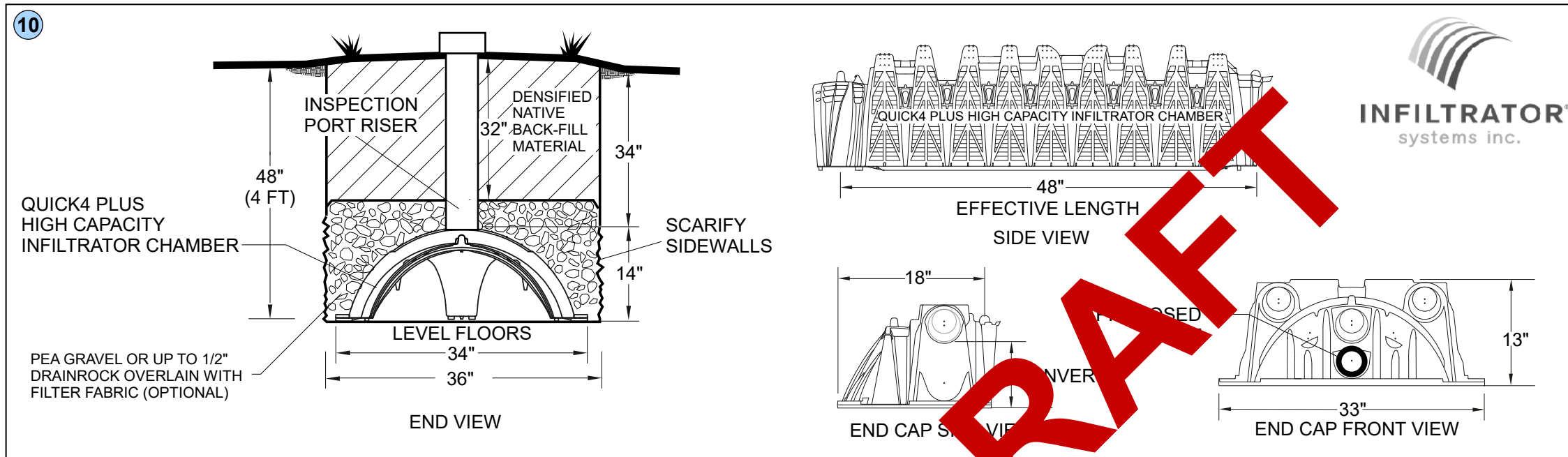
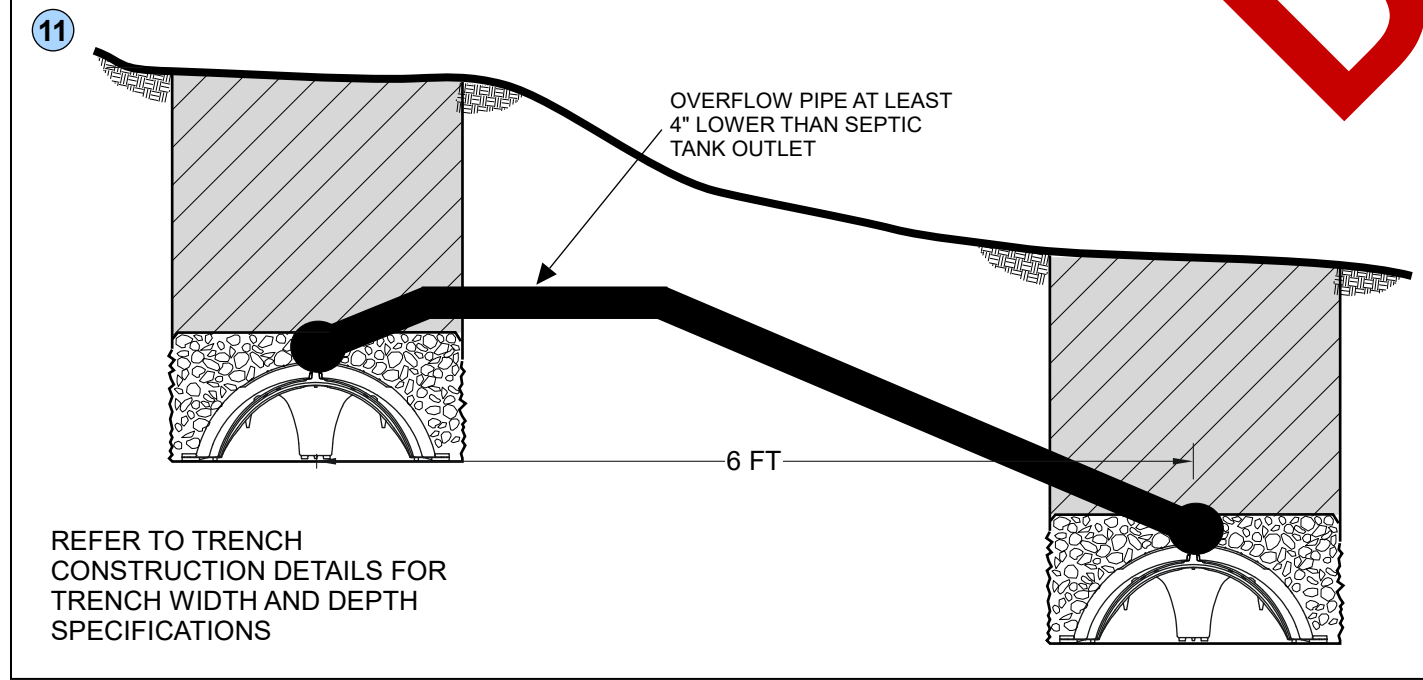


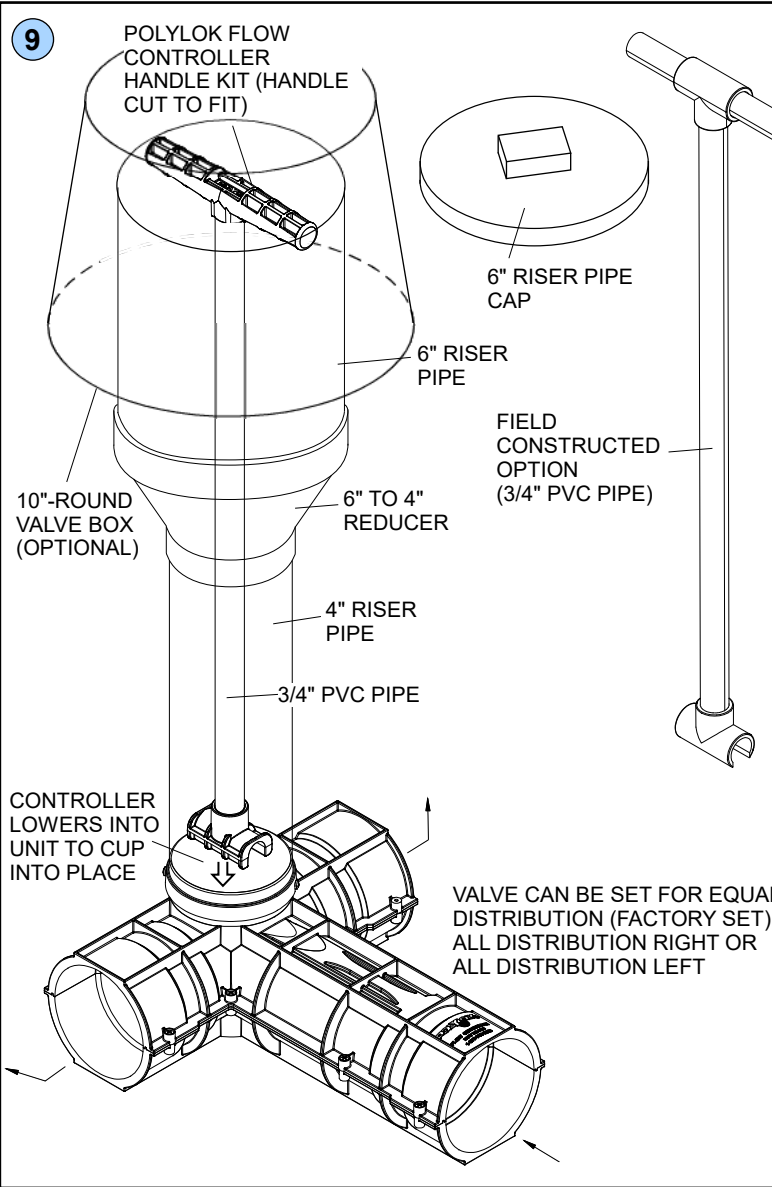
INFILTRATOR QUICK4 PLUS HIGH-CAPACITY  
SEPTIC DRAINFIELD TRENCH CONSTRUCTION DETAIL



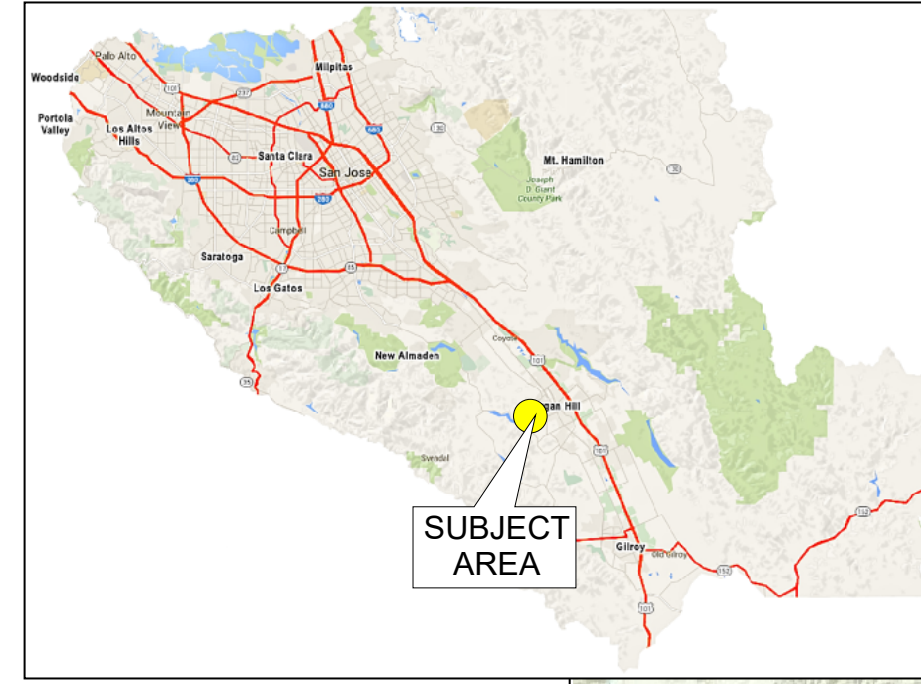
OVERFLOW/RELIEF (POP-OVER) LINE CONSTRUCTION DETAIL



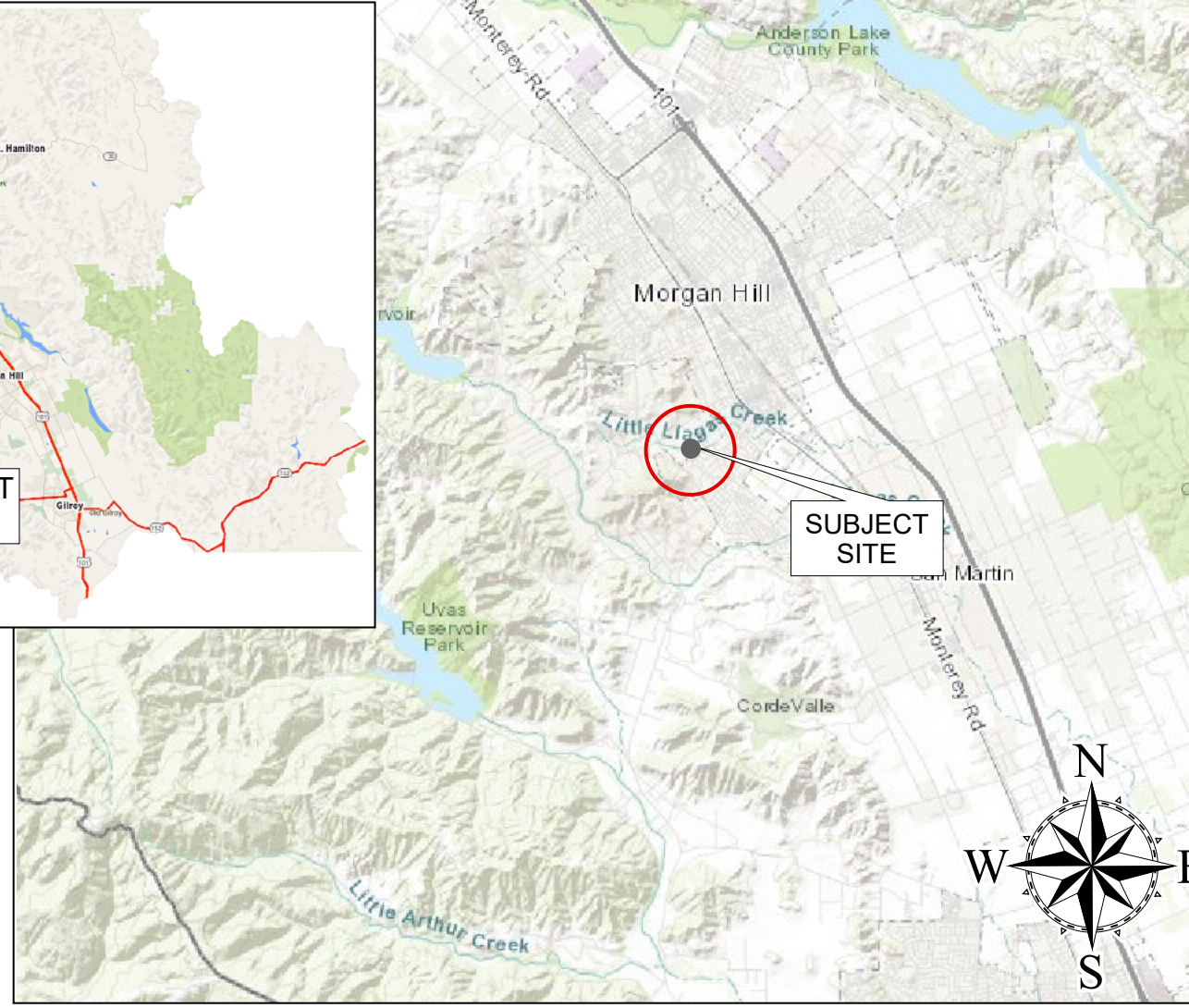
POLYLOK FLOW CONTROLLER  
DISTRIBUTION VALVE DETAIL



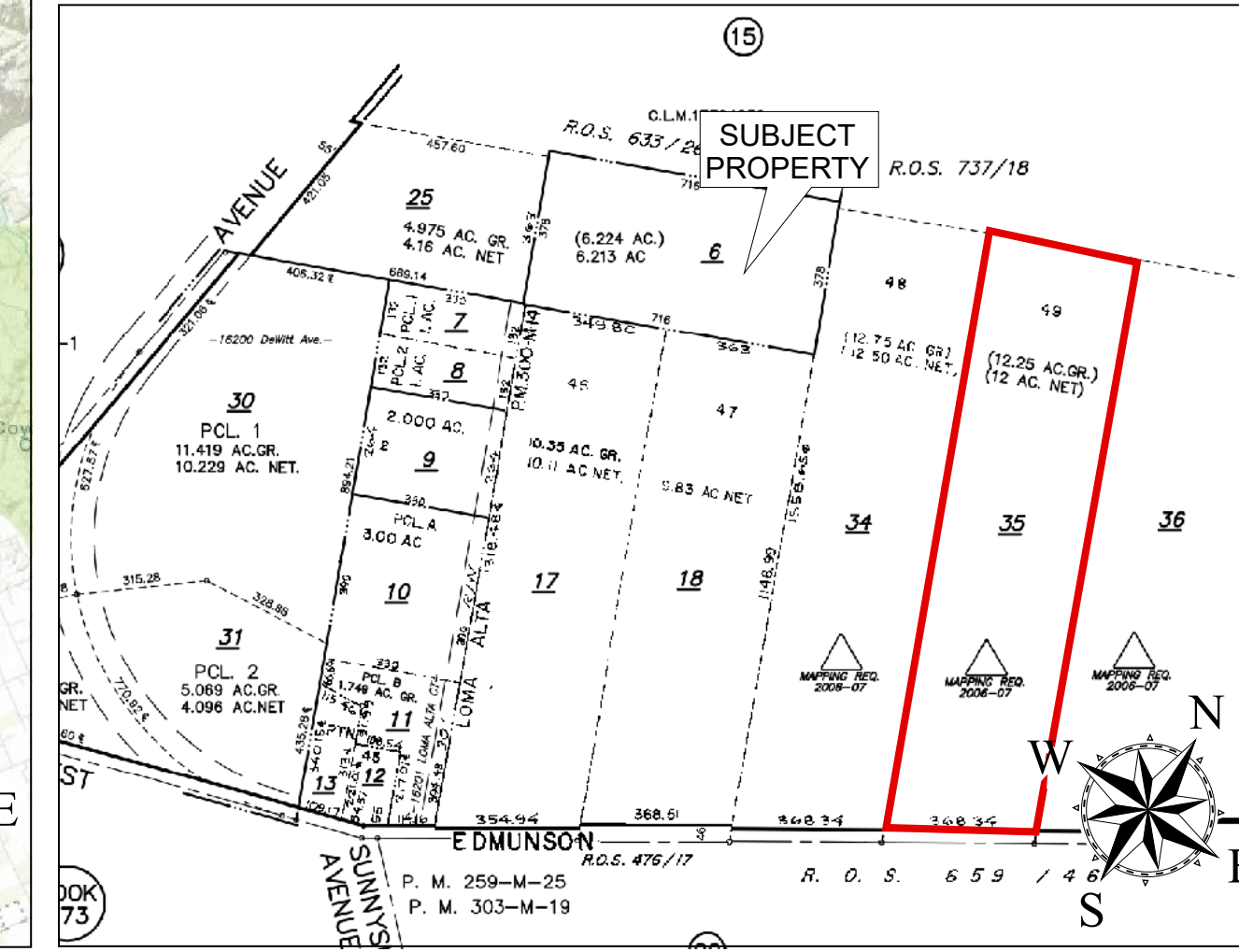
COUNTY INDEX MAP



TOPOGRAPHIC VICINITY MAP

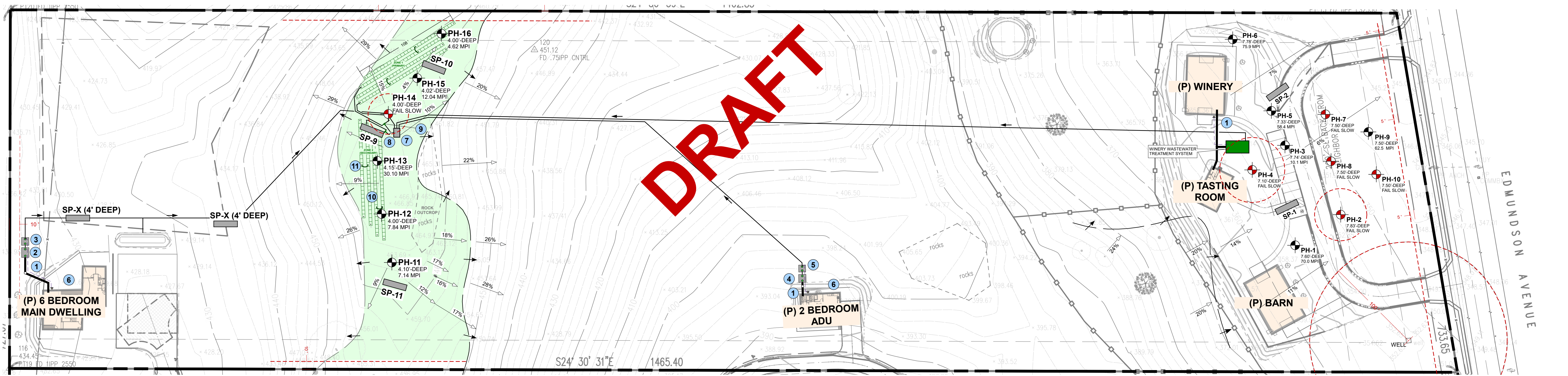


PARCEL INDEX MAP



DISCLAIMER NOTE: THIS MAP WAS PREPARED SOLELY FOR THE PURPOSES OF THE ONSITE WASTEWATER TREATMENT (SEPTIC) SYSTEM 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.

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).



NOTES:

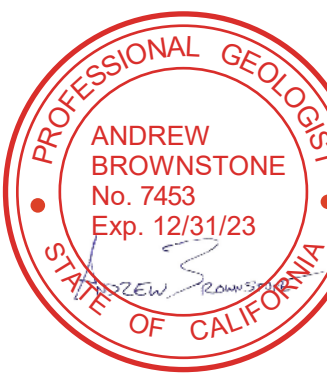
WASTEWATER DESIGN FLOW IS 1253 GPD.  
BASED ON PROPOSED 6 BEDROOM MAIN HOUSE (675 GPD)  
A 2 BEDROOM ADU (300 GPD)  
AND A WINERY (278 GPD)

- 4" ABS GRAVITY SEWER LINE WITH MINIMUM 2% GRADIENT AND 2-WAY CLEANOUTS SPACED 50' APART MIN.
- 2,000 GALLON CONCRETE, PINNACLE-STYLE CHAPIN SEPTIC TANK WITH 24" ORENCO RISERS AND OSI EFFLUENT FILTER (MODEL: FTS0444-36V) TO SERVE MAIN DWELLING
- 1,500 GALLON CONCRETE, PINNACLE-STYLE CHAPIN PUMP DOSE TANK WITH PF1005 DISCHARGE PUMP TO SERVE MAIN DWELLING
- 1,500 GALLON CONCRETE, PINNACLE-STYLE CHAPIN SEPTIC TANK WITH 24" ORENCO RISERS AND OSI EFFLUENT FILTER (MODEL: FTS0444-36V) TO SERVE ADU
- 1,000 GALLON CONCRETE, PINNACLE-STYLE CHAPIN PUMP DOSE TANK WITH PF1005 DISCHARGE PUMP TO SERVE ADU
- TWO MVP CONTROL PANELS WITH LOGO SCREENS AND 110 OUTLET. REQUIRE ONE 10 AMP 120 VOLT CIRCUIT AND ONE 20 AMP 120 VOLT CIRCUIT (MODEL: MVP-S1DM)
- GRAVITY FLOW DISTRIBUTION BOX
- BULL RUN VALVE (SEE DETAIL)
- POLYLOK FLOW DIVIDER 2X (SEE DETAIL)

- PRIMARY AND SECONDARY DRAINFIELDS, EACH CONSISTING OF 420 LF OF TRENCH (105 QUICK4 HIGH-CAPACITY INFILTRATOR CHAMBERS) WITH A TOTAL DEPTH OF 4 FT AND 4" INSPECTION RISERS (TYP.) ON EACH END OF TRENCH. TOTAL: 840 LF TRENCH / 210 INFILTRATOR CHAMBERS
- REDUNDANT OVERFLOW/RELIEF (POP-OVER) LINE 4X

**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.



COUNTY E.H. ACCEPTANCE/APPROVAL STAMPS

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

ONSITE WASTEWATER TREATMENT SYSTEM DESIGN PLAN			
Project Location:	W Edmondson, Morgan Hill, California 95037 [Santa Clara County]		
Property Owner:	Jim Hartigan		
Mailing Address:	16428 Peacock Lane, Los Gatos, California 95032		
Owner Phone #:	(408) 768-9343		
Date:	01/06/23	By: David Quinn / Andrew Brownstone	Sheet:
REVISION:			
	Job No.: 22002	APN: 767-19-035	1 OF 3



A conventional onsite pump up wastewater system with gravity flow to infiltrator trenches is proposed to serve a proposed 6 bedroom dwelling, a proposed 2 bedroom ADU and a proposed winery located on W Edmundson, Morgan Hill, in Santa Clara County, California.

- The proposed system is sized to serve a 6 bedroom dwelling, a 2 bedroom ADU and a winery with a total combined design wastewater flow of 1,253 gallons per day (gpd) per County DEH guidelines.
- Soil profiles did not exhibit any evidence of seasonally high groundwater conditions. Seasonally high groundwater was measured to be 14' below grade.
- No wells, springs or watercourses are situated within 100' of the proposed Onsite Wastewater Treatment System (OWTS).

EACH TRENCH SHALL HAVE A TOTAL DEPTH OF 4 FEET (SEE DETAIL)  
TRENCHES SHALL BE SPACED 6 FEET FROM CENTER TO CENTER

"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."

4

**TOP VIEW**

**SIDE VIEW**

**NOTES:**

**1) EXISTATION SPECIFICATIONS:**

LENGTH 5'-0"

WIDTH 7'-0"

DEPTH BELOW INLET 5'-4"

**2) DON CHAPIN PRE-CAST MAY MAKE CHANGES TO THE**

**DESIGN AND OR TO THE DIMENSIONS WITHOUT**

**NOTICE. PLEASE CONTACT DON CHAPIN PRE-CAST**

**WHENEVER NECESSARY TO CONFIRM DESIGN CRITERIA.**

**3) CERTIFIED ENGINEERING IS AVAILABLE UPON REQUEST.**

**THIS IS ALSO AVAILABLE AS AN H20 RATED ASSEMBLY.**

**5) INTEGRAL TOP TO BODY DESIGN.**

TANK SHALL BE CAST WITH 24" DIAM. ORENCO RISER ADAPTERS INSTEAD OF CONCRETE PLUGS.

**END VIEW**

**PRE-CAST CONCRETE WATER TIGHT  
SEPTIC TANK  
CAPACITY 1500 GALLONS  
MODEL IPS1500**

3

Diagram showing the top view of the pump tank. The overall dimensions are 7'-10" (94") wide by 7'-6" (90") deep. There are two circular openings, each with a diameter of 6" typ. A dimension of 3'-5" is shown from the left edge to the center of the first circle.

**NOTES:**

- 1) EXCAVATION SPECIFICATIONS:  
LENGTH 9' - 0"  
WIDTH 9' - 0"  
DEPTH BELOW INLET 5' - 4"
- 2) DON CHAPIN PRE-CAST MAY MAKE CHANGES TO THE DESIGN AND OR TO THE DIMENSIONS WITHOUT NOTICE. PLEASE CONTACT DON CHAPIN PRE-CAST WHENEVER NECESSARY TO CONFIRM DESIGN CRITERIA.
- 3) CERTIFIED ENGINEERING IS AVAILABLE UPON REQUEST.
- 4) THIS IS ALSO AVAILABLE AS AN H2O RATED ASSEMBLY.
- 5) INTEGRAL TOP TO BODY DESIGN.

PUMP TANK SHALL HAVE NO BAFFLE.  
TANK SHALL BE CAST WITH 24" DIAM. ORENCO RISER ADAPTERS INSTEAD OF CONCRETE PLUGS.  
TYPICAL GRAVITY FLOW OUTLET SHALL NOT BE CAST INTO TANK.

Diagram showing the side view cutaway of the pump tank. Key components and dimensions include:

- Pressurized Drainfield Supply Line** entering at the top.
- Discharge Assembly** located below the supply line.
- Orenco Universal Biotube Pump Vault**, Model PVU57-1813, Pump Model PF1005.
- High Head Discharge Pump** at the bottom.
- 4" DIA Inlet** on the left side.
- Emergency Storage Capacity**: 1,254 Gallons (40").
- 514 Gallons 19" in Tank**.
- 457 Gallons in Tank**.
- Dimensions**: Total height 7'-3" (87"), total width 7'-4", inlet height 5'-4" (64"), discharge height 5'-5.5" (65.5"), and various internal offsets like 10"-1", 6"-1", 6"-1", 17", 4.5", 6'-7" (79"), and 7'-4".

SIDE VIEW CUTAWAY

Float Functions	
Y	High Level Alarm
B	Pump On
R	Pump Off

**Emergency Storage Surge Capacity**

Specified pump tank has a max. capacity of 1,976 gallons to top of tank and 1,768 gallons to the invert of the inlet.

*System Design Flow: 675 gallons per day (gpd)*

To achieve 1.5 days of emergency storage, a capacity of 1,013 gallons is required above the "pump on" float up to the tank inlet invert elevation. [675 gpd x 1.5 = 1,013 gal]

Pump-on float shall be set at 19" from bottom of tank resulting in 514 gallons below this float and a 1,254 gallon capacity above this float up to the invert of the tank inlet [1,768 - 514 = 1,254gal]

**PRE-CAST CONCRETE WATER TIGHT  
HOLDING/PUMP TANK  
CAPACITY 1500 GALLONS  
MODEL IPS1500H**

The Don Chapin Pre-Cast logo features the company name in a stylized font above a small photograph of a pre-cast concrete pump tank unit.

5

24" DIAMETER ORENCO ACCESS RISERS

INLET

6" by 6"

7.4" (85")

3.5"

TOP VIEW

3 1/2" DIA INLET

6'-6" (78")

29"

768 Gallons Emergency Storage Capacity

431 Gallons in Tank

19"

383 Gallons in Tank

4'-6.5" (54.5")

5'-5"

4'-3"

5'-10" (70")

6'-7"

PRESSURIZED DRAINFIELD SUPPLY LINE

ORENCO UNIVERSAL BIOTUBE PUMP VAULT MODEL PVU57-1813 PUMP MODEL PF1005

SIDE VIEW

NOTES:

- 1) EXCAVATION SPECIFICATIONS:  
LENGTH 8' - 0"  
WIDTH 8' - 0"  
DEPTH BELOW INLET 4' - 5"
- 2) DON CHAPIN PRE-CAST MAY MAKE CHANGES TO THE DESIGN AND OR TO THE DIMENSIONS WITHOUT NOTICE. PLEASE CONTACT DON CHAPIN PRE-CAST WHENEVER NECESSARY TO CONFIRM DESIGN CRITERIA.
- 3) CERTIFIED ENGINEERING IS AVAILABLE UPON REQUEST.
- 4) THIS IS ALSO AVAILABLE AS AN H20 RATED ASSEMBLY.
- 5) INTEGRAL TOP TO BODY DESIGN.

PUMP TANK SHALL HAVE NO BAFFLE.  
**PUMP TANK SHALL BE CAST WITH 24" DIAM. ORENCO RISER ADAPTERS INSTEAD OF CONCRETE PLUGS.**  
 TYPICAL GRAVITY FLOW OUTLET SHALL NOT BE CAST INTO TANK.

Float Functions	
Y	High Level Alarm
B	Pump On
R	Pump Off

**Emergency Storage/ Surge Capacity:**

Specified pump tank has a max. capacity of 1,375 gallons to top of tank and 1,199 gallons to the invert of the inlet.

**System Design Flow: 300 gallons per day (gpd)**

To achieve 1.5 days of emergency storage, a capacity of 450 gallons is required above the "pump on" float up to the tank inlet invert elevation. [300 gpd x 1.5 = 450 gal]

Pump-on float shall be set at 19" from bottom of tank resulting in 431 gallons below this float and a 768 gallon capacity above this float up to the invert of the tank inlet  
 [1,199g - 431g = 768g]

PRE-CAST CONCRETE WATER TIGHT  
 HOLDING/PUMP TANK  
 CAPACITY 1000 GALLONS  
 MODEL IPS1000H

DON CHAPIN  
 PRE-CAST

**Orenco®**

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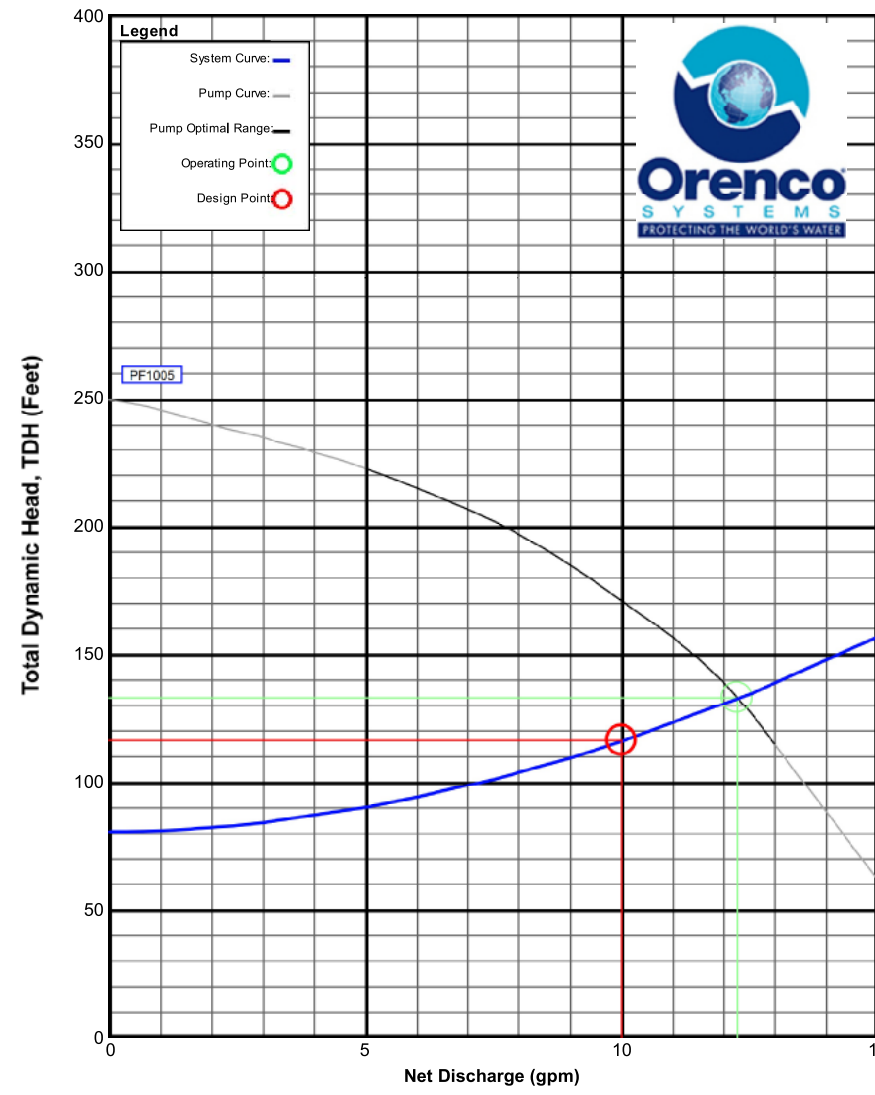
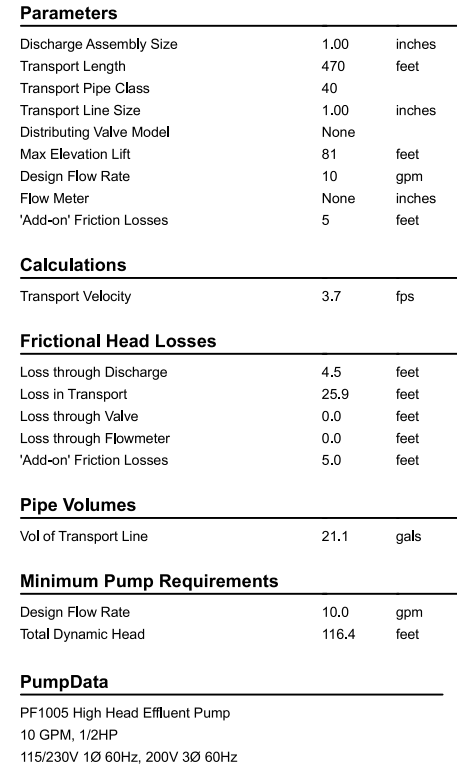
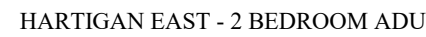
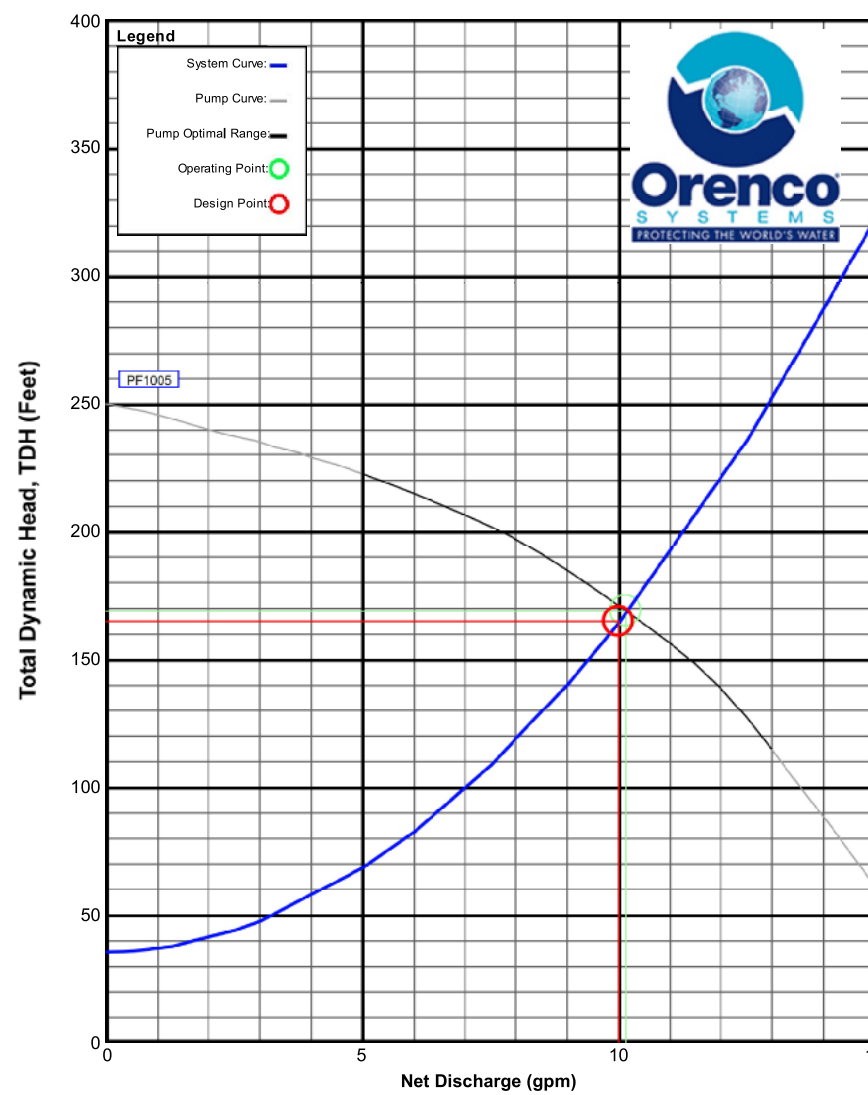
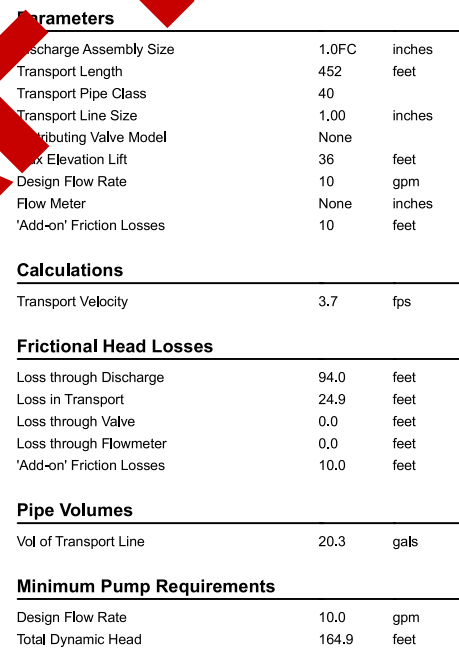
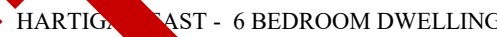
**MODEL: FTS0444-36V**

The diagram illustrates the Riser Cap Adapter assembly. It consists of a Riser Tube, a Riser Cap Adapter, and a Valve Direction Handle. The Riser Tube is connected to the Riser Cap Adapter, which is secured with a Water-Tight Access Cap. The Valve Direction Handle is attached to the Riser Tube and features a 4" Out Port and a 4" In Port. The diagram also shows a 4" Out Port on the side of the Riser Tube. Dimensions are provided for the Valve Direction Handle: a 30° angle for the top flange, a 120° angle for the bottom flange, and a 7.50" height for the central section.

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

<b>Project Location:</b> W Edmundson, Morgan Hill, California 95037		[Santa Clara County]	
<b>Property Owner:</b> Jim Hartigan			
<b>Mailing Address:</b> 16428 Peacock Lane, Los Gatos, California 95032			
<b>Owner Phone #:</b> (408) 768-9343		email: jim@hartigan.net	
<b>Date:</b> 01/06/23	<b>By:</b> David Quinn / Andrew Brownstone		<b>Sheet:</b>
<b>REVISION:</b>		<b>Job No.:</b> 22002	<b>APN:</b> 767-19-035 <b>2</b> OF 3



[illegible][illegible][illegible][illegible][illegible][illegible]SOIL PERCOLATION SUMMARY TABLE -- 10/25/22 EAST

Percolation Hole (PH)	PH-11	PH-12	PH-13	PH-14	PH-15	PH-16
Depth	4.10"	4.00"	4.15"	4.00"	4.02"	4.00"
Stabilized MPI	R	5.10	5.60	21.50	97.20	8.60
Adjusted Stabilized MPI	$R_p - R \times 1.4$	7.14	7.84	30.10	136.08	12.04
Avg. Adj. Stabilized MPI	$R_p - R \times 1.4$					
# Bed Rooms						
	FOR OFFICE USE ONLY	TANK SIZE (Gal)		Leach Line (Ft)		

COUNTY E.H. ACCEPTANCE/APPROVAL STAMP



	<ul style="list-style-type: none"> <li>• Site Evaluation and Mapping</li> <li>• Soil Analysis &amp; Percolation Testing</li> <li>• New Development, Upgrade &amp; Repairs</li> <li>• Residential &amp; Commercial</li> </ul>	1315 King Street Santa Cruz, CA 95060 <b>Tel: (831) 430-9116</b>
	<b>Alternative Wastewater System Design</b>	
Incorporated		
www.biosphere-consulting.com		