

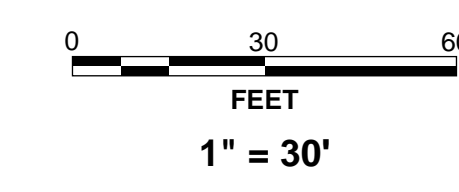
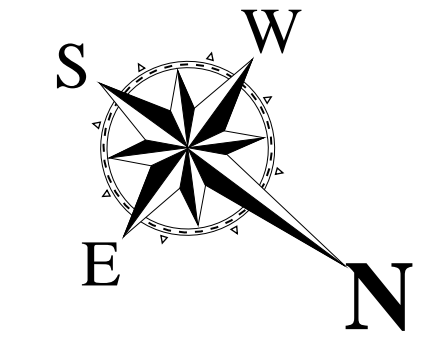
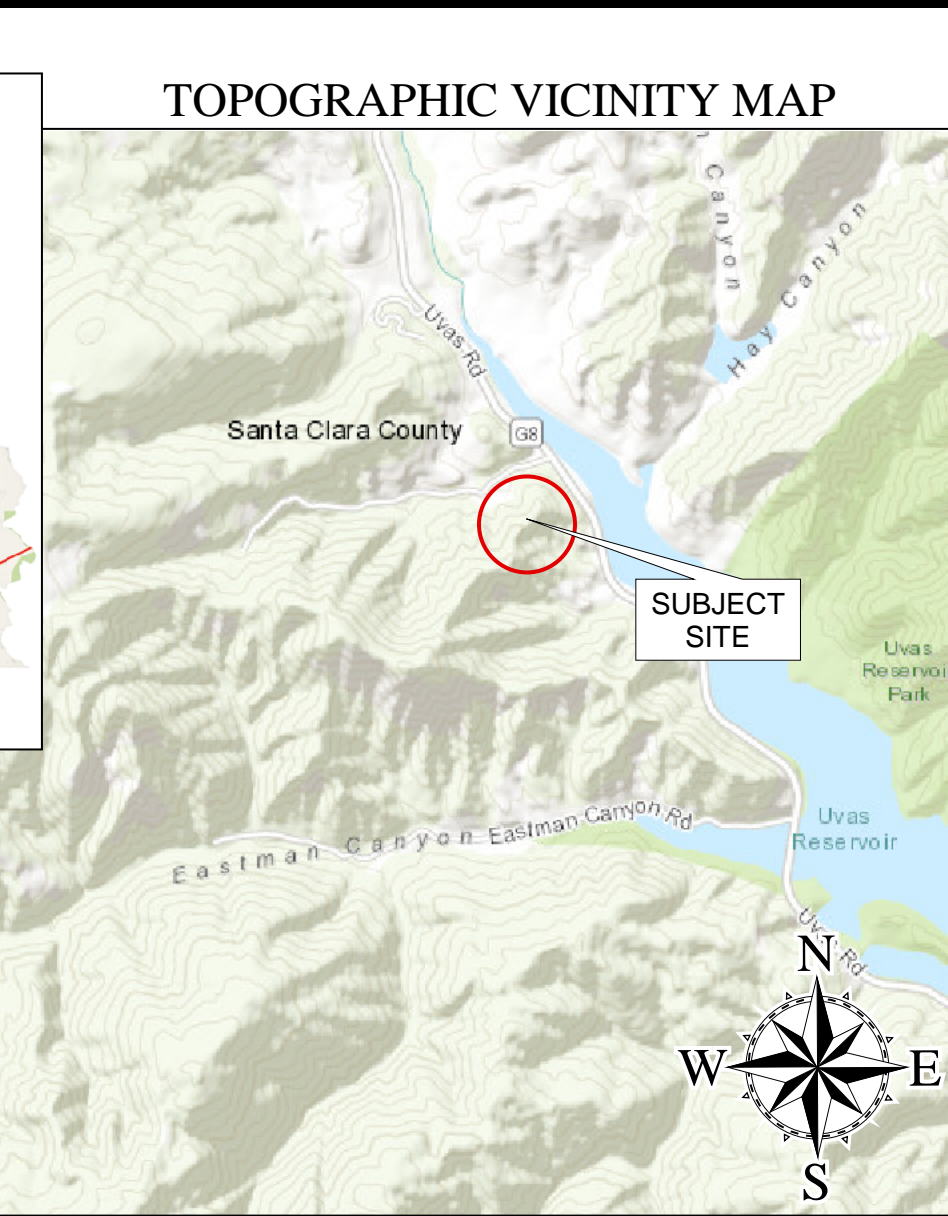
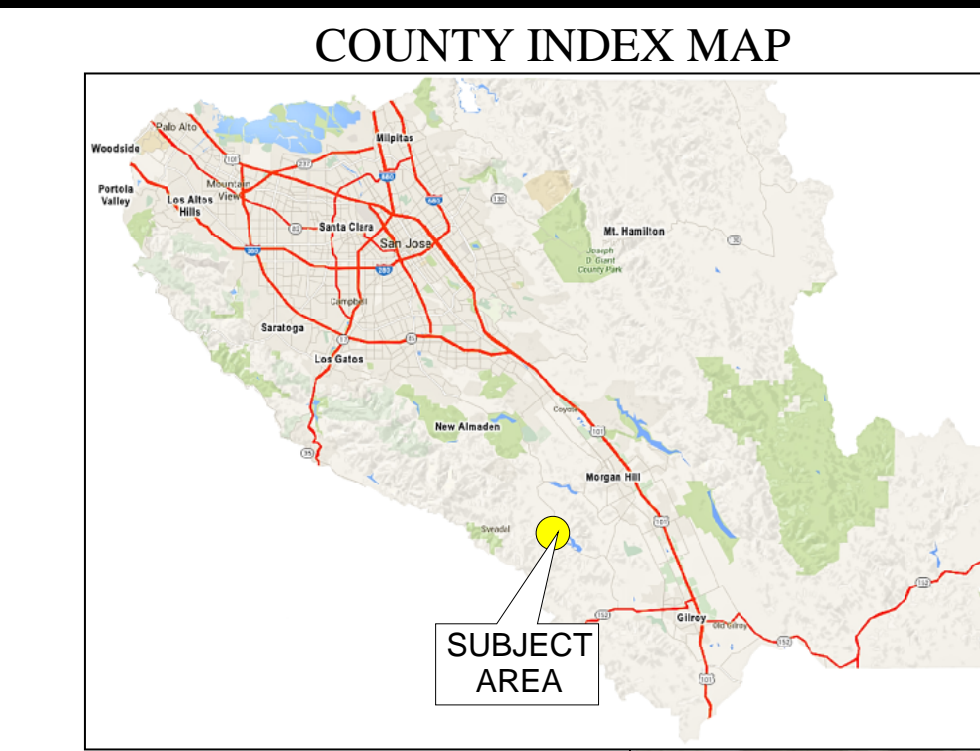
WASTEWATER DESIGN FLOW IS 300 GPD.  
BASED ON PROPOSED 2 BEDROOM RESIDENCE.

- 1 4" ABS GRAVITY SEWER LINE WITH MINIMUM 2% GRADIENT AND 2-WAY CLEANOUTS SPACED 50' APART MIN.
- 2 1,500 GALLON ROTH SEPTIC TANK WITH OSI EFFLUENT FILTER (MODEL FTS0444-36V)
- 3 BULL RUN VALVE (SEE DETAIL)
- 4 PRIMARY AND SECONDARY LEACHFIELDS EACH CONSISTING OF ONE 68 FT LONG LEACHING TRENCH. TOTAL OF 136 LF OF LEACHING TRENCH CONSISTING OF 34 QUICK4 HIGH-CAPACITY INFILTRATOR CHAMBERS WITH A TOTAL DEPTH OF 2.5 FT AND 4" INSPECTION RISERS (TYP.) ON EACH END OF TRENCH.

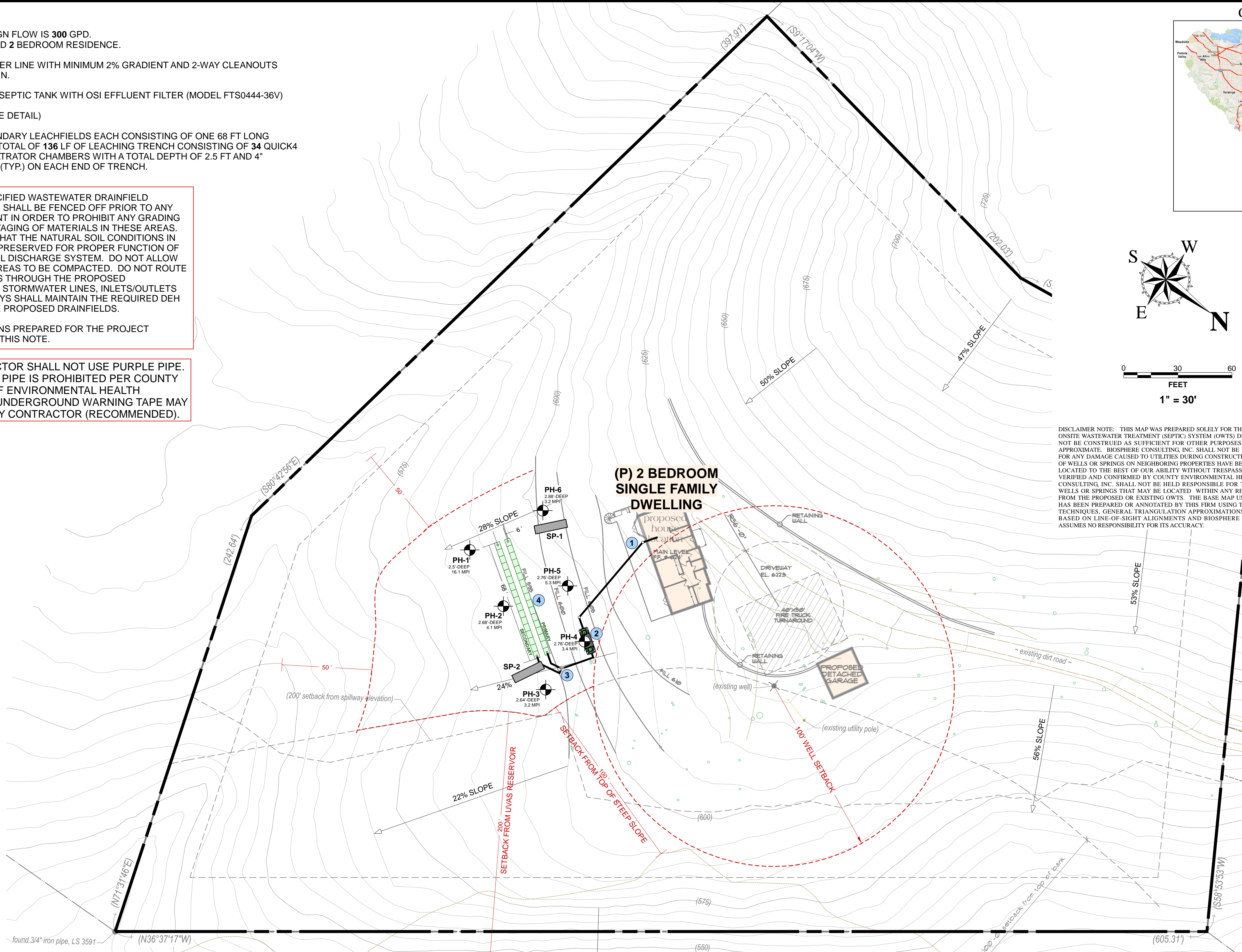
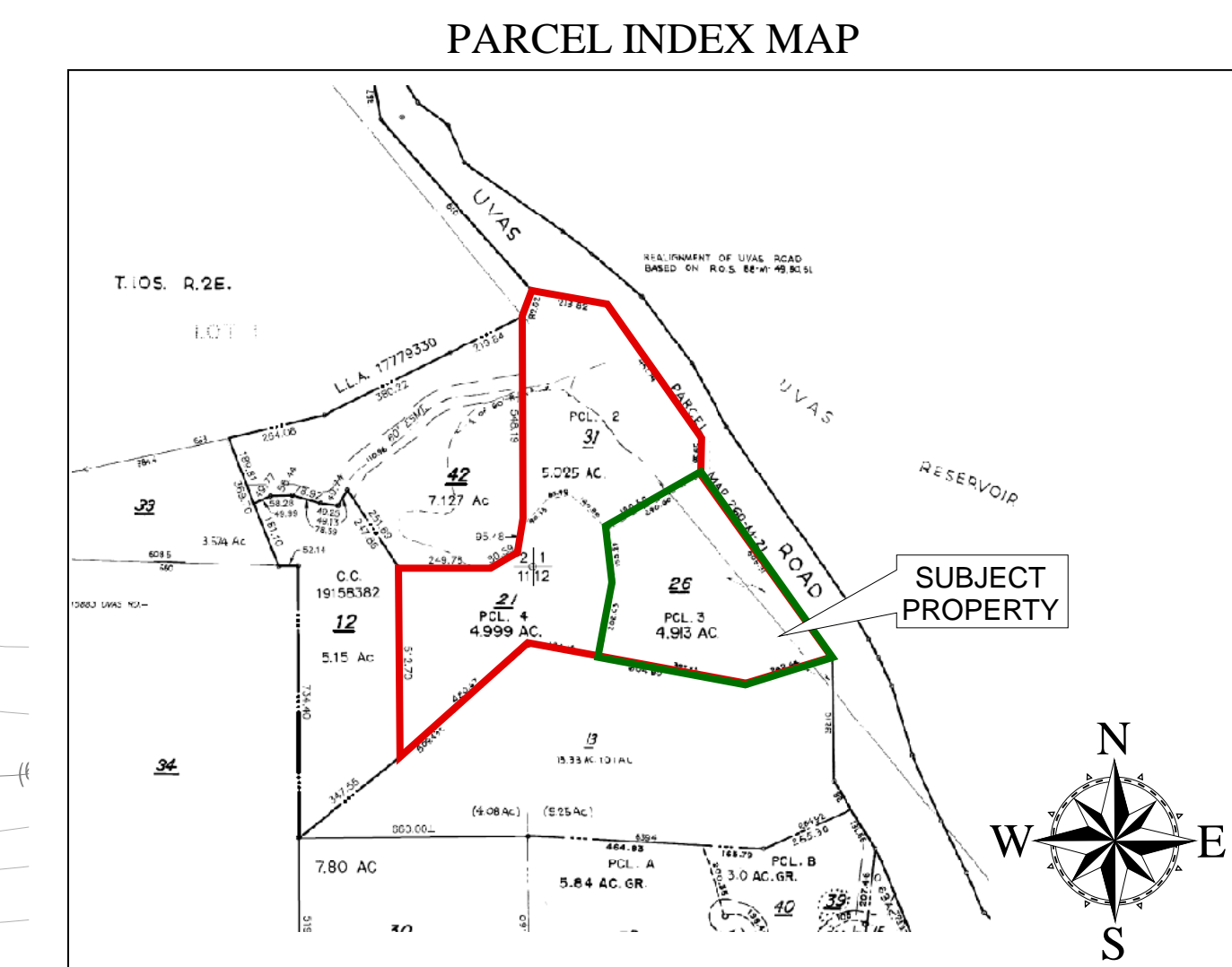
**IMPORTANT!** SPECIFIED WASTEWATER DRAINFIELD DISPERSAL AREAS SHALL BE FENCED OFF PRIOR TO ANY SITE DEVELOPMENT IN ORDER TO PROHIBIT ANY GRADING EQUIPMENT OR STAGING OF MATERIALS IN THESE AREAS. IT IS IMPORTANT THAT THE NATURAL SOIL CONDITIONS IN THESE AREAS BE PRESERVED FOR PROPER FUNCTION OF THE SHALLOW SOIL DISCHARGE SYSTEM. DO NOT ALLOW SOILS IN THESE AREAS TO BE COMPACTED. DO NOT ROUTE UTILITY TRENCHES THROUGH THE PROPOSED DRAINFIELDS. ALL STORMWATER LINES, INLETS/OUTLETS AND DRAINAGEWAYS SHALL MAINTAIN THE REQUIRED DEH SETBACKS TO THE PROPOSED DRAINFIELDS.

ALL BUILDING PLANS PREPARED FOR THE PROJECT SHOULD INCLUDE THIS NOTE.

NOTE: CONTRACTOR SHALL NOT USE PURPLE PIPE. USE OF PURPLE PIPE IS PROHIBITED PER COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH REGULATIONS. UNDERGROUND WARNING TAPE MAY BE INSTALLED BY CONTRACTOR (RECOMMENDED).

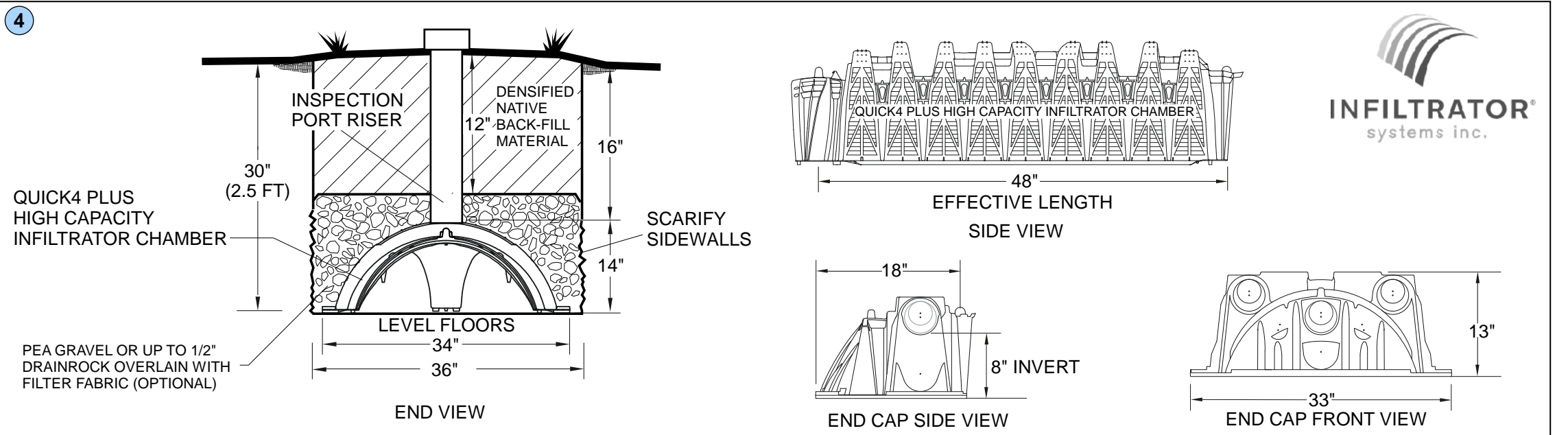


DISCLAIMER NOTE: THIS MAP WAS PREPARED SOLELY FOR THE PURPOSES OF THE ONSITE WASTEWATER TREATMENT (SEPTIC) SYSTEM (OWTS) DESIGN AND SHOULD NOT BE CONSTRUED AS SUFFICIENT FOR OTHER PURPOSES. LOCATIONS ARE APPROXIMATE. BIOSPHERE CONSULTING INC. SHALL NOT BE HELD RESPONSIBLE FOR ANY DAMAGE CAUSED TO UTILITIES DURING CONSTRUCTION. THE LOCATION OF WELLS OR SPRINGS ON NEIGHBORING PROPERTIES HAVE BEEN IDENTIFIED AND LOCATED TO THE BEST OF OUR ABILITY WITHOUT TRESPASSING AND SHALL BE VERIFIED AND CONFIRMED BY COUNTY ENVIRONMENTAL HEALTH. BIOSPHERE CONSULTING INC. SHALL NOT BE HELD RESPONSIBLE FOR THE LOCATIONS OF WELLS OR SPRINGS THAT MAY BE LOCATED WITHIN ANY REQUIRED SETBACKS FROM THE PROPOSED OR EXISTING OWTS. THE BASE MAP USED ON THIS SHEET HAS BEEN PREPARED OR ANNOTATED BY THIS FIRM USING TAPE AND COMPASS TECHNIQUES. GENERAL TRIANGULATION APPROXIMATIONS OR ESTIMATIONS BASED ON LINE-OF-SIGHT ALIGNMENTS AND BIOSPHERE CONSULTING, INC. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.



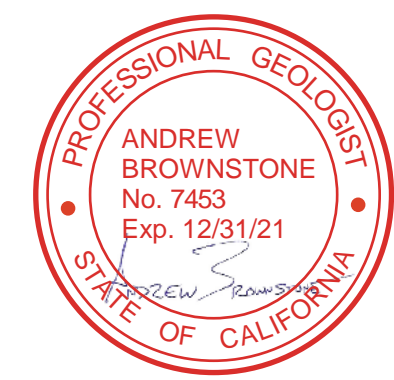
COUNTY E.H. ACCEPTANCE/APPROVAL STAMPS

**INFILTRATOR QUICK4 PLUS HIGH-CAPACITY SEPTIC DRAINFIELD TRENCH CONSTRUCTION DETAIL**



**Biosphere Consulting**  
Alternative Wastewater System Design  
1315 King Street  
Santa Cruz, CA 95060  
Tel: (831) 430-9116  
www.biosphere-consulting.com

ON-SITE WASTEWATER TREATMENT SYSTEM DESIGN PLAN			
<b>Project Location:</b>	15805 Uvas Road, Morgan Hill, California	[Santa Clara County]	
<b>Property Owner:</b>	Benny & Ronit Buller		
<b>Mailing Address:</b>	22191, McClellan Rd, CA 95014		
<b>Owner Phone #:</b>	(408) 778-7005 - Scott Zazueta (D&Z Design Assoc.)		
<b>Date:</b>	12/01/21	<b>By:</b> David Quinn / Andrew Brownstone	Sheet: _____
<b>REVISION:</b>		<b>Job No.:</b> 21041	<b>APN:</b> 756-12-026



THE USE OF THESE PLANS AND SPECIFICATIONS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED AND PUBLICATION THEREOF IS EXPRESSLY LIMITED TO SUCH USE. REPRODUCTION OR PUBLICATION BY ANY METHOD, IN WHOLE OR IN PART, IS PROHIBITED. BIOSPHERE CONSULTING, INC. MAINTAINS TITLE OWNERSHIP OF THE PLANS AND SPECIFICATIONS WITHOUT PREJUDICE. VISUAL CONFIRMATION OF THE PLANS AND SPECIFICATIONS SHALL BE OBTAINED FROM BIOSPHERE CONSULTING, INC. PRIOR TO ANY CONSTRUCTION.

### PROJECT DESCRIPTION

A conventional gravity flow treatment system utilizing Quick4 Plus High-Capacity Infiltrator Chambers is proposed to serve a proposed two bedroom single family dwelling located at 15805 Uvas Rd, Morgan Hill, in Santa Clara County, California.

### CONSTRAINTS & DESIGN CRITERIA

- The proposed system is designed to serve a 2 bedroom dwelling with a design wastewater flow of 300 gallons per day (gpd) per County DEH guidelines.
- Soil profiles did not exhibit any evidence of seasonally high groundwater conditions. Based on two soil profiles observed in the proposed leachfield area, seasonally high groundwater is estimated to occur at greater than 13.5' grade.
- No wells, springs or watercourses are situated within 100' of the proposed Onsite Wastewater Treatment System.

(P) 2 BEDROOM HOUSE = 300 GPD  
AVG ADJ. STABILIZED PERC RATE = 6 MPI  
APPLICATION RATE = 1.12 GPD/SF

300 GPD I 1.12 GPD/SF = 267.85 SF  
267.85 SF / 4 SF/LF = 66.96 LF OF TRENCH REQUIRED  
68 LF TRENCH = 17 INFILTRATOR CHAMBERS  
68 LF (17 CHAMBERS PRIMARY) + 68 LF (17 CHAMBERS SECONDARY) = 136 LF TOTAL

PRIMARY AND SECONDARY LEACHFIELDS EACH WITH ONE 68 FT LONG TRENCH CONSISTING OF 17 QUICK4 PLUS HIGH-CAPACITY INFILTRATOR CHAMBERS  
TRENCHES SHALL BE SPACED 6 FT ON CENTER  
EACH TRENCH SHALL HAVE A TOTAL DEPTH OF 2.5 FEET (SEE DETAIL)

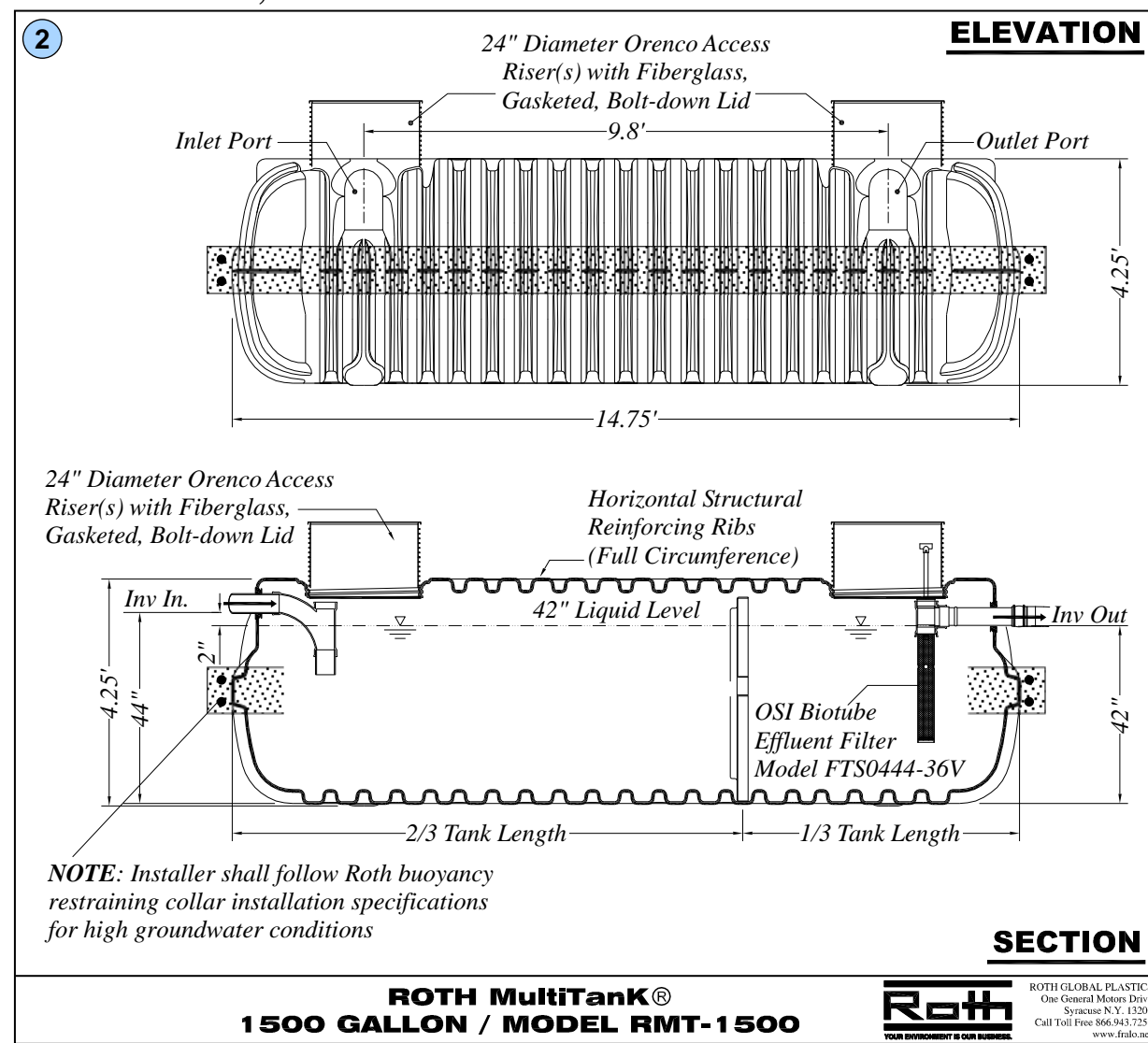
### SPECIFICATIONS

- Building Sewer Lines, & Proposed Processing Tank**
  - A 4" ABS building sewer line shall be installed to convey all raw sewage from dwelling to the processing tank. All gravity sewer piping must maintain a minimum 2% continuous gradient. **All wastewater including graywater shall be discharged to the processing tank.**
  - Locate a 2-way, 4" ABS cleanout fittings on the building sewer to facilitate snaking and line location.
  - The septic tank shall be a 1,500 gallon, septic tank manufactured by Roth Global Plastics. The tank shall have 24" diameter OSI access risers with fiberglass, bolt-down lids (brown). The tank shall be installed according to the manufacturer's guidelines including anti-floatation specifications.
  - The tank hole shall be excavated so that the tank sits level. Install the access risers with a watertight joint using the adhesives supplied by manufacturer. Access riser lids shall be brown unless otherwise requested.
  - Install the tank inlet fitting with a watertight joint. Cap off or use a test plug on this fitting and fill the tank with clean water 2" above the joint between the riser and the tank top. Repair any leaks.
  - Obtain a watertight tank inspection by EH and the designer or distributor with 24 hours notice to each.
  - Install an OSI Effluent Filter (Model: FTS0444-36V) at tank outlet.
- Effluent Distribution and Dispersal Trenches**
  - A Bull Run Valve shall be installed to divert effluent flow between the two proposed trenches as shown on the plan.
  - 4" ABS or SCH 40 PVC tightline shall be used to make gravity flow connections between the septic tank and the drainfield trenches. All gravity lines shall maintain a continuous 2% min. gradient.
  - A primary and secondary leachfield shall each consist of a total of 17 Quick4 Plus High-Capacity Infiltrator Chambers.
  - Trenches shall be spaced 6' on center and shall be installed with a total depth of 2.5 feet.
  - This is sufficient to serve a 2 bedroom house generating 300 gallons per day.
  - Installer shall assure that surface drainage is directed away from the proposed septic tank and dispersal trenches.
- Piping Schedule**
  - All piping shall be installed to conform to requirements in the current California Plumbing Code.
  - The house sewer pipe to the septic tank shall be constructed of 4" ABS and shall include a 2-way clean out fitting near dwelling as shown on the plan.
- Installer Qualifications and Responsibilities**
  - The system installer shall be licensed by the State of California, Department of Consumer Affairs, to install septic systems.
  - All piping shall conform to the current edition of the California Plumbing Code.
  - The installer shall be responsible for locating any property lines, underground utilities or piping. Any damage to these facilities shall be the responsibility of the installer.
  - For tree setback requirements, refer to the Santa Clara County Ordinance C-16 Tree Preservation and Revision.
  - The appropriate Environmental Health Office or Specialist must be notified by the installation contractor at least 48-hours prior to starting construction and for each required inspection: Main Office (1555 Berger Drive, Suite 300, San Jose) 408-918-3400 or South County Office (80 Highland Ave, San Martin) 408-918-3400
- Site Clean up and Erosion Control Measures**
  - All excavated areas shall be smoothed and all construction debris shall be removed from the site.
  - All disturbed soils shall be seeded and mulched. Erosion Control Mix seed shall be used at the coverage recommended on the package for all disturbed soil.
  - Straw shall be used to cover all disturbed soil.
  - PER DIVISION C12, CHAPTER III OF THE COUNTY CODE (Sec. C12-513, Temporary erosion control.)  
"The permittee and any person(s) doing, causing or directing the grading shall install and maintain all precautionary measures necessary to protect adjacent watercourses and public or private property from damage by erosion, flooding, or deposition of mud or debris originating from the site. Precautionary measures must include provisions of properly designed erosion prevention and sediment control measures, so that downstream properties are not affected by upstream erosion or sediment transport by stormwater."

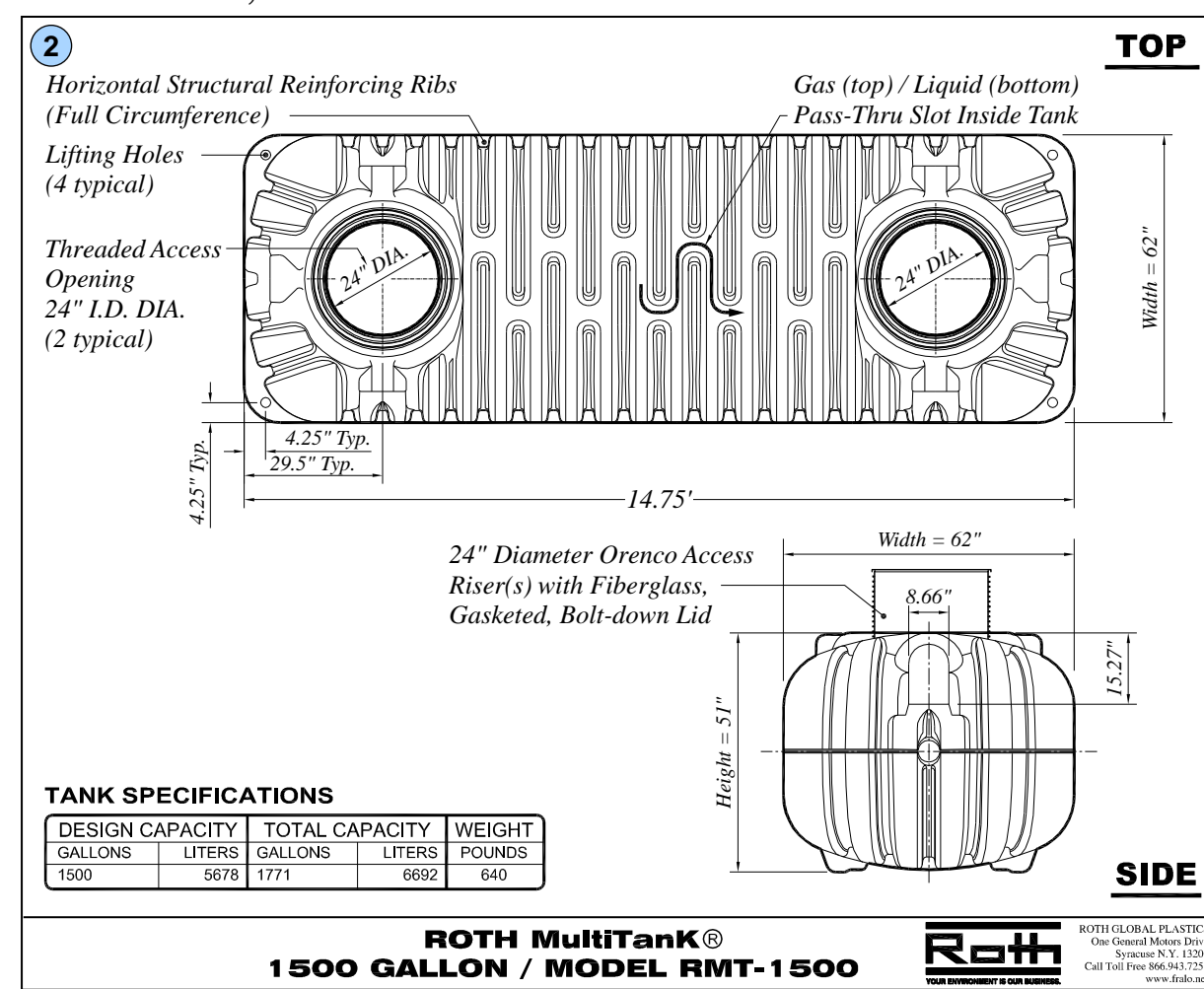
### SYSTEM OPERATION AND MAINTENANCE

- The septic tank should be pumped when the total thickness of the scum and sludge layers in the inlet side of the tank is greater than 1/3 of total liquid level depth, typically about 2 feet.
- The effluent filter in the septic tank should be removed yearly and cleaned by hosing off into the inlet side of the septic tank. Less frequent cleanings may be acceptable.
- Grease and oils should not be put into the home drains.
- The septic tank is alive with microorganisms performing oxidation and reduction of the contents. Do not add any materials (paint thinner, paint, motor oil, unused medicine, cat litter, etc.) that may disrupt this process.
- DO NOT ROUTE WATER SOFTENER BACKFLUSH DISCHARGE TO TREATMENT SYSTEM!** This discharge may be routed directly to an approved dispersal field.
- Repair all plumbing leaks (especially toilet leaks) promptly.
- Keep the area over the leach fields trimmed to prevent the growth of trees and shrubs. Do not construct anything or drive/park over the septic tanks or dispersal trenches.

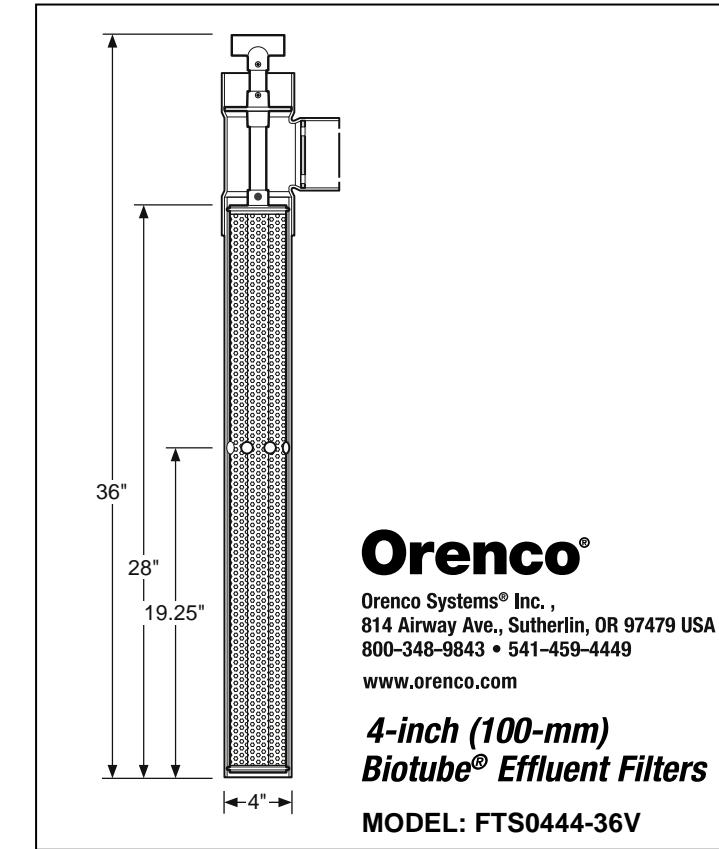
### 1,500 GALLON SEPTIC TANK DETAIL



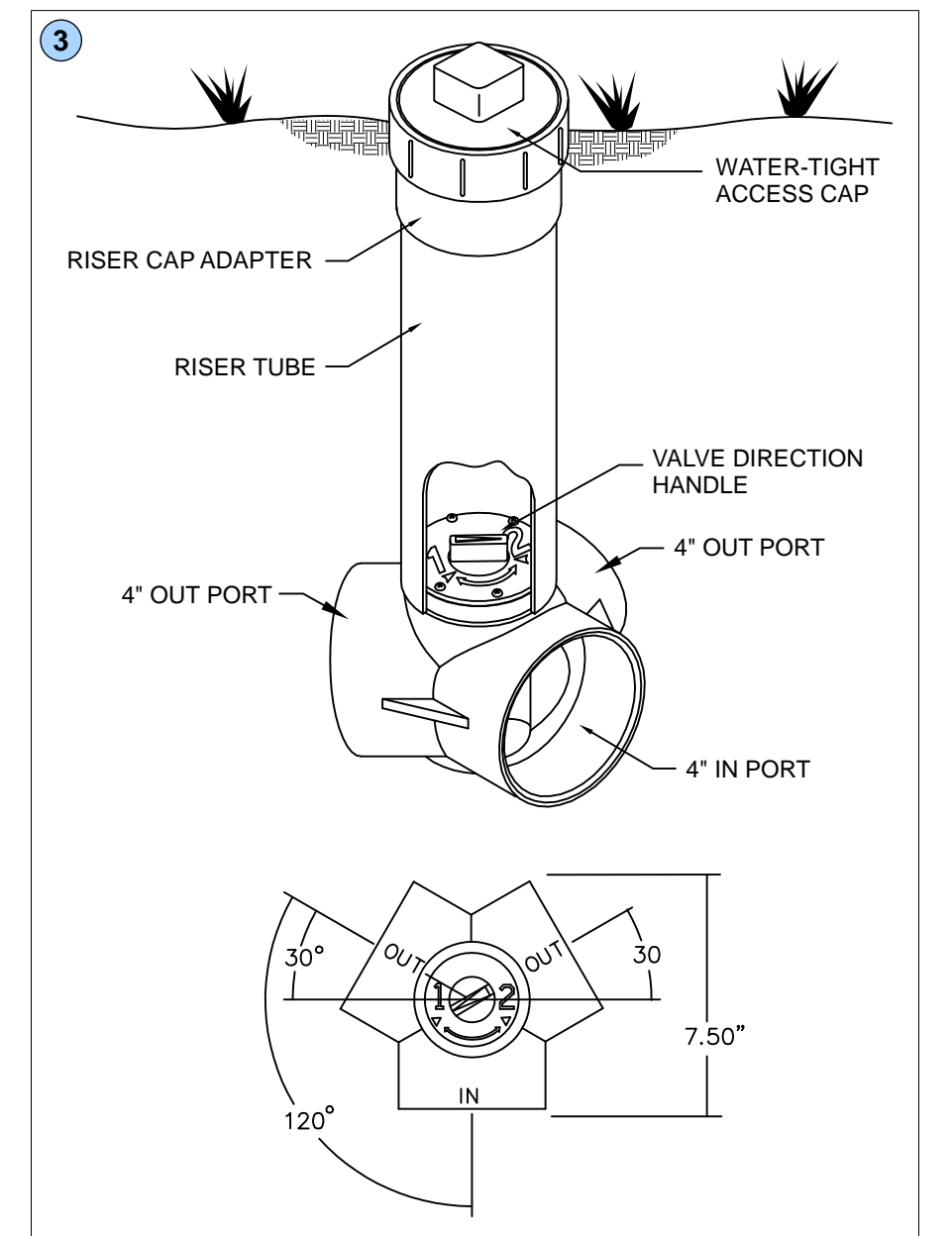
### 1,500 GALLON SEPTIC TANK DETAIL



### EFFLUENT FILTER DETAIL



### BULL RUN DIVERSION VALVE DETAIL



SOIL PROFILE FIELD LOG													
Job Number/Name: <b>Buller</b> Location: <b>15805 Uvas Rd</b> APN: <b>756-12-026</b> Test hole ID: <b>SP-1</b>													
Date Soil Sampled: <b>9-14-21</b> Time: <b>AM</b> Vegetation: <b>Mixed Forest</b>													
Elevation: <b>2500</b> Slope Gradient: <b>25%</b> Aspect: <b>South East</b> Geomorphic Surface: <b>Spur Ridge</b>													
Parent Material(s): <b>Green Stone</b> Described by: <b>A.B./D.Q.</b>													
GRAPHIC LOG													
Depth	Moisture	Structure	Pores	Mottles	Clay	Fines	Gravel	Roots	Consistence	Texture	Color	Horizon	Contacts
0	dry	loose	fine	none	0	0	0	none	dry	loose	Munsell (moist)	O A	distinct
1	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct
2	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct
3	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct
4	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct
5	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct
6	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct
7	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct
8	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct
9	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct
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11	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct
12	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct
13	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct
14	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct

SOIL PROFILE FIELD LOG													
Job Number/Name: <b>Buller</b> Location: <b>15805 Uvas Rd</b> APN: <b>756-12-026</b> Test hole ID: <b>SP-2</b>													
Date Soil Sampled: <b>9-14-21</b> Time: <b>PM</b> Vegetation: <b>Mixed Forest</b>													
Elevation: <b>2500</b> Slope Gradient: <b>20%</b> Aspect: <b>South East</b> Geomorphic Surface: <b>Spur Ridge</b>													
Parent Material(s): <b>Green Stone</b> Described by: <b>A.B./D.Q.</b>													
GRAPHIC LOG													
Depth	Moisture	Structure	Pores	Mottles	Clay	Fines	Gravel	Roots	Consistence	Texture	Color	Horizon	Contacts
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14	moist	loose	fine	none	0	0	0	none	moist	loose	Munsell (moist)	O A	distinct

### SOIL PERCOLATION SUMMARY TABLE -- 9/16/21

Percolation Hole (PH)	1	2	3	4	5	6	
Depth	2.50'	2.68'	2.64'	2.76'	2.76'	2.88'	
Stabilized MPI	11.50	2.90	2.30	2.40	3.80	2.30	
Adjusted Stabilized MPI	16.10	4.06	3.22	3.36	5.32	3.22	
Avg. Adj. Stabilized MPI	$R_s = \sum R_i / \#Holes$						5.88
# Bedrooms:	FOR OFFICE USE ONLY		TANK SIZE (Gal)		Leach Line (Pt)		

### COUNTY E.H. ACCEPTANCE/APPROVAL STAMPS

**Biosphere Consulting**  
Alternative Wastewater System Design  
www.biosphere-consulting.com

- Site Evaluation & Mapping
- Soil Analysis & Percolation Testing
- New Development, Upgrade & Repairs
- Residential & Commercial

1315 King Street  
Santa Cruz, CA 95060  
Tel: (831) 430-9116

### ONSITE WASTEWATER TREATMENT SYSTEM DESIGN PLAN

<b>Project Location:</b>	15805 Uvas Road, Morgan Hill, California	[Santa Clara County]
<b>Property Owner:</b>	Benny & Ronit Buller	
<b>Mailing Address:</b>	22191, McClellan Rd, CA 95014	
<b>Owner Phone #:</b>	(408) 778-7005 - Scott Zazueta (D&Z Design Assoc.)	email: bullerbenny@gmail.com
<b>Date:</b>	12/01/21	<b>By:</b> David Quinn / Andrew Brownstone
<b>REVISION:</b>	<b>Job No.:</b> 21041	<b>APN:</b> 756-12-026

