



TOWN OF CORTLANDT PLANNING BOARD

Steven Kessler
Chairperson

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Vice-Chairperson

David Douglas
Nora Hildinger
Kevin Kobasa
Peter McKinley
Jeff Rothfeder

Town Hall, 1 Heady Street
Cortlandt Manor, NY 10567
Main #: 914-734-1080
Fax #: 914-788-0294

Planning Staff email:
chrisk@townofcortlandt.com

Town Supervisor
Richard H. Becker, MD

Town Board
James F. Creighton
Francis X. Farrell
Cristin Jacoby
Robert Mayes

You are invited to a Zoom webinar.
When: Dec 5, 2023 06:30 PM Eastern Time (US and Canada)
Topic: 2023 December 5 Planning Board Meeting

Please click the link below to join the webinar:
<https://us02web.zoom.us/j/84559778299?pwd=ZUFwTXorNGdPSGJRSlhvNW9XMEtpdz09>

Passcode: 563162
Or One tap mobile:
+19292056099,84559778299#, *563162# US (New York)
+16469313860,84559778299#, *563162# US
Or Telephone:
Dial (for higher quality, dial a number based on your current location):
+1 929 205 6099 US (New York)
Webinar ID: 845 5977 8299
Passcode: 563162

WORK SESSION.....DECEMBER 5, 2023 6:00 PM

1. Discuss December 5, 2023 Regular Planning Board Meeting Agenda.

**MEETING AGENDA.....PLANNING BOARD
TOWN OF CORTLANDT
6:30 TUESDAY EVENING
DECEMBER 5, 2023**

1. PLEDGE TO THE FLAG
2. ROLL CALL
3. CHANGES TO THE AGENDA BY MAJORITY VOTE
4. ADOPTION OF THE MINUTES OF THE MEETING OF NOVEMBER 8, 2023
5. CORRESPONDENCE

- PB 2021-6** a. Letter dated November 21, 2023 from Daniel Richmond, Esq. and a memo dated November 20, 2023 from the Code Enforcement Office as required by Condition #2 of Planning Board Resolution 1-22 to provide an update to the Planning Board on the operation of the site and any substantial code violations for Yeshiva Ohr Hamier located at 141 Furnace Woods Road.
- b. Adopt the 2024 Meeting Schedule

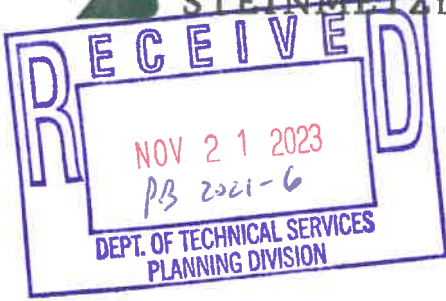
6. OLD BUSINESS

- PB 2023-6** a. Application of Heike Schneider on behalf of 3120 Lexington, LLC for Amended Site Plan approval and a Wetland Permit for a proposed 2,088 sq. ft. building addition to the existing Ace Hardware Store located at 3120 Lexington Avenue. Drawings latest revised November 1, 2023 (see prior PB 2018-5)
- PB 2023-4** b. Application of Cronin Engineering, P.E., P.C. for the property of Riverview Industrial Park LLC for Amended Site Development Plan approval for modifications to the existing industrial building and site located at 260 6th Street. Drawings latest revised November 29, 2023. (see prior PB's 5-16, 7-14, 26-04, 15-04)
- PB 2023-1** c. Application of Ryan Main, LLC for Site Development Plan Approval and a Residential Reuse Special Permit (RRUSP) and for Steep Slope, Wetland and Tree Removal Permits for an additional 13 rental units at Meadowbrook Commons on the Boulevard (formerly Pondview) located on Route 6, west of Regina Avenue. Drawings latest revised November 26, 2023. (see prior PB 3-09 & 2020-11)

7. ADJOURNMENT

Next Regular Meeting; TUESDAY, JANUARY 9, 2024 at 6:30 PM*
Agenda information is also available at www.townofcortlandt.com

** subject to the adoption of the 2024 meeting schedule*



November 21, 2023

- Copies 7 Planning Board
- Town Board
- Zoning Board
- J. Legal Dept.
- DOTS Director
- C.A.C.
- A.P.C.
- Applicant
- _____
- _____
- Sent 11/21/23

Hon. Steven Kessler
Chairman of the Town of Cortlandt Planning Board
and Members of the Planning Board
Town of Cortlandt Town Hall
One Heady Street
Cortlandt Manor, New York 10567

Re: Yeshiva Ohr Hameir (the "Yeshiva")
141 Furnace Woods Road; Cortlandt Manor, NY 10567
Planning Board Resolution No. 4-19

Dear Chairman Kessler and Members of the Planning Board:

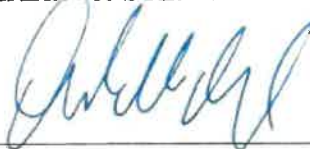
This letter report is submitted pursuant to Condition No. 2 of your Board's Resolution No. 1-22, which renewed the Yeshiva's Special Permit.

We are unaware of any issues or outstanding code violations, substantial or otherwise. It is our understanding that this letter will be received and filed by your Board.

As always, please do not hesitate to contact us with any questions or comments.

Respectfully submitted,

ZARIN & STEINMETZ

By: 
David S. Steinmetz
Daniel M. Richmond

DSS/mth
cc: Rabbi Elya Kanarek
Yaakov Rothberg
Yeshiva Ohr Hameir
Chris Kehoe, AICP



TOWN OF CORTLANDT
DEPARTMENT OF TECHNICAL SERVICES
CODE ENFORCEMENT DIVISION

Michael Preziosi, P.E.

Director – D.O.T.S

Martin G. Rogers, P.E.

Director of Code

Enforcement / D.O.T.S.

Holly Haight

Assistant Director of

Code Enforcement / D.O.T.S.

Town Hall, 1 Heady Street
Cortlandt Manor, NY 10567
Main #: 914-734-1010
Fax #: 914-293-0991

Town Supervisor
Richard H. Becker

Town Board
James F. Creighton
Francis X. Farrell
Cristin Jacoby
Robert Mayes

TO: **Chris Kehoe**
Director of Planning

Thomas F. Wood, Esq.
Town Attorney

Michael Cunningham, Esq.
Deputy Town Attorney

FROM: **Holly M. Haight**
Asst. Director of Code Enforcement

RE: **Yeshiva Fire Inspection**
August 16, 2023

DATE: **November 20, 2023**

Gentlemen:

On August 16, 2023, I inspected all the buildings located at the Yeshiva on 141 Furnace Woods Road. Present with me was Gary Brach for the Yeshiva.

During the inspection, no violations were found.

I found the following during the inspection:

Wolowitz Building (former pool):

Fire alarm system was normal.

Fire extinguishers were all tagged appropriately and in date

All emergency and exit lighting were operational

CO detection was installed.

All dorm rooms on main level and basement level have the appropriate number of beds in each

Dallas Building:

Fire alarm system was normal

Fire extinguishers were all tagged appropriately and in date

All emergency lighting and exit lighting were operational

CO detection was installed.



TOWN OF CORTLANDT
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CODE ENFORCEMENT DIVISION

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Martin G. Rogers, P.E.

*Director of Code
Enforcement / D.O.T.S.*

Holly Haight

Assistant Director of

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Bed count was 80 (no change from 2022). All rooms had the appropriate number of beds in each. All self-closers for egress doors were operational.

Classroom/Kitchen/Dining Building:

Fire alarm system was normal

Fire extinguishers were all tagged appropriately and in date

All emergency lighting and exit lighting were operational

CO detection was installed

Classrooms were inspected and found to have no violations noted.

Kitchen hood is clean, ansul system is in date, all grease catchers in place. Stoves and ovens free of grease accumulation.

Offices/Apartments:

Fire alarm system was normal

Fire extinguishers were all tagged appropriately and in date

All emergency lighting was operational

CO detection was installed

Chalet Building:

Fire alarm system was normal

Fire extinguishers were all tagged appropriately and in date

All emergency lighting was operational

CO detection was installed

Dorm room bed count is 36 (no change from 2022). All rooms had the appropriate number of beds in each.

In summary as noted above, fire alarm systems are secure and operational in each building and are maintained by Ken Marcus of EIPS. All fire extinguishers are hung, in service and tagged appropriately. The ansul system in the kitchen is in service, and in date (last inspection August 2023). Hood is free from grease accumulation. Grease trap is maintained and was cleaned out by Pizzella in August 2023. All emergency lighting and exit lights are operational.

The site is minimal compliance with the New York State Codes as of this date.

I have also attached a copy of the Periodic Inspection Certificate and the inspection report from the OpenGov portal.

If you require anything further, please let me know.

Cc: Martin Rogers, PE
Director of Code Enforcement

Members of the Planning Board



Town of Cortlandt
CODE ENFORCEMENT DIVISION
1 Heady Street
Cortlandt Manor, NY 10567-1254
(914) 734-1010

Periodic Inspection

Certificate of Occupancy #: INSP-23-32 **Date of Issue:** September 11, 2023

Tax Map No: 44.12-1-3 **Zone:** R-40

Issued To: CONGREGATION YESHIVATHOHR HAMEIR
PEEKSKILL NY

THIS CERTIFIES THAT THE PREMISES LOCATED AT: 141 FURNACE WOODS RD
have been inspected:

OCCUPANCY CLASSIFICATION: Commercial **GROUP:** E **USE:** Group E, Educational
occupancy

OCCUPANT LOAD: **HOOD SUPPRESSION SYSTEM EXISTING:** Yes
SPRINKLER SYSTEM EXISTING: No
ALARM SYSTEM EXISTING: Yes



INSP-23-32

Inspection - Educational Occupancies

Periodic Inspections

Status: Complete

Assignee: Holly Haight

Became Active: Aug 9, 2023

Completed: Sep 11, 2023

Applicant

gary brach
shifra@ohrhameir.edu
141 Furnace Woods Rd
cortlandt manor, NY 10567-6112
8454175996

Primary Location

141 FURNACE WOODS RD
CORTLANDT MANOR, NY 10567

Owner:

CONGREGATION YESHIVATHOHR HAMEIR
141 FURNACE WOODS RD PEEKSKILL, NY
10566

History

Date	Type	Recorded By	Result
Aug 16, 2023	F-INSP - CONSTRUCTION FEATURES (A)	Holly Haight	Pass
Aug 16, 2023	F-INSP - ELECTRICAL	Holly Haight	Pass
Aug 16, 2023	F-INSP - EMERGENCY PLANNING	Holly Haight	Pass
Aug 16, 2023	F-INSP - EXIT FEATURES/MEANS OF EGRESS (C)	Holly Haight	Pass
Aug 16, 2023	F-INSP - EXTERIOR	Holly Haight	Pass
Aug 16, 2023	F-INSP - FIRE ALARM & DETECTION SYSTEMS (C)	Holly Haight	Pass

Date	Type	Recorded By	Result
Aug 16, 2023	F-INSP - FIRE EXTINGUISHERS (B)	Holly Haight	Pass
Aug 16, 2023	F-INSP - FLAMMABLE/COMBUSTIBLE LIQUIDS (A)	Holly Haight	Pass
Aug 16, 2023	F-INSP - HAZARDOUS MATERIAL	Holly Haight	Not Inspected
Aug 16, 2023	F-INSP - OTHER FIRE PROTECTION SYSTEMS	Holly Haight	Pass
Aug 16, 2023	F-INSP - SPRINKLER SYSTEM	Holly Haight	Not Inspected
Aug 16, 2023	F-INSP - STORAGE	Holly Haight	Pass
Aug 16, 2023	F-INSP - UTILITY/MECHANICAL/HVAC	Holly Haight	Pass



TOWN OF CORTLANDT
DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT

Chris Kehoe, AICP
Director

Planning Staff
Michelle Robbins, AICP
Rosemary Boyle-Lasher

Town Hall, 1 Heady Street
Cortlandt Manor, NY 10567
Main #: 914-734-1080

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Richard H. Becker, MD

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Cristin Jacoby
Robert Mayes

DRAFT
Planning Board Meetings 2024
Regular Meetings Begin at 6:30 p.m.
Work Sessions at 6:00 p.m. (same night)

Regular Meeting	Deadline
Tuesday, January 9	Wednesday, January 3
Tuesday, February 6	Wednesday, January 31
Tuesday, March 5	Wednesday, February 28
Tuesday, April 2	Wednesday, March 27
Tuesday, May 7	Wednesday, May 1
Tuesday, June 4	Wednesday, May 29
Tuesday, July 9	Wednesday, July 3
Tuesday, September 10	Wednesday, September 4
Tuesday, October 1	Wednesday, September 25
*Thursday, November 7	Wednesday, October 30
Tuesday, December 3	Wednesday, November 20

Chris Kehoe, AICP
Town of Cortlandt
Deputy Director of Planning
1 Heady Street
Cortlandt Manor, NY 10567

Re: PB 2018-05
3120 Lexington Ave.
Cortlandt, NY

Project: Ace Hardware Store at 3120 Lexington Avenue in the Town of Cortlandt
SECTION: 24.15 BLOCK: 1 LOT: 8 Zone: CC

Owner : Ace Hardware
Architect: Heike A. Schneider, HS-Architecture, email: heike@hs-architecture.com

Project: Ace Hardware Store Expansion - Proposed Site Plan Alterations

Attn: Paul J. Jaehnig,

1. The proposed addition does not appear to require filling or disturbance of wetlands; at least on paper.
[HS-Architecture's Response: Confirmed.](#)
2. The close proximity of the proposed addition along wetland flag locations WL-A-10 to WL-A-11 and WL-15 to A-16 seems unrealistic in terms of potential avoidance of adjacent wetlands during construction. While the proposed building structure may be shown as being out of wetlands here, the associated site work, such as clearing and grading along the outside of the building, will likely involve disturbance to wetlands. The applicant should detail, by way of graphic and narrative, a construction staging sequence, indicating how the addition would be built and how the adjacent wetland will not be encroached upon during and after construction.
[HS-Architecture's Response:](#)
[The area of disturbance will be maintained outside the wetland's boundary. Established vegetation buffers are protected. Carry out staged excavation and stabilization. Maintain sediment and erosion control measures. Stabilize soil stockpiles by placing sediment fences around their lower edges, cover with fabric, plastic, or vegetation. All machinery needed for excavation will be brought in through the existing storage building or along the established gravel path in the back. No heavy machinery will be needed. The building will be prefabricated but arriving in parts that can be brought in with small machinery.](#)

3. Any wetland permit review asks that applicant consider avoidance and or reduction of impacts to wetlands and wetland buffer area. It would seem that a proposed addition could be considered elsewhere and result in less encroachment to the wetland buffer. More specifically, the applicant may consider an addition on the parking lot side of the building, that is, the southeast side of the building. The applicant could also consider altering or reducing the dimensions of the proposed addition, width, and length. If alternative locations have been considered, and found to be impractical, the applicant should prepare sketches demonstrating that.

HS-Architecture's Response:

Other locations were considered. The location proposed would significantly boost the company's long-term performance and lower daily operational costs. The size and location of the proposed addition was determined to maintain a level of functionality. Any addition located in the parking lot would limit the number of patrons, which would directly affect the overall daily operations and performance of the business. The existing number of parking spaces established in 2018 when the Ace Hardware store was first built and approved, is the minimum as per town code.

4. The proposed mitigation area of 5,000 sq. ft. appears to be rather generous in terms graphic depiction. When closely looking at the proposed quantity of plantings over this area, the quantity appears to be skimpy.

Sherwood Truitt's response: The preliminary mitigation plan can easily be more detailed. Wetland suited plants, bushes or trees can easily be added. By proposing a 5,000 SF mitigation area, we are also proposing to remove invasive species and therefore increasing the positive impact on the existing wetland.

5. The wetland is a NYSDEC wetland and permit approval from them will be needed. The NYSDEC wetland validation is more than 5 years, and it would be expected the NYSDEC staff will need to have re-validation of the wetland boundary as part of the agency review. The applicant should provide any information from the agency with regards to this.

HS-Architecture's Response: Will comply. An application with the NYSDEC has been filed already. We are currently waiting for a response to our revised application.

6. It is recommended that the applicant provide stake-out in the field of any proposed addition so that reviews may have a more informed idea of what may or may not be involved with the proposed addition with regards to impacts to the wetlands and or wetland buffer.

Heike A. Schneider

Architect AIA, LEED AP
515 Croton Heights Road
Yorktown Heights, NY 10598
Tel 914 962-2119
Fax 914 962 2119
heike@hs-architecture.com

HS-Architecture's Response: Will comply. The land surveyor can stake out the proposed addition and we can establish an onsite meeting to walk the site and further discuss the overall means and methods during construction.

Thank you.

Very truly yours,

Heike A. Schneider



HEIKE A. SCHNEIDER
 ARCHITECT, AIA, LEED AP
 515 CROTON HEIGHTS ROAD
 YORKTOWN HTS, NY 10598
 914 962-2119

FABRIC BUILDING for the
 ACE HARDWARE STORE
 3120 LEXINGTON AVE
 MOHEGAN LAKE, NY 10547

Plan Title
PROPOSED SITE PLAN

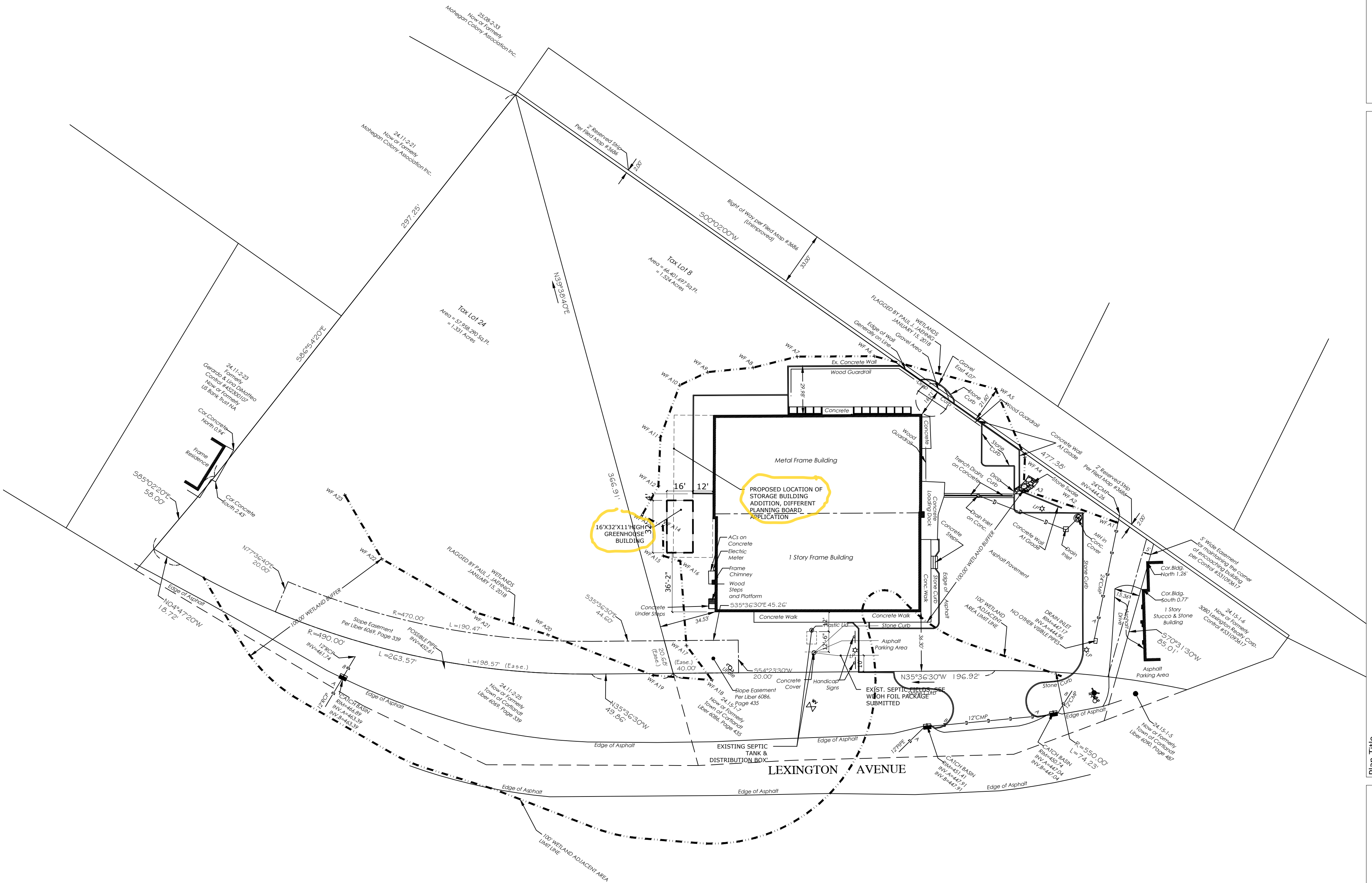
Title/Owner

Date: 08-25-23
 Revision:

Bidding:

S₁

2 OF 4

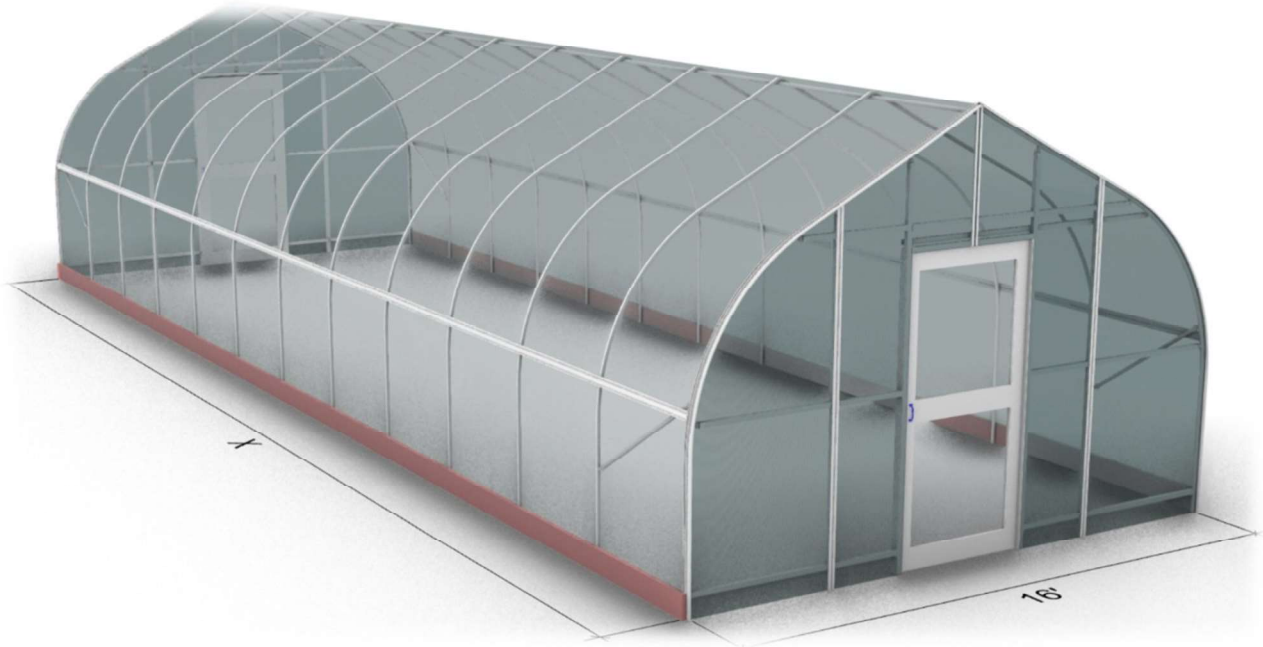


SITE PLAN

SCALE: 1" = 40' - 0"

Bobcat Greenhouse Assembly Instruction Manual

40 Londonderry Tpk., Hooksett, NH 03106 • Phone: 1-877-746-6544
Email: customerservice@rimol.com • Web Site: <https://www.rimolgreenhouses.com/>



Materials Included

Refer to the separate “pick” list for details on part numbers and quantities.

Additional Tools Recommended

- Cordless drill or impact driver
- 8’ step ladders
- Utility knife
- Clamps
- 4’ level
- 100’ or longer tape measure
- Deep socket set with an adaptor for your drill
- Sledgehammer
- Sharpie markers
- Circular saw with wood blade if wood framed ends
- Jigsaw or reciprocating saw with metal blade for polycarbonate or steel framing
- Extension cords

RGS provides a care kit with a ground post driver, a 5/16” magnetic driver for TEK screws and wood-mate screws, a line level, a 3/8” drill bit and mason line.

Always refer to your pick lists for parts to be used in each step of the construction process.

READ THROUGH EACH SECTION OF THE MANUAL FIRST BEFORE YOU ENGAGE IN THE ASSEMBLY PROCESS. THIS WILL HELP YOU FULLY UNDERSTAND THE CONSTRUCTION PROCESS.

November 29, 2023

Stephen Kessler, Chairman
Town of Cortlandt Planning Board
Town Hall, 1 Heady Street
Cortlandt Manor, NY 10567

**Re: Riverview Industrial Park, LLC
260 6th Street
Amended Site Development Plan**

Dear Chairman Kessler and Members of the Planning Board:

Find enclosed the following information for the above-referenced Project as uploaded to the Town Open Government website and PDF's sent via email to the Town Director of Planning:

1. Revised Short Environmental Assessment Form.
2. Site Development Plan.
3. Architectural plans.

The project site is located at 260 6th Street located in the MD Zoning District and contains one 40,000 square foot building. The building currently houses several industrial rental spaces. The interior of the building is currently being upgraded with new utilities and partitioning. The exterior of the site has been improved with tree and shrub plantings, new pavement, stormwater management and overall site cleanup.

The Site Development Plan was further revised pursuant to the discussions with this Board at the previous meeting as well as the review memorandums prepared by the Town's Consultants and Director of Planning. Below is an item-by-item response to those review memos:

Town Engineer Memo dated August 25, 2023:

1. The OWTS is now shown on the Site Plan and consists of 200 linear feet of 4'x4'x4' concrete gullies.
2. The only lighting proposed is for nine wall packs spaced 22 feet on-center and 10 feet above the ground. The wall packs are downward facing with LED lights. Details are on the Site Plan.
3. An analysis has been performed and the existing OWTS (200 feet of 4'x4'x4' gullies) has a daily capacity of approximately 1,699 gallons per day and the estimated design load based on the occupancy of the site is expected to be approximately 165 gallons per day. Therefore, the existing OWTS has more than sufficient capacity to serve the project site.

4. Signed and sealed design plans for the retaining wall will be provided at the time construction begins for the retaining wall. A note to this effect has been placed on the Site Plan.
5. A note to this effect has been placed on the Site Plan.
6. A note to this effect has been placed on the Site Plan.

Town Planner Memo dated August 09, 2023:

1. Acknowledged
2. -Additional plantings are shown on the Site Plan.
-Zoning Chart added to Site Plan
-A picture of the existing sign is on the Site Plan.
3. Acknowledged.
4. Acknowledged.
5. Acknowledged.
6. The EAF has been revised and is included in this resubmission.
7. Acknowledged.
8. Acknowledged.

We would like to have this application placed on the December 05, 2023, Planning Board agenda for discussion and to waive the public hearing and direct Staff to prepare an approving resolution for the next meeting. Should you have any questions or require additional information please contact me at the above number. Thank you for your time and consideration in this matter.

Respectfully submitted,

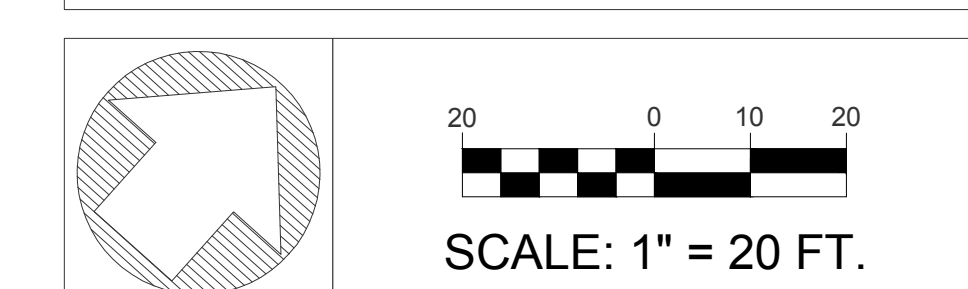
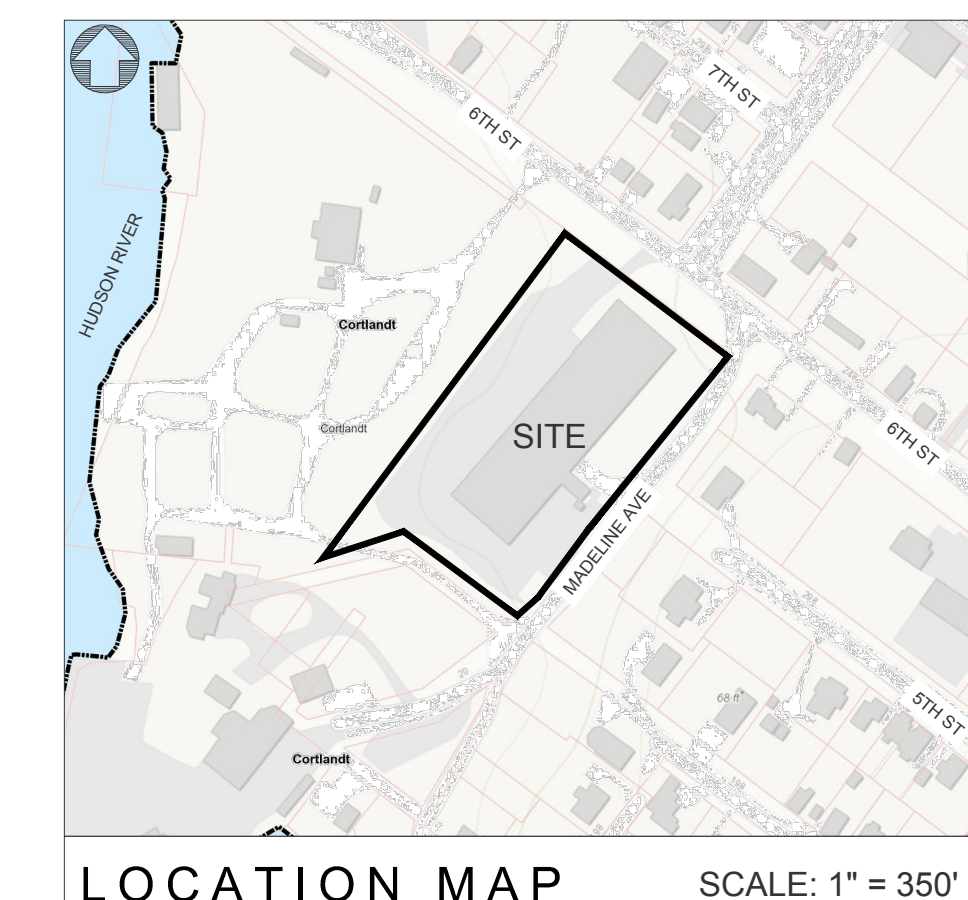


Keith C. Staudohar
Cronin Engineering P.E. P.C.

cc: Adam Garber w/ encl.

AMENDED SITE PLAN FOR RIVERVIEW INDUSTRIAL PARK, LLC

WESTCHESTER COUNTY, NEW YORK



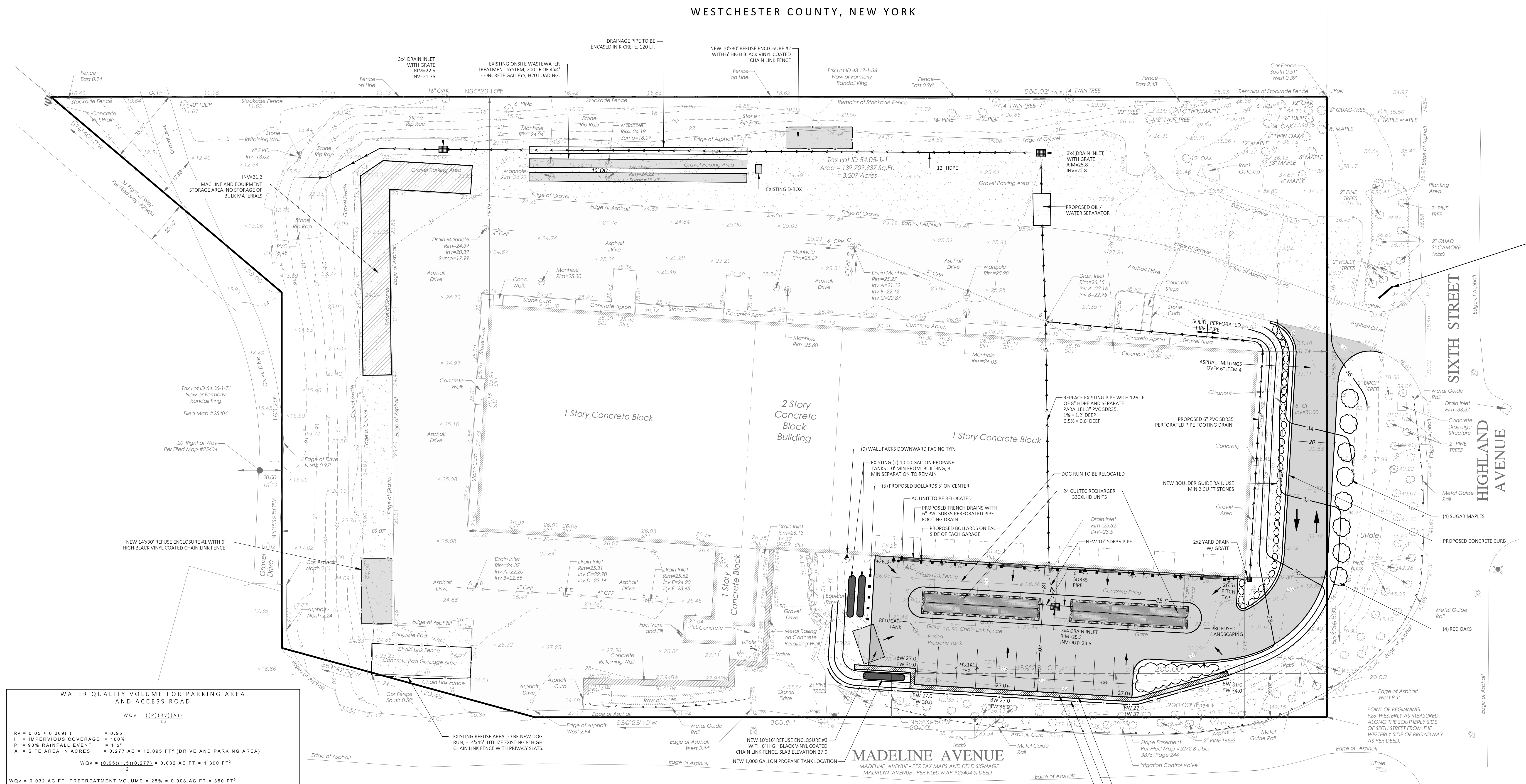
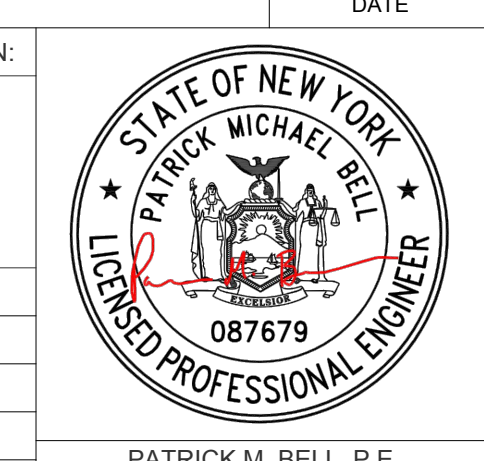
OWNER

RIVERVIEW INDUSTRIAL PARK, LLC
333 NORTH BEDFORD ROAD SUITE 140,
MOUNT KISCO, NY 10549

• UNDER NEW YORK STATE EDUCATIONAL LAW ARTICLE 145, SECTION 7209 (2), IT IS UNLAWFUL FOR ANY PERSON TO ALTER ANY ITEM ON THIS DRAWING, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF ANY ITEM IS ALTERED, THE ALTERING ENGINEER 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.
• COPYRIGHT "2023" BY CRONIN ENGINEERING, P.E., P.C. ALL RIGHTS RESERVED.

REVISIONS	
#	TOWN COMMENTS
5	
4	
3	
2	
1	

#	REASON	DATE
1	TOWN COMMENTS	11-29-2023



WATER QUALITY VOLUME FOR PARKING AREA AND ACCESS ROAD

$WQv = \frac{[0.95]([A] + [A])}{12}$

$Rv = 0.05 + 0.009(I) = 0.95$
 $I = \text{IMPERVIOUS COVERAGE} = 100\%$
 $P = 30\% \text{ RAINFALL EVENT} = 1.5"$
 $A = \text{SITE AREA IN ACRES} = 0.277 \text{ AC} = 12,095 \text{ FT}^2 \text{ (DRIVE AND PARKING AREA)}$

$WQv = \frac{[0.95]([12,095] + [12,095])}{12} = 0.032 \text{ AC FT} = 1,390 \text{ FT}^3$

$WQv = 0.032 \text{ AC FT, PRETREATMENT VOLUME} = 25\% \times 0.008 \text{ AC FT} = 350 \text{ FT}^3$
VOLUME PER CULTEC UNIT (330X180) = 79.26 FT³
TOTAL VOLUME (PRETREATMENT AND STORAGE) = 350 FT³ + 1,390 FT³ = 1,740 FT³
TOTAL NUMBER OF UNITS = 1,740 FT³ / 79.26 FT³ PER UNIT = 22 UNITS, 24 PROVIDED

DAILY CAPACITY OF REPAIRED OWTS

CONSISTS OF: 200LF OF 4'x4'x4' CONCRETE GALLEYS
 - 4 END SECTIONS
 - 184' OF GALLEYS

ALLOWABLE CREDIT FOR GALLEYS:
 - 8.67 SF/LF FOR INTERIOR GALLEYS
 - 26.0 SF FOR END SECTION

APPLICATION RATES: 6-7 MIN/INCH = 1.0 GPD/SF

USABLE AREAS:

END SECTIONS	= 4 x 26.0 SF	= 104 SF
GALLEY RUNS	= 8.67 SF/LF x 184 FT	= 1,595 SF
TOTAL		= 1,699 SF

MAXIMUM DESIGN FLOW:
 @ 6-7 = 1,699 SF x 1.0 = 1,699 GPD

ESTIMATED DAILY LOAD:
 (15 GPD PER EMPLOYEE)

TOTAL BUILDING AREA	= 41,833 SF	= 0 GPD
CONTRACTOR STORAGE	= 29,056 SF	= 0 GPD
ANNUAL RESERVE	= 4,091 SF (6 EMPLOYEES)	= 90 GPD
COMMERCIAL SPACE	= 2,750 SF (4 EMPLOYEES)	= 60 GPD
OFFICE SPACE	= 1,283 SF (1 EMPLOYEE)	= 15 GPD
SITE STORAGE	= 3,388 SF	= 0 GPD
TOTAL ESTIMATED DAILY FLOW		= 165 GPD

ZONING DATA - ZONE MD

LOT DESCRIPTION	LOT AREA (AC)	LOT WIDTH (FT)	DESIGNATED INDUSTRIAL				REAR YARD (FT)	BUILDING HEIGHT (STORIES) (FT)	MAX BLDG COVERAGE (% FLR AREA)	MIN LANDSCAPE COVERAGE (% FLR AREA)
			FRONT YARD (FT) 6TH ST	FRONT YARD (FT) MADLINE AVE	SIDE YARD (FT)	REAR YARD (FT)				
REQUIREMENT	5	300	75	75	75	75	(3/40)	25	40	
PROPOSED	3.207	>300	31.74'	64.21'	64.21'	89.07'	(2/40)	27'	24'	

*INDICATES PREEXISTING NONCONFORMING



EROSION AND SEDIMENT CONTROL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL SEDIMENT AND EROSION CONTROL PRACTICES, THE SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. TIMELY MAINTENANCE OF SEDIMENT CONTROL STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL STRUCTURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. THE SEDIMENT LEVEL IN ALL SEDIMENT TRAPS SHALL BE CLOSELY MONITORED AND SEDIMENT REMOVED PROMPTLY WHEN MAXIMUM LEVELS ARE REACHED OR AS ORDERED BY THE ENGINEER. ALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED WEEKLY PRIOR TO EXPECTED RAIN EVENTS, AND AFTER EACH HEAVY RAIN TO INSURE PROPER OPERATION AS DESIGNED. AN INSPECTION SCHEDULE SHALL BE SET FORTH PRIOR TO THE START OF CONSTRUCTION.
3. THE LOCATIONS AND THE INSTALLATION TIMES OF THE SEDIMENT CAPTURED STANDARDS SHALL BE AS ORDERED BY THE ENGINEER, AND IN ACCORDANCE WITH ACCEPTED STANDARDS.
4. ALL TOPSOIL NOT TO BE USED FOR FINAL GRADING SHALL BE REMOVED FROM THE SITE IMMEDIATELY AND PLACED IN A STABILIZED STOCKPILE OR FILL AREA. ALL TOPSOIL REQUIRED FOR FINAL GRADING AND STORED ON SITE SHALL BE LIMED, FERTILIZED, TEMPORARILY SEEDDED AND MULCHED WITHIN 14 DAYS.
5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 21 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL IMMEDIATELY RECEIVE TEMPORARY SEEDING. MULCH SHALL BE USED IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER. DISTURBED AREAS SHALL BE LIMED AND FERTILIZED PRIOR TO TEMPORARY SEEDING.
6. ALL DISTURBED AREAS WITHIN 500 FEET OF AN INHABITED DWELLING SHALL BE WETTED AS NECESSARY TO PROVIDE DUST CONTROL.
7. THE CONTRACTOR SHALL KEEP THE ROADWAYS WITHIN THE PROJECT CLEAR OF SOIL AND DEBRIS AND IS RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT.
8. SEDIMENT AND EROSION CONTROL STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED BY PERMANENT MEASURES.
9. SOIL SEEDING AND FERTILIZER AMENDMENTS SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITION OF "NEW YORK GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL".
10. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT EDITION OF "NEW YORK GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL".

ENGINEERS CONSTRUCTION NOTES

1. THERE SHALL BE NO MODIFICATION TO ANY ASPECT OF THIS PLAN WITHOUT FIRST CONTACTING CRONIN ENGINEERING, P.E., P.C. FOR APPROVAL.
2. PRIOR TO ANY EXCAVATION, THE OWNER AND/OR CONTRACTOR SHALL CALL THE UNDERGROUND LINE LOCATION SERVICE (CODE 811/FKA CODE 753). FOR MORE INFORMATION, VISIT "DIG SAFELY NEW YORK" AT WWW.DIGSAFELYNEWYORK.COM.
3. EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN IN THIS PLAN SET SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY SITE WORK. IF UNFORESEEN FIELD CONDITIONS ARE ENCOUNTERED WHICH PROHIBIT THE INSTALLATION OF CERTAIN EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN, IT SHALL BE THE OWNER AND/OR CONTRACTOR'S RESPONSIBILITY TO CONTACT CRONIN ENGINEERING, P.E., P.C. IMMEDIATELY TO DISCUSS ALTERNATIVE METHODS. IT SHALL BE THE OWNER AND/OR CONTRACTOR'S RESPONSIBILITY TO ENSURE THE INTEGRITY OF ALL EROSION AND SEDIMENT CONTROL MEASURES AT ALL TIMES THROUGHOUT THE DURATION OF THE PROJECT.
4. EROSION ENGINEERING, P.E., P.C. MAKES NO REPRESENTATIONS OR CERTIFICATIONS AS TO THE INTEGRITY, LOCATION OR EXISTENCE OF SUBSURFACE STRUCTURES OR SOIL CONDITIONS WITH RESPECT TO STABILITY AND SUITABILITY FOR THE INTENDED PURPOSE. IT IS THE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR TO VERIFY ALL SUBSURFACE CONDITIONS AND INSURE THAT ALL IMPROVEMENTS ARE PLACED ON MATERIAL WITH A SUITABLE BEARING CAPACITY.
5. EROSION ENGINEERING, P.E., P.C. MAKES NO REPRESENTATION OR CERTIFICATIONS AS TO THE QUANTITY OF MATERIAL NEEDED OR TO BE REMOVED FOR THE SUCCESSFUL CONSTRUCTION OF THE PROJECT. IT IS THE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR TO VERIFY THE QUANTITY OF MATERIAL NEEDED OR TO BE REMOVED TO SUCCESSFULLY CONSTRUCT THE PROJECT.
6. IN THE EVENT THAT FIELD CONDITIONS ARE DIFFERENT FROM WHAT IS PRESENTED IN THIS PLAN SET, IT IS THE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR TO NOTIFY CRONIN ENGINEERING, P.E., P.C. PRIOR TO CONTINUING WITH ANY FURTHER SITE WORK.
7. IF UNFORESEEN SUBSURFACE CONDITIONS ARE ENCOUNTERED (I.E. ROCK, GROUNDWATER, ETC.), THE OWNER AND/OR CONTRACTOR SHALL STOP WORK AND NOTIFY CRONIN ENGINEERING, P.E., P.C. ALL NECESSARY MODIFICATIONS OR CHANGES SHALL BE DISCUSSED WITH AND APPROVED BY CRONIN ENGINEERING, P.E., P.C. PRIOR TO CONTINUING WITH ANY FURTHER SITE WORK. FURTHERMORE, THE OWNER AND/OR CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS IF BLASTING IS REQUIRED.
8. IF THE OWNER AND/OR CONTRACTOR'S SOLE RESPONSIBILITY TO FOLLOW OSHA, NYS AND ANY OTHER APPLICABLE CODES OR REQUIREMENTS THROUGHOUT THE DURATION OF THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO PROVIDING ADEQUATE BRACING AND GUARANTEEING THE STABILITY OF EXCAVATIONS AND OTHER VICINITY STRUCTURES.
9. CRONIN ENGINEERING, P.E., P.C. MAKES NO REPRESENTATION AS TO THE QUALITY (I.E. CONTAMINATION), IF ANY, OF THE SOILS ON THIS SITE. THE OWNER AND/OR CONTRACTOR IS RESPONSIBLE TO CONDUCT ANY AND ALL TESTING AS MAY BE REQUIRED TO ENSURE THE SITE HAS NO CONTAMINATED SOILS.

GENERAL NOTES:

1. SURVEY INFORMATION SHOWN HEREON WAS TAKEN FROM A PLAN PREPARED BY TO MERRITS LAND SURVEYORS ENTITLED: TOPOGRAPHY OF PROPERTY PREPARED FOR RIVERVIEW INDUSTRIAL PARK, LLC DATED AS REVISED JANUARY 19, 2023.
2. TOWN OF CORTLAND PARCEL TAX MAP DESIGNATION: SECTION: 54.5, BLOCK: 1, LOTS: 1
3. TOTAL AREA OF LOT: 130.712 SQ. FT. (3.207 ACRES).
4. THE BUILDING INSPECTOR OR TOWN ENGINEER MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES IF DEEMED APPROPRIATE TO MITIGATE UNFORESEEN SLOTTION AND EROSION OF DISTURBED SOILS.
5. AS-BUILT DRAWINGS OF THE SITE IMPROVEMENTS SHALL BE SUBMITTED TO THE TOWN ENGINEER FOR REVIEW PRIOR TO OBTAINING CERTIFICATE OF OCCUPANCY.
6. PROPOSED SOIL SLOPES EXCEEDING 1:2 (V:H) SHALL BE RIP-RAPPED WITH 3" STONE OR PROVIDED WITH EROSION CONTROL BLANKET AND PROPOSED SLOPES SHALL NOT EXCEED 1:1 (V:H).

REFERENCE NOTES:

- 1) REFERENCE IS MADE TO THE ARCHITECTURAL PLANS BY GALLIN DESIGN STUDIO BEELER ENTITLED, "RIVERVIEW INDUSTRIAL PARK - PROPOSED FACADE ALTERATIONS - PHASE 2" DATED MAY 29, 2023.

SPECIAL NOTE

THE DESIGN ENGINEER ASSUMES NO RESPONSIBILITY FOR THE MEANS AND METHODS NEEDED TO PERFORM THE CONSTRUCTION/EXCAVATION, ET AL. OPERATIONS SHOWN HEREON. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A SAFE WORKING ENVIRONMENT AND PROVIDE THE MEANS AND METHODS TO PERFORM THE NECESSARY TASKS. NOTHING ON THESE PLANS SHALL OBLIGATE THE DESIGN ENGINEER AS TO THE MEANS AND METHODS TO PERFORM THE TASKS ASSOCIATED WITH THE APPROVED DESIGN PLANS. THOSE OBLIGATIONS AT ALL TIMES REMAIN WITH THE CONTRACTORS.

SITE PLAN REVIEW NOTES

- 1) APPLICANT MUST PROVIDE SIGNED AND SELED DESIGN PLANS FOR THE RETAINING WALL PRIOR TO BEGINNING INSTALLATION OF THE RETAINING WALL.
- 2) ANY PROPOSED IMPORT FILL MUST BE TESTED AND CERTIFIED AS UNRESTRICTED, SUITABLE FOR RESIDENTIAL USE IN ACCORDANCE WITH TOWN POLICY. CERTIFICATION MUST BE PROVIDED BY A LICENSED PROFESSIONAL, ALL CERTIFICATIONS SHALL BE ADDRESSED "JOSEPH M. FUSILLO, P.E., ENV. SP." ALL SOIL ANALYTICS AND REPORTS WILL BE FORWARDED TO LABELLA FOR REVIEW AND APPROVAL.
- 3) ANY REQUIREMENTS SET FORTH BY THE TOWN OF CORTLAND'S OFFICE OF TECHNICAL SERVICES MUST BE MET PRIOR TO BEGINNING CONSTRUCTION.

CRONIN ENGINEERING
PROFESSIONAL ENGINEERING & CONSULTING
(914) 736-3664

29 Arlo Lane
Cortlandt, New York 10567

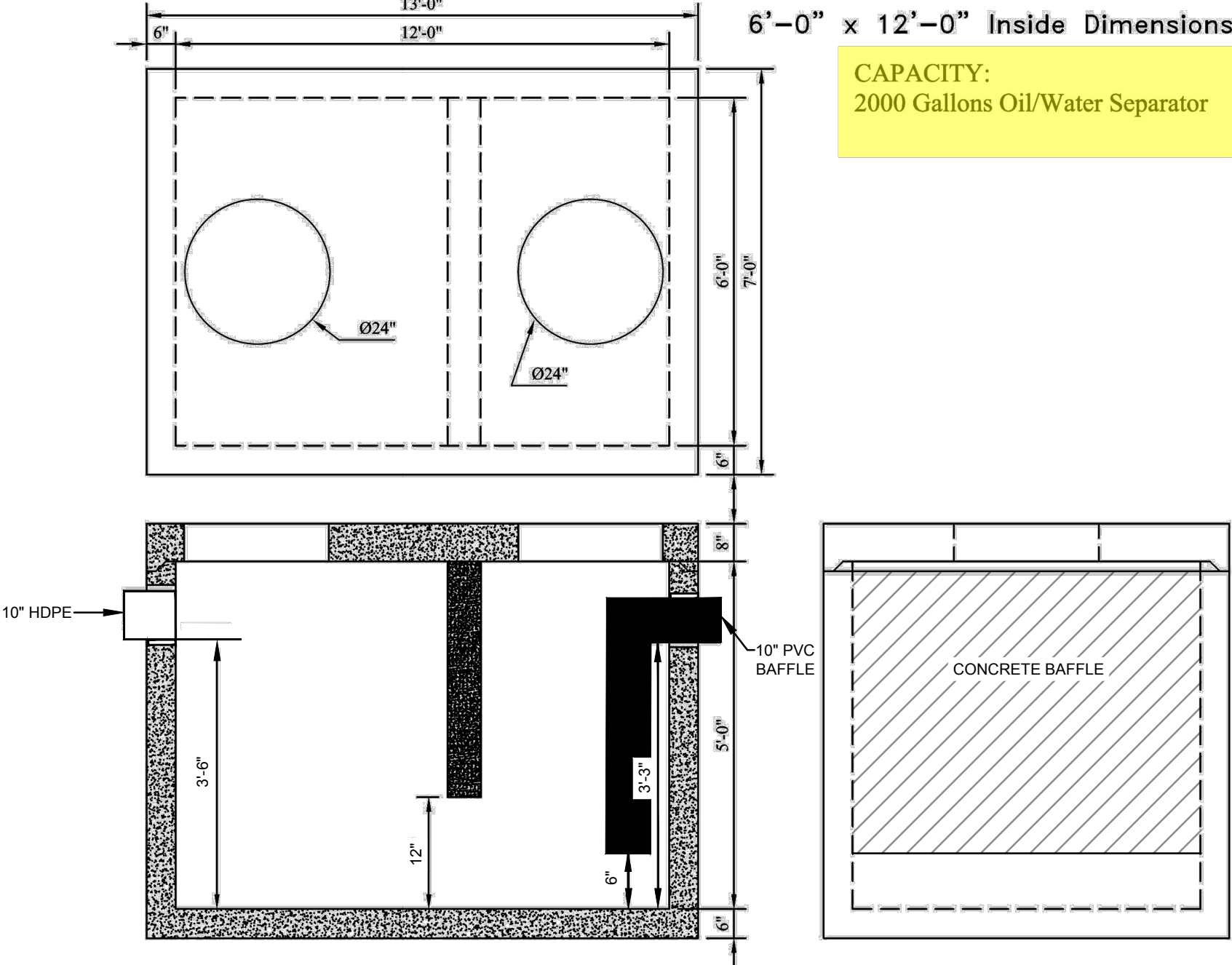
AMENDED SITE PLAN

AMENDED SITE PLAN FOR RIVERVIEW INDUSTRIAL PARK, LLC

LOCATION:
260 MADLINE AVENUE
TOWN OF CORTLANDT

SHEET 1 OF 4 **SP-1.1**

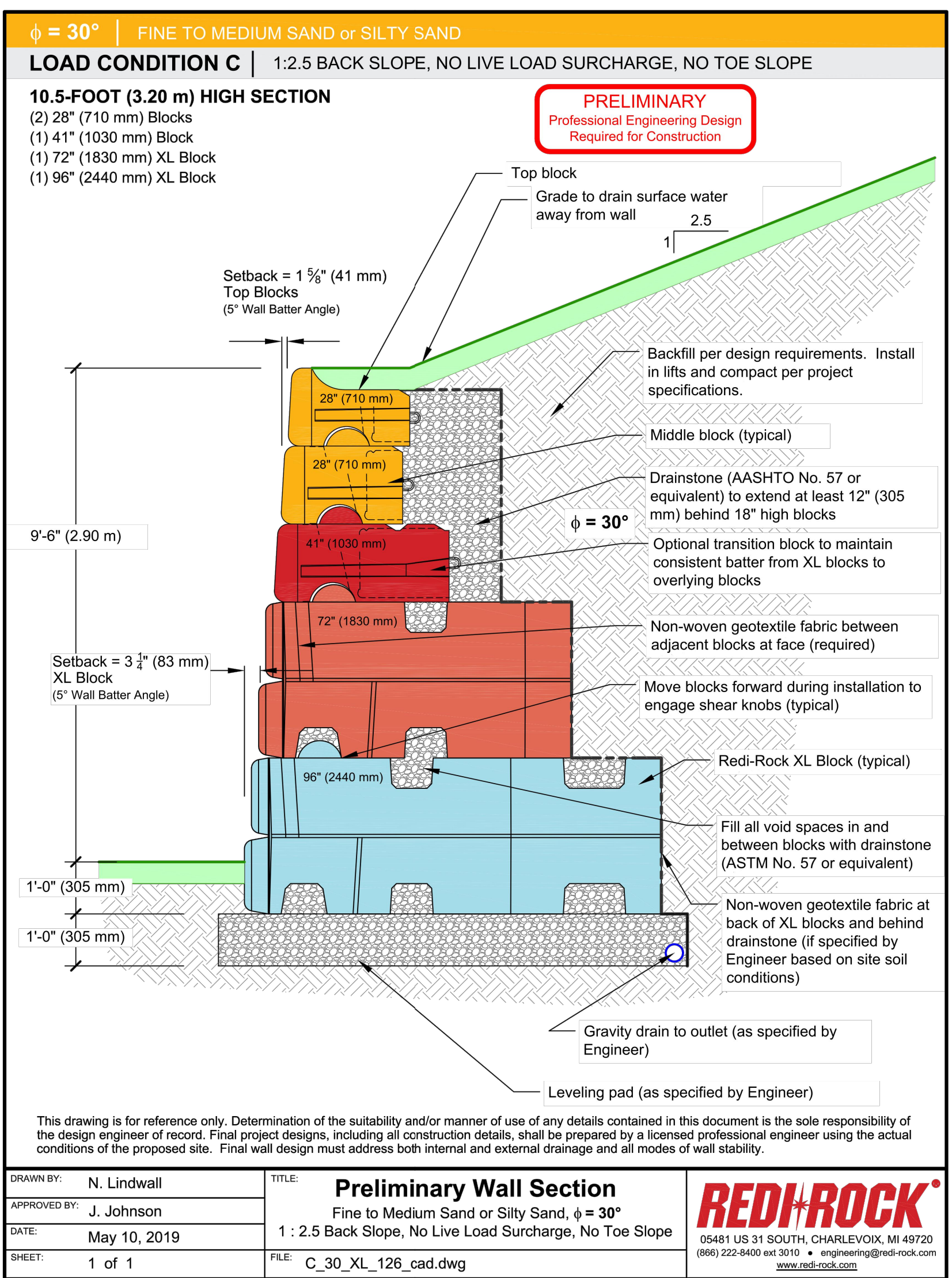
Precast Chamber



CAPACITY:
2000 Gallons Oil/Water Separator

- NOTES:**
- Minimum Concrete Compressive Strength: 5,000 PSI @ 28 Days.
 - Design Loading: AASHTO HS-20.
 - Construction joint shall be sealed with butyl rubber conforming to ASTM C443 and C990, AASHTO M-198 Type B.
 - Reinforcing steel conforms to ASTM A-615 Specs, Grade 60, 1" minimum cover.

Connecticut Precast Corp.

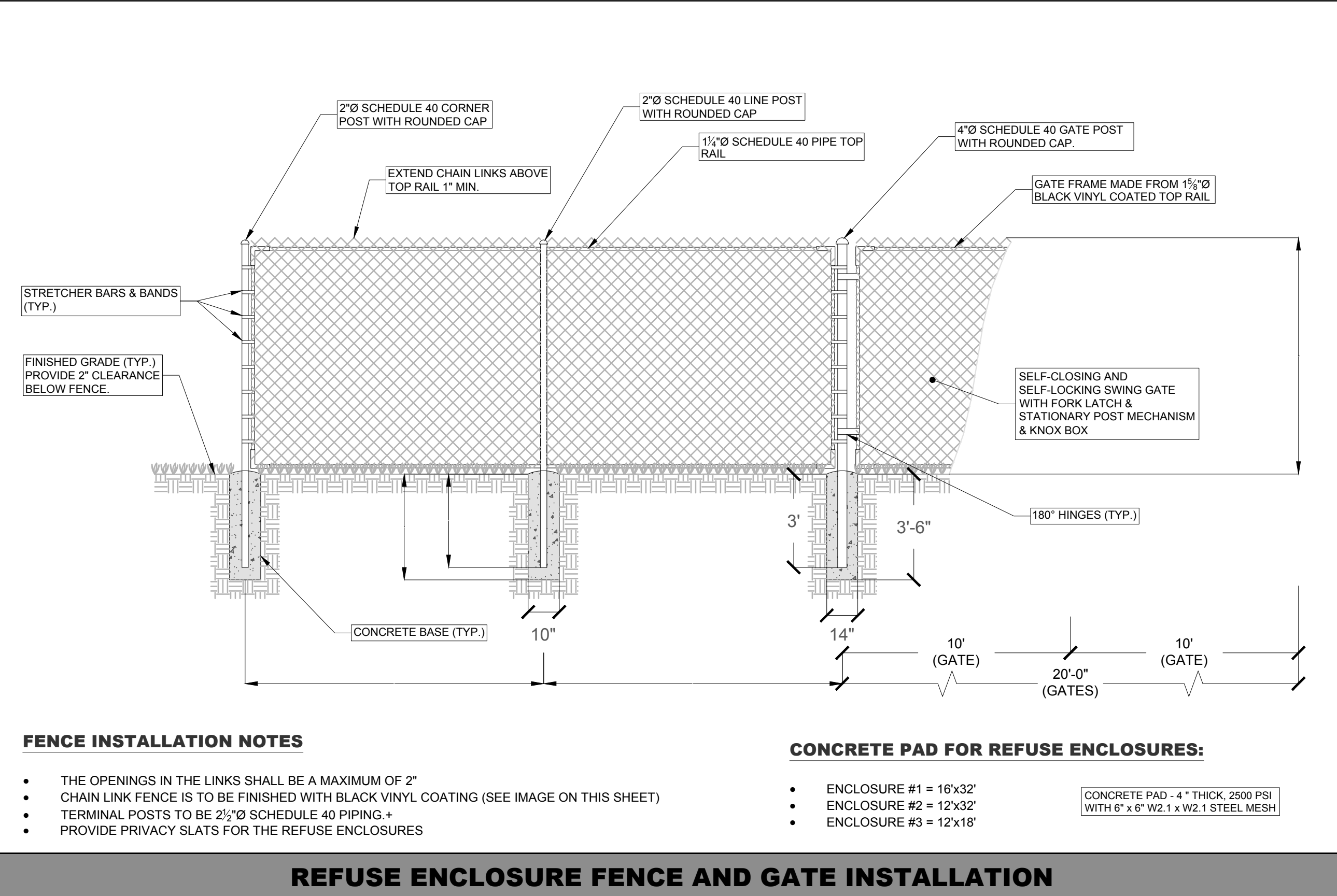
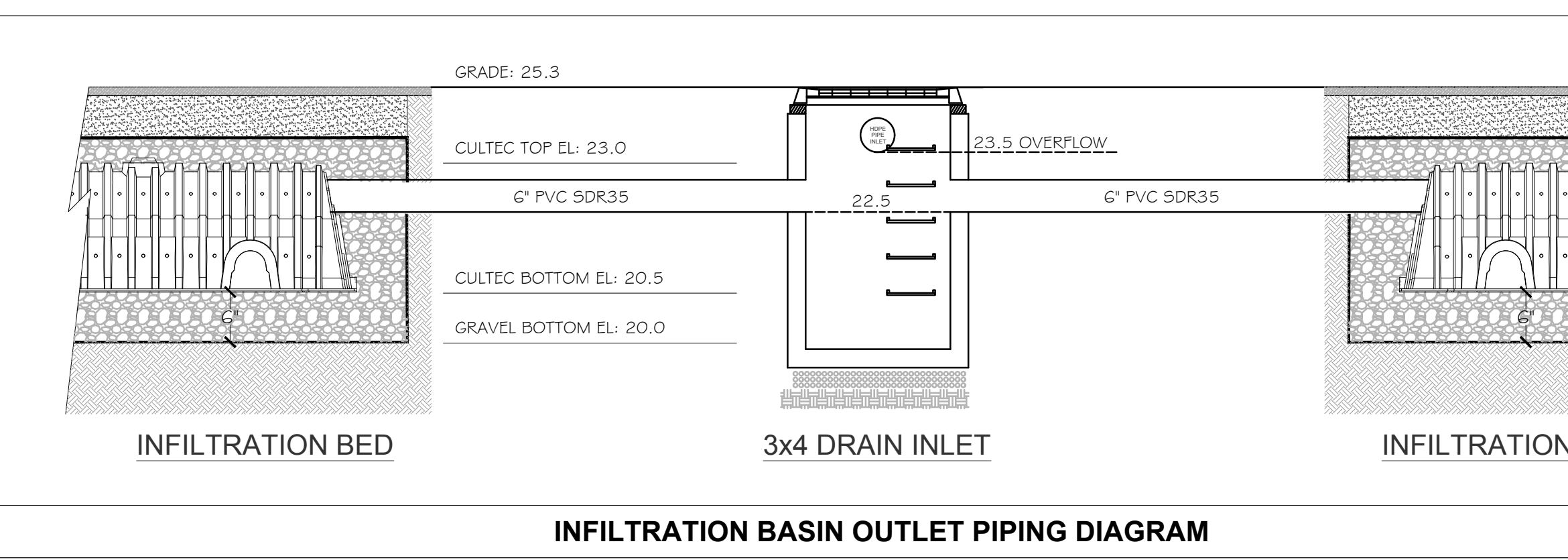
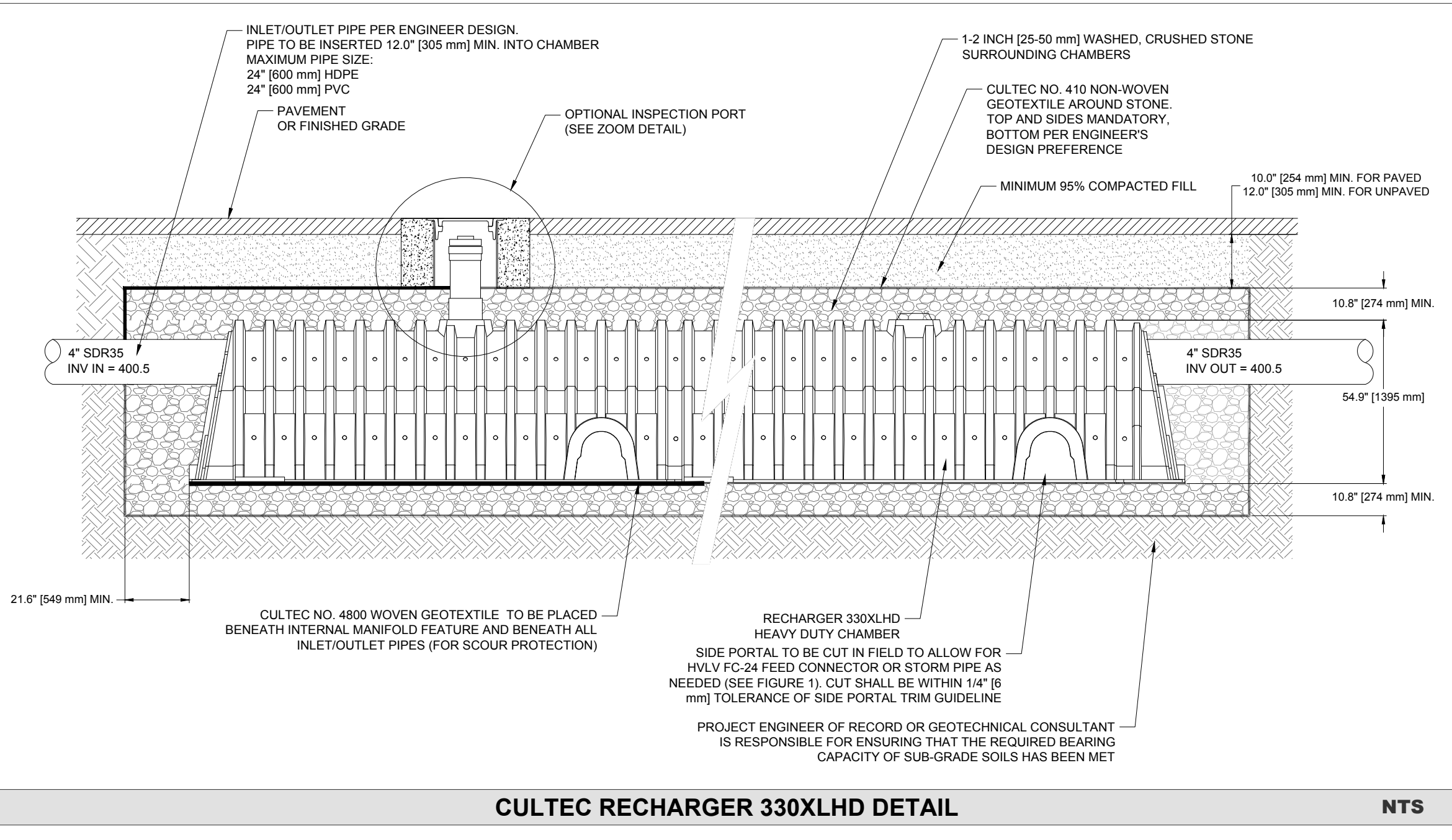


Preliminary Wall Section
Fine to Medium Sand or Silty Sand, $\phi = 30^\circ$
1 : 2.5 Back Slope, No Live Load Surcharge, No Toe Slope

DESIGNED BY: N. Lindvall
APPROVED BY: J. Johnson
DATE: May 10, 2019
SHEET: 1 of 1

FILE: C_30_XL_126_cad.dwg

REDI-ROCK
05481 US 31 SOUTH, CHARLEVOIX, MI 49720
800.223.8800 ext. 301 • engineering@redi-rock.com
www.redi-rock.com



- FENCE INSTALLATION NOTES**
- THE OPENINGS IN THE LINKS SHALL BE A MAXIMUM OF 2"
 - CHAIN LINK FENCE IS TO BE FINISHED WITH BLACK VINYL COATING (SEE IMAGE ON THIS SHEET)
 - TERMINAL POSTS TO BE 2 1/2" SCHEDULE 40 PIPING 4"
 - PROVIDE PRIVACY SLATS FOR THE REFUSE ENCLOSURES
- CONCRETE PAD FOR REFUSE ENCLOSURES:**
- ENCLOSURE #1 = 16x32
 - ENCLOSURE #2 = 12x32
 - ENCLOSURE #3 = 12x16
- CONCRETE PAD: 4" THICK 2500 PSI WITH 6" x 6" W2.1 x W2.1 STEEL MESH

Replace traditional wallpacks with SLIM™ LED.

Same footprint. Better performance.

SLIM™ 62W
SLIM™ 57W
SLIM™ 37W

RAB LIGHTING
RABWEB.COM • 888.722.1000

SLIM™

Covers footprint of most traditional wallpacks

- 37W replaces 150W MH, 57W replaces 200W MH, 62W replaces 250W MH
- Easy installation with hinged access, bubble level and multiple conduit entries
- Ultra-high efficiency, up to 115 lm/W
- Available as cutoffs or full cutoffs
- Tight-lock gasket keeps elements out
- 100,000-Hour LED lifespan

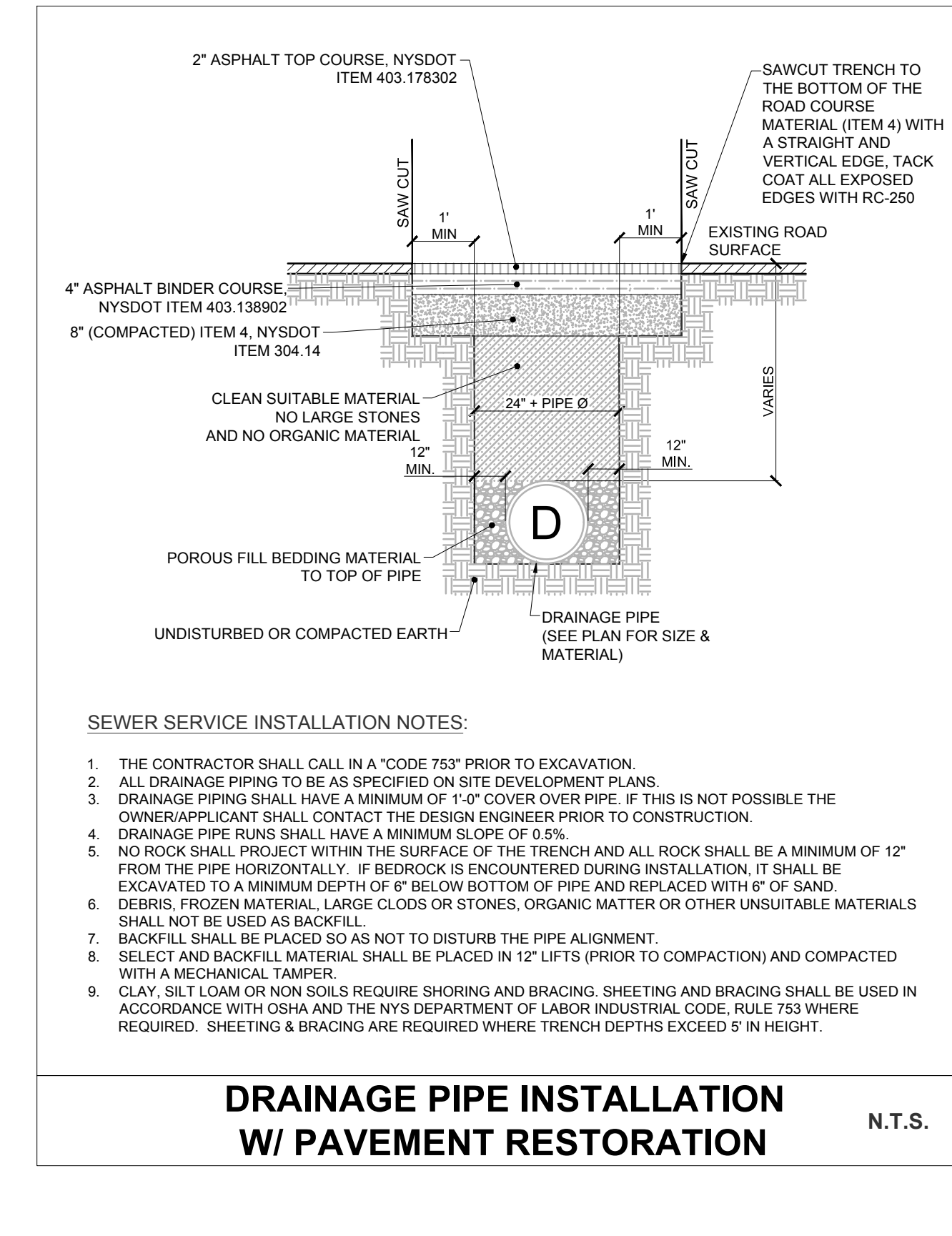
IP66 RATING

Specifications

Dimensions and weight

Photometrics

Ordering information



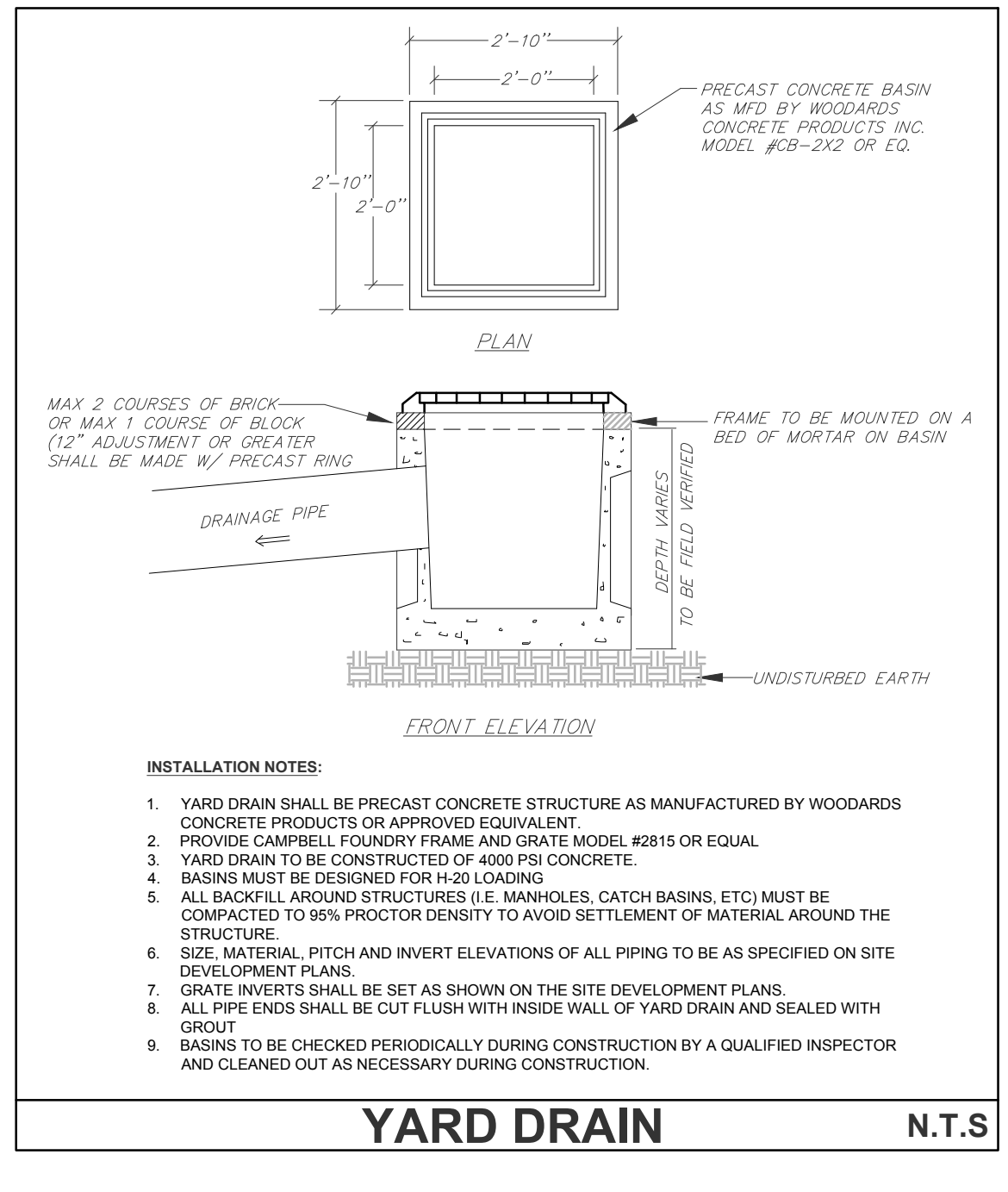
- SEWER SERVICE INSTALLATION NOTES:**
- THE CONTRACTOR SHALL CALL IN A "CODE 753" PRIOR TO EXCAVATION.
 - ALL DRAINAGE PIPING TO BE AS SPECIFIED ON SITE DEVELOPMENT PLANS.
 - DRAINAGE PIPING SHALL HAVE A MINIMUM OF 1" COVER OVER PIPE. IF THIS IS NOT POSSIBLE THE OWNER/APPLICANT SHALL CONTACT THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.
 - DRAINAGE PIPE RUNS SHALL HAVE A MINIMUM SLOPE OF 0.01%.
 - NO ROCK SHALL PROJECT WITHIN THE SURFACE OF THE TRENCH AND ALL ROCK SHALL BE A MINIMUM OF 12" FROM THE PIPE HORIZONTALLY. IF BEDROCK IS ENCOUNTERED DURING INSTALLATION, IT SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 6" BELOW BOTTOM OF PIPE AND REPLACED WITH 6" OF SAND.
 - DEBRIS, FROZEN MATERIAL, LARGE CLUMPS OR STONES, ORGANIC MATTER OR OTHER UNSUITABLE MATERIALS SHALL NOT BE USED AS BACKFILL.
 - BACKFILL SHALL BE PLACED SO AS NOT TO DISTURB THE PIPE ALIGNMENT.
 - SELECT AND BACKFILL MATERIAL SHALL BE PLACED IN 12" LIFTS (PRIOR TO COMPACTION) AND COMPACTED WITH A MECHANICAL TAMPER.
 - CLAY, SILT LOAM OR NON SOILS REQUIRE SHORING AND BRACING. SHEETING AND BRACING SHALL BE USED IN ACCORDANCE WITH OSHA AND THE NYS DEPARTMENT OF LABOR INDUSTRIAL CODE, RULE 753 WHERE REQUIRED. SHEETING & BRACING ARE REQUIRED WHERE TRENCH DEPTHS EXCEED 5' IN HEIGHT.
- DRAINAGE PIPE INSTALLATION W/ PAVEMENT RESTORATION** N.T.S.

BLACK VINYL COATED CHAIN LINK FENCE

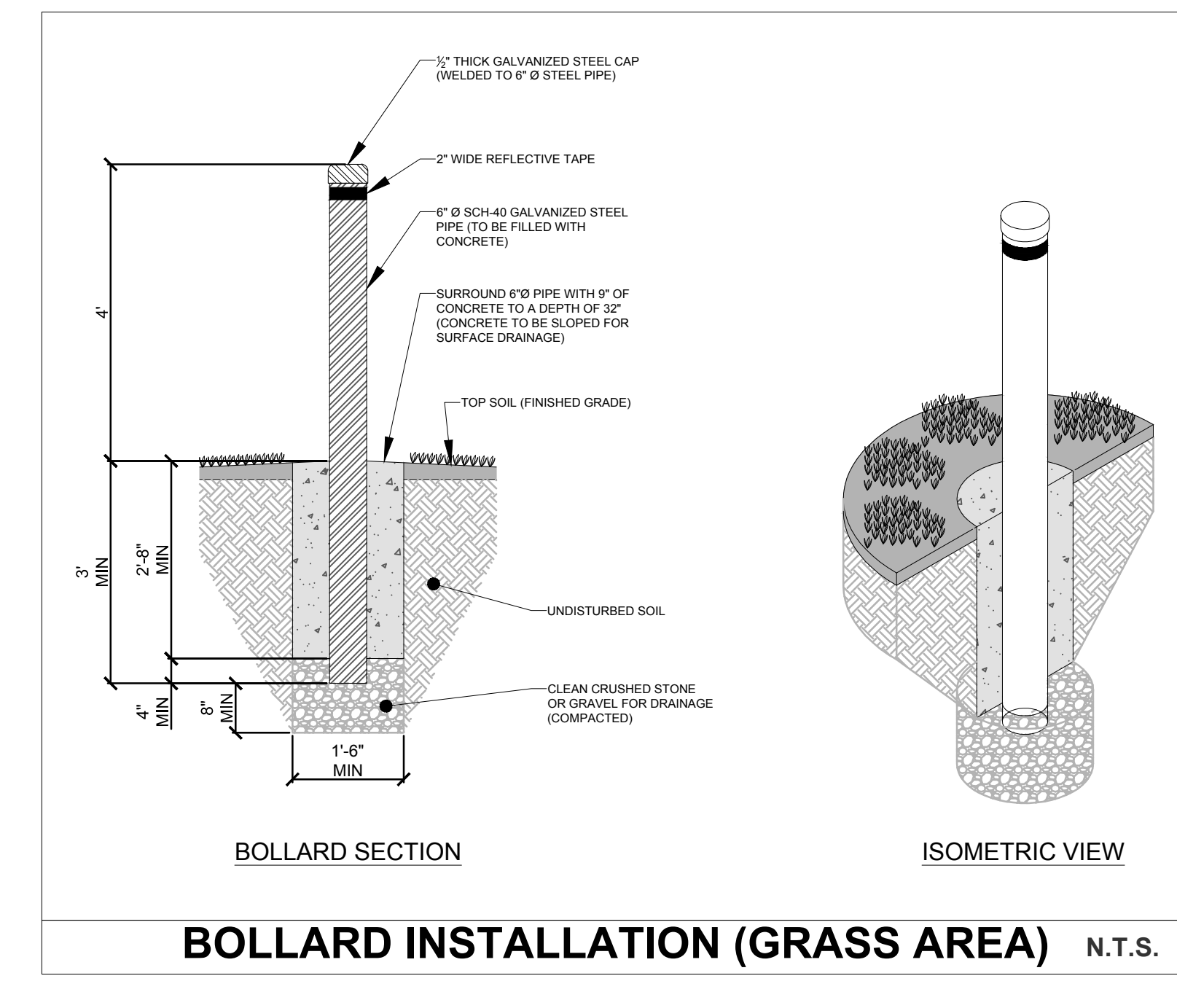
*PROVIDE PRIVACY SLATS

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800-962-7962
www.digsafelynewyork.org

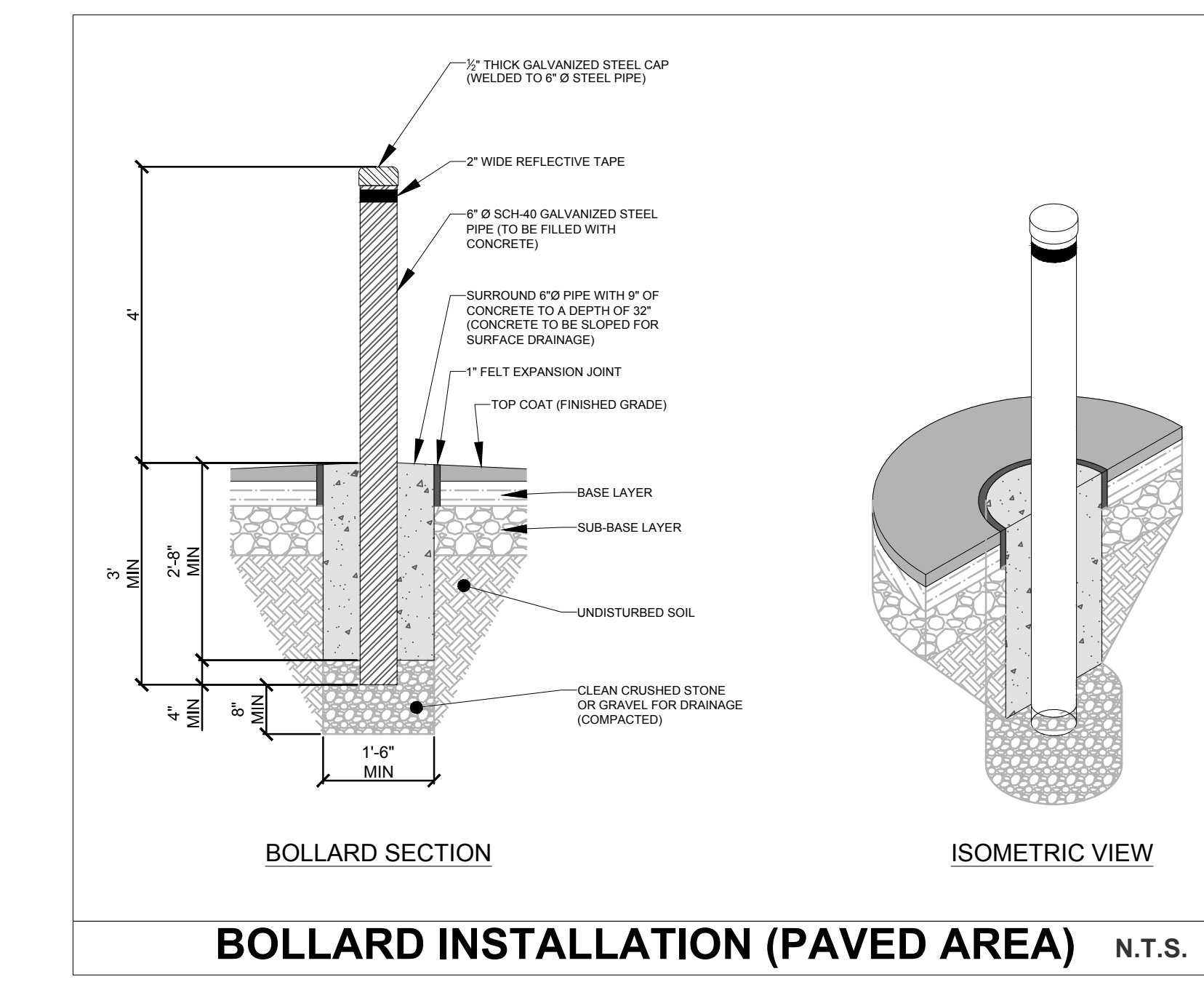
Call Before You Dig
Wait The Required Time
Confirm Utility Response
Respect The Marks
Dig With Care



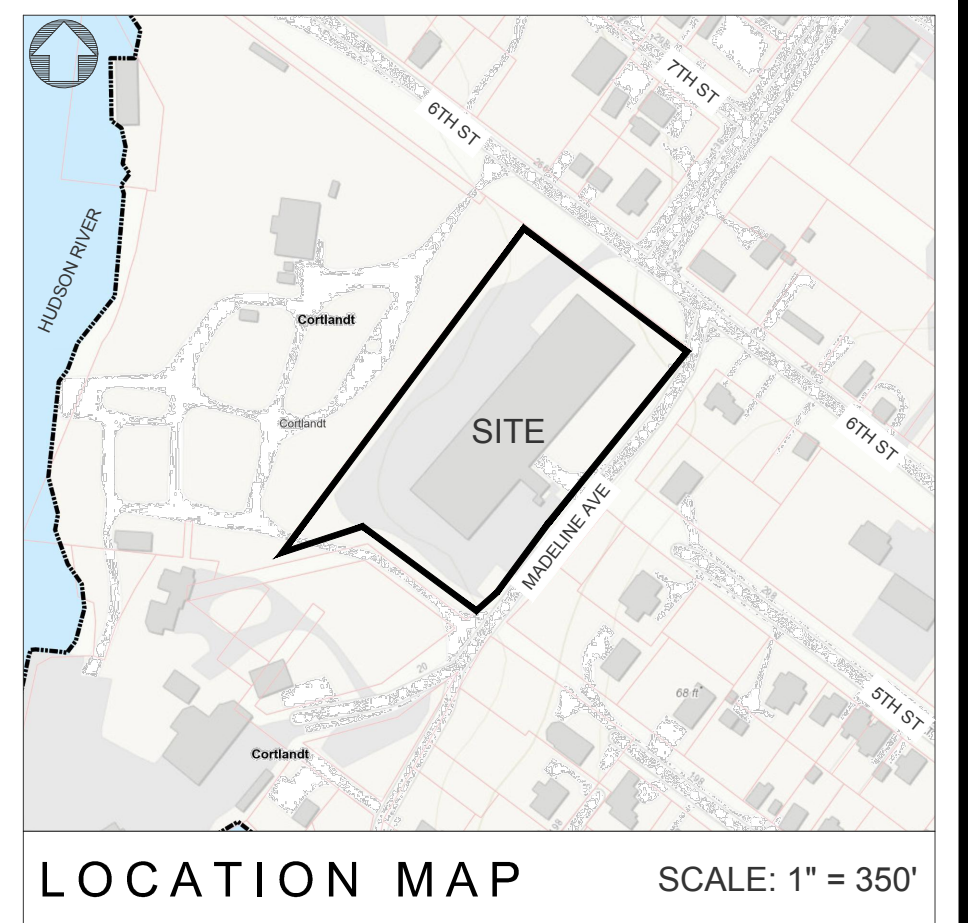
- INSTALLATION NOTES:**
- YARD DRAIN SHALL BE PRECAST CONCRETE STRUCTURE AS MANUFACTURED BY WOODGARDS CONCRETE PRODUCTS OR APPROVED EQUIVALENT.
 - PROVIDE SANDFILL, FORDNEY FRAME AND GRATE MODEL #815 OR EQUAL.
 - YARD DRAIN TO BE CONSTRUCTED OF 4000 PSI CONCRETE.
 - BASINS MUST BE DESIGNED FOR LOADS.
 - ALL BACKFILL AROUND STRUCTURES (I.E. MANHOLES, CATCH BASINS, ETC) MUST BE COMPACTED TO 95% PROCTOR DENSITY TO AVOID SETTLEMENT OF MATERIAL AROUND THE STRUCTURE.
 - SIZE, MATERIAL, PITCH AND INVERT ELEVATIONS OF ALL PIPING TO BE AS SPECIFIED ON SITE DEVELOPMENT PLANS.
 - GRATE INSERTS SHALL BE SET AS SHOWN ON THE SITE DEVELOPMENT PLANS.
 - ALL PIPE ENDS SHALL BE CUT FLUSH WITH INSIDE WALL OF YARD DRAIN AND SEALED WITH GROUT.
 - BASINS TO BE CHECKED PERIODICALLY DURING CONSTRUCTION BY A QUALIFIED INSPECTOR AND CLEANED OUT AS NECESSARY DURING CONSTRUCTION.
- YARD DRAIN** N.T.S.



- BOLLARD SECTION**
- BOLLARD INSTALLATION (GRASS AREA)** N.T.S.



- BOLLARD SECTION**
- BOLLARD INSTALLATION (PAVED AREA)** N.T.S.



OWNER

RIVERVIEW INDUSTRIAL PARK, LLC
333 NORTH BEDFORD ROAD SUITE 140,
MOUNT KISCO, NY 10549

REVISIONS

#	TOWN COMMENTS	DATE
5		
4		
3		
2		
1		

SEWER SERVICE INSTALLATION NOTES:

1. THE CONTRACTOR SHALL CALL IN A "CODE 753" PRIOR TO EXCAVATION.

2. ALL DRAINAGE PIPING TO BE AS SPECIFIED ON SITE DEVELOPMENT PLANS.

3. DRAINAGE PIPING SHALL HAVE A MINIMUM OF 1" COVER OVER PIPE. IF THIS IS NOT POSSIBLE THE OWNER/APPLICANT SHALL CONTACT THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

4. DRAINAGE PIPE RUNS SHALL HAVE A MINIMUM SLOPE OF 0.01%.

5. NO ROCK SHALL PROJECT WITHIN THE SURFACE OF THE TRENCH AND ALL ROCK SHALL BE A MINIMUM OF 12" FROM THE PIPE HORIZONTALLY. IF BEDROCK IS ENCOUNTERED DURING INSTALLATION, IT SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 6" BELOW BOTTOM OF PIPE AND REPLACED WITH 6" OF SAND.

6. DEBRIS, FROZEN MATERIAL, LARGE CLUMPS OR STONES, ORGANIC MATTER OR OTHER UNSUITABLE MATERIALS SHALL NOT BE USED AS BACKFILL.

7. BACKFILL SHALL BE PLACED SO AS NOT TO DISTURB THE PIPE ALIGNMENT.

8. SELECT AND BACKFILL MATERIAL SHALL BE PLACED IN 12" LIFTS (PRIOR TO COMPACTION) AND COMPACTED WITH A MECHANICAL TAMPER.

9. CLAY, SILT LOAM OR NON SOILS REQUIRE SHORING AND BRACING. SHEETING AND BRACING SHALL BE USED IN ACCORDANCE WITH OSHA AND THE NYS DEPARTMENT OF LABOR INDUSTRIAL CODE, RULE 753 WHERE REQUIRED. SHEETING & BRACING ARE REQUIRED WHERE TRENCH DEPTHS EXCEED 5' IN HEIGHT.

DRAINAGE PIPE INSTALLATION W/ PAVEMENT RESTORATION N.T.S.

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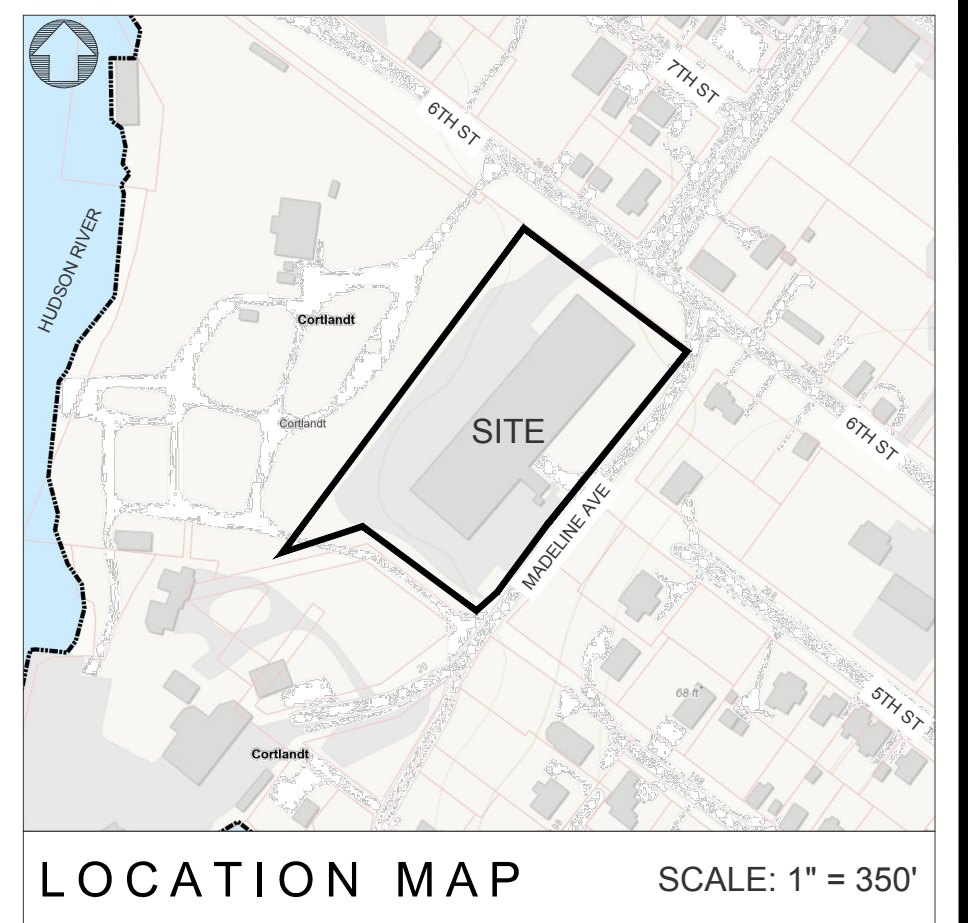
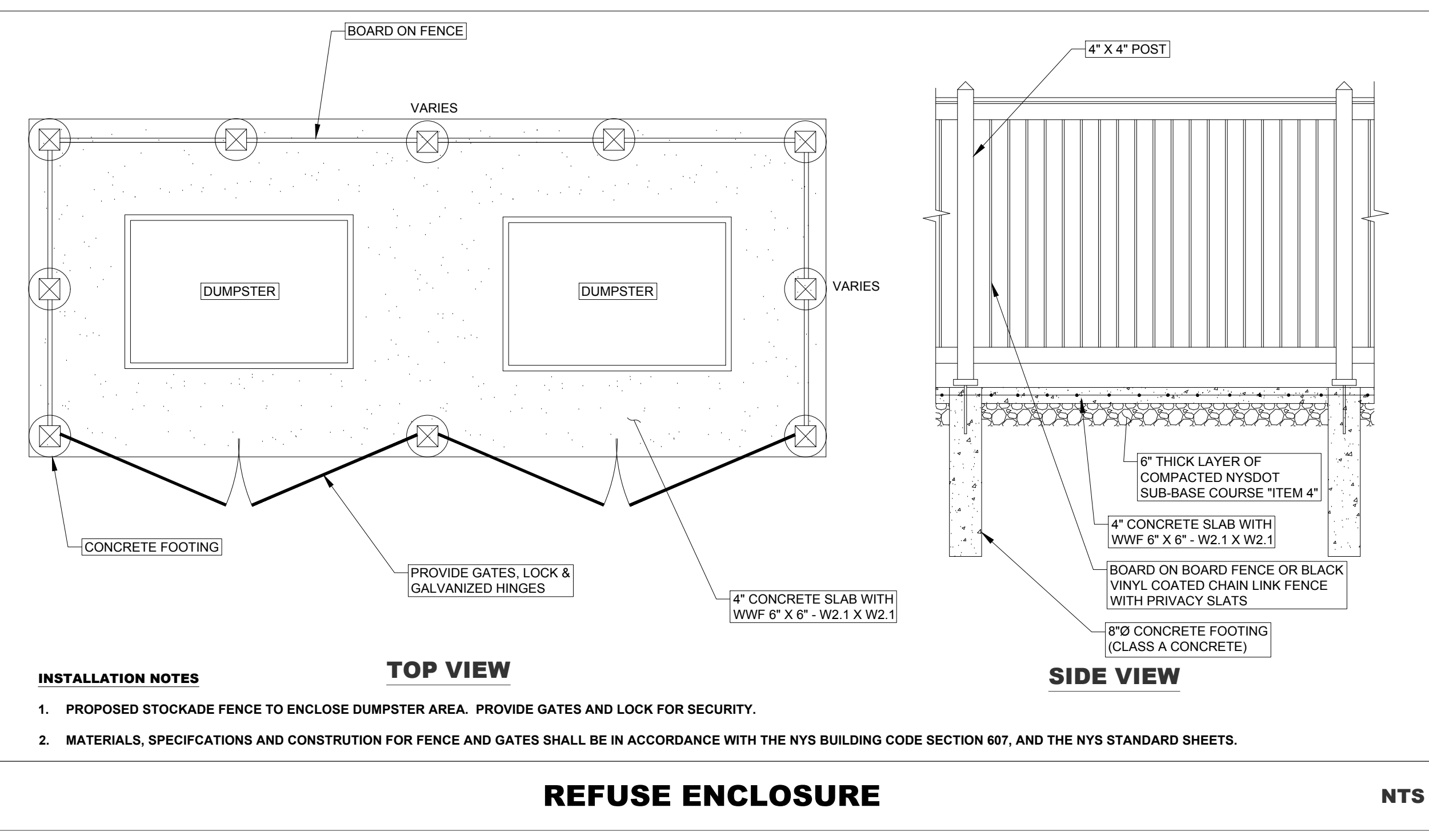
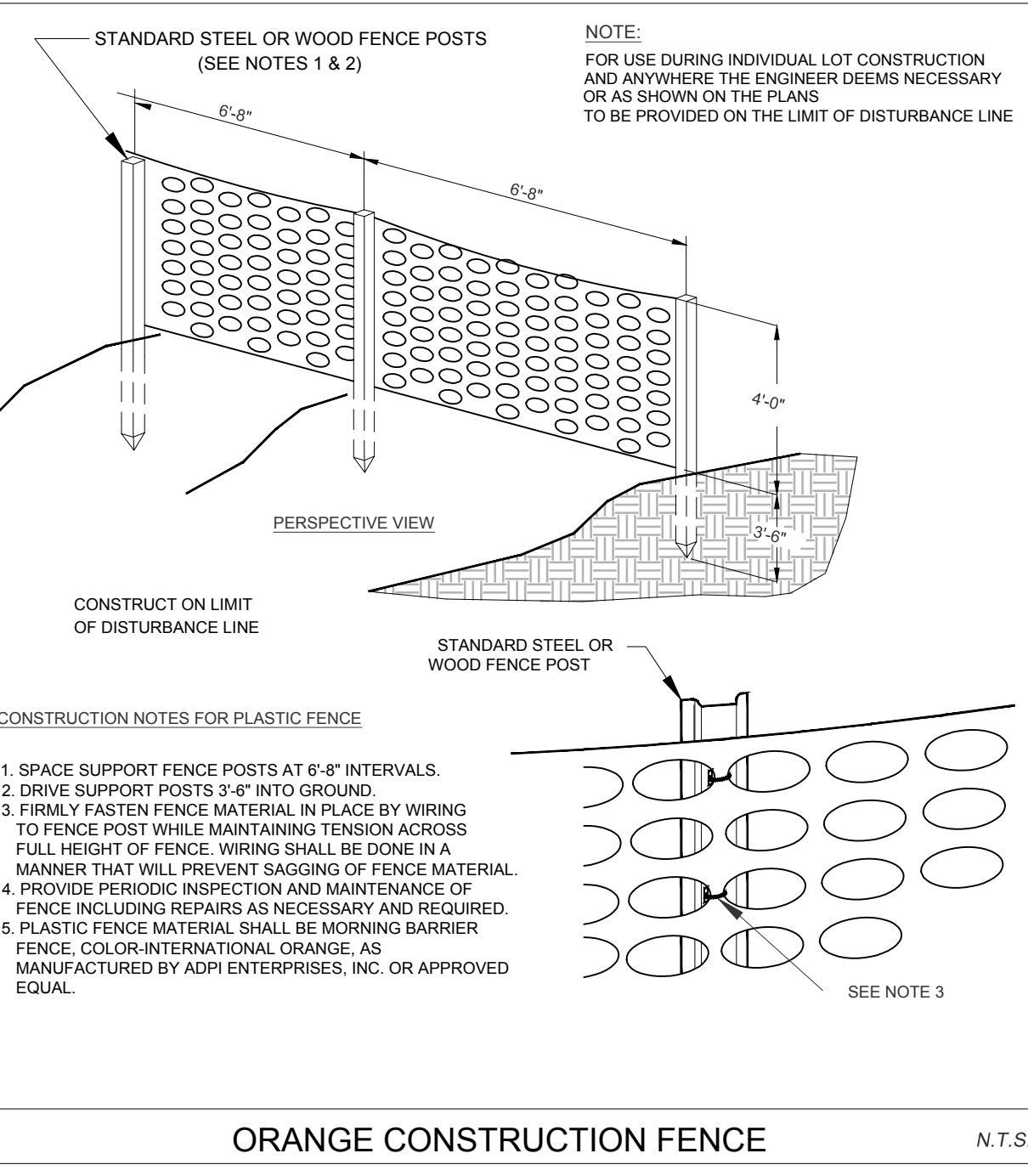
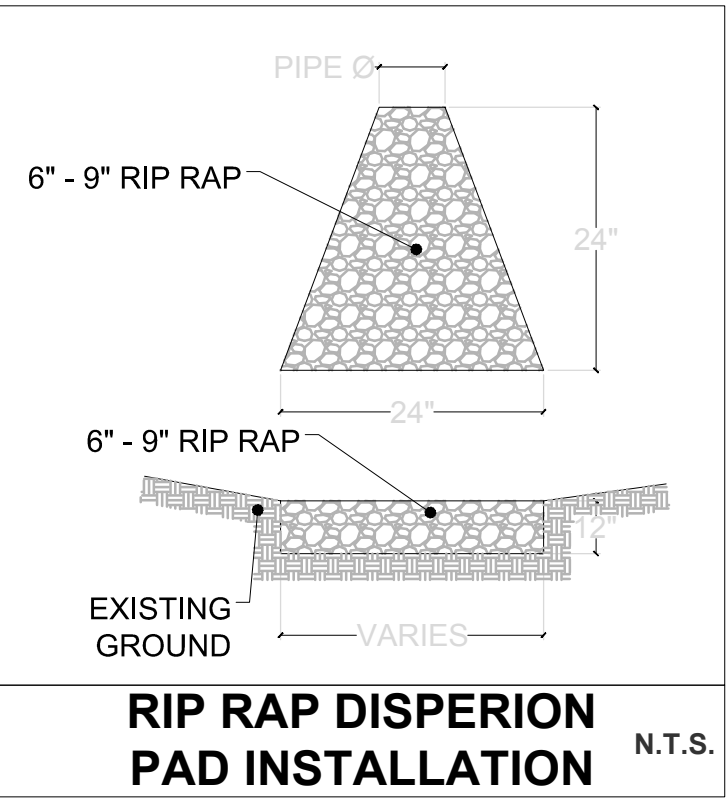
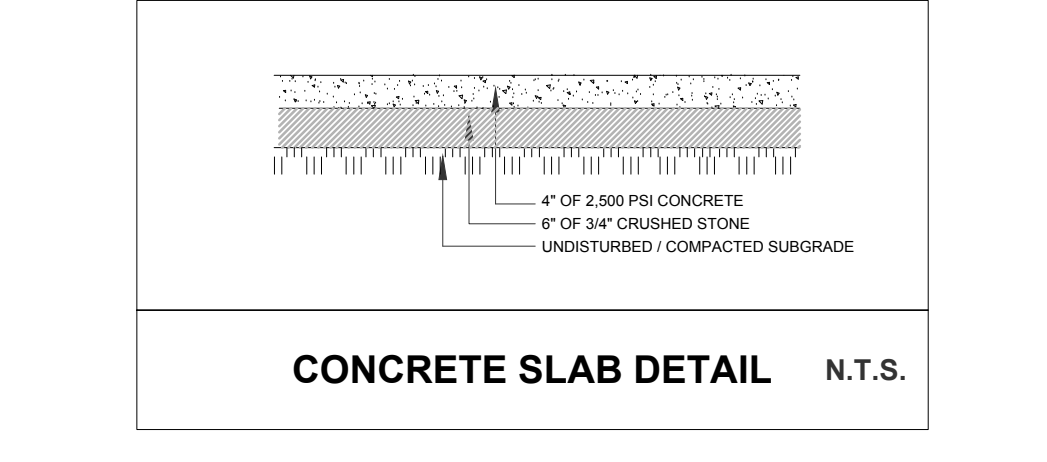
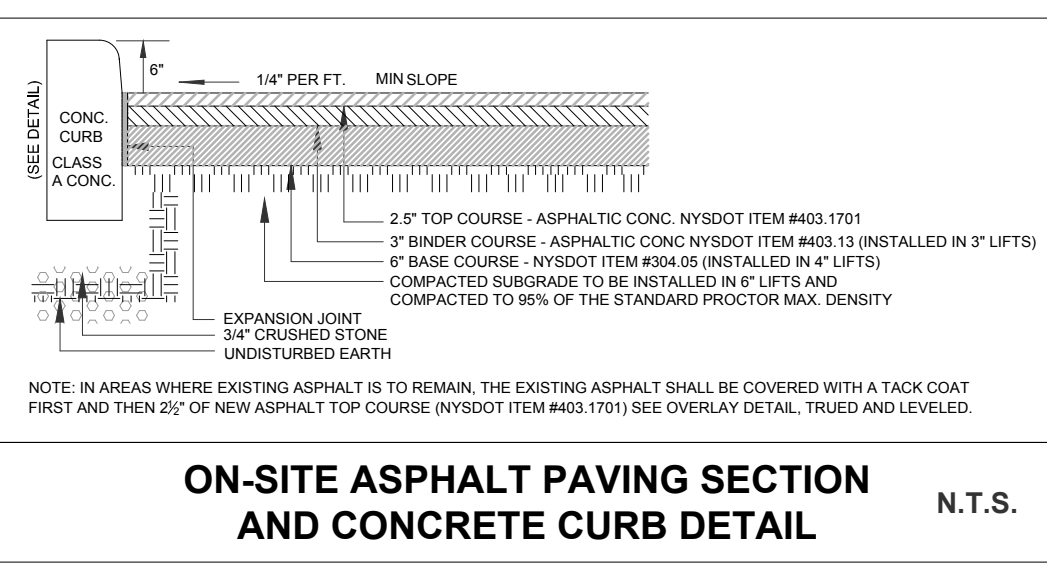
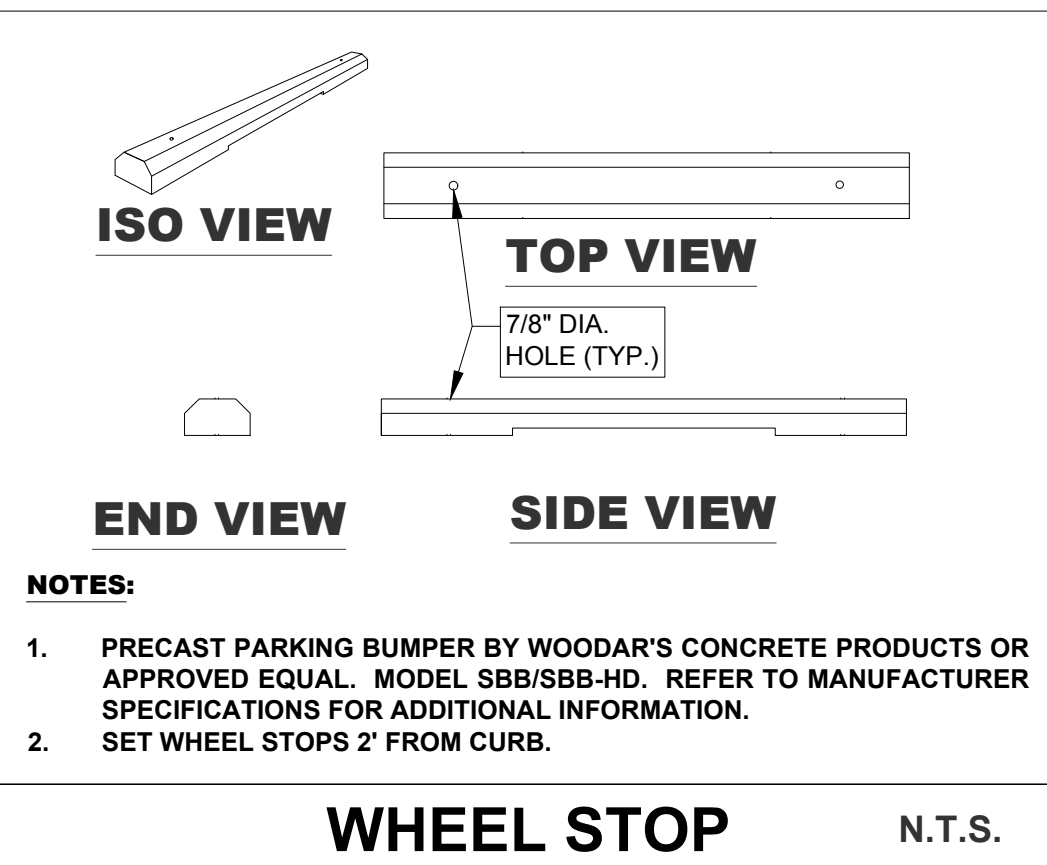
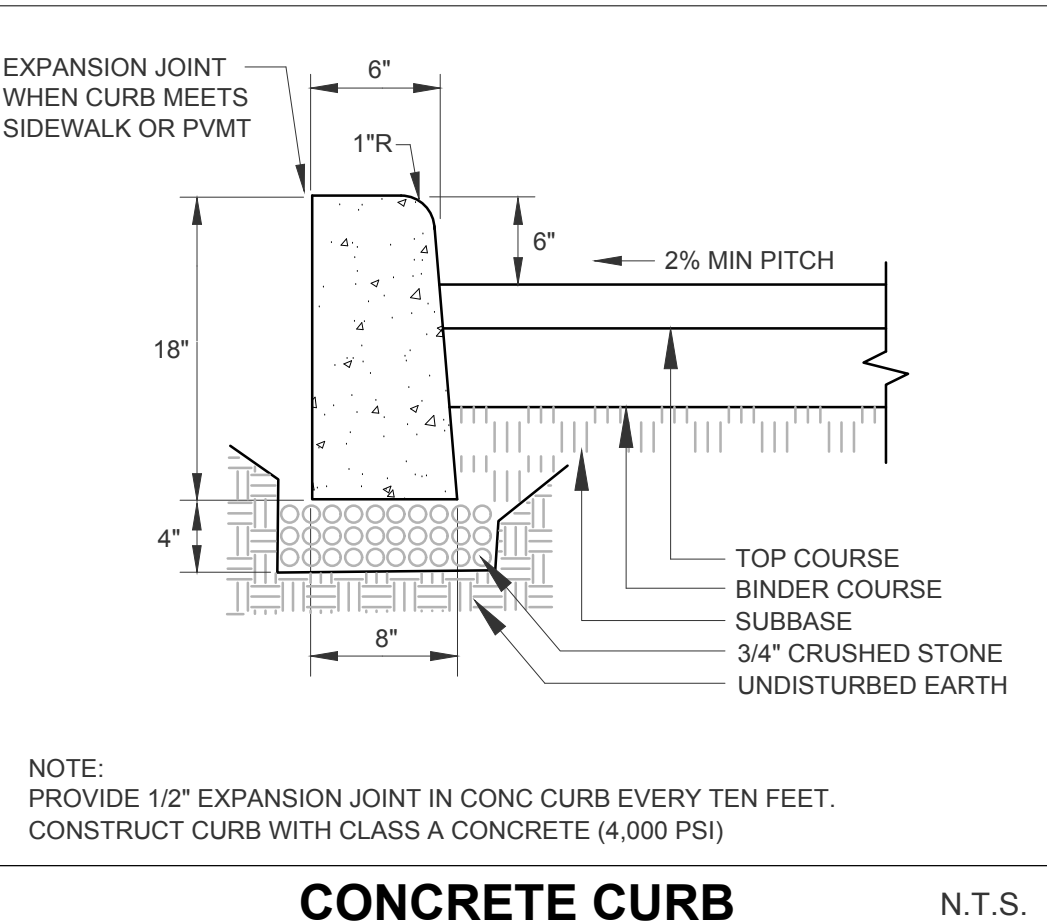
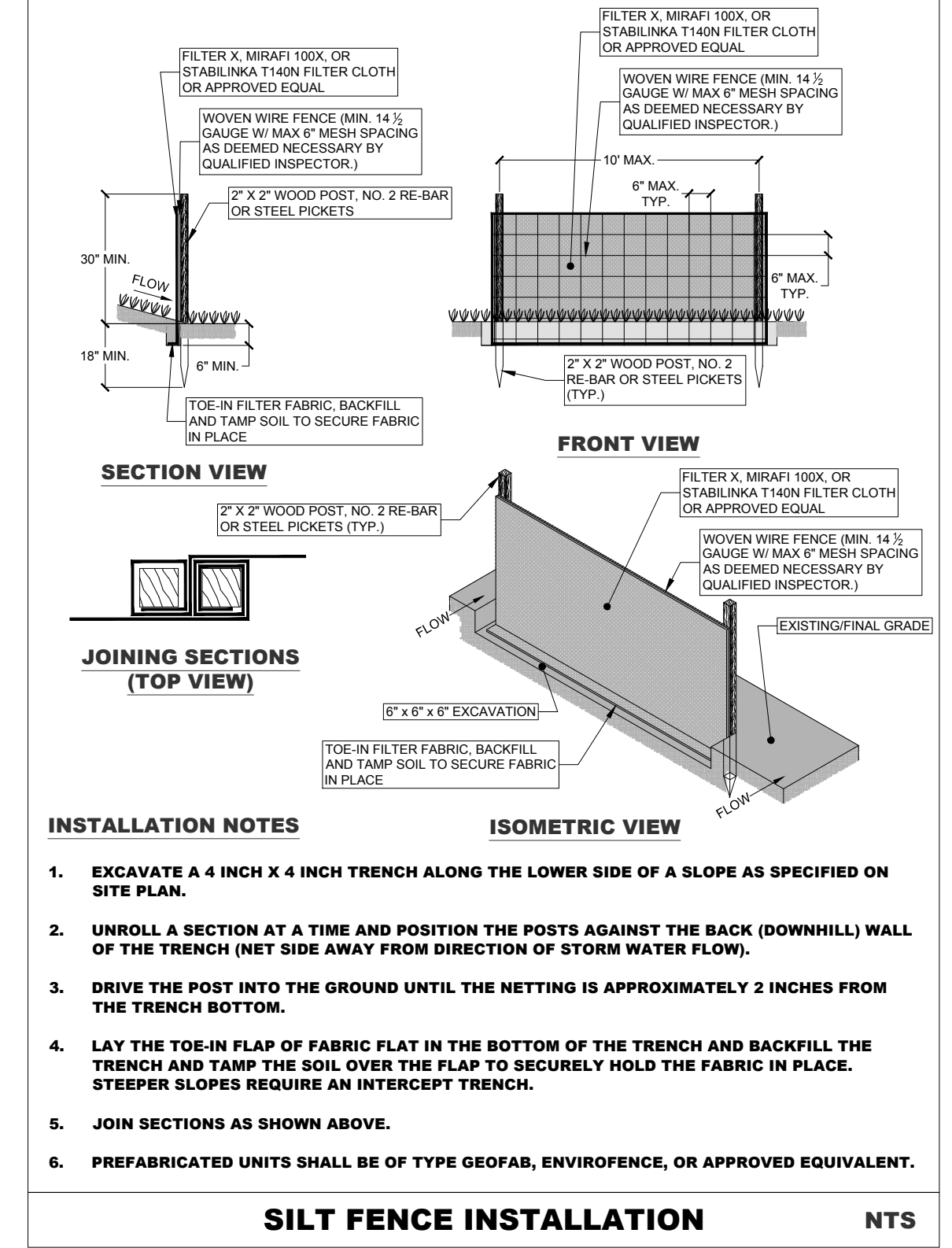
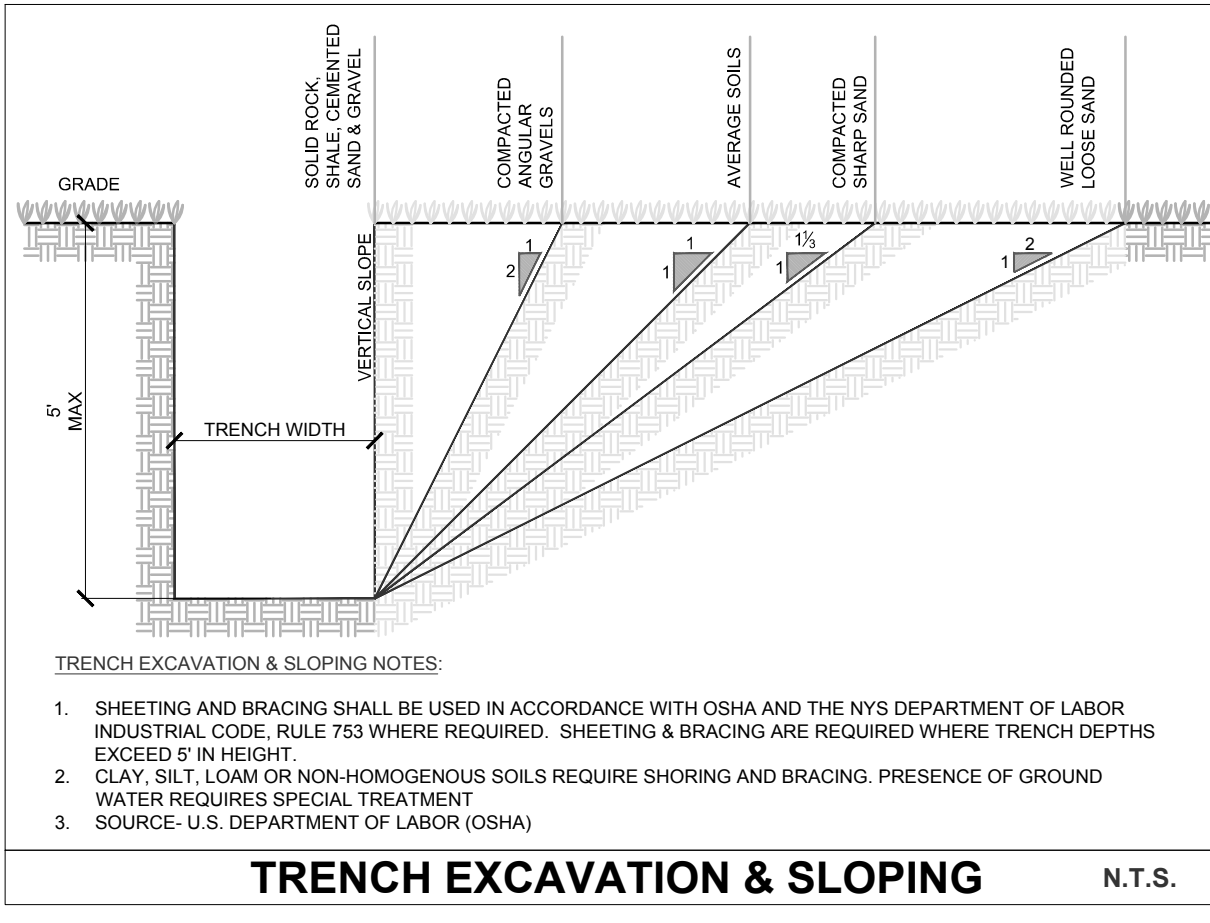
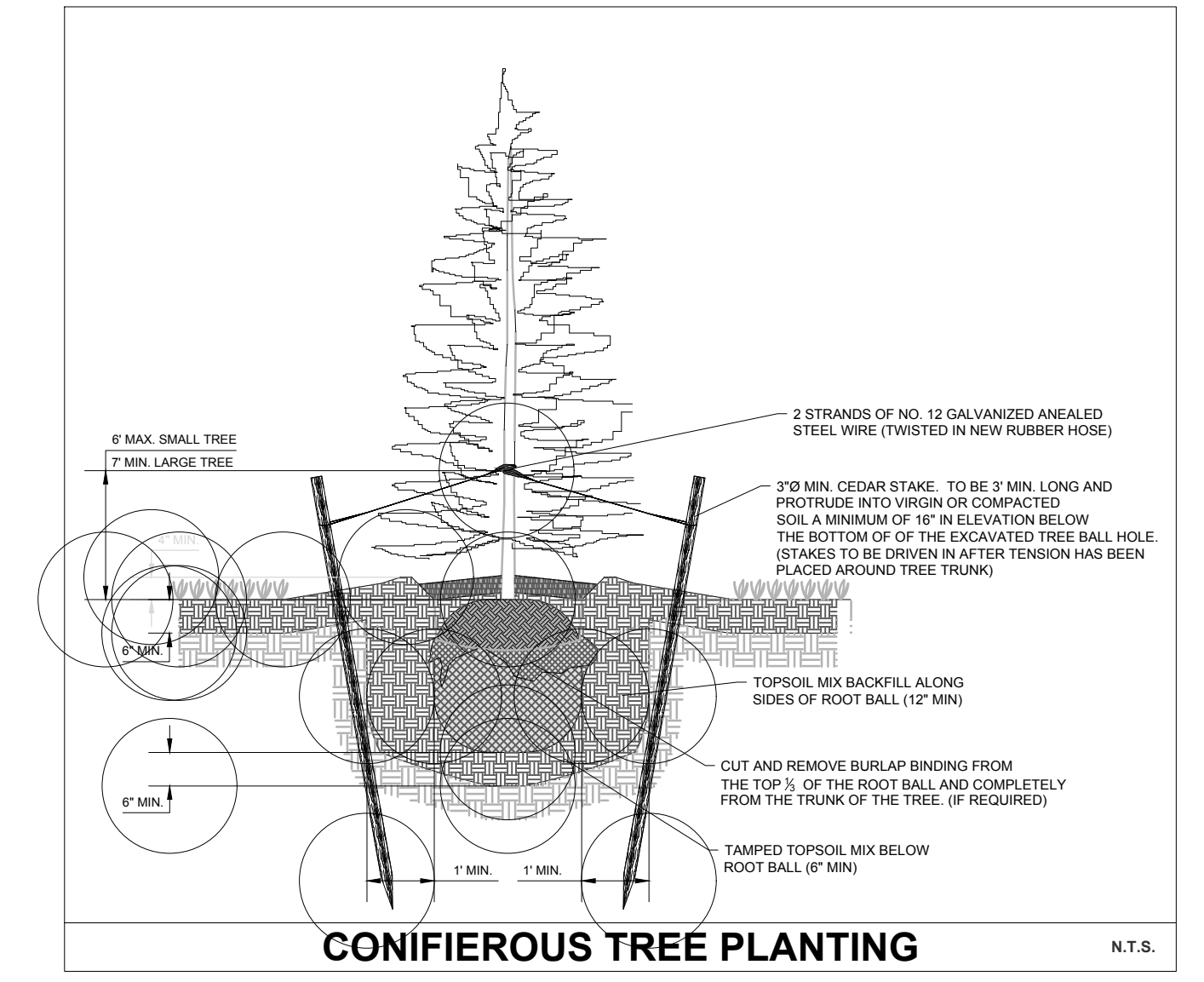
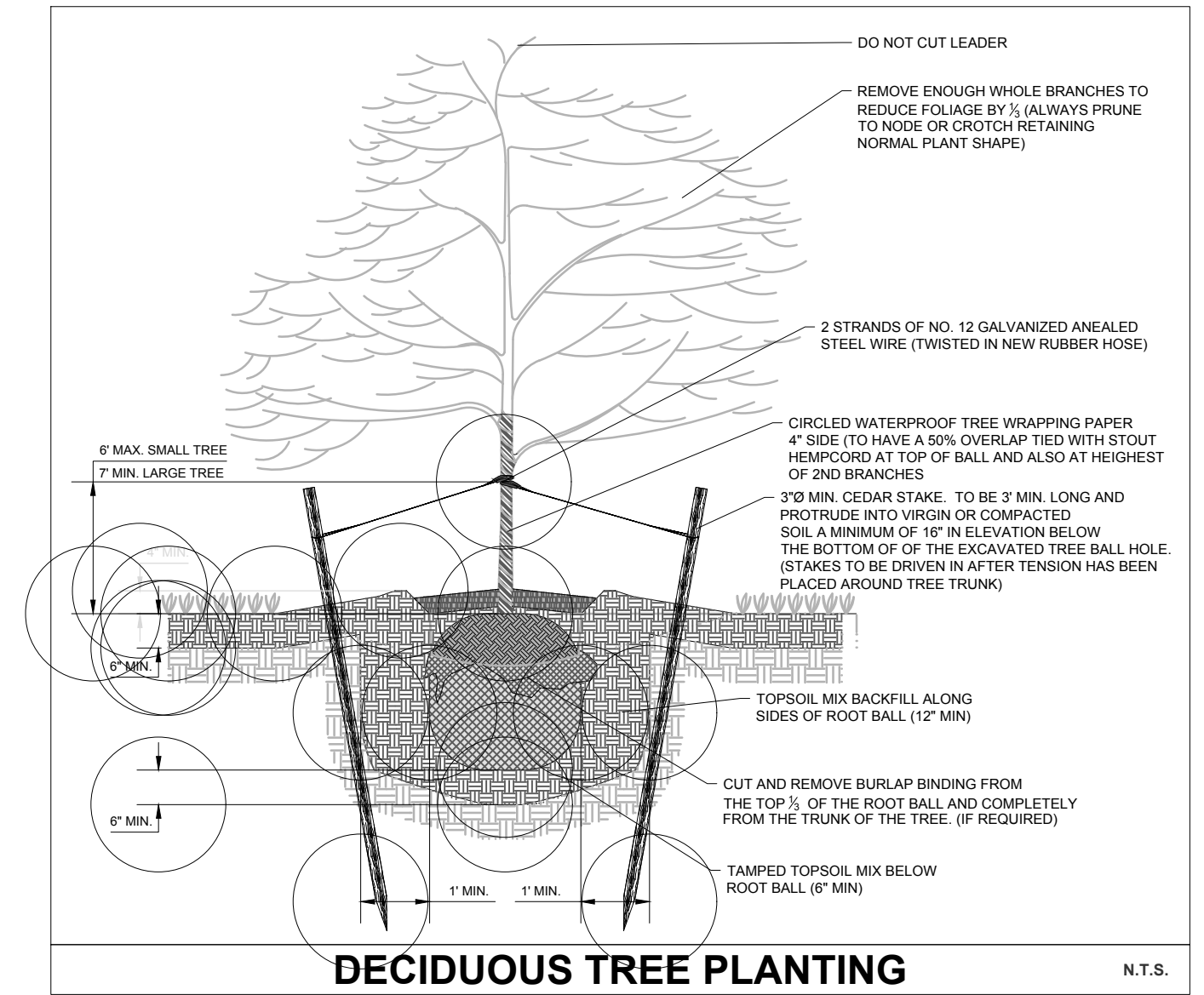
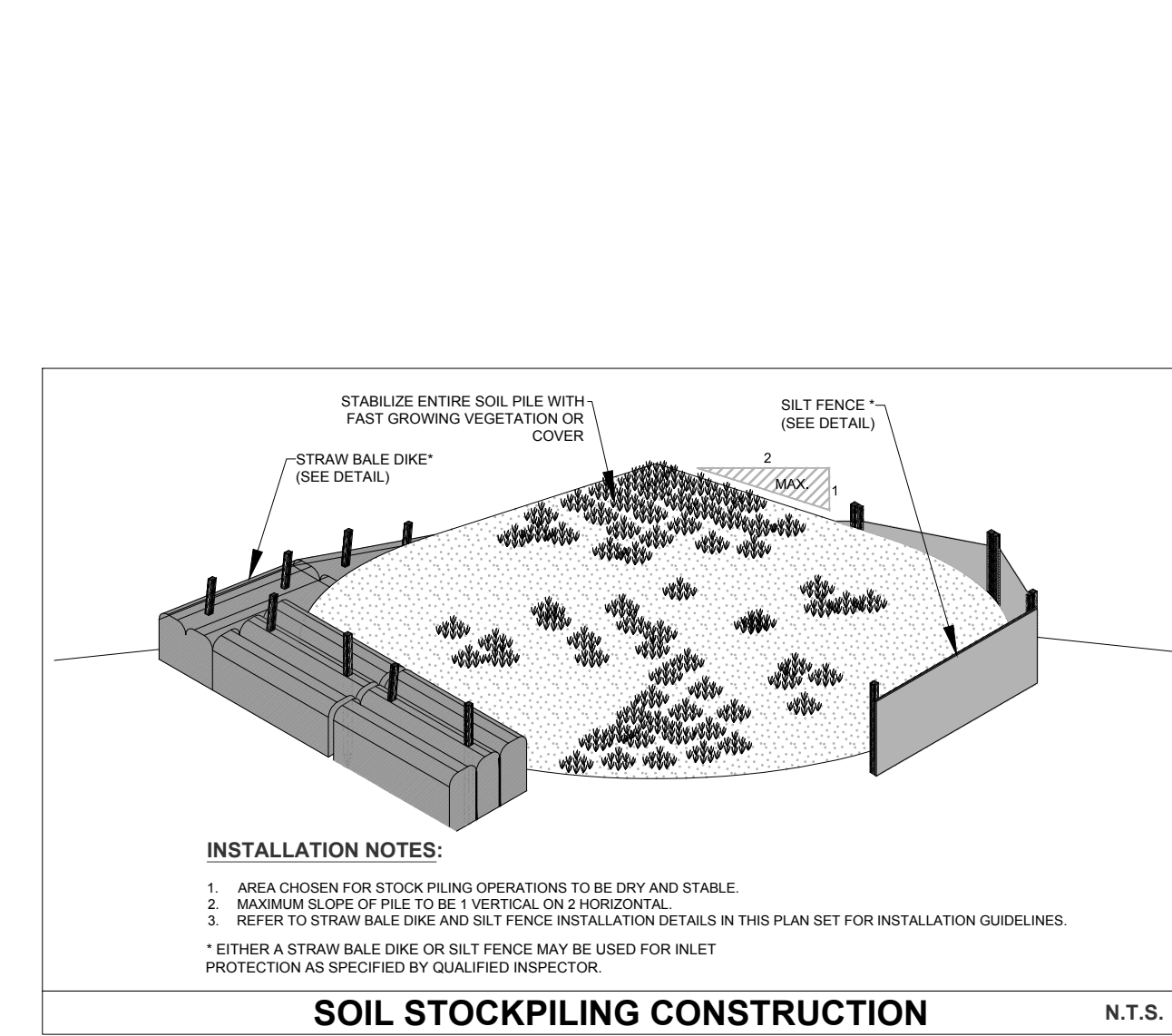
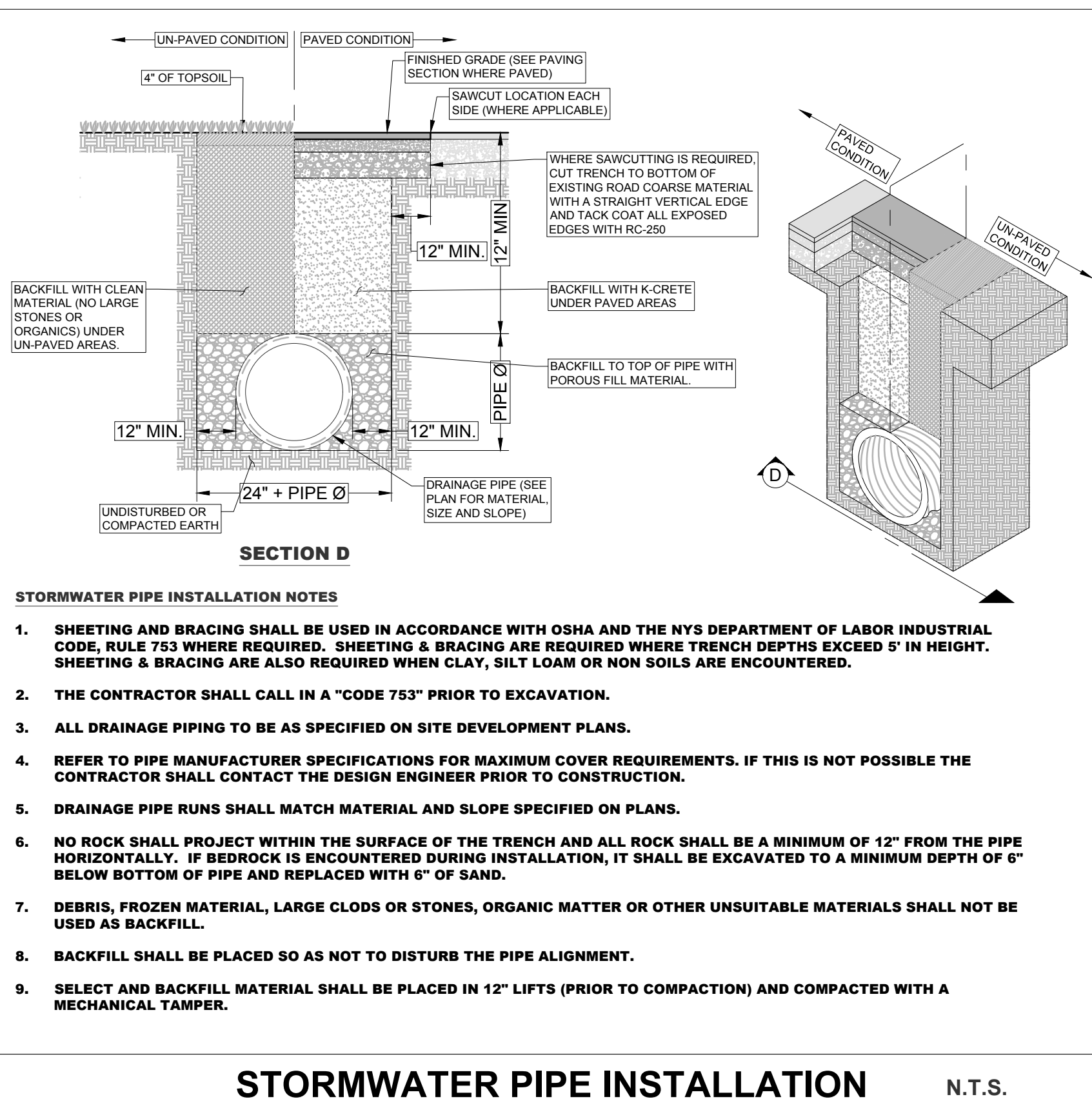
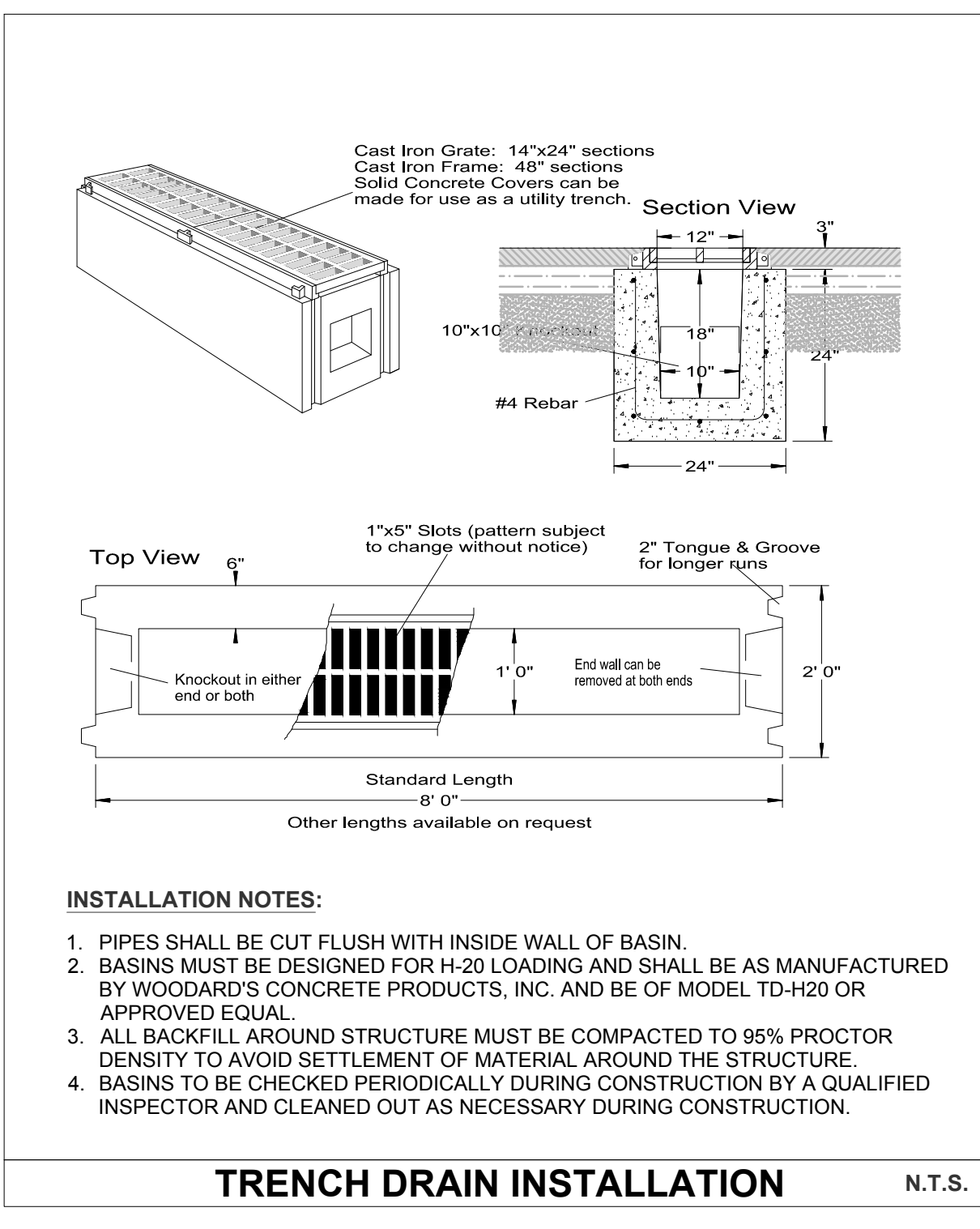
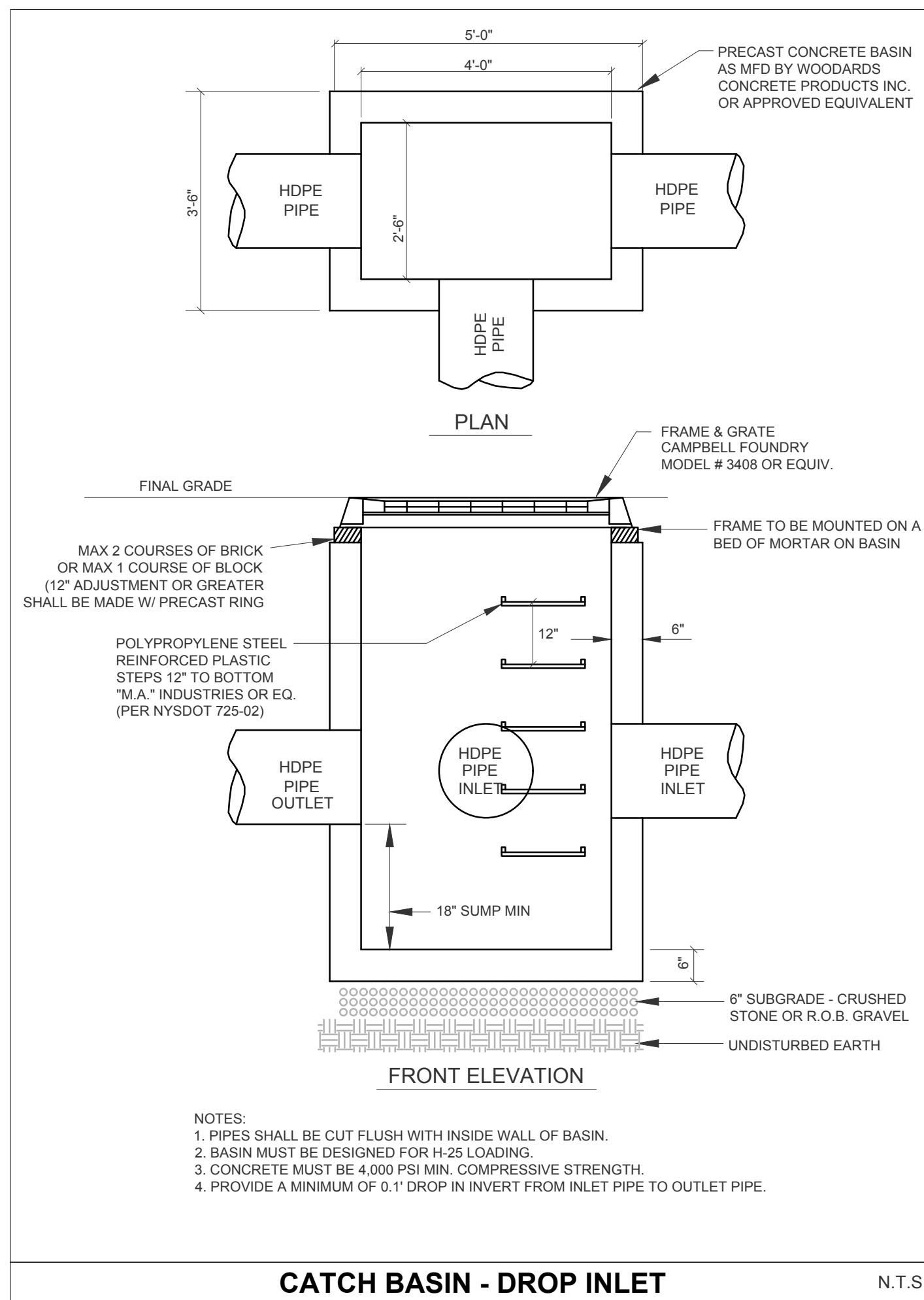
29 Arlo Lane
Cortlandt, New York 10567

CONSTRUCTION DETAILS

AMENDED SITE PLAN FOR RIVERVIEW INDUSTRIAL PARK, LLC

LOCATION:
260 MADELINE AVENUE
TOWN OF CORTLANDT

SHEET 2 OF 4 **CD-2.1**



OWNER

RIVERVIEW INDUSTRIAL PARK, LLC
333 NORTH BEDFORD ROAD SUITE 140,
MOUNT KISCO, NY 10549

REVISIONS

#	REASON	DATE
5		
4		
3		
2		
1	TOWN COMMENTS	11-29-2023

MUNICIPAL TAX IDENTIFICATION:
SECTION: 54.5
BLOCK: 1
LOT: 1
SUBLOT: ----

DRAWN BY: AD
CHECKED: KCS/PB
PROJECT: GARBER-APPIAN
DATE: JULY 17, 2023
JOB #: 210308

PATRICK M. BELL, P.E.
LICENSE #087679

CRONIN ENGINEERING
PROFESSIONAL ENGINEERING & CONSULTING
(914) 736-3664

29 Arlo Lane
Cortlandt, New York 10567

CONSTRUCTION DETAILS

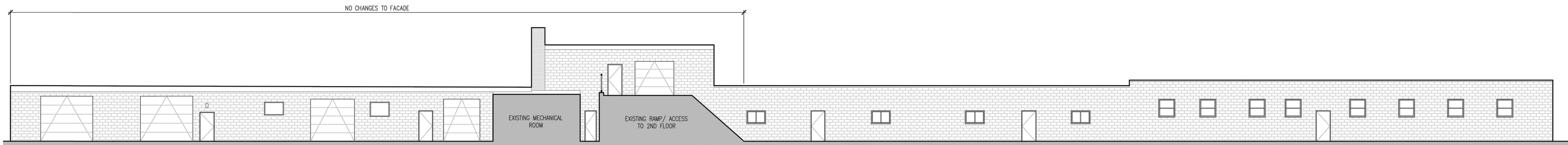
AMENDED SITE PLAN FOR RIVERVIEW INDUSTRIAL PARK, LLC

LOCATION:
260 MADELINE AVENUE
TOWN OF CORTLANDT

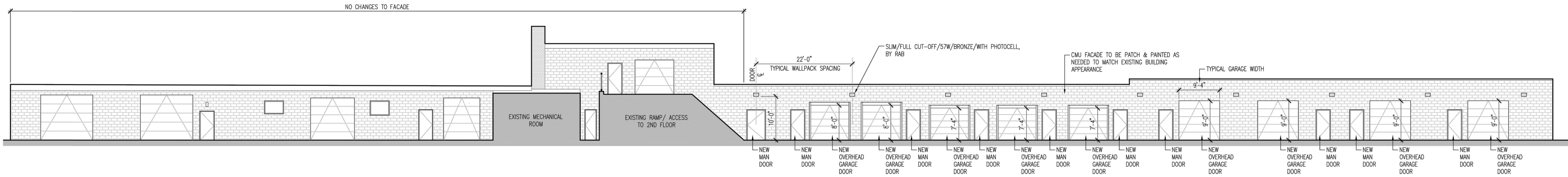
SHEET 3 OF 4 CD-2.2

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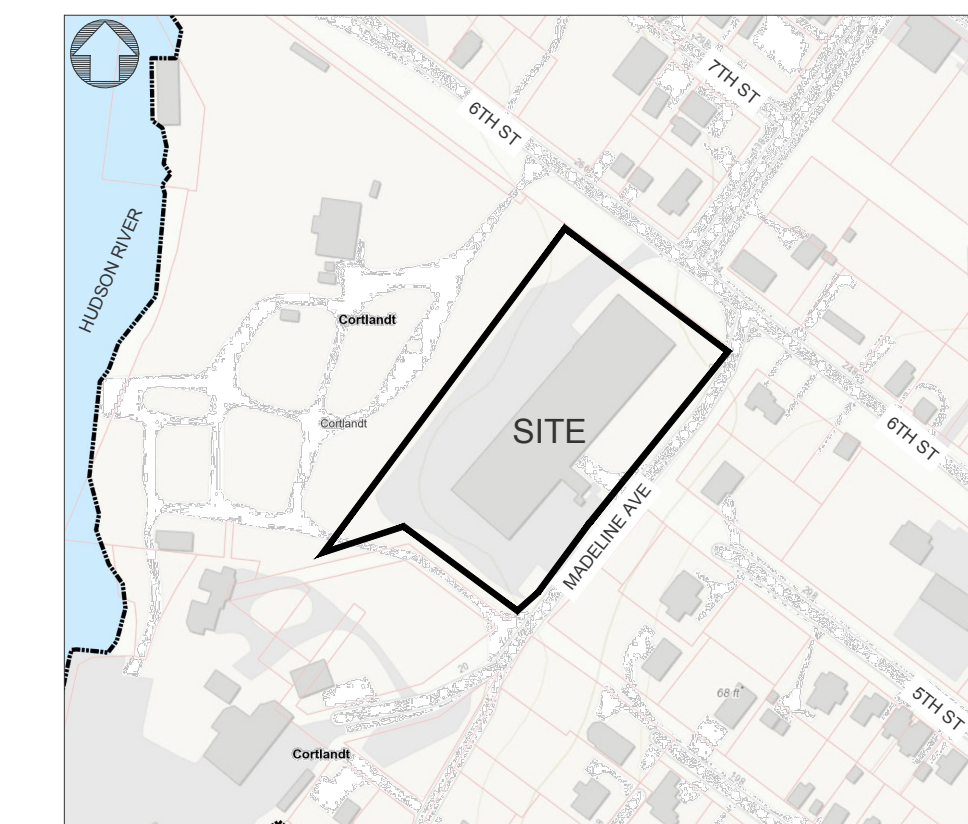
Call Before You Dig
 Wait The Required Time
 Confirm Utility Response
 Respect the Marks
 Dig With Care



Existing East Facade



Proposed East Facade



LOCATION MAP SCALE: 1" = 350'

Dig Safely. New York
 800-962-7962
 www.digsafelynewyork.org

- Call Before You Dig
- Mark The Required Time
- Confirm Utility Response
- Respect The Marks
- Dig With Care



River View Industrial Park - Proposed Facade Alterations - Phase 2

260 6th Street, Verplanck, NY

November 8th, 2023

OWNER

RIVERVIEW INDUSTRIAL PARK, LLC
 333 NORTH BEDFORD ROAD SUITE 140,
 MOUNT KISCO, NY 10549

• UNDER NEW YORK STATE EDUCATIONAL LAW ARTICLE 145, SECTION 7209 (2), IT IS UNLAWFUL FOR ANY PERSON TO ALTER ANY ITEM ON THIS DRAWING, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF ANY ITEM IS ALTERED, THE ALTERING ENGINEER 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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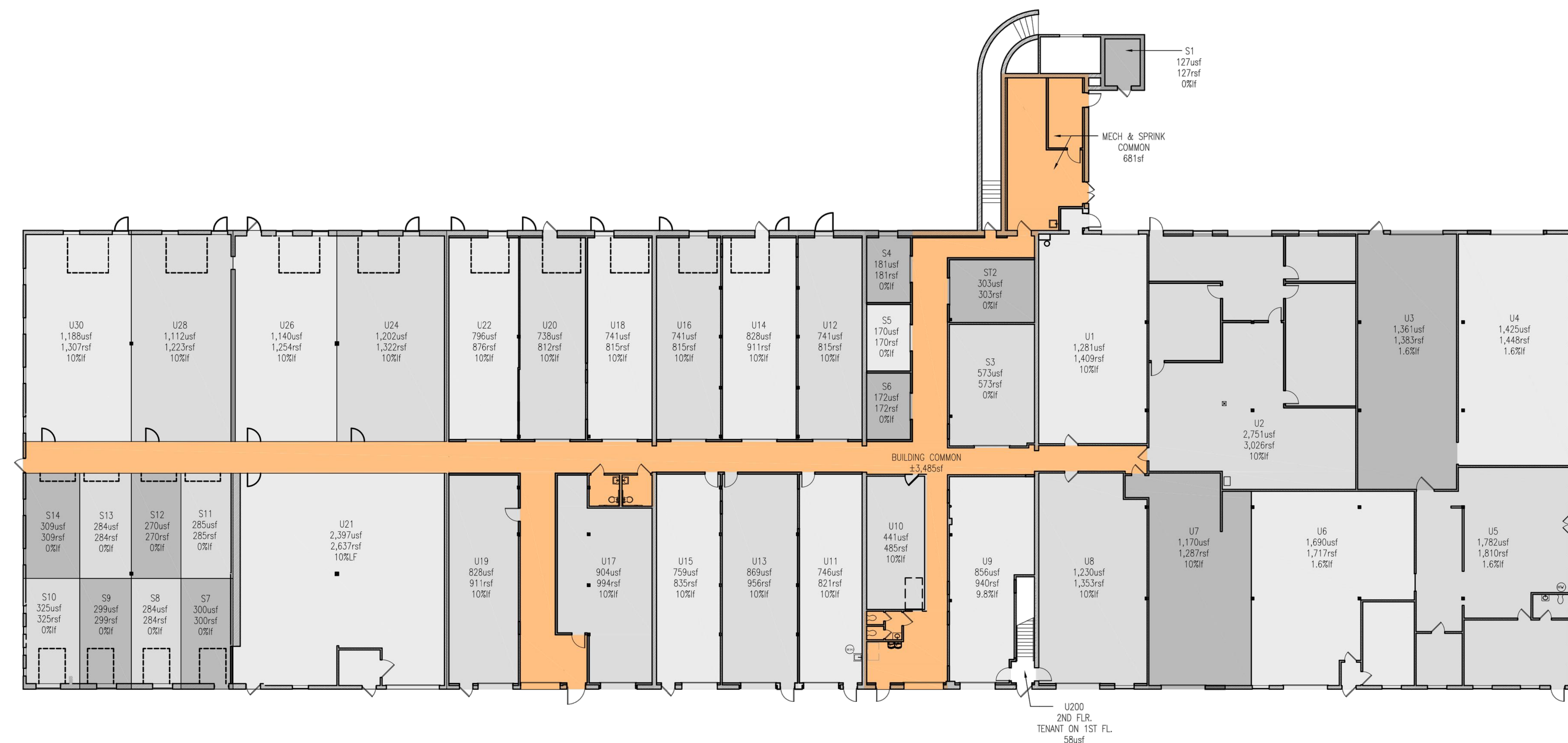
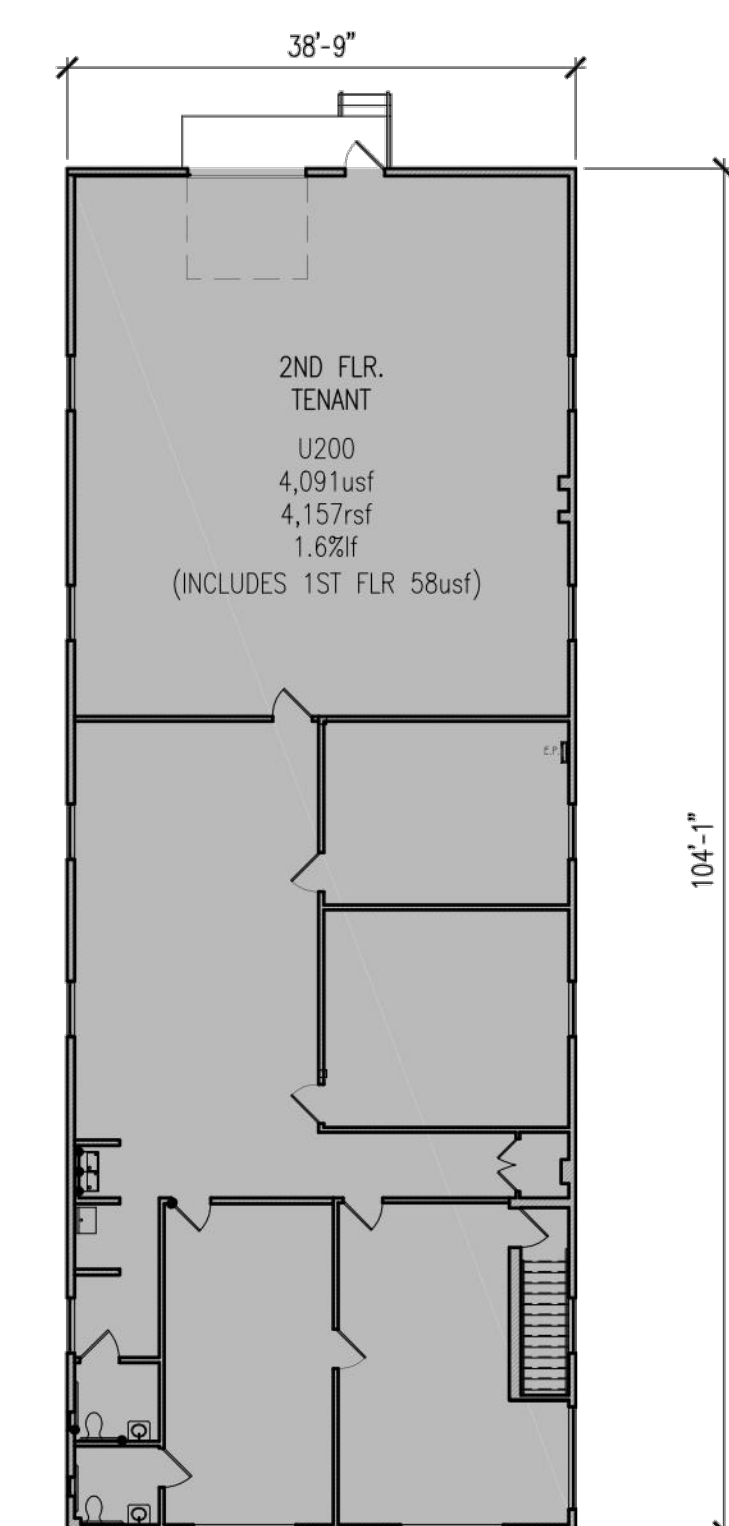
REVISIONS

#	REASON	DATE
1	TOWN COMMENTS	11-29-2023

MUNICIPAL TAX IDENTIFICATION:
 SECTION: 54.5
 BLOCK: 1
 LOT: 1
 SUBLOT: ----

PROJECT: GARBER-APPIAN
 CHECKED: KCS/PB
 DATE: JULY 17, 2023
 JOB #: 210308

PATRICK M. BELL, P.E.
 LICENSE #087679



1ST FLOOR AREA:	37,800 sf
2ND FLOOR AREA:	4,033 sf
TOTAL FLOOR AREA:	41,833 sf
MECH & SPRINK COMMON:	681 sf
OTHER COMMON:	3,485 sf
TOTAL:	4,166 sf
MECH & SPRINK LOSS FACTOR:	1.6% if (681sf/41,833sf)
TOTAL COMMON LOSS FACTOR:	10% if (4,166sf/41,833sf)

River View Industrial Park - Master Plan (phase 1 & phase 2)

260 6th Street, Verplanck, NY

08 September, 2023

CRONIN ENGINEERING
 PROFESSIONAL ENGINEERING & CONSULTING
 (914) 736-3664

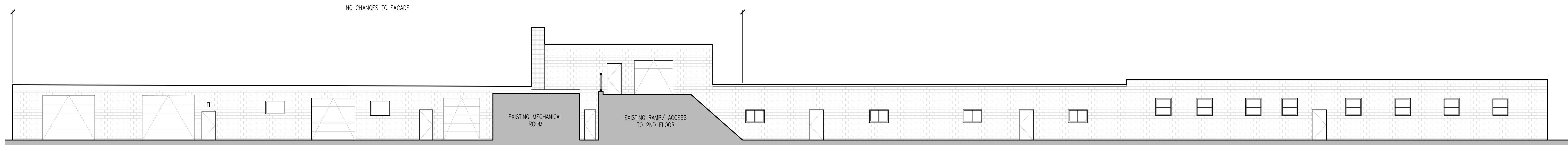
29 Arlo Lane
 Cortlandt, New York 10567

ARCHITECTURAL FLOOR PLANS / ELEVATION

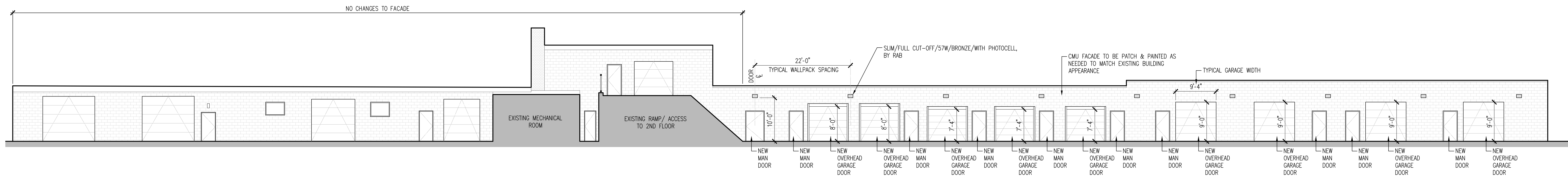
AMENDED SITE PLAN FOR RIVERVIEW INDUSTRIAL PARK, LLC

LOCATION:
 260 MADELINE AVENUE
 TOWN OF CORTLANDT

SHEET 4 OF 4 CD-2.3



Existing East Facade



Proposed East Facade

Short Environmental Assessment Form

Part 1 - Project Information

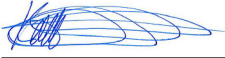
Instructions for Completing

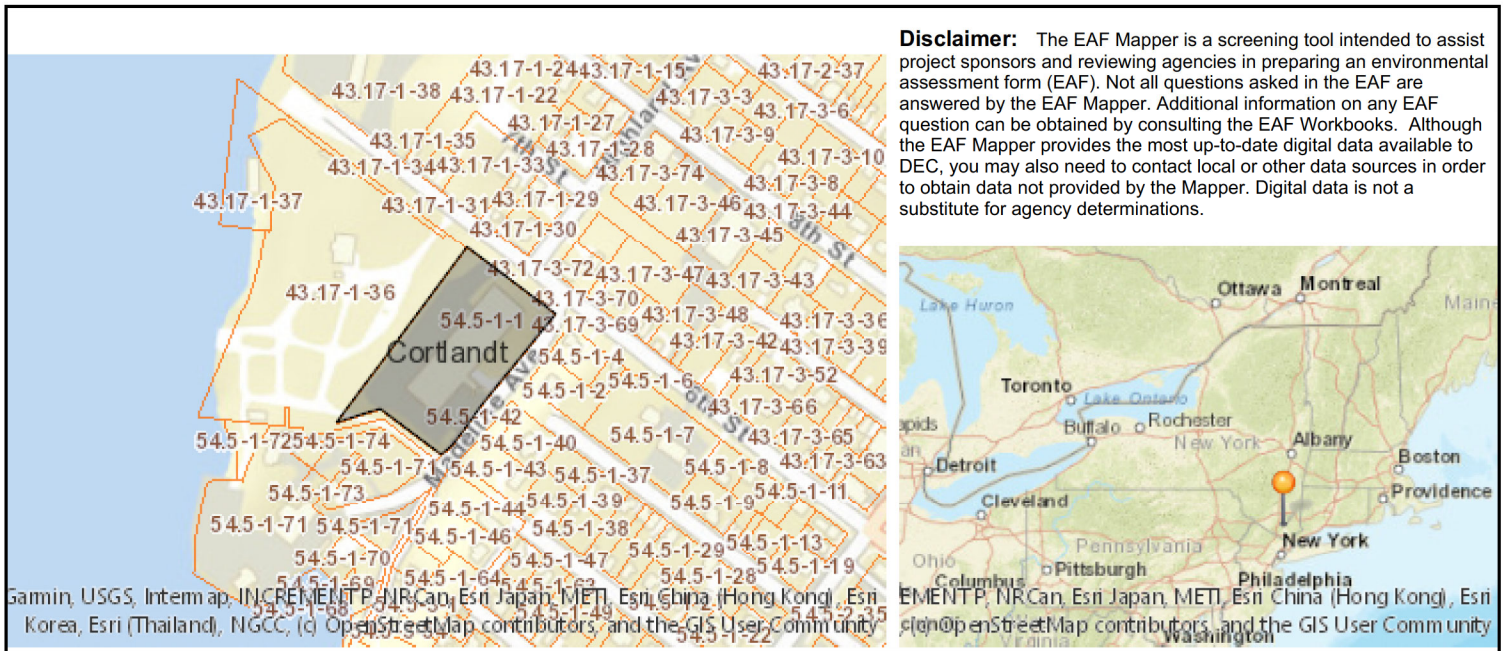
Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available.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

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

Part 1 – Project and Sponsor Information			
River View Industrial Park, LLC			
Name of Action or Project:			
Amended Site Plan for River View Industrial Park, LLC			
Project Location (describe, and attach a location map):			
260 6th Street			
Brief Description of Proposed Action:			
Project involves the modification to an existing 40,000 square foot building to provide 9 new garage doors with 9 new man doors along with an access drive and parking area for the purposes of provided contractor storage units.			
Name of Applicant or Sponsor:		Telephone: 914-494-9285	
River View Park Industrial Park, LLC		E-Mail: adamg@presadevelopment.com	
Address:			
333 North Bedford Road, Suite 140			
City/PO:		State:	Zip Code:
Mount Kisco		NY	10549
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation?		NO	YES
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.		<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other government Agency?		NO	YES
If Yes, list agency(s) name and permit or approval:		<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. a. Total acreage of the site of the proposed action?		3.27 acres	
b. Total acreage to be physically disturbed?		0.3 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		3.27 acres	
4. Check all land uses that occur on, are adjoining or near the proposed action:			
5. <input type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input checked="" type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential (suburban)			
<input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input type="checkbox"/> Other(Specify):			
<input type="checkbox"/> Parkland			

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Consistent with the adopted comprehensive plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? Name:Hudson River, Reason:Exceptional or unique character, Agency:Westchester County, Date:1-31-90 If Yes, identify: _____	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
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 <input checked="" type="checkbox"/>	YES <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
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 <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____ Existing water service to site _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ Existing wastewater treatment system on site _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
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 <input checked="" type="checkbox"/> <input type="checkbox"/>	YES <input type="checkbox"/> <input checked="" type="checkbox"/>	
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: _____ _____ _____	NO <input type="checkbox"/> <input checked="" type="checkbox"/>	YES <input checked="" type="checkbox"/> <input type="checkbox"/>	

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: <input type="checkbox"/> Shoreline <input type="checkbox"/> Forest <input type="checkbox"/> Agricultural/grasslands <input checked="" type="checkbox"/> Early mid-successional <input type="checkbox"/> Wetland <input type="checkbox"/> Urban <input type="checkbox"/> Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered? Bald Eagle, Atlantic Sturge...	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16. Is the project site located in the 100-year flood plan?	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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: _____ On site stormwater management system _____	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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: _____ _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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: _____ _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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: _____ _____	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor/name: <u>Cronin Engineering PE PC</u> Date: <u>July 18, 2023, Rev 11/29/23</u> Signature: <u></u> Title: <u>Project Manager</u>		



Part 1 / Question 7 [Critical Environmental Area]	Yes
Part 1 / Question 7 [Critical Environmental Area - Identify]	Name:Hudson River, Reason:Exceptional or unique character, Agency:Westchester County, Date:1-31-90
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
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]	Yes
Part 1 / Question 15 [Threatened or Endangered Animal - Name]	Bald Eagle, Atlantic Sturgeon, Shortnose Sturgeon
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	Yes



TOWN OF CORTLANDT
DEPARTMENT OF TECHNICAL SERVICES
CODE ENFORCEMENT DIVISION

Michael Preziosi, P.E.
Director – D.O.T.S

Martin G. Rogers, P.E.
*Director of Code
Enforcement/D.O.T.S.*

Holly Haight
*Assistant Director of Code
Enforcement*

Town Hall, 1 Heady Street
Cortlandt Manor, NY 10567
Main #: 914-734-1010
Fax #: 914-293-0991

Town Supervisor
Richard H. Becker

Town Board
James F. Creighton
Francis X. Farrell
Cristin Jacoby
Robert Mayes

To: Town of Cortlandt Planning Board
Cc: Chris Kehoe, AICP – Director, Department of Planning & Community Development
From: Martin G. Rogers, P.E. – Director of Code Enforcement
Date: November 30, 2023
Re: PB 2023-1
Ryan Main LLC
Tax ID 24.06, Block 2, Lot 4

Initial review has been performed for the Site Drawing for the above location. The following was noted:

1. Additional information is required to determine if Building Height is compliant per the Town Code. It is also noted there are no existing structures. The Zoning Compliance Chart shall be updated and note accurate proposed Building Height.
2. It appears some Dwelling Units may meet the definition in the RCNYS as 3 stories above grade and Fire Suppression (Sprinkler) systems will be required.
3. Show hose pulls for Responders as required by the FCNYS are compliant.

HERNANE DE ALMEIDA, P.E.
26 GLENVUE DRIVE, CARMEL, NY 10512
HERNANE@ENGINEER.COM
(914) 469-9741

Town of Cortlandt
Department of Technical Services
Code Enforcement Division
1 Heady Street
Cortlandt Manor, NY 10567

November 27, 2023

Re: Meadowbrook Development
3195 East Main Street
Tax ID 24.6-2-4

Dear Mr. Kehoe,

I'm in receipt of your memo to the planning board dated September 20, 2023 and in some changes were made to the plans that were presented earlier. Herein I will respond to the 13 comments in the same order; therefore the comment below are numbered corresponding to your memo.

Before the comments are dressed, I would like to take a moment to provide change to the plans. The limit of disturbance has been adjusted and is now over 1 acre. The requirement for this was to accommodate for the storm water management of the site. Initially, the design intention was to utilize the existing upper pond closest to the proposed development; this cannot be accomplished due to pitch and grade. Therefore the plan has been adjusted to utilize pond P-3 on the west side of the site. Pond P-3 is shown on these revised plans to be expanded. To direct the water toward this expanded pond, a stormwater pipe we need to be installed through an area that was not previously identified to be disturbed. Some trees will need to be removed to construct the required storm water management system and the town arborist will need to provide an updated list.

1. Sheet numbers were changed to correspond to a letter/number format; "G" for general, "L" for landscape and "C" for civil. Future additional pages will follow the same format.
2.
 - a. Zoning chart has been added to the first page of the drawings that
 - b. Details for the garbage closure have been included on the detail sheet
 - c. A landscape plan is in the process of being created. All proposed landscaping will be consistent with the existing plantings on the development previously approved by the Town
 - d. A stormwater management plan has been provided on these revised plans, see sheet C4 .0
 - e. The only outdoor lighting that would be proposed for this project will be 2 to 3 decorative streetlights to match the existing streetlights within the development. It is anticipated the streetlights will be located equidistant on the proposed Street, at the beginning middle and end. We are awaiting the photometric design to ensure the streetlights will be sufficient.

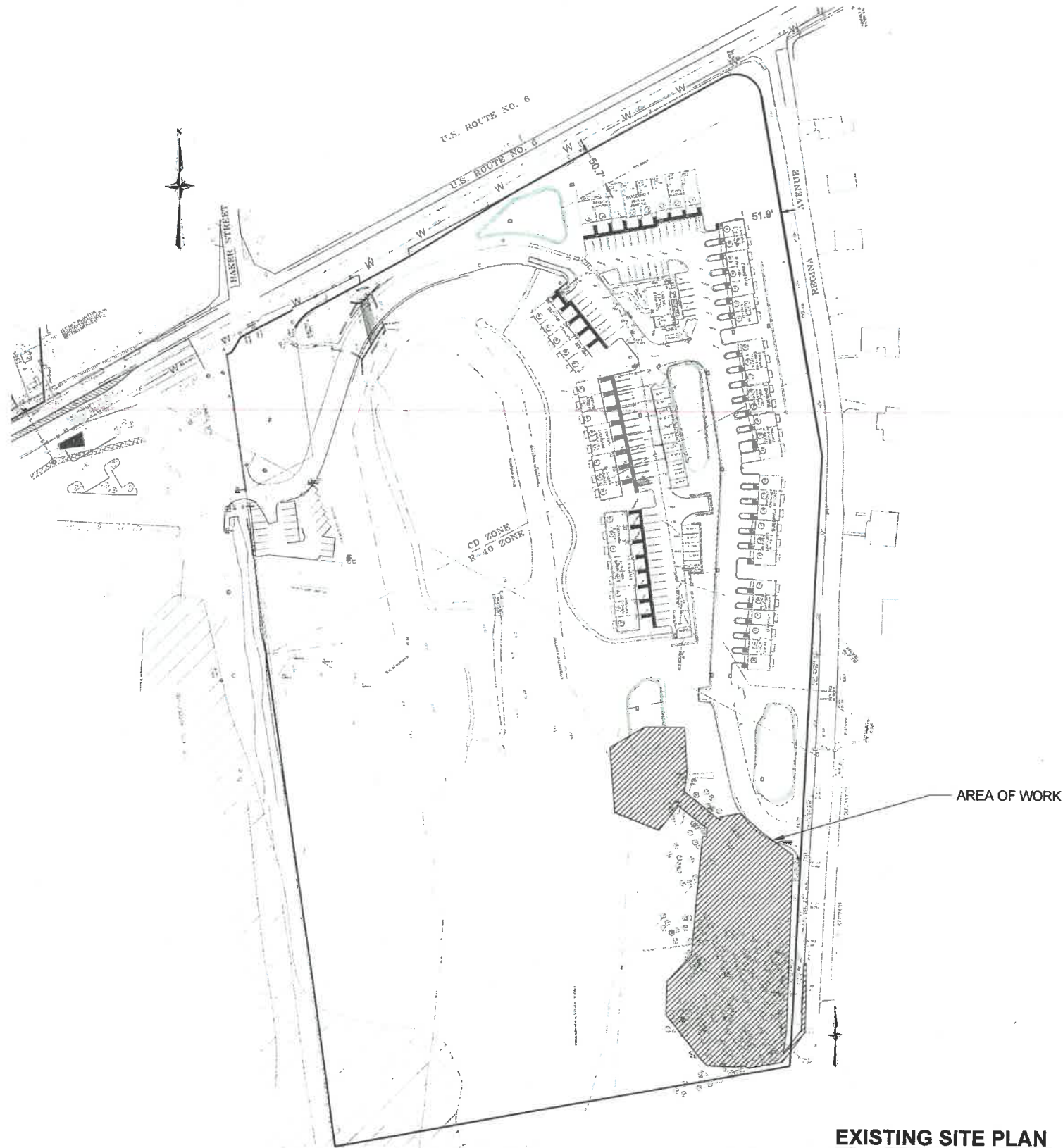
f. The datum used for all elevations is consistent with the datum on the as built drawings for the Pondview development currently known as Meadowbrook

3. The review memo contains a minor typo and does not contain a comment 3
4. This item is informational and not a comment requiring revision to the plan
5. This item is informational and not a comment requiring revision to the plan
6. This item is informational and not a comment requiring revision to the plan
7. some details of been shown on sheet C3 .1, however the design professional associated with sanitary sewer and potable water distribution will provide details in conformance with the Town's standard details utilizing the Town of Cortlandt's prescribed materials and manufacturers.
8. All new residential units shall be required to access routes 6 through the existing developments entrance utilizing the signal controlled intersection at route 6 and Baker Street. The emergency access to Regina Avenue will remain closed to daily use.
9. There have been some technical issues acquiring the tree survey data from the Town consulting arborist. Sheet L 1.0 illustrates the trees as per the original Pondview plan and a list of trees recently provided by the Town consulting arborist. We will work with the town consulting arborist provide an illustration that reflects the location of trees corresponding to the list.
10. The town wetland consultant has provided a comment letter dated October 17, 2023. The wetland consultant provided determination the proposed development will not negatively impact the greater off-site wetland complex. However, the wetland consultant made note that groundwater seepage should be maintained in the direction of the wetland downgrade from the site. This will be accomplished in accordance with typical New York State building code requirements of providing footing drains that collect groundwater and directs it to daylight, which will be downhill of the development in the direction of the wetland. This is a standard practice
11. This will be revised by the environmental consultant, Tim Miller Associates, Inc. This is not been completed due to a recent change in the limits disturbance as mentioned earlier in this correspondence.
12. This item is informational and not a comment requiring revision to the plan
13. This item is informational and not a comment requiring revision to the plan

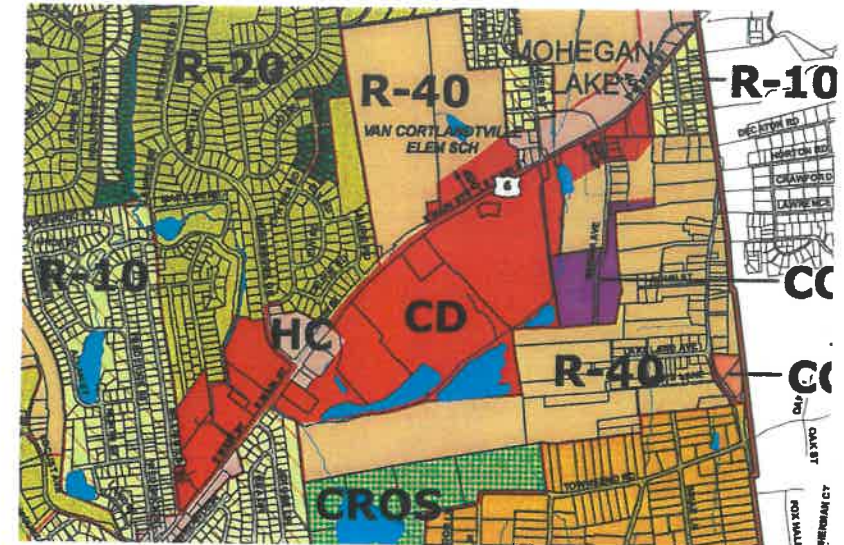
I trust the responses above have addressed to the best extent possible at this time. However if there any items above that you would like to further discuss her need more clarification, please call me at 914-469-9741.

Regards,

Hernane De Almeida, P. E.



EXISTING SITE PLAN
SCALE: 1" = 80'-0"



ZONING MAP
SCALE: 1" = 1000'-0"

ZONING COMPLIANCE CHART			
	Zone: R-40		PROPOSED
CRITERIA	REQUIRED	EXISTING	BUILDINGS 9&10
Lot Area	40,000 sq ft Min	291,185 SQ. FT.	291,185 SQ. FT.
Lot Width	150 FT	697.4 FT	697.4 FT
Building Height	2 1/2 Stories, 35FT	2 1/2 STORIES, 35FT	2 1/2 Stories, 35FT
Front Yard	50ft Min	-	>50ft
Rear Yard	30ft Min	-	35.6FT
Side Yard	30ft Min	-	79.5FT
Rear Yard	6ft Min	-	16.5ft
Side Yard	6ft Min	-	17ft
Building Coverage	44,250 (Max)*	12.3% (35,912sf)	14.8% (43,042sf)
Landscape Coverage	60% Min	>60%	>60%
Total Number of Bedrooms (Units)			12
PARKING	Total		27
	2 per DWELLING		27
	Visitor		3

Principal Setbacks
Accessory Setback

HERNANE DE ALMEIDA
PROFESSIONAL ENGINEER
38 BLEUVE DRIVE
GARNEL, NY 10813
914-489-9741
HERNANE@ENRINKER.COM

CLIENT
RYAN MAIN, LLC
c/o
FINKELESTEIN-MORGAN
111 BROOK ST.
SCARSDALE, NY 10583

PROJECT
PROPOSED RESIDENCES
MEADOWBROOK COMMONS
TOWN OF CORTLANDT,
NY 10567

DATE: 8/23/2023	REVISIONS	DESCRIPTION
NO.	DATE	REV. PER TOWN COMMENTS
1	1/26/2023	

BUILDINGS 9&10
DRAFT SITE PLAN

SHEET TITLE



SEAL

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ALL CONDITIONS OF APPROVAL AS NOTED IN FORMAL LETTERS OF APPROVAL OR ENDORSEMENTS ARE A PART OF THE APPROVED SITE PLAN, SUBMISSION OR VARIANCE PLANS, DRAWINGS OR PLANS, AND ARE HEREBY REFERENCED FOR ADDITIONAL APPROVAL DETAILS.

SHEET
G
1.0



PROPOSED SITE PLAN (PARTIAL)
SCALE: 1" = 20'-0"



EXISTING SITE - AERIAL VIEW
SCALE: N.T.S.



PROPOSED SITE - AERIAL VIEW
SCALE: N.T.S.



EXISTING SITE - AERIAL VIEW (CLOSE)
SCALE: N.T.S.



PROPOSED SITE - AERIAL VIEW (CLOSE)
SCALE: N.T.S.



PROPOSED SITE - NEAREST NEIGHBORS
SCALE: N.T.S.

**HERNANE
De
ALMEIDA**
PROFESSIONAL
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24 BLENVUE DRIVE
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914-469-9741
HERNANDE@ENGINEER.COM

CLIENT
RYAN MAIN, LLC
20
FINKELSTEIN-MORGAN
111 BROOK ST.
SCARSDALE, NY 10583

PROJECT
**PROPOSED
CLUBHOUSE**

**MEADOWBROOK
COMMONS
TOWN OF
CORTLANDT,
NY 10567**

DATE: 8/23/2023	
NO.	DESCRIPTION

**PRESENTATION
ILLUSTRATIONS**

SHEET TITLE



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SHEET
**P
1.0**



PROPOSED SITE PLAN RENDERING -BIRDSEYE



PROPOSED SITE PLAN RENDERING -STREET VIEW

**HERNANE
De
ALMEIDA**
PROFESSIONAL
ENGINEER

22 BLENHUE DRIVE
CARMEL, NY 10512
914-489-9741
HERNANE@ENGINEER.COM

CLIENT

RYAN MAIN, LLC
C/O
FINKELESTEIN-MORGAN
111 BRIDOK ST.
SCARSDALE, NY 10583

PROJECT

**PROPOSED
CLUBHOUSE**

**MEADOWBROOK
COMMONS
TOWN OF
CORTLANDT,
NY 10567**

DATE: 8/23/2023

REVISIONS
DESCRIPTION

NO. DATE

**PRESENTATION
ILLUSTRATIONS**

BHEET TITLE



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SHEET
**P
2.0**



TREE REMOVAL PLAN
SCALE: 1" = 30'-0"

TreeID	CommonName	Condition	Dbh1	Dbh2	Dbh3
18	Maple-Sugar	Good	4	0	0
19	Maple-Sugar	Good	18	0	0
20	Tree of Heaven	Good	14	0	0
21	Maple-Sugar	Good	6	0	0
22	Tree of Heaven	Good	12	0	0
23	Birch-Sweet	Good	9	0	0
24	Birch-Sweet	Fair	6	0	0
25	Maple-Red	Good	16	0	0
26	Tree of Heaven	Good	13	0	0
27	Maple-Sugar	Good	10	0	0
28	Maple-Red	Fair	14	0	0
29	Maple-Sugar	Fair	24	0	0
30	Maple-Sugar	Good	19	0	0
31	Maple-Sugar	Good	6	0	0
32	Maple-Red	Fair	7	0	0
33	Maple-Red	Good	12	0	0
34	Tupelo-Black	Good	17	0	0
35	Maple-Sugar	Good	15	0	0
36	Oak-Black	Good	5	4	0
37	Oak-Northern Red	Good	18	0	0
38	Oak-White	Good	13	0	0
39	Maple-Sugar	Good	12	0	0
40	Maple-Red	Good	6	0	0
41	Maple-Red	Poor	12	0	0
42	Maple-Red	Good	14	0	0
43	Maple-Red	Good	9	0	0
44	Maple-Sugar	Good	9	0	0
45	Maple-Sugar	Good	10	0	0
46	Maple-Red	Good	10	0	0
47	Maple-Red	Good	9	0	0
48	Maple-Sugar	Good	10	4	0
49	Maple-Sugar	Good	4	0	0
50	Maple-Red	Good	15	0	0
51	Maple-Sugar	Good	10	0	0
52	Ash	Dead	9	0	0
53	Maple-Red	Good	12	0	0
54	Maple-Sugar	Good	4	0	0
55	Maple-Sugar	Good	10	0	0
56	Maple-Sugar	Poor	4	0	0
57	Oak-Black	Good	8	0	0
58	Maple-Red	Fair	4	0	0
59	Maple-Red	Fair	9	0	0
60	Oak-Northern Red	Good	17	0	0
61	Oak-Black	Good	17	0	0
62	Oak-Black	Good	5	0	0
63	Maple-Red	Good	11	0	0
64	Maple-Sugar	Good	7	0	0
65	Ash	Dead	9	0	0
66	Tupelo-Black	Good	7	0	0
67	Maple-Sugar	Good	15	0	0
68	Maple-Red	Good	14	0	0
69	Maple-Red	Good	11	0	0
70	Maple-Red	Fair	22	0	0
71	Maple-Sugar	Poor	4	0	0
72	Tupelo-Black	Good	6	0	0
73	Maple-Red	Fair	9	0	0
74	Maple-Red	Fair	5	0	0
75	Maple-Red	Fair	10	0	0
76	Tupelo-Black	Good	17	0	0
77	Maple-Sugar	Fair	19	0	0
78	Oak-Northern Red	Good	13	0	0
79	Maple-Red	Fair	6	0	0
80	Maple-Sugar	Good	5	0	0
81	Maple-Red	Good	7	0	0
82	Hickory-Bitternut	Good	14	0	0
83	Maple-Red	Fair	10	0	0
84	Maple-Red	Good	6	0	0
85	Oak-White	Good	24	0	0
86	Maple-Sugar	Good	4	0	0
87	Maple-Sugar	Good	14	0	0
88	Oak-Black	Good	25	0	0
89	Maple-Sugar	Good	4	0	0
90	Maple-Sugar	Good	4	0	0
91	Maple-Red	Fair	8	0	0
92	Maple-Sugar	Good	6	0	0
93	Maple-Sugar	Good	5	0	0
94	Maple-Sugar	Good	5	0	0
95	Maple-Sugar	Good	13	0	0
96	Maple-Sugar	Good	11	0	0
97	Ash	Dead	9	0	0
98	Maple-Sugar	Fair	15	0	0

TreeID	CommonName	Condition	Dbh1	Dbh2	Dbh3
99	Ash	Dead	12	0	0
100	Maple-Sugar	Good	6	0	0
125	Maple-Sugar	Good	7	0	0
126	Maple-Sugar	Good	6	0	0
127	Maple-Sugar	Good	11	0	0
128	Maple-Sugar	Fair	15	0	0
129	Maple-Sugar	Good	4	0	0
130	Maple-Sugar	Good	4	0	0
131	Maple-Sugar	Good	15	0	0
132	Maple-Sugar	Good	8	0	0
133	Tree of Heaven	Good	17	0	0
134	Maple-Sugar	Good	17	0	0
135	Maple-Sugar	Fair	11	0	0
136	Maple-Sugar	Good	8	0	0
137	Maple-Sugar	Dead	15	0	0
138	Maple-Sugar	Dead	11	0	0
139	Maple-Sugar	Dead	10	0	0
140	Maple-Sugar	Poor	7	0	0
141	Maple-Sugar	Dead	30	0	0
142	Maple-Sugar	Good	7	0	0
143	Maple-Sugar	Fair	4	0	0
144	Maple-Sugar	Fair	4	0	0
145	Maple-Sugar	Good	5	0	0
146	Maple-Sugar	Good	5	0	0
147	Maple-Sugar	Poor	4	0	0
148	Maple-Sugar	Good	5	0	0
149	Maple-Sugar	Fair	4	0	0
150	Maple-Sugar	Fair	7	0	0
151	Maple-Sugar	Fair	4	0	0
152	Maple-Sugar	Good	11	0	0
153	Maple-Red	Good	14	0	0
154	Maple-Sugar	Good	18	0	0
155	Cherry-Black	Dead	9	0	0
156	Maple-Sugar	Good	7	0	0
157	Maple-Sugar	Good	7	0	0
158	Maple-Red	Fair	6	0	0
159	Maple-Sugar	Good	8	0	0
160	Maple-Sugar	Good	9	0	0
161	Maple-Sugar	Good	10	0	0
162	Maple-Sugar	Good	5	0	0
163	Maple-Sugar	Good	4	0	0
164	Maple-Red	Dead	7	0	0
165	Maple-Sugar	Good	6	0	0
166	Maple-Red	Good	6	0	0
167	Maple-Sugar	Good	16	0	0
168	Maple-Red	Fair	10	0	0
169	Maple-Sugar	Good	5	0	0
170	Maple-Red	Good	26	0	0
171	Maple-Sugar	Poor	31	0	0
172	Maple-Sugar	Poor	37	0	0
173	Maple-Sugar	Good	6	7	4
174	Maple-Red	Good	13	0	0
175	Maple-Red	Good	16	0	0
176	Maple-Red	Fair	9	0	0
177	Maple-Sugar	Fair	22	0	0
178	Maple-Sugar	Good	6	4	0
179	Maple-Sugar	Good	6	0	0
180	Tupelo-Black	Good	10	0	0
181	Tupelo-Black	Fair	6	7	4
182	Tupelo-Black	Good	7	0	0
183	Tupelo-Black	Good	11	0	0
184	Tupelo-Black	Dead	5	0	0
185	Maple-Red	Good	15	0	0
186	Maple-Sugar	Good	14	0	0
187	Maple-Red	Fair	20	0	0
188	Maple-Red	Good	19	0	0
189	Willow-Pussy	Fair	4	0	0
190	Elm-American	Fair	4	0	0
191	Elm-American	Dead	11	0	0
192	Elm-American	Fair	5	0	0
193	Elm-American	Fair	4	0	0
194	Elm-American	Fair	6	0	0
195	Elm-American	Fair	6	0	0
196	Elm-American	Good	14	0	0
197	Maple-Sugar	Fair	7	0	0
198	Maple-Sugar	Fair	4	0	0
199	Willow-Babylon Weeping	Good	20	0	0
200	Maple-Sugar	Poor	9	0	0
208	Maple-Sugar	Fair	12	0	0
209	Maple-Sugar	Fair	12	0	0

PROVIDED BY TOWN CONSULTING ARBORIST BARLETT TREES

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PROJECT
PROPOSED RESIDENCES

MEADOWBROOK COMMONS TOWN OF CORTLAND, NY 10567

DATE: 8/23/2023

REVISIONS

DESCRIPTION

REV. PER TOWN COMMENTS

NO. DATE

1 1/26/2023

BUILDINGS 9&10 TREE REMOVAL PLAN

SHEET TITLE



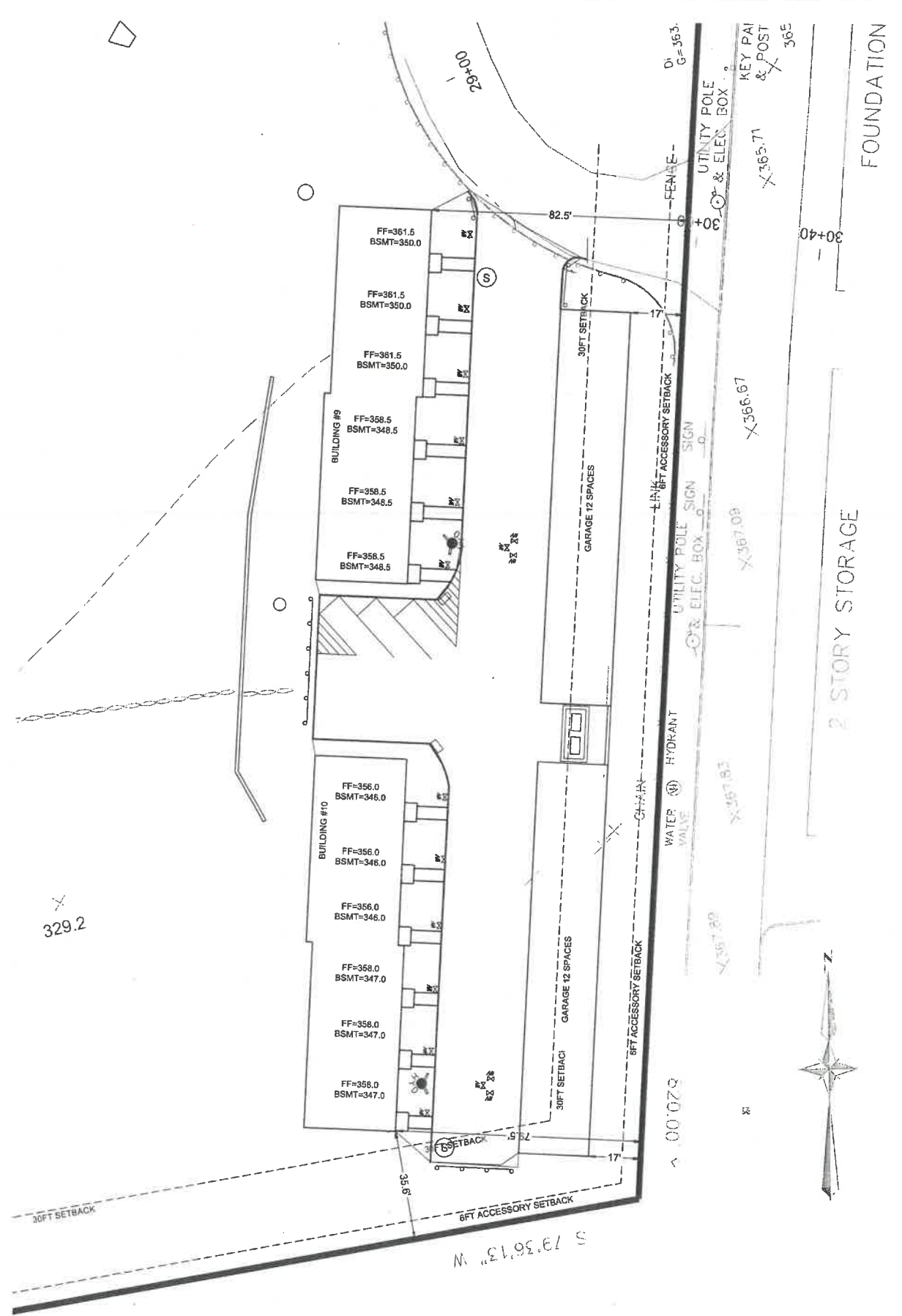
SEAL

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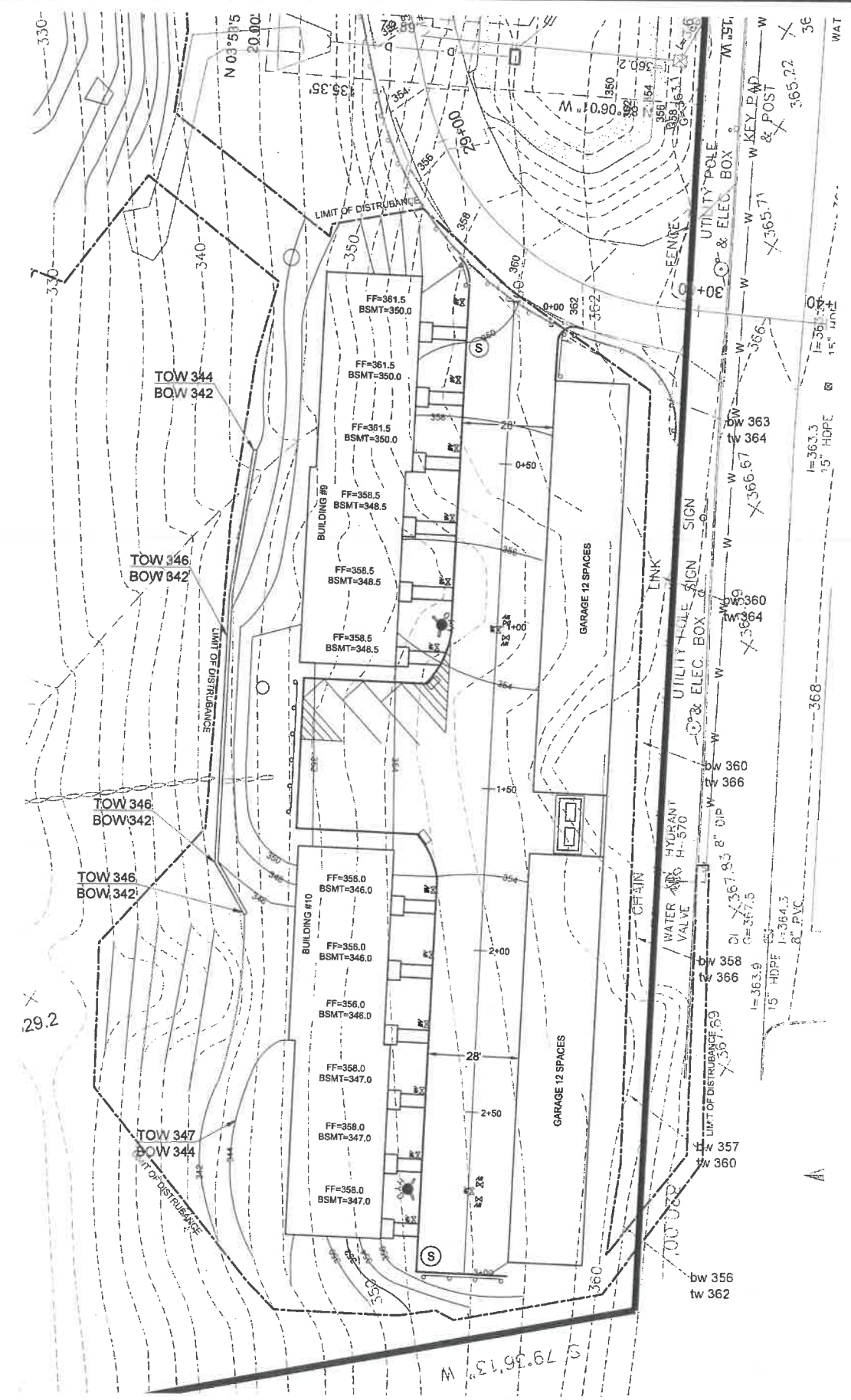
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SHEET

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PROPOSED SITE PLAN-SET BACK COMPLIANCE
SCALE : 1" = 20'-0"



GRADING PLAN
SCALE : 1" = 20'-0"

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PROJECT
PROPOSED RESIDENCES
MEADOWSBROOK COMMONS
TOWN OF CORTLANDT,
NY 10567

NO.	DATE	REVISIONS DESCRIPTION
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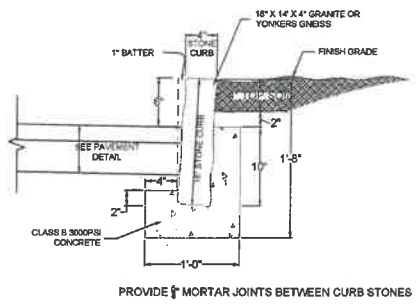
DATE: 8/23/2023
BUILDINGS 9 & 10
SETBACK COMPLIANCE
GRADING PLAN
SHEET TITLE



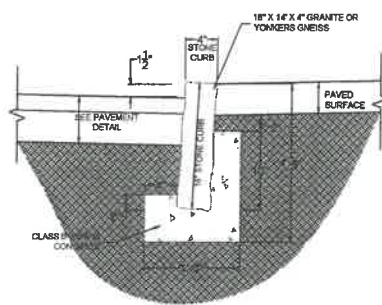
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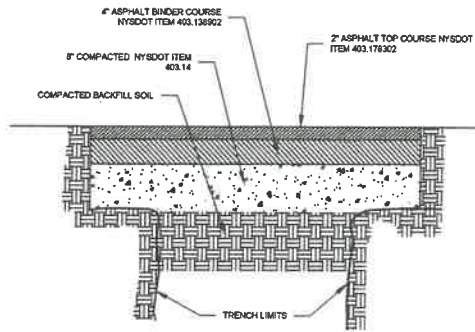
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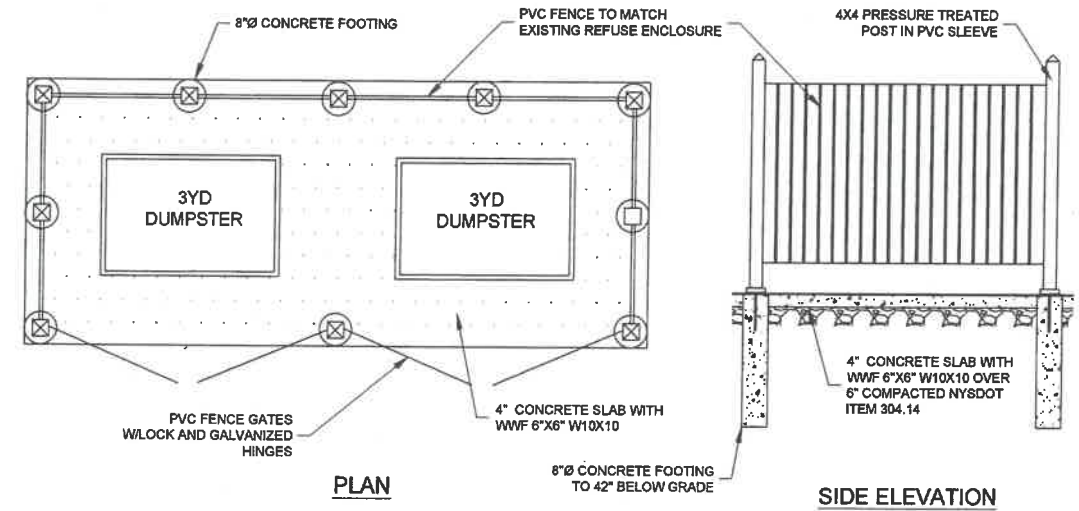
DROP STONE CURB DETAIL
SCALE : N.T.S.



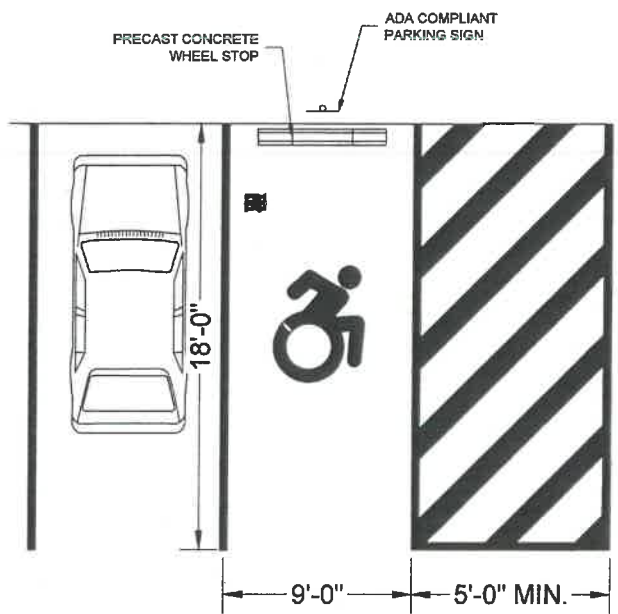
STONE CURB DETAIL
SCALE : N.T.S.



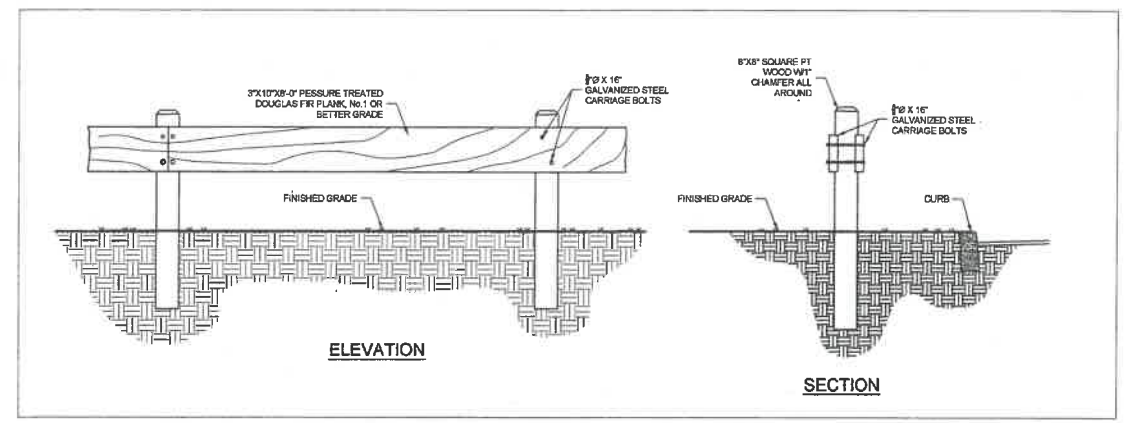
TRENCH RESTORATION DETAIL
SCALE : N.T.S.



REFUSE ENCLOSURE
SCALE : N.T.S.



ADA PARKING LAYOUT
SCALE : N.T.S.



WOOD GUIDERAIL DETAIL
SCALE : N.T.S.

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PROJECT
PROPOSED RESIDENCES
MEADOWBROOK COMMONS
TOWN OF CORTLANDT,
NY 10567

DATE: 8/23/2023	
NO.	DESCRIPTION
1	1/28/2023 REV. PER TOWN COMMENTS

BUILDINGS 9&10
SITE PLAN DETAILS
SHEET TITLE



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SHEET
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PROJECT
PROPOSED RESIDENCES

MEADOWSBROOK COMMONS
 TOWN OF CORTLANDT,
 NY 10567

NO.	DATE	REVISIONS	DESCRIPTION
1	1/25/2023	REV.	PER TOWN COMMENTS

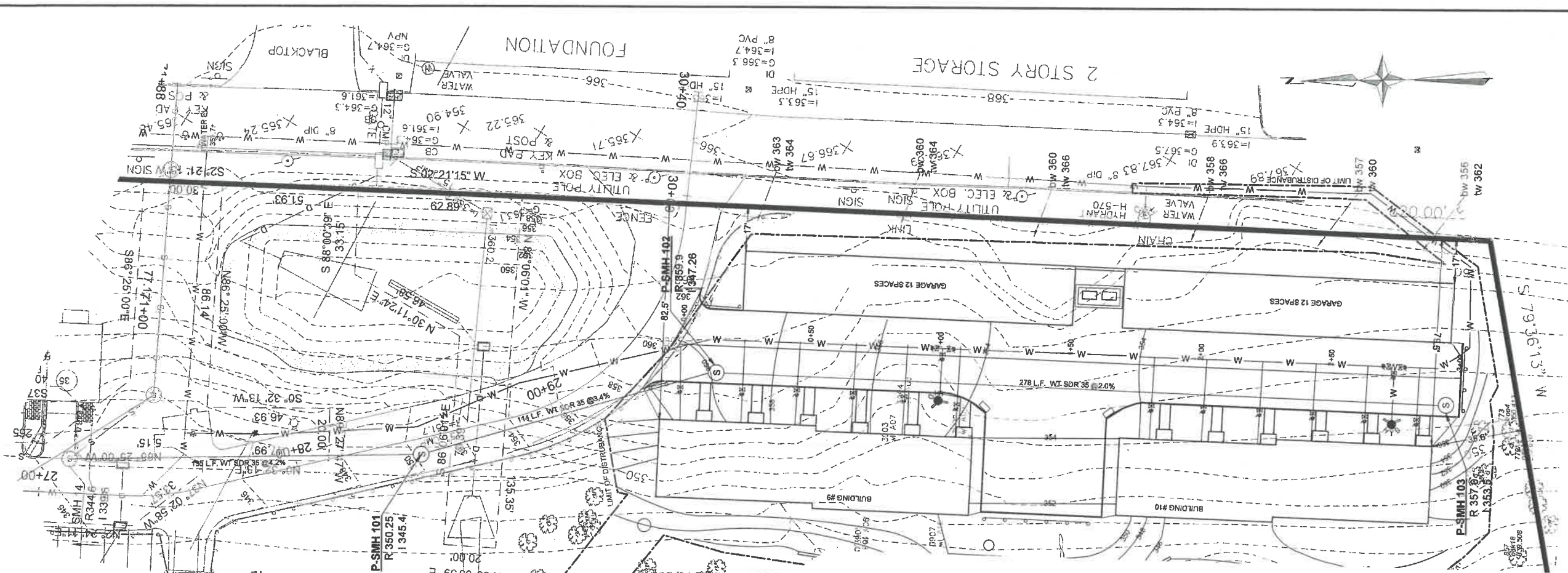
BUILDINGS 9&10
UTILITY PLAN
 SHEET TITLE



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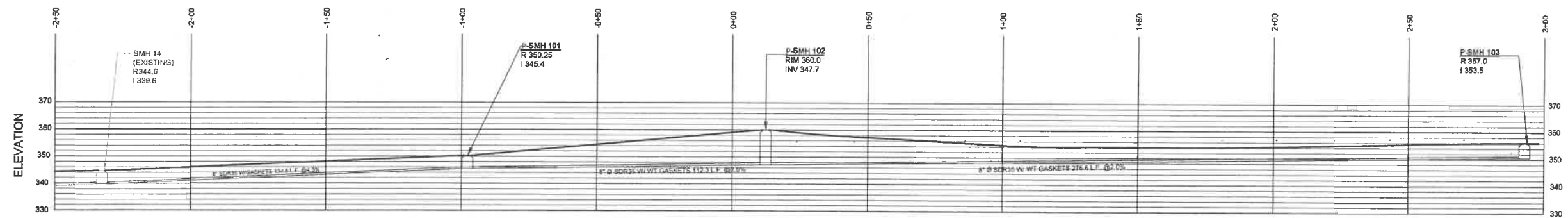
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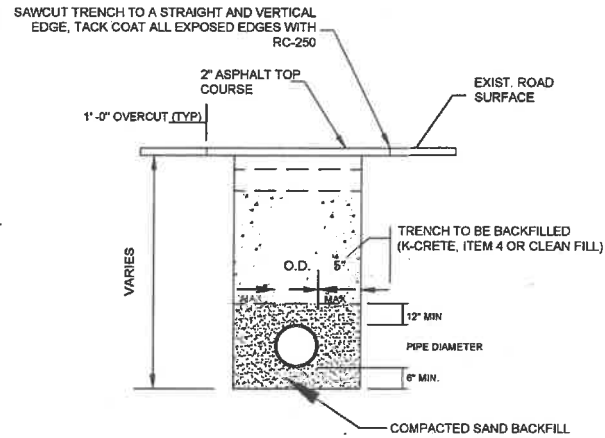


PROPOSED WATER & SANITARY SEWER UTILITIES
 SCALE : 1" = 20'-0"

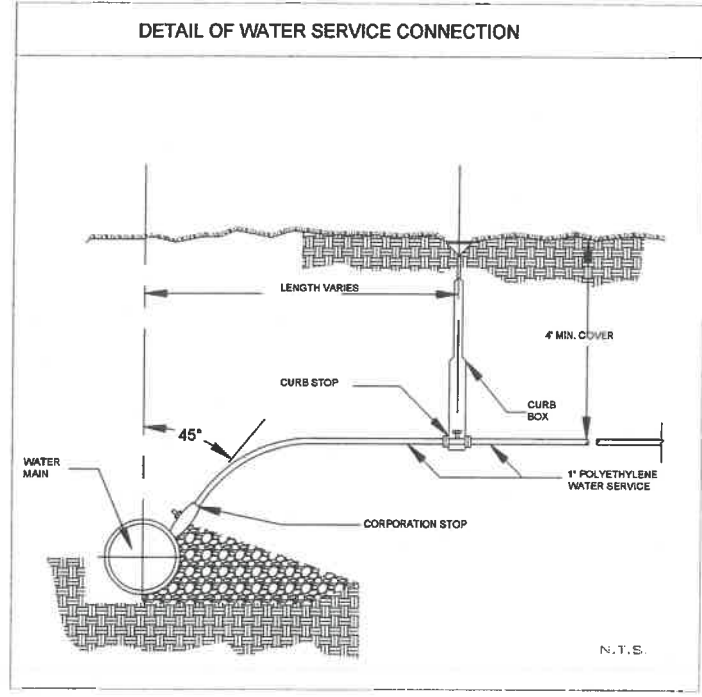
NOTE:
 PUBLIC POTABLE WATER AND SANITARY SEWER EXTENSIONS ARE TO BE PROVIDED BY A CONSULTING ENGINEER AND SUBMITTED TO THE TOWN OF CORTLANDT DEPARTMENT OF ENVIRONMENTAL SERVICES AND WESTCHESTER COUNTY DEPARTMENT OF HEALTH. THIS SHEET DEMONSTRATES FEASIBILITY



SEWER PROFILE
 SCALE : 1" = 20'-0"

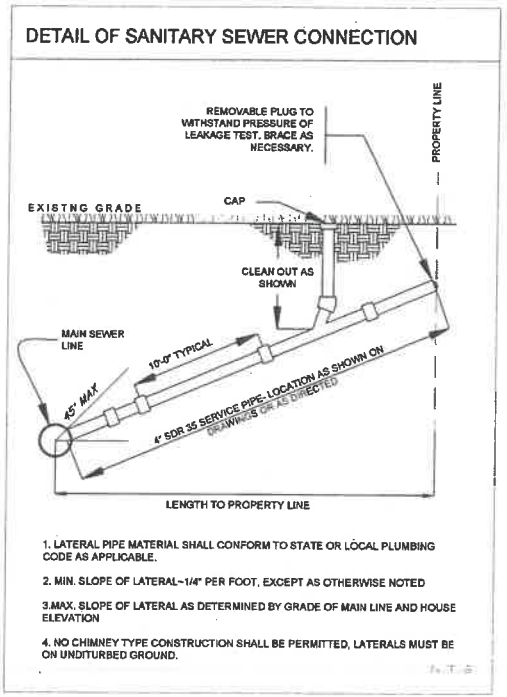


**WATER MAIN TRENCH AND PAVEMENT RESTORATION
DETAIL**
N.T.S.



DETAIL OF WATER SERVICE CONNECTION

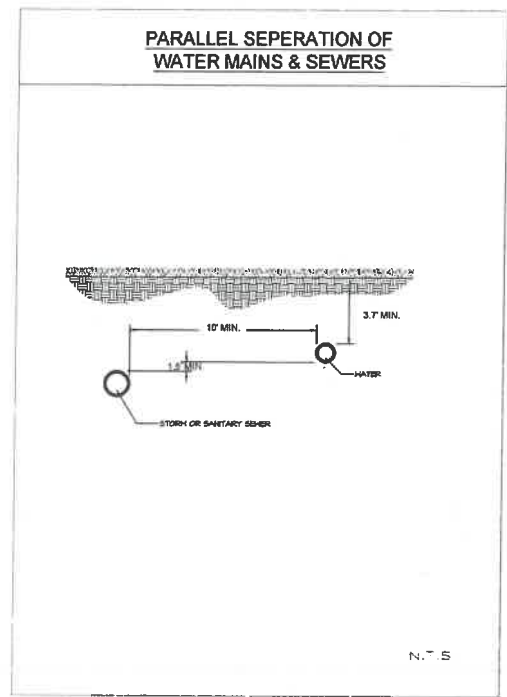
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DETAIL OF SANITARY SEWER CONNECTION

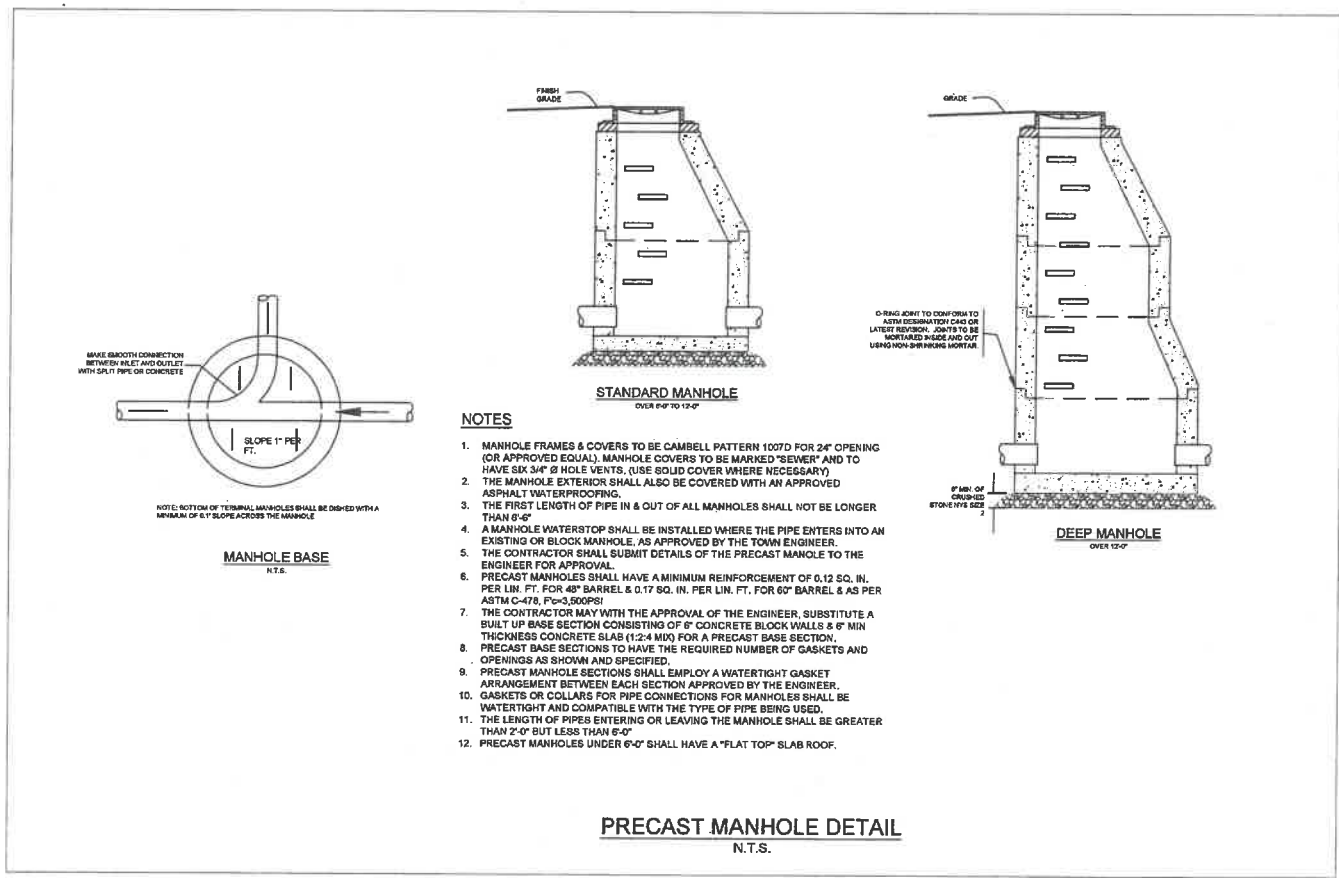
1. LATERAL PIPE MATERIAL SHALL CONFORM TO STATE OR LOCAL PLUMBING CODE AS APPLICABLE.
2. MIN. SLOPE OF LATERAL - 1/4" PER FOOT, EXCEPT AS OTHERWISE NOTED
3. MAX. SLOPE OF LATERAL AS DETERMINED BY GRADE OF MAIN LINE AND HOUSE ELEVATION
4. NO CHIMNEY TYPE CONSTRUCTION SHALL BE PERMITTED, LATERALS MUST BE ON UNDISTURBED GROUND.

N.T.S.



**PARALLEL SEPERATION OF
WATER MAINS & SEWERS**

N.T.S.



MANHOLE BASE
N.T.S.

STANDARD MANHOLE
OVER 6'-0" TO 12'-0"

DEEP MANHOLE
OVER 12'-0"

PRECAST MANHOLE DETAIL
N.T.S.

NOTES

1. MANHOLE FRAMES & COVERS TO BE CAMPBELL PATTERN 10070 FOR 36" OPENING (OR APPROVED EQUAL). MANHOLE COVERS TO BE MARKED "SEWER" AND TO HAVE SIX 3/4" Ø HOLE VENTS. (USE SOLID COVER WHERE NECESSARY)
2. THE MANHOLE EXTERIOR SHALL ALSO BE COVERED WITH AN APPROVED ASPHALT WATERPROOFING.
3. THE FIRST LENGTH OF PIPE IN & OUT OF ALL MANHOLES SHALL NOT BE LONGER THAN 8'-0"
4. A MANHOLE WATERSTOP SHALL BE INSTALLED WHERE THE PIPE ENTERS INTO AN EXISTING OR BLOCK MANHOLE, AS APPROVED BY THE TOWN ENGINEER.
5. THE CONTRACTOR SHALL SUBMIT DETAILS OF THE PRECAST MANHOLE TO THE ENGINEER FOR APPROVAL.
6. PRECAST MANHOLES SHALL HAVE A MINIMUM REINFORCEMENT OF 0.12 SQ. IN. PER LIN. FT. FOR 48" BARREL & 0.17 SQ. IN. PER LIN. FT. FOR 60" BARREL & AS PER ASTM C-478, P=3,500PSI
7. THE CONTRACTOR MAY WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A BUILT UP BASE SECTION CONSISTING OF 6" CONCRETE BLOCK WALLS & 6" MIN THICKNESS CONCRETE SLAB (1:2:4 MIX) FOR A PRECAST BASE SECTION.
8. PRECAST BASE SECTIONS TO HAVE THE REQUIRED NUMBER OF GASKETS AND OPENINGS AS SHOWN AND SPECIFIED.
9. PRECAST MANHOLE SECTIONS SHALL EMPLOY A WATERTIGHT GASKET ARRANGEMENT BETWEEN EACH SECTION APPROVED BY THE ENGINEER.
10. GASKETS OR COLLARS FOR PIPE CONNECTIONS FOR MANHOLES SHALL BE WATERTIGHT AND COMPATIBLE WITH THE TYPE OF PIPE BEING USED.
11. THE LENGTH OF PIPES ENTERING OR LEAVING THE MANHOLE SHALL BE GREATER THAN 2'-0" BUT LESS THAN 8'-0"
12. PRECAST MANHOLES UNDER 6'-0" SHALL HAVE A "FLAT TOP" SLAB ROOF.

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PROJECT
**PROPOSED
RESIDENCES**
MEADOWBROOK
COMMONS
TOWN OF
CORTLAND,
NY 10567

NO.	DATE	REVISIONS DESCRIPTION
1	11/26/2023	REV. PER TOWN COMMENTS

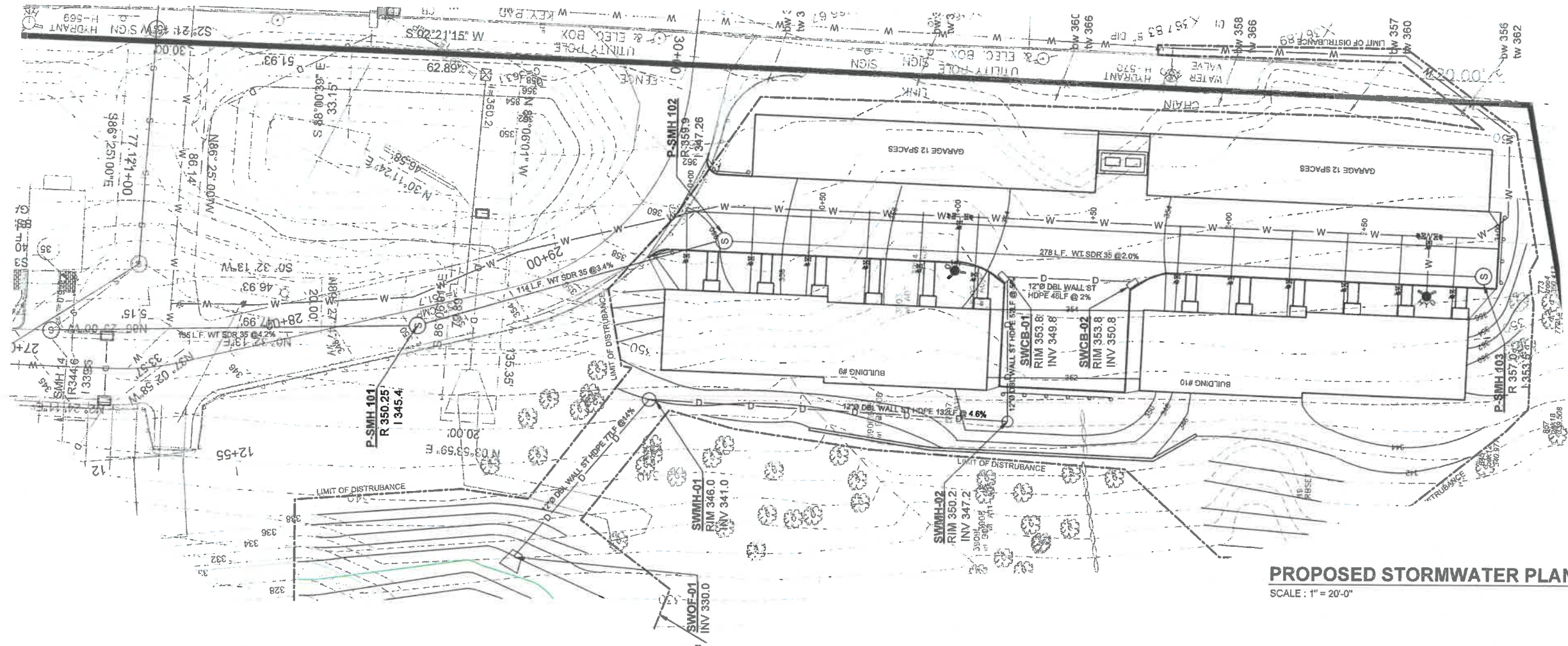
**BUILDINGS 9&10
UTILITY DETAILS**
SHEET TITLE



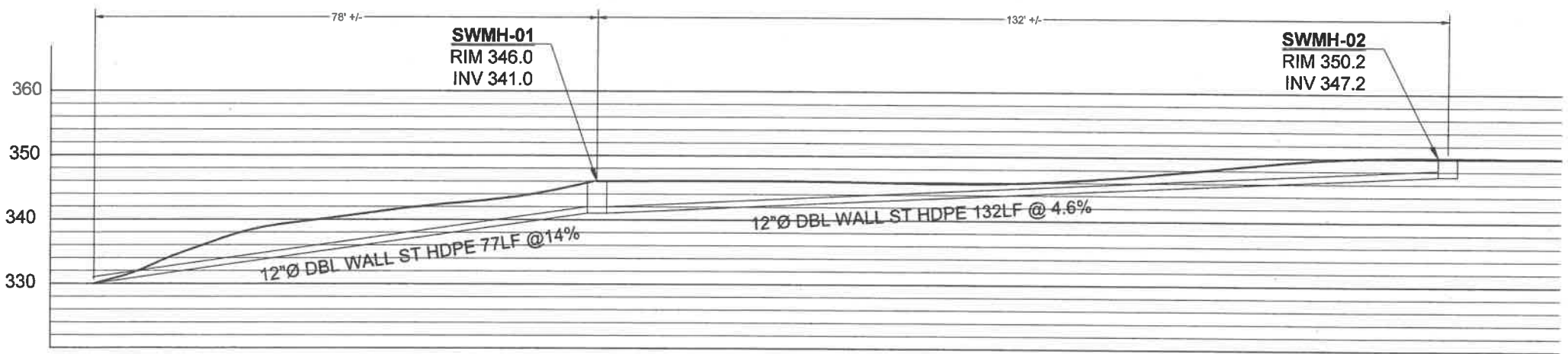
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PROPOSED STORMWATER PLAN
SCALE: 1" = 20'-0"



DRAINAGE PROFILE
SCALE: 1" = 20'-0"

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PROJECT
PROPOSED RESIDENCES
MEADOWSBROOK COMMONS
TOWN OF CORTLANDT, NY 10567

NO.	DATE	REVISIONS DESCRIPTION
1	1/26/2023	REV. PER TOWN COMMENTS

DATE: 8/23/2023

BUILDINGS 9&10
STORMWATER PLAN
SHEET TITLE



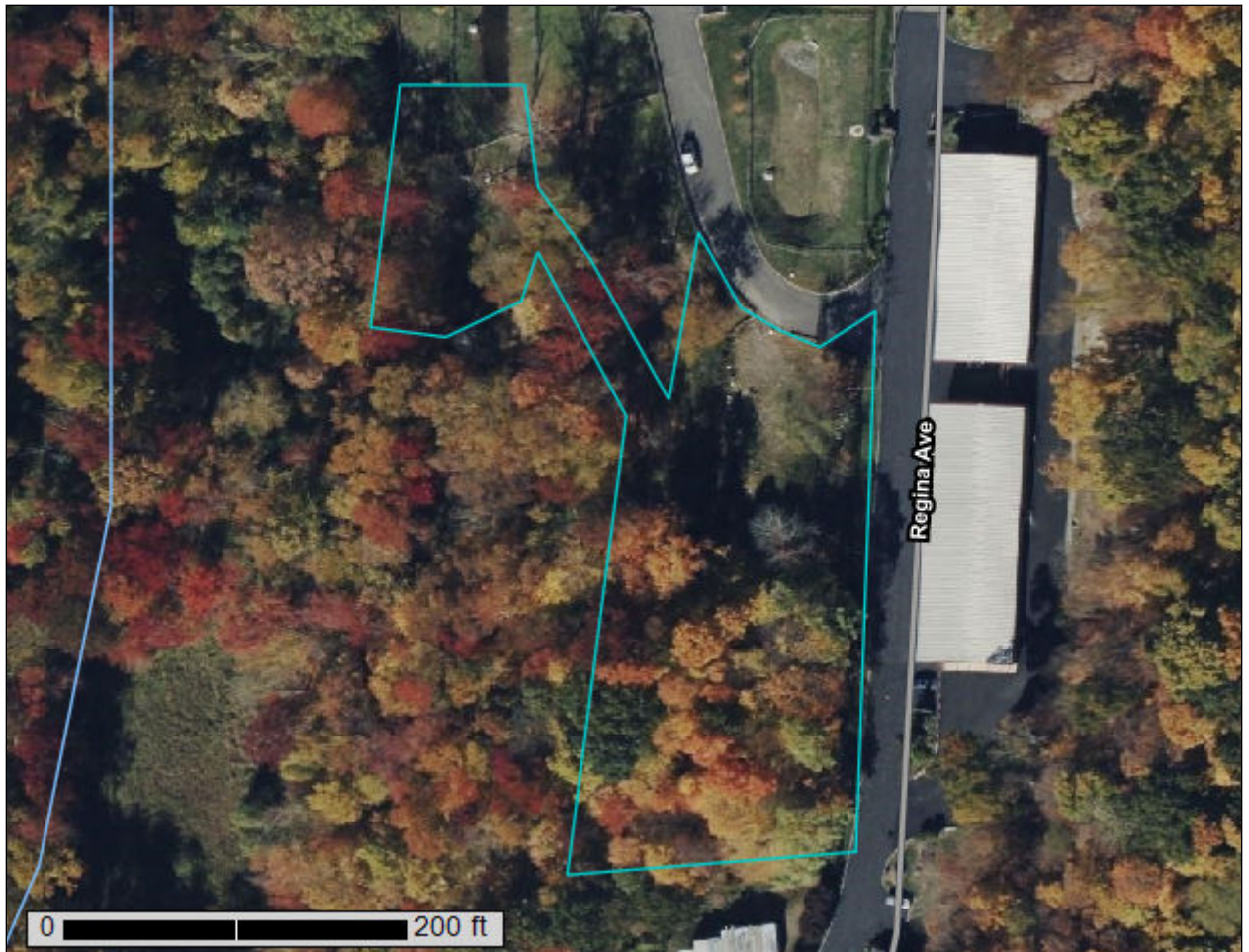
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SHEET
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Custom Soil Resource Report for **Westchester County, New York**

Meadowview



Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

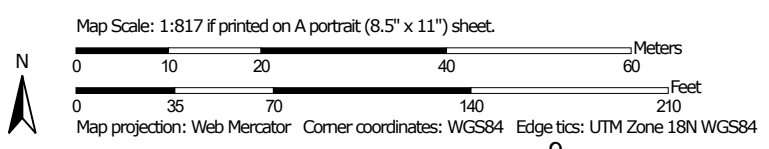
Soil Map

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

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Soil Map (3195 E Main Street, Cortlandt Manor, NY)




Soil Map may not be valid at this scale.





MAP LEGEND


Area of Interest (AOI)

 Area of Interest (AOI)

Soils







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

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

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

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

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

Soil Survey Area: Westchester County, New York
 Survey Area Data: Version 19, Sep 6, 2023

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

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 2022

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

Map Unit Legend (3195 E Main Street, Cortlandt Manor, NY)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ChD	Charlton fine sandy loam, 15 to 25 percent slopes	0.6	43.7%
LcA	Leicester loam, 0 to 3 percent slopes, stony	0.2	13.2%
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	0.6	43.0%
Totals for Area of Interest		1.4	100.0%

Map Unit Descriptions (3195 E Main Street, Cortlandt Manor, NY)

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

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

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

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

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

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

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

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

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

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

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

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

Westchester County, New York

ChD—Charlton fine sandy loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2wh0t
Elevation: 0 to 1,290 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Charlton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton

Setting

Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 22 inches: gravelly fine sandy loam
C - 22 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Paxton

Percent of map unit: 5 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Sutton, fine sandy loam

Percent of map unit: 5 percent
Landform: Ridges, hills, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Chatfield

Percent of map unit: 3 percent
Landform: Ridges, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Nose slope, crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Canton

Percent of map unit: 2 percent
Landform: Moraines, hills, ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

LcA—Leicester loam, 0 to 3 percent slopes, stony

Map Unit Setting

National map unit symbol: bd8v
Elevation: 0 to 1,120 feet
Mean annual precipitation: 46 to 50 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 115 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Leicester, poorly drained, and similar soils: 50 percent

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Leicester, somewhat poorly drained, and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leicester, Poorly Drained

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy acid till derived mostly from schist and gneiss

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 26 inches: sandy loam
C - 26 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A/D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Description of Leicester, Somewhat Poorly Drained

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy acid till derived mostly from schist and gneiss

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 26 inches: sandy loam
C - 26 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A/D

Ecological site: F144AY009CT - Wet Till Depressions

Hydric soil rating: No

Minor Components

Sun

Percent of map unit: 7 percent

Landform: Depressions

Hydric soil rating: Yes

Sutton

Percent of map unit: 5 percent

Hydric soil rating: No

Leicester, very stony

Percent of map unit: 3 percent

Landform: Depressions

Hydric soil rating: Yes

PnC—Paxton fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w66y

Elevation: 0 to 1,320 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Paxton and similar soils: 85 percent

Minor components: 15 percent

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

Description of Paxton

Setting

Landform: Ground moraines, hills, drumlins

Landform position (two-dimensional): Backslope

Custom Soil Resource Report

Landform position (three-dimensional): Side slope

Down-slope shape: Convex, linear

Across-slope shape: Convex

Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam

Bw1 - 8 to 15 inches: fine sandy loam

Bw2 - 15 to 26 inches: fine sandy loam

Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 20 to 39 inches to densic material

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 18 to 37 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Ecological site: F144AY007CT - Well Drained Dense Till Uplands

Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 7 percent

Landform: Hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Woodbridge

Percent of map unit: 6 percent

Landform: Hills, drumlins, ground moraines

Landform position (two-dimensional): Footslope, summit, backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Ridgebury

Percent of map unit: 2 percent

Landform: Drumlins, drainageways, depressions, ground moraines, hills

Landform position (two-dimensional): Toeslope, footslope

Landform position (three-dimensional): Base slope, head slope

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Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group (3195 E Main Street, Cortlandt Manor, NY)

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

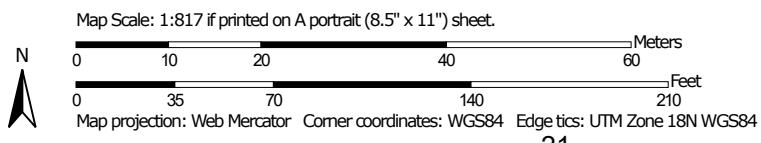
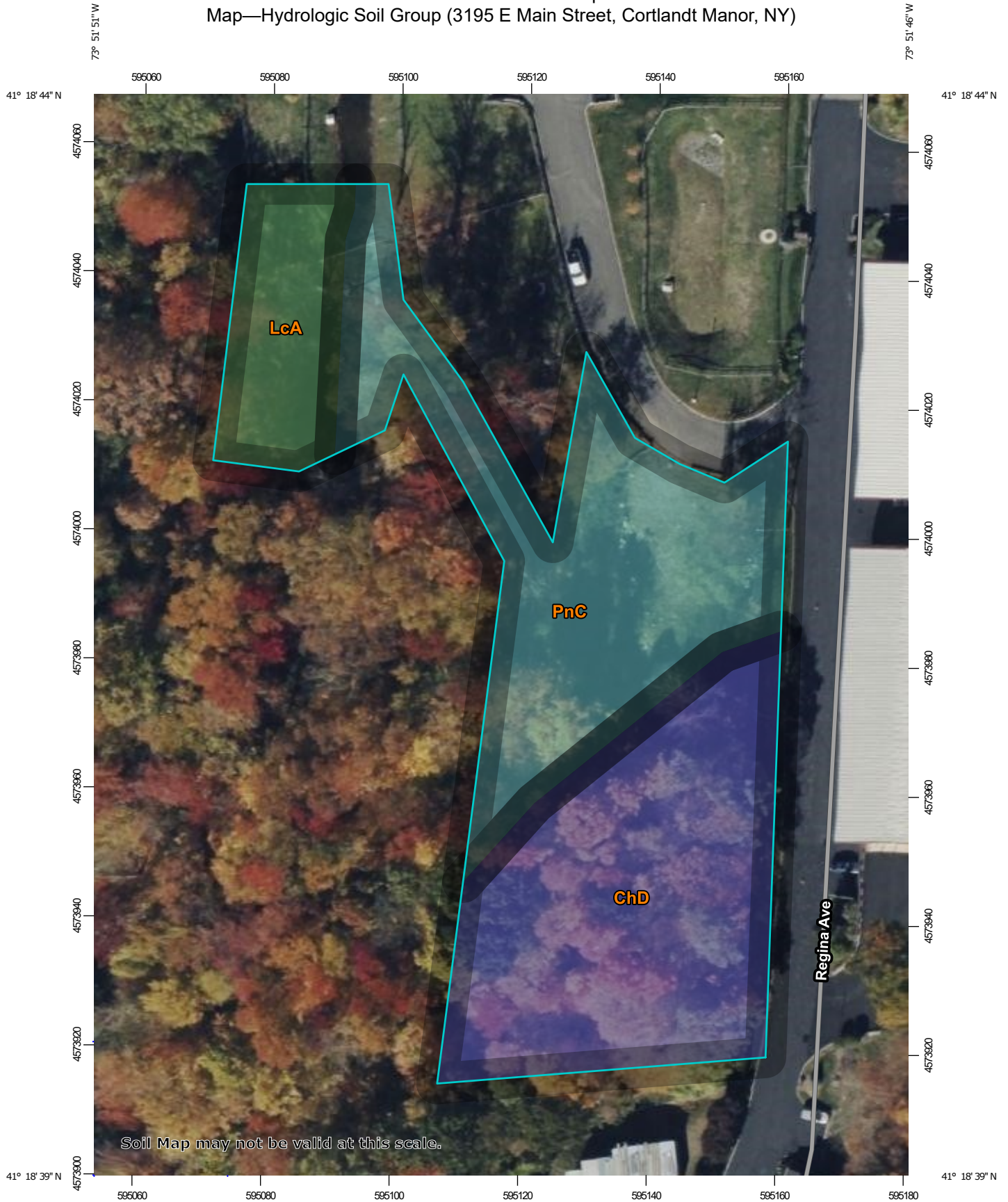
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Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.


If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

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Map—Hydrologic Soil Group (3195 E Main Street, Cortlandt Manor, NY)



MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Lines


-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Points






-  A
-  A/D
-  B
-  B/D

-  C
-  C/D
-  D
-  Not rated or not available


Water Features

 Streams and Canals

Transportation

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

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

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

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

Soil Survey Area: Westchester County, New York
 Survey Area Data: Version 19, Sep 6, 2023

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

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 2022

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

Table—Hydrologic Soil Group (3195 E Main Street, Cortlandt Manor, NY)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
ChD	Charlton fine sandy loam, 15 to 25 percent slopes	B	0.6	43.7%
LcA	Leicester loam, 0 to 3 percent slopes, stony	A/D	0.2	13.2%
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	C	0.6	43.0%
Totals for Area of Interest			1.4	100.0%

Rating Options—Hydrologic Soil Group (3195 E Main Street, Cortlandt Manor, NY)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

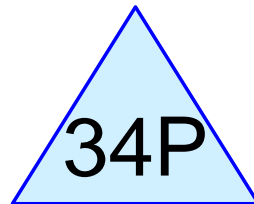
United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

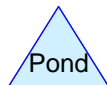
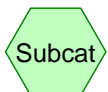
United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf



Existing Subcatchment



Basin 4



Meadowview Existing 2023

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.060	47	>75% Grass cover, Good, HSG A (34S)
0.830	74	>75% Grass cover, Good, HSG C (34S)
0.530	98	Paved Parking & roofs (34S)
1.420	82	TOTAL AREA

Meadowview Existing 2023

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.060	HSG A	34S
0.000	HSG B	
0.830	HSG C	34S
0.000	HSG D	
0.530	Other	34S
1.420		TOTAL AREA

Meadowview Existing 2023

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.060	0.000	0.830	0.000	0.000	0.890	>75% Grass cover, Good	34S
0.000	0.000	0.000	0.000	0.530	0.530	Paved Parking & roofs	34S
0.060	0.000	0.830	0.000	0.530	1.420	TOTAL AREA	

Meadowview Existing 2023

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	34P	325.00	318.00	79.0	0.0886	0.012	18.0	0.0	0.0

Meadowview Existing 2023

Cortlandt Manor Rainfall Data 24-hr S1 1-yr Rainfall=2.75"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 34S: Existing Subcatchment Runoff Area=1.420 ac 37.32% Impervious Runoff Depth>1.18"
Tc=5.0 min CN=82 Runoff=2.41 cfs 0.140 af

Pond 34P: Basin 4 Peak Elev=325.94' Storage=3,989 cf Inflow=2.41 cfs 0.140 af
Discarded=0.05 cfs 0.051 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.051 af

Total Runoff Area = 1.420 ac Runoff Volume = 0.140 af Average Runoff Depth = 1.18"
62.68% Pervious = 0.890 ac 37.32% Impervious = 0.530 ac

Summary for Subcatchment 34S: Existing Subcatchment

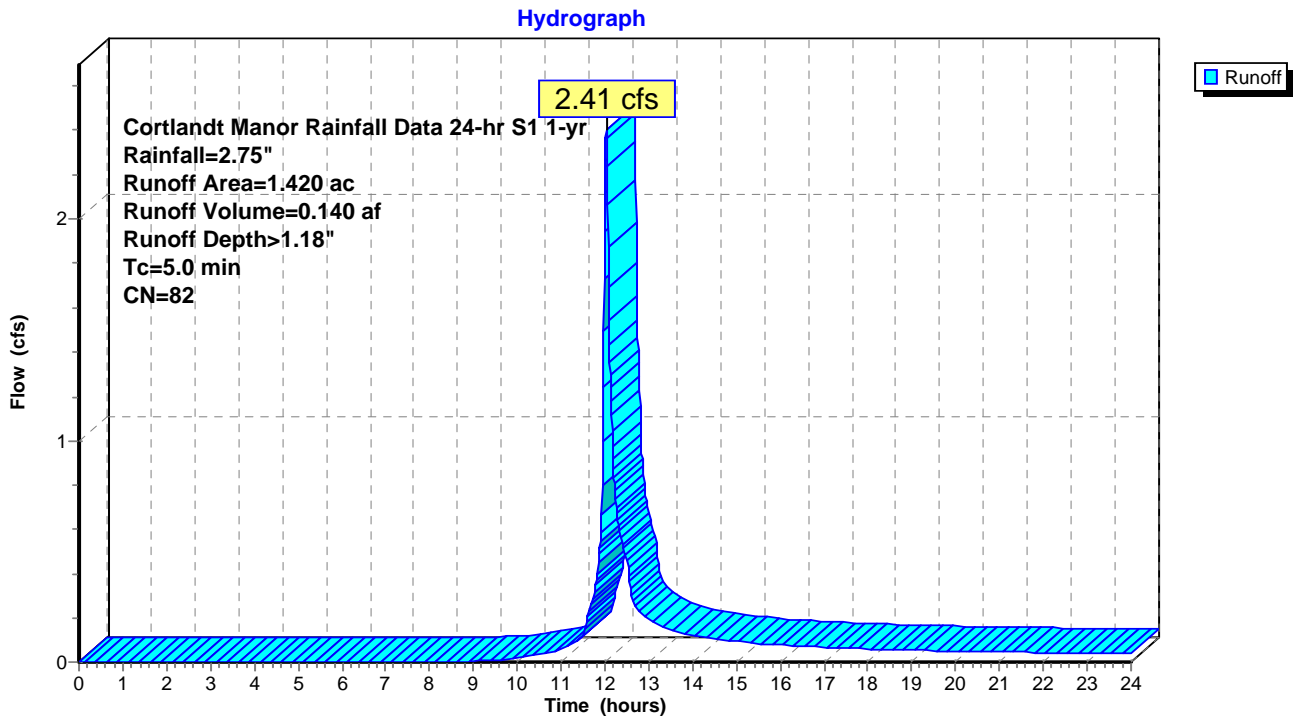
Runoff = 2.41 cfs @ 12.03 hrs, Volume= 0.140 af, Depth> 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Cortlandt Manor Rainfall Data 24-hr S1 1-yr Rainfall=2.75"

Area (ac)	CN	Description
* 0.530	98	Paved Parking & roofs
* 0.060	47	>75% Grass cover, Good, HSG A
0.830	74	>75% Grass cover, Good, HSG C
1.420	82	Weighted Average
0.890		62.68% Pervious Area
0.530		37.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 Minute Minimum

Subcatchment 34S: Existing Subcatchment



Hydrograph for Subcatchment 34S: Existing Subcatchment

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.02	0.00	0.00
1.00	0.04	0.00	0.00
1.50	0.05	0.00	0.00
2.00	0.07	0.00	0.00
2.50	0.09	0.00	0.00
3.00	0.11	0.00	0.00
3.50	0.14	0.00	0.00
4.00	0.16	0.00	0.00
4.50	0.18	0.00	0.00
5.00	0.21	0.00	0.00
5.50	0.23	0.00	0.00
6.00	0.26	0.00	0.00
6.50	0.29	0.00	0.00
7.00	0.32	0.00	0.00
7.50	0.35	0.00	0.00
8.00	0.39	0.00	0.00
8.50	0.43	0.00	0.00
9.00	0.47	0.00	0.00
9.50	0.52	0.00	0.01
10.00	0.57	0.01	0.02
10.50	0.64	0.02	0.03
11.00	0.73	0.03	0.06
11.50	0.85	0.07	0.12
12.00	1.51	0.35	2.12
12.50	1.91	0.59	0.47
13.00	2.03	0.67	0.19
13.50	2.11	0.73	0.15
14.00	2.18	0.77	0.12
14.50	2.24	0.81	0.10
15.00	2.28	0.84	0.09
15.50	2.33	0.87	0.08
16.00	2.36	0.90	0.08
16.50	2.40	0.93	0.07
17.00	2.43	0.95	0.07
17.50	2.46	0.97	0.06
18.00	2.49	0.99	0.06
18.50	2.52	1.01	0.06
19.00	2.55	1.03	0.05
19.50	2.57	1.05	0.05
20.00	2.59	1.07	0.05
20.50	2.62	1.08	0.05
21.00	2.64	1.10	0.05
21.50	2.66	1.11	0.04
22.00	2.68	1.13	0.04
22.50	2.70	1.14	0.04
23.00	2.71	1.16	0.04
23.50	2.73	1.17	0.04
24.00	2.75	1.19	0.04

Summary for Pond 34P: Basin 4

Inflow Area = 1.420 ac, 37.32% Impervious, Inflow Depth > 1.18" for 1-yr event
 Inflow = 2.41 cfs @ 12.03 hrs, Volume= 0.140 af
 Outflow = 0.05 cfs @ 19.84 hrs, Volume= 0.051 af, Atten= 98%, Lag= 468.5 min
 Discarded = 0.05 cfs @ 19.84 hrs, Volume= 0.051 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 325.94' @ 19.84 hrs Surf.Area= 2,142 sf Storage= 3,989 cf

Plug-Flow detention time= 353.3 min calculated for 0.051 af (36% of inflow)
 Center-of-Mass det. time= 203.7 min (1,062.5 - 858.8)

Volume	Invert	Avail.Storage	Storage Description
#1	323.00'	9,772 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
323.00	623	0	0
324.00	1,084	854	854
326.00	2,173	3,257	4,111
328.00	3,488	5,661	9,772

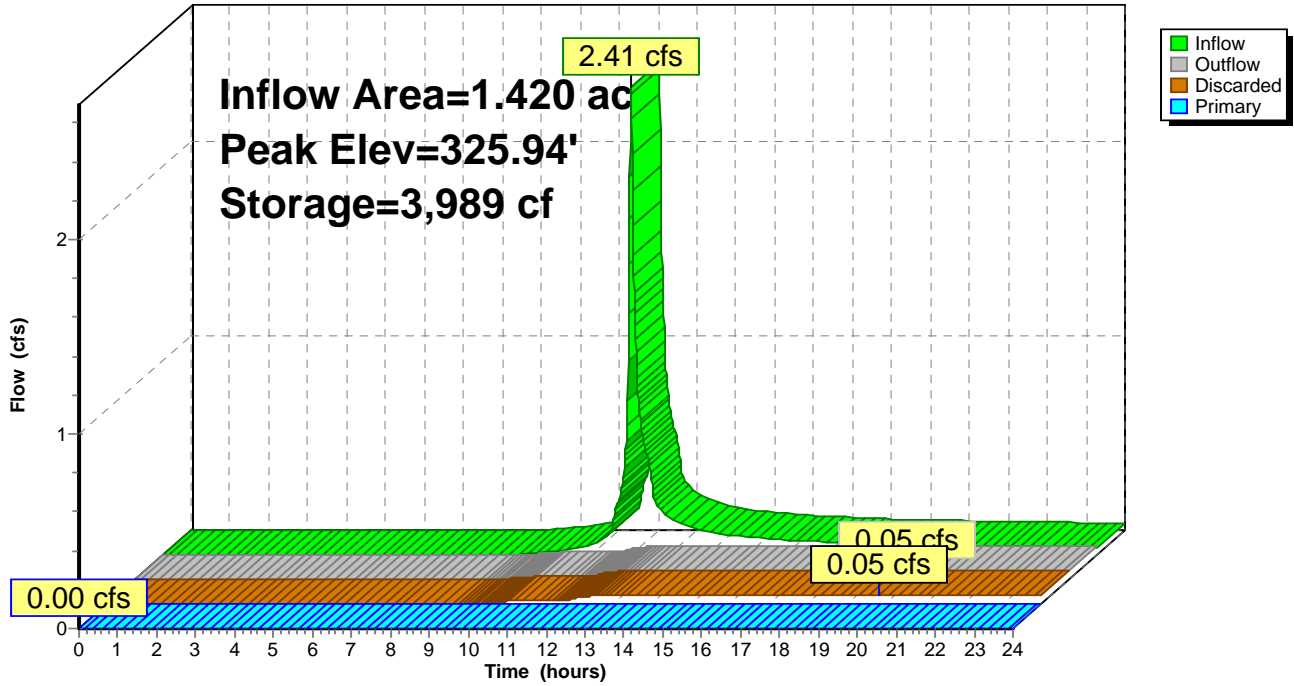
Device	Routing	Invert	Outlet Devices
#1	Primary	325.00'	18.0" Round Culvert L= 79.0' Ke= 0.500 Inlet / Outlet Invert= 325.00' / 318.00' S= 0.0886 ' S Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Discarded	323.00'	1.000 in/hr Exfiltration over Surface area
#3	Device 1	326.50'	3.5' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Discarded OutFlow Max=0.05 cfs @ 19.84 hrs HW=325.94' (Free Discharge)
 ↳ **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=323.00' (Free Discharge)
 ↳ **1=Culvert** (Controls 0.00 cfs)
 ↳ **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

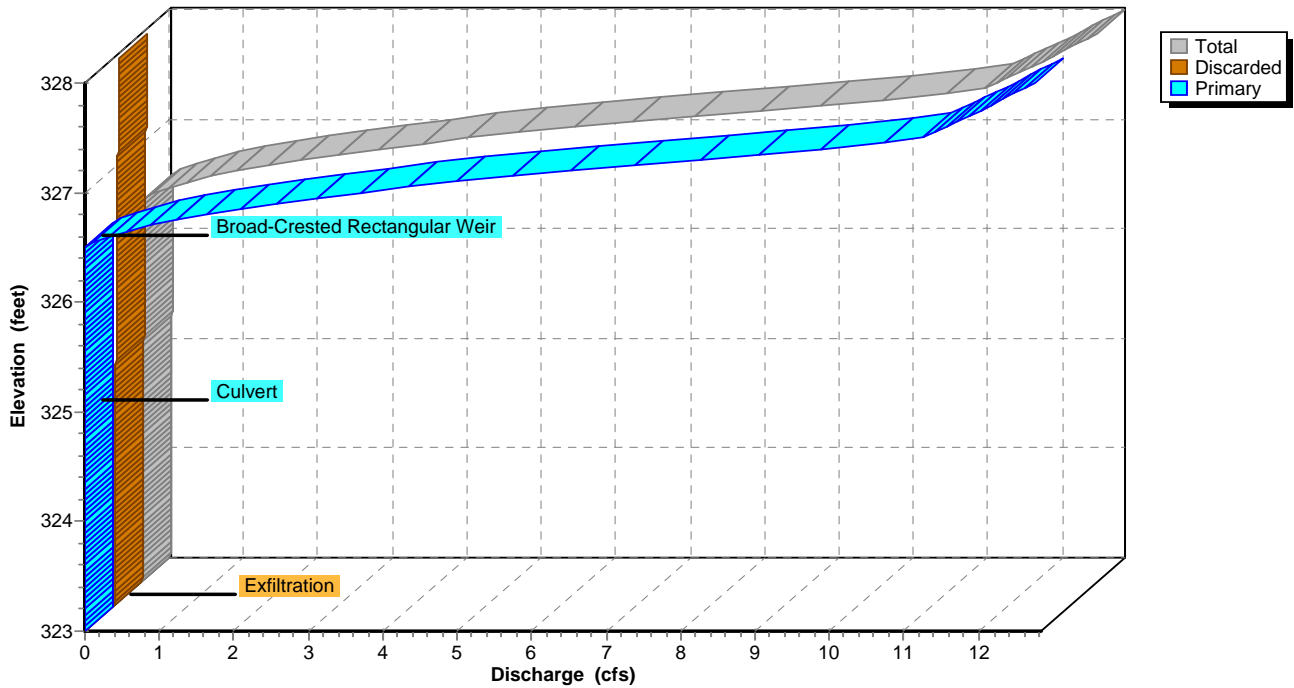
Pond 34P: Basin 4

Hydrograph

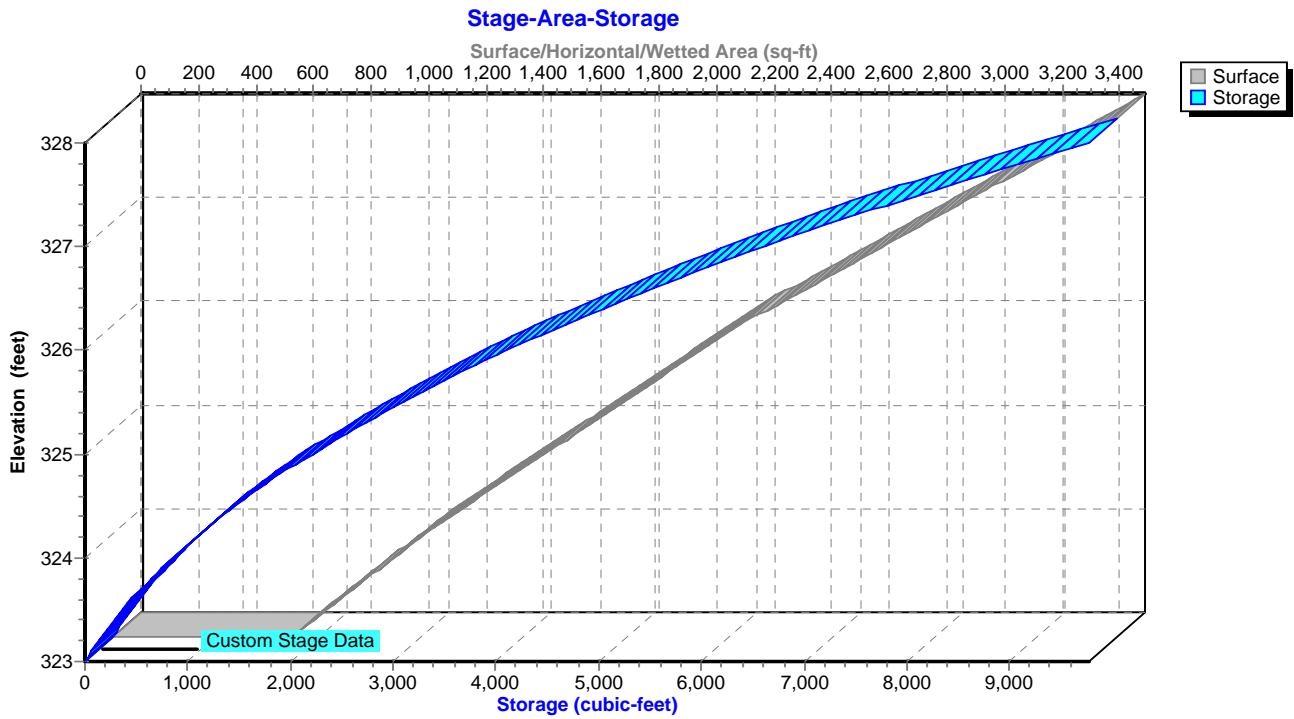


Pond 34P: Basin 4

Stage-Discharge



Pond 34P: Basin 4



Hydrograph for Pond 34P: Basin 4

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	323.00	0.00	0.00	0.00
0.50	0.00	0	323.00	0.00	0.00	0.00
1.00	0.00	0	323.00	0.00	0.00	0.00
1.50	0.00	0	323.00	0.00	0.00	0.00
2.00	0.00	0	323.00	0.00	0.00	0.00
2.50	0.00	0	323.00	0.00	0.00	0.00
3.00	0.00	0	323.00	0.00	0.00	0.00
3.50	0.00	0	323.00	0.00	0.00	0.00
4.00	0.00	0	323.00	0.00	0.00	0.00
4.50	0.00	0	323.00	0.00	0.00	0.00
5.00	0.00	0	323.00	0.00	0.00	0.00
5.50	0.00	0	323.00	0.00	0.00	0.00
6.00	0.00	0	323.00	0.00	0.00	0.00
6.50	0.00	0	323.00	0.00	0.00	0.00
7.00	0.00	0	323.00	0.00	0.00	0.00
7.50	0.00	0	323.00	0.00	0.00	0.00
8.00	0.00	0	323.00	0.00	0.00	0.00
8.50	0.00	0	323.00	0.00	0.00	0.00
9.00	0.00	1	323.00	0.00	0.00	0.00
9.50	0.01	8	323.01	0.00	0.00	0.00
10.00	0.02	20	323.03	0.01	0.01	0.00
10.50	0.03	40	323.06	0.02	0.02	0.00
11.00	0.06	89	323.14	0.02	0.02	0.00
11.50	0.12	207	323.30	0.02	0.02	0.00
12.00	2.12	998	324.13	0.03	0.03	0.00
12.50	0.47	2,721	325.30	0.04	0.04	0.00
13.00	0.19	3,121	325.52	0.04	0.04	0.00
13.50	0.15	3,341	325.63	0.05	0.05	0.00
14.00	0.12	3,496	325.71	0.05	0.05	0.00
14.50	0.10	3,614	325.76	0.05	0.05	0.00
15.00	0.09	3,705	325.81	0.05	0.05	0.00
15.50	0.08	3,776	325.84	0.05	0.05	0.00
16.00	0.08	3,833	325.87	0.05	0.05	0.00
16.50	0.07	3,878	325.89	0.05	0.05	0.00
17.00	0.07	3,913	325.91	0.05	0.05	0.00
17.50	0.06	3,940	325.92	0.05	0.05	0.00
18.00	0.06	3,960	325.93	0.05	0.05	0.00
18.50	0.06	3,975	325.94	0.05	0.05	0.00
19.00	0.05	3,984	325.94	0.05	0.05	0.00
19.50	0.05	3,988	325.94	0.05	0.05	0.00
20.00	0.05	3,989	325.94	0.05	0.05	0.00
20.50	0.05	3,986	325.94	0.05	0.05	0.00
21.00	0.05	3,980	325.94	0.05	0.05	0.00
21.50	0.04	3,971	325.94	0.05	0.05	0.00
22.00	0.04	3,960	325.93	0.05	0.05	0.00
22.50	0.04	3,946	325.92	0.05	0.05	0.00
23.00	0.04	3,930	325.92	0.05	0.05	0.00
23.50	0.04	3,912	325.91	0.05	0.05	0.00
24.00	0.04	3,892	325.90	0.05	0.05	0.00

Stage-Discharge for Pond 34P: Basin 4

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
323.00	0.00	0.00	0.00	325.65	0.05	0.05	0.00
323.05	0.01	0.01	0.00	325.70	0.05	0.05	0.00
323.10	0.02	0.02	0.00	325.75	0.05	0.05	0.00
323.15	0.02	0.02	0.00	325.80	0.05	0.05	0.00
323.20	0.02	0.02	0.00	325.85	0.05	0.05	0.00
323.25	0.02	0.02	0.00	325.90	0.05	0.05	0.00
323.30	0.02	0.02	0.00	325.95	0.05	0.05	0.00
323.35	0.02	0.02	0.00	326.00	0.05	0.05	0.00
323.40	0.02	0.02	0.00	326.05	0.05	0.05	0.00
323.45	0.02	0.02	0.00	326.10	0.05	0.05	0.00
323.50	0.02	0.02	0.00	326.15	0.05	0.05	0.00
323.55	0.02	0.02	0.00	326.20	0.05	0.05	0.00
323.60	0.02	0.02	0.00	326.25	0.05	0.05	0.00
323.65	0.02	0.02	0.00	326.30	0.05	0.05	0.00
323.70	0.02	0.02	0.00	326.35	0.06	0.06	0.00
323.75	0.02	0.02	0.00	326.40	0.06	0.06	0.00
323.80	0.02	0.02	0.00	326.45	0.06	0.06	0.00
323.85	0.02	0.02	0.00	326.50	0.06	0.06	0.00
323.90	0.02	0.02	0.00	326.55	0.17	0.06	0.11
323.95	0.02	0.02	0.00	326.60	0.37	0.06	0.31
324.00	0.03	0.03	0.00	326.65	0.63	0.06	0.57
324.05	0.03	0.03	0.00	326.70	0.94	0.06	0.88
324.10	0.03	0.03	0.00	326.75	1.30	0.06	1.24
324.15	0.03	0.03	0.00	326.80	1.71	0.06	1.64
324.20	0.03	0.03	0.00	326.85	2.16	0.06	2.09
324.25	0.03	0.03	0.00	326.90	2.65	0.06	2.59
324.30	0.03	0.03	0.00	326.95	3.19	0.06	3.13
324.35	0.03	0.03	0.00	327.00	3.78	0.07	3.71
324.40	0.03	0.03	0.00	327.05	4.41	0.07	4.34
324.45	0.03	0.03	0.00	327.10	5.08	0.07	5.01
324.50	0.03	0.03	0.00	327.15	5.82	0.07	5.75
324.55	0.03	0.03	0.00	327.20	6.61	0.07	6.54
324.60	0.03	0.03	0.00	327.25	7.45	0.07	7.38
324.65	0.03	0.03	0.00	327.30	8.33	0.07	8.26
324.70	0.03	0.03	0.00	327.35	9.14	0.07	9.07
324.75	0.03	0.03	0.00	327.40	9.96	0.07	9.89
324.80	0.04	0.04	0.00	327.45	10.82	0.07	10.74
324.85	0.04	0.04	0.00	327.50	11.33	0.07	11.26
324.90	0.04	0.04	0.00	327.55	11.49	0.07	11.42
324.95	0.04	0.04	0.00	327.60	11.65	0.07	11.57
325.00	0.04	0.04	0.00	327.65	11.80	0.08	11.73
325.05	0.04	0.04	0.00	327.70	11.96	0.08	11.88
325.10	0.04	0.04	0.00	327.75	12.11	0.08	12.03
325.15	0.04	0.04	0.00	327.80	12.26	0.08	12.18
325.20	0.04	0.04	0.00	327.85	12.41	0.08	12.33
325.25	0.04	0.04	0.00	327.90	12.56	0.08	12.48
325.30	0.04	0.04	0.00	327.95	12.70	0.08	12.62
325.35	0.04	0.04	0.00	328.00	12.84	0.08	12.76
325.40	0.04	0.04	0.00				
325.45	0.04	0.04	0.00				
325.50	0.04	0.04	0.00				
325.55	0.04	0.04	0.00				
325.60	0.05	0.05	0.00				

Stage-Area-Storage for Pond 34P: Basin 4

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
323.00	623	0	325.65	1,982	3,383
323.05	646	32	325.70	2,010	3,483
323.10	669	65	325.75	2,037	3,584
323.15	692	99	325.80	2,064	3,687
323.20	715	134	325.85	2,091	3,791
323.25	738	170	325.90	2,119	3,896
323.30	761	208	325.95	2,146	4,003
323.35	784	246	326.00	2,173	4,111
323.40	807	286	326.05	2,206	4,220
323.45	830	327	326.10	2,239	4,331
323.50	854	369	326.15	2,272	4,444
323.55	877	412	326.20	2,304	4,558
323.60	900	457	326.25	2,337	4,674
323.65	923	502	326.30	2,370	4,792
323.70	946	549	326.35	2,403	4,911
323.75	969	597	326.40	2,436	5,032
323.80	992	646	326.45	2,469	5,155
323.85	1,015	696	326.50	2,502	5,279
323.90	1,038	747	326.55	2,535	5,405
323.95	1,061	800	326.60	2,568	5,533
324.00	1,084	854	326.65	2,600	5,662
324.05	1,111	908	326.70	2,633	5,793
324.10	1,138	965	326.75	2,666	5,925
324.15	1,166	1,022	326.80	2,699	6,059
324.20	1,193	1,081	326.85	2,732	6,195
324.25	1,220	1,142	326.90	2,765	6,332
324.30	1,247	1,203	326.95	2,798	6,472
324.35	1,275	1,266	327.00	2,831	6,612
324.40	1,302	1,331	327.05	2,863	6,755
324.45	1,329	1,396	327.10	2,896	6,899
324.50	1,356	1,464	327.15	2,929	7,044
324.55	1,383	1,532	327.20	2,962	7,191
324.60	1,411	1,602	327.25	2,995	7,340
324.65	1,438	1,673	327.30	3,028	7,491
324.70	1,465	1,746	327.35	3,061	7,643
324.75	1,492	1,820	327.40	3,093	7,797
324.80	1,520	1,895	327.45	3,126	7,953
324.85	1,547	1,972	327.50	3,159	8,110
324.90	1,574	2,050	327.55	3,192	8,268
324.95	1,601	2,129	327.60	3,225	8,429
325.00	1,629	2,210	327.65	3,258	8,591
325.05	1,656	2,292	327.70	3,291	8,755
325.10	1,683	2,375	327.75	3,324	8,920
325.15	1,710	2,460	327.80	3,357	9,087
325.20	1,737	2,546	327.85	3,389	9,256
325.25	1,765	2,634	327.90	3,422	9,426
325.30	1,792	2,723	327.95	3,455	9,598
325.35	1,819	2,813	328.00	3,488	9,772
325.40	1,846	2,905			
325.45	1,874	2,998			
325.50	1,901	3,092			
325.55	1,928	3,188			
325.60	1,955	3,285			

Meadowview Existing 2023

Cortlandt Manor Rainfall Data 24-hr S1 10-yr Rainfall=5.06"

Prepared by Hernane De Almeida, PE

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 34S: Existing Subcatchment Runoff Area=1.420 ac 37.32% Impervious Runoff Depth>3.13"
Tc=5.0 min CN=82 Runoff=5.46 cfs 0.370 af

Pond 34P: Basin 4

Peak Elev=326.81' Storage=6,096 cf Inflow=5.46 cfs 0.370 af
Discarded=0.06 cfs 0.068 af Primary=1.77 cfs 0.180 af Outflow=1.83 cfs 0.248 af

Total Runoff Area = 1.420 ac Runoff Volume = 0.370 af Average Runoff Depth = 3.13"
62.68% Pervious = 0.890 ac 37.32% Impervious = 0.530 ac

Summary for Subcatchment 34S: Existing Subcatchment

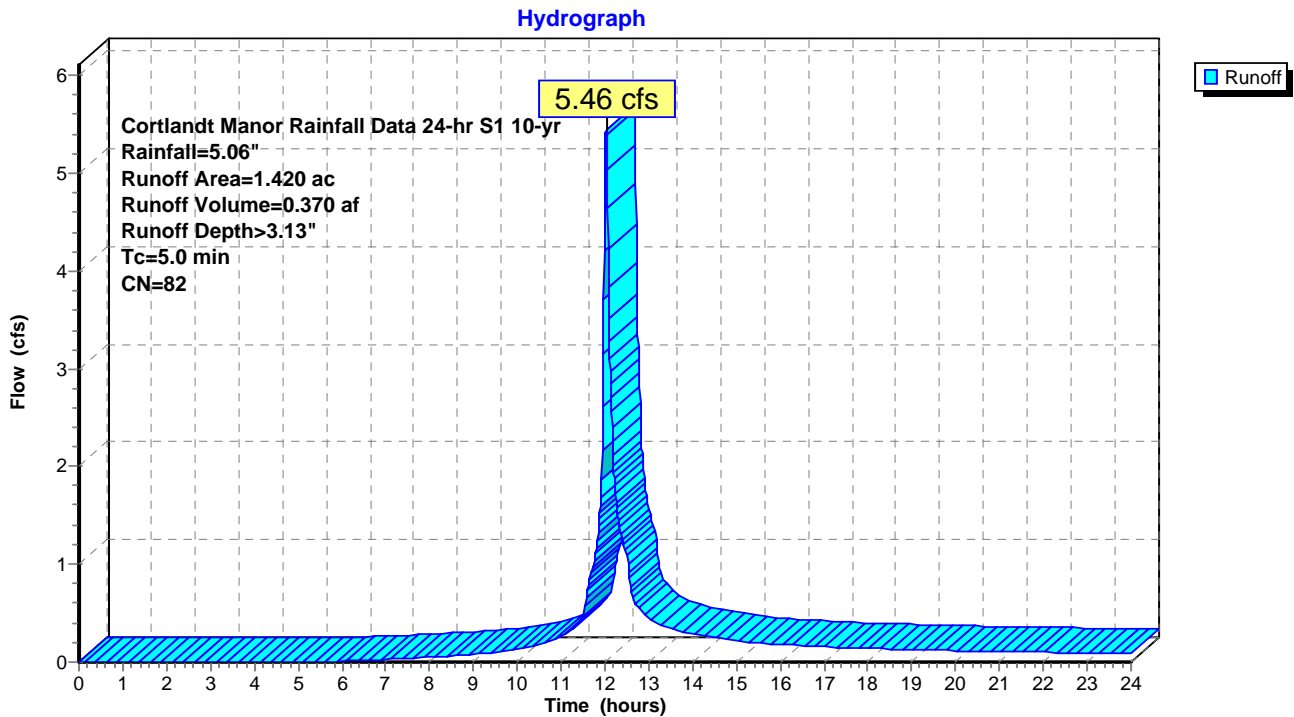
Runoff = 5.46 cfs @ 12.03 hrs, Volume= 0.370 af, Depth> 3.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Cortlandt Manor Rainfall Data 24-hr S1 10-yr Rainfall=5.06"

Area (ac)	CN	Description
* 0.530	98	Paved Parking & roofs
* 0.060	47	>75% Grass cover, Good, HSG A
0.830	74	>75% Grass cover, Good, HSG C
1.420	82	Weighted Average
0.890		62.68% Pervious Area
0.530		37.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 Minute Minimum

Subcatchment 34S: Existing Subcatchment



Hydrograph for Subcatchment 34S: Existing Subcatchment

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.04	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.31	0.00	0.00
4.50	0.36	0.00	0.00
5.00	0.41	0.00	0.00
5.50	0.46	0.00	0.00
6.00	0.51	0.00	0.01
6.50	0.57	0.01	0.02
7.00	0.63	0.02	0.03
7.50	0.70	0.03	0.04
8.00	0.77	0.04	0.05
8.50	0.84	0.06	0.06
9.00	0.92	0.09	0.08
9.50	1.02	0.12	0.10
10.00	1.13	0.16	0.13
10.50	1.25	0.22	0.18
11.00	1.41	0.30	0.26
11.50	1.65	0.43	0.45
12.00	2.74	1.18	4.98
12.50	3.44	1.73	1.10
13.00	3.66	1.92	0.45
13.50	3.82	2.05	0.35
14.00	3.94	2.15	0.29
14.50	4.05	2.24	0.25
15.00	4.14	2.32	0.22
15.50	4.22	2.39	0.20
16.00	4.30	2.46	0.18
16.50	4.37	2.52	0.17
17.00	4.43	2.58	0.16
17.50	4.49	2.63	0.15
18.00	4.55	2.68	0.14
18.50	4.60	2.73	0.13
19.00	4.65	2.77	0.13
19.50	4.70	2.81	0.12
20.00	4.75	2.85	0.12
20.50	4.79	2.89	0.11
21.00	4.83	2.93	0.11
21.50	4.87	2.97	0.10
22.00	4.91	3.00	0.10
22.50	4.95	3.04	0.10
23.00	4.99	3.07	0.09
23.50	5.03	3.10	0.09
24.00	5.06	3.13	0.09

Summary for Pond 34P: Basin 4

Inflow Area = 1.420 ac, 37.32% Impervious, Inflow Depth > 3.13" for 10-yr event
 Inflow = 5.46 cfs @ 12.03 hrs, Volume= 0.370 af
 Outflow = 1.83 cfs @ 12.22 hrs, Volume= 0.248 af, Atten= 66%, Lag= 11.6 min
 Discarded = 0.06 cfs @ 12.22 hrs, Volume= 0.068 af
 Primary = 1.77 cfs @ 12.22 hrs, Volume= 0.180 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 326.81' @ 12.22 hrs Surf.Area= 2,708 sf Storage= 6,096 cf

Plug-Flow detention time= 200.7 min calculated for 0.248 af (67% of inflow)
 Center-of-Mass det. time= 80.9 min (912.2 - 831.3)

Volume	Invert	Avail.Storage	Storage Description
#1	323.00'	9,772 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
323.00	623	0	0
324.00	1,084	854	854
326.00	2,173	3,257	4,111
328.00	3,488	5,661	9,772

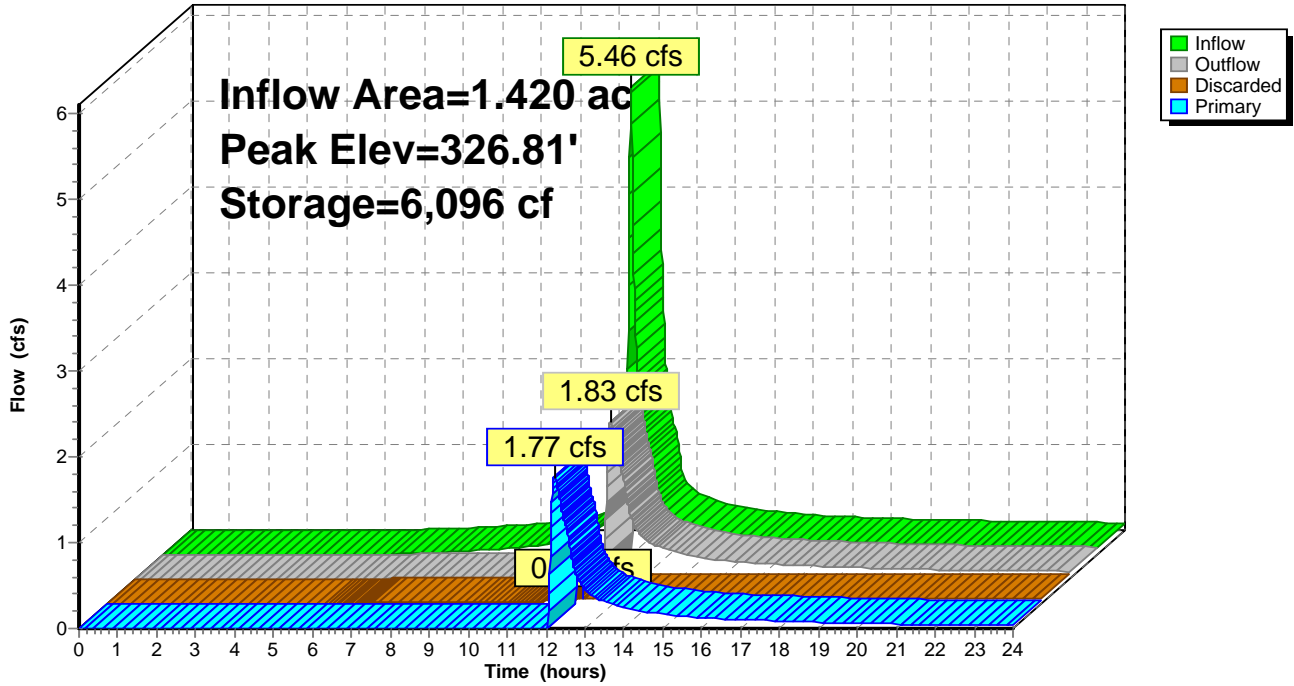
Device	Routing	Invert	Outlet Devices
#1	Primary	325.00'	18.0" Round Culvert L= 79.0' Ke= 0.500 Inlet / Outlet Invert= 325.00' / 318.00' S= 0.0886 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Discarded	323.00'	1.000 in/hr Exfiltration over Surface area
#3	Device 1	326.50'	3.5' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Discarded OutFlow Max=0.06 cfs @ 12.22 hrs HW=326.81' (Free Discharge)
 ↳ **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=1.76 cfs @ 12.22 hrs HW=326.81' (Free Discharge)
 ↳ **1=Culvert** (Passes 1.76 cfs of 8.78 cfs potential flow)
 ↳ **3=Broad-Crested Rectangular Weir** (Weir Controls 1.76 cfs @ 1.61 fps)

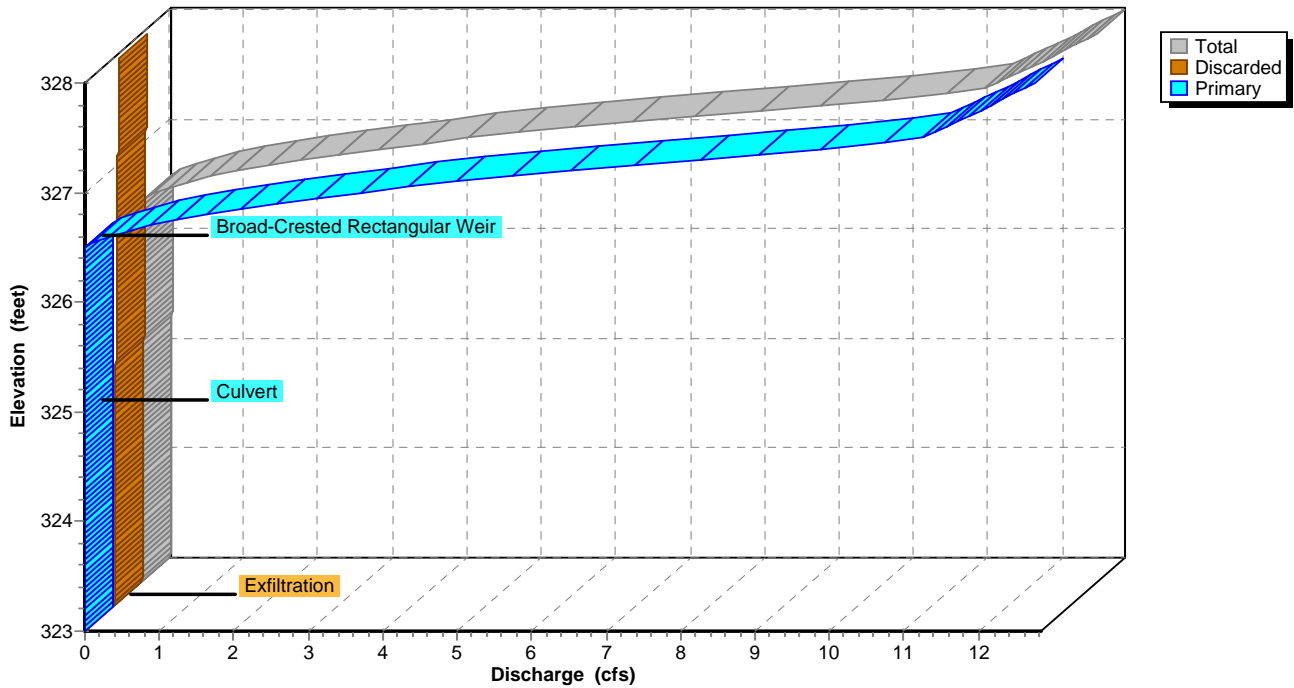
Pond 34P: Basin 4

Hydrograph



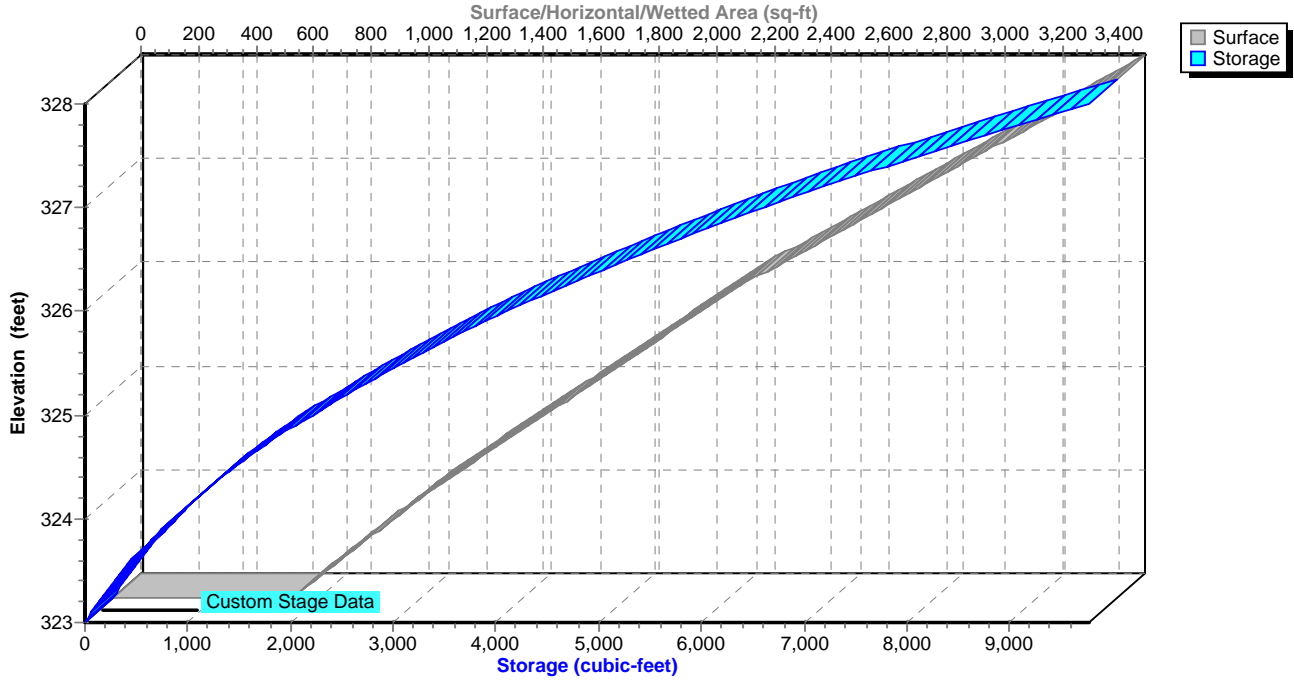
Pond 34P: Basin 4

Stage-Discharge



Pond 34P: Basin 4

Stage-Area-Storage



Hydrograph for Pond 34P: Basin 4

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	323.00	0.00	0.00	0.00
0.50	0.00	0	323.00	0.00	0.00	0.00
1.00	0.00	0	323.00	0.00	0.00	0.00
1.50	0.00	0	323.00	0.00	0.00	0.00
2.00	0.00	0	323.00	0.00	0.00	0.00
2.50	0.00	0	323.00	0.00	0.00	0.00
3.00	0.00	0	323.00	0.00	0.00	0.00
3.50	0.00	0	323.00	0.00	0.00	0.00
4.00	0.00	0	323.00	0.00	0.00	0.00
4.50	0.00	0	323.00	0.00	0.00	0.00
5.00	0.00	0	323.00	0.00	0.00	0.00
5.50	0.00	0	323.00	0.00	0.00	0.00
6.00	0.01	7	323.01	0.00	0.00	0.00
6.50	0.02	20	323.03	0.01	0.01	0.00
7.00	0.03	36	323.06	0.02	0.02	0.00
7.50	0.04	64	323.10	0.02	0.02	0.00
8.00	0.05	111	323.17	0.02	0.02	0.00
8.50	0.06	181	323.26	0.02	0.02	0.00
9.00	0.08	276	323.39	0.02	0.02	0.00
9.50	0.10	405	323.54	0.02	0.02	0.00
10.00	0.13	578	323.73	0.02	0.02	0.00
10.50	0.18	815	323.96	0.02	0.02	0.00
11.00	0.26	1,156	324.26	0.03	0.03	0.00
11.50	0.45	1,711	324.68	0.03	0.03	0.00
12.00	4.98	4,057	325.98	0.05	0.05	0.00
12.50	1.10	5,911	326.74	1.26	0.06	1.20
13.00	0.45	5,609	326.63	0.52	0.06	0.46
13.50	0.35	5,534	326.60	0.37	0.06	0.31
14.00	0.29	5,492	326.58	0.31	0.06	0.25
14.50	0.25	5,463	326.57	0.26	0.06	0.20
15.00	0.22	5,443	326.56	0.23	0.06	0.17
15.50	0.20	5,428	326.56	0.20	0.06	0.15
16.00	0.18	5,417	326.55	0.19	0.06	0.13
16.50	0.17	5,408	326.55	0.17	0.06	0.11
17.00	0.16	5,399	326.55	0.16	0.06	0.10
17.50	0.15	5,388	326.54	0.15	0.06	0.09
18.00	0.14	5,378	326.54	0.14	0.06	0.09
18.50	0.13	5,369	326.54	0.14	0.06	0.08
19.00	0.13	5,361	326.53	0.13	0.06	0.07
19.50	0.12	5,354	326.53	0.12	0.06	0.07
20.00	0.12	5,348	326.53	0.12	0.06	0.06
20.50	0.11	5,343	326.53	0.11	0.06	0.06
21.00	0.11	5,338	326.52	0.11	0.06	0.05
21.50	0.10	5,334	326.52	0.11	0.06	0.05
22.00	0.10	5,330	326.52	0.10	0.06	0.04
22.50	0.10	5,326	326.52	0.10	0.06	0.04
23.00	0.09	5,322	326.52	0.10	0.06	0.04
23.50	0.09	5,319	326.52	0.09	0.06	0.03
24.00	0.09	5,316	326.51	0.09	0.06	0.03

Stage-Discharge for Pond 34P: Basin 4

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
323.00	0.00	0.00	0.00	325.65	0.05	0.05	0.00
323.05	0.01	0.01	0.00	325.70	0.05	0.05	0.00
323.10	0.02	0.02	0.00	325.75	0.05	0.05	0.00
323.15	0.02	0.02	0.00	325.80	0.05	0.05	0.00
323.20	0.02	0.02	0.00	325.85	0.05	0.05	0.00
323.25	0.02	0.02	0.00	325.90	0.05	0.05	0.00
323.30	0.02	0.02	0.00	325.95	0.05	0.05	0.00
323.35	0.02	0.02	0.00	326.00	0.05	0.05	0.00
323.40	0.02	0.02	0.00	326.05	0.05	0.05	0.00
323.45	0.02	0.02	0.00	326.10	0.05	0.05	0.00
323.50	0.02	0.02	0.00	326.15	0.05	0.05	0.00
323.55	0.02	0.02	0.00	326.20	0.05	0.05	0.00
323.60	0.02	0.02	0.00	326.25	0.05	0.05	0.00
323.65	0.02	0.02	0.00	326.30	0.05	0.05	0.00
323.70	0.02	0.02	0.00	326.35	0.06	0.06	0.00
323.75	0.02	0.02	0.00	326.40	0.06	0.06	0.00
323.80	0.02	0.02	0.00	326.45	0.06	0.06	0.00
323.85	0.02	0.02	0.00	326.50	0.06	0.06	0.00
323.90	0.02	0.02	0.00	326.55	0.17	0.06	0.11
323.95	0.02	0.02	0.00	326.60	0.37	0.06	0.31
324.00	0.03	0.03	0.00	326.65	0.63	0.06	0.57
324.05	0.03	0.03	0.00	326.70	0.94	0.06	0.88
324.10	0.03	0.03	0.00	326.75	1.30	0.06	1.24
324.15	0.03	0.03	0.00	326.80	1.71	0.06	1.64
324.20	0.03	0.03	0.00	326.85	2.16	0.06	2.09
324.25	0.03	0.03	0.00	326.90	2.65	0.06	2.59
324.30	0.03	0.03	0.00	326.95	3.19	0.06	3.13
324.35	0.03	0.03	0.00	327.00	3.78	0.07	3.71
324.40	0.03	0.03	0.00	327.05	4.41	0.07	4.34
324.45	0.03	0.03	0.00	327.10	5.08	0.07	5.01
324.50	0.03	0.03	0.00	327.15	5.82	0.07	5.75
324.55	0.03	0.03	0.00	327.20	6.61	0.07	6.54
324.60	0.03	0.03	0.00	327.25	7.45	0.07	7.38
324.65	0.03	0.03	0.00	327.30	8.33	0.07	8.26
324.70	0.03	0.03	0.00	327.35	9.14	0.07	9.07
324.75	0.03	0.03	0.00	327.40	9.96	0.07	9.89
324.80	0.04	0.04	0.00	327.45	10.82	0.07	10.74
324.85	0.04	0.04	0.00	327.50	11.33	0.07	11.26
324.90	0.04	0.04	0.00	327.55	11.49	0.07	11.42
324.95	0.04	0.04	0.00	327.60	11.65	0.07	11.57
325.00	0.04	0.04	0.00	327.65	11.80	0.08	11.73
325.05	0.04	0.04	0.00	327.70	11.96	0.08	11.88
325.10	0.04	0.04	0.00	327.75	12.11	0.08	12.03
325.15	0.04	0.04	0.00	327.80	12.26	0.08	12.18
325.20	0.04	0.04	0.00	327.85	12.41	0.08	12.33
325.25	0.04	0.04	0.00	327.90	12.56	0.08	12.48
325.30	0.04	0.04	0.00	327.95	12.70	0.08	12.62
325.35	0.04	0.04	0.00	328.00	12.84	0.08	12.76
325.40	0.04	0.04	0.00				
325.45	0.04	0.04	0.00				
325.50	0.04	0.04	0.00				
325.55	0.04	0.04	0.00				
325.60	0.05	0.05	0.00				

Stage-Area-Storage for Pond 34P: Basin 4

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
323.00	623	0	325.65	1,982	3,383
323.05	646	32	325.70	2,010	3,483
323.10	669	65	325.75	2,037	3,584
323.15	692	99	325.80	2,064	3,687
323.20	715	134	325.85	2,091	3,791
323.25	738	170	325.90	2,119	3,896
323.30	761	208	325.95	2,146	4,003
323.35	784	246	326.00	2,173	4,111
323.40	807	286	326.05	2,206	4,220
323.45	830	327	326.10	2,239	4,331
323.50	854	369	326.15	2,272	4,444
323.55	877	412	326.20	2,304	4,558
323.60	900	457	326.25	2,337	4,674
323.65	923	502	326.30	2,370	4,792
323.70	946	549	326.35	2,403	4,911
323.75	969	597	326.40	2,436	5,032
323.80	992	646	326.45	2,469	5,155
323.85	1,015	696	326.50	2,502	5,279
323.90	1,038	747	326.55	2,535	5,405
323.95	1,061	800	326.60	2,568	5,533
324.00	1,084	854	326.65	2,600	5,662
324.05	1,111	908	326.70	2,633	5,793
324.10	1,138	965	326.75	2,666	5,925
324.15	1,166	1,022	326.80	2,699	6,059
324.20	1,193	1,081	326.85	2,732	6,195
324.25	1,220	1,142	326.90	2,765	6,332
324.30	1,247	1,203	326.95	2,798	6,472
324.35	1,275	1,266	327.00	2,831	6,612
324.40	1,302	1,331	327.05	2,863	6,755
324.45	1,329	1,396	327.10	2,896	6,899
324.50	1,356	1,464	327.15	2,929	7,044
324.55	1,383	1,532	327.20	2,962	7,191
324.60	1,411	1,602	327.25	2,995	7,340
324.65	1,438	1,673	327.30	3,028	7,491
324.70	1,465	1,746	327.35	3,061	7,643
324.75	1,492	1,820	327.40	3,093	7,797
324.80	1,520	1,895	327.45	3,126	7,953
324.85	1,547	1,972	327.50	3,159	8,110
324.90	1,574	2,050	327.55	3,192	8,268
324.95	1,601	2,129	327.60	3,225	8,429
325.00	1,629	2,210	327.65	3,258	8,591
325.05	1,656	2,292	327.70	3,291	8,755
325.10	1,683	2,375	327.75	3,324	8,920
325.15	1,710	2,460	327.80	3,357	9,087
325.20	1,737	2,546	327.85	3,389	9,256
325.25	1,765	2,634	327.90	3,422	9,426
325.30	1,792	2,723	327.95	3,455	9,598
325.35	1,819	2,813	328.00	3,488	9,772
325.40	1,846	2,905			
325.45	1,874	2,998			
325.50	1,901	3,092			
325.55	1,928	3,188			
325.60	1,955	3,285			

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 34S: Existing Subcatchment Runoff Area=1.420 ac 37.32% Impervious Runoff Depth>6.99"
Tc=5.0 min CN=82 Runoff=10.17 cfs 0.827 af

Pond 34P: Basin 4 Peak Elev=327.32' Storage=7,538 cf Inflow=10.17 cfs 0.827 af
Discarded=0.07 cfs 0.082 af Primary=8.51 cfs 0.620 af Outflow=8.58 cfs 0.702 af

Total Runoff Area = 1.420 ac Runoff Volume = 0.827 af Average Runoff Depth = 6.99"
62.68% Pervious = 0.890 ac 37.32% Impervious = 0.530 ac

Summary for Subcatchment 34S: Existing Subcatchment

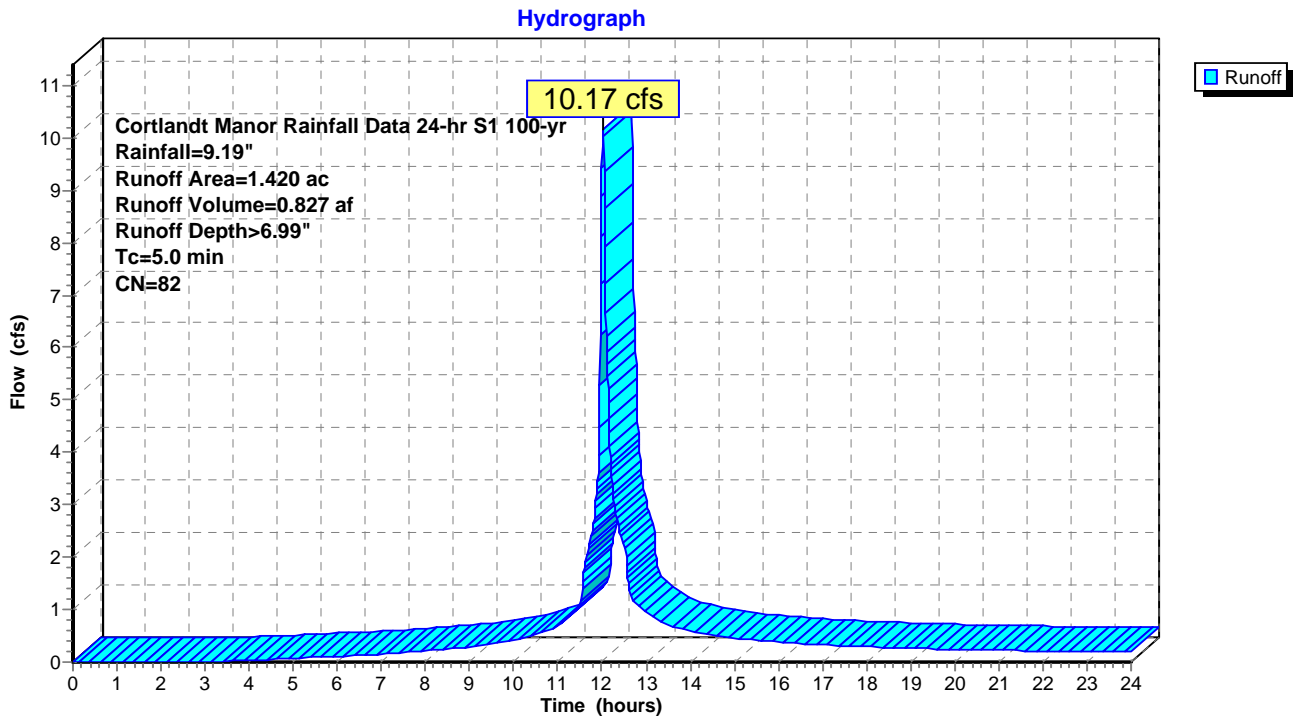
Runoff = 10.17 cfs @ 12.03 hrs, Volume= 0.827 af, Depth> 6.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Cortlandt Manor Rainfall Data 24-hr S1 100-yr Rainfall=9.19"

Area (ac)	CN	Description
* 0.530	98	Paved Parking & roofs
* 0.060	47	>75% Grass cover, Good, HSG A
0.830	74	>75% Grass cover, Good, HSG C
1.420	82	Weighted Average
0.890		62.68% Pervious Area
0.530		37.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 5 Minute Minimum

Subcatchment 34S: Existing Subcatchment



Hydrograph for Subcatchment 34S: Existing Subcatchment

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.07	0.00	0.00
1.00	0.14	0.00	0.00
1.50	0.21	0.00	0.00
2.00	0.29	0.00	0.00
2.50	0.37	0.00	0.00
3.00	0.45	0.00	0.00
3.50	0.53	0.00	0.02
4.00	0.62	0.01	0.03
4.50	0.71	0.03	0.05
5.00	0.80	0.05	0.07
5.50	0.90	0.08	0.09
6.00	1.00	0.12	0.11
6.50	1.11	0.16	0.13
7.00	1.23	0.21	0.15
7.50	1.35	0.27	0.18
8.00	1.49	0.34	0.21
8.50	1.63	0.42	0.24
9.00	1.79	0.51	0.29
9.50	1.97	0.63	0.34
10.00	2.17	0.76	0.41
10.50	2.41	0.93	0.52
11.00	2.70	1.15	0.71
11.50	3.13	1.48	1.13
12.00	4.91	3.00	9.44
12.50	6.11	4.09	2.18
13.00	6.51	4.46	0.93
13.50	6.80	4.73	0.71
14.00	7.04	4.95	0.59
14.50	7.24	5.14	0.51
15.00	7.41	5.30	0.45
15.50	7.57	5.45	0.41
16.00	7.71	5.59	0.38
16.50	7.84	5.71	0.35
17.00	7.97	5.83	0.33
17.50	8.08	5.94	0.31
18.00	8.19	6.04	0.29
18.50	8.29	6.14	0.28
19.00	8.39	6.23	0.26
19.50	8.49	6.32	0.25
20.00	8.58	6.41	0.24
20.50	8.66	6.49	0.23
21.00	8.75	6.57	0.22
21.50	8.83	6.65	0.22
22.00	8.90	6.72	0.21
22.50	8.98	6.79	0.20
23.00	9.05	6.86	0.20
23.50	9.12	6.93	0.19
24.00	9.19	7.00	0.19

Summary for Pond 34P: Basin 4

Inflow Area = 1.420 ac, 37.32% Impervious, Inflow Depth > 6.99" for 100-yr event
 Inflow = 10.17 cfs @ 12.03 hrs, Volume= 0.827 af
 Outflow = 8.58 cfs @ 12.06 hrs, Volume= 0.702 af, Atten= 16%, Lag= 2.1 min
 Discarded = 0.07 cfs @ 12.06 hrs, Volume= 0.082 af
 Primary = 8.51 cfs @ 12.06 hrs, Volume= 0.620 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 327.32' @ 12.06 hrs Surf.Area= 3,038 sf Storage= 7,538 cf

Plug-Flow detention time= 126.2 min calculated for 0.702 af (85% of inflow)
 Center-of-Mass det. time= 50.9 min (856.6 - 805.7)

Volume	Invert	Avail.Storage	Storage Description
#1	323.00'	9,772 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
323.00	623	0	0
324.00	1,084	854	854
326.00	2,173	3,257	4,111
328.00	3,488	5,661	9,772

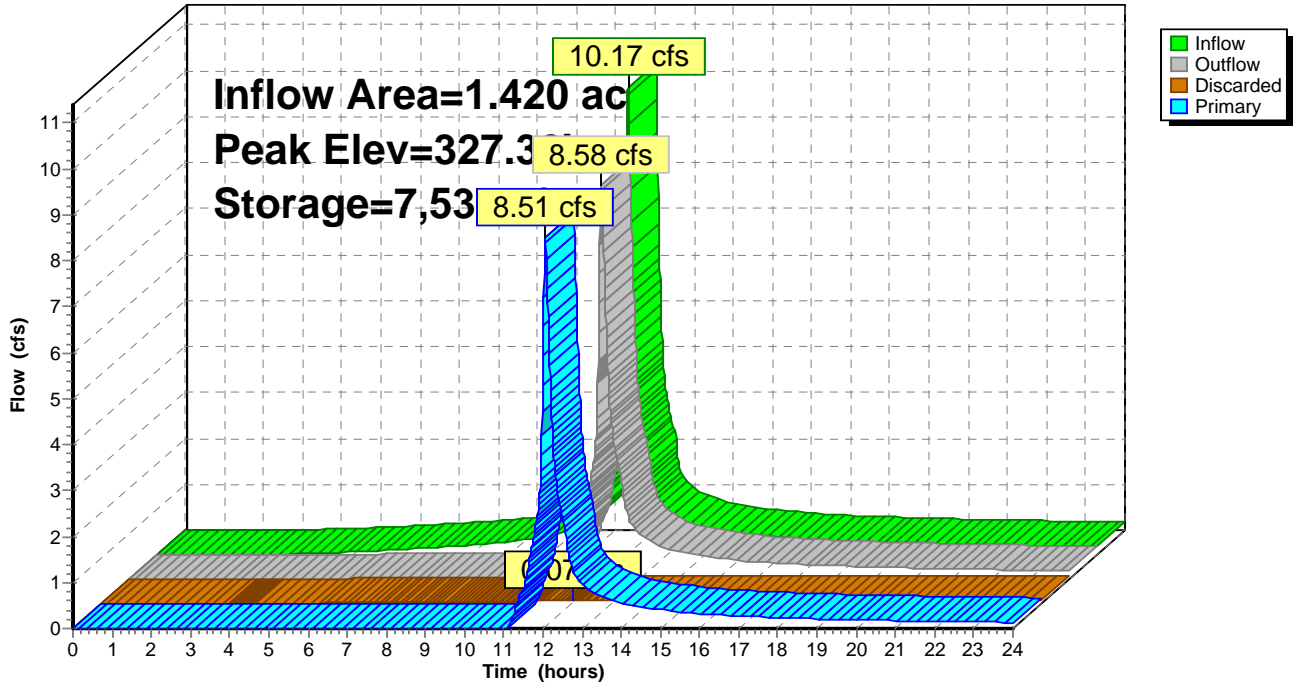
Device	Routing	Invert	Outlet Devices
#1	Primary	325.00'	18.0" Round Culvert L= 79.0' Ke= 0.500 Inlet / Outlet Invert= 325.00' / 318.00' S= 0.0886 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Discarded	323.00'	1.000 in/hr Exfiltration over Surface area
#3	Device 1	326.50'	3.5' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Discarded OutFlow Max=0.07 cfs @ 12.06 hrs HW=327.31' (Free Discharge)
 ↳ **2=Exfiltration** (Exfiltration Controls 0.07 cfs)

Primary OutFlow Max=8.50 cfs @ 12.06 hrs HW=327.31' (Free Discharge)
 ↳ **1=Culvert** (Passes 8.50 cfs of 10.64 cfs potential flow)
 ↳ **3=Broad-Crested Rectangular Weir** (Weir Controls 8.50 cfs @ 2.98 fps)

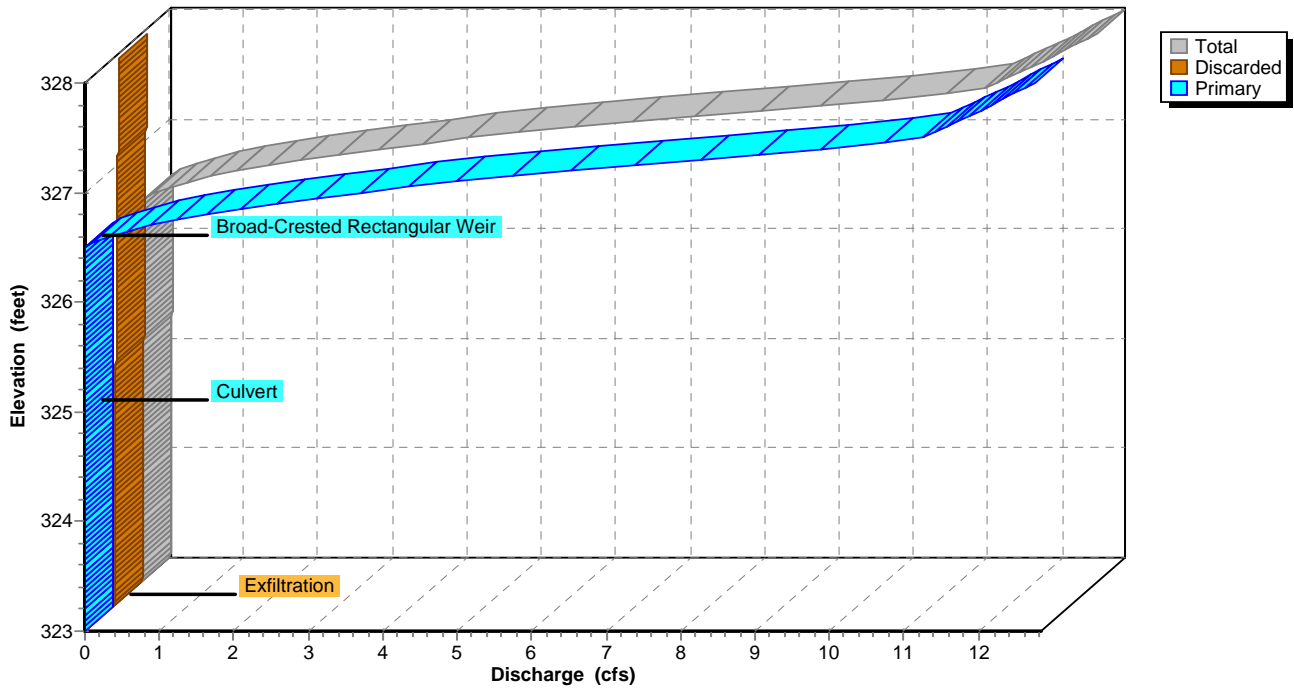
Pond 34P: Basin 4

Hydrograph



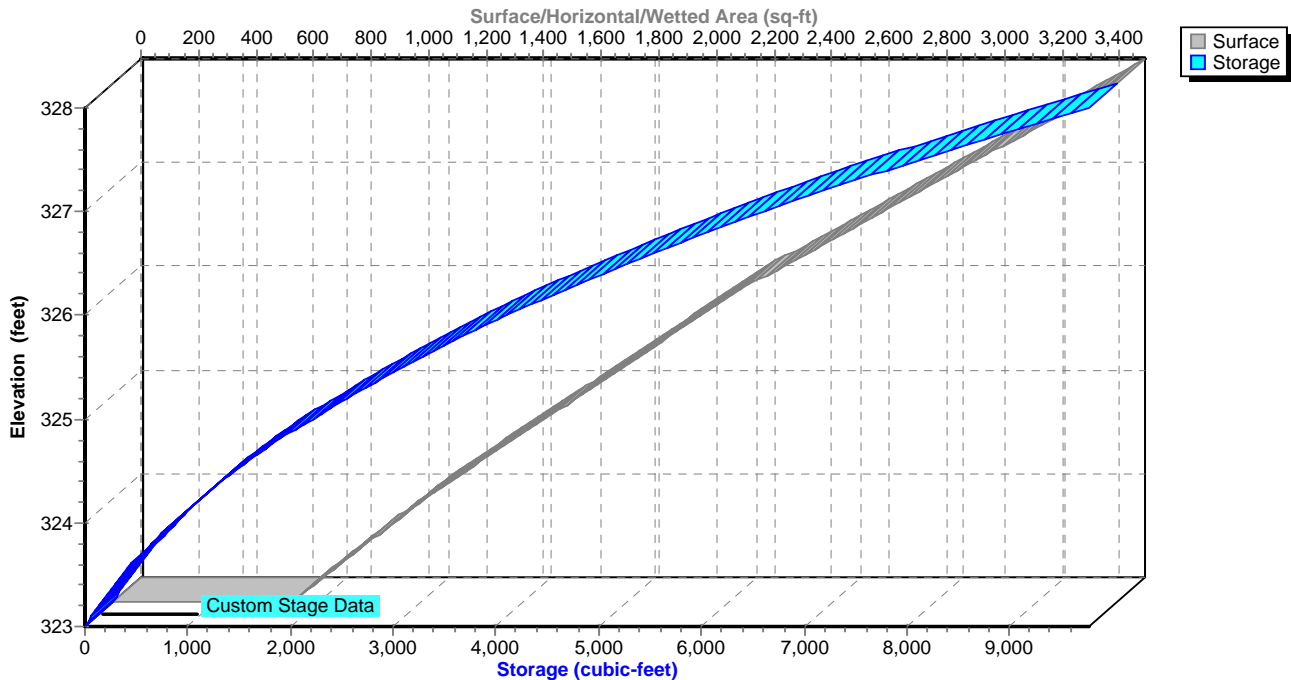
Pond 34P: Basin 4

Stage-Discharge



Pond 34P: Basin 4

Stage-Area-Storage



Hydrograph for Pond 34P: Basin 4

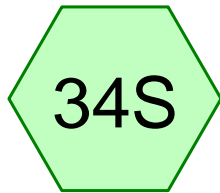
Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	323.00	0.00	0.00	0.00
0.50	0.00	0	323.00	0.00	0.00	0.00
1.00	0.00	0	323.00	0.00	0.00	0.00
1.50	0.00	0	323.00	0.00	0.00	0.00
2.00	0.00	0	323.00	0.00	0.00	0.00
2.50	0.00	0	323.00	0.00	0.00	0.00
3.00	0.00	0	323.00	0.00	0.00	0.00
3.50	0.02	11	323.02	0.01	0.01	0.00
4.00	0.03	36	323.06	0.02	0.02	0.00
4.50	0.05	85	323.13	0.02	0.02	0.00
5.00	0.07	164	323.24	0.02	0.02	0.00
5.50	0.09	275	323.39	0.02	0.02	0.00
6.00	0.11	417	323.56	0.02	0.02	0.00
6.50	0.13	593	323.75	0.02	0.02	0.00
7.00	0.15	806	323.96	0.02	0.02	0.00
7.50	0.18	1,059	324.18	0.03	0.03	0.00
8.00	0.21	1,357	324.42	0.03	0.03	0.00
8.50	0.24	1,707	324.67	0.03	0.03	0.00
9.00	0.29	2,121	324.95	0.04	0.04	0.00
9.50	0.34	2,615	325.24	0.04	0.04	0.00
10.00	0.41	3,214	325.56	0.04	0.04	0.00
10.50	0.52	3,965	325.93	0.05	0.05	0.00
11.00	0.71	4,957	326.37	0.06	0.06	0.00
11.50	1.13	5,794	326.70	0.94	0.06	0.88
12.00	9.44	7,082	327.16	6.02	0.07	5.95
12.50	2.18	6,274	326.88	2.44	0.06	2.38
13.00	0.93	5,822	326.71	1.02	0.06	0.96
13.50	0.71	5,715	326.67	0.75	0.06	0.69
14.00	0.59	5,655	326.65	0.62	0.06	0.56
14.50	0.51	5,612	326.63	0.53	0.06	0.47
15.00	0.45	5,582	326.62	0.47	0.06	0.41
15.50	0.41	5,559	326.61	0.42	0.06	0.36
16.00	0.38	5,541	326.60	0.39	0.06	0.33
16.50	0.35	5,526	326.60	0.36	0.06	0.30
17.00	0.33	5,511	326.59	0.33	0.06	0.28
17.50	0.31	5,498	326.59	0.31	0.06	0.25
18.00	0.29	5,486	326.58	0.30	0.06	0.24
18.50	0.28	5,477	326.58	0.28	0.06	0.22
19.00	0.26	5,468	326.57	0.27	0.06	0.21
19.50	0.25	5,461	326.57	0.26	0.06	0.20
20.00	0.24	5,454	326.57	0.25	0.06	0.19
20.50	0.23	5,448	326.57	0.24	0.06	0.18
21.00	0.22	5,443	326.56	0.23	0.06	0.17
21.50	0.22	5,438	326.56	0.22	0.06	0.16
22.00	0.21	5,433	326.56	0.21	0.06	0.15
22.50	0.20	5,429	326.56	0.21	0.06	0.15
23.00	0.20	5,425	326.56	0.20	0.06	0.14
23.50	0.19	5,421	326.56	0.19	0.06	0.14
24.00	0.19	5,418	326.56	0.19	0.06	0.13

Stage-Discharge for Pond 34P: Basin 4

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
323.00	0.00	0.00	0.00	325.65	0.05	0.05	0.00
323.05	0.01	0.01	0.00	325.70	0.05	0.05	0.00
323.10	0.02	0.02	0.00	325.75	0.05	0.05	0.00
323.15	0.02	0.02	0.00	325.80	0.05	0.05	0.00
323.20	0.02	0.02	0.00	325.85	0.05	0.05	0.00
323.25	0.02	0.02	0.00	325.90	0.05	0.05	0.00
323.30	0.02	0.02	0.00	325.95	0.05	0.05	0.00
323.35	0.02	0.02	0.00	326.00	0.05	0.05	0.00
323.40	0.02	0.02	0.00	326.05	0.05	0.05	0.00
323.45	0.02	0.02	0.00	326.10	0.05	0.05	0.00
323.50	0.02	0.02	0.00	326.15	0.05	0.05	0.00
323.55	0.02	0.02	0.00	326.20	0.05	0.05	0.00
323.60	0.02	0.02	0.00	326.25	0.05	0.05	0.00
323.65	0.02	0.02	0.00	326.30	0.05	0.05	0.00
323.70	0.02	0.02	0.00	326.35	0.06	0.06	0.00
323.75	0.02	0.02	0.00	326.40	0.06	0.06	0.00
323.80	0.02	0.02	0.00	326.45	0.06	0.06	0.00
323.85	0.02	0.02	0.00	326.50	0.06	0.06	0.00
323.90	0.02	0.02	0.00	326.55	0.17	0.06	0.11
323.95	0.02	0.02	0.00	326.60	0.37	0.06	0.31
324.00	0.03	0.03	0.00	326.65	0.63	0.06	0.57
324.05	0.03	0.03	0.00	326.70	0.94	0.06	0.88
324.10	0.03	0.03	0.00	326.75	1.30	0.06	1.24
324.15	0.03	0.03	0.00	326.80	1.71	0.06	1.64
324.20	0.03	0.03	0.00	326.85	2.16	0.06	2.09
324.25	0.03	0.03	0.00	326.90	2.65	0.06	2.59
324.30	0.03	0.03	0.00	326.95	3.19	0.06	3.13
324.35	0.03	0.03	0.00	327.00	3.78	0.07	3.71
324.40	0.03	0.03	0.00	327.05	4.41	0.07	4.34
324.45	0.03	0.03	0.00	327.10	5.08	0.07	5.01
324.50	0.03	0.03	0.00	327.15	5.82	0.07	5.75
324.55	0.03	0.03	0.00	327.20	6.61	0.07	6.54
324.60	0.03	0.03	0.00	327.25	7.45	0.07	7.38
324.65	0.03	0.03	0.00	327.30	8.33	0.07	8.26
324.70	0.03	0.03	0.00	327.35	9.14	0.07	9.07
324.75	0.03	0.03	0.00	327.40	9.96	0.07	9.89
324.80	0.04	0.04	0.00	327.45	10.82	0.07	10.74
324.85	0.04	0.04	0.00	327.50	11.33	0.07	11.26
324.90	0.04	0.04	0.00	327.55	11.49	0.07	11.42
324.95	0.04	0.04	0.00	327.60	11.65	0.07	11.57
325.00	0.04	0.04	0.00	327.65	11.80	0.08	11.73
325.05	0.04	0.04	0.00	327.70	11.96	0.08	11.88
325.10	0.04	0.04	0.00	327.75	12.11	0.08	12.03
325.15	0.04	0.04	0.00	327.80	12.26	0.08	12.18
325.20	0.04	0.04	0.00	327.85	12.41	0.08	12.33
325.25	0.04	0.04	0.00	327.90	12.56	0.08	12.48
325.30	0.04	0.04	0.00	327.95	12.70	0.08	12.62
325.35	0.04	0.04	0.00	328.00	12.84	0.08	12.76
325.40	0.04	0.04	0.00				
325.45	0.04	0.04	0.00				
325.50	0.04	0.04	0.00				
325.55	0.04	0.04	0.00				
325.60	0.05	0.05	0.00				

Stage-Area-Storage for Pond 34P: Basin 4

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
323.00	623	0	325.65	1,982	3,383
323.05	646	32	325.70	2,010	3,483
323.10	669	65	325.75	2,037	3,584
323.15	692	99	325.80	2,064	3,687
323.20	715	134	325.85	2,091	3,791
323.25	738	170	325.90	2,119	3,896
323.30	761	208	325.95	2,146	4,003
323.35	784	246	326.00	2,173	4,111
323.40	807	286	326.05	2,206	4,220
323.45	830	327	326.10	2,239	4,331
323.50	854	369	326.15	2,272	4,444
323.55	877	412	326.20	2,304	4,558
323.60	900	457	326.25	2,337	4,674
323.65	923	502	326.30	2,370	4,792
323.70	946	549	326.35	2,403	4,911
323.75	969	597	326.40	2,436	5,032
323.80	992	646	326.45	2,469	5,155
323.85	1,015	696	326.50	2,502	5,279
323.90	1,038	747	326.55	2,535	5,405
323.95	1,061	800	326.60	2,568	5,533
324.00	1,084	854	326.65	2,600	5,662
324.05	1,111	908	326.70	2,633	5,793
324.10	1,138	965	326.75	2,666	5,925
324.15	1,166	1,022	326.80	2,699	6,059
324.20	1,193	1,081	326.85	2,732	6,195
324.25	1,220	1,142	326.90	2,765	6,332
324.30	1,247	1,203	326.95	2,798	6,472
324.35	1,275	1,266	327.00	2,831	6,612
324.40	1,302	1,331	327.05	2,863	6,755
324.45	1,329	1,396	327.10	2,896	6,899
324.50	1,356	1,464	327.15	2,929	7,044
324.55	1,383	1,532	327.20	2,962	7,191
324.60	1,411	1,602	327.25	2,995	7,340
324.65	1,438	1,673	327.30	3,028	7,491
324.70	1,465	1,746	327.35	3,061	7,643
324.75	1,492	1,820	327.40	3,093	7,797
324.80	1,520	1,895	327.45	3,126	7,953
324.85	1,547	1,972	327.50	3,159	8,110
324.90	1,574	2,050	327.55	3,192	8,268
324.95	1,601	2,129	327.60	3,225	8,429
325.00	1,629	2,210	327.65	3,258	8,591
325.05	1,656	2,292	327.70	3,291	8,755
325.10	1,683	2,375	327.75	3,324	8,920
325.15	1,710	2,460	327.80	3,357	9,087
325.20	1,737	2,546	327.85	3,389	9,256
325.25	1,765	2,634	327.90	3,422	9,426
325.30	1,792	2,723	327.95	3,455	9,598
325.35	1,819	2,813	328.00	3,488	9,772
325.40	1,846	2,905			
325.45	1,874	2,998			
325.50	1,901	3,092			
325.55	1,928	3,188			
325.60	1,955	3,285			

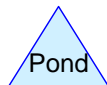
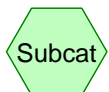


Existing Subcatchment



Basin 4 (Expanded)

Proposed Development



Meadowview Proposed 2023

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.060	47	>75% Grass cover, Good, HSG A (34S)
0.070	61	>75% Grass cover, Good, HSG B (35S)
0.830	74	>75% Grass cover, Good, HSG C (34S)
0.570	98	Impervious Roofs, road, walkways (35S)
0.530	98	Paved Parking & roofs (34S)
2.061	86	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.060	HSG A	34S
0.070	HSG B	35S
0.830	HSG C	34S
0.000	HSG D	
1.100	Other	34S, 35S
2.061		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.060	0.070	0.830	0.000	0.000	0.960	>75% Grass cover, Good	3 4 S , 3 5 S
0.000	0.000	0.000	0.000	0.570	0.570	Impervious Roofs, road, walkways	3 5 S
0.000	0.000	0.000	0.000	0.530	0.530	Paved Parking & roofs	3 4 S
0.060	0.070	0.830	0.000	1.100	2.061	TOTAL AREA	

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	34P	325.00	318.00	79.0	0.0886	0.012	18.0	0.0	0.0

Meadowview Proposed 2023

Cortlandt Manor Rainfall Data 24-hr S1 1-yr Rainfall=2.75"

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Time span=0.00-25.00 hrs, dt=0.01 hrs, 2501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 34S: Existing Subcatchment Runoff Area=1.420 ac 37.32% Impervious Runoff Depth=1.19"
Tc=5.0 min CN=82 Runoff=2.41 cfs 0.140 af

Subcatchment 35S: Proposed Development Runoff Area=27,915 sf 89.02% Impervious Runoff Depth=2.11"
Tc=15.0 min CN=94 Runoff=1.24 cfs 0.113 af

Pond 34P: Basin 4 (Expanded) Peak Elev=325.16' Storage=6,724 cf Inflow=3.14 cfs 0.253 af
Discarded=0.10 cfs 0.116 af Primary=0.00 cfs 0.000 af Outflow=0.10 cfs 0.116 af

Total Runoff Area = 2.061 ac Runoff Volume = 0.253 af Average Runoff Depth = 1.47"
46.60% Pervious = 0.960 ac 53.40% Impervious = 1.100 ac

Summary for Subcatchment 34S: Existing Subcatchment

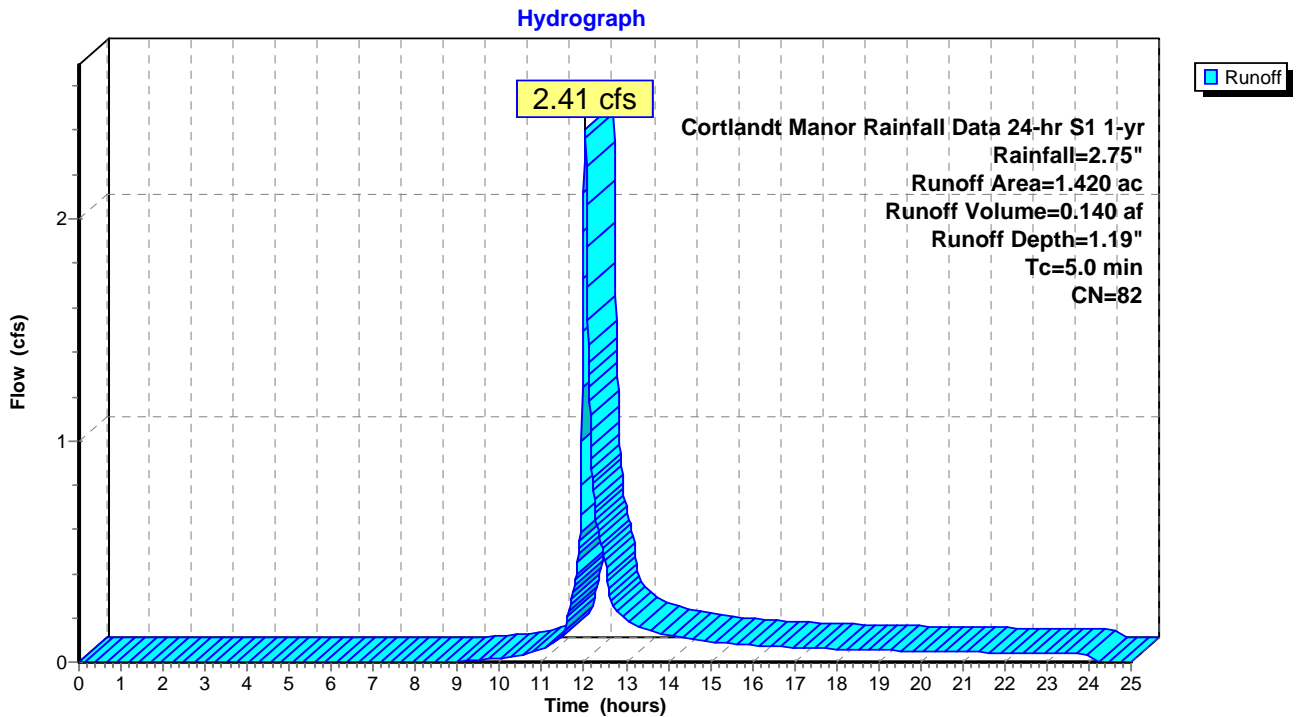
Runoff = 2.41 cfs @ 12.03 hrs, Volume= 0.140 af, Depth= 1.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
 Cortlandt Manor Rainfall Data 24-hr S1 1-yr Rainfall=2.75"

Area (ac)	CN	Description
* 0.530	98	Paved Parking & roofs
* 0.060	47	>75% Grass cover, Good, HSG A
0.830	74	>75% Grass cover, Good, HSG C
1.420	82	Weighted Average
0.890		62.68% Pervious Area
0.530		37.32% Impervious Area

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

Subcatchment 34S: Existing Subcatchment



Hydrograph for Subcatchment 34S: Existing Subcatchment

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.02	0.00	0.00
1.00	0.04	0.00	0.00
1.50	0.05	0.00	0.00
2.00	0.07	0.00	0.00
2.50	0.09	0.00	0.00
3.00	0.11	0.00	0.00
3.50	0.14	0.00	0.00
4.00	0.16	0.00	0.00
4.50	0.18	0.00	0.00
5.00	0.21	0.00	0.00
5.50	0.23	0.00	0.00
6.00	0.26	0.00	0.00
6.50	0.29	0.00	0.00
7.00	0.32	0.00	0.00
7.50	0.35	0.00	0.00
8.00	0.39	0.00	0.00
8.50	0.43	0.00	0.00
9.00	0.47	0.00	0.00
9.50	0.52	0.00	0.01
10.00	0.57	0.01	0.02
10.50	0.64	0.02	0.03
11.00	0.73	0.03	0.06
11.50	0.85	0.07	0.12
12.00	1.51	0.35	2.12
12.50	1.91	0.59	0.47
13.00	2.03	0.67	0.19
13.50	2.11	0.73	0.15
14.00	2.18	0.77	0.12
14.50	2.24	0.81	0.10
15.00	2.28	0.84	0.09
15.50	2.33	0.87	0.08
16.00	2.36	0.90	0.08
16.50	2.40	0.93	0.07
17.00	2.43	0.95	0.07
17.50	2.46	0.97	0.06
18.00	2.49	0.99	0.06
18.50	2.52	1.01	0.06
19.00	2.55	1.03	0.05
19.50	2.57	1.05	0.05
20.00	2.59	1.07	0.05
20.50	2.62	1.08	0.05
21.00	2.64	1.10	0.05
21.50	2.66	1.11	0.04
22.00	2.68	1.13	0.04
22.50	2.70	1.14	0.04
23.00	2.71	1.16	0.04
23.50	2.73	1.17	0.04
24.00	2.75	1.19	0.04
24.50	2.75	1.19	0.00
25.00	2.75	1.19	0.00

Summary for Subcatchment 35S: Proposed Development

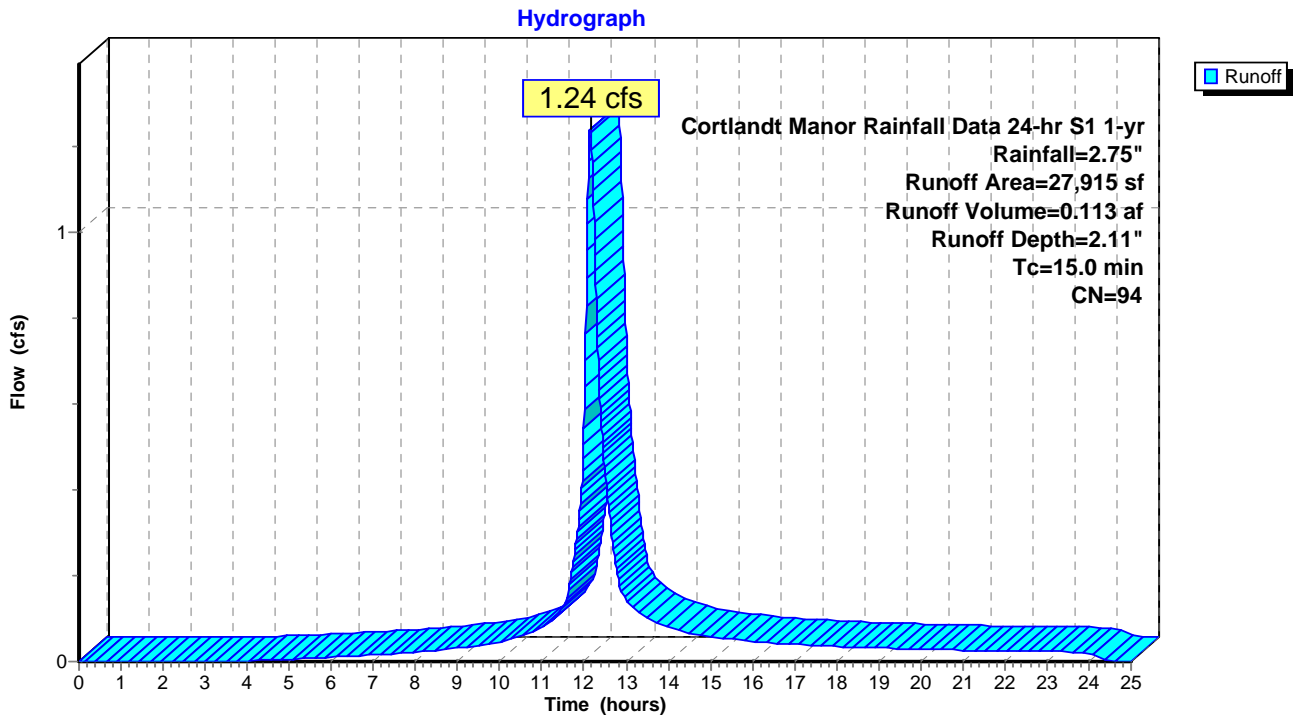
Runoff = 1.24 cfs @ 12.15 hrs, Volume= 0.113 af, Depth= 2.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
Cortlandt Manor Rainfall Data 24-hr S1 1-yr Rainfall=2.75"

Area (sf)	CN	Description
24,849	98	Impervious Roofs, road, walkways
3,066	61	>75% Grass cover, Good, HSG B
27,915	94	Weighted Average
3,066		10.98% Pervious Area
24,849		89.02% Impervious Area

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

Subcatchment 35S: Proposed Development



Hydrograph for Subcatchment 35S: Proposed Development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.02	0.00	0.00
1.00	0.04	0.00	0.00
1.50	0.05	0.00	0.00
2.00	0.07	0.00	0.00
2.50	0.09	0.00	0.00
3.00	0.11	0.00	0.00
3.50	0.14	0.00	0.00
4.00	0.16	0.00	0.00
4.50	0.18	0.00	0.00
5.00	0.21	0.01	0.01
5.50	0.23	0.01	0.01
6.00	0.26	0.02	0.01
6.50	0.29	0.03	0.01
7.00	0.32	0.04	0.02
7.50	0.35	0.06	0.02
8.00	0.39	0.07	0.02
8.50	0.43	0.10	0.03
9.00	0.47	0.12	0.03
9.50	0.52	0.15	0.04
10.00	0.57	0.18	0.05
10.50	0.64	0.23	0.06
11.00	0.73	0.29	0.08
11.50	0.85	0.39	0.12
12.00	1.51	0.95	0.54
12.50	1.91	1.31	0.44
13.00	2.03	1.43	0.14
13.50	2.11	1.50	0.10
14.00	2.18	1.57	0.08
14.50	2.24	1.62	0.07
15.00	2.28	1.66	0.06
15.50	2.33	1.70	0.05
16.00	2.36	1.74	0.05
16.50	2.40	1.77	0.04
17.00	2.43	1.81	0.04
17.50	2.46	1.83	0.04
18.00	2.49	1.86	0.04
18.50	2.52	1.89	0.03
19.00	2.55	1.91	0.03
19.50	2.57	1.94	0.03
20.00	2.59	1.96	0.03
20.50	2.62	1.98	0.03
21.00	2.64	2.00	0.03
21.50	2.66	2.02	0.03
22.00	2.68	2.04	0.02
22.50	2.70	2.06	0.02
23.00	2.71	2.07	0.02
23.50	2.73	2.09	0.02
24.00	2.75	2.11	0.02
24.50	2.75	2.11	0.00
25.00	2.75	2.11	0.00

Summary for Pond 34P: Basin 4 (Expanded)

Inflow Area = 2.061 ac, 53.40% Impervious, Inflow Depth = 1.47" for 1-yr event
 Inflow = 3.14 cfs @ 12.04 hrs, Volume= 0.253 af
 Outflow = 0.10 cfs @ 17.87 hrs, Volume= 0.116 af, Atten= 97%, Lag= 349.9 min
 Discarded = 0.10 cfs @ 17.87 hrs, Volume= 0.116 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
 Peak Elev= 325.16' @ 17.87 hrs Surf.Area= 4,130 sf Storage= 6,724 cf

Plug-Flow detention time= 347.3 min calculated for 0.116 af (46% of inflow)
 Center-of-Mass det. time= 205.4 min (1,042.2 - 836.8)

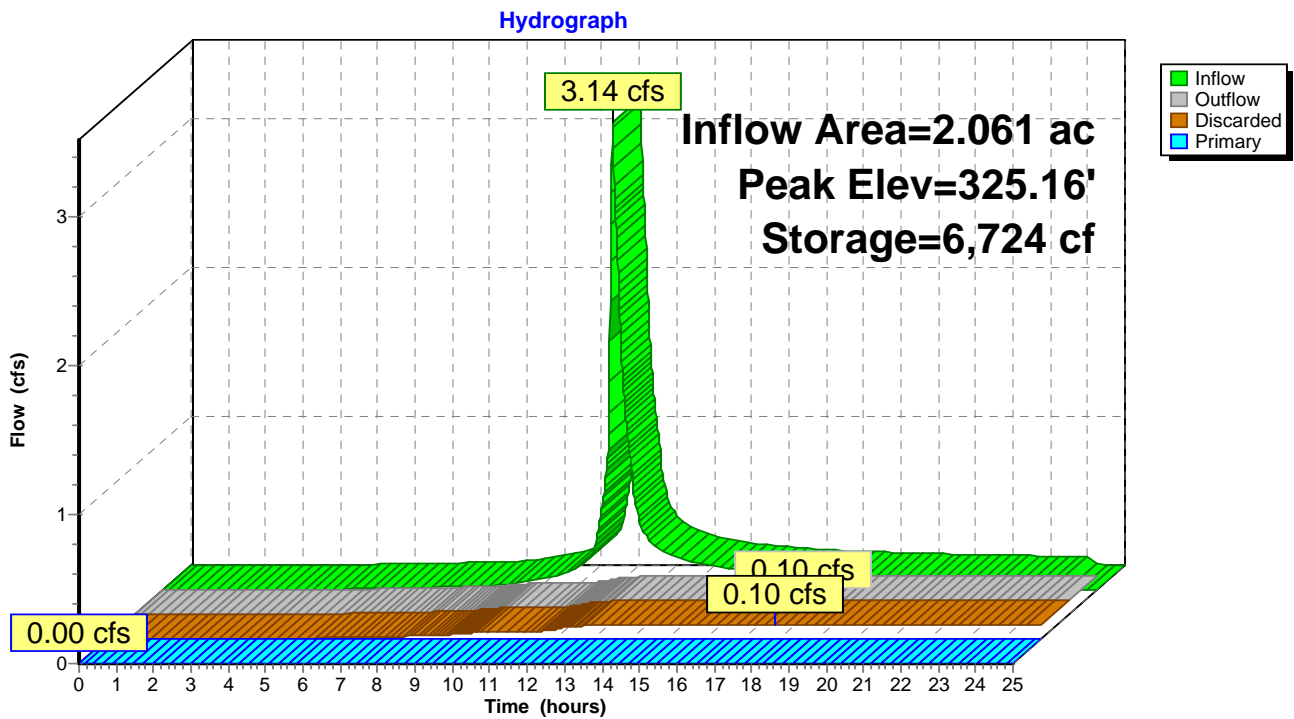
Volume	Invert	Avail.Storage	Storage Description
#1	323.00'	22,618 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
323.00	1,929	0	0
324.00	3,113	2,521	2,521
326.00	4,866	7,979	10,500
328.00	7,252	12,118	22,618

Device	Routing	Invert	Outlet Devices
#1	Primary	325.00'	18.0" Round Culvert L= 79.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 325.00' / 318.00' S= 0.0886 1/1' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Discarded	323.00'	1.000 in/hr Exfiltration over Surface area
#3	Device 1	326.50'	3.5' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

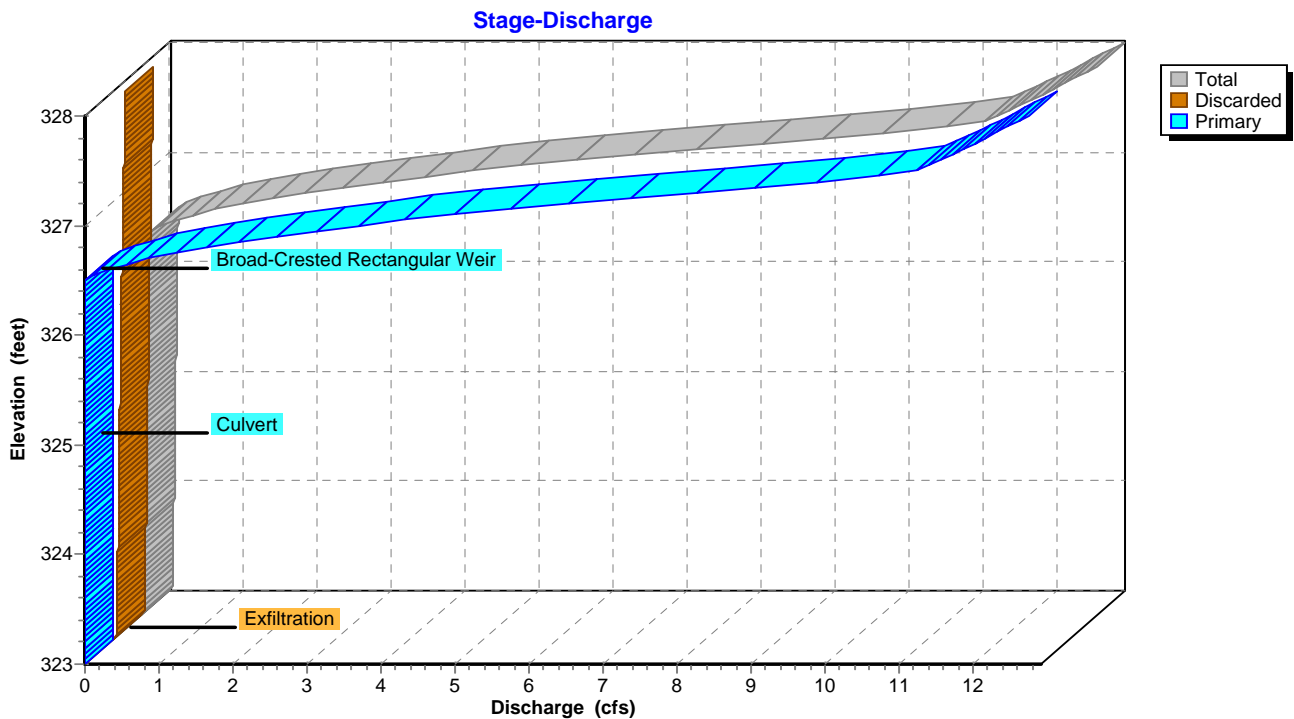
Discarded OutFlow Max=0.10 cfs @ 17.87 hrs HW=325.16' (Free Discharge)
 ↳ **2=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=323.00' (Free Discharge)
 ↳ **1=Culvert** (Controls 0.00 cfs)
 ↳ **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

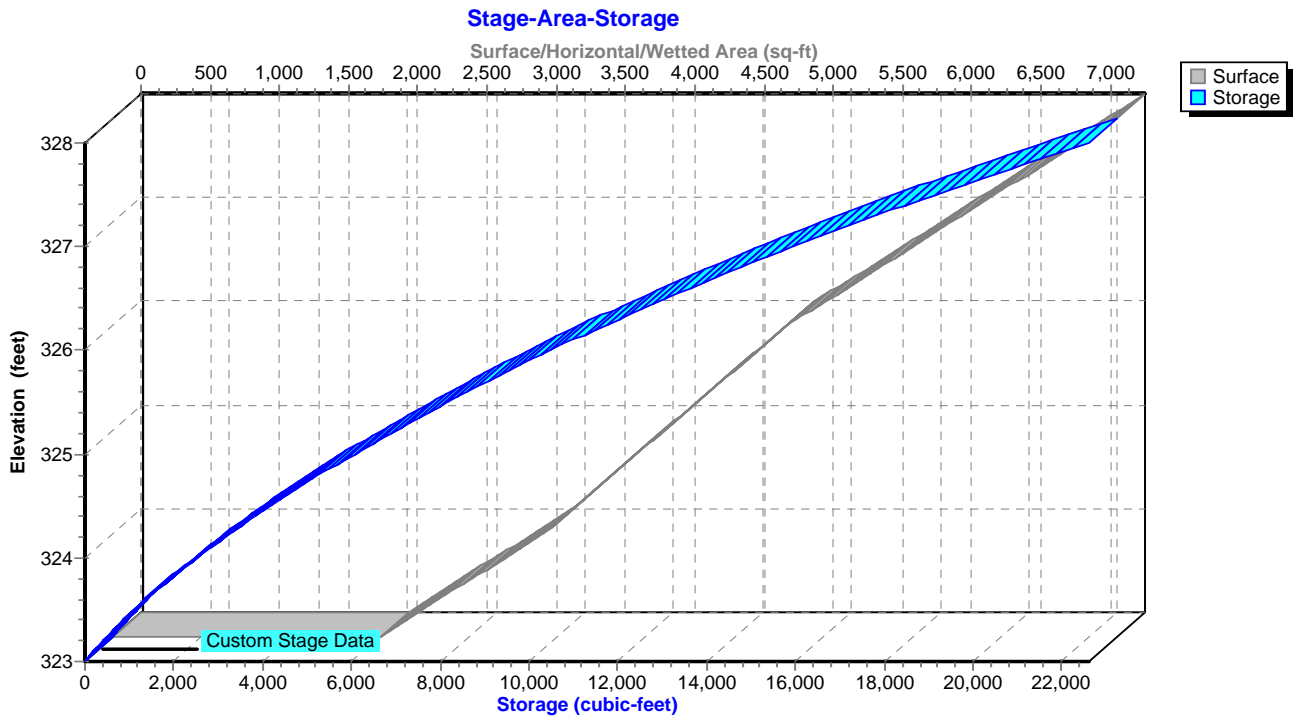
Pond 34P: Basin 4 (Expanded)



Pond 34P: Basin 4 (Expanded)



Pond 34P: Basin 4 (Expanded)



Hydrograph for Pond 34P: Basin 4 (Expanded)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	323.00	0.00	0.00	0.00
0.50	0.00	0	323.00	0.00	0.00	0.00
1.00	0.00	0	323.00	0.00	0.00	0.00
1.50	0.00	0	323.00	0.00	0.00	0.00
2.00	0.00	0	323.00	0.00	0.00	0.00
2.50	0.00	0	323.00	0.00	0.00	0.00
3.00	0.00	0	323.00	0.00	0.00	0.00
3.50	0.00	0	323.00	0.00	0.00	0.00
4.00	0.00	1	323.00	0.00	0.00	0.00
4.50	0.00	4	323.00	0.00	0.00	0.00
5.00	0.01	8	323.00	0.00	0.00	0.00
5.50	0.01	12	323.01	0.01	0.01	0.00
6.00	0.01	16	323.01	0.01	0.01	0.00
6.50	0.01	21	323.01	0.01	0.01	0.00
7.00	0.02	26	323.01	0.01	0.01	0.00
7.50	0.02	32	323.02	0.02	0.02	0.00
8.00	0.02	39	323.02	0.02	0.02	0.00
8.50	0.03	46	323.02	0.02	0.02	0.00
9.00	0.03	56	323.03	0.03	0.03	0.00
9.50	0.05	74	323.04	0.03	0.03	0.00
10.00	0.06	100	323.05	0.05	0.05	0.00
10.50	0.09	154	323.08	0.05	0.05	0.00
11.00	0.14	268	323.13	0.05	0.05	0.00
11.50	0.24	503	323.24	0.05	0.05	0.00
12.00	2.66	1,687	323.72	0.06	0.06	0.00
12.50	0.90	4,851	324.68	0.09	0.09	0.00
13.00	0.34	5,624	324.89	0.09	0.09	0.00
13.50	0.25	5,973	324.97	0.09	0.09	0.00
14.00	0.20	6,205	325.03	0.09	0.09	0.00
14.50	0.17	6,369	325.07	0.09	0.09	0.00
15.00	0.15	6,489	325.10	0.09	0.09	0.00
15.50	0.14	6,576	325.12	0.09	0.09	0.00
16.00	0.12	6,638	325.14	0.10	0.10	0.00
16.50	0.11	6,681	325.15	0.10	0.10	0.00
17.00	0.11	6,708	325.16	0.10	0.10	0.00
17.50	0.10	6,721	325.16	0.10	0.10	0.00
18.00	0.09	6,724	325.16	0.10	0.10	0.00
18.50	0.09	6,717	325.16	0.10	0.10	0.00
19.00	0.08	6,702	325.16	0.10	0.10	0.00
19.50	0.08	6,679	325.15	0.10	0.10	0.00
20.00	0.08	6,650	325.14	0.10	0.10	0.00
20.50	0.07	6,616	325.13	0.10	0.10	0.00
21.00	0.07	6,577	325.12	0.09	0.09	0.00
21.50	0.07	6,533	325.11	0.09	0.09	0.00
22.00	0.07	6,486	325.10	0.09	0.09	0.00
22.50	0.06	6,434	325.09	0.09	0.09	0.00
23.00	0.06	6,380	325.08	0.09	0.09	0.00
23.50	0.06	6,322	325.06	0.09	0.09	0.00
24.00	0.06	6,262	325.05	0.09	0.09	0.00
24.50	0.00	6,123	325.01	0.09	0.09	0.00
25.00	0.00	5,957	324.97	0.09	0.09	0.00

Stage-Discharge for Pond 34P: Basin 4 (Expanded)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
323.00	0.00	0.00	0.00	325.65	0.11	0.11	0.00
323.05	0.05	0.05	0.00	325.70	0.11	0.11	0.00
323.10	0.05	0.05	0.00	325.75	0.11	0.11	0.00
323.15	0.05	0.05	0.00	325.80	0.11	0.11	0.00
323.20	0.05	0.05	0.00	325.85	0.11	0.11	0.00
323.25	0.05	0.05	0.00	325.90	0.11	0.11	0.00
323.30	0.05	0.05	0.00	325.95	0.11	0.11	0.00
323.35	0.05	0.05	0.00	326.00	0.11	0.11	0.00
323.40	0.06	0.06	0.00	326.05	0.11	0.11	0.00
323.45	0.06	0.06	0.00	326.10	0.12	0.12	0.00
323.50	0.06	0.06	0.00	326.15	0.12	0.12	0.00
323.55	0.06	0.06	0.00	326.20	0.12	0.12	0.00
323.60	0.06	0.06	0.00	326.25	0.12	0.12	0.00
323.65	0.06	0.06	0.00	326.30	0.12	0.12	0.00
323.70	0.06	0.06	0.00	326.35	0.12	0.12	0.00
323.75	0.07	0.07	0.00	326.40	0.12	0.12	0.00
323.80	0.07	0.07	0.00	326.45	0.13	0.13	0.00
323.85	0.07	0.07	0.00	326.50	0.13	0.13	0.00
323.90	0.07	0.07	0.00	326.55	0.24	0.13	0.11
323.95	0.07	0.07	0.00	326.60	0.44	0.13	0.31
324.00	0.07	0.07	0.00	326.65	0.70	0.13	0.57
324.05	0.07	0.07	0.00	326.70	1.01	0.13	0.88
324.10	0.07	0.07	0.00	326.75	1.37	0.13	1.24
324.15	0.08	0.08	0.00	326.80	1.78	0.13	1.64
324.20	0.08	0.08	0.00	326.85	2.23	0.14	2.09
324.25	0.08	0.08	0.00	326.90	2.72	0.14	2.59
324.30	0.08	0.08	0.00	326.95	3.27	0.14	3.13
324.35	0.08	0.08	0.00	327.00	3.85	0.14	3.71
324.40	0.08	0.08	0.00	327.05	4.48	0.14	4.34
324.45	0.08	0.08	0.00	327.10	5.15	0.14	5.01
324.50	0.08	0.08	0.00	327.15	5.89	0.14	5.75
324.55	0.08	0.08	0.00	327.20	6.68	0.15	6.54
324.60	0.08	0.08	0.00	327.25	7.52	0.15	7.38
324.65	0.09	0.09	0.00	327.30	8.41	0.15	8.26
324.70	0.09	0.09	0.00	327.35	9.21	0.15	9.07
324.75	0.09	0.09	0.00	327.40	10.04	0.15	9.89
324.80	0.09	0.09	0.00	327.45	10.90	0.15	10.74
324.85	0.09	0.09	0.00	327.50	11.41	0.15	11.26
324.90	0.09	0.09	0.00	327.55	11.57	0.16	11.42
324.95	0.09	0.09	0.00	327.60	11.73	0.16	11.57
325.00	0.09	0.09	0.00	327.65	11.89	0.16	11.73
325.05	0.09	0.09	0.00	327.70	12.04	0.16	11.88
325.10	0.09	0.09	0.00	327.75	12.19	0.16	12.03
325.15	0.10	0.10	0.00	327.80	12.35	0.16	12.18
325.20	0.10	0.10	0.00	327.85	12.49	0.16	12.33
325.25	0.10	0.10	0.00	327.90	12.64	0.17	12.48
325.30	0.10	0.10	0.00	327.95	12.79	0.17	12.62
325.35	0.10	0.10	0.00	328.00	12.93	0.17	12.76
325.40	0.10	0.10	0.00				
325.45	0.10	0.10	0.00				
325.50	0.10	0.10	0.00				
325.55	0.10	0.10	0.00				
325.60	0.10	0.10	0.00				

Stage-Area-Storage for Pond 34P: Basin 4 (Expanded)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
323.00	1,929	0	325.65	4,559	8,851
323.05	1,988	98	325.70	4,603	9,080
323.10	2,047	199	325.75	4,647	9,311
323.15	2,107	303	325.80	4,691	9,544
323.20	2,166	409	325.85	4,735	9,780
323.25	2,225	519	325.90	4,778	10,018
323.30	2,284	632	325.95	4,822	10,258
323.35	2,343	748	326.00	4,866	10,500
323.40	2,403	866	326.05	4,926	10,745
323.45	2,462	988	326.10	4,985	10,993
323.50	2,521	1,113	326.15	5,045	11,243
323.55	2,580	1,240	326.20	5,105	11,497
323.60	2,639	1,371	326.25	5,164	11,754
323.65	2,699	1,504	326.30	5,224	12,013
323.70	2,758	1,640	326.35	5,284	12,276
323.75	2,817	1,780	326.40	5,343	12,542
323.80	2,876	1,922	326.45	5,403	12,810
323.85	2,935	2,067	326.50	5,463	13,082
323.90	2,995	2,216	326.55	5,522	13,357
323.95	3,054	2,367	326.60	5,582	13,634
324.00	3,113	2,521	326.65	5,641	13,915
324.05	3,157	2,678	326.70	5,701	14,198
324.10	3,201	2,837	326.75	5,761	14,485
324.15	3,244	2,998	326.80	5,820	14,775
324.20	3,288	3,161	326.85	5,880	15,067
324.25	3,332	3,327	326.90	5,940	15,363
324.30	3,376	3,494	326.95	5,999	15,661
324.35	3,420	3,664	327.00	6,059	15,963
324.40	3,464	3,836	327.05	6,119	16,267
324.45	3,507	4,011	327.10	6,178	16,574
324.50	3,551	4,187	327.15	6,238	16,885
324.55	3,595	4,366	327.20	6,298	17,198
324.60	3,639	4,547	327.25	6,357	17,515
324.65	3,683	4,730	327.30	6,417	17,834
324.70	3,727	4,915	327.35	6,477	18,156
324.75	3,770	5,102	327.40	6,536	18,482
324.80	3,814	5,292	327.45	6,596	18,810
324.85	3,858	5,484	327.50	6,656	19,141
324.90	3,902	5,678	327.55	6,715	19,475
324.95	3,946	5,874	327.60	6,775	19,813
325.00	3,990	6,072	327.65	6,834	20,153
325.05	4,033	6,273	327.70	6,894	20,496
325.10	4,077	6,476	327.75	6,954	20,842
325.15	4,121	6,681	327.80	7,013	21,191
325.20	4,165	6,888	327.85	7,073	21,544
325.25	4,209	7,097	327.90	7,133	21,899
325.30	4,252	7,309	327.95	7,192	22,257
325.35	4,296	7,522	328.00	7,252	22,618
325.40	4,340	7,738			
325.45	4,384	7,956			
325.50	4,428	8,177			
325.55	4,472	8,399			
325.60	4,515	8,624			

Time span=0.00-25.00 hrs, dt=0.01 hrs, 2501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 34S: Existing Subcatchment Runoff Area=1.420 ac 37.32% Impervious Runoff Depth=3.13"
Tc=5.0 min CN=82 Runoff=5.46 cfs 0.371 af

Subcatchment 35S: Proposed Development Runoff Area=27,915 sf 89.02% Impervious Runoff Depth=4.37"
Tc=15.0 min CN=94 Runoff=2.15 cfs 0.233 af

Pond 34P: Basin 4 (Expanded) Peak Elev=326.65' Storage=13,934 cf Inflow=6.76 cfs 0.604 af
Discarded=0.13 cfs 0.170 af Primary=0.59 cfs 0.142 af Outflow=0.72 cfs 0.312 af

Total Runoff Area = 2.061 ac Runoff Volume = 0.604 af Average Runoff Depth = 3.52"
46.60% Pervious = 0.960 ac 53.40% Impervious = 1.100 ac

Summary for Subcatchment 34S: Existing Subcatchment

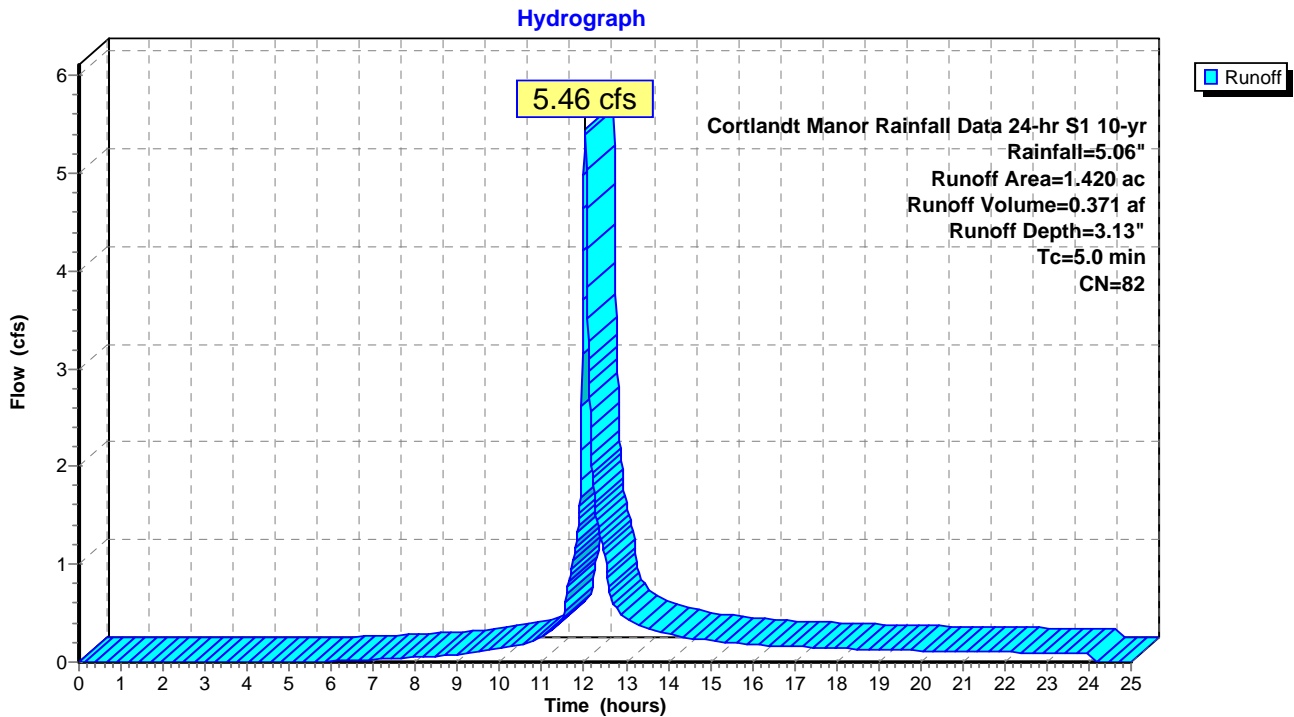
Runoff = 5.46 cfs @ 12.03 hrs, Volume= 0.371 af, Depth= 3.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
 Cortlandt Manor Rainfall Data 24-hr S1 10-yr Rainfall=5.06"

Area (ac)	CN	Description
* 0.530	98	Paved Parking & roofs
* 0.060	47	>75% Grass cover, Good, HSG A
0.830	74	>75% Grass cover, Good, HSG C
1.420	82	Weighted Average
0.890		62.68% Pervious Area
0.530		37.32% Impervious Area

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

Subcatchment 34S: Existing Subcatchment



Hydrograph for Subcatchment 34S: Existing Subcatchment

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.04	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.00
3.00	0.23	0.00	0.00
3.50	0.27	0.00	0.00
4.00	0.31	0.00	0.00
4.50	0.36	0.00	0.00
5.00	0.41	0.00	0.00
5.50	0.46	0.00	0.00
6.00	0.51	0.00	0.01
6.50	0.57	0.01	0.02
7.00	0.63	0.02	0.03
7.50	0.70	0.03	0.04
8.00	0.77	0.04	0.05
8.50	0.84	0.06	0.06
9.00	0.92	0.09	0.08
9.50	1.02	0.12	0.10
10.00	1.13	0.16	0.13
10.50	1.25	0.22	0.18
11.00	1.41	0.30	0.26
11.50	1.65	0.43	0.45
12.00	2.74	1.18	4.98
12.50	3.44	1.73	1.10
13.00	3.66	1.92	0.45
13.50	3.82	2.05	0.35
14.00	3.94	2.15	0.29
14.50	4.05	2.24	0.25
15.00	4.14	2.32	0.22
15.50	4.22	2.39	0.20
16.00	4.30	2.46	0.18
16.50	4.37	2.52	0.17
17.00	4.43	2.58	0.16
17.50	4.49	2.63	0.15
18.00	4.55	2.68	0.14
18.50	4.60	2.73	0.13
19.00	4.65	2.77	0.13
19.50	4.70	2.81	0.12
20.00	4.75	2.85	0.12
20.50	4.79	2.89	0.11
21.00	4.83	2.93	0.11
21.50	4.87	2.97	0.10
22.00	4.91	3.00	0.10
22.50	4.95	3.04	0.10
23.00	4.99	3.07	0.09
23.50	5.03	3.10	0.09
24.00	5.06	3.13	0.09
24.50	5.06	3.13	0.00
25.00	5.06	3.13	0.00

Summary for Subcatchment 35S: Proposed Development

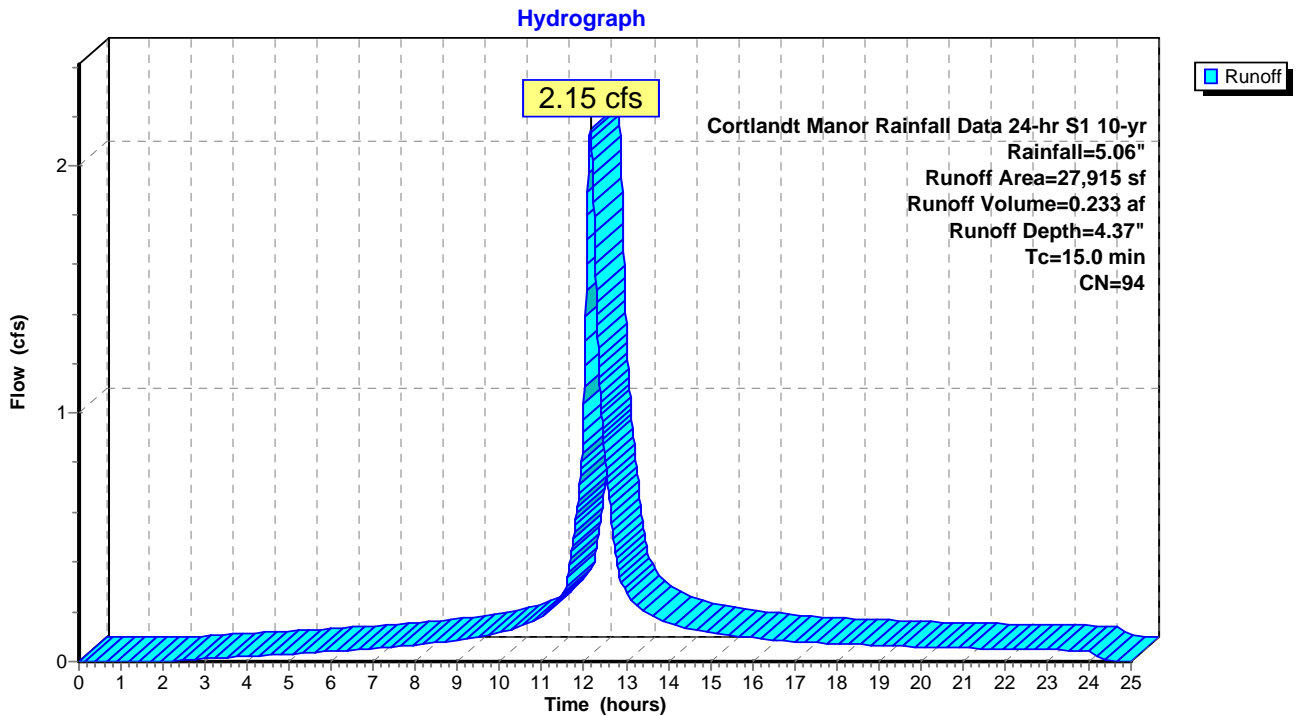
Runoff = 2.15 cfs @ 12.15 hrs, Volume= 0.233 af, Depth= 4.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
 Cortlandt Manor Rainfall Data 24-hr S1 10-yr Rainfall=5.06"

Area (sf)	CN	Description
24,849	98	Impervious Roofs, road, walkways
3,066	61	>75% Grass cover, Good, HSG B
27,915	94	Weighted Average
3,066		10.98% Pervious Area
24,849		89.02% Impervious Area

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

Subcatchment 35S: Proposed Development



Hydrograph for Subcatchment 35S: Proposed Development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.04	0.00	0.00
1.00	0.07	0.00	0.00
1.50	0.11	0.00	0.00
2.00	0.15	0.00	0.00
2.50	0.19	0.00	0.01
3.00	0.23	0.01	0.01
3.50	0.27	0.03	0.02
4.00	0.31	0.04	0.02
4.50	0.36	0.06	0.03
5.00	0.41	0.09	0.03
5.50	0.46	0.11	0.04
6.00	0.51	0.15	0.04
6.50	0.57	0.18	0.05
7.00	0.63	0.22	0.05
7.50	0.70	0.27	0.06
8.00	0.77	0.32	0.07
8.50	0.84	0.38	0.08
9.00	0.92	0.44	0.09
9.50	1.02	0.52	0.10
10.00	1.13	0.61	0.12
10.50	1.25	0.72	0.14
11.00	1.41	0.86	0.18
11.50	1.65	1.07	0.27
12.00	2.74	2.10	1.04
12.50	3.44	2.78	0.82
13.00	3.66	2.99	0.28
13.50	3.82	3.15	0.20
14.00	3.94	3.27	0.16
14.50	4.05	3.37	0.13
15.00	4.14	3.46	0.12
15.50	4.22	3.54	0.10
16.00	4.30	3.62	0.09
16.50	4.37	3.69	0.09
17.00	4.43	3.75	0.08
17.50	4.49	3.81	0.08
18.00	4.55	3.86	0.07
18.50	4.60	3.92	0.07
19.00	4.65	3.96	0.06
19.50	4.70	4.01	0.06
20.00	4.75	4.06	0.06
20.50	4.79	4.10	0.06
21.00	4.83	4.14	0.05
21.50	4.87	4.18	0.05
22.00	4.91	4.22	0.05
22.50	4.95	4.26	0.05
23.00	4.99	4.30	0.05
23.50	5.03	4.33	0.05
24.00	5.06	4.37	0.04
24.50	5.06	4.37	0.00
25.00	5.06	4.37	0.00

Summary for Pond 34P: Basin 4 (Expanded)

Inflow Area = 2.061 ac, 53.40% Impervious, Inflow Depth = 3.52" for 10-yr event
 Inflow = 6.76 cfs @ 12.03 hrs, Volume= 0.604 af
 Outflow = 0.72 cfs @ 13.03 hrs, Volume= 0.312 af, Atten= 89%, Lag= 59.7 min
 Discarded = 0.13 cfs @ 13.03 hrs, Volume= 0.170 af
 Primary = 0.59 cfs @ 13.03 hrs, Volume= 0.142 af

Routing by Stor-Ind method, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
 Peak Elev= 326.65' @ 13.03 hrs Surf.Area= 5,645 sf Storage= 13,934 cf

Plug-Flow detention time= 290.0 min calculated for 0.312 af (52% of inflow)
 Center-of-Mass det. time= 147.4 min (962.4 - 815.0)

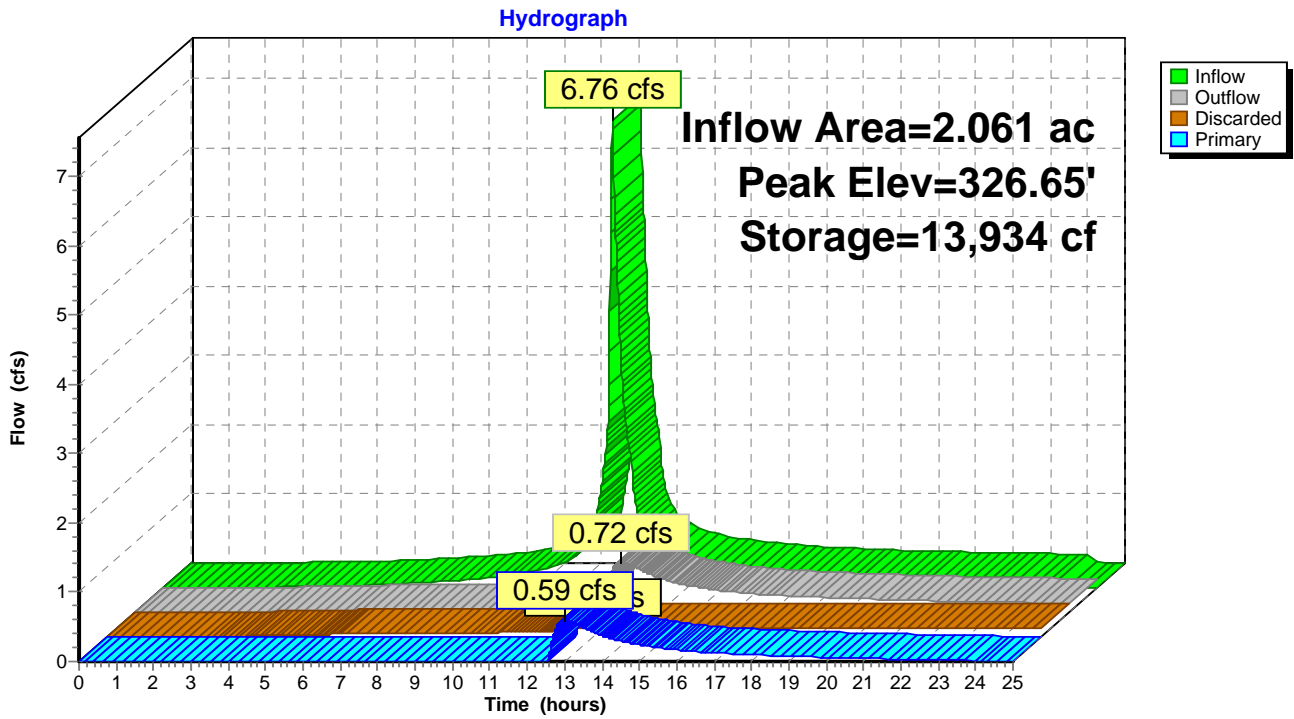
Volume	Invert	Avail.Storage	Storage Description
#1	323.00'	22,618 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
323.00	1,929	0	0
324.00	3,113	2,521	2,521
326.00	4,866	7,979	10,500
328.00	7,252	12,118	22,618

Device	Routing	Invert	Outlet Devices
#1	Primary	325.00'	18.0" Round Culvert L= 79.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 325.00' / 318.00' S= 0.0886 1/1' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Discarded	323.00'	1.000 in/hr Exfiltration over Surface area
#3	Device 1	326.50'	3.5' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

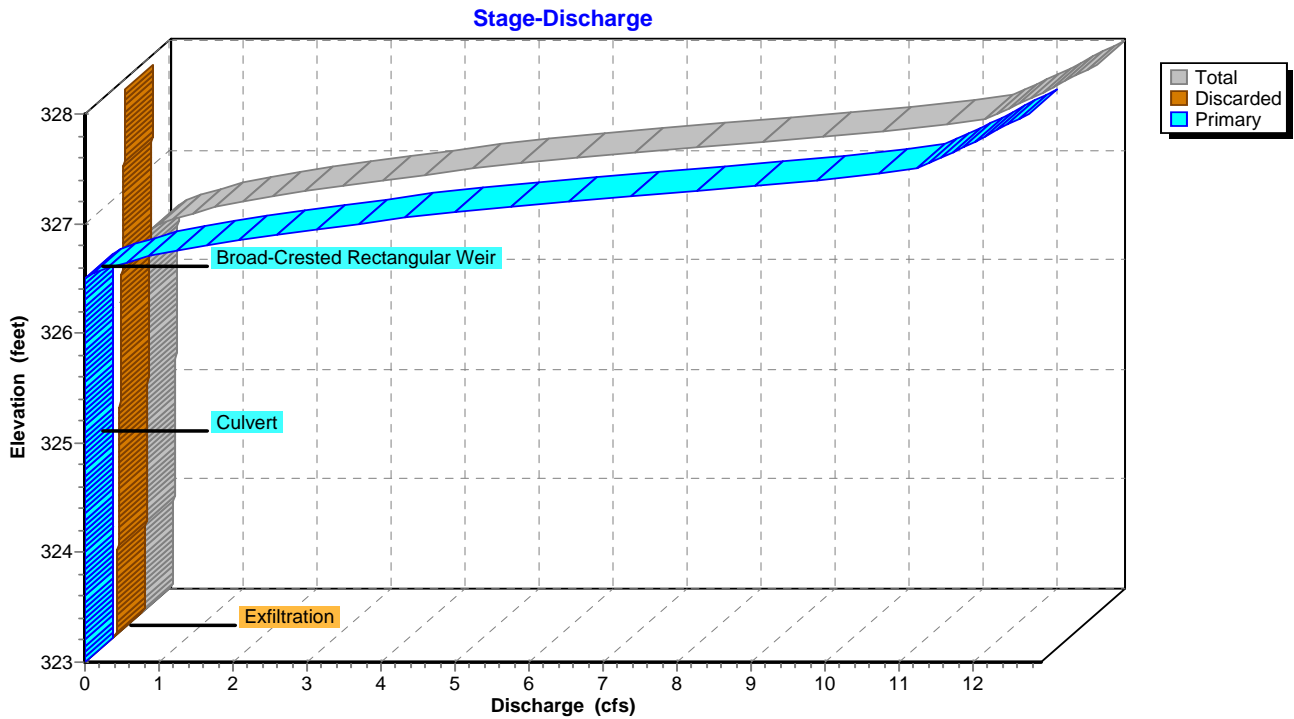
Discarded OutFlow Max=0.13 cfs @ 13.03 hrs HW=326.65' (Free Discharge)
 ↳ **2=Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=0.59 cfs @ 13.03 hrs HW=326.65' (Free Discharge)
 ↳ **1=Culvert** (Passes 0.59 cfs of 8.09 cfs potential flow)
 ↳ **3=Broad-Crested Rectangular Weir** (Weir Controls 0.59 cfs @ 1.10 fps)

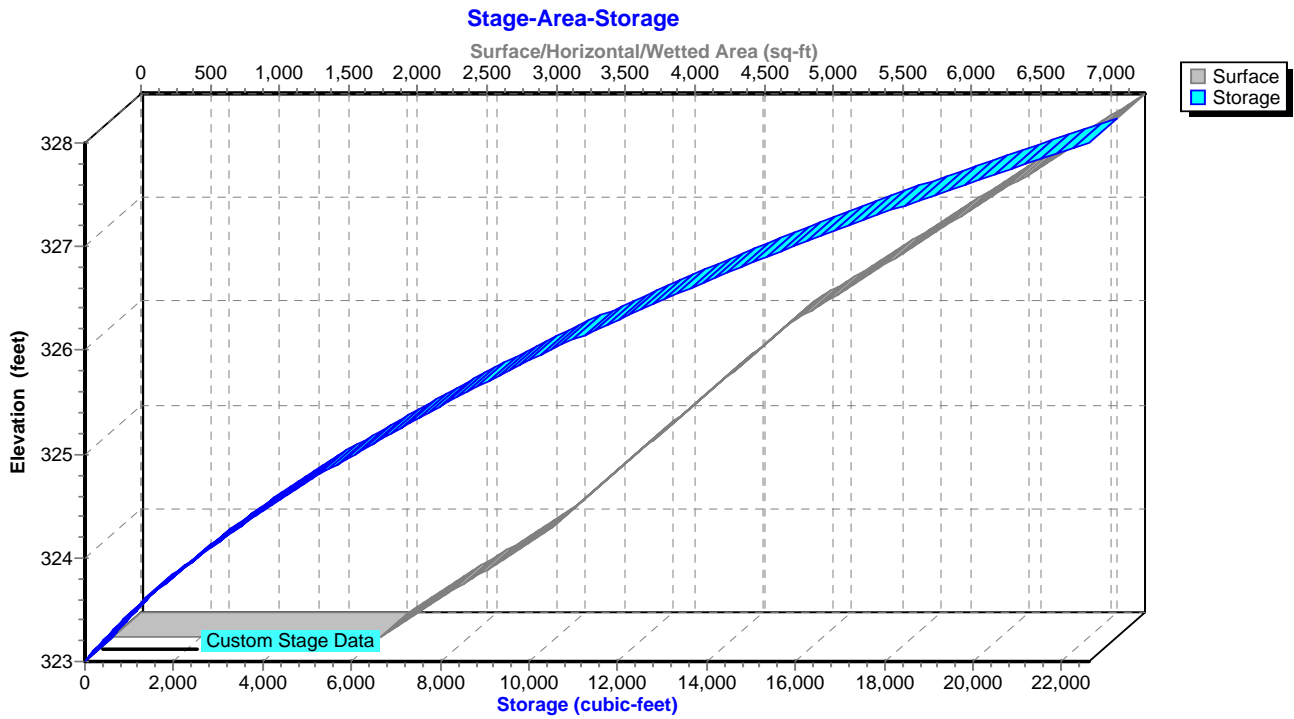
Pond 34P: Basin 4 (Expanded)



Pond 34P: Basin 4 (Expanded)



Pond 34P: Basin 4 (Expanded)



Hydrograph for Pond 34P: Basin 4 (Expanded)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	323.00	0.00	0.00	0.00
0.50	0.00	0	323.00	0.00	0.00	0.00
1.00	0.00	0	323.00	0.00	0.00	0.00
1.50	0.00	0	323.00	0.00	0.00	0.00
2.00	0.00	0	323.00	0.00	0.00	0.00
2.50	0.01	4	323.00	0.00	0.00	0.00
3.00	0.01	13	323.01	0.01	0.01	0.00
3.50	0.02	23	323.01	0.01	0.01	0.00
4.00	0.02	33	323.02	0.02	0.02	0.00
4.50	0.03	43	323.02	0.02	0.02	0.00
5.00	0.03	54	323.03	0.03	0.03	0.00
5.50	0.04	65	323.03	0.03	0.03	0.00
6.00	0.05	82	323.04	0.04	0.04	0.00
6.50	0.06	106	323.05	0.05	0.05	0.00
7.00	0.08	151	323.08	0.05	0.05	0.00
7.50	0.10	222	323.11	0.05	0.05	0.00
8.00	0.11	323	323.16	0.05	0.05	0.00
8.50	0.14	460	323.22	0.05	0.05	0.00
9.00	0.17	639	323.30	0.05	0.05	0.00
9.50	0.20	871	323.40	0.06	0.06	0.00
10.00	0.25	1,172	323.52	0.06	0.06	0.00
10.50	0.32	1,574	323.68	0.06	0.06	0.00
11.00	0.45	2,135	323.87	0.07	0.07	0.00
11.50	0.73	3,017	324.16	0.08	0.08	0.00
12.00	6.02	6,232	325.04	0.09	0.09	0.00
12.50	1.91	12,846	326.46	0.13	0.13	0.00
13.00	0.73	13,933	326.65	0.72	0.13	0.59
13.50	0.54	13,831	326.64	0.62	0.13	0.49
14.00	0.44	13,703	326.61	0.50	0.13	0.37
14.50	0.38	13,613	326.60	0.42	0.13	0.29
15.00	0.33	13,541	326.58	0.37	0.13	0.24
15.50	0.30	13,484	326.57	0.33	0.13	0.20
16.00	0.28	13,440	326.56	0.30	0.13	0.17
16.50	0.25	13,405	326.56	0.27	0.13	0.14
17.00	0.24	13,377	326.55	0.25	0.13	0.12
17.50	0.22	13,353	326.55	0.24	0.13	0.11
18.00	0.21	13,328	326.54	0.23	0.13	0.10
18.50	0.20	13,301	326.54	0.21	0.13	0.09
19.00	0.19	13,274	326.54	0.20	0.13	0.08
19.50	0.18	13,250	326.53	0.19	0.13	0.07
20.00	0.17	13,229	326.53	0.19	0.13	0.06
20.50	0.17	13,209	326.52	0.18	0.13	0.05
21.00	0.16	13,191	326.52	0.17	0.13	0.04
21.50	0.16	13,175	326.52	0.16	0.13	0.04
22.00	0.15	13,160	326.51	0.16	0.13	0.03
22.50	0.15	13,147	326.51	0.15	0.13	0.03
23.00	0.14	13,134	326.51	0.15	0.13	0.02
23.50	0.14	13,123	326.51	0.14	0.13	0.02
24.00	0.13	13,113	326.51	0.14	0.13	0.01
24.50	0.00	12,942	326.47	0.13	0.13	0.00
25.00	0.00	12,717	326.43	0.12	0.12	0.00

Stage-Discharge for Pond 34P: Basin 4 (Expanded)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
323.00	0.00	0.00	0.00	325.65	0.11	0.11	0.00
323.05	0.05	0.05	0.00	325.70	0.11	0.11	0.00
323.10	0.05	0.05	0.00	325.75	0.11	0.11	0.00
323.15	0.05	0.05	0.00	325.80	0.11	0.11	0.00
323.20	0.05	0.05	0.00	325.85	0.11	0.11	0.00
323.25	0.05	0.05	0.00	325.90	0.11	0.11	0.00
323.30	0.05	0.05	0.00	325.95	0.11	0.11	0.00
323.35	0.05	0.05	0.00	326.00	0.11	0.11	0.00
323.40	0.06	0.06	0.00	326.05	0.11	0.11	0.00
323.45	0.06	0.06	0.00	326.10	0.12	0.12	0.00
323.50	0.06	0.06	0.00	326.15	0.12	0.12	0.00
323.55	0.06	0.06	0.00	326.20	0.12	0.12	0.00
323.60	0.06	0.06	0.00	326.25	0.12	0.12	0.00
323.65	0.06	0.06	0.00	326.30	0.12	0.12	0.00
323.70	0.06	0.06	0.00	326.35	0.12	0.12	0.00
323.75	0.07	0.07	0.00	326.40	0.12	0.12	0.00
323.80	0.07	0.07	0.00	326.45	0.13	0.13	0.00
323.85	0.07	0.07	0.00	326.50	0.13	0.13	0.00
323.90	0.07	0.07	0.00	326.55	0.24	0.13	0.11
323.95	0.07	0.07	0.00	326.60	0.44	0.13	0.31
324.00	0.07	0.07	0.00	326.65	0.70	0.13	0.57
324.05	0.07	0.07	0.00	326.70	1.01	0.13	0.88
324.10	0.07	0.07	0.00	326.75	1.37	0.13	1.24
324.15	0.08	0.08	0.00	326.80	1.78	0.13	1.64
324.20	0.08	0.08	0.00	326.85	2.23	0.14	2.09
324.25	0.08	0.08	0.00	326.90	2.72	0.14	2.59
324.30	0.08	0.08	0.00	326.95	3.27	0.14	3.13
324.35	0.08	0.08	0.00	327.00	3.85	0.14	3.71
324.40	0.08	0.08	0.00	327.05	4.48	0.14	4.34
324.45	0.08	0.08	0.00	327.10	5.15	0.14	5.01
324.50	0.08	0.08	0.00	327.15	5.89	0.14	5.75
324.55	0.08	0.08	0.00	327.20	6.68	0.15	6.54
324.60	0.08	0.08	0.00	327.25	7.52	0.15	7.38
324.65	0.09	0.09	0.00	327.30	8.41	0.15	8.26
324.70	0.09	0.09	0.00	327.35	9.21	0.15	9.07
324.75	0.09	0.09	0.00	327.40	10.04	0.15	9.89
324.80	0.09	0.09	0.00	327.45	10.90	0.15	10.74
324.85	0.09	0.09	0.00	327.50	11.41	0.15	11.26
324.90	0.09	0.09	0.00	327.55	11.57	0.16	11.42
324.95	0.09	0.09	0.00	327.60	11.73	0.16	11.57
325.00	0.09	0.09	0.00	327.65	11.89	0.16	11.73
325.05	0.09	0.09	0.00	327.70	12.04	0.16	11.88
325.10	0.09	0.09	0.00	327.75	12.19	0.16	12.03
325.15	0.10	0.10	0.00	327.80	12.35	0.16	12.18
325.20	0.10	0.10	0.00	327.85	12.49	0.16	12.33
325.25	0.10	0.10	0.00	327.90	12.64	0.17	12.48
325.30	0.10	0.10	0.00	327.95	12.79	0.17	12.62
325.35	0.10	0.10	0.00	328.00	12.93	0.17	12.76
325.40	0.10	0.10	0.00				
325.45	0.10	0.10	0.00				
325.50	0.10	0.10	0.00				
325.55	0.10	0.10	0.00				
325.60	0.10	0.10	0.00				

Stage-Area-Storage for Pond 34P: Basin 4 (Expanded)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
323.00	1,929	0	325.65	4,559	8,851
323.05	1,988	98	325.70	4,603	9,080
323.10	2,047	199	325.75	4,647	9,311
323.15	2,107	303	325.80	4,691	9,544
323.20	2,166	409	325.85	4,735	9,780
323.25	2,225	519	325.90	4,778	10,018
323.30	2,284	632	325.95	4,822	10,258
323.35	2,343	748	326.00	4,866	10,500
323.40	2,403	866	326.05	4,926	10,745
323.45	2,462	988	326.10	4,985	10,993
323.50	2,521	1,113	326.15	5,045	11,243
323.55	2,580	1,240	326.20	5,105	11,497
323.60	2,639	1,371	326.25	5,164	11,754
323.65	2,699	1,504	326.30	5,224	12,013
323.70	2,758	1,640	326.35	5,284	12,276
323.75	2,817	1,780	326.40	5,343	12,542
323.80	2,876	1,922	326.45	5,403	12,810
323.85	2,935	2,067	326.50	5,463	13,082
323.90	2,995	2,216	326.55	5,522	13,357
323.95	3,054	2,367	326.60	5,582	13,634
324.00	3,113	2,521	326.65	5,641	13,915
324.05	3,157	2,678	326.70	5,701	14,198
324.10	3,201	2,837	326.75	5,761	14,485
324.15	3,244	2,998	326.80	5,820	14,775
324.20	3,288	3,161	326.85	5,880	15,067
324.25	3,332	3,327	326.90	5,940	15,363
324.30	3,376	3,494	326.95	5,999	15,661
324.35	3,420	3,664	327.00	6,059	15,963
324.40	3,464	3,836	327.05	6,119	16,267
324.45	3,507	4,011	327.10	6,178	16,574
324.50	3,551	4,187	327.15	6,238	16,885
324.55	3,595	4,366	327.20	6,298	17,198
324.60	3,639	4,547	327.25	6,357	17,515
324.65	3,683	4,730	327.30	6,417	17,834
324.70	3,727	4,915	327.35	6,477	18,156
324.75	3,770	5,102	327.40	6,536	18,482
324.80	3,814	5,292	327.45	6,596	18,810
324.85	3,858	5,484	327.50	6,656	19,141
324.90	3,902	5,678	327.55	6,715	19,475
324.95	3,946	5,874	327.60	6,775	19,813
325.00	3,990	6,072	327.65	6,834	20,153
325.05	4,033	6,273	327.70	6,894	20,496
325.10	4,077	6,476	327.75	6,954	20,842
325.15	4,121	6,681	327.80	7,013	21,191
325.20	4,165	6,888	327.85	7,073	21,544
325.25	4,209	7,097	327.90	7,133	21,899
325.30	4,252	7,309	327.95	7,192	22,257
325.35	4,296	7,522	328.00	7,252	22,618
325.40	4,340	7,738			
325.45	4,384	7,956			
325.50	4,428	8,177			
325.55	4,472	8,399			
325.60	4,515	8,624			

Time span=0.00-25.00 hrs, dt=0.01 hrs, 2501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 34S: Existing Subcatchment Runoff Area=1.420 ac 37.32% Impervious Runoff Depth=7.00"
Tc=5.0 min CN=82 Runoff=10.17 cfs 0.828 af

Subcatchment 35S: Proposed Development Runoff Area=27,915 sf 89.02% Impervious Runoff Depth=8.47"
Tc=15.0 min CN=94 Runoff=3.53 cfs 0.452 af

Pond 34P: Basin 4 (Expanded) Peak Elev=327.31' Storage=17,893 cf Inflow=12.37 cfs 1.280 af
Discarded=0.15 cfs 0.196 af Primary=8.41 cfs 0.787 af Outflow=8.56 cfs 0.984 af

Total Runoff Area = 2.061 ac Runoff Volume = 1.280 af Average Runoff Depth = 7.45"
46.60% Pervious = 0.960 ac 53.40% Impervious = 1.100 ac

Summary for Subcatchment 34S: Existing Subcatchment

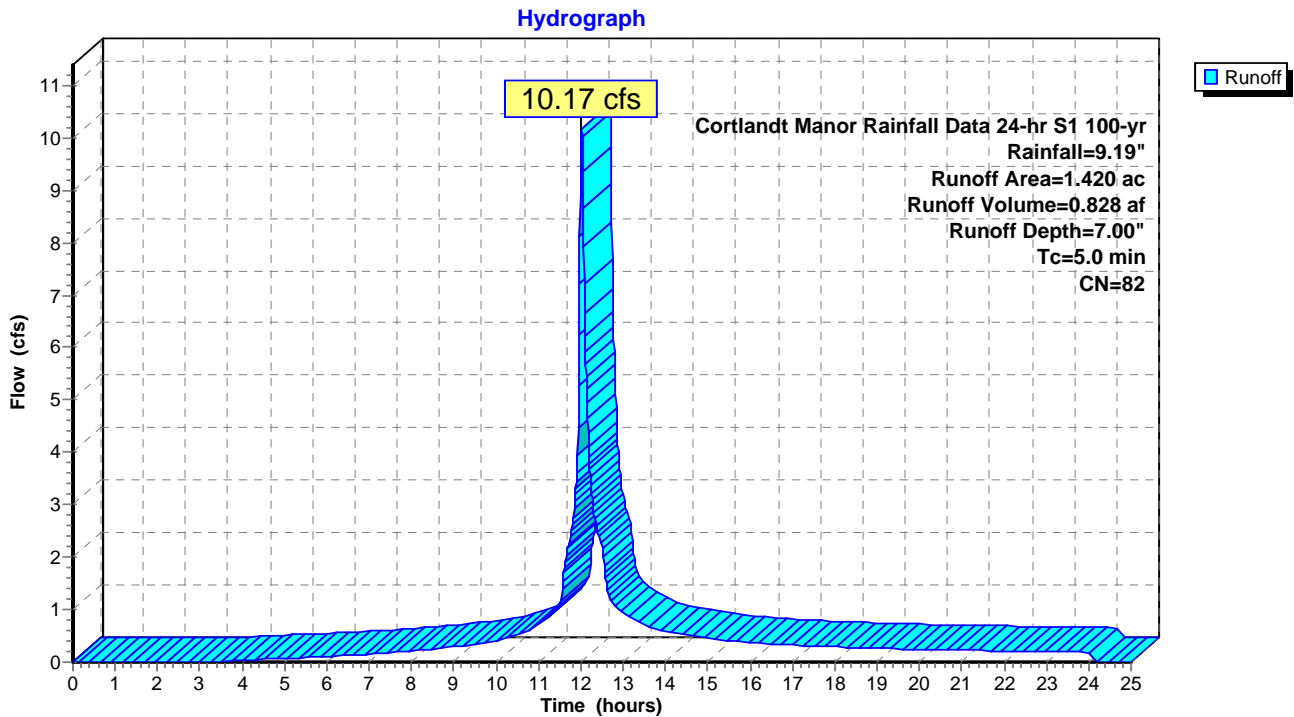
Runoff = 10.17 cfs @ 12.03 hrs, Volume= 0.828 af, Depth= 7.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
 Cortlandt Manor Rainfall Data 24-hr S1 100-yr Rainfall=9.19"

Area (ac)	CN	Description
* 0.530	98	Paved Parking & roofs
* 0.060	47	>75% Grass cover, Good, HSG A
0.830	74	>75% Grass cover, Good, HSG C
1.420	82	Weighted Average
0.890		62.68% Pervious Area
0.530		37.32% Impervious Area

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

Subcatchment 34S: Existing Subcatchment



Hydrograph for Subcatchment 34S: Existing Subcatchment

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.07	0.00	0.00
1.00	0.14	0.00	0.00
1.50	0.21	0.00	0.00
2.00	0.29	0.00	0.00
2.50	0.37	0.00	0.00
3.00	0.45	0.00	0.00
3.50	0.53	0.00	0.02
4.00	0.62	0.01	0.03
4.50	0.71	0.03	0.05
5.00	0.80	0.05	0.07
5.50	0.90	0.08	0.09
6.00	1.00	0.12	0.11
6.50	1.11	0.16	0.13
7.00	1.23	0.21	0.15
7.50	1.35	0.27	0.18
8.00	1.49	0.34	0.21
8.50	1.63	0.42	0.24
9.00	1.79	0.51	0.29
9.50	1.97	0.63	0.34
10.00	2.17	0.76	0.41
10.50	2.41	0.93	0.52
11.00	2.70	1.15	0.71
11.50	3.13	1.48	1.13
12.00	4.91	3.00	9.44
12.50	6.11	4.09	2.18
13.00	6.51	4.46	0.93
13.50	6.80	4.73	0.71
14.00	7.04	4.95	0.59
14.50	7.24	5.14	0.51
15.00	7.41	5.30	0.45
15.50	7.57	5.45	0.41
16.00	7.71	5.59	0.38
16.50	7.84	5.71	0.35
17.00	7.97	5.83	0.33
17.50	8.08	5.94	0.31
18.00	8.19	6.04	0.29
18.50	8.29	6.14	0.28
19.00	8.39	6.23	0.26
19.50	8.49	6.32	0.25
20.00	8.58	6.41	0.24
20.50	8.66	6.49	0.23
21.00	8.75	6.57	0.22
21.50	8.83	6.65	0.22
22.00	8.90	6.72	0.21
22.50	8.98	6.79	0.20
23.00	9.05	6.86	0.20
23.50	9.12	6.93	0.19
24.00	9.19	7.00	0.19
24.50	9.19	7.00	0.00
25.00	9.19	7.00	0.00

Summary for Subcatchment 35S: Proposed Development

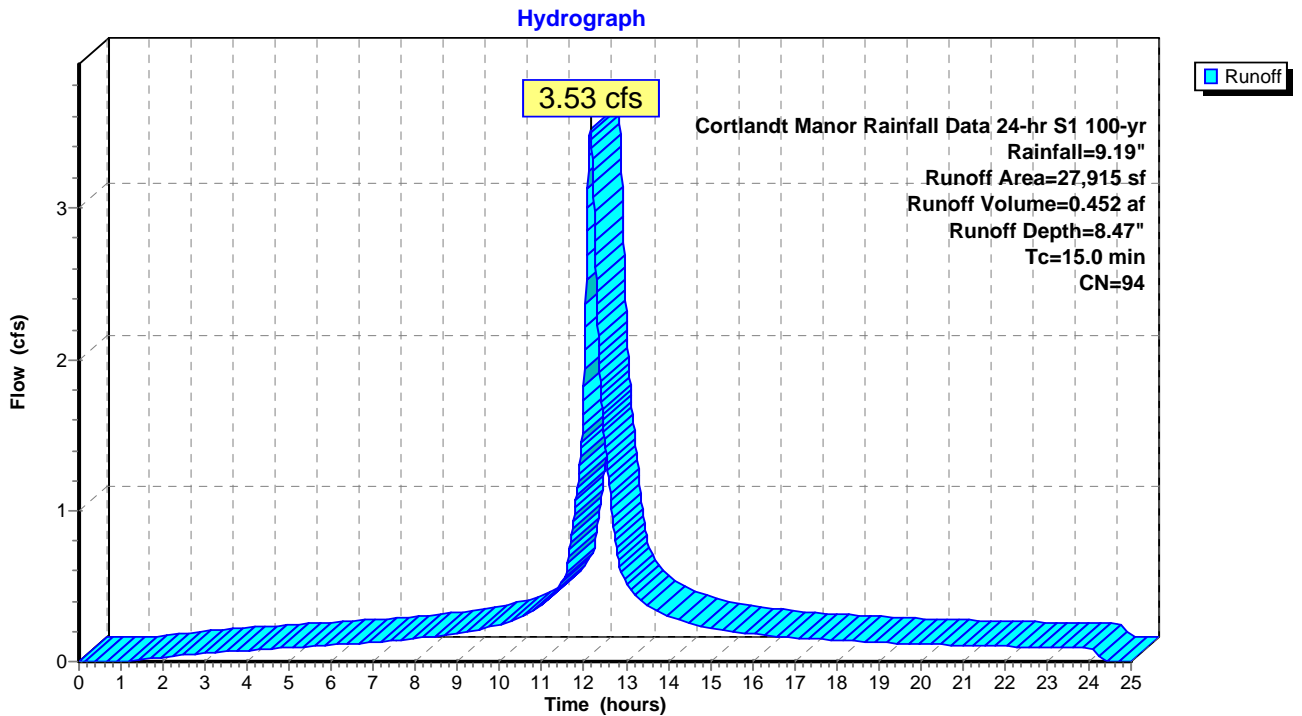
Runoff = 3.53 cfs @ 12.15 hrs, Volume= 0.452 af, Depth= 8.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
 Cortlandt Manor Rainfall Data 24-hr S1 100-yr Rainfall=9.19"

Area (sf)	CN	Description
24,849	98	Impervious Roofs, road, walkways
3,066	61	>75% Grass cover, Good, HSG B
27,915	94	Weighted Average
3,066		10.98% Pervious Area
24,849		89.02% Impervious Area

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

Subcatchment 35S: Proposed Development



Hydrograph for Subcatchment 35S: Proposed Development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.50	0.07	0.00	0.00
1.00	0.14	0.00	0.00
1.50	0.21	0.01	0.01
2.00	0.29	0.03	0.03
2.50	0.37	0.06	0.04
3.00	0.45	0.11	0.05
3.50	0.53	0.16	0.06
4.00	0.62	0.21	0.07
4.50	0.71	0.28	0.08
5.00	0.80	0.35	0.09
5.50	0.90	0.42	0.10
6.00	1.00	0.51	0.11
6.50	1.11	0.60	0.12
7.00	1.23	0.70	0.13
7.50	1.35	0.80	0.14
8.00	1.49	0.92	0.15
8.50	1.63	1.05	0.17
9.00	1.79	1.20	0.19
9.50	1.97	1.36	0.21
10.00	2.17	1.55	0.25
10.50	2.41	1.78	0.29
11.00	2.70	2.06	0.37
11.50	3.13	2.47	0.53
12.00	4.91	4.22	1.82
12.50	6.11	5.40	1.43
13.00	6.51	5.81	0.52
13.50	6.80	6.09	0.37
14.00	7.04	6.33	0.30
14.50	7.24	6.52	0.25
15.00	7.41	6.70	0.22
15.50	7.57	6.85	0.20
16.00	7.71	7.00	0.18
16.50	7.84	7.13	0.17
17.00	7.97	7.25	0.16
17.50	8.08	7.36	0.15
18.00	8.19	7.47	0.14
18.50	8.29	7.57	0.13
19.00	8.39	7.67	0.13
19.50	8.49	7.77	0.12
20.00	8.58	7.85	0.12
20.50	8.66	7.94	0.11
21.00	8.75	8.02	0.11
21.50	8.83	8.10	0.10
22.00	8.90	8.18	0.10
22.50	8.98	8.25	0.10
23.00	9.05	8.33	0.09
23.50	9.12	8.40	0.09
24.00	9.19	8.47	0.09
24.50	9.19	8.47	0.00
25.00	9.19	8.47	0.00

Summary for Pond 34P: Basin 4 (Expanded)

Inflow Area = 2.061 ac, 53.40% Impervious, Inflow Depth = 7.45" for 100-yr event
 Inflow = 12.37 cfs @ 12.03 hrs, Volume= 1.280 af
 Outflow = 8.56 cfs @ 12.15 hrs, Volume= 0.984 af, Atten= 31%, Lag= 6.9 min
 Discarded = 0.15 cfs @ 12.15 hrs, Volume= 0.196 af
 Primary = 8.41 cfs @ 12.15 hrs, Volume= 0.787 af

Routing by Stor-Ind method, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
 Peak Elev= 327.31' @ 12.15 hrs Surf.Area= 6,428 sf Storage= 17,893 cf

Plug-Flow detention time= 185.5 min calculated for 0.983 af (77% of inflow)
 Center-of-Mass det. time= 81.9 min (875.6 - 793.8)

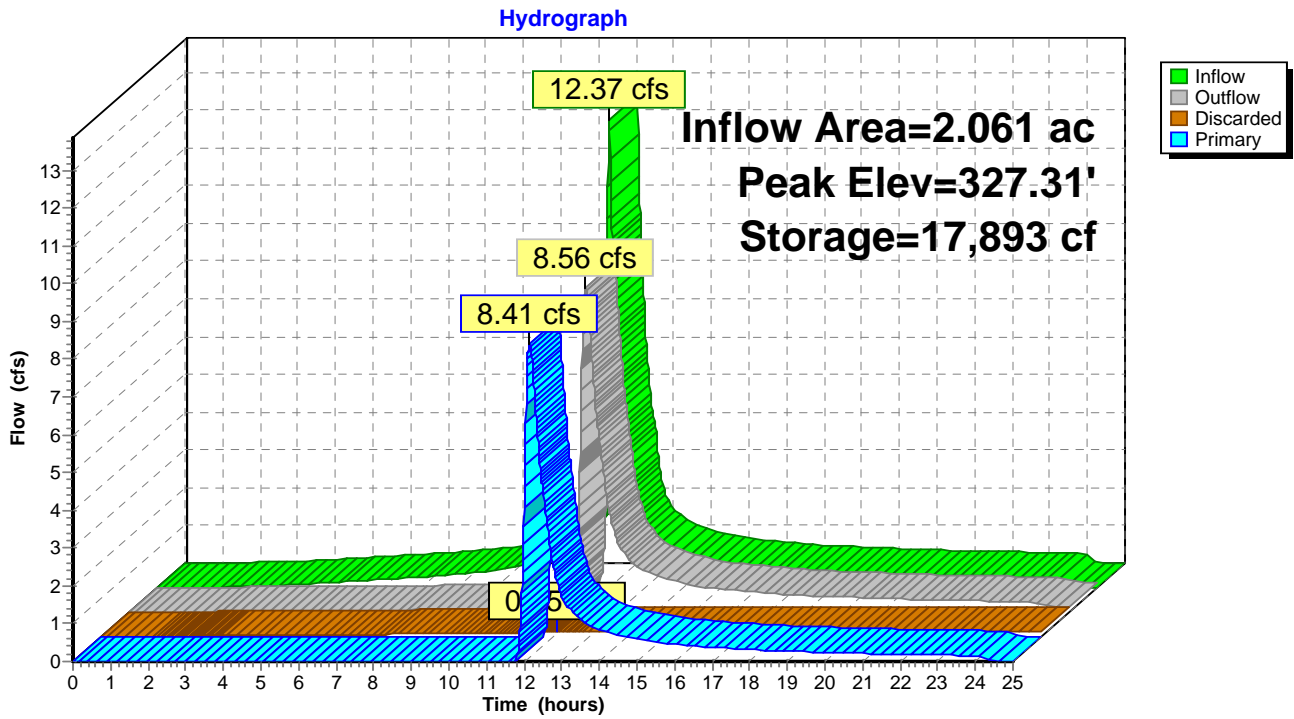
Volume	Invert	Avail.Storage	Storage Description
#1	323.00'	22,618 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
323.00	1,929	0	0
324.00	3,113	2,521	2,521
326.00	4,866	7,979	10,500
328.00	7,252	12,118	22,618

Device	Routing	Invert	Outlet Devices
#1	Primary	325.00'	18.0" Round Culvert L= 79.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 325.00' / 318.00' S= 0.0886 1/1' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Discarded	323.00'	1.000 in/hr Exfiltration over Surface area
#3	Device 1	326.50'	3.5' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

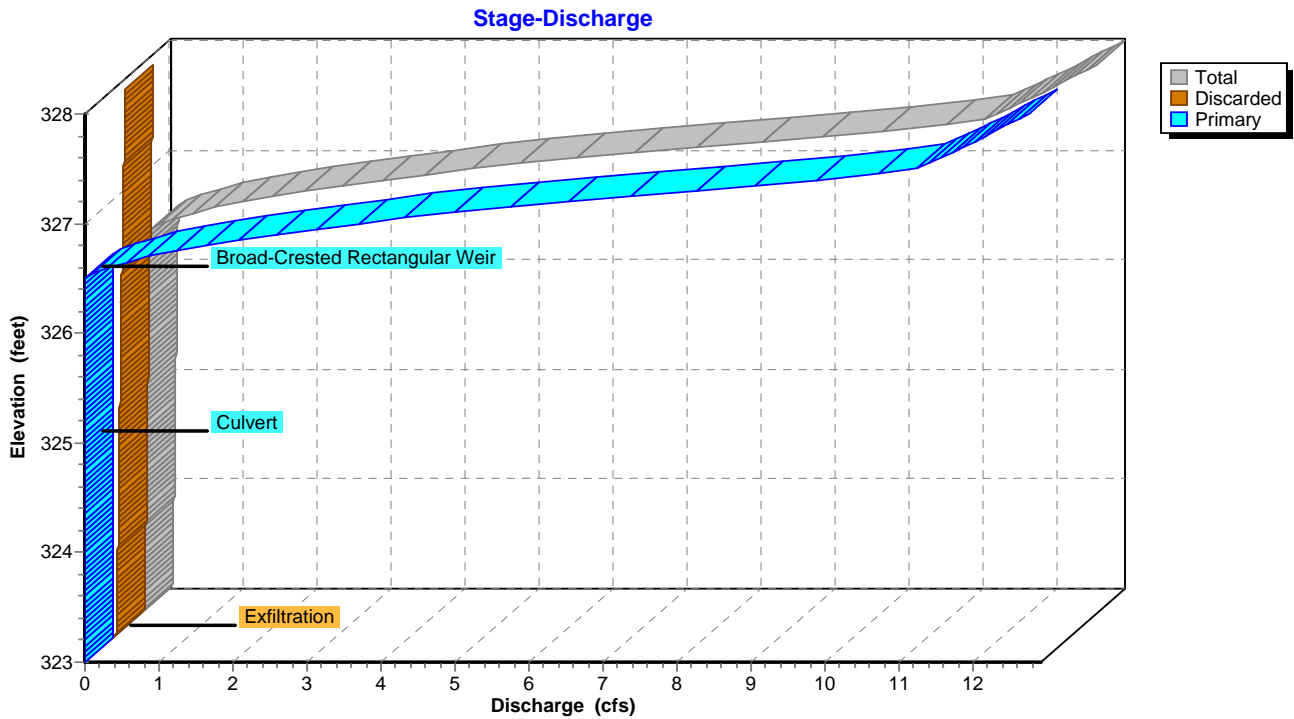
Discarded OutFlow Max=0.15 cfs @ 12.15 hrs HW=327.31' (Free Discharge)
 ↖ **2=Exfiltration** (Exfiltration Controls 0.15 cfs)

Primary OutFlow Max=8.41 cfs @ 12.15 hrs HW=327.31' (Free Discharge)
 ↖ **1=Culvert** (Passes 8.41 cfs of 10.62 cfs potential flow)
 ↖ **3=Broad-Crested Rectangular Weir** (Weir Controls 8.41 cfs @ 2.97 fps)

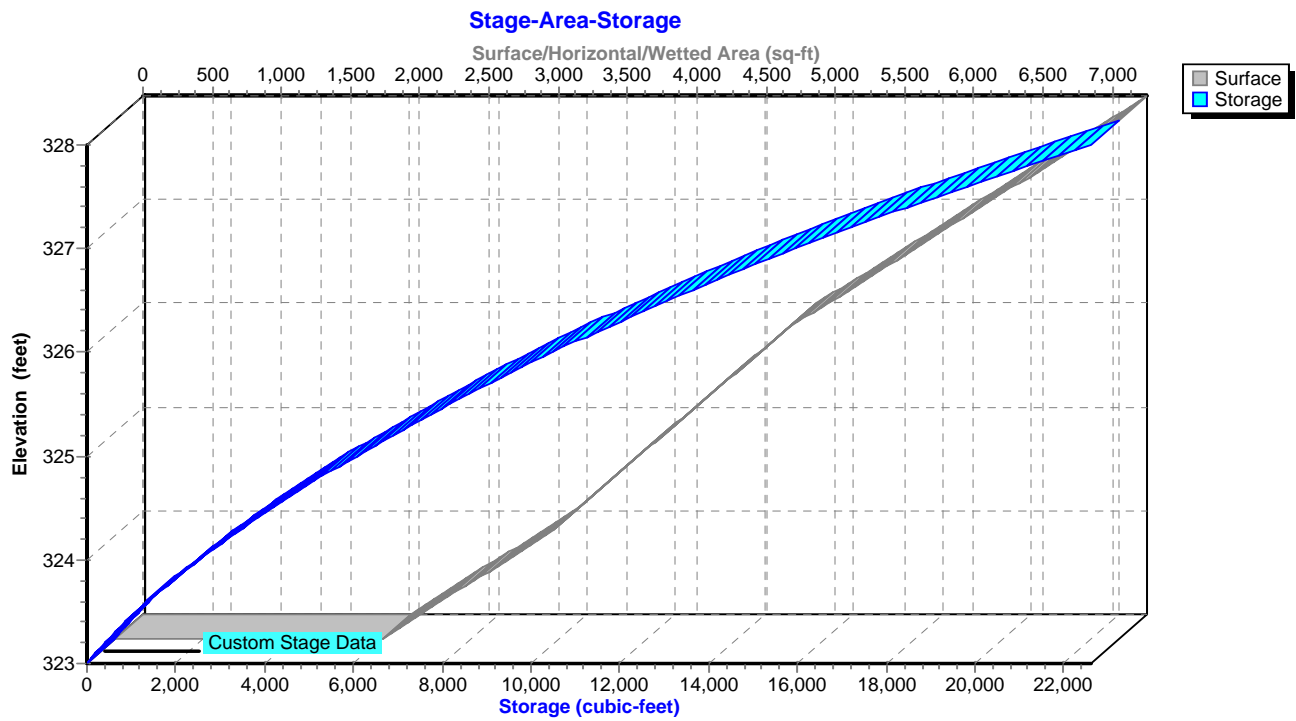
Pond 34P: Basin 4 (Expanded)



Pond 34P: Basin 4 (Expanded)



Pond 34P: Basin 4 (Expanded)



Hydrograph for Pond 34P: Basin 4 (Expanded)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	323.00	0.00	0.00	0.00
0.50	0.00	0	323.00	0.00	0.00	0.00
1.00	0.00	0	323.00	0.00	0.00	0.00
1.50	0.01	8	323.00	0.00	0.00	0.00
2.00	0.03	31	323.02	0.01	0.01	0.00
2.50	0.04	58	323.03	0.03	0.03	0.00
3.00	0.05	84	323.04	0.04	0.04	0.00
3.50	0.08	124	323.06	0.05	0.05	0.00
4.00	0.11	208	323.10	0.05	0.05	0.00
4.50	0.13	338	323.17	0.05	0.05	0.00
5.00	0.16	512	323.25	0.05	0.05	0.00
5.50	0.19	731	323.34	0.05	0.05	0.00
6.00	0.22	995	323.45	0.06	0.06	0.00
6.50	0.25	1,308	323.58	0.06	0.06	0.00
7.00	0.28	1,674	323.71	0.06	0.06	0.00
7.50	0.32	2,096	323.86	0.07	0.07	0.00
8.00	0.36	2,584	324.02	0.07	0.07	0.00
8.50	0.41	3,149	324.20	0.08	0.08	0.00
9.00	0.48	3,808	324.39	0.08	0.08	0.00
9.50	0.55	4,584	324.61	0.08	0.08	0.00
10.00	0.66	5,516	324.86	0.09	0.09	0.00
10.50	0.82	6,667	325.15	0.10	0.10	0.00
11.00	1.08	8,167	325.50	0.10	0.10	0.00
11.50	1.67	10,349	325.97	0.11	0.11	0.00
12.00	11.26	16,139	327.03	4.22	0.14	4.08
12.50	3.61	16,339	327.06	4.64	0.14	4.50
13.00	1.45	14,837	326.81	1.88	0.14	1.74
13.50	1.08	14,378	326.73	1.24	0.13	1.10
14.00	0.89	14,169	326.69	0.98	0.13	0.84
14.50	0.76	14,032	326.67	0.83	0.13	0.70
15.00	0.68	13,935	326.65	0.72	0.13	0.59
15.50	0.61	13,861	326.64	0.65	0.13	0.52
16.00	0.56	13,798	326.63	0.59	0.13	0.46
16.50	0.52	13,747	326.62	0.54	0.13	0.41
17.00	0.48	13,706	326.61	0.51	0.13	0.38
17.50	0.45	13,671	326.61	0.47	0.13	0.34
18.00	0.43	13,641	326.60	0.45	0.13	0.32
18.50	0.41	13,614	326.60	0.42	0.13	0.30
19.00	0.39	13,586	326.59	0.40	0.13	0.28
19.50	0.37	13,561	326.59	0.39	0.13	0.26
20.00	0.36	13,538	326.58	0.37	0.13	0.24
20.50	0.34	13,518	326.58	0.35	0.13	0.23
21.00	0.33	13,499	326.58	0.34	0.13	0.21
21.50	0.32	13,483	326.57	0.33	0.13	0.20
22.00	0.31	13,467	326.57	0.32	0.13	0.19
22.50	0.30	13,453	326.57	0.31	0.13	0.18
23.00	0.29	13,440	326.57	0.30	0.13	0.17
23.50	0.28	13,428	326.56	0.29	0.13	0.16
24.00	0.28	13,417	326.56	0.28	0.13	0.15
24.50	0.00	13,148	326.51	0.15	0.13	0.03
25.00	0.00	12,916	326.47	0.13	0.13	0.00

Stage-Discharge for Pond 34P: Basin 4 (Expanded)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
323.00	0.00	0.00	0.00	325.65	0.11	0.11	0.00
323.05	0.05	0.05	0.00	325.70	0.11	0.11	0.00
323.10	0.05	0.05	0.00	325.75	0.11	0.11	0.00
323.15	0.05	0.05	0.00	325.80	0.11	0.11	0.00
323.20	0.05	0.05	0.00	325.85	0.11	0.11	0.00
323.25	0.05	0.05	0.00	325.90	0.11	0.11	0.00
323.30	0.05	0.05	0.00	325.95	0.11	0.11	0.00
323.35	0.05	0.05	0.00	326.00	0.11	0.11	0.00
323.40	0.06	0.06	0.00	326.05	0.11	0.11	0.00
323.45	0.06	0.06	0.00	326.10	0.12	0.12	0.00
323.50	0.06	0.06	0.00	326.15	0.12	0.12	0.00
323.55	0.06	0.06	0.00	326.20	0.12	0.12	0.00
323.60	0.06	0.06	0.00	326.25	0.12	0.12	0.00
323.65	0.06	0.06	0.00	326.30	0.12	0.12	0.00
323.70	0.06	0.06	0.00	326.35	0.12	0.12	0.00
323.75	0.07	0.07	0.00	326.40	0.12	0.12	0.00
323.80	0.07	0.07	0.00	326.45	0.13	0.13	0.00
323.85	0.07	0.07	0.00	326.50	0.13	0.13	0.00
323.90	0.07	0.07	0.00	326.55	0.24	0.13	0.11
323.95	0.07	0.07	0.00	326.60	0.44	0.13	0.31
324.00	0.07	0.07	0.00	326.65	0.70	0.13	0.57
324.05	0.07	0.07	0.00	326.70	1.01	0.13	0.88
324.10	0.07	0.07	0.00	326.75	1.37	0.13	1.24
324.15	0.08	0.08	0.00	326.80	1.78	0.13	1.64
324.20	0.08	0.08	0.00	326.85	2.23	0.14	2.09
324.25	0.08	0.08	0.00	326.90	2.72	0.14	2.59
324.30	0.08	0.08	0.00	326.95	3.27	0.14	3.13
324.35	0.08	0.08	0.00	327.00	3.85	0.14	3.71
324.40	0.08	0.08	0.00	327.05	4.48	0.14	4.34
324.45	0.08	0.08	0.00	327.10	5.15	0.14	5.01
324.50	0.08	0.08	0.00	327.15	5.89	0.14	5.75
324.55	0.08	0.08	0.00	327.20	6.68	0.15	6.54
324.60	0.08	0.08	0.00	327.25	7.52	0.15	7.38
324.65	0.09	0.09	0.00	327.30	8.41	0.15	8.26
324.70	0.09	0.09	0.00	327.35	9.21	0.15	9.07
324.75	0.09	0.09	0.00	327.40	10.04	0.15	9.89
324.80	0.09	0.09	0.00	327.45	10.90	0.15	10.74
324.85	0.09	0.09	0.00	327.50	11.41	0.15	11.26
324.90	0.09	0.09	0.00	327.55	11.57	0.16	11.42
324.95	0.09	0.09	0.00	327.60	11.73	0.16	11.57
325.00	0.09	0.09	0.00	327.65	11.89	0.16	11.73
325.05	0.09	0.09	0.00	327.70	12.04	0.16	11.88
325.10	0.09	0.09	0.00	327.75	12.19	0.16	12.03
325.15	0.10	0.10	0.00	327.80	12.35	0.16	12.18
325.20	0.10	0.10	0.00	327.85	12.49	0.16	12.33
325.25	0.10	0.10	0.00	327.90	12.64	0.17	12.48
325.30	0.10	0.10	0.00	327.95	12.79	0.17	12.62
325.35	0.10	0.10	0.00	328.00	12.93	0.17	12.76
325.40	0.10	0.10	0.00				
325.45	0.10	0.10	0.00				
325.50	0.10	0.10	0.00				
325.55	0.10	0.10	0.00				
325.60	0.10	0.10	0.00				

Stage-Area-Storage for Pond 34P: Basin 4 (Expanded)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
323.00	1,929	0	325.65	4,559	8,851
323.05	1,988	98	325.70	4,603	9,080
323.10	2,047	199	325.75	4,647	9,311
323.15	2,107	303	325.80	4,691	9,544
323.20	2,166	409	325.85	4,735	9,780
323.25	2,225	519	325.90	4,778	10,018
323.30	2,284	632	325.95	4,822	10,258
323.35	2,343	748	326.00	4,866	10,500
323.40	2,403	866	326.05	4,926	10,745
323.45	2,462	988	326.10	4,985	10,993
323.50	2,521	1,113	326.15	5,045	11,243
323.55	2,580	1,240	326.20	5,105	11,497
323.60	2,639	1,371	326.25	5,164	11,754
323.65	2,699	1,504	326.30	5,224	12,013
323.70	2,758	1,640	326.35	5,284	12,276
323.75	2,817	1,780	326.40	5,343	12,542
323.80	2,876	1,922	326.45	5,403	12,810
323.85	2,935	2,067	326.50	5,463	13,082
323.90	2,995	2,216	326.55	5,522	13,357
323.95	3,054	2,367	326.60	5,582	13,634
324.00	3,113	2,521	326.65	5,641	13,915
324.05	3,157	2,678	326.70	5,701	14,198
324.10	3,201	2,837	326.75	5,761	14,485
324.15	3,244	2,998	326.80	5,820	14,775
324.20	3,288	3,161	326.85	5,880	15,067
324.25	3,332	3,327	326.90	5,940	15,363
324.30	3,376	3,494	326.95	5,999	15,661
324.35	3,420	3,664	327.00	6,059	15,963
324.40	3,464	3,836	327.05	6,119	16,267
324.45	3,507	4,011	327.10	6,178	16,574
324.50	3,551	4,187	327.15	6,238	16,885
324.55	3,595	4,366	327.20	6,298	17,198
324.60	3,639	4,547	327.25	6,357	17,515
324.65	3,683	4,730	327.30	6,417	17,834
324.70	3,727	4,915	327.35	6,477	18,156
324.75	3,770	5,102	327.40	6,536	18,482
324.80	3,814	5,292	327.45	6,596	18,810
324.85	3,858	5,484	327.50	6,656	19,141
324.90	3,902	5,678	327.55	6,715	19,475
324.95	3,946	5,874	327.60	6,775	19,813
325.00	3,990	6,072	327.65	6,834	20,153
325.05	4,033	6,273	327.70	6,894	20,496
325.10	4,077	6,476	327.75	6,954	20,842
325.15	4,121	6,681	327.80	7,013	21,191
325.20	4,165	6,888	327.85	7,073	21,544
325.25	4,209	7,097	327.90	7,133	21,899
325.30	4,252	7,309	327.95	7,192	22,257
325.35	4,296	7,522	328.00	7,252	22,618
325.40	4,340	7,738			
325.45	4,384	7,956			
325.50	4,428	8,177			
325.55	4,472	8,399			
325.60	4,515	8,624			