DRAINAGE ANALYSIS

PREPARED FOR

PROPOSED IMPROVEMENTS

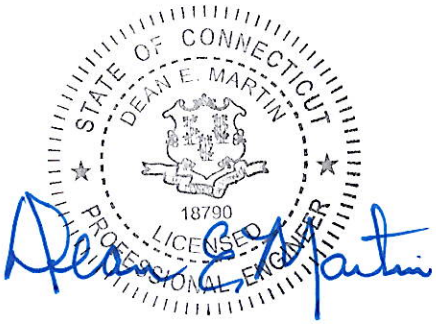
LOCATED AT

29 BRIAR OAK DRIVE

WESTON, CONNECTICUT

GE #23-5686

MARCH 26, 2024



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NARRATIVE:

The subject of this report is a 2.0398+/- acre parcel located at 29 Briar oak Drive, Weston. The purpose of the report is to determine the change in stormwater runoff resulting from the proposed detached garage and driveway expansion and to provide mitigation in accordance with Town of Weston standards.

EXISTING CONDITIONS:

This site, which is situated on the north side of Briar Oak Drive contains a single-family dwelling situated near the center of the parcel with asphalt driveway and a barn located along the northwest side. An intermittent stream and wetland are located off site to the west. The existing dwelling is served by a private well and on-site sewage disposal system.

The existing topography at this location is sloping generally from a high north to south with grades of 2-15%.

Existing upland soils at this location are identified in the NRCS Web Soil Survey as being Woodbridge fine sandy loam, HSG 'C/D', canton and Charlton fine sandy loams, HSG 'B', and Ridgebury, Leicester and Whitman soils, HSG 'D'.

PROPOSED CONDITIONS:

The proposal for this site is to construct a detached 2-story garage with living space above adjacent to the existing driveway and expanding the driveway slightly. A new septic system for the garage is to be installed. Some regrading will be required for the new septic system installation.

The site was analyzed to determine the existing and proposed peak runoff rates and on-site retention of the increased runoff was proposed using a stone dry well.

The following computations utilize the Hydrocad computer software and a 50-year design storm. Rainfall data was taken from the NOAA Atlas 14 for this location. Only the area for the proposed garage has been analyzed.

COMPUTATIONS:

Existing Conditions:

Lawn -	1,587 s.f.	CN–74
Total -	1,587 s.f.	

Proposed Conditions:

Garage -	1,282 s.f.	CN-98
Driveway -	305 s.f.	CN-98
Total -	1,587 s.f.	

Water Quality Volume (WQV) – First 1" of runoff from new impervious surfaces to be stored and treated.

$$WQV = \frac{(1")\,(R)\,(A)}{12}$$

$$WQV = \frac{(1")\,(0.95)\,(1{,}587\ s.f.)}{12}$$

$$WQV = 125.6\ c.f.$$

$R = 0.05+0.009I$
I = % Impervious
A = Area

SUMMARY:

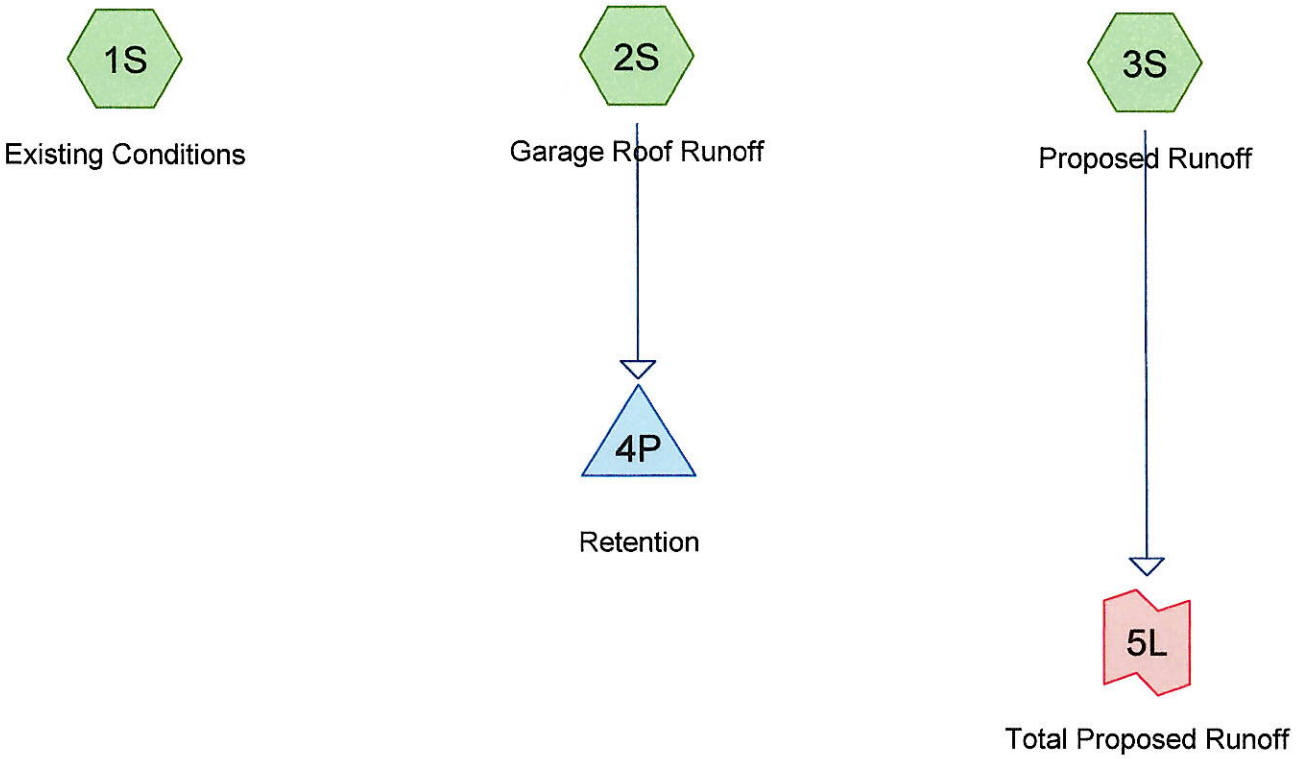
Existing Conditions Runoff -	0.17 c.f.s. (585 c.f.)
Proposed Conditions Runoff -	0.27 c.f.s. (954 c.f.)
Proposed Conditions Runoff – w/ Retention	0.16 c.f.s. (569 c.f.)

CONCLUSIONS:

The installation of a crushed stone dry well (10'x25'x2'deep) will be adequate to provide storage of the increased runoff resulting from the proposed improvements. Runoff from 50% of the proposed garage roof will be intercepted and routed into the retention system.

This retention system will also provide the required water quality volume.

There will be no adverse impact on wetland areas or adjacent properties as a result of the proposed improvements.



Subcat Reach Pond Link

Routing Diagram for 23-5686 Garage Runoff
Prepared by GRUMMAN ENGINEERING LLC, Printed 3/27/2024
HydroCAD® 10.00-26 s/n 01412 © 2020 HydroCAD Software Solutions LLC

Summary for Subcatchment 1S: Existing Conditions

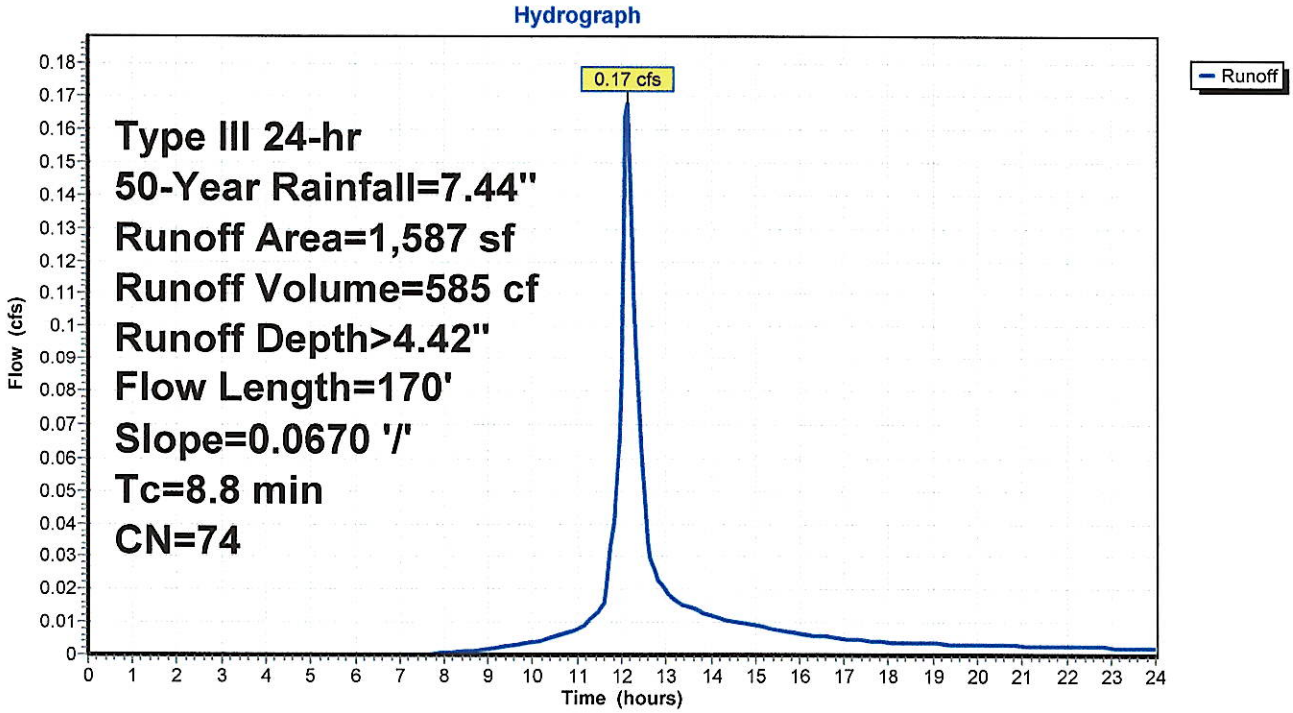
Runoff = 0.17 cfs @ 12.13 hrs, Volume= 585 cf, Depth> 4.42"

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 50-Year Rainfall=7.44"

Area (sf)	CN	Description
1,587	74	>75% Grass cover, Good, HSG C
1,587		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	170	0.0670	0.32		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.52"

Subcatchment 1S: Existing Conditions



Summary for Subcatchment 2S: Garage Roof Runoff

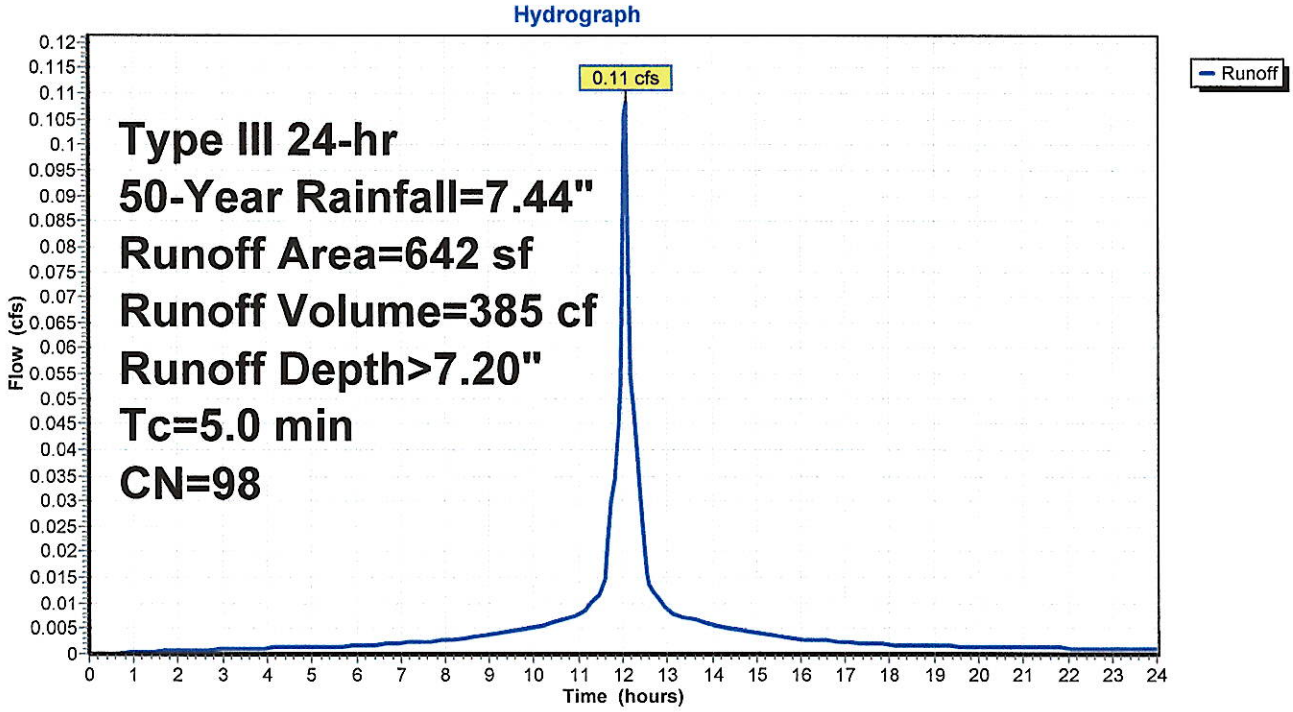
Runoff = 0.11 cfs @ 12.07 hrs, Volume= 385 cf, Depth> 7.20"

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 50-Year Rainfall=7.44"

	Area (sf)	CN	Description
*	642	98	Roof
	642		100.00% Impervious Area

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

Subcatchment 2S: Garage Roof Runoff



Summary for Subcatchment 3S: Proposed Runoff

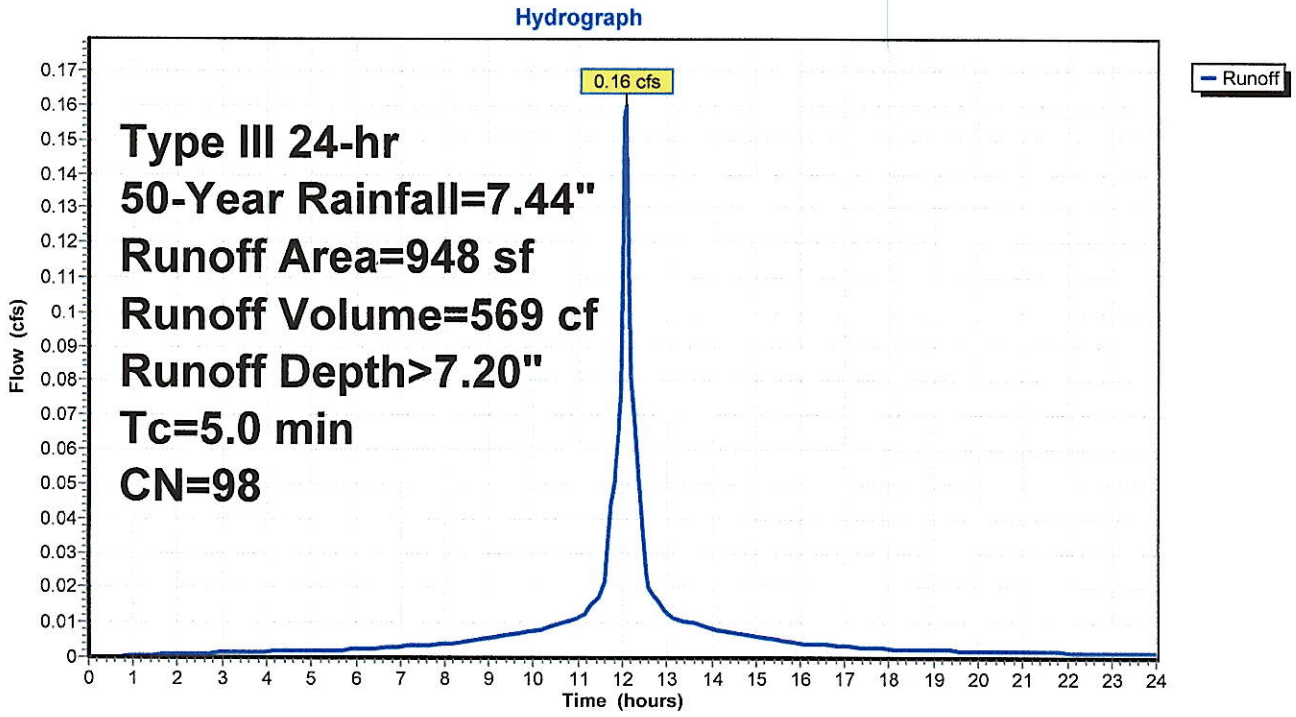
Runoff = 0.16 cfs @ 12.07 hrs, Volume= 569 cf, Depth> 7.20"

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 50-Year Rainfall=7.44"

	Area (sf)	CN	Description
*	305	98	Driveway
*	643	98	50% Garage Roof
	948	98	Weighted Average
	948		100.00% Impervious Area

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

Subcatchment 3S: Proposed Runoff



Summary for Pond 4P: Retention

Inflow Area = 642 sf,100.00% Impervious, Inflow Depth > 7.20" for 50-Year event
Inflow = 0.11 cfs @ 12.07 hrs, Volume= 385 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 261.42' @ 24.00 hrs Surf.Area= 500 sf Storage= 385 cf

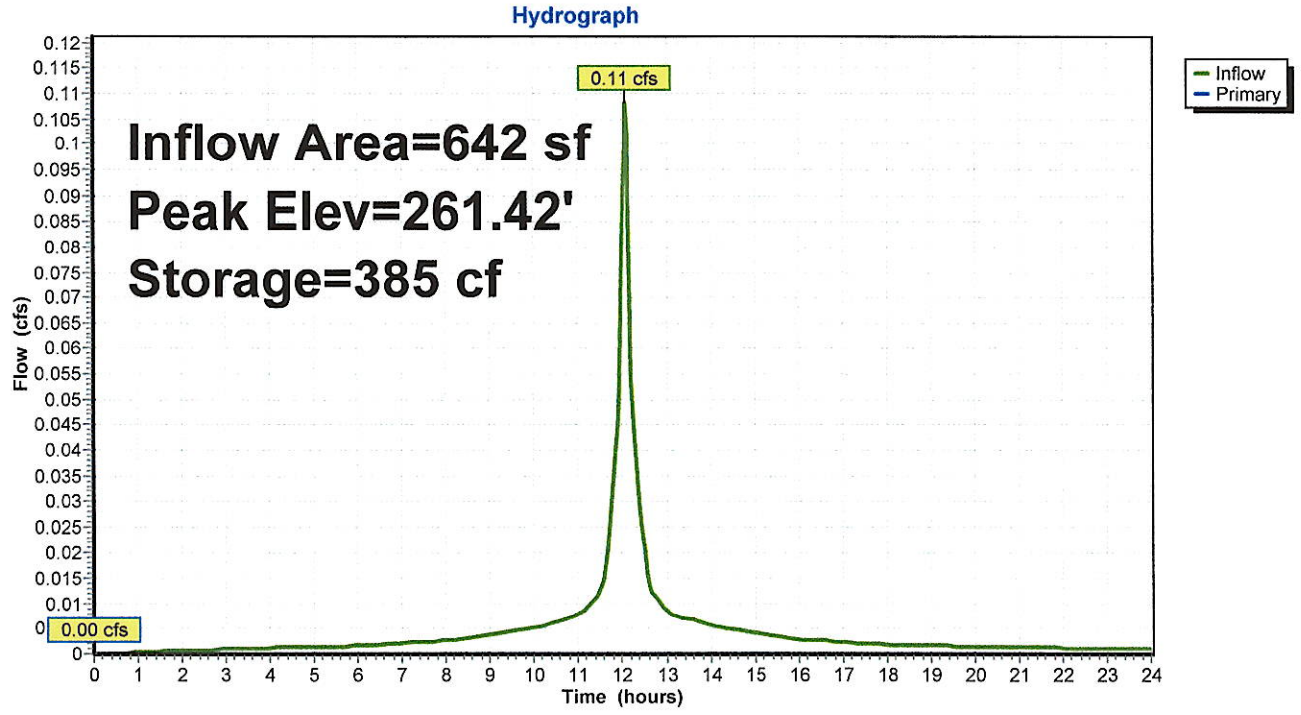
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	259.50'	400 cf	**10.00'W x 25.00'L x 2.00'H Retention** x 2 1,000 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	261.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=259.50' (Free Discharge)
↑—**1=Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: Retention



Stage-Area-Storage for Pond 4P: Retention

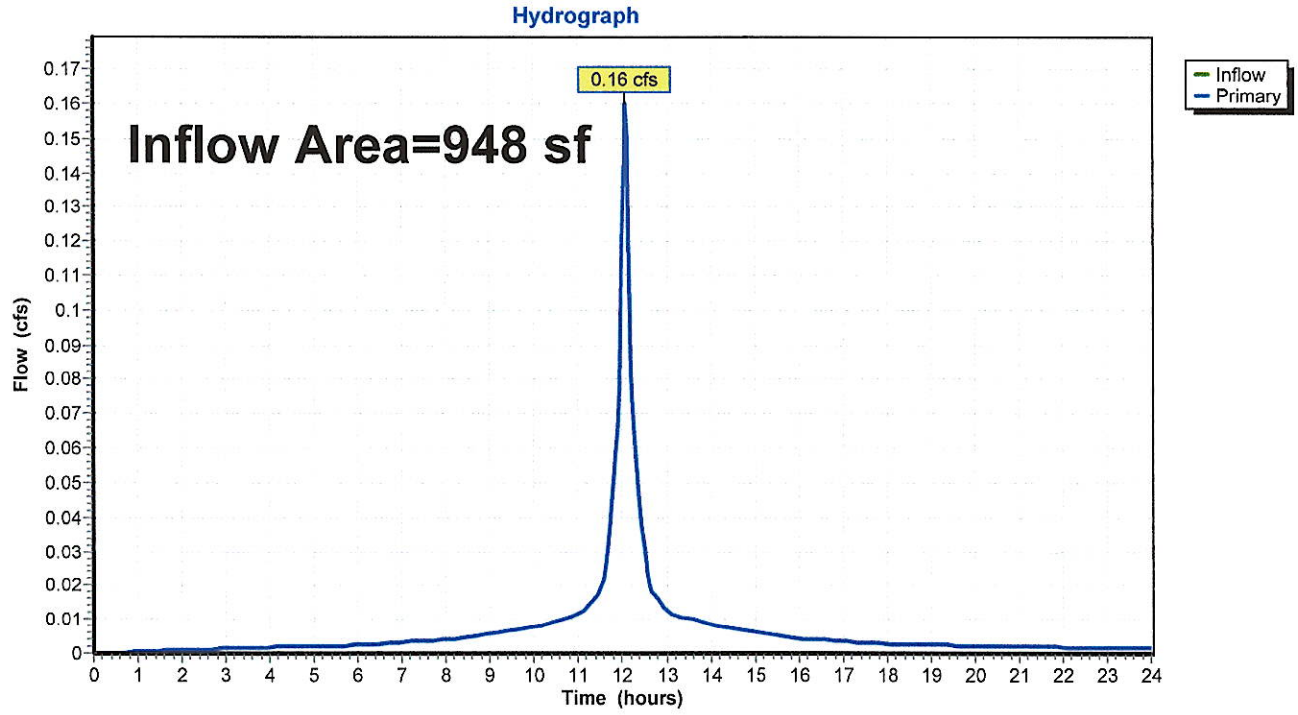
Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
259.50	0	260.54	208
259.52	4	260.56	212
259.54	8	260.58	216
259.56	12	260.60	220
259.58	16	260.62	224
259.60	20	260.64	228
259.62	24	260.66	232
259.64	28	260.68	236
259.66	32	260.70	240
259.68	36	260.72	244
259.70	40	260.74	248
259.72	44	260.76	252
259.74	48	260.78	256
259.76	52	260.80	260
259.78	56	260.82	264
259.80	60	260.84	268
259.82	64	260.86	272
259.84	68	260.88	276
259.86	72	260.90	280
259.88	76	260.92	284
259.90	80	260.94	288
259.92	84	260.96	292
259.94	88	260.98	296
259.96	92	261.00	300
259.98	96	261.02	304
260.00	100	261.04	308
260.02	104	261.06	312
260.04	108	261.08	316
260.06	112	261.10	320
260.08	116	261.12	324
260.10	120	261.14	328
260.12	124	261.16	332
260.14	128	261.18	336
260.16	132	261.20	340
260.18	136	261.22	344
260.20	140	261.24	348
260.22	144	261.26	352
260.24	148	261.28	356
260.26	152	261.30	360
260.28	156	261.32	364
260.30	160	261.34	368
260.32	164	261.36	372
260.34	168	261.38	376
260.36	172	261.40	380
260.38	176	261.42	384
260.40	180	261.44	388
260.42	184	261.46	392
260.44	188	261.48	396
260.46	192	261.50	**400**
260.48	196		
260.50	200		
260.52	204		

Summary for Link 5L: Total Proposed Runoff

Inflow Area = 948 sf,100.00% Impervious, Inflow Depth > 7.20" for 50-Year event
Inflow = 0.16 cfs @ 12.07 hrs, Volume= 569 cf
Primary = 0.16 cfs @ 12.07 hrs, Volume= 569 cf, Atten= 0%, Lag= 0.0 min

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

Link 5L: Total Proposed Runoff



NOAA Atlas 14, Volume 10, Version 3
Location name: Weston, Connecticut, USA*
Latitude: 41.191°, Longitude: -73.3807°
Elevation: 265 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

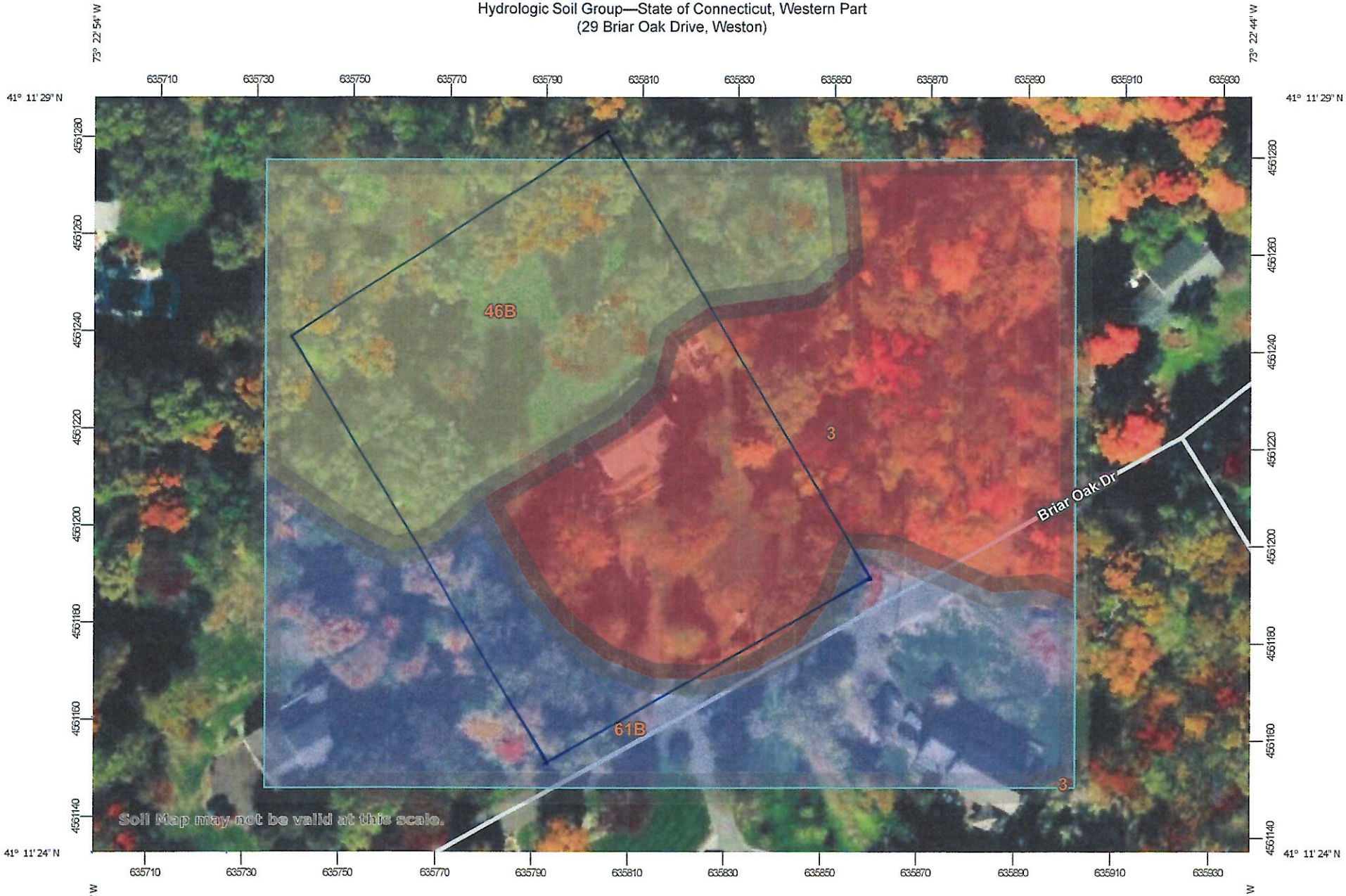
PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

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

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	100
5-min	0.365 (0.283-0.465)	0.425 (0.329-0.541)	0.523 (0.404-0.668)	0.603 (0.464-0.774)	0.715 (0.532-0.950)	0.801 (0.583-1.08)	0.888 (0.626-1.23)	0.981 (0.661-1.39)	1.11 (0.718-1.62)	1.21 (0.765-1
10-min	0.517 (0.402-0.658)	0.602 (0.467-0.767)	0.741 (0.573-0.947)	0.856 (0.658-1.10)	1.01 (0.754-1.34)	1.13 (0.825-1.53)	1.26 (0.887-1.75)	1.39 (0.935-1.97)	1.57 (1.02-2.30)	1.71 (1.08-2
15-min	0.609 (0.472-0.775)	0.708 (0.549-0.902)	0.871 (0.673-1.11)	1.01 (0.773-1.29)	1.19 (0.887-1.58)	1.33 (0.970-1.80)	1.48 (1.04-2.05)	1.63 (1.10-2.32)	1.85 (1.20-2.70)	2.01 (1.27-3
30-min	0.848 (0.658-1.08)	0.986 (0.765-1.26)	1.21 (0.937-1.55)	1.40 (1.08-1.80)	1.66 (1.23-2.20)	1.86 (1.35-2.50)	2.06 (1.44-2.84)	2.26 (1.52-3.21)	2.53 (1.64-3.71)	2.74 (1.73-4
60-min	1.09 (0.844-1.38)	1.26 (0.980-1.61)	1.55 (1.20-1.98)	1.79 (1.38-2.30)	2.12 (1.58-2.81)	2.38 (1.73-3.20)	2.63 (1.85-3.63)	2.89 (1.95-4.10)	3.22 (2.09-4.71)	3.46 (2.19-5
2-hr	1.39 (1.09-1.76)	1.64 (1.28-2.08)	2.05 (1.60-2.61)	2.39 (1.85-3.05)	2.86 (2.14-3.77)	3.21 (2.35-4.31)	3.58 (2.54-4.94)	3.97 (2.68-5.61)	4.51 (2.93-6.56)	4.9 (3.14-7
3-hr	1.60 (1.25-2.01)	1.90 (1.49-2.40)	2.39 (1.87-3.02)	2.80 (2.17-3.56)	3.36 (2.52-4.43)	3.79 (2.78-5.07)	4.23 (3.02-5.84)	4.72 (3.19-6.64)	5.41 (3.52-7.84)	5.96 (3.79-8
6-hr	2.01 (1.58-2.51)	2.41 (1.90-3.01)	3.06 (2.40-3.84)	3.59 (2.81-4.54)	4.34 (3.28-5.68)	4.89 (3.62-6.53)	5.48 (3.94-7.55)	6.14 (4.18-8.60)	7.11 (4.65-10.2)	7.91 (5.05-1
12-hr	2.48 (1.97-3.08)	2.98 (2.36-3.71)	3.80 (3.01-4.74)	4.49 (3.52-5.62)	5.42 (4.13-7.07)	6.13 (4.56-8.14)	6.87 (4.98-9.43)	7.73 (5.28-10.8)	9.00 (5.90-12.9)	10.0 (6.43-1
24-hr	2.90 (2.32-3.58)	3.52 (2.81-4.36)	4.55 (3.62-5.64)	5.40 (4.27-6.72)	6.57 (5.03-8.52)	7.44 (5.58-9.84)	8.38 (6.11-11.5)	9.49 (6.49-13.1)	11.1 (7.33-15.9)	12.6 (8.06-1
2-day	3.22 (2.59-3.95)	3.99 (3.20-4.90)	5.25 (4.20-6.46)	6.29 (5.00-7.78)	7.73 (5.96-9.99)	8.79 (6.65-11.6)	9.94 (7.33-13.6)	11.4 (7.80-15.6)	13.5 (8.93-19.1)	15.4 (9.93-2
3-day	3.48 (2.81-4.25)	4.33 (3.49-5.29)	5.71 (4.58-7.00)	6.86 (5.47-8.44)	8.44 (6.53-10.9)	9.60 (7.28-12.6)	10.9 (8.04-14.8)	12.4 (8.56-17.0)	14.9 (9.81-20.9)	16.9 (10.9-2
4-day	3.73 (3.02-4.54)	4.62 (3.74-5.64)	6.09 (4.90-7.44)	7.30 (5.84-8.96)	8.97 (6.96-11.5)	10.2 (7.75-13.4)	11.5 (8.54-15.7)	13.2 (9.09-18.0)	15.7 (10.4-22.1)	17.9 (11.6-2
7-day	4.46 (3.63-5.40)	5.44 (4.42-6.59)	7.03 (5.69-8.55)	8.36 (6.72-10.2)	10.2 (7.92-13.0)	11.5 (8.78-15.0)	13.0 (9.61-17.5)	14.7 (10.2-20.0)	17.3 (11.5-24.2)	19.5 (12.7-2
10-day	5.17 (4.22-6.24)	6.20 (5.06-7.49)	7.88 (6.40-9.55)	9.28 (7.49-11.3)	11.2 (8.73-14.2)	12.6 (9.63-16.3)	14.2 (10.5-18.9)	15.9 (11.0-21.5)	18.5 (12.3-25.7)	20.7 (13.4-2
20-day	7.33 (6.02-8.78)	8.48 (6.96-10.2)	10.4 (8.47-12.5)	11.9 (9.68-14.4)	14.1 (11.0-17.6)	15.7 (12.0-20.0)	17.4 (12.8-22.7)	19.2 (13.4-25.7)	21.7 (14.5-29.9)	23.7 (15.4-3
30-day	9.10 (7.51-10.9)	10.3 (8.52-12.4)	12.4 (10.1-14.8)	14.0 (11.4-16.9)	16.4 (12.8-20.3)	18.1 (13.9-22.9)	19.9 (14.6-25.8)	21.7 (15.2-29.0)	24.2 (16.2-33.2)	26.1 (17.0-3
45-day	11.3 (9.35-13.4)	12.6 (10.4-15.0)	14.8 (12.2-17.7)	16.6 (13.6-19.9)	19.1 (15.0-23.6)	21.1 (16.1-26.4)	23.0 (16.9-29.5)	24.9 (17.5-33.0)	27.3 (18.3-37.2)	29.0 (18.9-4
60-day	13.1 (10.9-15.6)	14.5 (12.1-17.2)	16.9 (13.9-20.1)	18.8 (15.4-22.4)	21.4 (16.9-26.3)	23.5 (18.0-29.3)	25.5 (18.8-32.6)	27.4 (19.3-36.2)	29.8 (20.1-40.6)	31. (20.6-4

Hydrologic Soil Group—State of Connecticut, Western Part
(29 Briar Oak Drive, Weston)



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 1, Sep 15, 2023

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

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

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	D	2.0	37.7%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	C/D	1.6	30.6%
61B	Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony	B	1.7	31.7%
Totals for Area of Interest			**5.4**	**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.

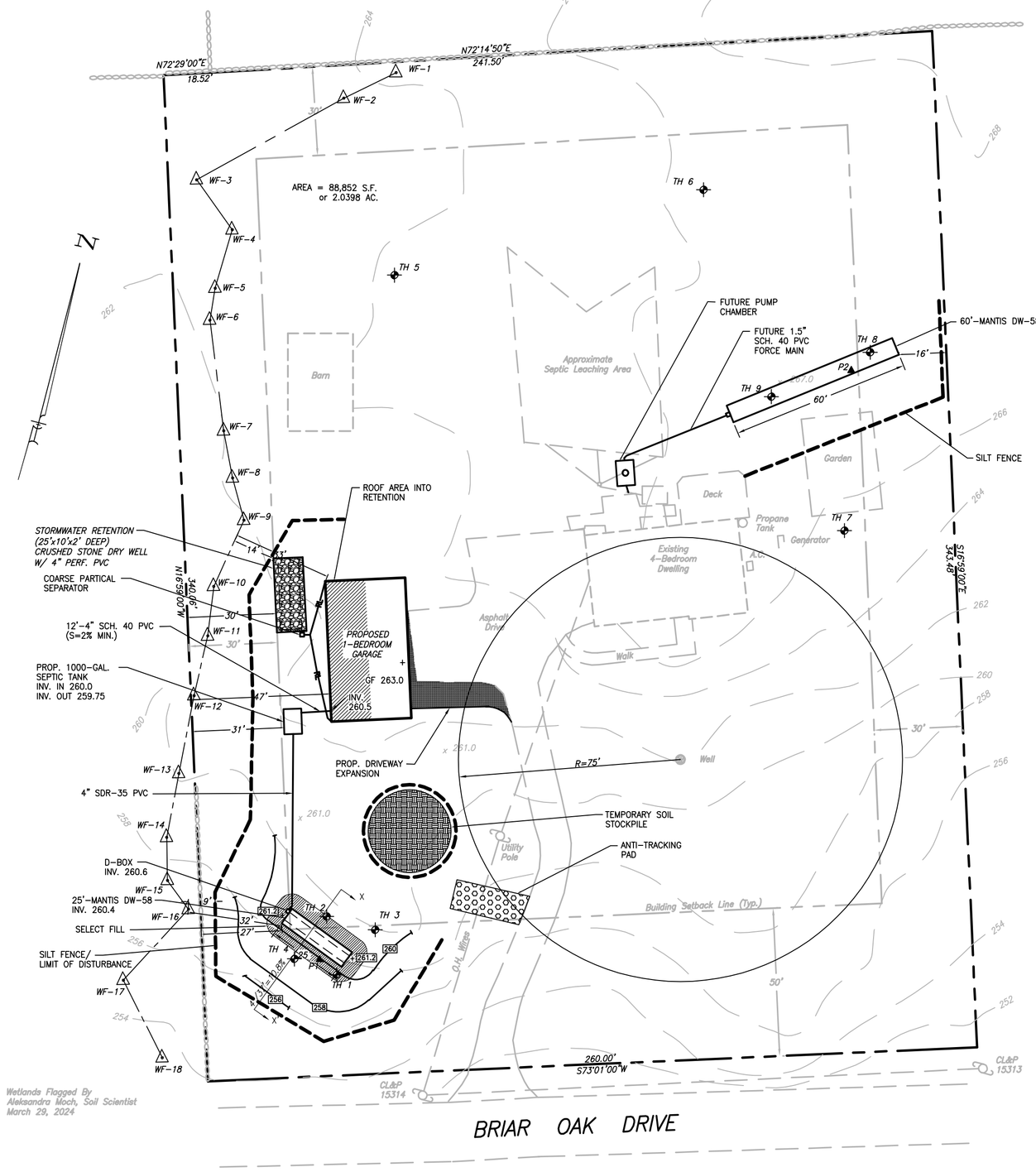
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



GRAPHIC SCALE

30 0 30 60

1 inch = 30 feet

PERCOLATION TESTS – 12-21-23

P-1
DEPTH – 16"
PRESOAK – 1 HOUR

3:03 4.25"
3:13 5.25"
3:23 6"
3:33 6.75"
3:43 7.25"
3:53 7.75"
4:03 8.125"

PERCOLATION RATE: 1"/30 MINUTES

P-2
DEPTH – 17"
PRESOAK – 1 HOUR

3:05 5.25"
3:15 8.5"
3:25 10.75"
3:35 12.75"
3:45 14.25"
3:55 16"
4:05 DRY

PERCOLATION RATE: 1"/10 MINUTES

TEST HOLE DATA – 12-15-23

TH 1
00 – 07" TOPSOIL
07 – 20" BROWN SILT SAND
20 – 50" GRAY FINE SAND
LEDGE @ 50"
MOTTLES @ 28"
ROOTS TO 28"

TH 2
00 – 06" TOPSOIL
06 – 27" BROWN SILT SAND
27 – 50" GRAY, COMP. FINE SAND
LEDGE > 50"
WATER @ 48"
ROOTS TO 27"
R.L. @ 27"

TH 3
LEDGE @ 18"

TH 4
00 – 08" TOPSOIL
08 – 24" R-B SILT SAND
24 – 42" GRAY COMP SAND
LEDGE @ 42"
R.L. @24"

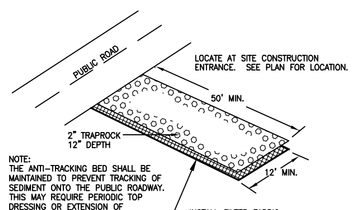
TH 5
MOTTLES @ 15"

TH 6
MOTTLES @ 12"

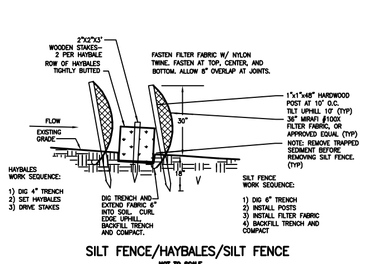
TH 7
00 – 07" TOPSOIL
07 – 18" O-T FINE SILT SAND
18 – 32" GRAY FINE SAND
32 – 55" BROWN SILT SAND
LEDGE > 55"
WATER @ 31"
MOTTLES @ 22"

TH 8
00 – 08" TOPSOIL
08 – 22" O-T FINE SILT SAND
22 – 50" GRAY FINE SILT SAND
NO WATER
LEDGE > 50"
ROOTS TO 22"
R.L. @ 22"

TH 9
00 – 10" TOPSOIL
10 – 24" R-B SILT SAND
24 – 55" GRAY SILT SAND
LEDGE > 55"
NO WATER
R.L. @ 24"



ANTI-TRACKING PAD
NOT TO SCALE



SILT FENCE/HAYBALES/SILT FENCE
NOT TO SCALE

CONSTRUCTION SEQUENCE

1. Remove trees, only as shown on plan.
2. Install silt fence and mud tracking bed. Call for inspection by conservation officer.
3. Rough-in driveway. Site grading.
4. Construct garage. Construct site utilities and drainage system.
5. Construct septic system. Pave driveway. Finish site work.
6. Fine grade, topsoil and seed disturbed areas.
7. Wait until slopes are stabilized before removing silt fences. (one growing season). Removal to be approved by project landscape architect.

SEWAGE DISPOSAL SYSTEM NOTES (B-100a)

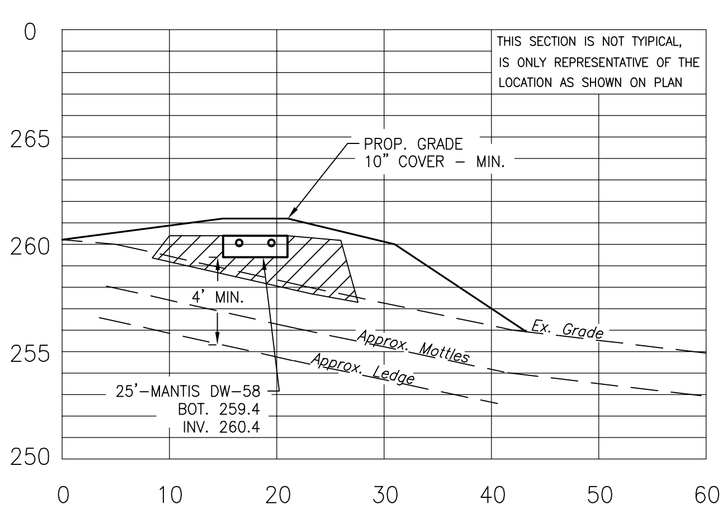
1. THE PROPOSED SEWAGE DISPOSAL SYSTEM SHALL CONFORM TO SECTIONS 19-13-B103d THROUGH 19-13-B104d OF THE CONNECTICUT STATE HEALTH CODE.
2. THE ASPETUCK HEALTH DISTRICT AND THE ENGINEER OF RECORD SHALL BE NOTIFIED THREE DAYS PRIOR TO COMMENCEMENT OF EACH PHASE OF CONSTRUCTION.
3. NO CERTIFICATE OF CONFORMANCE 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. THE EXISTING STRUCTURE IS A FOUR-BEDROOM DWELLING. THE OWNERS ARE PROPOSING TO CONSTRUCT A DETACHED GARAGE WITH BEDROOM. THERE WILL BE NO INCREASE IN DESIGN FLOW FOR MAIN HOUSE. THE REQUIRED EFFECTIVE LEACHING AREA FOR THIS HOUSE, WHICH IS BASED UPON AN OBSERVED PERCOLATION RATE OF 1"/10 MINUTES IS 577.5 SQUARE FEET.
5. THE 100% CODE COMPLYING LEACHING AREA CONSISTS OF 60 LINEAR FEET OF MANTIS DW-58 TRENCH, WHICH WILL PROVIDE 696 S.F. EFFECTIVE LEACHING AREA, (60 x 11.6 = 696). ANY SECTIONS TO BE LOCATED UNDER THE DRIVEWAY SHALL BE DESIGNED TO WITHSTAND H-20 LOADINGS.
6. THE PROPOSED SEPTIC SYSTEM WILL USE THE EXISTING 1000-GALLON SEPTIC TANK. CONTRACTOR SHALL VERIFY THAT TANK CONFORMS TO THE SPECIFICATIONS OUTLINED IN THE STATE OF CONNECTICUT TECHNICAL STANDARDS. SEPTIC TANK SHALL BE EQUIPPED WITH AN APPROVED OUTLET FILTER.
7. A MINIMUM SETBACK DISTANCE OF 50' SHALL BE MAINTAINED BETWEEN ANY LEACHING AREA AND WATERCOURSE.
8. THIS SYSTEM IS NOT DESIGNED TO ACCEPT WASTE FROM GARBAGE DISPOSAL UNITS, BACKWASH FROM WATER SOFTENER UNITS OR DISCHARGE FROM JACUZZI TYPE HOT TUBS (> 100 GALLONS).
9. CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING "CALL BEFORE YOU DIG", 1-800-922-4455, PRIOR TO START OF ANY EXCAVATION WORK ON SITE.
10. MLSS REQUIREMENTS: FF = 1.75
PF = 1.0
RL = (27+24/2)+22/2 = 22.5"
SL = 5.1%
HF = 34
MLSS = (1.75) (1.0) (34) = 59.5 L.F.

SEDIMENTATION AND EROSION CONTROL NOTES

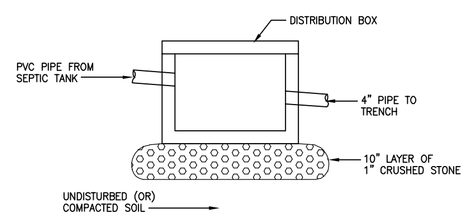
1. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM. PERMANENT STABILIZATION SHALL BE SCHEDULED AS SOON AS FINAL GRADES ARE ESTABLISHED.
2. ALL DISTURBED AREAS SHALL BE FINE GRADED AND SEEDED WITH AN APPROVED SEED MIXTURE. COVER NEWLY SEEDED AREAS WITH MULCH HAY OR SALT HAY.
3. ALL EROSION AND SEDIMENT CONTROL 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 OWNER 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.

SEWAGE DISPOSAL SYSTEM NOTES

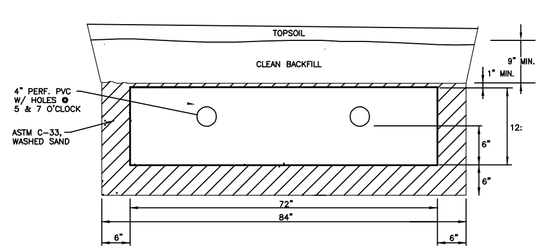
1. THE PROPOSED SEWAGE DISPOSAL SYSTEM SHALL CONFORM TO SECTIONS 19-13-B103d THROUGH 19-13-B104d OF THE CONNECTICUT STATE HEALTH CODE.
2. THE ASPETUCK HEALTH DISTRICT AND THE ENGINEER OF RECORD SHALL BE NOTIFIED THREE DAYS PRIOR TO COMMENCEMENT OF EACH PHASE OF CONSTRUCTION.
3. NO CERTIFICATE OF CONFORMANCE 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. ALL EXISTING SITE AND UTILITY LOCATIONS ARE AS TAKEN FROM A 'ZONING LOCATION SURVEY PROPOSED GARAGE LOT 4 "BRIAR OAK FARMS" PROPERTY LOCATED AT 29 BRIAR OAKS DRIVE, WESTON, CT PREPARED FOR WIESLAW V. GUTOWSKI' BY LEWIS ASSOCIATES LAND SURVEYORS, DATED 10-12-23. TOPOGRAPHIC TAKEN FROM TOWN OF WESTON GIS MAPPING.
5. THE PROPOSED STRUCTURE IS A ONE-BEDROOM ACCESSORY DWELLING UNIT. THE REQUIRED EFFECTIVE LEACHING AREA FOR THIS HOUSE, WHICH IS BASED UPON AN OBSERVED SOIL PERCOLATION RATE OF 1"/30 MINUTES IS 282.5 SQUARE FEET.
6. THE PROPOSED LEACHING AREA CONSISTS OF 25 LINEAR FEET OF 12" MANTIS DW-58 LEACHING TRENCH, WHICH WILL PROVIDE 290 S.F. EFFECTIVE LEACHING AREA, 250 x 11.6 = 290). ANY SECTIONS TO BE LOCATED UNDER DRIVEWAY SHALL BE DESIGNED TO WITHSTAND H-20 LOADINGS.
7. THE PROPOSED SEPTIC SYSTEM SHALL UTILIZE A NEW 1000-GALLON SEPTIC TANK THAT CONFORMS TO THE SPECIFICATIONS OUTLINED IN THE STATE OF CONNECTICUT TECHNICAL STANDARDS. TANK SHALL BE EQUIPPED WITH AN APPROVED OUTLET FILTER.
8. A SEPTIC RESERVE AREA CONSISTING OF MANTIS DW-58 TRENCH HAS ALSO BEEN DEPICTED ON PLAN.
9. THE PROPOSED DWELLING WILL BE SERVICED BY A PRIVATE WELL. PUBLIC ATER SUPPLY. FIELD INVESTIGATIONS VERIFY THERE ARE NO EXISTING WELLS WITHIN 75' OF THE PROPOSED SEPTIC SYSTEM LOCATION.
10. A MINIMUM SETBACK DISTANCE OF 50' SHALL BE MAINTAINED BETWEEN ANY LEACHING AREA AND WETLAND OR WATERCOURSE.
11. A BENCHMARK SHALL BE ESTABLISHED IN THE FIELD PRIOR TO START OF CONSTRUCTION TO ASSURE PROPER SYSTEM INSTALLATION.
12. SELECT FILL MATERIAL SHALL MEET THE CRITERIA ESTABLISHED BY THE STATE OF CONNECTICUT HEALTH SERVICES. IT SHALL HAVE FEWER THAN 2.5% OF THE FINES PASSING THE #200 SIEVE, FEWER THAN 58 OF THE FINES PASSING #100 SIEVE, AND SHALL ACHIEVE AN AVERAGE PERCOLATION RATE OF 1"/5 MINUTES, AFTER BEING PLACED. ALL FILL SHALL BE PLACED IN LIFTS OF 1' MAXIMUM.
13. THE CONTRACTOR SHALL PROVIDE A REPRESENTATIVE SAMPLE OF ALL FILL MATERIAL TO THE ENGINEER OF RECORD FOR INSPECTION AND SIEVE ANALYSIS AT THE CONTRACTORS EXPENSE, PRIOR TO PLACEMENT. IT MAY BE ALSO NECESSARY FOR THE INSTALLER TO PROVIDE A SAMPLE OF THE SOIL TO THE LOCAL HEALTH DEPARTMENT.
14. ALL BERM MATERIAL SHALL BE FREE OF LARGE STONE, LOGS, OR OTHER DEBRIS THAT MAY CREATE LARGE VOIDS. IT SHALL CONSIST OF COMPACTED NATIVE LOAMY SOIL WITH A MAXIMUM PERCOLATION RATE OF 1"/15 MINUTES.
15. ALL FILL SHALL BE DUMPED OUTSIDE THE LIMITS OF THE PROPOSED LEACHING SYSTEM AND CAREFULLY PLACED BY THE CONTRACTOR IN LIFTS OF 1' MAXIMUM USING CRAWLER, TRACTOR OR OTHER APPROVED MACHINERY.
16. THE FIRST 6" OF SELECT FILL BE HARROWED INTO EXISTING SOIL.
17. DISTRIBUTION BOXES SHALL BE ON STABLE FOOTING, CONSISTING OF 10" CRUSHED STONE.
18. ALL LOCATIONS OF INLETS AND OUTLETS FROM THE SEPTIC TANK AND DISTRIBUTION BOXES SHALL BE GASKETED.
19. THE CONTRACTOR SHALL REMOVE ALL TREES, STUMPS, AND LARGE STONES WITHIN LIMITS OF THE SEWAGE DISPOSAL SYSTEM.
20. THE CONTRACTOR SHALL STRIP AND STOCKPILE TOPSOIL OUTSIDE THE LIMITS OF SEWAGE DISPOSAL SYSTEM AND REUSE IT TO FINISH GRADE THE AREA OF DISTURBANCE. ADDITIONAL TOPSOIL, IF REQUIRED TO COVER DISTURBED AREAS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
21. THE CONTRACTOR SHALL TOPSOIL, FINE RAKE, SEED AND MULCH ALL AREAS DISTURBED BY CONSTRUCTION.
22. 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.
23. THIS SYSTEM IS NOT DESIGNED TO ACCEPT WASTE FROM GARBAGE DISPOSAL UNITS, BACKWASH FROM WATER SOFTENER UNITS OR DISCHARGE FROM JACUZZI TYPE HOT TUBS (> 100 GALLONS).
24. CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING "CALL BEFORE YOU DIG", 1-800-922-4455, PRIOR TO START OF ANY EXCAVATION WORK ON SITE.
25. THIS DESIGN CONFORMS TO ALL APPLICABLE CODES AND ACCEPTED PRACTICE. NO OTHER WARRANTY IS EXPRESSED OR IMPLIED.
26. MLSS REQUIREMENTS: FF = 0.5
PF = 1.5
RL = (27+18)/2+(28+24/2) = 24.25"
SL = 10.5%
HF = 26
MLSS = (0.5)(1.5)(26) = 19.5 L.F.



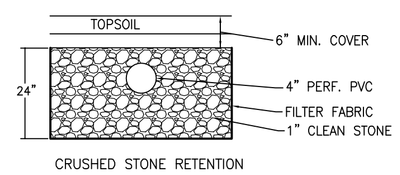
SECTION X-X'
SCALE- H: 1"-10'
V: 1"-5'



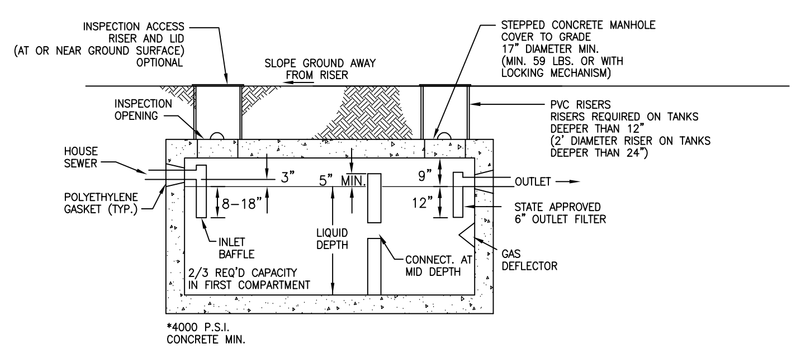
TYPICAL DISTRIBUTION BOX
NOT TO SCALE



MANTIS DW-58
N.T.S.



CRUSHED STONE RETENTION



SEPTIC TANK (<2000 GAL)
NOT TO SCALE

REVISED: 4-1-24- GARAGE DRAINAGE, WETLAND FLAGS.

WIESLAW V. GUTOWSKI
29 BRIAR OAK DRIVE WESTON, CONNECTICUT

23-5686 project

ADU SEPTIC SYSTEM DESIGN PLAN
B-100a SEPTIC SYSTEM DESIGN

1 OF 1 sheet

12-28-23 date

GRUMMAN ENGINEERING L.L.C.
CONSULTING CIVIL ENGINEERS
20 KNIGHT STREET, NORWALK, CONNECTICUT 06851
PH: (203) 853-3833 FAX: (203) 286-5057

240401 SEPTIC

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: 29 Briar Oak Drive

Assessor's Map # 30 **Block #** 2 **Lot #** 16

PROJECT DESCRIPTION *(general purpose)* Construct detached garage, with living space, septic system

Total Acres 2.0398 Total Acres of Wetlands and Watercourses 0.092 acres

Acreage of Wetlands and Watercourses Altered 0 Upland Area Altered 0.100 acres

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: Wieslaw V. Gutowski Phone: 203-515-0651

Address: 29 Briar Oak Drive, Weston, CT 06883

Email: annawesly@aol.com

APPLICANT/AUTHORIZED AGENT:

Name: Wieslaw V. Gutowski Phone: 203-515-0651

Address: 29 Briar Oak Drive, Weston, CT 06883

Email: annawesly@aol.com

CONSULTANTS: *(Please provide, if applicable)*

Engineer: Dean E. Martin, P.E. Phone: 203-853-3833

Address: 20 Knight St., Norwalk, CT Email: dean@grummanengineering.com

Soil Scientist: Aleksandra Moch Phone: 203-550-9373

Address: Stamford, CT Email: aleksandra_Moch@yahoo.com

Legal Counsel: _____ Phone: _____

Address: _____ Email: _____

Surveyor: Lewis Associates Phone: 203-261-8648

Address: 260 Main St, Monroe, CT Email: _____

PROPERTY INFORMATION

Property Address: 29 Briar Oak Drive

Existing Conditions *(Describe existing property and structures)*: existing single-family dwelling, Barn w/ on-site sewage disposal.

Provide a detailed description and purpose of proposed activity *(attach sheet with additional information if needed)*: Construct detached garage w/ 2nd floor living space, septic system, drainage system & expanded driveway in upland review area.

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

Square feet of proposed impervious surfaces *(roads, buildings, parking, etc.)*: 1,587 SF

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:
65 cy +/- Septic fill, 10 cy Gravel for driveway

Description, work sequence, and duration of activities:
Construct detached garage, Septic + drainage. See Site Plan.

Describe alternatives considered and why the proposal described herein was chosen:
Only available location for Septic, garage.

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: 1-29-24

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: 4/3/24

Signature of Authorized Agent — Date

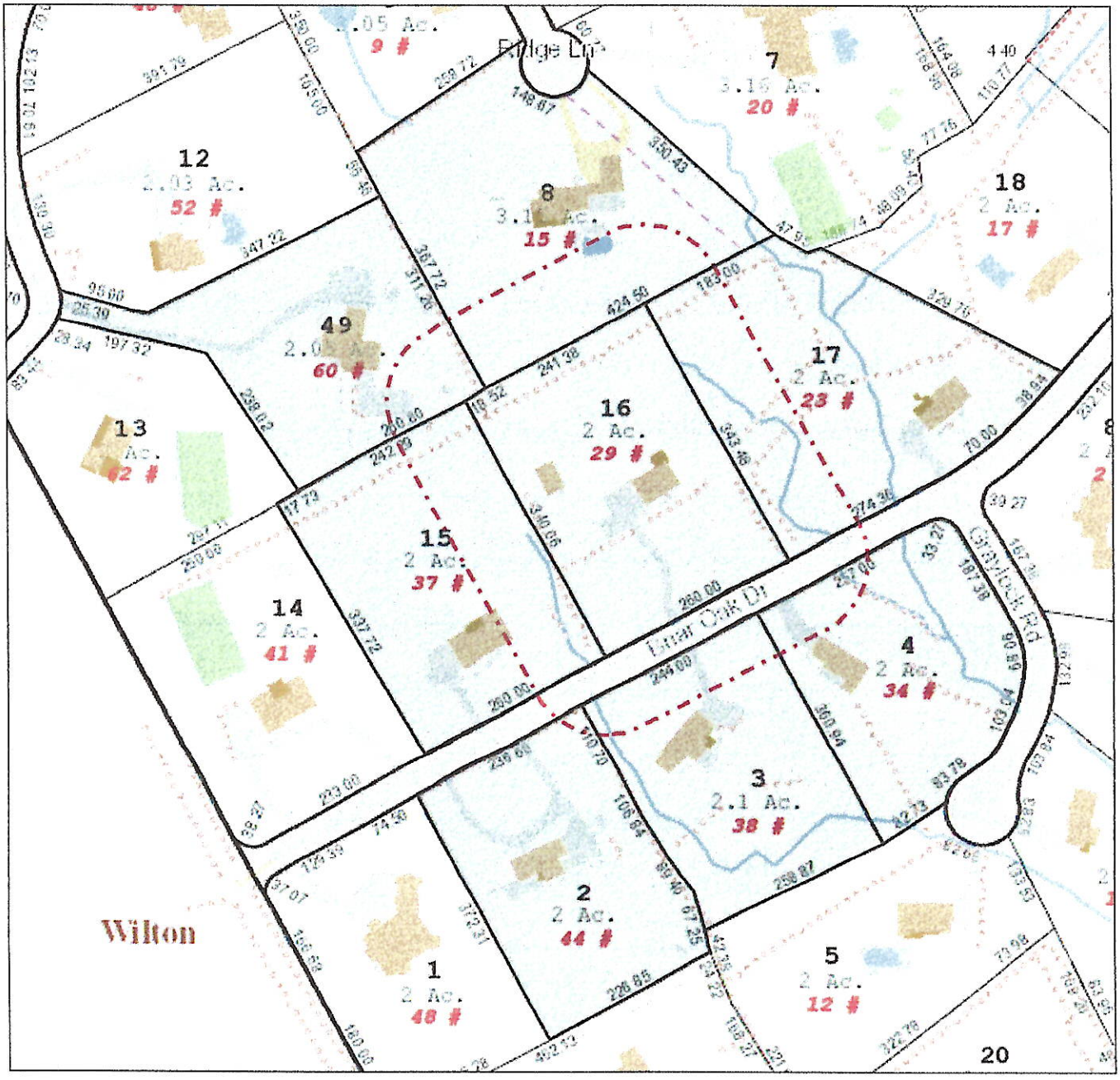
FOR OFFICE USE ONLY

Administrative Approval — Initials — Date

Town of Weston

Geographic Information System (GIS)

Date Printed: 3/26/2024



MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Weston and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 100 ft

0 100 Feet

N W E S

30 2 49
EHRLICH MICHAEL & LAUREN
60 RIDGE ROAD
WESTON CT 06883

30 2 8
ABRAMS ROSS & LAUREN
15 RIDGE LA
WESTON CT 06883

30 6 3
WOLFE ALEXANDER & LINDSAY
38 BRIAR OAK DRIVE
WESTON CT 06883

30 6 4
BRAUN ERIC WILLIAM & CHEN ALICE &
34 BRIAR OAK DR
WESTON CT 06883

30 2 16
GUTOWSKI WIESLAW V
29 BRIAR OAK DRIVE
WESTON CT 06883

30 2 15
DART JAMES TR & DART CHRISTINE A TR
37 BRIAR OAK DRIVE
WESTON CT 06883

30 2 17
BLUMENSTOCK MICHAEL B & DUNNE
23 BRIAR OAK DR
WESTON CT 06883

30 6 2
FLEMING DAVID G & LUIGINA
44 BRIAR OAK DR
WESTON CT 06883

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): Weston
   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: Norwalk North, CT or number: _____
   subregional drainage basin number: 7200
7. NAME OF APPLICANT, VIOLATOR OR PETITIONER (print name): Wieslaw V. Gutowski
8. NAME & ADDRESS OF ACTIVITY / PROJECT SITE (print information): 29 Briar Oak Drive, Weston, CT
   briefly describe the action/project/activity (check and print information): temporary ☐ permanent ☒ description:
   Construct detached garage, septic + drainage systems
9. ACTIVITY *PURPOSE* CODE (see instructions - one code only): A
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): 0.100 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

April 4, 2024

Weston Conservation Commission
Town Hall Annex
24 School Road
Weston, CT 06883

Re: 29 Briar Oak Drive
Weston

As the owner at the above referenced property, I hereby authorize Dean Martin, P.E., Grumman Engineering, to act on my behalf as Agent to submit application and plans for permitting for a proposed detached garage & septic system.

Thank you

_____

WETLAND DELINEATION

FOR THE PROPERTY LOCATED AT

29 BRIAR OAK DRIVE
WESTON, CONNECTICUT

REPORT PREPARED BY

ALEKSANDRA MOCH

SOIL & WETLAND SCIENTIST

LANDSCAPE DESIGNER, CPESC

GEOLOGIST/HYDROGEOLOGIST

March 29, 2024

SITE DESCRIPTION

The property is located on the northern side of Briar Oak Drive, approximately 274 feet west from the junction with Graylook Road in Weston, CT. This two acres site supports a single-family residence with a driveway and a barn. The site is maintained as a lawn with wooded edges.

METHODS

Wetland identification was performed on March 29, 2024 and based on 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 sequentially1-18 along the eastern edge of a 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.*

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 marked in the field consists of a wetland/watercourse system which only slightly encroaches upon the western section of the property. This wetland/watercourse

Aleksandra Moch, 44 Lewelyn Road Stamford, CT 06902
cell: (203) 550 9373, aleksandra_moch@yahoo.com

which is maintained in its naturally wooded state surrounds the site. There are two streams which flow off-site in close proximity to the western and eastern property lines.

WETLAND SOILS

The soils were classified using soil criteria and maps developed by USDA Natural Resource Conservation Service.

3 – Ridgebury, Leicester, and Whitman extremely stony fine sandy loams

This unit consists of poorly, drained and very poorly drained soils. Including with this unit in mapping are small areas of moderately well drained Woodbridge and Sutton soils and very poorly drained Adrian and Scarboro soils. The major soils in this unit have a seasonal high water table at or near the surface from fall through spring.

Ridgebury soils have a surface layer of very dark grayish brown fine sandy loam. The subsoil is brown and light brownish gray, mottled fine sandy loam. The substratum is grayish brown and dark yellowish brown, mottled fine sandy loam.

Leicester soils have a surface layer of black fine sandy loam. The subsoil is brown, mottled fine sandy loam and gravelly fine sandy loam. The substratum is olive brown, mottled gravelly fine sandy loam.

Whitman soils have a surface layer of very dark gray fine sandy loam. The upper section of subsoil is dark and grayish brown gravelly fine sandy loam. The lower section of subsoil is grayish brown, mottled fine sandy loam. The substratum is very firm, grayish brown, mottled gravelly fine sandy loam.

UPLAND SOILS

60C—Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony

Canton is a well-drained soil found at ridges, moraines and hills. The parent material consist of a coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist. The depth to ground water is more than 80 inches.

Typical profile

- *0 to 7 inches:* fine sandy loam
- *7 to 15 inches:* fine sandy loam
- *15 to 26 inches:* gravelly fine sandy loam
- *26 to 65 inches:* gravelly loamy sand

Charlton is also a well-drained soil which occurs on hills, ground moraines and ridges. The parent material consist of a coarse-loamy melt-out till derived from granite, gneiss, and/or schist. The depth to ground water is also more than 80 inches.

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Typical profile

- *0 to 7 inches:* fine sandy loam
- *7 to 22 inches:* gravelly fine sandy loam
- *22 to 65 inches:* gravelly fine sandy loam

308 – Udorthents, smoothed

This unit consists of areas that have been altered by cutting or filling. The slope occurring in this area vary from 0 to 35 percent. The depth to restrictive feature are more than 80 inches. This is a moderately well drain soil with water table hovering between 24 and 54 inches.

Typical profile

- 0 to 5 inches: loam
- 5 to 21 inches: gravelly loam
- 21 to 80 inches: very gravelly sandy loam

Certified by:

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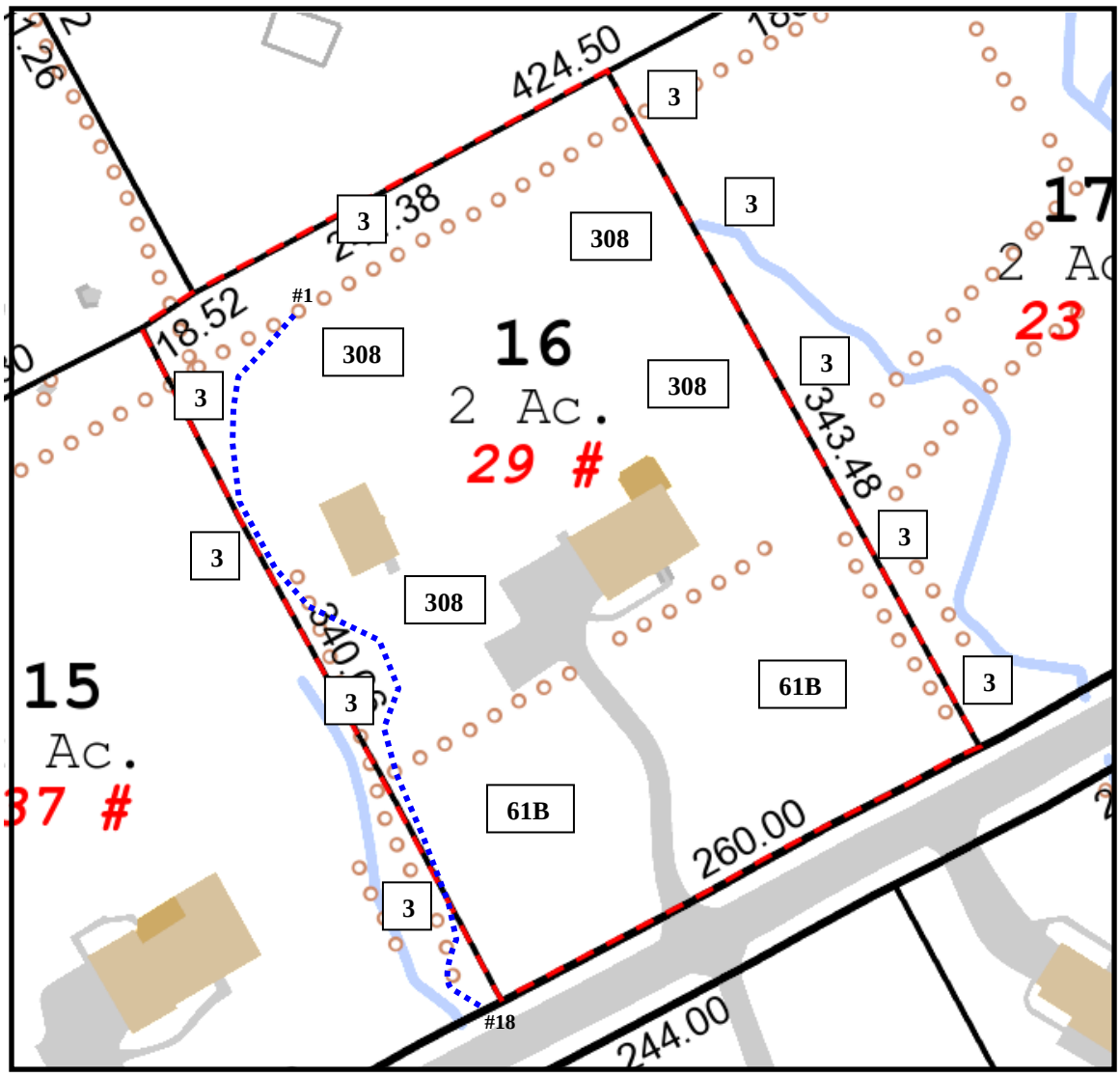

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