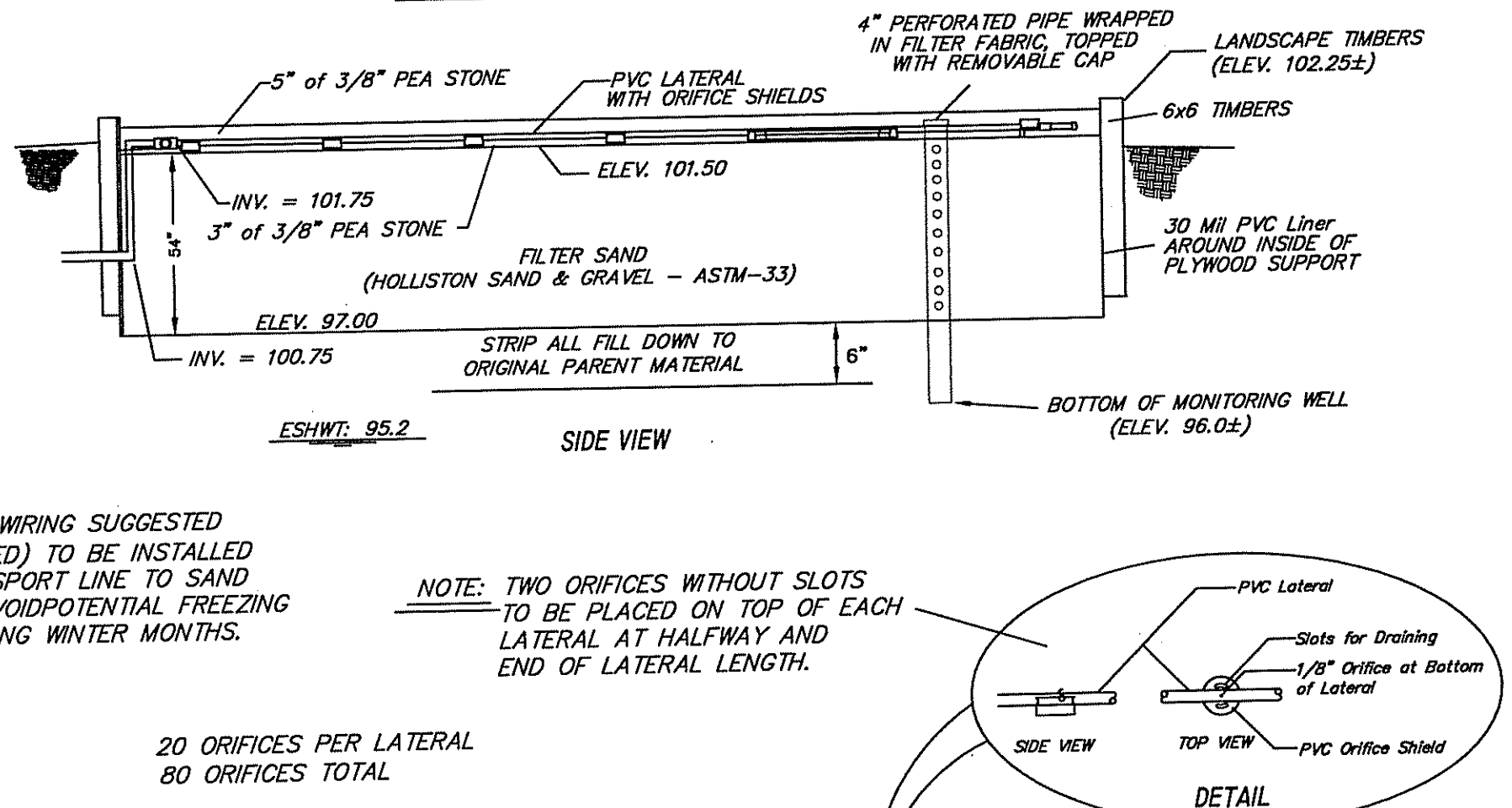


**BOTTOMLESS SAND FILTER** NOT TO SCALE



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

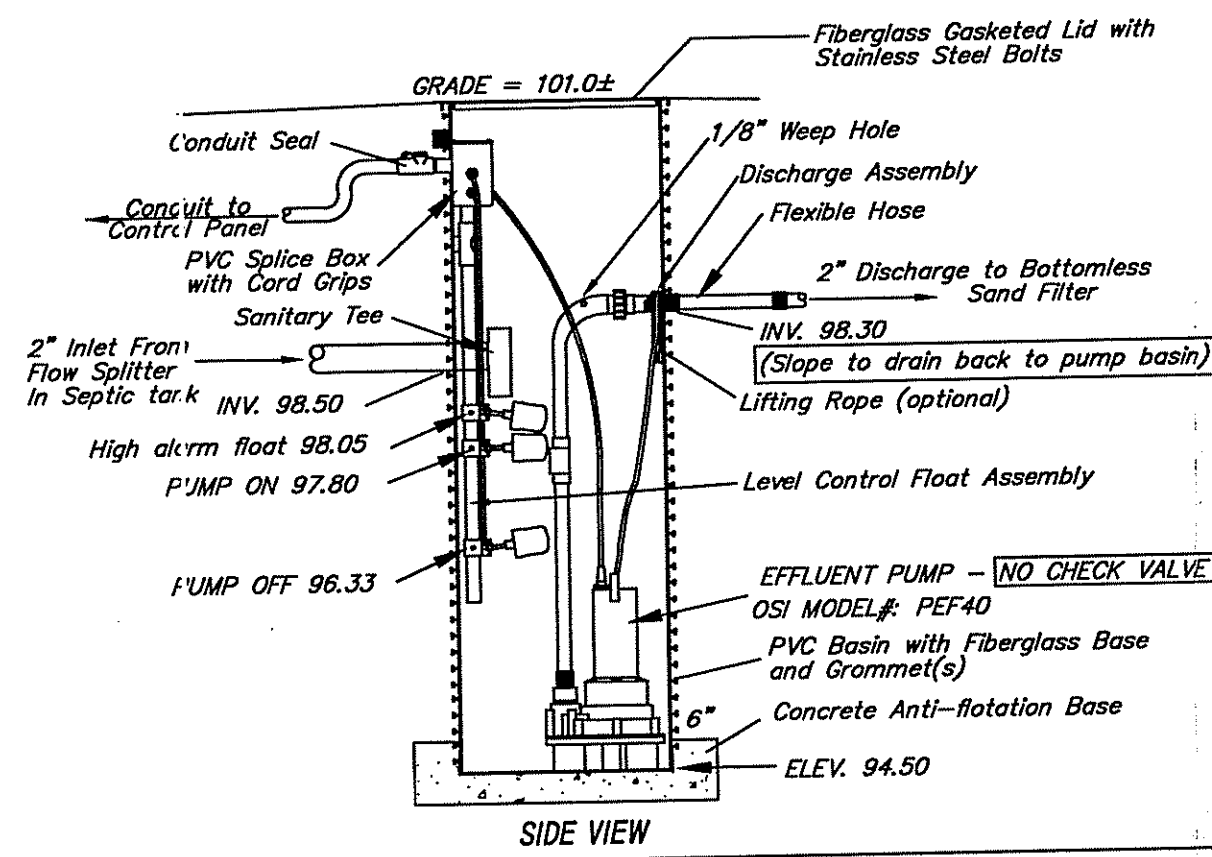
20 ORIFICES PER LATERAL  
80 ORIFICES TOTAL

TOP VIEW

HEAT TRACE WIRING SUGGESTED (NOT REQUIRED) TO BE INSTALLED ALONG TRANSPORT LINE TO SAND FILTER TO AVOID/POTENTIAL FREEZING OF LINE DURING WINTER MONTHS.

**24" 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/OSI P#300511 (6 STAGE) PUMP TANK WITH PUMP VAULT AND RECIRCULATION SPLITTING
- 6" DEEP - 24" DIAMETER PUMP BASIN. W/OSI MODEL# PEF40
- AX-20 ADVANTEX TEXTILE FILTER.
- 6' LONG X 25' WIDE BOTTOMLESS SAND FILTER
- ORENCO SYSTEMS, INC. CONTROL PANEL.

**TEST HOLE DATA**  
DATE: 5/31/07

TH1 ELEV. 96.9  
0'-6" A. SL. 10YR 3/3  
6'-28" Bw. CB, G. SL. 10YR 4/6  
28'-96" C. BD, ST, CB, G. SL. 2.5YR 5/8  
ESHW: 30" ELEV. 94.4  
LEDGE AT 96"

TH2 ELEV. 97.2  
0'-6" A. SL. 10YR 3/3  
6'-24" Bw. SL. 10YR 4/6  
24'-30" C. VFSL. 5YR 6/1  
30'-96" C. ST, CB, G. SL. 2.5YR 4/3  
ESHW: 24" ELEV. 95.2  
LEDGE AT 96"

LEDGE PROBES  
P1 SURFACE  
P2 48"  
P3 SURFACE

SOIL CATEGORY: 6

**LEGEND**

- EXISTING CONTOURS
- - - 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 WELLS EXIST 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-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 SEPARATE 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 101.75.

**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 CPM = 0.60 MIN.  
TOTAL PUMP RUN TIME = 14.40 MIN./DAY  
TIME OFF PER CYCLE = 1425.60 MIN./DAY  
TIME ON PER CYCLE = 59.40 MIN.  
TIME ON PER CYCLE = 0.60 MIN.

**DOSING RATE:**

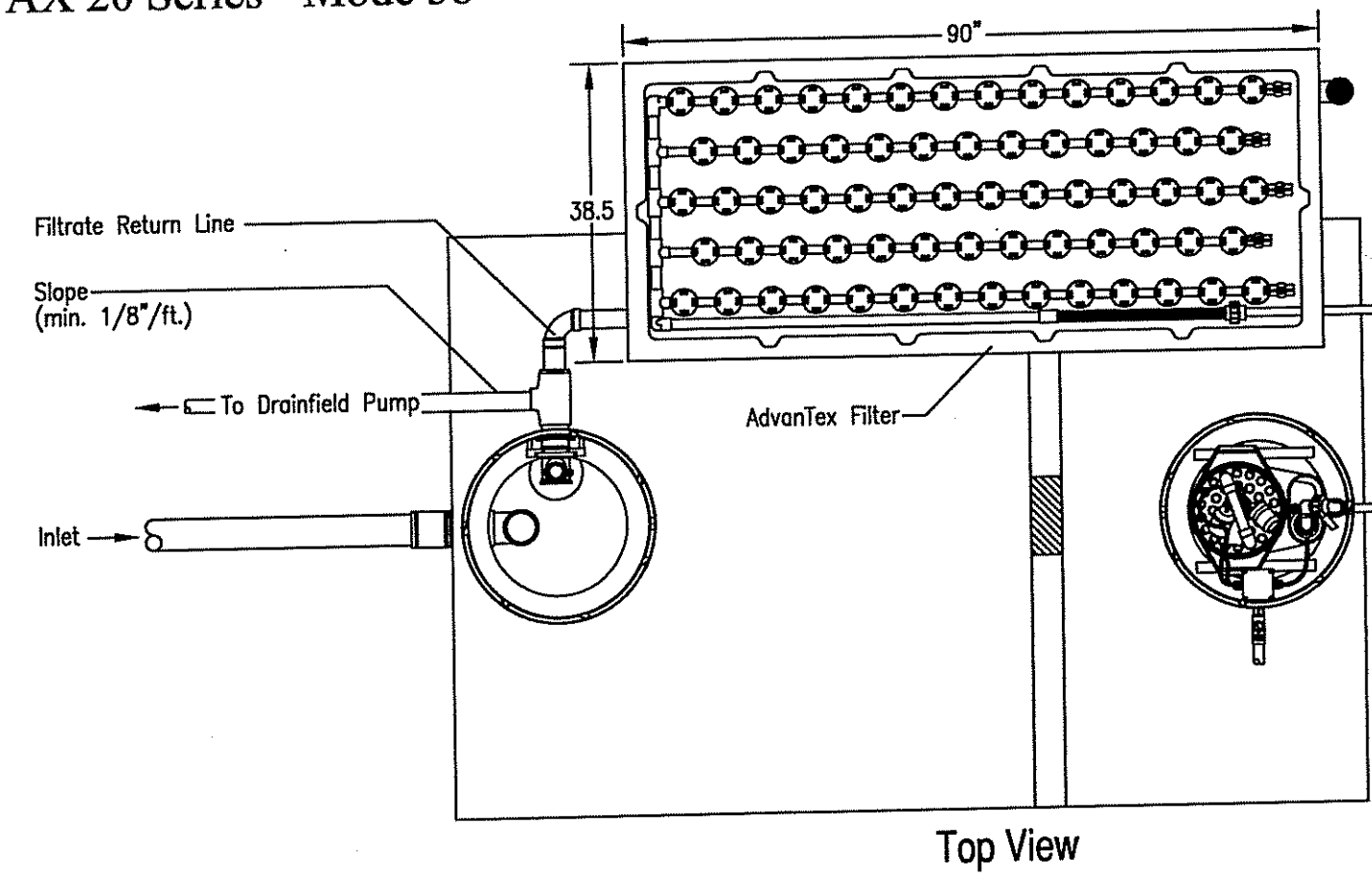
18.75 GAL/DOSE  
PUMP CHAMBER CAPACITY = 23.5 GAL./FT OR 1.96 GAL./INCH  
PUMP CHAMBER DEPTH @ 18.75 GAL = 9.6 INCHES = .80'  
DOSE PER CRIFICE = 450 GPD/(24 DOSES/DAY)/80 ORIFICES = .234 GAL/ORIFICE/DOSE

**RECIRCULATING EFFLUENT PUMP SYSTEM (REPS)**  
(2 COMPARTMENT 1,500 GALLON SEPTIC TANK  
AX 20 ADVANTEX TEXTILE FILTER)

NOT TO SCALE

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

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



Top View

NO STABILIZATION REQUIRED

Fiberglass Gasketed Lid with Stainless Steel Bolts

Advantex Filter or equivalent

2" Dia. Vent

24" Dia. PVC Riser (bond to tank adapter with the recommended adhesive)

24" Dia. PVC Riser/Lid

(HIGH WATER ALARM TIMER OVERRIDE) ELEV. 99.33

ON ELEV. 99.08

(LOW WATER ALARM REDUNDANT OFF) ELEV. 98.17

2 Compartment Tank

Filter Cartridge

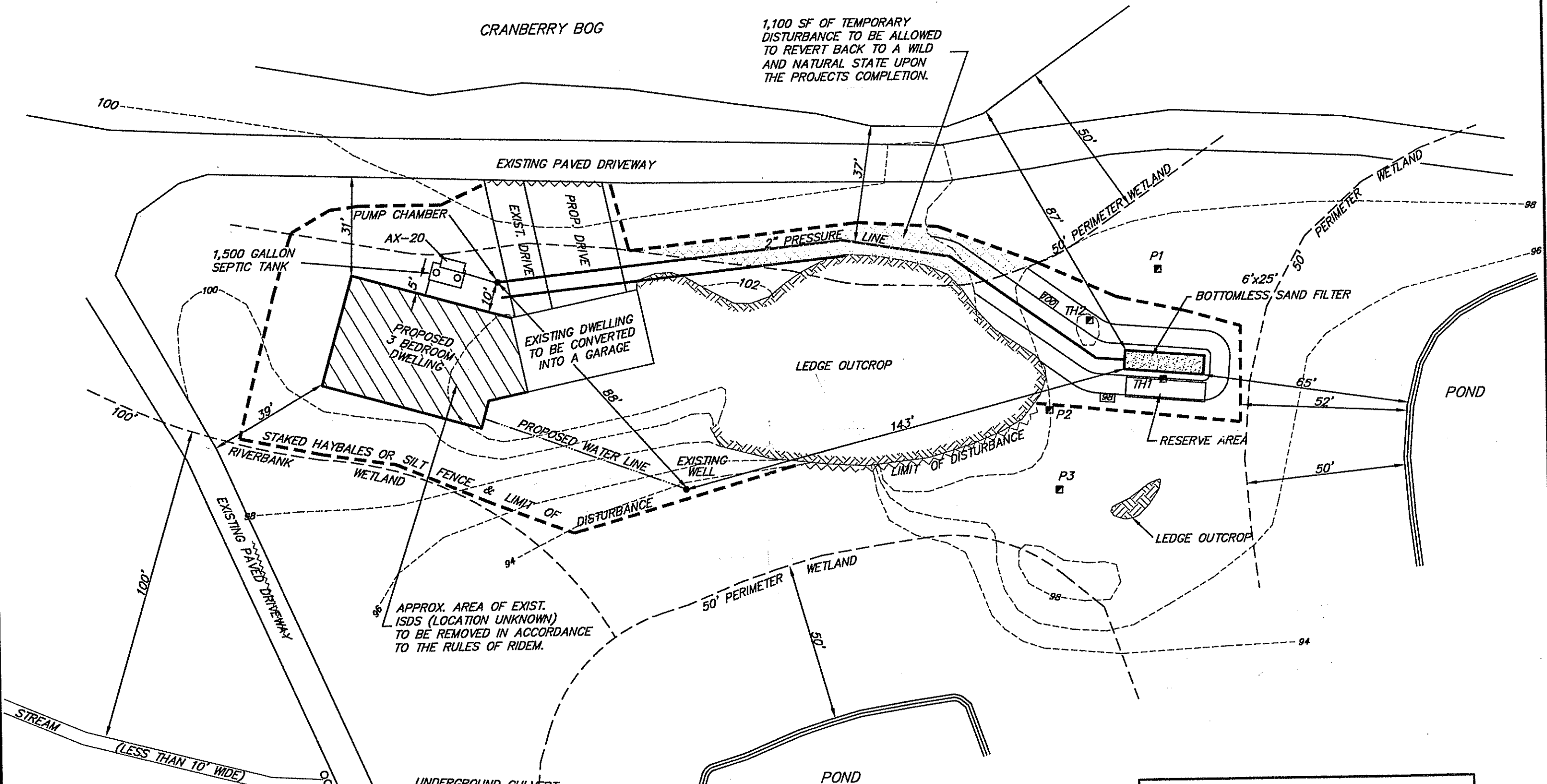
Pump Model P#300511

Biotube® Pump Package

Side View

1500 Gallon 2-Compartment Septic Tank

Bottom ELEV. 94.50



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

**PROPOSED LEACHING SYSTEM ALTERATION AND WETLANDS PLAN FOR GLEN ANDREONI**  
ROCKY HILL ROAD, No. SMITHFIELD, RHODE ISLAND  
ASSESSOR'S PLAT 16, LOT 81  
DATE: JUNE, 2007  
SCALE: 1" = 30'  
REVISED: 7/31/07 REDUCE LIMIT OF DISTURBANCE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED NOV 2 2007 FILE # 07-0350  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

*W. Joseph Cooney*

AUG 30 2007

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