



Prevent • Promote • Protect

Environmental Health Division

1675 W. Garden of the Gods Rd., Suite 2044  
Colorado Springs, CO 80907  
(719) 578-3199 phone  
(719) 575-8664 fax  
www.elpasocountyhealth.org

## Conventional (Non-Engineered) On-site Wastewater Treatment System (OWTS) Design Worksheet – Short Form

Property Address: \_\_\_\_\_ City and Zip: \_\_\_\_\_

Number of bedrooms: \_\_\_\_\_ Wastewater Design Flow (Table 6-1) \_\_\_\_\_

Work will be done by:  Owner  Licensed Installer \_\_\_\_\_

*Note: - Homeowner installation requires the individual installing the system be the listed as the individual on the permit.*

### Water source:

Well  Municipal  Cistern

*Note: - Wells must be located 50' from septic tank and 100' from STA.  
- The well must be installed and verified before final signoff will occur.  
- An additional trip fee will be charged if EPCPH must return to verify the well location.*

### Soil Report:

*Note: Report **MUST** stamped by Professional Engineer*

Soil Type: \_\_\_\_\_ LTAR: \_\_\_\_\_

*Note: - Most limiting layer found within wither profile pit must be used*

Was a limiting layer of Bedrock or Groundwater found within 8 feet?  Yes  No

Groundwater found at \_\_\_\_\_ inches. Bedrock found at \_\_\_\_\_ inches.

### Septic Tank Requirements:

Septic Tank Material:  Concrete  Plastic

Tank Size (Table 9-1): \_\_\_\_\_ Pump Tank size (if applicable): \_\_\_\_\_

### Clean outs

Distance from structure to clean out: \_\_\_\_\_ (no further than 5' from structure)

*Note: - There must also be a cleanout at least every 100' from structure to the septic tank*

**Proposed Soil Treatment Area (STA):**

What is the installation depth range for the STA? \_\_\_\_\_ inches.

*Depth of limiting layer: \_\_\_\_\_ inches.*

*Must maintain appropriate separation*

- |                            |                                                      |                                                |
|----------------------------|------------------------------------------------------|------------------------------------------------|
| Application of wastewater: | <input type="checkbox"/> Gravity                     | <input type="checkbox"/> Pump-to-gravity       |
| Distribution Layout:       | <input type="checkbox"/> Trench(s)                   | <input type="checkbox"/> Bed                   |
| Distribution Media:        | <input type="checkbox"/> Chambers                    | <input type="checkbox"/> Rock and Pipe         |
| Distribution Type:         | <input type="checkbox"/> Distribution box            | <input type="checkbox"/> Serial distribution   |
| Diverter Valve:            | <input type="checkbox"/> Yes                         | <input type="checkbox"/> No                    |
| Inspection Ports:          | <input type="checkbox"/> Beginning & End of trenches | <input type="checkbox"/> 4 corners of each bed |

Calculate the size of the STA:

Design Flow: \_\_\_\_\_ GPD,

LTAR: \_\_\_\_\_

Reductions: Table 10-2: \_\_\_\_\_

Table 10-3: \_\_\_\_\_

Show calculations here:

*Sample calculation: 3-bedroom home: 450gpd, LTAR 0.8, gravity fed (1.0) chambers in trenches (0.7) system: 450 / 0.8 = 562.5 Sq Ft \* 1.0 = 562.5 Sq ft \* 0.7 = 394 (393.75 rounds up to 394) Sq ft*

For Chamber systems:

Chamber Type:       Quick4 (12 ft<sup>2</sup>)                       Arc36 (15 ft<sup>2</sup>)

Number of rows: \_\_\_\_\_      Chambers per row: \_\_\_\_\_      Total ft<sup>2</sup>: \_\_\_\_\_

For Rock and Pipe Systems:

Depth of Rock (under pipe): \_\_\_\_\_      Depth of Rock (over pipe): \_\_\_\_\_

Width of each trench/bed: \_\_\_\_\_      Total Pipe Length: \_\_\_\_\_

Total ft<sup>2</sup>: \_\_\_\_\_      Type of Cover on Rock: \_\_\_\_\_

**Design Document**

A legible drawing *shall* be provided with each permit application (see attached example design documents):

- Must be minimum 8.5"x11" and show then entire property boundary
- Reference locations including street names, building structures, and any other permanent physical features.
- Layout of the entire OWTS and all components from structure to soil treatment area

- To include dimensions of trenches or beds, distribution method and equipment (including distribution boxes, drop boxes, valves, or other components used.)
- A legible drawing showing location of each OWTS component and distances to all applicable physical features, on both the subject and adjacent properties requiring setbacks (Table 7-1).
- Elevation or depth of infiltrative surface of the soil treatment area, the septic tank invert, and all other components of the OWTS.
- Location of the soil profile test pit excavations. (Must also be clearly marked on site).
- Location of the alternate STA site.
- North direction arrow.
- Contours, OR slope direction and % slope.
- Location of proposed well or existing well.

*Note: It is recommended that the design document is completed by a professional in the OWTS industry. EPCPH does not complete or alter design documents. Contact EPCPH with any questions.*

**Certification:**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Address

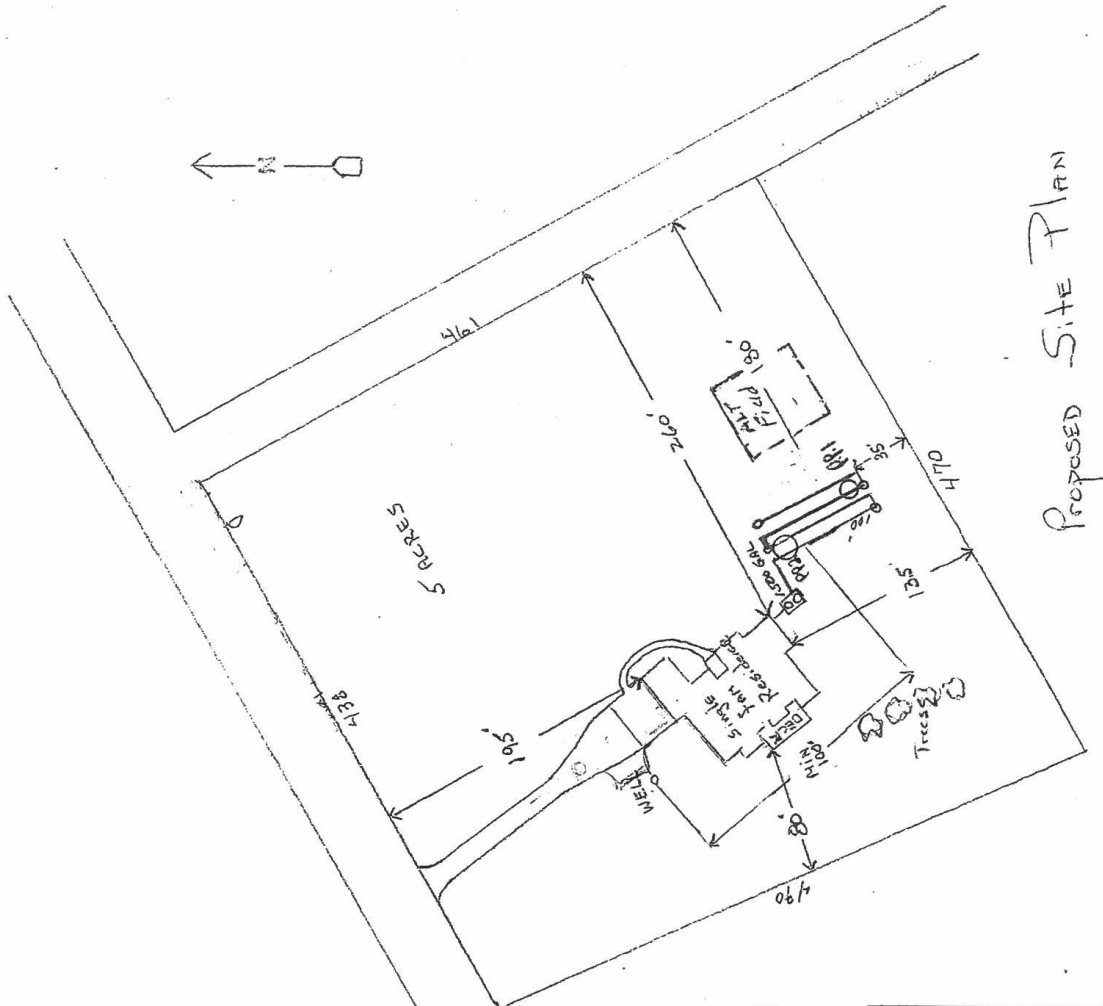
\_\_\_\_\_  
Date

\_\_\_\_\_  
Phone

\_\_\_\_\_  
Property Address

\_\_\_\_\_  
Email

Example Site Plan (New System)



PROPOSED SITE PLAN

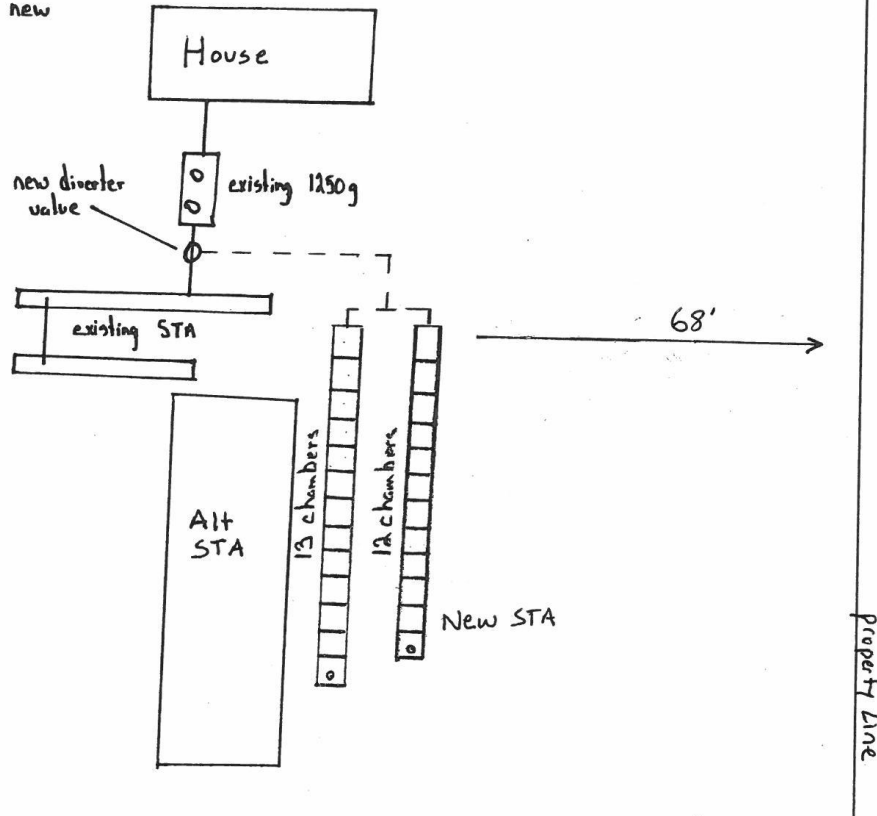
Septic Specs

- 4 rows - 20 chambers ARC 36
- 1 row - 14 Chambers ARC 36
- 6' Separation between Rows
- 4" Sch 40 Pipe from House to Tank
- 4" Sch 35 Pipe from Tank to field
- 1500 GAL TANK
- GPD = 600 gal (5 bedroom)
- LTAR = .35
- 1200 sq ft. STA Required

Example Site Plan (Repair)



- Install diverter valve
- Install 375 g/ft of new leach field  
2 trenches:
  - 1 row of 13 ARC36 chambers
  - 1 row of 12 ARC36 chambers
- Trenches can be no deeper than 48"
- Install inspection ports at end of each trench



3 bedroom house  
450 G.P.D.  
 $450 \div .6 = 750$   
 $750 \times .5 (\text{diverter}) = 375$   
2 trenches  
1 row of 12 chambers  
1 row of 13 chambers