VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Rockbridge-Lexington Health Department
PO BOX 900
Lexington, Virginia 24450
(540) 463-3185
(540) 463-6677 Fax

PE Sewage Disposal System Construction Permit Letter (COV 32.1-163.6)

May 15, 2017

JEFFERSON NATIONAL FOREST SERVICE-NATURAL BRIDGE STATION
27 Ranger Ln
Natural Bridge Station, VA 24579

RE: **Tax Map/GPIN:** 113-8--6A (was 118-8-7) (6C) **HDID:** 181-17-0050 **Reserve:** 50% reserve area provided **System Capacity:** Residential, **Conditiona**l to 400 gallons per day

Dear JEFFERSON NATIONAL FOREST SERVICE-NATURAL BRIDGE STATION:

This letter and the attached drawings, specifications and calculations dated May 02, 2017 constitute your **permit** to install a sewage disposal system [and private well if applicable] on the property referenced above. Your application for a permit was submitted pursuant to §32.1-163.6 of the *Code of Virginia,* which requires the Virginia Department of Health (VDH) to accept designs for onsite sewage systems from individuals licensed as Professional Engineers (PEs). This law allows PEs to design onsite sewage systems that do not fully comply with the *Sewage Handling and Disposal Regulations* (12 VAC 5-610-10 *et seq.)* and requires VDH to accept such designs provided they comply with standard engineering practices, performance requirements set by the Board of Health, and certain horizontal setback requirements necessary to protect public health and the environment. VDH hereby recognizes that the design submitted by **Burleson, John , P.E.** complies with the requirements of the *Code of Virginia* and the *Regulations for Alternative Onsite Sewage Systems* and grants permission to install the system as designed in the area shown on the attached plans and specifications.

If modifications or revisions are necessary between now and when the system is constructed, please contact the PE who designed the system upon which this permit is based. Should revisions be necessary during construction, your contractor should consult with the PE. The PE is authorized to make minor adjustments in the location or design of the system provided that adequate documentation is provided to the Rockbridge-Lexington Health Department.

The PE that submitted the design for this permit is required by the *Sewage Handling and Disposal Regulations* to conduct a final inspection of this sewage system when it is installed and to submit an inspection report and completion statement to the Rockbridge-Lexington Health Department. The health department is not required to inspect the installation, but may do so at its sole discretion. The sewage system may not be placed into operation until you have obtained an Operation Permit from the Rockbridge-Lexington Health Department. If your PE did not submit an Operation and Maintenance Manual for review and approval with the plan package, then (s)he will be required to do so prior to issuance of an Operation Permit.

This Construction Permit is null and void if site and soil conditions are changed from those shown on your application or if conditions are changed from those shown on the attached plans and specifications. VDH may revoke or modify any permit if, at a later date, it finds that the system would threaten public health or the environment.

This permit approval has been issued in accordance with applicable regulations based on the information and materials provided at the time of application. There may be other local, state, or federal laws or regulations that apply to the proposed construction of this onsite sewage system. The owner is responsible at all times for complying with all applicable local, state, and federal laws and regulations. If you have any questions, please contact me.

This permit expires **November 14, 2018**. This permit is not transferable to another owner or location.

Sincerely,

Eric Royer
Environmental Health Specialist, Sr.

C: Burleson, John , P.E.

Glenwood-Pedlar Ranger Office

Rockbridge County, Virginia
TM: 113-8-6A

400 GPD Drainfield
w/Advantex AX-RT

PDF Notice: This document is meant to be read as an 11" x 17" sheet of paper. Zooming may reveal superfluous lines and features used during the CAD process.

COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER
5/2/17

A Pre-Construction conference with Engineer, John Burleson, is required prior to excavation/installation.

This sewage system must be installed by a DPOR licensed "Alternative Onsite Sewage System Installer".

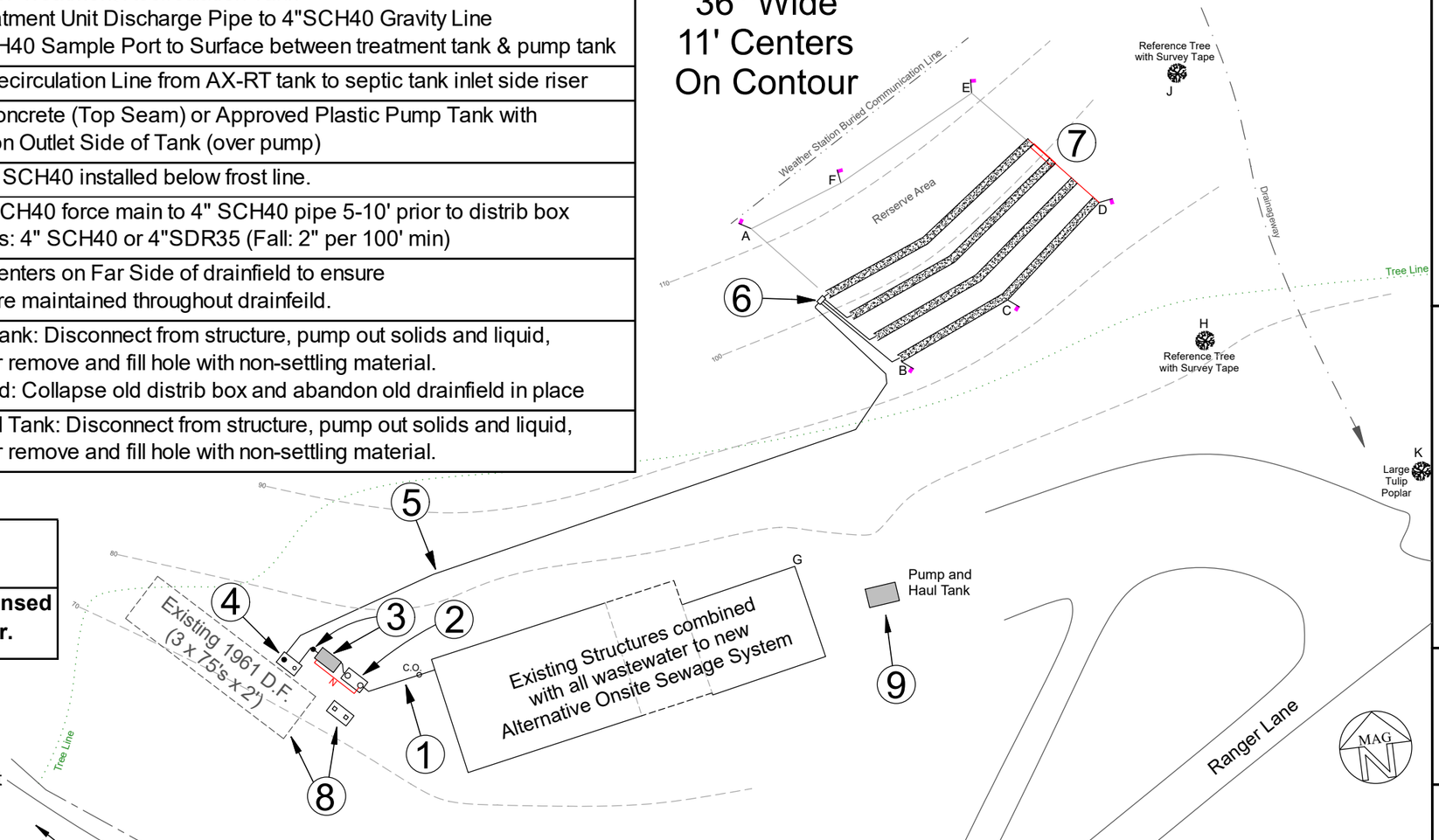
May 2, 2017	Project No. CKR17

Burleson Engineering, PLLC
1374 Big Spring Drive
Lexington, Virginia 24450
540-464-9242

COMMONWEALTH OF VIRGINIA
JOHN T. BURLESON
Lic. No. 028503
5/2/17
PROFESSIONAL ENGINEER

1	4" SCH40 Sewer Main with at least one cleanout on exterior of structure and cleanouts every 50' to 60' (Min Fall: 1.24" per 10')
2	1000 Gallon Concrete (Top Seam) or Approved Plastic Septic Tank with Access Risers on Inlet and Outlet Sides and Orenco Biotube Effluent Filter on Outlet Side.
3	Advantex AX-RT Treatment/Recirculation Tank a. Expand Treatment Unit Discharge Pipe to 4"SCH40 Gravity Line b. Install 4" SCH40 Sample Port to Surface between treatment tank & pump tank
N	1" SCH40 N-Recirculation Line from AX-RT tank to septic tank inlet side riser
4	1000 Gallon Concrete (Top Seam) or Approved Plastic Pump Tank with Access Riser on Outlet Side of Tank (over pump)
5	Force Main: 2" SCH40 installed below frost line.
6	a. Expand 2" SCH40 force main to 4" SCH40 pipe 5-10' prior to distrib box b. Header Lines: 4" SCH40 or 4"SDR35 (Fall: 2" per 100' min)
7	Measure 11' Centers on Far Side of drainfield to ensure 11'+ Centers are maintained throughout drainfeild.
8	a. Old Septic Tank: Disconnect from structure, pump out solids and liquid, collapse and/or remove and fill hole with non-settling material. b. Old Drainfield: Collapse old distrib box and abandon old drainfield in place
9	Pump and Haul Tank: Disconnect from structure, pump out solids and liquid, collapse and/or remove and fill hole with non-settling material.

4 x 95's
20" Deep
36" Wide
11' Centers
On Contour



	Distance (feet)	Azimuth (degrees)
AB	76	141
BC	46	67
CD	50	50
DE	63	320
EF	59	237
FA	36	256.5
GB	90	36
HD	65	329
JD	57	218.5
KD	158	316.5

Water Softerner should not discharge to the sewage treatment & disposal system.

This system must be installed by a DPOR Licensed Alternative Onsite Sewage System Installer.

Notes:
1. DO NOT install during wet, icy or snowy weather.
2. Identify all buried utilities prior to any excavation.
3. Read all plans and specifications carefully.
4. Follow installation procedures detailed in treatment unit installation manuals.
5. This drainfield should not be installed unless the plans and specifications have a signed authorization letter or signed permit from the Health Department.
6. Treatment Tank, Septic Tank and Drainfield should be located 10'+ from house or any structure without basement, 10'+ from downhill side of walkout basement, 20'+ from full basement or sides or uphill of walkout basement.
7. No system component substitutions without approval from the project engineer.
8. A pre-construction conference is required with project engineer prior to installation.
9. Drainfield corners marked with pink flags.
10. If drainfield corner flags are missing, project engineer must re-flag prior to any installation.
11. Drainfield area should be seeded, strawed and fertilized immediately after backfilling, covering and grading.

Burleson Engineering, PLLC
1374 Big Spring Drive
Lexington, Virginia 24450
540-464-9242

Rockbridge County TM: 113-8-6A

100'
50'
0

1/5

CKR17

Glenwood-Pedlar Ranger Office
400 GPD Drainfield
w/Advantex AX-RT
Site Plan

General Notes:
1. All components of this system should be 5'+ from any property line.
2. Contact Miss Utility 48 hours before any excavation.
3. Do Not install during wet, icy or snowy weather.
4. Any questions regarding location and/or layout of drainfield or components, or drainfield flags are missing, contact engineer, John Burleson, at 540-817-0350 prior to installation.
5. Trees should be removed from the installed drainfield area.
6. Trees with water loving roots (maples) should be removed to at least 10'+ from the installed drainfield area.
7. All sewage system components should be located 10'+ from house or any structure without basement, 10'+ from downhill side of walkout basement, 20'+ from full basement or sides or uphill of walkout basement.
8. Protect the drainfield area during any land disturbance and/or building construction.
9. The sewage disposal system is to be constructed as specified by the permit or attached plans and specifications. Failure to install sewage disposal system as specified may require reinstallation.
10. All construction materials and methods must conform to applicable local regulations and with Virginia Sewage Handling and Disposal Regs.
11. Concrete tanks should be installed on uniformly firm and stable compacted soil or undisturbed soil. Number 57 stone recommended to provide uniform support to tank bottom. If rock is encountered in bottom of tank hole, at least 6" of number 57 stone is required and should be graded and leveled before tanks are set.
12. Backfill tanks and piping with suitable loose material that is free of large or damaging objects.
13. Compact soil in lifts around tanks to reduce settling.
14. Drainfield should be seeded, strawed and fertilized immediately after backfilling and final grading.
15. Ensure that the final grade sheds water away from the drainfield area. Stormwater from gutters, etc. should be diverted away from the drainfield area and the septic/treatment/pump tanks.
16. If the drainfield is not marked, flags are missing or can't be located using the construction drawing, Do Not Begin installation on any part of the system. Contact engineer, John Burleson, at 540-817-0350 or 540-464-9242. Failure to contact the engineer and installing the drainfield in the incorrect location, incorrect depth, etc. may result in inspection rejection and may require reinstallation.
17. Sewage disposal system requires inspection. Contact, engineer, John Burleson at 540-817-0350 or 540-464-9242 a minimum of 48 hours in advance to arranged for inspection.
18. Unless specifically authorized by engineer, the system should not be covered until the engineer has inspected and approved the installation.
19. NO EQUIPMENT SUBSTITUTIONS ALLOWED, unless authorized by project engineer.
20. Before installing, contractor should have a copy of the signed Health Department Approval Letter with Health Dept ID#, and PE Plans and Specs.
21. Sewer main: 4" SCH40, fall: 1.25" per 10' minimum.
22. Gravity Lines: 4" SCH40 or SDR35, fall: 6" per 100' minimum.
23. Unless noted differently, all piping and fittings should be SCH40 PVC and designed for pressure applications.

COMMONWEALTH OF VIRGINIA
JOHN T. BURLESON
Lic. No. 028503
5/2/17
PROFESSIONAL ENGINEER

TOP SEAM TANKS REQUIRED

Treatment Unit/Septic Tank Notes:
1. Treatment Unit: Advantex AX-RT.
2. Tank: 800 Gallon, Recirculation/Processing Tank from Approved Manufacturer (see Advantex AX20RT Plan Sheet).
3. Advantex Rep: Reed Johnson, 757-645-8662.
4. Contractor must be a officially trained Advantex installer.
5. Follow Advantex installation manual and specification sheets provided with equipment for installation details.
6. Control Panel: Vericom AXB PT (if phone service does not exist at property, appropriate Orenco non-Vericom panel may be substituted.)
7. Septic Tank: 1000 Gallon, Top Seam, Orenco Approved Tank.
8. Effluent Filter: Orenco Biotube.

Drainfield Notes:
1. Drainfield: 4 x 95's x 3', 11' Centers, 20" deep.
2. Distribution Box: 12+ Port, Concrete or Approved Plastic
3. Gravel: 0.5 to 1.5 inches, clean.
4. Gravelless: Do Not use Chamber Type gravelless system.
5. Authorized Peanut Style or pipe bundle type gravelless systems may be used for this drainfield.
6. NO GRAVELLESS REDUCTION MAY BE TAKEN.

Pump Tank Notes:
1. 1000 Gallon Concrete (TOP SEAM) or Approved Plastic Tank.
2. Pump: Goulds, WE10H.
3. Follow pump manufacturers installation procedures.
4. NO PUMP SUBSTITUTIONS without approval of engineer.
5. Pump control panel should have the following min characteristics.
   a. Pump must have an audiovisual alarm in an area where it will be easily seen or heard.
   b. Highwater alarm must have electrical circuitry separate from the pump circuitry.
   c. All electrical connections must be hard wired.
   d. Pump station should have controls for automatically starting and stopping the pump based on water level and include a manual overide switch.

Orenco Tank Testing Requirement
(Processing, Pump and Septic Tanks)

Tank Testing Specification:
Concrete tanks may be allowed 24 hours to absorb water prior to hydrostatic testing. All tanks shall be tested in the field by filling the tank with water to 2 (two) inches into the riser for a minimum of 2 hours. Any drop in water level indicates leakage. The tank may be drained and the installer and tank manufacturer may make one attempt to repair the tank to make the tank watertight. The tank shall be retested according to the procedure specified above. If the tank leaks during the retest, it shall be removed from the site and replaced with a struturally sound watertight tank at no cost to the homeowner.

Burleson Engineering, PLLC
1374 Big Spring Drive
Lexington, Virginia 24450
540-464-9242

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CKR17

Glenwood-Pedlar Ranger Office
400 GPD Drainfield
w/Advantex AX-RT
Project Notes

Orenco Septic Tank requirement. *Note: Only discharge tanks from the manufacturers listed below shall be used.*			
Discharge Tank Manufacturer	Tank Size	I	D
Orenco Fiberglass Tank	1000 Gal.	11"	65"
Wrights Ready Mix	1000 Gal.	15"	65"
Beasley Concrete	1000 Gal.	16"	66"
C.T. Jamison	1000 Gal.	14"	65"
Hanover Precast	1000 Gal.	16"	66.5"
Rockingham Precast	1000 Gal.	14"	65"

NOTE: ALL TANKS SHALL BE TESTED FOR WATERTIGHTNESS. ALL CONCRETE TANKS SHALL HAVE PRTA24 CAST INTO TANK FOR ACCEPTANCE OF MODEL RR24CC RISER.

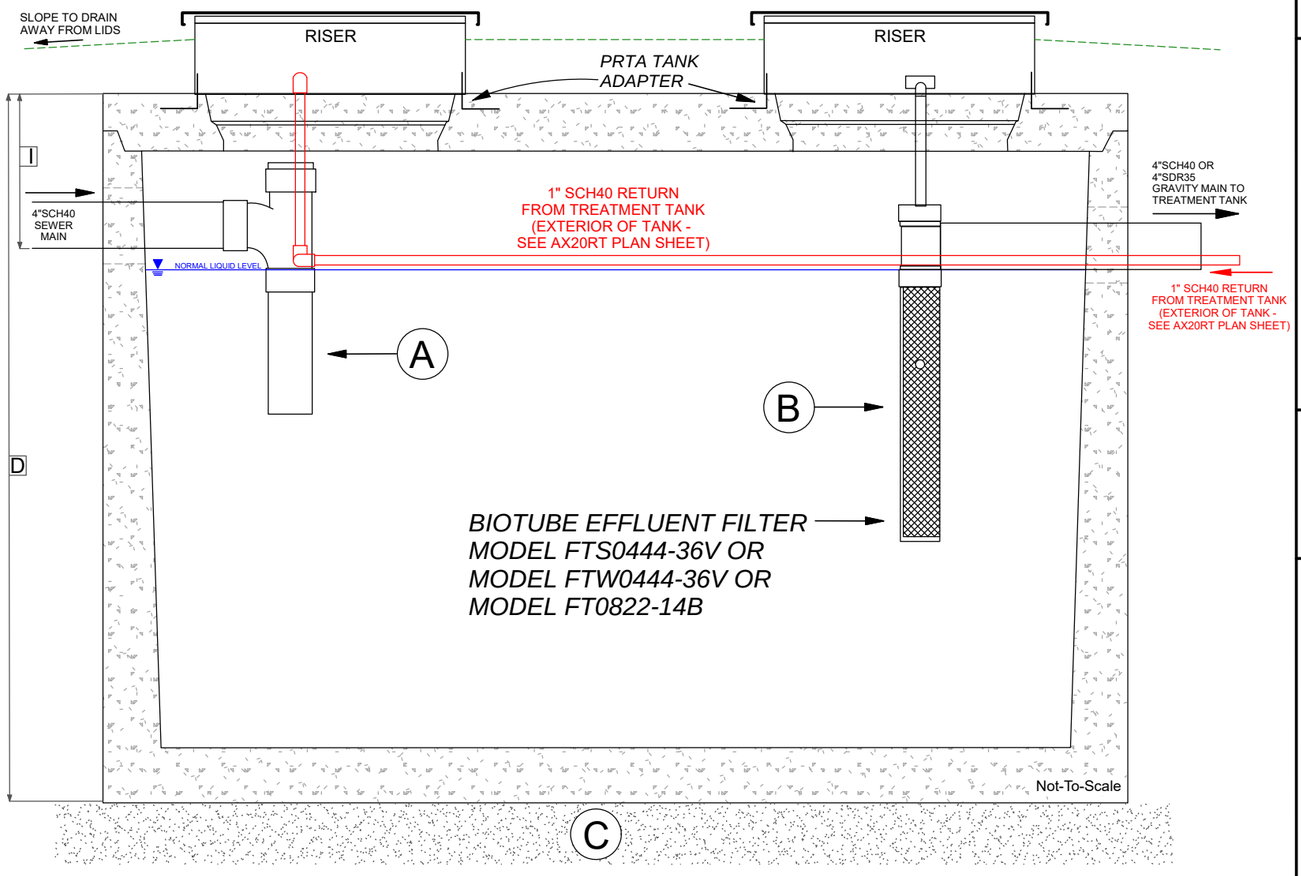
TOP SEAM TANKS REQUIRED

Risers on Inlet and Outlet Sides

ORENCO RISER
ORENCO MODEL RR24XX
24" PVC RISER WITH
MODEL FL24G-4BU-ATX
24" GASKETED FIBERGLASS
LID WITH S.S.BOLTS.

ALL CONCRETE TANKS SHALL HAVE PRTA24 TANK ADAPTER CAST INTO TANK FOR ACCEPTANCE OF RR24XX RISER.

A. SCH40 sanitary tee on the inlet pipe. Inlet Tee should extend 6" to 8" below and 8" to 10" above the normal liquid level.
B. Biotube Effluent Filter.
C. Concrete tanks should be installed on uniformly firm and stable compacted soil or undisturbed soil. 6" (minimum) of Number 57 stone required to provide uniform support to tank bottom. Stone base should be graded and leveled before tank is set.



1 1000 Gallon Septic Tank (TOP SEAM)

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PROFESSIONAL ENGINEER

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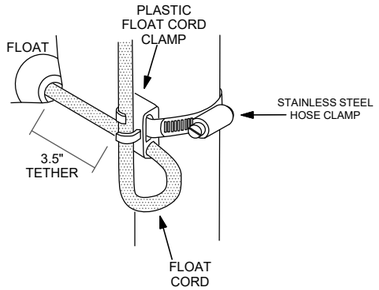
CKR17

Glenwood-Pedlar Ranger Office
400 GPD Drainfield
Septic Tank



1. Place the cord into the plastic clamp as shown.
2. Locate clamp at activation level shown on pump tank schematic.
3. Do not install cord under steel hose clamp.
4. Tighten hose clamp using screwdriver. Over tightening may result in damage to plastic clamp.
5. All hose clamp components should be made of 18-8 stainless steel material.
6. Follow all installation and safety procedures provided with manufacturers instructions.

2 Float Tree Assembly (Typical)

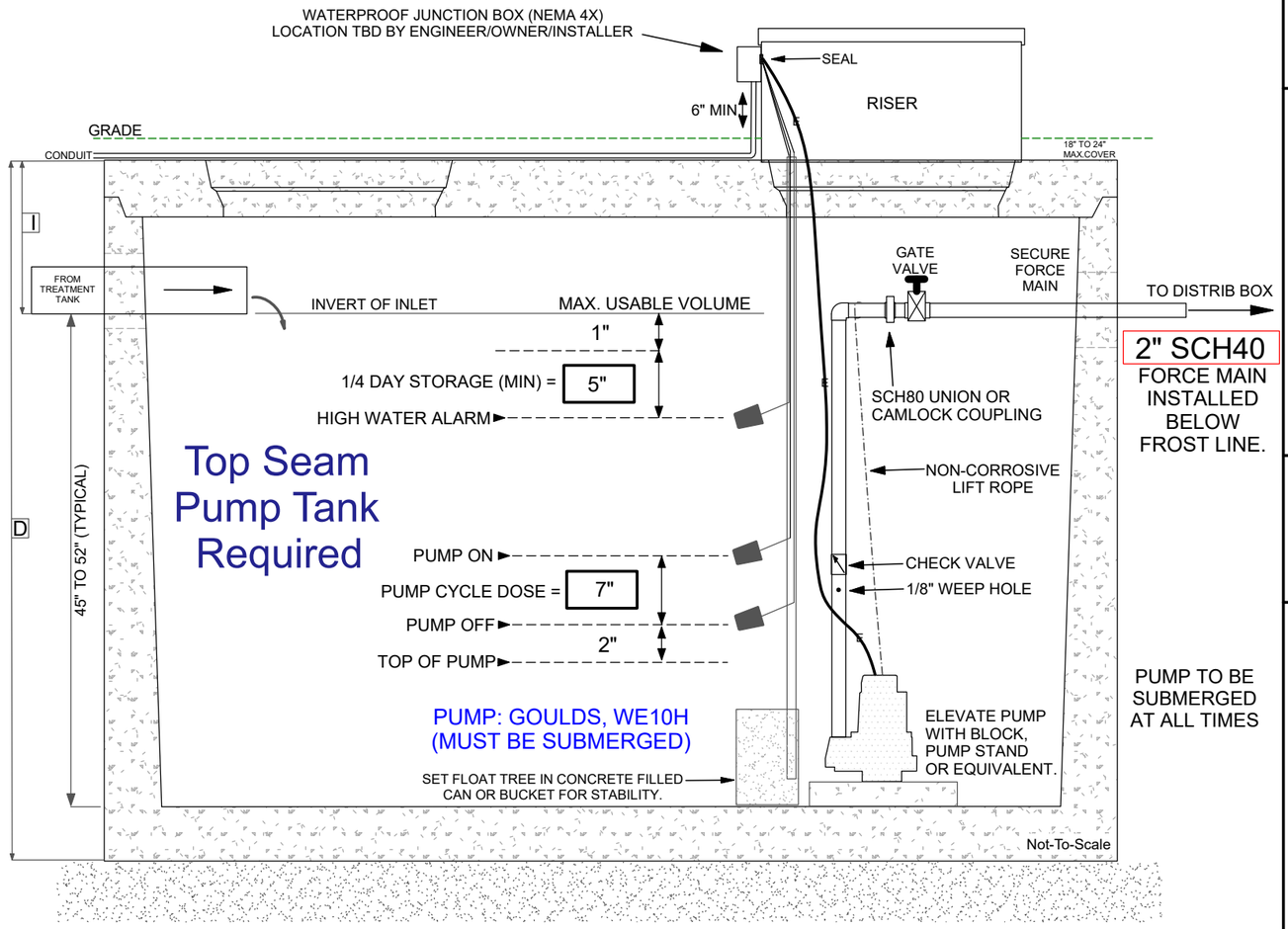
Min Flow TDH	49 feet at	20.9 GPM
Operating Point TDH	57 feet at	36 GPM
Pump	Goulds WE10H	
Pump Chamber Size	1000 Gallons	
Gallons per Cycle	140 Gallons	
Drawdown per Cycle	7 Inches	
Pump Cycle Time	3:54 m:s at	36 GPM

ORENCO RISER
ORENCO MODEL RR24XX
24" PVC RISER WITH
MODEL FL24G-4BU-ATX
24" GASKETED FIBERGLASS
LID WITH S.S.BOLTS.

ALL CONCRETE TANKS SHALL HAVE PRTA24 TANK ADAPTER CAST INTO TANK FOR ACCEPTANCE OF RR24XX RISER.

Orenco Discharge (Pump) Tank requirement.
Note: Only discharge tanks from the manufacturers listed below shall be used.

Discharge Tank Manufacturer	Tank Size	I	D
Orenco Fiberglass Tank	1000 Gal.	11"	65"
Wrights Ready Mix	1000 Gal.	15"	65"
Beasley Concrete	1000 Gal.	16"	66"
C.T. Jamison	1000 Gal.	14"	65"
Hanover Precast	1000 Gal.	16"	66.5"
Rockingham Precast	1000 Gal.	14"	65"



1 1000 Gallon Pump Tank (TOP SEAM)

Notes:
1. The pump station must be provided with controls for automatically starting and stopping the pump based on water level.
2. The electrical motor control center and master disconnect switch shall be placed in a secure location and above grade.
3. Each motor control center shall be provided with a manual override switch.
4. A high water alarm with remote sensing and electrical circuitry separate from the motor control center circuitry shall be provided.
5. The alarm shall be audiovisual and shall alarm in an area where it may be easily monitored.
6. All electrical connections shall be hardwired in the electrical junction box.
7. All piping shall be of the pressure type with pressure fittings that are chemically fused.
8. Do not use any compression fittings. Use glue or screw fittings only.
9. Contact Engineer prior to substituting pump.
10. Pump chamber must be level and watertight.
11. Use an approved pump chamber only.
12. Concrete tanks should be installed on uniformly firm and stable compacted soil or undisturbed soil. 6" of Number 57 stone (minimum) required to provide uniform support to tank bottom. Stone base should be graded and leveled before tank is set.

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Lexington, Virginia 24450
540-464-9242

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Glenwood-Pedlar Ranger Office
400 GPD Drainfield
Pump Tank

Seeding/Mulching

a. All areas disturbed by construction shall be stabilized with permanent seeding immediately following final/finish grading. Seeding should be pursuant to Virginia Erosion and Sediment Control Manual, Table 3.32-C for specific areas/requirements or the following general mixture.

Seed	Application Rate (#/acre)
Kentucky 31 Fescue	128
Red Top Grass	2
Seasonal Nurse Crop March-May:Annual Rye May-August: Foxtail Millet August-October: Annual Rye November-February: Winter Rye	20

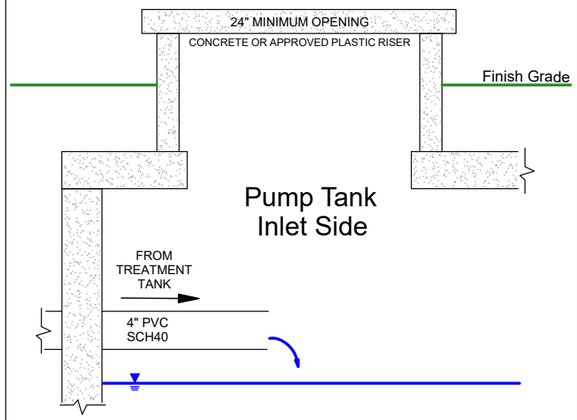
b. Lime and Fertilizer should be applied pursuant to guidance in the VESC manual, specification 3.32 for Piedmont and Appalachian Region;

1.) Lime: 2 tons/acre pulverized agricultural grade limestone (90#/1000SF)
2.) Fertilizer: 1000#/acre 10-20-10 or equivalent nutrients (23#/1000SF)

c. Straw mulch should be used on relatively flat surfaces and applied after seeding has occurred. Straw should be applied to provide at a rate of 1.5 to 2 tons per acre (70-90#/1000SF or 1.5 to 2 square bales per 1000SF). In all seeding operations, seed, fertilizer and lime will be applied prior to mulching. Seeding and/or strawing, may have to be repeated to establish appropriate temporary and permanent vegetation.

5 Seeding/Mulching

Notes:
1. The purpose of the sample port is to collect free flowing treated effluent.
2. Extend 4"SCH40 gravity line from treatment tank to under the access hole on the inlet side of the pump tank.
3. Install Access Riser (Concrete or Approved Plastic) to surface on the inlet side of the pump tank.
4. With this option there will be two access risers on the pump tank: one on the inlet side and one on the outlet side.

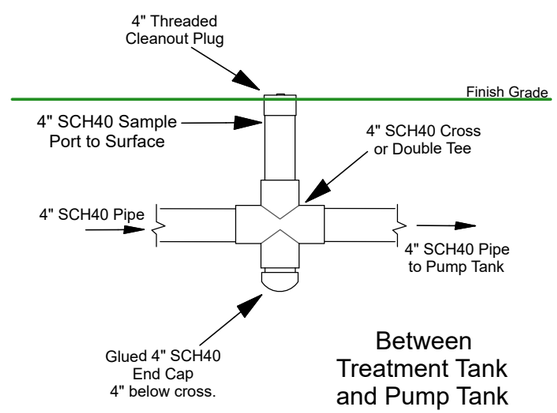


4 Sample Port - Option 2

Not-To-Scale

or

Notes:
1. The purpose of the sample port is to collect free flowing treated effluent.
2. Gravity lines should be 4" SCH40 or 4" SDR35 pipe (min. fall: 6" per 100').
3. Install 4" SCH40 sample port to surface between treatment tank and pump tank.



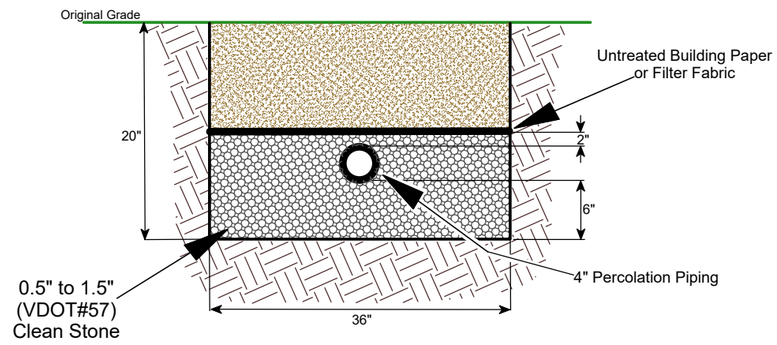
3 Sample Port - Option 1

Not-To-Scale

NO GRAVELLESS SYSTEM LINE OR AREA REDUCTIONS ALLOWED.

Authorized "peanut style" or "pipe bundle" Gravelless Systems may be substituted for gravel.

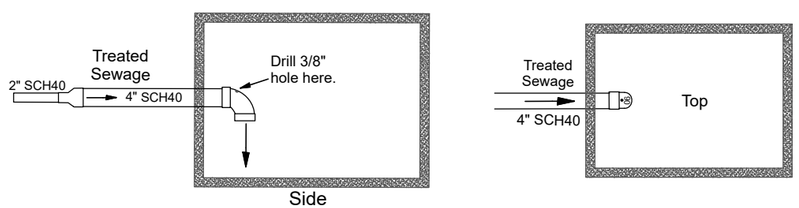
DO NOT USE "CHAMBER TYPE" GRAVELLESS DRAINFIELD SYSTEMS.



1 Trench Cross Section with Gravel

Not-To-Scale

1. Pipe entering box should have 90 ell forcing flow to bottom of box(es).
2. Use Speed Levelers to balance flow in box.
3. Header Lines should be 4" SCH40 or 4" SDR35 pipe.
4. Header Line Fall: 2" per 100' Min.
5. Expand 2" SCH40 force main to 4" SCH40 five to ten feet prior to the distribution box to ensure tight fit into box port.



Header Lines Not Shown.

2 12+ Port Distribution Box

Not-To-Scale

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5/5

CKR17

Glenwood-Pedlar Ranger Office
400 GPD Drainfield
Trench, Distrib. Box
and Sample Port

GOULDS PUMPS

Submersible Effluent Pump

MODEL 3885

WE Series

PROSURANCE AVAILABLE FOR RESIDENTIAL APPLICATIONS.

APPLICATIONS

Specifically designed for the following uses:

- Homes
- Farms
- Trailer courts
- Motels
- Schools
- Hospitals
- Industry
- Effluent systems

SPECIFICATIONS

Pump

- Solids handling capabilities: ¾" maximum.
- Discharge size: 2" NPT.
- Capacities: up to 140 GPM.
- Total heads: up to 128 feet TDH.
- Temperature: 104°F (40°C) continuous 140°F (60°C) intermittent.
- See order numbers on reverse side for specific HP, voltage, phase and RPM's available.

FEATURES

■ **Impeller:** Cast iron, semi-open, non-clog with pump-out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller available as an option.

■ **Casing:** Cast iron volute type for maximum efficiency. 2" NPT discharge.

■ **Mechanical Seal: SILICON CARBIDE VS. SILICON CARBIDE** sealing faces. Stainless steel metal parts, BUNA-N elastomers.

■ **Shaft:** Corrosion-resistant, stainless steel. Threaded design. Locknut on all models to guard against component damage on accidental reverse rotation.

■ **Fasteners:** 300 series stainless steel.

■ Capable of running dry without damage to components.

■ Designed for continuous operation when fully submerged.

MOTORS

■ Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.

■ Class B insulation on ⅓-1½ HP models.

■ Class F insulation on 2 HP models.

Single phase (60 Hz):

- Capacitor start motors for maximum starting torque.
- Built-in overload with automatic reset.
- SJTOW or STOW severe duty oil and water resistant power cords.
- ⅓ and ½ HP models have NEMA three prong grounding plugs.
- ¾ HP and larger units have bare lead cord ends.

Three phase (60 Hz):

- Class 10 overload protection must be provided in separately ordered starter unit.
- STOW power cords all have bare lead cord ends.

■ **Designed for Continuous Operation:** Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.

■ **Bearings:** Upper and lower heavy duty ball bearing construction.

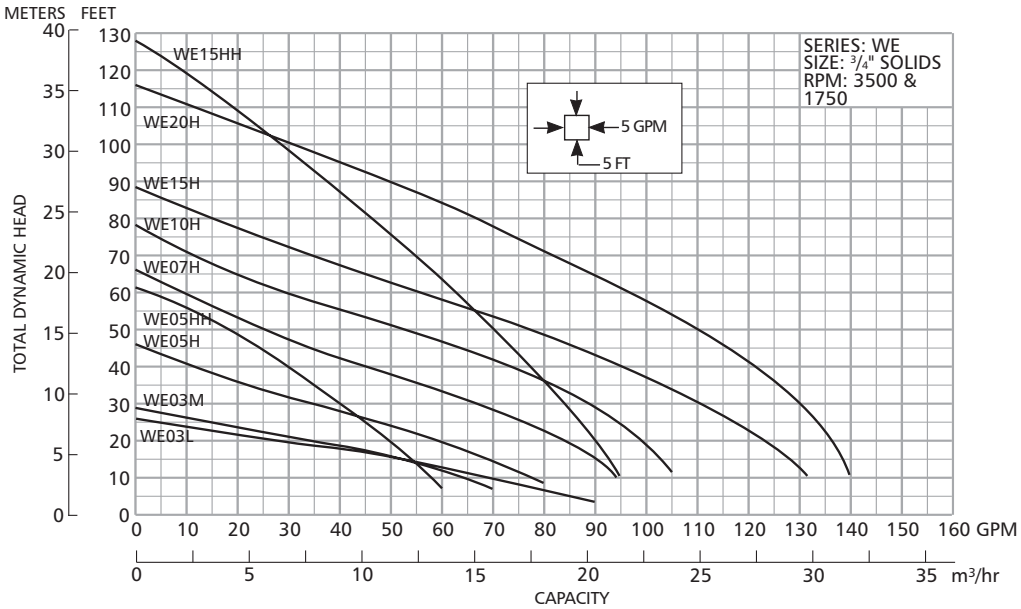
■ **Power Cable:** Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.

■ **O-ring:** Assures positive sealing against contaminants and oil leakage.

AGENCY LISTINGS

Tested to UL 778 and CSA 22.2 108 Standards By Canadian Standards Association File #LR38549

Goulds Pumps is ISO 9001 Registered.



Goulds Pumps

ITT Industries

Effective July, 2003
B3885

GOULDS PUMPS

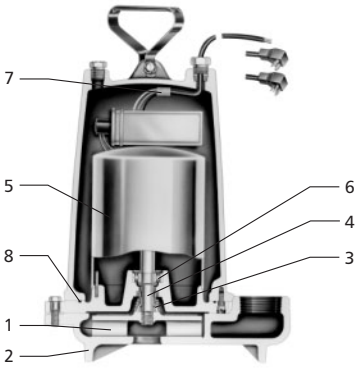
Submersible Effluent Pump

MODEL 3885

WE Series

COMPONENTS

Item No.	Description
1	Impeller
2	Casing
3	Mechanical Seal
4	Motor Shaft
5	Motor
6	Ball Bearings
7	Power Cable
8	Casing O-Ring



MODELS

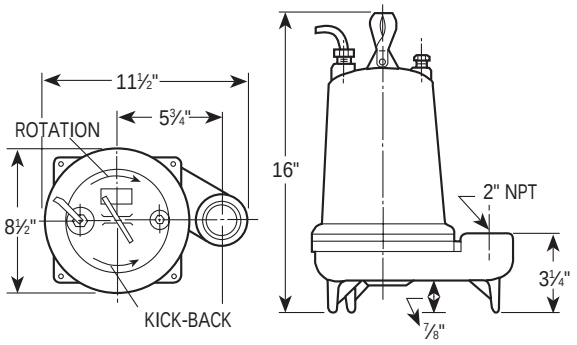
Order No.	HP	Volts	Phase	Max. Amp.	RPM	Solids	Wt. (lbs.)
WE0311L	⅓	115	1	10.7	1750	¾"	56
WE0318L		208		6.8			
WE0312L		230		4.9			
WE0311M		115		10.7			
WE0318M		208		6.8			
WE0312M		230		4.9			
WE0511H	½	115	1	14.5	3500		60
WE0518H		208		8.1			
WE0512H		230		7.3			
WE0538H		200	3	4.9			
WE0532H		230		3.3			
WE0534H		460		1.7			
WE0537H		575		1.4			
WE0511HH		115	1	14.5			
WE0518HH		208		8.1			
WE0512HH		230		7.3			
WE0538HH		200	3	4.9			
WE0532HH		230		3.6			
WE0534HH		460		1.8			
WE0537HH		575		1.5			
WE0718H	¾	208	1	11.0			70
WE0712H		230		10.0			
WE0738H		200	3	6.2			
WE0732H		230		5.4			
WE0734H		460		2.7			
WE0737H		575		2.2			
WE1018H	1	208	1	14.0			
WE1012H		230		12.5			
WE1038H		200	3	8.1			
WE1032H		230		7.0			
WE1034H		460		3.5			
WE1037H		575		2.8			
WE1518H	1½	208	1	17.5			80
WE1512H		230		15.7			
WE1538H		200	3	10.6			
WE1532H		230		9.2			
WE1534H		460		4.6			
WE1537H		575		3.7			
WE1518HH		208	1	17.5			
WE1512HH		230		15.7			
WE1538HH		200	3	10.6			
WE1532HH		230		9.2			
WE1534HH		460		4.6			
WE1537HH		575		3.7			
WE2012H	2	230	1	18.0			83
WE2038H		200	3	12.0			
WE2032H		230		11.6			
WE2034H		460		5.8			
WE2037H		575		4.7			

PERFORMANCE RATINGS (gallons per minute)

Order No.		WE03L	WE03M	WE05H	WE07H	WE10H	WE15H	WE05HH	WE15HH	WE20H
Total Head Feet of Water	HP	⅓	⅓	½	¾	1	1½	½	1½	2
	RPM	1750	1750	3500	3500	3500	3500	3500	3500	3500
	5	86	–	–	–	–	–	–	–	–
	10	70	63	78	–	–	–	58	–	–
	15	52	50	70	90	–	–	53	–	–
	20	27	35	60	83	98	123	49	90	136
	25	–	–	48	76	94	117	45	87	133
	30	–	–	35	67	88	110	40	83	130
	35	–	–	20	57	82	103	35	80	126
	40	–	–	–	45	74	95	30	77	121
	45	–	–	–	35	64	86	25	74	116
	50	–	–	–	25	53	77	–	70	110
	55	–	–	–	–	40	67	–	66	103
	60	–	–	–	–	30	56	–	63	96
	65	–	–	–	–	20	45	–	58	89
	70	–	–	–	–	–	35	–	55	81
	75	–	–	–	–	–	25	–	51	74
	80	–	–	–	–	–	–	–	47	66
	90	–	–	–	–	–	–	–	37	49
	100	–	–	–	–	–	–	–	28	30

DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)



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SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Goulds Pumps

ITT Industries

AX20RT Treatment System - Gravity Discharge

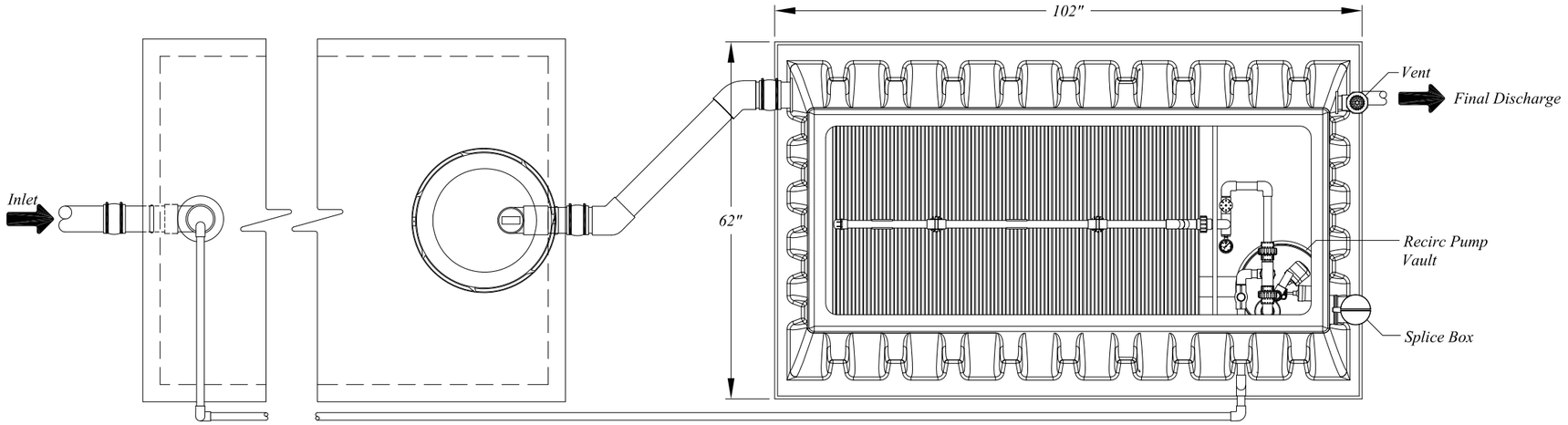
Filter Tank Dry Weight: 860 lbs

Design Notes

For residential strength waste up to 4 bedrooms.

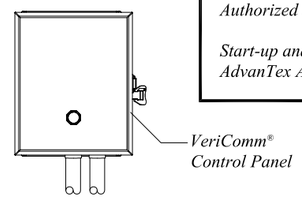
Installation to be performed by an AdvanTex Authorized Installer only.

Start-up and service to be performed by an AdvanTex Authorized Service Provider only.

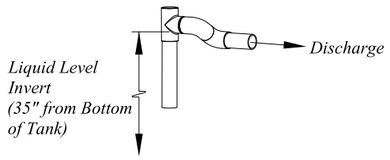


1000 gal. Primary Tank - Top View

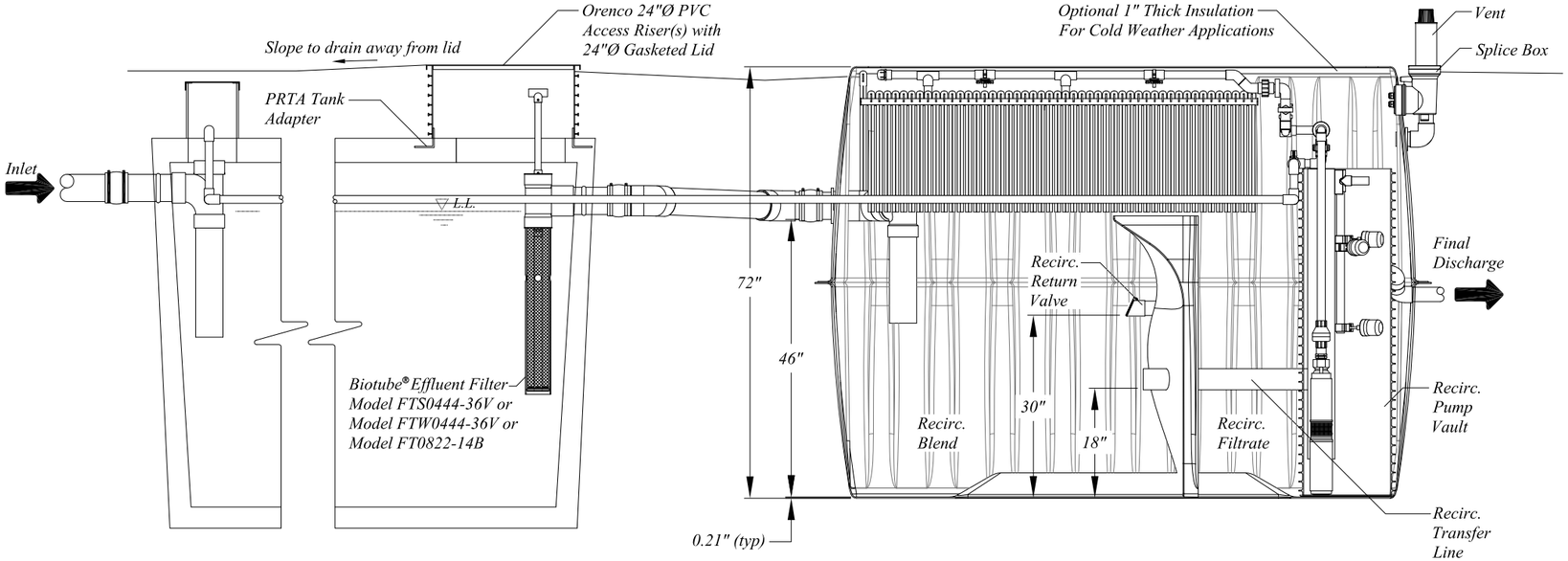
AX20 800 gal. Recirc. Tank - Top View



Control Panel Detail
Not To Scale

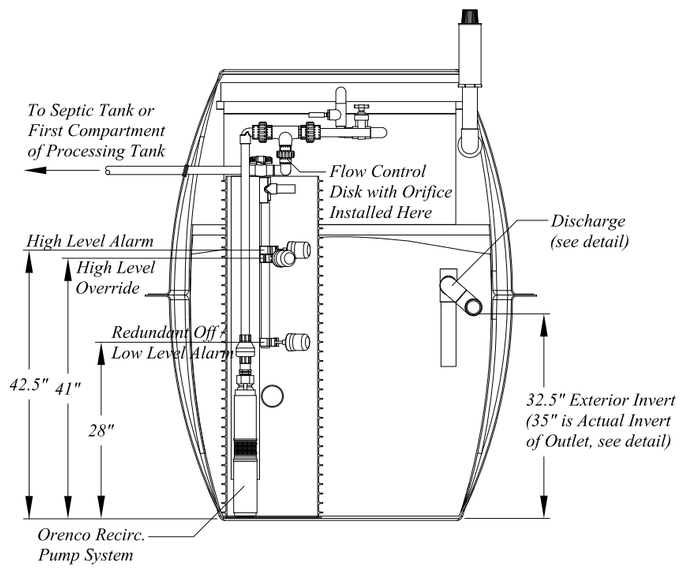


Discharge Detail
Not To Scale



1000 gal. Primary Tank - Side View

AX20 800 gal. Recirc. Tank - Side View



Discharge Chamber - End View

PRODUCT CONFIGURATION DRAWINGS

Orenco Systems® Incorporated
Changing the Way the World Does Wastewater®

Drawn By: BEN SMITH	Project: AX20RT Mode 3A	Scale: 1" = 2'-0"	
Drawn For:		Sheet: 1 OF 1	
	Title: NDW-ATX-RT-STD-08	Rev: A-05	Date: 4/22/2013