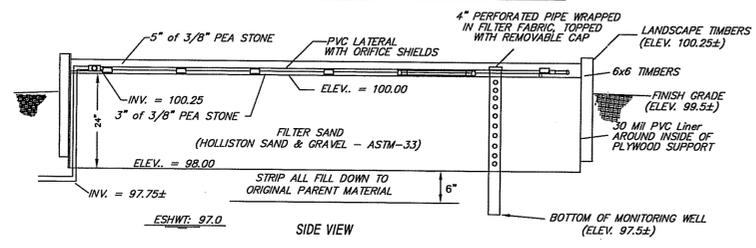
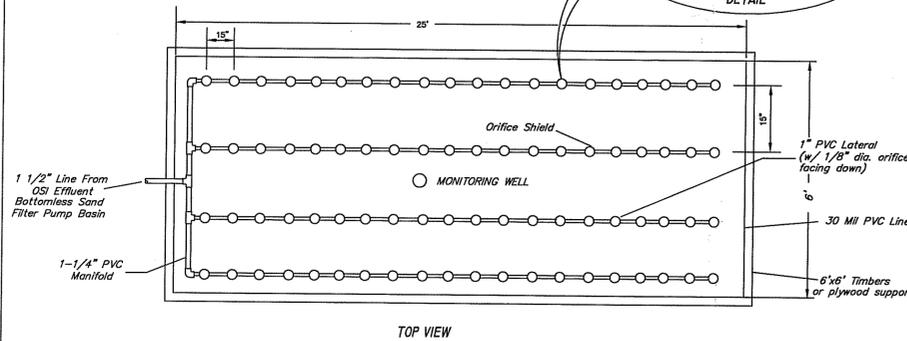


**BOTTOMLESS SAND FILTER NOT TO SCALE**

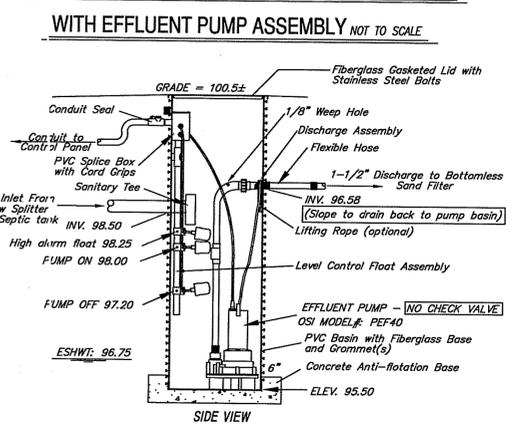


NOTE: TWO ORIFICES WITHOUT SLOTS TO BE PLACED ON TOP OF EACH LATERAL AT HALFWAY AND END OF LATERAL LENGTH.

20 ORIFICES PER LATERAL  
80 ORIFICES TOTAL



**2 1/2" DIA. BOTTOMLESS SAND FILTER PUMP BASIN WITH EFFLUENT PUMP ASSEMBLY NOT TO SCALE**



**LIST OF SYSTEM COMPONENTS**

- 1,500 GALLON 2-COMPARTMENT CONCRETE SEPTIC TANK WITH PUMP VAULT AND RECIRCULATION SPLITTING VALVE, W/OSIP3005 (6 STAG) PUMP TANK WITH PUMP VAULT AND RECIRCULATION SPLITTING
- 5' DEEP - 24" DIAMETER PUMP BASIN, W/OSI MODEL# PEF40
- AX-20 ADVANTEX TEXTILE FILTER.
- 6' LONG 1/2" 25" WIDE BOTTOMLESS SANDFILTER
- ORENCO SYSTEMS, INC. CONTROL PANEL.

**TEST HOLE DATA**

DATE: 6/28/07

TH1	TH2
0'-6" A, SIL, 10YR 3/3	0'-6" A, SIL, 10YR 3/3
6'-30" Bw, BD, ST, CB, G, SL, 10YR 4/6	6'-12" A, SIL, 10YR 3/3
30'-44" C, BD, ST, CB, G, COS, 2.5YR 5/4	12'-36" SL, 10YR 4/6
44'-70" C2, BD, ST, CB, G, LCOS, 10YR 5/6	36'-110" C, LOS, 5YR 5/3
70'-102" C3, ST, CB, G, SL, 2.5YR 5/6	
ESHWT: 30°	ESHWT: 30°
NO LEDGE AT 102'	NO LEDGE AT 110'
	TH1 (RIGHT)
	ESHWT: 24° (6" FROM OG)
	NO LEDGE AT 120'
	TH2 (RIGHT)
	ESHWT: 27° (5" FROM OG)
	NO LEDGE AT 134'

**LEGEND**

- 100 --- 100 EXISTING CONTOURS
- 102 --- PROPOSED CONTOURS
- TEST HOLE

**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.
- 4) NO LEACHING SYSTEM EXISTS WITHIN 100' OF THE PROPOSED WELL.
- 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 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-IX 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) 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 98.00.

**DESIGN INFO:**

DAILY FLOW: 450 GPD  
SOIL CATEGORY: 6  
APPLICATION RATE: 3 GPD/SF  
AREA REQUIRED: 450/3 = 150 SF

**TIMER INFO:**

SET ADVANTEX TIMER TO 24 DOSES/DAY  
450 GPD/24 DOSES/DAY = 18.75 GAL/DOSE  
18.75/31.3 GPM = 0.60 MIN.  
TOTAL PUMP RUN TIME = 14.40 MIN./DAY  
TOTAL PUMP OFF TIME = 1425.60 MIN./DAY  
TIME OFF PER CYCLE = 59.40 MIN.  
TIME ON PER CYCLE = 0.60 MIN.

**DOSING RATE:**

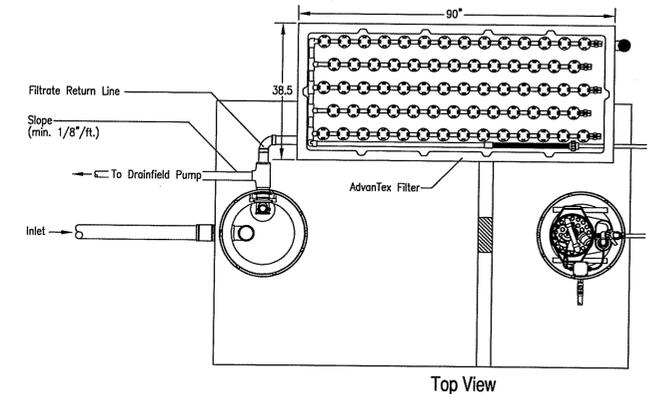
18.75 GAL/DOSE  
PUMP CHAMBER CAPACITY = 23.5 GAL/FT OR 1.96 GAL./INCH  
PUMP CHAMBER DEPTH @ 18.75 GAL = 9.6 INCHES = .80'  
DOSE PER ORIFICE = 450 GPD/(24 DOSES/DAY)/80 ORIFICES = .234 GAL/ORIFICE/DOSE

**RECIRCULATING EFFLUENT PUMP SYSTEM (REPS)**

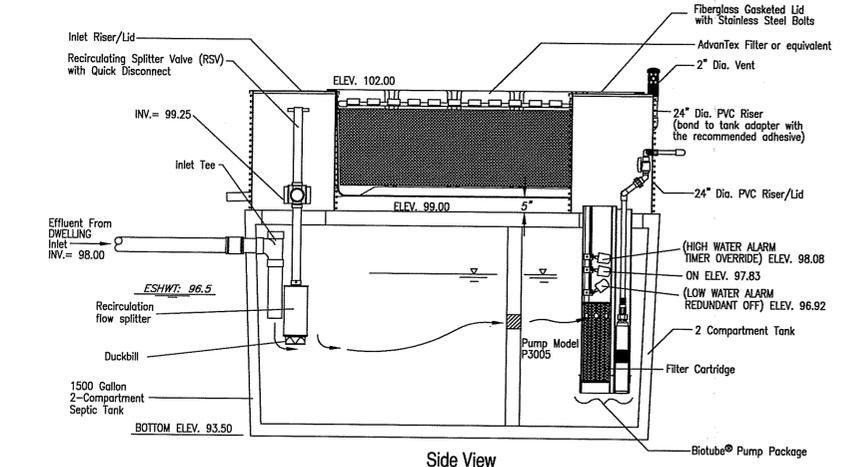
(2 COMPARTMENT 1,500 GALLON SEPTIC TANK AX 20 ADVANTEX TEXTILE FILTER)

NOT TO SCALE

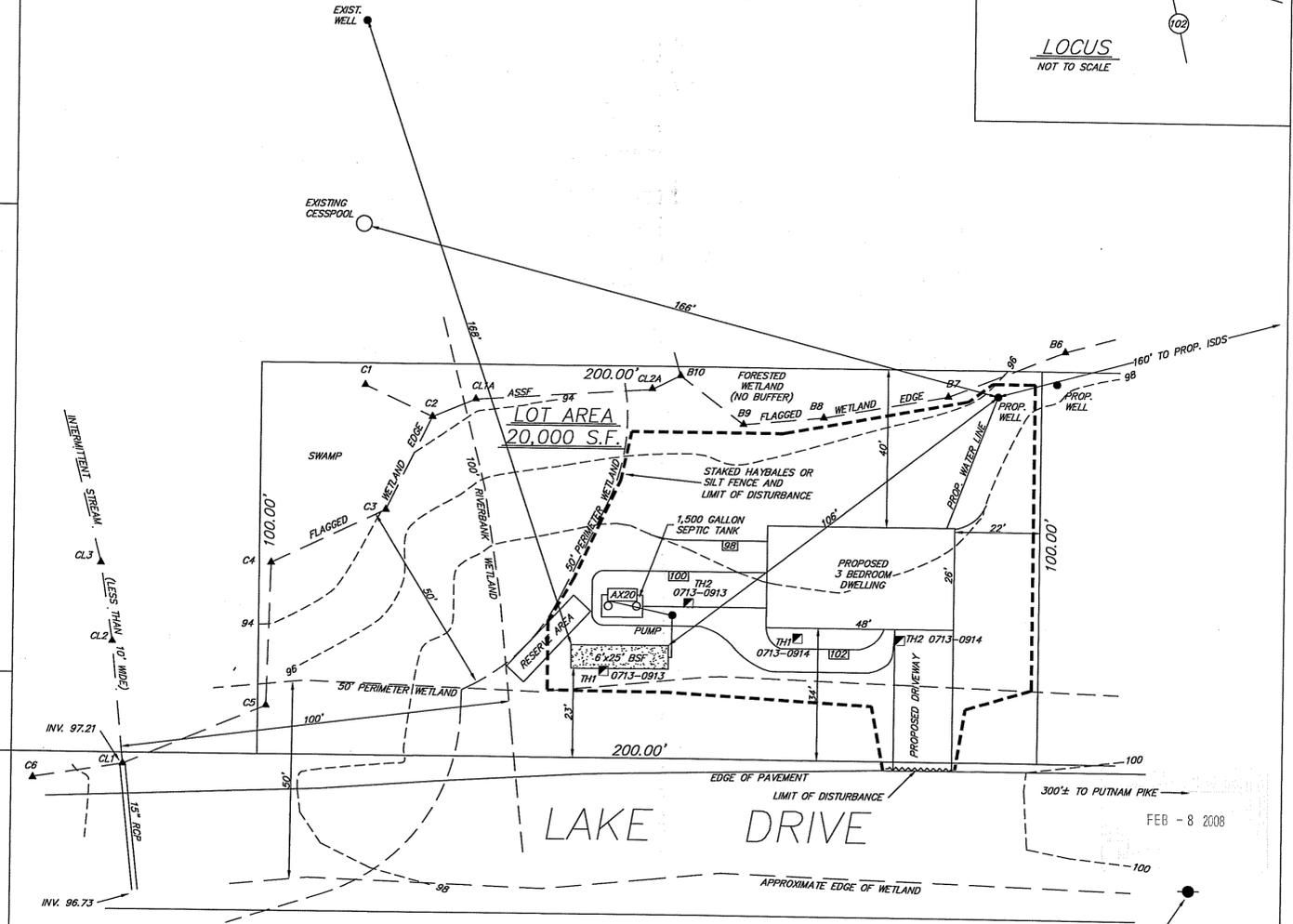
**AdvanTex Treatment System**  
AX 20 Series - Mode 3b



Top View

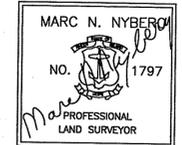


Side View



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED APR 15 2008 FILE # 08-0023  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROPOSED LEACHING SYSTEM  
DESIGN FOR  
SUBURBAN LAND COMPANY  
ECHO LAKE PLAT - SECTION 1  
LOT 173  
LAKE DRIVE, GLOCESTER, RI  
DATE: NOVEMBER, 2007  
SCALE: 1" = 20'  
REVISED: 2/7/08 LOT AREA



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