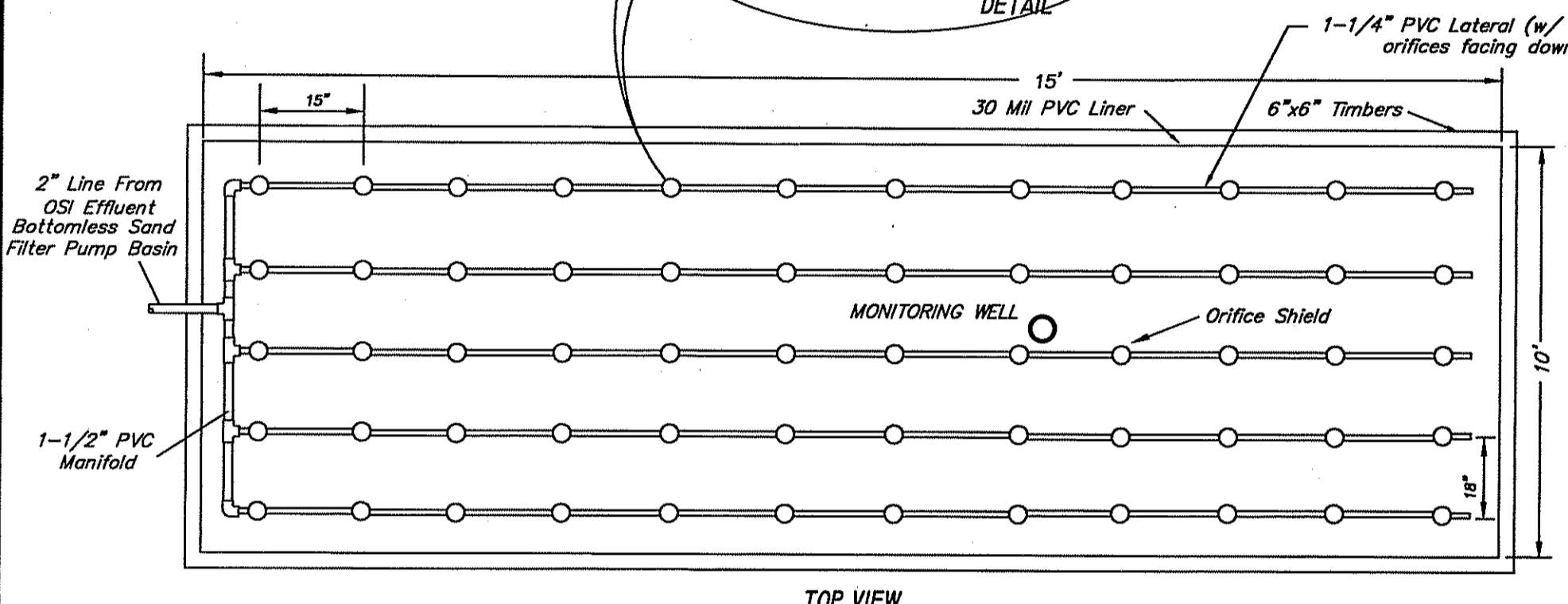
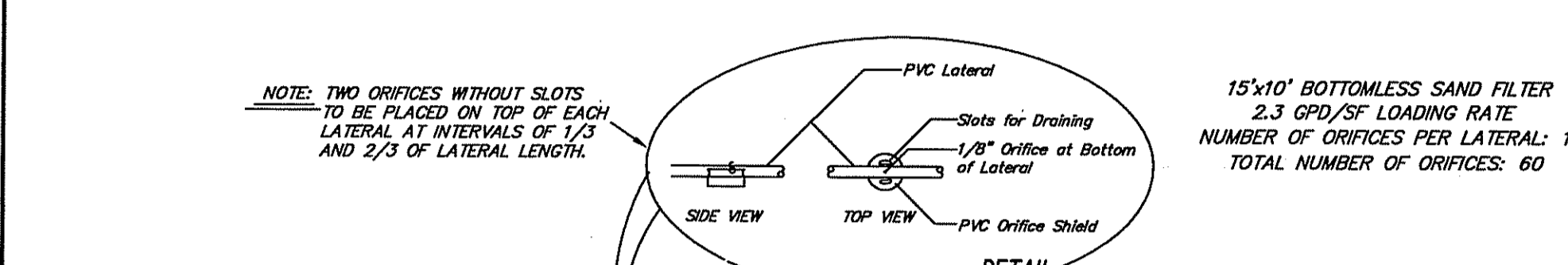
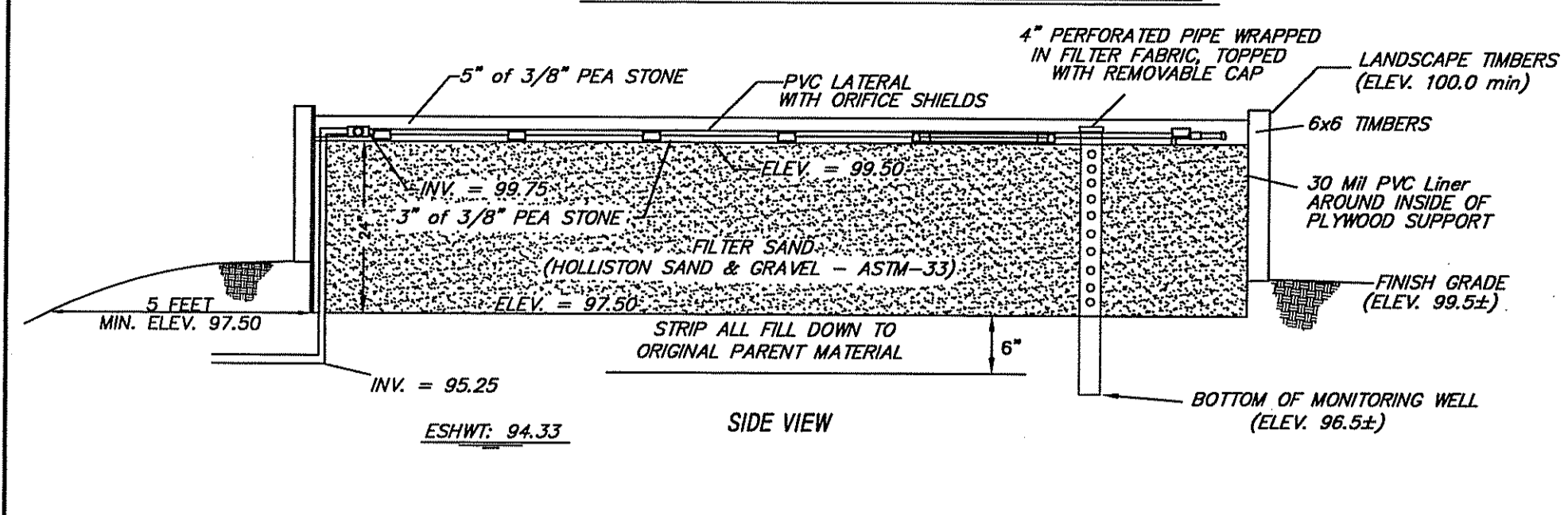
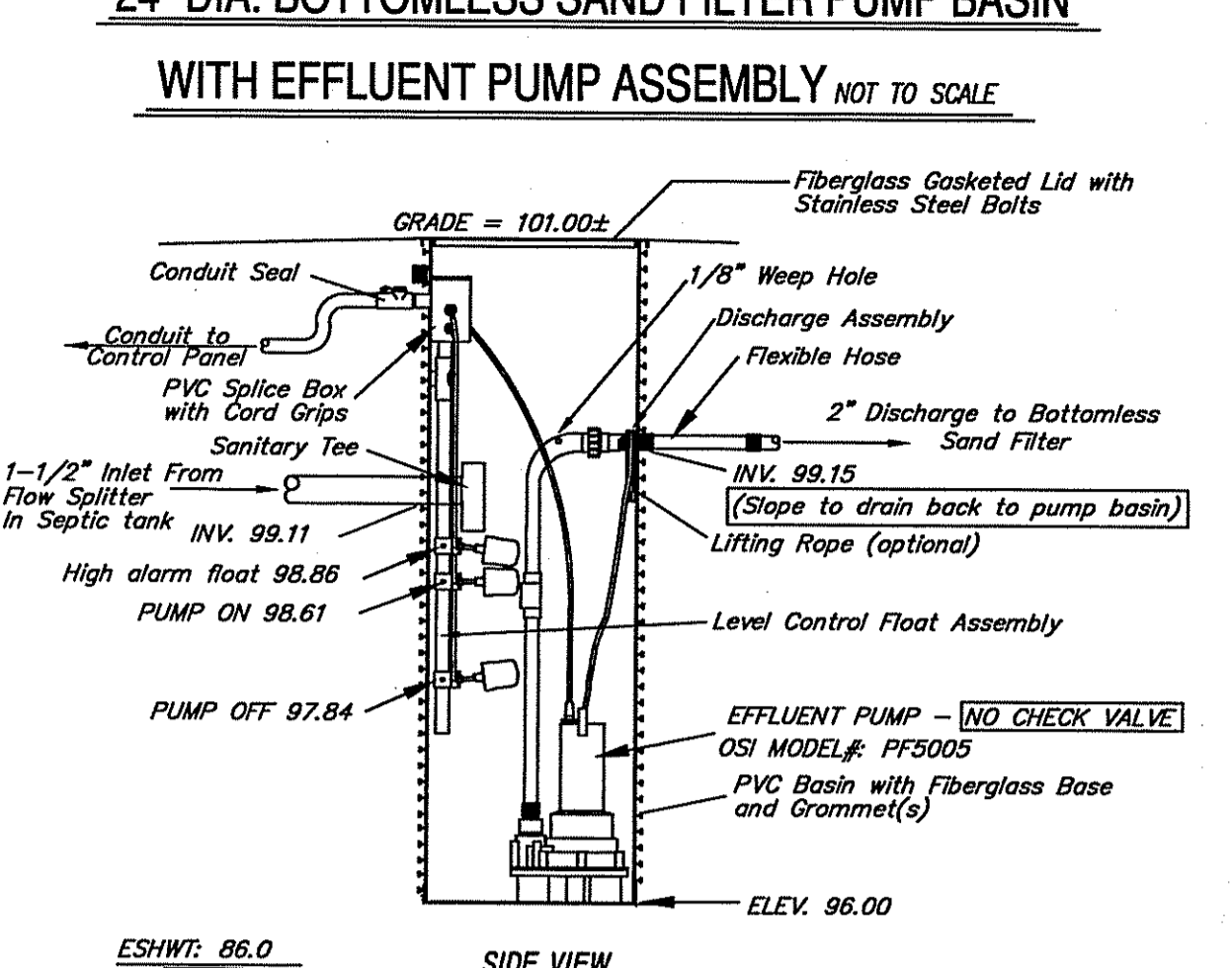


**BOTTOMLESS SAND FILTER NOT TO SCALE**



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



**SYSTEM COMPONENTS**

- 1,500 GALLON 2-COMPARTMENT CONCRETE SEPTIC TANK WITH PUMP VAULT AND RECIRCULATING SPLITTER VALVE AND WOSIP3005 (6 STAGE) PUMP TANK.
- 6" DEEP - 24" DIAMETER PUMP BASIN.
- AX-20 ADVANTEX TEXTILE FILTER.
- 10' LONG x 15' WIDE BOTTOMLESS SAND FILTER
- ORENCO SYSTEMS, INC. CONTROL PANEL.

**TEST HOLE DATA**  
DATE: 10-16-12

TH1 ELEV. 97.8  
0"-24" FILL  
24"-34" Ab, SIL, 10YR 3/1  
34"-42" Bw, CB, G, SL, 10YR 4/6  
42"-120" C, CB, G, LCOS, 10YR 3/6

NO LEDGE AT 120"  
ESHW: 46" (8" FROM OG)

TH2 ELEV. 99.4  
0"-24" FILL  
24"-34" Ab, SIL, 10YR 3/1  
34"-44" Bw, CB, G, SL, 10YR 4/6  
44"-120" C, CB, G, LCOS, 10YR 3/6

NO LEDGE AT 120"  
ESHW: 62" (16" FROM OG)

SOIL CATEGORY: 6

**LEGEND**

- 100 --- 100 EXISTING CONTOURS
- 1000 --- 1000 PROPOSED CONTOURS
- TEST HOLE
- STAKED HAYBALES

**GENERAL 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 EXCEPT AS SHOWN.
- 4) NO LEACHING SYSTEM EXISTS WITHIN 100' OF THE PROPOSED WELL EXCEPT APPLICANTS PROPOSED SYSTEM.
- 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 EXCEPT APPLICANTS PROPOSED WELL.
- 8) NO DRAINS OF ANY KIND SHALL BE LOCATED WITHIN 25' OF THE PROPOSED 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 INLET END. AN ACCESS RISER SHALL BE INSTALLED DIRECTLY ABOVE THE SCREENED PUMP VAULT AND INLET TEE.
- 14) BOTTOMLESS SAND FILTER MEDIA: HOLLISTON SAND & GRAVEL ASTM-33 SAND, LESS THAN 1% PASSING THE SIEVE WITH AN EFFECTIVE SIZE OF .25mm-.45mm AND WITH A UNIFORMITY COEFFICIENT OF 2.0±.
- 15) IF CONTRACTOR ENCOUNTERS ANY CONDITIONS DURING CONSTRUCTION WHICH INDICATE THE SYSTEM CANNOT BE INSTALLED IN ACCORDANCE WITH THE APPROVED DESIGN, CONSTRUCTION SHALL CEASE AND DESIGNER 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) 5 FEET FROM SAND FILTER NOT TO BE LOWER THAN ELEVATION 97.50.

**SYSTEM SIZING:**

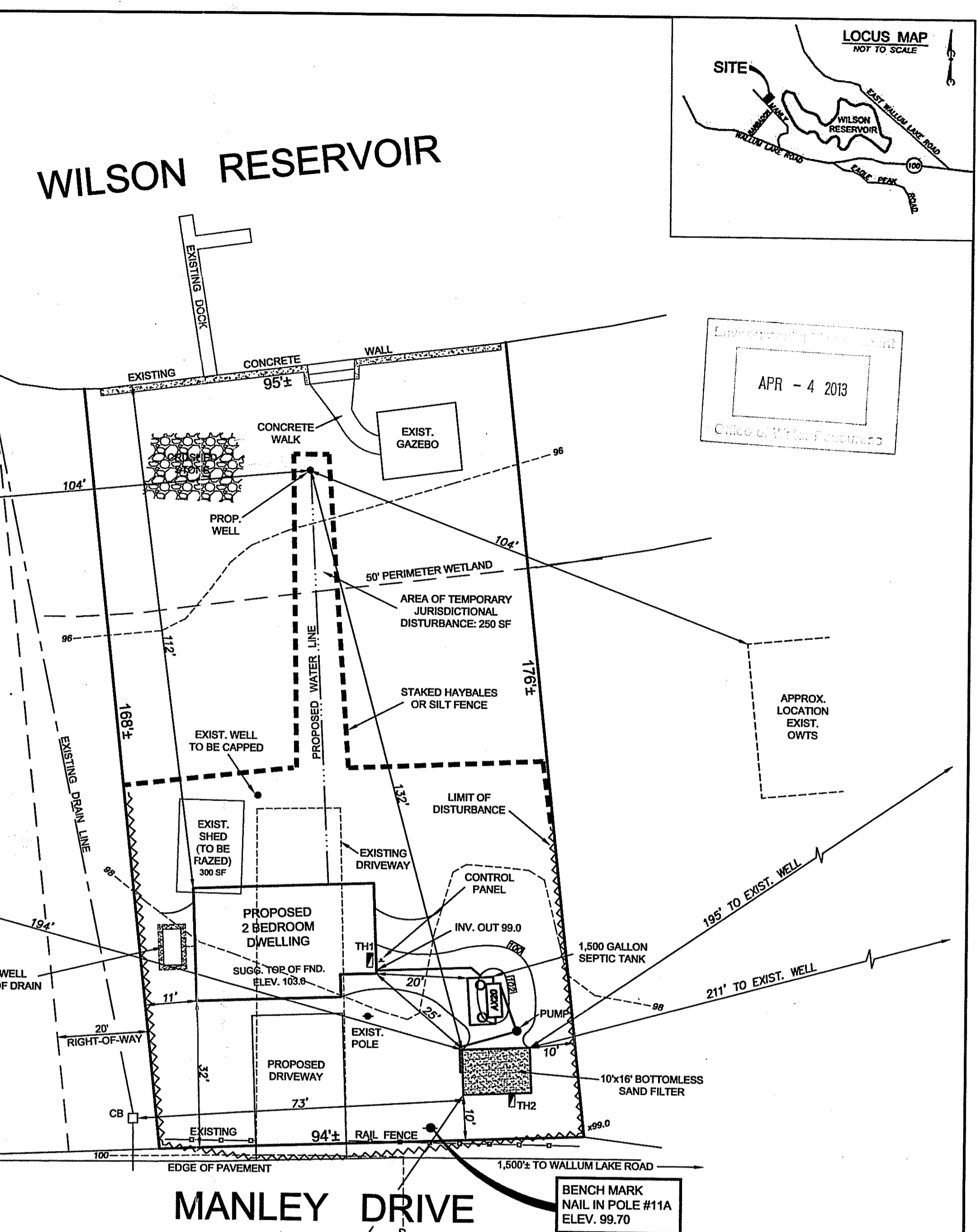
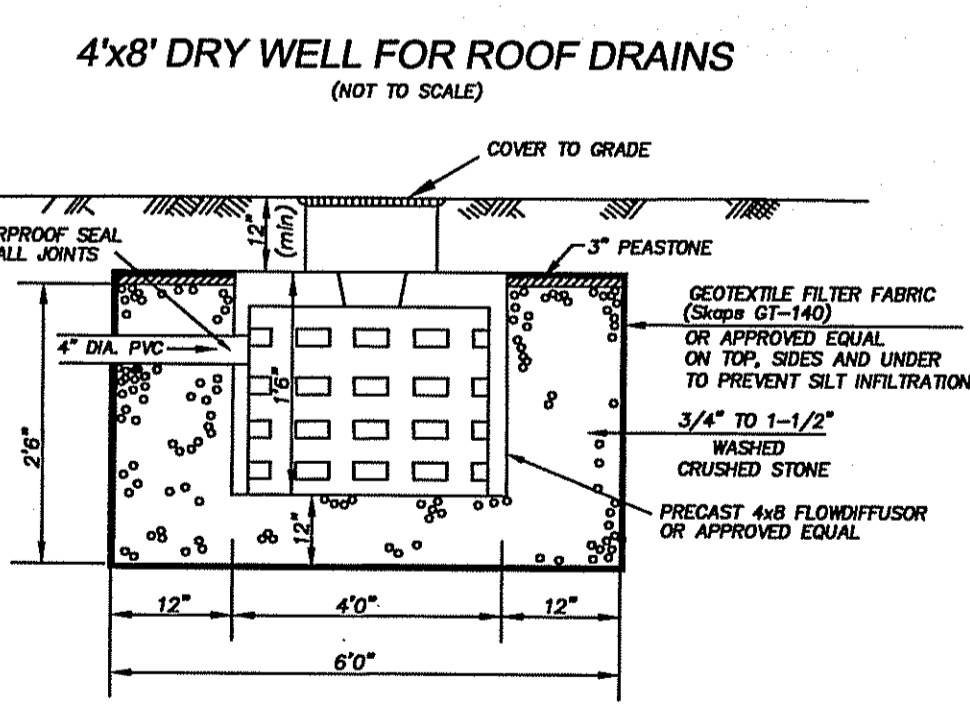
2 BEDROOM: 115 GPD x 2 = 230 GPD  
SOIL CATEGORY: 6  
APPLICATION RATE: 2.3 GPD/SF  
AREA REQUIRED: 230/2.3 = 100 SF  
AREA PROVIDED: 150 SF

**BSF DEMAND DOSING:**

60 ORIFACE @ 0.24 GAL/ORIFACE = 14.4 GAL  
25 LF 2" TRANSPORT LINE = 4.0 GAL  
TOTAL DOSED: 18.4 GAL PER DOSE

**PUMP BASIN DRAW DOWN**  
18.4 GAL/DOSE/2 GAL PER INCH = 9.2" = 0.77'

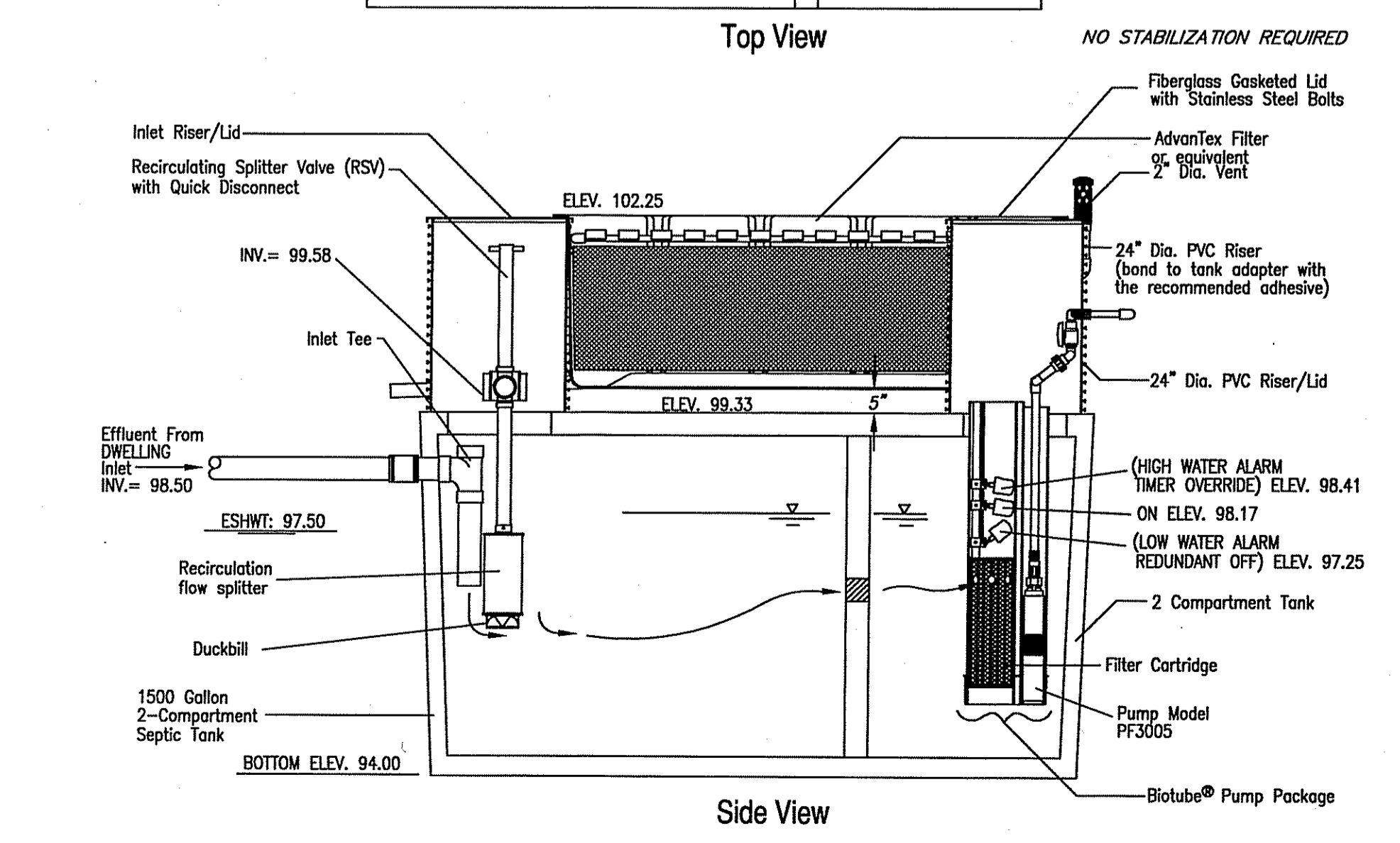
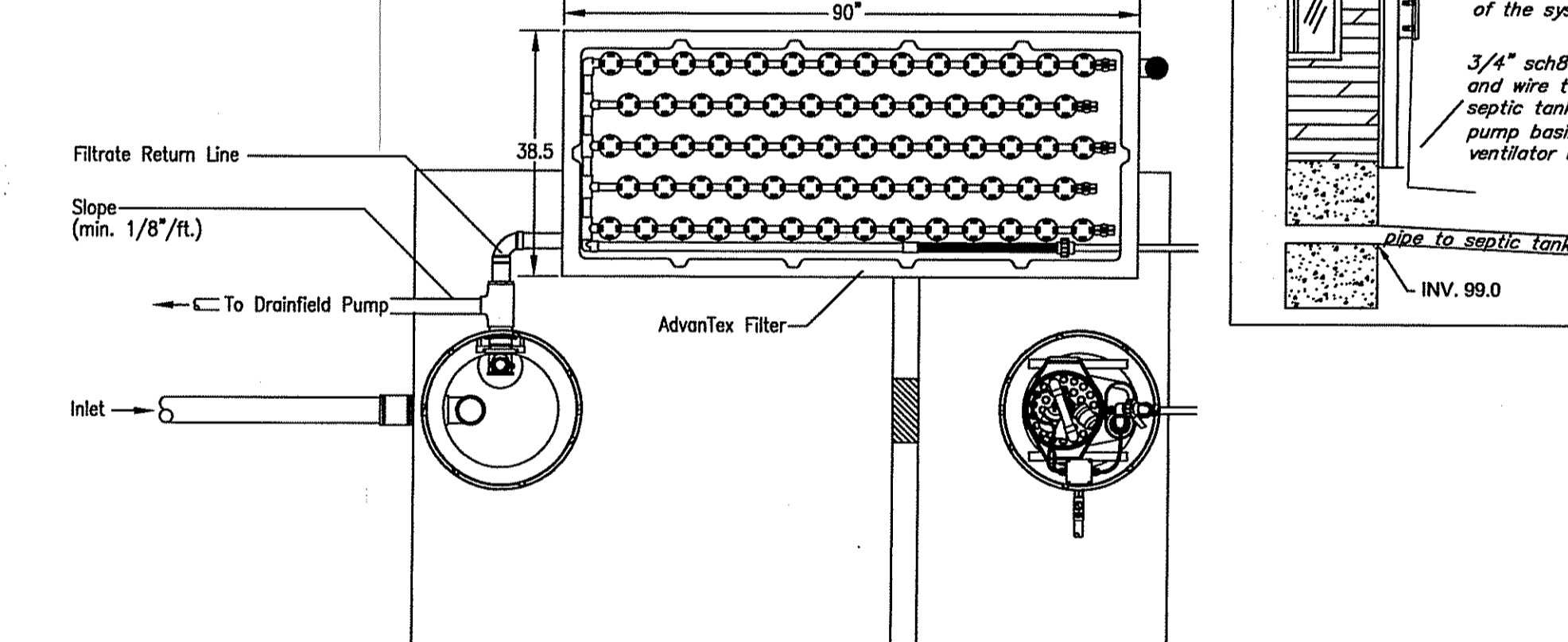
**DESIGN CHECK:**  
230 GPD/14.4 GAL DOSE = 24 DOSES  
(OK BETWEEN 24 & 48 DOSES PER DAY)



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

**AdvanTex Treatment System AX 20 Series - Mode 3b**

NOTE: LANDSCAPE TIMBERS TO BE USED TO BUILD UP EARTH TO ALLOW FOR PROP. GRADE TO BE FLUSH WITH AX-20 COVER.



**ONSITE WASTEWATER TREATMENT DESIGN & WETLANDS PLAN for PAUL DETONNANCOURT ASSESSOR'S PLAT 138, LOT 21 MANLY ROAD, BURRILLVILLE, RHODE ISLAND NOVEMBER, 2012**

SCALE: 1 INCH EQUALS 20 FEET  
REVISED: 1/8/12  
3/22/13 WETLANDS APP

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED MAY 29 2013 FILE # 13-0056  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

**LEACHING SYSTEM DESIGN BY:**  
ADVANCED CIVIL DESIGN, INC.  
7 Countryside Lane  
Scituate, Rhode Island 02857  
(401) 644-8656

MARC N. NYBERG  
No. 1797  
PROFESSIONAL LAND SURVEYOR

MARC N. NYBERG ASSOCIATES, INC.  
LAND SURVEYORS and PLANNERS  
501 GREAT ROAD, UNIT 104  
NORTH SMITHFIELD, RHODE ISLAND 02896  
TEL (401) 762-2870 FAX (401) 762-2871