Feasibility and Plan Review

Absorption Trench

Address: 4267 N 3150 East St Liberty
System Design #: WC-22-225-0001-3.0
Design Date: 2021 Mar 20

Alteration

This property has an existing, properly functioning OWS. This design is a request for an alteration to the existing system to accommodate new construction on the property.

An additional absorption trench will be added to allow for annual resting of one trench.

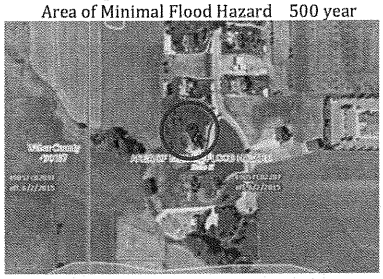
Est Hydraulic Flow Rate (HFR)	**100 gpd**
Proposed New Building	100 gpd
20 guests on holiday weekends	
35 gpd per guest (with showers)	

Feasibility Assessment Record

Hydraulic Loading Rate (HLR)	**0.45 ($\frac{gpd}{ft^2}$)**
HD Required Rate	0.452 ($\frac{gpd}{ft^2}$)
Soil Profile	see WMHD
Max Absorption Trench Depth	**30"**
Maximum Ground Water Design per WMHD	24"
Absorption Area Max Ground Slope	≤1%

Flood Plain Zones

Flood Plain Zone	See Map
FEMA Designation	Zone X
Area of Minimal Flood Hazard	500 year



Key

- Flood Plain Zone
- Absorption Area
- Groundwater Protection Zone 2
- Non-Public Water Supply
- 100 foot Groundwater Protection Zone
- Soil Test Pit

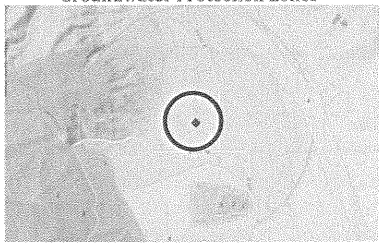
Plan Review and Permitting

Wastewater Type	Domestic
Water Supply	Liberty Pipeline Company
Application	Attached
Soil Pit Location	see WMHD

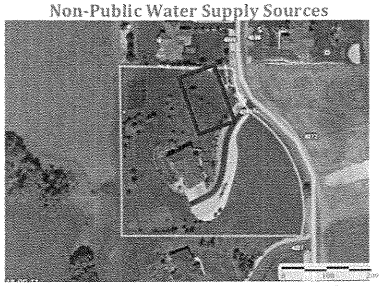
Lot Size and Dimensions

See Site Plan

Groundwater Protection Zones



Non-Public Water Supply Sources



The field verified wells are shown on the **Site Plan**

Design Requirements

Sewer & Septic Tank Details

Inlet Riser

Orenco:

PRTA24, Tank Adapter	24"
PRTA24BDKIT, Bolt Down Kit or Cast-In	
FLD24G, DuraFiber™ Access Lid	24"
RR24xx	**As needed**
Ultra-Rib™ Access Riser	

Outlet Riser

Orenco:

PRTA24, Tank Adapter	24"
PRTA24BDKIT, Bolt Down Kit or Cast-In	
FLD24G, DuraFiber™ Access Lid	24"
RR24xx	**As needed**
Ultra-Rib™ Access Riser	

Effluent Filter

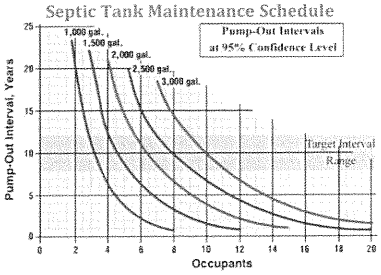
Orenco FTS0444-36, 4" x 36" Cartridge

Alternate Septic Tank Risers

Tuf-Tite:

Tank Adapter and Lid	24"
PolyRiser	As needed

Septic Tank Maintenance Schedule



Absorption Trench System Details

Absorption Trenches

Sizing Criteria

Effective Absorption Area (E_{AA}) = $\frac{HFR}{HLR}$

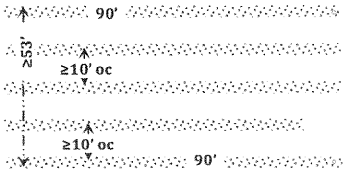
= 100 gpd / 0.45 ($\frac{gpd}{ft^2}$) = 222 ft²

Reduction Factor (None)	1.0
E_{AA} x RF = 222 ft² x 1.0 =	**222 ft²**
Width of Media (W_M) =	**3 ft**

Length of Media (L_M) = $\frac{EAA}{W_M}$

= 222 ft² / 3 ft= **74 ft**

Standard Trench



Chambered Trenches

Sizing Criteria

Reduction Factor (None)	1.0
L_M x RF = 74 ft x 1.0 =	**74 ft**

Disclaimer

Due to the variability of: site soils; wastewater; the personnel that conduct feasibility studies and review plans; building construction; and, OWS system installation, this design is not intended to be a guarantee or warranty, expressed or implied, regarding the future adequacy, performance, or condition of any installed system. The designer liability is limited to the value paid for this plan.

The drawings, plans, models, designs, specifications, reports, photographs, computer software, surveys, calculations and other data, including computer print-outs, contained in this Plan are the property of the designer. The Plan is made available for 4267 N 3150 East St Liberty. The Plan may not be copied, reproduced, or distributed in any way or for any purpose without the consent of the designer.

The designer reserves the right to revise this document and to make changes in content as needed or as required by the local regulatory authority without obligation on the part of the designer to provide notification of such revision or change. The installer shall confirm they have the most current revision of this plan.

The designer is not responsible for the results of any changes to this plan without approval by the designer and the local health department. Any deviations shall be coordinated with the designer and local health department prior to proceeding with the related work concerning the deviation.

This design assumes installer experience or competency with the system shown herein. The designer shall not be held liable for any errors, omissions, or deficiencies in any form by the installer.

The installer shall read the notes and details in this plan.

All third party information provided including any plot plans, site plans, geographic maps, health department requirements and statements, is "as is" without any guarantee, representation, condition or warranty of any kind, either express, implied, or statutory.

Any location of utilities shown on this plan are approximate. The installer shall call the Blue Stakes utility locating company, 1-800-662-4111, for field location marking before excavating.

Existing System (House)

OFFICE USE ONLY

Date Issued 6-9-05 By BL Initial Inspection _____ By _____

Water Table >58" Percolation Rate _____ MPI Final Inspection 11-15-05 By BC

Septic Tank Size 1250 Pumping Chamber Size N/A Total Absorption Area 760 (780) Sq. Ft.

Type of System	Fee
X Conventional (includes absorption fields, and absorption beds)	$231.00
_____ Seepage Trench	$264.00
_____ At-Grade	$528.00
_____ Mound	$693.00
_____ Renewal	$ 75.00
_____ Alteration	$ 0.00
_____ Holding Tanks*	$528.00
X On-Site Training Center* State Fee added	$ 25.00
X Plan Review Fee	$ 66.00 per hour

1 hour

H.B. 14, passed by the legislature in the 2001 session, created a $25.00 fee for all new underground wastewater disposal systems, beginning July 1, 2001. These fees will go into a new State restricted account to be used for the training, testing, and certification programs at the on-site training center.

Instructions

_____ Sized for maximum water usage of _____ GPD.
X Maximum depth to bottom of trench from original ground surface is 30".
_____ Call before rock is added to trench.
X Three foot maximum backfill over septic tank.
_____ Maintain 100 foot separation from ditches.
_____ Maintain 100 foot separation from wellhead.
_____ Install in designated location.
_____ Installation to begin only after approval of site conditions.
X On-site instruction prior to installation.
X Install according to construction plans reviewed by this office
_____ Two inspections required for ALL At-Grade Systems, installation and final cover.
_____ Operation & Maintenance required.
X 3/4 to 2/1/2 inch gravel must be used. 1 inch minus will not be accepted.
X Water tightness test required. Tank must be full at time of inspection.

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INSTALLER: S+S EXC
Thom Summers