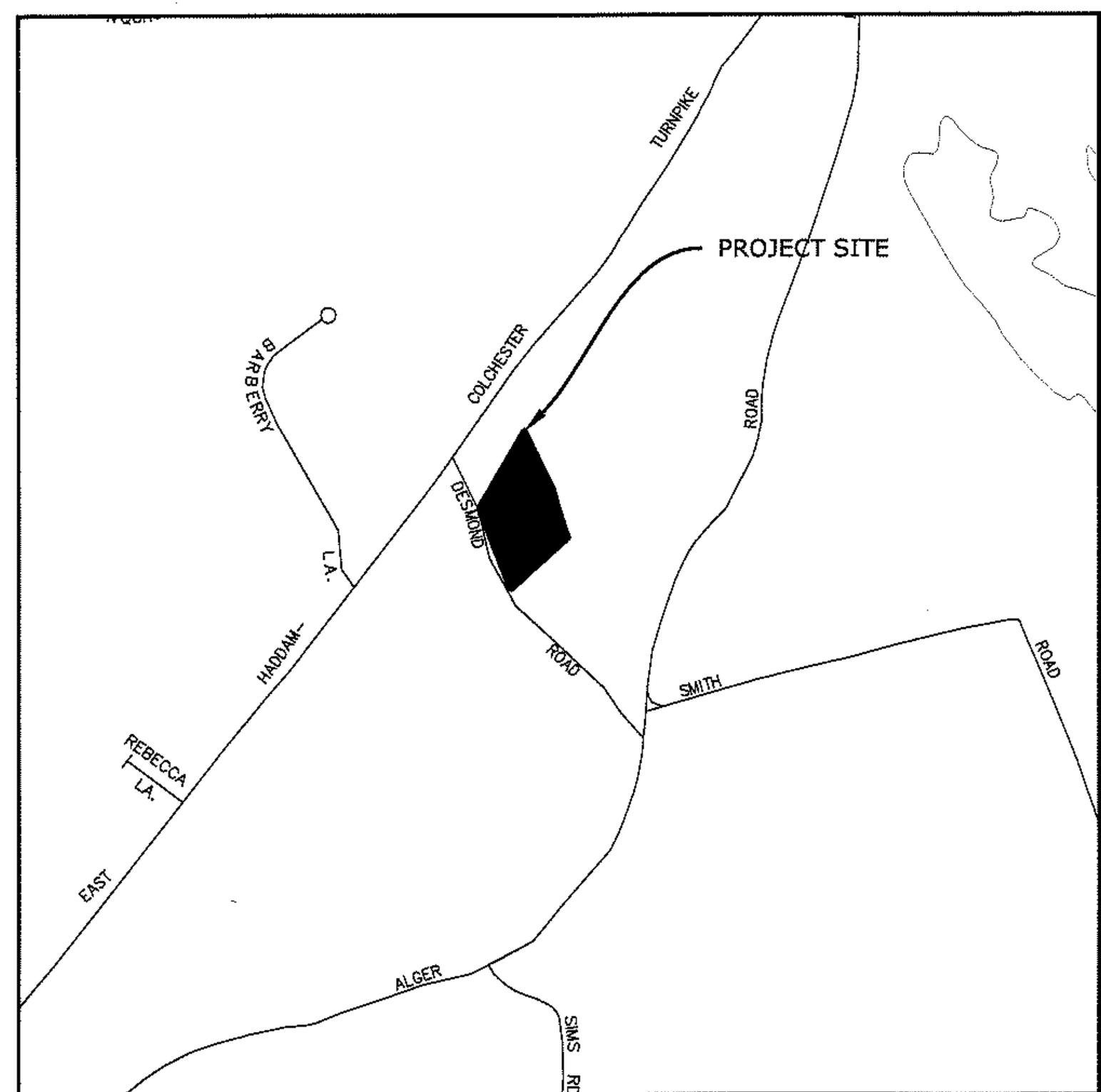
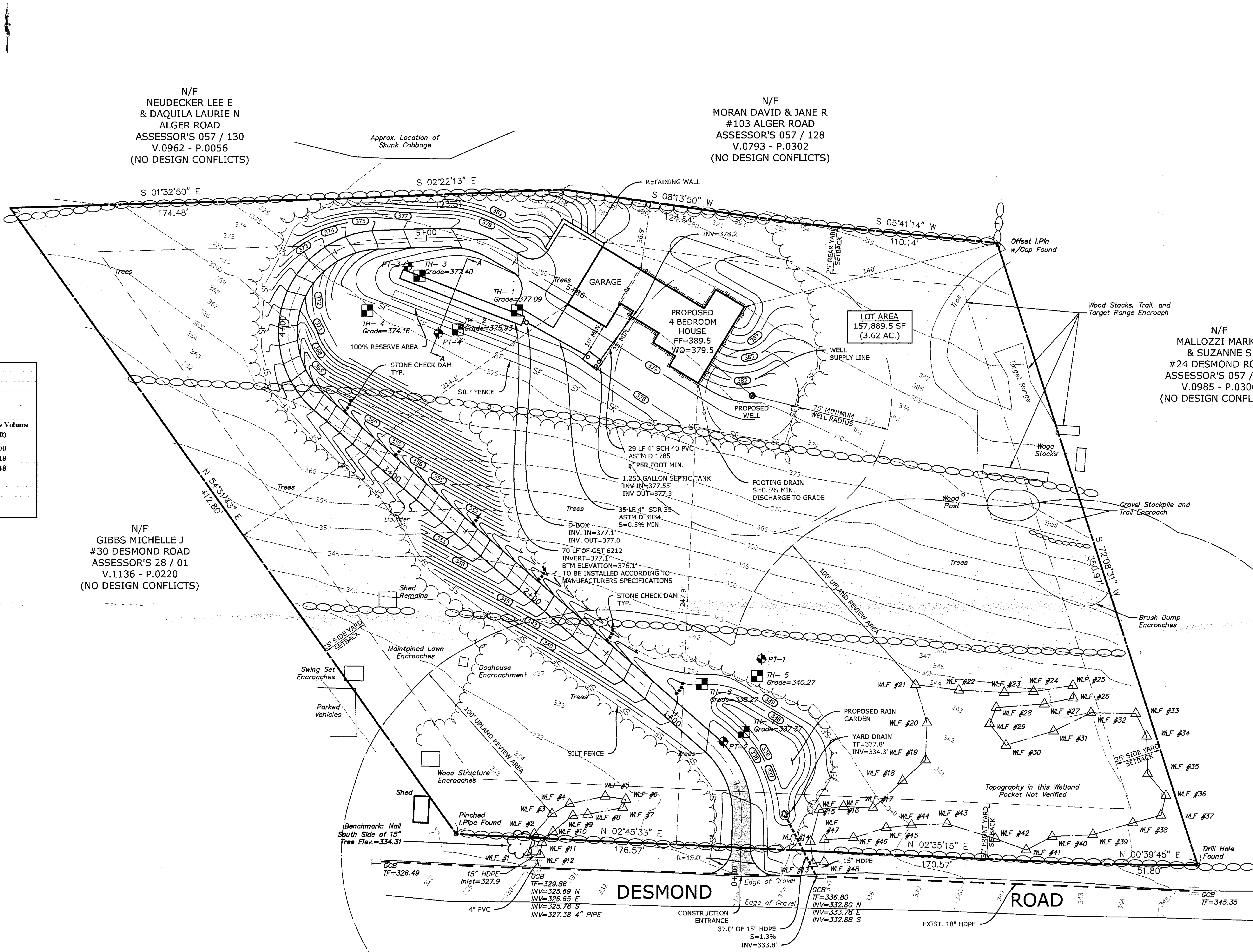
DATE	REVISION	CK.



LOCATION MAP
SCALE: 1"=1000'±



STORMWATER RECHARGE SYSTEM:

Impervious Surcace Area= 9,250 SF
Storage Required= 9,250X1"/12=771 CF

RAIN GARDEN STROAGE VOLUME:

Elevation (ft)	Surface Area (ft2)	Volume (ft3)	Volume (ac-ft)	Cumulative Volume (ac-ft)
336.0	544	0.0	0.000	**0.000**
337.0	1,032	788.0	0.018	**0.018**
338.0	1,582	1,307.0	0.030	**0.048**

SUMMARY:

1" Water Quality Volume= 771 CF
Total Storage Provided= 1,307 CF

PROPOSED SANITARY SYSTEM DESIGN:

PROPOSED 4 BEDROOM HOUSE
DESIGN PERCOLATION RATE = 10.1–20.0 MIN/IN
REQUIRED EFFECTIVE LEACHING AREA = 788 SF
PROVIDE 1 LINE 70 LF OF GST 6212
1 X 70 LF X 10.0 SF/LF = 700 SF PROVIDED

PROVIDE 1,250 GALLON SEPTIC TANK

MINIMUM LENGTH SYSTEM SPREAD
(MLSS)

DEPTH TO RESTRICTION = 30"
SLOPE = 8.0 PERCENT

HF = 28
FF = 1.75
PF = 1.25

MLSS REQUIRED = 28 X 1.75 X 1.25 = 62 LF
MLSS PROVIDED = 70 LF OF GST6212
PROVIDE 100% RESERVE AREA

LEGEND

- ● IRON PIPE/ROD TO BE SET
- MON ⊡ MONUMENT
- IP ◎ IRON PIPE/ROD
- DH ⊙ DRILL HOLE
- Ⓦ WELL
- CONC. CONCRETE
- GTD GRADE TO DRAIN
- FND FOUND
- FF FINISHED FLOOR
- EXIST. EXISTING
- TW TOP OF WALL
- CL&P# 1198 –O– EXISTING UTILITY POLE
- TH#1 TEST HOLE
- PT#1 PERCOLATION TEST HOLE
- [7.0] PROPOSED SPOT ELEVATION
- – – 100 – – EXISTING CONTOURS
- —— SF —— SILT FENCE
- EXISTING STONEWALL

DISTRICT R–1

ZONING COMPLIANCE CHART

ZONING REGULATION	REQUIRED/ ALLOWED BY REGULATION	EXISTING	PROPOSED
MIN. LOT AREA	43,560 SF	157,889.5 SF	157,889.5 SF
MIN. LOT WIDTH	150 Ft.	N/A	410.6'
FRONT SETBACK	30 Ft.	N/A	247.9'
SIDE SETBACKS	25 Ft.	N/A	NORTH 214.1' / SOUTH 140.0'
REAR SETBACK	25 Ft.	N/A	36.9'
MAX. LOT COVERAGE	10%	N/A	1.7% (2,748 SF)
MAX. SURRFACE IMPERVIOUS COVERAGE	20%	N/A	5.9% (9,250 SF)
MAX. BUILDING HEIGHT	35 Ft.	N/A	<35 Ft.

NOTE:

HOUSE, GARAGE, WELL, SANITARY SYSTEM AND DRIVE LOCATION ARE SHOWN TO DEMONSTRATE THAT THE LOT IS BUILDABLE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. AN INDIVIDUAL SITE PLAN SHOWING THE ACTUAL IMPROVEMENTS TO BE CONSTRUCTED SHALL BE PREPARED PRIOR TO CONSTRUCTION.

CONN_COORDS

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

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

ROBERT L. DOANE, JR.
CONN. P.E. & L.S. LIC. NO. 11463

STATE OF CONNECTICUT ROBERT L. DOANE JR. NO. 11463 REGISTERED PROFESSIONAL ENGINEER

STATE OF CONNECTICUT ROBERT L. DOANE JR. NO. 11463 LICENSED LAND SURVEYOR

MAP #57 LOT #123

DOANE ENGINEERING
CIVIL ENGINEERING AND LAND SURVEYING
P.O. BOX 113 CENTERBROOK, CONNECTICUT 06409
TEL: (860)767-0138, FAX: (860)767-9104

SITE PLAN
PREPARED FOR
ALEXIS DEVLIN
DESMOND ROAD ,EAST HADDAM , CONNECTICUT

SCALE:	DATE:	SHEET NO.:	IDENT. NO.:
1"=40'	07/28/23	1 OF 2	

DATE	REVISION	CK.

CONSTRUCTION SEQUENCE
(SANITARY SYSTEM)

1. NOTIFY TOWN HEALTH DEPARTMENT AND THE ENGINEER 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.NO PORTION OF THE SYSTEM WILL BE COVERED WITHOUT INSPECTION AND APPROVAL BY THE ENGINEER OR THE SANITARIAN.
2. PLACE SILT FENCE AS SHOWN ON THE DRAWING AND IN THE DETAIL.
3. REMOVE ALL TREES, STUMPS AND DELETERIOUS MATERIAL FROM SYSTEM AREA.
4. STOCKPILE TOPSOIL FOR REUSE.
   A. DO NOT STOCKPILE TOPSOIL IN SANITARY SYSTEM AREA.
   B. DO NOT REMOVE SUBSOIL.
5. ENGINEER/LAND SURVEYOR SHALL FIELD STAKE THE PROPOSED SYSTEM PRIOR TO INSTALLATION. ADDITIONAL A BENCH MARK SHOULD BE SET AT THE TIME OF STAKEOUT.
6. INSTALL SEPTIC SYSTEM AS SHOWN.
   A. IF SOIL CONDITIONS OTHER THAN THOSE SHOWN IN THE SOIL LOGS ARE ENCOUNTERED DURING THE INSTALLATION OF THE SANITARY SYSTEM, THE DESIGN ENGINEER OR THE SANITARIAN SHALL BE NOTIFIED AND THE WORK WILL BE HALTED PENDING REVIEW OF THOSE CONDITIONS. IF NECESSARY THE SANITARY SYSTEM SHALL BE REVISED.
   B. A MINIMUM OF 4 FEET MUST BE MAINTAINED BETWEEN THE BOTTOM OF THE SYSTEM AND LEDGE.A MINIMUM OF 1.5 FEET MUST BE MAINTAINED BETWEEN THE BOTTOM OF THE SYSTEM AND SEASONAL HIGH GROUNDWATER.
7. DO NOT BACKFILL ANY PORTION OF THE SANITARY SYSTEM UNTIL INSPECTED BY THE SANITARIAN AND UNTIL A "RECORD" SURVEY HAS BEEN COMPLETED.
8. REPLACE TOPSOIL, GRADE, SEED AND MULCH ALL DISTURBED AREAS.
9. MAINTAIN SYNTHETIC FILTER BARRIER UNTIL ALL DISTURBED AREAS ARE STABILIZED.

SANITARY SYSTEM NOTES:

1. NO LARGE CAPACITY TUBS (> 100 GALLON CAPACITY) ARE PLANNED AND WILL NOT BE PERMITTED IN THE PROPOSED RESIDENCE.
2. NO WATER TREATMENT SYSTEM WASTE WATER SHOULD BE DISCHARGED TO THE SEPTIC SYSTEM.
3. A GARBAGE GRINDER (DISPOSAL) IS PROPOSED AND THE SEPTIC TANK HAS BEEN INCREASED IN SIZE TO A 1,500 GALLON TANK
4. WATER SUPPLY SHALL BE BY INDIVIDUAL WELL
5. ALL SOLID PIPING AFTER THE SEPTIC TANK TO BE 4" PVC ASTM D 3034, SDR 35.
6. FILTER FABRIC SHALL BE SELECTED FROM THE FOLLOWING TABLE:

APPROVED FILTER FABRICS FOR COVERING STONE AGGREGATE

MANUFACTURE	DESIGNATION NUMBER
AMERICAN ENGINEERING FABRICS	AEF-480
BRADLEY INDUSTRIAL TEXTILE	PHENOIX LIJOMA
CARTHAGE MILLS	M35
CULTEC	410
DUPONT	SF20
ENGINEERED SYNTHETIC PRODUCTS	TNS R020
GEO FABRICS	GF 150
L&M SUPPLY COMPANY	L&M 231
MIRAFI	65304 (4' WIDE), 65303 (3' WIDE)
SKAPS INDUSTRIES	SKAPS GT 120
SRW PRODUCTS	SRW PRODUCTS DF1, SRW PRODUCTS DF2
TERRA TEX	SO1.5, P01.5
TYPAR	3151, 3201
US FABRIC INC.	US 1.5 CT

7. NO DEVIATION FROM THIS PLAN WILL BE ALLOWED WITHOUT THE APPROVAL OF THE ENGINEER AND SANITARIAN.
8. SEPTIC TANK CONSTRUCTION JOINTS SHALL BE SEALED WITH ASPHALT CEMENT. ALL PIPE CONNECTIONS TO THE SEPTIC TANK AND DISTRIBUTION BOXES SHALL BE SEALED WITH A POLYETHYLENE GASKET ("POLY-LOK" OR APPROVED EQUAL)
9. SEPTIC TANK AND BAFFLES SHALL CONFORM TO SECTION V.A.1 TECHNICAL STANDARDS OF THE STATE HEALTH CODE.
10. SEPTIC TANK SHALL BE TWO COMPARTMENT TANK WITH HEAVY DUTY STEEL HANDLES FOR MANHOLE ACCESS COVERS AND GAS BAFFLES INSTALLED ON OUTLET PIPING. SEPTIC TANK TO BE EQUIPPED WITH AN APPROVED NON-BY-PASS EFFLUENT FILTER AT THE OUTLET. SEE TABLE BELOW:

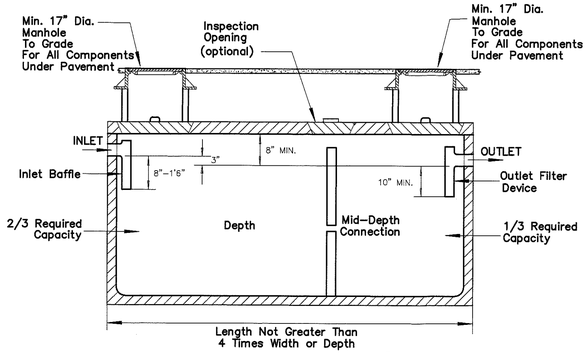
APPROVED SEPTIC TANK EFFLUENT FILTERS

MANUFACTURER	MODEL
BEAR ONSITE	ML2-416, ML2-920, ML3-910 ML3-916, ML3-925, ML3-932
BIO-MICROBICS	Sanitee Series, ST 416, ST 418, ST 818 ST 836, ST 1618, ST 1638
BOWCO INDUSTRIES	EF-235
GAG-SIMTECH	STF-110, STF-110-7R STF-110-6W, STF-110-8B
NORWECO	BIO-KINETIC BK2000
ORENCO SYSTEMS	FT0444-36 FT0854-36 FT1254-36 FT1554-36 FTJ0418
POLYLOK	PL-68, PL-122, PL-525, PL-625 GF 10-8, GF 10-16
PREMIER TECH	EFT-080
RISSY PLASTICS	45 - CLIK N'STICK
TUF-TITE	EF-4, EF-6
ZABEL	A100 A300 A1800 A1801 A100-HIP A300-HIP A1800-HIP A1801-HIP A600-12, A600-8
ZOELLER/CLARUS	WW1 (170-0078) WW4 (5000-0007)

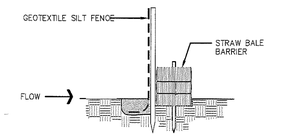
11. STONE AGGREGATE MEANS BROKEN STONE, CRUSHED STONE, OR SCREENED GRAVEL MEETING DEPARTMENT OF TRANSPORTATION FORM 816 SPECIFICATION M.01.01 FOR NO. 4 OR NO. 6 STONE (AS SHOWN BELOW OR LATEST SPECIFICATION). STONE AGGREGATE SHALL BE FREE OF SILT, DIRT OR DEBRIS AND SHALL SHOW A LOSS OF ABRASION OF NOT MORE THAN 50 PERCENT USING AASHTO METHOD T-96.

SIEVE SIZE	NO. 4 STONE AGGREGATE (A.K.A. 1 & " STONE) PERCENT PASSING (by weight)	NO. 6 STONE AGGREGATE (A.K.A. 3/4" STONE) PERCENT PASSING (by weight)
2 - INCH	100	N/A
1.5 INCH	90-100	N/A
1 INCH	20-55	100
3/4 INCH	0-15	90-100
1/2 INCH	N/A	20-55
3/8 INCH	0-5	0-15
#4	N/A	0-5
#40	0-3	0-3
#200	0-15	0-15

12. ALL TANKS REQUIRING RISERS SHALL MAINTAIN THE ORIGINAL COVERS ON THE TANKS, HAVE RISER COVERS THAT WEIGHS AT LEAST 59 LBS. AND/OR INSTALL A SAFETY DEVICE BELOW THE RISER TO PREVENT INDIVIDUALS FROM FALLING INTO THE TANK. ALL BELOW GRADE TANK OR RISER COVER HANDLES SHALL CONTAIN OR BE FITTED WITH A MATERIAL THAT CAN BE LOCATED WITH A METAL DETECTOR.



TYPICAL SEPTIC TANK

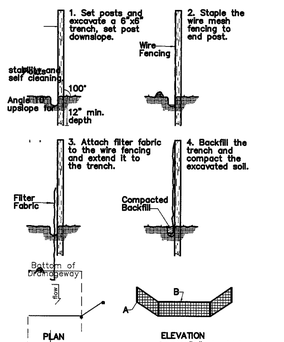


SECTION

GEOTEXTILE SILT FENCE AND STRAW BALE SEDIMENT BARRIER
NOT TO SCALE

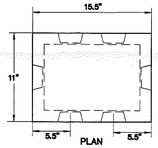
NOTE:

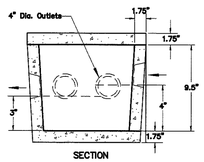
SEE GEOTEXTILE SILT FENCE AND STRAW BALE BARRIER DETAILS THIS SHEET.



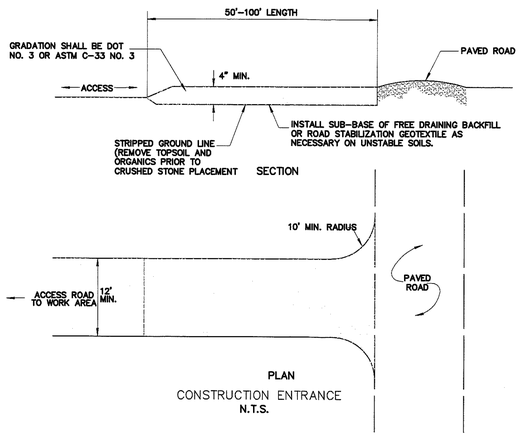
SILT FENCE
NOT TO SCALE

Source: U.S. Department of Agriculture, Soil Conservation Service, Storrs, Connecticut.

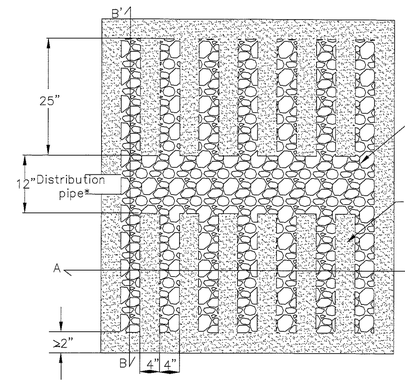




DISTRIBUTION BOX
N.T.S.



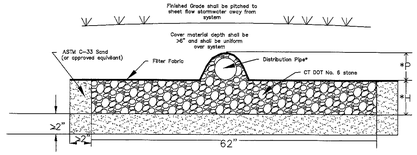
CONSTRUCTION ENTRANCE
N.T.S.



*3" min. I.D., ASTM D-3034, SDR 35 pipe for gravity applications
0.75" min. I.D., ASTM D-2665, SCH 40 PVC pipe for pressure applications

GEOMATRIX GST LEACHING SYSTEM
Plan View
N.T.S

12" (GST6212)



*H=12" (GST6212) *P= 2" - 5.5"

GEOMATRIX GST LEACHING SYSTEM
B-B' CROSS SECTION
N.T.S

PERC TEST DATA
CONDUCTED BY DOANE ENGINEERING
ON 05/23/23

Perc Hole 1 05/23/23 - Depth=23"			
Time	Depth Reading (Inches)	Rate (minutes / inch)	
10:50 AM	5.00		
11:00 AM	12.50	1.33	Min / Inch
11:10 AM	16.50	2.50	Min / Inch
11:20 AM	17.75	8.00	Min / Inch
11:25 AM	18.50	6.67	Min / Inch
Note: Dry by 11:25 AM		5.7	Min / Inch

Perc Hole 2 05/23/23 - Depth=12"			
Time	Depth Reading (Inches)	Rate (minutes / inch)	
11:15 AM	1.00		
11:25 AM	2.75	5.71	Min / Inch
11:35 AM	3.75	10.00	Min / Inch
11:45 AM	4.75	10.00	Min / Inch
11:55 AM	5.50	13.33	Min / Inch
12:05 PM	6.50	10.00	Min / Inch
12:15 PM	7.25	13.33	Min / Inch
		12.2	Min / Inch

Perc Hole 3 05/23/23 - Depth=24"			
Time	Depth Reading (Inches)	Rate (minutes / inch)	
12:00 PM	7.00		
12:05 PM	13.00	0.83	Min / Inch
12:10 PM	14.50	3.33	Min / Inch
12:15 PM	16.50	2.50	Min / Inch
12:20 PM	18.00	3.33	Min / Inch
12:25 PM	19.00	5.00	Min / Inch
12:30 PM	20.00	5.00	Min / Inch
Note: Dry by 12:30 PM		4.4	Min / Inch

Perc Hole 4 05/23/23 - Depth=18"			
Time	Depth Reading (Inches)	Rate (minutes / inch)	
12:01 PM	5.00		
12:06 PM	5.50	10.00	Min / Inch
12:11 PM	6.00	10.00	Min / Inch
12:21 PM	7.00	10.00	Min / Inch
12:31 PM	7.50	20.00	Min / Inch
12:41 PM	8.00	20.00	Min / Inch
12:51 PM	8.50	20.00	Min / Inch
		20	Min / Inch

TEST HOLE DATA
CONDUCTED BY CHATHAM HEALTH DISTRICT
& DOANE ENGINEERING
ON 05/23/23

TH 1
0 - 7" Natural topsoil
7 - 33" Light brown medium sandy loam, wet
33 - 69" Olive brown medium loamy sand, wet
Mottles: 31'
GW: seeps 49"
Ledge: No refusal
Roots: 48"

TH 2
0 - 6" Natural topsoil
6 - 35" Light brown medium sandy loam
53 - 86" Light brown medium sand with gravel, moist
Mottles: 30"
GW: seeps 63"
Ledge: No refusal
Roots: 35"

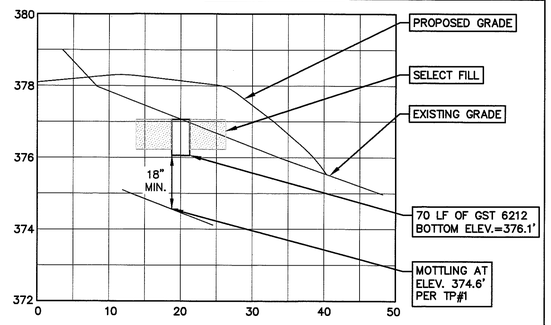
TH 3
0 - 7" Natural topsoil
7 - 18" Light brown medium sandy loam with gravel
18 - 33" Light brown medium loamy sand with gravel, firm
Mottles: 36"
GW: seeps 70"
Ledge: No refusal
Roots: Heavy 24", Most to 38", Some to 56"

TH 4
0 - 8" Natural topsoil
8 - 31" Brown fine silty loam
31 - 89" Light brown fine silty sand firm to moderately compact
Mottles: 37"
GW: 87"
Ledge: No refusal
Roots: most to 36", Some to 48"

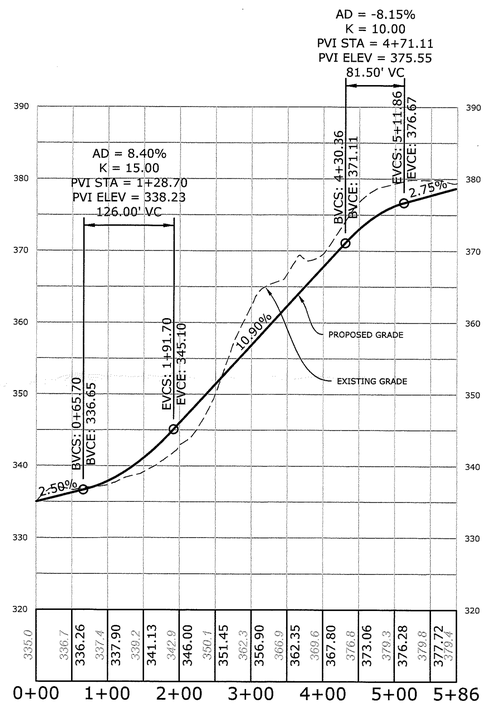
TH 5
0 - 8" Topsoil dark
8 - 18" Brown fine silty loam, moist
18 - 84" Light brown medium loamy sand with gravel, wet
Mottles: 24"
GW: seeps 45"
Ledge: No refusal
Roots: 33"

TH 6
0 - 3" Natural topsoil
3 - 14" Brown medium loamy sand, wet
14 - 66" Light brown medium loamy sand with gravel, wet
Mottles: 15"
GW: seeps 31"
Ledge: No refusal
Roots: not noted

TH 7
0 - 8" Natural topsoil
8 - 24" Brown medium sandy loam
24 - 68" Light brown medium loamy sand with gravel, wet
Mottles: 32"
GW: seeps 38"
Ledge: No refusal
Roots: 27"
Moderately compact at 30"



SECTION A-A
SANITARY SYSTEM X-SECTION
HORZ. SCALE: 1" = 10'
VERT. SCALE: 1" = 1'



DRIVEWAY PROFILE
HORZ. SCALE: 1" = 100'
VERT. SCALE: 1" = 10'

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

ROBERT L. DOANE, JR.
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SITE PLAN
PREPARED FOR
ALEXIS DEVLIN
DESMOND ROAD, EAST HADDAM, CONNECTICUT

SCALE:	DATE:	SHEET NO.:	IDENT. NO.:
NOT TO SCALE	07/28/23	2 OF 2	