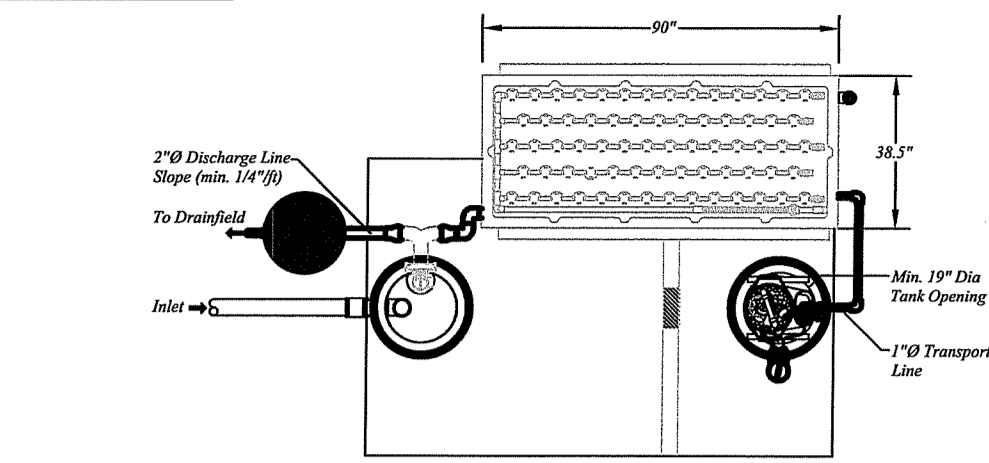
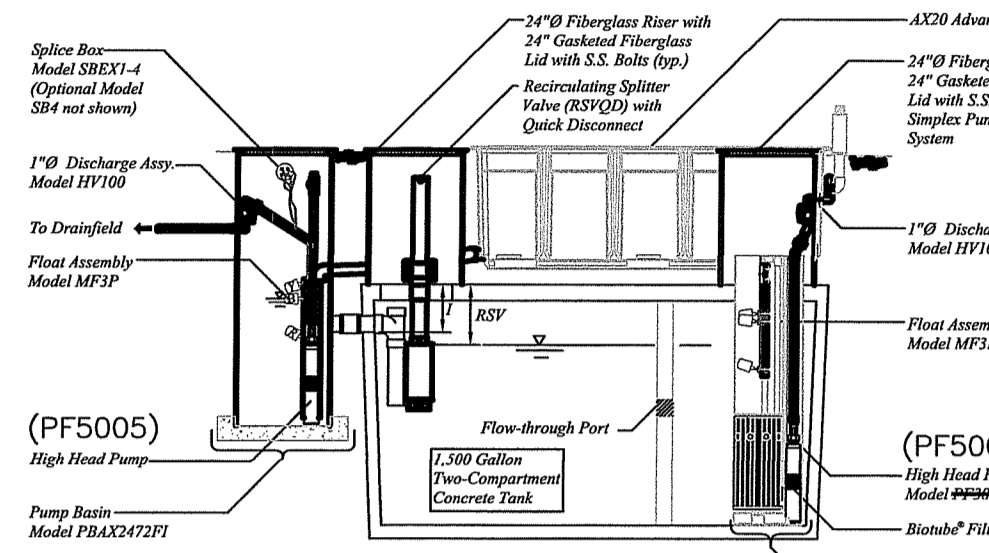


AdvanTex® AX20 Mode 3B
CATEGORY 1, TIME DOSED



Top View
Scale: 1" = 3'-0"



Side View
Scale: 1" = 3'-0"

Design Notes

For residential strength waste up to 4 bedrooms.
Installation to be performed by an AdvanTex Authorized Installer only.
Start-up and service to be performed by an AdvanTex Authorized Service Provider only.

Flow Function	Indicator
High Level Alarm	1
Low Level Alarm	2
Pump On	3
Pump Off	4

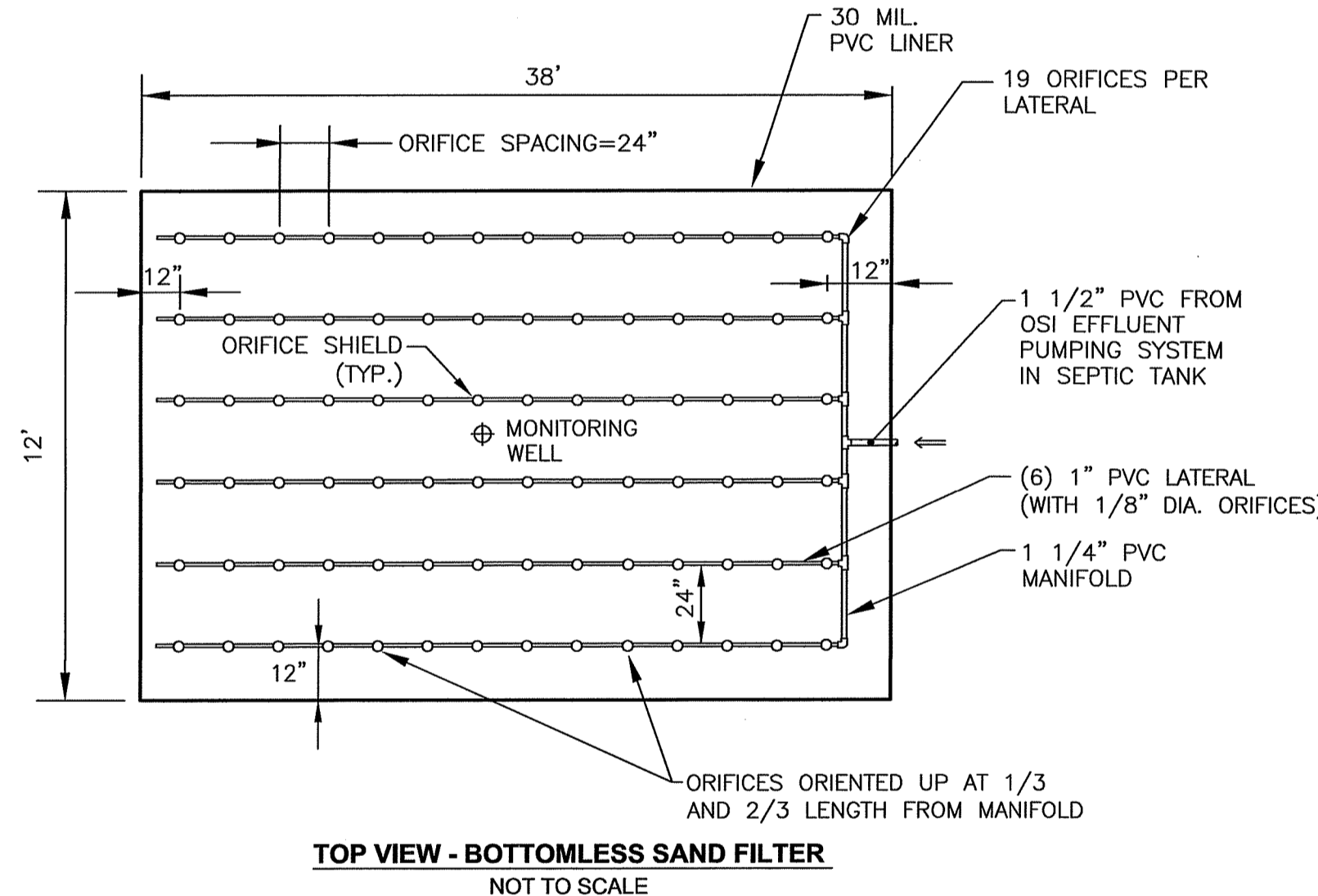


Orenco Systems, Inc.
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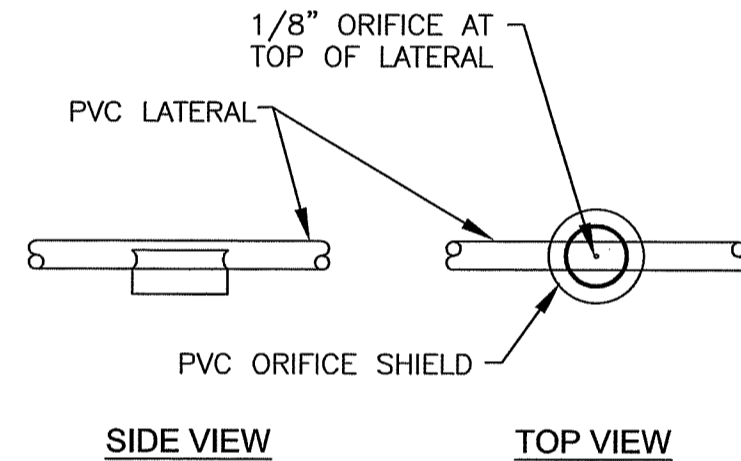
AX20 Mode 3B
Design Aid
Drawn By: BAS
Reviewed By:
File Name: N0W-ATX-080R-6.rvt
Scale: 1" = 3'-0"
Sheet: 1 OF 1
Rev: 4.0
Date: 6/25/2013

NOTES

- EQUIPMENT MODEL NOS. IN MANUFACTURER DETAIL, INCLUDING PUMP MODEL, TO BE CONFIRMED THROUGH COORDINATION WITH SUPPLIER AND ENGINEER.
- SUPPLIER MUST PROVIDE ANTI-FLOTATION COLLARS ON ALL TANKS AND CHAMBERS DUE TO HIGH SEASONAL GROUNDWATER TABLE.



TOP VIEW - BOTTOMLESS SAND FILTER
NOT TO SCALE



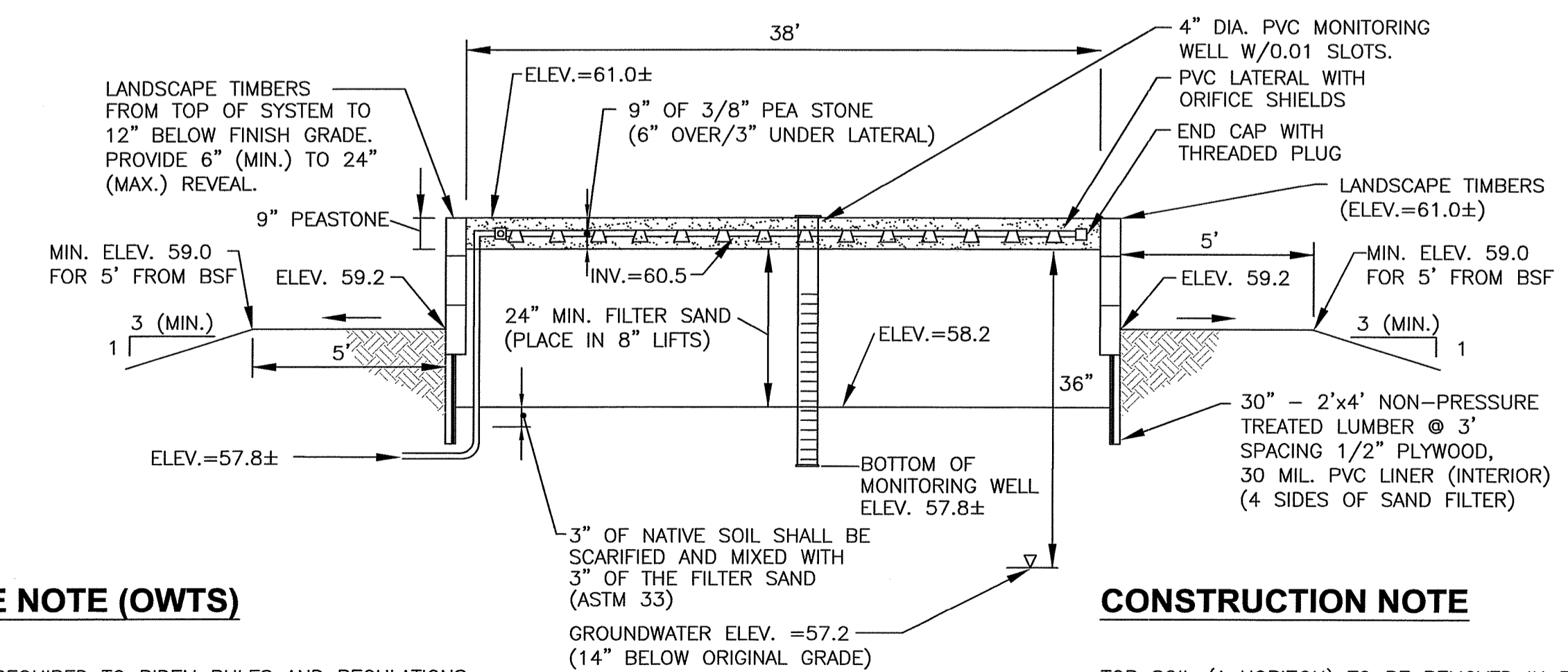
COLD WEATHER ORIFICE DETAIL
NOT TO SCALE

NOTE
SHIELD AND ORIFICE MUST BE ORIENTED BELOW LATERAL FOR COLD WEATHER APPLICATION

CONSTRUCTION NOTE

TOP SOIL (A HORIZON) TO BE REMOVED IN BSF FOOTPRINT AND WITHIN 5' OF PROPOSED BSF.

SOIL STRIPPING SHALL NOT BE PERFORMED INTO THE WATER TABLE.



SIDE VIEW - BOTTOMLESS SAND FILTER
NOT TO SCALE

BOTTOMLESS SAND FILTER
NOT TO SCALE

VARIANCE NOTE (OWTS)

A VARIANCE IS REQUIRED TO RIDEM RULES AND REGULATIONS 6.33(E) WITH RESPECT TO SEASONAL HIGH GROUNDWATER TABLE.

REQUIRED WATER TABLE DEPTH WITH RESPECT TO ORIGINAL GROUND SURFACE ELEVATION (WITH BOTTOMLESS SAND FILTER): 18"
EXISTING WATER TABLE DEPTH: 14" (1327-1346)

SOIL EVALUATION DATA

TEST PIT 1		TEST PIT 2	
0"	Very Fine Sandy Loam, Friable	0"	Very Fine Sandy Loam, Friable
8"	Very Fine Sandy Loam, Friable	10"	Very Fine Sandy Loam, Friable
15"	Channery, Very Fine Sandy Loam, Very Firm	17"	Channery, Very Fine Sandy Loam, Very Firm
47"	Channery, Very Fine Sandy Loam, Very Firm	48"	Channery, Very Fine Sandy Loam, Very Firm
120"	Depth 120" Depth to Seepage N/A Redox 14" Depth to Impervious N/A	126"	Depth 126" Depth to Seepage 123" Redox 14" Depth to Impervious N/A

RIDEM APPROVED WT = 14" (1327-1346)
SOIL EVALUATIONS CONDUCTED ON NOVEMBER 25, 2013
AFFIDAVIT OF CONTINUING VALIDITY PREPARED BY CROSSMAN ENGINEERING

ORENCO SYSTEM NOTES

- THE SYSTEM SHALL BE EQUIPPED WITH AN HOUR METER AND AUDIBLE & VISUAL ALARMS TO INDICATE POWER INTERRUPTION TO THE SYSTEM. THE INDICATORS SHALL BE MOUNTED ON A N.E.P.A. APPROVED CABINET ON A POST EXTERIOR TO THE BUILDING AT A LOCATION APPROVED BY OWNER AND ALARMS (AUDIBLE & VISUAL) SHALL BE LOCATED WITHIN THE HOUSE.
- A PUBLIC OR PRIVATE ENTITY SHALL BE RETAINED CONTINUOUSLY FOR THE LIFE OF THE SYSTEM AND BE AVAILABLE TO PERFORM NEEDED MAINTENANCE AND REPAIRS. SUCH ENTITY SHALL PERFORM AN INSPECTION OF THE SYSTEM AT LEAST TWICE ANNUALLY. THE ENTITY MUST BE APPROVED BY R.I.D.E.M. AND ADHERE TO ALL R.I.D.E.M. RECOMMENDED REPORTING REQUIREMENTS. A COPY OF THE EXECUTED OPERATION AND MAINTENANCE CONTRACT MUST BE RECORDED AT THE OFFICE OF THE LOCAL JURISDICTION.
- ABILITY TO CONNECT TO STANDBY POWER SUPPLY IS RECOMMENDED.
- THE SEPTIC TANK AND PUMP CHAMBERS SHALL BE WATER-TIGHT. CONCRETE ANTI-FLOTATION COLLARS SHALL BE REQUIRED DUE TO FLUCTUATING GROUNDWATER LEVELS. A MINIMUM 8" LAYER OF CRUSHED STONE SHALL BE SET LEVEL TO FORM A STABLE BASE.
- A HIGH LEVEL WATER ALARM (VISUAL AND AUDIBLE) POWERED BY A CIRCUIT SEPARATE FROM THE PUMP SHALL BE LOCATED IN THE HOUSE.
- ALL PLUMBING AND ELECTRICAL WORK AND MATERIALS SHALL CONFORM TO ALL STATE, FEDERAL AND LOCAL CODES.
- ALL PROCEDURES AND MATERIALS MUST ALSO CONFORM TO THE RECOMMENDATIONS AND REQUIREMENTS OF ORENCO SYSTEMS INCORPORATED.
- BOTTOMLESS SAND FILTER SHALL FOLLOW A TIMED DOSED ORENCO AX-20 ADVANCED TREATMENT SYSTEM.
- THE CONTRACTOR AND SITE OWNER MUST BE FAMILIAR WITH AND MUST FULLY CONFORM TO THE R.I.D.E.M. "GUIDELINES FOR THE DESIGN AND USE AND MAINTENANCE OF PRESSURIZED DRAINFIELDS", NOVEMBER 2013 INCLUDING ADDENDA, AND SECTION 6.36 AND 6.37 OF THE THE R.I.D.E.M. OWTS REGULATIONS.
- FILTER SAND MEDIA TO CONFORM TO ASTM 33 SAND WITH AN EFFECTIVE SIZE (D10) OF 0.3 mm AND UNIFORMITY COEF. (D60/D10) OF 3.0-4.0. MAXIMUM ALLOWABLE PERCENTAGE OF FINES PASSING NO. 200 SIEVE = 1% (ASTM D-136 AND ASTM C-117). TEST DATA SHALL BE PROVIDED TO DESIGNER PRIOR TO PURCHASE.
- CONTROL PANEL PLACEMENT SHALL BE COORDINATED WITH THE OWNER.
- ALL PUMP SYSTEMS, DISTRIBUTION SYSTEMS AND ADVANCED TREATMENT COMPONENTS SHALL BE MANUFACTURED BY ORENCO SYSTEMS, INC.
- THE CONTRACTOR SHALL RETAIN THE SERVICES OF ORENCO - ADVANTEX TO INSTALL THE ADVANTEX SYSTEM INCLUDING THE TANKS, PIPING, PUMPS, WIRING AND CONTROL PANELS. CERTIFICATIONS FROM THE MANUFACTURER SHALL BE PROVIDED TO THE DESIGNER THAT THE SYSTEM HAS BEEN INSTALLED CORRECTLY AND WILL OPERATE IN ACCORDANCE WITH RIDEM REGULATIONS AND THE MANUFACTURER'S OPERATION REQUIREMENTS.
- TRAINING OF THE ORENCO - ADVANTEX COMPONENTS AND OPERATION REQUIREMENTS SHALL BE PROVIDED TO THE OWNER BY THE MANUFACTURER'S REPRESENTATIVE UPON INSTALLATION COMPLETION.

DESIGN FLOW

USE	DESIGN UNITS	UNIT FLOW RATE (gpd/unit)	DESIGN FLOW (gpd)
4 BEDROOM HOUSE	PER BEDROOM	115 gpd	460 gpd

SEPTIC SIZING WITH NO GARBAGE GRINDER

REQUIRED SIZE: 1,250 gallons
PROPOSED SIZE: 2,000 gallon tank

LEACHING SYSTEM SIZING

TYPE OF SYSTEM: BOTTOMLESS SAND FILTER
SOIL CATEGORY = 9
CATEGORY 1 TECHNOLOGIES LOADING RATE = 1.5 GAL/S.F./DAY
PRETREATMENT DEVICE = ADVANTEX (AX-20)
MIN. LEACHING AREA REQUIRED:
460 GPD / (1.5 GAL/S.F./DAY) = 307 S.F.
LEACHING AREA PROVIDED = 38' x 12' = 456 S.F.

PUMP - DOSING CALCULATIONS

LENGTH OF EACH DISTRIBUTION LINE = 36 LF (6 LINES)
DISTRIBUTION LINE ORIFICES = 114 (24" SPACING)
DOSING = 0.15 GAL/ORIFICE = 17.1 GALLONS
PUMP CHAMBER = 24" DIAMETER
PUMP RATE = PUMP ON/PUMP OFF = 49.9 GAL/MIN.
(PUMP TO BE OSI PF5005 1/2 HP 50 GPM OR ALTERNATE APPROVED IN WRITING BY ORENCO SYSTEM REPRESENTATIVE)

ONSITE WASTEWATER TREATMENT SYSTEM NOTES

- THERE ARE NO PUBLIC SEWERS WITHIN 200' OF THE PARCEL.
- THERE ARE NO KNOWN EXISTING PRIVATE WELLS WITHIN 200' OF THE LEACHFIELD/BSF. ALL PROPOSED PRIVATE WELLS WITHIN 200' OF THE LEACHFIELD/BSF ARE SHOWN ON THE SITE PLAN. THERE ARE NO KNOWN EXISTING OR PROPOSED PUBLIC WELLS WITHIN 500' OF THE LEACHFIELD/BSF. THERE ARE NO KNOWN EXISTING OR PROPOSED NON-POTABLE WELLS WITHIN 100' OF THE LEACHFIELD/BSF.
- ALL KNOWN WATERCOURSES, WETLANDS, DRAINS AND STORMWATER MANAGEMENT SYSTEMS WITHIN 200' OF THE PROPOSED OWTS ARE SHOWN.
- THE SITE IS NOT WITHIN THE CRITICAL RESOURCE AREA AS DEFINED BY SECTION 6.42 OF THE OWTS RULES AND REGULATIONS. THE NEAREST CRITICAL RESOURCE AREA IS >1 MILE.
- SOIL STRIPPING SHALL NOT BE PERFORMED INTO THE WATER TABLE.
- NO VEHICULAR TRAFFIC IS PERMITTED ON BSF BEFORE, DURING, OR AFTER CONSTRUCTION.
- SURFACE RUNOFF TO BE DIVERTED FROM SYSTEM AND BSF.
- THE PIPING FOR BUILDING SEWER TO BE SOLID SCHEDULE 35 (MINIMUM) PVC PIPE WITH WATERTIGHT JOINTS.
- THE LICENSED INSTALLER MUST FOLLOW ALL R.I.D.E.M. "RULES AND REGULATIONS ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS, EFFECTIVE DATE 11/25/2018."
- NO KNOWN DRAINS, PROPOSED DRAINS OR UNDERDRAINS DISCHARGING INTO A SURFACE WATER SUPPLY ARE WITHIN 100' OF LEACH FIELD.
- ALL DISTURBED AREAS ARE TO RECEIVE 4" OF LOAM & SEED, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR MUST ADHERE TO ALL CONSTRUCTION INSPECTION PROCEDURES AND REQUIREMENTS OF R.I.D.E.M. AND CROSSMAN ENGINEERING, INC.
- HOUSEHOLD GARBAGE DISPOSAL GRINDER WILL NOT BE PERMITTED.
- THE SITE IS NOT WITHIN THE WATERSHED OF THE PUBLIC WATER SUPPLY AS DEFINED IN SECTION 6.42, AND DRAINS WITHIN THE VICINITY DO NOT DISCHARGE DIRECTLY OR INDIRECTLY TO A CRITICAL RESOURCE AREA IDENTIFIED IN RULE 6.42.
- THE OWTS INSTALLER SHALL NOTIFY THE OWTS DESIGNER OF THE CONSTRUCTION START DATE AT LEAST THREE (3) WORKING DAYS IN ADVANCE.
- NO OWTS CONSTRUCTION SHALL BEGIN UNTIL AUTHORIZED BY R.I.D.E.M. AND THE OWTS DESIGNER.
- PRIOR TO PURCHASE/ORDER OF PRODUCTS, THE INSTALLER MUST PROVIDE "SHOP DRAWINGS" FOR ALL MATERIALS. APPROVAL MUST BE GRANTED BY THE DESIGNER PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE A WATER-TIGHT CERTIFICATE FROM THE CONCRETE MANUFACTURER FOR THE SEPTIC TANK AND PUMP CHAMBER.
- PROVIDE AN 8" CRUSHED STONE BASE LAYER BENEATH THE SEPTIC TANK AND PUMP CHAMBER.
- THE INLET OPENING ON THE SEPTIC TANK SHALL HAVE A WATERTIGHT CAST-IN-PLACE RUBBER BOOT WITH A STAINLESS STEEL CLAMP.
- THE SEPTIC TANK SHALL HAVE MANHOLE COVERS AND RISERS TO GRADE DESIGNED FOR AN H-20 LOADING (HEAVY DUTY USE) UNLESS APPROVED OTHERWISE BY OWNER AND ENGINEER.
- BUILDING SEWER SHALL BE SLEEVED WITH OVERSIZED SCH. 40 PVC PIPE WITH WATERTIGHT JOINTS FROM THE FOUNDATION TO THE SEPTIC TANK.
- TOP SOIL (A HORIZON) WITHIN THE BSF FOOTPRINT AND WITHIN 5 FEET OF THE PROPOSED BSF SHALL BE REMOVED PRIOR TO BSF INSTALLATION.

R.I. DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: DEC 07 2022 FILE #: 22-03193
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy J. Freeman

OWTS ELEVATIONS	
1ST. FLOOR ELEV.	63.5
BASEMENT SLAB ELEV.	54.5
GARAGE SLAB ELEV.	62.0
FOUNDATION INVERT OUT ELEV.	56.0
BUILDING SEWER LENGTH (S=1% MIN.)	36'
FINISH GRADE ELEV. AT FOUNDATION	61.5±
SEPTIC TANK INVERT IN ELEV.	54.5
BOTTOM OF TANK ELEV.	49.8
INSIDE BOTTOM OF TANK ELEV.	50.25
TOP OF TANK ELEV.	55.7
FINISH GRADE ELEV. AT SEPTIC TANK	58.7
SEPTIC TANK RIM ELEV.	58.7
HIGH WATER ALARM ELEV. (SEPTIC TANK)	54.5±
LOW WATER ALARM (SEPTIC TANK)	NA
24" DIA. PUMP RIM ELEV.	58.3±
PUMP CHAMBER INVERT IN ELEV.	56.0±
HIGH WATER ALARM ELEV. (PUMP TANK)	55.0±
PUMP CHAMBER INVERT OUT ELEV.	55.0±
PUMP ON ELEVATION (PUMP TANK)	54.75
PUMP OFF ELEVATION (PUMP TANK)	53.84
INSIDE BOTTOM OF PUMP CHAMBER ELEV.	52.3±
SEWER FORCE MAIN LENGTH	18'±
SEASONAL HIGH GROUNDWATER TABLE	57.2

NOTES

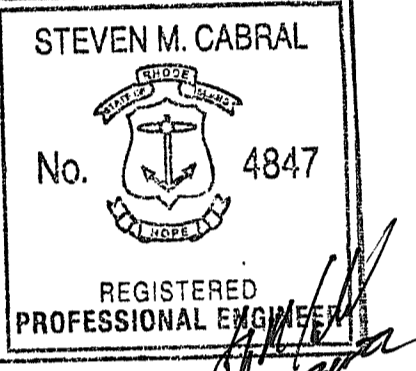
PRETREATMENT SYSTEM INSTALLER MUST PROVIDE CERTIFICATE OF COMPLETION TO ENGINEER, UPON INSTALLATION, SHOWING PUMP SYSTEM ELEVATIONS INCLUDING PUMP ON/OFF AND ALARM ELEVATIONS, AND PUMP CHAMBER INVERT ELEVATIONS.



CROSSMAN ENGINEERING

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North Attleboro, MA 02763
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PROJECT TITLE:
SINGLE-FAMILY HOME
PLAT MAP 67, LOT 67B
0 COTTONTAIL DRIVE
PORTSMOUTH, RI
ZONE R-40
RESIDENTIAL

PREPARED FOR:
151 EAST POST ROAD CORP.
C/O WFL REALTY
162 EAST AVE STE. 1A
NORWALK, CT 06851

DRAWING TITLE:
DETAIL PLAN NO. 1
for
WETLAND PRELIMINARY DETERMINATION

DATE: JUNE 2022 SCALE: AS SHOWN
DWG. NAME: 2545_Derektor_CO2-DETAIL1.dwg

REVISIONS	NUMBER	REMARKS	DATE
△			

DRAWING NUMBER
C2.1
SHEET: 2 OF 3

