

NOTES:

Site conditions require a designed septic system consisting of septic tanks and chambered absorption field. A pumping chamber will be required.

DESIGN CRITERIA:

El Paso County Health Department: Onsite Wastewater Treatment System (OWTS) Regulations Dated April 10, 2014.

PERCOLATION TEST:

The percolation test was performed by Entech Engineering, Inc., report dated December 12, 2016 Entech Job No. 160533. Acceptance Rate LTAR value of 0.20 gallons per square foot per day was observed. Bedrock and groundwater were encountered in the profile hole that was drilled 20 feet. (8" Dia Auger Used)

TACTILE TEST PIT RESULTS:

The tactile test was performed by Entech Engineering, Inc., report dated December 12, 2016 Entech Job No. 160533. Acceptance Rate LTAR value of 0.15 gallons per square foot per day was observed. Bedrock was encountered between 3.5 to 6 feet in the test pits that were excavated to depths of 8 to 10 feet. Groundwater was not encountered in the test pits but estimated as occurring seasonally at the bedrock interface of 3.5 to 6 feet.

DESIGN FLOW:

Total Average flow = 1885 gpd
(SEE CALCULATIONS)

DESIGN BASIS:

Adjustment Factors EPHD Regulations Table 10.2 - Pressure Dosed Bed = 1.0, Table 10.3 - Bed with Chambers = 0.7.

SEPTIC TANKS:

The new septic tanks capacities should be a minimum of 2250 gallons each. The septic tanks shall comply with El Paso County Health Department regulations. The tank should be checked periodically and pumped as needed.

PUMPING CHAMBER:

A pumping chamber with a capacity of 2250 gallons shall be sealed at all joints and shall be coated with a suitable asphaltic waterproofing. A pump with a high water alarm shall be installed in the pumping chamber. The pumping chamber shall comply with El Paso County Health Department regulations. Periodic monitoring of water usage is recommended to adjust dosing to 3 to 4 doses per day, with a 650 gallon minimum dose. Install check valve / air release valve to permit line to drain to pumping tank or to field.

INSTALLATION OBSERVATION:

The installation of the septic system shall be observed to check compliance with the design. Recommended minimum observations include:

- 1) A meeting with Entech, builder, owner, and the installer to stake the field locations.
- 2) Site observation during and after trenches are excavated.
- 3) Site observation of pipe installation, distribution valves and manifold assembly, septic tanks, pumping chamber, and verify that the stand pipes have been installed;
- 4) final site observation including soil cover over the trenches.

PRE-CONSTRUCTION MEETING:

Contractor should contact Entech Engineering, Inc. to discuss installation and scheduling of recommended observations. A site meeting with an engineer from Entech Engineering, Inc., an El Paso County Health Officer and the ISDS contractor is required prior to excavation or installation of the field. The leach field location will be finalized at the pre-construction meeting. The system shall be installed and minimum horizontal distances must be maintained from pertinent physical features according to El Paso County Health Department Regulations.

WATER

A water well exists at the southwest corner of the subject property. The well setback is adequate.

CALCULATIONS

AVERAGE FLOW PER RV SITE
32.5 GALLONS

SOIL TYPE 4A, LTAR = 0.15

REQUIRED AREA

$$A = \frac{(1885)(1.0)(0.7)}{LTAR}$$

- Q = 1885 GPD
- 0.15 = TREATMENT LEVEL 1 (SOIL TYPE 4A)
- 1.0 = DOSED BED SYSTEM FACTOR
- 0.7 = BED W/CHAMBERS SYS. FACTOR
- 58 = RV SITES

FOR BED SYSTEM WITH QUICK-4 CHAMBERS

$$A = \frac{(1885)(1.0)(0.7)}{0.15}$$

A = 8,797 SF USE 9,216 SF

$$QUICK-4 = \frac{9,216 \text{ SF}}{12 \text{ SF/ CHAMBER}} = 768 \text{ CHAMBERS}$$

USE (8) BEDS OF 4 ROWS OF 24 INFILTRATORS FOR TOTAL OF 768 INFILTRATORS



VICINITY MAP

SCALE: 1" = 600'



MODIFICATIONS TO THIS DESIGN MAY BE REQUIRED, TO BE DETERMINED AT THE TIME OF SITE OBSERVATIONS.

REVISIONS	BY:

ENTECH ENGINEERING, INC.
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ON-SITE WASTEWATER SYSTEM
 JUDGE ORR ROAD RV PARK - EAST SYS.
 14010 JUDGE ORR ROAD
 EL PASO COUNTY, COLORADO
 FOR: WILLIAM GUMAN & ASSOCIATES, LTD.

DRAWN BY: S. CULP
DESIGNED BY: S. CULP
CHECKED BY: J. COODE
DATE: 8/16/17
SCALE: AS SHOWN
JOB NO.: 160533
SHEET NO.: 1 OF 4 SHEETS