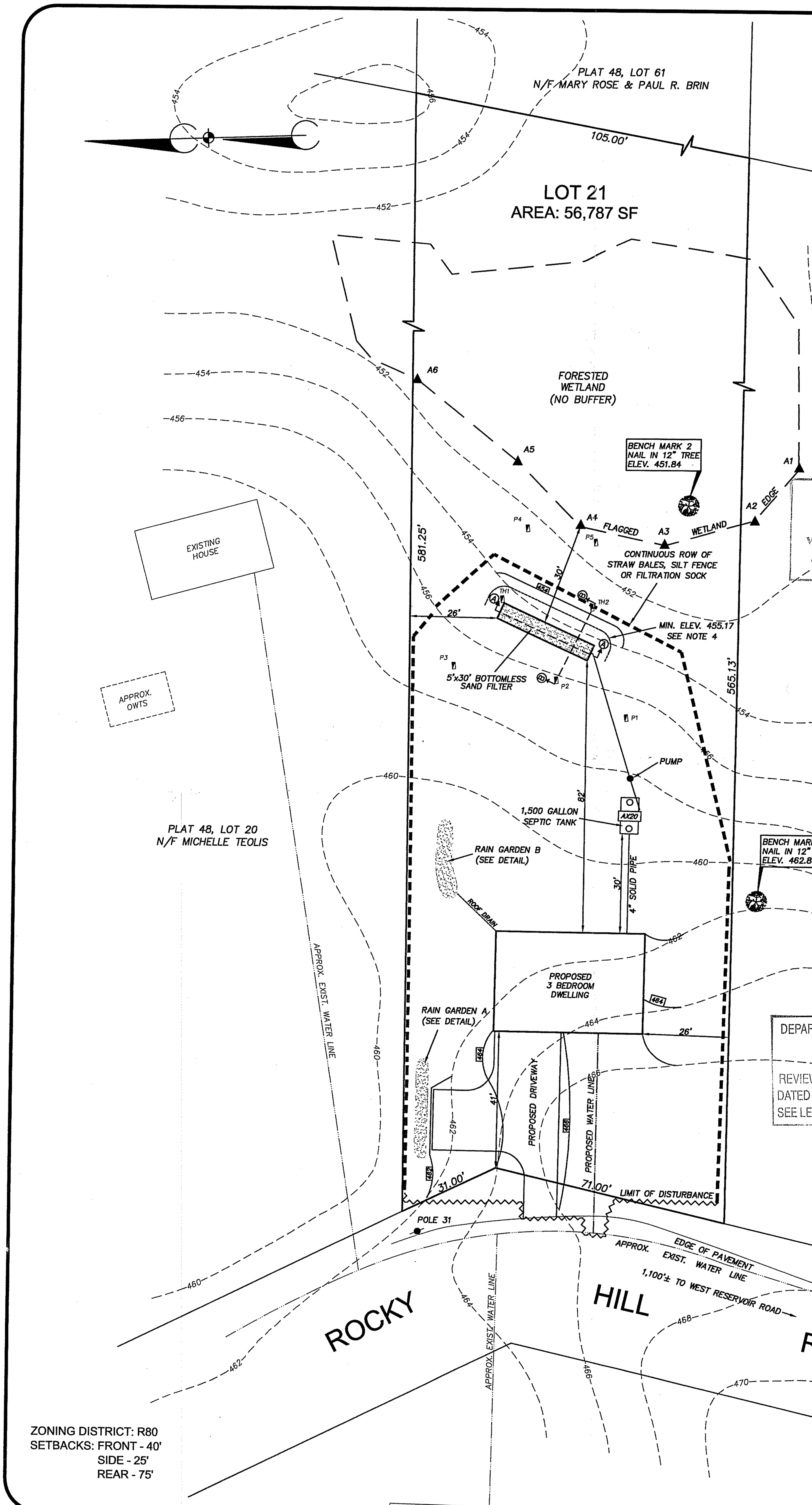


ZONING DISTRICT: R80
SETBACKS: FRONT - 40'
SIDE - 25'
REAR - 75'

VARIANCE REQUESTS:

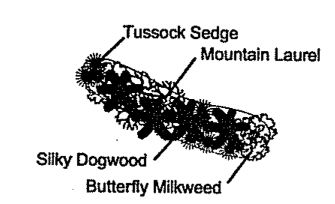
Rule 22 Table 22.1 Minimum setback distances - General
50' required from leachfield to wetland - 30' provided

Rule 32.5 Depth to Restrictive Layer or Bedrock From Original Ground Surface - The minimum depth to a restrictive layer or bedrock shall be met within twenty-five (25) feet of all sides of the leachfield.
Ledge is located within 4' of original ground in all areas tested with the exception of test holes 1 & 2.

WAIVER REQUEST FOR: 32.8 OWTS Separation Distance to a Restrictive Layer or Bedrock on upgradient side. Leachfield bottom is above ledge elevation.

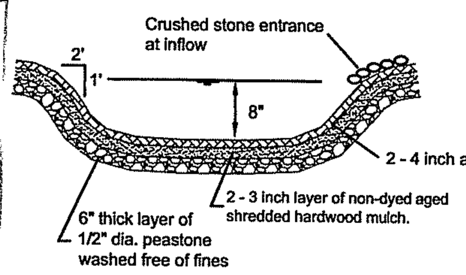
RAIN GARDEN A PLANTING DETAIL
NOT TO SCALE
DRIVEWAY AREA: 1,267 SF
SOIL TEXTURE: SANDY LOAMS
AREA: 104 SF
26 PLANTS

RAIN GARDEN B PLANTING DETAIL
NOT TO SCALE
ROOF AREA: 1,350 SF
SOIL TEXTURE: SANDY LOAMS
AREA: 112 SF
28 PLANTS



Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

RAIN GARDEN CROSS-SECTIONL
NOT TO SCALE



RAIN GARDEN

TREATMENT

Rain garden to be 8" deep with a 2 - 4 inch amended soil layer (50/50 mixture of the excavated native soils and mature organic compost) and a 2 - 3 inch layer of non-dyed aged shredded hardwood mulch.

CONSTRUCTION

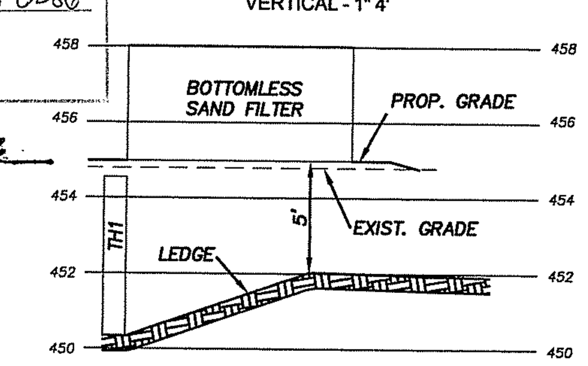
1. A crushed stone entrance should be installed at the inflow to prevent channeling.
2. A berm to detain stormwater should be constructed along the downhill side of the rain garden, perpendicular to the slope of the lawn
3. Be sure that the soil within the rain garden area does not become compacted by construction activities (i.e. heavy machinery). If soil becomes severely compacted it may need to be tilled and amended to maintain proper

MAINTENANCE

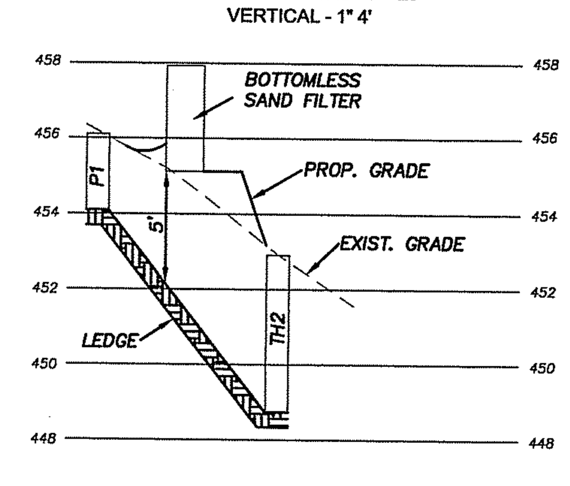
1. The rain garden shall be inspected following at least the first two precipitation events of at least 1.0 inch to ensure that the system is functioning properly. Thereafter, the rain garden shall be monitored and maintained to assure proper functioning, plant growth and survival. Plants shall be replaced on an as-needed basis during the growing season.
2. Silt/sediment shall be removed from the rain garden when the accumulation exceeds one inch, or when water ponds on the surface of the rain garden for more than 48 hours). The top few inches of material shall be removed and shall be replaced with fresh soil mixture and mulch.
3. Pruning or replacement of woody vegetation shall occur when dead or dying vegetation is observed.
4. Soil erosion gullies shall be repaired when they occur.
5. Fertilizer or pesticides shall not be applied to plants within rain gardens.
6. Perennial plants and ground covers shall be replaced as necessary to maintain an adequate vegetated ground cover. Annual plants may also be used to maintain ground cover.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
REVIEWED SITE PLAN APPLICATION NO.: 18-0286
DATED JAN 15 2019
SEE LETTER OF SAME DATE.

SECTION A-A
SCALE: HORIZONTAL - 1"= 20'
VERTICAL - 1" 4'



SECTION B-B
SCALE: HORIZONTAL - 1"= 20'
VERTICAL - 1" 4'



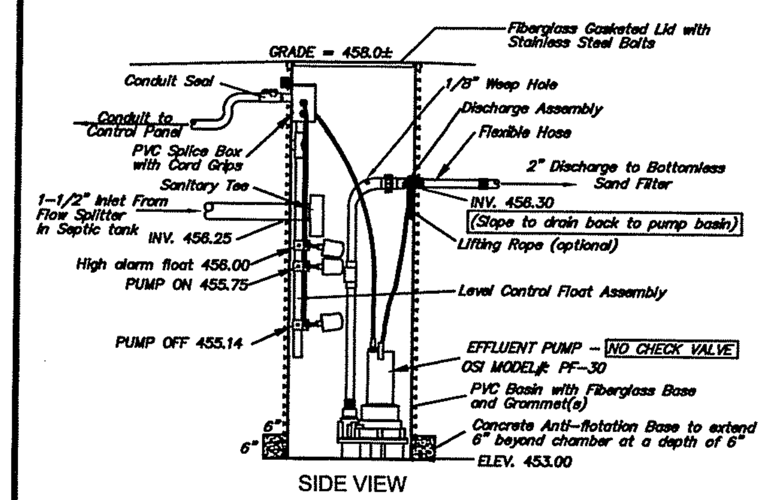
SYSTEM COMPONANTS

1. 1,500 GALLON 2-COMPARTMENT CONCRETE SEPTIC TANK WITH PUMP VAULT AND RECIRCULATING SPLITTER VALVE AND P3005 PUMP.
2. 5' DEEP - 24" DIAMETER PUMP BASIN.
3. AX-20 ADVANTEX TEXTILE FILTER.
4. 30' LONG x 5' WIDE BOTTOMLESS SANDFILTER
5. ORENCO SYSTEMS, INC. CONTROL PANEL.

LEGEND

100 ——— 100	EXISTING CONTOURS
[100]	PROPOSED CONTOURS
TH1	TEST HOLE
▲A6	WETLAND FLAG

24" DIA. BOTTOMLESS SAND FILTER PUMP WITH EFFLUENT PUMP ASSEMBLY
NOT TO SCALE



TEST HOLE DATA
DATE: 7-27-17

TH1
0"-6" A, SL, 10 YR 3/2
6"-36" Bw, SL, 7.5YR 4/6
36"-52" C, CB, G, SL, 10YR 5/3
ESHWT: 52"
LEDGE: 52"

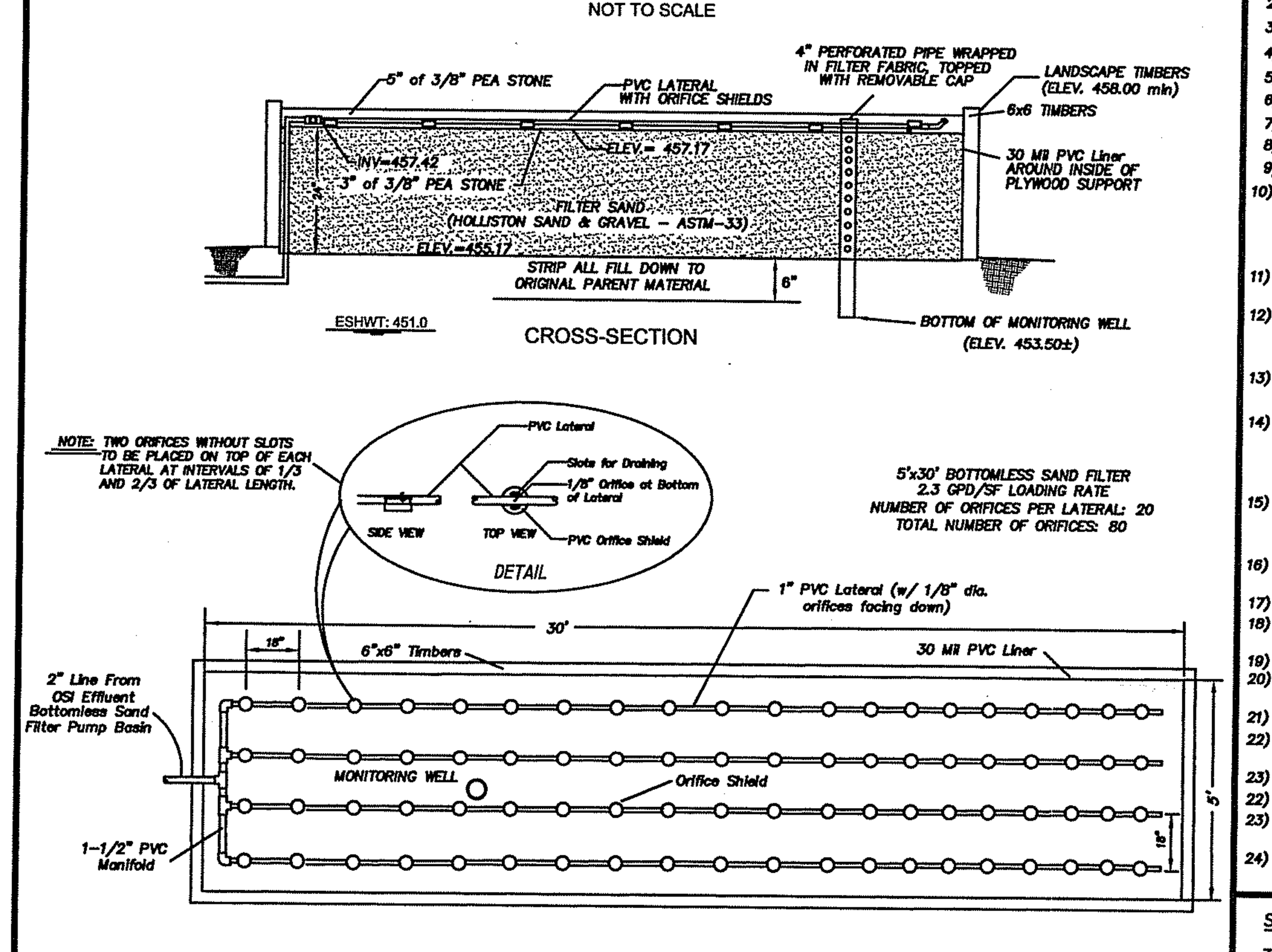
TH2
0"-6" A, SL, 10 YR 3/2
6"-36" Bw, SL, 7.5YR 4/6
36"-48" C, CB, G, SL, 10YR 5/3
ESHWT: 48"
LEDGE: 48"

LEDGE PROBES

P1 - 34"
P2 - 24"
P3 - 36"
P4 - 42"
P5 - 30"

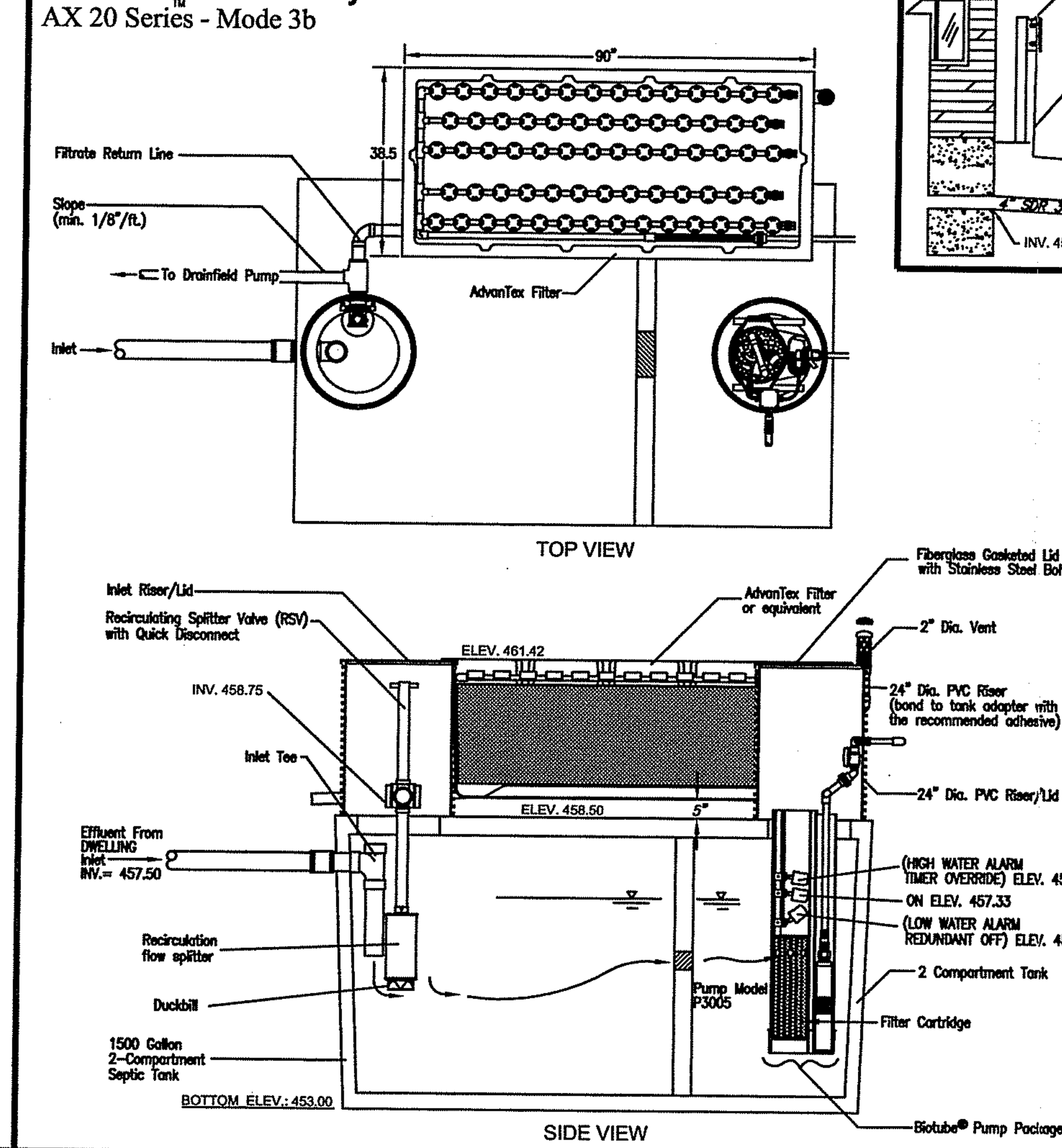
SOIL CATEGORY: 6

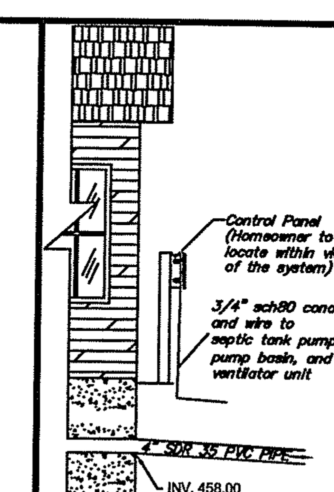
BOTTOMLESS SAND FILTER
NOT TO SCALE

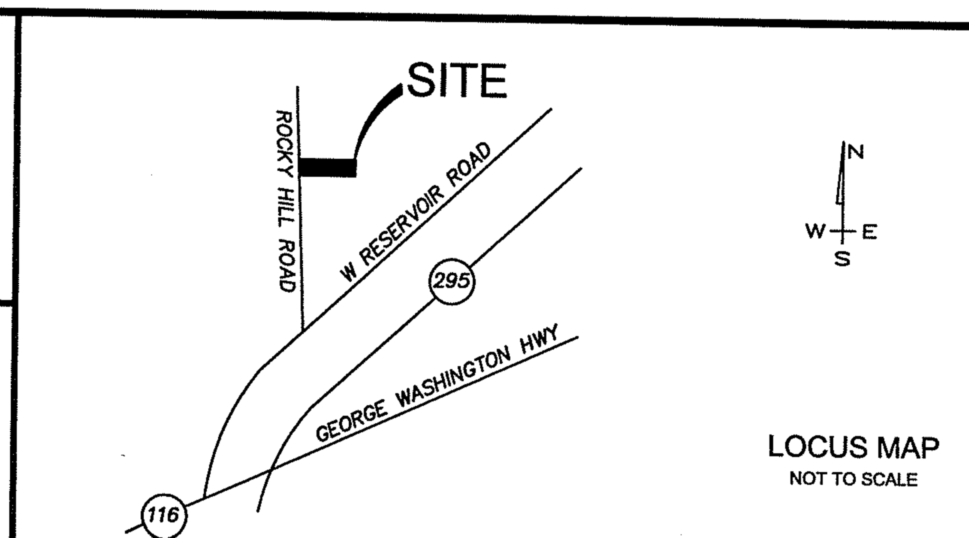


**RECIRCULATING EFFLUENT PUMP SYSTEM (REPS)
(2 COMPARTMENT 1,500 GALLON SEPTIC TANK and
AX 20 ADVANTEX TEXTILE FILTER)**
NOT TO SCALE

AdvanTex™ Treatment System
AX 20 Series - Mode 3b

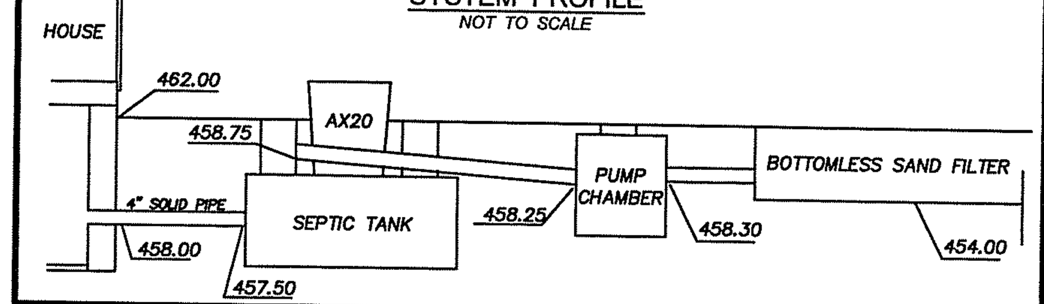






LOCUS MAP
NOT TO SCALE

SYSTEM PROFILE
NOT TO SCALE



NOTES

1) SYSTEM INSTALLATION TO BE SUPERVISED BY THE DESIGNER.
2) ALL TREES AND/OR STUMPS WITHIN 10 FEET OF PROPOSED SYSTEM TO BE CLEARED.
3) NO WELL EXISTS WITHIN 100' OF THE PROPOSED LEACHING SYSTEM.
4) 5 FEET FROM SAND FILTER NOT TO BE LOWER THAN ELEVATION 455.17.
5) ANY PRIVATE WELLS, EXISTING & PROPOSED, WITHIN 200' OF ISDS ARE SHOWN.
6) ANY PUBLIC WELLS, EXISTING AND PROPOSED, WITHIN 500' OF ISDS ARE SHOWN.
7) SEPTIC TANK TO BE A MINIMUM OF 75' FROM ALL WELLS.
8) NO DRAINS OF ANY KIND SHALL BE WITHIN 25' UPGRADIENT OR SIDE GRADIENT OR 50' DOWNGRADIENT OF THE LEACHING SYSTEM.
9) ALL SOIL AT LEAST 6"± BELOW EXISTING GRADE AT BOTTOMLESS SAND FILTER SHALL BE STRIPPED AND BACKFILLED WITH FILTER SAND.
10) THE SEPTIC TANK SHALL BE A WATERTIGHT, 1,500 GALLON 2-COMPARTMENT TANK WITH 24" DIAMETER INLET AND OUTLET ACCESS RISERS. RISERS SHALL BE PVC WITH SECURE FIBERGLASS LIDS. IF CONCRETE TANK IS USED, ABS TANK ADAPTER SHALL BE CAST IN PLACE. TANK SHALL BE VACUUM TESTED WHEN CONSTRUCTED (W/CERTIFICATE) OR WATER TESTED/VACUUM TESTED ON SITE PRIOR TO ACCEPTANCE FROM THE ENGINEER.
11) THE ADVANTEX-AX TREATMENT SYSTEM CONTAINS A PACKED BED FILTER THAT USES SPECIALLY DESIGNED TEXTILE MATERIALS WITHIN A PRE-ASSEMBLED FILTER UNIT.
12) ALL PUMPS SHALL BE EQUIPPED WITH A HIGH WATER LEVEL VISABLE AND AUDIBLE ALARM POWERED BY A CIRCUIT SEPERATE FROM THE PUMP POWER. THE ALARM SHALL BE LOCATED IN A NORMALLY OCCUPIED AREA OF THE DWELLING OR SHALL BE INSTALLED AT A LOCATION TO BE DESIGNATED BY THE HOMEOWNER.
13) THE SEPTIC TANK SHALL BE PROVIDED WITH A PVC INLET TEE AND SCREENING PUMP VAULT IN THE OUTLET END. AN ACCESS RISER SHALL BE INSTALLED DIRECTLY ABOVE THE SCREENED PUMP VAULT AND INLET TEE.
14) ALL MEDIA WITHIN THE ENCLOSURE AND BELOW THE COVER STONE SHALL HAVE AN EFFECTIVE SIZE (D_{10}) OF 0.33 mm (+/-) AND UNIFORMITY COEFFICIENT (D_{60}/D_{10}) OF 3.0 TO 4.0. THE MAXIMUM ALLOWABLE PERCENTAGE OF FINES PASSING THROUGH A NUMBER 200 SIEVE SHALL BE 1%. OTHER THAN THE GRADATION AND FINE CONTENT SPECIFIED ABOVE, THE SAND MEDIA SHALL MEET OTHER ASTM C-33 SAND SPECIFICATIONS.
15) IF CONTRACTOR ENCOUNTERS ANY CONDITIONS DURING CONSTRUCTION WHICH INDICATE THE SYSTEM CANNOT BE INSTALLED IN ACCORDANCE WITH THE APPROVED DESIGN, OR FIND CONFLICTICTING INFORMATION ON THE PLAN, CONSTRUCTION SHALL CEASE AND DESIGNER BE NOTIFIED.
16) THE DESIGNER IS NOT RESPONSIBLE FOR ANY NEGLIGENT ACT OF OMISSION OF AN ISDS USER, INCLUDING BUT NOT LIMITED TO, FAILURE TO PROPERLY USE AND MAINTAIN THE SYSTEM, WHICH CAUSES DAMAGE TO THE SYSTEM.
17) LOCAL SUPPLIER OF OSI EQUIPMENT: ATLANTIC SOLUTIONS, 2417 EAST MAIN ROAD, PORTSMOUTH, RI 02871 TEL. (401) 293-0176
18) NO STRUCTURES, PERMANENT FEATURES, OR LARGE, HEAVY OR NUMEROUS DECORATIONS SHALL BE PLACED ON TOP OF THE BOTTOMLESS SAND FILTER THAT WOULD OBSTRUCT, PREVENT OR HINDER OPERATION AND MAINTENANCE OR ACCESS TO THE
19) ACCESS PORTS OR MANHOLES SHALL BE REQUIRED FOR SEQUENCING VALVES AND SHALL BE SUFFICIENTLY SIZED TO FACILITATE
20) TIMER SETTINGS SHALL BE CHECKED AT EVERY ESTABLISHED MAINTENANCE AND INSPECTION VISIT AND WHEN HOME OCCUPANCY CHANGES AND ADJUSTED AS NEEDED.
21) THE PANEL BOX MUST BE WITHIN VIEW OF THE SYSTEM LOCATION TO HELP FACILITATE OPERATION AND MAINTENANCE.
22) THE SPACE FROM THE ENDS OF THE LATERALS TO THE LINER SHALL BE CLOSE TO HALF THE ORIFICE SPACING AND BE ABLE TO ACCOMMODATE THE FITTINGS AND HAVE SUFFICIENT SPACE FOR MAINTENANCE ACTIVITIES.
23) SWEEP ELBOWS SHALL BE ATTACHED TO THE DISTAL END OF EACH LATERAL TO FACILITATE MAINTENANCE AND INSPECTION.
22) REFER TO OPERATION & MAINTENANCE AGREEMENT FOR PROPER MAINTENANCE OF ALL SYSTEM COMPONANTS.
23) THE LOCATION OF ALL STRUCTURES, EXISTING OWTS'S, AND WATER LINES WITHIN 100' OF PROPERTY LINES ARE SHOWN OR DENOTED. KNOWN CESSPOOLS ARE LABELED AS SUCH.
24) SITE IS WITHIN WOONSOCKET DRINKING WATER SUPPLY WATERSHED.

SYSTEM SIZING:

3 BEDROOMS: 115 GPD x 3 = 345 GPD
SOIL CATEGORY: 6
APPLICATION RATE: 2.3 GPD/SF
AREA REQUIRED: 345/2.3 = 150 SF
AREA PROVIDED: 5' x 30' = 150 SF

TIMER INFO:

SET ADVANTEX TIMER TO 24 DOSES/DAY
345 GPD/24 DOSES/DAY = 14.38 GAL/DOSE
14.38/35 GPM = .41 MIN.
TOTAL PUMP RUN TIME = 9.84 MIN./DAY
TOTAL PUMP OFF TIME = 1430.16 MIN./DAY
TIME OFF PER CYCLE = 59.19 MIN.
TIME ON PER CYCLE = 0.41 MIN.

DOSING RATE:

14.38 GAL/DOSE
PUMP CHAMBER CAPACITY = 23.5 GAL./FT OR 1.96 GAL./INCH
PUMP CHAMBER DEPTH @ 14.38 GAL = .61 FEET
DOSE PER ORIFICE: 345 GPD/(24 DOSES/DAY)/80 ORIFICES = .18 GAL/ORIFICE/DOSE

ONSITE WASTEWATER TREATMENT SYSTEM and WETLANDS PLAN
FOR
RICHARD HADUCH
PLAT 48, LOT 21
ROCKY HILL ROAD, SMITHFIELD, RI
DATE: OCTOBER, 2018
SCALE: 1" = 20'

REVISED: 11-7-18
11-27-18 - REMOVE PROP. INFO LOT 22
1-3-19 - WETLANDS COMMENTS

GRAPHIC SCALE
0' 20' 40' 60'

CERTIFICATION

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:

LIMITED CONTENT BOUNDARY SURVEY: CLASS IV
TOPOGRAPHIC ACCURACY: T4

STATEMENT OF PURPOSE

THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND THE PREPARATION OF THE PLAN IS AS FOLLOWS: PROPOSED HOUSE

BY: Marc N Nyberg

MARC N. NYBERG License No. 1797 COA No.: A52

JAN 2019

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Planners
GPS
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Unit 104
North Smithfield, RI 02896
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MARC N. NYBERG
No. 1797
PROFESSIONAL LAND SURVEYOR

SHEET NUMBER
1 of 1

JOB NUMBER
18-150