Paul Stone
2 Victoria Drive

Town of Monroe
Inland Wetlands and
Watercourses Application

Table of Contents

APPLICATION FOR PERMIT
INLAND WETLANDS COMMISSION

TOWN OF MONROE
INLAND WETLANDS COMMISSION
7 Fan Hill Road, Monroe, CT 06468
Tel. (203) 452-2809

FOR OFFICE USE:
IWC– _____
File# _____

As the applicant, it is your responsibility to provide the information the Commission needs in order to process your application and make a fair determination of the issues. If you fail to supply the information it may result in delay, a denial of your application or both. We recommend that you read the Inland Wetlands and Watercourses Regulations and that you request a meeting with the Land Use Department prior to submitting your application. There is no charge to the applicant for this meeting.

SECTION A: INFORMATION ABOUT THE PROPERTY

Location of the Property:

Street Address: 2 Victoria Drive Assessor's Map Number: 012

Parcel Number: 047

Where is the property deed found in the Monroe Land Records?

Volume: 2227 Page: 0165

Is the property located within a public water supply watershed?

☑ No

☐ Yes **(If** ***" Yes, " the Applicant must send a copy of this application BY CERTIFIED MAIL ON OR BEFORE THE DATE OF THE APPLICATION to the Aquarion Water Company of Connecticut, 714 Black Rock Road, Easton, CT 06612, and the Commissioner of Public Health, 410 Capitol Avenue, Hartford, CT 06106; See Regulations Section 8.3).***

Is the property located within 500 feet of a town boundary?

☑ No

☐ Yes ***(If" Yes ", the applicant must notify the Inland Wetland Agency of the adjacent municipality by certified mail and submit the receipt with this application).***

Is the property subject to an existing conservation easement?

☑ No

☐ Yes ***(If" Yes ", the applicant must notify the party holding such restriction by certified mail no later than sixty days prior to the filing of this permit application, or submit a letter from the party holding the restriction verifying that the application is in compliance with the terms of the restriction; see Regulations Section 7.9c & 7.9d).***

Is there a flood plain located on the property?

☐ No

☑ Yes ***(If" Yes ", indicate elevation and location of flood plain on the submission plan).***

Please attach a list of the names and mailing addresses of all landowners within 100 feet of the property.

SECTION B: INFORMATION ABOUT THE APPLICANT

Applicant's name and contact information:

Name: Sentro LLC

Address: 16 Cross Street, New Canaan, CT 06840

Telephone: 203-972-3366 Fax: _____ Email: pstone@karpassociatesinc.com

What is the Applicant's interest in the property?

☑ Owner

☐ Option to purchase

☐ Other _____

Applicant's representative's name and contact information:

Name: Jason Edwards PLS
Business Name: J. Edwards & Associates, LLC
Business Address: 227 Stepney Road, Easton, CT 06612
Telephone: 203-268-4205 Fax: _____ Email: jason@jedwardsassoc.com

Engineer's name and contact information:

Name: Larry Edwards, PE
Business Name: J. Edwards & Associates, LLC
Business Address: 227 Stepney Road, Easton, CT 06612
Telephone: 203-268-4205 Fax: _____ Email: larry@jedwardsassoc.com

11. Owner's name and contact information:

Name: Same as applicant
Address: _____
Telephone: _____ Fax: _____ Email: _____

Owner's signature _____
(Granting permission for submission of application by the applicant)

If the applicant is not the current owner, this application must include the owner's signature or a written, witnessed consent to submit this application, signed and dated by the owner. Only the applicant and the agent listed on this application will receive copies of official action and correspondence.

SECTION C: INFORMATION ABOUT THE PROPOSED ACTIVITY

(Please attach additional sheets if necessary)

Select one or more of the following types of Application requested:

- ☑ Regulated Activity
- □ Including Site Remediation
- □ Subdivision Report/Referral
- □ Map Amendment
- □ Renewal/Extension of Issued Permit Number _____

13. Describe the proposed activity covered by this application:

Construction of 10,000 sf daycare facility and it's appurtenances.

14. List all activities which will take place in regulated areas, including the upland review areas:

Construction of building, parking lot, underground utilities, retaining walls, sidewalks and grading. compensatory storage basin.

Overall project site: 8.26 ac.
Wetlands on the property: 4.47 ac.
Upland review areas on the property: 3.42 ac.

15. List the total area of the regulated areas to be altered:

Wetlands: 0 acres; _____ sq. ft. _____
Upland review areas (within 100 feet of a wetland or 150 feet of a watercourse): 1.12 acres; 48,842 sq. ft.
Total Regulated area to be altered (a + b above) for determination of fee: ____

16. What alternatives to the proposed regulated activity did you consider? Why did you choose the activity proposed in this application as opposed to the alternatives considered? (See Regulations *Section 7.5f)*

See submitted site plan alternate. The chosen site plan configuaration creates a larger open area behind the building and places the playground next to established bike trail.

17. List all measures of Low Impact Design/Development that have been incorporated into this application in order to minimize impact to wetlands.

Subsurface detention gallery system with mechanical treatment unit.

SECTION D: DETERMINATION OF APPLICATION FEE

(See Regulations Section 19)

18. Select type of Application Fee (choose one):

□	Residential Use = $300.00	
☑	Commercial Use = $500.00	$ 500.00
□	Regulation Amendment = $500.00	
□	Map Amendment = $150.00	
□	Permit Modification = $100.00	
□	Renewal/Extension of Issue Permit = $100.00	

19. Select the following additional fees that apply for regulated areas proposed to be disturbed:

Square Feet of Disturbed Area:

□	Less than 1,000 square feet = $50.00	
□	1,000 to 5,000 square feet = $100.00	
☑	More than 5,000 square feet = $100.00 (base amount)	$ 100.00
	*(Plus $5.00 for every **additional** 5,000 square feet rounded up)*	
	Disturbed Area (Line 17c) (-) 5,000 sq.ft. (÷) 5,000 sq.ft. (x) $5.00 per sq.ft. rounded up...	$ 44.00
	20. Department of Environmental Protection State Surcharge	$60
	21. TOTAL APPLICATION FEE:	$ 704.00

****** Please note the Application Fees/State Fee must be payable to the Town of Monroe. Applicants paying with a personal check must include their driver's license number and telephone number on the check.***

SECTION E: REQUIRED SUPPORT DOCUMENTS

(See Regulations Section 7)

Please indicate (check box) that the following documents have been included with the application:

22. Submit ten (10) copies of the following:

☑ Completed Inland Wetlands Application.
☑ A description of all filling and/or excavation activities within regulated areas (include estimates of quantity).
☑ A Soils Report by a Soil Scientist (include a sketch of flagged wetland areas within said report).
□ A minimum of two alternative plans/sketches that were considered prior to choosing the proposed plans.
□ A report from the Monroe Health Department.
□ A Wetlands Assessment Report.
☑ An area plan showing all abutting properties and applicable downstream drainage systems.

23. Submit seven **(7)** reduced copies of the following (all plans must be folded):

☑ Reduced copies, **18' x 24'**, of the site plan showing existing and proposed conditions in relation to the wetlands, watercourses and upland review areas. Please include a location map, delineate the 100-foot wetland setback (Upland review area) and/or the l50-foot watercourse setback (upland review area) in red, and incorporate an area plan showing all abutting properties and applicable downstream drainage systems. All plans must have a bar scale.

24. Submit three **(3)** copies of the following (all plans must be folded):

☑ Full size copies of the site plan, **24' x 36'**, showing existing and proposed conditions in relation to the wetlands, watercourses and upland review areas. Please include a location map, delineate the 100-foot wetland Setback (Upland review area) and/or the l50-foot watercourse setback (upland review area) in red, and incorporate an area plan showing all abutting properties and applicable downstream drainage systems. All plans must have a bar scale.

25. Submit two (2) copies of the following:

☑ Drainage calculations, if applicable.

26. Submit one (1) copy of the following:

☑ A list of the names and mailing addresses of all abutting property owners.

☑ A completed **D.E.E.P** report form (available at the Inland Wetlands Office or on the Town Website at www.monroect.gov/Town Hall Departments/Inland Wetlands/Applications & Forms).

☑ Verification in writing that all wetlands have been flagged and the property address/location isadequately delineated and/or marked at the property.

☑ A completed bond form listing all wetlands related work and protective measures for same (available at the Inland Wetlands Office or on the Town Website at www.monroect.org/Town Hall Departments/Inland Wetlands/Applications & Forms).

PLEASE INCLUDE TEN (10) COPIES OF ANY FUTURE SUPPORTING DOCUMENTATION SUBMITTED TO THE COMMISSION AND ONE (1) digital pdf by CD, email or link. (Plans: 3 Full Size copies - 24' x 36', and 7 Reduced Size copies - 18' x 24'). Plans prepared by engineers, surveyors and architects must be signed and sealed. The Commission may request additional copies of the application or supporting documents at any time.

Title of original submission plan (include author and date) 2.1 Site Plan, 2 Victoria Drive, Monroe, Connecticut, Prepared for Paul Stone, by J. Edwards & Associates LLC, Scale 1"=30', dated 03/18/25.

The undersigned applicant hereby consents for the owner, in the case where the applicant is not the owner, to necessary and proper access to the above mentioned property by the Inland Wetlands Commissioners, the Inland Wetlands Agent and other appropriate Town staff and/or authorized Town Consultants, at reasonable times, both before and after any permit has been granted or denied by the Commission, for the purpose of evaluating the application, monitoring compliance or correcting any violation of the Inland Wetlands and Watercourses Regulations brought about through actions or inactions of the applicant of permittee.

The undersigned warrants the truth of all statements contained herein and in all supporting documents according to the best of the applicant's knowledge and belief.

The undersigned applicant understands and agrees that the Commission may request additional information and it is the applicant's responsibility to provide this information in a timely fashion and to the Commission's satisfaction. If the information provided is incomplete or inaccurate, in the opinion of the Commission, the Commission may deny the application or request an extension to be granted by the Applicant in order to act within the legal time limits.

Type or Print the Name of the Applicant: PAUL STONE

Signature of Applicant: Paul Stone

Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

GIS CODE #: ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
For DEEP Use Only

Statewide Inland Wetlands & Watercourses Activity Reporting Form

Please complete this form in accordance with the instructions on pages 2 and 3 and mail to:
DEEP Land & Water Resources Division, Inland Wetlands Management Program, 79 Elm Street, 3rd Floor, Hartford, CT 06106
Incomplete or incomprehensible forms will be mailed back to the inland wetlands agency.

PART I: Must Be Completed By The Inland Wetlands Agency

1. DATE ACTION WAS TAKEN: year: _____ month: _____
2. ACTION TAKEN (see instructions - one code only): _____
3. WAS A PUBLIC HEARING HELD (check one)? yes ☐ no ☐
4. NAME OF AGENCY OFFICIAL VERIFYING AND COMPLETING THIS FORM:
   (print name) _____ (signature) _____

PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant

5. TOWN IN WHICH THE ACTIVITY IS OCCURRING (print name): Monroe
   does this project cross municipal boundaries (check one)? yes ☐ no ☑
   if yes, list the other town(s) in which the activity is occurring (print name(s)): _____, _____
6. LOCATION (see instructions for information): USGS quad name: _____ or number: 93
   subregional drainage basin number: 7105
7. NAME OF APPLICANT, VIOLATOR OR PETITIONER (print name): Sentro LLC
8. NAME & ADDRESS OF ACTIVITY / PROJECT SITE (print information): 2 Victoria Drive
   briefly describe the action/project/activity (check and print information): temporary ☐ permanent ☑ description:
   Construction of 10,000 sf daycare facility and it's appurtenances.
9. ACTIVITY *PURPOSE* CODE (see instructions - one code only): D
10. ACTIVITY *TYPE* CODE(S) (see instructions for codes): 1, 2, 12, _____
11. WETLAND / WATERCOURSE AREA ALTERED (see instructions for explanation, must provide acres or linear feet):
    wetlands: 0 acres open water body: 0 acres stream: 0 linear feet
12. UPLAND AREA ALTERED (must provide acres): 1.12 acres
13. AREA OF WETLANDS / WATERCOURSES RESTORED, ENHANCED OR CREATED (must provide acres): 0 acres

PART III: To Be Completed By The DEEP

DATE RECEIVED: DATE RETURNED TO DEEP:

FORM COMPLETED: YES NO FORM CORRECTED / COMPLETED: YES NO

APPLICATION ATTACHMENTS

Section E. 23- Description of all filling/excavation activities within regulated areas:

For specific activities refer to Section C.14.. Such operations yield quantities resulting in 980 cubic yards of cut and 2260 cubic yards of fill.

2 VICTORIA DRIVE
MONROE, CT
SENTRO, LLC
ADJOINERS LIST

3/5/25

MAP/BLOCK/LOT	STREET ADDRESS	OWNER/MAILING ADDRESS
VICTORIA DRIVE		
004/037/04	5	Kelley Brother Sports, LLC 55 West Road Easton, CT 06612
004/037/03	7	Swiss Army Land Inc. P.O. Box 1212 Monroe, CT 06468
012/047/01	10	Amazon.com Services LLC P.O. Box 80416 Seattle, WA 98109-80416
MAPLE DR.		
012/046	4	Scartaglen LLC 4750 Madison Ave. Trumbull, CT 06611
012/045	8	REM Enterprises LLC 9 David Drive Shelton, CT 06484
012/043	20	State of Connecticut 79 Elm St. Hartford, CT 06106-5127
MAIN STREET		
004/035	36	10 & 36 Main St. LLC 16 Cross Street New Canaan, CT 06840
012/049	75	Corbalite IV LLC 100 Lupes Drive Stratford, CT 06615
PHEASANT LANE		
013/046/08	23	Nash Evelyn Kosar Trustee 23 Pheasant Lane Monroe, CT 06468

J. EDWARDS & ASSOCIATES LLC

March 18, 2025

Andrew Brodtman
Inland Wetland Enforcement Officer
7 Fan Hill Road
Monroe, CT 06468

Re: 2 Victoria Drive

Dear Andrew:

As required in the application form for this Commission, we are verifying in writing that, to the best of our knowledge and belief, a portion of the wetlands were flagged on June 18, 2024 by William Kenny Associates. The flagging adjacent to the Pequonnock River was completed in 2002.

In addition, the property address/location is adequately marked at the site.

Very truly yours,

Nicholas D. Clark, P.E

cc: Application
File 1194a

227 Stepney Road • Easton, CT • 06612 • Phone:203.268.4205 • Fax: 203.268.5604
www.jedwardsassoc.com • www.leassoc.com
Engineering • Surveying • Site Planning

WILLIAM KENNY ASSOCIATES
LANDSCAPE ARCHITECTURE ▪ ECOLOGICAL SERVICES

June 18, 2024

Mr. Jason Edwards
J. Edwards Associates, LLC
227 Stepney Road
Easton, CT 06612

Re: Wetland and Watercourse Delineation
2 Victoria Drive, Monroe, Connecticut

Dear Mr. Edwards:

As requested, we investigated a portion the referenced property and land to the north to determine the presence or absence of wetlands and/or watercourses, to demarcate (flag) the boundaries of wetlands and watercourses identified, and to identify onsite soil types. This letter includes the methods and results of our investigation, which we completed today, June 18, 2024. In summary, two inland wetland systems were identified and delineated. One system, which is located in the northern portion of the property, is a woodland wetland with an intermittent stream which extends and flows west to east. The second system, which is located to the east of the first system, is a woodland wetland/stormwater basin wetland.

Regulatory Definitions

The Inland Wetlands and Watercourses Act (Connecticut General Statutes §22a-38) defines inland wetlands as "land, including submerged land...which consists of any soil types designated as poorly drained, very poorly drained, alluvial, and floodplain." Watercourses are defined in the act as "rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon the state or any portion thereof." The Act defines Intermittent Watercourses as having a defined permanent channel and bank and the occurrence of two or more of the following characteristics: A) evidence of scour or deposits of recent alluvium or detritus, B) the presence of standing or flowing water for a duration longer than a particular storm incident, and C) the presence of hydrophytic vegetation.

Methodology

A second order soil survey in accordance with the principles and practices noted in the USDA publication *Soil Survey Manual* (1993) was completed at the subject site. The classification system of the National Cooperative Soil Survey was used in this investigation. Soil map units identified at the project site generally correspond to those included in the *Soil Survey of the State of Connecticut* (USDA 2005).

1899 Bronson Road
Fairfield CT 06824
203 366 0588
www.wkassociates.net

Wetland determinations were completed based on the presence of poorly drained, very poorly drained, alluvial, or floodplain soils. Soil types were identified by observation of soil morphology (soil texture, color, structure, etc.). To observe the morphology of the property's soils, test pits and/or borings (maximum depth of two feet) were completed at the site.

Intermittent watercourse determinations were made based on the presence of a defined permanent channel and bank and the occurrence of two or more of the following characteristics: A) evidence of scour or deposits of recent alluvium or detritus, B) the presence of standing or flowing water for a duration longer than a particular storm incident, and C) the presence of hydrophytic vegetation.

Wetland boundaries were demarcated (flagged) with pink surveyor's tape (hung from vegetation) or small flags (on wire stakes) labeled "William Kenny Associates" that are generally spaced a maximum of every 50 feet. Complete boundaries are located along the lines that connect these sequentially numbered flags. The wetland boundaries are subject to change until adopted by local, state, or federal regulatory agencies.

Results

The approximate 11.0-acre commercial property is located at 2 Victoria Drive in Monroe, Connecticut. Victoria Drive borders the southern property boundary and Main Street (Route 25) borders the western property boundary. The investigation was limited to the area shown on the attached map. Property improvements include an asphalt driveway. The primary vegetative cover in the investigation area is a broadleaved deciduous woodland. Lawn with other ornamentals and some shade trees are present near Main Street and Victoria Drive.

Two inland wetland systems were identified and delineated. One system, which is located in the northern portion of the property, is a woodland wetland with an intermittent stream which extends and flows west to east. The second system, which is located to the east of the first system, is a woodland wetland/stormwater basin wetland. Wetland soils are primarily poorly drained and formed from glacial till deposits. The approximate locations of the systems are shown on the attached map. The boundaries of the systems were marked at the site with flags numbered 1 to 24 and 30 to 64.

Four soil map units were identified on the property (two wetland and two upland). Each map unit represents a specific area on the landscape and consists of one or more soils for which the unit is named. Other soils (inclusions that are generally too small to be delineated separately) may account for 10 to 15 percent of each map unit. The mapped units are identified in the following table by name and symbol and typical characteristics (parent material, drainage class, high water table, depth to bedrock, and slope). These characteristics are generally the primary characteristics to be considered in land use planning and management. A description of each characteristic and their land use implications follows the table. A complete description of each soil map unit can be found in the *Soil Survey of the State of Connecticut* (USDA 2005), and at *https://soilseries.sc.egov.usda.gov/osdname.aspx.* On the day of the review, the upland soil was dry and the wetland soil was moist to inundated. The sky was clear and air temperatures were in the 80's ° F.

Map Unit Sym.	Map Unit Name	Parent Material	Slope (%)	Drainage Class	High Water Table Depth (ft)	High Water Table Kind	High Water Table Mos.	Depth To Bedrock (in)
	Upland Soil							
51	Sutton very stony fine sandy loam	Loose Glacial Till	3-8	Moderately Well Drained	1.5-3.5	Apparent	Nov-Apr	>60
308	Udorthents, Smoothed	Excavated or Filled Soil (>2 feet)	0-45	Well Drained	>6.0	--	--	>60
	Wetland Soil							
1	Aquents	Excavated or Filled Soil (>2 feet)	0-3	Poorly Drained	0.0-1.5	Apparent	Nov-May	>60
3	Ridgebury	Compact Glacial Till	0-8	Poorly Drained	0.0-1.5	Perched	Nov-May	>60
	Leicester	Loose Glacial Till	0-3	Poorly Drained	0.0-1.5	Apparent	Nov-May	>60
	Whitman extremely stony fine sandy loam	Compact Glacial Till	0-3	Very Poorly Drained	0.0-0.5	Perched	Sep-Jun	>60

Parent material is the unconsolidated organic and mineral material in which soil forms. Soil inherits characteristics, such as mineralogy and texture, from its parent material. Glacial till is unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice. Glacial outwash consists of gravel, sand, and silt, which are commonly stratified and deposited by glacial melt water. Alluvium is material such as sand, silt, or clay, deposited on land by streams. Organic deposits consist of decomposed plant and animal parts.

A soil's texture affects the ease of digging, filling, and compacting and the permeability of a soil. Generally sand and gravel soils, such as outwash soils, have higher permeability rates than most glacial till soils. Soil permeability affects the cost to design and construct subsurface sanitary disposal facilities and, if too slow or too fast, may preclude their use. Outwash soils are generally excellent sources of natural aggregates (sand and gravel) suitable for commercial use, such as construction sub base material. Organic layers in soils can cause movement of structural footings. Compacted glacial till layers make excavating more difficult and may preclude the use of subsurface sanitary disposal systems or increase their design and construction costs if fill material is required.

Generally, soils with steeper slopes increase construction costs, increase the potential for erosion and sedimentation impacts, and reduce the feasibility of locating subsurface sanitary disposal facilities.

Drainage class refers to the frequency and duration of periods of soil saturation or partial saturation during soil formation. Seven classes of natural drainage classes exist. They range from excessively drained, where water is removed from the soil very rapidly, to very poorly drained, where water is removed so slowly that free water remains at or near the soil surface during most of the growing season. Soil drainage affects the type and growth of plants found in an area. When landscaping or gardening, drainage class information can be used to assure that proposed plants are adapted to

existing drainage conditions or that necessary alterations to drainage conditions (irrigation or drainage systems) are provided to assure plant survival.

High water table is the highest level of a saturated zone in the soil in most years. The water table can affect the timing of excavations; the ease of excavating, constructing, and grading; and the supporting capacity of the soil. Shallow water tables may preclude the use of subsurface sanitary disposal systems or increase design and construction costs if fill material is required.

The depth to bedrock refers to the depth to fixed rock. Bedrock depth affects the ease and cost of construction, such as digging, filling, compacting, and planting. Shallow depth bedrock may preclude the use of subsurface sanitary disposal systems or increase design and construction costs if fill material is required.

Conclusions

Today, we investigated a portion of the property at 2 Victoria Drive in Monroe, Connecticut and identified and delineated two inland wetland systems. Thank you for the opportunity to assist you. If you should have any questions or comments, please do not hesitate to contact us.

Sincerely,

William L. Kenny, PWS, PLA
Soil Scientist

Alexander Wojtkowiak
Soil Scientist

Enclosure

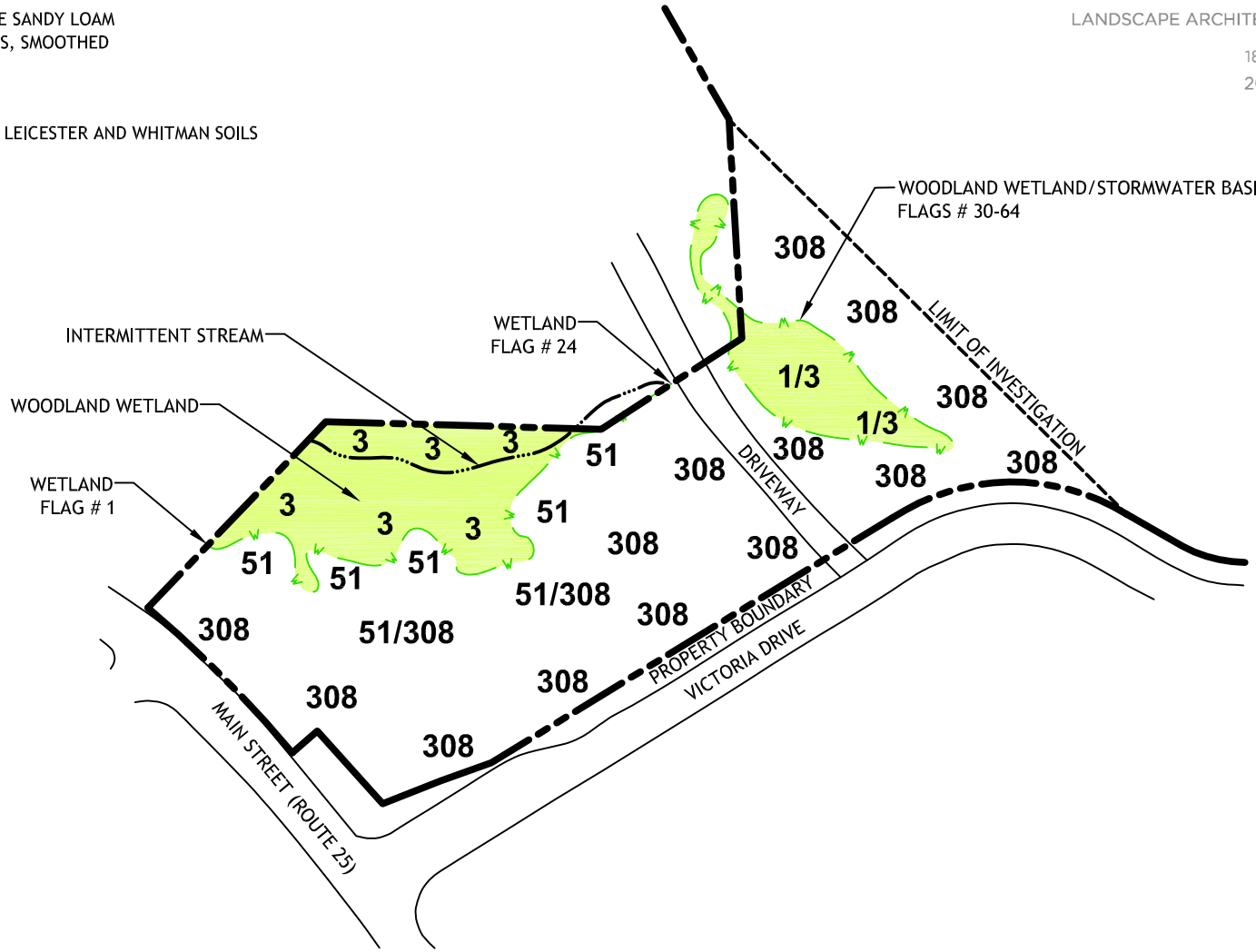
Ref. No. 3339

SOIL LEGEND

UPLAND
51 SUTTON FINE SANDY LOAM
308 UDORTHENTS, SMOOTHED

WETLAND
1 AQUENTS
3 RIDGEBURY, LEICESTER AND WHITMAN SOILS

WILLIAM KENNY ASSOCIATES
LANDSCAPE ARCHITECTURE ▪ ECOLOGICAL SERVICES
1899 Bronson Road Fairfield CT 06824
203 366 0588 www.wkassociates.net



NOTES:

- *INFORMATION SHOWN ON THIS DRAWING, INCLUDING THE WETLAND BOUNDARY, IS APPROXIMATE. THE BOUNDARY IS NOT A SURVEYED REPRESENTATION OF WHAT WAS FIELD MARKED (FLAGGED).*
- *WETLAND AND SOIL INFORMATION PROVIDED BY WILLIAM KENNY ASSOC. OTHER INFORMATION TAKEN FROM A DRAWING PREPARED BY SOLLI ENGINEERING, LLC.*
- ***51, 308, 1** AND **3** ARE SOIL MAPPING UNIT SYMBOLS. SEE WETLAND DELINEATION REPORT FOR THE SOIL MAP UNIT NAMES AND ADDITIONAL RELATED INFORMATION.*

I CERTIFY THAT THIS WETLAND MAP SUBSTANTIALLY REPRESENTS THE SOILS AND WETLANDS MAPPED IN THE FIELD

WILLIAM L. KENNY, SOIL SCIENTIST

WETLAND & WATERCOURSE MAP

2 VICTORIA DRIVE
MONROE, CONNECTICUT

SCALE: NOT TO SCALE
DATE: JUNE 18, 2024

Ref. No. 3339

NORTH

DIRECTLY CONNECTED IMPERVIOUS AREA TRACKING FORM

TOWN OF MONROE
ENGINEERING DEPARTMENT
7 Fan Hill Road, Monroe, CT 06468
(203) 452-2812

FOR OFFICE USE:

Application No: _____
File Number - _____

The Town is a registrant under the Connecticut Department of Energy and Environmental Protection's (CTDEEP) General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit). In accordance with Section 6(a)(6)(B)(ii)(a) of the MS4 General Permit, the Town is required to track the amount of impervious coverage of directly connected impervious area (DCIA) that is added as a result of projects within the Town. The Town is maintaining a database of coverage to track changes in DCIA, which it will use in its Annual Report to CTDEEP.

Project Data	
Owner	Sentro LLC
(2) CTDEEP Basin No. (XXXX-XX-X) https://cteco.uconn.edu/viewers/ctms4/	7105-01-2
(3) (4) Street Address	2 Victoria Drive
(5) Brief Project Description	Construction of 10,500 sf daycare facility and its appurtenances.

"Directly Connected Impervious Area (DCIA)" means that impervious area from which stormwater runoff discharges directly to waters of the state or directly to a storm sewer system that discharges to waters of the state. Impervious areas that discharge through a system designed to retain the appropriate portion of the Water Quality Volume (pursuant to Section 6(a)(5)(b)(i) or (ii) of the MS4 General Permit) are not considered DCIA.

Existing Impervious Cover Summary	
(6) Site Total Impervious Cover (ac)	0
(7) Area Treated by Stormwater Practices (ac)	0

Proposed Impervious Cover Summary	
(9) Project Type, check ONE	☒ New Development ☐ Redevelopment
(10) Site Total Impervious Cover (ac)	0.8211ac

Post-Development Impervious Cover Treated by Stormwater Practices (acres)

Note: Do not double-count treatment. If a particular area on the site is treated by two practices in series, for the purposes of this tracking form, credit that area for only the treatment practice closest to the source. Total of these columns shall not exceed the Site Total Impervious Cover.

11-P1 Stormwater Pond		11-S5 Dry Swales	
11-P2 Stormwater Wetlands		11-S6 Permeable Pavement	
11-P3 Infiltration Practices	0.8211ac	11-S7 Vegetated Filter Strips	
11-P4 Filtering Practices		11-S8 Grass Drainage Channels	
11-P5 Water Quality Swales		11-S9 Catch Basin Inserts	
11-S1 Dry Detention Pond		11-S10 Hydrodynamic Separators	
11-S2 Underground Detention		11-S11 Media Filters	
11-S3 Deep Sump Catch Basins		11-S12 Underground Infiltration Systems	
11-S4 Oil/Particle Separators		11-S13 Alum Injection	
		Total all values, 11-P1 through 11-S13	0.8211ac

TOWN OF MONROE

Issued: 10-9-07

BOND ESTIMATE FORM (Private Site Development)

☐ PLANNING & ZONING COMMISSION
MEETING DATE_____

APPLICANT: Paul Stone
ENGINEER: J. Edwards & Associates, LLC
TEL.: 203-268-4205

*APPLICATION NO: _____
*FILE NO: _____
DATE: _____

PROJECT NAME: 2 Victoria Drive

PROJECT LOCATION: _____

(IWWC BOND)

*BOND RECOMMENDATION

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	COST	Comments by Town Engr. Unit Price*	Comments by Town Engr. Cost*
1.	Sedimentation and Erosion Control Measures	L.S.	184	16/cy	2,944		
2.	Silt Fence or Hay Bales	L.F.	1,150	4.2/lf	4,830		
3.	Topsoil, Seed, Fertilizing, and Mulching (entire disturbed area)	S.F.	48,840	0.65/sf	31,746		
4.	Landscaping (extent to provide for restoration and aesthetic considerations)	L.S. lb	122	8/lb	976		
5.	Grading (for site restoration that will provide safe and stable conditions)	L.S.	2 days	1500/day	3,000		
6.	Other (anti-track pad)		1	1225/ea	1,225		
					44,721		
	(+) 10% for Contingencies				4,472		
* To be filled in by the Town				Total Cost =	49,200	*	

Submitted by: ndc

Approved by: _____

Total costs as determined by the Town Engineer represent adjusted values assuming a Municipal bid arrangement with inflation, noting that the terms of the bond may be in effect for up to 10 or more years (statutory time allowance for performance of requirements).

SITE IMPROVEMENTS
2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

VICINITY MAP

LIST OF DRAWINGS

1.0	TITLE SHEET
1.1	EXISTING CONDITIONS SURVEY
1.2	CONCEPTUAL SUBDIVISION PLAN
1.3	AREA PLAN
2.1	SITE PLAN
2.2	UNDERGROUND UTILITIES PLAN
2.3	EROSION & SEDIMENT CONTROL PLAN
3.1	SITE PLAN ALTERNATE
4.1–4.6	DETAILS

J. EDWARDS & ASSOCIATES LLC
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227 Stepney Road Easton, CT 06612
Phone:203.268.4205 Fax: 203.268.5604
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PERMIT SET – NOT FOR CONSTRUCTION

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE:

TITLE

SHEET NUMBER

1.0

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\TITLE

NOTES:

1. THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH THE SECTIONS 20–300B–1 THROUGH 20–300B–20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES – "MINIMUM STANDARDS FOR SURVEY AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. IT IS AN IMPROVEMENT LOCATION SURVEY BASED UPON A DEPENDENT RESURVEY AND CONFORMS TO HORIZONTAL ACCURACY CLASS A–2.

2. REFERENCE IS MADE TO THE FOLLOWING MAPS ON FILE IN THE MONROE TOWN CLERK'S OFFICE:
   A. "RESUBDIVISION PLAN OF 2 VICTORIA DRIVE, MONROE, CONNECTICUT. PREPARED FOR KIMBALL LAND HOLDINGS, LLC & KIMBALL DEVELOPMENT, LLC, 523 PEPPER STREET, MONROE, CT 06468. SHEETS 1 OF 3, 2 OF 3 AND 3 OF 3" SCALE 1"=60'. DATED 04–04–14; REVISED TO 11–12–15. PREPARED BY ACCURATE LAND SURVEYING. ON FILE AS RECORD MAPS #3144A, 3144B AND 3144C.
   B. "RIGHT OF WAY SURVEY, TOWN OF MONROE. MAP SHOWING LAND ACQUIRED FROM 38–44 MAIN STRET, LLC. BY THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION." SCALE 1"=30'. DATED JUNE 9, 2017. ON FILE AS RECORD MAP #3223.

3. THE LOCATION OF UNDERGROUND UTILITIES, IF ANY, IS UNKNOWN

4. PLAN PREPARED FOR OWNER.

5. LOT CORNER MARKERS DEPICTED HEREON WERE FOUND AND/OR SET DURING COMPLETION OF THIS SURVEY.

6. BEARING BASED ON THE MAPS REFERENCED IN NOTE 2A ABOVE.

7. CERTIFICATION OF THIS MAP APPLIES TO CONDITIONS AS OF THE ORIGINAL DATE OR REVISED DATE DEPICTED HEREON. EXISTING CONDITIONS ON THIS PROPERTY MAY HAVE CHANGED SINCE THAT DATE AND AN UPDATED SURVEY IS RECOMMENDED TO ACCURATELY DEPICT THE CURRENT CONDITIONS.

8. PORTIONS OF THE PROPERTY ARE IN FLOOD ZONES, AS NOTED, PER FEMA FLOOD INSURANCE RATE MAP, FAIRFIELD COUNTY, CONNECTICUT, MAP NUMBER 09001C0286F, EFFECTIVE DATE JUNE 18, 2010.

9. PROPERTY IS LOCATED IN ZONE B–2.

SCHEDULE B –– EXCEPTIONS
REFERENCE IS MADE TO ALTA COMMITTMENT FOR TITLE INSURANCE
PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY

9. Riparian or littoral rights of others in or to any watercourse or body of water on or adjacent to the property. NOT PLOTTABLE

10. Water rights as set forth in the following instruments:
a. Quit Claim Deed from Aaron B. Goodsell to Ida E. Eastwood dated and recorded November 30, 1914 in Volume 12 at Page 758 ofthe Monroe Land Records. NOT PLOTTABLE
b. Quit Claim Deed from Aaron B. Goodsell to Elbert R. Eastwood dated and recorded November 30, 1914 in Volume 12 at Page 761 ofthe Monroe Land Records. NOT PLOTTABLE

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c. Warranty Deed from Genevieve W. Eastwood to Julius Lieberman dated February 9, 1949 and recorded February 11, 1949 in Volume 42 al Page 93 of the Monroe Land Records.

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14. Reservations in Warranty Deed from Vitramon, Incorporated to Trefoil/Trumbull Associates Limited Partnership dated June 25, 1985 and recorded July 17, 1985 in Volume 286 at Page 168 of the Monroe Land Records and re–recorded August 15, 1985 in Volume 288 at Page 226 of the Monroe Land Records. NOT PLOTTABLE

17. Reservations, easements, agreements, conditions and all other matters set forth in the following Deed(s):
E. Special Warranty Deed from Kimball Land Holdings, LLC to 38–44 Main Street, LLC dated November 16, 2005 and recorded November 21,2005 in Volume 1395 at Page 100 of the Monroe Land Records. NOT PLOTTABLE

20. Access and Utilities Easement from Kimball Land Holdings, LLC to E & P Associates dated July 31, 2003 and recorded August 1 , 2003 in Volume 1 188 at Page 95 of the Monroe Land Records. AS NOTED

26. Access and Utility Easement from Kimball Land Holdings, LLC to REM Enterprises, LLC dated April 26,2004 and recorded April 28, 2004 in Volume 1263 at Page 332 of the Monroe Land Records. AS NOTED

27. Access and Utility Easement from Kimball Land Holdings, LLC to Robert F. O'Keefe and Maureen T. O'Keefe dated and recorded April28,2004 in Volume 1264 at Page 146 of the Monroe Land Records and as re–recorded on June 16,2004 in Volume 1278 al Page 193 of the Monroe Land Records. AS NOTED

31. Easement Agreement by and between Kimball Land Holdings, LLC and The Southern New England Telephone Company d/b/a SBC Connecticut dated September 1,2004 and recorded September 3,2004 in Volume 1297 al Page 162 of the Monroe Land Records. AS NOTED

32. Electric Distribution Easement from Kimball Land Holdings, LLC to The Connecticut Light and Power Company dated November 9,2004 and recorded November 17,2004 in Volume 1312a|Page 18 of the Monroe Land Records, and as partially assigned by a Partial Assignment of Easement Rights to The Southern New England Telephone Company d/b/a AT&T Connecticut dated October 2,2000 and recorded March 7,2008 in Volume 1538 at Page 30 of the Monroe Land Records. AS NOTED

33. Easement from Kimball Land Holdings, LLC and 38–44 Main Street, LLC to the State of Connecticut dated March 15, 2006 and recorded November 22,2006 in Volume 14'15 alPage 124 of the Monroe Land Records. AS NOTED

34. Trail Easement from 38–44 Main Street, LLC and Kimball Land Holdings, LLC to the Town of Monroe dated and recorded April4,2006 in Volume 1417 alPage267 of the Monroe Land Records, and as modified by a Modification of Easement dated and recorded July 9, 2015 in Volume 1884 at Page 206 of the Monroe Land Records. AS NOTED

37. Electric Distribution Easement from Kimball Land Holdings, LLC and 38–44 Main Street, LLC to The Connecticut Light and Power Company dated and recorded March 15, 2007 in Volume 1480 at Page 321 of the Monroe Land Records. AS NOTED

38. Right of Way Agreement between Kimball Land Holdings, LLC and 38–44 Main Street, LLC in favor of Aquarion Water Company dated June 29, 2007 and recorded May 9, 2008 in Volume '1547 at Page 132 of the Monroe Land Records. AS NOTED

43. Declaration of Restrictions and Covenants by Kimball Land Holdings, LLC and Kimball Development, LLC dated July 9, 2015 and recorded July 9, 2015 in Volume 1884 at Page 211 of the Monroe Land Records. NOT PLOTTABLE

46. Effect, if any, of a Traffic Investigation Report to the State Traffic Commission (STC No. 173–1309–01) dated December 22, 2015 and recorded January 6, 2016 in Volume 1905 at Page247 of the Monroe Land Records. Certificate issued by the State of Connecticut, Department of Transportation to Victoria Drive Associates, LLC and Kimball Land Holdings, LLC & Kimball Development, LLC (Certificate No. 1601–8) dated July 25,2017 and recorded July 26, 2017 in Volume 1968 at Page 258 of the Monroe Land Records. NOT PLOTTABLE

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TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

THIS MAP IS NOT VALID UNLESS EMBOSSED WITH THE SEAL OR AFFIXED WITH THE LIVE STAMP OF THE SIGNATORY.

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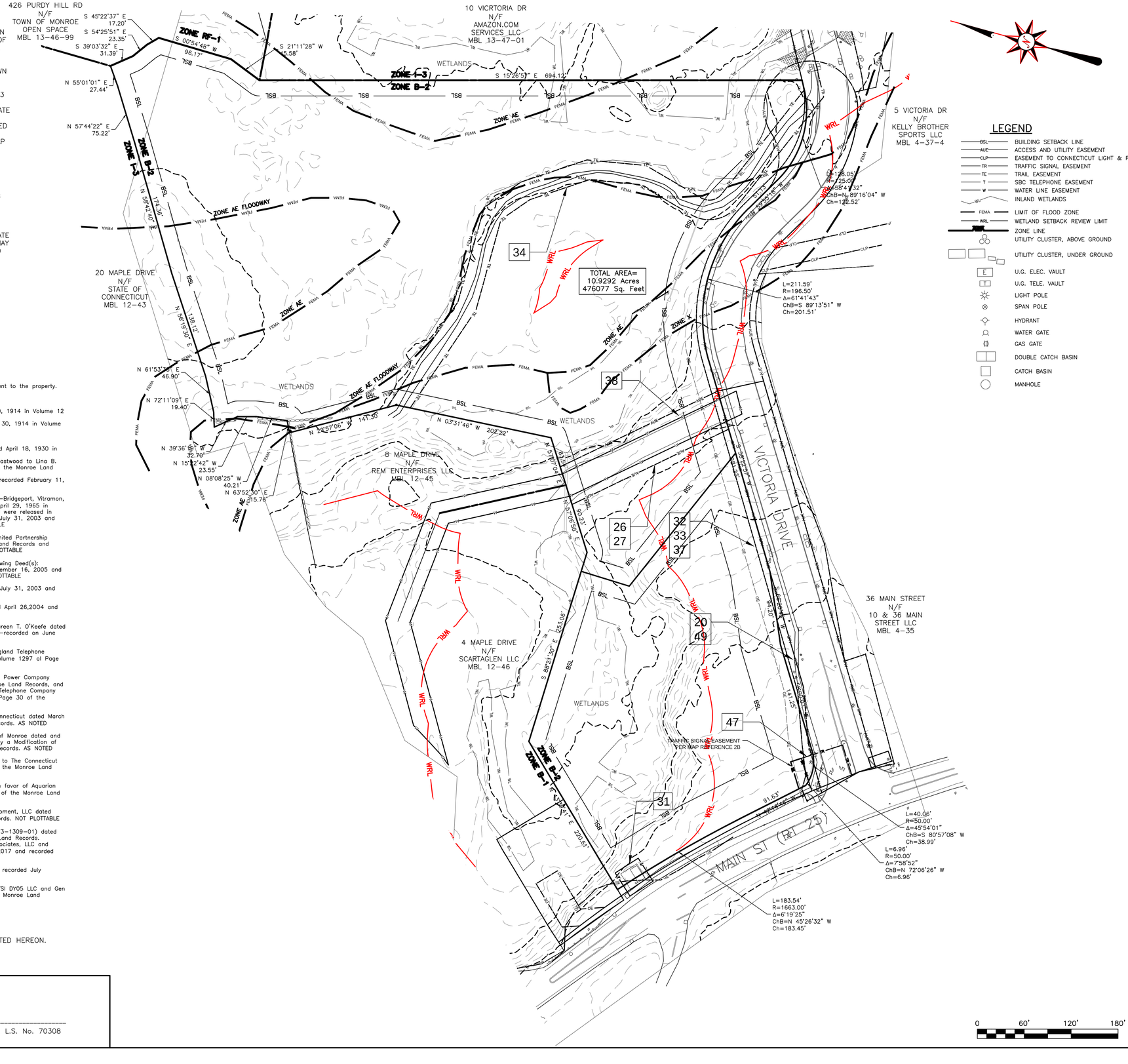
JASON EDWARDS, L.S. No. 70308



LEGEND

- BSL — BUILDING SETBACK LINE
- AUE — ACCESS AND UTILITY EASEMENT
- CLP — EASEMENT TO CONNECTICUT LIGHT & POWER
- TR — TRAFFIC SIGNAL EASEMENT
- TE — TRAIL EASEMENT
- T — SBC TELEPHONE EASEMENT
- W — WATER LINE EASEMENT
- WL — INLAND WETLANDS
- FEMA — LIMIT OF FLOOD ZONE
- WRL — WETLAND SETBACK REVIEW LIMIT
- ZONE LINE
- UTILITY CLUSTER, ABOVE GROUND
- UTILITY CLUSTER, UNDER GROUND
- E — U.G. ELEC. VAULT
- T — U.G. TELE. VAULT
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- SPAN POLE
- HYDRANT
- WATER GATE
- GAS GATE
- DOUBLE CATCH BASIN
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2 VICTORIA DRIVE
MONROE, CONNECTICUT

REVISIONS

#	DATE	DESCRIPTION
1	3/18/25	IWWC

DATE: 7/1/24
PROJECT #: 11942A
DRAWING FILE: EX
DRAWN BY: IE
SCALE: 1"=60'

TITLE

EXISTING CONDITIONS PLAN

SHEET NUMBER

1.1

FILE NO. 11942A

NOTES:
1. THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH THE SECTIONS 20–300B–1 THROUGH 20–300B–20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES – "MINIMUM STANDARDS FOR SURVEY AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. IT IS AN IMPROVEMENT LOCATION SURVEY BASED UPON A DEPENDENT RESURVEY AND CONFORMS TO HORIZONTAL ACCURACY CLASS A–2.

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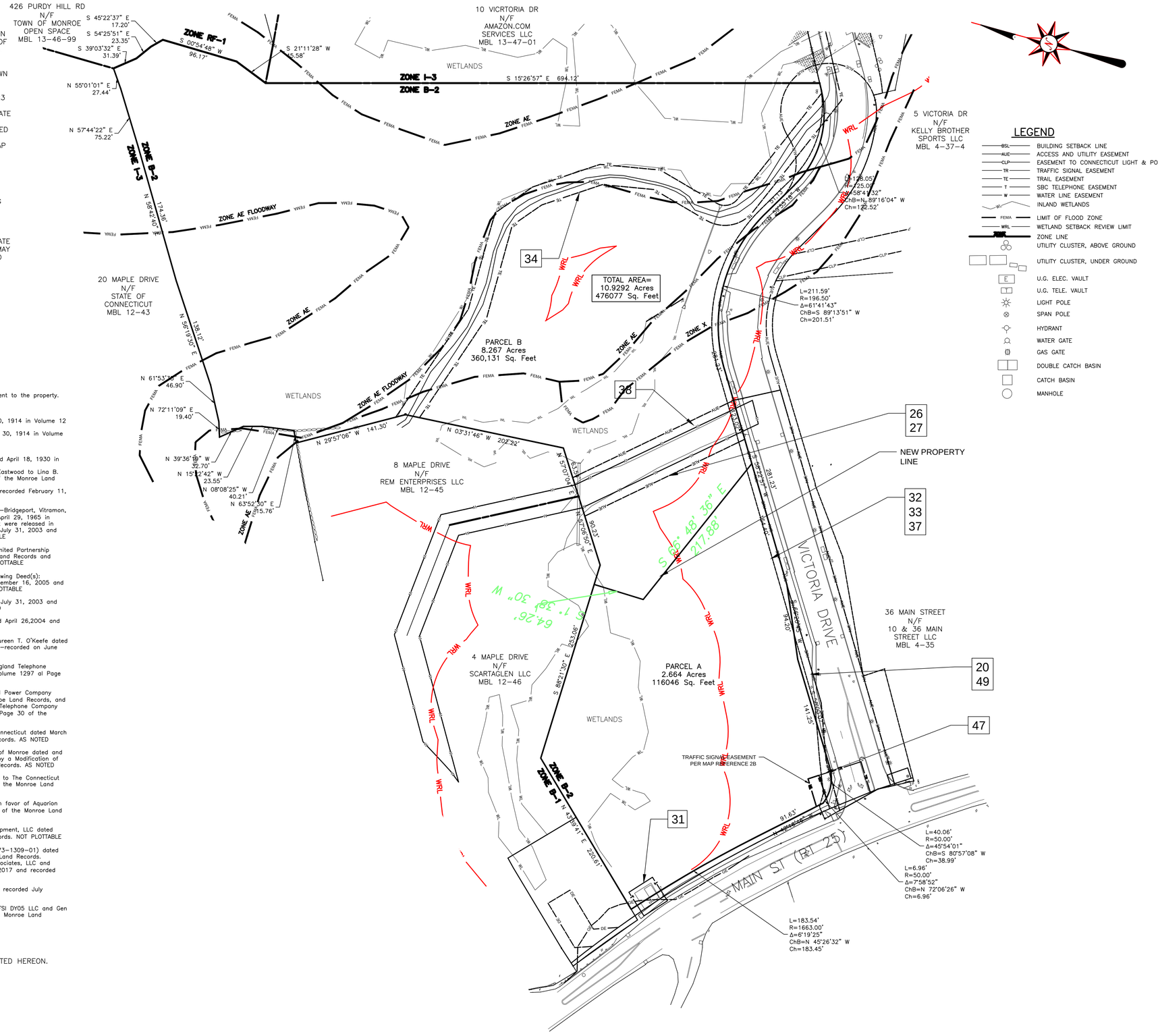
JASON EDWARDS, L.S. No. 70308



LEGEND

BSL	BUILDING SETBACK LINE
AUE	ACCESS AND UTILITY EASEMENT
CLP	EASEMENT TO CONNECTICUT LIGHT & POWER
TR	TRAFFIC SIGNAL EASEMENT
TE	TRAIL EASEMENT
T	SBC TELEPHONE EASEMENT
W	WATER LINE EASEMENT
WL	INLAND WETLANDS
FEMA	LIMIT OF FLOOD ZONE
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	UTILITY CLUSTER, ABOVE GROUND
	UTILITY CLUSTER, UNDER GROUND
E	U.G. ELEC. VAULT
T	U.G. TELE. VAULT
	LIGHT POLE
	SPAN POLE
	HYDRANT
	WATER GATE
	GAS GATE
	DOUBLE CATCH BASIN
	CATCH BASIN
	MANHOLE

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www.jedwardsassoc.com

STATE OF CONNECTICUT JASON A. EDWARDS No. 70308 LICENSED LAND SURVEYOR

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: 1"=60'

TITLE

CONCEPTUAL SUBDIVISION PLAN

SHEET NUMBER

1.2

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\1.2-SB

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- 520.2 EXISTING SPOT ELEVATION
- 520.2 PROPOSED SPOT ELEVATION
- EXISTING DRAINAGE
- PROPOSED DRAINAGE
- EXISTING SANITARY
- PROPOSED SANITARY
- L SANITARY LATERALS
- FM FORCE MAIN
- FD FOOTING DRAIN
- RD ROOF DRAIN
- W WATER SERVICE
- G GAS LINE
- COTG CLEAN OUT TO GRADE
- FF FINISHED FLOOR
- GF GARAGE FLOOR
- BS BASEMENT SLAB
- R HANDICAP RAMP
- V VAN ACCESSIBLE SPACE
- WL 27 INLAND WETLANDS WITH FLAG #
- OBSERVATION HOLE
- PERCOLATION TEST
- GTD GRADE TO DRAIN
- SF SYNTHETIC FILTER BARRIER
- WATER BREAK
- LOD LIMIT OF DISTURBANCE
- FE FOUNDATION ENVELOPE
- BUILDING SETBACK LINE
- DE DRAINAGE EASEMENT
- GE GRADING EASEMENT
- SR SLOPE RIGHTS
- CE CONSERVATION EASEMENT
- ME MAINTENANCE EASEMENT
- UPLAND REVIEW LIMIT
- WATERCOURSE
- WATERCOURSE OFFSET

60 0 60 120

PERMIT SET — NOT FOR CONSTRUCTION

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STATE OF CONNECTICUT — JOHN E. EDWARDS — No. 10308 — LICENSED PROFESSIONAL ENGINEER

STATE OF CONNECTICUT — JASON EDWARDS — No. 70308 — LICENSED LAND SURVEYOR

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: 1"= 60'

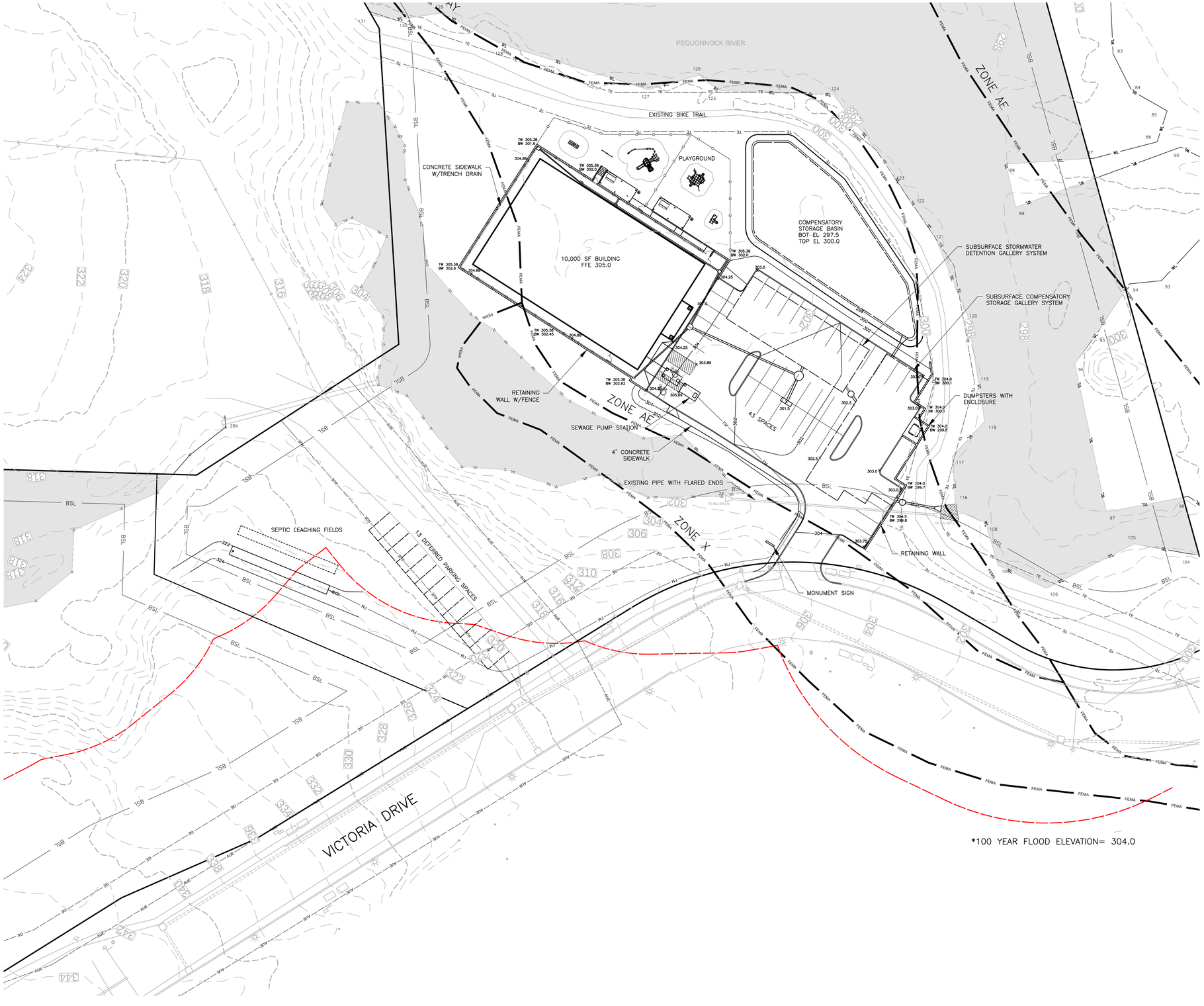
TITLE

AREA PLAN

SHEET NUMBER

1.3

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\1.3 A-1 AREA PLAN



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING DRAINAGE
- PROPOSED DRAINAGE
- EXISTING SANITARY
- PROPOSED SANITARY
- SANITARY LATERALS
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- UPLAND REVIEW LIMIT
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- WATERCOURSE OFFSET

30 0 30 60

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STATE OF CONNECTICUT — JOSEPH E. EDWARDS — No. 10927 — REGISTERED PROFESSIONAL ENGINEER

STATE OF CONNECTICUT — JASON L. EWING — No. 30308 — LICENSED LAND SURVEYOR

PERMIT SET – NOT FOR CONSTRUCTION

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: 1"= 30'

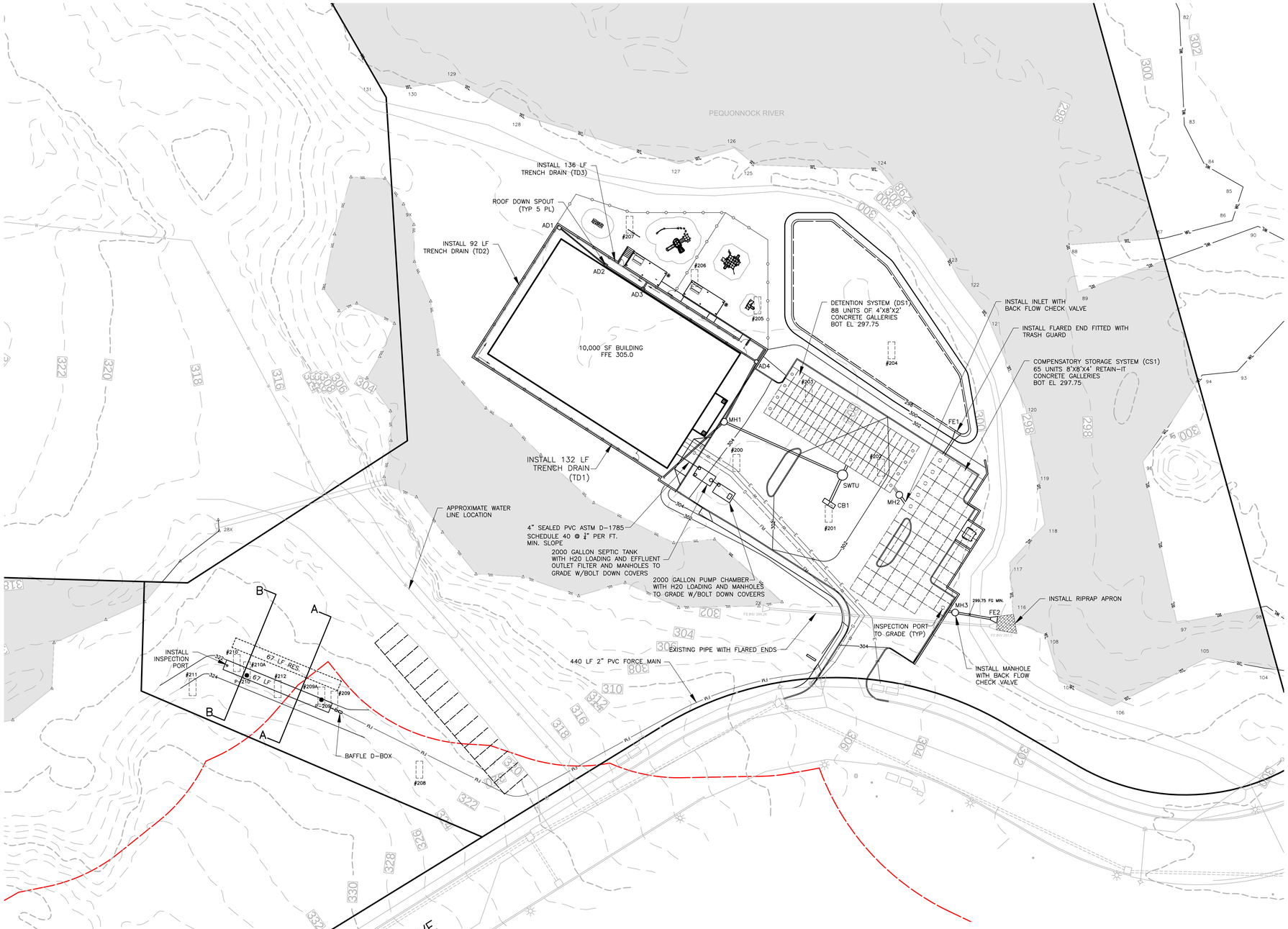
TITLE

SITE PLAN

SHEET NUMBER

2.1

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\2.1 SITE PLAN



DRAINAGE STRUCTURES

ALL CB's ARE TYPE C-L UNLESS NOTED OTHERWISE

CB1 (DBL) TF 301.5 INV 298.0	MH1 TF 304.2 INV 300.0 (6"SW) INV 299.18 (8"NE) INV 298.6 (15"SE)	MH2 TF 302.4 INV 299.5 ((2)8"NW) INV 297.8 (15"SE)	MH3 TF XXX INV XXX	AD1 TF 304.88 INV 302.88
AD2 TF 305.45 INV 302.5	AD3 TF 305.45 INV 302.25	AD4 TF 304.75 INV 301.5	FE1 INV 297.5	FE2 INV 297.0
SWTU TF 301.6 INV 297.81				

DRAINAGE PIPES

ALL PIPES ARE HDPE UNLESS NOTED OTHERWISE. PIPE LENGTHS ARE FROM CL TO CL OF STRUCTURES

FROM CB1 TO SWTU SIZE: 15" SLOPE: 1% LENGTH: 19 LF	FROM SWTU TO DS1 SIZE: 15" SLOPE: 1% LENGTH: 6 LF	FROM DS1* TO MH2 SIZE: 15" SLOPE: 2% LENGTH: 5 LF	FROM MH2 TO CS1 SIZE: 15" SLOPE: 1% LENGTH: 5 LF	FROM CS1 TO MH3 SIZE: 12" SLOPE: 2.59% LENGTH: 4 LF
FROM MH3 TO FE2 SIZE: 12" SLOPE: 2.59% LENGTH: 25 LF	FROM AD1 TO AD2 SIZE: 6" SLOPE: 1.08% LENGTH: 35 LF	FROM AD2 TO AD3 SIZE: 6" SLOPE: 0.96% LENGTH: 26 LF	FROM AD3 TO AD4 SIZE: 8" SLOPE: 0.95% LENGTH: 79 LF	FROM AD4 TO MH1 SIZE: 8" SLOPE: 5.8% LENGTH: 40 LF
FROM MH1 TO SWTU SIZE: 15" SLOPE: 5% LENGTH: 76 LF	FROM FE1 TO CS1 SIZE: 15" SLOPE: 1.92% LENGTH: 13 LF	FROM TD1 TO MH1 SIZE: 6" SLOPE: 6% LENGTH: 48 LF		

*TWIN 8" PVC SCH-40 PIPES

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- 520.2 EXISTING SPOT ELEVATION
- 520.2 PROPOSED SPOT ELEVATION
- EXISTING DRAINAGE
- PROPOSED DRAINAGE
- EXISTING SANITARY
- PROPOSED SANITARY
- L SANITARY LATERALS
- FM FORCE MAIN
- FD FOOTING DRAIN
- RD ROOF DRAIN
- W WATER SERVICE
- G GAS SERVICE
- E ELECTRIC SERVICE
- COTG CLEAN OUT TO GRADE
- FF FINISHED FLOOR
- GF GARAGE FLOOR
- BS BASEMENT SLAB
- R HANDICAP RAMP
- V VAN ACCESSIBLE SPACE
- WL 27 INLAND WETLANDS WITH FLAG #
- OBSERVATION HOLE
- PERCOLATION TEST
- GTD GRADE TO DRAIN
- SF SYNTHETIC FILTER BARRIER
- WATER BREAK
- LOD LIMIT OF DISTURBANCE
- FE FOUNDATION ENVELOPE
- BUILDING SETBACK LINE
- DE DRAINAGE EASEMENT
- GE GRADING EASEMENT
- SR SLOPE RIGHTS
- CE CONSERVATION EASEMENT
- ME MAINTENANCE EASEMENT
- UPLAND REVIEW LIMIT
- WATERCOURSE
- WATERCOURSE OFFSET

30 0 30 60

PERMIT SET – NOT FOR CONSTRUCTION

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STATE OF CONNECTICUT — JOHN R. EDWARDS — No. 10027 — REGISTERED PROFESSIONAL ENGINEER

STATE OF CONNECTICUT — JASON L. EDWARDS — No. 30308 — LICENSED LANDSCAPE ARCHITECT

2 VICTORIA DRIVE MONROE, CONNECTICUT

PREPARED FOR PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: 1"= 30'

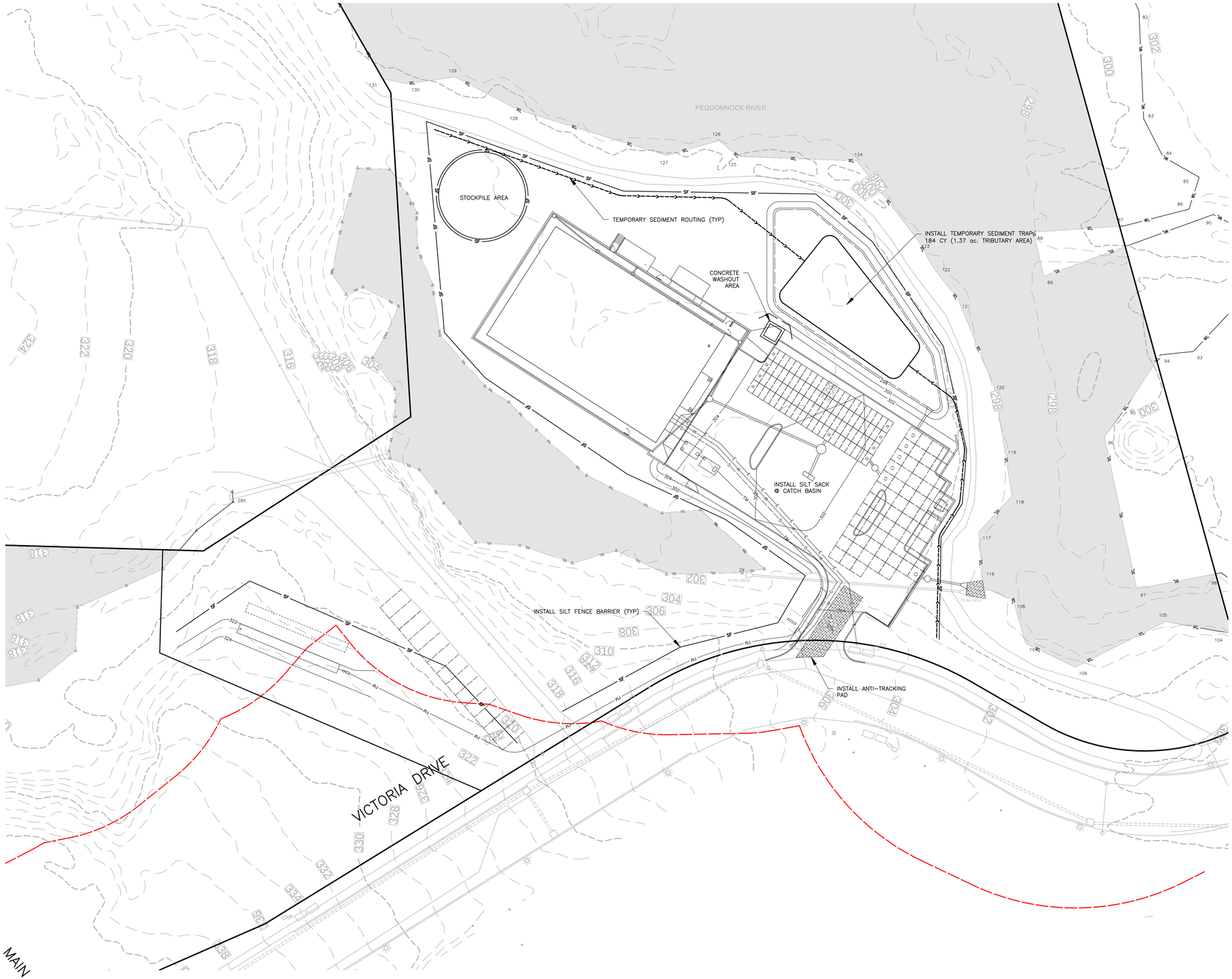
TITLE

UNDERGROUND UTILITIES PLAN

SHEET NUMBER

2.2

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\2.2 UNDERGROUND UTILITIES PLAN



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- 520.2 EXISTING SPOT ELEVATION
- 520.2 PROPOSED SPOT ELEVATION
- EXISTING DRAINAGE
- PROPOSED DRAINAGE
- EXISTING SANITARY
- PROPOSED SANITARY
- L SANITARY LATERALS
- FM FORCE MAIN
- FD FOOTING DRAIN
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40 0 40 80

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STATE OF CONNECTICUT — JASON E. EDWARDS — No. 10308 — LICENSED LANDSCAPE ARCHITECT

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: 1"= 40'

TITLE

EROSION & SEDIMENT CONTROL PLAN

SHEET NUMBER

2.3

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\2.3 EROSION CONTROL PLAN

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2 VICTORIA DRIVE
MONROE, CONNECTICUT

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE:	7/1/24
PROJECT #:	11942A
DRAWING FILE:	EX
DRAWN BY:	IE
SCALE:	1"=40'

TITLE

ALTERNATIVE CONCEPTUAL SITE PLAN

SHEET NUMBER

3.1

FILE NO. 11942A

GENERAL NOTES

1. The proposed improvements indicated on these plans are shown as one of many possible layouts. Any variation from these plans is to be approved by the design Engineer and may require Municipal approval.

2. Topographic data and property lines are based on an Existing Conditions Plan, 2 Victoria Drive Monroe, Connecticut, Scale 1"=60', Dated 3-18-25 by J. Edwards & Associates, LLC.

3. Owner: Sentro LLC
16 Cross Street
New Cannan, CT 06840

Applicant: Paul Stone
16 Cross Street
New Canaan, CT 06840

4. Total area of site is 8.26 acres.

5. The site contains 4.47 ac of wetlands.

6. Reference is made to a document titled: Stormwater Management Report for the proposed Site Improvements Located At 2 Victoria Drive, Monroe CT., Prepared On: March 18, 2025 Prepared by J. Edwards & Associates LLC.

7. The site will be served with public water and a private sewage disposal system.

8. The location of underground utilities, if any, is unknown. Call Before-You-Dig 1-800-922-4455.

9. Retaining walls are to be designed by a structural engineer. Retaining wall over three (3) feet high require a building permit.

10. It is the contractor's responsibility to verify all on-site and off-site field conditions and establish that no changes have occurred since the issuance of this plan. The design engineer is to be notified of any field conditions which conflict with this plan.

11. Existing grades shown hereon are to be verified by the contractor prior to commencing construction. The benchmark shown on these plans is to be verified by the contractor prior to commencing construction.

12. All construction methods, materials and system installations are to conform to Town of Monroe Standards and the State of Connecticut Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction, Form 818, July 2020, with latest revisions, to conform all applicable local and state regulations and to normal standards of good practice.

13. All new, altered or replacement utilities shall be installed underground.

14. All roof drains shall discharge to the designated detention system.

15. The contractor shall submit shop drawings for all drainage, detention, retention, septic and sewer structures and drainage pumps to the design engineer for his approval prior to installation. Shop drawings shall also be submit for any facilities requested by the design engineer at the preconstruction meeting.

16. The contractor shall be responsible for obtaining "as-built" drawings by a licensed land surveyor of detention facilities and septic system.

17. Construction shall only commence upon completion of a pre-construction meeting that includes authorization to start construction.

18. Approximately 1.14 acres will be disturbed for the improvements indicated on the plans.

STORM WATER POLLUTION CONTROL PLAN

Project description

The proposal is for the construction of a 10,000 sf daycare center and it's appurtenances.

1. Erosion and sediment control measures will be constructed in accordance with the Town of Monroe Standards, State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 818, 2020, with latest revisions, and 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, Dep Bulletin 34.

2. The Stormwater Pollution Control Plan shall include all erosion and sedimentation control shown on the approved maps and detail sheets. These controls are assumed to be the minimum required, and the contractor may be required to install additional measures as site conditions and weather warrant.

3. All erosion and sediment control devices will be installed prior to the start of clearing and grubbing operations and excavation work. All the devices will be maintained as specified in this document until the disturbed earth has been paved or vegetated, at which time the devices will be removed.

4. All construction methods, materials and system installations are to conform to all applicable local and state regulations.

5. Grading to be according to all applicable regulations and normal standards of good practice.

6. Land disturbance will be kept to a minimum. Restabilization will be scheduled as soon as practicable.

7. Stockpiles of topsoil and common fill shall be located outside regulated areas where possible. They should be surrounded with silt fence and temporarily stabilized by seeding with a 50-50 mix of annual and perennial rye grass at the rate of one pound per 1,000 square feet of surface area shall be employed between March 15 and June 15 or August 1 and October 1. Mulch with straw or hay at the rate of 70 to 90 pounds per 1,000 square feet until stabilized.

8. All control measures will be maintained in effective condition throughout the construction period until the area is stabilized.

9. Maintenance of the erosion controls shall consist of inspection at the start of each work day with special attention afforded following storm events. Noted deficiencies shall be corrected immediately. Accumulated sediment shall be removed from the erosion control device and dispersed temporarily on the upland portion of the disturbed area. Additional seeding or mulching shall be employed as required.

10. The contractor is to inspect the site daily during construction to insure the integrity of the erosion controls.

11. The contractor is to have available at all times extra silt fence, hay bale mulch, grass seed and riprap to implement additional erosion control measures not foreseen in this plan.

12. Prior to closing the site down for winter, if required, the contractor shall schedule a meeting with the project engineer to review site conditions and make recommendations to minimize erosion during the winter. The meeting is to be held no later than October 1,of any given year.

13. Accumulated sediment is to be disposed of in an area approved by the design engineer and verification compliance accepted by the Town.

14. This plan and report may be modified by the engineer based upon field conditions. Any alteration of the proposed layout requires acceptance/approval by the Town Planner and/or Zoning Enforcement Officer, or applicable Commission actions if warranted.

15. Catch basins shall be protected with silt sacks, haybales, and/or silt fence during construction until all disturbed areas are stabilized.

16. Water breaks, silt fence, haybales and other measures are to be maintained until drainage is complete and site is stabilized with vegetated cover.

17. Stabilization practices may include silt fences, temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation and other vegetative and non-structural measures as identified in the Guidelines. Where construction activities have permanently ceased or have temporarily been suspended for more than seven days or when final grades are reached in any portion of the site, stabilization practices shall be implemented within three days. Areas which remain disturbed but inactive for at least thirty days shall receive temporary seeding and/or mulching in accordance with the Guidelines. Areas that will remain disturbed beyond the planting season, shall receive long-term, non-vegetative stabilization sufficient to protect the site through the winter.

18. Structural practices include but are not limited to earth dikes (diversions), drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, outlet protection, reinforced soil retained systems, gabions and temporary or permanent sediment basins and chambers.

19. Disturbance for lot development will be limited to 1 acre at any one time. Overland drainage from uphill sources will be diverted around the disturbed portions of the lot until those disturbed areas have been stabilized. If more than 1 acre is to be disturbed at one time, sediment basins must be provided. These sediment basins shall have a storage capacity of 134 cubic yards per acre of tributary area. Possible locations are shown on the site plan.

20. De-watering waste waters might be generated during the construction of the underground utilities and the excavation for foundations. Contractors shall arrange for the pumping of water in excavations to occur in sumps created in the excavation and will discharge into temporary sediment basins.

21. All contractors and subcontractors working on site will ensure that no litter, debris, building material or similar material is discharged to the inland wetlands.

22. Contractors will implement techniques to control the generation of dust.

23. All post construction storm water structures will be cleaned of construction sediment and any remaining silt fence shall be removed.

24. The site will have an anti-tracking pad installed at the point where construction traffic exits the site and silt fence installed as shown on the plans or as required downhill of areas of disturbed earth. Refer to the detail drawings for specifics on proposed measures.

Paul Stone 203-972-3366 is assigned the responsibility for implementing this Storm water Pollution Control Plan during the construction. This responsibility includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of the plan. If the land is transferred, the Planning and Zoning office shall be notified and a copy of the Storm water Pollution Control Plan shall be conveyed to the new owners. It shall become the responsibility of the new owners to implement the Storm water Pollution Control Plan for the site as outlined in this Storm water Pollution Control Plan.

CONSTRUCTION SEQUENCE

1. Install anti-tracking pad as shown where construction traffic enters a public right-of-way.
2. Install perimeter erosion and sediment controls.
3. No burying of stumps, slash and grubbing material is allowed on any site. Materials must be chipped or removed from the site and disposed of at a permitted location.
4. Install temporary sediment trap.
5. Direct stormwater runoff from the construction area with temporary sediment routing and diversion berms as necessary to flow into the temporary sediment traps.
6. Strip topsoil and stockpile in designated area.
7. Rough grade site beginning at the front and move rearward.
8. Install retain-it compensatory gallery/retaining wall system.
9. Construct remainder of retaining walls.
10. Prepare building pad and construct foundation.
11. Install storm detention facilities. and storm drainage system.
12. Install septic system.
13. Place, grade and compact the processed aggregate in the driveway and parking base.
14. Install underground utilities and site lighting.
15. Install first course of bituminous concrete.
18. Install sidewalk and playground area.
19. Install curbing where required.
20. Apply stabilization measures to remaining disturbed areas in accordance with the Stormwater Quality Management Plan (topsoil, seeding, sodding, mulching, etc.)
21. Inspect and clean drainage system as needed.
22. Install the final course of bituminous concrete pavement.
23. Install landscaping materials.
24. After site is stabilized in accordance with the applicable Stormwater Quality Management Plan measures, remove temporary erosion and sediment controls.

SITE MAINTENANCE PLAN

This Site Maintenance Plan and Schedule highlights the maintenance procedures for the development. However, this does not preclude the maintenance personnel's responsibility to perform maintenance procedures properly, add other procedures as necessary and conduct maintenance in accordance with current state laws and regulations.

Driveways and Parking Areas

The driveway and parking area shall be swept with a mechanical sweeper or broom at least four times per year. One cleaning will be in the fall after the leaves are off the trees. The second will be in the spring after the last snow fall. The other two sweepings will be scheduled at equal intervals during the spring, summer and early fall seasons preferably after extended dry periods. A light spray of water is recommended to minimize dust during sweeping. Use of high velocity blowers is not recommended as they often "defeat the basic purpose of sweeping in an environmentally sound manner."

The sweepings shall be collected and removed from the site. The disposal method shall be determined by the personnel conducting the sweeping and shall comply with all applicable laws.

Pavement markings, directional arrows and stop bars shall be inspected annually. All pavement markings and directional signs shall be replaced as necessary to insure they are clear, visible and reflective to maintain safe traffic flow.

Paved surfaces shall be crack sealed on a yearly basis and inspected for "Pot Holes". Required patching shall be done on a yearly basis every spring. Paved surfaces should be replaced every 20 years, or as site conditions warrant.

Infiltration Galleries

The detention galleries shall be inspected annually. If sediment is observed at the inlet to the gallery system, it shall be removed. This is an indication that the catch basin sumps and or the stormwater treatment unit are not functioning as designed. It may be necessary to increase the frequency of the cleaning of the drainage structures.

Landscaping

The site landscaping shall be maintained including trimming and replacing plant materials that have died or diseased. All grass areas shall be maintained by cutting and fertilizing. All fertilizer application shall be based upon a yearly evaluation of the required nutrient levels and fertilizer application shall be calibrated accordingly to avoid excessive amounts of fertilizer. Litter and dead, diseased or unhealthy plants which are a safety hazard shall be removed.

SEPTIC SYSTEM NOTES:

1. The purpose of the proposed septic system is to dispose of domestic sewage consisting of water and human excretions or other waterborne wastes incidental to the occupancy of the proposed use. Waste water from water softening equipment, water from floor drains or surface water from roofs, paved surfaces or yard drains is not permitted.

2. Once construction plans for the site are approved, deviation from these plans may require additional approvals from regulating authorities.

3. Care should be taken during site development to protect the proposed septic system area from unnecessary disturbance. If care is not taken and the area is not prepared as noted on this plan, premature failure of the system may result. It is recommended that the septic disposal area is fenced prior to construction.

4. The test results and soil types shown apply only to the test hole shown and may or may not apply to other areas on the site. The soil types shown and existing grades are to be verified over the entire septic area prior to construction.

5. The septic tank shall be capable of supporting the superimposed loads indicated on the plans. The superimposed loads shall consist of the earth load and the live load. The earth load shall be computed from the depth of soil cover shown on the plans. The minimum earth load shall be for soil cover of eighteen inches. The minimum live load shall be H-10. The minimum live load for any tank located under pavement shall be H-20.

6. The septic tank shall conform to the latest revision of the Connecticut Public Health Code. The tanks shall have a mid-depth connection, an inlet and outlet baffle, an appropriately sized effluent filter and shall have access risers and safety devices.

7. No loose or open jointed, perforated, slotted or pervious pipe drain is to be located within 50' down gradient of any septic system area.

8. There are no apparent visible wells within seventy five (75) feet of the proposed septic system.

9. No utility service trench is to be located within 5 feet of the septic system. Excavations within 5 to 25 feet from the system shall not be back filled with free draining material.

10. System preparation: remove unsuitable fill and topsoil from entire septic system area.

11. Observation port to be installed on gallery ends as shown to facilitate leaching system monitoring and performance capabilities.

12. The benchmark shown in this plan is to be verified in the field by the contractor prior to any construction.

15. The proposed septic system shall be staked out, offset and elevated for construction by a qualified surveyor.

17. An as-built plan shall be prepared by a qualified surveyor, reviewed by the Design Engineer and submitted to the applicable agencies for approval.

18. All proposed sanitary structures shall conform to the current
18. Connecticut Public Health Code.

19. Oil tank (if required) is to be located inside the structure.

SOILS TESTING

DEEP TEST RESULTS

TESTING PERFORMED:10/30/24 - NDC, A.Karp, J.Kimball, Amy Lehaney

#200
0 - 14" Topsoil/Misc Fill
14" - 39" Yellow Brown Fine Sandy Loam
39" - 73" Tan Fine-Medium Sand & Gravel W/Cobbles
No Ledge No Water Redoximorphic Features @ 32"

#201
0 - 43" Topsoil/Misc Fill
43" - 76" Grey fine-Medium Sand (mottled throughout)
Pocket of black substance @ 40" (does not appear to be organic)
No Ledge Water @ 72" Redoximorphic Features @ 43"

#202
0 - 20" Topsoil/Misc Fill
20" - 72" Tan Fine-Medium Sand & Gravel W/Cobbles (very compact)
Health Dept. opines that lower material not suitable for sewage disposal.
No Ledge No Water No Redoximorphic Features

#203
0 - 18" Topsoil/Misc Fill
18" - 77" Tan Fine-Medium Sand & Gravel W/Cobbles (compact)
No Ledge No Water No Redoximorphic Features

#204
0 - 26" Topsoil/Misc Fill
26" - 69" Tan Fine-Medium Sand & Gravel W/Cobbles
No Ledge Water @ 64" Redoximorphic Features @ 48"

#205
0 - 26" Topsoil/Misc Fill
26" - 68" Tan Fine-Medium Sand & Gravel W/Cobbles
No Ledge Water @ 68" Redoximorphic Features @ 21"

#206
0 - 6" Topsoil
6" - 73" Tan Fine Silty Sand (compact)
No Ledge Water @ 52" Redoximorphic Features @ 12"

#207
0 - 12" Topsoil/Misc Fill
12" - 73" Tan Fine Silty Sand
No Ledge Water @ 68" Redoximorphic Features @ 17"

#208
0 - 87" Topsoil/Misc Fill

#209
0 - 60" Topsoil/Misc Fill
60" - 92" Tan Fine-Medium Sand & Gravel W/Cobbles
No Ledge No Water No Redoximorphic Features

#210
0 - 25" Topsoil/Misc Fill
25" - 39" Tan Coarse Sand
39" - 48" Tan Fine Sand
48" - 81" Brown Fine-Medium Sand W/Cobbles
No Ledge No Water No Redoximorphic Features

#211
0 - 48" Topsoil/Misc Fill
48" - 87" Brown Fine-Medium Sand W/Cobbles
No Ledge No Water No Redoximorphic Features

#212
0 - 28" Topsoil/Misc Fill
28" - 40" Tan Fine Sand
40" - 76" Olive Brown Fine-Medium Sand W/Cobbles
No Ledge No Water No Redoximorphic Features

TESTING PERFORMED:12/17/24 - NDC, J.Kimball, Amy Lehaney

#209A -Dug to verify depth to any restrictive layer (ledge)
D=113"
No Ledge No Water No Redoximorphic Features

#210A -Dug to verify depth to any restrictive layer (ledge)
D=120"
No Ledge No Water No Redoximorphic Features

PERCOLATION TESTS

TESTING PERFORMED:12/17/24

P-209		P-210	
Depth: 18"	Diameter: 12"	Depth: 22"	Diameter: 8"
(perc test located 48" below existing grade)		(perc test located 48" below existing grade)	
10:10	Presoak	10:25	
11:22	10-3/4"	11:18	11"
11:27	14-3/4"	11:23	15-1/2"
11:32	Dry	11:28	17"
		11:33	Dry

Rate: 1" = 1.25 minutes Rate: 1" =3.33 minutes

SEPTIC SYSTEM DESIGN BASIS

The proposed daycare building has the potential to accommodate 161 students

Due to the absence of a restrictive layer, no MLSS is required.
Perc rate:" 1" in 10 min.

Use an application rate of 1.5 gpd/sf of ELA (non-residential building with non-problematic sewage).

Design Flow =161 students x 10 gpd/student= 1610 gpd.

Application rate= 1610 gpd/1.5 gpd/sf ela= 1073.33 sf required ELA.

Use Greenleach GLT 72"x21" @ 16.1 sf/lf
Therefore 1073.33 sf/16.1 sf/lf= 66.66 lf required.

Primary system: Install 67 LF of leaching system providing 1078.7 sf ela.
Reserve system: Install 67 LF of leaching system providing 1078.7 sf ela.

APPROXIMATE PROPOSED ELEVATIONS:

Effluent line at building: 301.0
Septic tank inlet: 300.0; outlet elevation 299.75
Pump Chamber inlet 299.5; outlet elevation 298.5
Baffle D-box outlet elevation 319.35

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STATE OF CONNECTICUT JOHN E. EDWARDS No. 10927 REGISTERED PROFESSIONAL ENGINEER

STATE OF CONNECTICUT JASON E. KIMBALL No. 20308 LICENSED LAND SURVEYOR

PERMIT SET - NOT FOR CONSTRUCTION

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

10 1-31-25 CONNDOT

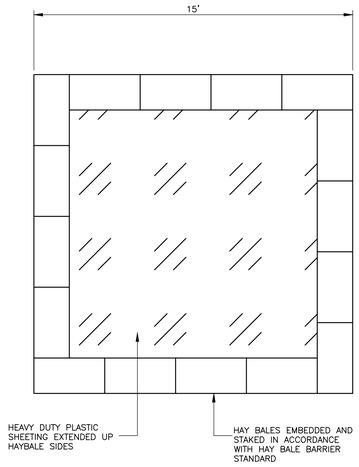
DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: NTS

TITLE

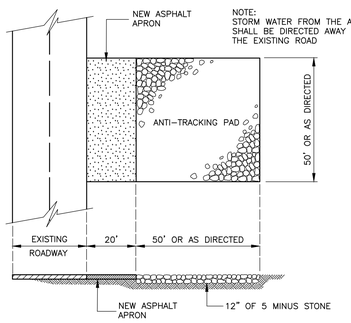
DETAILS

SHEET NUMBER

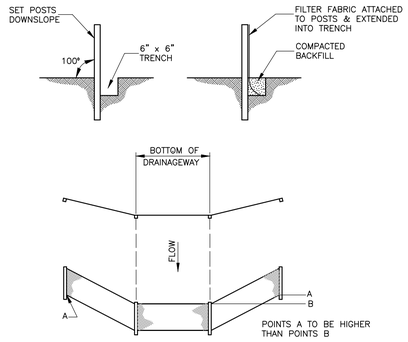
4.1



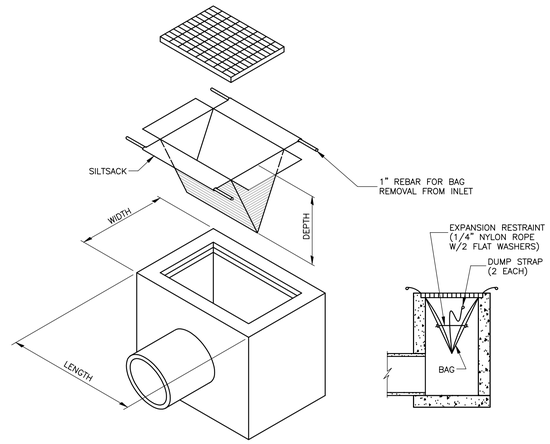
CONCRETE WASHOUT BASIN



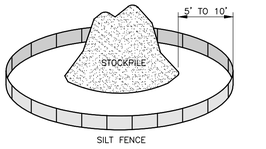
ANTI-TRACKING PAD



SYNTHETIC FILTER BARRIER

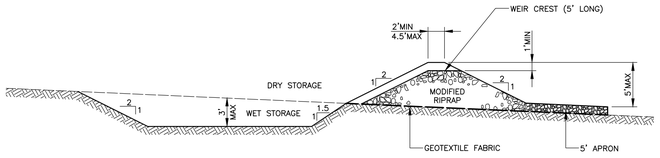


SEDIMENT CONTROL AT INLET

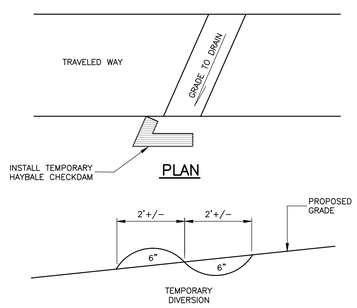


APPLY MIXTURE OF PERRENIAL RYEGRASS, ANNUAL RYEGRASS AND WINTER RYE AT A RATE OF 10 LBS PER 1000 SF

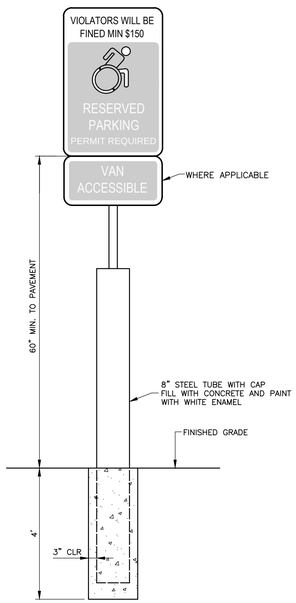
STOCKPILE STABILIZATION



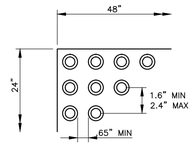
TEMPORARY SEDIMENT TRAP



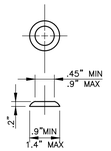
TEMPORARY WATER BREAK



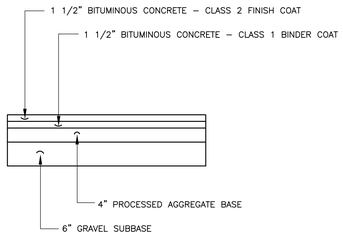
PARKING BOLLARD



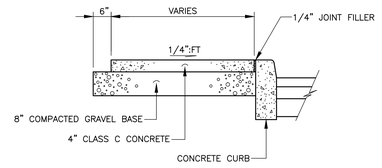
DETECTABLE WARNING



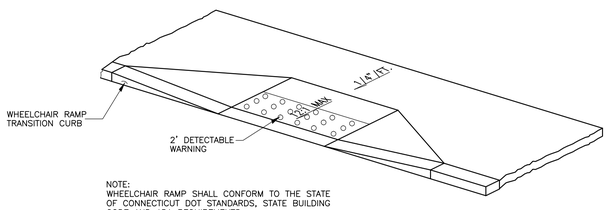
DOME DETAIL



PAVEMENT SECTION–ONSITE

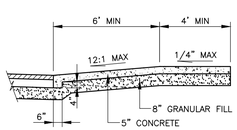


CONCRETE SIDEWALK WITH CURB

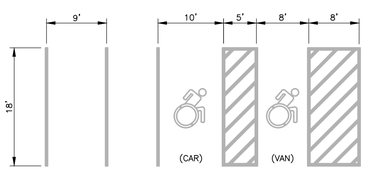


NOTE:
WHEELCHAIR RAMP SHALL CONFORM TO THE STATE OF CONNECTICUT DOT STANDARDS, STATE BUILDING CODE AND ADA REQUIREMENTS

ISOMETRIC VIEW



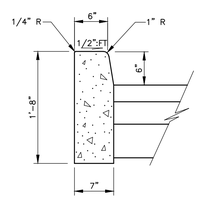
SECTION
SIDEWALK FLARED CURB RAMP



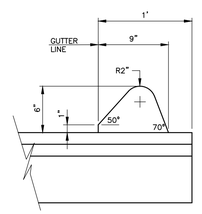
GUEST HANDICAP

PARKING SPACES

NOTE:
HANDICAP PARKING SPACES SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION



CONCRETE CURBING



BITUMINOUS LIP CURBING

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2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

10 1–31–25 CONNDOT

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: NTS

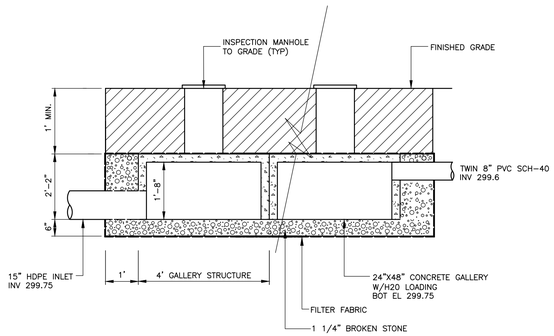
TITLE

DETAILS

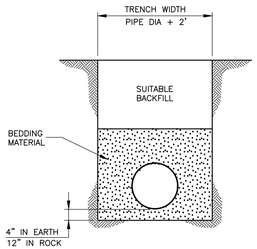
SHEET NUMBER

4.2

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\4.2 D-2



DETENTION GALLERY SYSTEM



BEDDING MATERIAL TO BE SAND OR SANDY SOIL WHICH PASSES A 3/8" SIEVE WITH NOT MORE THAN 10% PASSING A #200 SIEVE. WHEN GROUND WATER IS ENCOUNTERED, THE ENGINEER MAY ALLOW 3/4" STONE CONFORMING TO CT DOT FORM 817 ARTICLE M.01.01 TO BE USED INSTEAD.

DRAINAGE PIPE TRENCH

TRASH GUARD

Red Valve®

CUT SHEET RV09.01-7
July 2024

CTF - Tideflex® Series TF-1 Duckbill Check Valve

- Ideal for manhole installations
- Lightweight, all-elastomer design
- Seals around entrapped solids
- Cost-effective, virtually maintenance-free design

The Tideflex® Series TF-1 Duckbill Check Valve design provides excellent backflow prevention. The TF-1 offers very low head loss and a low cracking pressure to eliminate standing water. The valve's all-elastomer fabrication means it will not warp or freeze and is not affected by rust, corrosion or lack of lubrication. It requires virtually no maintenance or repairs and provides a long operational lifespan.

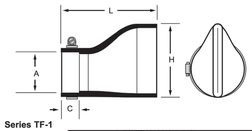
The Series TF-1 Check Valve operates using line pressure and backpressure to open and close without an additional energy source. Sliding, rotating, swinging and plunging parts are completely eliminated.

A flat-bottom and offset bill design simplifies installation. No modifications to the structure are needed. The flat-bottom design is ideal for installation in existing structures such as interceptors, manholes and vaults, where the invert of the pipe is as close to the floor of the vault as possible, to maximize head pressure from gravity.

The Series TF-1 Check Valve is ideal for sewer systems. The valve seals around small debris with less than one psi of backpressure. TF-1 Check Valves 18" and larger are constructed with a curved bill as standard. The curved bill returns to a closed position every time, allowing for a tighter seal in backflow applications. Contact Red Valve for Series TF-1 backpressure ratings.

Materials of Construction

- **Elastomers:** Natural Rubber (NR), Ethylene Propylene Diene Terpolymer (EPDM), Acrylonitrile-Butadiene (NBR), Fluoroelastomer (FKM), Chloroprene (CR), Chlorosulfonated Polyethylene (CSM), Chloro-Isobutylene-Isoprene (CIIR), NSF/ANSI/CAN 61 and NSF/ANSI/CAN 372 certified EPDM
- **Mounting Clamps:** 316 Stainless Steel, special alloys available

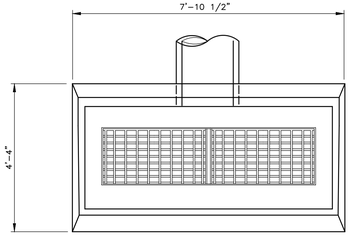


Series TF-1

PIPE O.D. A	DIMENSIONS in/mm MAXIMUM LENGTH L	BILL HEIGHT H	CUFF LENGTH C
4" 100mm	11.00 279	8.00 203	1.50 38
5" 125mm	11.00 279	8.00 203	1.50 38
6" 150mm	16.00 406	12.00 305	2.00 51
8" 200mm	18.00 457	16.00 406	2.00 51
10" 250mm	23.00 584	19.00 483	3.00 76
12" 300mm	29.00 737	23.00 584	4.25 108
14" 350mm	28.00 711	27.00 686	4.00 102
16" 400mm	36.00 914	30.00 762	5.00 127
18" 450mm	38.00 965	34.00 864	6.00 152
20" 500mm	45.00 1143	37.00 940	8.50 216
22" 550mm	45.00 1143	37.00 940	8.50 216
24" 600mm	49.00 1245	44.00 1118	8.00 203
26" 650mm	49.00 1245	44.00 1118	8.00 203
28" 700mm	49.00 1245	44.00 1118	8.00 203
30" 750mm	57.00 1448	56.00 1422	9.00 229
32" 800mm	61.00 1549	60.00 1524	10.00 254
36" 900mm	67.00 1702	70.00 1778	11.00 279
38" 950mm	67.00 1702	70.00 1778	11.00 279
40" 1000mm	67.00 1702	70.00 1778	11.00 279
42" 1050mm	66.00 1676	74.00 1880	10.00 254
44" 1100mm	66.00 1676	74.00 1880	10.00 254
48" 1200mm	71.00 1803	81.00 2057	10.00 254
50" 1250mm	71.00 1803	81.00 2057	10.00 254
54" 1350mm	77.00 1956	90.00 2286	11.50 292
58" 1450mm	77.00 1956	90.00 2286	11.50 292
60" 1500mm	78.00 1981	94.00 2388	14.00 356
68" 1700mm	78.00 1981	94.00 2388	14.00 356
72" 1800mm	102.00 2591	121.00 3073	16.00 406
90" 2300mm	111.00 2819	145.00 3683	16.00 406
100" 2500mm	114.00 2896	169.00 4293	16.00 406

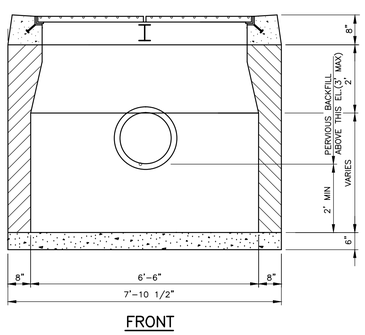
Red Valve • 750 Holiday Drive, Suite 400, Pittsburgh, PA 15220 • 412-279-0044 • support@redvalve.com • RedValve.com

BACK FLOW CHECK VALVE

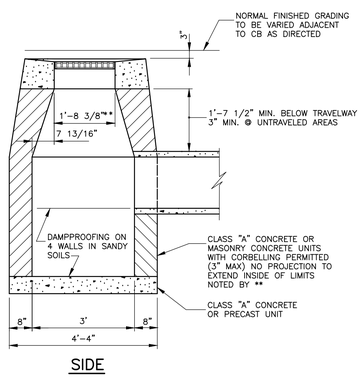


PLAN

NOTE:
WHERE PRECAST CONCRETE UNITS ARE USED FOR THE SUMP, THE TOP OF THE UNIT SHALL BE AT LEAST 6" BELOW THE BOTTOM OF THE PIPE OUTLETTING FROM THE CATCH BASIN

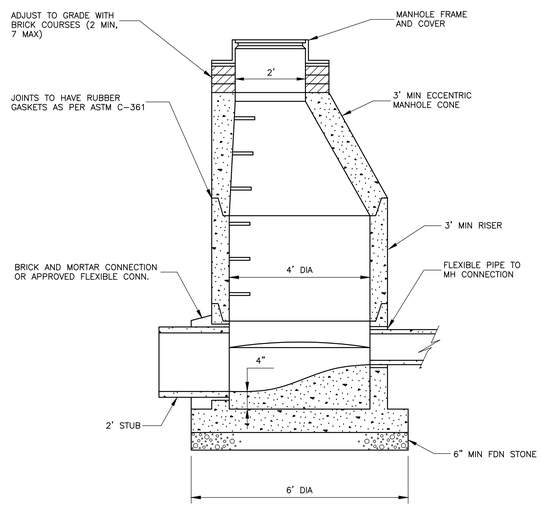


FRONT

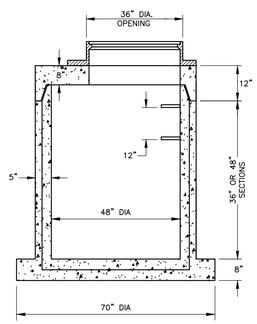


SIDE

TYPE "C-L" CATCH BASIN - DOUBLE GRATE



48" PRECAST CONCRETE MANHOLE



48" PRECAST CONCRETE SHALLOW TYPE MANHOLE

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STATE OF CONNECTICUT — JASON L. EDWARDS — No. 20308 — LICENSED LAND SURVEYOR

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

10 1-31-25 CONNDOT

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: NTS

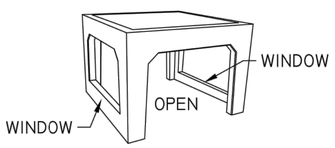
TITLE

DETAILS

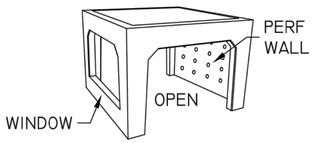
SHEET NUMBER

4.3

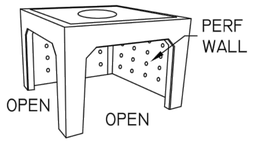
K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\4.3 D-3



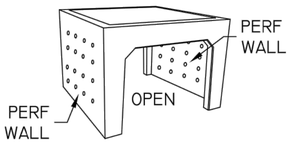
MULTI ROW CENTER



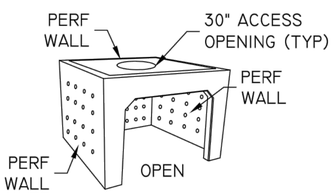
MULTI ROW PERIMETER



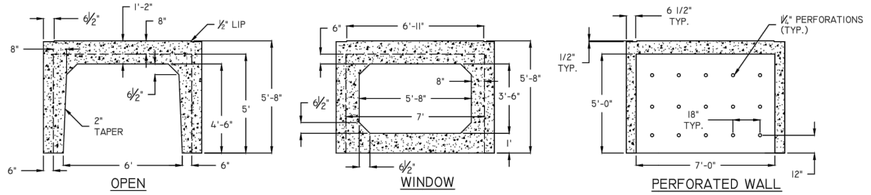
MULTI ROW CORNER



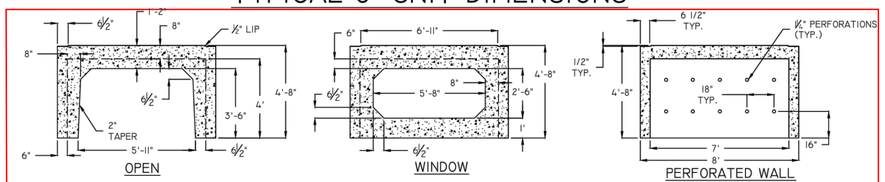
SINGLE ROW CENTER



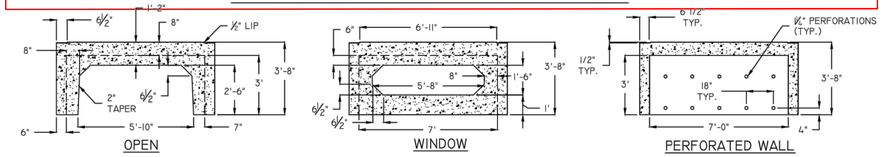
SINGLE ROW END



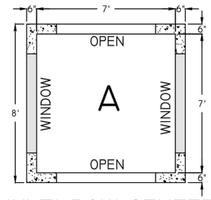
TYPICAL 5' UNIT DIMENSIONS



TYPICAL 4' UNIT DIMENSIONS



TYPICAL 3' UNIT DIMENSIONS



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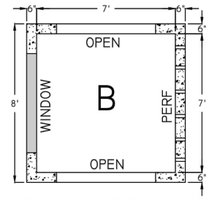

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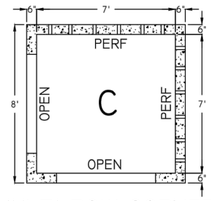
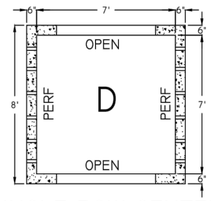
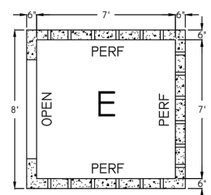


MULTI ROW CORNER

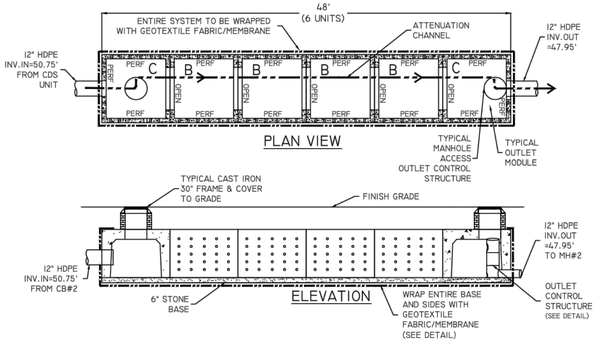


SINGLE ROW CENTER

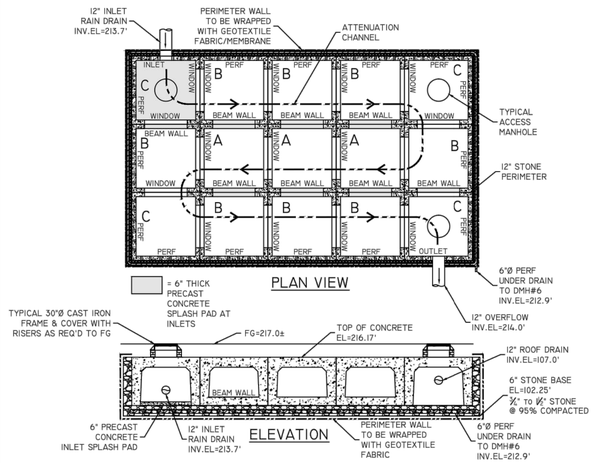


SINGLE ROW END

SYSTEM EXAMPLES



TYPICAL DETENTION /RETENTION



TYPICAL INFILTRATION

ASTM SPECIFICATIONS:

1. CONCRETE - 5,000 PSI, 28 DAYS
2. REINFORCING STEEL CONFORMS TO LATEST ASTM A615
3. H-20 DESIGN LOADING PER AASHTO HS-20-44

retain-it® Stormwater Management Systems

STORM WATER MANAGEMENT
DETENTION / RETENTION AND INFILTRATION SYSTEM

RETAIN IT
560 SALMON BROOK STREET
GRANBY, CT 06035
(860) 413-3050
RETAIN-IT.COM

SINGLE SYSTEM

No.	Revision/Issue	Date
1	SUBMITTAL OF REVIEW	12-16-12

AUTOCAD TYPICAL DETAILS

Project ~
Date 5/2/14
Scale N.T.S.
Sheet

PERMIT SET – NOT FOR CONSTRUCTION

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PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
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10	1-31-25	CONNDOT

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: NTS

TITLE

DETAILS

SHEET NUMBER

4.4

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\4.4 D-4

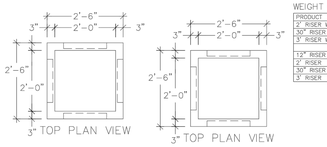
2'x2' YARD DRAIN RISER WITH BASE AND RISER

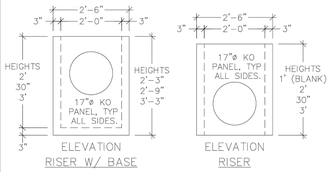
NOTES:

1. REINFORCING STEEL WELDED WIRE FABRIC CONFORMS TO LATEST ASTM SPECIFICATION A185.
2. REINFORCING STEEL DEFORMED BARS CONFORM TO LATEST ASTM SPECIFICATION A615.
3. CONCRETE COMPRESSIVE STRENGTH– 4000 PSI AT 28 DAYS.
4. METHOD OF MANUFACTURE: WET CAST.
5. SECTION IS MONOLITHIC.
6. DESIGN LOAD: AASHTO H–20

WEIGHT CHART

PRODUCT	APPROX. WEIGHT
2" RISER W/ BASE	730 LBS.
30" RISER W/ BASE	900 LBS.
3' RISER W/ BASE	1070 LBS.
12" RISER (BLANK)	340 LBS.
2' RISER	500 LBS.
30" RISER	670 LBS.
3' RISER	840 LBS.





UNITED CONCRETE PRODUCTS INC.
173 CHURCH STREET YALESVILLE, CT 06492
TEL. 800 234–3119 (203) 269–3119
FAX. (203) 265–4941

AREA DRAIN

DURA SLOPE™ TRENCH DRAIN – PRE-SLOPED (PATENTED)

Product Features & Benefits

Interlocking tongue and groove joints
- Secures alignment
- Ensures straight channel runs
- Easy assembly and installation

DuraLoc™ integral joint lock
- Prevents joint movement during installation
- No extra clamps or screws needed

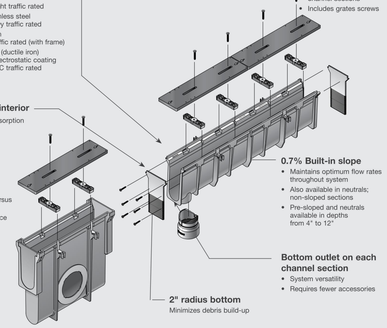
Various grating options
- ADA compliant, Heel-Proof options
- Plastic grates
  Array of colors
  Pedestrian and light traffic rated
- Galvanized & stainless steel
  Pedestrian & heavy traffic rated
- Cast & ductile iron
  Class D heavy traffic rated (with frame)
- Decorative grates (ductile iron)
  Standard black electrostatic coating or raw iron Class C traffic rated

Lightweight 4 ft. modular sections
- Easier handling and installation
- Lower freight costs

Blank grate insert
- Eliminates use of plywood
- Slides for overlapping of channel sections
- Includes grates screws

Smooth HDPE interior
Virtually no water absorption

HDPE material
- Durable
- Inexpensive
- Less breakage versus concrete
- Chemical resistance



0.7% Built-in slope
- Maintains optimum flow rates throughout system
- Also available in neutrals; non-sloped sections
- Pre-sloped and neutrals available in depths from 4" to 12"

Bottom outlet on each channel section
- System versatility
- Requires fewer accessories

2" radius bottom
Minimizes debris build-up

LeveLoc™ re-bar supports with integral protruding knob
- Levels channel and grips re-bar
- Requires fewer accessories

ProFit™ locking system
- Locks grate to integral frame
- Supports product in shipping and installation (included)

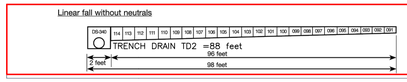
DURA SLOPE™ TRENCH DRAIN – PRE-SLOPED

Dura Slope™ System Profiles

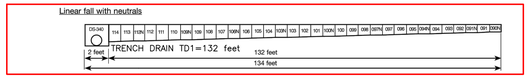
NDS

Neutral run

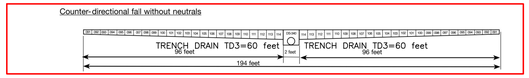
Linear fall without neutrals



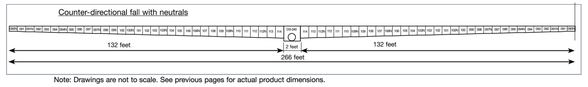
Linear fall with neutrals



Counter-directional fall without neutrals

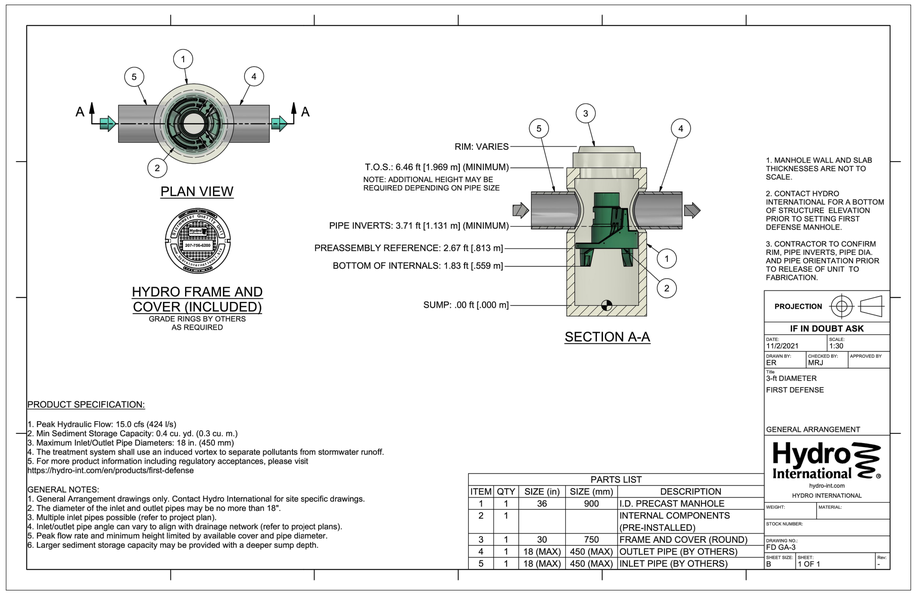


Counter-directional fall with neutrals



Note: Drawings are not to scale. See previous pages for actual product dimensions.

TRENCH DRAIN



1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING FIRST DEFENSE MANHOLE.
3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.

PROJECTION

IF IN DOUBT ASK

DATE:	SCALE:
11/2/2021	1:30
DRAWN BY: ER	CHECKED BY: MRJ
APPROVED BY:	

Title:
3-ft DIAMETER
FIRST DEFENSE

GENERAL ARRANGEMENT

Hydro International
hydro-int.com
HYDRO INTERNATIONAL

WEIGHT:	MATERIAL:
STOCK NUMBER:	
DRAWING NO.: FD GA-3	
SHEET SIZE: B	SHEET: 1 OF 1
Rev: -	

PRODUCT SPECIFICATION:

1. Peak Hydraulic Flow: 15.0 cfs (424 l/s)
2. Min Sediment Storage Capacity: 0.4 cu. yd. (0.3 cu. m.)
3. Maximum Inlet/Outlet Pipe Diameters: 18 in. (450 mm)
4. The treatment system shall use an induced vortex to separate pollutants from stormwater runoff.
5. For more product information including regulatory acceptances, please visit https://hydro-int.com/en/products/first-defense

GENERAL NOTES:
1. General Arrangement drawings only. Contact Hydro International for site specific drawings.
2. The diameter of the inlet and outlet pipes may be no more than 18".
3. Multiple inlet pipes possible (refer to project plan).
4. Inlet/outlet pipe angle can vary to align with drainage network (refer to project plans).
5. Peak flow rate and minimum height limited by available cover and pipe diameter.
6. Larger sediment storage capacity may be provided with a deeper sump depth.

PARTS LIST				
ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	36	900	I.D. PRECAST MANHOLE
2	1			INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	750	FRAME AND COVER (ROUND)
4	1	18 (MAX)	450 (MAX)	OUTLET PIPE (BY OTHERS)
5	1	18 (MAX)	450 (MAX)	INLET PIPE (BY OTHERS)

GENERIC STORMWATER TREATMENT UNIT DETAIL

(SHOP DRAWING TO BE APPROVED PRIOR TO CONSTRUCTION)

J. EDWARDS & ASSOCIATES LLC
ENGINEERING • SURVEYING • SITE PLANNING

227 Stepney Road Easton, CT 06612
Phone:203.268.4205 Fax: 203.268.5604
www.jedwardsassoc.com

STATE OF CONNECTICUT — JOSEPH E. EDWARDS — No. 10927 — REGISTERED PROFESSIONAL ENGINEER

STATE OF CONNECTICUT — JASON L. EDWARDS — No. 20308 — LICENSED LAND SURVEYOR

PERMIT SET – NOT FOR CONSTRUCTION

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

10 1–31–25 CONNDOT

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: NTS

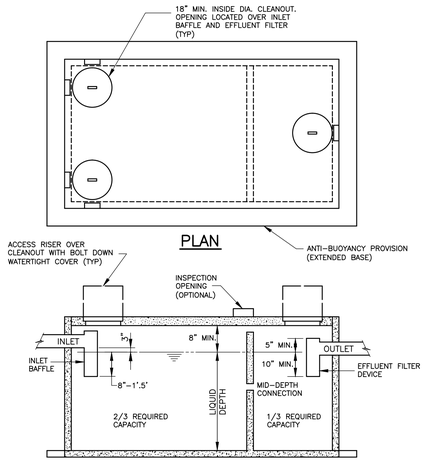
TITLE

DETAILS

SHEET NUMBER

4.5

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\4.5 D-5

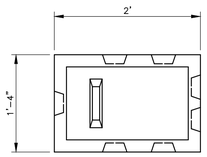


PLAN

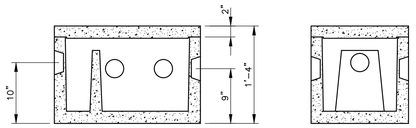
SECTION

SEPTIC TANK

2000 GAL WITH H20 LOADING

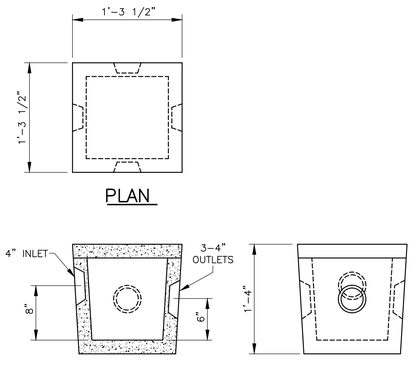


PLAN



SECTION END VIEW

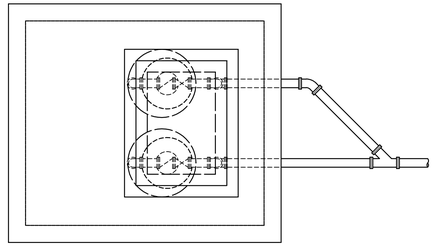
DISTRIBUTION BOX WITH BAFFLE DB-6



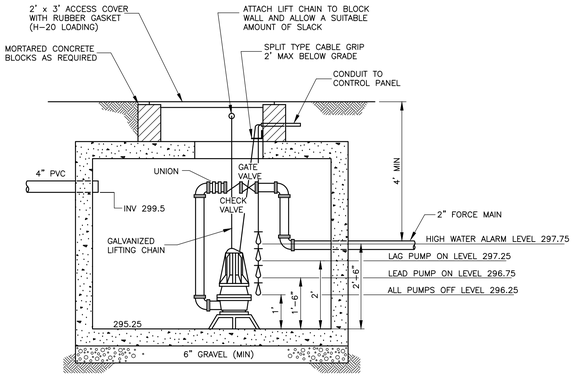
PLAN

SECTION END VIEW

DISTRIBUTION BOX



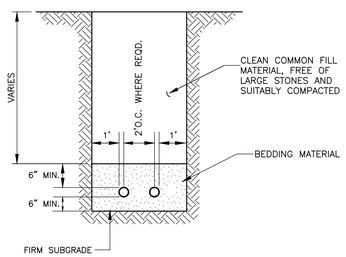
PLAN



SECTION

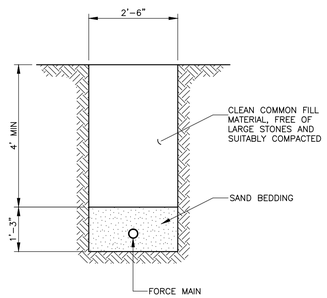
SEPTIC PUMP CHAMBER

2000 GALLON PUMP CHAMBER WITH H20 LOADING

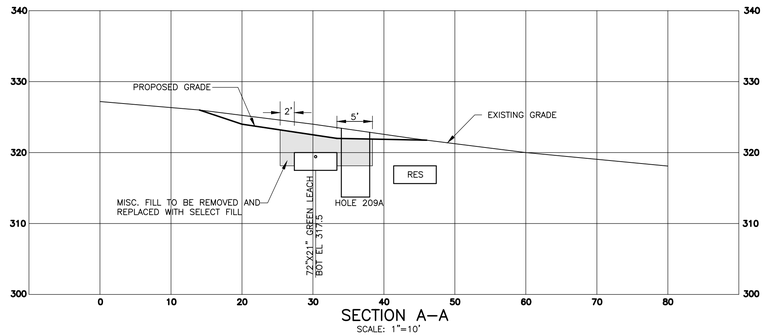


BEDDING MATERIAL TO BE SAND OR SANDY SOIL WHICH PASSES A 3/8" SIEVE WITH NOT MORE THAN 10% PASSING A #200 SIEVE. WHEN GROUND WATER IS ENCOUNTERED, THE ENGINEER MAY ALLOW 3/4" STONE CONFORMING TO CT DOT FORM 817 ARTICLE M.01.01 TO BE USED INSTEAD.

UTILITIES TRENCH

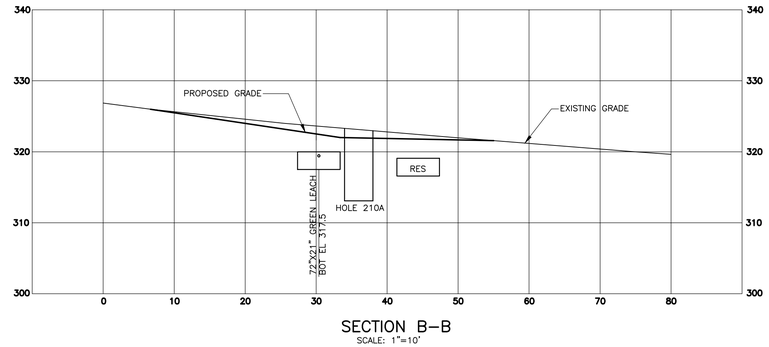


FORCE MAIN TRENCH



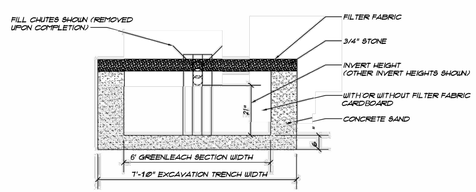
SECTION A-A

SCALE: 1"=10'



SECTION B-B

SCALE: 1"=10'



GLF 21-72

GREEN LEACH SYSTEM SECTION - END VIEW

NOT TO SCALE

PERMIT SET – NOT FOR CONSTRUCTION

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

J. EDWARDS & ASSOCIATES LLC
ENGINEERING • SURVEYING • SITE PLANNING

227 Stepney Road Easton, CT 06612
Phone:203.268.4205 Fax: 203.268.5604
www.jedwardsassoc.com

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: NTS

TITLE

DETAILS

SHEET NUMBER

4.6

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\4.6 D-6

SITE IMPROVEMENTS
2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

VICINITY MAP

LIST OF DRAWINGS

J. EDWARDS & ASSOCIATES LLC
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227 Stepney Road Easton, CT 06612
Phone:203.268.4205 Fax: 203.268.5604
www.jedwardsassoc.com

STATE OF CONNECTICUT JEFFREY R. EDWARDS No. 18906 LICENSED PROFESSIONAL ENGINEER

STATE OF CONNECTICUT JASON EDWARDS No. 70308 LICENSED LANDSCAPE ARCHITECT

PERMIT SET – NOT FOR CONSTRUCTION

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE:

TITLE

SHEET NUMBER

1.0

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\TITLE

NOTES:

1. THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH THE SECTIONS 20-300B-1 THROUGH 20-300B-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES – "MINIMUM STANDARDS FOR SURVEY AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. IT IS AN IMPROVEMENT LOCATION SURVEY BASED UPON A DEPENDENT RESURVEY AND CONFORMS TO HORIZONTAL ACCURACY CLASS A-2.

2. REFERENCE IS MADE TO THE FOLLOWING MAPS ON FILE IN THE MONROE TOWN CLERK'S OFFICE:
   A. "RESUBDIVISION PLAN OF 2 VICTORIA DRIVE, MONROE, CONNECTICUT. PREPARED FOR KIMBALL LAND HOLDINGS, LLC & KIMBALL DEVELOPMENT, LLC, 523 PEPPER STREET, MONROE, CT 06468. SHEETS 1 OF 3, 2 OF 3 AND 3 OF 3" SCALE 1"=60'. DATED 04-04-14; REVISED TO 11-12-15. PREPARED BY ACCURATE LAND SURVEYING. ON FILE AS RECORD MAPS #3144A, 3144B AND 3144C.
   B. "RIGHT OF WAY SURVEY, TOWN OF MONROE. MAP SHOWING LAND ACQUIRED FROM 38-44 MAIN STRET, LLC. BY THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION." SCALE 1"=30'. DATED JUNE 9, 2017. ON FILE AS RECORD MAP #3223.

3. THE LOCATION OF UNDERGROUND UTILITIES, IF ANY, IS UNKNOWN

4. PLAN PREPARED FOR OWNER.

5. LOT CORNER MARKERS DEPICTED HEREON WERE FOUND AND/OR SET DURING COMPLETION OF THIS SURVEY.

6. BEARING BASED ON THE MAPS REFERENCED IN NOTE 2A ABOVE.

7. CERTIFICATION OF THIS MAP APPLIES TO CONDITIONS AS OF THE ORIGINAL DATE OR REVISED DATE DEPICTED HEREON. EXISTING CONDITIONS ON THIS PROPERTY MAY HAVE CHANGED SINCE THAT DATE AND AN UPDATED SURVEY IS RECOMMENDED TO ACCURATELY DEPICT THE CURRENT CONDITIONS.

8. PORTIONS OF THE PROPERTY ARE IN FLOOD ZONES, AS NOTED, PER FEMA FLOOD INSURANCE RATE MAP, FAIRFIELD COUNTY, CONNECTICUT, MAP NUMBER 09001C0286F, EFFECTIVE DATE JUNE 18, 2010.

9. PROPERTY IS LOCATED IN ZONE B-2.

SCHEDULE B -- EXCEPTIONS
REFERENCE IS MADE TO ALTA COMMITMENT FOR TITLE INSURANCE
PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY

9. Riparian or littoral rights of others in or to any watercourse or body of water on or adjacent to the property. NOT PLOTTABLE

10. Water rights as set forth in the following instruments:
a. Quit Claim Deed from Aaron B. Goodsell to Ida E. Eastwood dated and recorded November 30, 1914 in Volume 12 at Page 758 ofthe Monroe Land Records. NOT PLOTTABLE
b. Quit Claim Deed from Aaron B. Goodsell to Elbert R. Eastwood dated and recorded November 30, 1914 in Volume 12 at Page 761 ofthe Monroe Land Records. NOT PLOTTABLE

11. Rights and reservations to take water from well, as set forth in the following instruments:
a. Warranty Deed from Morris Lieberman to Julius Lieberman dated March 26, 1930 and recorded April 18, 1930 in Volume 26 at Page 425 of the Monroe Land Records.
b. Administratrix Deed from Genevieve W Eastwood, as Administratrix of the Estate of Elbert R. Eastwood to Lina B. Sanders dated September5, 1935 and recorded September6, 1935 in Volume 34 at Page 152 of the Monroe Land Records.
c. Warranty Deed from Genevieve W. Eastwood to Julius Lieberman dated February 9, 1949 and recorded February 11, 1949 in Volume 42 al Page 93 of the Monroe Land Records.

12. Agreement by and between Louis M. Snyder and John H. Snyder, The Peoples Savings Bank-Bridgeport, Vitramon, Incorporated and Bridgeport Children's Camp, Incorporated dated March 15, 1965 and recorded April 29, 1965 in Volume 80 at Page 61 of the Monroe Land Records. Certain rights contained in such Agreement were released in that certain Special Warranty Deed from Kimball Land Holdings, LLC to E & P Associates dated July 31, 2003 and recorded August 1,2003 in Volume 1188 at Page 89 of the Monroe Land Records. NOT PLOTTABLE

14. Reservations in Warranty Deed from Vitramon, Incorporated to Trefoil/Trumbull Associates Limited Partnership dated June 25, 1985 and recorded July 17, 1985 in Volume 286 at Page 168 of the Monroe Land Records and re-recorded August 15, 1985 in Volume 288 at Page 226 of the Monroe Land Records. NOT PLOTTABLE

17. Reservations, easements, agreements, conditions and all other matters set forth in the following Deed(s):
E. Special Warranty Deed from Kimball Land Holdings, LLC to 38-44 Main Street, LLC dated November 16, 2005 and recorded November 21,2005 in Volume 1395 at Page 100 of the Monroe Land Records. NOT PLOTTABLE

20. Access and Utilities Easement from Kimball Land Holdings, LLC to E & P Associates dated July 31, 2003 and recorded August 1 , 2003 in Volume 1 188 at Page 95 of the Monroe Land Records. AS NOTED

26. Access and Utility Easement from Kimball Land Holdings, LLC to REM Enterprises, LLC dated April 26,2004 and recorded April 28, 2004 in Volume 1263 at Page 332 of the Monroe Land Records. AS NOTED

27. Access and Utility Easement from Kimball Land Holdings, LLC to Robert F. O'Keefe and Maureen T. O'Keefe dated and recorded April28,2004 in Volume 1264 at Page 146 of the Monroe Land Records and as re-recorded on June 16,2004 in Volume 1278 al Page 193 of the Monroe Land Records. AS NOTED

31. Easement Agreement by and between Kimball Land Holdings, LLC and The Southern New England Telephone Company d/b/a SBC Connecticut dated September 1,2004 and recorded September 3,2004 in Volume 1297 al Page 162 of the Monroe Land Records. AS NOTED

32. Electric Distribution Easement from Kimball Land Holdings, LLC to The Connecticut Light and Power Company dated November 9,2004 and recorded November 17,2004 in Volume 1312a|Page 18 of the Monroe Land Records, and as partially assigned by a Partial Assignment of Easement Rights to The Southern New England Telephone Company d/b/a AT&T Connecticut dated October 2,2000 and recorded March 7,2008 in Volume 1538 at Page 30 of the Monroe Land Records. AS NOTED

33. Easement from Kimball Land Holdings, LLC and 38-44 Main Street, LLC to the State of Connecticut dated March 15, 2006 and recorded November 22,2006 in Volume 14'15 alPage 124 of the Monroe Land Records. AS NOTED

34. Trail Easement from 38-44 Main Street, LLC and Kimball Land Holdings, LLC to the Town of Monroe dated and recorded April4,2006 in Volume 1417 alPage267 of the Monroe Land Records, and as modified by a Modification of Easement dated and recorded July 9, 2015 in Volume 1884 at Page 206 of the Monroe Land Records. AS NOTED

37. Electric Distribution Easement from Kimball Land Holdings, LLC and 38-44 Main Street, LLC to The Connecticut Light and Power Company dated and recorded March 15, 2007 in Volume 1480 at Page 321 of the Monroe Land Records. AS NOTED

38. Right of Way Agreement between Kimball Land Holdings, LLC and 38-44 Main Street, LLC in favor of Aquarion Water Company dated June 29, 2007 and recorded May 9, 2008 in Volume '1547 at Page 132 of the Monroe Land Records. AS NOTED

43. Declaration of Restrictions and Covenants by Kimball Land Holdings, LLC and Kimball Development, LLC dated July 9, 2015 and recorded July 9, 2015 in Volume 1884 at Page 2'11 of the Monroe Land Records. NOT PLOTTABLE

46. Effect, if any, of a Traffic Investigation Report to the State Traffic Commission (STC No. 173-1309-01) dated December 22, 2015 and recorded January 6, 2016 in Volume 1905 at Page247 of the Monroe Land Records. Certificate issued by the State of Connecticut, Department of Transportation to Victoria Drive Associates, LLC and Kimball Land Holdings, LLC & Kimball Development, LLC (Certificate No. 1601-8) dated July 25,2017 and recorded July 26, 2017 in Volume 1968 at Page 258 of the Monroe Land Records. NOT PLOTTABLE

47. Easementfrom 38-44 Main Street, LLC to the State of Connecticut dated July 5, 2017 and recorded July 19,2016 in Volume 1967 al Page 332 of the Monroe Land Records. AS NOTED

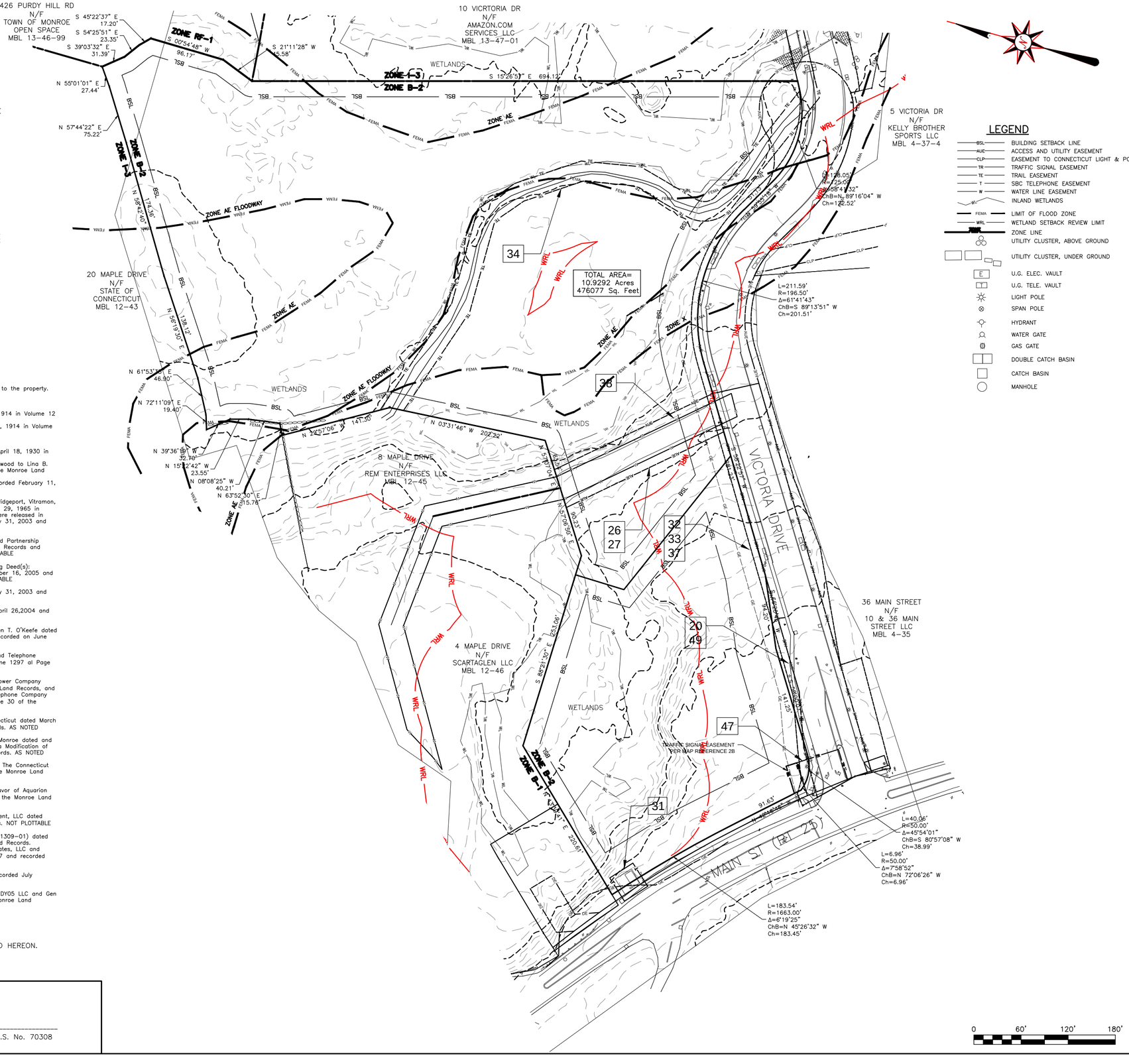
49. Terms and conditions of an Access, Utility and Sign Easement Agreement by and between FSI DY05 LLC and Gen IV, LLC dated May 21 , 2021 and recorded June 7, 2021 in Volume 21 63 at Page 166 of the Monroe Land Records. AS NOTED

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

THIS MAP IS NOT VALID UNLESS EMBOSSED WITH THE SEAL OR AFFIXED WITH THE LIVE STAMP OF THE SIGNATORY.

J. EDWARDS & ASSOCIATES, LLC
Engineering and Surveying
227 Stepney Road
Easton, CT. 06612
(203)-268-4205
www.jedwardsassoc.com

JASON EDWARDS, L.S. No. 70308



LEGEND

- BSL — BUILDING SETBACK LINE
- AUE — ACCESS AND UTILITY EASEMENT
- CLP — EASEMENT TO CONNECTICUT LIGHT & POWER
- TR — TRAFFIC SIGNAL EASEMENT
- TE — TRAIL EASEMENT
- T — SBC TELEPHONE EASEMENT
- W — WATER LINE EASEMENT
- WL — INLAND WETLANDS
- FEMA — LIMIT OF FLOOD ZONE
- WRL — WETLAND SETBACK REVIEW LIMIT
- ZONE LINE
- UTILITY CLUSTER, ABOVE GROUND
- UTILITY CLUSTER, UNDER GROUND
- E — U.G. ELEC. VAULT
- U.G. TELE. VAULT
- LIGHT POLE
- SPAN POLE
- HYDRANT
- WATER GATE
- GAS GATE
- DOUBLE CATCH BASIN
- CATCH BASIN
- MANHOLE

0 60' 120' 180'

J. EDWARDS & ASSOCIATES LLC
ENGINEERING • SURVEYING • SITE PLANNING
227 Stepney Road Easton, CT 06612
Phone:203.268.4205 Fax: 203.268.5604
www.jedwardsassoc.com

2 VICTORIA DRIVE
MONROE, CONNECTICUT

REVISIONS

#	DATE	DESCRIPTION
1	3/18/25	IWWC

DATE: 7/1/24
PROJECT #: 11942A
DRAWING FILE: EX
DRAWN BY: IE
SCALE: 1"=60'

TITLE

EXISTING CONDITIONS PLAN

SHEET NUMBER

1.1

FILE NO. 11942A

NOTES:
1. THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH THE SECTIONS 20-300B-1 THROUGH 20-300B-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES – "MINIMUM STANDARDS FOR SURVEY AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. IT IS AN IMPROVEMENT LOCATION SURVEY BASED UPON A DEPENDENT RESURVEY AND CONFORMS TO HORIZONTAL ACCURACY CLASS A-2.

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B. "RIGHT OF WAY SURVEY, TOWN OF MONROE. MAP SHOWING LAND ACQUIRED FROM 38-44 MAIN STRET, LLC. BY THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION." SCALE 1"=30'. DATED JUNE 9, 2017. ON FILE AS RECORD MAP #3223.

3. THE LOCATION OF UNDERGROUND UTILITIES, IF ANY, IS UNKNOWN

4. PLAN PREPARED FOR OWNER.

5. LOT CORNER MARKERS DEPICTED HEREON WERE FOUND AND/OR SET DURING COMPLETION OF THIS SURVEY.

6. BEARING BASED ON THE MAPS REFERENCED IN NOTE 2A ABOVE.

7. CERTIFICATION OF THIS MAP APPLIES TO CONDITIONS AS OF THE ORIGINAL DATE OR REVISED DATE DEPICTED HEREON. EXISTING CONDITIONS ON THIS PROPERTY MAY HAVE CHANGED SINCE THAT DATE AND AN UPDATED SURVEY IS RECOMMENDED TO ACCURATELY DEPICT THE CURRENT CONDITIONS.

8. PORTIONS OF THE PROPERTY ARE IN FLOOD ZONES, AS NOTED, PER FEMA FLOOD INSURANCE RATE MAP, FAIRFIELD COUNTY, CONNECTICUT, MAP NUMBER 09001C0286F, EFFECTIVE DATE JUNE 18, 2010.

9. PROPERTY IS LOCATED IN ZONE B-2.

SCHEDULE B -- EXCEPTIONS
REFERENCE IS MADE TO ALTA COMMITTMENT FOR TITLE INSURANCE
PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY

9. Riparian or littoral rights of others in or to any watercourse or body of water on or adjacent to the property. NOT PLOTTABLE

10. Water rights as set forth in the following instruments:
a. Quit Claim Deed from Aaron B. Goodsell to Ida E. Eastwood dated and recorded November 30, 1914 in Volume 12 at Page 758 ofthe Monroe Land Records. NOT PLOTTABLE
b. Quit Claim Deed from Aaron B. Goodsell to Elbert R. Eastwood dated and recorded November 30, 1914 in Volume 12 at Page 761 ofthe Monroe Land Records. NOT PLOTTABLE

11. Rights and reservations to take water from well, as set forth in the following instruments:
a. Warranty Deed from Morris Lieberman to Julius Lieberman dated March 26, 1930 and recorded April 18, 1930 in Volume 26 at Page 425 of the Monroe Land Records.
b. Administratrix Deed from Genevieve W Eastwood, as Administratrix of the Estate of Elbert R. Eastwood to Lina B. Sanders dated September5, 1935 and recorded September6, 1935 in Volume 34 at Page 152 of the Monroe Land Records.
c. Warranty Deed from Genevieve W. Eastwood to Julius Lieberman dated February 9, 1949 and recorded February 11, 1949 in Volume 42 al Page 93 of the Monroe Land Records.

12. Agreement by and between Louis M. Snyder and John H. Snyder, The Peoples Savings Bank-Bridgeport, Vitramon, Incorporated and Bridgeport Children's Camp, Incorporated dated March 15, 1965 and recorded April 29, 1965 in Volume 80 at Page 61 of the Monroe Land Records. Certain rights contained in such Agreement were released in that certain Special Warranty Deed from Kimball Land Holdings, LLC to E & P Associates dated July 31, 2003 and recorded August 1,2003 in Volume 1188 at Page 89 of the Monroe Land Records. NOT PLOTTABLE

14. Reservations in Warranty Deed from Vitramon, Incorporated to Trefoil/Trumbull Associates Limited Partnership dated June 25, 1985 and recorded July 17, 1985 in Volume 286 at Page 168 of the Monroe Land Records and re-recorded August 15, 1985 in Volume 288 at Page 226 of the Monroe Land Records. NOT PLOTTABLE

17. Reservations, easements, agreements, conditions and all other matters set forth in the following Deed(s):
E. Special Warranty Deed from Kimball Land Holdings, LLC to 38-44 Main Street, LLC dated November 16, 2005 and recorded November 21,2005 in Volume 1395 at Page 100 of the Monroe Land Records. NOT PLOTTABLE

20. Access and Utilities Easement from Kimball Land Holdings, LLC to E & P Associates dated July 31, 2003 and recorded August 1 , 2003 in Volume 1 188 at Page 95 of the Monroe Land Records. AS NOTED

26. Access and Utility Easement from Kimball Land Holdings, LLC to REM Enterprises, LLC dated April 26,2004 and recorded April 28, 2004 in Volume 1263 at Page 332 of the Monroe Land Records. AS NOTED

27. Access and Utility Easement from Kimball Land Holdings, LLC to Robert F. O'Keefe and Maureen T. O'Keefe dated and recorded April28,2004 in Volume 1264 at Page 146 of the Monroe Land Records and as re-recorded on June 16,2004 in Volume 1278 al Page 193 of the Monroe Land Records. AS NOTED

31. Easement Agreement by and between Kimball Land Holdings, LLC and The Southern New England Telephone Company d/b/a SBC Connecticut dated September 1,2004 and recorded September 3,2004 in Volume 1297 al Page 162 of the Monroe Land Records. AS NOTED

32. Electric Distribution Easement from Kimball Land Holdings, LLC to The Connecticut Light and Power Company dated November 9,2004 and recorded November 17,2004 in Volume 1312a|Page 18 of the Monroe Land Records, and as partially assigned by a Partial Assignment of Easement Rights to The Southern New England Telephone Company d/b/a AT&T Connecticut dated October 2,2000 and recorded March 7,2008 in Volume 1538 at Page 30 of the Monroe Land Records. AS NOTED

33. Easement from Kimball Land Holdings, LLC and 38-44 Main Street, LLC to the State of Connecticut dated March 15, 2006 and recorded November 22,2006 in Volume 14'15 alPage 124 of the Monroe Land Records. AS NOTED

34. Trail Easement from 38-44 Main Street, LLC and Kimball Land Holdings, LLC to the Town of Monroe dated and recorded April4,2006 in Volume 1417 alPage267 of the Monroe Land Records, and as modified by a Modification of Easement dated and recorded July 9, 2015 in Volume 1884 at Page 206 of the Monroe Land Records. AS NOTED

37. Electric Distribution Easement from Kimball Land Holdings, LLC and 38-44 Main Street, LLC to The Connecticut Light and Power Company dated and recorded March 15, 2007 in Volume 1480 at Page 321 of the Monroe Land Records. AS NOTED

38. Right of Way Agreement between Kimball Land Holdings, LLC and 38-44 Main Street, LLC in favor of Aquarion Water Company dated June 29, 2007 and recorded May 9, 2008 in Volume '1547 at Page 132 of the Monroe Land Records. AS NOTED

43. Declaration of Restrictions and Covenants by Kimball Land Holdings, LLC and Kimball Development, LLC dated July 9, 2015 and recorded July 9, 2015 in Volume 1884 at Page 2'11 of the Monroe Land Records. NOT PLOTTABLE

46. Effect, if any, of a Traffic Investigation Report to the State Traffic Commission (STC No. 173-1309-01) dated December 22, 2015 and recorded January 6, 2016 in Volume 1905 at Page247 of the Monroe Land Records. Certificate issued by the State of Connecticut, Department of Transportation to Victoria Drive Associates, LLC and Kimball Land Holdings, LLC & Kimball Development, LLC (Certificate No. 1601-8) dated July 25,2017 and recorded July 26, 2017 in Volume 1968 at Page 258 of the Monroe Land Records. NOT PLOTTABLE

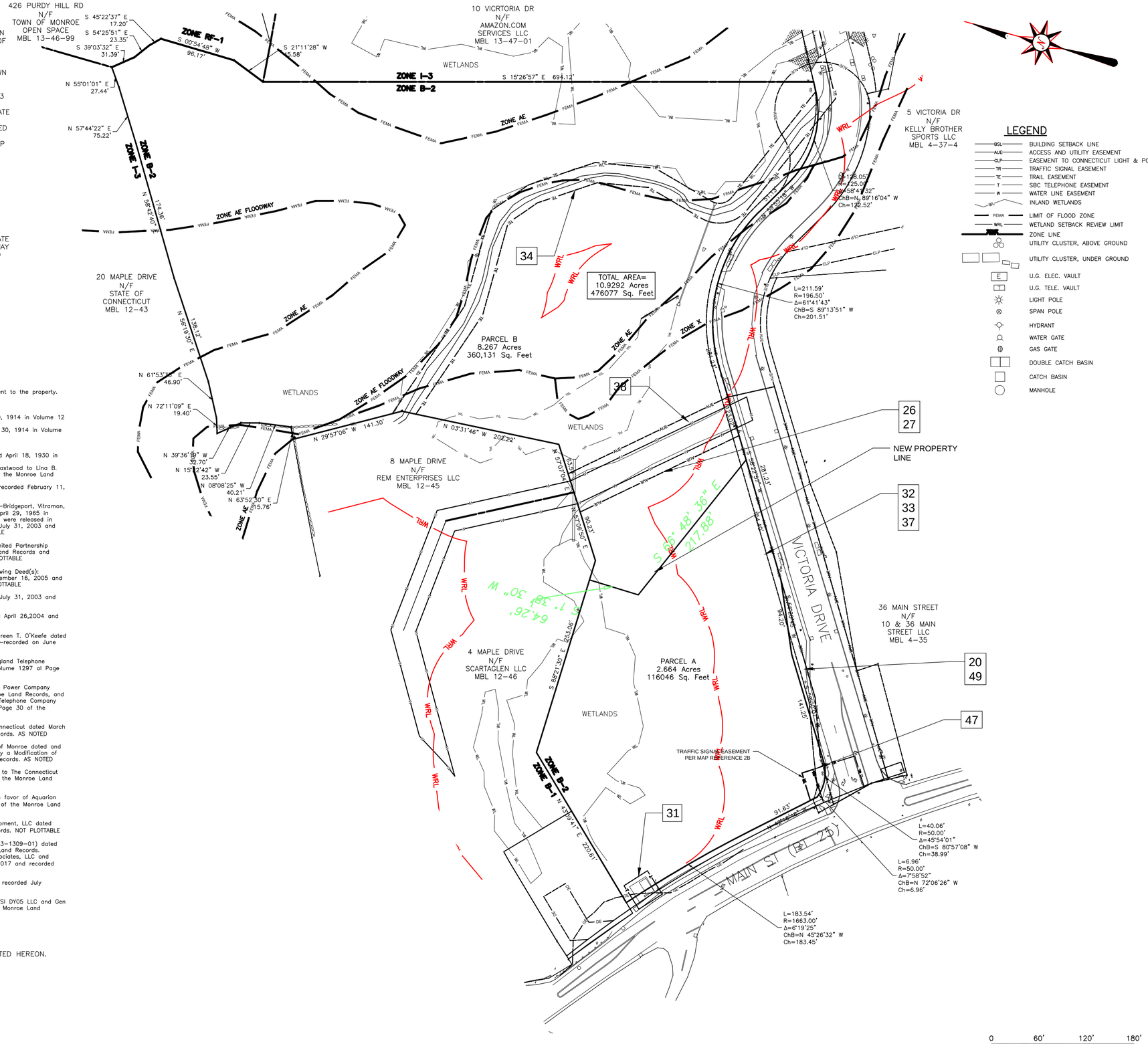
47. Easementfrom 38-44 Main Street, LLC to the State of Connecticut dated July 5, 2017 and recorded July 19,2016 in Volume 1967 al Page 332 of the Monroe Land Records. AS NOTED

49. Terms and conditions of an Access, Utility and Sign Easement Agreement by and between FSI DY05 LLC and Gen IV, LLC dated May 21 , 2021 and recorded June 7, 2021 in Volume 21 63 at Page 166 of the Monroe Land Records. AS NOTED

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

THIS MAP IS NOT VALID UNLESS EMBOSSED WITH THE SEAL OR AFFIXED WITH THE LIVE STAMP OF THE SIGNATORY.

JASON EDWARDS, L.S. No. 70308



LEGEND

BSL	BUILDING SETBACK LINE
AUE	ACCESS AND UTILITY EASEMENT
CLP	EASEMENT TO CONNECTICUT LIGHT & POWER
TR	TRAFFIC SIGNAL EASEMENT
TE	TRAIL EASEMENT
T	SBC TELEPHONE EASEMENT
W	WATER LINE EASEMENT
WL	INLAND WETLANDS
FEMA	LIMIT OF FLOOD ZONE
WRL	WETLAND SETBACK REVIEW LIMIT
	ZONE LINE
	UTILITY CLUSTER, ABOVE GROUND
	UTILITY CLUSTER, UNDER GROUND
E	U.G. ELEC. VAULT
T	U.G. TELE. VAULT
	LIGHT POLE
	SPAN POLE
	HYDRANT
	WATER GATE
	GAS GATE
	DOUBLE CATCH BASIN
	CATCH BASIN
	MANHOLE

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STATE OF CONNECTICUT JASON EDWARDS LICENSED LAND SURVEYOR No. 70308

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: 1"=60'

TITLE

CONCEPTUAL SUBDIVISION PLAN

SHEET NUMBER

1.2

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\1.2-SB

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- 520.2 EXISTING SPOT ELEVATION
- 520.2 PROPOSED SPOT ELEVATION
- EXISTING DRAINAGE
- PROPOSED DRAINAGE
- EXISTING SANITARY
- PROPOSED SANITARY
- L SANITARY LATERALS
- FM FORCE MAIN
- FD FOOTING DRAIN
- RD ROOF DRAIN
- W WATER SERVICE
- G GAS LINE
- COTG CLEAN OUT TO GRADE
- FF FINISHED FLOOR
- GF GARAGE FLOOR
- BS BASEMENT SLAB
- R HANDICAP RAMP
- V VAN ACCESSIBLE SPACE
- WL 27 INLAND WETLANDS WITH FLAG #
- OBSERVATION HOLE
- PERCOLATION TEST
- GTD GRADE TO DRAIN
- SF SYNTHETIC FILTER BARRIER
- WATER BREAK
- LOD LIMIT OF DISTURBANCE
- FE FOUNDATION ENVELOPE
- BUILDING SETBACK LINE
- DE DRAINAGE EASEMENT
- GE GRADING EASEMENT
- SR SLOPE RIGHTS
- CE CONSERVATION EASEMENT
- ME MAINTENANCE EASEMENT
- UPLAND REVIEW LIMIT
- WATERCOURSE
- WATERCOURSE OFFSET

DIRECTION OF FLOW

60 0 60 120

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STATE OF CONNECTICUT JASON EDWARDS No. 30008 LICENSED LANDSCAPE ARCHITECT

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: 1"= 60'

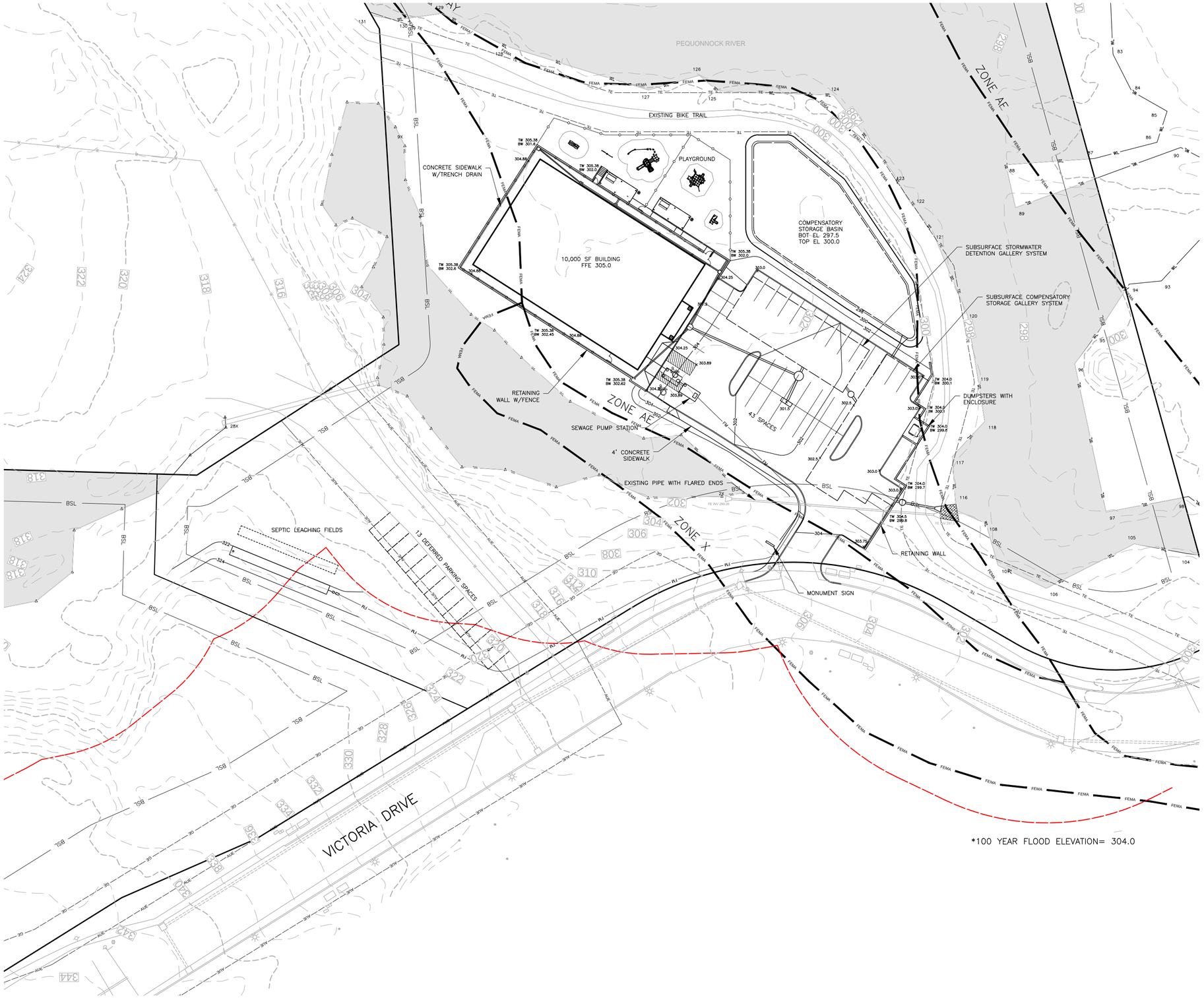
TITLE

AREA PLAN

SHEET NUMBER

1.3

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\1.3 A-1 AREA PLAN



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- 520.2 PROPOSED SPOT ELEVATION
- EXISTING DRAINAGE
- PROPOSED DRAINAGE
- EXISTING SANITARY
- PROPOSED SANITARY
- L — SANITARY LATERALS
- FM — FORCE MAIN
- FD — FOOTING DRAIN
- RD — ROOF DRAIN
- W — WATER SERVICE
- G — GAS LINE
- COTG — CLEAN OUT TO GRADE
- FF — FINISHED FLOOR
- GF — GARAGE FLOOR
- BS — BASEMENT SLAB
- R — HANDICAP RAMP
- V — VAN ACCESSIBLE SPACE
- WL 37 — INLAND WETLANDS WITH FLAG #
- OBSERVATION HOLE
- PERCOLATION TEST
- GTD — GRADE TO DRAIN
- SF — SYNTHETIC FILTER BARRIER
- WATER BREAK
- LOD — LIMIT OF DISTURBANCE
- FE — FOUNDATION ENVELOPE
- BUILDING SETBACK LINE
- DE — DRAINAGE EASEMENT
- GE — GRADING EASEMENT
- SR — SLOPE RIGHTS
- CE — CONSERVATION EASEMENT
- ME — MAINTENANCE EASEMENT
- UPLAND REVIEW LIMIT
- WATERCOURSE
- WATERCOURSE OFFSET

30 0 30 60

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STATE OF CONNECTICUT — JASON EDWARDS — No. 70308 — LICENSED LANDSCAPE ARCHITECT

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2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: 1"= 30'

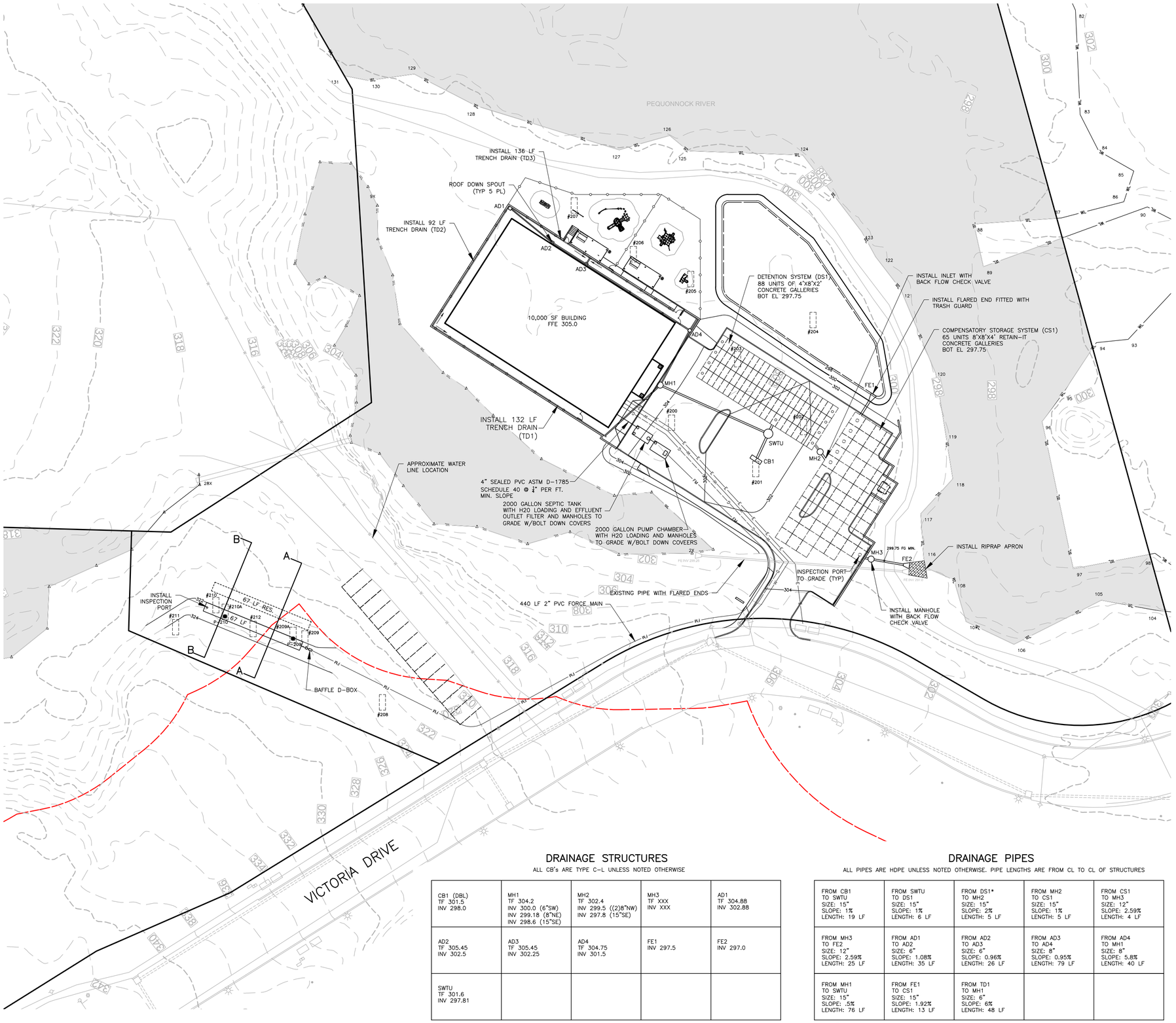
TITLE

SITE PLAN

SHEET NUMBER

2.1

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\2.1 SITE PLAN



DRAINAGE STRUCTURES

ALL CB's ARE TYPE C-L UNLESS NOTED OTHERWISE

CB1 (DBL) TF 301.5 INV 298.0	MH1 TF 304.2 INV 300.0 (6"SW) INV 299.18 (8"NE) INV 298.6 (15"SE)	MH2 TF 302.4 INV 299.5 ((2)8"NW) INV 297.8 (15"SE)	MH3 TF XXX INV XXX	AD1 TF 304.88 INV 302.88
AD2 TF 305.45 INV 302.5	AD3 TF 305.45 INV 302.25	AD4 TF 304.75 INV 301.5	FE1 INV 297.5	FE2 INV 297.0
SWTU TF 301.6 INV 297.81				

DRAINAGE PIPES

ALL PIPES ARE HDPE UNLESS NOTED OTHERWISE. PIPE LENGTHS ARE FROM CL TO CL OF STRUCTURES

FROM CB1 TO SWTU SIZE: 15" SLOPE: 1% LENGTH: 19 LF	FROM SWTU TO DS1 SIZE: 15" SLOPE: 1% LENGTH: 6 LF	FROM DS1* TO MH2 SIZE: 15" SLOPE: 2% LENGTH: 5 LF	FROM MH2 TO CS1 SIZE: 15" SLOPE: 1% LENGTH: 5 LF	FROM CS1 TO MH3 SIZE: 12" SLOPE: 2.59% LENGTH: 4 LF
FROM MH3 TO FE2 SIZE: 12" SLOPE: 2.59% LENGTH: 25 LF	FROM AD1 TO AD2 SIZE: 6" SLOPE: 1.08% LENGTH: 35 LF	FROM AD2 TO AD3 SIZE: 6" SLOPE: 0.96% LENGTH: 26 LF	FROM AD3 TO AD4 SIZE: 8" SLOPE: 0.95% LENGTH: 79 LF	FROM AD4 TO MH1 SIZE: 8" SLOPE: 5.8% LENGTH: 40 LF
FROM MH1 TO SWTU SIZE: 15" SLOPE: .5% LENGTH: 76 LF	FROM FE1 TO CS1 SIZE: 15" SLOPE: 1.92% LENGTH: 13 LF	FROM TD1 TO MH1 SIZE: 6" SLOPE: 6% LENGTH: 48 LF		

*TWIN 8" PVC SCH-40 PIPES

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- 520.2 EXISTING SPOT ELEVATION
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- PROPOSED DRAINAGE
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- UPLAND REVIEW LIMIT
- WATERCOURSE
- WATERCOURSE OFFSET

30 0 30 60

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2 VICTORIA DRIVE
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PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: 1"= 30'

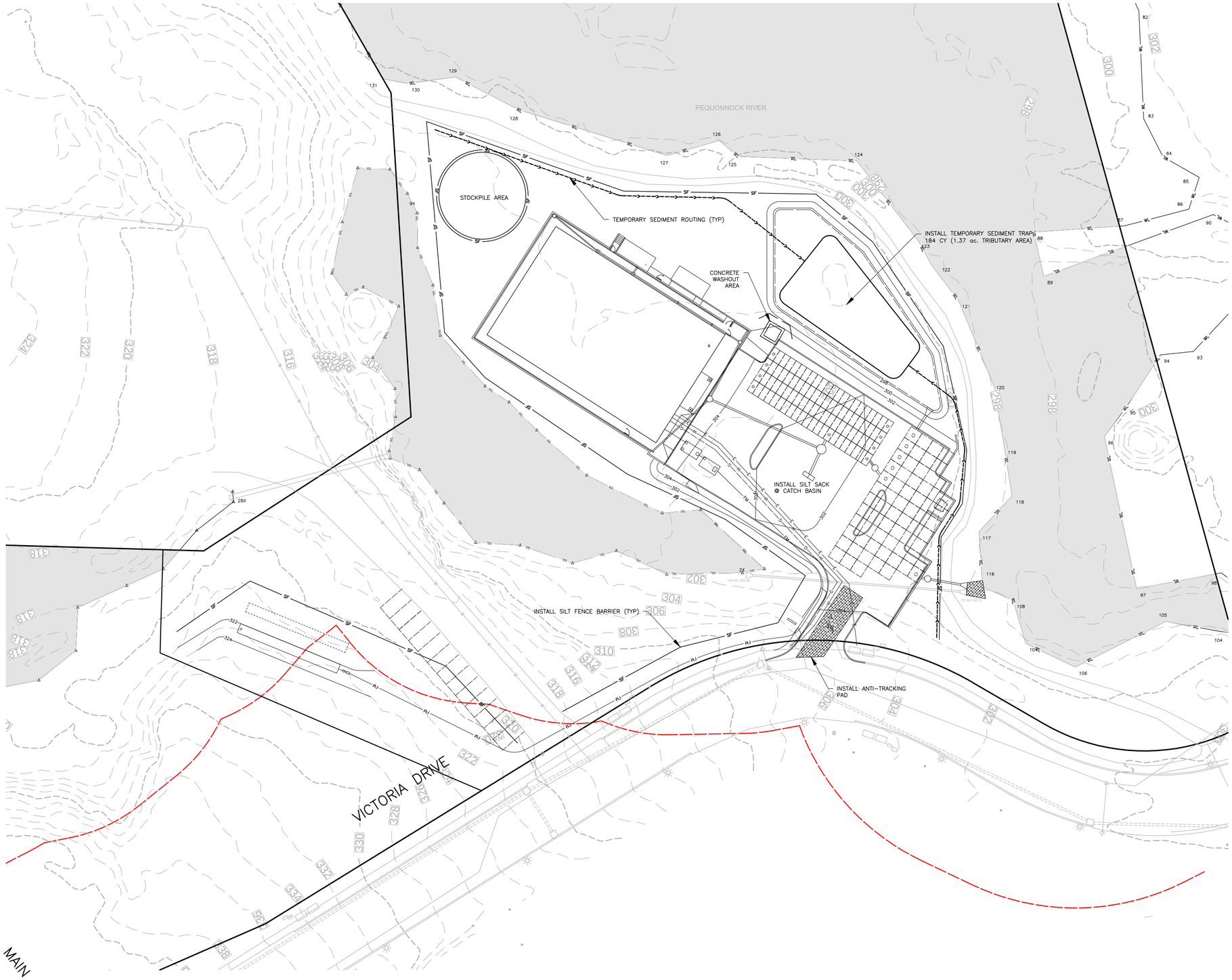
TITLE

UNDERGROUND UTILITIES PLAN

SHEET NUMBER

2.2

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\2.2 UNDERGROUND UTILITIES PLAN



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING DRAINAGE
- PROPOSED DRAINAGE
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- PROPOSED SANITARY
- SANITARY LATERALS
- FORCE MAIN
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- WATERCOURSE
- WATERCOURSE OFFSET

40 0 40 80

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2 VICTORIA DRIVE
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REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: 1"= 40'

TITLE

EROSION & SEDIMENT CONTROL PLAN

SHEET NUMBER

2.3

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\2.3 EROSION CONTROL PLAN

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REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE:	7/1/24
PROJECT #:	11942A
DRAWING FILE:	EX
DRAWN BY:	IE
SCALE:	1"=40'

TITLE

ALTERNATIVE CONCEPTUAL SITE PLAN

SHEET NUMBER

3.1

FILE NO. 11942A

GENERAL NOTES

1. The proposed improvements indicated on these plans are shown as one of many possible layouts. Any variation from these plans is to be approved by the design Engineer and may require Municipal approval.

2. Topographic data and property lines are based on an Existing Conditions Plan, 2 Victoria Drive Monroe, Connecticut, Scale 1"=60', Dated 3-18-25 by J. Edwards & Associates, LLC.

3. Owner: Sentro LLC
16 Cross Street
New Cannan, CT 06840

Applicant: Paul Stone
16 Cross Street
New Canaan, CT 06840

4. Total area of site is 8.26 acres.

5. The site contains 4.47 ac of wetlands.

6. Reference is made to a document titled: Stormwater Management Report for the proposed Site Improvements Located At 2 Victoria Drive, Monroe CT., Prepared On: March 18, 2025 Prepared by J. Edwards & Associates LLC.

7. The site will be served with public water and a private sewage disposal system.

8. The location of underground utilities, if any, is unknown. Call Before-You-Dig 1-800-922-4455.

9. Retaining walls are to be designed by a structural engineer. Retaining wall over three (3) feet high require a building permit.

10. It is the contractor's responsibility to verify all on-site and off-site field conditions and establish that no changes have occurred since the issuance of this plan. The design engineer is to be notified of any field conditions which conflict with this plan.

11. Existing grades shown hereon are to be verified by the contractor prior to commencing construction. The benchmark shown on these plans is to be verified by the contractor prior to commencing construction.

12. All construction methods, materials and system installations are to conform to Town of Monroe Standards and the State of Connecticut Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction, Form 818, July 2020, with latest revisions, to conform all applicable local and state regulations and to normal standards of good practice.

13. All new, altered or replacement utilities shall be installed underground.

14. All roof drains shall discharge to the designated detention system.

15. The contractor shall submit shop drawings for all drainage, detention, retention, septic and sewer structures and sewer and drainage pumps to the design engineer for his approval prior to installation. Shop drawings shall also be submit for any facilities requested by the design engineer at the preconstruction meeting.

16. The contractor shall be responsible for obtaining "as-built" drawings by a licensed land surveyor of detention facilities and septic system.

17. Construction shall only commence upon completion of a pre-construction meeting that includes authorization to start construction.

18. Approximately 1.14 acres will be disturbed for the improvements indicated on the plans.

STORM WATER POLLUTION CONTROL PLAN

Project description

The proposal is for the construction of a 10,000 sf daycare center and it's appurtenances.

1. Erosion and sediment control measures will be constructed in accordance with the Town of Monroe Standards, State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 818, 2020, with latest revisions, and 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, Dep Bulletin 34.

2. The Stormwater Pollution Control Plan shall include all erosion and sedimentation control shown on the approved maps and detail sheets. These controls are assumed to be the minimum required, and the contractor may be required to install additional measures as site conditions and weather warrant.

3. All erosion and sediment control devices will be installed prior to the start of clearing and grubbing operations and excavation work. All the devices will be maintained as specified in this document until the disturbed earth has been paved or vegetated, at which time the devices will be removed.

4. All construction methods, materials and system installations are to conform to all applicable local and state regulations.

5. Grading to be according to all applicable regulations and normal standards of good practice.

6. Land disturbance will be kept to a minimum. Restabilization will be scheduled as soon as practicable.

7. Stockpiles of topsoil and common fill shall be located outside regulated areas where possible. They should be surrounded with silt fence and temporarily stabilized by seeding with a 50-50 mix of annual and perennial rye grass at the rate of one pound per 1,000 square feet of surface area shall be employed between March 15 and June 15 or August 1 and October 1. Mulch with straw or hay at the rate of 70 to 90 pounds per 1,000 square feet until stabilized.

8. All control measures will be maintained in effective condition throughout the construction period until the area is stabilized.

9. Maintenance of the erosion controls shall consist of inspection at the start of each work day with special attention afforded following storm events. Noted deficiencies shall be corrected immediately. Accumulated sediment shall be removed from the erosion control device and dispersed temporarily on the upland portion of the disturbed area. Additional seeding or mulching shall be employed as required.

10. The contractor is to inspect the site daily during construction to insure the integrity of the erosion controls.

11. The contractor is to have available at all times extra silt fence, hay bale mulch, grass seed and riprap to implement additional erosion contral measures not foreseen in this plan.

12. Prior to closing the site down for winter, if required, the contractor shall schedule a meeting with the project engineer to review site conditions and make recommendations to minimize erosion during the winter. The meeting is to be held no later than October 1,of any given year.

13. Accumulated sediment is to be disposed of in an area approved by the design engineer and verification compliance accepted by the Town.

14. This plan and report may be modified by the engineer based upon field conditions. Any alteration of the proposed layout requires acceptance/approval by the Town Planner and/or Zoning Enforcement Officer, or applicable Commission actions if warranted.

15. Catch basins shall be protected with silt sacks, haybales, and/or silt fence during construction until all disturbed areas are stabilized.

16. Water breaks, silt fence, haybales and other measures are to be maintained until drainage is complete and site is stabilized with vegetated cover.

17. Stabilization practices may include silt fences, temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation and other vegetative and non-structural measures as identified in the Guidelines. Where construction activities have permanently ceased or have temporarily been suspended for more than seven days or when final grades are reached in any portion of the site, stabilization practices shall be implemented within three days. Areas which remain disturbed but inactive for at least thirty days shall receive temporary seeding and/or mulching in accordance with the Guidelines. Areas that will remain disturbed beyond the planting season, shall receive long-term, non-vegetative stabilization sufficient to protect the site through the winter.

18. Structural practices include but are not limited to earth dikes (diversions), drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, outlet protection, reinforced soil retained systems, gabions and temporary or permanent sediment basins and chambers.

19. Disturbance for lot development will be limited to 1 acre at any one time. Overland drainage from uphill sources will be diverted around the disturbed portions of the lot until those disturbed areas have been stabilized. If more than 1 acre is to be disturbed at one time, sediment basins must be provided. These sediment basins shall have a storage capacity of 134 cubic yards per acre of tributary area. Possible locations are shown on the site plan.

20. De-watering waste waters might be generated during the construction of the underground utilities and the excavation for foundations. Contractors shall arrange for the pumping of water in excavations to occur in sumps created in the excavation and will discharge into temporary sediment basins.

21. All contractors and subcontractors working on site will ensure that no litter, debris, building material or similar material is discharged to the inland wetlands.

22. Contractors will implement techniques to control the generation of dust.

23. All post construction storm water structures will be cleaned of construction sediment and any remaining silt fence shall be removed.

24. The site will have an anti-tracking pad installed at the point where construction traffic exits the site and silt fence installed as shown on the plans or as required downhill of areas of disturbed earth. Refer to the detail drawings for specifics on proposed measures.

Paul Stone 203-972-3366 is assigned the responsibility for implementing this Storm water Pollution Control Plan during the construction. This responsibility includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of the plan. If the land is transferred, the Planning and Zoning office shall be notified and a copy of the Storm water Pollution Control Plan shall be conveyed to the new owners. It shall become the responsibility of the new owners to implement the Storm water Pollution Control Plan for the site as outlined in this Storm water Pollution Control Plan.

CONSTRUCTION SEQUENCE

1. Install anti-tracking pad as shown where construction traffic enters a public right-of-way.
2. Install perimeter erosion and sediment controls.
3. No burying of stumps, slash and grubbing material is allowed on any site. Materials must be chipped or removed from the site and disposed of at a permitted location.
4. Install temporary sediment trap.
5. Direct stormwater runoff from the construction area with temporary sediment routing and diversion berms as necessary to flow into the temporary sediment traps.
6. Strip topsoil and stockpile in designated area.
7. Rough grade site beginning at the front and move rearward.
8. Install retain-it compensatory gallery/retaining wall system.
9. Construct remainder of retaining walls.
10. Prepare building pad and construct foundation.
11. Install storm detention facilities. and storm drainage system.
12. Install septic system.
13. Place, grade and compact the processed aggregate in the driveway and parking base.
14. Install underground utilities and site lighting.
15. Install first course of bituminous concrete.
18. Install sidewalk and playground area.
19. Install curbing where required.
20. Apply stabilization measures to remaining disturbed areas in accordance with the Stormwater Quality Management Plan (topsoil, seeding, sodding, mulching, etc.)
21. Inspect and clean drainage system as needed.
22. Install the final course of bituminous concrete pavement.
23. Install landscaping materials.
24. After site is stabilized in accordance with the applicable Stormwater Quality Management Plan measures, remove temporary erosion and sediment controls.

SITE MAINTENANCE PLAN

This Site Maintenance Plan and Schedule highlights the maintenance procedures for the development. However, this does not preclude the maintenance personnel's responsibility to perform maintenance procedures properly, add other procedures as necessary and conduct maintenance in accordance with current state laws and regulations.

Driveways and Parking Areas

The driveway and parking area shall be swept with a mechanical sweeper or broom at least four times per year. One cleaning will be in the fall after the leaves are off the trees. The second will be in the spring after the last snow fall. The other two sweepings will be scheduled at equal intervals during the spring, summer and early fall seasons preferably after extended dry periods. A light spray of water is recommended to minimize dust during sweeping. Use of high velocity blowers is not recommended as they often "defeat the basic purpose of sweeping in an environmentally sound manner."

The sweepings shall be collected and removed from the site. The disposal method shall be determined by the personnel conducting the sweeping and shall comply with all applicable laws.

Pavement markings, directional arrows and stop bars shall be inspected annually. All pavement markings and directional signs shall be replaced as necessary to insure they are clear, visible and reflective to maintain safe traffic flow.

Paved surfaces shall be crack sealed on a yearly basis and inspected for "Pot Holes". Required patching shall be done on a yearly basis every spring. Paved surfaces should be replaced every 20 years, or as site conditions warrant.

Infiltration Galleries

The detention galleries shall be inspected annually. If sediment is observed at the inlet to the gallery system, it shall be removed. This is an indication that the catch basin sumps and or the stormwater treatment unit are not functioning as designed. It may be necessary to increase the frequency of the cleaning of the drainage structures.

Landscaping

The site landscaping shall be maintained including trimming and replacing plant materials that have died or diseased. All grass areas shall be maintained by cutting and fertilizing. All fertilizer application shall be based upon a yearly evaluation of the required nutrient levels and fertilizer application shall be calibrated accordingly to avoid excessive amounts of fertilizer. Litter and dead, diseased or unhealthy plants which are a safety hazard shall be removed.

SEPTIC SYSTEM NOTES:

1. The purpose of the proposed septic system is to dispose of domestic sewage consisting of water and human excretions or other waterborne wastes incidental to the occupancy of the proposed use. Waste water from water softening equipment, water from floor drains or surface water from roofs, paved surfaces or yard drains is not permitted.

2. Once construction plans for the site are approved, deviation from these plans may require additional approvals from regulating authorities.

3. Care should be taken during site development to protect the proposed septic system area from unnecessary disturbance. If care is not taken and the area is not prepared as noted on this plan, premature failure of the system may result. It is recommended that the septic disposal area is fenced prior to construction.

4. The test results and soil types shown apply only to the test hole shown and may or may not apply to other areas on the site. The soil types shown and existing grades are to be verified over the entire septic area prior to construction.

5. The septic tank shall be capable of supporting the superimposed loads indicated on the plans. The superimposed loads shall consist of the earth load and the live load. The earth load shall be computed from the depth of soil cover shown on the plans. The minimum earth load shall be for soil cover of eighteen inches. The minimum live load shall be H-10. The minimum live load for any tank located under pavement shall be H-20.

6. The septic tank shall conform to the latest revision of the Connecticut Public Health Code. The tanks shall have a mid-depth connection, an inlet and outlet baffle, an appropriately sized effluent filter and shall have access risers and safety devices.

7. No loose or open jointed, perforated, slotted or pervious pipe drain is to be located within 50' down gradient of any septic system area.

8. There are no apparent visible wells within seventy five (75) feet of the proposed septic system.

9. No utility service trench is to be located within 5 feet of the septic system. Excavations within 5 to 25 feet from the system shall not be back filled with free draining material.

10. System preparation: remove unsuitable fill and topsoil from entire septic system area.

11. Observation port to be installed on gallery ends as shown to facilitate leaching system monitoring and performance capabilities.

12. The benchmark shown in this plan is to be verified in the field by the contractor prior to any construction.

15. The proposed septic system shall be staked out, offset and elevated for construction by a qualified surveyor.

17. An as-built plan shall be prepared by a qualified surveyor, reviewed by the Design Engineer and submitted to the applicable agencies for approval.

18. All proposed sanitary structures shall conform to the current
18. Connecticut Public Health Code.

19. Oil tank (if required) is to be located inside the structure.

SOILS TESTING

DEEP TEST RESULTS

TESTING PERFORMED:10/30/24 - NDC, A.Karp, J.Kimball, Amy Lehaney

#200
0 - 14" Topsoil/Misc Fill
14" - 39" Yellow Brown Fine Sandy Loam
39" - 73" Tan Fine-Medium Sand & Gravel W/Cobbles
No Ledge No Water Redoximorphic Features @ 32"

#201
0 - 43" Topsoil/Misc Fill
43" - 76" Grey fine-Medium Sand (mottled throughout)
Pocket of black substance @ 40" (does not appear to be organic)
No Ledge Water @ 72" Redoximorphic Features @ 43"

#202
0 - 20" Topsoil/Misc Fill
20" - 72" Tan Fine-Medium Sand & Gravel W/Cobbles (very compact)
Health Dept. opines that lower material not suitable for sewage disposal.
No Ledge No Water No Redoximorphic Features

#203
0 - 18" Topsoil/Misc Fill
18" - 77" Tan Fine-Medium Sand & Gravel W/Cobbles (compact)
No Ledge No Water No Redoximorphic Features

#204
0 - 26" Topsoil/Misc Fill
26" - 69" Tan Fine-Medium Sand & Gravel W/Cobbles
No Ledge Water @ 64" Redoximorphic Features @ 48"

#205
0 - 26" Topsoil/Misc Fill
26" - 68" Tan Fine-Medium Sand & Gravel W/Cobbles
No Ledge Water @ 68" Redoximorphic Features @ 21"

#206
0 - 6" Topsoil
6" - 73" Tan Fine Silty Sand (compact)

No Ledge Water @ 52" Redoximorphic Features @ 12"

#207
0 - 12" Topsoil/Misc Fill
12" - 73" Tan Fine Silty Sand
No Ledge Water @ 68" Redoximorphic Features @ 17"

#208
0 - 87" Topsoil/Misc Fill

#209
0 - 60" Topsoil/Misc Fill
60" - 92" Tan Fine-Medium Sand & Gravel W/Cobbles
No Ledge No Water No Redoximorphic Features

#210
0 - 25" Topsoil/Misc Fill
25" - 39" Tan Coarse Sand
39" - 48" Tan Fine Sand
48" - 81" Brown Fine-Medium Sand W/Cobbles
No Ledge No Water No Redoximorphic Features

#211
0 - 48" Topsoil/Misc Fill
48" - 87" Brown Fine-Medium Sand W/Cobbles
No Ledge No Water No Redoximorphic Features

#212
0 - 28" Topsoil/Misc Fill
28" - 40" Tan Fine Sand
40" - 76" Olive Brown Fine-Medium Sand W/Cobbles
No Ledge No Water No Redoximorphic Features

TESTING PERFORMED:12/17/24 - NDC, J.Kimball, Amy Lehaney

#209A -Dug to verify depth to any restrictive layer (ledge)
D=113"
No Ledge No Water No Redoximorphic Features

#210A -Dug to verify depth to any restrictive layer (ledge)
D=120"
No Ledge No Water No Redoximorphic Features

PERCOLATION TESTS

TESTING PERFORMED:12/17/24

P-209		P-210	
Depth: 18"	Diameter: 12"	Depth: 22"	Diameter: 8"
(perc test located 48" below existing grade)		(perc test located 48" below existing grade)	
10:10	Presoak	10:25	
11:22	10-3/4"	11:18	11"
11:27	14-3/4"	11:23	15-1/2"
11:32	Dry	11:28	17"
		11:33	Dry
Rate: 1" = 1.25 minutes		Rate: 1" =3.33 minutes	

SEPTIC SYSTEM DESIGN BASIS

The proposed daycare building has the potential to accommodate 161 students

Due to the absence of a restrictive layer, no MLSS is required.
Perc rate:" 1" in 10 min.

Use an application rate of 1.5 gpd/sf of ELA (non-residential building with non-problematic sewage).

Design Flow =161 students x 10 gpd/student= 1610 gpd.

Application rate= 1610 gpd/1.5 gpd/sf ela= 1073.33 sf required ELA.

Use Greenleach GLT 72"x21" @ 16.1 sf/lf
Therefore 1073.33 sf/16.1 sf/lf= 66.66 lf required.

Primary system: Install 67 LF of leaching system providing 1078.7 sf ela.
Reserve system: Install 67 LF of leaching system providing 1078.7 sf ela.

APPROXIMATE PROPOSED ELEVATIONS:

Effluent line at building: 301.0
Septic tank inlet: 300.0; outlet elevation 299.75
Pump Chamber inlet 299.5; outlet elevation 298.5
Baffle D-box outlet elevation 319.35

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STATE OF CONNECTICUT JEFFREY R. EDWARDS No. 20021 LICENSED PROFESSIONAL ENGINEER

STATE OF CONNECTICUT JASON EDWARDS No. 70308 LICENSED LAND SURVEYOR

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

10 1-31-25 CONNDOT

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: NTS

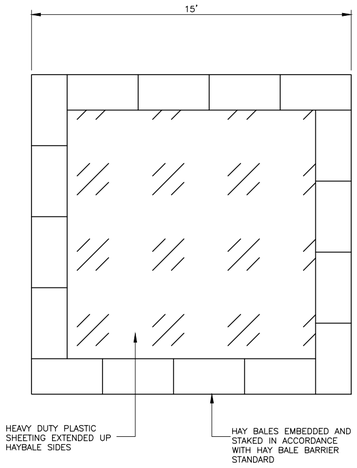
TITLE

DETAILS

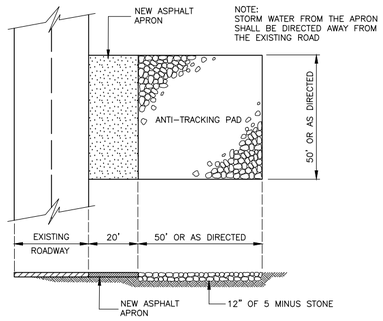
SHEET NUMBER

4.1

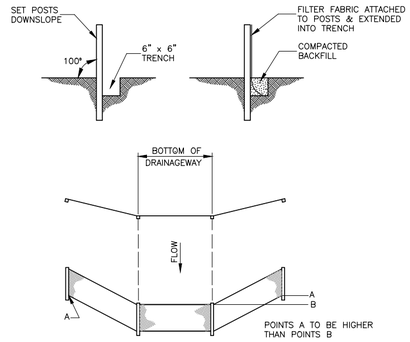
K:\PROJECTS\1194-2-A-KARP-38 MAN ST\DRAWINGS\4.1 D-1



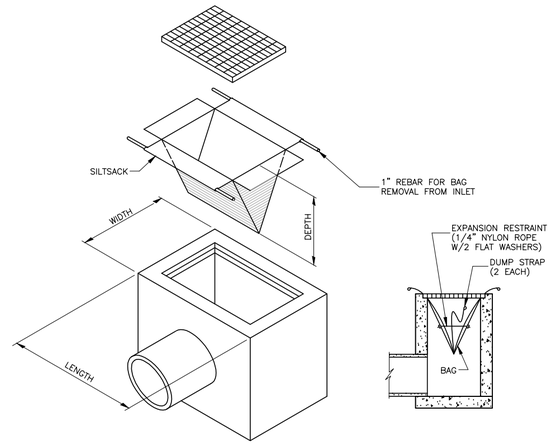
CONCRETE WASHOUT BASIN



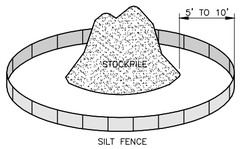
ANTI-TRACKING PAD



SYNTHETIC FILTER BARRIER

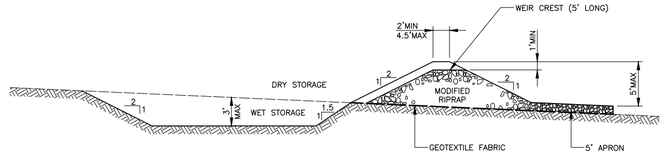


SEDIMENT CONTROL AT INLET

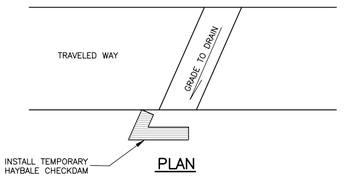


APPLY MIXTURE OF PERRENIAL RYEGRASS, ANNUAL RYEGRASS AND WINTER RYE AT A RATE OF 10 LBS PER 1000 SF

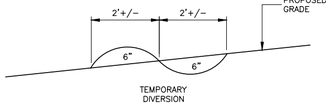
STOCKPILE STABILIZATION



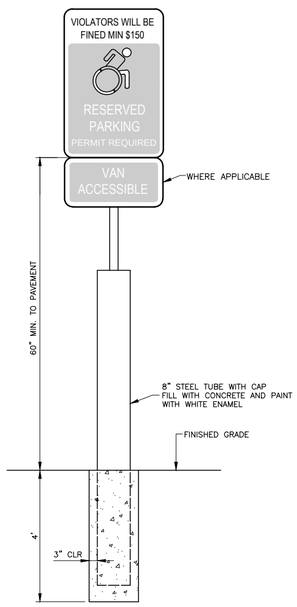
TEMPORARY SEDIMENT TRAP



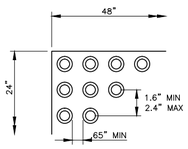
PLAN



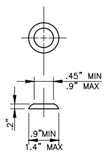
TEMPORARY WATER BREAK



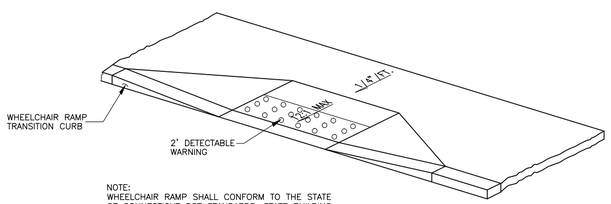
PARKING BOLLARD



DETECTABLE WARNING

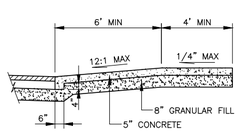


DOME DETAIL



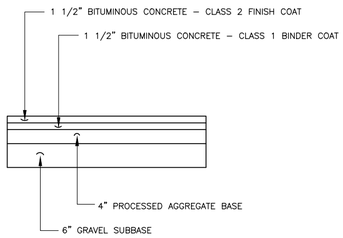
NOTE:
WHEELCHAIR RAMP SHALL CONFORM TO THE STATE OF CONNECTICUT DOT STANDARDS, STATE BUILDING CODE AND ADA REQUIREMENTS

ISOMETRIC VIEW

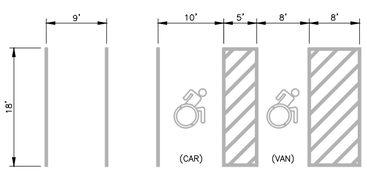


SECTION

SIDEWALK FLARED CURB RAMP



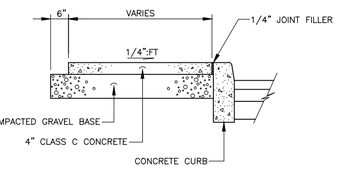
PAVEMENT SECTION–ONSITE



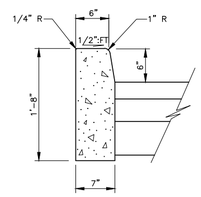
GUEST HANDICAP

PARKING SPACES

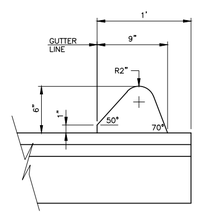
NOTE:
HANDICAP PARKING SPACES SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION



CONCRETE SIDEWALK WITH CURB



CONCRETE CURBING



BITUMINOUS LIP CURBING

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PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

10 1–31–25 CONNDOT

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: NTS

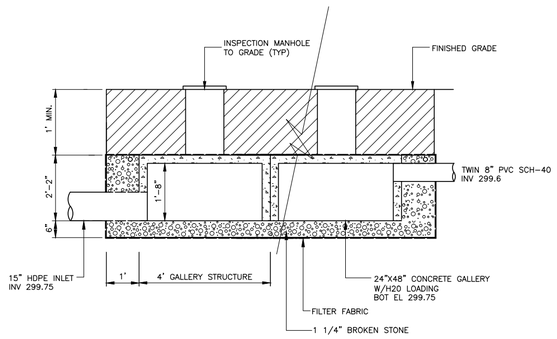
TITLE

DETAILS

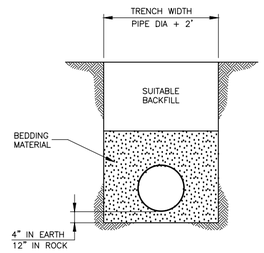
SHEET NUMBER

4.2

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\4.2 D-2

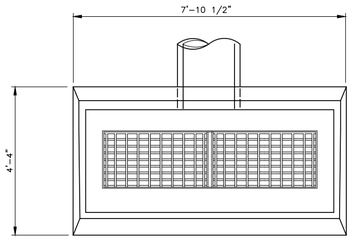


DETENTION GALLERY SYSTEM



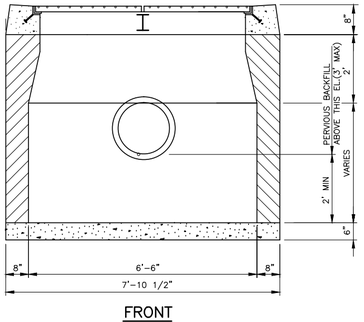
BEDDING MATERIAL TO BE SAND OR SANDY SOIL WHICH PASSES A 3/8" SIEVE WITH NOT MORE THAN 10% PASSING A #200 SIEVE. WHEN GROUND WATER IS ENCOUNTERED, THE ENGINEER MAY ALLOW 3/4" STONE CONFORMING TO CT DOT FORM 817 ARTICLE M.01.01 TO BE USED INSTEAD.

DRAINAGE PIPE TRENCH

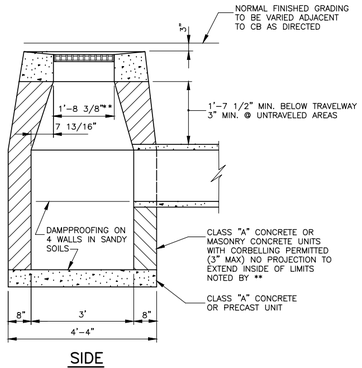


PLAN

NOTE:
WHERE PRECAST CONCRETE UNITS ARE USED FOR THE SUMP, THE TOP OF THE UNIT SHALL BE AT LEAST 6" BELOW THE BOTTOM OF THE PIPE OUTLETTING FROM THE CATCH BASIN



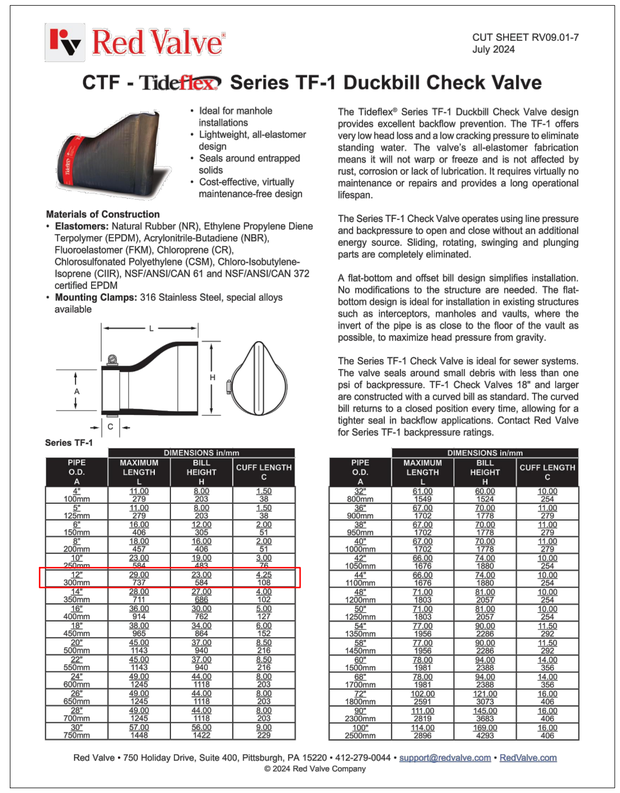
FRONT



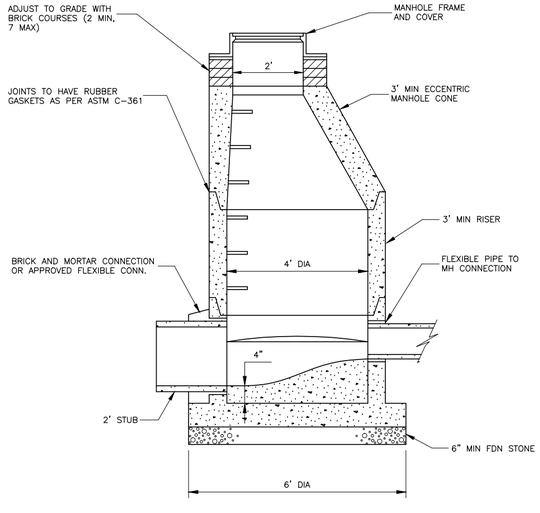
SIDE

TYPE "C-L" CATCH BASIN - DOUBLE GRATE

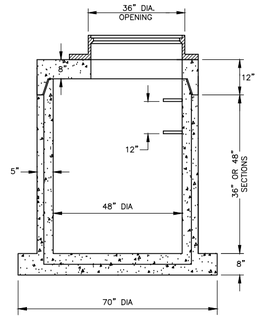
TRASH GUARD



BACK FLOW CHECK VALVE



48" PRECAST CONCRETE MANHOLE



48" PRECAST CONCRETE SHALLOW TYPE MANHOLE

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REVISIONS

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DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: NTS

TITLE

DETAILS

SHEET NUMBER

4.3

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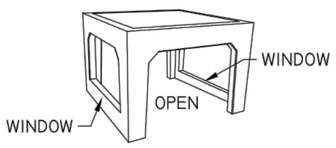
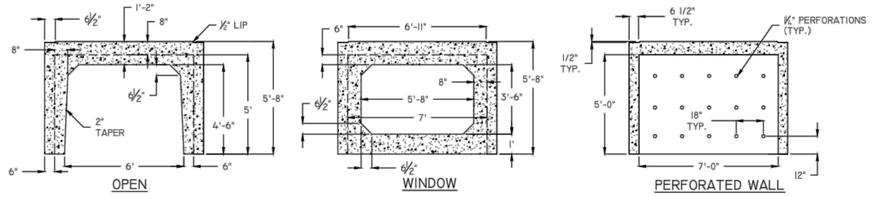
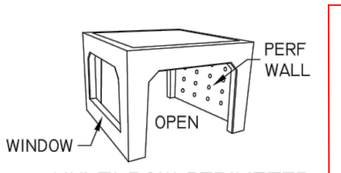


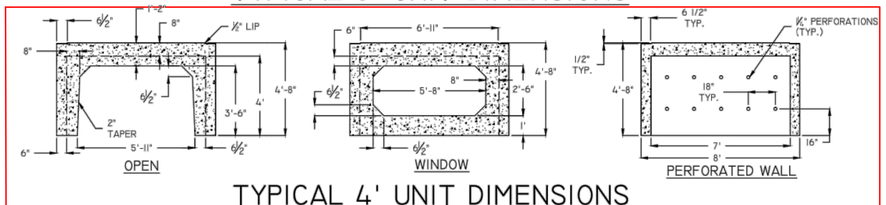
MULTI ROW CENTER



TYPICAL 5' UNIT DIMENSIONS



MULTI ROW PERIMETER



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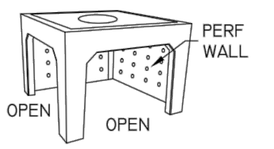
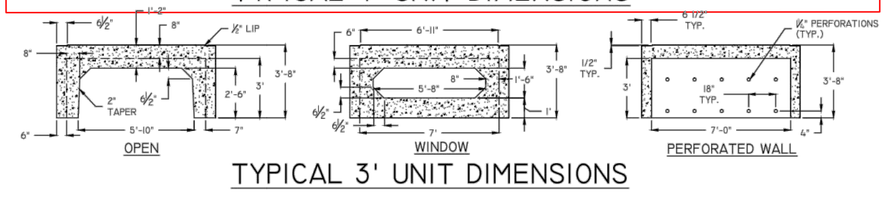
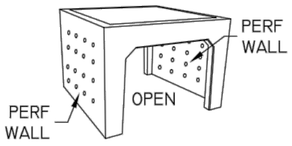


MULTI ROW CORNER



TYPICAL 3' UNIT DIMENSIONS



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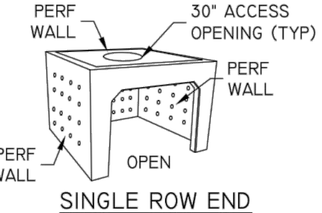
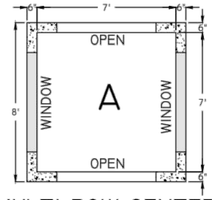


SINGLE ROW END



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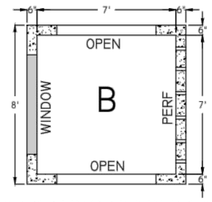
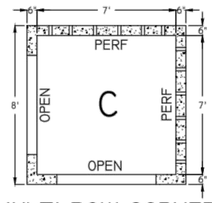
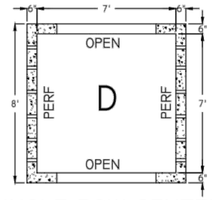


MULTI ROW PERIMETER



MULTI ROW CORNER



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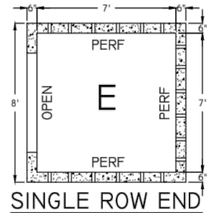
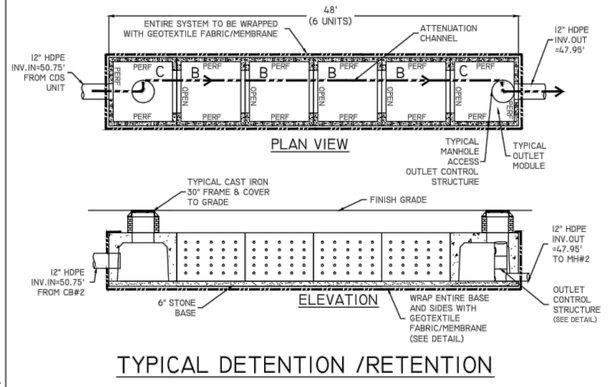
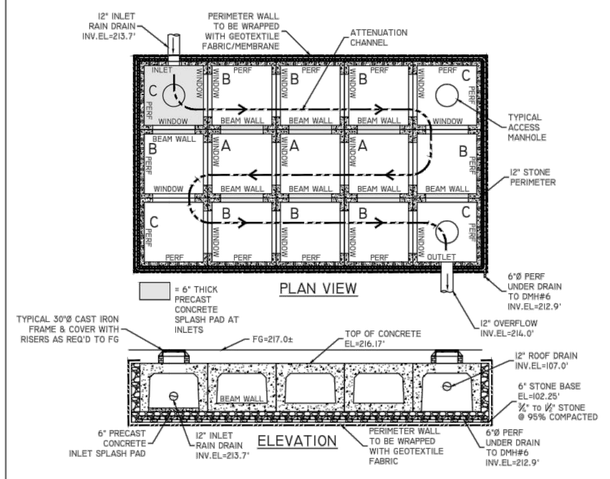


SINGLE ROW END

SYSTEM EXAMPLES



TYPICAL DETENTION /RETENTION



TYPICAL INFILTRATION

ASTM SPECIFICATIONS:

1. CONCRETE - 5,000 PSI, 28 DAYS
2. REINFORCING STEEL CONFORMS TO LATEST ASTM A615
3. H-20 DESIGN LOADING PER AASHTO HS-20-44

retain-it® Stormwater Management Systems

RETAIN IT
560 SALMON BROOK STREET
GRANBY, CT 06035
(860) 413-3050
RETAIN-IT.COM

STORM WATER MANAGEMENT
DETENTION / RETENTION AND INFILTRATION SYSTEM

SINGLE SYSTEM

No.	Revision/Issue	Date
1	SUBMITTAL OF REVIEW	12-16-12

AUTOCAD
TYPICAL
DETAILS

Project ~
Date 5/2/14
Scale N.T.S.
Sheet

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Phone:203.268.4205 Fax: 203.268.5604
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2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC
10	1-31-25	CONNDOT

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: NTS

TITLE

DETAILS

SHEET NUMBER

4.4

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\4.4 D-4

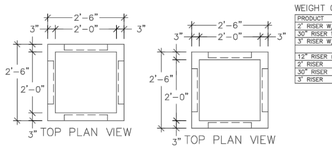
2'x2' YARD DRAIN RISER WITH BASE AND RISER

NOTES:

1. REINFORCING STEEL WELDED WIRE FABRIC CONFORMS TO LATEST ASTM SPECIFICATION A185.
2. REINFORCING STEEL DEFORMED BARS CONFORM TO LATEST ASTM SPECIFICATION A615.
3. CONCRETE COMPRESSIVE STRENGTH– 4000 PSI AT 28 DAYS.
4. METHOD OF MANUFACTURE: WET CAST.
5. SECTION IS MONOLITHIC.
6. DESIGN LOAD: AASHTO H–20

WEIGHT CHART

PRODUCT	APPROX WEIGHT
2" RISER W/ BASE	730 LBS.
30" RISER W/ BASE	900 LBS.
3" RISER W/ BASE	1070 LBS.
12" RISER (BLANK)	340 LBS.
2" RISER	500 LBS.
30" RISER	670 LBS.
3" RISER	840 LBS.



UNITED CONCRETE PRODUCTS INC.
173 CHURCH STREET YALESVILLE, CT 06492
TEL. 800 234–3119 (203) 269–3119
FAX. (203) 265–4941

AREA DRAIN

We put water in its place

DURA SLOPE™ TRENCH DRAIN – PRE-SLOPED (PATENTED)

Product Features & Benefits

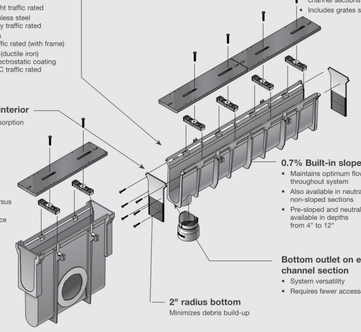
Interlocking tongue and groove joints
- Secures alignment
- Ensures straight channel runs
- Easy assembly and installation

DuraLoc™ integral joint lock
- Prevents joint movement during installation
- No extra clamps or screws needed

Various grating options
- ADA compliant, Heel-Proof options
- Plastic grates
  Array of colors
  Pedestrian and light traffic rated
- Galvanized & stainless steel
  Pedestrian & heavy traffic rated
- Cast & ductile iron
  Class D heavy traffic rated (with frame)
- Decorative grates (ductile iron)
  Standard black electrostatic coating or raw iron Class C traffic rated

Lightweight 4 ft. modular sections
- Easier handling and installation
- Lower freight costs

Blank grate insert
- Eliminates use of plywood
- Slides for overlapping of channel sections
- Includes grates screws



Smooth HDPE interior
Virtually no water absorption

HDPE material
- Durable
- Inexpensive
- Less breakage versus concrete
- Chemical resistance

0.7% Built-in slope
- Maintains optimum flow rates throughout system
- Also available in neutrals; non-sloped sections
- Pre-sloped and neutrals available in depths from 4" to 12"

Bottom outlet on each channel section
- System versatility
- Requires fewer accessories

2" radius bottom
Minimizes debris build-up

LeveLoc™ re-bar supports with integral protruding knob
- Levels channel and grips re-bar
- Requires fewer accessories

ProFit™ locking system
- Locks grate to integral frame
- Supports product in shipping and installation (included)

for videos, specs, detail drawings and case studies, visit **ndspro.com** 20

CHANNEL & TRENCH DRAINS

27 Product Catalog 2019

CHANNEL & TRENCH DRAINS

DURA SLOPE™ TRENCH DRAIN – PRE-SLOPED

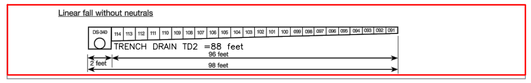
Dura Slope™ System Profiles

NDS

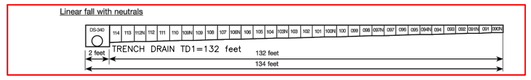
Neutral run

*Any neutral channel can be used in this application.

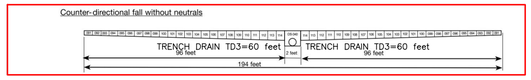
Linear fall without neutrals



Linear fall with neutrals



Counter-directional fall without neutrals



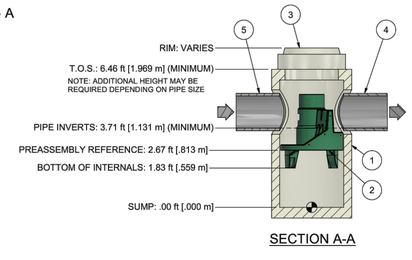
Counter-directional fall with neutrals

Note: Drawings are not to scale. See previous pages for actual product dimensions.

TRENCH DRAIN

PLAN VIEW

HYDRO FRAME AND COVER (INCLUDED)
GRADE RINGS BY OTHERS AS REQUIRED



SECTION A-A

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.

2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING FIRST DEFENSE MANHOLE.

3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA, AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.

PROJECTION

IF IN DOUBT ASK

DATE:	SCALE:
11/2/2021	1:30

DRAWN BY:	CHECKED BY:	APPROVED BY
ER	MRJ	

TITLE:
3-ft DIAMETER
FIRST DEFENSE

GENERAL ARRANGEMENT

Hydro International
hydro-int.com
HYDRO INTERNATIONAL

WEIGHT:	MATERIAL:
STOCK NUMBER:	
DRAWING NO.: FD GA-3	
SHEET SIZE: B	SHEET: 1 OF 1
REV: -	

PRODUCT SPECIFICATION:

1. Peak Hydraulic Flow: 15.0 cfs (424 l/s)
2. Min Sediment Storage Capacity: 0.4 cu. yd. (0.3 cu. m.)
3. Maximum Inlet/Outlet Pipe Diameters: 18 in. (450 mm)
4. The treatment system shall use an induced vortex to separate pollutants from stormwater runoff.
5. For more product information including regulatory acceptances, please visit https://hydro-int.com/en/products/first-defense

GENERAL NOTES:
1. General Arrangement drawings only. Contact Hydro International for site specific drawings.
2. The diameter of the inlet and outlet pipes may be no more than 18".
3. Multiple inlet pipes possible (refer to project plan).
4. Inlet/outlet pipe angle can vary to align with drainage network (refer to project plans).
5. Peak flow rate and minimum height limited by available cover and pipe diameter.
6. Larger sediment storage capacity may be provided with a deeper sump depth.

PARTS LIST

ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	36	900	I.D. PRECAST MANHOLE
2	1			INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	750	FRAME AND COVER (ROUND)
4	1	18 (MAX)	450 (MAX)	OUTLET PIPE (BY OTHERS)
5	1	18 (MAX)	450 (MAX)	INLET PIPE (BY OTHERS)

GENERIC STORMWATER TREATMENT UNIT DETAIL
(SHOP DRAWING TO BE APPROVED PRIOR TO CONSTRUCTION)

PERMIT SET – NOT FOR CONSTRUCTION

J. EDWARDS & ASSOCIATES LLC
ENGINEERING • SURVEYING • SITE PLANNING

227 Stepney Road Easton, CT 06612
Phone:203.268.4205 Fax: 203.268.5604
www.jedwardsassoc.com

STATE OF CONNECTICUT JASON R. EDWARDS No. 20505 LICENSED PROFESSIONAL ENGINEER

STATE OF CONNECTICUT JASON R. EDWARDS No. 70308 LICENSED LAND SURVEYOR

2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

10 1–31–25 CONNDOT

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: NTS

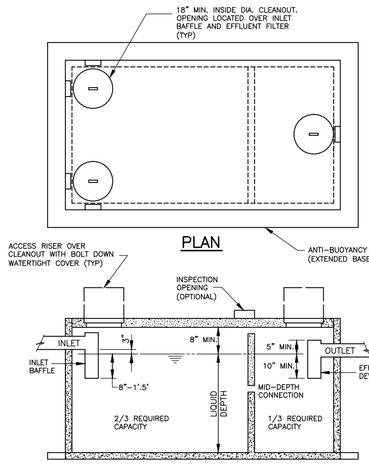
TITLE

DETAILS

SHEET NUMBER

4.5

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\4.5 D-5

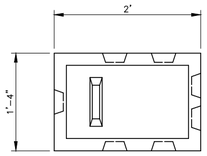


PLAN

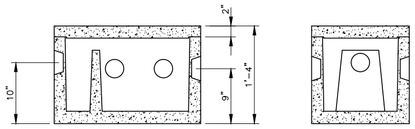
SECTION

SEPTIC TANK

2000 GAL WITH H20 LOADING



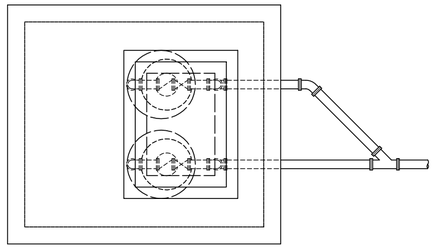
PLAN



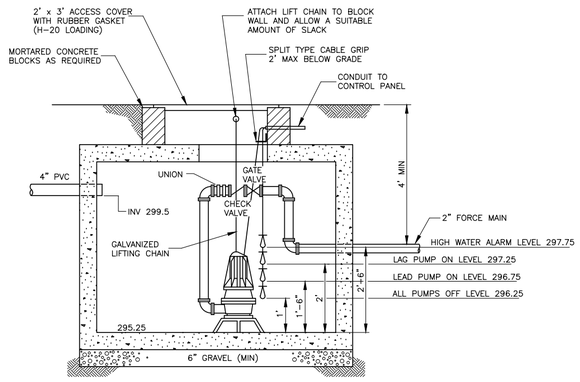
SECTION

END VIEW

DISTRIBUTION BOX WITH BAFFLE DB-6



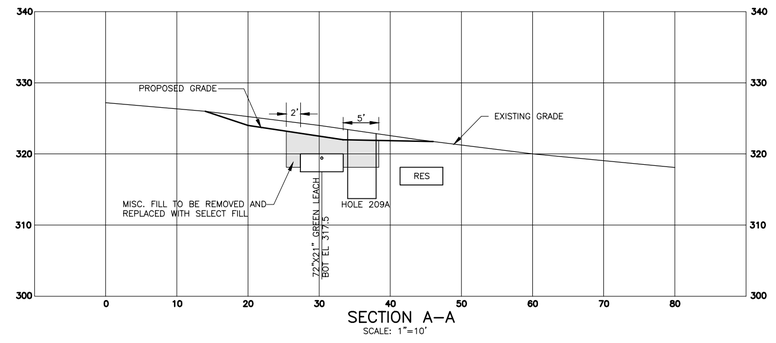
PLAN



SECTION

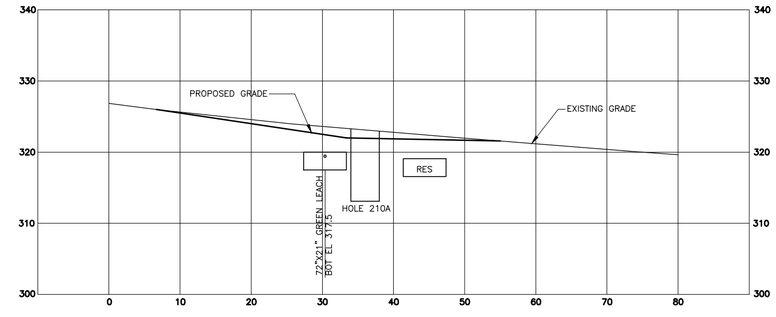
SEPTIC PUMP CHAMBER

2000 GALLON PUMP CHAMBER WITH H20 LOADING



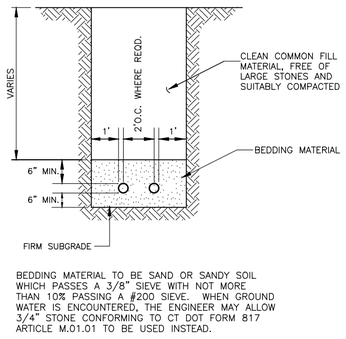
SECTION A-A

SCALE: 1"=10'



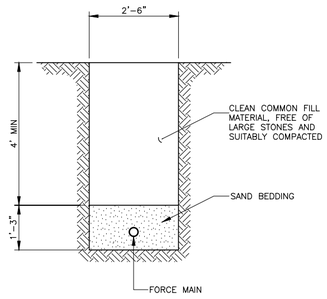
SECTION B-B

SCALE: 1"=10'

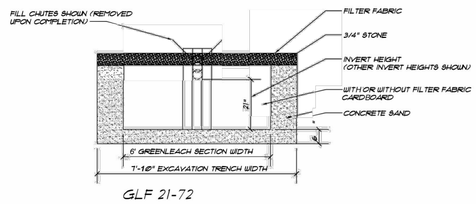


BEDDING MATERIAL TO BE SAND OR SANDY SOIL WHICH PASSES A 3/8" SIEVE WITH NOT MORE THAN 10% PASSING A #200 SIEVE. WHEN GROUND WATER IS ENCOUNTERED, THE ENGINEER MAY ALLOW 3/4" STONE CONFORMING TO CT DOT FORM 817 ARTICLE M.01.01 TO BE USED INSTEAD.

UTILITIES TRENCH



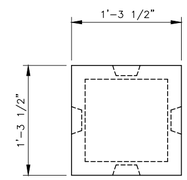
FORCE MAIN TRENCH



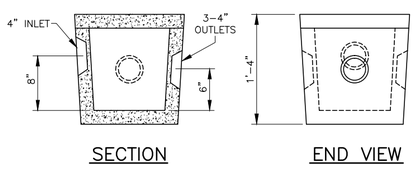
GLF 21-72

GREEN LEACH SYSTEM SECTION - END VIEW

NOT TO SCALE



PLAN



SECTION

END VIEW

DISTRIBUTION BOX

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2 VICTORIA DRIVE
MONROE, CONNECTICUT
PREPARED FOR
PAUL STONE

REVISIONS

#	DATE	DESCRIPTION
1	03/18/25	IWWC

DATE: 02-24-25
PROJECT #: 1194a
DRAWING FILE:
DRAWN BY: NDC
SCALE: NTS

TITLE

DETAILS

SHEET NUMBER

4.6

K:\PROJECTS\1194-2-A-KARP-38 MAIN ST\DRAWINGS\4.6 D-6

STORMWATER MANAGEMENT REPORT

FOR THE PROPOSED

SITE IMPROVEMENTS

LOCATED AT

2 VICTORIA DRIVE
MONROE, CT

PREPARED FOR

PAUL STONE

PREPARED ON: MARCH 18, 2025

PREPARED BY:

J. EDWARDS & ASSOCIATES, LLC
227 STEPNEY ROAD, EASTON CT, 06612

Larry Edwards, P.E.

TABLE OF CONTENTS

INTRODUCTION:

J. Edwards & Associates has prepared this report to demonstrate compliance with local and state engineering guidelines. These guidelines include drainage design, sediment and erosion control, site grading, and floodwater compensatory storage.

PROJECT OVERVIEW:

This site is part of a former industrial site on Victoria Drive, the access to the Victorinox Offices off Main Street (CT Route 25). The property is a combination of remains of its former uses, brush and forested areas. The property is bounded by several commercial properties and a wetland and watercourse. Our client is proposing to develop the subject property with a single commercial building that will house a child daycare facility. Supporting improvements on the property will include outdoor play areas, a parking lot, stormwater management, floodwater storage, and utilities. Refer to the accompanying plans that include the design and layout of the proposed development and its associated improvements. Soil testing was performed on site which confirms the HSG B soils indicated by the NRCS map.

DRAINAGE ANALYSIS:

A Hydrologic analysis was completed using HydroCAD software which implements SCS-T20 methodology to compute runoff volumes. Rainfall intensities and depths were generated by NOAA Atlas 14, Volume 10, Version 3.

NOAA RAINFALL DEPTHS

EVENT	24 HR. DEPTH
2 YEAR	3.56
5 YEAR	4.63
10 YEAR	5.51
25 YEAR	6.73
50 YEAR	7.63
100 YEAR	8.61

The stormwater from the property flows to a single point of concern. The property flows east to the West Branch of the Pequonnock River. The NRCS soil survey indicates Hydraulic Soil Group (HSG) B soils throughout the property.

The proposed development consists of a commercial retail building, outdoor play areas, parking lot, hardscapes, and landscaping. The development will result in an increase in impervious surfaces on the site of approximately 35,767 sf. A storm drainage network is proposed to collect, route, store, and infiltrate runoff from impervious surfaces. A concrete gallery stormwater retention system is proposed under the parking lot. This system is sized to retain the Water Quality Volume for contributing areas. Peak flow attenuation and other standards are also satisfied. The tables below include calculated peak flows and runoff volumes for the 2, 5, 10, 25, 50, & 100-year storm events. Peak flow from the site is decreased or maintained for all storm events.

Pre and Post Development Peak Flow Summary

Design Storm	Design Point	Existing Peak Flow (cfs)	Proposed Peak Flow (cfs)	Change in Peak Flow (cfs)
2	POC A	1.18	1.06	-0.12
5	POC A	3.52	3.24	-0.28
10	POC A	6.09	5.95	-0.14
25	POC A	10.30	9.90	-0.40
50	POC A	13.75	13.04	-0.71
100	POC A	17.76	16.94	-0.82

Pre and Post Development Runoff Volume Summary

Design Storm	Design Point	Existing Runoff Vol. (ac-ft)	Proposed Runoff Vol. (ac-ft)	Change in Runoff Vol. (cu-ft)
2	POC A	0.266	0.251	-0.015
5	POC A	0.584	0.548	-0.036
10	POC A	0.908	0.865	-0.043
25	POC A	1.426	1.374	-0.052
50	POC A	1.850	1.787	-0.063
100	POC A	2.344	2.266	-0.078

WATER QUALITY:

The state of Connecticut DEEP stormwater guidelines requires that the first 1.3" of runoff be retained on site to provide an improvement in water quality. Below are calculations using the DEEP calculation worksheet.

TOTAL PROJECT AREA (A) = 1.34 acres

DRAINAGE AREAS

Drainage Area	Impervious Area	
Area 10S	0.82	
Total Impervious	0.82	61.2%

WATER QUALITY VOLUME (WQV) CALCULATION

Design Precipitation (P) =	1.3	inch
% Impervious Cover (I) =	0.612	
Volumetric Runoff Coefficient (R) =	0.601	
WQV =	0.087	ac-ft
	3,800	cu-ft

WQ BMP	Provided Storage Volume (cf)
Swale System	3,877
Total	3,877

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Groundwater Recharge Volume

This requirement is intended to maintain pre-development annual groundwater recharge volume by capturing and infiltrating the storm water runoff.

Groundwater recharge will be provided through the swale and galley system. The swale has an emergency high overflow set above the 100-yr storm peak elevation. The system retains and infiltrates 3,877cf.

GRV = DxAxI/12

Soil recharge depth calculation:

Soil group B: D_B =0.35

Site	Area	% Imperv.	GRV Required (cf)	GRV Proposed (cf)
HSG B	58,370 sf	61.2	1,042	
Total			1,042	1,042

Outlet Protection

The water quality basin outlets and all other stormwater discharges will be protected with rip rap pads sized in accordance with the state of Connecticut Department of transportation drainage design manual.

Conveyance Protection

All project drainage improvements have been designed to handle a minimum 25 year storm event with outlet overflow from the basin designed to handle a 100 year storm.

Peak Runoff Attenuation

The storm management system for this project will control post development peak runoff for the 2, 10, 25, 50, and 100-year storm events to levels less than or equal to the pre-development rates.

Downstream Analysis

The drainage study for this project has also looked at the overall project impact to downstream off-site water courses. Peak runoff from the total site is significantly reduced from pre-development levels.

Pollutant Reduction

The State of CT DEEP requires 80% removal of Total Suspended Solids, 60% removal of Phosphorus, and 40% removal of Nitrogen. The proposed BMPs exceed these standards.

Total Suspended Solids

TSS Removal Calculation Worksheet

Location: Driveway -> Galleries

A	B	C	D	E
BMP[1]	TSS Removal Rate[1]	Starting TSS Load*	Amount Removed (B*C)	Remaining Load (C-D)
Deep Sump	0.25	1	0.25	0.75
Galleries	0.9	0.75	0.675	0.075
		0.075	0	0.075
		0.075	0	0.075
		0.075	0	0.075
		Total TSS Removal =	93%	

TSS Removal Calculation Worksheet

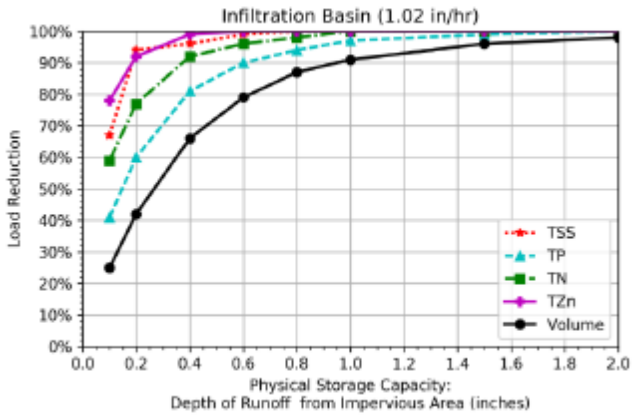
Location: Roof Drains -> Galleries

A	B	C	D	E
BMP[1]	TSS Removal Rate[1]	Starting TSS Load*	Amount Removed (B*C)	Remaining Load (C-D)
Deep Sump	0.25	1	0.25	0.75
Galleries	0.9	0.75	0.675	0.075
		0.075	0	0.075
		0.075	0	0.075
		0.075	0	0.075
		Total TSS Removal =	93%	

Phosphorus and Nitrogen Removal

Watershed Area	Runoff Depth (in)	Perc. Rate (in/hr)	Phosph-orus Removal	Nitrogen Removal
Parking to Swale	8.37	1.02	100%	100%

Removal Rates are provided by the University of New Hampshire Stormwater Center. Graph and table below.



Infiltration Rate (in/hr)	Depth of Runoff from Impervious Area (inches)	TSS	Phosphorus	Nitrogen	Zinc	Runoff Volume
1.02	0.1	67%	41%	59%	78%	25%
	0.2	94%	60%	77%	92%	42%
	0.4	96%	81%	92%	99%	66%
	0.6	99%	90%	96%	100%	79%
	0.8	100%	94%	98%	100%	87%
	1.0	100%	97%	100%	100%	91%
	1.5	100%	99%	100%	100%	96%
	2.0	100%	100%	100%	100%	98%

Drawdown Calculation

Based on 50% of field infiltration rates, all basins will drawdown within the required 48hrs.

System #	Storage Volume (ft3)	Footprint Area (ft2)	Infil. Rate (in/hr)	DT (hrs)
Galleries	3,877	3,060	1.02	15

4. FLOODPLAIN COMPENSATORY STORAGE

The site is located on the Pequonnock River. There is earth work to be performed in the floodplain for the construction of the proposed site plan. The work consists of the placement of fill to raise the building to be one foot above the 100-year flood elevation and to construct a parking facility set above a subsurface detention gallery system.

Flood data is taken from The FEMA "Flood Insurance Study, Fairfield County, Connecticut" revised October 16, 2013 and "Flood Insurance Rate Map, Fairfield County, Connecticut, Panel 286 of 626" effective June 18, 2010. Immediately downstream of the site there is a restriction at a roadway crossing. The culverts under Victoria Drive create a hydraulic grade line jump that extends to the project site. It should be noted that the flood study appears to be based upon restriction of formerly placed RCP culverts and not on the existing condition of four large concrete box culverts constructed in the early 2000's. However, for purposes of this study, the 100-year flood elevation taken from the most recent flood study is respected. The 100-year flood elevation is 304.

As a result of the placement of fill within a floodplain, storage volume must be made available during a flood event to compensate for that taken away by construction. Storage volume is provided through the creation of a flood storage basin in the eastern portion of the site supplemented by underground concrete galleries placed under the eastern side of the parking lot. The total volume of these two structures equate to approximately 1039 cubic yards of potential storage which exceeds the volume displaced by construction. Refer to Appendix D for storage data for the proposed system.

5. CONCLUSION

The proposed development will increase the amount of impervious areas on the site, resulting in higher runoff rates. However, with the installation of the proposed stormwater management system, the original flow patterns will be maintained and there will be no increase in peak runoff flow rates and volumes for the 2, 5, 10, 25, 50 & 100-year storm events. In addition to controlling stormwater peak runoff, the proposed design incorporates stormwater treatment to control pollution and provide groundwater recharge capacity. The implementation of these techniques and the overall site design layout will result in a finished project that will minimize sediment and erosion impacts during construction and will have no adverse impacts to adjoining properties upon completion.

APPENDIX A:

NRCS MAP AND NOAA RAINFALL TABLES

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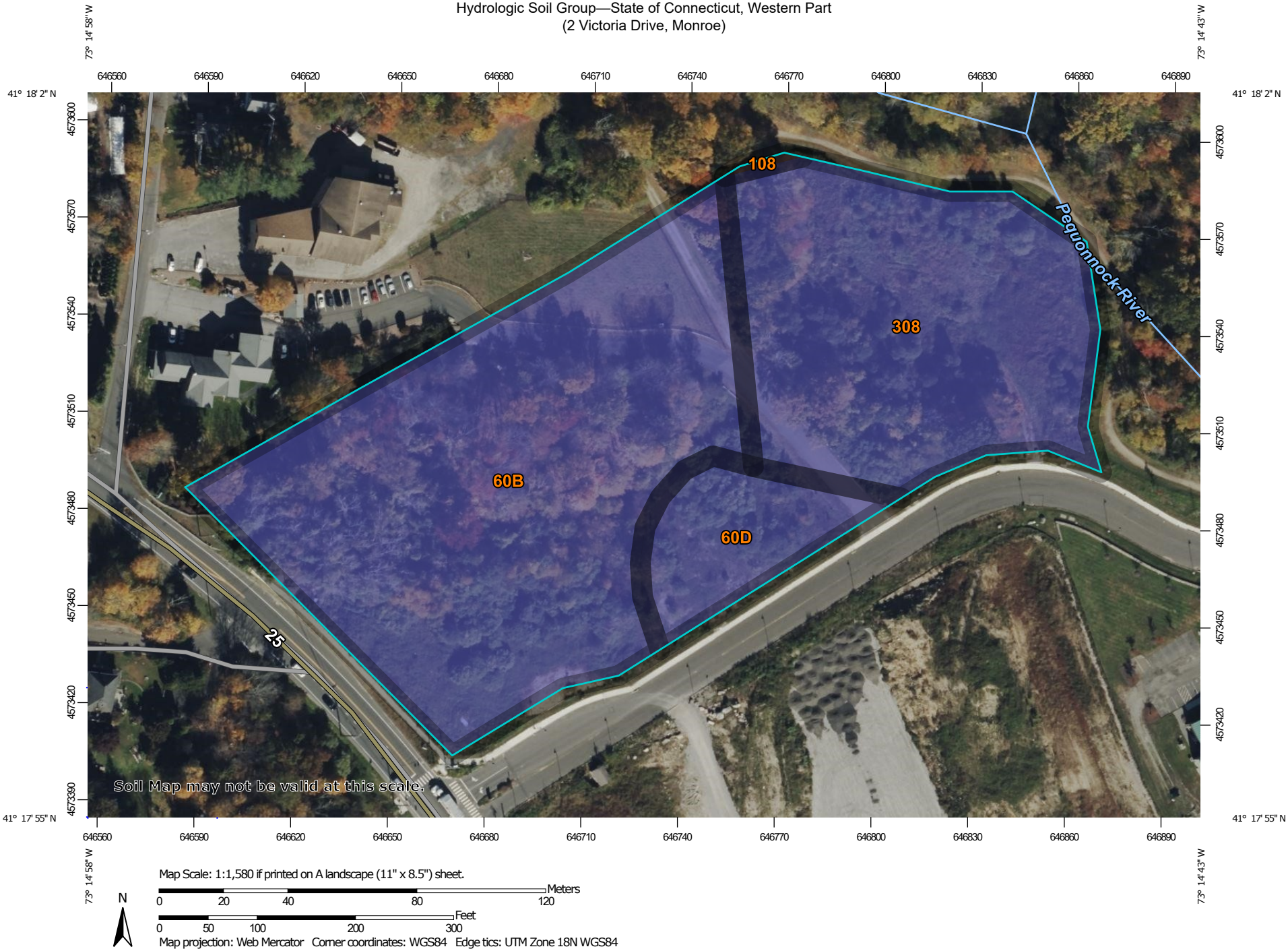
Hydrologic Soil Group—State of Connecticut, Western Part
(2 Victoria Drive, Monroe)



Map Scale: 1:1,580 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil 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: State of Connecticut, Western Part
Survey Area Data: Version 2, Aug 30, 2024

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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	B	3.9	56.2%
60D	Canton and Charlton soils, 15 to 25 percent slopes	B	0.6	8.7%
108	Saco silt loam, frequently ponded, 0 to 2 percent slopes, frequently flooded	B/D	0.0	0.2%
308	Udorthents, smoothed	B	2.4	34.9%
Totals for Area of Interest			**6.9**	**100.0%**

Description

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.

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.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

NOAA Atlas 14, Volume 10, Version 3
Location name: Monroe, Connecticut, USA*
Latitude: 41.2993°, Longitude: -73.2452°
Elevation: 300 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

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

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.363** (0.277-0.464)	**0.425** (0.324-0.544)	**0.527** (0.401-0.675)	**0.611** (0.463-0.788)	**0.727** (0.535-0.969)	**0.815** (0.589-1.10)	**0.906** (0.637-1.26)	**1.01** (0.675-1.43)	**1.15** (0.745-1.68)	**1.27** (0.802-1.88)
10-min	**0.514** (0.393-0.657)	**0.602** (0.460-0.771)	**0.746** (0.568-0.958)	**0.865** (0.656-1.12)	**1.03** (0.758-1.37)	**1.15** (0.833-1.56)	**1.28** (0.903-1.79)	**1.43** (0.957-2.03)	**1.63** (1.06-2.38)	**1.80** (1.14-2.66)
15-min	**0.604** (0.462-0.773)	**0.708** (0.541-0.907)	**0.878** (0.668-1.13)	**1.02** (0.771-1.31)	**1.21** (0.892-1.62)	**1.36** (0.981-1.84)	**1.51** (1.06-2.11)	**1.68** (1.13-2.38)	**1.92** (1.24-2.80)	**2.11** (1.34-3.13)
30-min	**0.840** (0.642-1.07)	**0.984** (0.751-1.26)	**1.22** (0.929-1.57)	**1.42** (1.07-1.82)	**1.68** (1.24-2.24)	**1.89** (1.36-2.55)	**2.10** (1.47-2.92)	**2.32** (1.56-3.30)	**2.63** (1.70-3.83)	**2.87** (1.82-4.26)
60-min	**1.08** (0.822-1.38)	**1.26** (0.962-1.61)	**1.56** (1.19-2.00)	**1.81** (1.37-2.34)	**2.16** (1.58-2.87)	**2.42** (1.74-3.27)	**2.69** (1.88-3.72)	**2.97** (1.99-4.21)	**3.34** (2.16-4.87)	**3.63** (2.30-5.38)
2-hr	**1.39** (1.07-1.77)	**1.64** (1.26-2.09)	**2.05** (1.57-2.61)	**2.38** (1.82-3.05)	**2.85** (2.10-3.77)	**3.20** (2.32-4.30)	**3.56** (2.51-4.93)	**3.96** (2.66-5.58)	**4.53** (2.94-6.56)	**4.99** (3.17-7.34)
3-hr	**1.60** (1.24-2.03)	**1.90** (1.46-2.41)	**2.38** (1.83-3.03)	**2.78** (2.12-3.55)	**3.33** (2.47-4.40)	**3.74** (2.73-5.03)	**4.18** (2.96-5.78)	**4.67** (3.15-6.56)	**5.38** (3.50-7.76)	**5.96** (3.79-8.75)
6-hr	**2.02** (1.57-2.54)	**2.41** (1.87-3.03)	**3.05** (2.36-3.85)	**3.58** (2.76-4.54)	**4.31** (3.22-5.67)	**4.86** (3.56-6.50)	**5.44** (3.89-7.51)	**6.11** (4.14-8.53)	**7.11** (4.64-10.2)	**7.94** (5.07-11.6)
12-hr	**2.48** (1.94-3.10)	**3.00** (2.34-3.74)	**3.83** (2.98-4.80)	**4.53** (3.50-5.70)	**5.48** (4.12-7.17)	**6.20** (4.57-8.25)	**6.96** (5.01-9.57)	**7.86** (5.33-10.9)	**9.19** (6.01-13.1)	**10.3** (6.60-14.9)
24-hr	**2.91** (2.29-3.61)	**3.56** (2.80-4.43)	**4.63** (3.62-5.77)	**5.51** (4.29-6.90)	**6.73** (5.10-8.76)	**7.63** (5.68-10.1)	**8.61** (6.25-11.8)	**9.78** (6.66-13.5)	**11.6** (7.60-16.4)	**13.1** (8.41-18.8)
2-day	**3.28** (2.60-4.05)	**4.08** (3.22-5.03)	**5.38** (4.24-6.65)	**6.46** (5.06-8.02)	**7.94** (6.06-10.3)	**9.04** (6.78-12.0)	**10.2** (7.51-14.1)	**11.7** (8.02-16.1)	**14.1** (9.29-19.8)	**16.2** (10.4-23.1)
3-day	**3.57** (2.84-4.38)	**4.44** (3.52-5.46)	**5.87** (4.64-7.23)	**7.05** (5.54-8.72)	**8.68** (6.64-11.2)	**9.87** (7.43-13.0)	**11.2** (8.24-15.3)	**12.8** (8.80-17.5)	**15.5** (10.2-21.7)	**17.8** (11.5-25.3)
4-day	**3.84** (3.06-4.70)	**4.76** (3.79-5.83)	**6.26** (4.97-7.70)	**7.51** (5.92-9.27)	**9.23** (7.08-11.9)	**10.5** (7.91-13.8)	**11.9** (8.76-16.2)	**13.6** (9.35-18.5)	**16.4** (10.8-22.9)	**18.8** (12.1-26.6)
7-day	**4.61** (3.69-5.61)	**5.61** (4.49-6.84)	**7.26** (5.78-8.86)	**8.62** (6.83-10.6)	**10.5** (8.08-13.4)	**11.9** (8.97-15.5)	**13.4** (9.87-18.1)	**15.2** (10.5-20.6)	**18.1** (12.0-25.1)	**20.5** (13.3-28.9)
10-day	**5.36** (4.30-6.50)	**6.41** (5.14-7.79)	**8.14** (6.51-9.91)	**9.57** (7.61-11.7)	**11.5** (8.90-14.7)	**13.0** (9.83-16.8)	**14.6** (10.7-19.5)	**16.5** (11.4-22.2)	**19.3** (12.8-26.7)	**21.7** (14.0-30.4)
20-day	**7.62** (6.16-9.18)	**8.78** (7.09-10.6)	**10.7** (8.59-12.9)	**12.3** (9.80-14.9)	**14.4** (11.1-18.1)	**16.1** (12.1-20.5)	**17.8** (13.0-23.3)	**19.6** (13.6-26.2)	**22.3** (14.9-30.5)	**24.4** (15.9-34.0)
30-day	**9.49** (7.70-11.4)	**10.7** (8.68-12.9)	**12.7** (10.3-15.3)	**14.4** (11.6-17.4)	**16.7** (12.9-20.8)	**18.4** (14.0-23.3)	**20.2** (14.8-26.2)	**22.1** (15.4-29.3)	**24.6** (16.4-33.6)	**26.5** (17.3-36.8)
45-day	**11.8** (9.59-14.1)	**13.1** (10.6-15.6)	**15.2** (12.3-18.2)	**17.0** (13.7-20.5)	**19.4** (15.1-24.0)	**21.3** (16.2-26.7)	**23.2** (16.9-29.8)	**25.0** (17.5-33.1)	**27.4** (18.4-37.3)	**29.2** (19.0-40.4)
60-day	**13.7** (11.2-16.3)	**15.0** (12.3-17.9)	**17.3** (14.0-20.7)	**19.1** (15.5-23.0)	**21.7** (16.9-26.7)	**23.7** (18.0-29.6)	**25.6** (18.7-32.7)	**27.5** (19.3-36.2)	**29.8** (20.0-40.4)	**31.5** (20.6-43.4)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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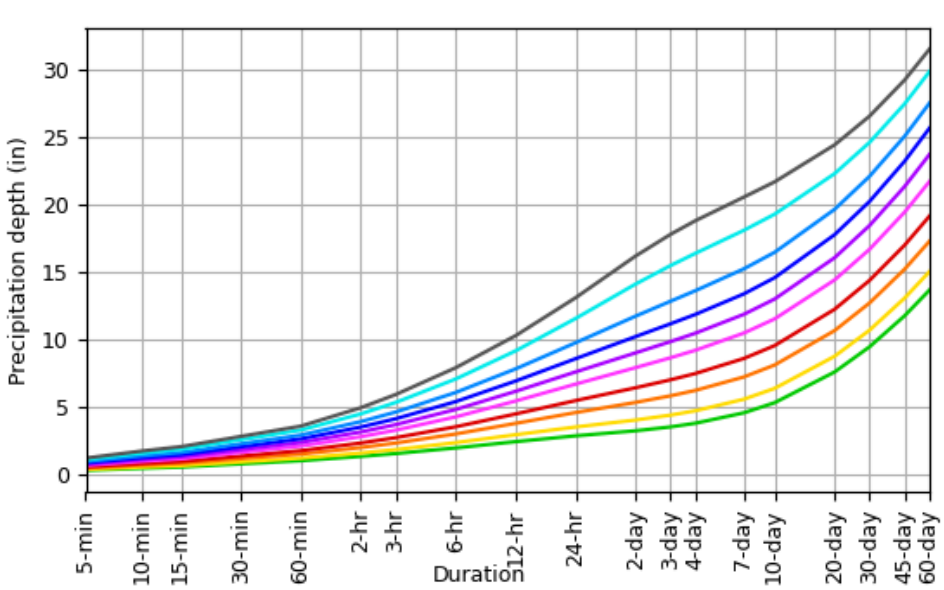
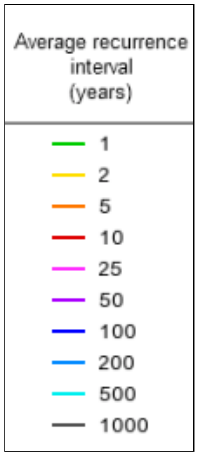
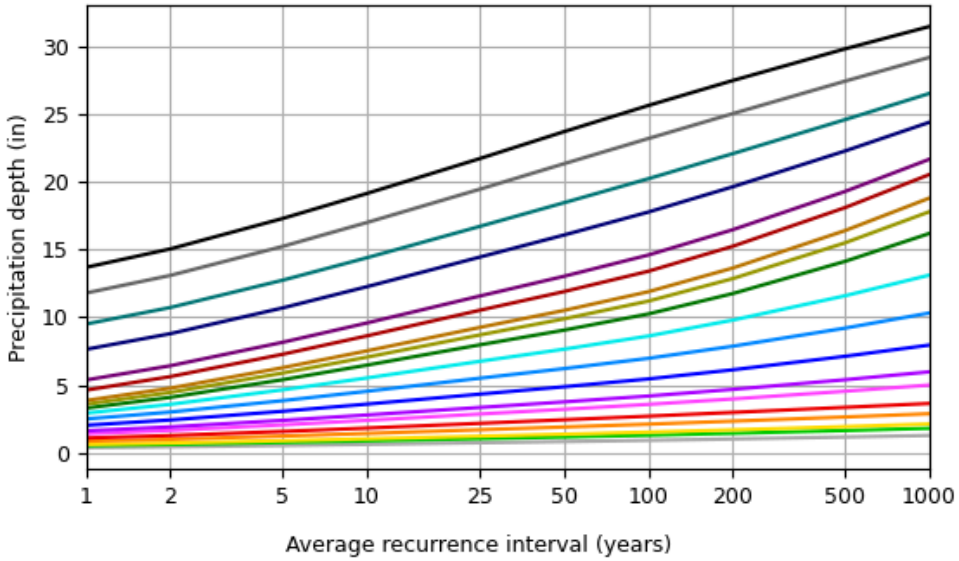
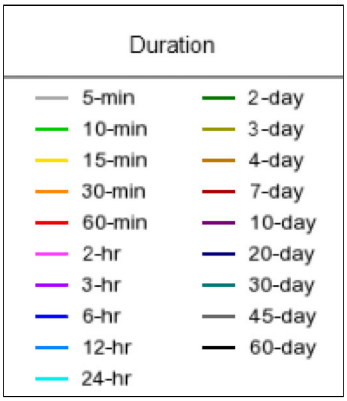
PF graphical

PDS-based depth-duration-frequency (DDF) curves
Latitude: 41.2993°, Longitude: -73.2452°









NOAA Atlas 14, Volume 10, Version 3

Created (GMT): Wed Jan 29 17:25:21 2025

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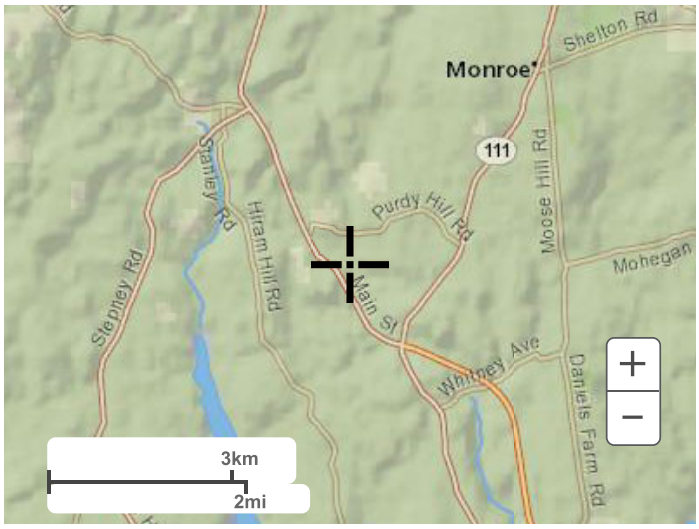
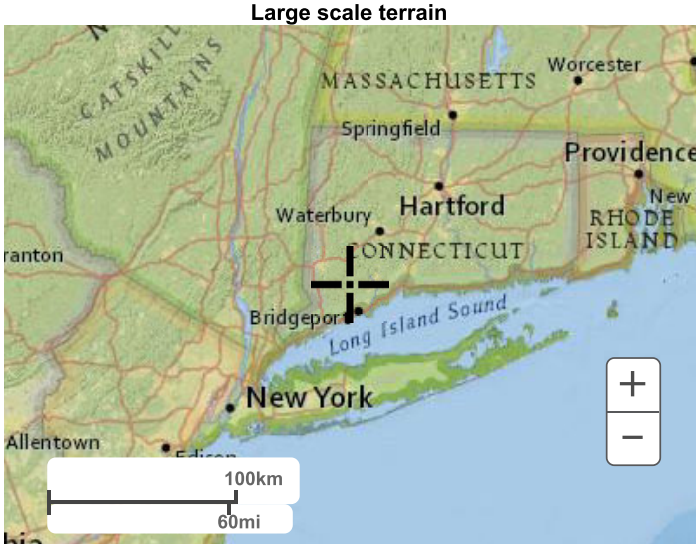
Maps & aerials

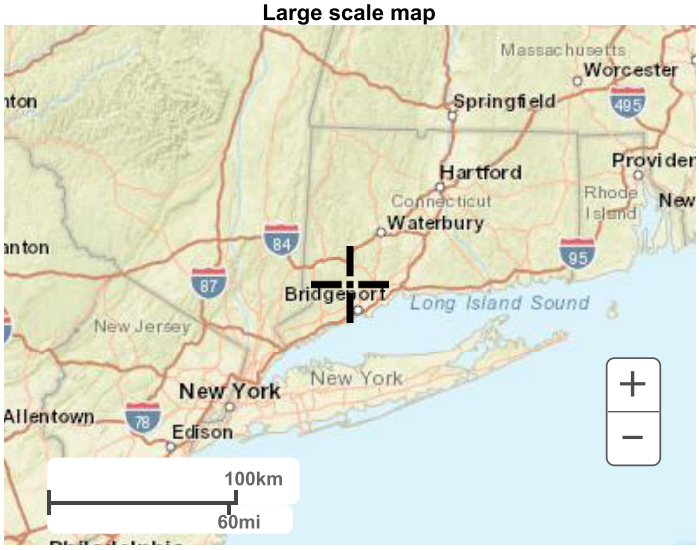
Small scale terrain



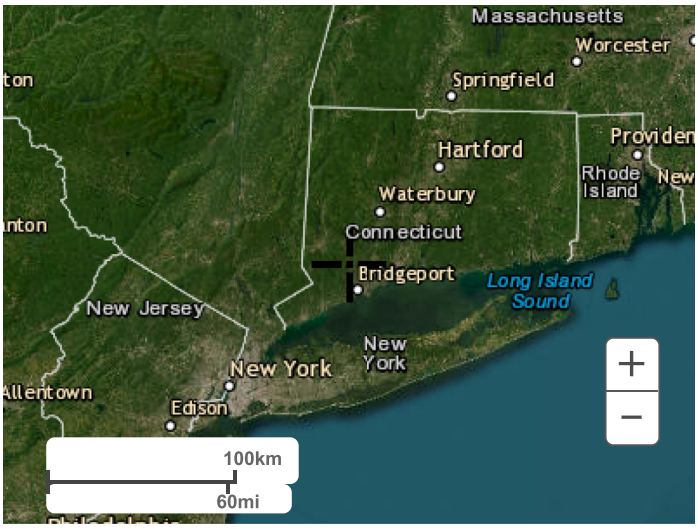
Large scale terrain



Large scale map



Large scale aerial



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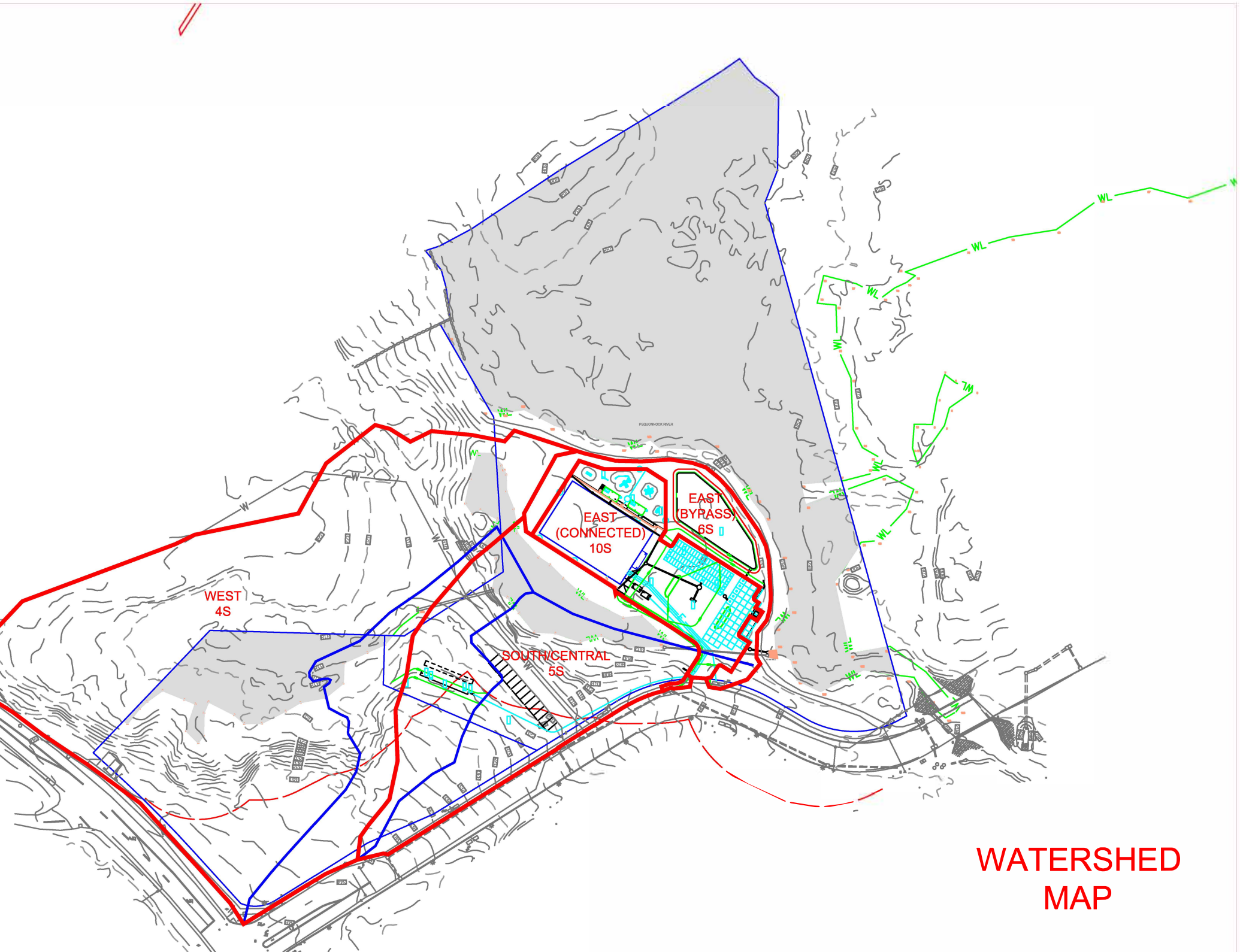
US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

APPENDIX B:

WATERSHED MAP

227 Stepney Road • Easton, CT • 06612 • Phone:203.268.4205 • Fax: 203.268.5604
www.jedwardsassoc.com • www.leassoc.com
Engineering • Surveying • Site Planning



WATERSHED MAP

APPENDIX C:

PRE- AND POST-DEVELOPMENT HYDROLOGICAL ANALYSIS

227 Stepney Road • Easton, CT • 06612 • Phone:203.268.4205 • Fax: 203.268.5604
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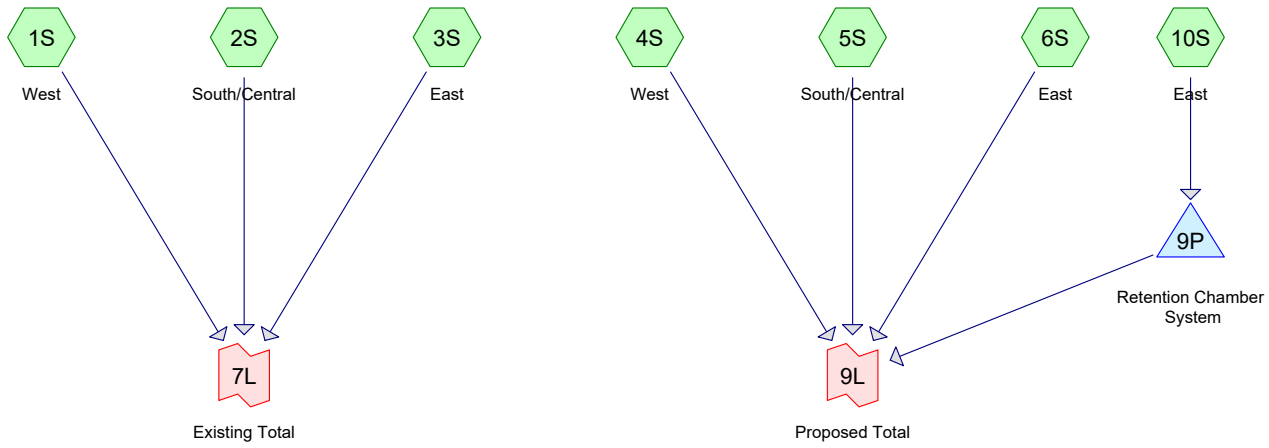


Subcat Reach Pond Link

Routing Diagram for 1194_012925

Prepared by J. Edwards & Associates, LLC, Printed 3/18/2025

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.514	61	>75% Grass cover, Good, HSG B (6S)
0.424	98	Paved parking, HSG B (10S)
0.230	98	Roofs, HSG B (10S)
0.168	98	Unconnected pavement, HSG B (10S)
16.326	55	Woods, Good, HSG B (1S, 2S, 3S, 4S, 5S)

Summary for Subcatchment 1S: West

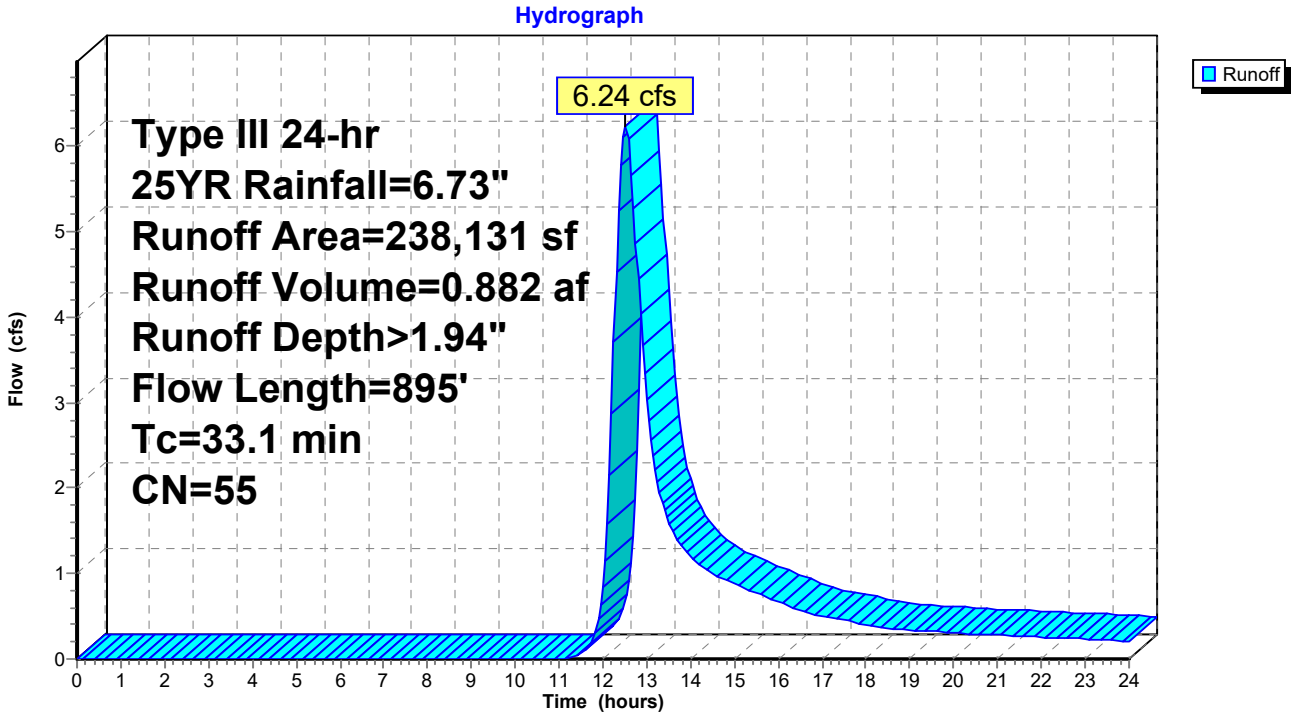
Runoff = 6.24 cfs @ 12.51 hrs, Volume= 0.882 af, Depth> 1.94"
Routed to Link 7L : Existing Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.73"

Area (sf)	CN	Description
238,131	55	Woods, Good, HSG B
238,131		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	100	0.0400	0.11		**Sheet Flow, Seg 1** Woods: Light underbrush n= 0.400 P2= 3.56"
2.0	123	0.0400	1.00		**Shallow Concentrated Flow, Seg 2** Woodland Kv= 5.0 fps
0.6	82	0.2200	2.35		**Shallow Concentrated Flow, Seg 3** Woodland Kv= 5.0 fps
12.4	371	0.0100	0.50		**Shallow Concentrated Flow, Seg 4** Woodland Kv= 5.0 fps
2.6	219	0.0800	1.41		**Shallow Concentrated Flow, Seg 5** Woodland Kv= 5.0 fps
33.1	895	Total			

Subcatchment 1S: West



Summary for Subcatchment 2S: South/Central

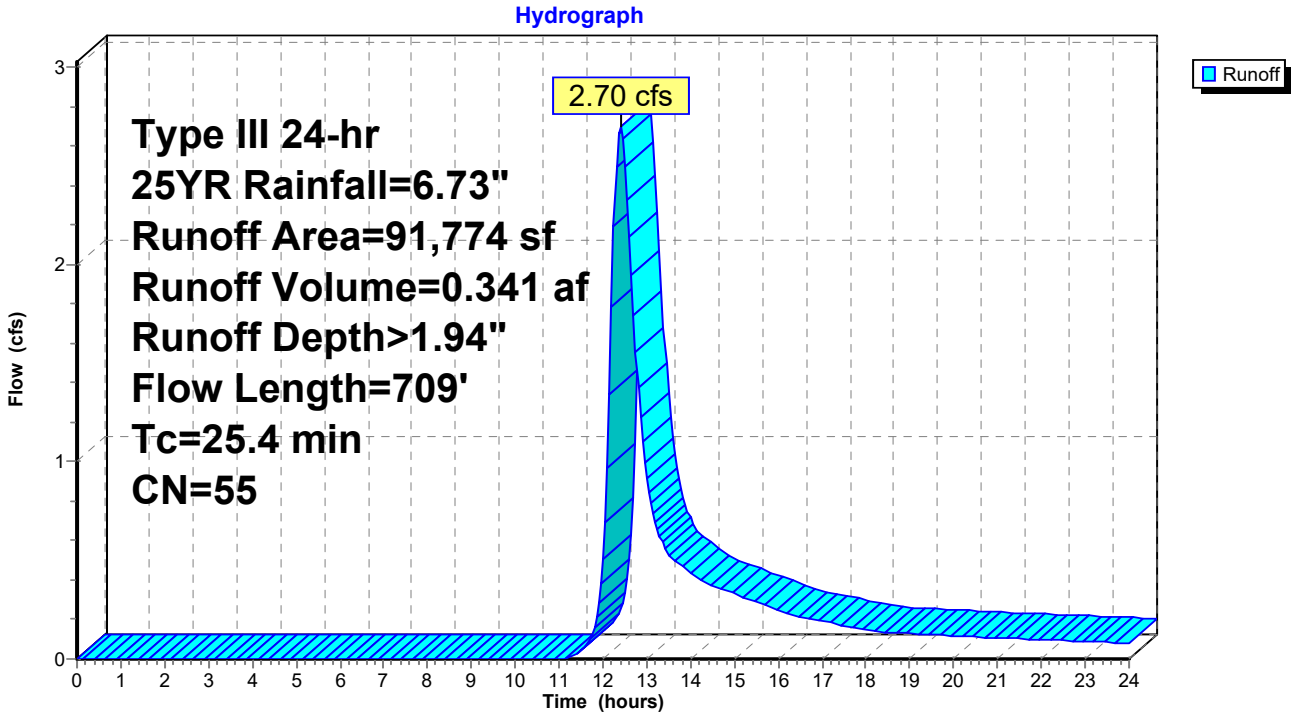
Runoff = 2.70 cfs @ 12.39 hrs, Volume= 0.341 af, Depth> 1.94"
Routed to Link 7L : Existing Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.73"

Area (sf)	CN	Description
91,774	55	Woods, Good, HSG B
91,774		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0800	0.14		**Sheet Flow, Seg 1** Woods: Light underbrush n= 0.400 P2= 3.56"
2.5	216	0.0800	1.41		**Shallow Concentrated Flow, Seg 2** Woodland Kv= 5.0 fps
2.4	102	0.0200	0.71		**Shallow Concentrated Flow, Seg 3** Woodland Kv= 5.0 fps
0.1	30	0.4700	3.43		**Shallow Concentrated Flow, Seg 4** Woodland Kv= 5.0 fps
8.7	261	0.0100	0.50		**Shallow Concentrated Flow, Seg 5** Woodland Kv= 5.0 fps
25.4	709	Total			

Subcatchment 2S: South/Central



Summary for Subcatchment 3S: East

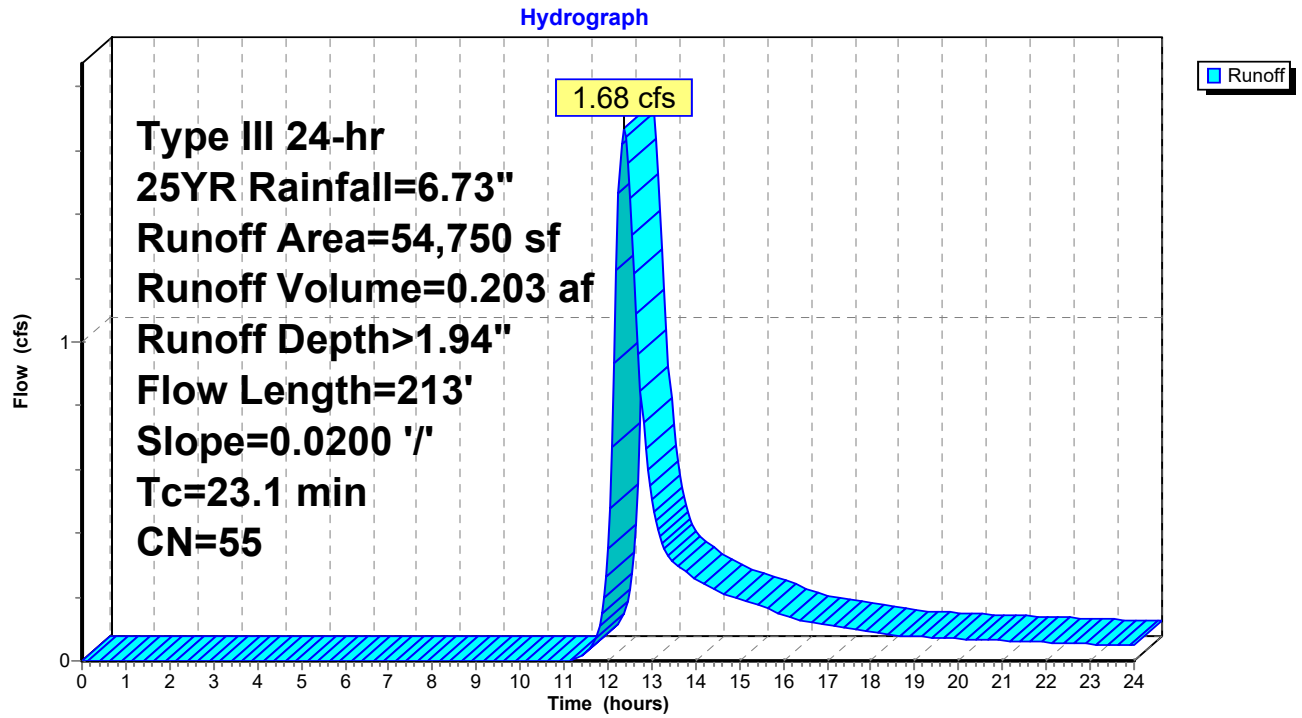
Runoff = 1.68 cfs @ 12.36 hrs, Volume= 0.203 af, Depth> 1.94"
Routed to Link 7L : Existing Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.73"

Area (sf)	CN	Description
54,750	55	Woods, Good, HSG B
54,750		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.4	100	0.0200	0.08		**Sheet Flow, Seg 1** Woods: Light underbrush n= 0.400 P2= 3.56"
2.7	113	0.0200	0.71		**Shallow Concentrated Flow, Seg 2** Woodland Kv= 5.0 fps
23.1	213	Total			

Subcatchment 3S: East



Summary for Subcatchment 4S: West

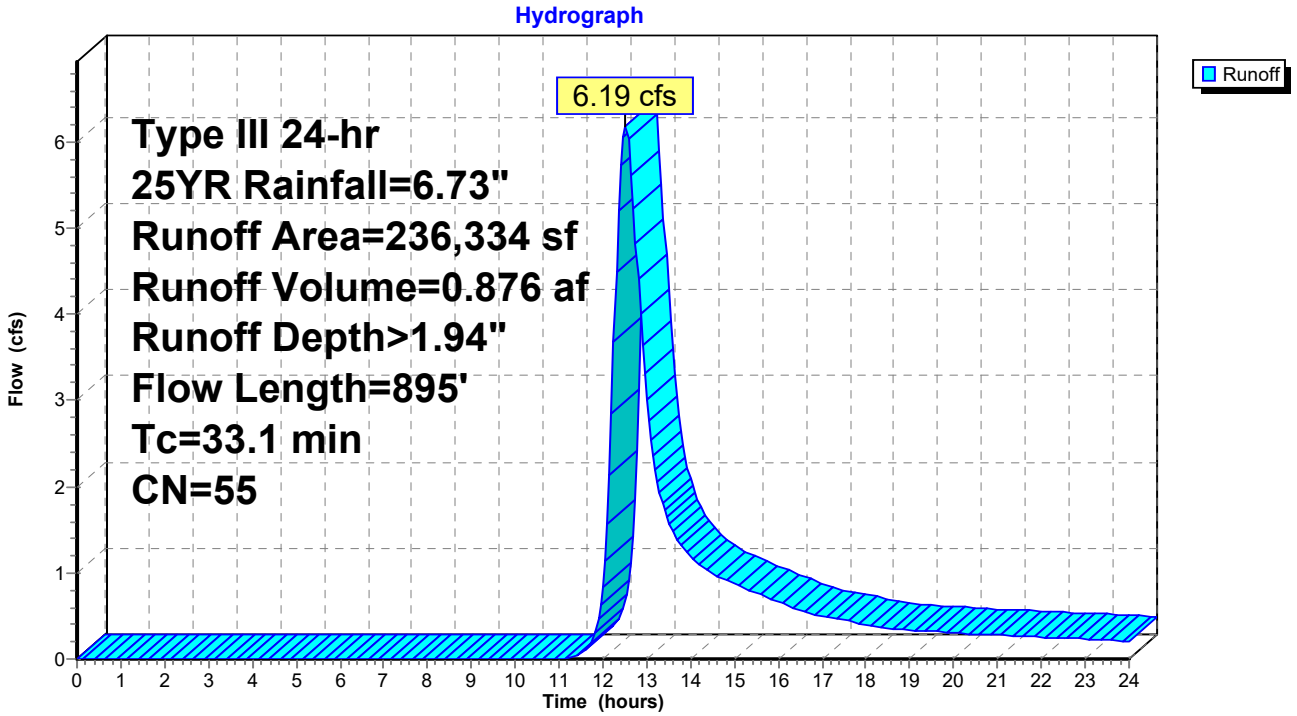
Runoff = 6.19 cfs @ 12.51 hrs, Volume= 0.876 af, Depth> 1.94"
Routed to Link 9L : Proposed Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.73"

Area (sf)	CN	Description
236,334	55	Woods, Good, HSG B
236,334		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	100	0.0400	0.11		**Sheet Flow, Seg 1** Woods: Light underbrush n= 0.400 P2= 3.56"
2.0	123	0.0400	1.00		**Shallow Concentrated Flow, Seg 2** Woodland Kv= 5.0 fps
0.6	82	0.2200	2.35		**Shallow Concentrated Flow, Seg 3** Woodland Kv= 5.0 fps
12.4	371	0.0100	0.50		**Shallow Concentrated Flow, Seg 4** Woodland Kv= 5.0 fps
2.6	219	0.0800	1.41		**Shallow Concentrated Flow, Seg 5** Woodland Kv= 5.0 fps
33.1	895	Total			

Subcatchment 4S: West



Summary for Subcatchment 5S: South/Central

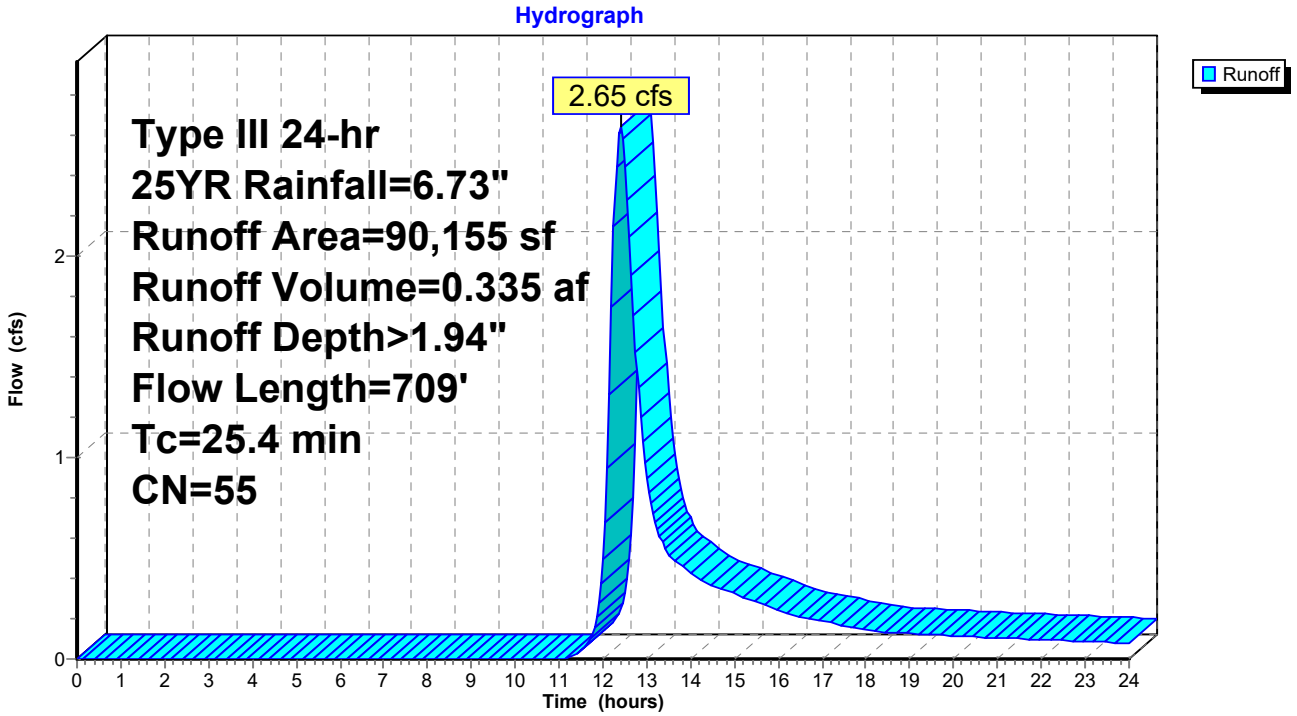
Runoff = 2.65 cfs @ 12.39 hrs, Volume= 0.335 af, Depth> 1.94"
Routed to Link 9L : Proposed Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.73"

Area (sf)	CN	Description
90,155	55	Woods, Good, HSG B
90,155		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0800	0.14		**Sheet Flow, Seg 1** Woods: Light underbrush n= 0.400 P2= 3.56"
2.5	216	0.0800	1.41		**Shallow Concentrated Flow, Seg 2** Woodland Kv= 5.0 fps
2.4	102	0.0200	0.71		**Shallow Concentrated Flow, Seg 3** Woodland Kv= 5.0 fps
0.1	30	0.4700	3.43		**Shallow Concentrated Flow, Seg 4** Woodland Kv= 5.0 fps
8.7	261	0.0100	0.50		**Shallow Concentrated Flow, Seg 5** Woodland Kv= 5.0 fps
25.4	709	Total			

Subcatchment 5S: South/Central



Summary for Subcatchment 6S: East

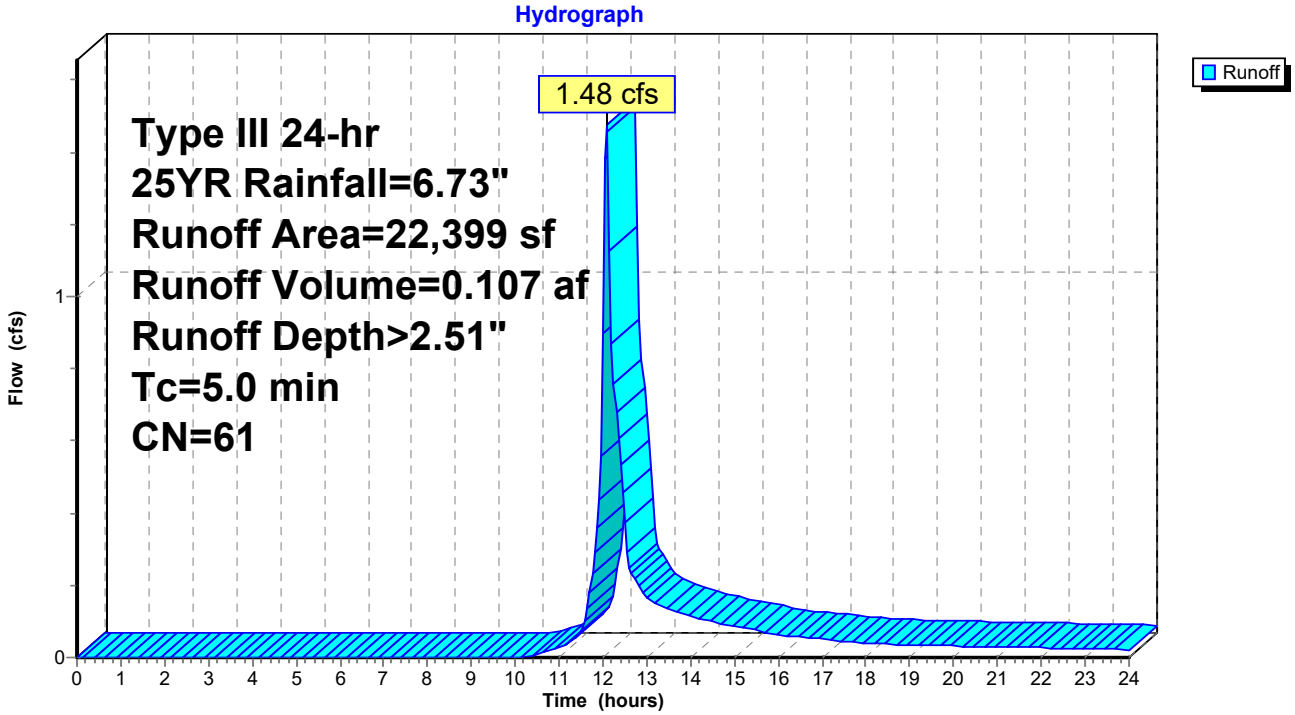
Runoff = 1.48 cfs @ 12.08 hrs, Volume= 0.107 af, Depth> 2.51"
Routed to Link 9L : Proposed Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.73"

Area (sf)	CN	Description
22,399	61	>75% Grass cover, Good, HSG B
22,399		100.00% Pervious Area

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

Subcatchment 6S: East



Summary for Subcatchment 10S: East

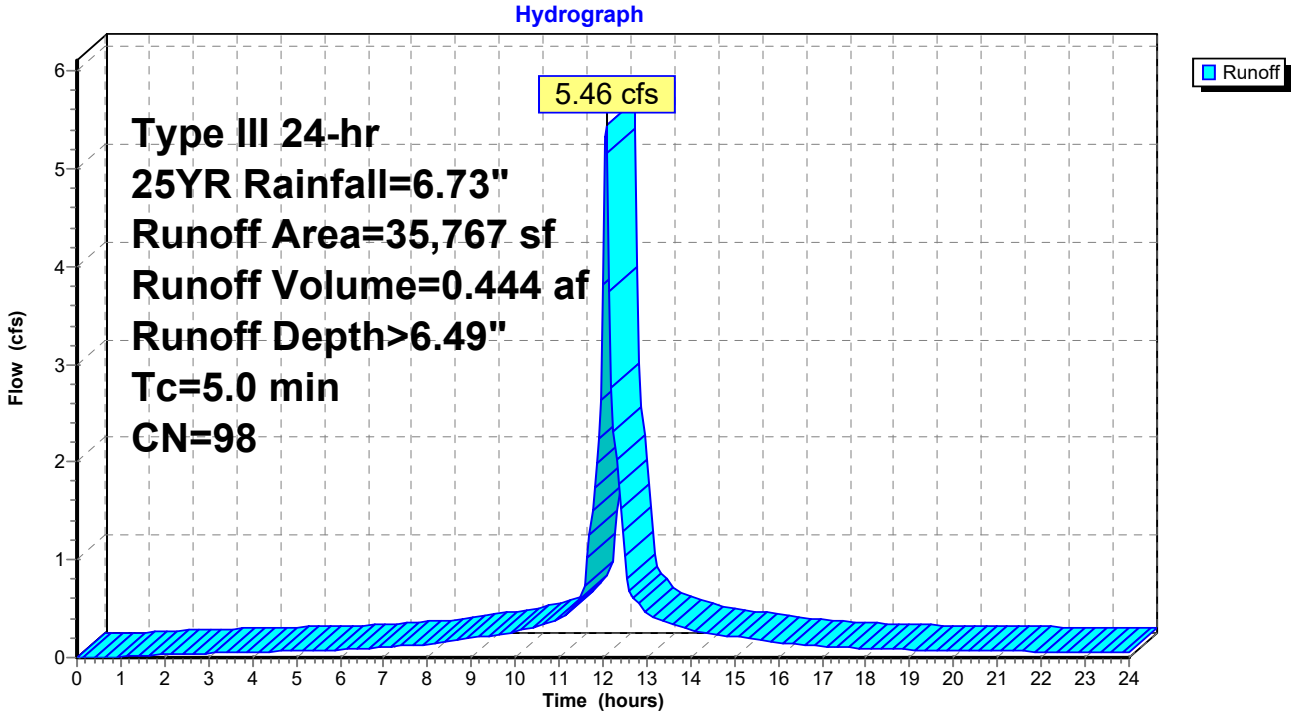
Runoff = 5.46 cfs @ 12.07 hrs, Volume= 0.444 af, Depth> 6.49"
Routed to Pond 9P : Retention Chamber System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=6.73"

Area (sf)	CN	Description
10,000	98	Roofs, HSG B
18,463	98	Paved parking, HSG B
7,304	98	Unconnected pavement, HSG B
35,767	98	Weighted Average
35,767		100.00% Impervious Area
7,304		20.42% Unconnected

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

Subcatchment 10S: East



Summary for Pond 9P: Retention Chamber System

Inflow Area = 0.821 ac,100.00% Impervious, Inflow Depth > 6.49" for 25YR event
Inflow = 5.46 cfs @ 12.07 hrs, Volume= 0.444 af
Outflow = 5.67 cfs @ 12.15 hrs, Volume= 0.444 af, Atten= 0%, Lag= 4.8 min
Discarded = 1.49 cfs @ 12.15 hrs, Volume= 0.387 af
Primary = 4.18 cfs @ 12.15 hrs, Volume= 0.057 af
Routed to Link 9L : Proposed Total

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 301.87' @ 12.15 hrs Surf.Area= 3,060 sf Storage= 4,816 cf

Plug-Flow detention time= 49.7 min calculated for 0.444 af (100% of inflow)
Center-of-Mass det. time= 49.2 min (791.4 - 742.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	297.75'	830 cf	**90.00'W x 34.00'L x 2.50'H Field A** 7,650 cf Overall - 5,576 cf Embedded = 2,074 cf x 40.0% Voids
#2A	298.25'	3,986 cf	**Concrete Galley 4x8x2** x 88 Inside #1 Inside= 42.0"W x 21.0"H => 6.04 sf x 7.50'L = 45.3 cf Outside= 48.0"W x 24.0"H => 7.92 sf x 8.00'L = 63.4 cf 88 Chambers in 22 Rows
		4,816 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	297.75'	**1.200 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 297.50'
#2	Primary	299.60'	**8.0" Round Culvert X 2.00** L= 105.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 299.60' / 298.50' S= 0.0105 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf

Discarded OutFlow Max=1.48 cfs @ 12.15 hrs HW=301.86' (Free Discharge)
↑—**1=Exfiltration** (Controls 1.48 cfs)

Primary OutFlow Max=4.17 cfs @ 12.15 hrs HW=301.85' (Free Discharge)
↑—**2=Culvert** (Barrel Controls 4.17 cfs @ 5.97 fps)

Pond 9P: Retention Chamber System - Chamber Wizard Field A

Chamber Model = Concrete Galley 4x8x2 (Concrete Galley, UCPI 24" Low Profile Galley or equivalent)
Inside= 42.0"W x 21.0"H => 6.04 sf x 7.50'L = 45.3 cf
Outside= 48.0"W x 24.0"H => 7.92 sf x 8.00'L = 63.4 cf

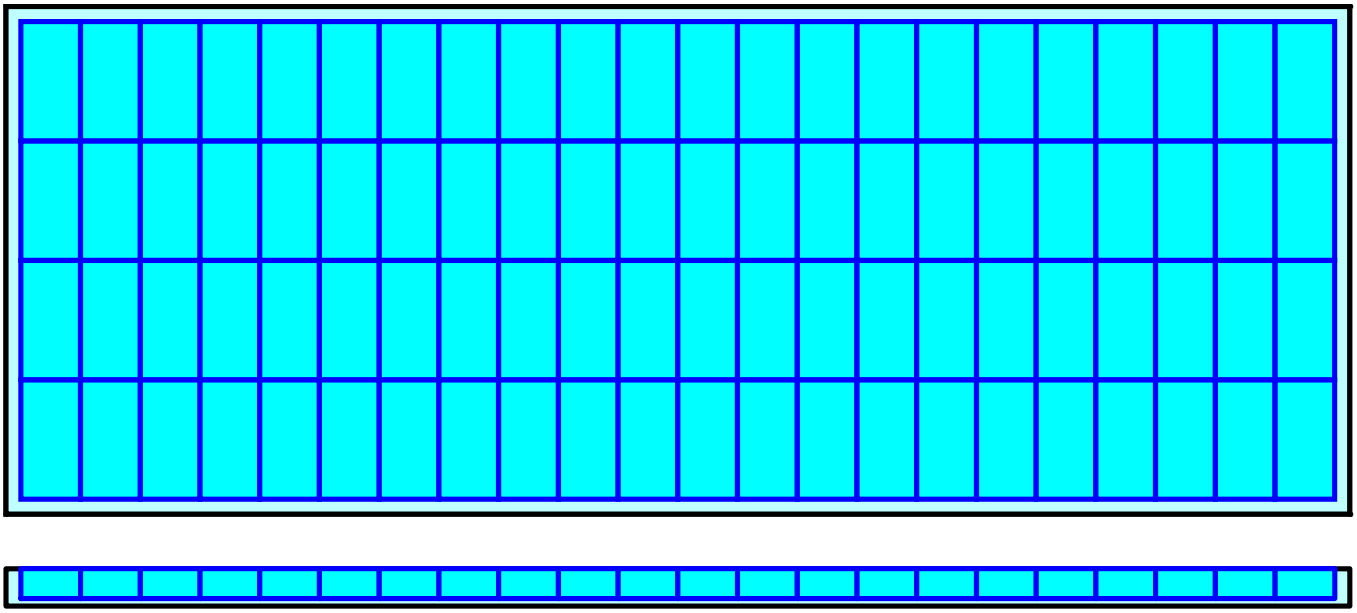
4 Chambers/Row x 8.00' Long = 32.00' Row Length +12.0" End Stone x 2 = 34.00' Base Length
22 Rows x 48.0" Wide + 12.0" Side Stone x 2 = 90.00' Base Width
6.0" Stone Base + 24.0" Chamber Height = 2.50' Field Height

88 Chambers x 45.3 cf = 3,986.4 cf Chamber Storage
88 Chambers x 63.4 cf = 5,575.7 cf Displacement

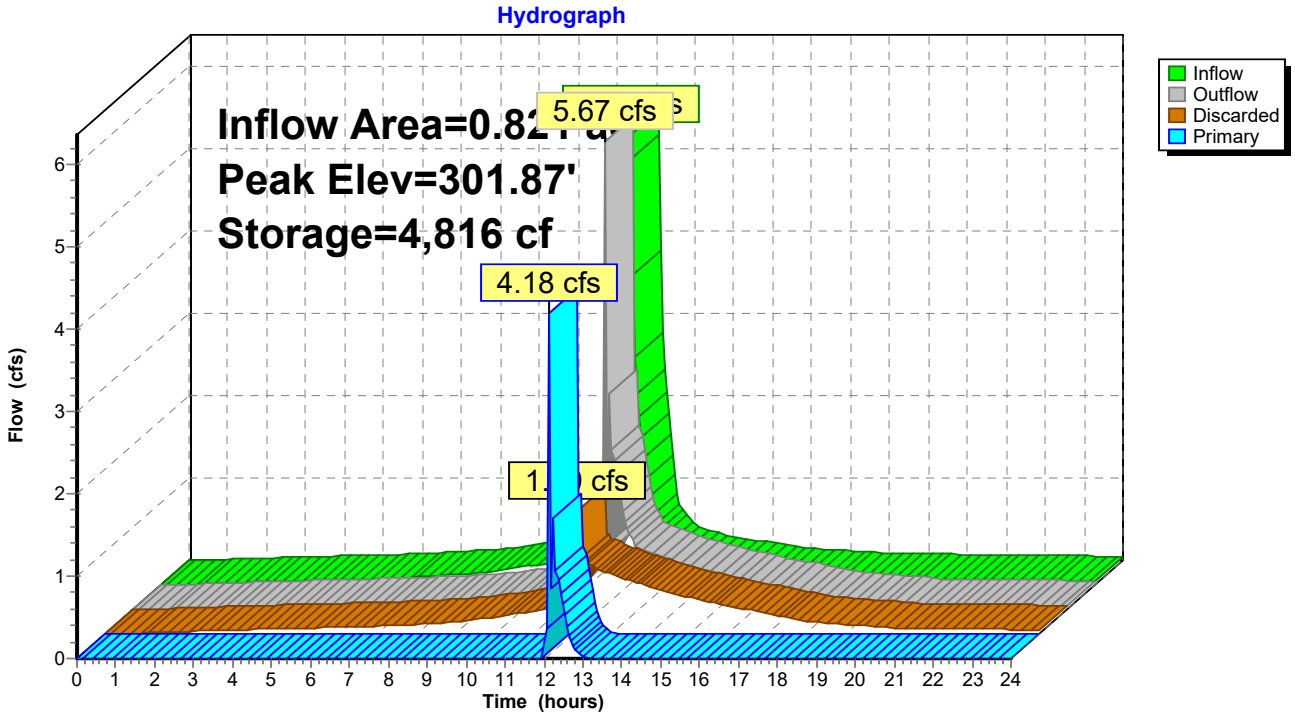
7,650.0 cf Field - 5,575.7 cf Chambers = 2,074.3 cf Stone x 40.0% Voids = 829.7 cf Stone Storage

Chamber Storage + Stone Storage = 4,816.1 cf = 0.111 af
Overall Storage Efficiency = 63.0%
Overall System Size = 34.00' x 90.00' x 2.50'

88 Chambers
283.3 cy Field
76.8 cy Stone



Pond 9P: Retention Chamber System



Stage-Area-Storage for Pond 9P: Retention Chamber System

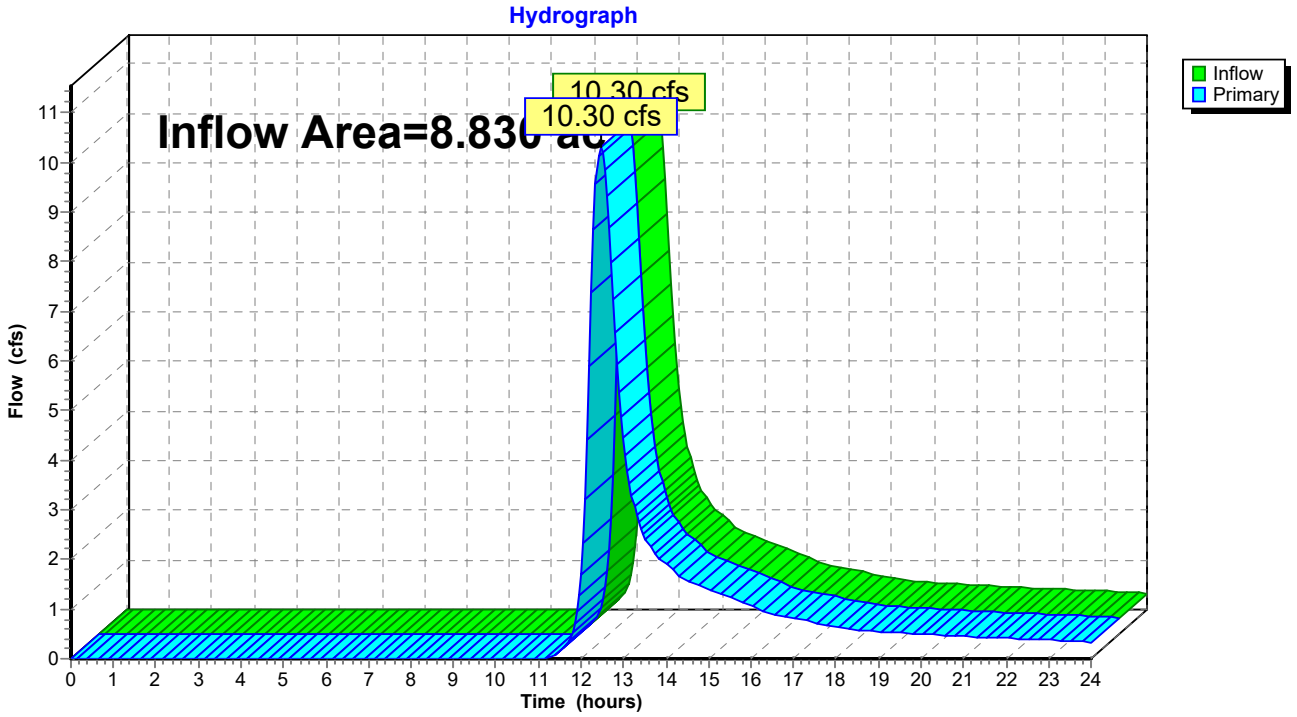
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
297.75	**3,060**	0
297.80	3,060	61
297.85	3,060	122
297.90	3,060	184
297.95	3,060	245
298.00	3,060	306
298.05	3,060	367
298.10	3,060	428
298.15	3,060	490
298.20	3,060	551
298.25	3,060	612
298.30	3,060	733
298.35	3,060	854
298.40	3,060	975
298.45	3,060	1,096
298.50	3,060	1,217
298.55	3,060	1,338
298.60	3,060	1,459
298.65	3,060	1,580
298.70	3,060	1,700
298.75	3,060	1,821
298.80	3,060	1,942
298.85	3,060	2,063
298.90	3,060	2,184
298.95	3,060	2,305
299.00	3,060	2,426
299.05	3,060	2,547
299.10	3,060	2,668
299.15	3,060	2,789
299.20	3,060	2,910
299.25	3,060	3,031
299.30	3,060	3,152
299.35	3,060	3,273
299.40	3,060	3,394
299.45	3,060	3,515
299.50	3,060	3,636
299.55	3,060	3,757
299.60	3,060	3,877
299.65	3,060	3,998
299.70	3,060	4,119
299.75	3,060	4,240
299.80	3,060	4,361
299.85	3,060	4,477
299.90	3,060	4,582
299.95	3,060	4,686
300.00	3,060	4,789
300.05	3,060	4,794
300.10	3,060	4,800
300.15	3,060	4,805
300.20	3,060	4,811
300.25	3,060	**4,816**
300.30	3,060	4,816
300.35	3,060	4,816
300.40	3,060	4,816
300.45	3,060	4,816
300.50	3,060	4,816
300.55	3,060	4,816
300.60	3,060	4,816
300.65	3,060	4,816
300.70	3,060	4,816
300.75	3,060	4,816
300.80	3,060	4,816
300.85	3,060	4,816
300.90	3,060	4,816
300.95	3,060	4,816
301.00	3,060	4,816
301.05	3,060	4,816
301.10	3,060	4,816
301.15	3,060	4,816
301.20	3,060	4,816
301.25	3,060	4,816
301.30	3,060	4,816
301.35	3,060	4,816
301.40	3,060	4,816
301.45	3,060	4,816
301.50	3,060	4,816
301.55	3,060	4,816
301.60	3,060	4,816
301.65	3,060	4,816
301.70	3,060	4,816
301.75	3,060	4,816
301.80	3,060	4,816
301.85	3,060	4,816

Summary for Link 7L: Existing Total

Inflow Area = 8.830 ac, 0.00% Impervious, Inflow Depth > 1.94" for 25YR event
Inflow = 10.30 cfs @ 12.46 hrs, Volume= 1.426 af
Primary = 10.30 cfs @ 12.46 hrs, Volume= 1.426 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 7L: Existing Total

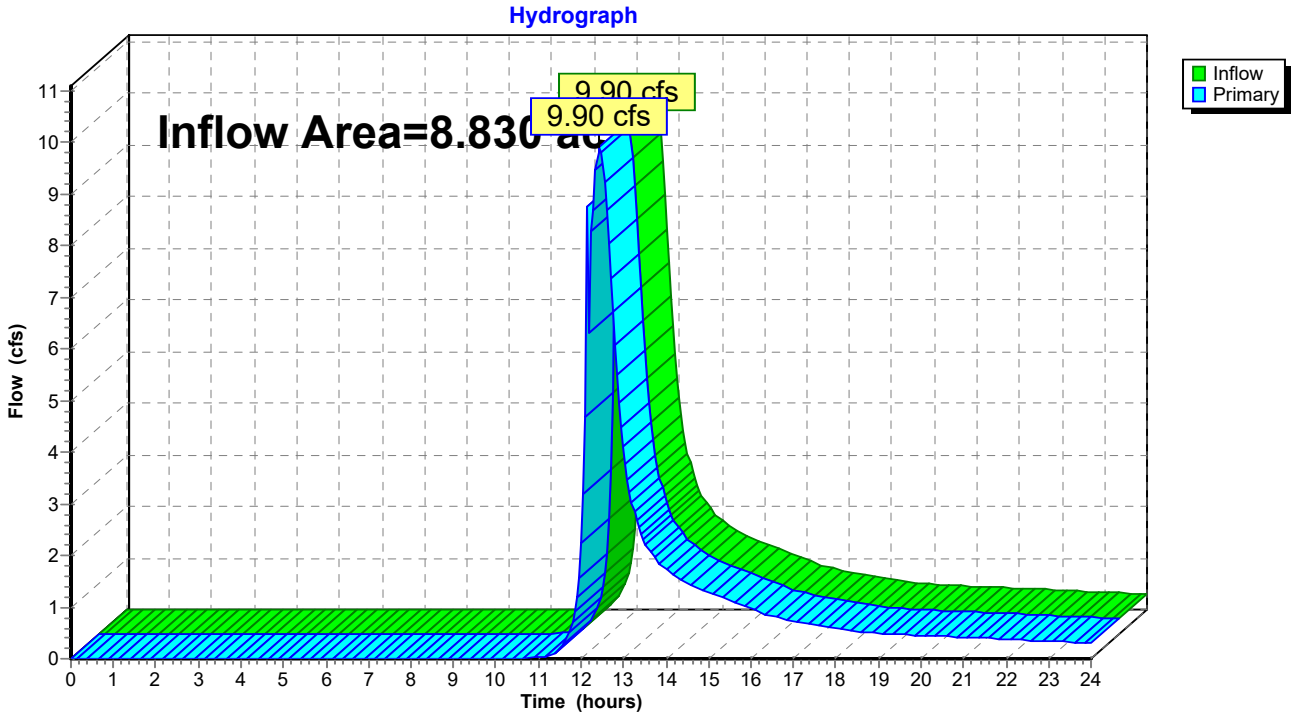


Summary for Link 9L: Proposed Total

Inflow Area = 8.830 ac, 9.30% Impervious, Inflow Depth > 1.87" for 25YR event
Inflow = 9.90 cfs @ 12.44 hrs, Volume= 1.374 af
Primary = 9.90 cfs @ 12.44 hrs, Volume= 1.374 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 9L: Proposed Total



Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	100YR	Type III 24-hr		Default	24.00	1	8.61	2

Summary for Subcatchment 1S: West

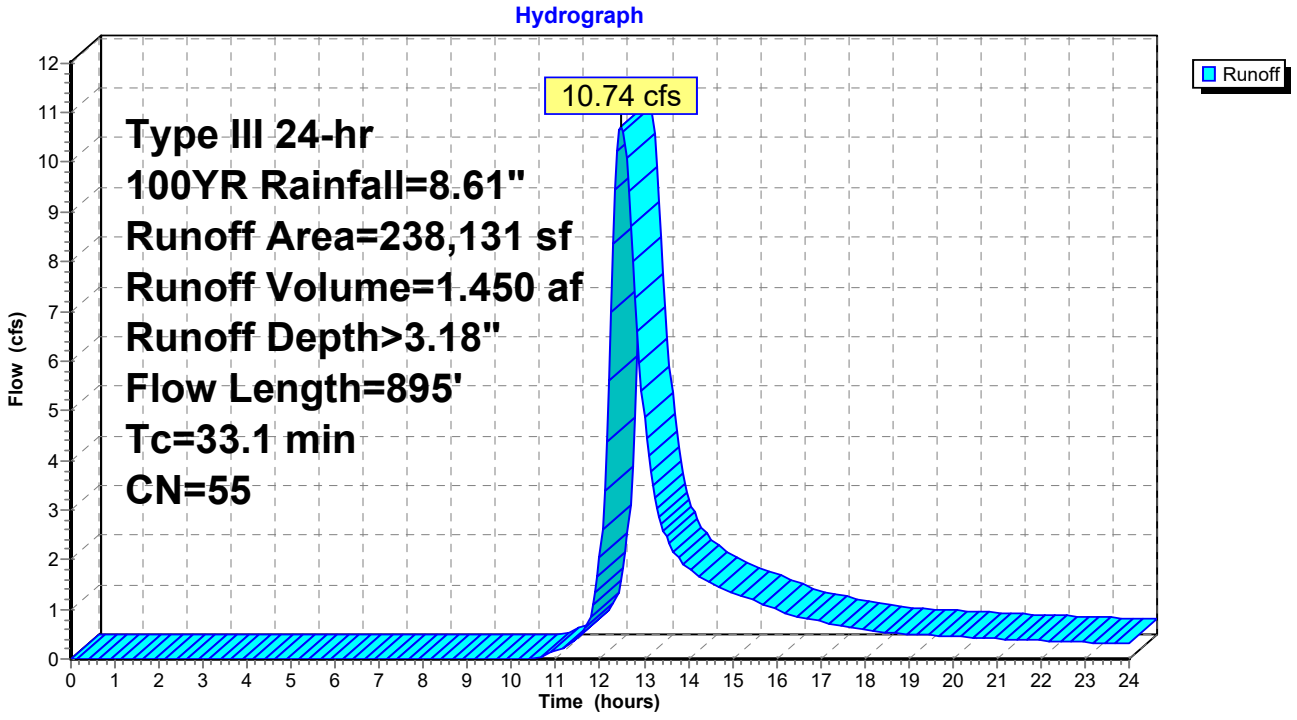
Runoff = 10.74 cfs @ 12.49 hrs, Volume= 1.450 af, Depth> 3.18"
Routed to Link 7L : Existing Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=8.61"

Area (sf)	CN	Description
238,131	55	Woods, Good, HSG B
238,131		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	100	0.0400	0.11		**Sheet Flow, Seg 1** Woods: Light underbrush n= 0.400 P2= 3.56"
2.0	123	0.0400	1.00		**Shallow Concentrated Flow, Seg 2** Woodland Kv= 5.0 fps
0.6	82	0.2200	2.35		**Shallow Concentrated Flow, Seg 3** Woodland Kv= 5.0 fps
12.4	371	0.0100	0.50		**Shallow Concentrated Flow, Seg 4** Woodland Kv= 5.0 fps
2.6	219	0.0800	1.41		**Shallow Concentrated Flow, Seg 5** Woodland Kv= 5.0 fps
33.1	895	Total			

Subcatchment 1S: West



Summary for Subcatchment 2S: South/Central

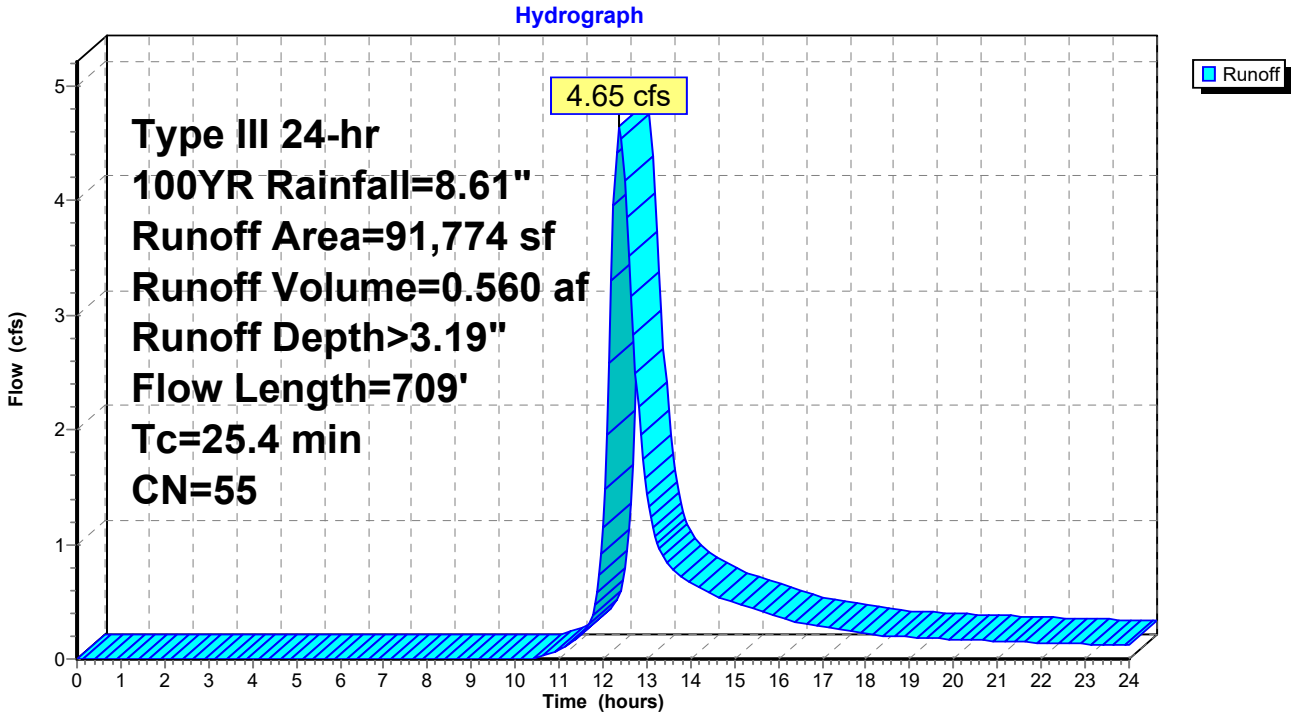
Runoff = 4.65 cfs @ 12.38 hrs, Volume= 0.560 af, Depth> 3.19"
Routed to Link 7L : Existing Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=8.61"

Area (sf)	CN	Description
91,774	55	Woods, Good, HSG B
91,774		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0800	0.14		**Sheet Flow, Seg 1** Woods: Light underbrush n= 0.400 P2= 3.56"
2.5	216	0.0800	1.41		**Shallow Concentrated Flow, Seg 2** Woodland Kv= 5.0 fps
2.4	102	0.0200	0.71		**Shallow Concentrated Flow, Seg 3** Woodland Kv= 5.0 fps
0.1	30	0.4700	3.43		**Shallow Concentrated Flow, Seg 4** Woodland Kv= 5.0 fps
8.7	261	0.0100	0.50		**Shallow Concentrated Flow, Seg 5** Woodland Kv= 5.0 fps
25.4	709	Total			

Subcatchment 2S: South/Central



Summary for Subcatchment 3S: East

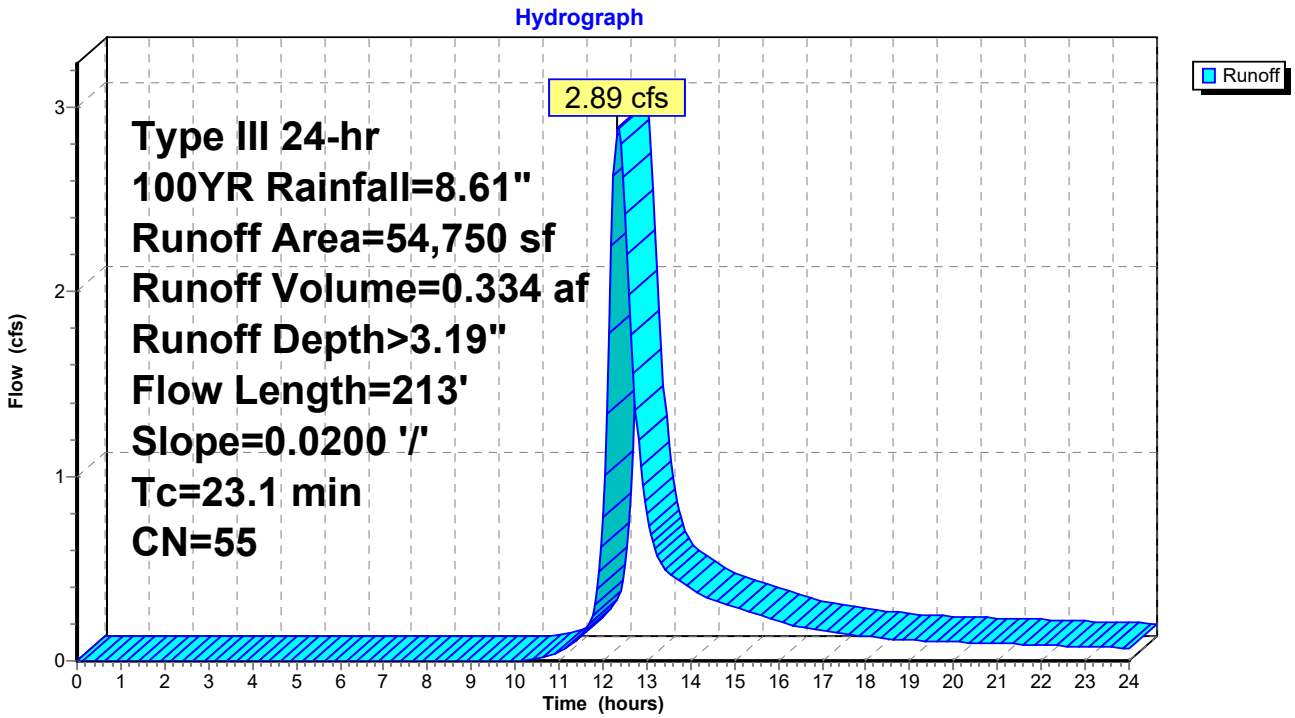
Runoff = 2.89 cfs @ 12.34 hrs, Volume= 0.334 af, Depth> 3.19"
Routed to Link 7L : Existing Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=8.61"

Area (sf)	CN	Description
54,750	55	Woods, Good, HSG B
54,750		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.4	100	0.0200	0.08		**Sheet Flow, Seg 1** Woods: Light underbrush n= 0.400 P2= 3.56"
2.7	113	0.0200	0.71		**Shallow Concentrated Flow, Seg 2** Woodland Kv= 5.0 fps
23.1	213	Total			

Subcatchment 3S: East



Summary for Subcatchment 4S: West

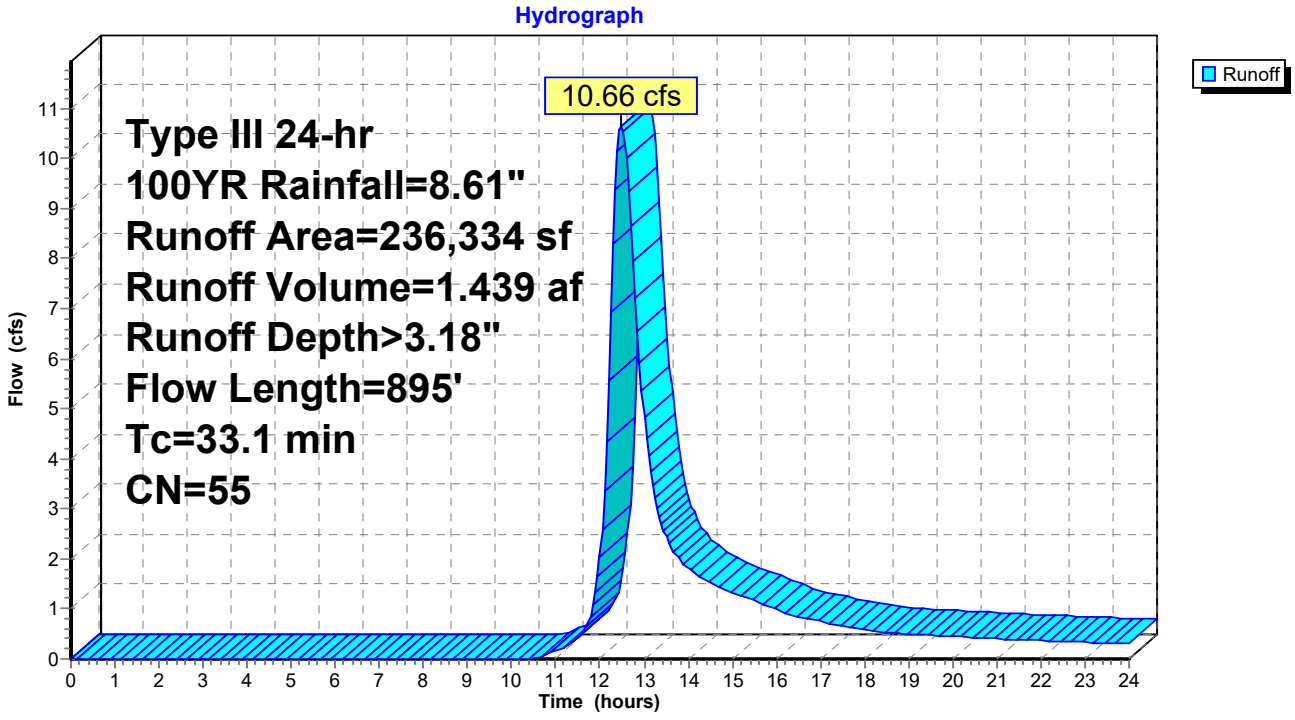
Runoff = 10.66 cfs @ 12.49 hrs, Volume= 1.439 af, Depth> 3.18"
Routed to Link 9L : Proposed Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=8.61"

Area (sf)	CN	Description
236,334	55	Woods, Good, HSG B
236,334		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	100	0.0400	0.11		**Sheet Flow, Seg 1** Woods: Light underbrush n= 0.400 P2= 3.56"
2.0	123	0.0400	1.00		**Shallow Concentrated Flow, Seg 2** Woodland Kv= 5.0 fps
0.6	82	0.2200	2.35		**Shallow Concentrated Flow, Seg 3** Woodland Kv= 5.0 fps
12.4	371	0.0100	0.50		**Shallow Concentrated Flow, Seg 4** Woodland Kv= 5.0 fps
2.6	219	0.0800	1.41		**Shallow Concentrated Flow, Seg 5** Woodland Kv= 5.0 fps
33.1	895	Total			

Subcatchment 4S: West



Summary for Subcatchment 5S: South/Central

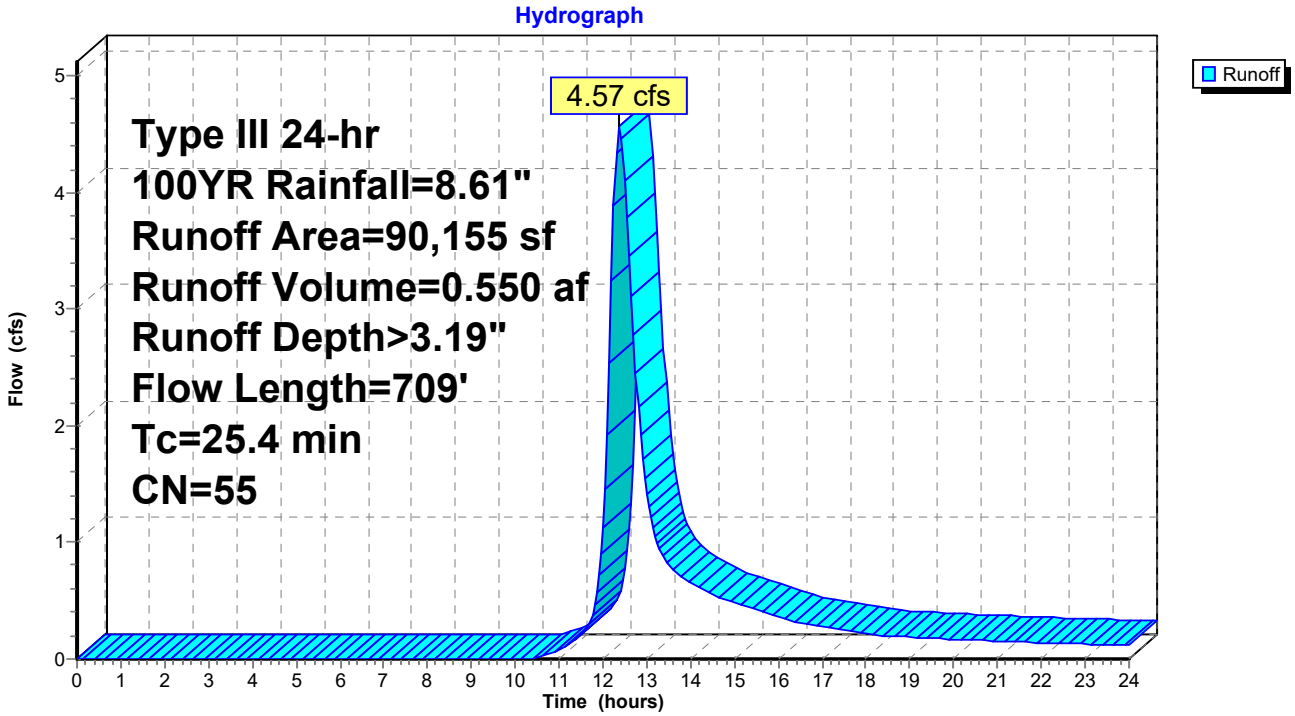
Runoff = 4.57 cfs @ 12.38 hrs, Volume= 0.550 af, Depth> 3.19"
Routed to Link 9L : Proposed Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=8.61"

Area (sf)	CN	Description
90,155	55	Woods, Good, HSG B
90,155		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0800	0.14		**Sheet Flow, Seg 1** Woods: Light underbrush n= 0.400 P2= 3.56"
2.5	216	0.0800	1.41		**Shallow Concentrated Flow, Seg 2** Woodland Kv= 5.0 fps
2.4	102	0.0200	0.71		**Shallow Concentrated Flow, Seg 3** Woodland Kv= 5.0 fps
0.1	30	0.4700	3.43		**Shallow Concentrated Flow, Seg 4** Woodland Kv= 5.0 fps
8.7	261	0.0100	0.50		**Shallow Concentrated Flow, Seg 5** Woodland Kv= 5.0 fps
25.4	709	Total			

Subcatchment 5S: South/Central



Summary for Subcatchment 6S: East

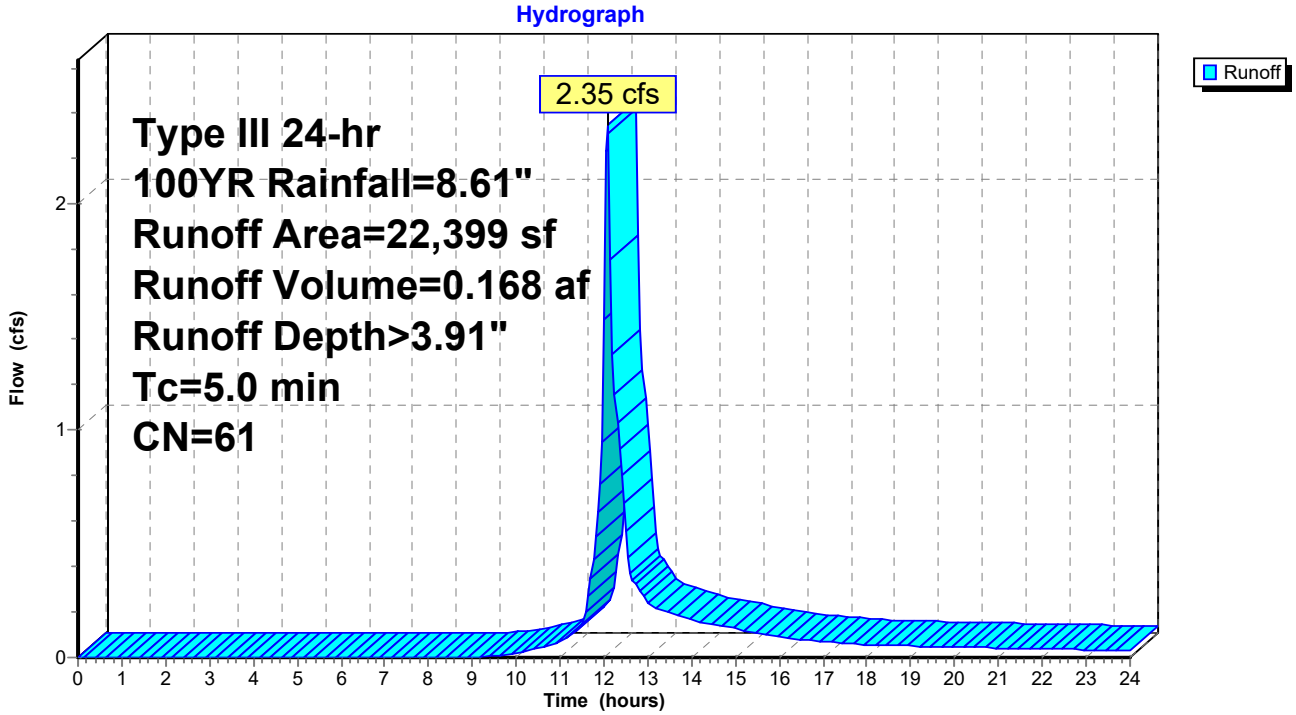
Runoff = 2.35 cfs @ 12.08 hrs, Volume= 0.168 af, Depth> 3.91"
Routed to Link 9L : Proposed Total

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=8.61"

Area (sf)	CN	Description
22,399	61	>75% Grass cover, Good, HSG B
22,399		100.00% Pervious Area

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

Subcatchment 6S: East



Summary for Subcatchment 10S: East

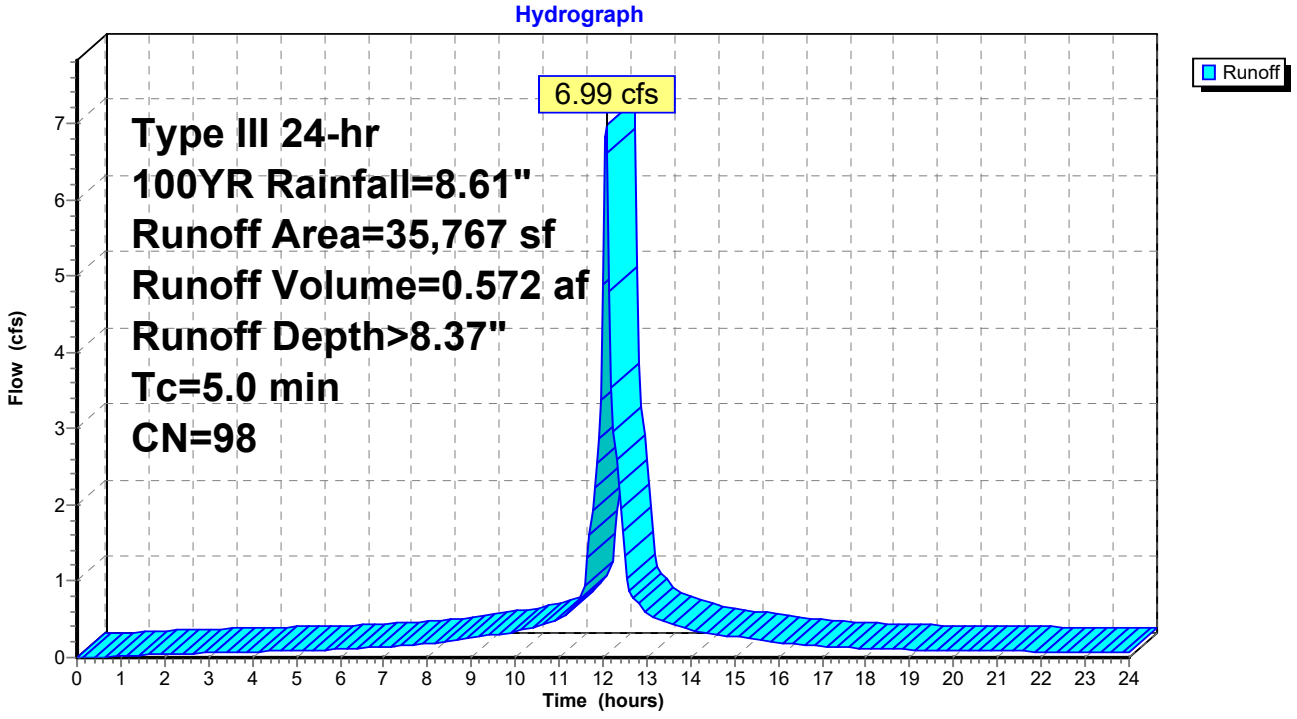
Runoff = 6.99 cfs @ 12.07 hrs, Volume= 0.572 af, Depth> 8.37"
Routed to Pond 9P : Retention Chamber System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100YR Rainfall=8.61"

Area (sf)	CN	Description
10,000	98	Roofs, HSG B
18,463	98	Paved parking, HSG B
7,304	98	Unconnected pavement, HSG B
35,767	98	Weighted Average
35,767		100.00% Impervious Area
7,304		20.42% Unconnected

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

Subcatchment 10S: East



Summary for Pond 9P: Retention Chamber System

Inflow Area = 0.821 ac,100.00% Impervious, Inflow Depth > 8.37" for 100YR event
Inflow = 6.99 cfs @ 12.07 hrs, Volume= 0.572 af
Outflow = 8.07 cfs @ 12.09 hrs, Volume= 0.572 af, Atten= 0%, Lag= 1.4 min
Discarded = 2.29 cfs @ 12.10 hrs, Volume= 0.462 af
Primary = 5.78 cfs @ 12.09 hrs, Volume= 0.110 af
Routed to Link 9L : Proposed Total

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 304.24' @ 12.10 hrs Surf.Area= 3,060 sf Storage= 4,816 cf

Plug-Flow detention time= 47.5 min calculated for 0.572 af (100% of inflow)
Center-of-Mass det. time= 46.5 min (785.5 - 739.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	297.75'	830 cf	**90.00'W x 34.00'L x 2.50'H Field A** 7,650 cf Overall - 5,576 cf Embedded = 2,074 cf x 40.0% Voids
#2A	298.25'	3,986 cf	**Concrete Galley 4x8x2** x 88 Inside #1 Inside= 42.0"W x 21.0"H => 6.04 sf x 7.50'L = 45.3 cf Outside= 48.0"W x 24.0"H => 7.92 sf x 8.00'L = 63.4 cf 88 Chambers in 22 Rows
		4,816 cf	Total Available Storage

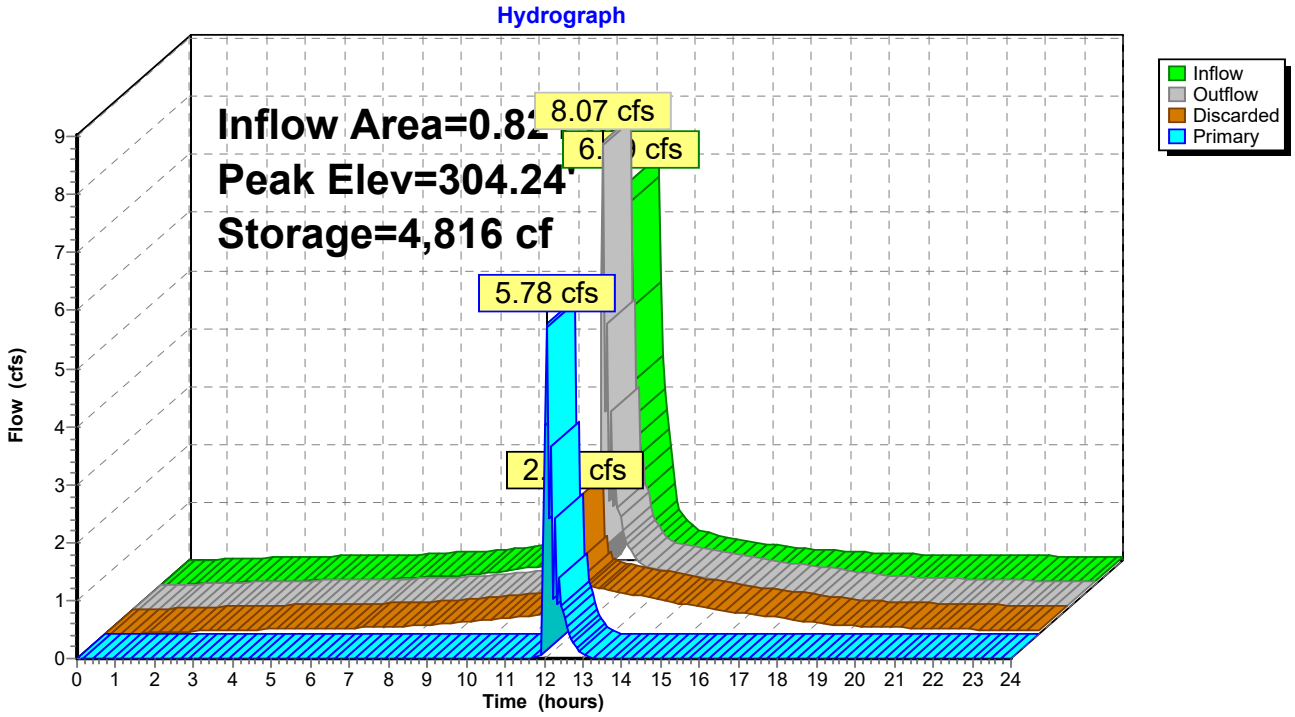
Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	297.75'	**1.200 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 297.50'
#2	Primary	299.60'	**8.0" Round Culvert X 2.00** L= 105.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 299.60' / 298.50' S= 0.0105 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf

Discarded OutFlow Max=2.20 cfs @ 12.10 hrs HW=303.97' (Free Discharge)
↑—**1=Exfiltration** (Controls 2.20 cfs)

Primary OutFlow Max=5.48 cfs @ 12.09 hrs HW=303.80' (Free Discharge)
↑—**2=Culvert** (Barrel Controls 5.48 cfs @ 7.85 fps)

Pond 9P: Retention Chamber System

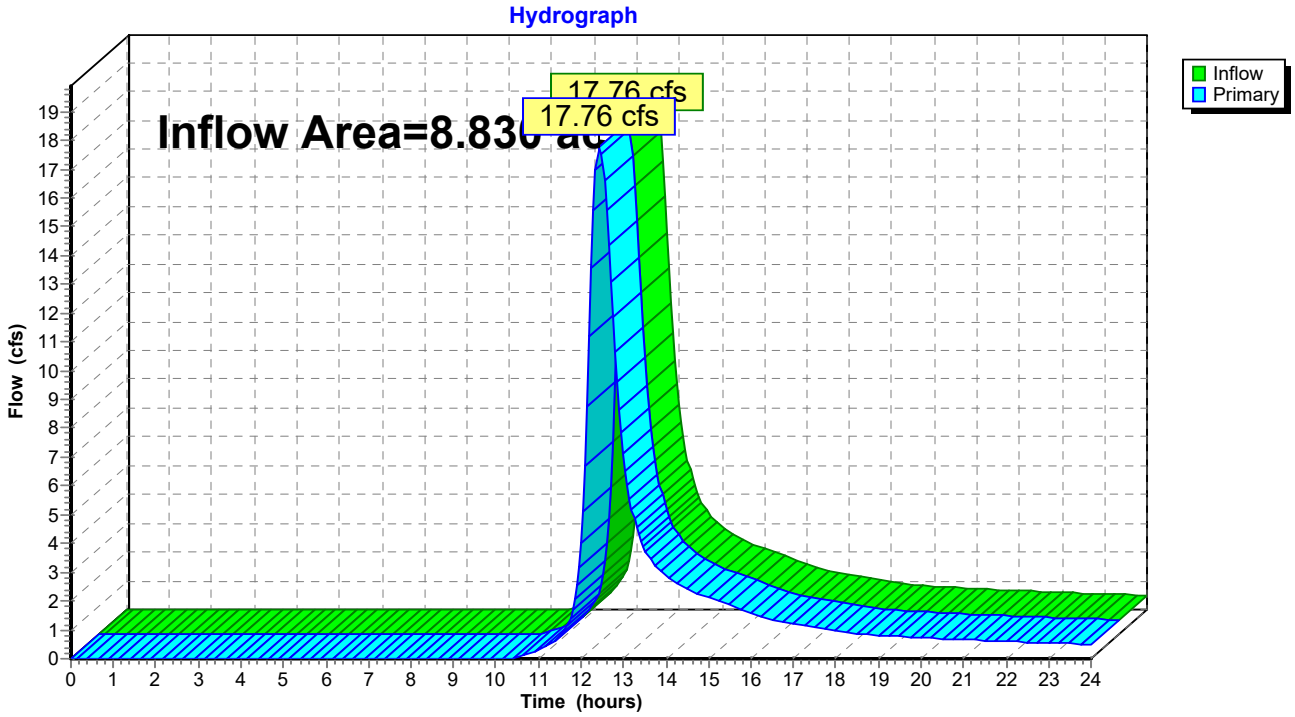


Summary for Link 7L: Existing Total

Inflow Area = 8.830 ac, 0.00% Impervious, Inflow Depth > 3.19" for 100YR event
Inflow = 17.76 cfs @ 12.43 hrs, Volume= 2.344 af
Primary = 17.76 cfs @ 12.43 hrs, Volume= 2.344 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 7L: Existing Total

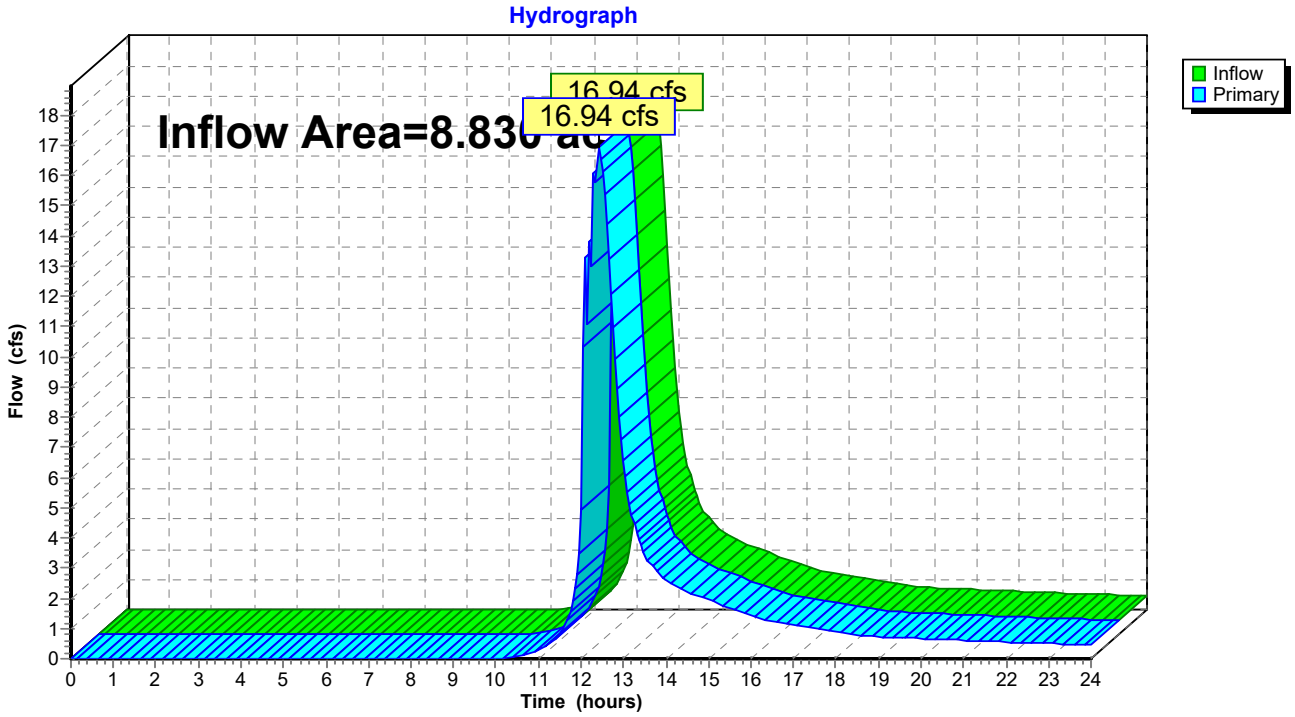


Summary for Link 9L: Proposed Total

Inflow Area = 8.830 ac, 9.30% Impervious, Inflow Depth > 3.08" for 100YR event
Inflow = 16.94 cfs @ 12.41 hrs, Volume= 2.266 af
Primary = 16.94 cfs @ 12.41 hrs, Volume= 2.266 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 9L: Proposed Total



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 1S: West Runoff Area=238,131 sf 0.00% Impervious Runoff Depth>0.36"
Flow Length=895' Tc=33.1 min CN=55 Runoff=0.71 cfs 0.164 af

Subcatchment 2S: South/Central Runoff Area=91,774 sf 0.00% Impervious Runoff Depth>0.36"
Flow Length=709' Tc=25.4 min CN=55 Runoff=0.31 cfs 0.064 af

Subcatchment 3S: East Runoff Area=54,750 sf 0.00% Impervious Runoff Depth>0.36"
Flow Length=213' Slope=0.0200 '/' Tc=23.1 min CN=55 Runoff=0.19 cfs 0.038 af

Subcatchment 4S: West Runoff Area=236,334 sf 0.00% Impervious Runoff Depth>0.36"
Flow Length=895' Tc=33.1 min CN=55 Runoff=0.71 cfs 0.163 af

Subcatchment 5S: South/Central Runoff Area=90,155 sf 0.00% Impervious Runoff Depth>0.36"
Flow Length=709' Tc=25.4 min CN=55 Runoff=0.30 cfs 0.062 af

Subcatchment 6S: East Runoff Area=22,399 sf 0.00% Impervious Runoff Depth>0.60"
Tc=5.0 min CN=61 Runoff=0.27 cfs 0.026 af

Subcatchment 10S: East Runoff Area=35,767 sf 100.00% Impervious Runoff Depth>3.32"
Tc=5.0 min CN=98 Runoff=2.86 cfs 0.227 af

Pond 9P: Retention Chamber System Peak Elev=299.29' Storage=3,129 cf Inflow=2.86 cfs 0.227 af
Discarded=0.61 cfs 0.227 af Primary=0.00 cfs 0.000 af Outflow=0.61 cfs 0.227 af

Link 7L: Existing Total Inflow=1.18 cfs 0.266 af
Primary=1.18 cfs 0.266 af

Link 9L: Proposed Total Inflow=1.06 cfs 0.251 af
Primary=1.06 cfs 0.251 af

Total Runoff Area = 17.661 ac Runoff Volume = 0.745 af Average Runoff Depth = 0.51"
95.35% Pervious = 16.840 ac 4.65% Impervious = 0.821 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 1S: West Runoff Area=238,131 sf 0.00% Impervious Runoff Depth>0.79"
Flow Length=895' Tc=33.1 min CN=55 Runoff=2.13 cfs 0.361 af

Subcatchment 2S: South/Central Runoff Area=91,774 sf 0.00% Impervious Runoff Depth>0.80"
Flow Length=709' Tc=25.4 min CN=55 Runoff=0.92 cfs 0.140 af

Subcatchment 3S: East Runoff Area=54,750 sf 0.00% Impervious Runoff Depth>0.80"
Flow Length=213' Slope=0.0200 '/' Tc=23.1 min CN=55 Runoff=0.57 cfs 0.083 af

Subcatchment 4S: West Runoff Area=236,334 sf 0.00% Impervious Runoff Depth>0.79"
Flow Length=895' Tc=33.1 min CN=55 Runoff=2.12 cfs 0.358 af

Subcatchment 5S: South/Central Runoff Area=90,155 sf 0.00% Impervious Runoff Depth>0.80"
Flow Length=709' Tc=25.4 min CN=55 Runoff=0.90 cfs 0.137 af

Subcatchment 6S: East Runoff Area=22,399 sf 0.00% Impervious Runoff Depth>1.15"
Tc=5.0 min CN=61 Runoff=0.62 cfs 0.049 af

Subcatchment 10S: East Runoff Area=35,767 sf 100.00% Impervious Runoff Depth>4.39"
Tc=5.0 min CN=98 Runoff=3.74 cfs 0.301 af

Pond 9P: Retention Chamber System Peak Elev=299.74' Storage=4,215 cf Inflow=3.74 cfs 0.301 af
Discarded=0.76 cfs 0.297 af Primary=0.14 cfs 0.003 af Outflow=0.90 cfs 0.300 af

Link 7L: Existing Total Inflow=3.52 cfs 0.584 af
Primary=3.52 cfs 0.584 af

Link 9L: Proposed Total Inflow=3.24 cfs 0.548 af
Primary=3.24 cfs 0.548 af

Total Runoff Area = 17.661 ac Runoff Volume = 1.429 af Average Runoff Depth = 0.97"
95.35% Pervious = 16.840 ac 4.65% Impervious = 0.821 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 1S: West Runoff Area=238,131 sf 0.00% Impervious Runoff Depth>1.23"
Flow Length=895' Tc=33.1 min CN=55 Runoff=3.69 cfs 0.561 af

Subcatchment 2S: South/Central Runoff Area=91,774 sf 0.00% Impervious Runoff Depth>1.24"
Flow Length=709' Tc=25.4 min CN=55 Runoff=1.60 cfs 0.217 af

Subcatchment 3S: East Runoff Area=54,750 sf 0.00% Impervious Runoff Depth>1.24"
Flow Length=213' Slope=0.0200 '/' Tc=23.1 min CN=55 Runoff=0.99 cfs 0.129 af

Subcatchment 4S: West Runoff Area=236,334 sf 0.00% Impervious Runoff Depth>1.23"
Flow Length=895' Tc=33.1 min CN=55 Runoff=3.67 cfs 0.557 af

Subcatchment 5S: South/Central Runoff Area=90,155 sf 0.00% Impervious Runoff Depth>1.24"
Flow Length=709' Tc=25.4 min CN=55 Runoff=1.57 cfs 0.213 af

Subcatchment 6S: East Runoff Area=22,399 sf 0.00% Impervious Runoff Depth>1.68"
Tc=5.0 min CN=61 Runoff=0.96 cfs 0.072 af

Subcatchment 10S: East Runoff Area=35,767 sf 100.00% Impervious Runoff Depth>5.27"
Tc=5.0 min CN=98 Runoff=4.46 cfs 0.361 af

Pond 9P: Retention Chamber System Peak Elev=299.95' Storage=4,691 cf Inflow=4.46 cfs 0.361 af
Discarded=0.83 cfs 0.337 af Primary=0.76 cfs 0.023 af Outflow=1.59 cfs 0.360 af

Link 7L: Existing Total Inflow=6.09 cfs 0.908 af
Primary=6.09 cfs 0.908 af

Link 9L: Proposed Total Inflow=5.95 cfs 0.865 af
Primary=5.95 cfs 0.865 af

Total Runoff Area = 17.661 ac Runoff Volume = 2.110 af Average Runoff Depth = 1.43"
95.35% Pervious = 16.840 ac 4.65% Impervious = 0.821 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 1S: West Runoff Area=238,131 sf 0.00% Impervious Runoff Depth>1.94"
Flow Length=895' Tc=33.1 min CN=55 Runoff=6.24 cfs 0.882 af

Subcatchment 2S: South/Central Runoff Area=91,774 sf 0.00% Impervious Runoff Depth>1.94"
Flow Length=709' Tc=25.4 min CN=55 Runoff=2.70 cfs 0.341 af

Subcatchment 3S: East Runoff Area=54,750 sf 0.00% Impervious Runoff Depth>1.94"
Flow Length=213' Slope=0.0200 '/' Tc=23.1 min CN=55 Runoff=1.68 cfs 0.203 af

Subcatchment 4S: West Runoff Area=236,334 sf 0.00% Impervious Runoff Depth>1.94"
Flow Length=895' Tc=33.1 min CN=55 Runoff=6.19 cfs 0.876 af

Subcatchment 5S: South/Central Runoff Area=90,155 sf 0.00% Impervious Runoff Depth>1.94"
Flow Length=709' Tc=25.4 min CN=55 Runoff=2.65 cfs 0.335 af

Subcatchment 6S: East Runoff Area=22,399 sf 0.00% Impervious Runoff Depth>2.51"
Tc=5.0 min CN=61 Runoff=1.48 cfs 0.107 af

Subcatchment 10S: East Runoff Area=35,767 sf 100.00% Impervious Runoff Depth>6.49"
Tc=5.0 min CN=98 Runoff=5.46 cfs 0.444 af

Pond 9P: Retention Chamber System Peak Elev=301.87' Storage=4,816 cf Inflow=5.46 cfs 0.444 af
Discarded=1.49 cfs 0.387 af Primary=4.18 cfs 0.057 af Outflow=5.67 cfs 0.444 af

Link 7L: Existing Total Inflow=10.30 cfs 1.426 af
Primary=10.30 cfs 1.426 af

Link 9L: Proposed Total Inflow=9.90 cfs 1.374 af
Primary=9.90 cfs 1.374 af

Total Runoff Area = 17.661 ac Runoff Volume = 3.188 af Average Runoff Depth = 2.17"
95.35% Pervious = 16.840 ac 4.65% Impervious = 0.821 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 1S: West Runoff Area=238,131 sf 0.00% Impervious Runoff Depth>2.51"
Flow Length=895' Tc=33.1 min CN=55 Runoff=8.32 cfs 1.145 af

Subcatchment 2S: South/Central Runoff Area=91,774 sf 0.00% Impervious Runoff Depth>2.52"
Flow Length=709' Tc=25.4 min CN=55 Runoff=3.60 cfs 0.442 af

Subcatchment 3S: East Runoff Area=54,750 sf 0.00% Impervious Runoff Depth>2.52"
Flow Length=213' Slope=0.0200 '/' Tc=23.1 min CN=55 Runoff=2.24 cfs 0.264 af

Subcatchment 4S: West Runoff Area=236,334 sf 0.00% Impervious Runoff Depth>2.51"
Flow Length=895' Tc=33.1 min CN=55 Runoff=8.26 cfs 1.136 af

Subcatchment 5S: South/Central Runoff Area=90,155 sf 0.00% Impervious Runoff Depth>2.52"
Flow Length=709' Tc=25.4 min CN=55 Runoff=3.54 cfs 0.434 af

Subcatchment 6S: East Runoff Area=22,399 sf 0.00% Impervious Runoff Depth>3.16"
Tc=5.0 min CN=61 Runoff=1.88 cfs 0.136 af

Subcatchment 10S: East Runoff Area=35,767 sf 100.00% Impervious Runoff Depth>7.39"
Tc=5.0 min CN=98 Runoff=6.19 cfs 0.505 af

Pond 9P: Retention Chamber System Peak Elev=303.49' Storage=4,816 cf Inflow=6.19 cfs 0.505 af
Discarded=2.04 cfs 0.423 af Primary=5.32 cfs 0.082 af Outflow=7.36 cfs 0.505 af

Link 7L: Existing Total Inflow=13.75 cfs 1.850 af
Primary=13.75 cfs 1.850 af

Link 9L: Proposed Total Inflow=13.04 cfs 1.787 af
Primary=13.04 cfs 1.787 af

Total Runoff Area = 17.661 ac Runoff Volume = 4.062 af Average Runoff Depth = 2.76"
95.35% Pervious = 16.840 ac 4.65% Impervious = 0.821 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 1S: West Runoff Area=238,131 sf 0.00% Impervious Runoff Depth>3.18"
Flow Length=895' Tc=33.1 min CN=55 Runoff=10.74 cfs 1.450 af

Subcatchment 2S: South/Central Runoff Area=91,774 sf 0.00% Impervious Runoff Depth>3.19"
Flow Length=709' Tc=25.4 min CN=55 Runoff=4.65 cfs 0.560 af

Subcatchment 3S: East Runoff Area=54,750 sf 0.00% Impervious Runoff Depth>3.19"
Flow Length=213' Slope=0.0200 '/' Tc=23.1 min CN=55 Runoff=2.89 cfs 0.334 af

Subcatchment 4S: West Runoff Area=236,334 sf 0.00% Impervious Runoff Depth>3.18"
Flow Length=895' Tc=33.1 min CN=55 Runoff=10.66 cfs 1.439 af

Subcatchment 5S: South/Central Runoff Area=90,155 sf 0.00% Impervious Runoff Depth>3.19"
Flow Length=709' Tc=25.4 min CN=55 Runoff=4.57 cfs 0.550 af

Subcatchment 6S: East Runoff Area=22,399 sf 0.00% Impervious Runoff Depth>3.91"
Tc=5.0 min CN=61 Runoff=2.35 cfs 0.168 af

Subcatchment 10S: East Runoff Area=35,767 sf 100.00% Impervious Runoff Depth>8.37"
Tc=5.0 min CN=98 Runoff=6.99 cfs 0.572 af

Pond 9P: Retention Chamber System Peak Elev=304.24' Storage=4,816 cf Inflow=6.99 cfs 0.572 af
Discarded=2.29 cfs 0.462 af Primary=5.78 cfs 0.110 af Outflow=8.07 cfs 0.572 af

Link 7L: Existing Total Inflow=17.76 cfs 2.344 af
Primary=17.76 cfs 2.344 af

Link 9L: Proposed Total Inflow=16.94 cfs 2.266 af
Primary=16.94 cfs 2.266 af

Total Runoff Area = 17.661 ac Runoff Volume = 5.073 af Average Runoff Depth = 3.45"
95.35% Pervious = 16.840 ac 4.65% Impervious = 0.821 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 1S: West Runoff Area=238,131 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=895' Tc=33.1 min CN=55 Runoff=0.00 cfs 0.000 af

Subcatchment 2S: South/Central Runoff Area=91,774 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=709' Tc=25.4 min CN=55 Runoff=0.00 cfs 0.000 af

Subcatchment 3S: East Runoff Area=54,750 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=213' Slope=0.0200 '/' Tc=23.1 min CN=55 Runoff=0.00 cfs 0.000 af

Subcatchment 4S: West Runoff Area=236,334 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=895' Tc=33.1 min CN=55 Runoff=0.00 cfs 0.000 af

Subcatchment 5S: South/Central Runoff Area=90,155 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=709' Tc=25.4 min CN=55 Runoff=0.00 cfs 0.000 af

Subcatchment 6S: East Runoff Area=22,399 sf 0.00% Impervious Runoff Depth>0.00"
Tc=5.0 min CN=61 Runoff=0.00 cfs 0.000 af

Subcatchment 10S: East Runoff Area=35,767 sf 100.00% Impervious Runoff Depth>1.08"
Tc=5.0 min CN=98 Runoff=1.45 cfs 0.074 af

Pond 9P: Retention Chamber System Peak Elev=298.42' Storage=1,032 cf Inflow=1.45 cfs 0.074 af
Discarded=0.31 cfs 0.074 af Primary=0.00 cfs 0.000 af Outflow=0.31 cfs 0.074 af

Link 7L: Existing Total Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link 9L: Proposed Total Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 17.661 ac Runoff Volume = 0.074 af Average Runoff Depth = 0.05"
95.35% Pervious = 16.840 ac 4.65% Impervious = 0.821 ac

APPENDIX D:

COMPENSATORY FLOOD STORAGE CALCULATIONS

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Engineering • Surveying • Site Planning

Summary for Pond 8P: Flood storage pond

Volume	Invert	Avail.Storage	Storage Description
#1	296.00'	20,851 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)
#2A	297.75'	0 cf	**48.00'W x 88.00'L x 2.67'H Field A** 11,264 cf Overall - 11,264 cf Embedded = 0 cf x 40.0% Voids
#3A	297.75'	7,214 cf	**retain_it retain_it 2.0'** x 66 Inside #2 Inside= 84.0"W x 24.0"H => 13.78 sf x 8.00'L = 110.3 cf Outside= 96.0"W x 32.0"H => 21.33 sf x 8.00'L = 170.7 cf 6 Rows adjusted for 64.3 cf perimeter wall
		28,065 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
296.00	3,289	0	0
298.00	5,156	8,445	8,445
300.00	7,250	12,406	20,851

Device	Routing	Invert	Outlet Devices
#1	Primary	298.50'	**15.0' long (Profile 26) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 3.06 3.13 3.13

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 8P: Flood storage pond - Chamber Wizard Field A

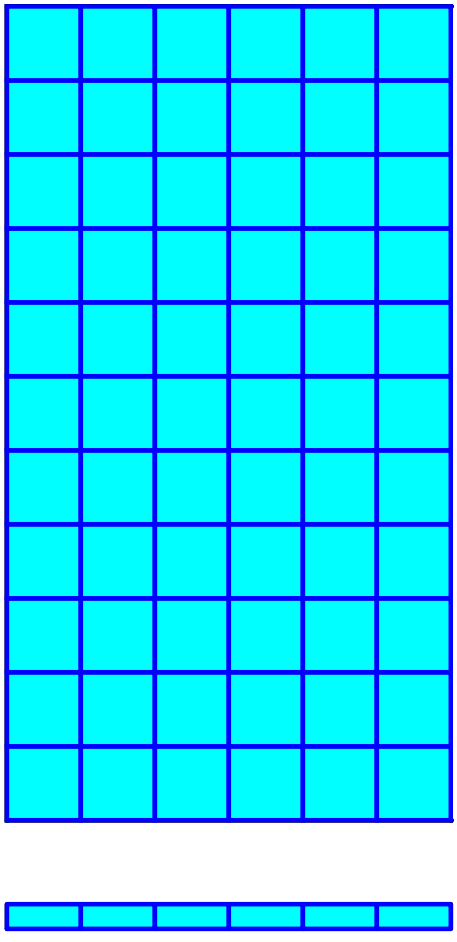
Chamber Model = retain_it retain_it 2.0' (retain-it®)
Inside= 84.0"W x 24.0"H => 13.78 sf x 8.00'L = 110.3 cf
Outside= 96.0"W x 32.0"H => 21.33 sf x 8.00'L = 170.7 cf
6 Rows adjusted for 64.3 cf perimeter wall

11 Chambers/Row x 8.00' Long = 88.00' Row Length
6 Rows x 96.0" Wide = 48.00' Base Width
32.0" Chamber Height = 2.67' Field Height

1.9 cf Sidewall x 11 x 2 + 1.9 cf Endwall x 6 x 2 = 64.3 cf Perimeter Wall
66 Chambers x 110.3 cf - 64.3 cf Perimeter wall = 7,214.2 cf Chamber Storage
66 Chambers x 170.7 cf = 11,264.0 cf Displacement

Chamber Storage = 7,214.2 cf = 0.166 af
Overall Storage Efficiency = 64.0%
Overall System Size = 88.00' x 48.00' x 2.67'

66 Chambers
417.2 cy Field



Stage-Area-Storage for Pond 8P: Flood storage pond

Elevation (feet)	Storage (cubic-feet)
296.00	0
296.05	166
296.10	334
296.15	504
296.20	676
296.25	851
296.30	1,029
296.35	1,208
296.40	1,390
296.45	1,575
296.50	1,761
296.55	1,950
296.60	2,141
296.65	2,335
296.70	2,531
296.75	2,729
296.80	2,930
296.85	3,133
296.90	3,338
296.95	3,546
297.00	3,756
297.05	3,968
297.10	4,183
297.15	4,400
297.20	4,619
297.25	4,841
297.30	5,065
297.35	5,291
297.40	5,519
297.45	5,750
297.50	5,984
297.55	6,219
297.60	6,457
297.65	6,698
297.70	6,940
297.75	7,185
297.80	7,613
297.85	8,043
297.90	8,475
297.95	8,910
298.00	9,347
298.05	9,786
298.10	10,228
298.15	10,673
298.20	11,120
298.25	11,570
298.30	12,023
298.35	12,478
298.40	12,936
298.45	13,396
298.50	13,859
298.55	14,325
298.60	14,793
298.65	15,264
298.70	15,737
298.75	16,214
298.80	16,692
298.85	17,174
298.90	17,658
298.95	18,144
299.00	18,633
299.05	19,125
299.10	19,620
299.15	20,117
299.20	20,616
299.25	21,119
299.30	21,624
299.35	22,131
299.40	22,641
299.45	23,154
299.50	23,669
299.55	24,187
299.60	24,708
299.65	25,231
299.70	25,757
299.75	26,285
299.80	26,636
299.85	26,989
299.90	27,345
299.95	27,704
300.00	**28,065**
300.05	28,065
300.10	28,065
300.15	28,065
300.20	28,065
300.25	28,065
300.30	28,065
300.35	28,065
300.40	28,065