TOWN of WESTON, CONNECTICUT

Incorporated 1787

Conservation Commission

INLAND WETLANDS AND WATERCOURSES APPLICATION

This Application is for a five-year permit to conduct a regulated activity or activities pursuant to the Inland Wetlands and Watercourses Regulations of the Town of Weston ("The Regulations")

PROPERTY ADDRESS: 71 NEWTOWN TURNPIKE LLC

Assessor's Map # 22 **Block #** 4 **Lot #** 20

PROJECT DESCRIPTION *(general purpose)* install an in-ground swimming pool and designate a 100% septic replacement area (B-100)

Total Acres 5.45 ac Total Acres of Wetlands and Watercourses ~1.4 ac

Acreage of Wetlands and Watercourses Altered 0 Upland Area Altered 2,146 sf

Acres Linear Feet of Stream Alteration 0 Total Acres Proposed Open Space 0

OWNER(S) OF RECORD: *(Please list all owners, attach extra sheet if necessary)*

Name: 71 NEWTOWN TURNPIKE LLC Phone: 860.324.0676

Address: 71 NEWTOWN TURNPIKE, WESTON, CT 06883

Email: kateannkudish@gmail.com; jacobhz127@gmail.com

APPLICANT/AUTHORIZED AGENT:

Name: Aleksandra Moch Phone: 203 550 9373

Address: 44 Lewelyn Road, Stamford, CT 06902

Email: aleksandra_moch@yahoo.com

CONSULTANTS: *(Please provide, if applicable)*

Engineer: Wayne D'Avanzo Phone: (203) 831-8005

Address: 60 Winfield St, Norwalk, CT 06855 Email: wayne@fairfieldce.com

Soil Scientist: Aleksandra Moch Phone: 203 550 9373

Address: 44 Lewelyn Road, Stamford, CT 06902 Email: aleksandra_moch@yahoo.com

Legal Counsel: _____ Phone: _____

Address: _____ Email: _____

Surveyor: _____ Phone: _____

Address: _____ Email: _____

PROPERTY INFORMATION

Property Address: 71 Newtown Turnpike, Weston, CT 06883

Existing Conditions *(Describe existing property and structures)*: The property supports a single-family residence with a barn, a detached garage, a shed, a driveway and a septic system.

Provide a detailed description and purpose of proposed activity *(attach sheet with additional information if needed)*: install an in-ground swimming pool with a pool equipment pad and access steps. designate the 100% septic replacement area (B-100)

Is this property within a subdivision *(circle)*: Yes or No

Square feet of proposed impervious surfaces *(roads, buildings, parking, etc.)*: 1,856 pool +290 steps

Subject property to be affected by proposed activity contains:

- ☒ wetlands soils
- ☒ swamp
- ☐ floodplain
- ☐ marsh
- ☐ bog
- ☐ lake or pond
- ☒ stream or river
- ☐ other _____

The proposed activity will involve the following within wetlands, watercourse, and/or review area:

- ☐ Alteration
- ☐ Discharge to
- ☒ Removal of Materials
- ☒ Construction
- ☐ Discharge from
- ☒ Deposition of Materials
- ☐ Pollution
- ☐ Bridge or Culvert
- ☐ Other_____

Amount, type, and location of materials to be removed, deposited, or stockpiled:
207 cy of material will be excavated, about 77 cy will be used to slightly modify the grade around the pool.

Description, work sequence, and duration of activities:
provided at the site plan details sheet.

Describe alternatives considered and why the proposal described herein was chosen:
The pool will be conveniently located near the barn which will be used as a changing and storage for pool furniture.

Does the proposed activity involve the installation and/or repair of an existing septic system(s) *(circle)*: Yes or No

The Westport/Weston Health District Approval: in progress

ADJOINING MUNICIPALITIES AND NOTICE:

If any of the situations below apply, the applicant is required to give written notice of his/her application to the Inland Wetlands Agency of the adjoining municipality, on the same day that he/she submits this application. Notification must be sent by Certified Mail with Return Receipt Requested.

The property is located within 500 feet of any town boundary line;
A significant portion of the traffic to the completed project will use streets within the adjoining municipality to enter or exit the site;

A portion of the water drainage from the project site will flow through and significantly impact the sewage system or drainage systems within the adjoining municipality; or
Water runoff from the improved site will impact streets or other municipal or private property within the adjoining municipality

AQUARION WATER COMPANY

Pursuant to Section 8.4 of the Weston regulations, the Aquarion Water Company must be notified of any regulated activity proposed within its watersheds. Maps showing approximate watershed boundaries are available at the office of the Commission. If the project site lies within these boundaries, send notice, site plan, and grading and erosion control plan via certified mail, return receipt requested, within seven (7) days of submitting application to the Commission, to:

George S. Logan, Director – Environmental Management
Aquarion Water Company
714 Black Rock Turnpike
Easton, CT 06612

The Commissioner of the Connecticut Department of Public Health must also be notified in the same manner in a format prescribed by that commissioner.

The undersigned, as owner(s) of the property, hereby consents to necessary and proper inspections of the above mentioned property by Commissioners and agents of the Conservation Commission, Town of Weston, at reasonable times, both before and after a final decision has been issued by the Commission.

The undersigned hereby acknowledges to have read the "Application Requirements and Procedures" in completing this application.

The undersigned hereby certifies that the information provided in this application, including its supporting documentation is true and he/she is aware of the penalties provided in Section 22a-376 of the Connecticut General Statues for knowingly providing false or misleading information.

_____

Signature of Owner(s) of Record Date

10/17/2023

Signature of Authorized Agent Date

FOR OFFICE USE ONLY

Administrative Approval _____

Initials Date

TOWN OF WESTON
INLAND WETLANDS AND WATERCOURSE AREA
APPLICATION REQUIREMENTS AND PROCEDURES

In addition to the application form for permission to conduct a regulated activity within inland wetlands and watercourse area, applicants must submit the following information in accordance to scheduled submittal date. An incomplete application may result in a delay:

1. A signed letter of permission from the Owner of Record.
2. Fee in accordance to the Conservation Commission fee schedule.
3. Nine (9) collated copies of the following:
   - ☐ Completed Inland Wetland and Watercourses Application
   - ☐ Two (2) 24" x 36" Original and Seven (7) 24" x 36" Copies of the following
     - A-2 Survey map and/or site plan of at least 1" = 40'
       - Title of project
       - Name, signature, and Connecticut license professional seal(s).
       - Date map prepared, date of most recent revision, and brief description of revision.
       - Show locations of wetlands boundary, watercourses (with direction of flow, water depth, and bottom characteristics) and other pertinent features and structures such as rock ledges, stonewalls, utility lines.
       - Show location and extent of proposed activities including material and soil stockpiles, erosion and sedimentation controls, ingress and egress patterns.
       - Indicate in acres or square feet of wetlands/watercourse disturbance.
       - North arrow, Scale Bar, Legend, Property lines.
       - Edge of 100' Upland Review Area.
       - Existing and Proposed Conditions, Grading and Drainage Location
       - Double Silt fence detail (slit fence/hay bale/slit fence) configuration.
       - Construction Sequence.
       - Contour lines – 2 foot intervals.
       - Topographic *(This area may be enlarged for certain activities on/or above steep slopes or other physical conditions that may adversely impact wetlands)*.
   - ☐ Drainage report prepared by a professional engineer registered in the State of Connecticut.
4. One electronic copy of all submitted materials emailed to conservationplanner@westonct.gov
5. Westport/ Weston Health District Approval, including a copy of the septic plan or B100 plan stamped and signed by the Health Department *(if applicable)*.
6. If a Soil Scientist is involved, his/her name, written report, and field sketch.
7. List of names and addresses of adjacent property owners and abutters, include addressed and stamped business envelopes.
8. Proof of certified mailings to Aquarion Water Company and adjoining municipalities*, if applicable*.
9. All deeds, conservation easements, or restrictions associated with the property.
10. Location of the 100 year flood line, *if applicable*.
11. Tree removal plan of all trees greater than 12" in diameter.
12. Diagrams of alternatives considered.
13. Completed Part II of the DEEP Statewide Inland Wetlands & Watercourses Activity Reporting Form.

CONNECTICUT DEPARTMENT OF
ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Gina McCarthy, Commissioner

GIS CODE #: _____
For DEP Use Only

Statewide Inland Wetlands & Watercourses Activity Reporting Form

Please complete and mail this form in accordance with the instructions. Please print or type.

PART I: To Be Completed By The Inland Wetlands Agency Only

1. DATE ACTION WAS TAKEN: Year _____ Month _____
2. ACTION TAKEN (circle one): A B C D E F G H
3. WAS A PUBLIC HEARING HELD? Yes _____ No _____
4. NAME OF AGENCY OFFICIAL VERIFYING AND COMPLETING THIS FORM:

   (print) _____ (signature) _____

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

5. TOWN IN WHICH THE ACTION IS OCCURRING: WESTON

   Does this project cross municipal boundaries? Yes _____ No X

   If Yes, list the other town(s) in which the action is occurring: _____, _____
6. LOCATION: USGS Quad Map Name: NORWALK NORTH *AND* Quad Number: 107

   Subregional Drainage Basin Number: 7203
7. NAME OF APPLICANT, VIOLATOR OR PETITIONER: 71 NEWTOWN TURNPIKE LLC
8. NAME & ADDRESS/LOCATION OF PROJECT SITE: 71 NEWTOWN TURNPIKE IN WESTON

   Briefly describe the action/project/activity: IN-GROUND SWIMMING POOL
9. ACTIVITY *PURPOSE* CODE: A
10. ACTIVITY *TYPE* CODE(S): 2, 1, 12, _____
11. WETLAND / WATERCOURSE AREA ALTERED [must be provided in acres or linear feet as indicated]:

    Wetlands: 1.47 acres Open Water Body: 0 acres Stream: 1,023 linear feet
12. UPLAND AREA ALTERED [must be provided in acres as indicated]: 1,664± acres
13. AREA OF WETLANDS AND / OR WATERCOURSES RESTORED, ENHANCED OR CREATED: 0 acres
    [must be provided in acres as indicated]

DATE RECEIVED:

PART III: To Be Completed By The DEP

DATE RETURNED TO DEP:

FORM COMPLETED: YES NO

FORM CORRECTED / COMPLETED: YES NO

Project narratives

The site is located on the eastern side of Newtown Turnpike, approximately 0.27 mile from State Hwy 53 in Weston, CT. This 5.45-acres site supports a single-family residence with, a barn, a shed, a driveway and a septic system. The site's topography undulates creating valleys and ridges. The valleys are occupied by streams and associated wetland fringes. The central ridge supports the barn and the shed. Down below, closer to the street, over a level area sits the main residence with a driveway connecting it to the street. Shallow ledge and numerous of ledge outcrops control the steep slopes. The most northern section of the site is unimproved and covered with undisturbed woodland. This area is isolated from the recreational area by the stream corridor. Overall, the site is wooded with clearing occupying the central portion of the site. The slope and the top of the central ridge is maintained as a meadow. The wooded area supports a large number of sugar maples which provide maple syrup harvested at the site.

The proposed activates consist of an in-ground swimming pool, pool equipment and access stone stairs. The pool will be located at the top of the ridge with central axes oriented towards the existing barn. The barn will be used for storing pool equipment and furniture. The pool will have automatic cover, so no pool fence is being propose. The pool (760 sf) will be surrounded on three sides by a terrace (680sf) used for pool chairs and access. The area of the pool is relatively level, but it will require a bit of grade modification. The depth of the pool is planned not to exceed 8 feet at the deepest end. The proposed stairs will accommodate the connection between the pool and the barn. The steps (224 sf) will use large stones which will not be fixed in concrete, so they should not have any visible impact on the storm water runoff.

Drainage calculation done by Fairfield County Engineering, LLC had determined the increased run-off resulting from the proposed site improvements will be retained in the freeboard of the pool; therefore, no storm water detention is being proposed.

The access to the pool site will be achieved over the sloping area located between the barn and the main house. This lawn area will be secured with an anti-tracking path placed at the construction entrance. Two line of silt fence will be installed to address potential sedimentation from the access way. The pool area will be surrounded by a line of silt fence delineating the edge of disturbance. Within this area, there will be a designated space for stockpiling of soil during the pool excavation. The excavated material will be tracked off-site after the project completion.

The proposed activities will be located within the upland review area. The use of proper soil erosion and sediment control measures will adequately protect the wetland and watercourses located in the vicinity. The site will be stabilized with newly seeded lawn and meadow after the project completion. The slope may require the use of erosion control blankets. This will depend on the weather condition and intensity of the site disturbance. Overall, the proposed site improvements will not have any negative impact on the regulated area.

WETLAND DELINEATION

FOR THE PROPERTY LOCATED AT:

71 NEWTOWN TURNPIKE

WESTON, CONNECTICUT

REPORT PREPARED BY:

ALEKSANDRA MOCH

SOIL & WETLAND SCIENTIST

CERTIFIED PROFESSIONAL IN EROSION
AND SEDIMENT CONTROL
GEOLOGIST/HYDROGEOLOGIST

April 25, 2023

SITE DESCRIPTION

The property is located on the eastern side of Newtown Turnpike in Weston, CT. This 5.45-acre site supports a single-family residence with a cottage, detached garage, a shed and a driveway. The area is divided into a developed central portion of the property and an extensive area of wooded edges. The topography is controlled by shallow ledge with numerous ledge outcrops throughout the area and steep slopes. The are drains towards the west.

METHODS

Wetland identification was performed on April 25, 2023. This site was evaluated in terms of the presence of poorly drained, very poorly drained, alluvial, and/or floodplain soils and submerged land. The soil types were identified by observation of soil morphology including soil texture, structure, color, etc. Numerous soil samples were taken using an auger. Sampling began within the typical wetland area and continued toward the upland. Soil morphology was observed at soil sampling points along the transect lines perpendicular to the wetland boundary. At each transect, the boundary between the upland and wetland was marked with pink surveyor's tape labeled "*WET*". Each flag was numbered sequentially 1-32 along the southwestern edge of the wetland/watercourse corridor, 33-43 along the northern side of the wetland/watercourse corridor and 44-53 along the easter edge of the wetland/watercourse area.

WETLANDS/WATERCOURSES REGULATORY DEFINITION

The Inland Wetlands and Watercourses Act (Connecticut General Statues section 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.*

The terms poorly drained and very poorly drained describes the drainage classes of the soil, which are based on frequency and duration of periods of soil saturation due to the fluctuations of ground water table. The terms alluvial and floodplain describe the processes in which the soils were formed.

Watercourses are defined in the statues 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.*

Intermittent watercourse: is determined by a defined permanent channel and bank and the occurrence of two or more of the following characteristics:

- Evidence of scour or deposits of recent alluvium or detritus,

- Presence of standing or flowing water for a duration longer than a particular storm incident, and

- Presence of hydrophytic vegetation.

WETLAND/WATERCOURSE DESCRIPTION

The area flagged in the field consists of a large wetland wetland/watercourse system combining two corridors: the southern and the northern. Both corridors are connected by a series of natural springs emerging along the slope in the middle. The southern corridor exits the site and continues on the adjacent property prior to being captured by a street culvert. The northern corridor drains also towards a street culvert. Both corridors are tributaries to West Branch Saugatuck River flowing along the western side of the street. The area is wooded and situated over steep slopes.

WETLAND SOILS

The soils were classified using soil criteria and maps developed by United States Department of Agriculture, Natural Resources Conservation Service.

4 – Leicester fine sandy loam

The *Leicester* series occurs in depressions and/or drainage ways. This poorly drained soil is underlined by a compacted restrictive layer at the depth of more than 80 inches. 9% of the surface area is covered with cobbles, stones or boulders. The parent material is a coarse-loamy melt-out till derived from granite and/or schist and/or gneiss. The slope is 0 to 5% and the depth to the groundwater table is about 0-18 inches.

Typical profile

- *0 to 1 inches:* Moderately decomposed plant material
- *1 to 7 inches:* Fine sandy loam
- *7 to 10 inches:* Fine sandy loam
- *10 to 18 inches:* Fine sandy loam
- *18 to 24 inches:* Fine sandy loam
- *24 to 43 inches:* Gravelly fine sandy loam
- *43 to 65 inches:* Gravelly fine sandy loam

UPLAND SOILS

62C - Canton and Charlton fine sandy loam, 3 to 15 percent slopes, extremely stony

The *Canton* series consists of very deep, well drained soils formed in a loamy mantle underlain by sandy till. They are on nearly level to very steep glaciated plains, hills, and ridges. Slope ranges from 0 to 35 percent.

Typically the surface layer consists of fine sandy loam with weak granular fracture. The subsoil is yellowish brown fine sandy loam and gravelly fine sandy loam. The substratum is olive gray gravelly loamy sand.

The *Charlton* series consists of very deep, well drained loamy soils formed in till. They are nearly level to very steep soils on till plains and hills. Slope ranges from 0 to 50 percent. Thickness of solum ranges from 20 to 38 inches. Depth to bedrock is commonly more than 6 feet.

Typically the surface layer is very dark brown fine sandy loam. The subsoil is strongly brown and yellowish brown fine sandy loam. The substratum is light olive brown gravelly sandy loam.

73E – Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky

The *Chatfield* series consists of moderately deep, well drained, and somewhat excessively drained soils formed in till. They are nearly level to very steep soils on glaciated plains, hills, and ridges. Slope ranges from 0 to 70 percent. Crystalline bedrock is at depth of 20 to 40 inches.

Typically the surface layer is very dark grayish brown loam with weak fine granular structures. The subsoil is dark brown loam and pale brown dry with medium subangular blocky structure. The substratum is brown flaggy silt loam with fine subangular blocky structure.

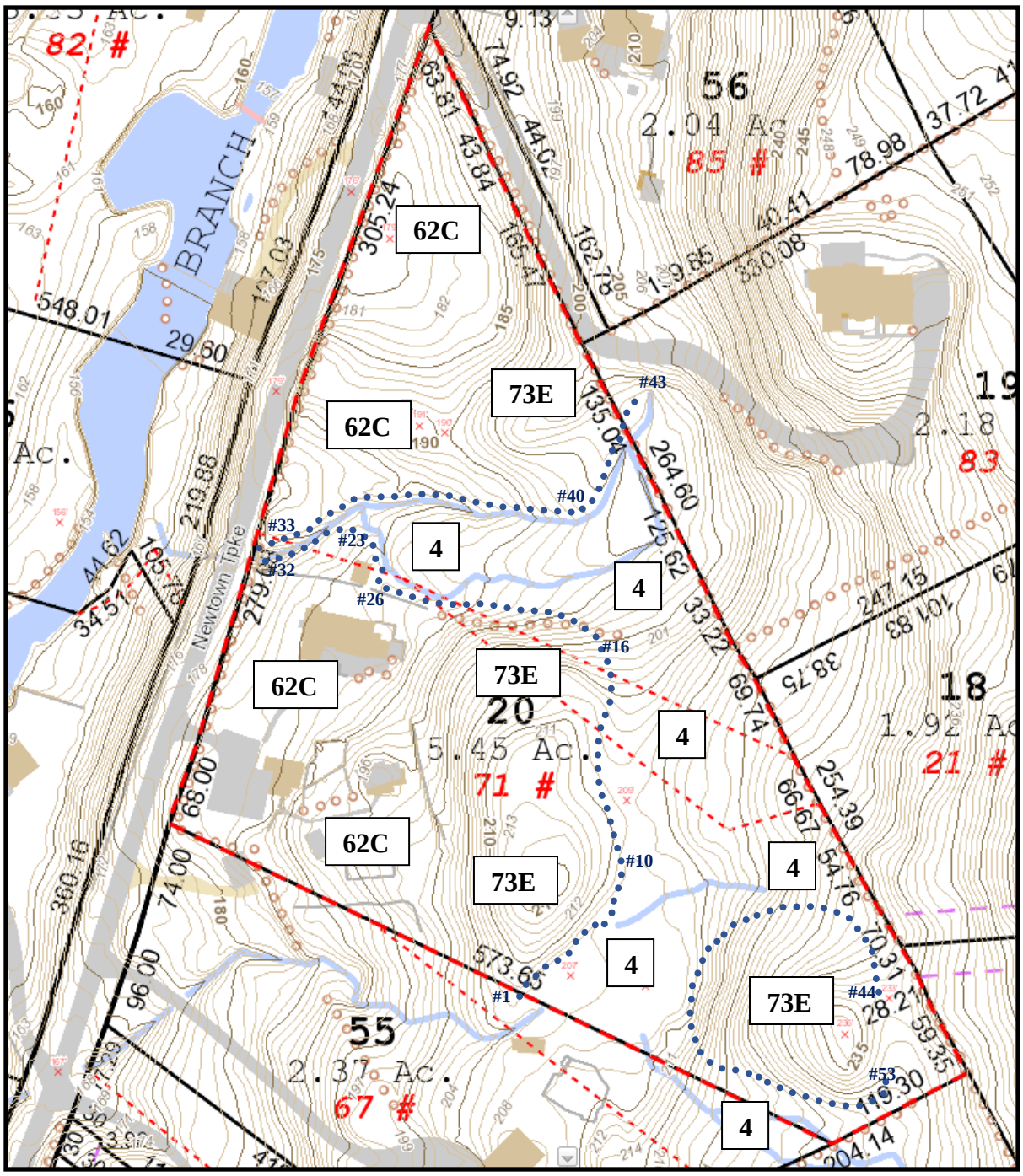
The *Charlton* series consists of very deep, well drained loamy soils formed in till. They are nearly level to very steep soils on till plains and hills. Slope ranges from 0 to 50 percent. Thickness of solum ranges from 20 to 38 inches. Depth to bedrock is commonly more than 6 feet.

Typically the surface layer is very dark brown fine sandy loam. The subsoil is strongly brown and yellowish brown fine sandy loam. The substratum is light olive brown gravelly sandy loam.

Certified by:

A Moch

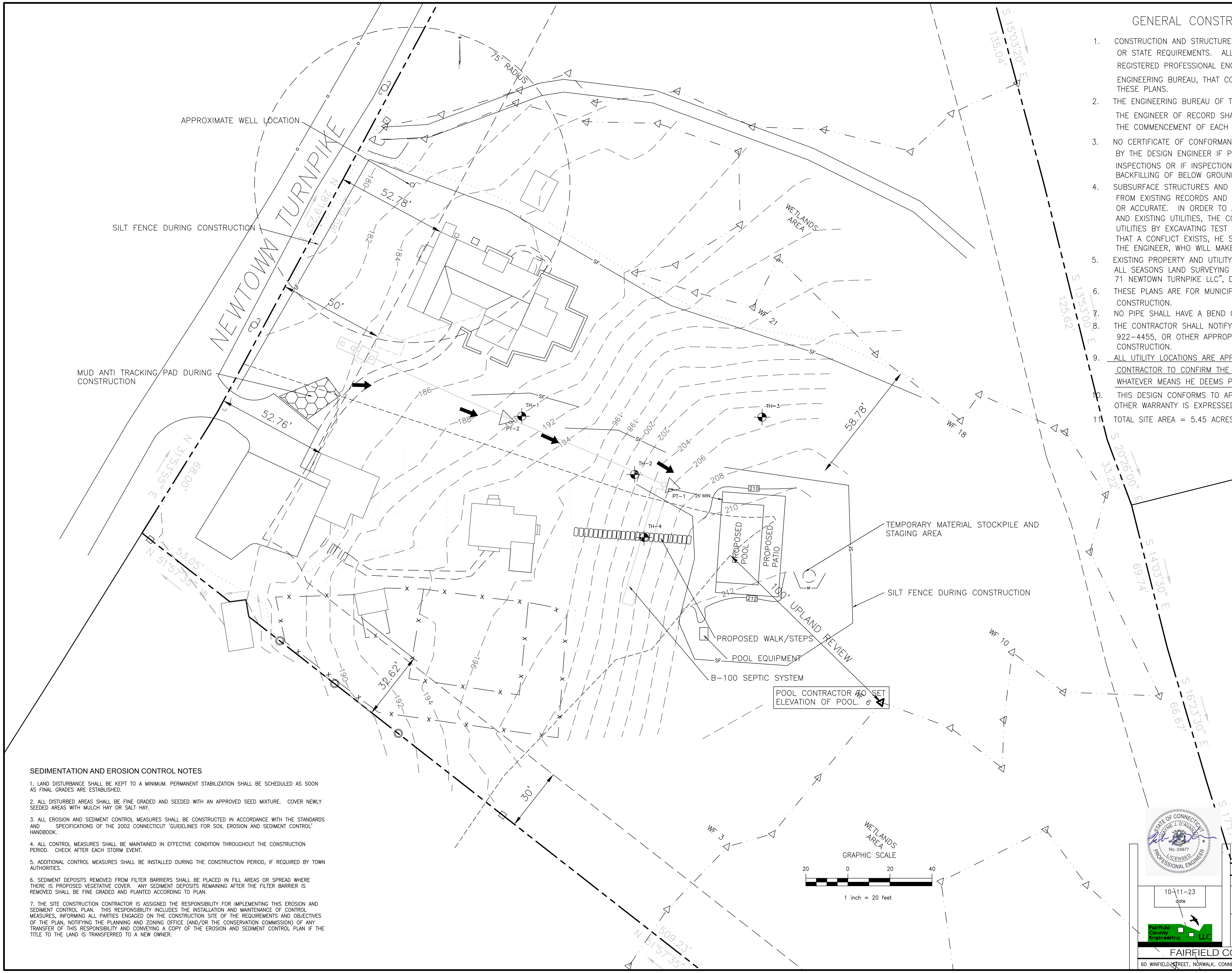
Aleksandra Moch
Soil and Wetland Scientist

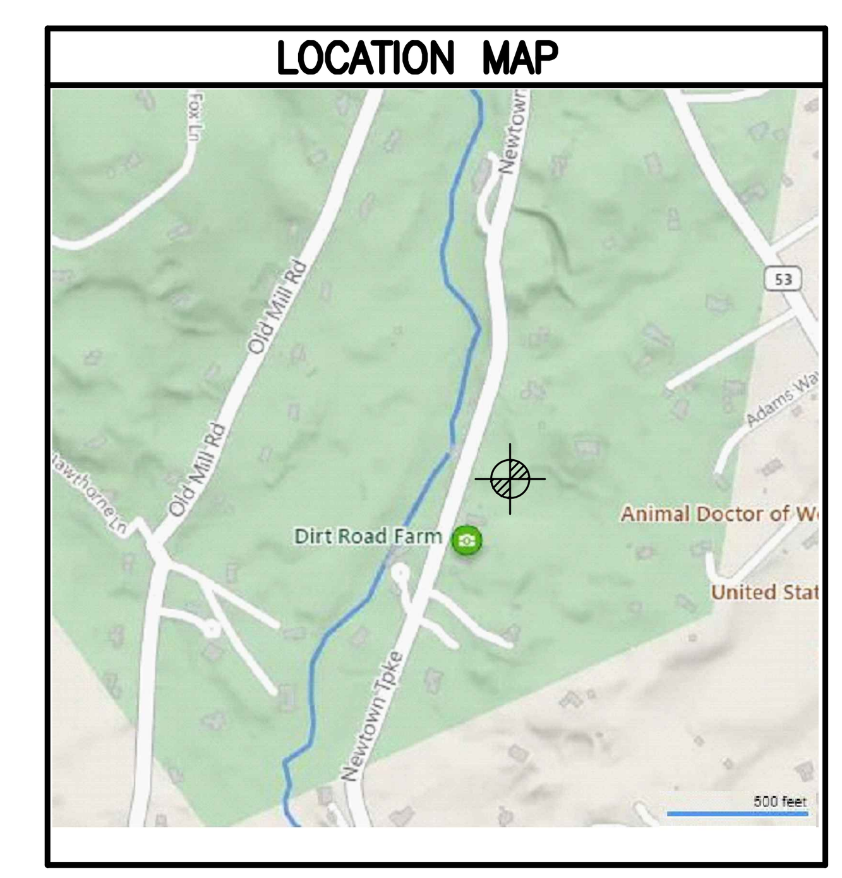


Aleksandra Moch, 44 Lewelyn Road, Stamford, CT 06902
tel/fax: (203) 975-7834, cell: (203) 550 9373, aleksandra_moch@yahoo.com

GENERAL CONSTRUCTION NOTES:

1. CONSTRUCTION AND STRUCTURES SHALL COMPLY WITH ALL MUNICIPAL OR STATE REQUIREMENTS. ALL WORK SHALL BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER, TO THE SATISFACTION OF THE ENGINEERING BUREAU, THAT CONSTRUCTION IS IN ACCORDANCE WITH THESE PLANS.
2. THE ENGINEERING BUREAU OF THE DEPARTMENT OF PUBLIC WORKS AND THE ENGINEER OF RECORD SHALL BE NOTIFIED THREE DAYS PRIOR TO THE COMMENCEMENT OF EACH PHASE OF CONSTRUCTION.
3. NO CERTIFICATE OF CONFORMANCE TO STANDARDS SHALL BE ISSUED BY THE DESIGN ENGINEER IF PROPER NOTICE IS NOT PROVIDED FOR INSPECTIONS OR IF INSPECTIONS ARE NOT MADE PRIOR TO BACKFILLING OF BELOW GROUND STRUCTURES AND APPURTENANCES.
4. SUBSURFACE STRUCTURES AND UTILITIES HAVE BEEN DETERMINED FROM EXISTING RECORDS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. IN ORDER TO AVOID CONFLICT OF THE PROPOSED WORK AND EXISTING UTILITIES, THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES BY EXCAVATING TEST HOLES. IF THE CONTRACTOR DETERMINES THAT A CONFLICT EXISTS, HE SHALL IMMEDIATLEY NOTIFY THE ENGINEER, WHO WILL MAKE THE NECESSARY ADJUSTMENTS.
5. EXISTING PROPERTY AND UTILITY INFORMATION WAS TAKEN FROM A SURVEY BY ALL SEASONS LAND SURVEYING TITLED "ZONING LOCATION SURVEY PREPARED FOR 71 NEWTOWN TURNPIKE LLC", DATED JANUARY 4, 2023.
6. THESE PLANS ARE FOR MUNICIPAL OR STATE AGENCY APPROVAL ONLY. NOT FOR CONSTRUCTION.
7. NO PIPE SHALL HAVE A BEND OF GREATER THAN 45 DEGREES.
8. THE CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455, OR OTHER APPROPRIATE CONTACT POINT PRIOR TO START OF CONSTRUCTION.
9. ALL UTILITY LOCATIONS ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE LOCATION OF THE UTILITIES IN THE FIELD BY WHATEVER MEANS HE DEEMS PRUDENT.
10. THIS DESIGN CONFORMS TO APPLICABLE CODES AND ACCEPTED PRACTICE, NO OTHER WARRANTY IS EXPRESSED OR IMPLIED.
11. TOTAL SITE AREA = 5.45 ACRES





SEDIMENTATION AND EROSION CONTROL NOTES

1. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM. PERMANENT STABILIZATION SHALL BE SCHEDULED AS SOON AS FINAL GRADES ARE ESTABLISHED.

2. ALL DISTURBED AREAS SHALL BE FINE GRADED AND SEEDED WITH AN APPROVED SEED MIXTURE. COVER NEWLY SEEDED AREAS WITH MULCH HAY OR SALT HAY.

3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE 2002 CONNECTICUT 'GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL' HANDBOOK.

4. ALL CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. CHECK AFTER EACH STORM EVENT.

5. ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD, IF REQUIRED BY TOWN AUTHORITIES.

6. SEDIMENT DEPOSITS REMOVED FROM FILTER BARRIERS SHALL BE PLACED IN FILL AREAS OR SPREAD WHERE THERE IS PROPOSED VEGETATIVE COVER. ANY SEDIMENT DEPOSITS REMAINING AFTER THE FILTER BARRIER IS REMOVED SHALL BE FINE GRADED AND PLANTED ACCORDING TO PLAN.

7. THE SITE CONSTRUCTION CONTRACTOR IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. 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, NOTIFYING THE PLANNING AND ZONING OFFICE (AND/OR THE CONSERVATION COMMISSION) OF ANY TRANSFER OF THIS RESPONSIBILITY AND CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED TO A NEW OWNER.

STATE OF CONNECTICUT
WAYNE J. D'AVANZO
No. 24877
LICENSED
PROFESSIONAL ENGINEER

10-11-23
date

JACOB ZACHS

71 NEWTOWN TURNPIKE WESTON, CONNECTICUT

DRAINAGE PLAN

CIVIL ENGINEERS

2065
project

1 OF 2
sheet

Fairfield County Engineering LLC
FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831-8005 FAX: (203) 831-8006

2065_231011Drainage

DRAINAGE REPORT

PREPARED FOR

EXISTING AND PROPOSED SITE CONDITIONS

LOCATED AT:

FCE #2065

71 NEWTOWN TURNPIKE

WESTON, CONNECTICUT

October 6, 2023

FAIRFIELD COUNTY ENGINEERING, LLC
CIVIL ENGINEERS

60 WINFIELD ST.
NORWALK, CONNECTICUT 06855
(203) 831-8005
FAX: (203) 831-8006
E-mail to: wayne@fairfieldce.com

Fairfield County Engineering LLC

NARRATIVE:

The subject of this report is a 5.45 acre parcel located at 71 Newtown Turnpike in Weston. The purpose of this report is to determine the existing and proposed runoffs resulting from the proposed site improvements in order to design a stormwater management system.

EXISTING CONDITIONS:

The subject parcel is located at the east side of Newtown Turnpike, approximately 2000 feet from its intersection with Route 53. The lot currently contains a single family residence, driveway, barn and accessory structure. The lot slopes moderately to steeply from the rear to the road, generally from the southeast to the northwest, flattening towards the front.

Existing soils at this location, as identified in the NRCS Soil Survey of Fairfield County, Connecticut, consist of a combination of Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony, and Charlton-Chatfield complex, 0 to 45 percent slopes, very rocky, both of which have a Hydrologic classification of 'B'.

For the purposes of this analysis the area affected by the proposed improvements will be analyzed.

The existing runoff as developed from a 1" rainfall event from the area of the proposed impervious surfaces is 0.0 c.f.s. (rounded).

PROPOSED CONDITIONS:

The proposal for this site is to construct a pool, patio and walk.

The proposed runoff (unmitigated) from a 1" rainfall event is 0.3 c.f.s.

COMPUTATIONS:

The following computations of the existing and proposed conditions runoff flows were derived from the HydroCAD computer software. HydroCAD follows the NRCS TR-20 procedure for computing stormwater runoff. Computations were performed for a 1" rainfall event.

Existing Conditions:

Lawn	1,664 s.f.	CN 69
Total -	1,664 s.f.	

Weighted CN - 69

Proposed Conditions:

Pool	760 s.f.	CN 98
Pool Patio	680 s.f.	CN 98
Walk	224 s.f.	CN 98
Total -	1,664 s.f.	

Weighted CN - 98

SUMMARY

Existing Runoff (1"):	0.00 c.f.s.
Proposed Runoff (1"):	0.03 c.f.s.
Proposed Impervious Run-off Retained (1"):	0.03 c.f.s
Proposed Run-off from Areas Bypassing Retention plus overflow (1"):	0.00 c.f.s.

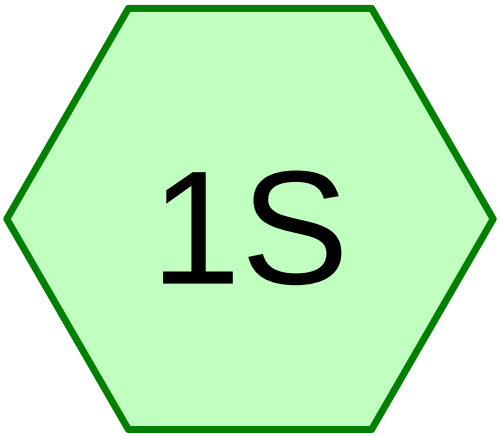
CONCLUSIONS:

The increased run-off resulting from the proposed site improvements will be retained in the freeboard of the pool. The freeboard consists of the upper 4" of the pool above the water surface while in season.

This system will maintain the net peak runoff during a 1" storm at its current peak of 0.00 c.f.s. in the areas of the proposed improvemants.

The proposed retention system provides 251 ft^3 of storage.

The proposed improvements will have no adverse impact on surrounding properties during a 1" rainfall event.



Existing Conditions

Subcat Reach Pond Link

Routing Diagram for 2065ExistingRev1
Prepared by Fairfield County Engineering LLC, Printed 10/6/2023
HydroCAD® 10.00-26 s/n 06020 © 2020 HydroCAD Software Solutions LLC

Summary for Subcatchment 1S: Existing Conditions

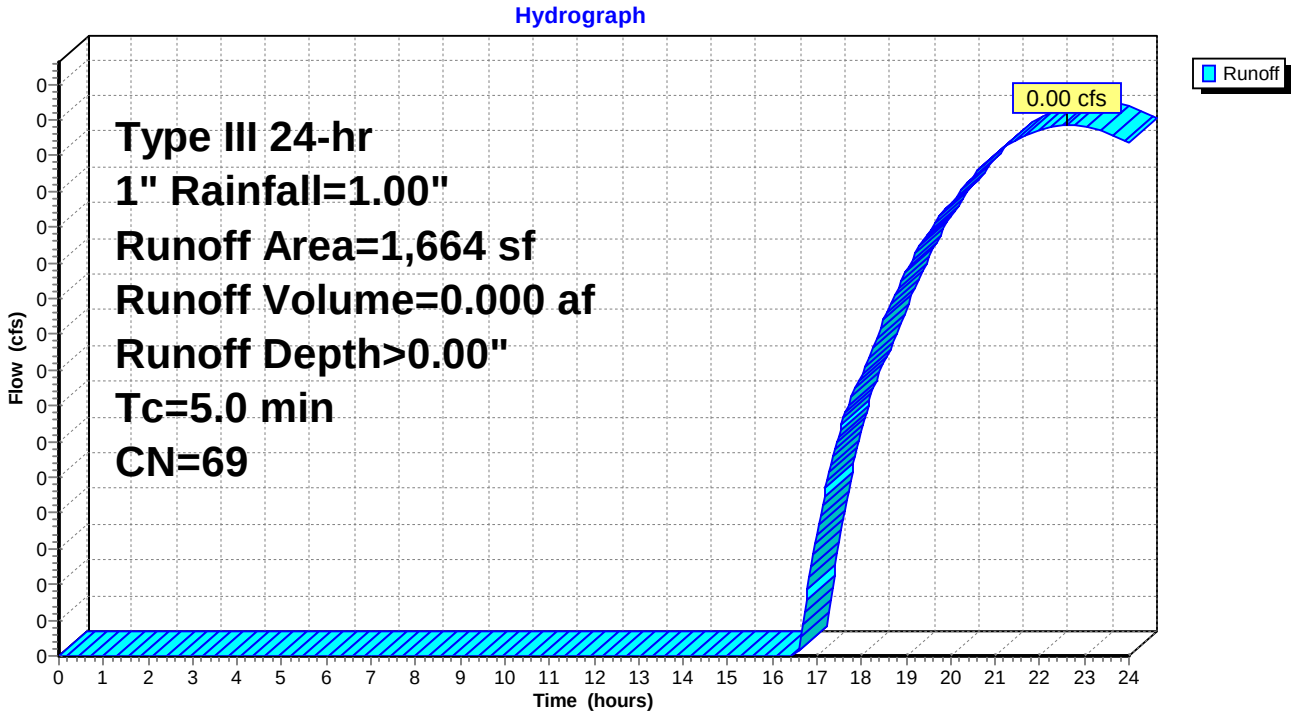
Runoff = 0.00 cfs @ 22.60 hrs, Volume= 0.000 af, Depth> 0.00"

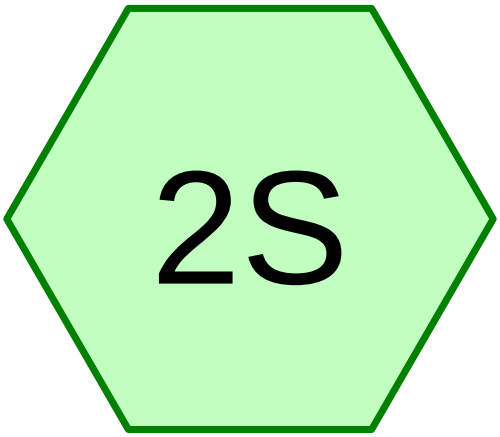
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 1" Rainfall=1.00"

Area (sf)	CN	Description
1,664	69	50-75% Grass cover, Fair, HSG B
1,664		100.00% Pervious Area

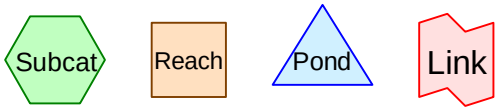
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct**

Subcatchment 1S: Existing Conditions





Proposed Conditions



Routing Diagram for 2065ProposedRev1
Prepared by Fairfield County Engineering LLC, Printed 10/6/2023
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Summary for Subcatchment 2S: Proposed Conditions

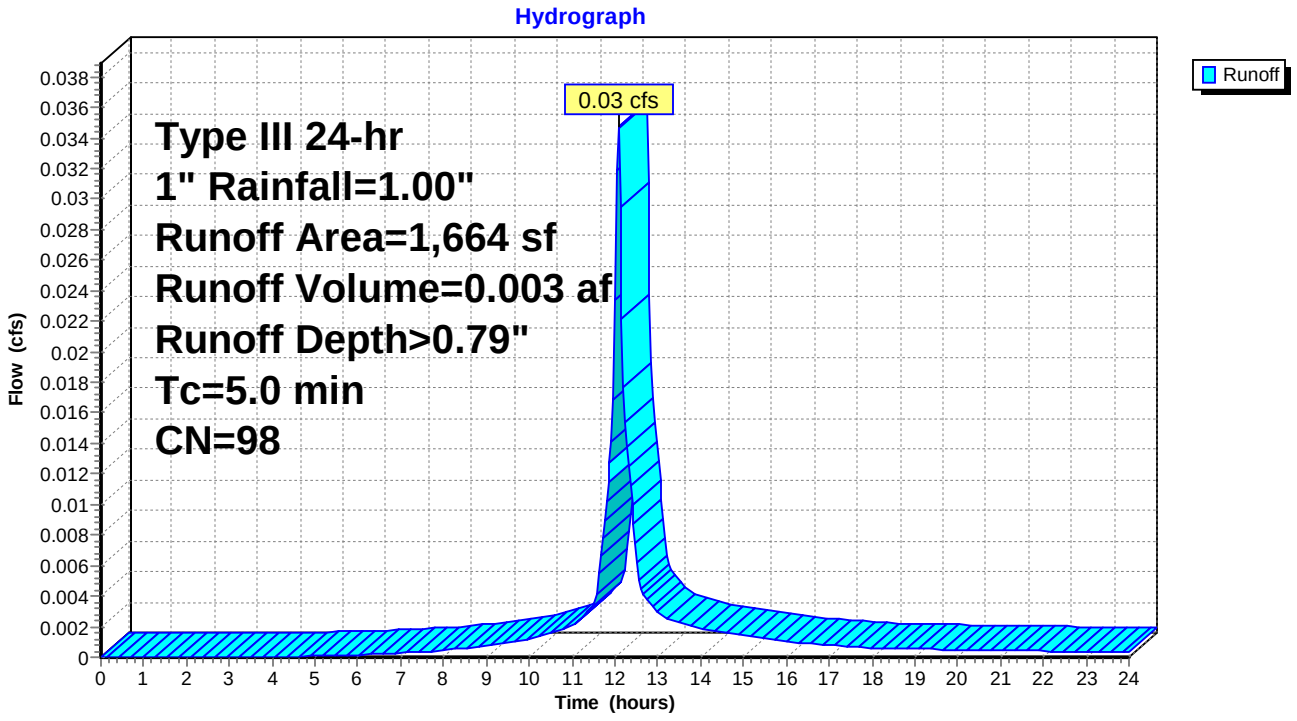
Runoff = 0.03 cfs @ 12.07 hrs, Volume= 0.003 af, Depth> 0.79"

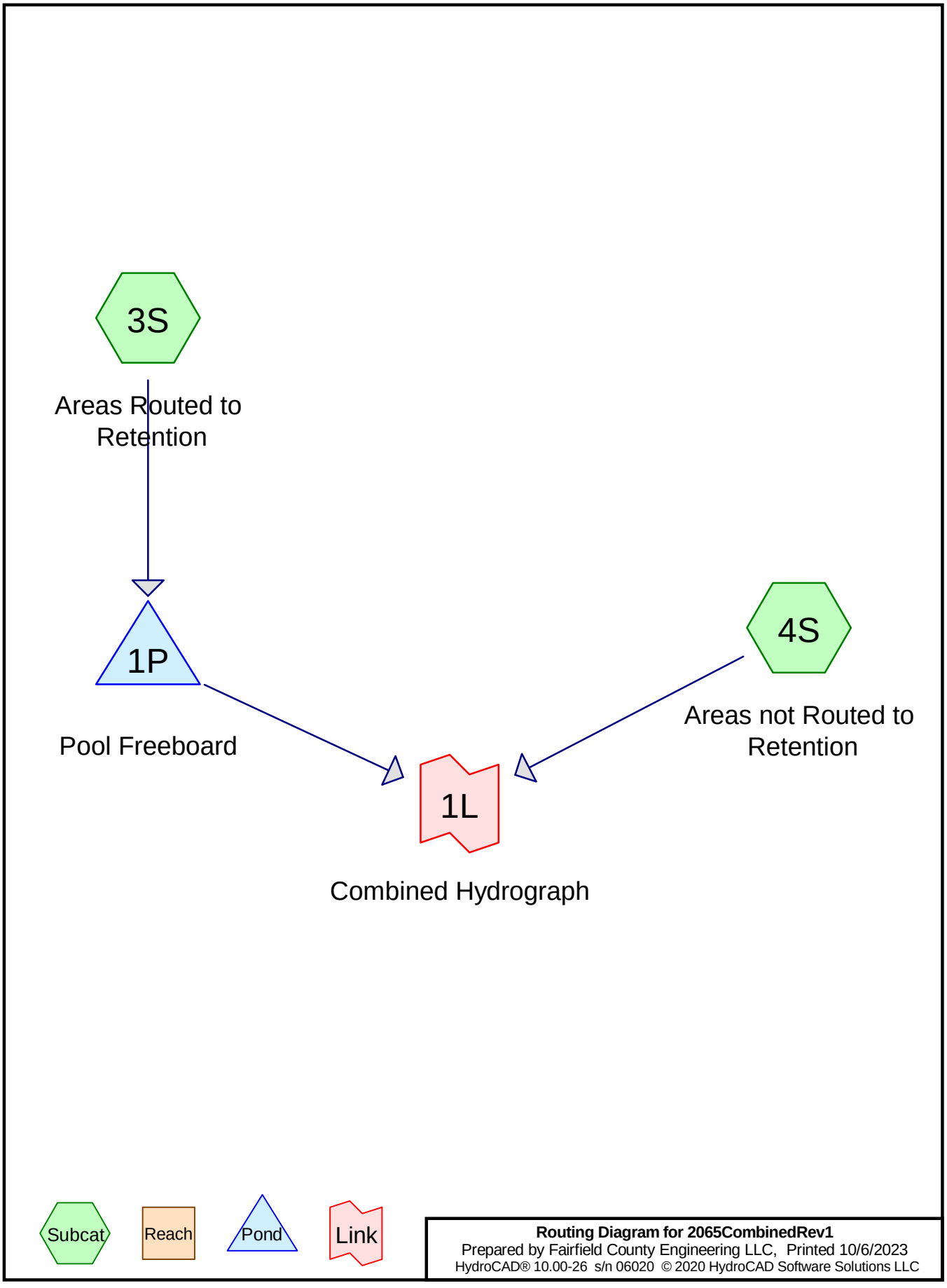
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 1" Rainfall=1.00"

	Area (sf)	CN	Description
*	760	98	Pool
*	680	98	Pool Patio
*	224	98	Walk
	1,664	98	Weighted Average
	1,664		100.00% Impervious Area

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

Subcatchment 2S: Proposed Conditions





Summary for Subcatchment 3S: Areas Routed to Retention

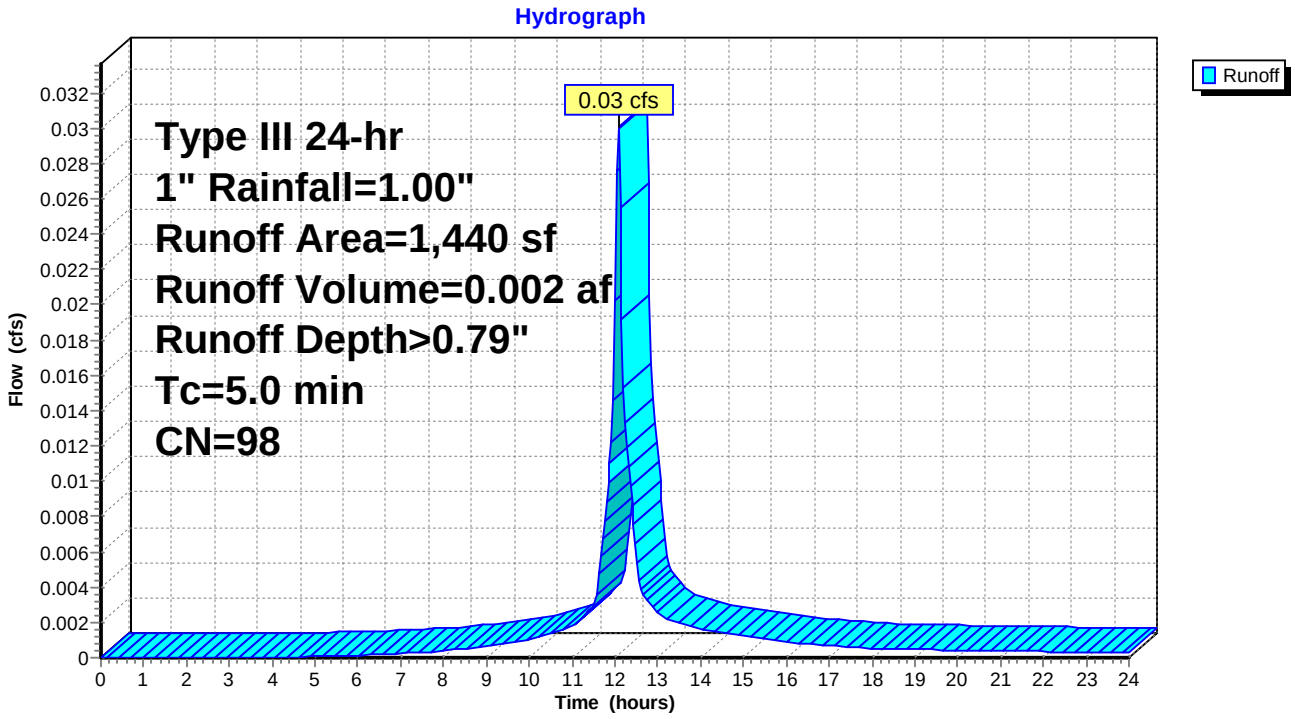
Runoff = 0.03 cfs @ 12.07 hrs, Volume= 0.002 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 1" Rainfall=1.00"

	Area (sf)	CN	Description
*	760	98	Pool
*	680	98	Pool Patio
	1,440	98	Weighted Average
	1,440		100.00% Impervious Area

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

Subcatchment 3S: Areas Routed to Retention



Summary for Subcatchment 4S: Areas not Routed to Retention

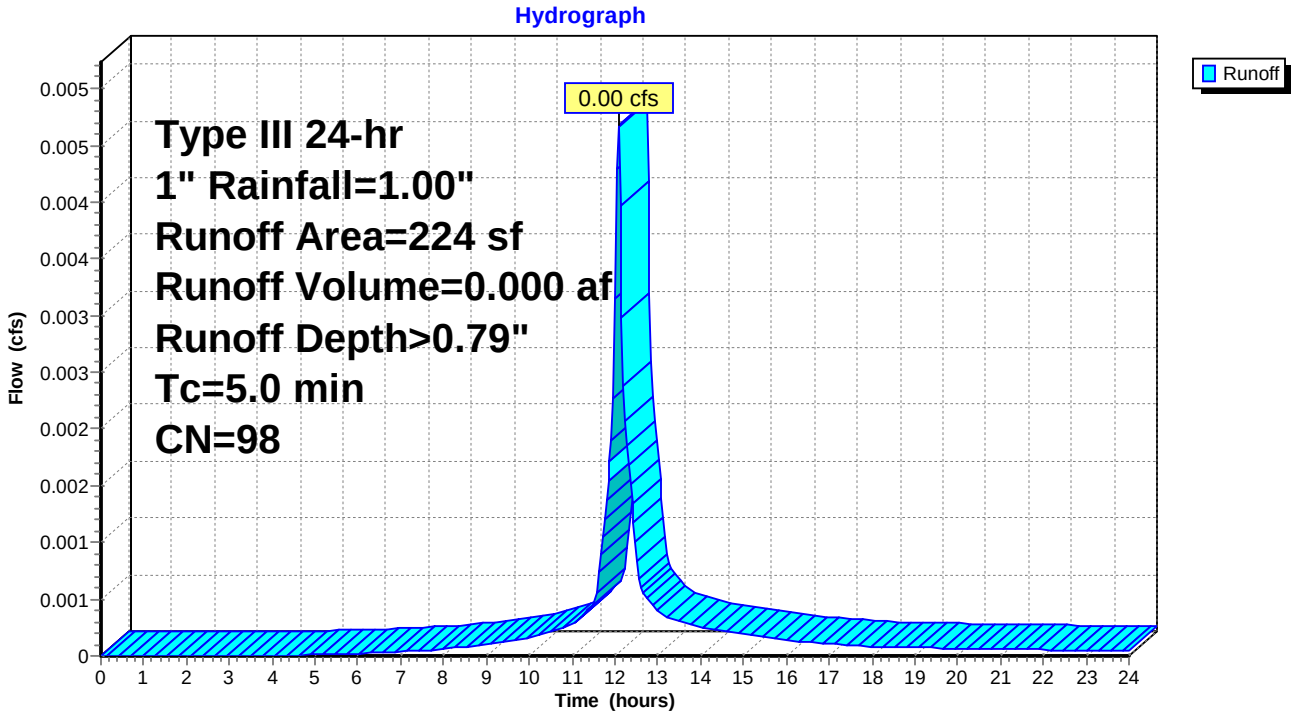
Runoff = 0.00 cfs @ 12.07 hrs, Volume= 0.000 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 1" Rainfall=1.00"

	Area (sf)	CN	Description
*	224	98	Walk
	224		100.00% Impervious Area

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

Subcatchment 4S: Areas not Routed to Retention



Summary for Pond 1P: Pool Freeboard

Inflow Area = 0.033 ac,100.00% Impervious, Inflow Depth > 0.79" for 1" event
Inflow = 0.03 cfs @ 12.07 hrs, Volume= 0.002 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 0.12' @ 24.00 hrs Surf.Area= 760 sf Storage= 95 cf

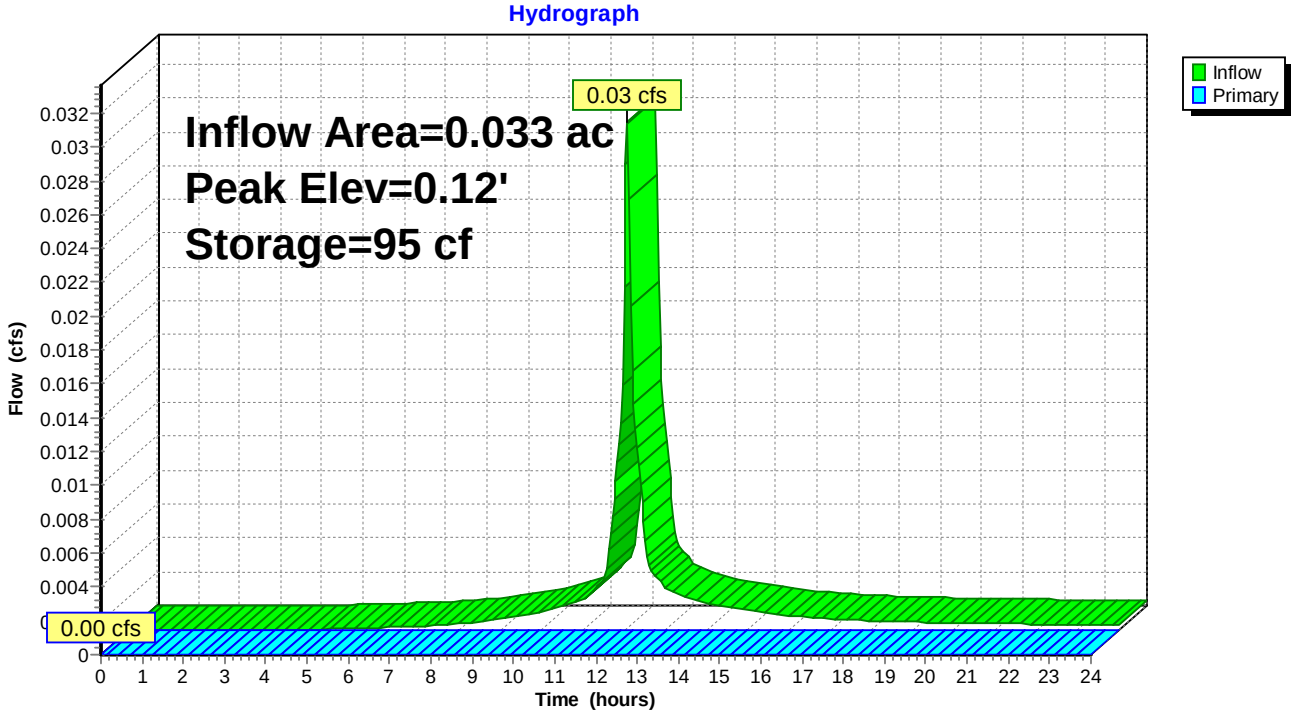
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	251 cf	**20.00'W x 38.00'L x 0.33'H Pool Freeboard**

Device	Routing	Invert	Outlet Devices
#1	Primary	0.33'	**1.0' long x 38.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

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

Pond 1P: Pool Freeboard

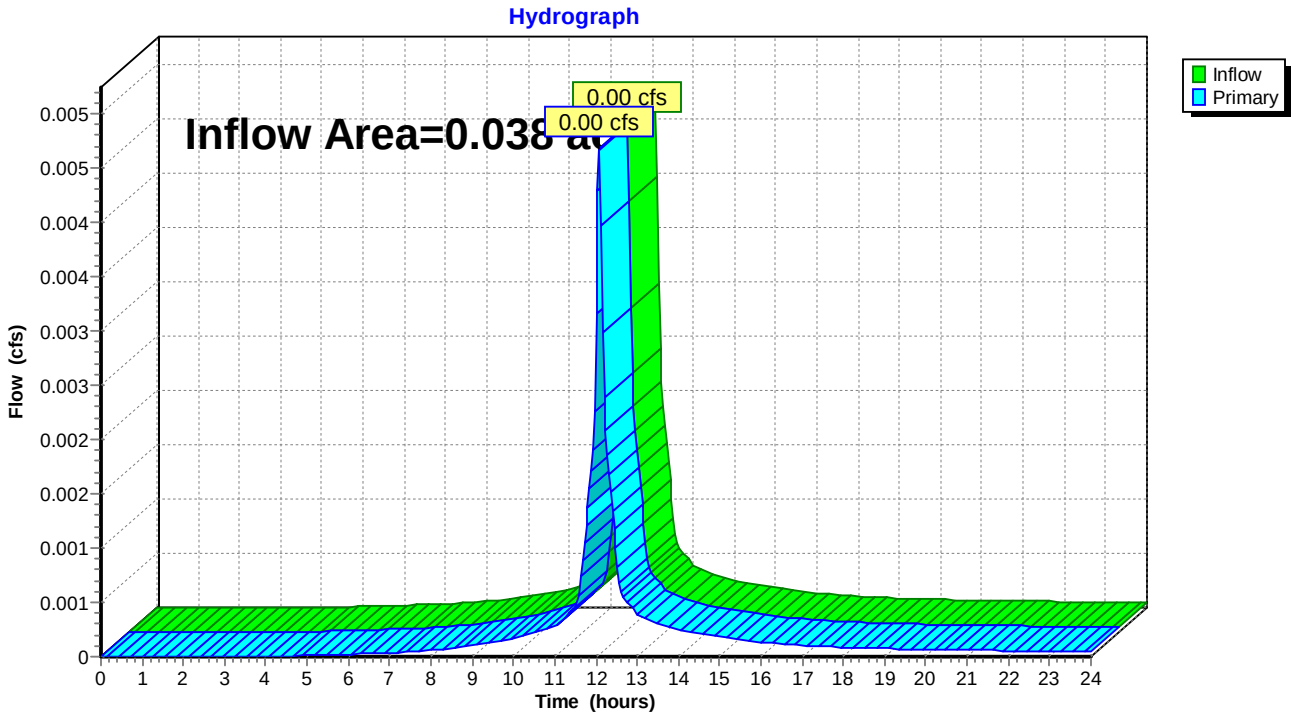


Summary for Link 1L: Combined Hydrograph

Inflow Area = 0.038 ac,100.00% Impervious, Inflow Depth > 0.11" for 1" event
Inflow = 0.00 cfs @ 12.07 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 12.07 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Link 1L: Combined Hydrograph



FCE Project #	2065	**Date Performed:**	10/24/2022
Client:	Jacob Zachs		
Location:	71 Newtown Turnpike, Weston		
Observed by:	Wayne D'Avanzo		

Test Hole 1:

0-7"	Topsoil
7-58"	Light Brown Medium Gravel
No Ground Water	
No Mottling	
No Ledge	
Roots to 24"	

Test Hole 2:

0-6"	Topsoil
6-36"	Light Brown Medium Gravel
No Ground Water	
No Mottling	
Ledge @ 36"	
Roots to 24"	

Test Hole 3:

0-6"	Topsoil
6-27"	Light Brown Medium Gravel
No Ground Water	
No Mottling	
Ledge @ 27"	
Roots to 12"	

Test Hole 4:

0-7"	Topsoil
7-26"	Light Brown Medium Gravel
26-56"	Grey Sand and Gravel
No Ground Water	
Mottling @ 26"	
No Ledge	

Conducted by:	Wayne D'Avanzo	Project:	2065
Location:	71 Newtown Turnpike	Town:	Weston
Client :	Jacob Zachs	Date:	10/24/2022

Weather conditions prior to and during tests:
Overcast

Single Lot:	X	Subdivision:	
Diameter of Hole:	8"	Depth of Hole:	21"

PT-1 — **Design**
Pre-soak @ 9:10 AM — **1"/20 Min.**

Time	Time Increment	Depth to Water	Drop in inches	Soil Percolation Rate Time to drop 1 inch
10:20 AM	---	9 5/8"	---	---
10:30 AM	10 Min.	14"	4 3/8"	2.3 Min.
10:40 AM	10 Min.	16 1/4"	2 1/4"	4.4 Min.
10:50 AM	10 Min.	18 1/8"	1 7/8"	5.3 Min.
11:00 AM	10 Min.	19 3/8"	1 1/4"	8.0 Min.
11:10 AM	10 Min.	20 1/8"	3/4"	13.3 Min.
11:20 AM	10 Min.	20 5/8"	1/2"	20.0 Min.

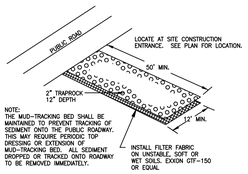
Single Lot:	X	Subdivision:	
Diameter of Hole:	8"	Depth of Hole:	24"

PT-2 — **Design**
Pre soak @ 9:05 AM — **1"/20 Min.**

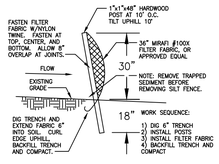
Time	Time Increment	Depth to Water	Drop in inches	Soil Percolation Rate Time to drop 1 inch
10:10 AM	---	3"	---	---
10:20 AM	10 Min.	8 1/4"	5 1/4"	1.9 Min.
10:30 AM	10 Min.	11"	2 3/4"	3.6 Min.
10:40 AM	10 Min.	12 1/4"	1 1/4"	8.0 Min.
10:50 AM	10 Min.	13 1/8"	7/8"	11.4 Min.
11:00 AM	10 Min.	13 3/4"	5/8"	16.0 Min.
11:10 AM	10 Min.	14 1/4"	1/2"	20.0 Min.

Construction Sequence

1. Establish all erosion and sedimentation control measures including gravel tracking pads for construction equipment and materials access as shown on plan and according to standards and specifications of the 2002 (updated 2019) of the Connecticut "Guidelines for Soil Erosion and Sediment Control Handbook"
2. Contact the municipal conservation officer one week prior to onset of activity for inspection of controls before construction begins.
3. Call before you dig 1-800-922-4455
4. Stake area(s) for excavation and construction.
5. Begin site development with excavation and proper temporary storage of excavated material according to plan.
7. Inspect erosion and sedimentation controls after storm events and repair as needed and clean up and dispose of silt in an environmentally and legally acceptable manner.
8. Remove unneeded excavated material from the site in an environmentally and legally acceptable manner.
10. Finish grade site spread top soil and seed all areas disturbed by construction and access activity
11. Remove gravel tracking pad repair any damage; do not remove erosion and sedimentation controls until reseed areas are re-established.
12. Contact the municipal conservation officer for site inspection before removing erosion and sedimentation controls



MUD-TRACKING BED
NOT TO SCALE



SILT FENCE
NOT TO SCALE

STATE OF CONNECTICUT
WAYNE J. D'AVANZO
No. 24877
LICENSED PROFESSIONAL ENGINEER

10-11-23
date

Fairfield County Engineering LLC

JACOB ZACHS
71 NEWTOWN TURNPIKE — WESTON, CONNECTICUT

DETAIL SHEET

CIVIL ENGINEERS

2065
project

2 OF 2
sheet

FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831-8005 FAX: (203) 831-8006

2065_231011Drainage