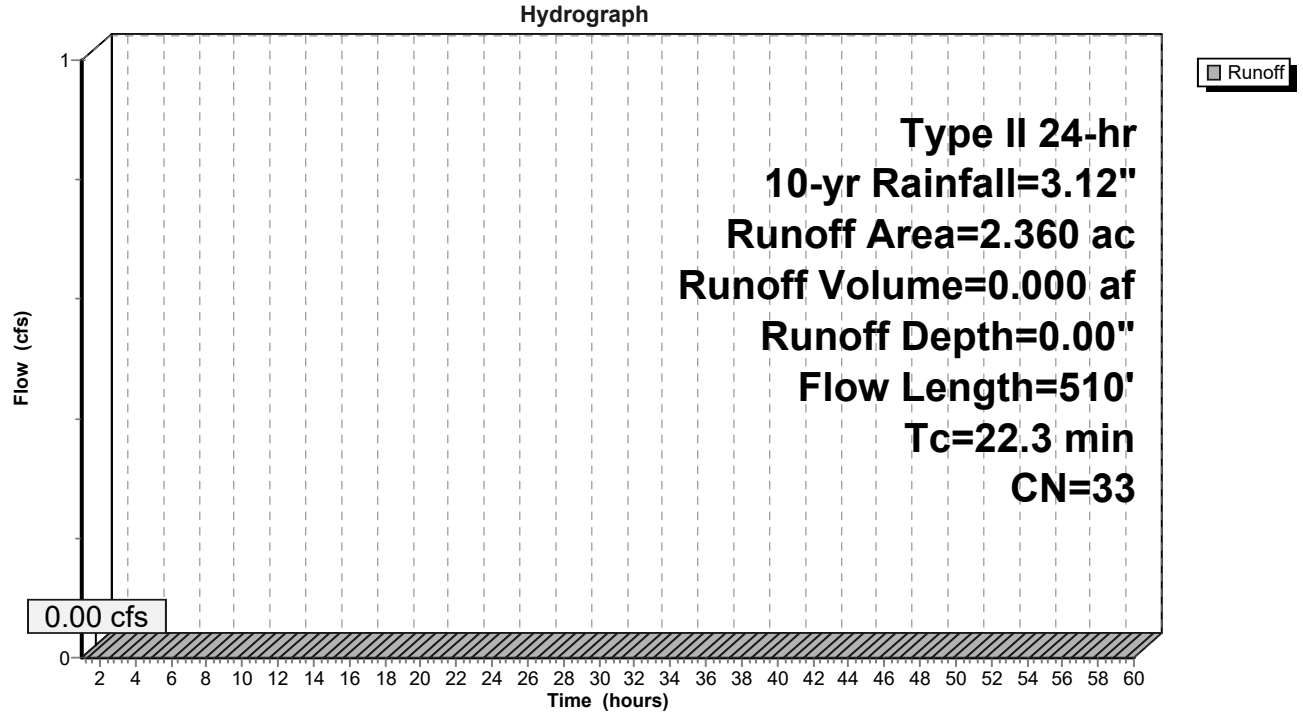
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

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)

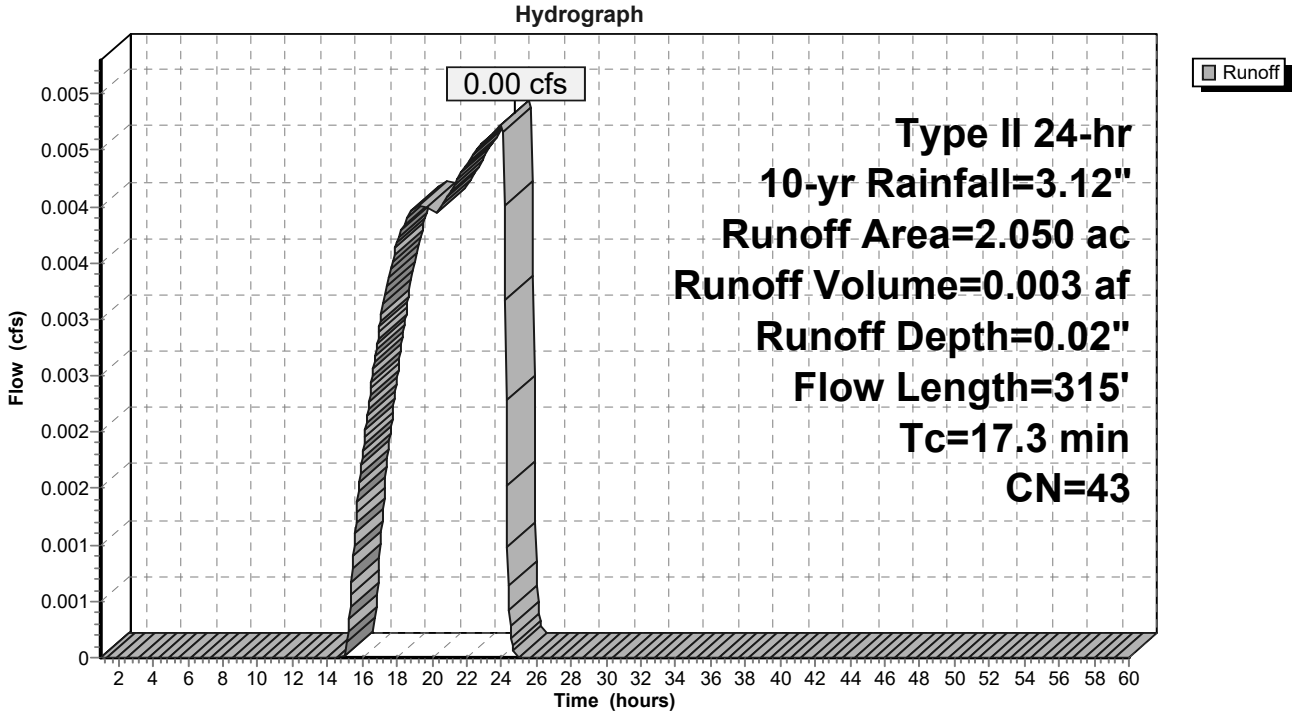
Runoff = 0.00 cfs @ 23.99 hrs, Volume= 0.003 af, Depth= 0.02"
Routed to Link 3 : Ex Subarea A Total

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)

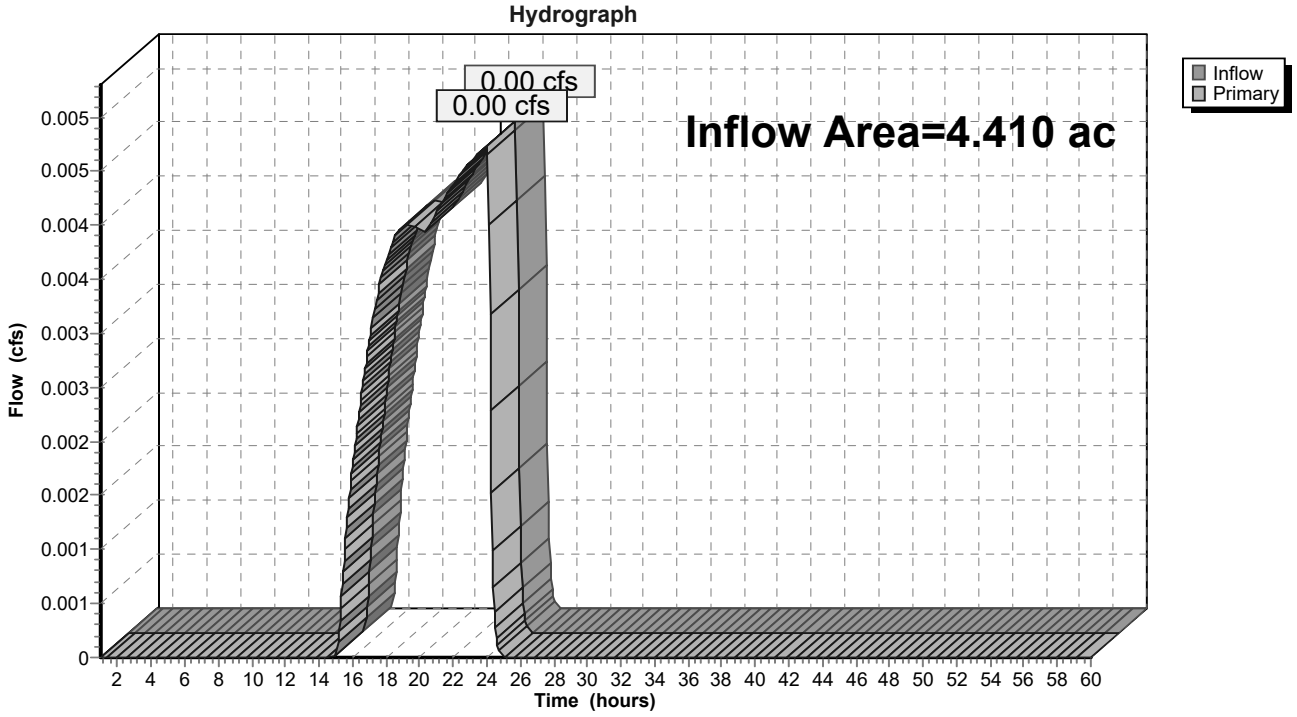


Summary for Link 3: Ex Subarea A Total

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 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)

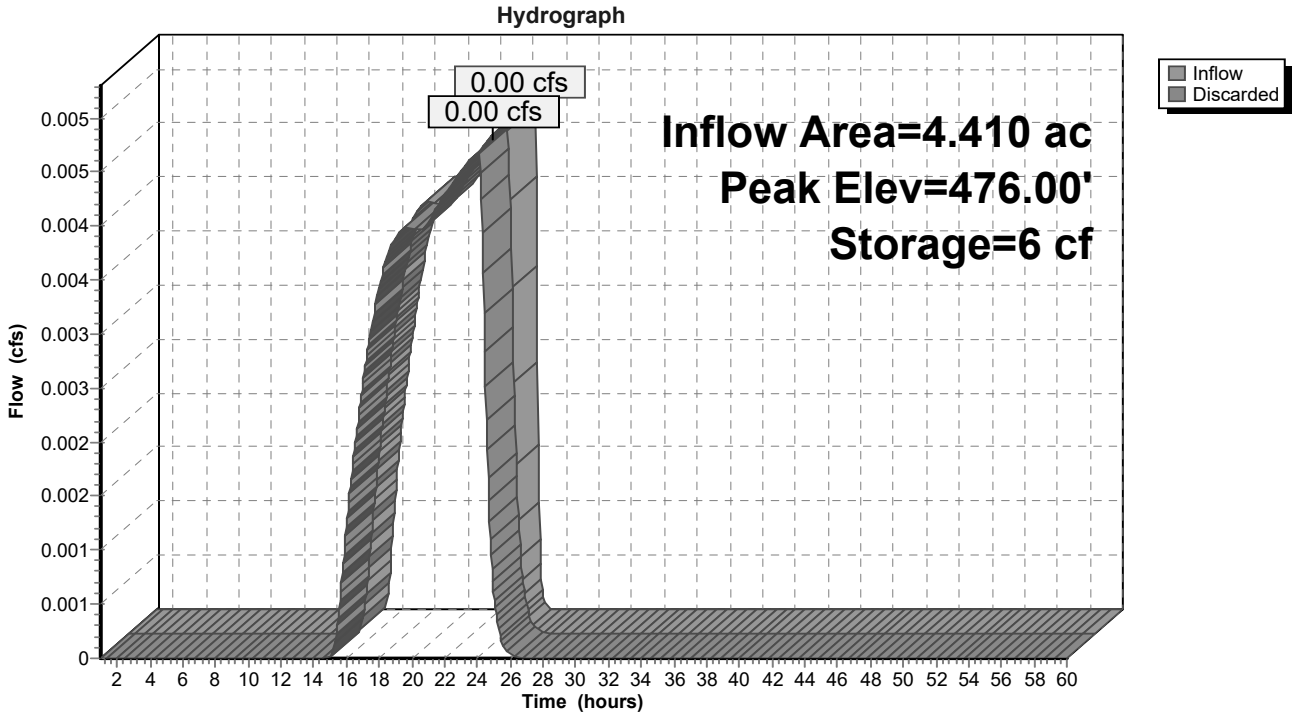
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 5: Ex Subarea B

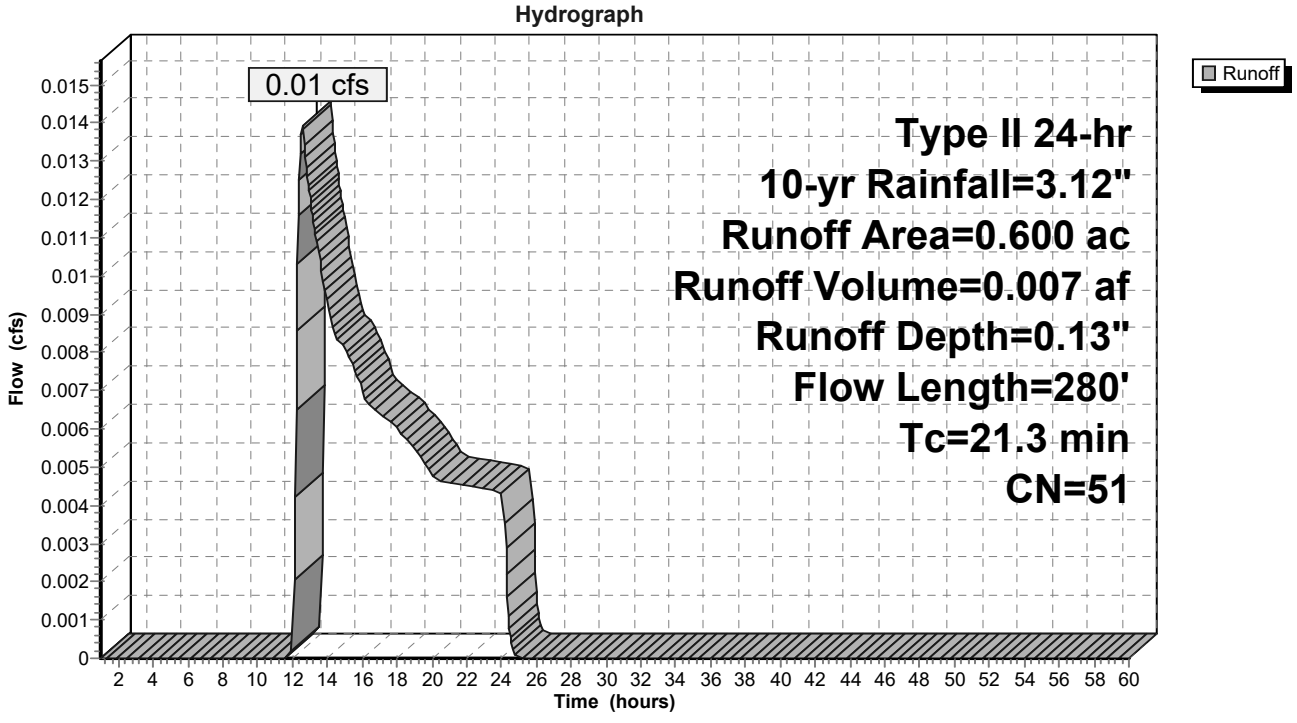
Runoff = 0.01 cfs @ 12.58 hrs, Volume= 0.007 af, Depth= 0.13"

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

[45] Hint: Runoff=Zero

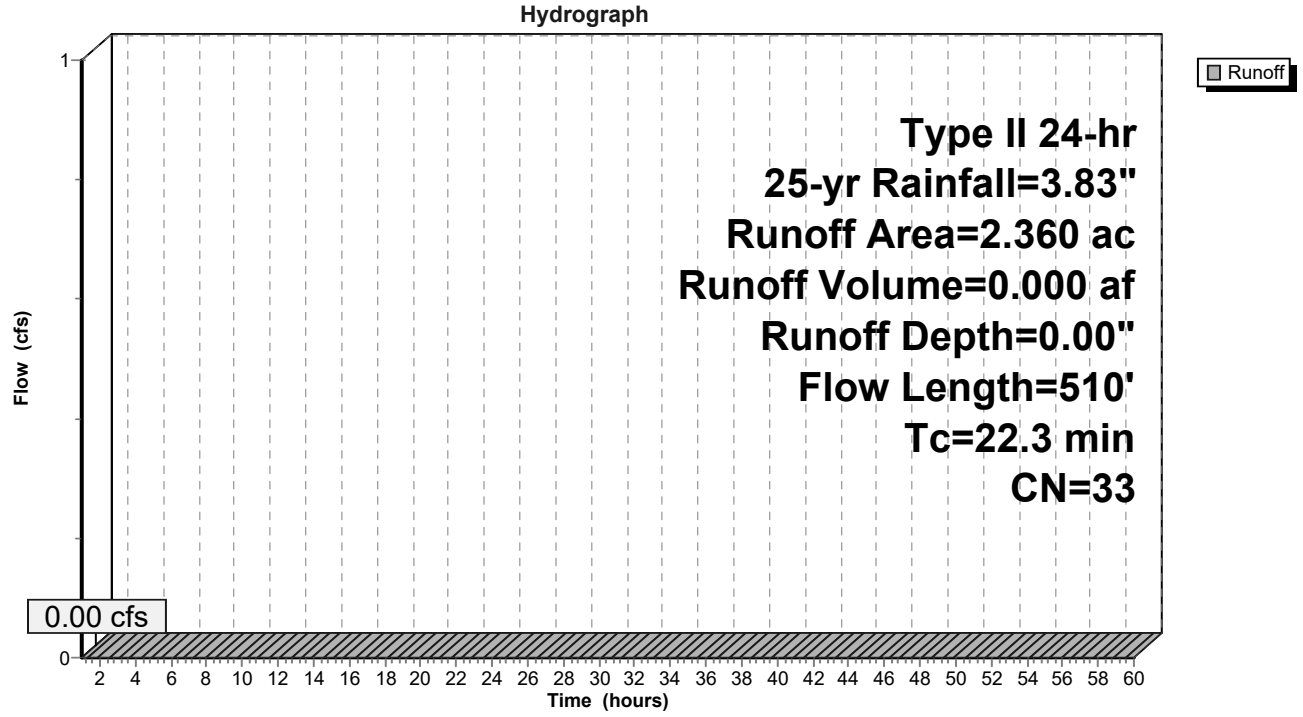
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

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)

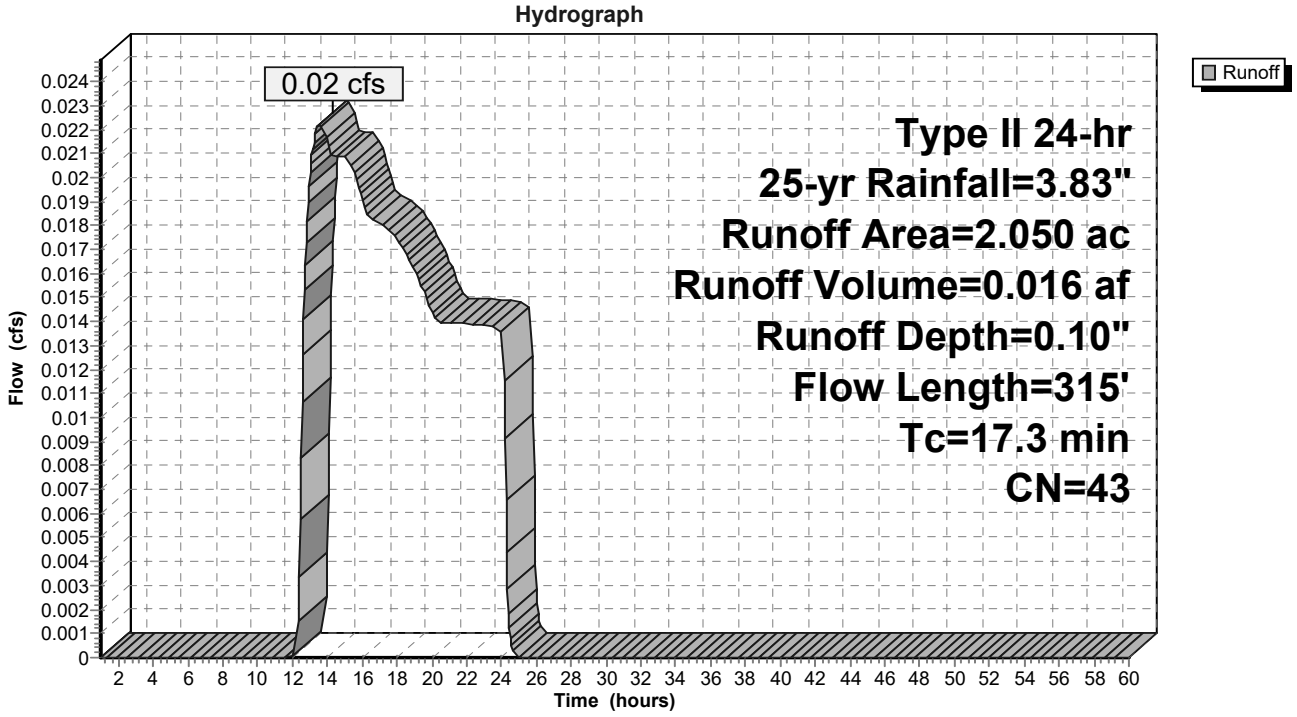
Runoff = 0.02 cfs @ 13.55 hrs, Volume= 0.016 af, Depth= 0.10"
Routed to Link 3 : Ex Subarea A Total

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)

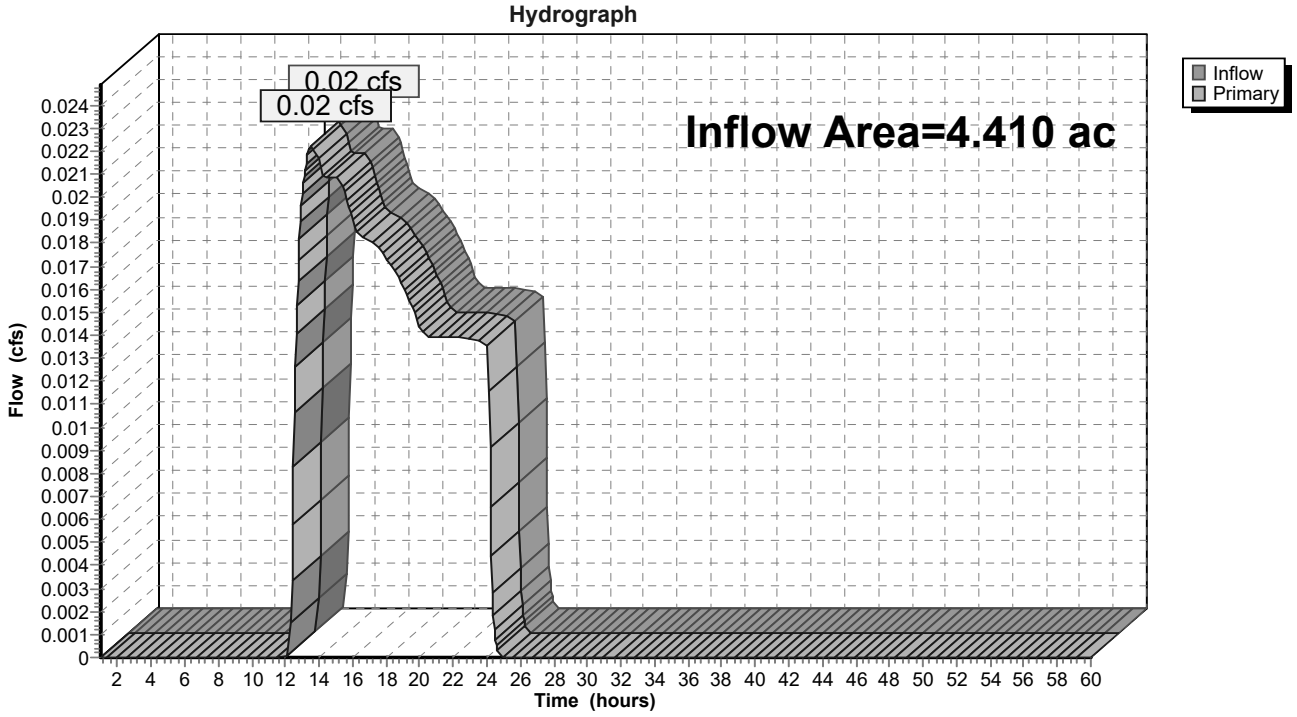


Summary for Link 3: Ex Subarea A Total

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 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)

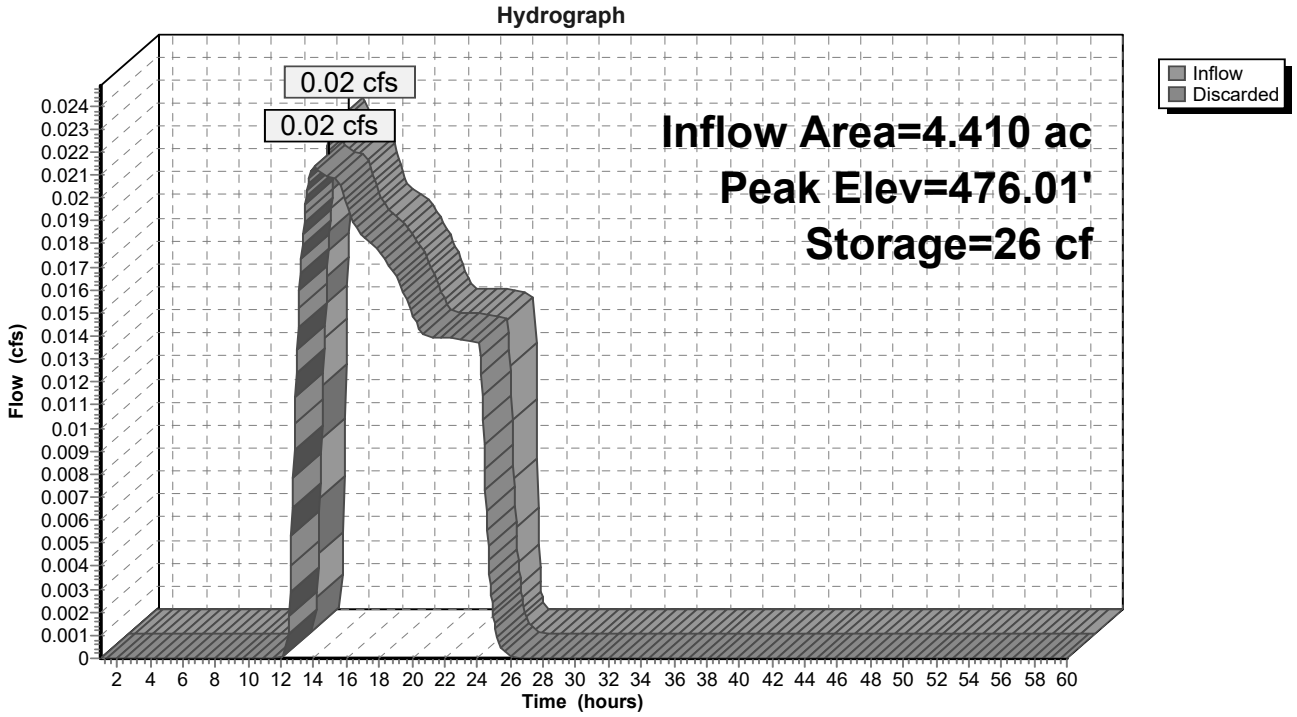
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 5: Ex Subarea B

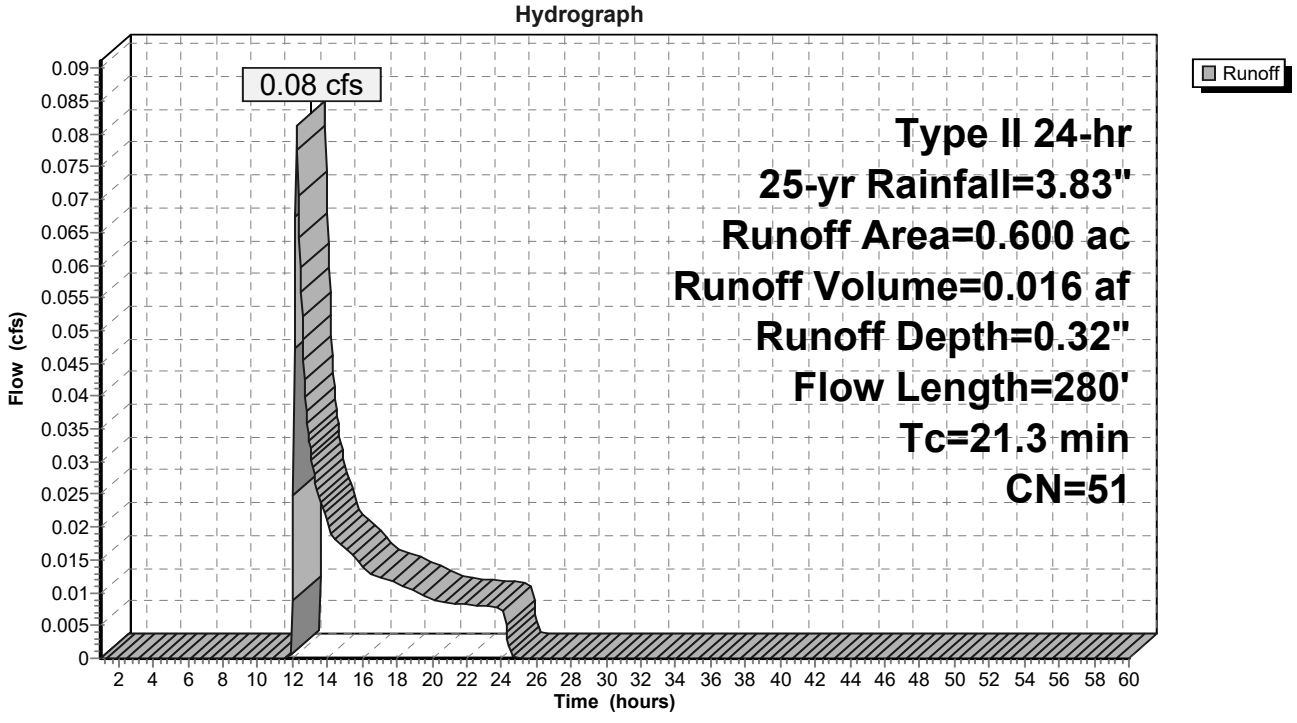
Runoff = 0.08 cfs @ 12.25 hrs, Volume= 0.016 af, Depth= 0.32"

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

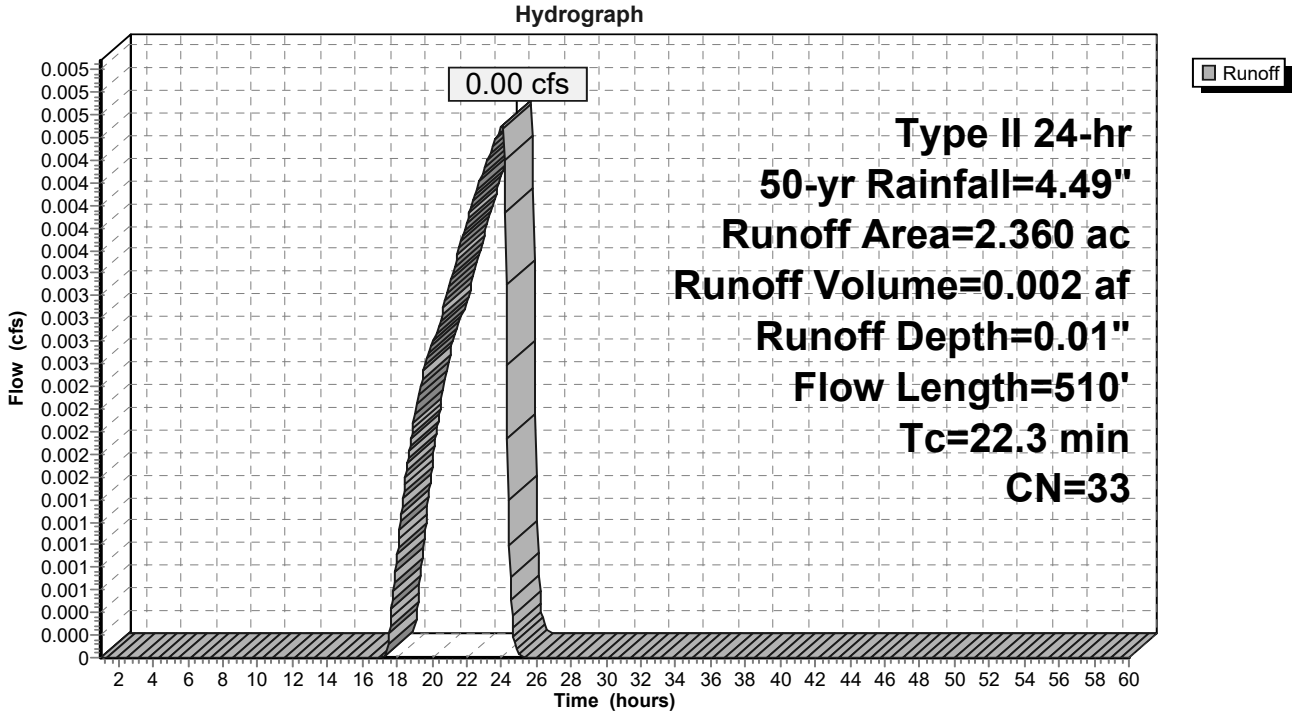
Runoff = 0.00 cfs @ 24.03 hrs, Volume= 0.002 af, Depth= 0.01"
Routed to Link 3 : Ex Subarea A Total

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)

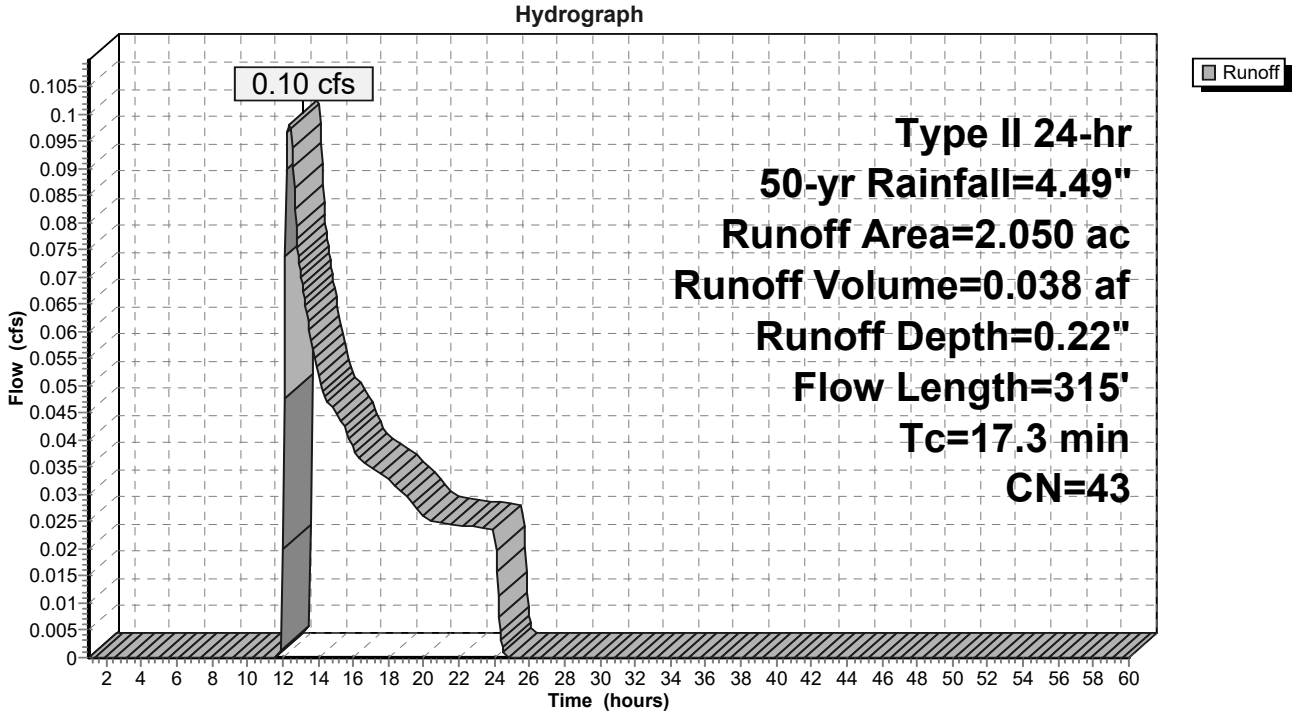
Runoff = 0.10 cfs @ 12.40 hrs, Volume= 0.038 af, Depth= 0.22"
Routed to Link 3 : Ex Subarea A Total

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)

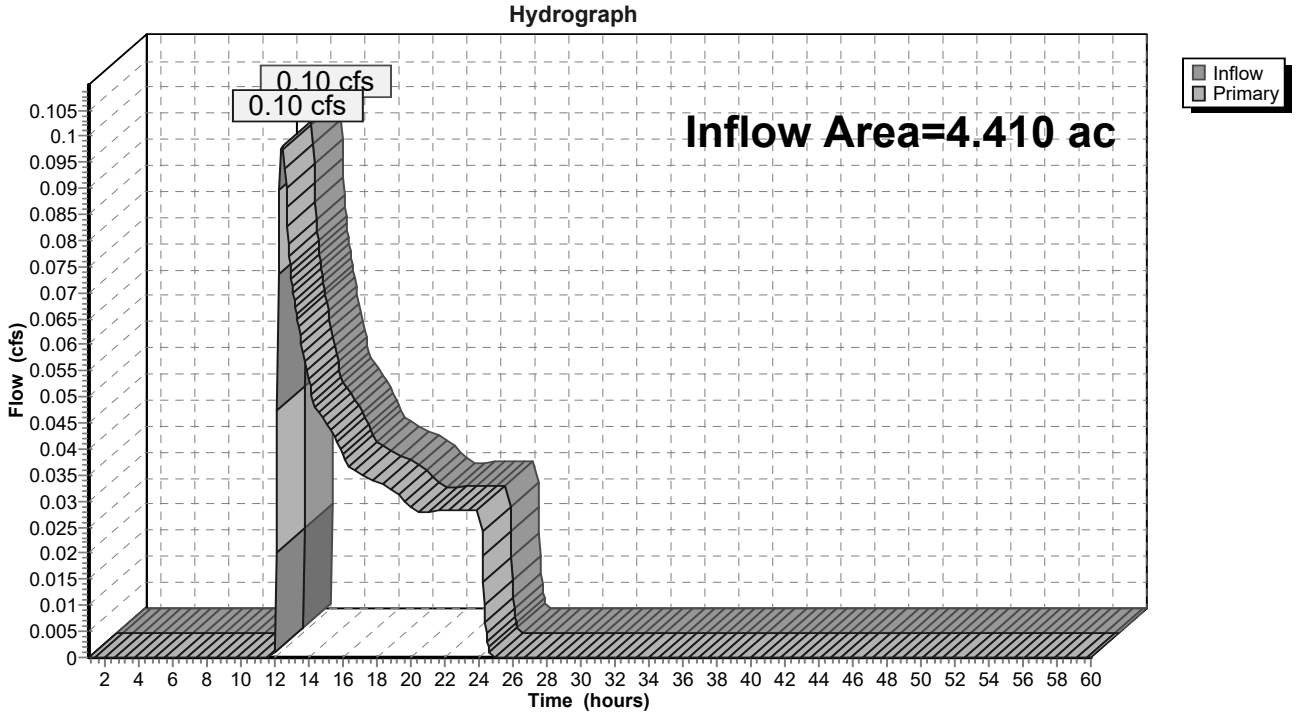


Summary for Link 3: Ex Subarea A Total

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 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)

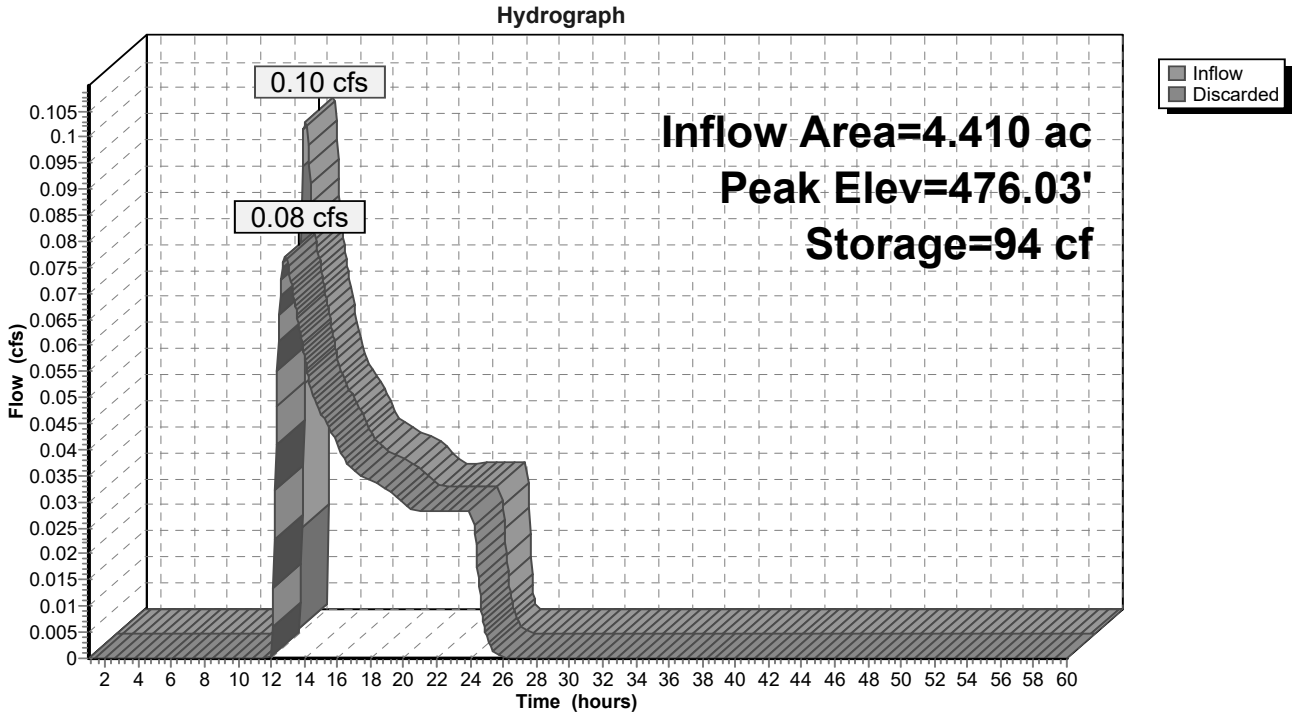
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 5: Ex Subarea B

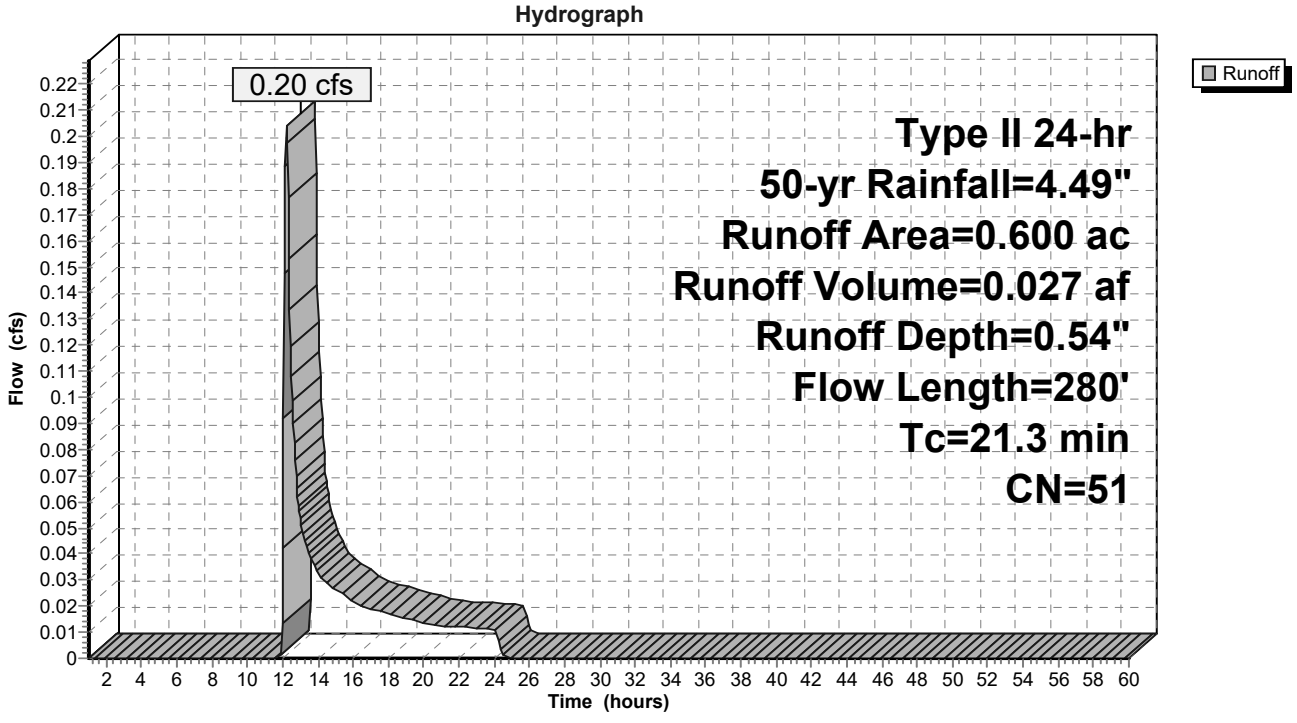
Runoff = 0.20 cfs @ 12.21 hrs, Volume= 0.027 af, Depth= 0.54"

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

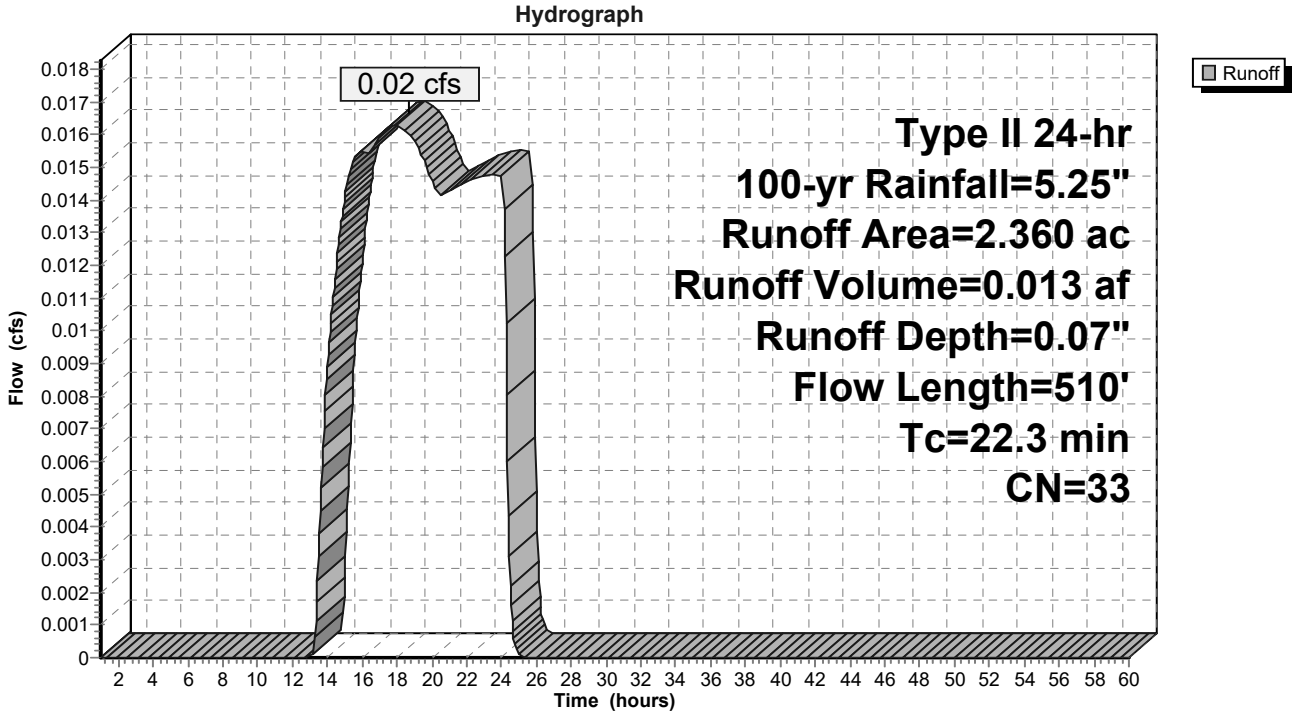
Runoff = 0.02 cfs @ 17.89 hrs, Volume= 0.013 af, Depth= 0.07"
Routed to Link 3 : Ex Subarea A Total

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)

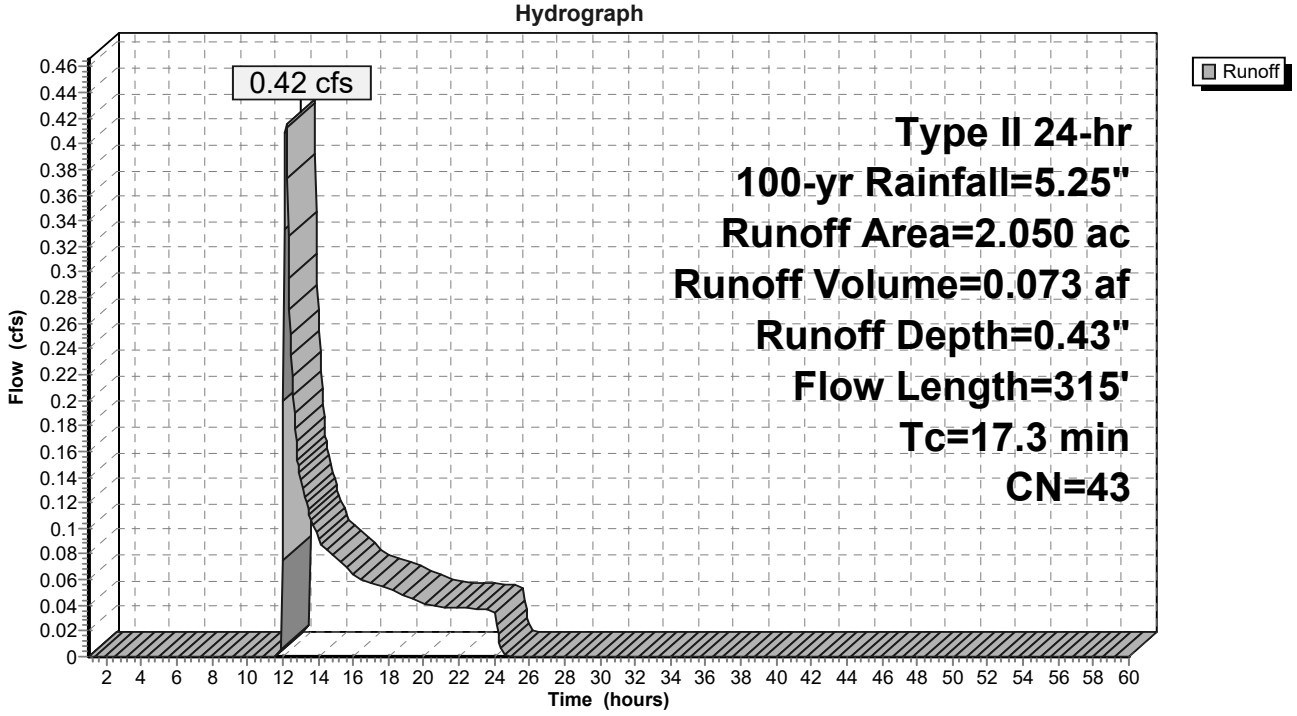
Runoff = 0.42 cfs @ 12.18 hrs, Volume= 0.073 af, Depth= 0.43"
Routed to Link 3 : Ex Subarea A Total

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)

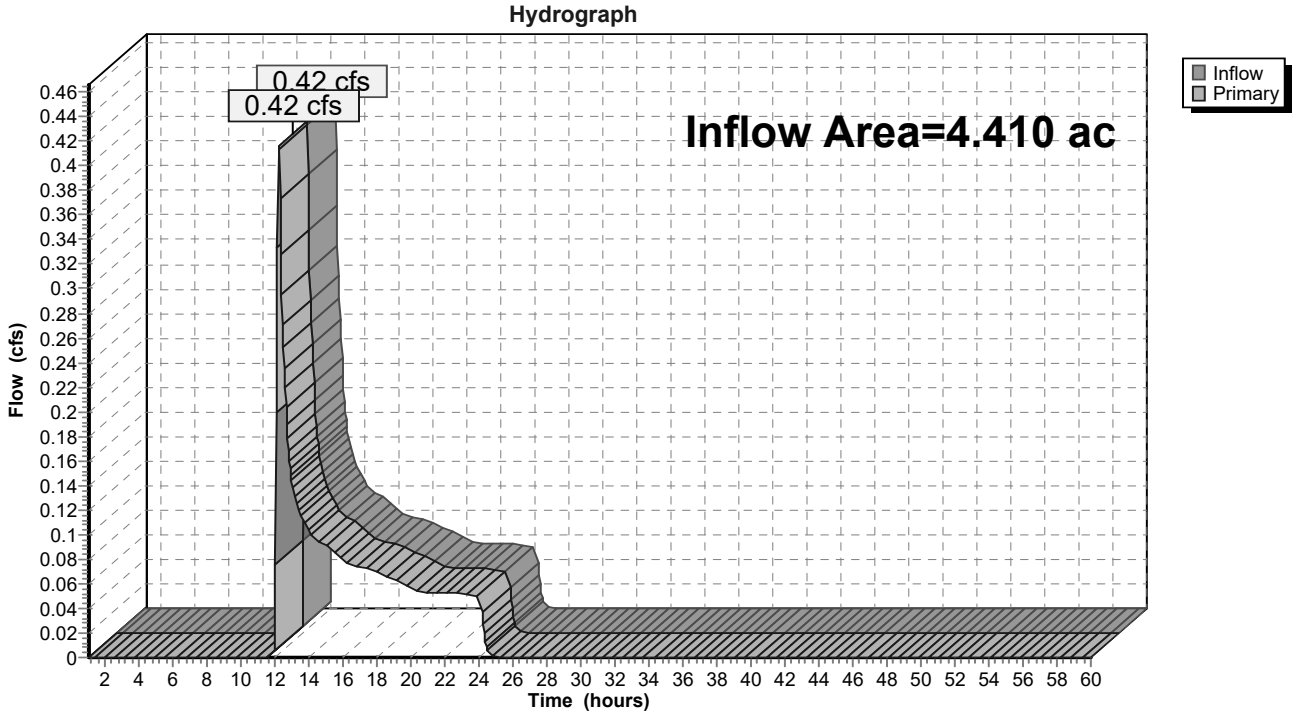


Summary for Link 3: Ex Subarea A Total

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



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)

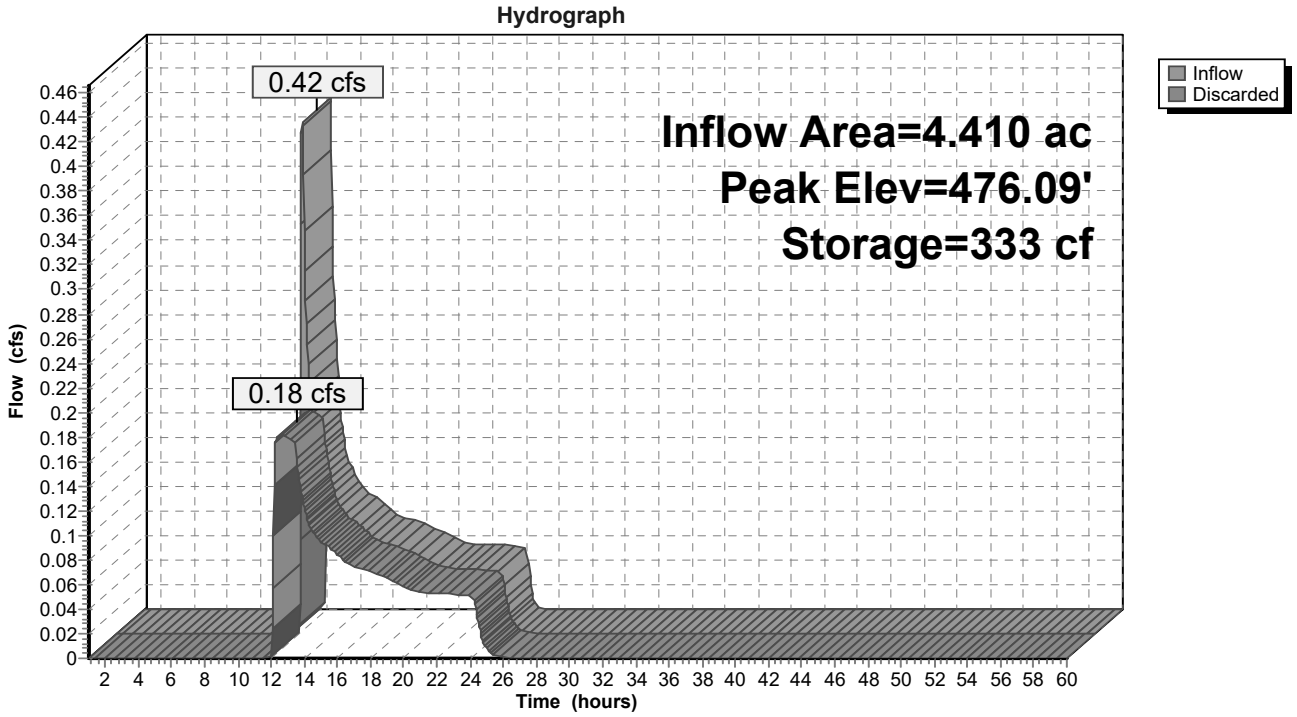
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 5: Ex Subarea B

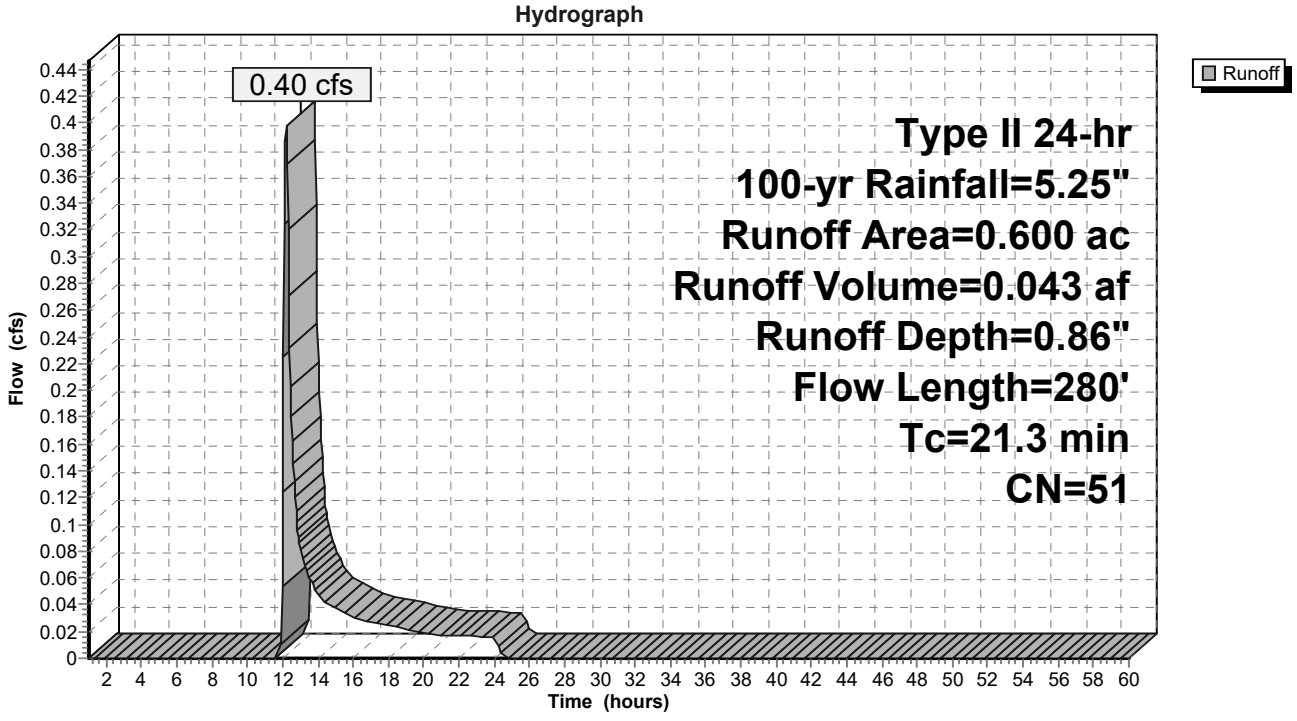
Runoff = 0.40 cfs @ 12.19 hrs, Volume= 0.043 af, Depth= 0.86"

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

[45] Hint: Runoff=Zero

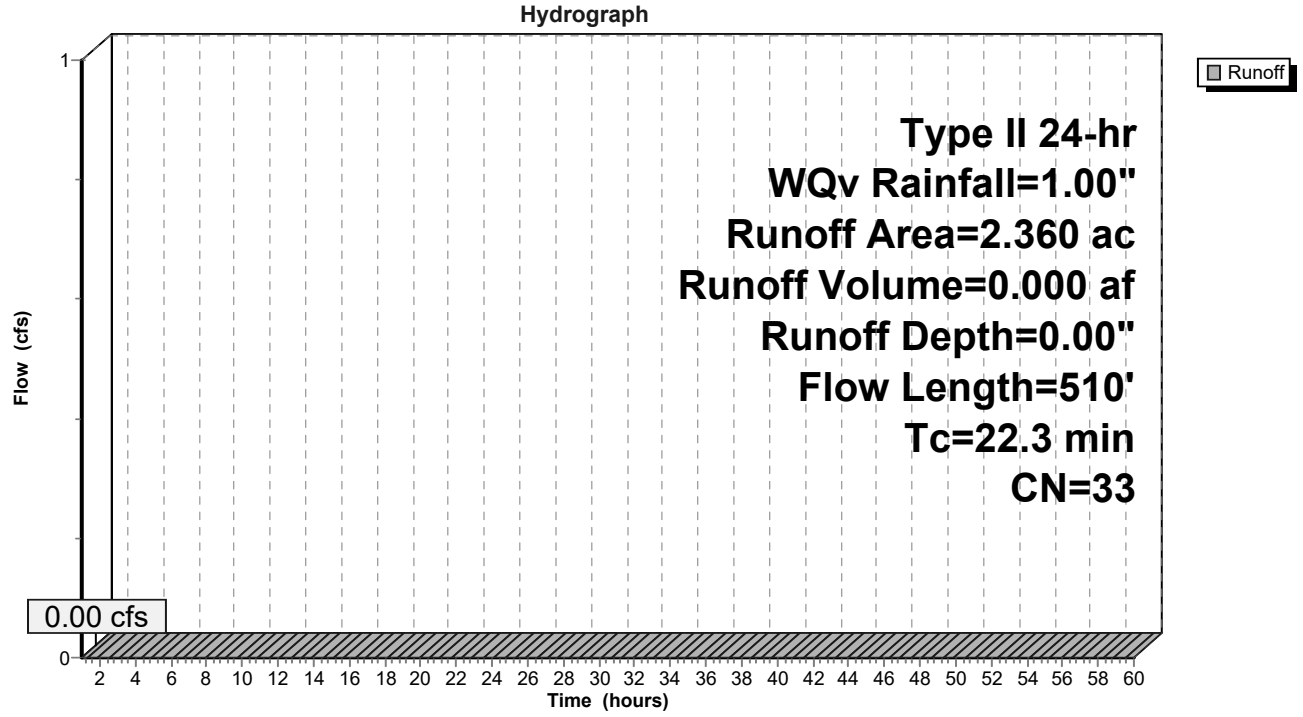
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

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 WQv Rainfall=1.00"

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)

[45] Hint: Runoff=Zero

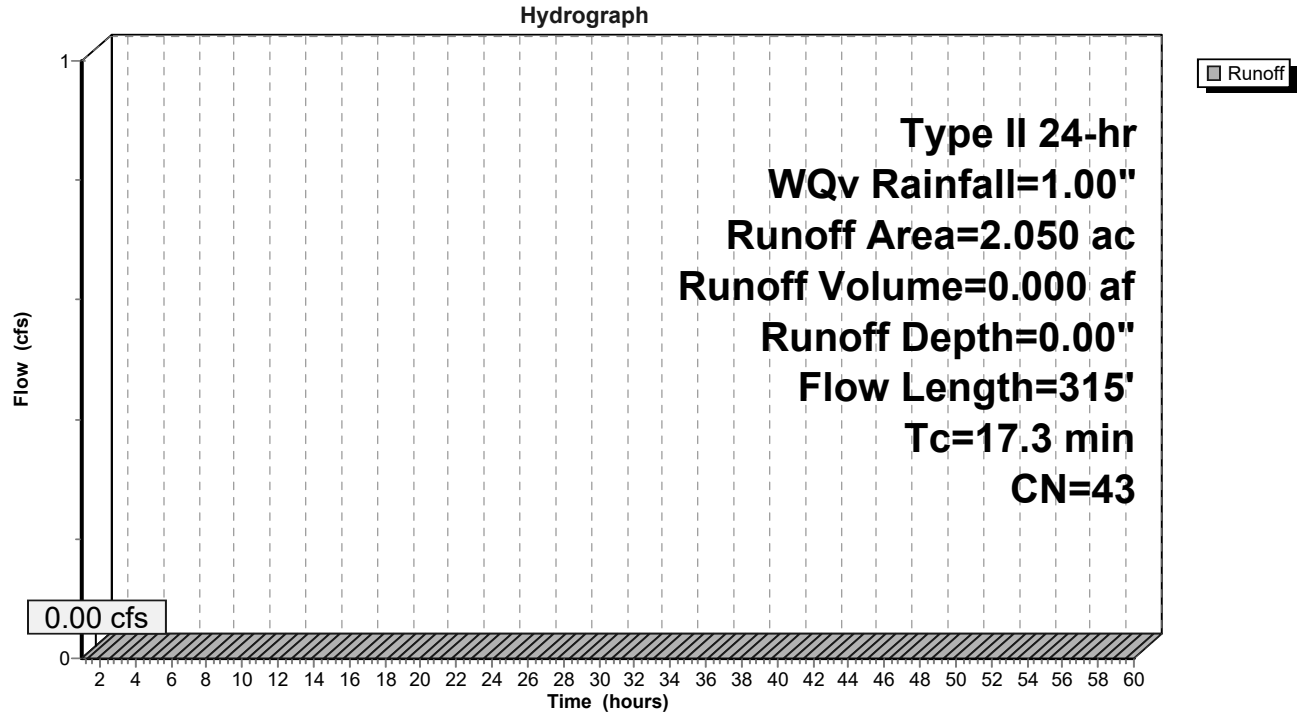
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 3 : Ex Subarea A Total

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 WQv Rainfall=1.00"

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)

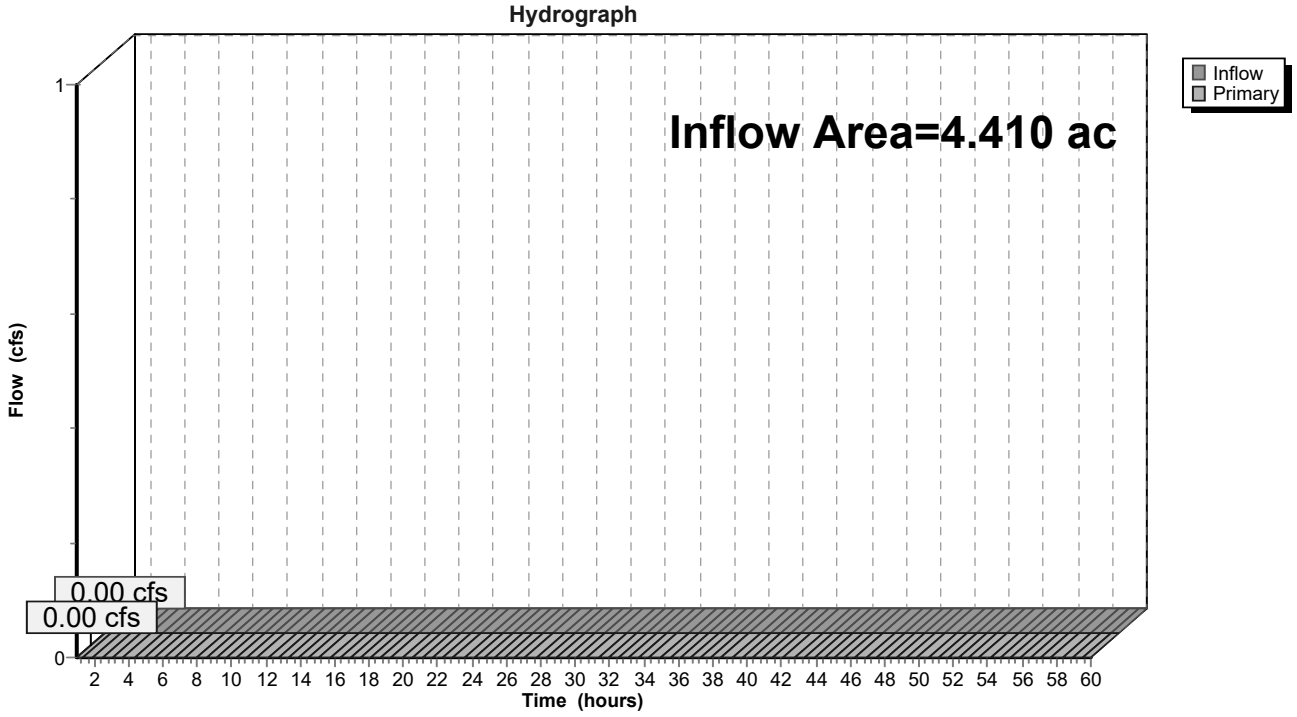


Summary for Link 3: Ex Subarea A Total

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.00" for WQv 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 Pond 4: Existing IB

Inflow Area = 4.410 ac, 8.84% Impervious, Inflow Depth = 0.00" for WQv 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)

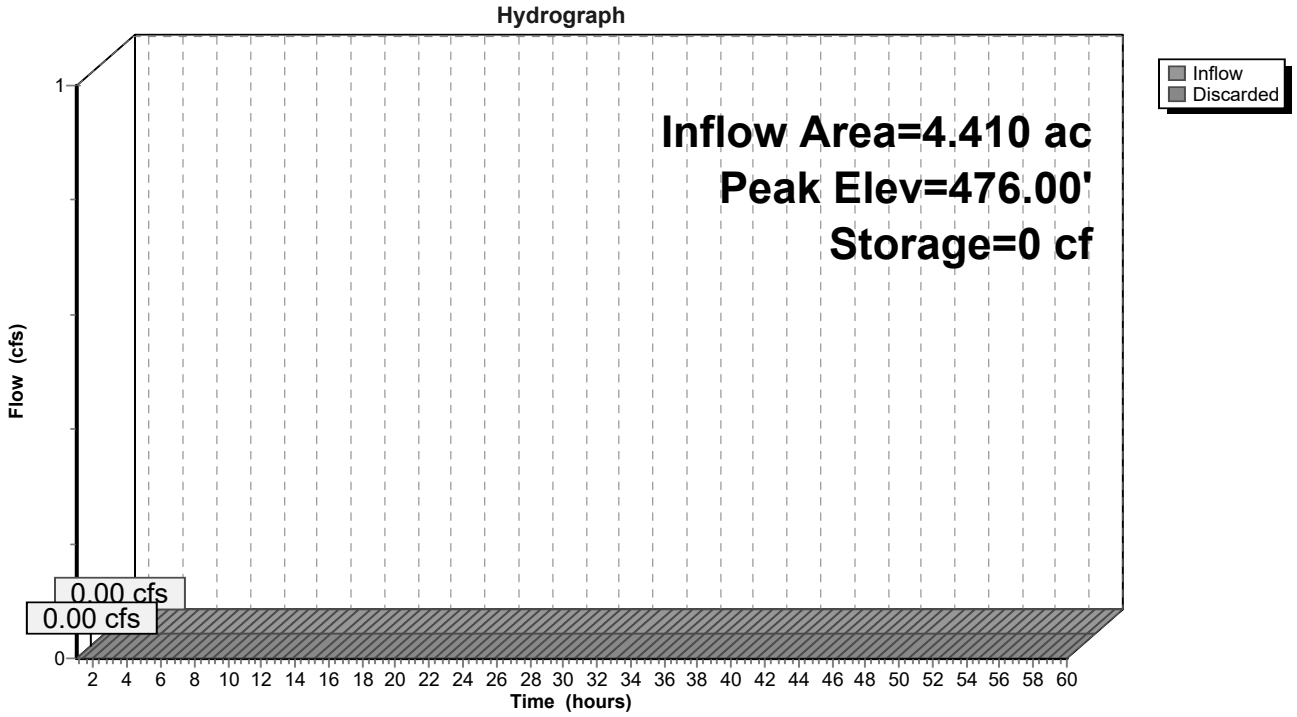
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 5: Ex Subarea B

[45] Hint: Runoff=Zero

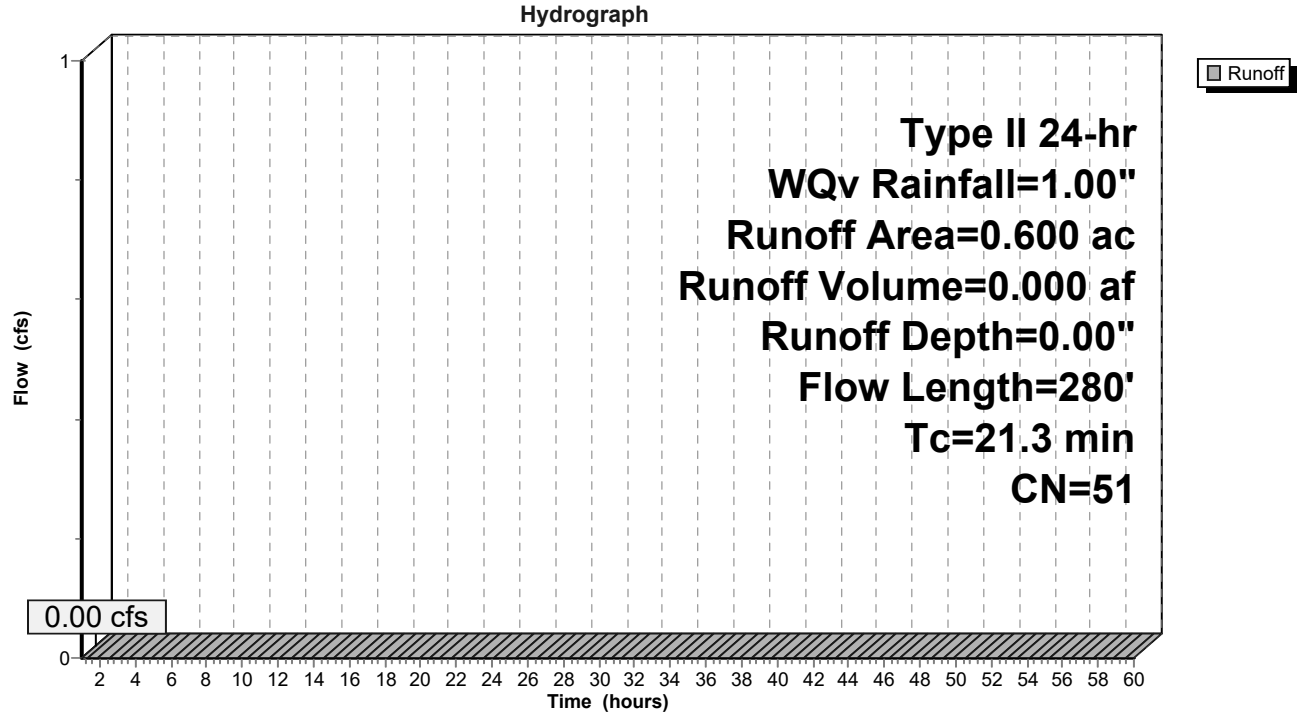
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

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 WQv Rainfall=1.00"

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



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 1,117,139.55
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

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			
5			
4			
3			
2			
1			
	REVISIONS	DATE	BY

BME ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS
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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

BME ASSOCIATES	***CALCULATIONS*** **:**	Project No.: **2850**
	Project: **Channel Protection Volume Calculations**	Date: **11/13/2025**
	Hartwell Height	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

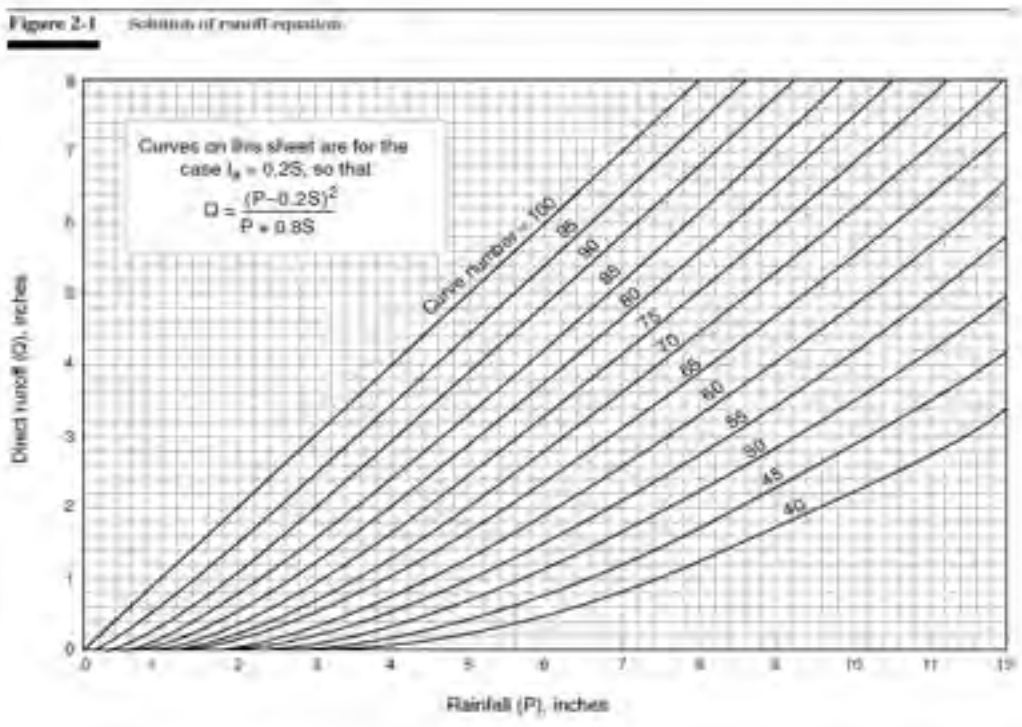


Figure 3-15. Detention Time vs. Discharge Ratios

(Source: Maryland Department of the Environment, 1998)

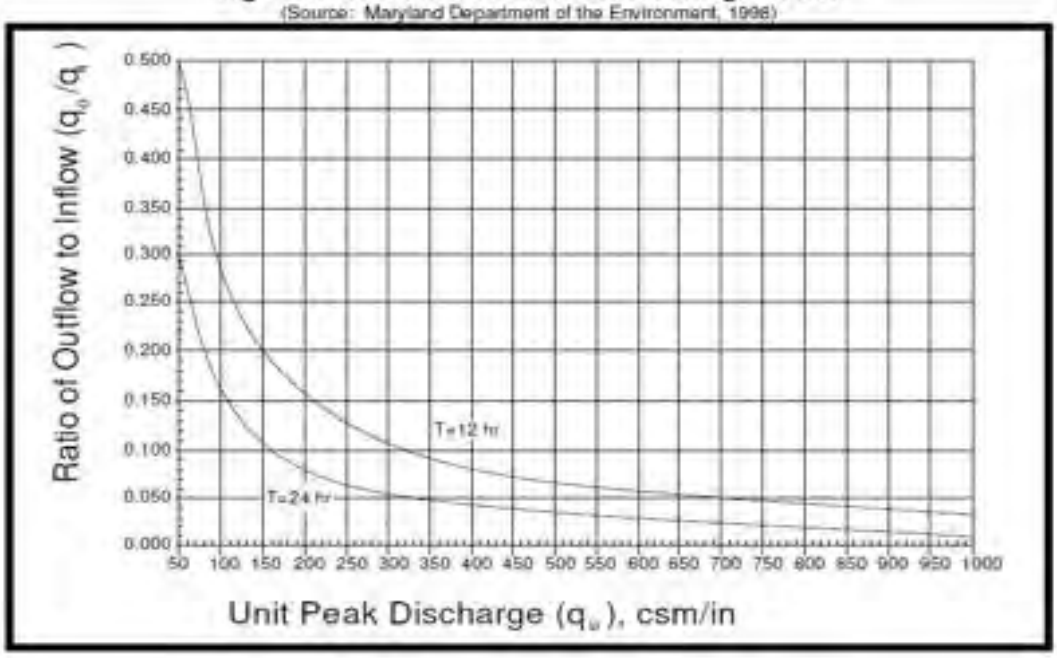
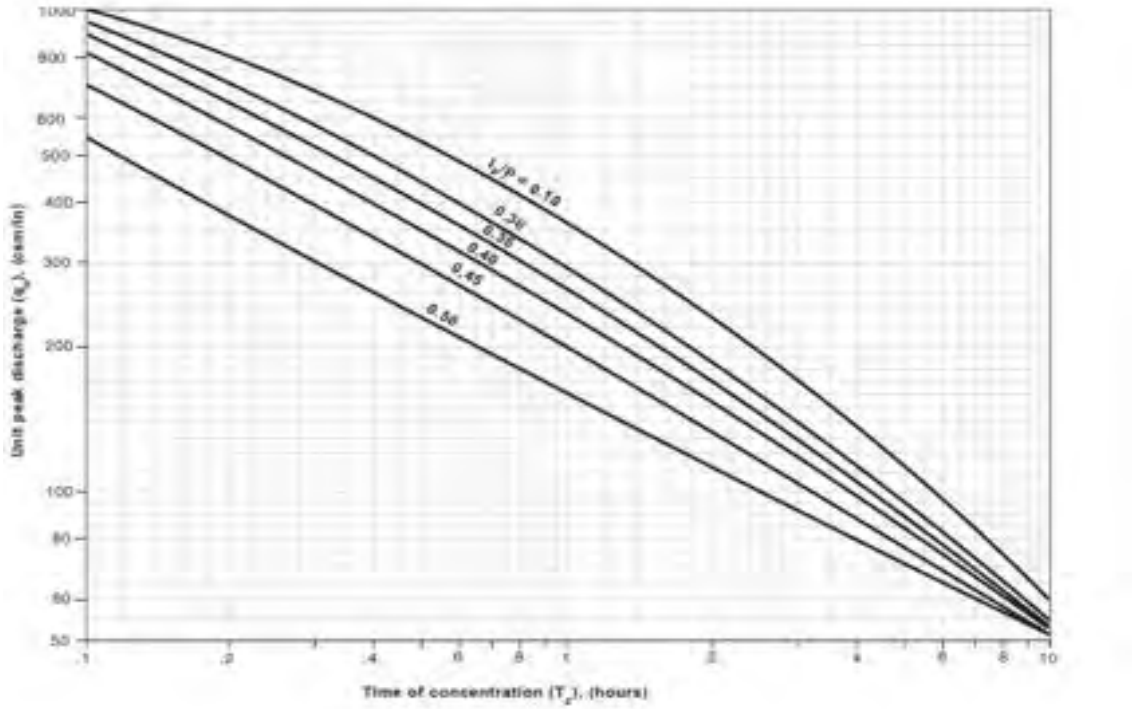
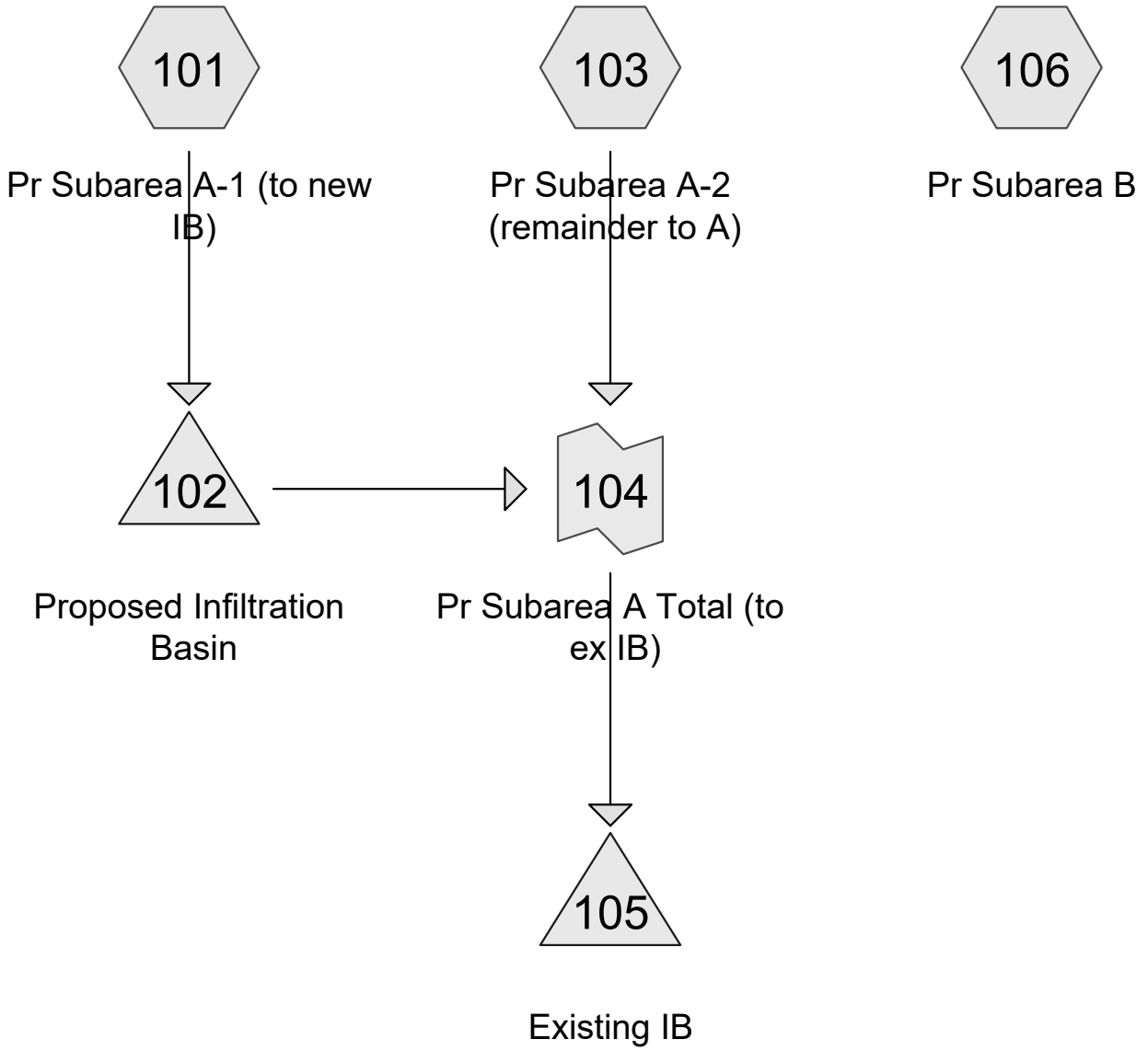


Exhibit 4-II Unit peak discharge (q_u) for NRCS (SCS) type II rainfall distribution



PROPOSED DRAINAGE



Subcat Reach Pond Link

Routing Diagram for 2850 Stormwater Calcs
Prepared by BME Associates, Printed 11/13/2025
HydroCAD® 10.20-7a s/n 09860 © 2025 HydroCAD Software Solutions LLC

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

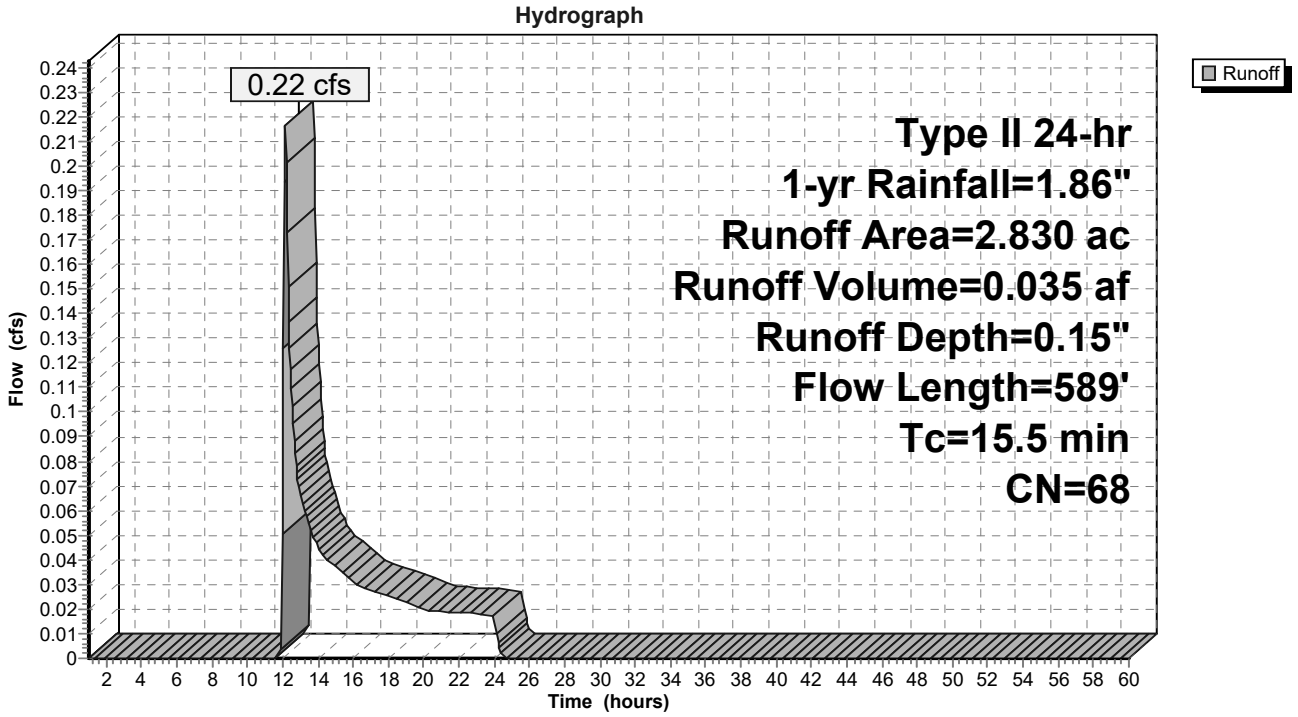
Runoff = 0.22 cfs @ 12.16 hrs, Volume= 0.035 af, Depth= 0.15"
Routed to Pond 102 : Proposed Infiltration Basin

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 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)

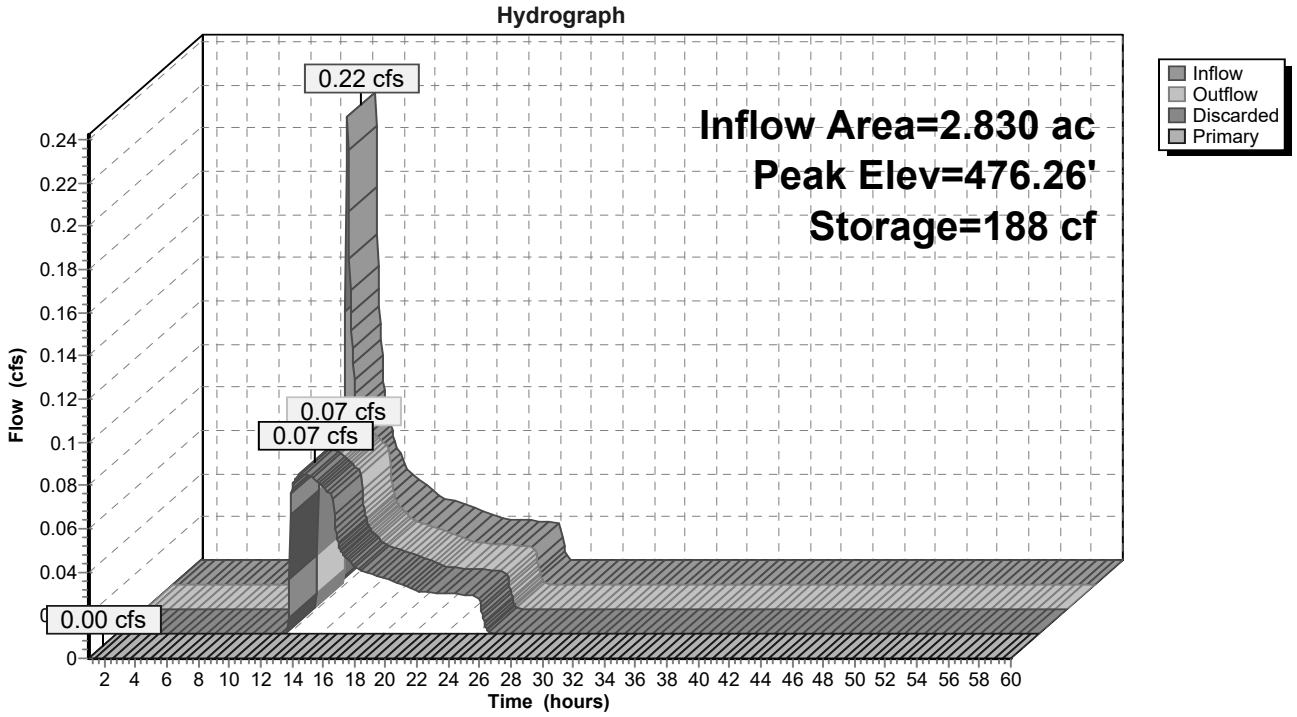
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.73'	**12.0" Round Culvert** L= 69.0' Ke= 0.500 Inlet / Outlet Invert= 478.73' / 476.83' S= 0.0275 '/' 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 Subcatchment 103: Pr Subarea A-2 (remainder to A)

[45] Hint: Runoff=Zero

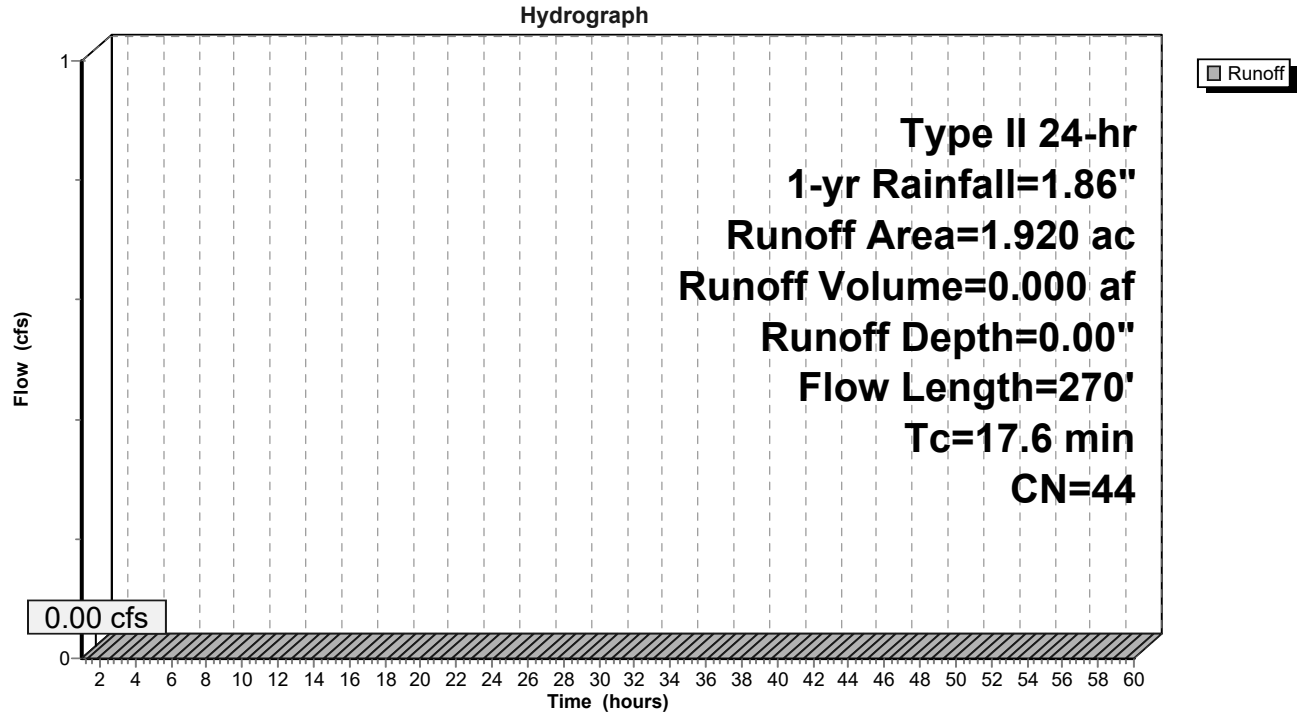
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

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)

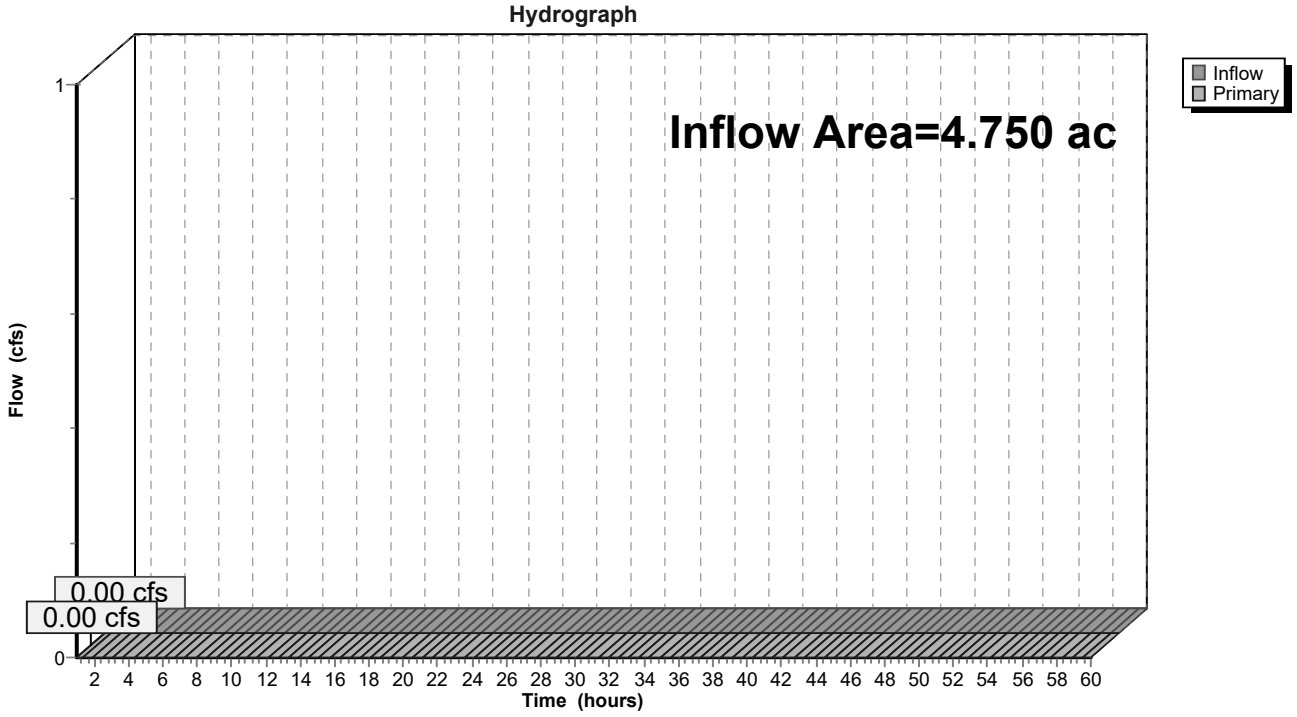


Summary for Link 104: Pr Subarea A Total (to ex IB)

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 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)

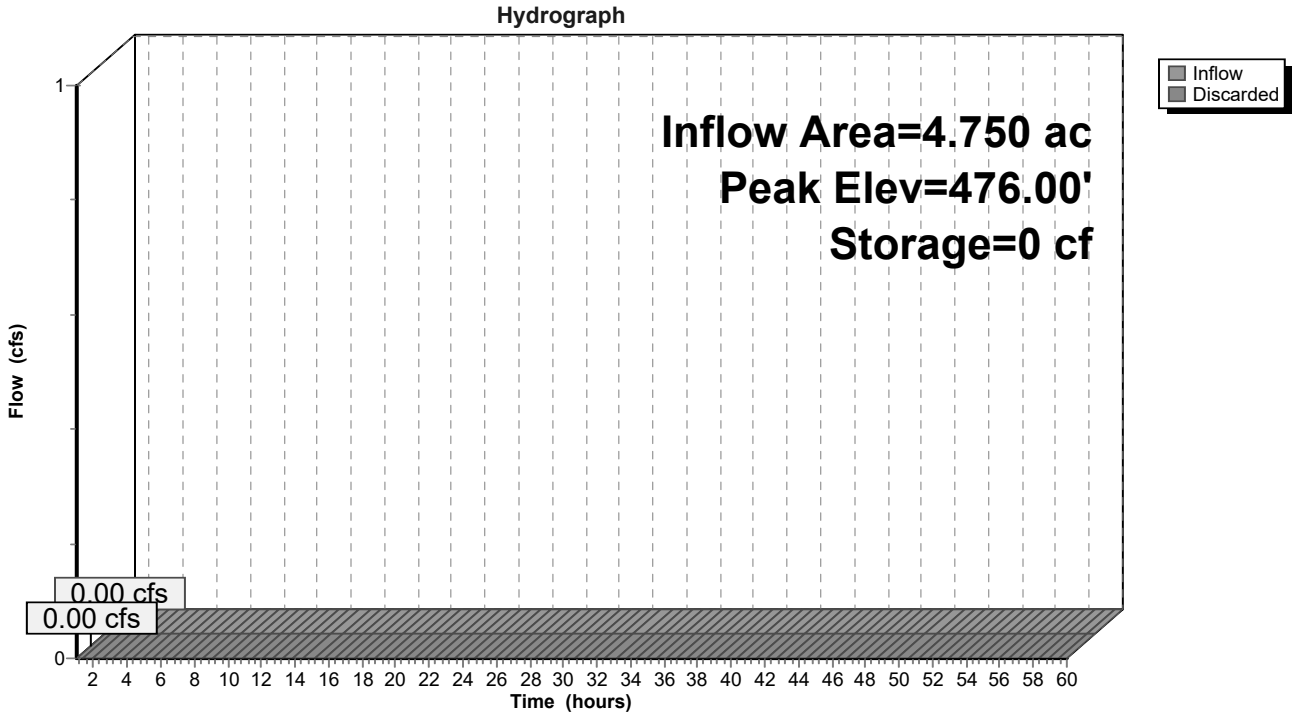
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 106: Pr Subarea B

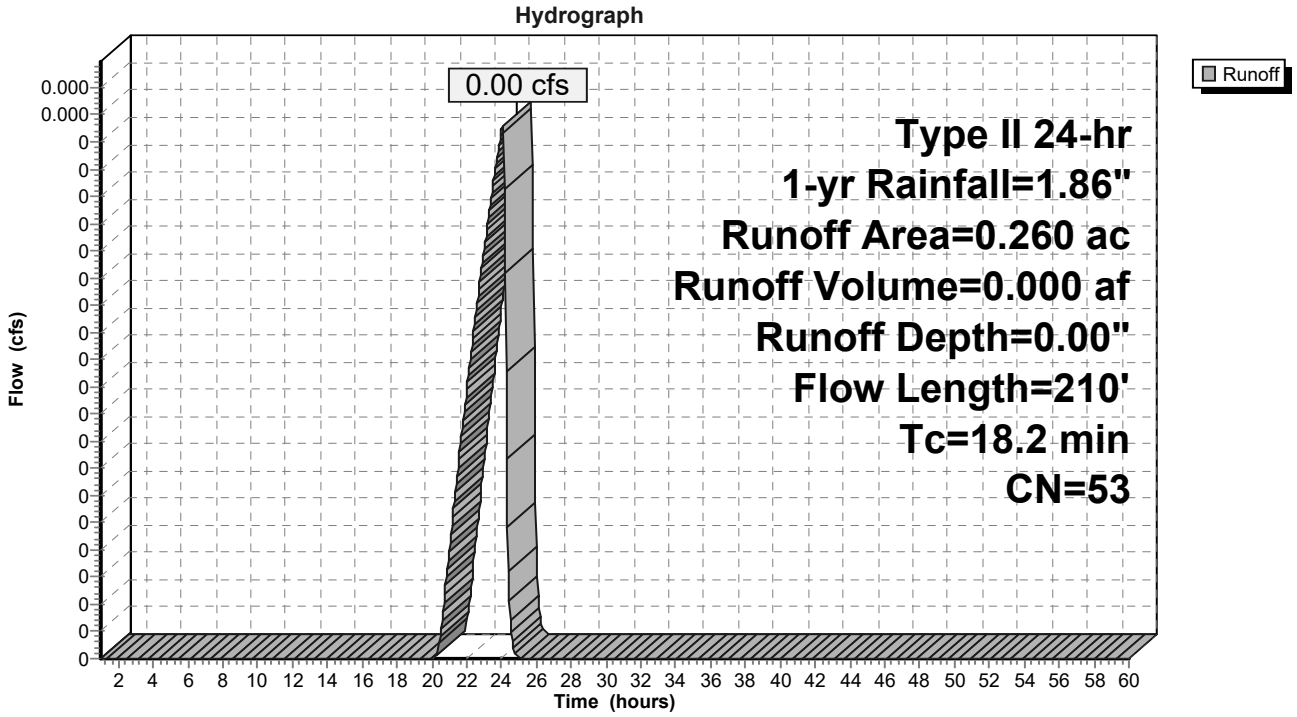
Runoff = 0.00 cfs @ 24.03 hrs, Volume= 0.000 af, Depth= 0.00"

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

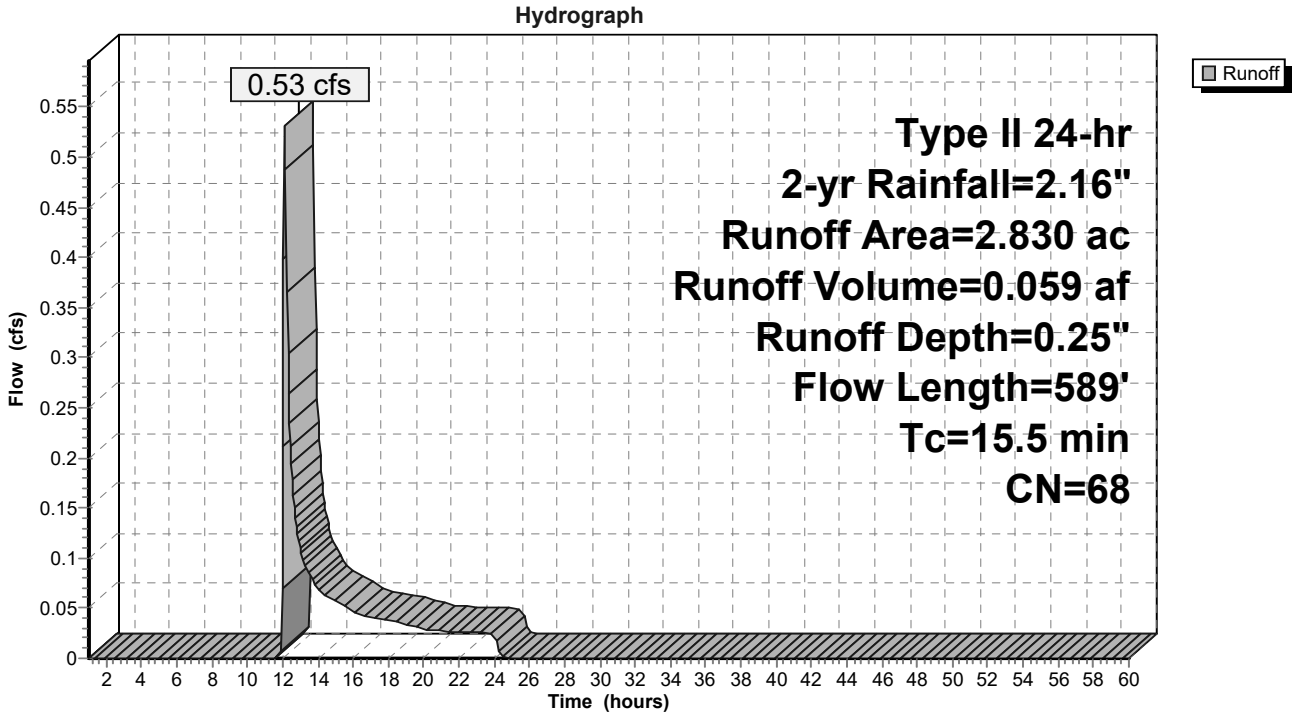
Runoff = 0.53 cfs @ 12.13 hrs, Volume= 0.059 af, Depth= 0.25"
Routed to Pond 102 : Proposed Infiltration Basin

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 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)

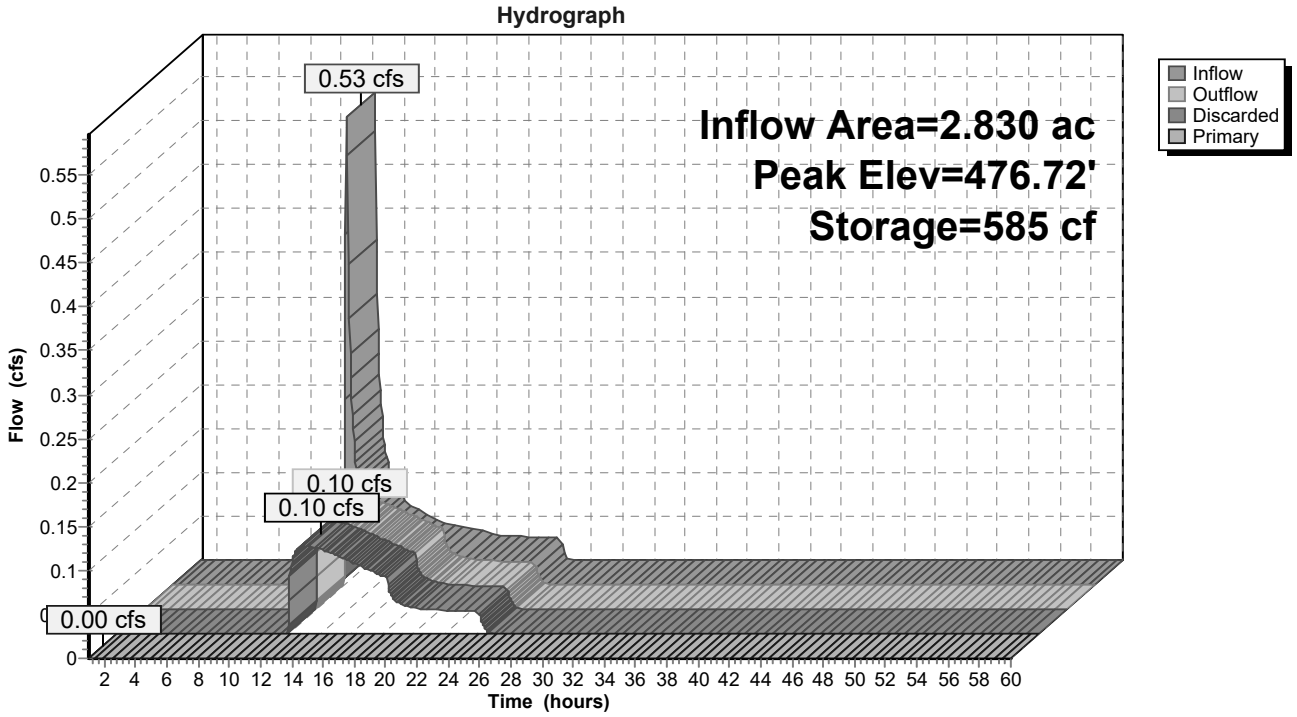
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.73'	**12.0" Round Culvert** L= 69.0' Ke= 0.500 Inlet / Outlet Invert= 478.73' / 476.83' S= 0.0275 '/' 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 Subcatchment 103: Pr Subarea A-2 (remainder to A)

[45] Hint: Runoff=Zero

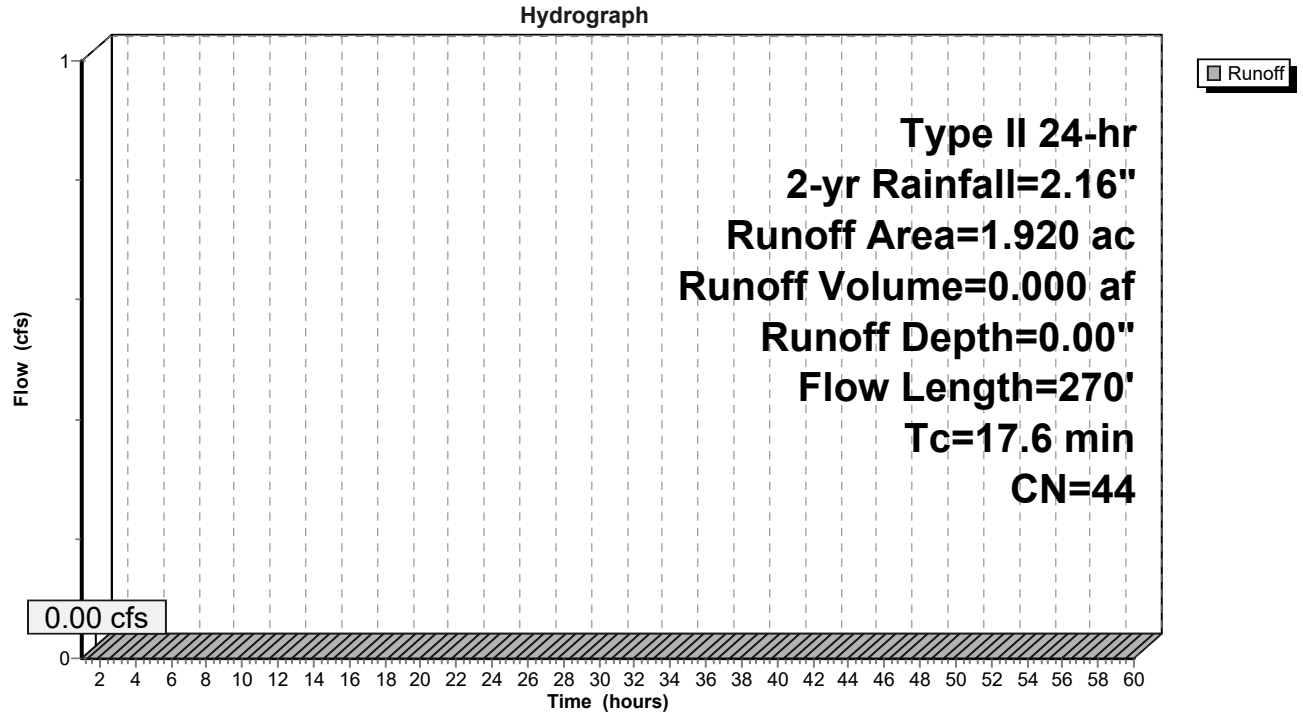
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

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)

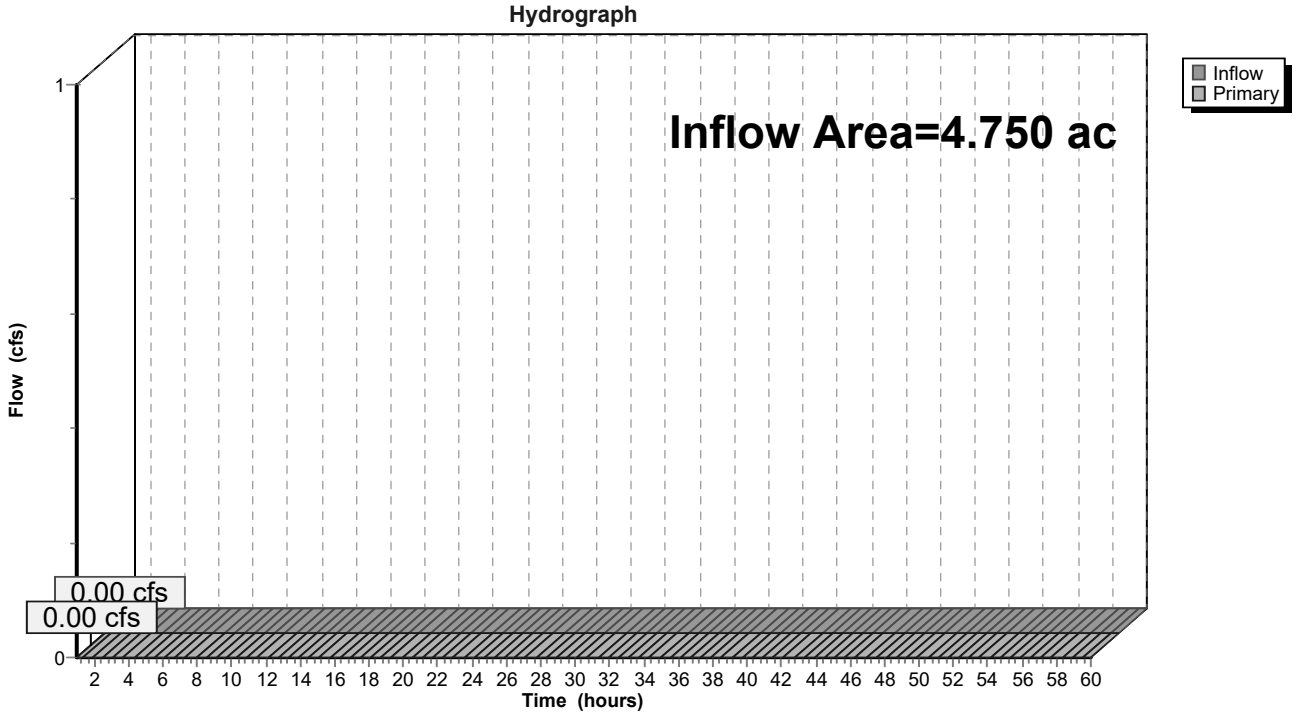


Summary for Link 104: Pr Subarea A Total (to ex IB)

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 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)

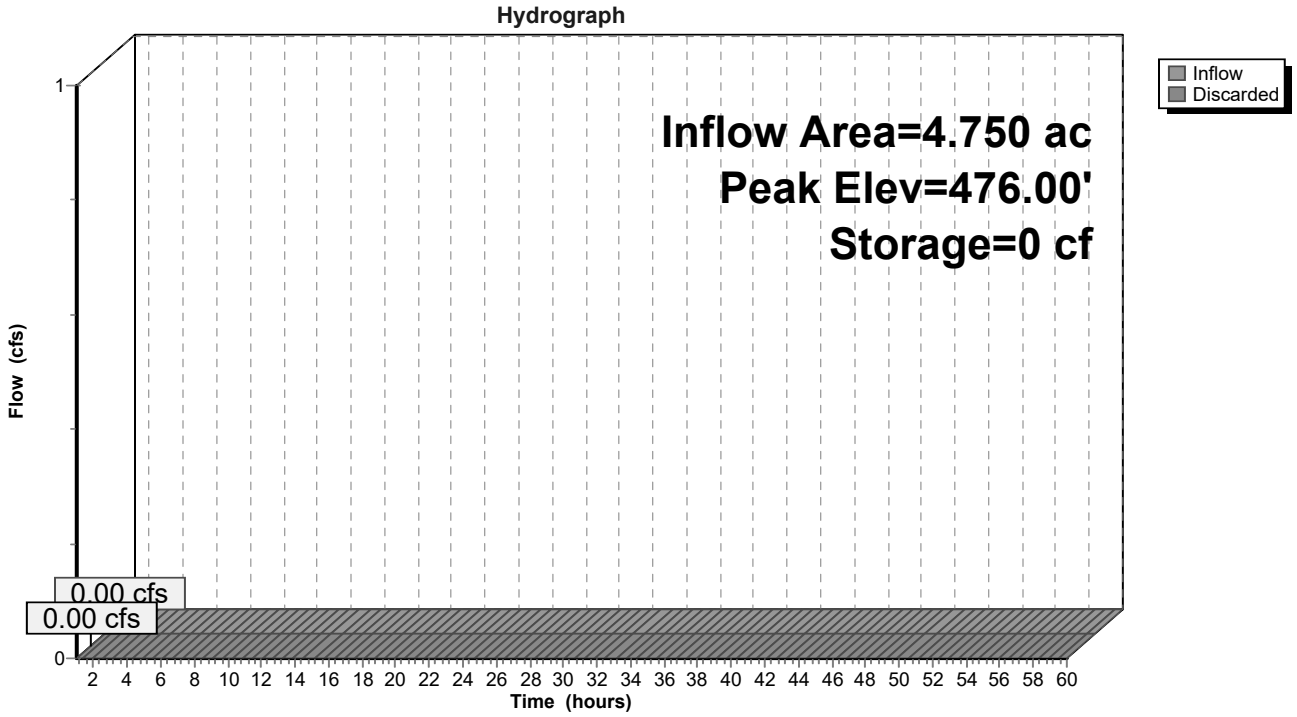
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 106: Pr Subarea B

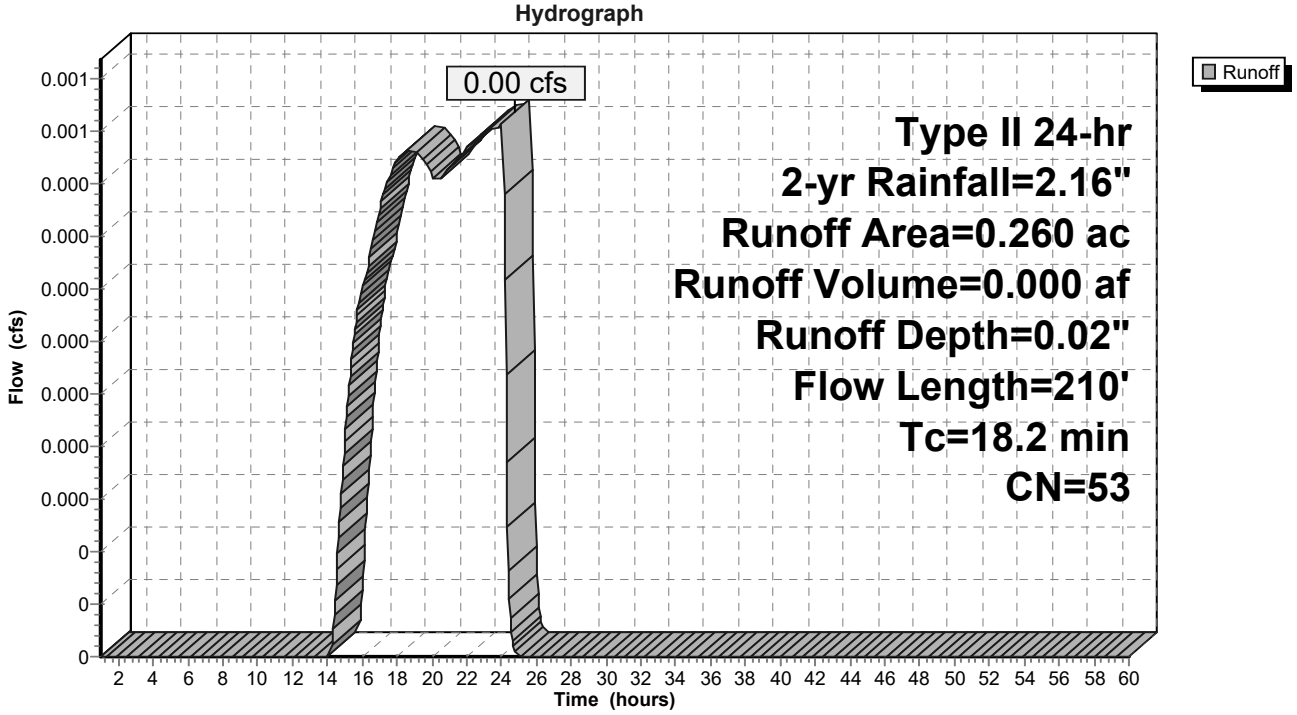
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth= 0.02"

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

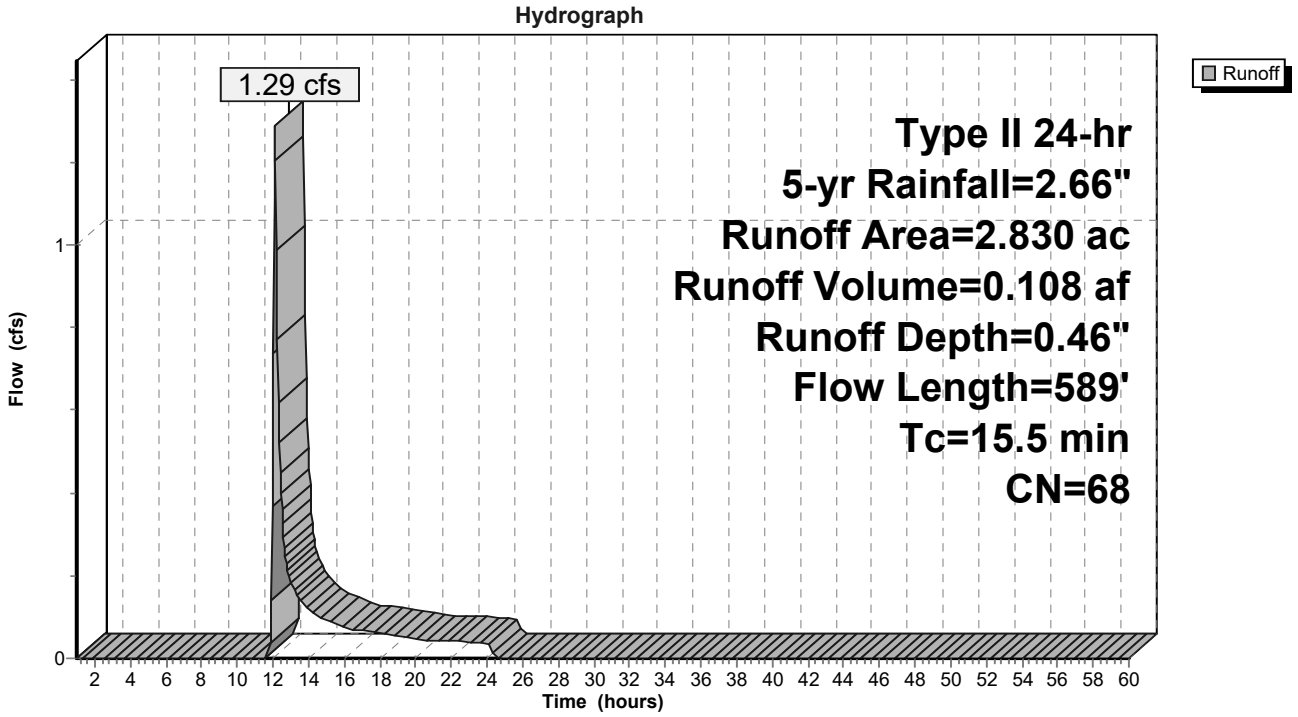
Runoff = 1.29 cfs @ 12.11 hrs, Volume= 0.108 af, Depth= 0.46"
Routed to Pond 102 : Proposed Infiltration Basin

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 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)

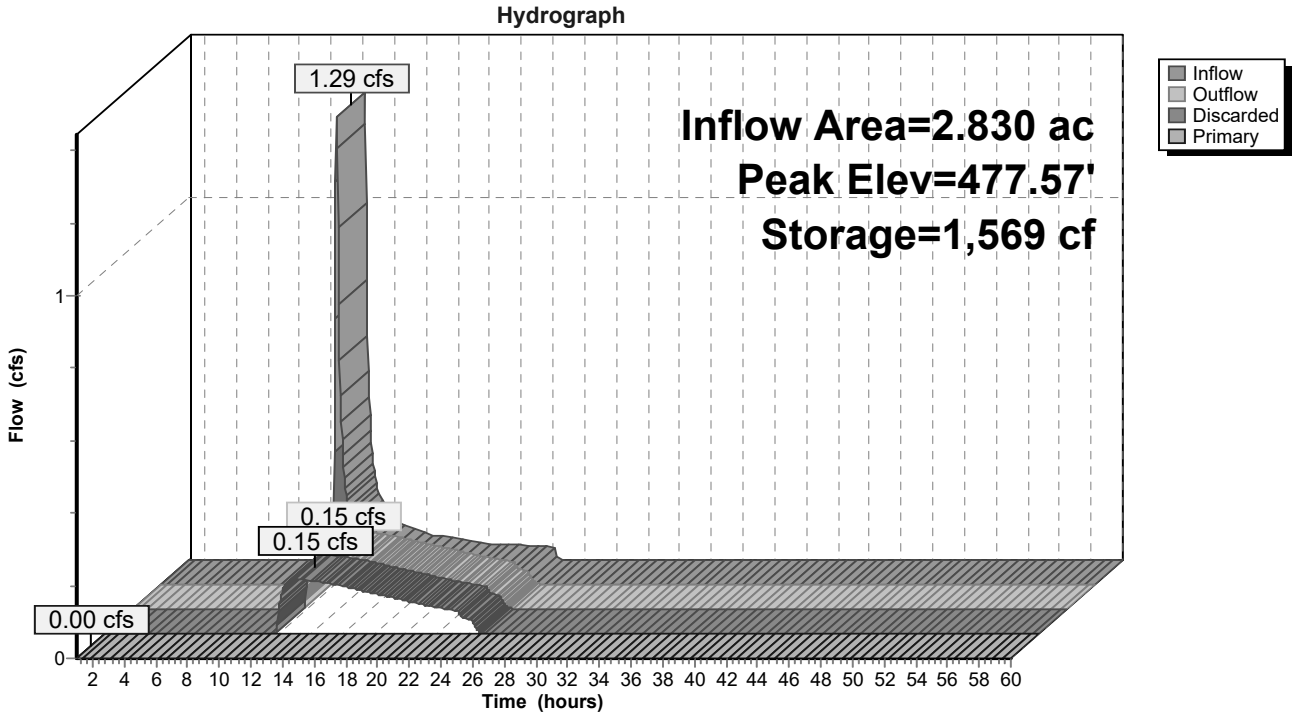
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.73'	**12.0" Round Culvert** L= 69.0' Ke= 0.500 Inlet / Outlet Invert= 478.73' / 476.83' S= 0.0275 '/' 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 Subcatchment 103: Pr Subarea A-2 (remainder to A)

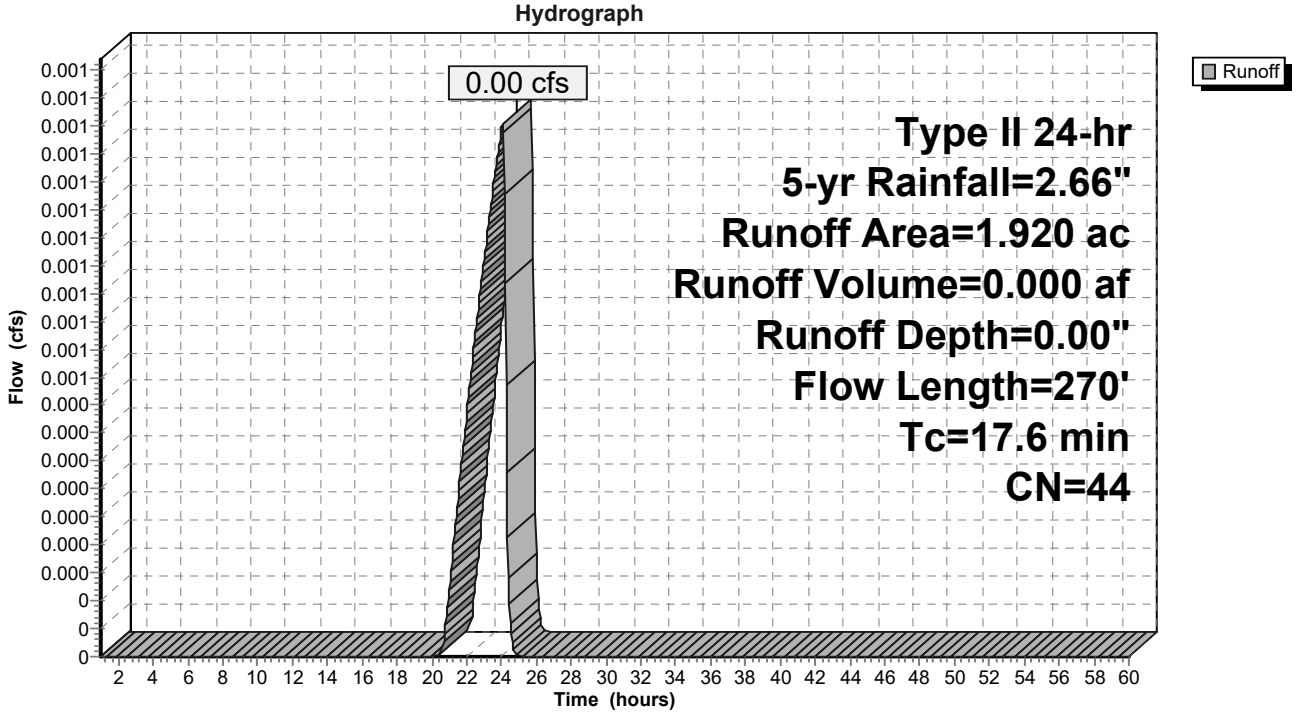
Runoff = 0.00 cfs @ 24.03 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

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)

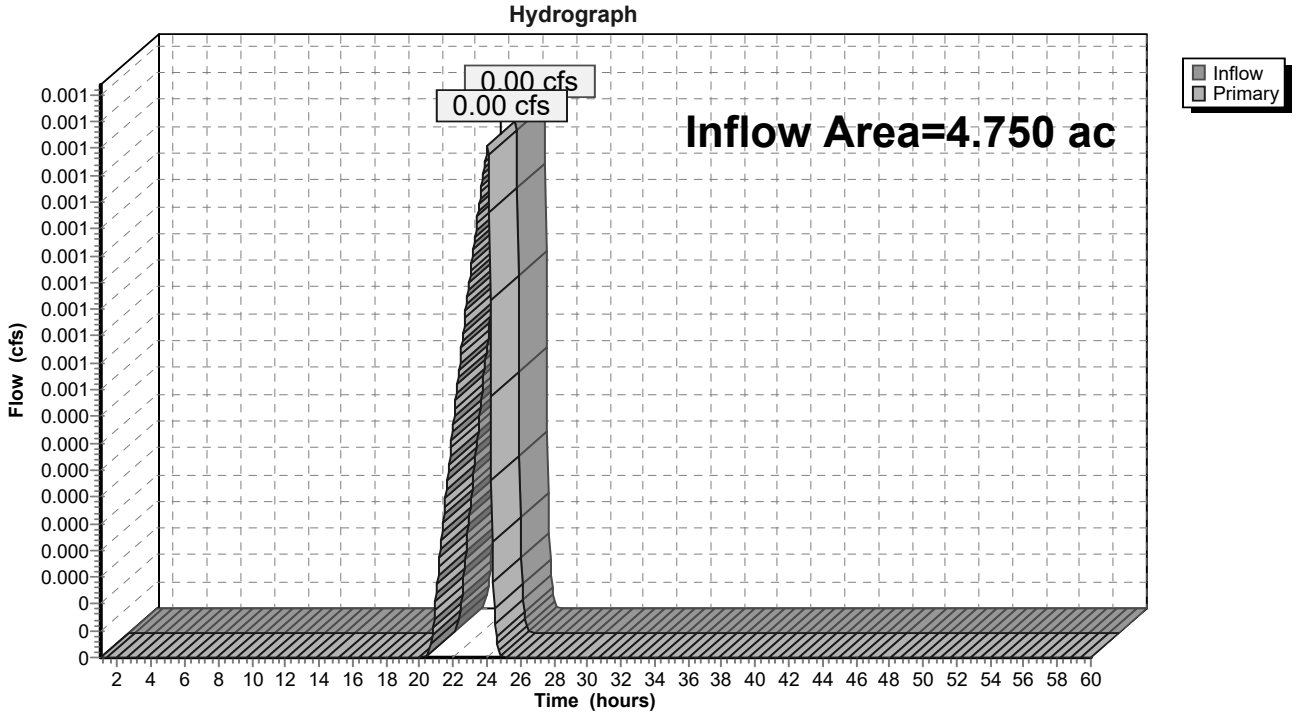


Summary for Link 104: Pr Subarea A Total (to ex IB)

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 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)

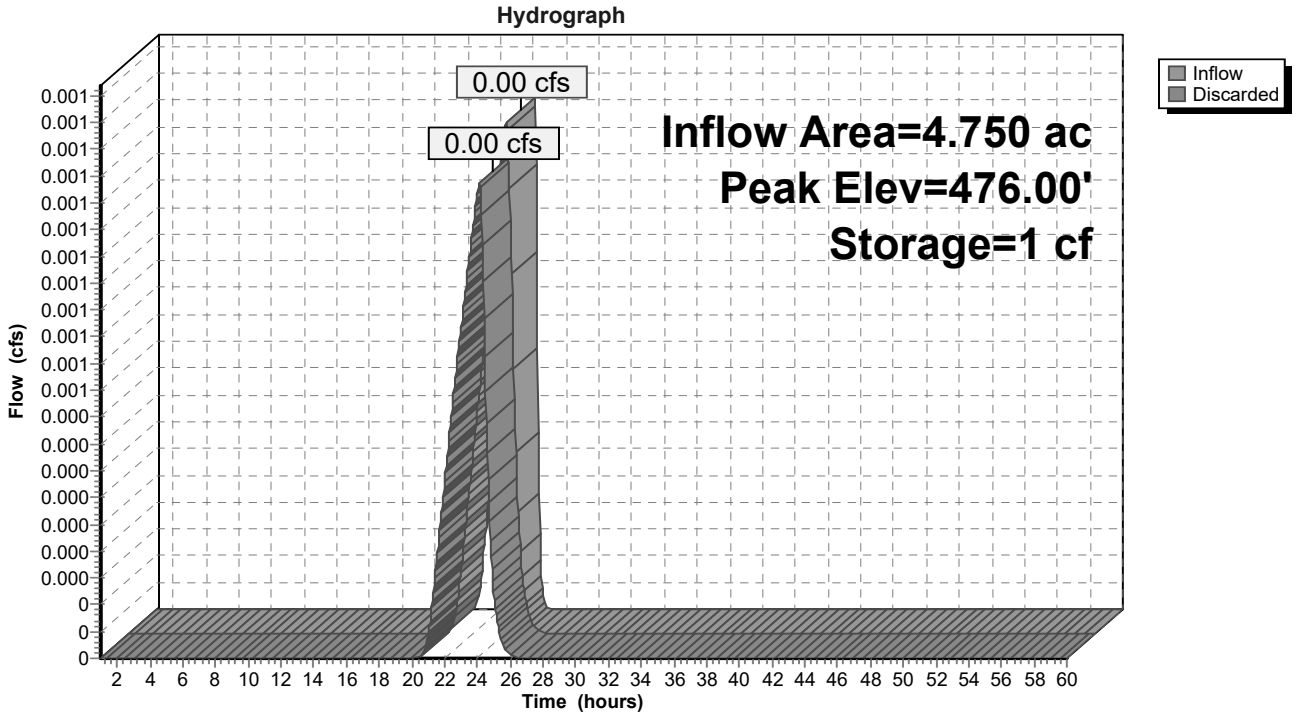
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 106: Pr Subarea B

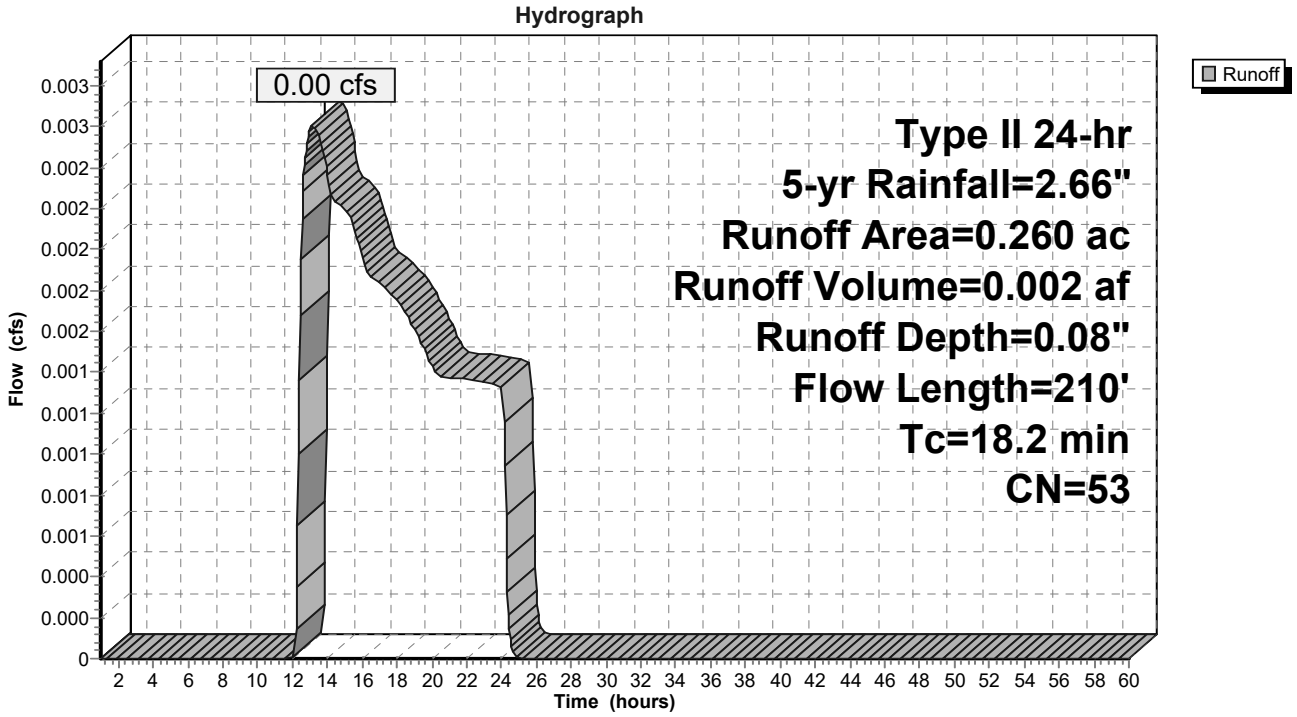
Runoff = 0.00 cfs @ 13.09 hrs, Volume= 0.002 af, Depth= 0.08"

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

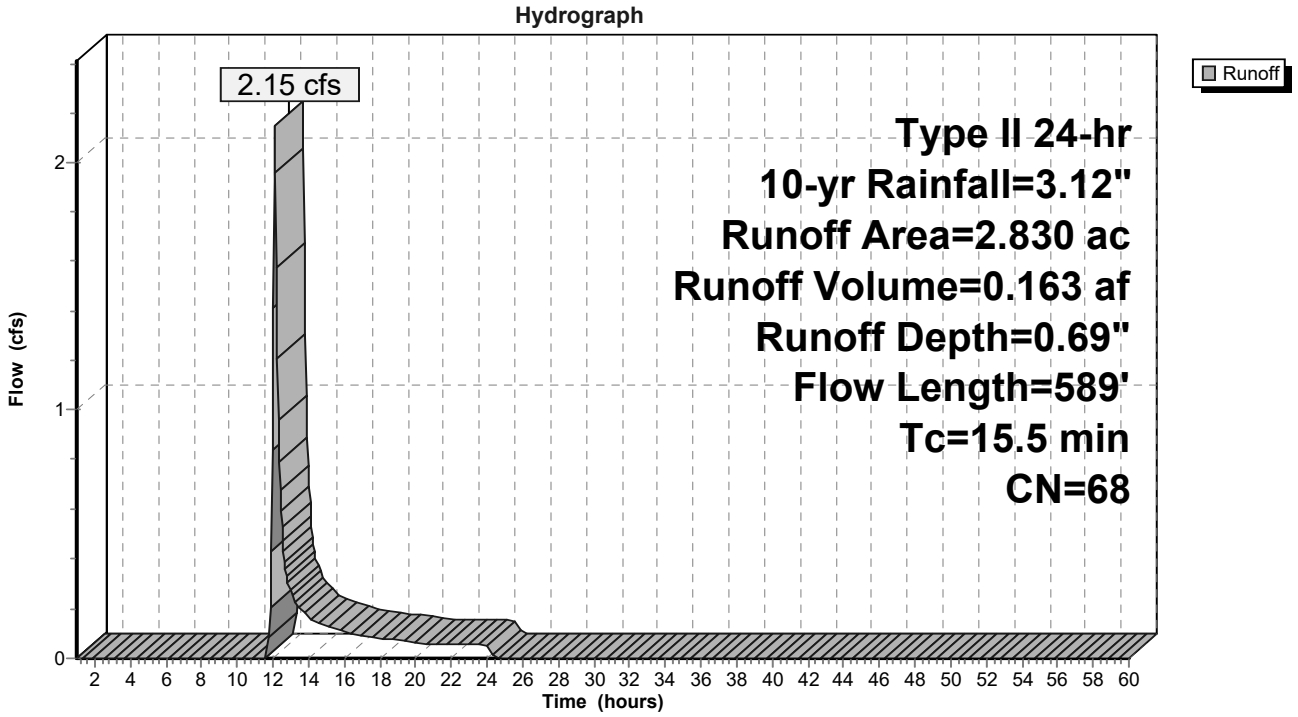
Runoff = 2.15 cfs @ 12.10 hrs, Volume= 0.163 af, Depth= 0.69"
Routed to Pond 102 : Proposed Infiltration Basin

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 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)

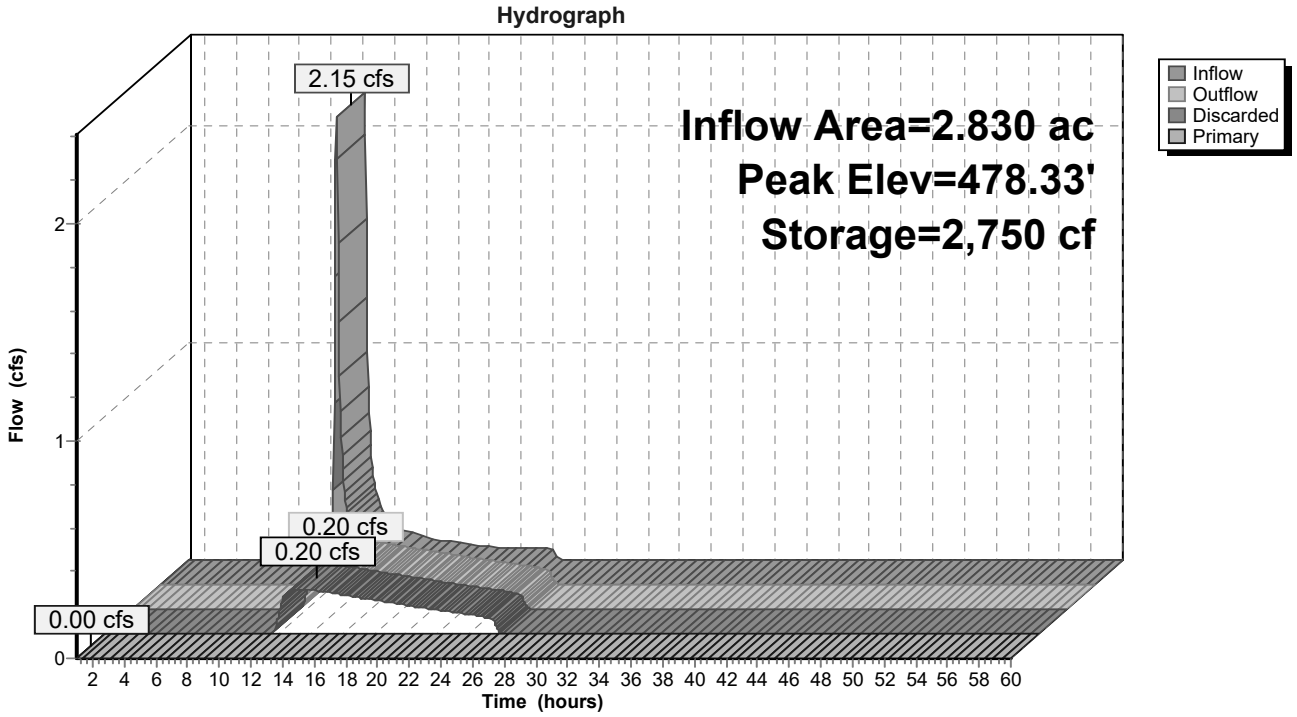
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.73'	**12.0" Round Culvert** L= 69.0' Ke= 0.500 Inlet / Outlet Invert= 478.73' / 476.83' S= 0.0275 '/' 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 Subcatchment 103: Pr Subarea A-2 (remainder to A)

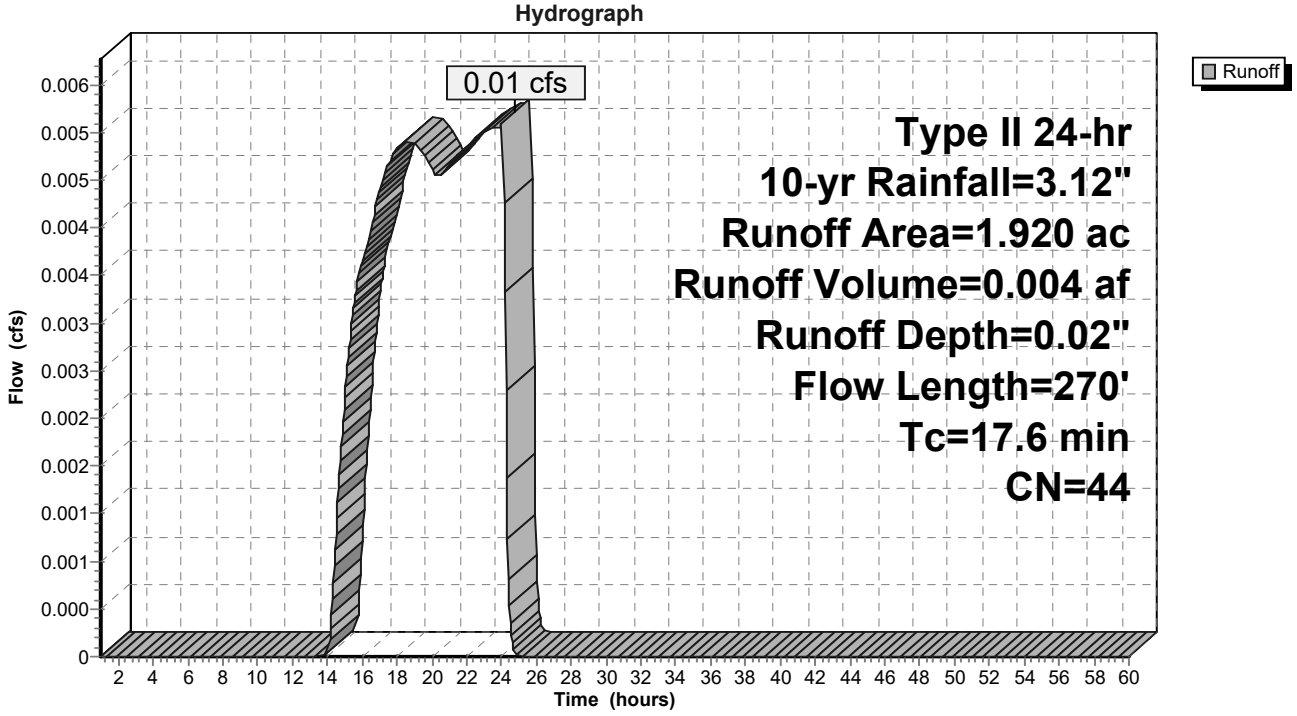
Runoff = 0.01 cfs @ 24.00 hrs, Volume= 0.004 af, Depth= 0.02"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

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)

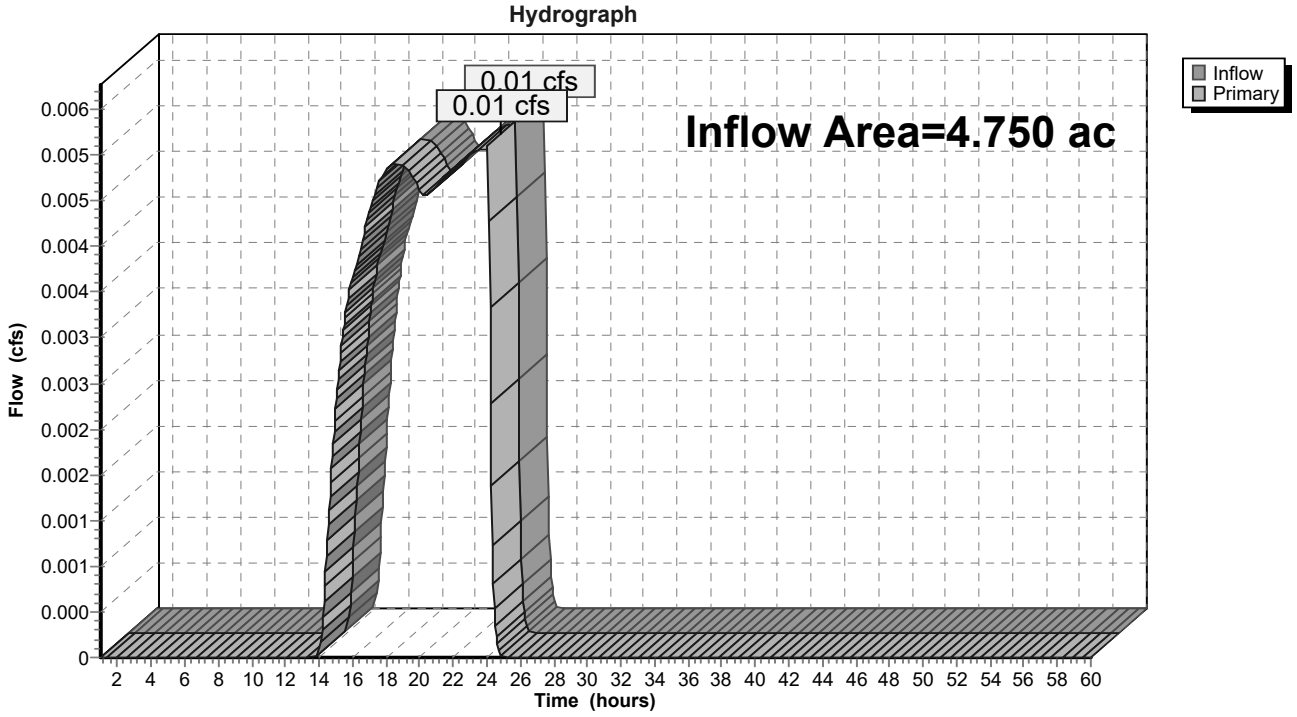


Summary for Link 104: Pr Subarea A Total (to ex IB)

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 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)

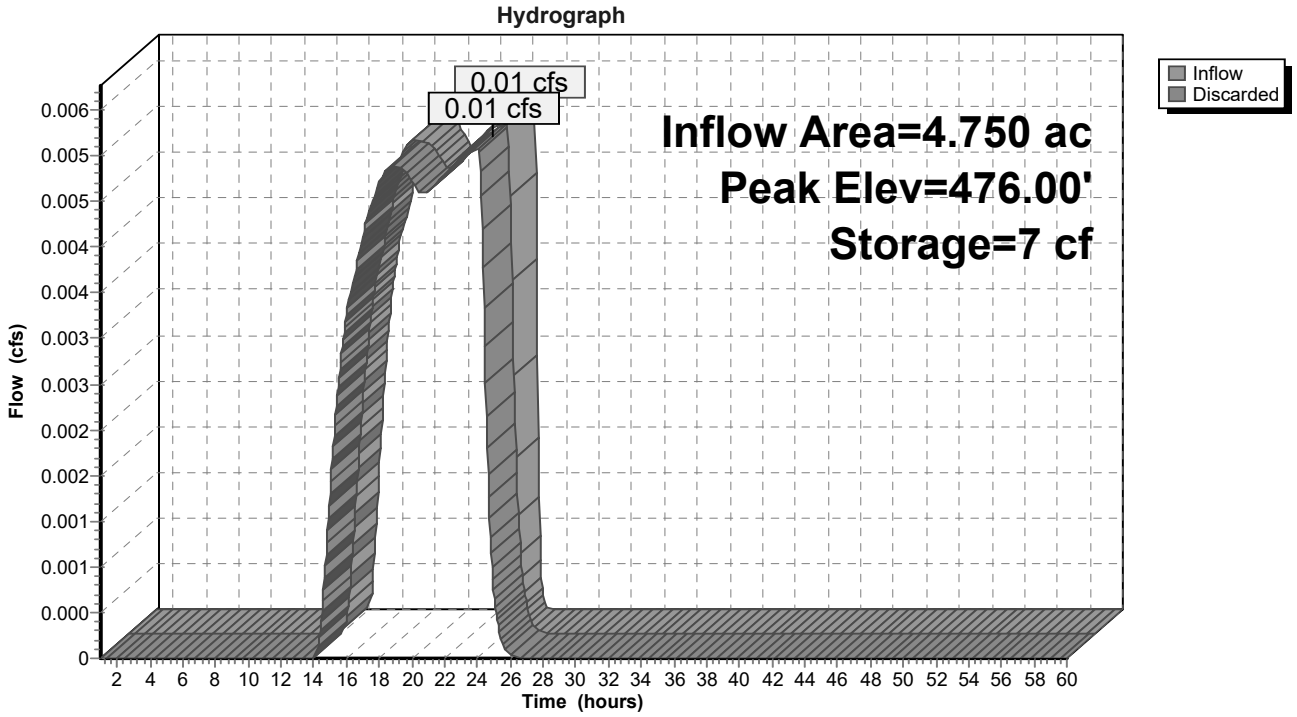
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 106: Pr Subarea B

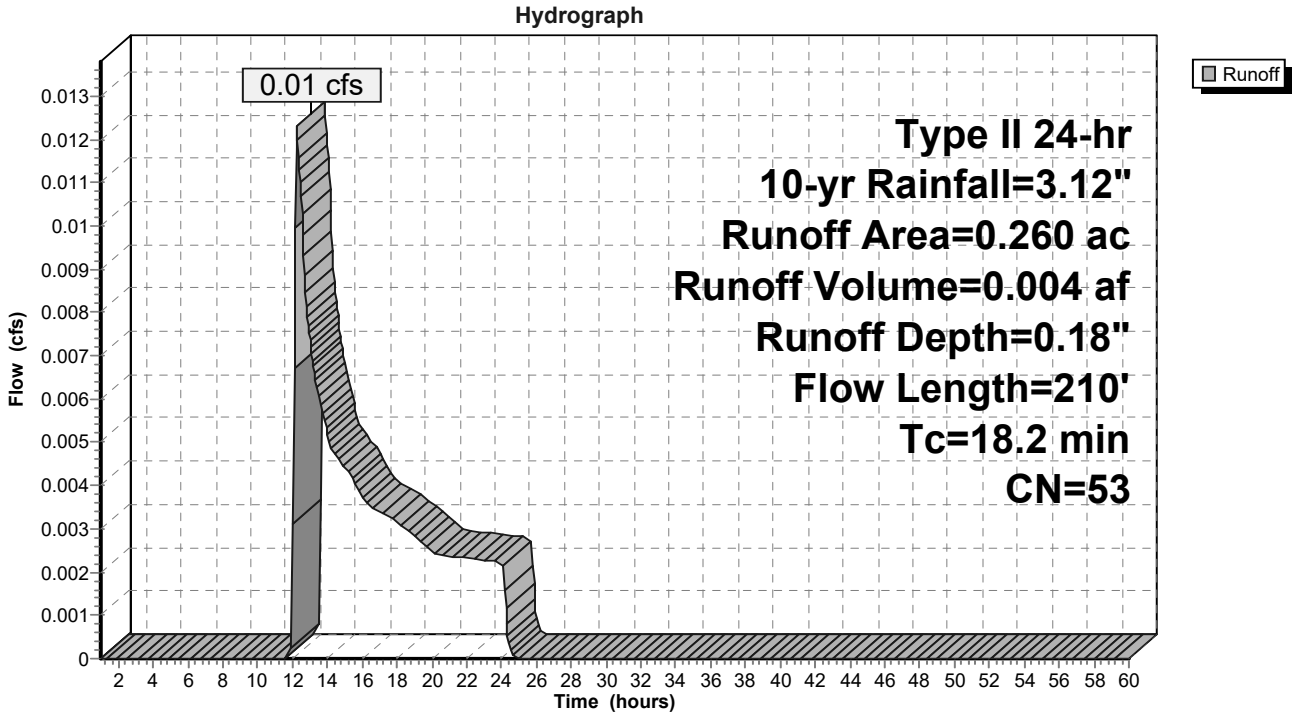
Runoff = 0.01 cfs @ 12.26 hrs, Volume= 0.004 af, Depth= 0.18"

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

[47] Hint: Peak is 146% of capacity of segment #3
[47] Hint: Peak is 103% of capacity of segment #4

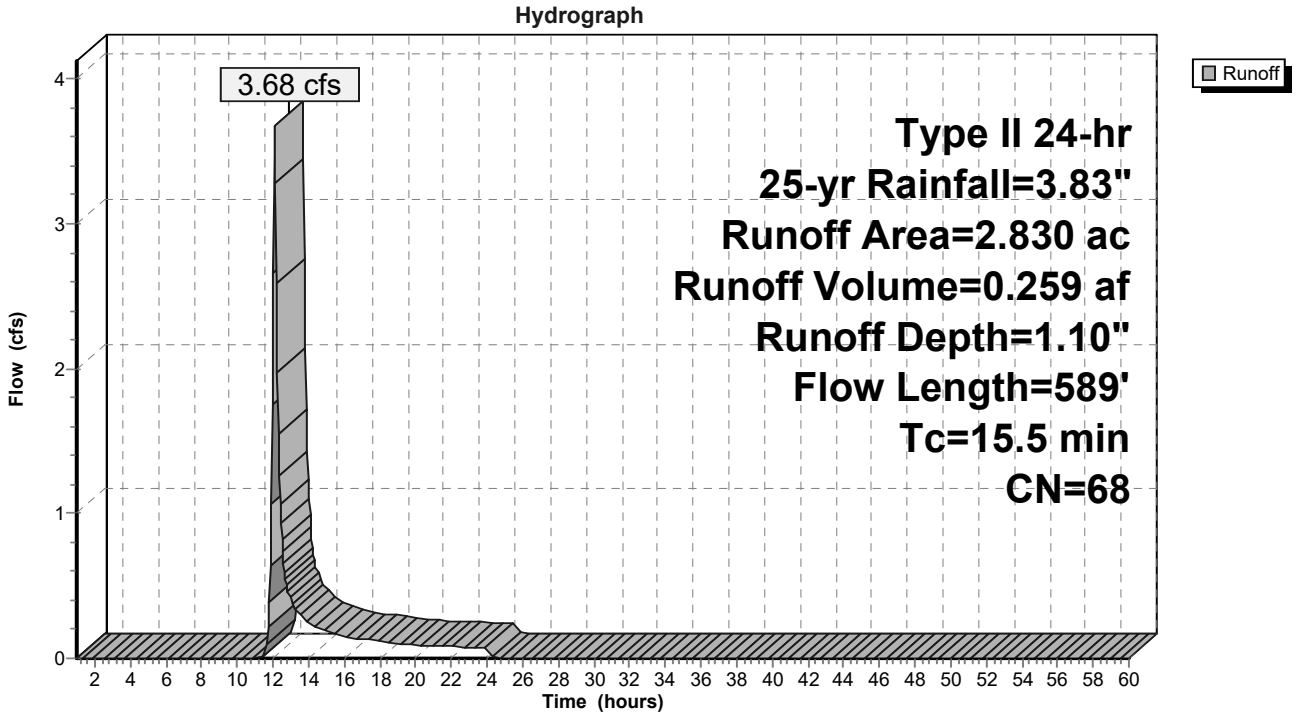
Runoff = 3.68 cfs @ 12.09 hrs, Volume= 0.259 af, Depth= 1.10"
Routed to Pond 102 : Proposed Infiltration Basin

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 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)

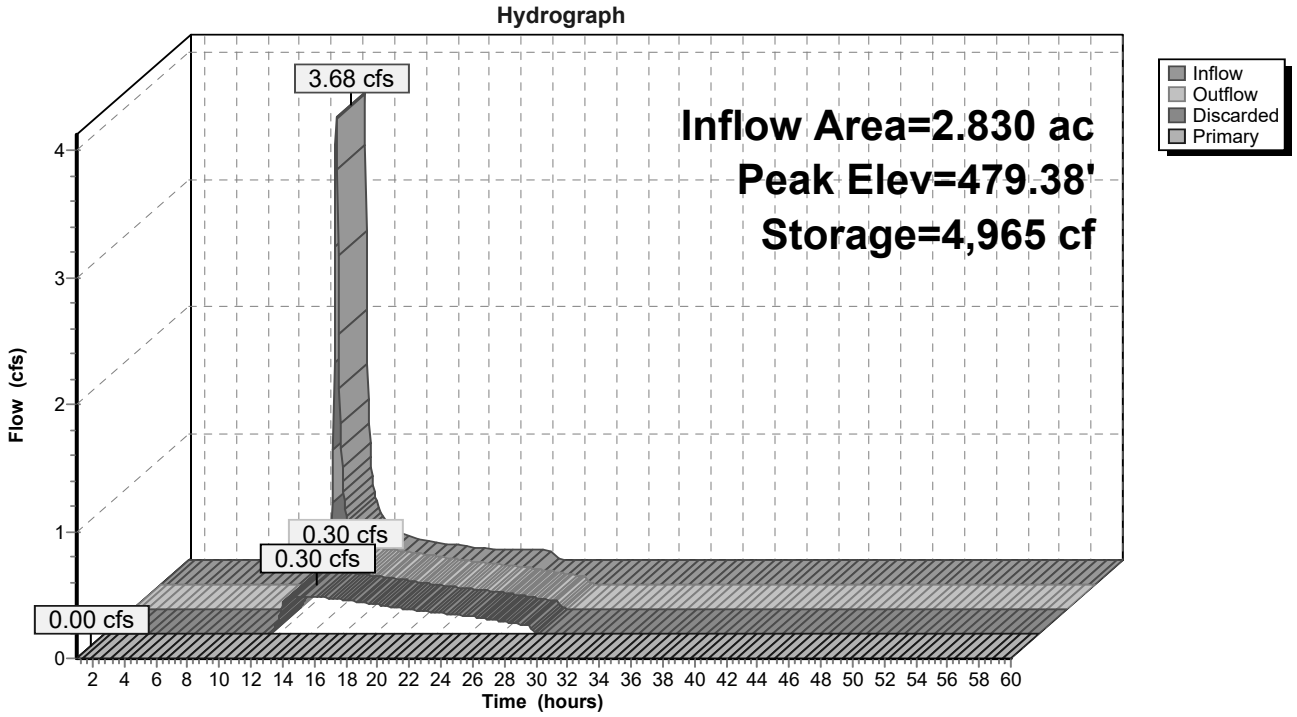
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.73'	**12.0" Round Culvert** L= 69.0' Ke= 0.500 Inlet / Outlet Invert= 478.73' / 476.83' S= 0.0275 '/' 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 Subcatchment 103: Pr Subarea A-2 (remainder to A)

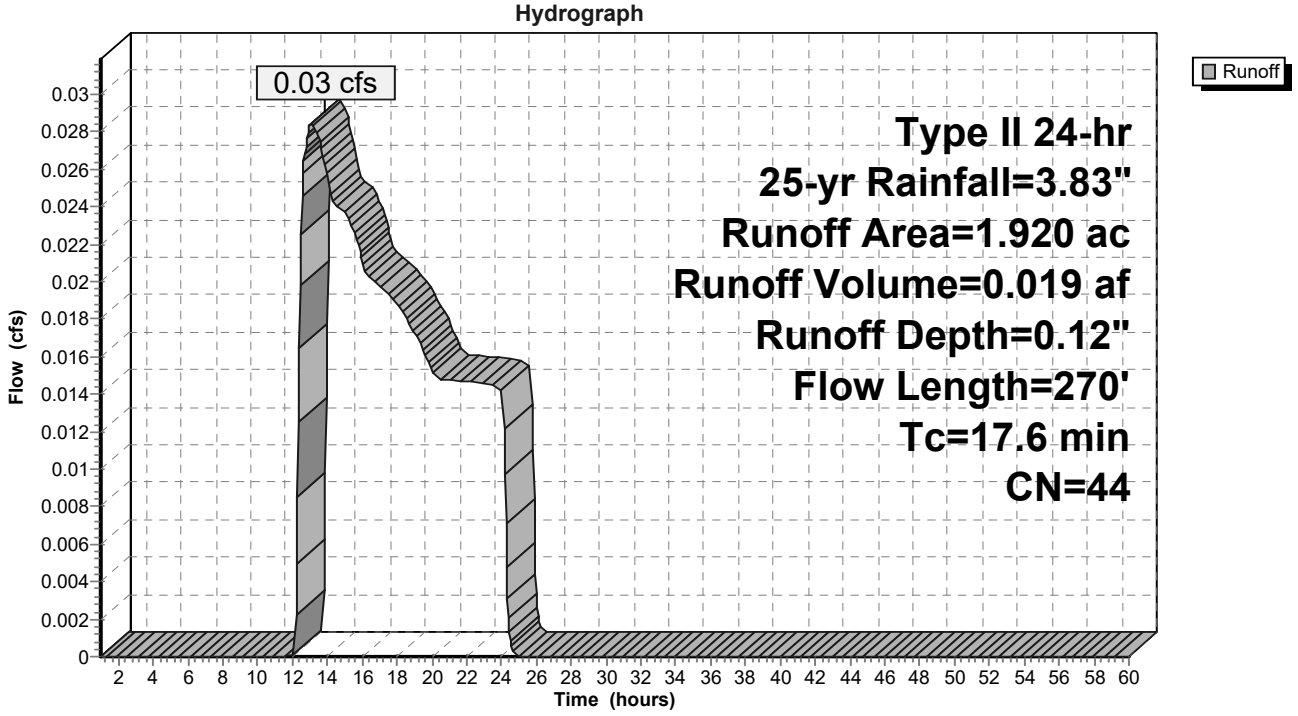
Runoff = 0.03 cfs @ 13.06 hrs, Volume= 0.019 af, Depth= 0.12"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

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)

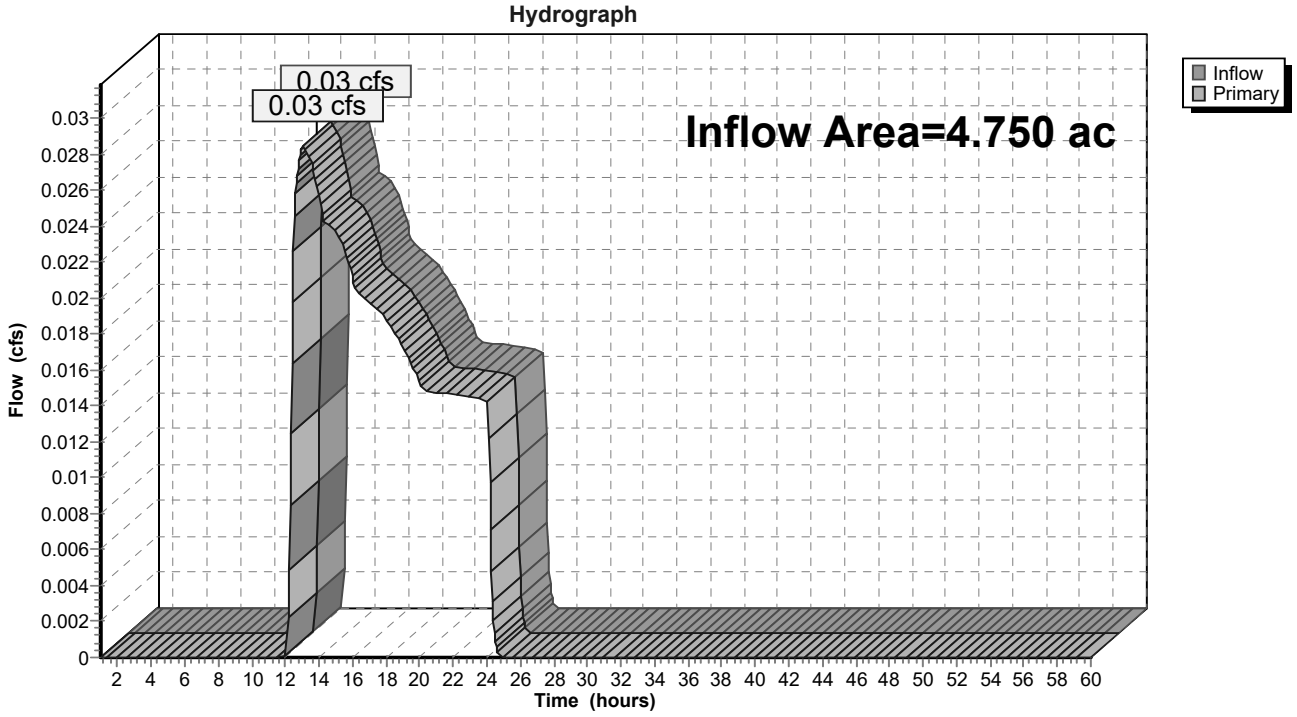


Summary for Link 104: Pr Subarea A Total (to ex IB)

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 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)

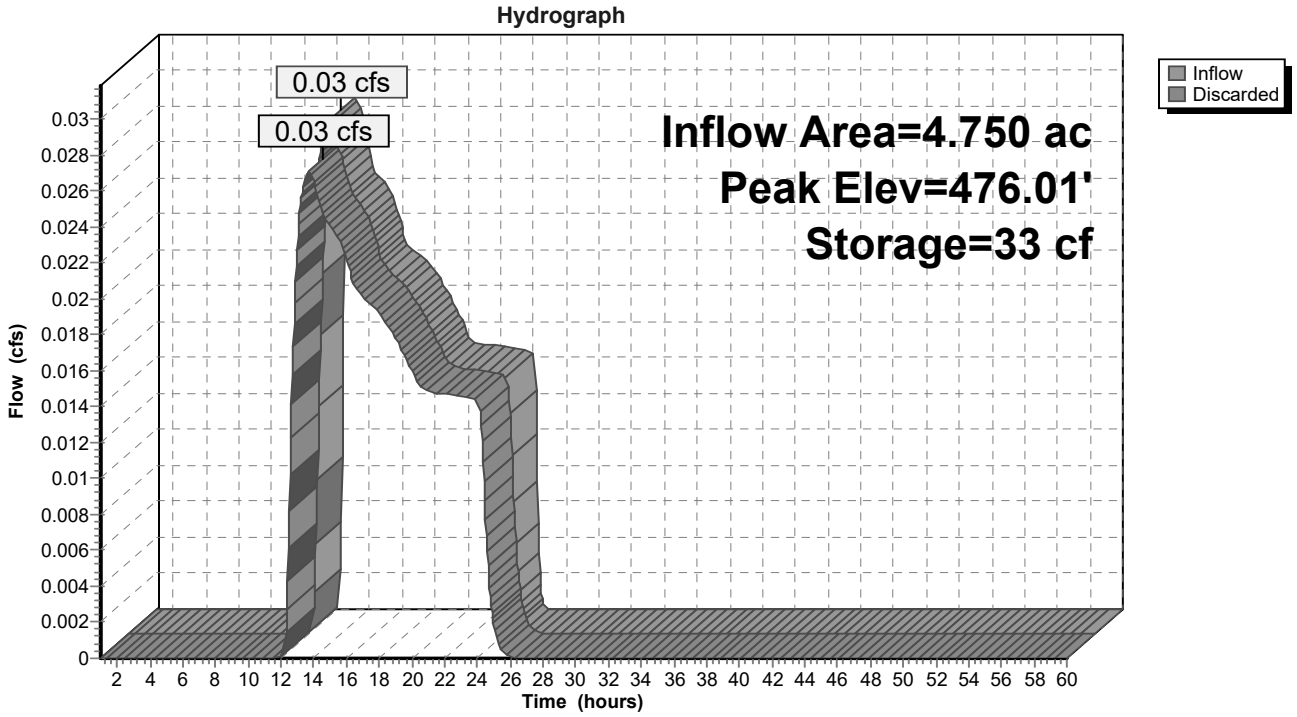
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 106: Pr Subarea B

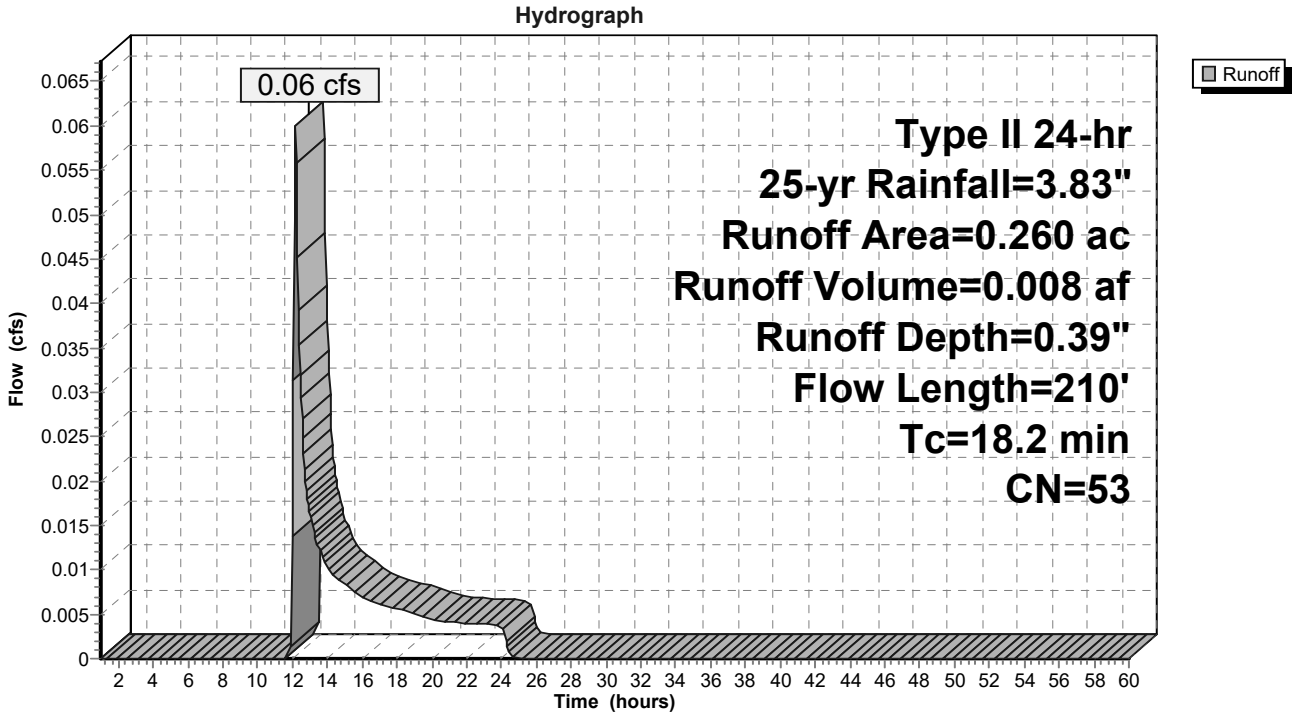
Runoff = 0.06 cfs @ 12.17 hrs, Volume= 0.008 af, Depth= 0.39"

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

[47] Hint: Peak is 209% of capacity of segment #3
[47] Hint: Peak is 148% of capacity of segment #4

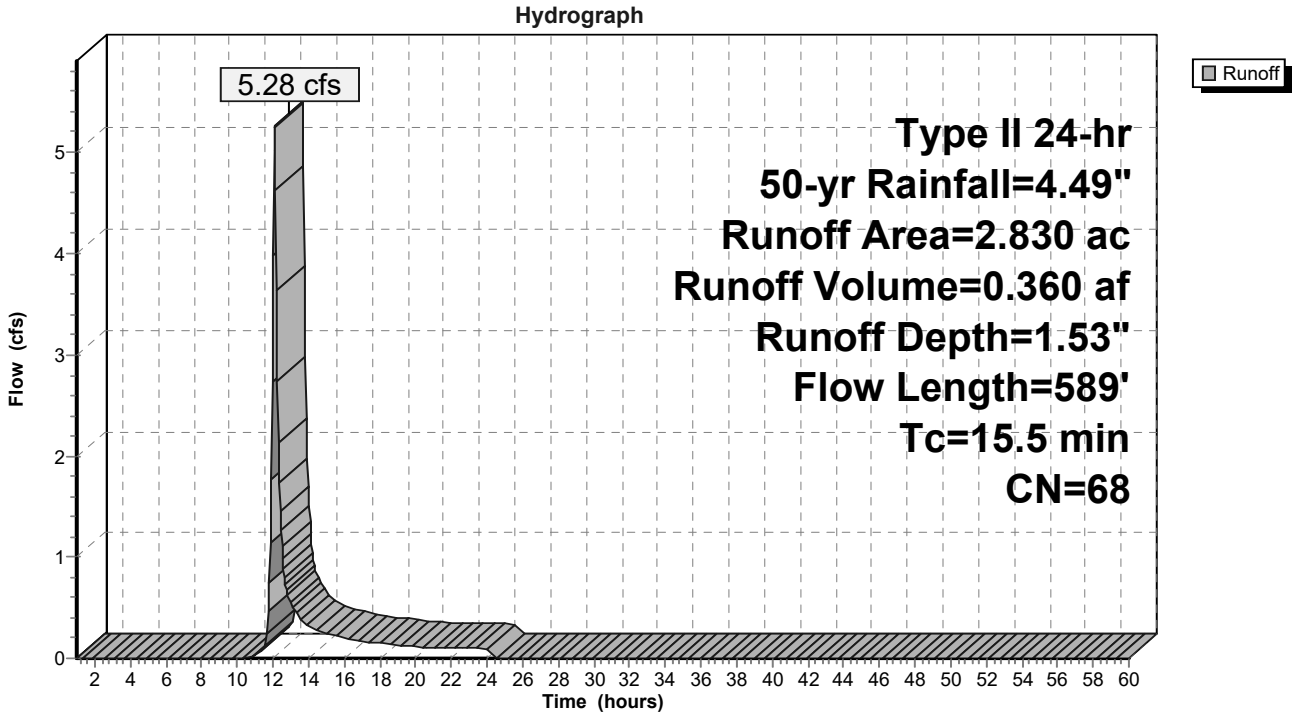
Runoff = 5.28 cfs @ 12.09 hrs, Volume= 0.360 af, Depth= 1.53"
Routed to Pond 102 : Proposed Infiltration Basin

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 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)

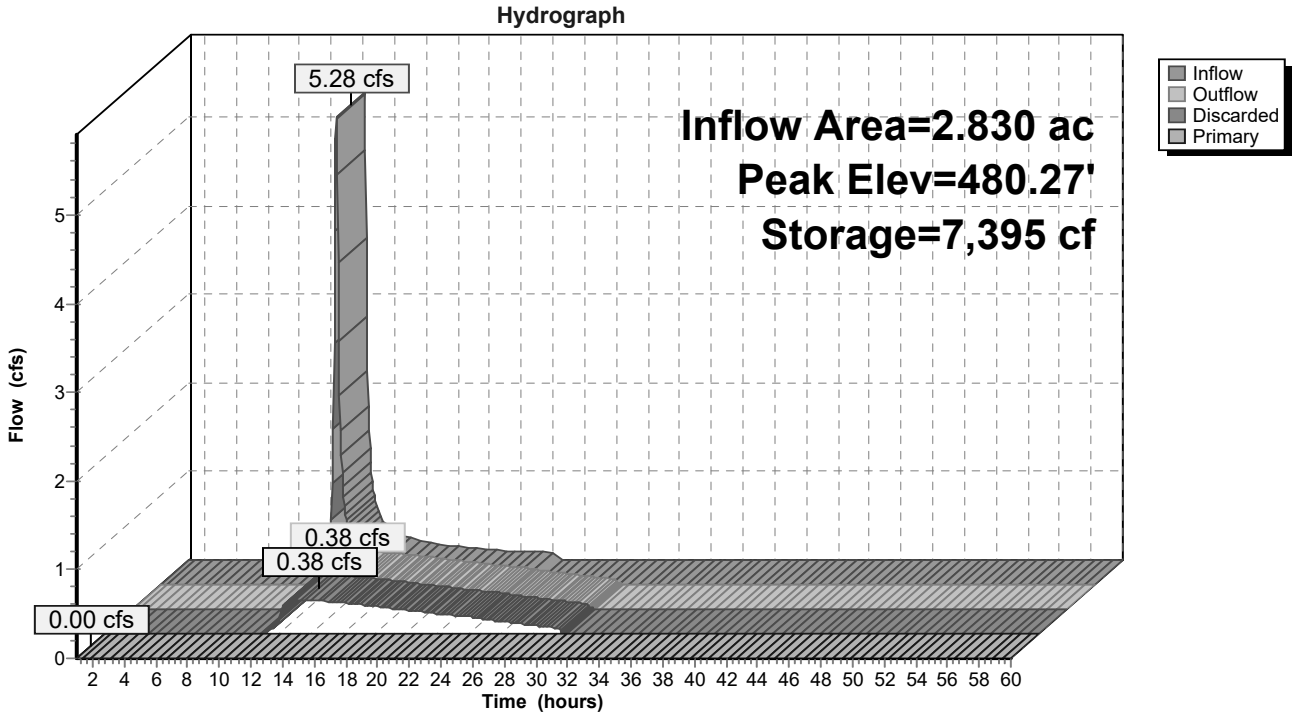
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.73'	**12.0" Round Culvert** L= 69.0' Ke= 0.500 Inlet / Outlet Invert= 478.73' / 476.83' S= 0.0275 '/' 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 Subcatchment 103: Pr Subarea A-2 (remainder to A)

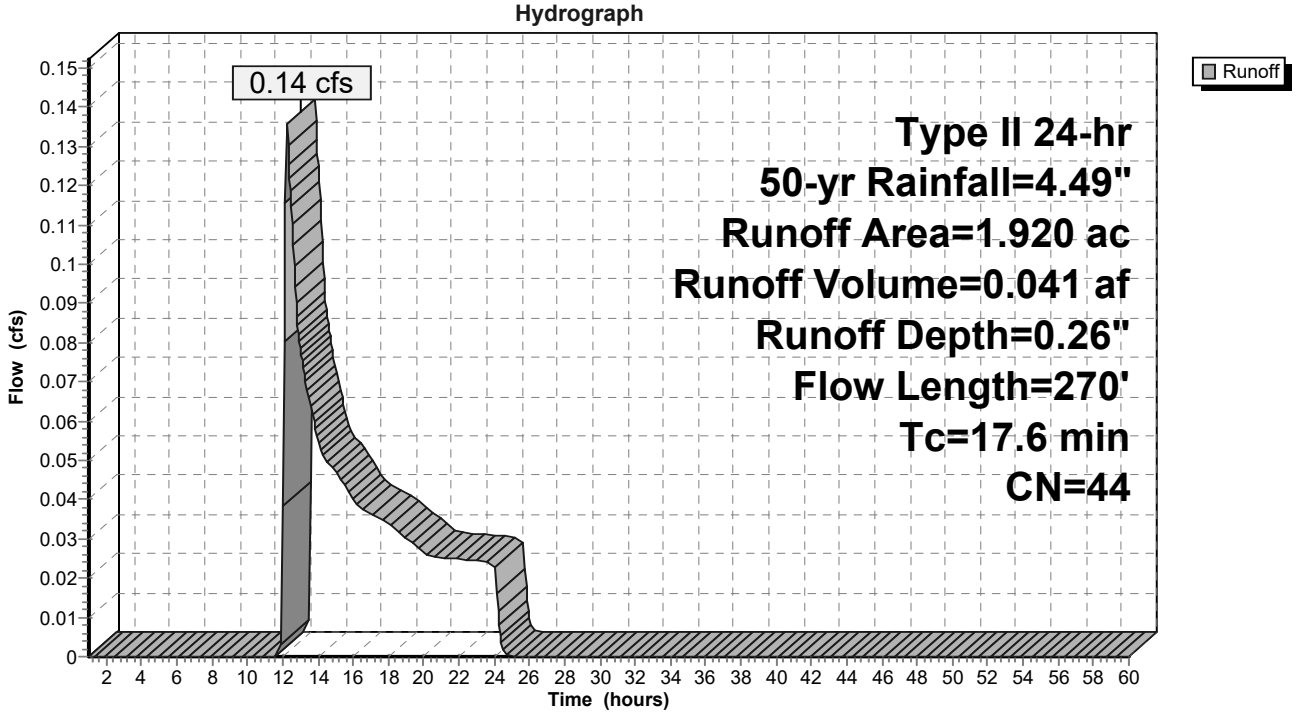
Runoff = 0.14 cfs @ 12.24 hrs, Volume= 0.041 af, Depth= 0.26"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

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)

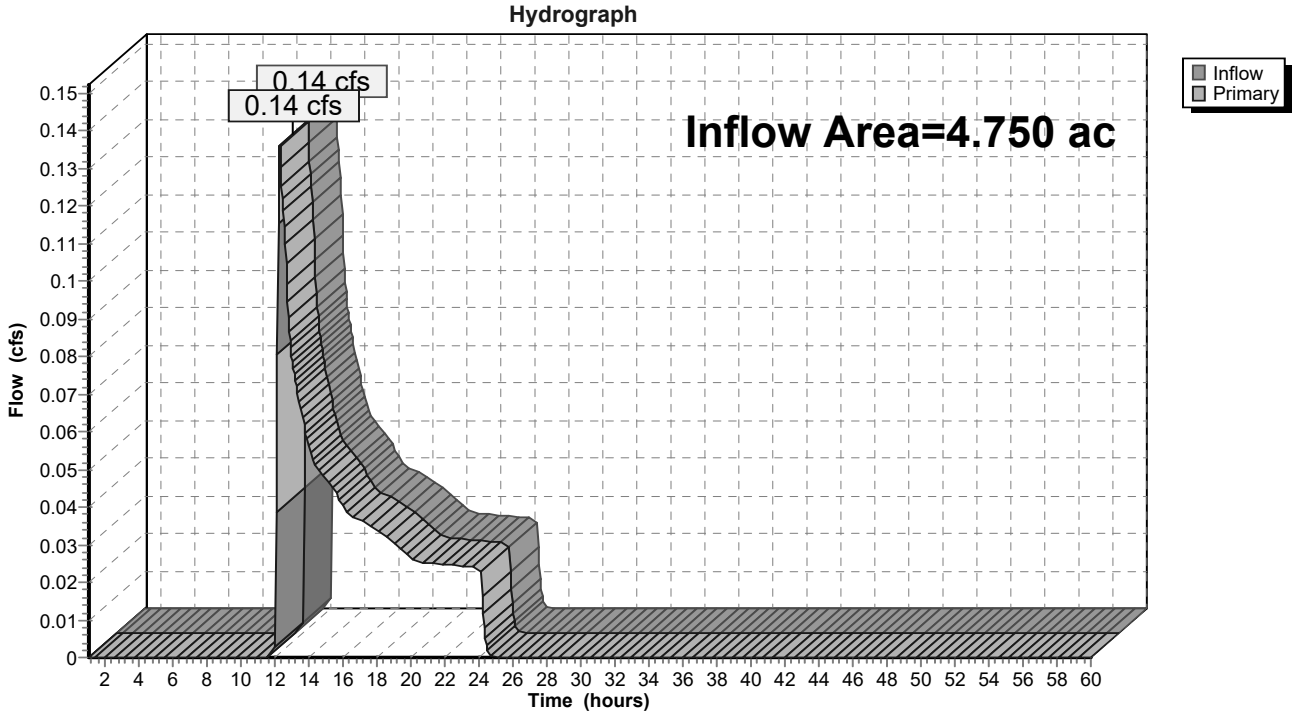


Summary for Link 104: Pr Subarea A Total (to ex IB)

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 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)

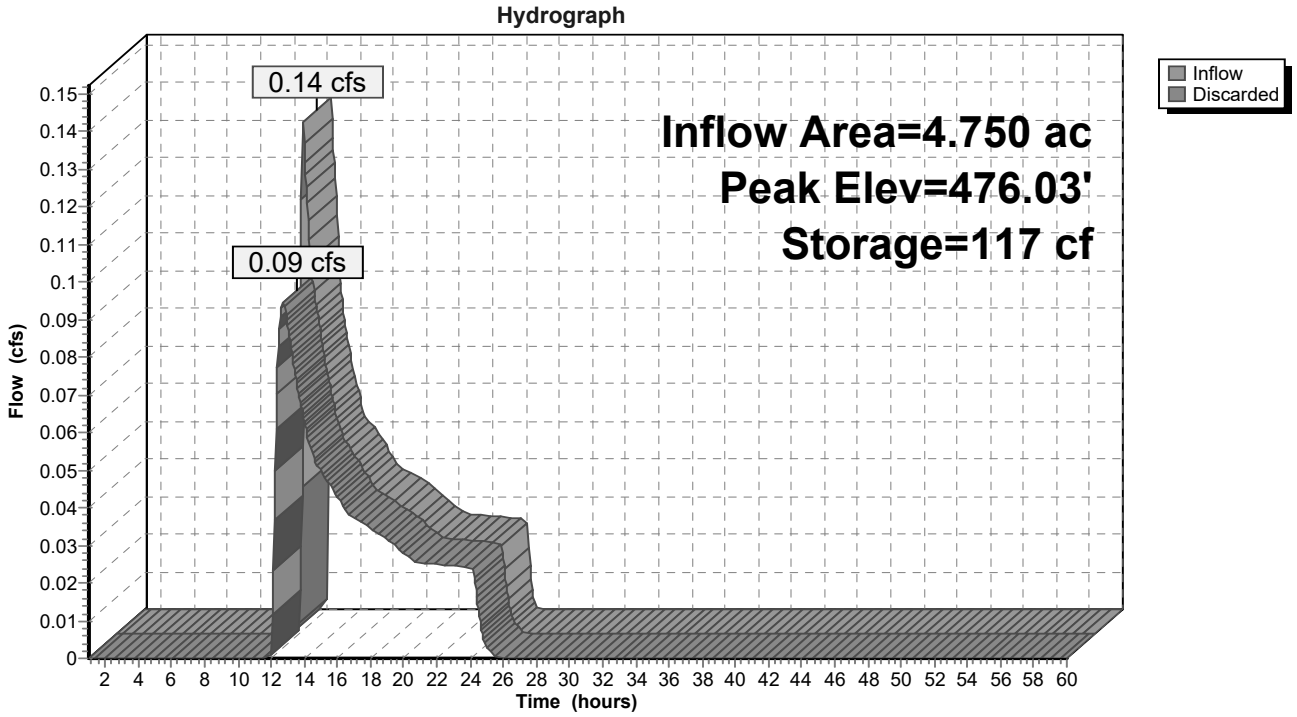
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 106: Pr Subarea B

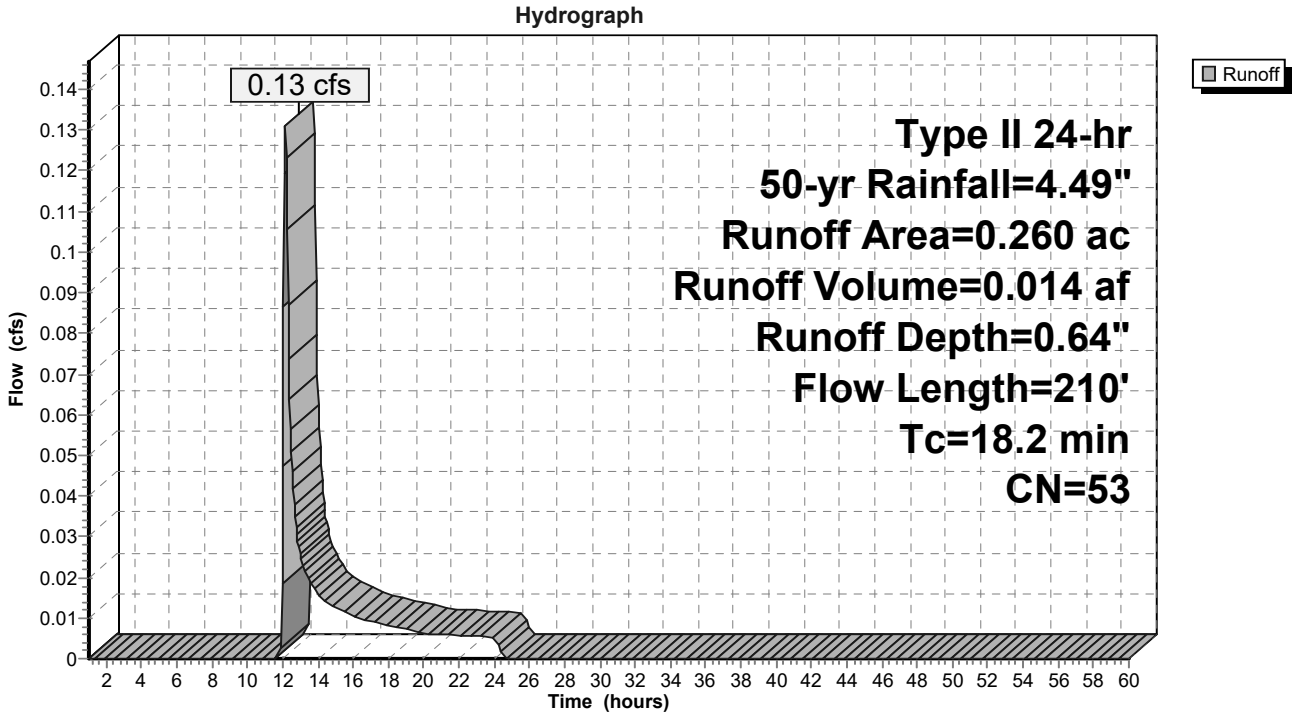
Runoff = 0.13 cfs @ 12.16 hrs, Volume= 0.014 af, Depth= 0.64"

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

[47] Hint: Peak is 288% of capacity of segment #3
[47] Hint: Peak is 203% of capacity of segment #4

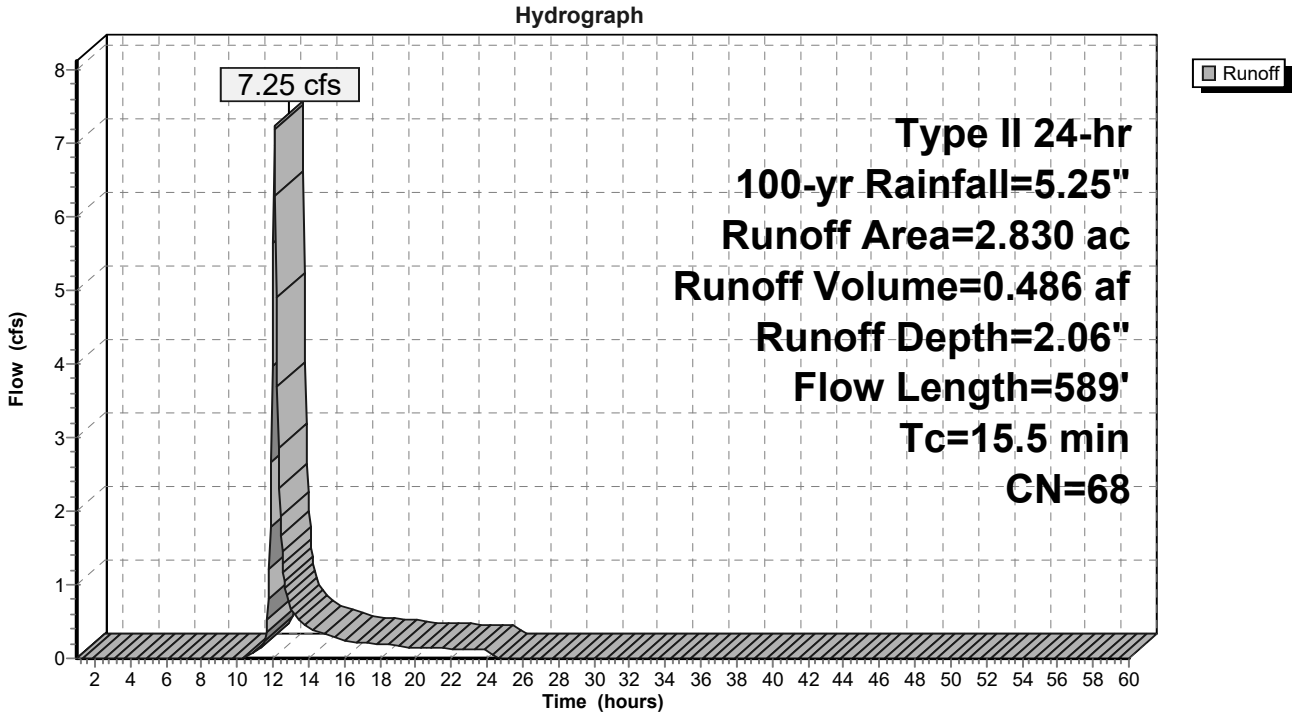
Runoff = 7.25 cfs @ 12.08 hrs, Volume= 0.486 af, Depth= 2.06"
Routed to Pond 102 : Proposed Infiltration Basin

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 lB)



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)

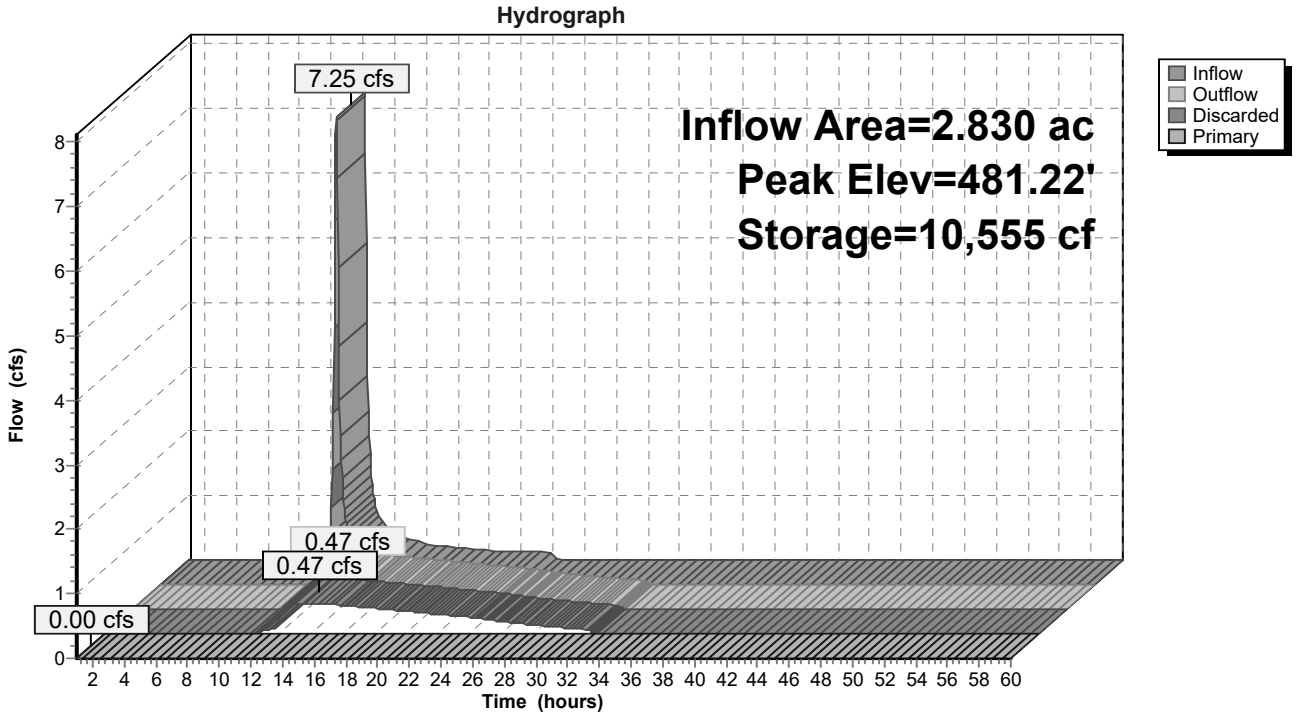
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.73'	**12.0" Round Culvert** L= 69.0' Ke= 0.500 Inlet / Outlet Invert= 478.73' / 476.83' S= 0.0275 '/' 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 Subcatchment 103: Pr Subarea A-2 (remainder to A)

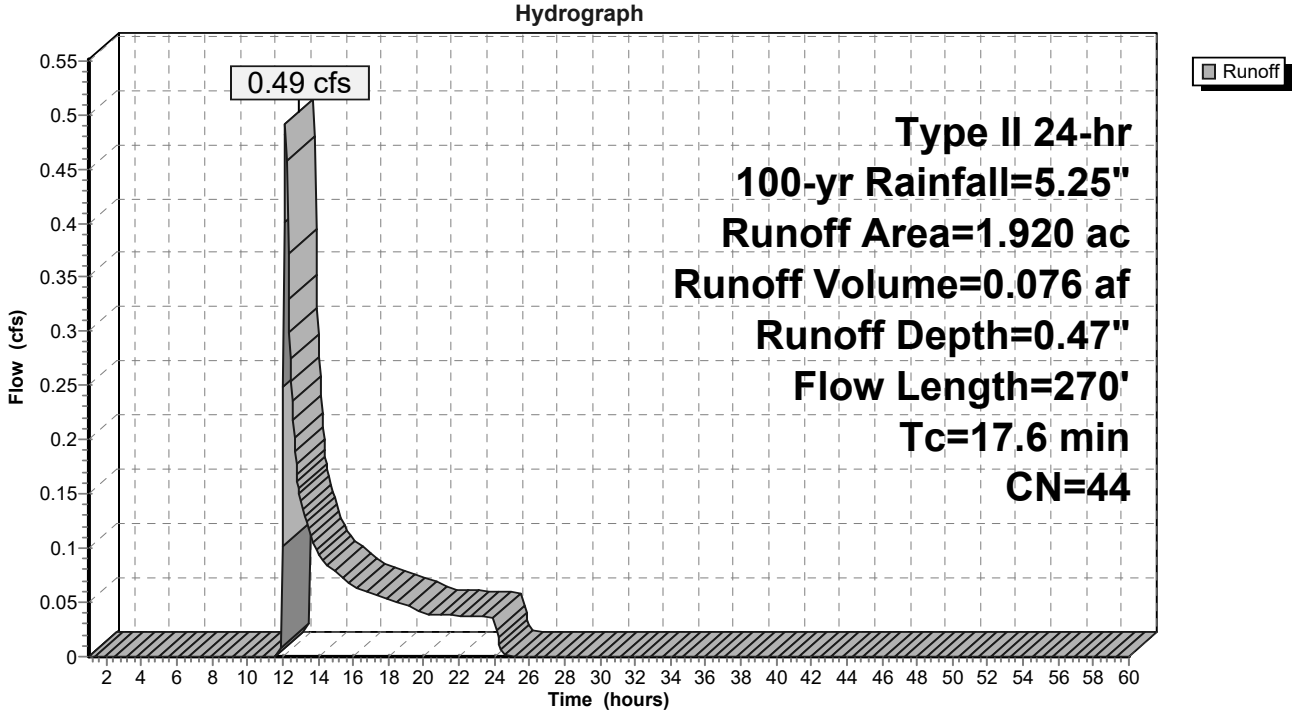
Runoff = 0.49 cfs @ 12.17 hrs, Volume= 0.076 af, Depth= 0.47"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

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)

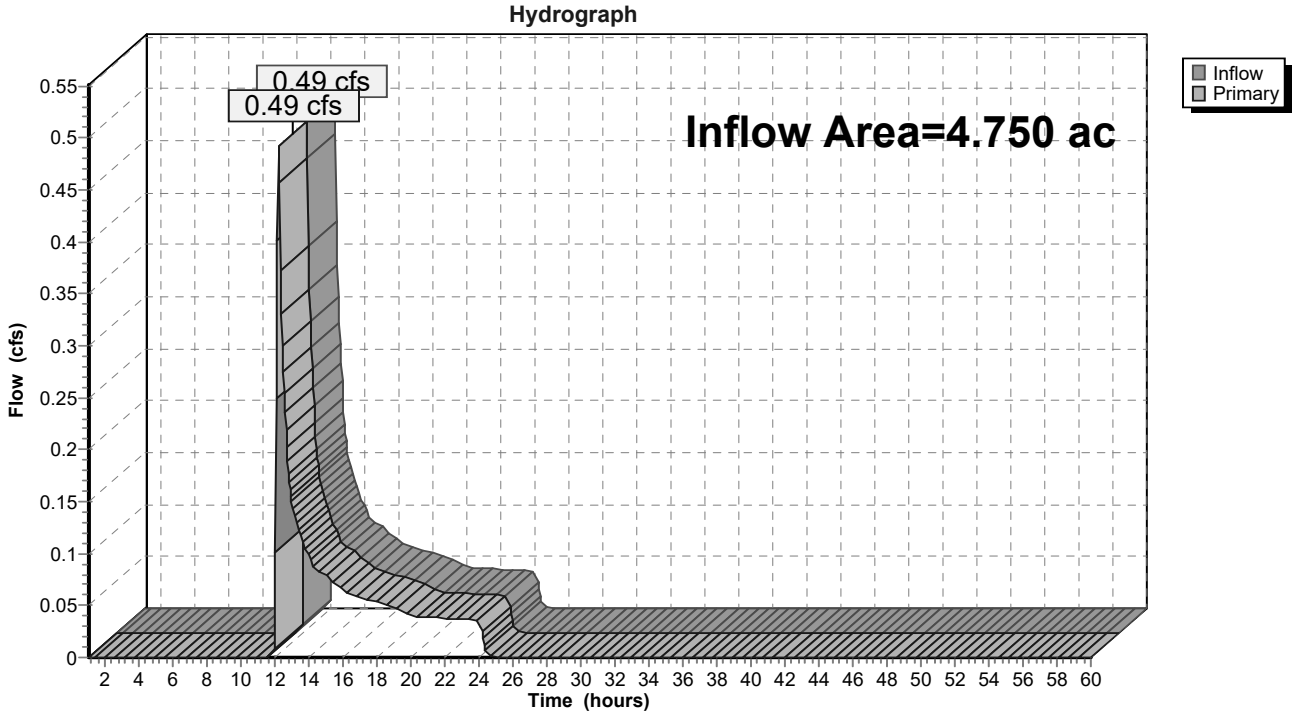


Summary for Link 104: Pr Subarea A Total (to ex IB)

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)



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)

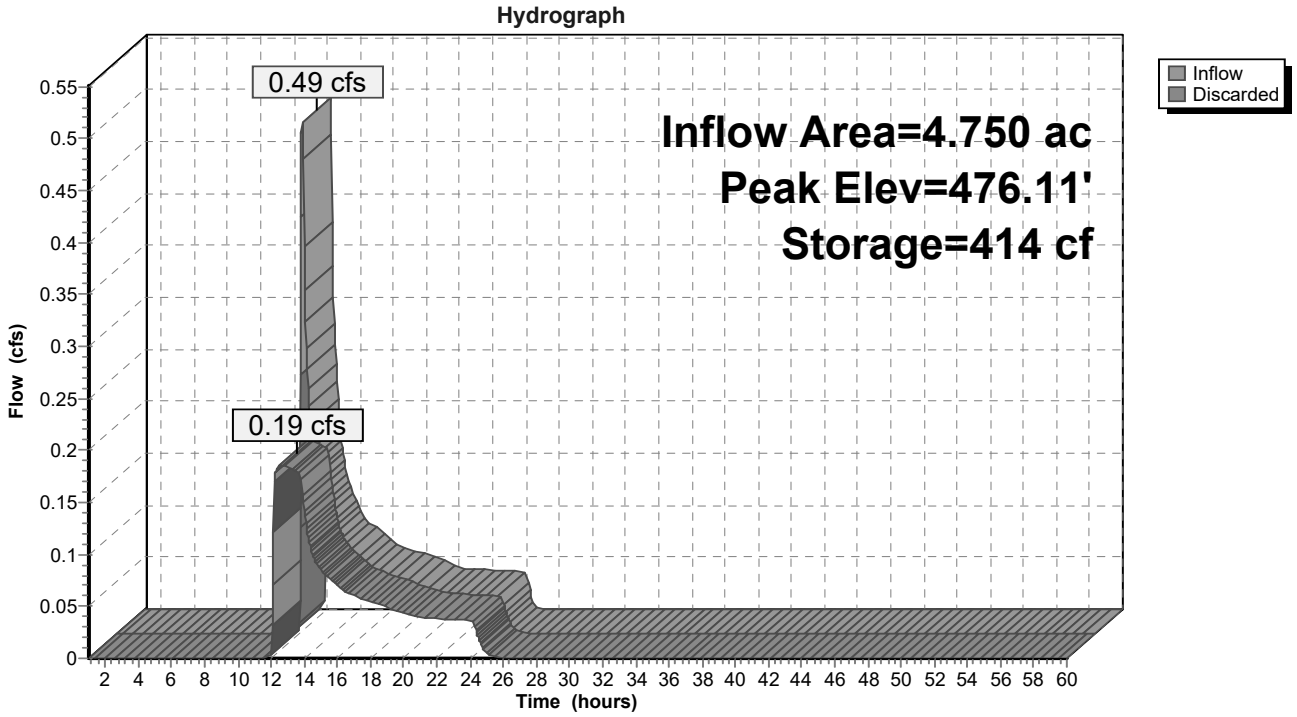
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 106: Pr Subarea B

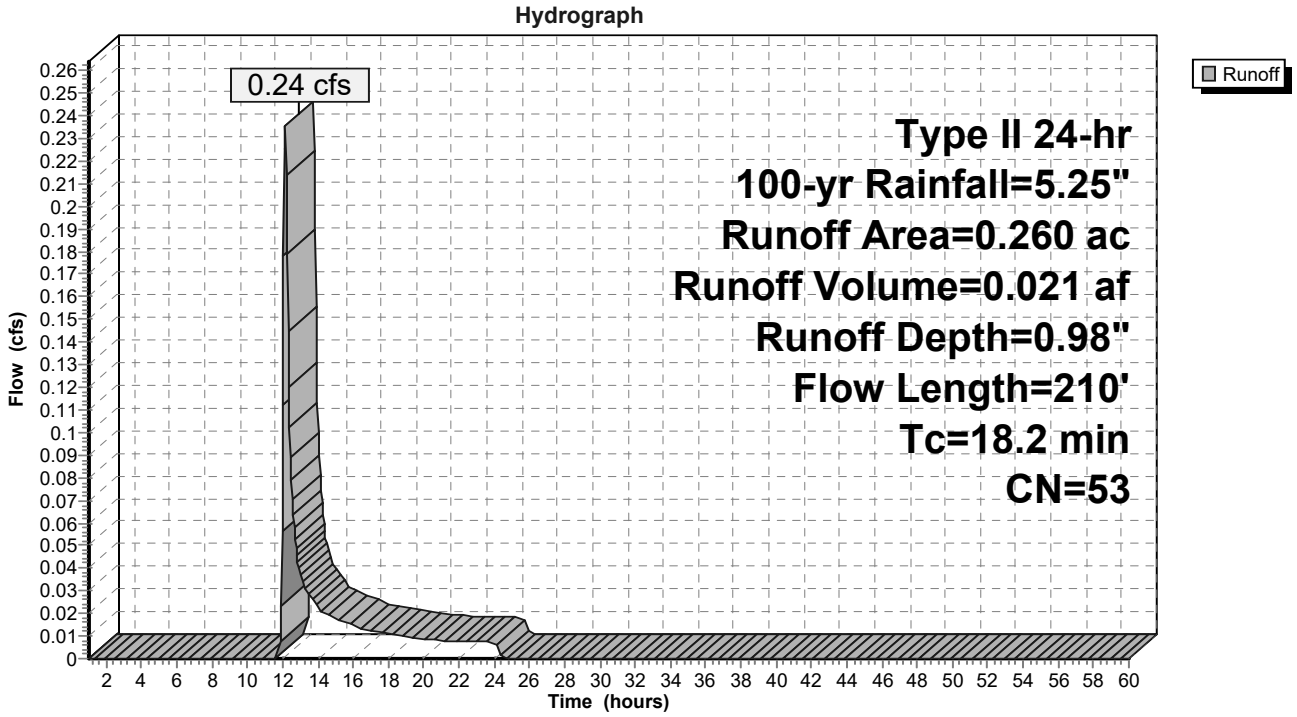
Runoff = 0.24 cfs @ 12.14 hrs, Volume= 0.021 af, Depth= 0.98"

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

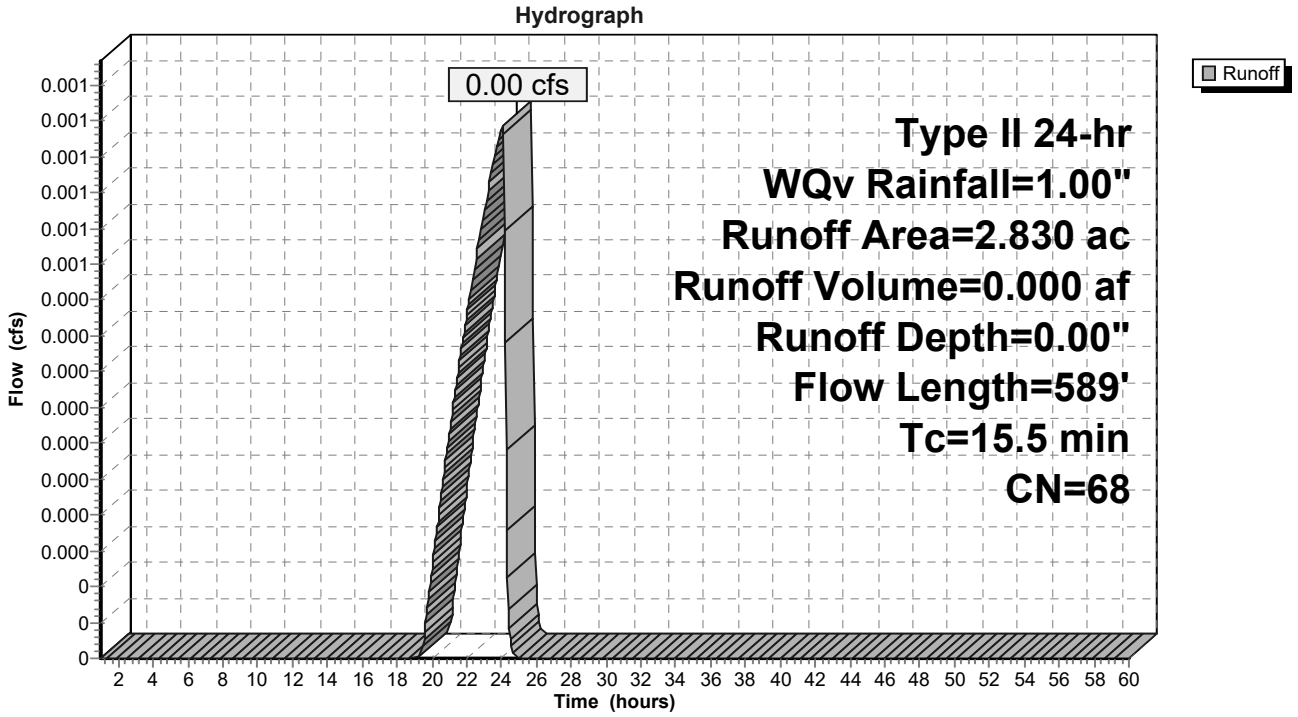
Runoff = 0.00 cfs @ 24.02 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Pond 102 : Proposed Infiltration Basin

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 WQv Rainfall=1.00"

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 Pond 102: Proposed Infiltration Basin

Inflow Area = 2.830 ac, 49.82% Impervious, Inflow Depth = 0.00" for WQv event
Inflow = 0.00 cfs @ 24.02 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 24.07 hrs, Volume= 0.000 af, Atten= 2%, Lag= 3.2 min
Discarded = 0.00 cfs @ 24.07 hrs, Volume= 0.000 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= 476.00' @ 24.07 hrs Surf.Area= 650 sf Storage= 1 cf

Plug-Flow detention time= 12.1 min calculated for 0.000 af (100% of inflow)
Center-of-Mass det. time= 12.2 min (1,365.0 - 1,352.8)

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

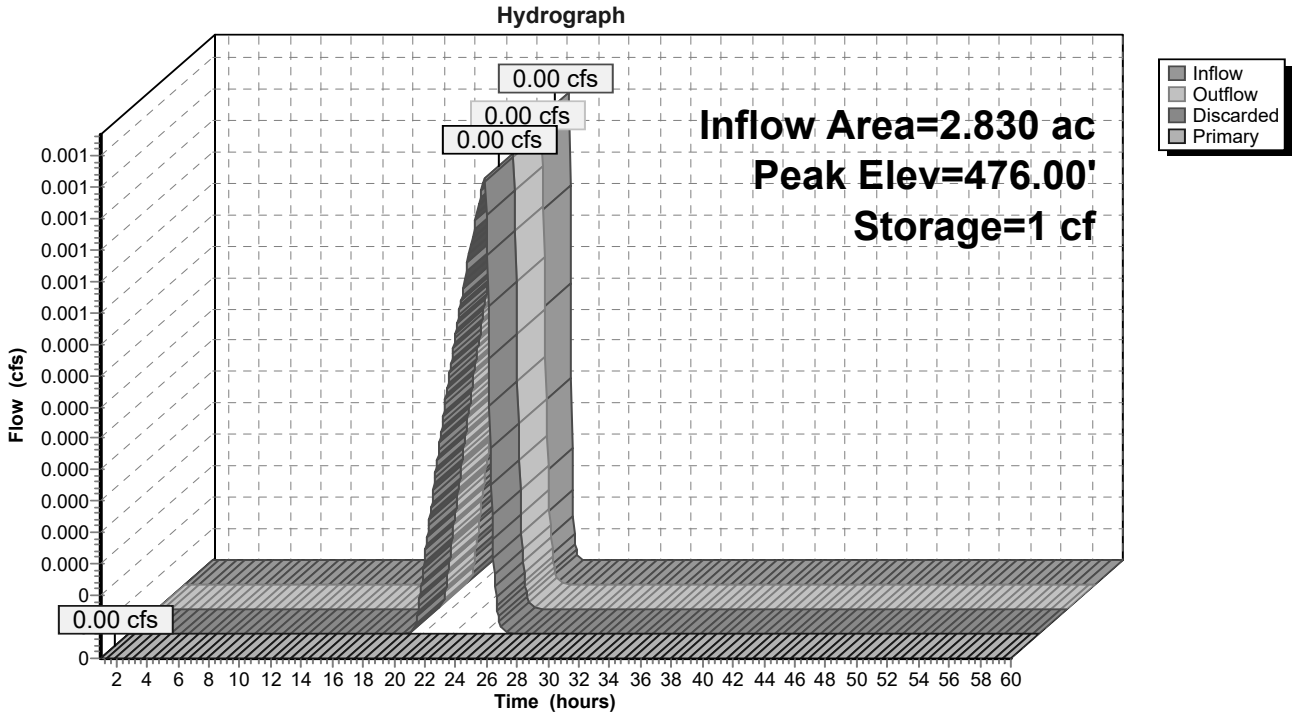
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
476.00	650	0	0
478.00	1,550	2,200	2,200
480.00	2,850	4,400	6,600
482.00	4,160	7,010	13,610
483.00	5,560	4,860	18,470

Device	Routing	Invert	Outlet Devices
#1	Primary	478.73'	**12.0" Round Culvert** L= 69.0' Ke= 0.500 Inlet / Outlet Invert= 478.73' / 476.83' S= 0.0275 '/' 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=0.06 cfs @ 24.07 hrs HW=476.00' (Free Discharge)
↑└**3=Exfiltration** (Controls 0.06 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 Subcatchment 103: Pr Subarea A-2 (remainder to A)

[45] Hint: Runoff=Zero

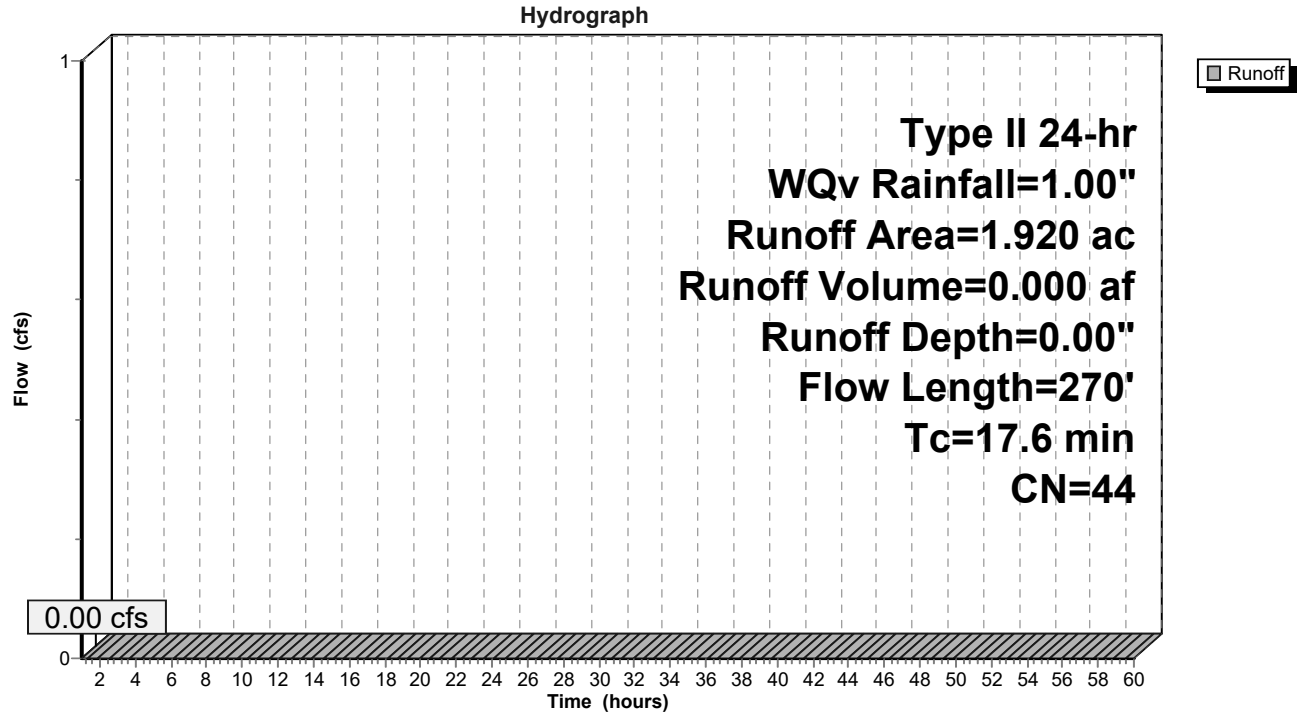
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 104 : Pr Subarea A Total (to ex IB)

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 WQv Rainfall=1.00"

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)

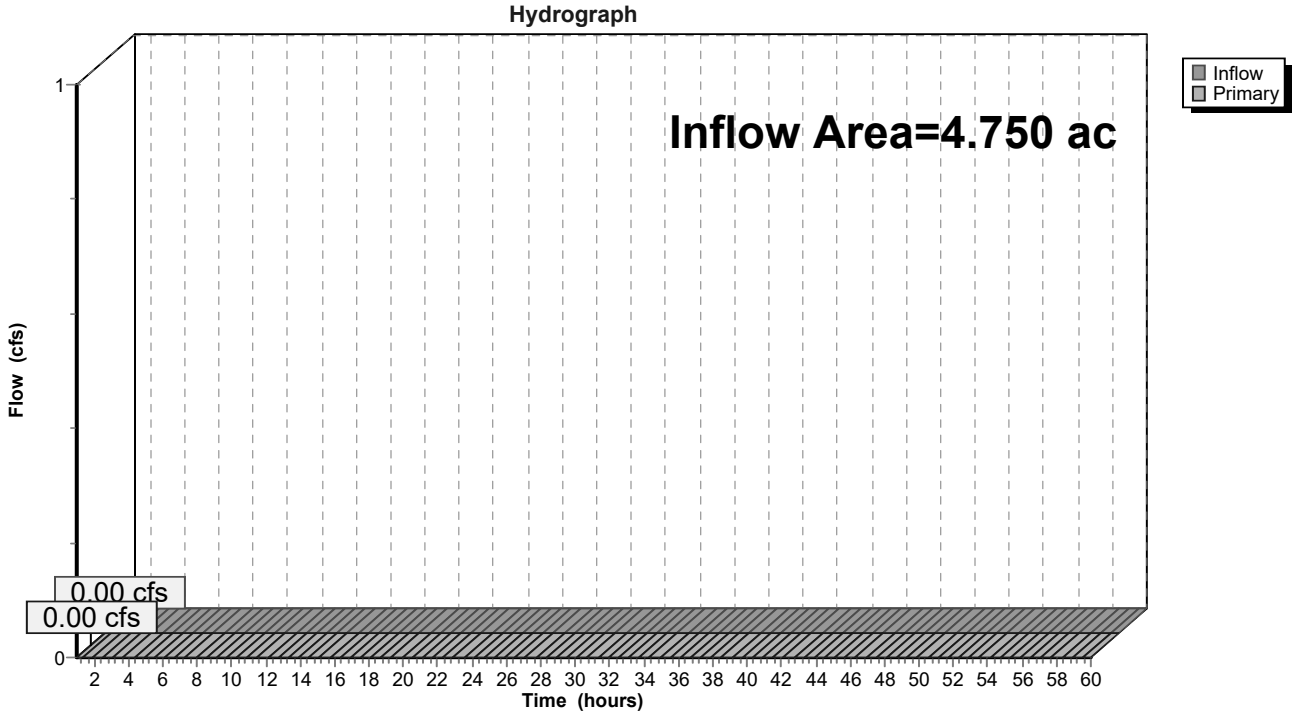


Summary for Link 104: Pr Subarea A Total (to ex IB)

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.00" for WQv 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 Pond 105: Existing IB

Inflow Area = 4.750 ac, 35.79% Impervious, Inflow Depth = 0.00" for WQv 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)

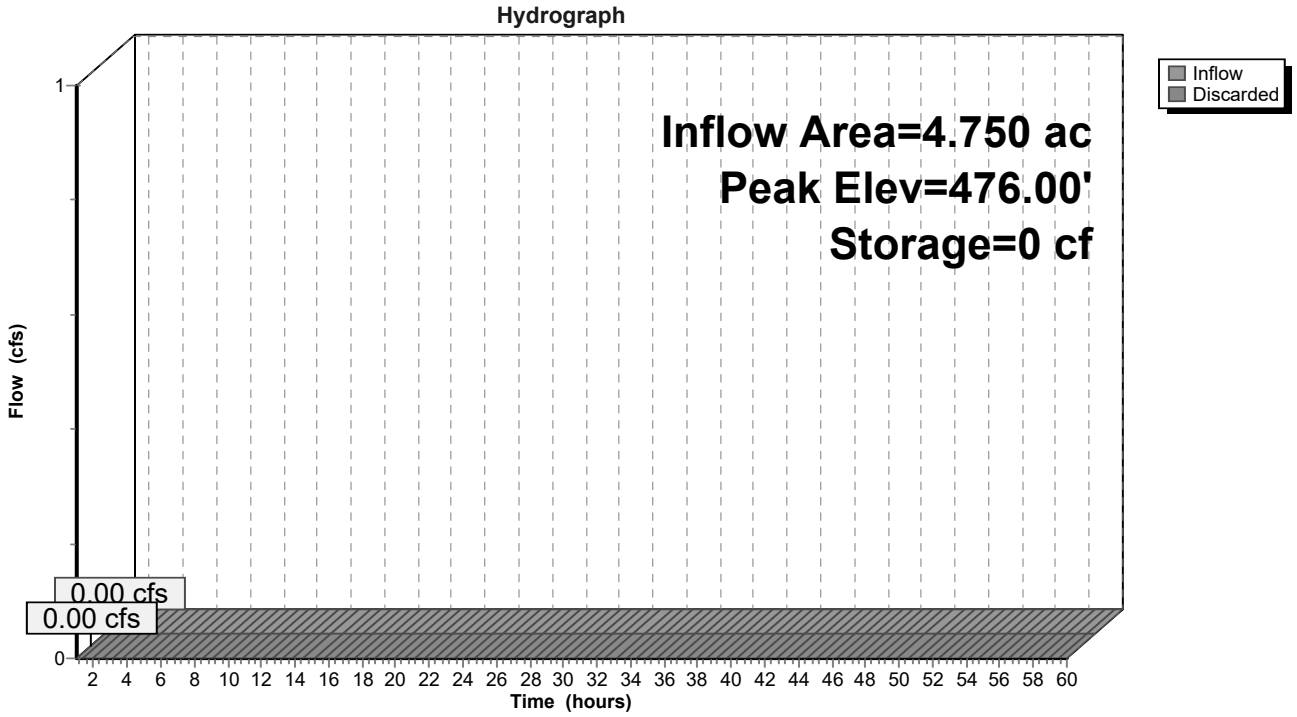
Volume	Invert	Avail.Storage	Storage Description
#1	476.00'	70,420 cf	**Existing IB (Prismatic)**Listed below (Recalc)

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 Subcatchment 106: Pr Subarea B

[45] Hint: Runoff=Zero

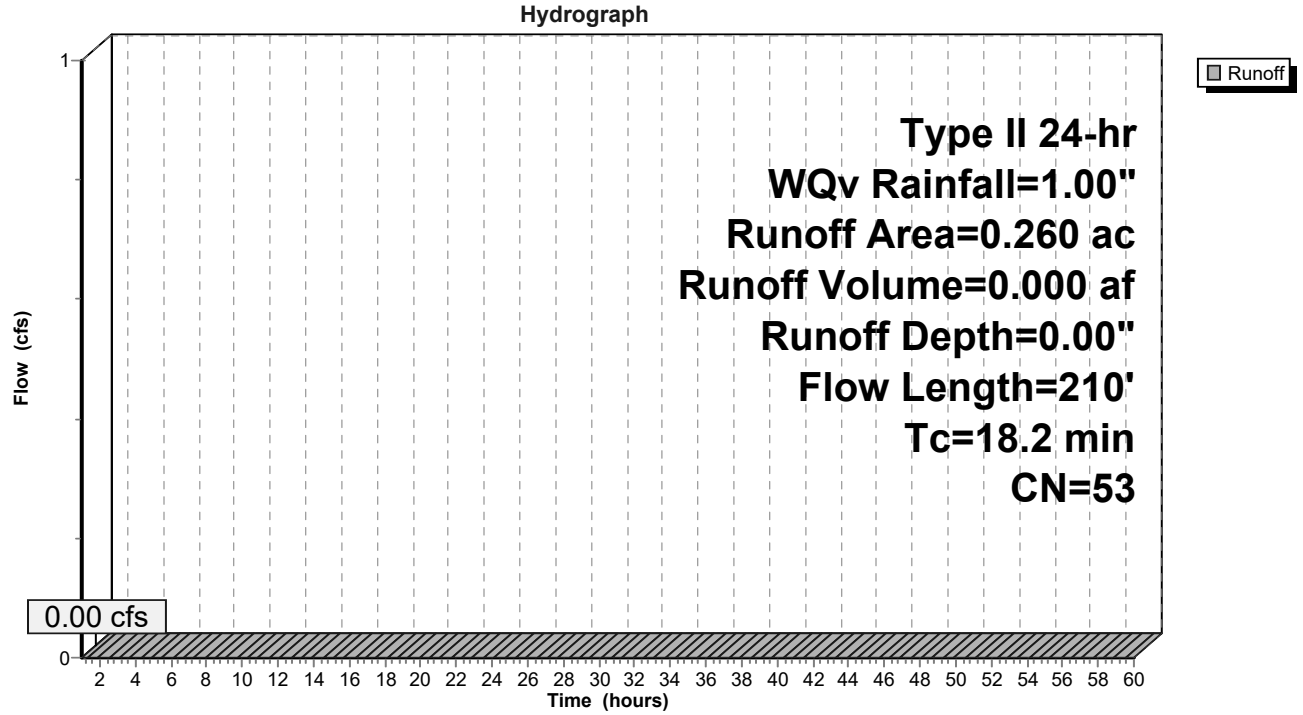
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

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 WQv Rainfall=1.00"

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



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)

THORNELL ROAD – COUNTY ROAD 33
(49.5' 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

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 1,117,141.84
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

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."

								BY
								DATE
								REVISIONS
7	6	5	4	3	2	1		

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FAIRPORT, NEW YORK 14450
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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					
P=	1.00	inches	*Enter 90% Rainfall Event as P*			
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**

BME ASSOCIATES

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** Area = Area to Pracitce
Impervious Area =	**1.01**	**acres**
I = % Impervious =	**38.8**	%
Weighted S Value =	**0.50**	

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

BME ASSOCIATES	***CALCULATIONS :***	Project No.: 2850
	Project: Hartwell Heights	Date: 11/14/2025
	WQv and RRv Summary	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

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

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
0.83± ACRES±

12" END SECTION
INV=482.00

D-2
TG=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

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

D-3.1
TG=491.1
2'x2' Gutter Inlet

2-STORY 6-UNITS (6-16)

2-STORY 10-UNITS (14-23)

D-3
TG=491.2
5' DIA STM MH

D-4
TG=492.7
5' DIA STM MH

D-4.1
TG=492.2
2'x2' Gutter Inlet

D-4.2
TG=492.5
2'x2' Field Inlet

D-4.3
TG=491.0
2'x2' INLET

D-5.1
TG=491.0
2'x2' Gutter Inlet

D-5
TG=491.8
5' DIA STM MH

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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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."

7			
6			
5			
4			
3			
2			
1			
	REVISIONS	DATE	BY

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: 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

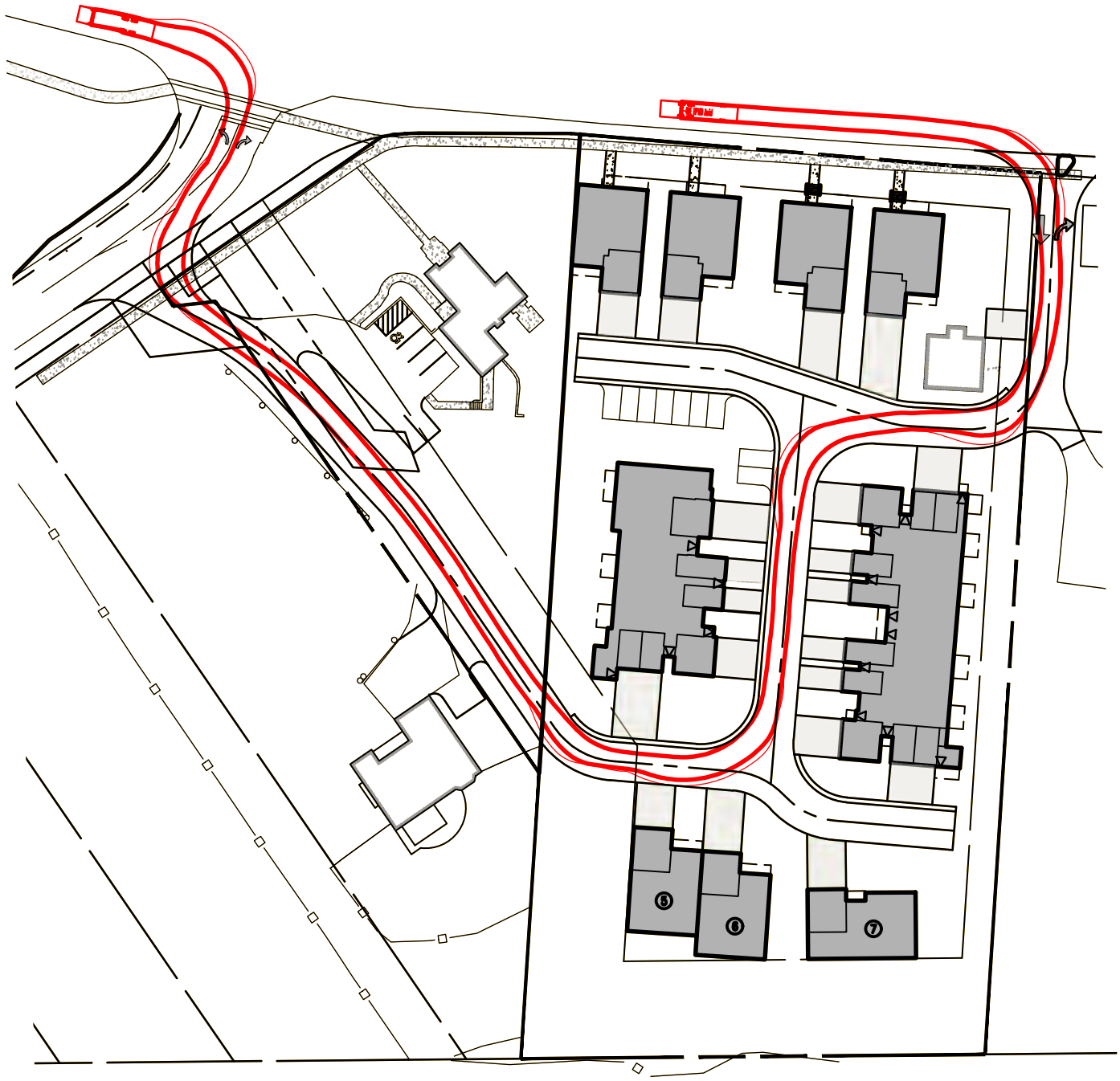
Project:	Hartwell Heights
Project No:	2850
Date:	11/14/25
By:	DTT
Sheet	2 of 2

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

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N

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 [redacted]
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: [redacted]
Fax: 585-324-4326
[redacted]

From: David Kruse <[redacted]
Sent: Tuesday, May 6, 2025 2:16 PM
To: Rob Kozarits [redacted]>; Oravec, Matthew C (DOT) [redacted]>; Raymond, John D [redacted]; Herdzik, Henry [redacted]
Cc: Peter Vars [redacted]; Ryan Destro [redacted]; Dennis Wilmot [redacted]
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.

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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

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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

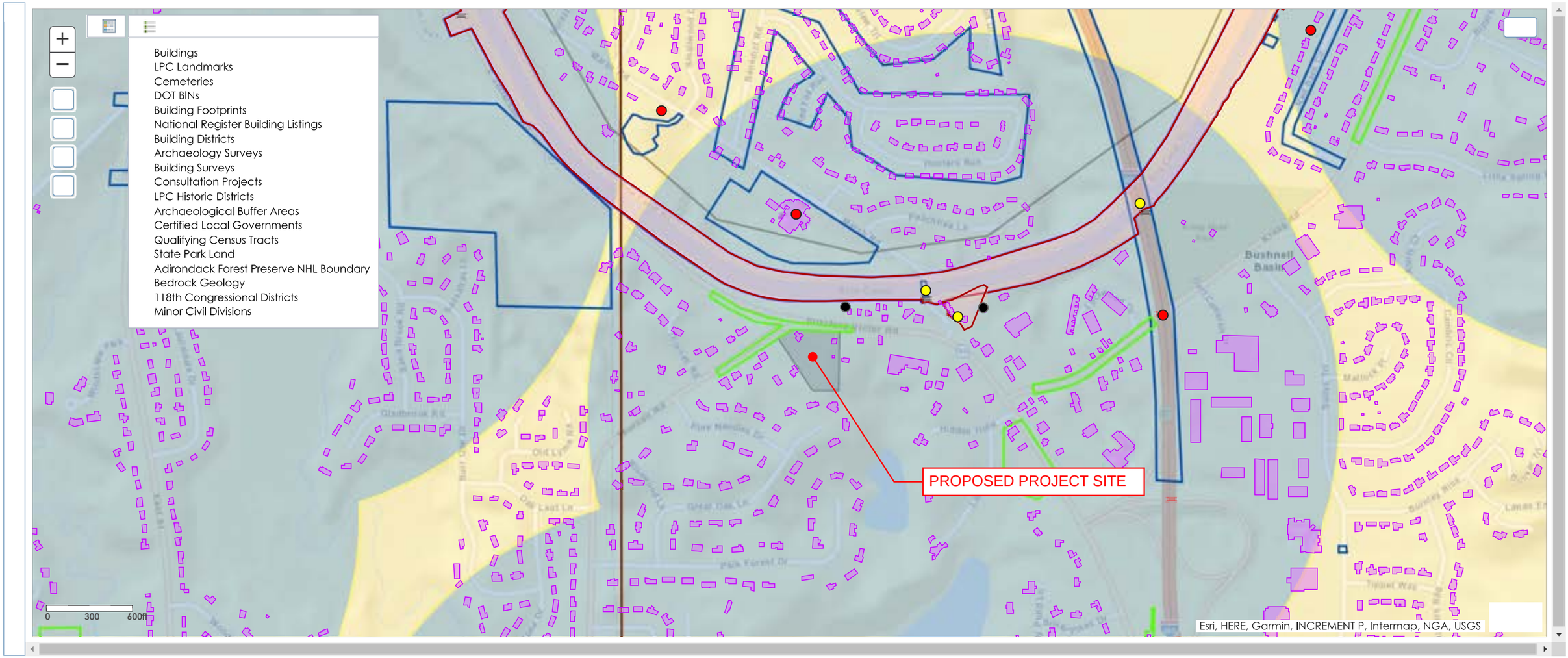
Appendix E

Background Information

NYS CRIS Map

CRIS

HOME SUBMIT SEARCH COMMUNICATE



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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

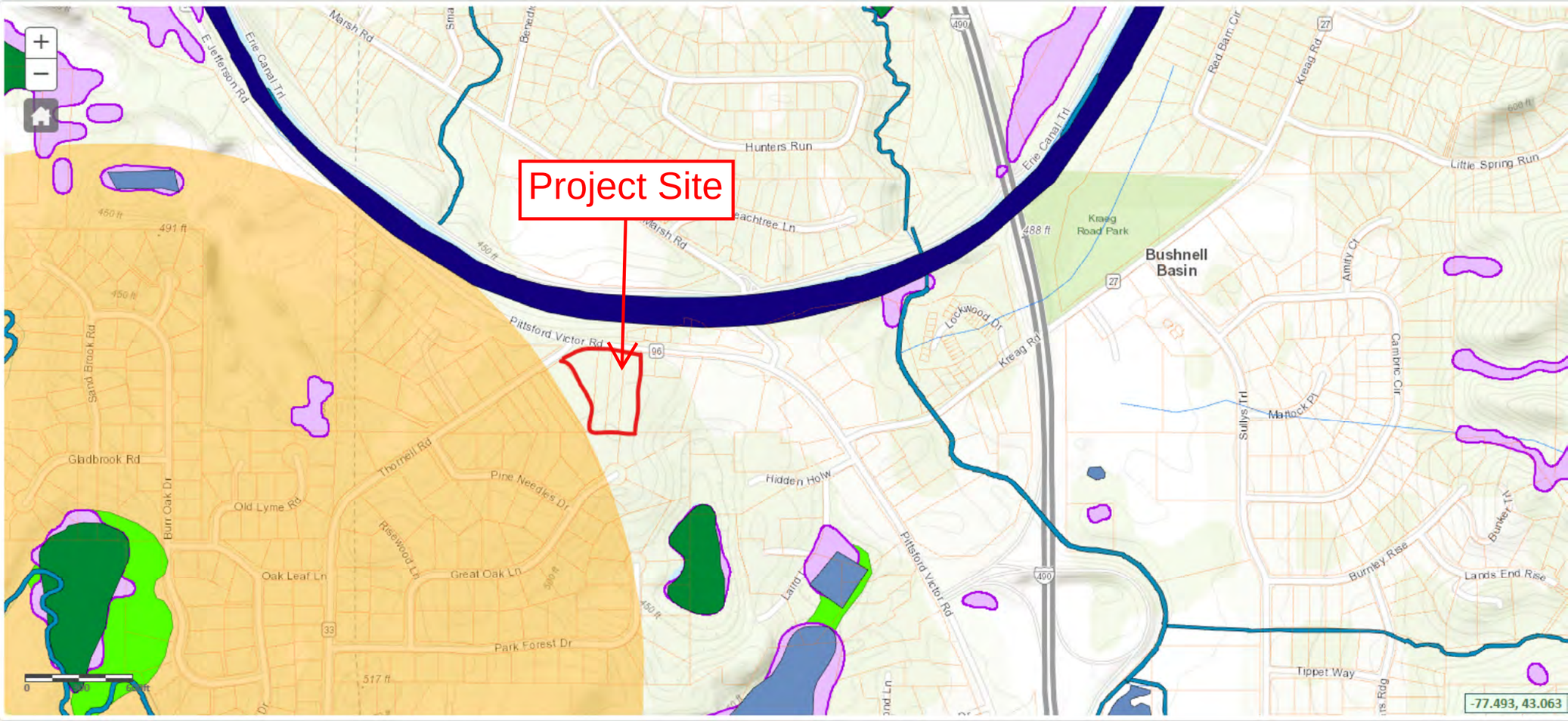
Wetland Layers

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, NNGS12
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 20-centimeter and 50-centimeter resolution natural color orthoimagery from photography dated April-May 2014.

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.


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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 Kosciol

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

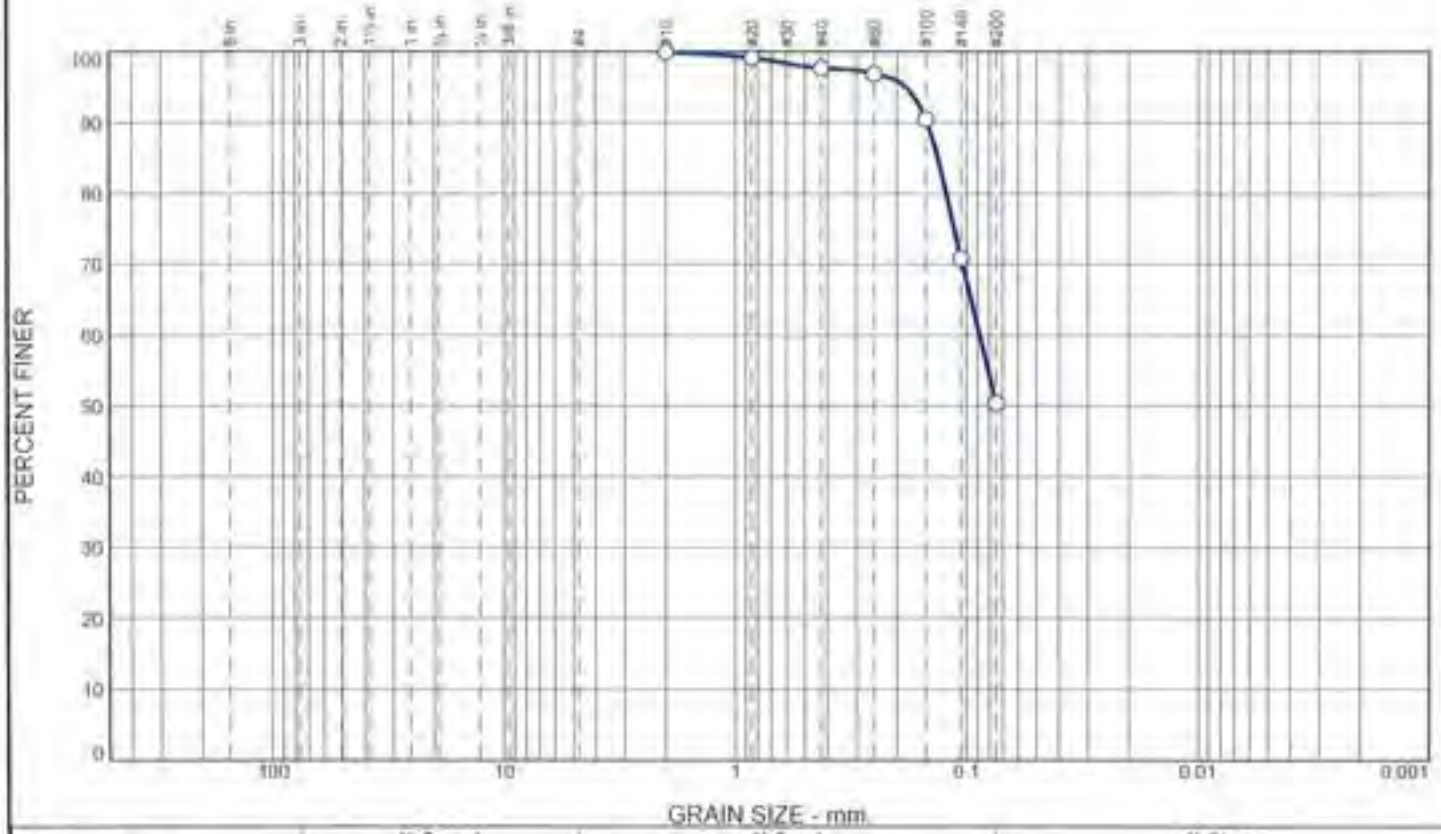
10.27.2025

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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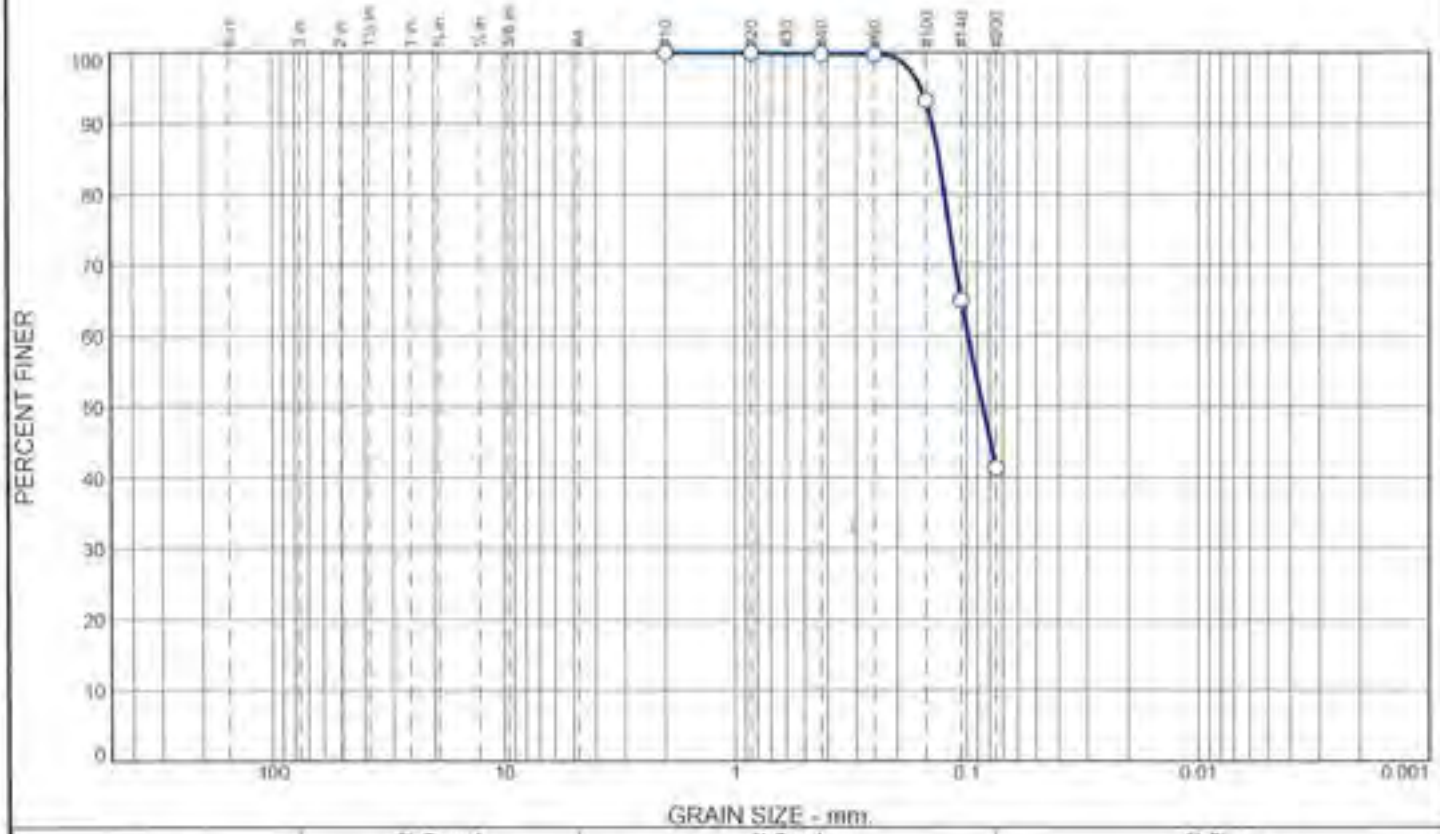
Client: WDG2, LLC, PO Box 34, Pittsford, New York 14534
Project: Harwell Heights - Infiltration Testing, 2 Thornell Road, Pittsford, New York

Project No: 25.060015.0 **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: WHG2, 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:** 10/23/2025

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Client: WDG2, LLC, PO Box 34, Pittsford, New York 14534
Project: Harwell Heights - Infiltration Testing, 2 Thornell Road, Pittsford, New York

Project No: 25.06015.0 **Figure**

Tested By: RLS **Checked By:** RJR

SECTION 5
Miscellaneous Materials

- Post-Construction Stormwater Management Practice (SMP) Operation & Maintenance Plan
- Post-Construction Maintenance and Management Inspection Checklists (from the NYSDEC Maintenance Guidance Stormwater Management Practices)
- General Permit – GP-0-25-001
- Notice of Termination Formwork
- Misc. Correspondence, Meeting Minutes, etc.

STORMWATER POLLUTION PREVENTION PLAN
POST-CONSTRUCTION OPERATION & MAINTENANCE (O & M) PLAN

As per the General Permit for Stormwater Discharges from Construction Activity (GP-025-001) Part III.B.2.:

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

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

Number of Stormwater Management Practices (SMP)s:	(2) Bioretention Areas
Who Owns the Stormwater Management Practice(s):	Property Owner
Who is responsible for long term operation and maintenance of the Stormwater Management Practice(s):	Property Owner

Contact Information: **Hartwell Heights HOA**	
Name:	Dennis Wilmont
Address:	P.O. Box 34 Pittsford, NY 14534
Phone:	[redacted]
Email:	[redacted]

<u>Post-Construction Maintenance and Inspection</u>:
Maintenance and inspection activities are recommended as per the Maintenance Guidance for Stormwater Management Practices (March 31, 2017):

Qualifications/Training of Inspectors	No special training, but person is provided educational materials, see Maintenance Guidance for Stormwater Management Practices (March 31, 2017) http://www.dec.ny.gov/docs/water_pdf/smpmaintguidance.pdf
Frequency of Inspection	At least annually
Inspection Guidance	See attached SMP Level 1 Inspection Checklist
Typical Maintenance Activities	Routine mowing. Trash removal. Plant care and upkeep. Mulching as needed. Removal of small amounts of sediment from pretreatment areas of the practice.

Bioretention Stormwater Management Practices Level 1 Inspection Checklist

SMP ID #		**SMP Owner**		☐ Private ☐ Public
SMP Location (Address; Latitude & Longitude)				
	Latitude		**Longitude**	

Party Responsible for Maintenance	**System Type**		**Type of Site**
☐ Same as SMP Owner ☐ Other _____	☐ Seasonal ☐ Continuous Use ☐ Other	☐ Above Ground ☐ Below Ground	☐ Commercial ☐ Industrial ☐ Residential ☐ State

Inspection Date		**Inspection Time**	
Inspector			
Date of Last Inspection			

BR Drainage Area

Look for areas that are uphill from the Bioretention cell.

Problem (Check if Present)	**Follow-Up Actions**
 ☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and mulch areas of bare soil to establish vegetation. ☐ Fill in erosion areas with soil, compact, and seed and straw to establish vegetation. ☐ If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ Other:

BR Drainage Area

Look for areas that are uphill from the Bioretention cell.

Problem (Check if Present)	Follow-Up Actions
	☐ Kick-Out to Level 2 Inspection: Large areas of soil have been eroded, or larger channels are forming. May require rerouting of flow paths.
 ☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Other:
 ☐ Open containers of oil, grease, paint, or other substances	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous. ☐ Other:

BR Inlets

Stand in the Bioretention cell itself and look for all the places where water flows in. Often there will be multiple points of inflow to the practice.

Problem (Check if Present)	Follow-Up Actions
 ☐ Inlets collect grit and debris or grass/weeds. Some water may not be getting into the Bioretention cell. The objective is to have a clear pathway for water to flow into the cell.	☐ Use a flat shovel to remove grit and debris (especially at curb inlets or openings). Parking lots generate fine grit that will accumulate at these spots. ☐ Pull out clumps of growing grass or weeds and scoop out the soil or grit that the plants are growing in. ☐ Remove any grass clippings, leaves, sticks, and other debris that is collecting at inlets. ☐ For pipes and ditches, remove sediment and debris that is partially blocking the pipe or ditch opening where it enters the Bioretention cell. ☐ Dispose of all material properly where it will not re-enter the Bioretention cell. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Inlets are blocked to the extent that most of the water does not seem to be entering the Bioretention cell.
 ☐ Some or all of the inlets are eroding so that rills, gullies, and other erosion is present, or there is bare dirt that is washing into the Bioretention cell.	☐ For small areas of erosion, smooth out the eroded part and apply rock or stone (e.g., river cobble) to prevent further erosion. Usually, filter fabric is placed under the rock or stone. ☐ In some cases, reseeding and applying erosion-control matting can be used to prevent further erosion. Some of these materials may be available at a garden center, but it may be best to consult a landscape contractor. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Erosion is occurring at most of the inlets, and it looks like there is too much water that is concentrating at these points. The inlet design may have to be modified.

BR Ponding Area

Examine the entire Bioretention surface and side slopes

Problem (Check if Present)	Follow-Up Actions
 ☐ Mulch (if used) needs to be replaced or replenished. The mulch layer had decomposed or is less than 1-inch thick.	☐ Add new mulch to a total depth (including any existing mulch that is left) of 2 to 3 inches. The mulch should be shredded hardwood mulch that is less likely to float away during rainstorms. ☐ Avoid adding too much mulch so that inlets are obstructed or certain areas become higher than the rest of the Bioretention surface. ☐ Other:
 ☐ Minor areas of sediment, grit, trash, or other debris are accumulating on the bottom.	☐ Use a shovel to scoop out minor areas of sediment or grit, especially in the spring after winter sanding materials may wash in and accumulate. Dispose of the material where it cannot re-enter the Bioretention cell . ☐ If removing the material creates a hole or low area, fill with soil mix that matches original mix and cover with mulch so that the Bioretention surface area is as flat as possible. ☐ Remove trash, vegetative debris, and other undesirable materials. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: Sediment has accumulated more than 2-inches deep and covers 25% or more of the Bioretention surface. ☐ Kick-Out to Level 2 Inspection: The Bioretention cell is too densely vegetated to assess sediment accumulation or ponding; see BR-4, Vegetation.

BR Ponding Area

Examine the entire Bioretention surface and side slopes

Problem (Check if Present)	Follow-Up Actions
 ☐ There is erosion in the bottom or on the side slopes. Water seems to be carving out rills as it flows across the Bioretention surface or on the slopes, or sinkholes are forming in certain areas. ☐ Source: Stormwater Maintenance, LLC.	☐ Try filling the eroded areas with clean topsoil or sand, and cover with mulch. ☐ If the problem recurs, you may have to use stone (e.g., river cobble) to fill in problem areas. ☐ If the erosion is on a side slope, fill with clay that can be compacted and seed and mulch the area. ☐ Other: ☐ Kick-Out to Level 2 Inspection: The problem persists or the erosion is more than 3-inches deep and seems to be an issue with how water enters and moves through the Bioretention cell. ☐ Kick-Out to Level 2 Inspection: The problem does not seem to be caused by flowing water, but a collapse or sinking of the surface (e.g., “sinkhole”) due to some underground problem.
 ☐ The bottom of the Bioretention cell is not flat, and the water pools at one end, along an edge, or in certain pockets. The whole bottom is not uniformly covered with water. See design plan to verify that bioretention surface is intended to be flat. Check during or immediately after a rainstorm.	☐ If the problem is minor (just small, isolated areas are not covered with water), try raking the surface OR adding mulch to low spots to create a more level surface. You may need to remove and replace plantings in order to properly even off the surface. ☐ Check the surface with a string and bubble level to get the surface as flat as possible. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Ponding water is isolated to less than half of the Bioretention surface area, and there seem to be elevation differences of more than a couple of inches across the surface.

BR Ponding Area

Examine the entire Bioretention surface and side slopes

Problem (Check if Present)	Follow-Up Actions
 ☐ Water stands on the surface more than 72 hours after a rainstorm and /or wetland-type vegetation is present. The Bioretention cell does not appear to be draining properly.	☐ Kick-Out to Level 2 Inspection: This is generally a serious problem, and it will be necessary to activate a Level 2 Inspection.

BR Vegetation

Examine all Bioretention cell vegetation.

Problem (Check if Present)	Follow-Up Actions
 ☐ Vegetation requires regular maintenance—pulling weeds, removing dead and diseased plants, replacing mulch around plants, adding plants to fill in areas that are not well vegetated, etc.	☐ If you can identify which plants are weeds or not intended to be part of the planting plan, eliminate these, preferably by hand pulling. ☐ If weeds are widespread, check with the local stormwater authority and/or Extension Office about proper use of herbicides for areas connected with the flow of water. ☐ Even vegetation that is intended to be present can become large, overgrown, and/or crowd out surrounding plants. Prune and thin accordingly. ☐ If weeds or invasive plants have overtaken the whole Bioretention cell , bush-hog the entire area before seedheads form in the spring. It will be necessary to remove the root mat manually or with appropriate herbicides, as noted above. ☐ Re-plant with species that are aesthetically pleasing and seem to be doing well in the Bioretention cell. ☐ Other: ☐ Kick-Out to Level 2 Inspection: You are unsure of the original planting design, or the vegetation maintenance task is beyond your capabilities of time, expertise, or resources. If you are unsure of the health of the vegetation (e.g. salt damage, invasives, which plants are undesirable) or the appropriate season to conduct vegetation management, consult a landscape professional before undertaking any cutting, pruning, mowing, or brush hogging.

BR Vegetation

Examine all Bioretention cell vegetation.

Problem (Check if Present)	Follow-Up Actions
 ☐ Vegetation is too thin, is not healthy, and there are many spots that are not well vegetated.	☐ The original plants are likely not suited for the actual conditions within the Bioretention cell . If you are knowledgeable about plants, select and plant more appropriate vegetation (preferably native plants) so that almost the entire surface area will be covered by the end of the second growing season. ☐ Other: ☐ Kick-Out to Level 2 Inspection: For all but small practices (e.g., rain gardens), this task will likely require a landscape design professional or horticulturalist.

BR Outlets

Examine outlets that release water out of the Bioretention cell.

Problem (Check if Present)	Follow-Up Actions
☐ Erosion at outlet	☐ Add stone to reduce the impact from the water flowing out of the outlet pipe or weir during storms. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Rills have formed and erosion problem becomes more severe.
 ☐ Outlet obstructed with mulch, sediment, debris, trash, etc.	☐ Remove the debris and dispose of it where it cannot re-enter the Bioretention cell . ☐ Other: ☐ Kick-Out to Level 2 Inspection: Outlet is completely clogged or obstructed; there is too much material to remove by hand or with simple hand tools.

Additional Notes:

Inspector:_____ Date: _____

Complete the following if follow-up/corrective actions were identified during this inspection:

Certified Completion of Follow-Up Actions:

"I hereby certify that the follow-up/corrective actions identified in the inspection performed on _____ (DATE) have been completed and any required maintenance deficiencies have been adequately corrected."

Inspector/Operator: _____ Date: _____



NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (NYSDEC)

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-25-001

Construction General Permit (CGP)

Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: January 29, 2025 Expiration Date: January 28, 2030

Scott E. Sheeley
Chief Permit Administrator

Authorized Signature Date: Jan. 29, 2025

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

PREFACE

Pursuant to Section 402 of the Clean Water Act (CWA), and 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), *stormwater discharges* from certain *construction activities* are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York State administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7 and 8, and Article 70, as well as 6 NYCRR Parts 621 and 750.

C*onstruction activities* constitute construction of a *point source* and, therefore, pursuant to ECL sections 17-0505, 17-0701, and 17-0803, the *owner or operator* must have coverage under a SPDES permit prior to *commencement of construction activities*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

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

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES CONSTRUCTION GENERAL PERMIT (CGP) GP-0-25-001
FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part I. How to Obtain Coverage and General Requirements

To be covered under this permit, the *owner or operator* must meet all eligibility requirements in Part I.A. and follow the requirements for obtaining permit coverage in Part I.D., F., or G.

A. Eligibility Requirements

For a *common plan of development or sale*, the *phase(s)* that meet the eligibility requirements in Part I.A. may obtain coverage under this permit even if other *phase(s)* of the same *common plan of development or sale* do not meet the eligibility requirements and require an individual SPDES permit.

1. The *owner's or operator's construction activities* involve soil disturbances of:
    a. one or more acres; or
    b. less than one acre which are part of a *common plan of development or sale* that will ultimately disturb one or more acres; or
    c. less than one acre where NYSDEC has determined that a SPDES permit is required for *stormwater discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of pollutants to *surface waters of the State*.
        i. 5,000 square feet or more, but less than one acre, and are in the New York City Watershed located east of the Hudson River, Appendix C Figure 1; or
        ii. 20,000 square feet or more, but less than one acre, within the municipal boundaries of the City of New York (NYC); or
        iii. less than 20,000 square feet which are part of a *common plan of development or sale* that will ultimately disturb 20,000 square feet or more, but less than one acre, within the municipal boundaries of NYC; or
        iv. that creates 5,000 square feet or more of *impervious area* within the municipal boundaries of NYC.

2. *Discharges* from the *owner's or operator's construction activities* are/were not:
    a. already covered by a different SPDES permit; or
    b. covered under a different SPDES permit that was denied, terminated, or revoked; or
    c. identified in an expired individual SPDES permit that was not renewed; or
    d. required to obtain an individual SPDES permit or another general SPDES permit in accordance with Part VII.K.
3. If *construction activities* may adversely affect a species that is endangered or threatened, the *owner or operator* must obtain a:
    a. permit issued pursuant to 6 NYCRR Part 182 for the project; or
    b. letter issued by NYSDEC of non-jurisdiction pursuant to 6 NYCRR Part 182 for the project.
4. If *construction activities* have the potential to affect an *historic property*, the *owner or operator* must obtain one of the following:
    a. documentation that the *construction activity* is not within an archeological buffer area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:
        i. 1-5 acres of disturbance - 20 feet; or
        ii. 5-20 acres of disturbance - 50 feet; or

        iii. 20+ acres of disturbance - 100 feet.
    b. NYSDEC consultation form sent to OPRHP,[1] and copied to NYSDEC's Agency Historic Preservation Officer (APO), and
        i. the State Environmental Quality Review Act (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
        ii. documentation from OPRHP that the *construction activity* will result in No Impact; or
        iii. documentation from OPRHP providing a determination of No Adverse Impact; or
        iv. a Letter of Resolution signed by the *owner or operator*, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA).
    c. documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:
        i. No Affect; or
        ii. No Adverse Affect; or
        iii. Executed Memorandum of Agreement.
    d. documentation that SHPA Section 14.09 has been completed by NYSDEC or another state agency.
5. If *construction activities* are subject to SEQR, the *owner or operator* must obtain documentation that SEQR has been satisfied.
6. If *construction activities* are not subject to SEQR, but subject to the equivalent environmental review from another New York State or federal agency, the

[1] The consultation form can be submitted, along with other project information, through OPRHP's Cultural Resource Information System (CRIS) portal. If submitted through CRIS, paper copies of the consultation form need not be mailed.

owner or operator must obtain documentation that project review, pursuant to a process equivalent to SEQR from another New York State or federal agency, has been satisfied.

7. If *construction activities* require Uniform Procedures Act (UPA) Permits (see 6 NYCRR Part 621) from NYSDEC, or the equivalent from another New York State or federal agency, the *owner or operator* must:
    a. obtain all such necessary permits; or
    b. receive notification from NYSDEC pursuant to 6 NYCRR 621.3(a)(4) excepting Part I.A.7.a.
8. *Construction activities* are not eligible if they meet the following criteria in Part I.A.8.a. or b.:
    a. For linear transportation and linear utility project types, the *construction activities*:
        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and
        ii. are undertaken on land with no existing *impervious cover*; and
        iii. disturb two or more acres of *steep slope*.
    b. For all other project types, the *construction activities*:
        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and
        ii. are undertaken on land with no existing *impervious cover*; and
        iii. disturb one or more acres of *steep slope*.

B. Types of *Discharges* Authorized

1. The following *stormwater discharges* are authorized under this permit:

   a. *Stormwater discharges*, including *stormwater* runoff, snowmelt runoff, and surface runoff and drainage, associated with *construction activity*, are authorized under this permit provided that appropriate *stormwater* controls are designed, installed, and maintained in accordance with Part II. and Part III.

   b. *Stormwater discharges* from construction support activities at the *construction site* (including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) if the following requirements are met:

      i. The support activity is directly related to the *construction site* required to have permit coverage for *stormwater discharges*; and

      ii. The support activity is not a commercial operation, nor does it serve multiple unrelated *construction sites*; and

      iii. The support activity does not continue to operate beyond the completion of the *construction activity* at the site it supports; and

      iv. *Stormwater* controls are implemented in accordance with Part II. and Part III. for *discharges* from the support activity areas.

2. The following non-*stormwater discharges* associated with *construction activity* are authorized under this permit:

   a. Non-*stormwater discharges* listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "*Discharges* from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; and

   b. Non-*stormwater discharges* of waters to which other components have not been added that are used in accordance with the *SWPPP* to control dust or irrigate vegetation in stabilized areas; and

   c. Uncontaminated *discharges* from *dewatering* operations

3. Authorized *discharges* of *stormwater* or authorized *discharges* of non-*stormwater*, commingled with a *discharge* authorized by a different SPDES permit and/or a *discharge* that does not require SPDES permit authorization, are also authorized under this permit.

C. Prohibited *Discharges*

1. Non-*stormwater discharges* prohibited under this permit include but are not limited to:

   a. Wastewater from washout of concrete; and

   b. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and

   c. Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance; and

   d. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and

   e. Toxic or hazardous substances from a spill or other release.

D. Electronic Notice of Intent (eNOI) Submittal

To receive authorization in accordance with Part I.D.3.b., the *owner or operator* must submit a complete eNOI in accordance with the requirements in Part I.D. The eNOI contains questions to: ensure eligibility requirements in Part I.A. have been met; obtain *owner or operator* contact information; obtain the total area to be disturbed and the existing/future *impervious areas* (rounded to the nearest tenth of an acre); confirm *Traditional Land Use Control MS4 Operator* jurisdiction over construction projects; satisfy the EPA eRule requirements; confirm that the Water Quality-Based Effluent Limitations in Part II. have been met; demonstrate consideration of the future risks due to climate change in accordance with Part III.A.2.; and confirm that the other *Stormwater Pollution Prevention Plan (SWPPP)* requirements in Part III. have been met.

1. An eNOI may be submitted for:

   a. *construction activities* that are not part of a *common plan of development or sale*; or

   b. an entire *common plan of development or sale*; or

   c. separate *phase(s)* of a *common plan of development or sale* if the following requirements are met:

      i. the *common plan of development or sale* meets the eligibility requirements of Part I.A.5. or 6.; and

      ii. the *phase(s)* meet(s) all other eligibility requirements of Part I.A.; and

      iii. Part III.C. Required *SWPPP* Components by Project Type is based on the *common plan of development or sale*, not the *phase(s)*; or

   d. *tree clearing* that is associated with, or will support, a *renewable energy* generation, transmission, or storage project that meets Part I.A.5. and 6., if the *tree clearing*:

      i. meets all other eligibility requirements of Part I.A.; and

      ii. will occur in NYSDEC's Regions 3-9; and

      iii. is not within ¼ mile of a bat hibernaculum protected pursuant to 6 NYCRR Part 182; and

      iv. will occur between November 1st and March 31st.

2. As prerequisites for submitting an eNOI, the *owner or operator* must:

   a. prepare a *SWPPP* for Part I.D.1.a., b., c., or d. in accordance with Part III.; and

   b. based on the following criteria, upload the following signature forms signed in accordance with Part VII.J. to the eNOI prior to submission:

      i. for all eNOIs:

         1. the SWPPP Preparer Certification Form, Appendix F, signed by the *SWPPP* preparer; and

         2. the Owner/Operator Certification Form, Appendix J, signed by the *owner or operator*; and

      ii. if an eNOI includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that will *discharge* to the *MS4(s)*:

         1. determine if the *Traditional Land Use Control MS4 Operator(s)* have review authority. A *Traditional Land Use Control MS4 Operator* does not have review authority where:

            a. the *owner or operator* of the *construction activities* in Part I.D.2.b.ii. is the same entity as the *Traditional Land Use Control MS4 Operator* identified in Part I.D.2.b.ii.; or

            b. there is a statute exempting the *owner or operator* from zoning review by the *Traditional Land Use Control MS4 Operator*; or

            c. there is no such statute per Part I.D.2.b.ii.1.b., the *Traditional Land Use Control MS4 Operator* concludes, after public hearing, that it does not have zoning review authority in accordance with Legal Memorandum LU14 Updated January 2020 "Governmental Immunity from Zoning and Other Legislation"; and

         2. if the *Traditional Land Use Control MS4 Operator(s)* have review authority, submit the *SWPPP* to the *Traditional Land Use Control MS4 Operator(s)* for review and have:

            a. if outside the municipal boundaries of NYC: the MS4 SWPPP Acceptance Form, Appendix G, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.; or

b. if within the municipal boundaries of NYC: The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval Form, Appendix H, signed by the principal executive officer or ranking elected official from the Traditional Land Use Control MS4 Operator, or by a duly authorized representative of that person in accordance with Part VII.J.2.; and

3. if the *Traditional Land Use Control MS4 Operator* does not have review authority, have the MS4 No Jurisdiction Form, Appendix I, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.

3. Submitting an eNOI:

   a. The *owner or operator* must submit a complete Notice of Intent electronically using a NYSDEC approved form.[2]

   b. The *owner or operator* is authorized to *commence construction activity* as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

      i. If an eNOI is received for a *SWPPP* that deviates from one of the technical standards but demonstrates *equivalence* in accordance with Part III.B.1.a.ii. or Part III.B.2.b.ii., if the *SWPPP* includes *construction activities* that are not within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)*, and/or if the *SWPPP* includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that do not have review authority in accordance with Part I.D.2.b.ii.1., the authorization date indicated in the LOA will be 60 business days after the eNOI submission date.

[2] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

c. If *Traditional Land Use Control MS4 Operator(s)* have review authority in accordance with Part I.D.2.b.ii.2., the *owner or operator* must, within five business days of receipt of the LOA, send an electronic copy of the LOA to the *Traditional Land Use Control MS4 Operator(s)* with review authority.

E. General Requirements for *Owners or Operators* with Permit Coverage

1. As of the date the LOA is received, the *owner or operator* must make the eNOI, *SWPPP*, and LOA available for review and copying in accordance with the requirements in Part VII.H. When applicable, as of the date an updated LOA is received, the *owner or operator* must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

2. The *owner or operator* must ensure compliance with all requirements of this permit and that the provisions of the *SWPPP*, including any changes made to the *SWPPP* in accordance with Part III.A.5., are properly implemented and maintained from the *commencement of construction activity* until:

   a. all areas of disturbance have achieved *final stabilization;* and

   b. the owner's or operator's coverage under this permit is terminated in accordance with Part V.A.5.a.

3. As of the date of the *commencement of construction activities* until Part I.E.2.a. and b. have been met, the *owner or operator* must maintain at the *construction site*, a copy of:

   a. all documentation necessary to demonstrate eligibility with this permit; and

   b. this permit; and

   c. the *SWPPP*; and

   d. the signed SWPPP Preparer Certification Form; and

   e. the signed MS4 SWPPP Acceptance Form or signed NYCDEP SWPPP Acceptance/Approval Form or signed MS4 No Jurisdiction Form (when applicable); and

   f. the signed Owner/Operator Certification Form; and

g. the eNOI; and

h. the LOA; and

i. the LOA transmittal to the Traditional Land Use Control MS4 Operator in accordance with Part I.D.3.c. (when applicable).

4. The *owner or operator* must maintain at the *construction site*, until Part I.E.2.a. and b. have been met, as of the date the documents become final or are received, a copy of the:

   a. responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7.; and

   b. inspection reports in accordance with Part IV.C.4. and 6.; and

   c. Request to Disturb Greater Than Five Acres and the Authorization Letter to Disturb Greater Than Five Acres in accordance with Part I.E.6. (when applicable); and

   d. Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4. (when applicable); and

   e. The updated LOA(s) in accordance with Part I.E.9. (when applicable).

5. The *owner or operator* must maintain the documents in Part I.E.3. and 4. in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the *owner or operator* must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

6. The *owner or operator* must meet the following requirements prior to disturbing greater than five acres of soil at any one time:

   a. The *owner or operator* must submit a written Request to Disturb Greater Than Five Acres to:

i. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, if a *Traditional Land Use Control MS4 Operator* does not have review authority in accordance with Part I.D.2.b.ii.1.; or

ii. the *Traditional Land Use Control MS4 Operator*, if a *Traditional Land Use Control MS4 Operator* has review authority in accordance with Part I.D.2.b.ii.1.; or

iii. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, and each involved *Traditional Land Use Control MS4 Operator*, if the project spans multiple municipalities with more than one *Traditional Land Use Control MS4 Operator* involved with review authority in accordance with Part I.D.2.b.ii.1.

   b. The written Request to Disturb Greater Than Five Acres must include:

      i. The SPDES permit identification number (Permit ID); and

      ii. Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and

      iii. The phasing plan for the project and sequencing plans for all *phases* from the *SWPPP* in accordance with Part III.B.1.d.; and

      iv. Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and

      v. Acknowledgment that "the *owner or operator* will comply with the requirements in Part IV.C.2.b."; and

      vi. Acknowledgment that "the *owner or operator* will comply with the requirements in Part II.B.1.b."

   c. The *owner or operator* must be in receipt of an Authorization Letter to Disturb Greater Than Five Acres, which will include when the

authorization begins and ends and indicate a maximum area (acres) of soil disturbance allowed at any one time, from:

i. NYSDEC, if Part I.E.6.a.i. or iii. apply; or

ii. the *Traditional Land Use Control MS4 Operator*, if Part I.E.6.a.ii. applies.

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

8. If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE).[3] *Construction activity* shall not resume until written permission to do so has been received from the RWE.

9. To be authorized to implement modifications to the information previously submitted in the eNOI, the *owner or operator* must:

   a. notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI; and

   b. update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D.; and

   c. receive an updated LOA.

10. The eNOI, *SWPPP*, LOA, updated LOAs (when applicable), and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

[3] The Regional Water Manager where a DEC Region does not have a RWE.

F. Permit Coverage for *Discharges* Authorized Under GP-0-20-001

When applicable:

1. Upon the effective date of this permit, an *owner or operator* of *a construction activity*, with coverage under GP-0-20-001, will have interim coverage under GP-0-25-001 for 45 calendar days starting on the effective date of GP-0-25-001 so long as the *owner or operator* maintains compliance with all applicable requirements of this permit.

2. Within 30 calendar days of the effective date of this permit, the *owner or operator*, with coverage under GP-0-20-001, must submit a complete Request to Continue Coverage electronically using a NYSDEC approved form,[4] which contains the information identified in Part I.F.3. below, if:

   a. the *owner or operator* continues to implement the SMP component in conformance with the technical standards in place at the time of initial project authorization; and

   b. the *owner or operator* will comply with all non-design requirements of GP-0-25-001.

3. The Request to Continue Coverage form contains questions to: ensure eligibility requirements in Part I.A. have been met; verify *owner or operator* contact information; verify the permit identification number; verify the original eNOI submission ID, if applicable; verify Part I.F.2.a. and b.; verify the version of the Design Manual that the technical/design components conform to; and receive an updated Owner/Operator Certification Form, Appendix I.

4. The *owner or operator* has obtained continued coverage under GP-0-25-001 as of the date indicated in the LOCC, which is sent by NYSDEC after a complete Request to Continue Coverage form is submitted.

5. If the owner or operator does not submit the Request to Continue Coverage form in accordance with Part I.F.2. and 3., coverage under this permit is automatically terminated after interim coverage expires.

[4] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

G. Change of *Owner or Operator*

When applicable:

1. When property ownership changes, or when there is a change in operational control over the construction plans and specifications, the following process applies:

   a. The new *owner or operator* must meet the applicable prerequisites for submitting an eNOI in accordance with Part I.D.2.; and

   b. The new *owner or operator* must submit an eNOI in accordance with Part I.D.3.; and

   c. Permit coverage for the new *owner or operator* will be effective upon receipt of the LOA in accordance with Part I.D.3.b.; and

   d. The new *owner or operator*, upon receipt of their LOA, must provide their Permit ID to the original *owner or operator*; and

   e. If the original *owner or operator* will no longer be the *owner or operator* of the *construction activity* identified in the original *owner's or operator's* eNOI, the original *owner or operator*, upon receipt of the new *owner's or operator's* Permit ID in accordance with Part I.G.1.d., must submit to NYSDEC a completed eNOT in accordance with Part V. that includes the name and Permit ID of the new *owner or operator*; or

   f. If the original *owner or operator* maintains ownership of a portion of the *construction activity*, the original *owner or operator* must maintain their coverage under the permit by modifying their eNOI; modifications to the eNOI must include:

      i. the revised area of disturbance and/or *impervious area(s)*; and

      ii. the revised SMP information, if applicable; and

      iii. a narrative description of what has changed; and

      iv. the new *owner's or operator's* Permit ID for the portion of the project removed from the eNOI.

   Owners or operators must follow Part I.E.9. to modify the eNOI.

Part II. Water Quality-Based Effluent Limitations

A. Maintaining Water Quality

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

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

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

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

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

If, despite compliance with the requirements of this permit, it is demonstrated that the *stormwater discharge*s authorized by this permit are causing or contributing to a violation of *water quality standards*, or if NYSDEC determines that a modification of this permit is necessary to prevent a violation of *water quality standards*, the authorized *discharge*s will no longer be eligible for coverage under this permit, and the *owner or operator* must obtain an individual SPDES permit prior to further *discharges* from the *construction site*.

B. Effluent Limitations Applicable to *Discharges* from *Construction Activities*

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part II.B.1.a., b., c., d., and e. These limitations represent the

degree of effluent reduction attainable by the application of best practicable technology currently available.

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

   a. **Erosion and Sediment Controls.** At a minimum, erosion and sediment controls must be selected, designed, installed, implemented, and maintained to:

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

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

      iii. *Minimize* the amount of soil exposed during *construction activity*; and

      iv. *Minimize* the disturbance of *steep slope*; and

      v. *Minimize* sediment *discharge*s from the site; and

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

      vii. *Minimize* soil compaction. *Minimizing* soil compaction is not required

where the intended function of a specific area of the site dictates that it be compacted; and

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

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

   b. **Soil Stabilization**. In areas where soil disturbance activity has ceased, whether permanently or *temporarily ceased*, the application of soil stabilization measures must be initiated by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. For *construction sites* that *directly discharge* to one of the 303(d) segments listed in Appendix D, or are located in one of the watersheds listed in Appendix C, or are authorized to disturb greater than five acres in accordance with Part I.E.5.a.viii., the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven calendar days from the date the soil disturbance activity ceased.

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

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

      i. *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. Soaps, detergents and solvents cannot be used; and

      ii. *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation

and to *stormwater*. *Minimization* of exposure is not required in cases where the exposure to precipitation and to *stormwater* will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of *stormwater* contamination (such as final products and materials intended for outdoor use); and

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

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

C. Post-Construction Stormwater Management Practice (SMP) Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction SMPs, in accordance with Part III.C., must select, design, install, implement, and maintain the SMPs to meet the *performance criteria* in the New York State Stormwater Management Design Manual, dated July 31, 2024 (DM), using sound engineering judgment. Where SMPs are not designed in conformance with the *performance criteria* in the DM, the *owner or operator* must include in the *SWPPP* the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity*, that requires SMPs in accordance with Part III.C., must design the practices to meet the applicable *sizing criteria* in Part II.C.2.a., b., c., or d.

   a. Sizing Criteria for *New Development*

      i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

         1. Reduce the total WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv must be calculated in accordance with the criteria in Section 4.2 of the DM; or

         2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the requirements in Part II.C.2.a.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

            In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.4 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

      ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

         1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

         2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs without detention or velocity controls; or

         3. The site *directly discharges* into a fifth order or larger water body (stream, river, or lake), or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

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

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24-hour design storm over the post-developed watershed and must be calculated in accordance with the criteria in Section 4.3 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part II.C.2.b.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include

documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.5 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs; or

3. The site *directly discharges* to tidal waters, or a fifth order or larger water body (stream, river, or lake) where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

c. *Sizing Criteria* for *Redevelopment Activity*

i. Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* must be addressed by one of the following options, as outlined in Section 9.2.1. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C) must calculate the WQv in accordance with Section 4.3 of the DM. All other *redevelopment activities* must calculate the WQv in accordance with Section 4.2 of the DM.

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

2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment *impervious area*, by implementation of standard SMPs or reduced by application of runoff reduction techniques; or

3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a volume-based alternative SMP, as defined in Section 9.4 of the DM; or

4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm; or

5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods. Application of this method must be in accordance with the criteria in Section 9.2.1(A)(V) of the DM; or

6. If there is an existing SMP located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.

ii. Channel Protection Volume (CPv) is not required if there is 0% change to hydrology that increases the *discharge* rate and volume from the project site.

iii. *Overbank* Flood Control (Qp) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

iv. Extreme Flood Control (Qf) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

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

Construction projects, that include both *new development* and *redevelopment activity*, must use SMPs that meet the *sizing criteria* calculated as an aggregate of the *sizing criteria* in Part II.C.2.a. or b. for the *new development* portion of the project and Part II.C.2.c. for the *redevelopment activity* portion of the project.

Part III. Stormwater Pollution Prevention Plan (SWPPP)

A. General *SWPPP* Requirements

1. A *SWPPP* must be prepared and implemented by the *owner or operator* of all *construction activity* covered by this permit. All authorized *discharges* must be identified in the *SWPPP*. The *SWPPP* must document the selection, design, installation, implementation and maintenance of the control measures and

practices that will be used to meet the effluent limitations in Part II.B. and, where applicable, the SMP requirements in Part II.C.

2. The *SWPPP* must demonstrate consideration in narrative format of the future physical risks due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490, and associated guidance.

   a. The owner or operator must consider:

      i. the following physical risks due to climate change:

         (i) increasing temperature; and

         (ii) increasing precipitation; and

         (iii) increasing variability in precipitation, including chance of drought; and

         (iv) increasing frequency and severity of flooding; and

         (v) rising sea level; and

         (vi) increasing storm surge; and

         (vii) shifting ecology.

      ii. for each of the following:

         (i) overall site planning; and

         (ii) location, elevation, and sizing of:

            a. control measures and practices; and

            b. conveyance system(s); and

            c. detention system(s).

3. The *SWPPP* must describe the erosion and sediment control practices and where required, SMPs that will be used and/or constructed to reduce the *pollutants* in *stormwater discharges* and to assure compliance with the

requirements of this permit. In addition, the *SWPPP* must identify potential sources of pollution which may reasonably be expected to affect the quality of *stormwater discharges*.

4. All *SWPPPs*, that require the SMP component in accordance with Part III.B.2., must be prepared by a *qualified professional*.

5. The *owner or operator* must keep the *SWPPP* current so that, at all times, it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all SMPs that will be constructed on the site. At a minimum, the *owner or operator* must modify the *SWPPP*, including construction drawings:

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

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

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

   d. to document the final construction conditions in an as-built drawing.

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

7. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices included in the *SWPPP* and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the *SWPPP*. The *owner or operator* must have each of the contractors and subcontractors identify at least one person from their company to be *trained contractor* that will be responsible for implementation of the *SWPPP*. The *owner or operator* must ensure that at least one *trained contractor* is on site daily when soil disturbance activities are being performed.

The *owner or operator* must have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before the *commencement of construction activities*:

> "I hereby certify under penalty of law that I understand and agree to comply with the requirements of the *SWPPP* and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

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

B. Required *SWPPP* Contents

1. Erosion and sediment control component - The *owner or operator* must prepare a *SWPPP* that includes erosion and sediment control practices.

   a. Erosion and sediment control practices must be designed:

      i. in conformance with the BB; or

      ii. *equivalent* to the BB if deviating from Part III.B.1.a.i.

   b. If the erosion and sediment control practices are designed in conformance with Part III.B.1.a.ii., the *SWPPP* must include a demonstration of *equivalence* to the BB.

   c. At a minimum, the erosion and sediment control component of the *SWPPP* must include the following:

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

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

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

      iv. A phasing plan for the project and sequencing plans for all *phases*, both of which must address clearing and grubbing, excavation and grading, utility and infrastructure installation, *final stabilization*,

and any other *construction activity* at the site that will result in soil disturbance.

1. The phasing plan must include:

    a. a map delineating and labeling the limits of soil disturbance for all *phases* of a project; and

    b. a table identifying the order and intended schedule of when each *phase* will begin and end its sequencing plan. The table must identify the total disturbed area for each *phase* at any one time and the total disturbed area for the overall project at any one time all on one timeline showing all overlapping quantities of disturbed area at any one time; and

2. A sequencing plan for a specific *phase* must include:

    a. a table indicating the order and intended schedule of *construction activities* within a *phase*, and corresponding construction drawings with a description of the work to be performed; and

    b. all permanent and *temporary stabilization* measures; and

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

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

vii. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any

temporary sediment basins and structural practices that will be used to divert flows from exposed soils; and

viii. A maintenance inspection schedule for the contractor(s) and subcontractor(s) identified in Part III.A.7. to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule must be in accordance with the requirements in the BB technical standard; and

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

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

xi. Identification of any elements of the design that are not in conformance with the design criteria in the BB technical standard. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. SMP component – The *owner or operator* of *construction activity* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs.

    a. SMPs must be designed in conformance with the applicable *sizing criteria* in Part II.C.2.a., c., or d.; and

    b. SMPs must be designed in conformance with the *performance criteria*:

        i. in the DM; or

        ii. *equivalent* to the DM if deviating from Part III.B.2.b.i.; or

        iii. in the New York State Stormwater Management Design Manual, dated January 2015 (2015 Design Manual), or *equivalent* to it, if the following criteria are met:

1. The eNOI is submitted in accordance with Part I.D. before January 29, 2027 for *construction activities* that are either:

    a. subject to governmental review and approval:

        i. where the *owner or operator* made any application to that governmental entity prior to the effective date of this permit; and

        ii. such application included a *SWPPP* developed using the 2015 Design Manual or *equivalent* to it; or

    b. not subject to governmental review and approval:

        i. where a fiscal allocation for the *construction activities* has been developed and approved by a governmental entity; and

        ii. the *SWPPP* was developed using the 2015 Design Manual or *equivalent* to it; and

c. If SMPs are designed in conformance with Part III.B.2.b.ii., the *SWPPP* must include the reason(s) for the deviation or alternative design and a demonstration of *equivalence* to the DM; and

d. If SMPs are designed in conformance with Part III.B.2.b.iii., the *SWPPP* must include supporting information or documentation demonstrating that Part III.B.2.b.iii.1.a. or b. apply; and

e. The SMP component of the *SWPPP* must include the following:

    i. Identification of all SMPs to be constructed as part of the project, including which option the SMP designs conform to, either Part III.B.2.b.i., ii., or iii. Include the dimensions, material specifications and installation details for each SMP; and

    ii. A site map/construction drawing(s) showing the specific location and size of each SMP; and

iii. A Stormwater Modeling and Analysis Report that includes:

    (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points; and

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

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

    (iv) Summary table, with supporting calculations, which demonstrates that each SMP has been designed in conformance with the *sizing criteria* included in the DM; and

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

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

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

v. Infiltration test results, when required in accordance with Part III.B.2.a.; and

vi. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each SMP. The plan must identify the entity

that will be responsible for the long-term operation and maintenance of each practice; and

3. Enhanced Phosphorus Removal Standards - The *owner or operator* of *construction activity* identified in Table 2 of Appendix B that is located in a watershed identified in Appendix C must prepare a *SWPPP* that includes SMPs designed in conformance with the applicable *sizing criteria* in Part II.C.2.b., c., or d. and the *performance criteria* Enhanced Phosphorus Removal Standards included in the DM. At a minimum, the SMP component of the *SWPPP* must meet the requirements of Part III.B.2.

C. Required *SWPPP* Components by Project Type

Owners or operators of *construction activities*, identified in Table 1 of Appendix B, are required to prepare a *SWPPP* that only includes erosion and sediment control practices designed in accordance with Part III.B.1. *Owners or operators* of the *construction activities*, identified in Table 2 of Appendix B, must prepare a *SWPPP* that also includes SMPs designed in accordance with Part III.B.2 or 3.

For the entire area of disturbance, including the entire *common plan of development or sale* if applicable, the owner or operator must evaluate every bullet from Appendix B Table 1 and Table 2 separately. If bullets from both Table 1 and Table 2 apply, the *SWPPP* must include erosion and sediment control practices for all *construction activities* but SMPs for only those portions of the *construction activities* that fall under Table 2 bullet(s).

Part IV. Inspection and Maintenance Requirements

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures), and all SMPs identified in the *SWPPP*, are inspected and maintained in accordance with Part IV.B. and C.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity*, identified in Tables 1 and 2 of Appendix B, must have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being

implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor must:

a. if the corrective action does not require engineering design:

   i. begin implementing corrective actions within one business day; and

   ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

   i. begin the engineering design process within five business days; and

   ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

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

3. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational.

C. *Qualified Inspector* Inspection Requirements

1. With the exception of the following *construction activities* identified in Tables 1 and 2 of Appendix B, a *qualified inspector* must conduct site inspections for all other *construction activities* identified in Tables 1 and 2 of Appendix B:

   a. the construction of a single-family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than or equal to five (5) acres and is

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

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

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

   d. *construction activities* located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances of 5,000 square feet or more, but less than one acre.

2. The *qualified inspector* must conduct site inspections in accordance with the following timetable:

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

   b. For *construction sites* where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part I.E.6. to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days; or

   c. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* must conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas under the jurisdiction of a *Traditional Land Use Control MS4 Operator,* the *Traditional Land Use Control MS4 Operator* (provided the *Traditional Land Use Control MS4 Operator* is not the *owner or operator* of the *construction activity*) by hard copy or email prior to reducing the inspections to this frequency and again by hard copy or email prior to re-commencing construction; or

   d. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the requirement to have the *qualified inspector* conduct inspections ceases if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1., the *Traditional Land Use Control MS4 Operator(s)* (provided the *Traditional Land Use Control MS4 Operator(s)* are not the *owners or operators* of the *construction activity*) in writing prior to the shutdown and again in writing prior to resuming *construction activity*. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* must terminate coverage by meeting the requirements of Part V; or

   e. For *construction sites* involving soil disturbance of one (1) or more acres that *directly discharge* to one of the 303(d) segments listed in Appendix D or is located in one of the watersheds listed in Appendix C, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* must inspect:

   a. all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness; and

   b. all SMPs under construction to ensure that they are constructed in conformance with the *SWPPP*; and

   c. all areas of disturbance that have not achieved *final stabilization*; and

   d. all points of *discharge* to *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site*; and

   e. all points of *discharge* from the *construction site*.

4. The *qualified inspector* must prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report must include and/or address all of the following, for all *construction activities* except those listed in Part IV.C.1.:

   a. Permit identification number; and

   b. Date and time of inspection; and

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

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

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

   f. A description of the condition of all *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This must include identification of any *discharges* of sediment to the *surface waters of the State*; and

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

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

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

   j. Estimates, in square feet or acres, of the following areas:

      i. Total area with active soil disturbance (not requiring either *temporary stabilization* or *final stabilization*); and

      ii. Total area with inactive soil disturbance (requiring either *temporary stabilization* or *final stabilization*); and

      iii. Total area that has achieved *temporary stabilization*; and

      iv. Total area that has achieved *final stabilization*; and

   k. Current stage of construction of all SMPs and identification of all *construction activity* on site that is not in conformance with the *SWPPP* and technical standards; and

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

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

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

5. Within one business day of the completion of an inspection, the *qualified inspector* must notify the *owner or operator*, and appropriate contractor or subcontractor identified in Part III.A.7., of any corrective actions that need to be taken. The contractor or subcontractor must:

   a. if the corrective action does not require engineering design:

      i. begin implementing corrective actions within one business day; and

      ii. complete the corrective actions within five business days; or

   b. if the corrective action requires engineering design:

      i. begin the engineering design process within five business days; and

      ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

6. All inspection reports must be signed by the *qualified inspector*. In accordance with Part I.E.3., the inspection reports must be maintained on site with the *SWPPP*.

Part V. How to Terminate CGP Coverage

A. Electronic Notice of Termination (eNOT) Submittal

The eNOT contains questions to ensure requirements in Part V.A. have been met.

1. An *owner or operator* must terminate coverage when one or more of the following requirements have been met:

   a. Total project completion:

      i. all *construction activity* identified in the *SWPPP* has been completed; and

      ii. all areas of disturbance have achieved *final stabilization*; and

      iii. all temporary, structural erosion and sediment control measures have been removed; and

      iv. all SMPs have been constructed in conformance with the *SWPPP* and are operational; and

      v. an as-built drawing has been prepared; or

   b. Planned shutdown with partial project completion:

      i. all soil disturbance activities have ceased; and

      ii. all areas disturbed as of the project shutdown date have achieved *final stabilization*; and

      iii. all temporary, structural erosion and sediment control measures have been removed; and

      iv. all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational; and

      v. an as-built drawing has been prepared; or

   c. In accordance with Part I.G. Change of Owner or Operator; or

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

2. For *construction activities* that require *qualified inspector* inspections in accordance with Part IV.C.1. and have met Part V.A.1.a. or b., the *owner or operator* must have the *qualified inspector* perform a final site inspection prior to submitting the eNOT. The *qualified inspector* must, by signing the “Final Stabilization” and “Post-Construction Stormwater Management Practice(s)” certification statements on the eNOT, certify that all the requirements in Part V.A.1.a. or b. have been achieved.

3. For *construction activities* that are subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1. and meet Part V.A.1.a. or b., the *owner or operator* must have the *Traditional Land Use Control MS4 Operator(s)* sign the “MS4 Acceptance” statement on the eNOT in accordance with the requirements in Part VII.J. A *Traditional Land Use Control MS4 Operator* official, by signing this statement, determined that it is acceptable for the *owner or operator* to submit the eNOT in accordance with the requirements of this Part. A *Traditional Land Use Control MS4 Operator* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*’s final site inspection certification(s) when required in Part V.A.2.

4. For *construction activities* that require SMPs and meet Part V.A.1.a. or b., the *owner or operator* must, prior to submitting the eNOT, ensure one of the following:

   a. for SMP(s) that were constructed by a private entity, but will be owned, operated, and maintained by a public entity, the SMP(s) and any right-of-way(s) needed to operate and maintain such practice(s) have been deeded to the municipality in which the practice(s) is located; or

   b. for SMP(s) that are privately owned, but will be operated and maintained by a public entity, an executed operation and maintenance agreement is in place with the municipality that will operate and maintain the SMP(s); or

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

   d. for SMP(s) that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility, the *owner or operator* has policies and procedures in place that ensure operation and maintenance of the practices in accordance with the operation and maintenance plan.

5. An *owner or operator* that has met the requirements of Part V.A.1., 2., 3., and 4. must request termination of coverage under this permit by submitting a complete Notice of Termination form electronically using a NYSDEC approved form.[5]

   a. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

[5] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

Part VI. Record Retention and Reporting

A. Record Retention

The *owner or operator* must retain a copy of the documents listed in Part I.E.3. and a copy of the LOT for a period of at least five years from the date that NYSDEC accepts a complete NOT submitted in accordance with Part V.

B. Reporting

Except for the eNOI, the signature forms associated with the eNOI, and the eNOT, all other written correspondence requested by NYSDEC, including individual permit applications, must be sent to the address of the appropriate DOW (SPDES) Program contact at the Regional Office listed in Appendix E.

Part VII. Standard Permit Requirements

For the purposes of this permit, examples of contractors and subcontractors include: third-party maintenance and construction contractors.

A. Duty to Comply

The *owner or operator*, and all contractors or subcontractors, must comply with all requirements of this permit. Any non-compliance with the requirements of this permit constitutes a violation of the New York State Environmental Conservation Law (ECL), and its implementing regulations, and is grounds for enforcement action. Filing of a request for termination of coverage under this permit, or a notification of planned changes or anticipated non-compliance, does not limit, diminish or stay compliance with any requirements of this permit.

B. Need to Halt or Reduce Activity Not a Defense

The necessity to halt or reduce the *construction activity* regulated by this permit, in order to maintain compliance with the requirements of this permit, must not be a defense in an enforcement action.

C. Penalties

There are substantial criminal, civil, and administrative penalties associated with violating the requirements of this permit. Fines of up to $37,500 per day for each

violation and imprisonment for up to 15 years may be assessed depending upon the nature and degree of the offense.

D. False Statements

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

E. Re-Opener Clause

Upon issuance of this permit, a determination has been made on the basis of a submitted Notice of Intent, plans, or other available information, that compliance with the specified permit requirements will reasonably protect classified water use and assure compliance with applicable *water quality standards*. Satisfaction of the requirements of this permit notwithstanding, if operation pursuant to this permit causes or contributes to a condition in contravention of State *water quality standards* or guidance values, or if NYSDEC determines that a modification is necessary to prevent impairment of the best use of the waters or to assure maintenance of *water quality standards* or compliance with other provisions of ECL Article 17 or the Clean Water Act (CWA), or any regulations adopted pursuant thereto, NYSDEC may require such modification and the Commissioner may require abatement action to be taken by the *owner or operator* and may also prohibit such operation until the modification has been implemented.

F. Duty to Mitigate

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

G. Requiring Another General Permit or Individual SPDES Permit

NYSDEC may require any *owner or operator* authorized to *discharge* in accordance with this permit to apply for and obtain an individual SPDES permit or apply for authorization to *discharge* in accordance with another general SPDES permit.

1. Cases where an individual SPDES permit or authorization to discharge in accordance with another general SPDES permit may be required include, but is not limited to the following:

   a. the *owner or operator* is not in compliance with the conditions of this permit or does not meet the requirements for coverage under this permit; and

   b. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of *pollutants* applicable to the *point source*; and

   c. new effluent limitation guidelines or new source performance standards are promulgated that are applicable to *point sources* authorized to *discharge* in accordance with this permit; and

   d. existing effluent limitation guidelines or new source performance standards that are applicable to *point sources* authorized to *discharge* in accordance with this permit are modified; and

   e. a water quality management plan containing requirements applicable to such *point sources* is approved by NYSDEC; and

   f. circumstances have changed since the time of the request to be covered so that the *owner or operator* is no longer appropriately controlled under this permit, or either a temporary or permanent reduction or elimination of the authorized *discharge* is necessary; and

   g. the *discharge* is in violation of section 17-0501 of the ECL; and

   h. the *discharge(s)* is a significant contributor of *pollutants*. In making this determination, NYSDEC may consider the following factors:

      i. the location of the *discharge(s)* with respect to *surface waters of the State*; and

      ii. the size of the *discharge(s)*; and

      iii. the quantity and nature of the *pollutants discharged* to *surface waters of the State*; and

      iv. other relevant factors including compliance with other provisions of ECL Article 17, or the CWA.

2. When NYSDEC requires any *owner or operator* authorized by this permit to apply for an individual SPDES permit as provided for in this subdivision, it must notify the *owner or operator* in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision, an application

form, a statement setting a time for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from the *owner's or operator's* receipt of the notification letter, whereby the authorization to *discharge* under this permit must be terminated. NYSDEC may grant additional time upon demonstration, to the satisfaction of the RWE,[6] that additional time to apply for an alternative authorization is necessary or where NYSDEC has not provided a permit determination in accordance with 6 NYCRR Part 621.

3. When an individual SPDES permit is issued to an *owner or operator* authorized to *discharge* under this permit for the same *discharge(s)*, this permit authorization for *construction activities* authorized under the individual SPDES permit is automatically terminated on the effective date of the individual SPDES permit unless termination is earlier in accordance with 6 NYCRR Part 750.

H. Duty to Provide Information

The *owner or operator* must furnish to NYSDEC, within five business days, unless otherwise set forth by NYSDEC, any information that NYSDEC may request to determine whether cause exists to determine compliance with this permit or to determine whether cause exists for requiring an individual SPDES permit in accordance with 6 NYCRR 750-1.21(e) (see Part VII.G. Requiring Another General Permit or Individual Permit).

The *owner or operator* must make available to NYSDEC, for inspection and copying, or furnish to NYSDEC within 25 business days of receipt of a NYSDEC request for such information, any information retained in accordance with this permit.

Except for Part I.D.4. and 5. and Part I.G., the following applies: where the *owner or operator* becomes aware that it failed to submit any relevant facts on the Notice of Intent, or submitted incorrect information in a Notice of Intent or in any report to NYSDEC, the *owner or operator* must submit such facts or corrected information to NYSDEC within five business days.

I. Extension

In the event a new permit is not issued and effective prior to the expiration of this permit, and this permit is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, then the *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the requirements of this permit until a new permit is issued and effective.

[6] The Regional Water Manager where a DEC Region does not have a RWE.

J. Signatories and Certification

The Notice of Intent, Notice of Termination, and reports required by this permit must be signed as provided in 40 CFR §122.22.

1. All Notices of Intent and Notices of Termination must be signed as follows:

   a. For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

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

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

      Note: NYSDEC does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR §122.22(a)(1)(i). NYSDEC will presume that these responsible corporate officers have the requisite authority to sign the Notice of Intent or Notice of Termination unless the corporation has notified NYSDEC to the contrary. Corporate procedures governing authority to sign a Notice of Intent or Notice of Termination may provide for assignment or delegation to applicable corporate positions under 40 CFR §122.22(a)(1)(ii) rather than to specific individuals.

   b. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively.

   c. For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

      1. the chief executive officer of the agency; or

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

2. All reports required by this permit, and other information requested by NYSDEC, must be signed by a person described in Part VII.J.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Part VII.J.1. or using the Duly Authorized Form, found on the DEC website; and

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

   c. The written authorization is submitted to NYSDEC.

3. Changes to authorization. If an authorization under Part VII.J.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the *construction activity*, a new authorization satisfying the requirements of Part VII.J.2. must be submitted to NYSDEC prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under Part VII.J.1. or 2. must make the following certification:

   I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

   manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

5. Electronic reporting. If documents described in Part VII.J.1. or 2. are submitted electronically by or on behalf of the *construction activity* with coverage under this permit, any person providing the electronic signature for such documents must meet all relevant requirements of this section, and must ensure that all of the relevant requirements of 40 CFR Part 3 (including, in all cases, subpart D to Part 3) (Cross-Media Electronic Reporting) and 40 CFR Part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

K. Inspection and Entry

The *owner or operator* must allow NYSDEC, the USEPA Regional Administrator, the applicable county health department, or any authorized representatives of those entities, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the *discharge*, upon the presentation of credentials and other documents as may be required by law, to:

1. enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the requirements of this permit; and

2. have access to and copy at reasonable times, any records that must be kept under the requirements of this permit, including records required to be maintained for purposes of operation and maintenance; and

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

4. sample or monitor at reasonable times, for the purposes of assuring general SPDES permit compliance or as otherwise authorized by the CWA or ECL, any substances or parameters at any location; and

5. enter upon the property of any contributor to the regulated facility or activity under authority of the *owner or operator*.

L. Confidentiality of Information

The following must not be held confidential: this permit, the fact sheet for this permit, the name and address of any *owner or operator*, effluent data, the Notice of Intent, and information regarding the need to obtain an individual permit or an alternative general SPDES permit. This includes information submitted on forms themselves and any attachments used to supply information required by the forms (except information submitted on usage of substances). Upon the request of the *owner or operator*, NYSDEC must make determinations of confidentiality in accordance with 6 NYCRR Part 616, except as set forth in the previous sentence. Any information accorded confidential status must be disclosed to the Regional Administrator upon his or her written request. Prior to disclosing such information to the Regional Administrator, NYSDEC will notify the Regional Administrator of the confidential status of such information.

M. Other Permits May Be Required

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

N. NYSDEC Orders or Civil Decrees/Judgments

The issuance of this permit by the NYSDEC, and the coverage under this permit by the *owner or operator*, does not supersede, revoke, or rescind any existing order on consent or civil Decree/Judgment, or modification to any such documents or to any order issued by the Commissioner, or any of the terms, conditions, or requirements contained in such order or modification therefore, unless expressly noted.

O. Property Rights

Coverage under this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining the assent of any other jurisdiction as required by law for the *discharge* authorized.

P. Compliance with Interstate Standards

If the *construction activity* covered by this permit originates within the jurisdiction of an interstate water pollution control agency, then the *construction activity* must also comply with any applicable effluent standards or *water quality standards* promulgated by that interstate agency and as set forth in this permit for such *construction activities*.

Q. Oil and Hazardous Substance Liability

Coverage under this permit does not affect the imposition of responsibilities upon, or the institution of any legal action against, the *owner or operator* under section 311 of the CWA, which must be in conformance with regulations promulgated pursuant to section 311 governing the applicability of section 311 of the CWA to *discharges* from facilities with *NPDES* permits, nor must such issuance preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. section 9601 et seq. (CERCLA).

R. Severability

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

S. NYSDEC Approved Forms

The *owner or operator* must provide all relevant information that is requested by NYSDEC, and required by this permit, on all NYSDEC approved forms.

APPENDIX A – Abbreviations and Definitions

Abbreviations

APO – Agency Preservation Officer
BB – New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), dated November 2016
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
CPv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DM – New York State Stormwater Management Design Manual (Design Manual), dated July 31, 2024
DOW – Division of Water
EAF – Environmental Assessment Form
ECL – chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law
EPA – U.S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NYC – The City of New York
NYCDEP – The City of New York Department of Environmental Protection
NYSDEC – The New York State Department of Environmental Conservation
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RR – Runoff Reduction
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SMP – Post-Construction Stormwater Management Practice
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit. If a word is not italicized in the permit, use its common definition.

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

Agricultural Property – the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023).

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

Combined Sewer System – a sewer system which conveys sewage and *stormwater* through a single pipe system to a publicly owned treatment works.

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

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

Common plan of development or sale does not include separate and distinct *construction activities* that are occurring, or may occur, under one plan that are at least 1/4 mile apart provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Construction Activity(ies) – identified within 40 CFR 122.26(b)(14)(x), 122.26(b)(15)(i), and 122.26(b)(15)(ii), any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, mechanized logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal.

Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, which is excluded from the calculation of the soil disturbance for a project. Routine maintenance includes, but is not limited to:

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

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

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

Directly Discharge(s)(ing) (to a specific surface waterbody) – runoff flows from a *construction site* by overland flow and the first point of *discharge* is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system and the first point of *discharge* from the separate storm sewer system is the specific surface waterbody.

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

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

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

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

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

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

Infeasible – not technologically possible, or not economically practicable and achievable considering best industry practices.

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

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

1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, *stormwater*, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that *discharges* to *surface waters of the State*; and

2. designed or used for collecting or conveying *stormwater*; and

3. which is not a *combined sewer system*; and

4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

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

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

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

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

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

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

Performance Criteria – the six performance criteria for each group of SMPs in Chapters 5 and 6 of the technical standard, New York State Stormwater Management Design Manual (DM), dated July 31, 2024. These include feasibility, conveyance, pretreatment, treatment, landscaping, and maintenance. It does not include the *Sizing Criteria* (i.e. WQv, RRv, CPv, Qp and Qf) in Part I.C.2. of the permit.

Phase – a defined area in which *construction activities* are occurring or will occur separate from other defined area(s).

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

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

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

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

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

Note: Inspections of any SMPs that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

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

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

Renewable Energy – electricity or thermal energy generated by renewable energy systems through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

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

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

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

Stormwater – that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the State.

Streambank – the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

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

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

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

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

Total Maximum Daily Load (TMDL) – the sum of the allowable loads of a single *pollutant* from all contributing point and *nonpoint source*s. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet *water quality standards*, and an allocation of that amount to the *pollutant's* sources. A TMDL stipulates Waste Load Allocations (WLA) for *point source discharges*, Load Allocations (LA) for *nonpoint source*s, and a margin of safety (MOS).

Traditional Land Use Control MS4 Operator – a city, town, or village with land use control authority that is authorized to *discharge* under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Trained Contractor – an employee from the contracting (construction) company, identified in Part III.A.7., that has received four (4) hours of NYSDEC endorsed training

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

It can also mean an employee from the contracting (construction) company, identified in Part III.A.7., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity).

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

Tree Clearing – *construction activities* limited to felling and removal of trees.

Tree clearing does not include hand felling and leaving the trees in place with no support from mechanized equipment, which is not considered *construction activity* requiring coverage under this permit.

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

APPENDIX B – Required SWPPP Components by Project Type

Table 1
***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS**

The following *construction activities* that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres: • Single-family home not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D • Single-family residential subdivisions with 25% or less *impervious cover* at total site build-out and not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D • Construction of a barn or other *agricultural building*, silo, stock yard or pen. • Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that include construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
The following *construction activities* that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land: • All construction activities located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
Within the municipal boundaries of NYC: • Stand-alone road reconstruction, where the total soil disturbance from only that road construction, is less than one (1) acre of land.
The following *construction activities*: • Installation of underground linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains • Environmental enhancement projects, such as wetland mitigation, *stormwater* retrofits, stream restoration, and resiliency projects that reconstruct shoreline areas to address sea level rise • Pond construction • Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an *impervious cover* • Cross-country ski trails, walking/hiking trails, and mountain biking trails, including a de minimis parking lot (maximum 10 spaces total, sized for passenger cars) with 35 feet minimum preservation of undisturbed area downgradient from the parking lot • Dam rehabilitation (the structure of the dam itself) • Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are not part of residential, commercial, or institutional development; • Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path, or walking path.

Table 1 (Continued)
***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS**

The following *construction activities*:

- Slope stabilization
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Vegetated open space (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) that do not *alter hydrology from pre- to post-development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions
- Demolition where vegetation will be established, and no *redevelopment activity* is planned[1]
- Installation or replacement of either an overhead electric transmission line or a ski lift tower that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*.
- Solar array field areas that have tables elevated off the ground, spaced one table width apart, do not *alter hydrology from pre- to post-development conditions*, and address water quality volume and runoff reduction volume by maintaining sheet flow on slopes less than 8%.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that do not include construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions.
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary *impervious areas* that will be restored to pre-construction conditions once the *construction activity* is complete (in this context, "temporary" means the *impervious area* will be in place for two years or less)
- Other *construction activities* that do not include the construction or reconstruction of *impervious area*, and do not *alter hydrology from pre- to post-development* conditions, and are not listed in Table 2.

1. If the site is redeveloped in the future, a new eNOI must be submitted.

Table 2
***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)**

The following *construction activities*:

- Single-family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family home that disturbs five (5) or more acres of land
- Single-family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of between 20,000 square feet and one (1) acre of land within the municipal boundaries of NYC with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single-family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a *common plan of development or sale* that will ultimately disturb five (5) or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Creation of 5,000 square feet or more of *impervious area* in the municipal boundaries of NYC
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) that involves soil disturbance greater than five acres.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that involves soil disturbance greater than five acres and include the construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
- Facility buildings, including ski lodges, restroom buildings, pumphouses, ski lift terminals, and maintenance and groomer garages
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills; including creation of landfills or capping landfills.
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTWs, water treatment plants, and water storage tanks
- Golf courses
- Office complexes

Table 2 (Continued)

***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)**

The following *construction activities*:

- Permanent laydown yards and equipment storage lots
- Playgrounds that include the construction or reconstruction of *impervious area*
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surfaces
- Road construction or reconstruction, outside the municipal boundaries of NYC
- Road construction within the municipal boundaries of NYC
- Stand-alone road reconstruction, within the municipal boundaries of NYC where the total soil disturbance from that road reconstruction involves soil disturbance of one (1) acre or more of land
- Parking lot construction or reconstruction (as with all Table 2 bullets, this includes parking lots constructed as part of the *construction activities* listed in Table 1, unless a Table 1 bullet specifies otherwise)
- Athletic fields (natural grass) that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations, and well drilling pads, surfaced with *impervious cover,* and constructed as part of an overhead electric transmission line, wind-power, cell tower, oil or gas well drilling, sewer or water main, ski lift, or other linear utility project
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of a residential, commercial or institutional development
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of highway construction or reconstruction
- Solar array field areas on slopes greater than 8% that cannot maintain sheet flow using management practices identified in the BB or the DM
- Solar array field areas on slopes less than 8% that will *alter the hydrology from pre- to post-development* conditions
- Solar array field areas with tables that are not elevated high enough to achieve *final stabilization* beneath the tables
- Traditional *impervious areas* associated with solar development (e.g. roads, buildings, transformers)
- Utility pads surfaced with *impervious cover*, including electric vehicle charging stations
- All other *construction activities* that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre- to post-development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of *construction activities* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs designed in conformance with the Enhanced Phosphorus Removal Standards included in the DM technical standard.

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

Figure 1 - New York City Watershed East of the Hudson



Figure 2 - Onondaga Lake Watershed



Figure 3 - Greenwood Lake Watershed



Figure 4 - Oscawana Lake Watershed

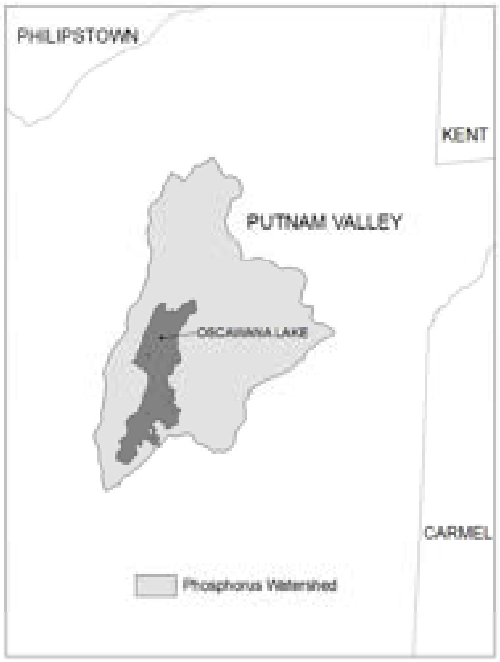
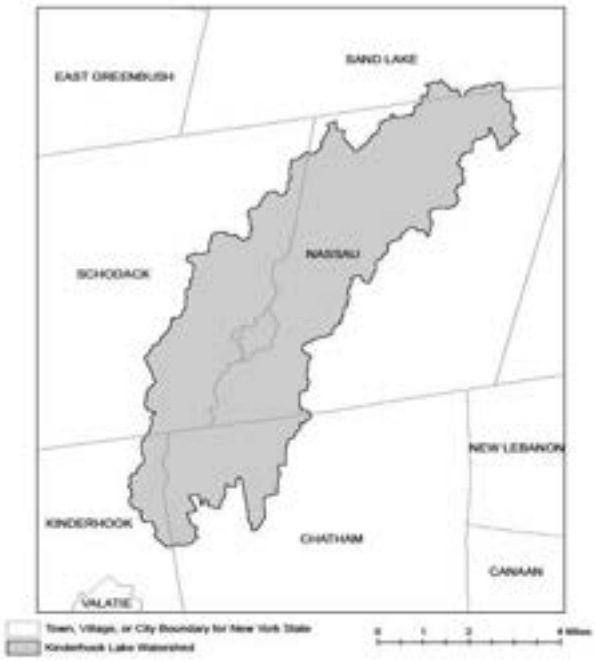


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)

List of waterbodies impaired by *pollutants* related to *construction activity*, including turbidity, silt/sediment, and nutrients (e.g. nitrogen, phosphorus). This list is a subset of "The Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL" dated June 2020.

County	Waterbody	Pollutant
Albany	Ann Lee (Shakers) Pond, Stump Pond (1201-0096)	Phosphorus
Albany	Lawsons Lake (1301-0235)	Phosphorus
Allegany	Amity Lake, Saunders Pond (0403-0054)	Phosphorus
Allegany	Andover Pond (0403-0056)	Phosphorus
Bronx	Reservoir No.1/Lake Isle (1702-0075)	Phosphorus
Bronx	Van Cortlandt Lake (1702-0008)	Phosphorus
Broome	Blueberry, Laurel Lakes (1404-0033)	Phosphorus
Broome	Fly Pond, Deer Lake (1404-0038)	Phosphorus
Broome	Minor Tribs to Lower Susquehanna (0603-0044)	Phosphorus
Broome	Whitney Point Lake/Reservoir (0602-0004)	Phosphorus
Cattaraugus	Allegheny River/Reservoir (0201-0023)	Phosphorus
Cattaraugus	Beaver Lake/Alma Pond (0201-0073)	Phosphorus
Cattaraugus	Case Lake (0201-0020)	Phosphorus
Cattaraugus	Linlyco/Club Pond (0201-0035)	Phosphorus
Cayuga	Duck Lake (0704-0025)	Phosphorus
Cayuga	Owasco Inlet, Upper, and tribs (0706-0014)	Nutrients
Chautauqua	Chadakoin River and tribs (0202-0018)	Phosphorus
Chautauqua	Hulburt/Clymer Pond (0202-0079)	Phosphorus
Chautauqua	Middle Cassadaga Lake (0202-0002)	Phosphorus
Clinton	Great Chazy River, Lower, Main Stem (1002-0001)	Silt/Sediment
Columbia	Robinson Pond (1308-0003)	Phosphorus
Cortland	Dean Pond (0602-0077)	Phosphorus
Dutchess	Fallkill Creek (1301-0087)	Phosphorus
Dutchess	Hillside Lake (1304-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Silt/Sediment
Erie	Beeman Creek and tribs (0102-0030)	Phosphorus
Erie	Delaware Park Pond (0101-0026)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Silt/Sediment
Erie	Green Lake (0101-0038)	Phosphorus
Erie	Little Sister Creek, Lower, and tribs (0104-0045)	Phosphorus
Erie	Murder Creek, Lower, and tribs (0102-0031)	Phosphorus

Erie	Rush Creek and tribs (0104-0018)	Phosphorus
Erie	Scajaquada Creek, Lower, and tribs (0101-0023)	Phosphorus
Erie	Scajaquada Creek, Middle, and tribs (0101-0033)	Phosphorus
Erie	Scajaquada Creek, Upper, and tribs (0101-0034)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Silt/Sediment
Genesee	Bigelow Creek and tribs (0402-0016)	Phosphorus
Genesee	Black Creek, Middle, and minor tribs (0402 0028)	Phosphorus
Genesee	Black Creek, Upper, and minor tribs (0402-0048)	Phosphorus
Genesee	Bowen Brook and tribs (0102-0036)	Phosphorus
Genesee	LeRoy Reservoir (0402-0003)	Phosphorus
Genesee	Mill Pond (0402-0050)	Phosphorus
Genesee	Oak Orchard Cr, Upper, and tribs (0301-0014)	Phosphorus
Genesee	Oatka Creek, Middle, and minor tribs (0402-0031)	Phosphorus
Genessee	Tonawanda Cr, Middle, Main Stem (0102-0002)	Phosphorus
Greene	Schoharie Reservoir (1202-0012)	Silt/Sediment
Greene	Sleepy Hollow Lake (1301-0059)	Silt/Sediment
Herkimer	Steele Creek tribs (1201-0197)	Phosphorus
Herkimer	Steele Creek tribs (1201-0197)	Silt/Sediment
Kings	Hendrix Creek (1701-0006) 18	Nitrogen
Kings	Prospect Park Lake (1701-0196)	Phosphorus
Lewis	Mill Creek/South Branch, and tribs (0801-0200)	Nutrients
Livingston	Christie Creek and tribs (0402-0060)	Phosphorus
Livingston	Conesus Lake (0402-0004)	Phosphorus
Livingston	Mill Creek and minor tribs (0404-0011)	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs (0402-0033)	Phosphorus
Monroe	Buck Pond (0301-0017)	Phosphorus
Monroe	Cranberry Pond (0301-0016)	Phosphorus
Monroe	Durand, Eastman Lakes (0302-0037)	Phosphorus
Monroe	Lake Ontario Shoreline, Western (0301-0069) 9	Phosphorus
Monroe	Long Pond (0301-0015)	Phosphorus
Monroe	Mill Creek and tribs (0302-0025)	Phosphorus 2
Monroe	Mill Creek/Blue Pond Outlet and tribs (0402-0049)	Phosphorus
Monroe	Minor Tribs to Irondequoit Bay (0302-0038)	Phosphorus
Monroe	Rochester Embayment - East (0302-0002) [9]	Phosphorus
Monroe	Rochester Embayment - West (0301-0068) 9	Phosphorus
Monroe	Shipbuilders Creek and tribs (0302-0026)	Phosphorus 2
Monroe	Thomas Creek/White Brook and tribs (0302-0023)	Phosphorus

Nassau	Bannister Creek/Bay (1701-0380)	Nitrogen
Nassau	Beaver Lake (1702-0152)	Phosphorus
Nassau	Browswere Bay (1701-0383)	Nitrogen
Nassau	Camaans Pond (1701-0052)	Phosphorus
Nassau	East Meadow Brook, Upper, and tribs (1701-0211)	Silt/Sediment
Nassau	East Rockaway Channel (1701-0381)	Nitrogen
Nassau	Glen Cove Creek, Lower, and tribs (1702-0146)	Silt/Sediment
Nassau	Grant Park Pond (1701-0054)	Phosphorus
Nassau	Hempstead Bay, Broad Channel (1701-0032)	Nitrogen
Nassau	Hempstead Lake (1701-0015)	Phosphorus
Nassau	Hewlett Bay (1701-0382)	Nitrogen
Nassau	Hog Island Channel (1701-0220)	Nitrogen
Nassau	Massapequa Creek, Upper, and tribs (1701-0174)	Phosphorus
Nassau	Milburn/Parsonage Creeks, Upp, and tribs (1701-0212)	Phosphorus
Nassau	Reynolds Channel, East (1701-0215) [12]	Nitrogen
Nassau	Reynolds Channel, West (1701-0216) 12	Nitrogen
Nassau	Tidal Tribs to Hempstead Bay (1701-0218)	Nitrogen
Nassau	Tribs (fresh) to East Bay (1701-0204)	Silt/Sediment
Nassau	Tribs (fresh) to East Bay (1701-0204)	Phosphorus
Nassau	Tribs to Smith Pond/Halls Pond (1701-0221)	Phosphorus
Nassau	Woodmere Channel (1701-0219)	Nitrogen
New York	Harlem Meer (1702-0103)	Phosphorus
New York	The Lake in Central Park (1702-0105)	Phosphorus
Niagara	Bergholtz Creek and tribs (0101-0004)	Phosphorus
Niagara	Hyde Park Lake (0101-0030)	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0053) 9	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0072) 9	Phosphorus
Oneida	Ballou, Nail Creeks (1201-0203)	Phosphorus
Onondaga	Ley Creek and tribs (0702-0001) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nitrogen (NH3, NO2)
Onondaga	Onondaga Creek, Lower (0702-0023) 10	Nutrients (phosphorus)
Onondaga	Onondaga Creek, Lower, and tribs (0702-0023)	Turbidity
Onondaga	Onondaga Creek, Middle, and tribs (0702-0004)	Turbidity
Onondaga	Onondaga Creek, Upper, and tribs (0702-0024)	Turbidity
Ontario	Great Brook and minor tribs (0704-0034)	Phosphorus 2
Ontario	Great Brook and minor tribs (0704-0034)	Silt/Sediment

Ontario	Hemlock Lake Outlet and minor tribs (0402-0013)	Phosphorus
Ontario	Honeoye Lake (0402-0032)	Phosphorus
Orange	Brown Pond Reservoir (1303-0013)	Phosphorus
Orange	Lake Washington (1303-0012)	Phosphorus
Orange	Minor Tribs to Middle Wallkill (1306-0061)	Phosphorus
Orange	Monhagen Brook and tribs (1306-0074)	Phosphorus
Orange	Orange Lake (1301-0008) [16]	Phosphorus
Orange	Quaker Creek and tribs (1306-0025)	Phosphorus
Orange	Wallkill River, Middle, Main Stem (1306-0038)	Phosphorus
Orange	Wallkill River, Upper, and Minor tribs (1306-0017)	Phosphorus
Orleans	Glenvwood Lake (0301-0041)	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0070) 9	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0071) 9	Phosphorus
Oswego	Lake Neatahwanta (0701-0018)	Nutrients (phosphorus)
Oswego	Pleasant Lake (0703-0047)	Phosphorus
Putnam	Lost Lake, Putnam Lake (1302-0053)	Phosphorus
Putnam	Minor Tribs to Croton Falls Reservoir (1302-0001)	Phosphorus
Queens	Bergen Basin (1701-0009) 18	Nitrogen
Queens	Jamaica Bay, Eastern, and tribs, Queens (1701-0005) 18	Nitrogen
Queens	Kissena Lake (1702-0258)	Phosphorus
Queens	Meadow Lake (1702-0030)	Phosphorus
Queens	Shellbank Basin (1701-0001) 18	Nitrogen
Queens	Willow Lake (1702-0031)	Phosphorus
Rensselaer	Nassau Lake (1310-0001)	Phosphorus
Rensselaer	Snyders Lake (1301-0043)	Phosphorus
Richmond	Grassmere Lake/Bradys Pond (1701-0357)	Phosphorus
Rockland	Congers Lake, Swartout Lake (1501-0019)	Phosphorus
Rockland	Rockland Lake (1501-0021)	Phosphorus
Saratoga	Ballston Lake (1101-0036)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Silt/Sediment
Saratoga	Lake Lonely (1101-0034)	Phosphorus
Saratoga	Round Lake (1101-0060)	Phosphorus
Saratoga	Tribs to Lake Lonely (1101-0001)	Phosphorus
Schenectady	Collins Lake (1201-0077)	Phosphorus
Schenectady	Duane Lake (1311-0006)	Phosphorus
Schenectady Lake	Mariaville Lake (1201-0113)	Phosphorus
Schuyler	Cayuta Lake (0603-0005)	Phosphorus

Seneca	Reeder Creek and tribs (0705-0074)	Phosphorus
St.Lawrence	Black Lake Outlet, Black Lake (0906-0001)	Phosphorus
St.Lawrence	Fish Creek and minor tribs (0906-0026)	Phosphorus
Steuben	Smith Pond (0502-0012)	Phosphorus
Suffolk	Agawam Lake (1701-0117)	Phosphorus
Suffolk	Big/Little Fresh Ponds (1701-0125)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Silt/Sediment
Suffolk	Fresh Pond (1701-0241)	Phosphorus
Suffolk	Great South Bay, East (1701-0039)	Nitrogen
Suffolk	Great South Bay, Middle (1701-0040)	Nitrogen
Suffolk	Great South Bay, West (1701-0173)	Nitrogen
Suffolk	Lake Ronkonkoma (1701-0020)	Phosphorus
Suffolk	Mattituck/Marratooka Pond (1701-0129)	Phosphorus
Suffolk	Mill and Seven Ponds (1701-0113)	Phosphorus
Suffolk	Millers Pond (1702-0013)	Phosphorus
Suffolk	Moriches Bay, East (1701-0305)	Nitrogen
Suffolk	Moriches Bay, West (1701-0038)	Nitrogen
Suffolk	Quantuck Bay (1701-0042)	Nitrogen
Suffolk	Shinnecock Bay and Inlet (1701-0033)	Nitrogen
Suffolk	Tidal Tribs to West Moriches Bay (1701-0312)	Nitrogen
Sullivan	Bodine, Mongomery Lakes (1401-0091)	Phosphorus
Sullivan	Davies Lake (1402-0047)	Phosphorus
Sullivan	Evens Lake (1402-0004)	Phosphorus
Sullivan	Pleasure Lake (1402-0055)	Phosphorus
Sullivan	Swan Lake (1401-0063)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Silt/Sediment
Ulster	Ashokan Reservoir (1307-0004)	Silt/Sediment
Ulster	Esopus Creek, Lower, Main Stem (1307-0010) [17]	Turbidity
Ulster	Esopus Creek, Middle, Main Stem (1307-0003) 17	Turbidity
Ulster	Esopus Creek, Upper, and minor tribs (1307-0007)[3]	Silt/Sediment
Ulster	Wallkill River, Lower, Main Stem (1306-0027)	Phosphorus
Warren	Hague Brook and tribs (1006-0006)	Silt/Sediment
Warren	Huddle/Finkle Brooks and tribs (1006-0003)	Silt/Sediment
Warren	Indian Brook and tribs (1006-0002)	Silt/Sediment
Warren	Lake George (1006-0016) and tribs	Silt/Sediment
Warren	Tribs to Lake George, East Shore (1006-0020)	Silt/Sediment
Warren	Tribs to Lake George, Lk.George Village (1006-0008)	Silt/Sediment

Washington	Wood Cr/Champlain Canal and tribs (1005-0036)	Phosphorus
Westchester	Lake Katonah (1302-0136)	Phosphorus
Westchester	Lake Lincolndale (1302-0089)	Phosphorus
Westchester	Lake Meahagh (1301-0053)	Phosphorus
Westchester	Lake Mohegan (1301-0149)	Phosphorus
Westchester	Lake Shenorock (1302-0083)	Phosphorus
Westchester	Mamaroneck River, Lower (1702-0071)	Silt/Sediment
Westchester	Mamaroneck River, Upp, & minor tribs (1702-0123)	Silt/Sediment
Westchester	Saw Mill River (1301-0007)	Phosphorus
Westchester	Saw Mill River, Middle, and tribs (1301-0100)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Silt/Sedimnt
Westchester	Silver Lake (1702-0040)	Phosphorus
Westchester	Teatown Lake (1302-0150)	Phosphorus
Westchester	Truesdale Lake (1302-0054)	Phosphorus
Westchester	Wallace Pond (1301-0140)	Phosphorus

eNOT MS4 Acceptance

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Traditional Land Use Control MS4 Operator Information

a. Name of MS4 Operator:

b. MS4 SPDES Permit ID Number: NYR20A

c. Street Address:

d. City/State/Zip:

e. Telephone Number:

IV. Certification Statement

I have determined that it is acceptable for the owner or operator of the construction project identified above to submit the electronic Notice of Termination in accordance with CGP Part V. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:

b. Title/Position:

c. Signature:

d. Date:

eNOT Owner or Operator Certification

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I certify that I have met the requirements of CGP Part V.A.1., 2., 3., and 4. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Owner or Operator:

b. Title/Position:

c. Signature:

d. Date:

eNOT Qualified Inspector Certification – SMPs

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.iv. or CGP Part V.A.1.b.iv. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

b. Title/Position:

c. Signature:

d. Date:

eNOT Qualified Inspector Certification – Final Stabilization

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.i., ii., and iii. or CGP Part V.A.1.b.i., ii., and iii. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

b. Title/Position:

c. Signature:

d. Date:

SECTION 6
Construction Site Log

- Qualified Inspection Monitoring Reports
- SWPPP Modifications (if needed)
- Inspection Frequency Reductions Notifications

BME ASSOCIATES
ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS

CONSTRUCTION STORMWATER OBSERVATION REPORT

Project Name and Location: _____

Owner: _____

Contractor: _____

Date: _____
Time: _____
Permit No.: _____
Weather Conditions: _____
Soil Conditions: _____
Receiving Waters:
Wetland(s) ☐ Storm Sewer(s) ☐
Stream(s) ☐ Other(s) ☐
303(d) ☐

Project #: _____
Drawing #: _____
SWPPP Book Location: _____

Stages of Construction:
(check all that apply)

- ☐ Clearing & Grubbing
- ☐ Rough Grading/Earthwork
- ☐ Utility Installation
- ☐ Final Grading
- ☐ Building/Lot Construction
- ☐ Temporary Stabilization
- ☐ Final Stabilization
- ☐ Topsoil Screening
- ☐ No Construction Activity

Email Distribution
DATE: _____

- ☐ OWNER
- ☐ CONTRACTOR
- ☐ MUNICIPALITY
- ☐ _____

Inspection Frequency: ☐ Semiweekly ☐ Weekly ☐ Monthly ☐ Other _____

Yes	No	N/A			COMMENTS:
☐	☐	☐	1.	Is there evidence of turbidity in the receiving waters, or causing a substantial visible contrast to natural conditions?	
				Describe the condition of discharge (None, Clear, Cloudy, Turbid).	
☐	☐	☐	2.	Is there evidence of sedimentation in the receiving waters?	
☐	☐	☐	3.	Adjoining properties and downstream waterways protected from erosion and sediment due to stormwater runoff from the construction site?	
☐	☐	☐	4.	Have all erosion control measures been installed/constructed per Grading & Erosion Control Plan (where necessary)?	
☐	☐	☐	5.	Are perimeter erosion control measures functioning? (Silt fence, Silt sock, etc.)	
☐	☐	☐	6.	Have the stabilized construction entrances been installed & maintained?	
☐	☐	☐	7.	Have public roadways and site access roads been kept free of mud and debris?	
☐	☐	☐	8.	Are check dams in good condition?	
☐	☐	☐	9.	Do all operational storm inlets have functional inlet protection?	
☐	☐	☐	10.	Have sediment basins and traps been constructed where necessary?	
☐	☐	☐	11.	Are areas where soil disturbance has ceased been temporary/permanently stabilized within 7 days (≥ 5 acres), 14 days (< 5 acres), or 3 days (Winter Stabilization) of last disturbance?	
☐	☐	☐	12.	Is the site adequately stabilized at this time?	
☐	☐	☐	13.	Are soil stockpiles in appropriate locations and covered, mulched or vegetated?	
☐	☐	☐	14.	Is dust control needed?	
☐	☐	☐	15.	Is construction site litter and debris appropriately managed?	
☐	☐	☐	16.	Is the concrete washout area properly maintained and utilized?	
☐	☐	☐	17.	Have all permanent stormwater management facilities been installed/constructed?	
☐	☐	☐	18.	Are additional temporary erosion control measures needed?	
☐	☐	☐	19.	Have temporary measures that are no longer needed been removed?	
☐	☐	☐	20.	Have deficiencies from previous reports been addressed	

☐ See attached sketch ☐ SWPPP Modification *(See attached)* ☐ See Corrective Actions

Notes:

BME ASSOCIATES ☐ P.E. ☐ NYSESCCP ☐ CPESC ☐ SWT Date

This record is intended to provide compliance with the provisions of Part IV.C.4. of the NYS DEC SPDES General Permit for Stormwater Discharges from Construction Activities.