

### ABBREVIATIONS

∅	DIAMETER	MAX	MAXIMUM
AB	AGGREGATE BASE	MEP	MECHANICAL/ELECTRICAL/PLUMBING
ABDN	ABANDONED	MH	MANHOLE
AC	ACRE, ASPHALT CONCRETE	MIN	MINIMUM
ACP	ASBESTOS CEMENT PIPE	MIPT	MALE IRON PIPE THREAD
ACM	ASBESTOS CONTAINING MATERIAL	MJ	MECHANICAL JOINT
AD	AREA DRAIN	MPVC	MIDPOINT OF VERTICAL CURVE
AGG	AGGREGATE	MON	MONUMENT
ALGN	ALIGNMENT	N	NORTHING COORDINATE
ARV	AIR RELEASE VALVE	(N)	NEW
ASB	AGGREGATE SUBBASE	NC	NORMALLY CLOSED
ASPH	ASPHALT	NIC	NOT IN CONTRACT
		NO	NUMBER
		NTS	NOT TO SCALE
BC	BEGIN CURVE	OHE	OVERHEAD ELECTRIC
BEG	BEGIN	O.R.	OFFICIAL RECORDS
BFP	BACK FLOW PREVENTER		
BLDC	BUILDING CORNER	(P)	PROPOSED
BLDG	BUILDING	P	PAVEMENT ELEVATION
BMP	BEST MANAGEMENT PRACTICES	PA	PLANTER AREA
BOD	BOTTOM OF DOCK	PB	PULL BOX
BOL	BOLLARD	PCC	POINT OF COMPOUND CURVATURE
BSW	BACK OF SIDEWALK		
BVC	BEGIN VERTICAL CURVE	PE	PLAIN END
BW	FINISHED GRADE AT BOTTOM OF WALL	PEP	PEDESTRIAN
		PERF	PERFORATED
C	CONCRETE OR CIVIL	PH	POT HOLE
CB	CATCH BASIN	PID	POINT ID
C&G	CURB AND GUTTER	PIV	POST INDICATOR VALVE
CG&SW	CURB, GUTTER & SIDEWALK	PL	PROPERTY LINE
CI	CAST IRON OR CURB INLET	PM	PARKING METER
CIP	CAST IRON PIPE	PMH	POWER MANHOLE
CL	CENTERLINE	PO	PUSH-ON
CLR	CLEAR	POC	POINT ON CURVE
CLSM	CONTROLLED LOW-STRENGTH MATERIAL	POI	POINT OF INTERSECTION
CMN	COMMUNICATION	PP	POWER POLE
CMP	CORRUGATED METAL PIPE	PRC	POINT OF REVERSE CURVATURE
CO	CLEAN OUT	PRV	PRESSURE REDUCING VALVE
CONC	CONCRETE	PRUE	PRIVATE UTILITY EASEMENT
CONST	CONSTRUCTION OR CONSTRUCT	PT	POINT OF TANGENCY
CONF	CONFORM TO EXISTING	PUE	PUBLIC UTILITY EASEMENT
CSC	CITY OF SANTA CLARA	PVC	POLYVINYL CHLORIDE PIPE
CUC	CUBIC		
CY	CUBIC YARD	R	RIGHT
D=	DELTA (CURVE)	R=	RADIUS (CURVE)
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY	RC	RELATIVE COMPACTION
DEMO	DEMOLISH	RCP	REINFORCED CONCRETE PIPE
DEPT	DEPARTMENT	RJ	RESTRAINED JOINT
DET	DETAIL	RP	RADIUS POINT
DI	DROP INLET, DUCTILE IRON	RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
DIA	DIAMETER	RPPA R	REDUCED PRESSURE PRINCIPLE ASSEMBLY
DIP	DUCTILE IRON PIPE	RSC	RECEIVING AND SUPPORT CENTER
DOM	DOMESTIC	RW	RECYCLED WATER
DW	DOMESTIC WATER	R/W, ROW	RIGHT OF WAY
DWG	DRAWING		
		S	SOUTH SLOPE
E	EASTING COORDINATE, ELECTRIC	S.A.D.	SEE ARCHITECTURAL DRAWINGS
EC	END CURVE	SD	STORM DRAIN
EG	EXISTING GRADE	SDCB	STORM DRAIN CATCH BASIN
EL, ELEV	ELEVATION	SDI	STORM DRAIN INLET
ELEC	ELECTRICAL	SDMH	STORM DRAIN MANHOLE
EP	EDGE OF PAVEMENT	SDCO	STORM DRAIN CLEANOUT
EVA	EMERGENCY VEHICLE ACCESS	S.E.D.	SEE ELECTRICAL DRAWINGS
EX, EXIST.	EXISTING	SF	SILT FENCE
(E)		SG	SUBGRADE
(F)	FUTURE	SHLDR	SHOULDER
FA	FIRE ALARM	SHT	SHEET
FC, FC	FACE OF CURB	SL	STREETLIGHT
FD	FOUND	S.L.D.	SEE LANDSCAPE DRAWINGS
FDC	FIRE DEPARTMENT CONNECTION	SMH	SIGNAL MANHOLE
FF, FFE	FINISHED FLOOR ELEVATION	S.M.D	SEE MECHANICAL DRAWINGS
FG	FINISH GRADE	S.P.D	SEE PLUMBING DRAWINGS
FH	FIRE HYDRANT	SS	SANITARY SEWER
FIPT	FEMALE IRON PIPE THREAD	S.S.D.	SEE STRUCTURAL DRAWINGS
FL	FLOW LINE, FLANGE	SSD	SUBSURFACE DRIP
FLG	FLANGE	SSCO	SANITARY SEWER CLEANOUT
FM	FLOWMETER/FORCE MAIN	SSFM	SANITARY SEWER FORCE MAIN
FOUND	FOUNDATION	SSMH	SANITARY SEWER MANHOLE
FS	FINISHED SURFACE	SSPS	SANITARY SEWER PUMP STATION
FT	FOOT, FEET	STA	STATION
FW	FIRE WATER	STD	STANDARD
		STL	STEEL
G	GAS, GROUND ELEVATION	S/W	SIDEWALK
GB	GRADE BREAK	SWP	SILICON VALLEY POWER
GI	GALVANIZED IRON		
GRD, G	GROUND	T	TELEPHONE
GV	GATE VALVE	TC	TOP OF CURB
		TD	TRENCH DRAIN
HMA	HOT MIX ASPHALT	TEL	TELEPHONE
HORIZ	HORIZONTAL	TEMP	TEMPORARY
HT	HEIGHT	TFC	TOP FACE OF CURB
HP	HIGH POINT	THK	THICK
		TOD	TOP OF DOCK
INV	INVERT	TOE	TOE OF SLOPE
INST	INSTALL	TW, TOW	TOP OF WALL
IRR	IRRIGATION	TS	TOP OF SLAB
		TYP	TYPICAL
JP	JOINT POLE	UON	UNLESS OTHERWISE NOTED
JT	JOINT TRENCH	U/G	UNDERGROUND
		VC	VERTICAL CURVE
L	LEFT		
L=	LENGTH (CURVE)	W	WEST, WATER
LF	LINEAR FEET	WM	WATER METER
LAT	LATERAL	WV	WATER VALVE
LIP	LIP OF GUTTER	WWF	WELDED WIRE FABRIC
LP	LIGHT POLE, LOW POINT	W/	WITH
LPFH	FIRE HYDRANT, LOW POINT		
LS	LANDSCAPE	YDS	YARDS
LSA	LANDSCAPE ARCHITECT		
MA	MEDICAL AIR		

### CIVIL SYMBOLS LEGEND

SURVEY TOPO AND SITE IMPROVEMENTS		ANNOTATION	
	6" CURB & GUTTER		KEYNOTE
	EDGE OF AC PAVEMENT		DEMOLITION NOTE
	6" VERTICAL CURB		DETAIL INDICATOR
	DOMESTIC WATER MAIN		SECTION INDICATOR
	ELECTRIC LINE		
	FLUSH LINE		
	FORCE MAIN		
	GAS LINE		
	IRRIGATION LINE		
	OVERHEAD WIRES		
	OVERHEAD ELECTRIC		
	OVERHEAD TELEPHONE		
	RECYCLED WATER		
	SANITARY SEWER LINE		
	STORM DRAIN LINE		
	STREET LIGHT CONDUIT		
	TELECOMMUNICATIONS		
	TELEPHONE LINE		
	TELEVISION LINE		
	WATER LINE		
	UNDERGROUND ELECTRIC		
	TRENCH DRAIN		
	METAL BEAM GUARD RAIL		
	SILT FENCE		
	CHAIN LINK FENCE		
	FLOW LINE		
	CONTOUR ELEVATION LINE		
	CENTER LINE		
	PROPERTY LINE		
	MONUMENT LINE		
	EASEMENT LINE		
	FINISH GRADE		
	SURFACE DRAINAGE SLOPE		
	SPOT ELEVATION		
	GRADE BREAK		
	LIMIT OF WORK/GRADING		
	IRRIGATION BOX		
	GAS METER		
	GAS VALVE		
	WATER METER		
	WATER VALVE		
	WATER METER OR BFP		
	FIRE HYDRANT		
	FIRE DEPARTMENT CONNECTION		
	WATER TAPPING SADDLE		
	SEWER MANHOLE		
	SEWER CLEANOUT		
	SEWER LAMP HOLE		
	SEWER VENT		
	STORM DRAIN MANHOLE		
	CATCH BASIN		
	CURB INLET		
	DRAINAGE INLET		

#### SITE VICINITY

#### SITE LOCATION

#### PROJECT DESCRIPTION

GENERAL: NEW REPLACEMENT OWTS  
BASIS: BEDROOM AND POOL CABANA ADDITIONS

JUSTIFICATION FOR ALTERNATIVE OWTS DESIGN:  
THERE IS A LIMITING CLAY LAYER STARTING AT 3' BELOW GROUND LEVEL (BGL), AND MYER ENGINEERING PROPOSES ENHANCED (SUPPLEMENTAL) TREATMENT THAT PRODUCES EFFLUENT QUALITY OF LESS THAN 30 MGL BOD, TSS AND TN, FOLLOWED BY SUBSURFACE DRIP DISPERSAL INSTALLED TO A MAXIMUM DEPTH OF 8' BGL, TO MEET THE SEPARATION REQUIREMENTS TO THIS LIMITING LAYER.

### GENERAL SHEET NOTES

- ABBREVIATIONS AND SYMBOLS ON THIS SHEET APPLY ONLY TO THE CIVIL DRAWINGS. REFER TO OTHER DISCIPLINES FOR APPLICABLE ABBREVIATIONS AND SYMBOLS NOT PROVIDED HERE.
- THIS IS A STANDARD ABBREVIATION AND LEGEND SHEET. THEREFORE, SOME ABBREVIATIONS AND LEGEND SYMBOLS MAY APPEAR ON THIS SHEET AND MAY NOT BE UTILIZED ON THIS PROJECT.
- DO NOT SCALE DRAWINGS.
- ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE CURRENTLY REQUIRED VERSION OF THE FOLLOWING CODE:
  - CALIFORNIA BUILDING CODE
  - CALIFORNIA PLUMBING CODE
  - CALIFORNIA MECHANICAL CODE
  - CALIFORNIA ELECTRICAL CODE
  - ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES
- NOTHING ON THE ENCLOSED DRAWINGS IS TO BE CONSTRUED AS REQUIRING OR PERMITTING WORK THAT IS CONTRARY TO THE CODES, ORDINANCES, OR REGULATIONS DESCRIBED ABOVE.
- ANY DEVIATIONS FROM THE PROPOSED PLANS SHALL BE DISCUSSED WITH THE PROJECT ENGINEER PRIOR TO MAKING CHANGES IN THE FIELD.

### INDEX

WASTEWATER SHEETS		
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4	WW 4	WASTEWATER SYSTEM SCHEMATIC AND DETAILS
5	WW 5	WASTEWATER SYSTEM SPECIFICATIONS (AND EROSION CONTROL NOTES)

### PROJECT DESIGN AND OPERATION NOTES

**DESIGN FLOWS, VOLUMES, AND TREATMENT**

FACILITY TYPE: RESIDENTIAL  
UNIT FLOW BASIS: # OF BEDROOMS  
# OF UNITS: 6 BEDROOMS + 1 OFFICE + POOL CABANA  
DESIGN FLOWS: 825 GPD  
TREATMENT CATEGORY: ENHANCED/ALTERNATIVE  
EXISTING SEPTIC TANK VOLUME: 1,500 GALLONS  
NEW TREATMENT TANK VOLUME: 2,000 GALLONS  
NEW PUMP TANK VOLUME: 1,000 GALLONS  
TREATMENT SYSTEM: ORENCO ADVANTEX AX23 2-P-00, MODE 3  
WASTEWATER STRENGTH: DOMESTIC RESIDENTIAL STRENGTH  
DOMESTIC STRENGTH DEFINITION: <220 MGL BOD, <60 MGL TSS, <60 MGL TN

**SOIL TESTING RESULTS AND DISPOSAL DESIGN**

**SITE TEST PITS (SOIL PROFILES):**  
MYER ENGINEERING OBSERVED THE SOIL CHARACTERISTICS OF 2 TEST PITS EXCAVATED TO DEPTHS OF 12' AND 13' BELOW GROUND LEVEL (BGL). THE LOCATION OF THE TEST PITS IS PROVIDED ON THE PROJECT DESIGN PLANS. THE FOLLOWING SOIL PROFILE WAS OBSERVED:

**TEST PIT #1 (TP-1)**  
0'-15' BGL: DARK BROWN LOAMY TOPSOIL  
15'-40' BGL: BROWNISH GREY CLAY W/ MEDIUM TO COARSE GRAIN SAND AND GRAVEL, MOIST  
40'-9' BGL: LIGHT BROWN LOAMY CLAY W/ ROCK CLASTS 1" TO 3" SIZE  
9'-12' BGL: LIGHT BROWN SANDY CLAY W/ FRACTURED SHALE (1" TO 4" SIZE)  
GROUNDWATER WAS NOT ENCOUNTERED, AND GROUNDWATER INDICATORS WERE NOT PRESENT.

**TEST PIT #2 (TP-2)**  
0'-15' BGL: DARK BROWN LOAMY TOPSOIL  
15'-8' BGL: DARK BROWN CLAY W/ SILT, SAND AND GRAVEL, MOIST  
8'-13' BGL: LIGHT BROWN SANDY CLAY W/ FRACTURED SHALE (1" TO 4" SIZE)  
GROUNDWATER WAS NOT ENCOUNTERED, AND GROUNDWATER INDICATORS WERE NOT PRESENT.

**SITE PERCOLATION TEST:**  
TEST HOLE #1 (P-1): DEPTH = 1', RATE = 18.5 MPI  
TEST HOLE #2 (P-2): DEPTH = 1', RATE = 34.3 MPI  
TEST HOLE #3 (P-3): DEPTH = 1', RATE = 12 MPI  
TEST HOLE #4 (P-4): DEPTH = 1', RATE = 27.9 MPI  
TEST HOLE #5 (P-5): DEPTH = 1', RATE = 60 MPI  
TEST HOLE #6 (P-6): DEPTH = 1', RATE = 60 MPI

**ADJUSTED STABILIZED MPI: R X 1.4 =**  
TEST HOLE #1 (P-1): DEPTH = 1', RATE = 25.9 MPI  
TEST HOLE #2 (P-2): DEPTH = 1', RATE = 48.0 MPI  
TEST HOLE #3 (P-3): DEPTH = 1', RATE = 16.8 MPI  
TEST HOLE #4 (P-4): DEPTH = 1', RATE = 39.0 MPI  
TEST HOLE #5 (P-5): DEPTH = 1', RATE = 84.0 MPI  
TEST HOLE #6 (P-6): DEPTH = 1', RATE = 84.0 MPI  
AVERAGE ADJUSTED STABILIZED RATE = 49.6 MPI

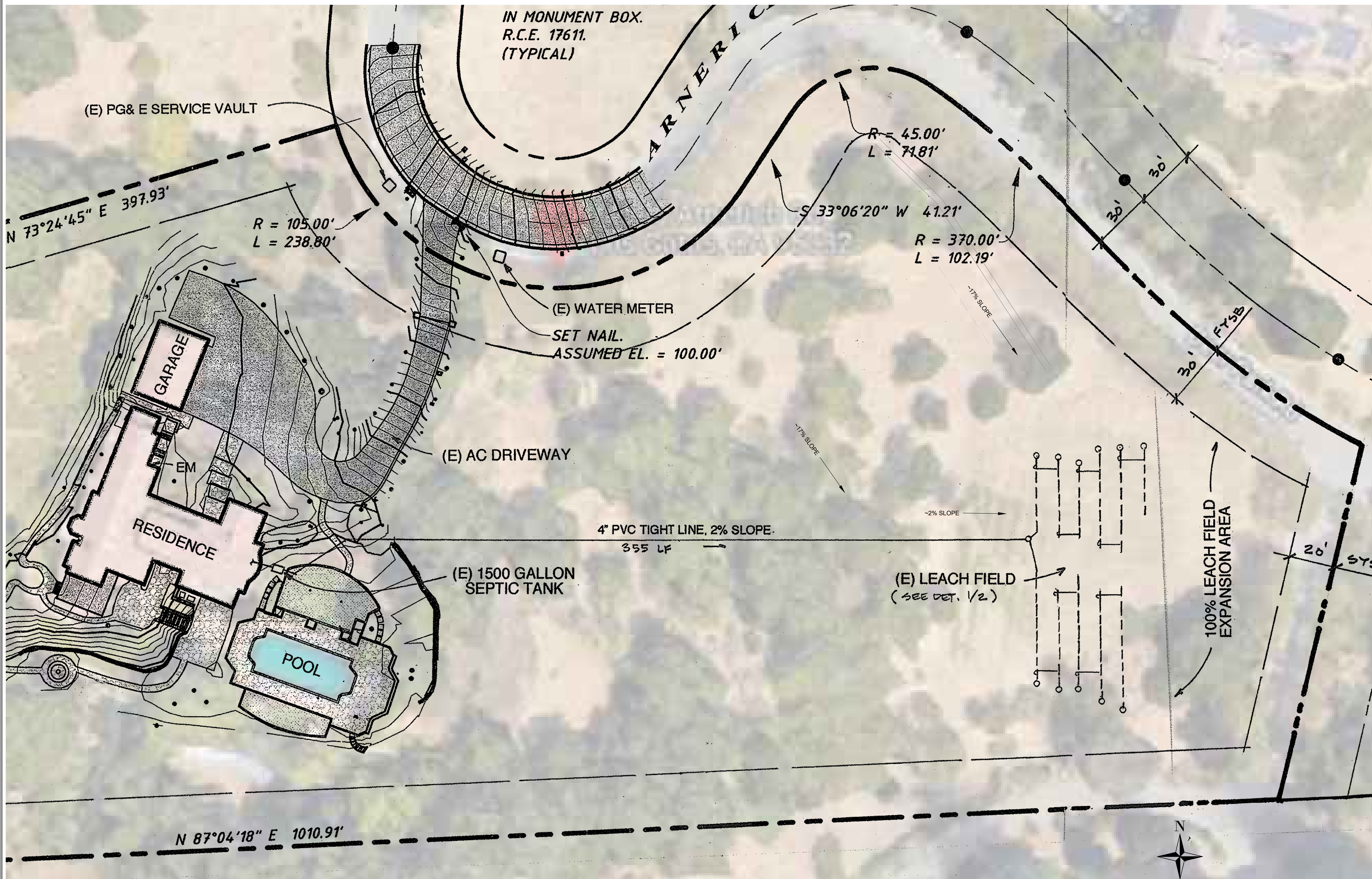
DESIGN AREA APPLICATION RATE FOR SUBSURFACE DRIP: 0.4 GPD/SF  
DESIGN PRIMARY EFFECTIVE LEACHING AREA: 2,064 SF  
DESIGN SECONDARY EFFECTIVE AREA: 2,064 SF

SEE SHEETS WW3 AND WW4 FOR SYSTEM SIZING CALCULATIONS AND DETAILS

**WATER SUPPLY: SAN JOSE WATER (PUBLIC)**

OWNER IS RESPONSIBLE FOR GENERAL OPERATION AND MAINTENANCE OF THE WASTEWATER SYSTEM  
THE SEPTIC/WASTEWATER SYSTEM SHALL BE INSTALLED BY A QUALIFIED PROFESSIONAL.





P R E L I M I N A R Y P L A N S : N O T F O R C O N S T R U C T I O N

**EXISTING SITE LAYOUT**

Renfrew Site Improvement Project  
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Los Gatos CA 95032  
APN: 537-12-012

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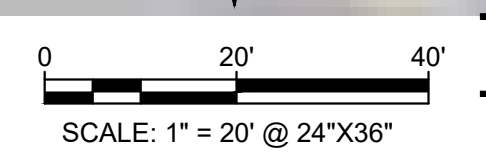
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Drawn By PEM	Checked By PEM
Project No. 202304	Scale AS SHOWN
Date JUNE 2023	

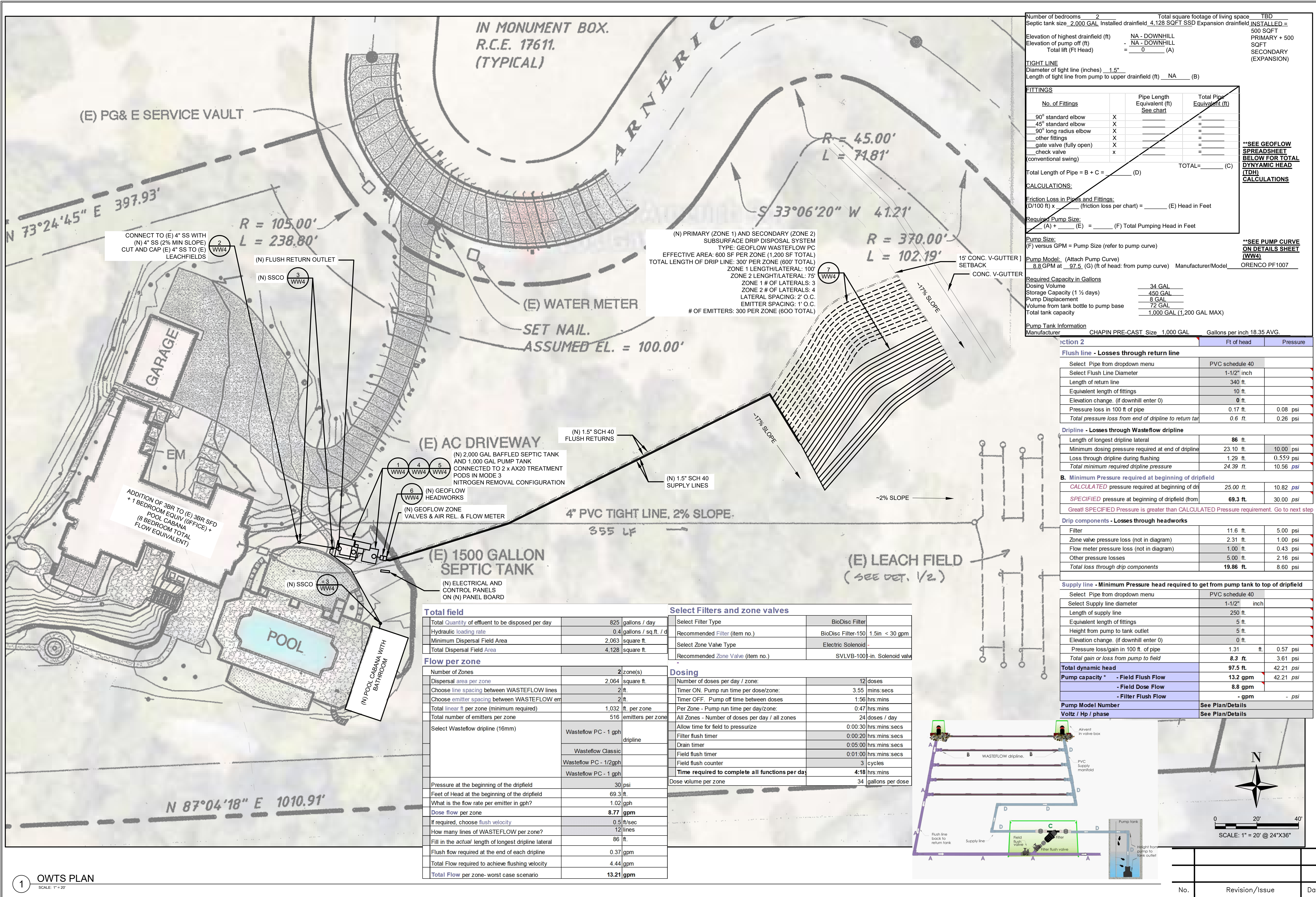
**WW2**  
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1 EXISTING SITE LAYOUT  
SCALE: 1" = 20' @ 24"X36"



No.	Revision/Issue	Date





Number of bedrooms	2	Total square footage of living space	TBD
Septic tank size	2,000 GAL	Installed drainfield	4,128 SQFT
		Expansion drainfield	INSTALLED = 500 SQFT
Elevation of highest drainfield (ft)	NA - DOWNHILL		PRIMARY + 500 SQFT
Elevation of pump off (ft)	NA - DOWNHILL		SECONDARY (EXPANSION)
Total lift (ft Head)	= 0 (A)		

<b>TIGHT LINE</b>		
Diameter of tight line (inches)	1.5"	
Length of tight line from pump to upper drainfield (ft)	NA (B)	

<b>FITTINGS</b>		
No. of Fittings	Pipe Length Equivalent (ft)	Total Pipe Equivalent (ft)
90° standard elbow	X	=
45° standard elbow	X	=
90° long radius elbow	X	=
other fittings	X	=
gate valve (fully open)	X	=
check valve (conventional swing)	X	=
TOTAL =		(C)

**CALCULATIONS:**

Friction Loss in Pipes and Fittings:  
 $(D/100 \text{ ft}) \times \text{(friction loss per chart)} = \text{(E) Head in Feet}$

Required Pump Size:  
 $(A) + \text{(E)} = \text{(F) Total Pumping Head in Feet}$

**Pump Size:**  
 (F) versus GPM = Pump Size (refer to pump curve)

**Pump Model:** (Attach Pump Curve)  
 8.8 GPM at 97.5 (G) (ft of head: from pump curve) Manufacturer/Model: ORENCO PF1007

**Required Capacity in Gallons**

Dosing Volume	34 GAL
Storage Capacity (1 1/2 days)	450 GAL
Pump Displacement	8 GAL
Volume from tank bottle to pump base	72 GAL
Total tank capacity	1,000 GAL (1,200 GAL MAX)

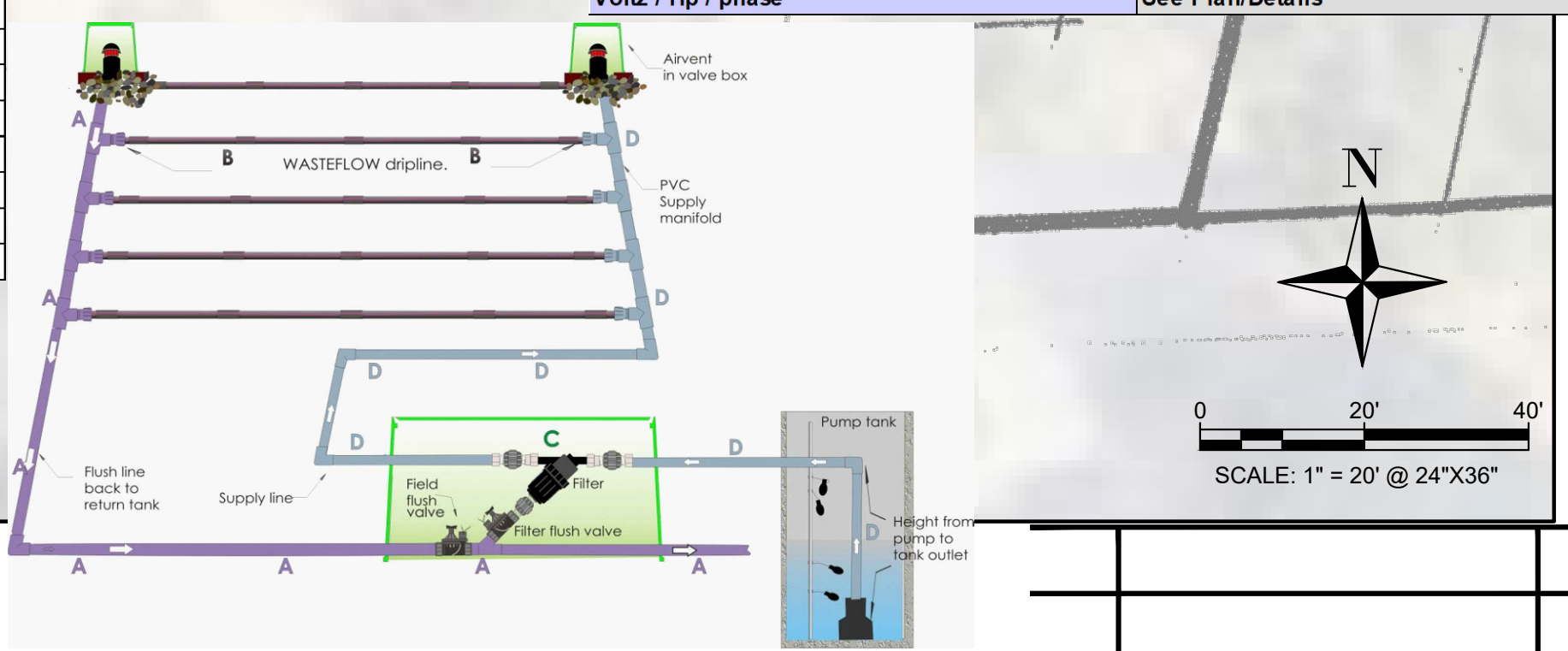
**Pump Tank Information**

Manufacturer	CHAPIN PRE-CAST	Size	1,000 GAL	Gallons per inch	18.35 AVG.
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Section 2	Ft of head	Pressure
<b>Flush line - Losses through return line</b>		
Select Pipe from dropdown menu	PVC schedule 40	
Select Flush Line Diameter	1-1/2" inch	
Length of return line	340 ft.	
Equivalent length of fittings	10 ft.	
Elevation change (if downhill enter 0)	0 ft.	
Pressure loss in 100 ft of pipe	0.17 ft.	0.08 psi
Total pressure loss from end of dripline to return tank	0.6 ft.	0.26 psi
<b>Dripline - Losses through Wasteflow dripline</b>		
Length of longest dripline lateral	86 ft.	
Minimum dosing pressure required at end of dripline	23.10 ft.	10.00 psi
Loss through dripline during flushing	1.29 ft.	0.559 psi
Total minimum required dripline pressure	24.39 ft.	10.56 psi
<b>B. Minimum Pressure required at beginning of dripline</b>		
CALCULATED pressure required at beginning of dripline	25.00 ft.	10.82 psi
SPECIFIED pressure at beginning of dripline (from Great! SPECIFIED Pressure is greater than CALCULATED Pressure requirement. Go to next step)	69.3 ft.	30.00 psi
<b>Drip components - Losses through headworks</b>		
Filter	11.6 ft.	5.00 psi
Zone valve pressure loss (not in diagram)	2.31 ft.	1.00 psi
Flow meter pressure loss (not in diagram)	1.00 ft.	0.43 psi
Other pressure losses	5.00 ft.	2.16 psi
Total loss through drip components	19.86 ft.	8.60 psi

<b>Supply line - Minimum Pressure head required to get from pump tank to top of dripline</b>		
Select Pipe from dropdown menu	PVC schedule 40	
Select Supply line diameter	1-1/2" inch	
Length of supply line	250 ft.	
Equivalent length of fittings	5 ft.	
Height from pump to tank outlet	5 ft.	
Elevation change (if downhill enter 0)	0 ft.	
Pressure loss/gain in 100 ft. of pipe	1.31 ft.	0.57 psi
Total gain or loss from pump to field	8.3 ft.	3.61 psi
<b>Total dynamic head</b>	<b>97.5 ft.</b>	<b>42.21 psi</b>
<b>Pump capacity * - Field Flush Flow</b>	<b>13.2 gpm</b>	<b>42.21 psi</b>
<b>- Field Dose Flow</b>	<b>8.8 gpm</b>	
<b>- Filter Flush Flow</b>	<b>gpm</b>	<b>psi</b>
<b>Pump Model Number</b>	See Plan/Details	
<b>Voltz / Hp / phase</b>	See Plan/Details	

<b>Total field</b>		<b>Select Filters and zone valves</b>	
Total Quantity of effluent to be disposed per day	825 gallons / day	Select Filter Type	BioDisc Filter
Hydraulic loading rate	0.4 gallons / sq. ft. / d	Recommended Filter (item no.)	BioDisc Filter-150 1.5in < 30 gpm
Minimum Dispersal Field Area	2,063 square ft.	Select Zone Valve Type	Electric Solenoid
Total Dispersal Field Area	4,128 square ft.	Recommended Zone Valve (item no.)	SVLVB-100-in. Solenoid valve
<b>Flow per zone</b>		<b>Dosing</b>	
Number of Zones	2 zone(s)	Number of doses per day / zone:	12 doses
Dispersal area per zone	2,064 square ft.	Timer ON. Pump run time per dose/zone:	3.55 mins:secs
Choose line spacing between WASTEFLOW lines	2 ft.	Timer OFF. Pump off time between doses	1.56 hrs:mins
Choose emitter spacing between WASTEFLOW emitters	2 ft.	Per Zone - Pump run time per day/zone:	0.47 hrs:mins
Total linear ft per zone (minimum required)	1,032 ft. per zone	All Zones - Number of doses per day / all zones	24 doses / day
Total number of emitters per zone	516 emitters per zone	Allow time for field to pressurize	0:00:30 hrs:mins:secs
Select Wasteflow dripline (16mm)	Wasteflow PC - 1 gph dripline	Filter flush timer	0:00:20 hrs:mins:secs
	Wasteflow Classic dripline	Drain timer	0:05:00 hrs:mins:secs
	Wasteflow PC - 1/2gph dripline	Field flush timer	0:01:00 hrs:mins:secs
	Wasteflow PC - 1 gph dripline	Field flush counter	3 cycles
Pressure at the beginning of the dripline	30 psi	<b>Time required to complete all functions per day</b>	<b>4:18 hrs:mins</b>
Feet of Head at the beginning of the dripline	69.3 ft.	Dose volume per zone	34 gallons per dose
What is the flow rate per emitter in gph?	1.02 gph		
Dose flow per zone	<b>8.77 gpm</b>		
If required, choose flush velocity	0.5 ft/sec		
How many lines of WASTEFLOW per zone?	12 lines		
Fill in the actual length of longest dripline lateral	86 ft.		
Flush flow required at the end of each dripline	0.37 gpm		
Total Flow required to achieve flushing velocity	4.44 gpm		
Total Flow per zone- worst case scenario	<b>13.21 gpm</b>		



**WASTEWATER SYSTEM PLAN**

Renfrew Site Improvement Project  
 14500 Arnerich Hill Road  
 Los Gatos CA 95032  
 APN: 537-12-012

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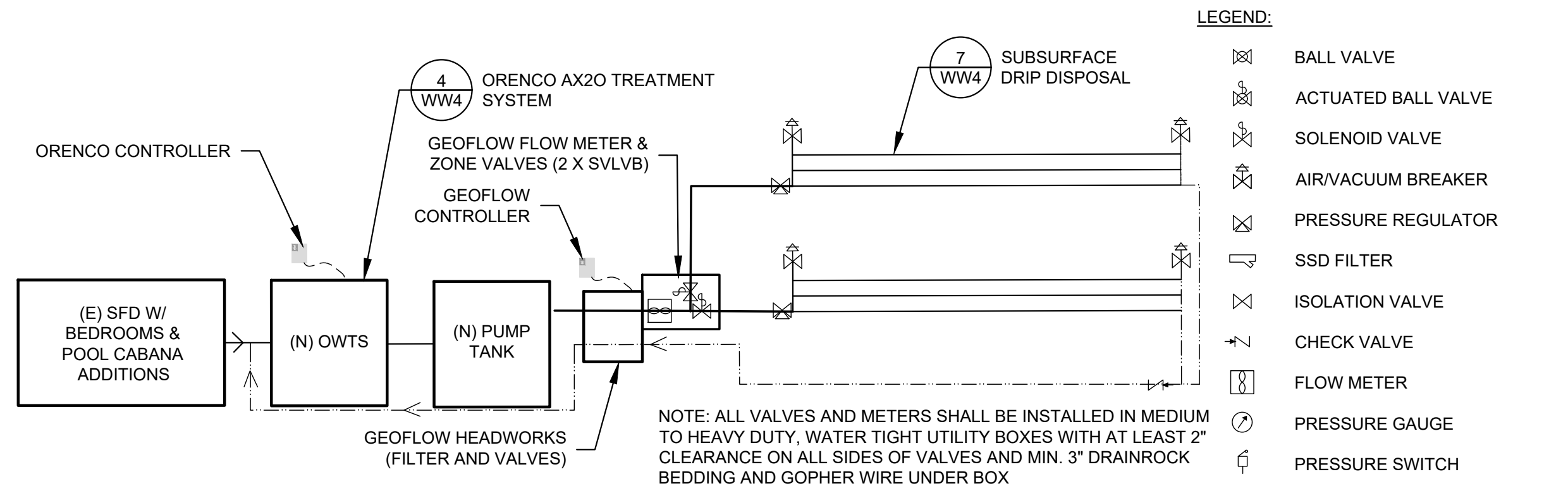
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PEM	PEM
Project No.	Scale
202304	AS SHOWN
Date	JUNE 2023
Sheet No.	

**WW3**

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No.	Revision/Issue	Date
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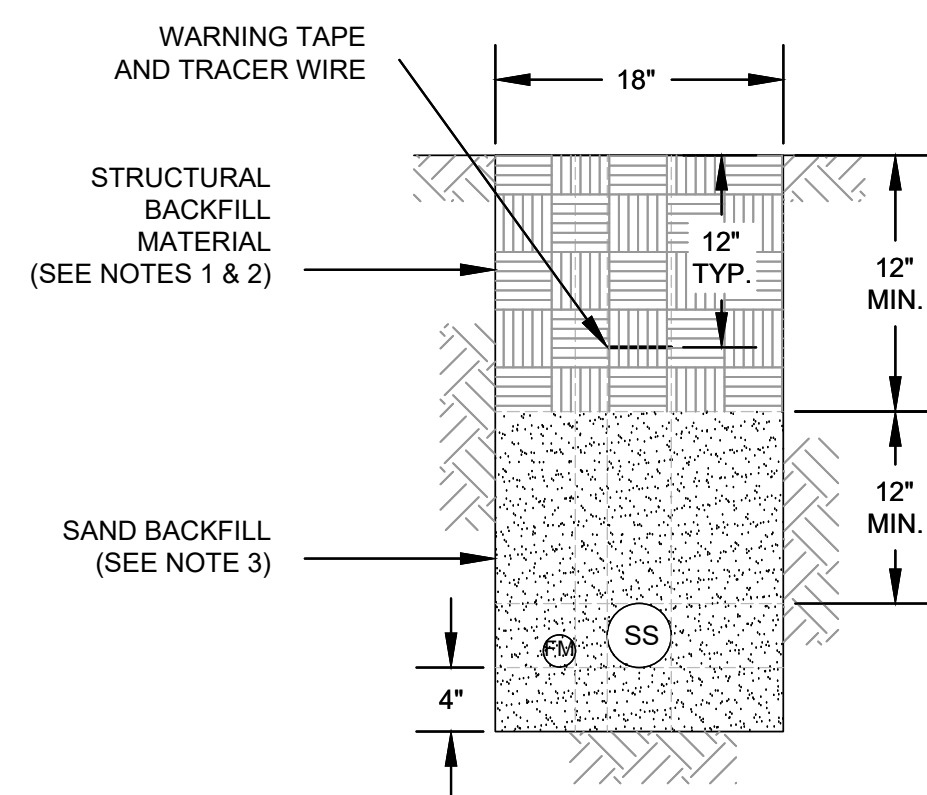


**1 WASTEWATER TREATMENT AND DISPOSAL SYSTEM SCHEMATIC**

SCALE: AS DIMENSIONED

- LEGEND:**
- ⊗ BALL VALVE
  - ⊗ ACTUATED BALL VALVE
  - ⊗ SOLENOID VALVE
  - ⊗ AIR/VACUUM BREAKER
  - ⊗ PRESSURE REGULATOR
  - ⊗ SSD FILTER
  - ⊗ ISOLATION VALVE
  - ⊗ CHECK VALVE
  - ⊗ FLOW METER
  - ⊗ PRESSURE GAUGE
  - ⊗ PRESSURE SWITCH
  - ⊗ PRESSURE REGULATOR (30 PSI)

NOTE: ALL VALVES AND METERS SHALL BE INSTALLED IN MEDIUM TO HEAVY DUTY, WATER TIGHT UTILITY BOXES WITH AT LEAST 2" CLEARANCE ON ALL SIDES OF VALVES AND MIN. 3" DRAINROCK BEDDING AND GOPHER WIRE UNDER BOX

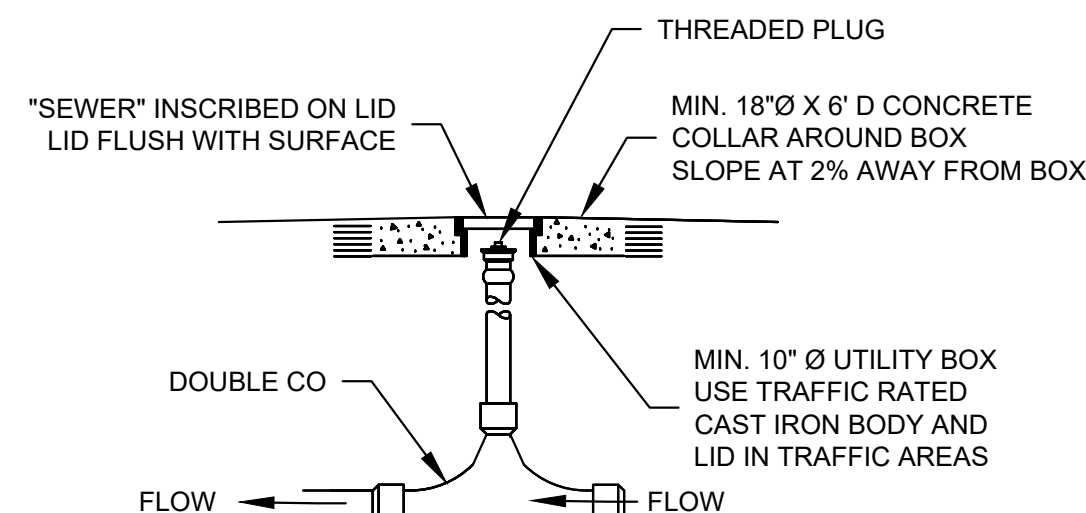


**2 SS UTILITY TRENCH DETAIL**

SCALE: AS DIMENSIONED

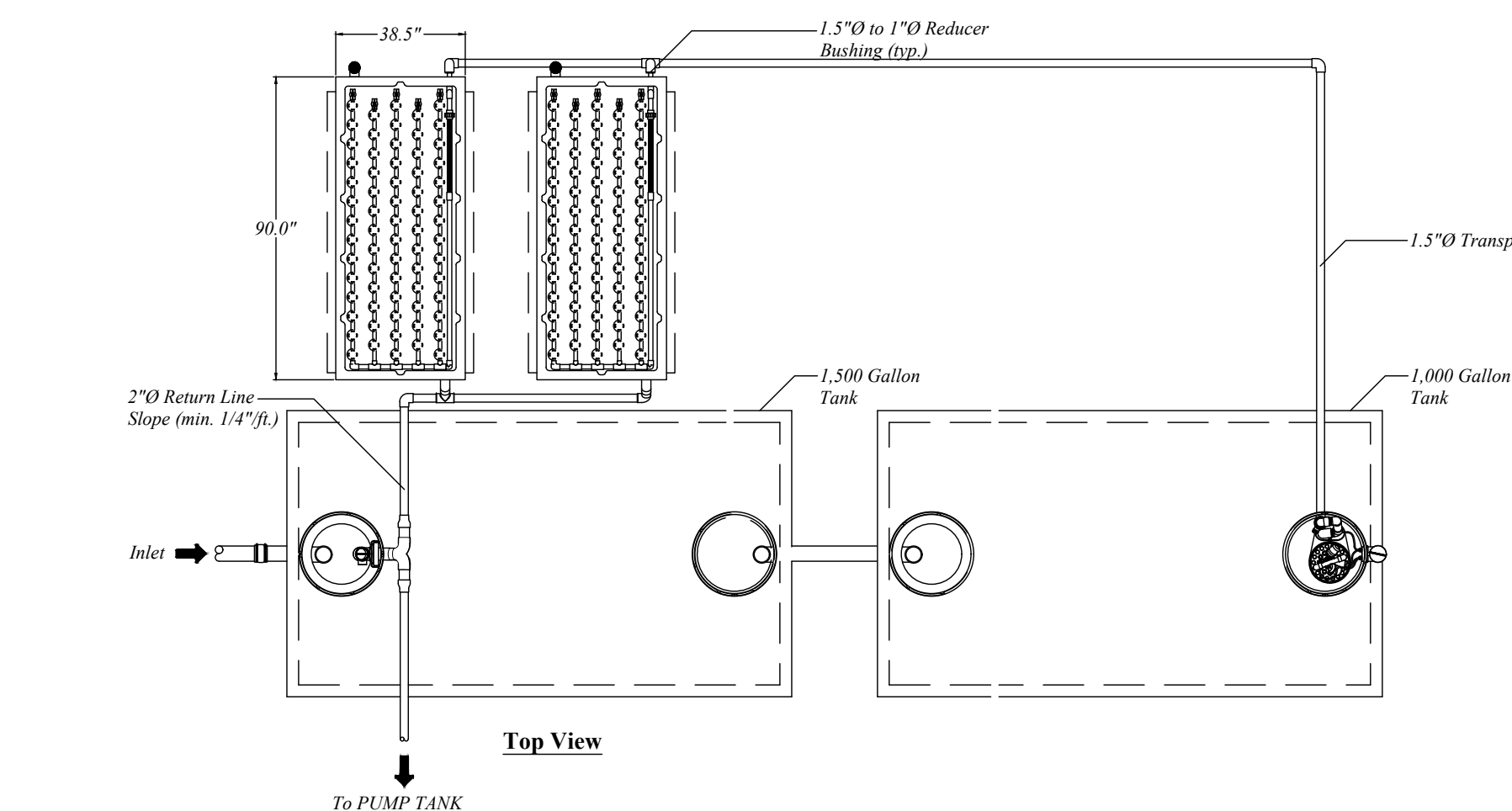
**UTILITY TRENCH NOTES:**

1. UTILITY TRENCH STRUCTURAL BACKFILL UNDER DRIVEWAYS AND ROADS SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
2. UTILITY TRENCH STRUCTURAL BACKFILL UNDER NON-TRAFFIC AREAS SHALL BE COMPACTED TO 90% RELATIVE COMPACTION.
3. ALL SAND BACKFILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION.
4. SS=SANITARY SEWER
5. SANITARY SEWER LINES SHALL BE INSTALLED WITH A 10' MINIMUM SEPARATION FROM ALL POTABLE WATER LINES.
6. IF SANITARY SEWER AND WATER LINES MUST CROSS, THE SANITARY SEWER SHALL BE LOCATED AT LEAST 2' BELOW THE WATER LINE.



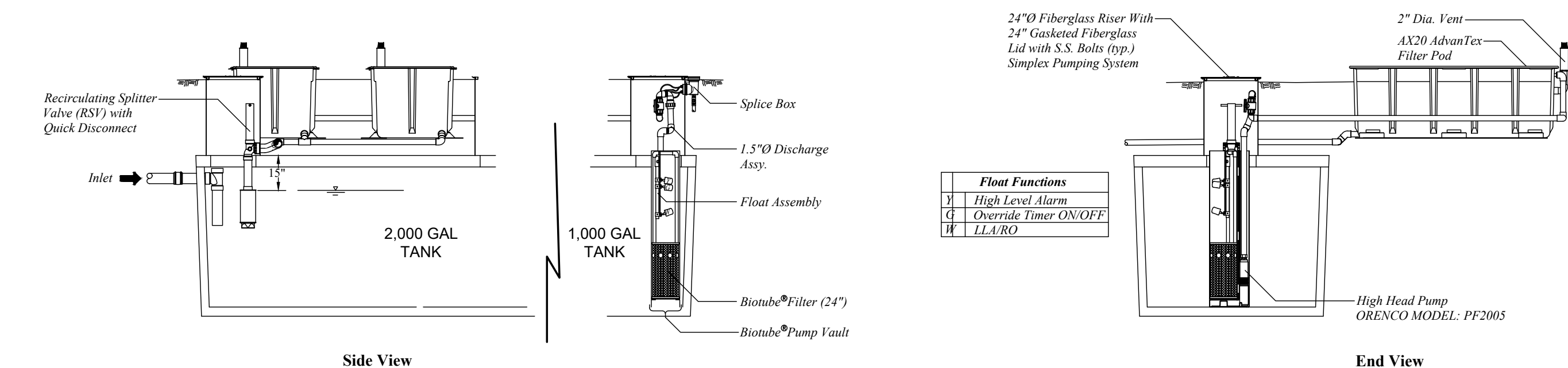
**3 SS CLEANOUT**

SCALE: AS DIMENSIONED



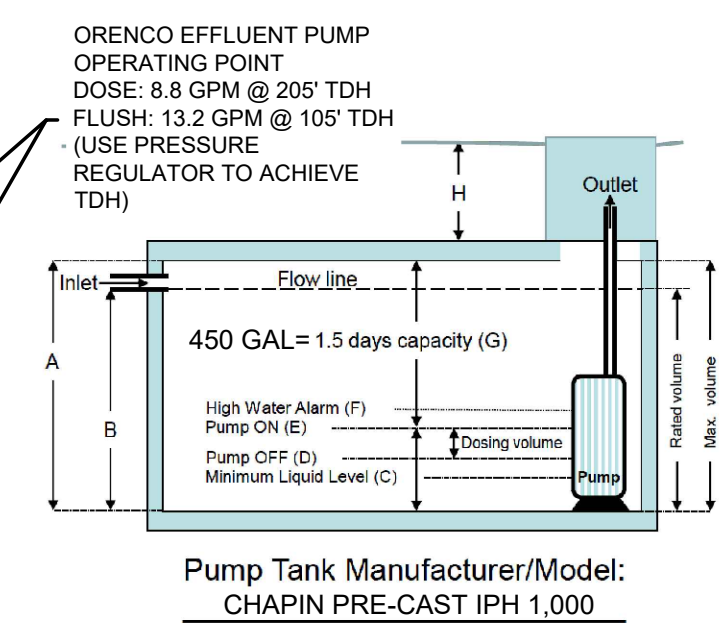
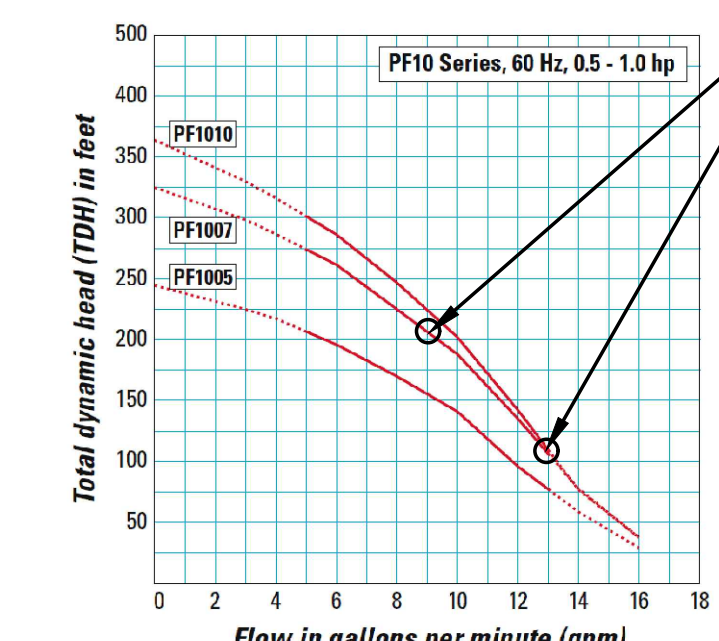
**4 ADVANTEK 2-POD AX20N MODE 3A ENHANCED TREATMENT SYSTEM (WITH 2,000 GALLON WATERTIGHT SEPTIC TANK)**

SCALE: AS DIMENSIONED



**8 PUMP SYSTEM DETAILS**

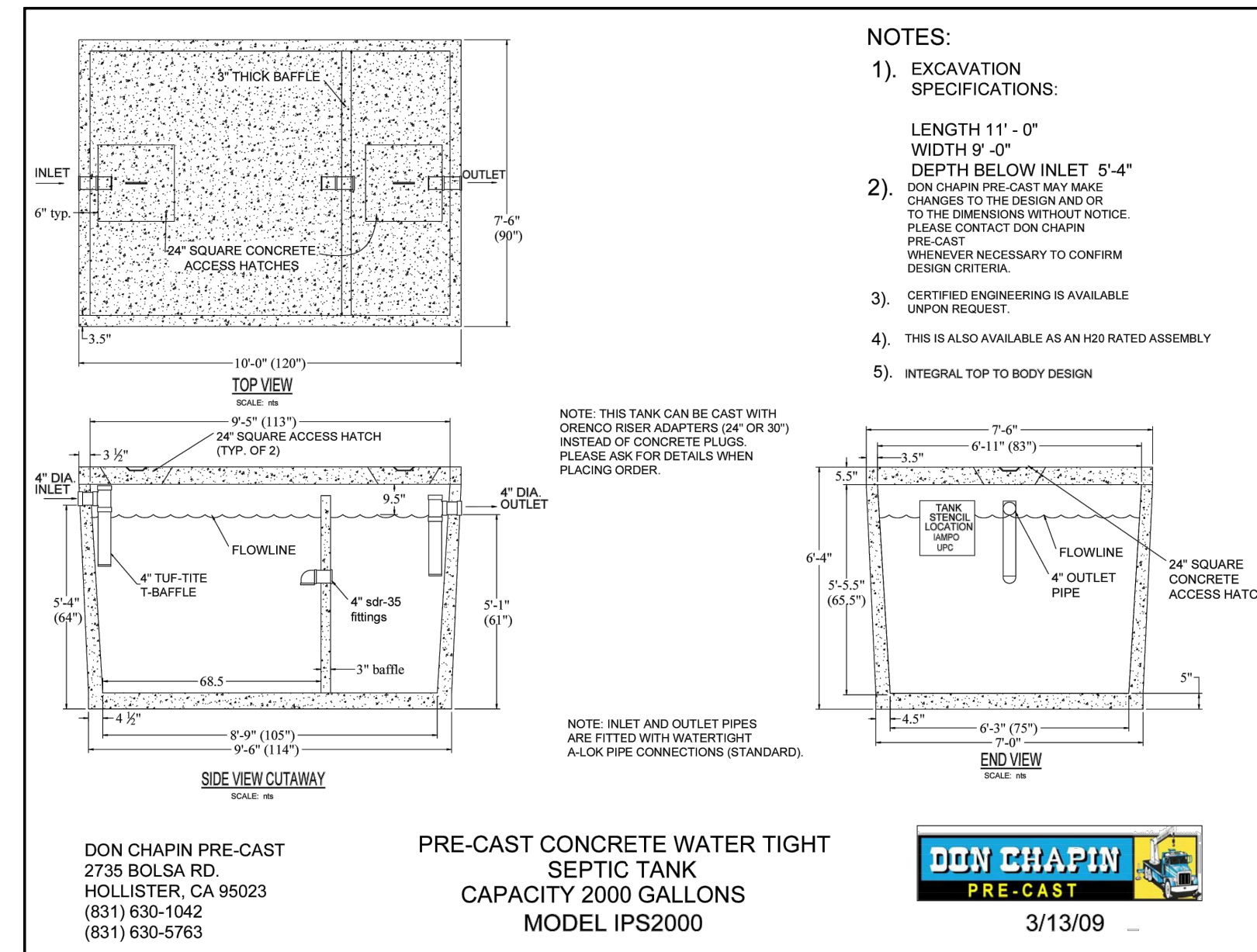
SCALE: AS DIMENSIONED



A	B	C	D	E	F	G	H
4'-6.5"	4'-0"	12"	32"	34"	36"	20.5'	24"

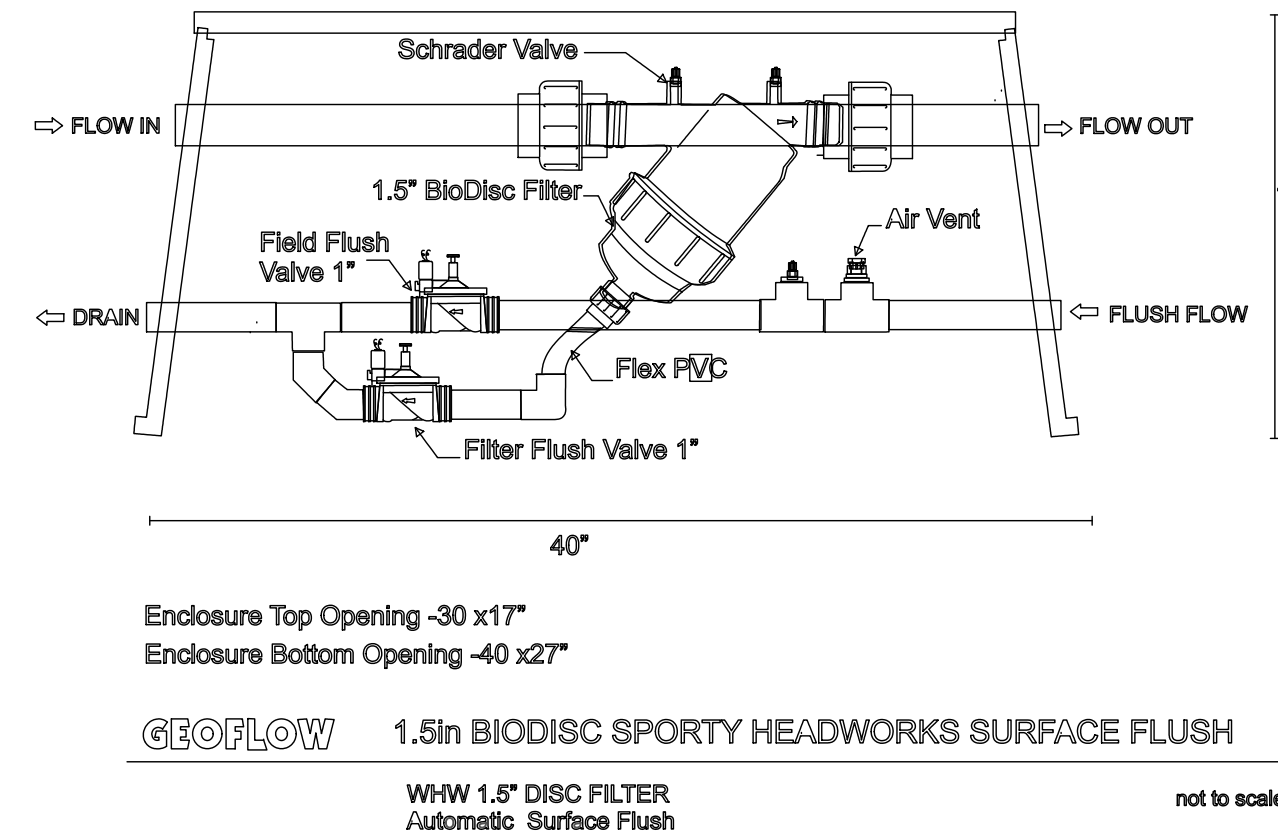
**5 2,000 GAL SEPTIC TANK AND 1,000 GAL PUMP TANK (CHAPIN PRE-CAST OR EQUIV)**

SCALE: AS DIMENSIONED



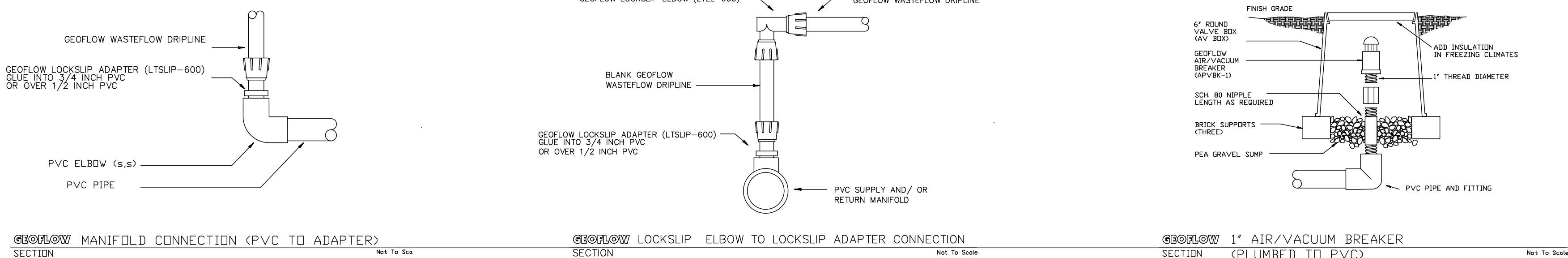
**6 GEOFLOW HEADWORKS**

SCALE: AS DIMENSIONED



**7 SUBSURFACE DRIP (SSD) GEOFLOW DETAILS**

SCALE: AS DIMENSIONED

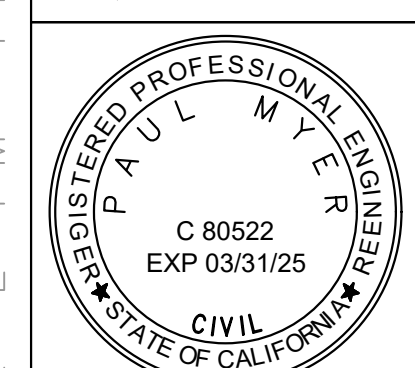


**WASTEWATER SYSTEM SCHEMATIC AND DETAILS**

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 Project No.: 202304  
 Scale: AS SHOWN  
 Date: JUNE 2023  
 Sheet No.:

No.	Revision/Issue	Date



GENERAL SPECIFICATIONS

THE FOLLOWING SPECIFICATIONS ARE FOR THE INSTALLATION OF THE ENHANCED WASTEWATER TREATMENT SYSTEM AT THE LOCATION SPECIFIED IN THE BORDER OF THESE DESIGN PLANS...

MATERIAL SPECIFICATIONS

THE FOLLOWING ARE MATERIAL SPECIFICATIONS FOR THE WASTEWATER SYSTEM COMPONENTS. ALL MATERIALS USED FOR THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AND AS DESCRIBED IN THE ACCOMPANIED PLANS OR AN ENGINEER APPROVED EQUIVALENT.

1. SUBSURFACE TANKS
THE SUBSURFACE TANKS INCLUDE THE 2,000 GALLON CONCRETE WATER-TIGHT SEPTIC TANK (TREATMENT TANK) AND THE 1,000 GALLON CONCRETE WATER-TIGHT PUMP TANK.

1.1. DIMENSIONS, FITTING SIZES AND LOCATIONS, AND OPTIONAL ACCESSORIES SHALL BE INCLUDED AS SHOWN ON TANK DRAWINGS. THE TANK SHALL BE WATER TIGHT AND TESTED IN THE FIELD AFTER INSTALLATION.

1.2. PRODUCT STORAGE. THE SUBSURFACE TANKS SHALL BE CAPABLE OF STORING SEPTAGE LIMITED TO THE COLLECTION AND STORAGE OF HUMAN SOLID OR LIQUID ORGANIC WASTE.

1.3. PIPING. SDR35 PVC PIPE, SCHEDULE 40 PVC PIPE, OR ABS PIPE SHALL BE USED FOR INLET AND OUTLET PIPING AS SHOWN ON DRAWINGS. ALL PIPING SHALL BE FACTORY SEALED TO ENABLE FIELD TIGHTNESS TESTING WITH AT LEAST ONE PIPE OPENING PROVIDED WITH A THREADED FITTING FOR CONNECTING A PRESSURE TEST MANIFOLD.

1.4. ACCESS OPENINGS. ALL ACCESS OPENINGS SHALL BE 30 INCHES IN DIAMETER OR LARGER AS SHOWN ON THE PLANS, SHALL BE MANUFACTURED OF FIBERGLASS, CONCRETE OR CAST IRON WITH RESPECT TO SPECIFIED TRAFFIC RATING. LOCATIONS SHALL BE AS SHOWN ON TANK DRAWINGS. EACH MANHOLE SHALL HAVE A WATER TIGHT RISER TO FINISH GRADE.

1.5. RISERS. RISERS SHALL BE REQUIRED FOR ACCESS TO INTERNAL VAULTS AND ACCESS INTO THE TANKS FOR SEPTAGE PUMPING. ALL RISERS SHALL BE CONSTRUCTED WITH WATER TIGHT SEALS PROVIDED. RISERS SHALL BE A MINIMUM OF 30" IN NOMINAL DIAMETER WHEN THE DEPTH OF BURIAL IS 36" OR GREATER. TO ENSURE PRODUCT COMPATIBILITY, RISERS, LIDS, AND ATTACHMENT COMPONENTS SHALL BE SUPPLIED BY A SINGLE MANUFACTURER AND, WHERE APPLICABLE, SHALL BE FACTORY EQUIPPED WITH THE FOLLOWING:

1.5.1. ADHESIVE. WHEN BONDING TO THE RISER RINGS, AN EPOXY PROVIDED BY THE MANUFACTURER SHALL BE USED. ADHESIVES AND SEALANTS SHALL BE WATERPROOF, CORROSION RESISTANT, AND APPROVED FOR THE INTENDED APPLICATION.

1.5.2. LIDS. ONE LID SHALL BE FURNISHED WITH EACH ACCESS RISER. LIDS SHALL BE WATERPROOF, CORROSION RESISTANT, AND UV RESISTANT. LIDS SHALL BE FLAT, WITH NO NOTICEABLE UPWARD DOME. LIDS SHALL NOT ALLOW WATER TO POND ON THEM.

1.5.3. RISER INSTALLATION. RISER INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

2. PIPING AND FITTINGS

THE TYPE OF PIPE MATERIALS AND FITTINGS SHALL BE AS DESIGNATED ON THE PLANS AND SHALL COMPLY WITH THE FOLLOWING:

2.1. FITTINGS AND COUPLINGS
THE FITTINGS AND COUPLINGS FOR PVC PIPES SHALL BE THREADED OR SLIP-FITTED TAPERED SOCKET SOLVENT WELD. THREADED ADAPTERS SHALL BE PROVIDED WITH SOCKET PIPE FOR CONNECTIONS TO THREADED PIPE.

3. VALVES

3.1. GENERAL
VALVES SHALL BE OF THE SIZE, TYPE, AND CAPACITY DESIGNATED ON THE PLANS OR IN THE SPECIFICATIONS AND SHALL COMPLY WITH THE REQUIREMENTS SPECIFIED HEREIN.

4. PUMP SYSTEMS

ALL PUMP SYSTEMS SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS. IF THERE IS A CONFLICT BETWEEN MANUFACTURER RECOMMENDATIONS, AND THE DESIGN PLANS, THE PROJECT ENGINEER SHALL BE CONTACTED FOR APPROVAL OF INSTALLATION CONFIGURATION.

5. ADDITIONAL COMPONENTS

ALL COMPONENTS SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS. IF THERE IS A CONFLICT BETWEEN MANUFACTURER RECOMMENDATIONS, AND THE DESIGN PLANS, THE PROJECT ENGINEER SHALL BE CONTACTED FOR APPROVAL OF INSTALLATION CONFIGURATION.

7. SUBSURFACE DRIP SYSTEM

THE SUBSURFACE DRIP SYSTEM SHALL PROVIDE ADDITIONAL TREATMENT AND DISPOSAL OF THE WASTEWATER. THE SYSTEM SHALL BE CONSTRUCTED PER MANUFACTURER RECOMMENDATIONS AND AS SHOWN ON PLANS.

7.1. SOIL COVER

THE SOIL COVER (CAP) SHALL BE PLACED OVER THE MOUND SYSTEM TO PROVIDE A SUBSTRATE FOR VEGETATION AND REDUCE EROSION CONTROL. THE SOIL SHALL BE A SANDY LOAM TO INCREASE THE POTENTIAL FOR AIR THROUGH THE DEPTH OF THE SOIL.

CONSTRUCTION SPECIFICATIONS

THE CONSTRUCTION OF THE PROJECT SHALL CONFORM TO THE PLANS AND FOLLOWING SPECIFICATIONS. ALL NECESSARY CONSTRUCTION PERMITS SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF ALL SITE WORK.

1. PRECONSTRUCTION CONFERENCE

THE CONTRACTOR SHALL HAVE A PRECONSTRUCTION MEETING WITH THE ENGINEER AND OWNER AT LEAST ONE WEEK PRIOR TO COMMENCEMENT OF SITE WORK. THE ENGINEER SHALL BE CONTACTED 48 HOURS PRIOR TO THE MEETING CONFERENCE. THE MEETING SHOULD BE CONDUCTED TO REVIEW THE DESIGN, MATERIAL, AND CONSTRUCTION SPECIFICATIONS.

2. STAKING

THE CONTRACTOR WILL PROVIDE SUFFICIENT HORIZONTAL AND VERTICAL CONTROL FOR INSTALLATION OF THE WORK AT DATUM POINTS NECESSARY TO ESTABLISH ALIGNMENT AND GRADE. THE PROTECTION AND CARE OF THE STAKES ONCE SET, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

3. EXCAVATION

ALL EXCAVATION WORK SHALL BE MADE TO THE LINES, GRADES AND DIMENSIONS SHOWN IN THE ACCOMPANIED PLANS. EXCAVATIONS SHALL BE PERFORMED IN THE DAY AND IN A MANNER THAT MINIMIZES EROSION, FLOODING AND SEDIMENTATION.

THE CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHERE EXCAVATION EQUIPMENT MAY ENCOUNTER EXISTING UNDERGROUND UTILITIES AND OTHER FACILITIES OF ANY NATURE.

ADJUSTMENTS SHALL BE MADE UNTIL ALL EQUIPMENT, ELECTRICAL WORK, CONTROLS, AND INSTRUMENTATION ARE FUNCTIONING IN ACCORDANCE WITH THE CONTRACTORS DOCUMENTS OR MANUFACTURER SPECIFICATIONS.

ADJUSTMENTS SHALL BE MADE UNTIL ALL EQUIPMENT, ELECTRICAL WORK, CONTROLS, AND INSTRUMENTATION ARE FUNCTIONING IN ACCORDANCE WITH THE CONTRACTORS DOCUMENTS OR MANUFACTURER SPECIFICATIONS.

11. AS-BUILT DRAWINGS

THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A SET OF AS-BUILT DRAWINGS OF THE LAYOUT AND CONSTRUCTION OF THE SYSTEM.

12. OTHER ITEMS

ANY PROCEDURES NOT NOTED OR INCLUDED IN THE ENGINEERING PLANS OR SPECIFICATIONS SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO IMPLEMENTATION.

13. CONSTRUCTION INSPECTION

13.1. AT A MINIMUM, INSPECTION OF THE DRIP DISPERSAL SYSTEM INSTALLATION SHOULD INCLUDE THE FOLLOWING THIS IS IN ADDITION TO INSPECTION REQUIRED FOR THE TREATMENT SYSTEM.

- 13.1.1. PRE-CONSTRUCTION INSPECTION WHERE THE CONSTRUCTION STAKING OR MARKING OF THE DRIP LINES, SUPPLY AND RETURN PIPING, PUMP SYSTEM AND APPURTENANCES IS PROVIDED AND CONSTRUCTION PROCEDURES DISCUSSED.
13.1.2. WATER TIGHTNESS OF EFFLUENT DOSING (PUMP) TANK;
13.1.3. DRIP FIELD LAYOUT, PIPING MATERIALS AND INSTALLATION, AND ALL ASSOCIATED VALVES AND CONNECTIONS.
13.1.4. HYDRAULIC TESTING OF THE DRIP SYSTEM;
13.1.5. FUNCTIONING AND SETTING OF ALL CONTROL DEVICES; AND
13.1.6. FINAL INSPECTION TO VERIFY THAT ALL CONSTRUCTION ELEMENTS ARE IN CONFORMANCE WITH THE APPROVED PLANS, SPECIFICATIONS, AND MANUFACTURE RECOMMENDATIONS; ALL INSPECTION WELLS ARE INSTALLED; AND EROSION CONTROL, HAS BEEN COMPLETED.

14. MANAGEMENT REQUIREMENTS

14.1. RECOMMENDED MINIMUM PROCEDURES AND FREQUENCY FOR INSPECTION, MAINTENANCE, MONITORING AND REPORTING ACTIVITIES FOR SUBSURFACE DRIP DISPERSAL SYSTEMS ARE OUTLINED IN TABLE DD-2.

15. OPERATING PERMITS (PER SANTA CLARA COUNTY ORDINANCE SECTION B11-92)

15.1. (A) IN ADDITION TO AN INSTALLATION PERMIT, AN OPERATING PERMIT IS REQUIRED FOR ALL ALTERNATIVE OWTS, INCLUDING THOSE INSTALLED IN CONNECTION WITH THE REPAIR OR UPGRADE OF EXISTING OWTS AS WELL AS THOSE FOR NEW CONSTRUCTION. GENERAL REQUIREMENTS PERTAINING TO OPERATING PERMITS ARE AS FOLLOWS:
15.1.1. (1) THE OPERATING PERMIT WILL BE ISSUED BY THE DIRECTOR FOLLOWING: A. COMPLETION OF CONSTRUCTION OF THE ALTERNATIVE OWTS; B. SATISFACTORY COMPLIANCE WITH THE INSTALLATION PERMIT REQUIREMENTS; AND C. PAYMENT OF APPLICABLE FEES.

15.1.2. (2) AFTER INITIAL ISSUANCE, THE OPERATING PERMIT IS REQUIRED TO BE RENEWED PERIODICALLY, THE STANDARD RENEWAL PERIOD BEING ONE YEAR. THE DIRECTOR MAY ESTABLISH CONDITIONS ALLOWING THE TIME PERIOD BETWEEN RENEWALS TO BE EXTENDED FOR CERTAIN TYPES OF OWTS BASED ON A RECORD OF FAVORABLE PERFORMANCE OR OTHER FACTORS WARRANTING A REDUCTION IN SYSTEM OVERSIGHT BY DEH. PROVISIONS FOR ADJUSTING THE OPERATING PERMIT RENEWAL PERIOD SHALL BE PRESCRIBED BY THE DIRECTOR IN THE ONSITE SYSTEMS MANUAL. OPERATING PERMITS MUST ALSO BE RENEWED AT THE TIME OF CHANGE IN PROPERTY OWNERSHIP.

15.1.3. (3) OPERATING PERMITS ARE IN ADDITION TO BE ISSUED TO THE OPERATING PERMIT TO VERIFY THE ADEQUACY OF ALTERNATIVE OWTS PERFORMANCE AND ENSURING ON-GOING MAINTENANCE. PERMIT CONDITIONS SHALL INCLUDE MONITORING AND INSPECTION REQUIREMENTS, PERMIT DURATION, AND OTHER PROVISIONS AS PRESCRIBED BY THE DIRECTOR IN THE ONSITE SYSTEMS MANUAL OR AS DEEMED APPROPRIATE BY THE DIRECTOR ON A CASE-BY-CASE BASIS.

15.1.4. (4) RENEWAL OF AN OPERATING PERMIT REQUIRES A PAYMENT OF THE APPLICABLE FEES, UPON RECEIPT OF NOTICE FROM THE DIRECTOR. ANDB SUBMISSION OF THE RESULTS OF REQUIRED SYSTEM INSPECTION AND MONITORING.

15.1.5. (5) FAILURE TO PAY THE REQUIRED FEE OR SUBMIT THE SPECIFIED MONITORING AND INSPECTION INFORMATION, OR FAILURE TO UNDERTAKE ANY REQUIRED CORRECTIVE WORK SPECIFIED BY THE DIRECTOR MAY BE CAUSE FOR ISSUANCE OF A CITATION, PENALTY FEES, NON-RENEWAL AND/OR REVOCATION OF THE OPERATING PERMIT BY THE DIRECTOR. THE DIRECTOR MAY PLACE A LIEN ON THE PROPERTY FOR RECOVERY OF ANY ASSOCIATED ABATEMENT COSTS AND UNPAID FEES.

15.1.6. (6) A CERTIFIED COPY OF THE FOLLOWING SHALL BE RECORDED AGAINST THE PROPERTY IN THE OFFICE OF THE COUNTY RECORDER OF SANTA CLARA COUNTY: A. INITIAL OPERATING PERMIT ISSUED FOR THE SYSTEM; B. RENEWAL OF OPERATING PERMIT TO NEW OWNERS; AND C. NOTICES OF WITHDRAWAL OF ANY OPERATING PERMIT.

15.2. (B) OTHER USES OF OPERATING PERMITS. AN OPERATING PERMIT MAY ALSO BE UTILIZED FOR CIRCUMSTANCES OTHER THAN ALTERNATIVE OWTS, SUCH AS FOR LARGER FLOW OWTS (> 2,500 GPD), IN CONNECTION WITH HIGH-RISK TANKS OR WHERE, IN THE OPINION OF THE DIRECTOR, THE TYPE, SIZE, LOCATION OR OTHER ASPECTS OF A PARTICULAR OWTS INSTALLATION WARRANT THE ADDITIONAL LEVEL OF OVERSIGHT PROVIDED BY AN OPERATING PERMIT. IN SUCH CASES, THE ISSUANCE AND SCOPE OF OPERATING PERMITS WILL BE ISSUED IN ACCORDANCE WITH THE GENERAL REQUIREMENTS LISTED IN SECTION B11-92(A)(1) THROUGH (A)(6) ABOVE, AND ANY ADDITIONAL REQUIREMENTS PRESCRIBED BY THE DIRECTOR IN THE ONSITE SYSTEMS MANUAL FOR PARTICULAR CIRCUMSTANCES.

16. PERFORMANCE MONITORING AND REPORTING.

16.1. (A) A MONITORING PROGRAM WILL BE ESTABLISHED FOR EACH ALTERNATIVE OWTS AS A CONDITION OF THE OPERATING PERMIT AT THE TIME OF PERMIT ISSUANCE, AND MAY BE AMENDED AT THE TIME OF PERMIT RENEWAL. SAID MONITORING SHALL BE PERFORMED TO ENSURE THAT THE ALTERNATIVE OWTS IS MONITORING AND REPORTING SATISFACTORY PROTECT WATER QUALITY AND PUBLIC HEALTH AND SAFETY. THE MONITORING PROGRAM WILL BE IN ACCORDANCE WITH GUIDELINES IN THE ONSITE SYSTEMS MANUAL AND MAY ALSO INCORPORATE RECOMMENDATIONS OF THE SYSTEM DESIGNER, MANUFACTURER, OR THIRD-PARTY REVIEWER.

16.2. (B) MONITORING REQUIREMENTS WILL VARY DEPENDING UPON THE SPECIFIC TYPE OF ALTERNATIVE OWTS IN ACCORDANCE WITH GUIDELINES IN THE ONSITE SYSTEMS MANUAL.

16.3. (C) THE REQUIRED FREQUENCY OF MONITORING WILL BE IN ACCORDANCE WITH GUIDELINES IN THE ONSITE SYSTEMS MANUAL. MONITORING FREQUENCY MAY BE INCREASED IF, IN THE OPINION OF THE DIRECTOR, SYSTEM PROBLEMS ARE EXPERIENCED.

16.4. (D) MONITORING OF ALTERNATIVE OWTS SHALL BE CONDUCTED BY OR UNDER THE SUPERVISION OF ONE OF THE FOLLOWING:
16.4.1. (1) REGISTERED CIVIL ENGINEER;
16.4.2. (2) PROFESSIONAL GEOLOGIST;
16.4.3. (3) REGISTERED ENVIRONMENTAL HEALTH SPECIALIST; OR
16.4.4. (4) OTHER ONSITE WASTEWATER MAINTENANCE PROVIDER REGISTERED WITH THE DEPARTMENT OF ENVIRONMENTAL HEALTH AND MEETING QUALIFICATIONS AS ESTABLISHED IN THE ONSITE SYSTEMS MANUAL. REGISTRATION SHALL ENTAIL:
A. DOCUMENTATION OF REQUIRED QUALIFICATIONS.
16.4.4.2. B. PARTICIPATION IN ANNUAL TRAINING/REVIEW CONDUCTED BY THE DIRECTOR; AND
16.4.4.3. C. PAYMENT OF AN ANNUAL FEE ESTABLISHED BY THE BOARD OF SUPERVISORS.

16.4.4.4. ADDITIONALLY, THE DIRECTOR MAY REQUIRE THIRD-PARTY OR COUNTY MONITORING OF ANY ALTERNATIVE OWTS WHERE DEEMED NECESSARY BECAUSE OF SPECIAL CIRCUMSTANCES, SUCH AS THE COMPLEXITY OF THE SYSTEM OR THE SENSITIVE NATURE OF THE SITE. THE COSTS FOR SUCH ADDITIONAL MONITORING WOULD BE THE RESPONSIBILITY OF THE OWNER.

16.5. (E) MONITORING RESULTS SHALL BE SUBMITTED TO THE DIRECTOR IN ACCORDANCE WITH REPORTING GUIDELINES PROVIDED IN THE ONSITE SYSTEMS MANUAL. THE MONITORING REPORT SHALL BE SIGNED BY THE PARTY RESPONSIBLE FOR THE MONITORING. NOTWITHSTANDING FORMAL MONITORING REPORTS, THE DIRECTOR SHALL BE NOTIFIED IMMEDIATELY OF ANY SYSTEM PROBLEMS OBSERVED DURING SYSTEM INSPECTION AND MONITORING THAT THREATEN PUBLIC HEALTH OR WATER QUALITY.

16.6. (F) IN ADDITION TO REGULAR INSPECTION AND MONITORING ACTIVITIES, POST-SEISMIC INSPECTION AND EVALUATION OF ALTERNATIVE OWTS LOCATED IN HIGH-RISK SEISMIC AREAS WILL BE REQUIRED IN THE EVENT OF AN EARTHQUAKE CAUSING SIGNIFICANT GROUND SHAKING IN THE REGION AS DETERMINED BY THE DIRECTOR IN CONSULTATION WITH THE COUNTY GEOLOGIST. THE DIRECTOR WILL BE RESPONSIBLE FOR ISSUING APPROPRIATE NOTICES WHEN SUCH INSPECTIONS ARE REQUIRED; THOSE CONDUCTING THE INSPECTIONS WILL BE REQUIRED TO REPORT THE INSPECTION RESULTS TO THE DIRECTOR. THE PURPOSE OF SUCH INSPECTIONS WILL BE TO ASSESS AND DOCUMENT ANY DAMAGE TO THE OWTS AND TO IMPLEMENT CORRECTIVE MEASURES, AS NEEDED, IN A TIMELY MANNER. POST-SEISMIC INSPECTION SHALL BE IN ACCORDANCE WITH REQUIREMENTS PRESCRIBED BY THE DIRECTOR, IN CONSULTATION WITH THE COUNTY GEOLOGIST, AND CONTAINED IN THE ONSITE SYSTEMS MANUAL.

16.7. (G) THE DIRECTOR WILL, FROM TIME-TO-TIME, COMPILE AND REVIEW MONITORING AND INSPECTION RESULTS FOR ALTERNATIVE OWTS AND, AT LEAST EVERY TWO YEARS, WILL PROVIDE A SUMMARY OF RESULTS TO THE SAN FRANCISCO BAY AND CENTRAL COAST REGIONAL WATER QUALITY CONTROL BOARDS. BASED ON THIS REVIEW, THE DIRECTOR MAY REQUIRE CORRECTIVE ACTION FOR SPECIFIC PROPERTIES AND TO IMPLEMENT ANY DAMAGE TO THE OWTS AND TO IMPLEMENT CORRECTIVE MEASURES, AS NEEDED, IN A TIMELY MANNER. POST-SEISMIC INSPECTION SHALL BE IN ACCORDANCE WITH REQUIREMENTS PRESCRIBED BY THE DIRECTOR, IN CONSULTATION WITH THE COUNTY GEOLOGIST, AND CONTAINED IN THE ONSITE SYSTEMS MANUAL.

4.1. WATER POLLUTION
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL PERMITTING REQUIREMENTS RELEVANT TO THE CONSTRUCTION OF THE PROJECT ARE MET AT ALL TIMES. ACTIONS BY THE CONTRACTOR, THE SUBCONTRACTORS OR EMPLOYEES THEREOF RESULTING IN NONCOMPLIANCE OF PERMITTING REQUIREMENTS MAY BE GROUNDS FOR TERMINATION OF THIS CONTRACT.

4.2. NOISE POLLUTION
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO KEEP NOISE POLLUTION, DUE TO THESE CONSTRUCTION ACTIVITIES, AS LOW AS POSSIBLE.

4.3. SOIL CONTAMINATION
THE CONTRACTOR SHALL NOT ALLOW REGULATED MATERIALS TO SPILL ON THE PROJECT SITE. ANY SPILLAGE OR REGULATED MATERIALS RESULTING FROM THE CONTRACTOR'S OPERATION SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

4.4. STORAGE OF REGULATED MATERIALS
THE STORAGE AND USE OF ANY REGULATED MATERIALS SHALL MEET ALL REQUIREMENTS OF LOCAL, STATE, AND FEDERAL REGULATORY AGENCIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SATISFY THE REQUIREMENTS OF ANY REGULATORY AGENCY FOR THE STORAGE, MONITORING, USAGE, TRANSPORTATION, SAFETY, REPORTING, OR ANY OTHER REQUIREMENTS REGARDING THE MANAGEMENT OF REGULATED MATERIALS ON AND OFF THE PROJECT SITE.

5. SITE WORK

5.1. MOBILIZATION
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PREPARATORY WORK AND PLACEMENT OF MATERIALS IN A STAGING AREA REQUIRED FOR CONSTRUCTION OPERATIONS INCLUDING, BUT NOT LIMITED TO, THOSE NECESSARY FOR THE MOVEMENT OF PERSONNEL, EQUIPMENT, SUPPLIES, AND INCIDENTALS TO THE PROJECT SITE. FOR THE ESTABLISHMENT OF FACILITIES NECESSARY FOR WORK ON THE PROJECT, PROVIDING POLLUTION CONTROL MEASURES, AND FOR ALL OTHER WORK AND OPERATIONS WHICH MUST BE PERFORMED.

THE CONTRACTOR SHALL PROVIDE MATERIALS, NOT SPECIFICALLY DESCRIBED BUT REQUIRED FOR PROPER COMPLETION OF THE WORK OF THIS SECTION, AS SELECTED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE COUNTY.

5.2. CLEARING AND GRUBBING
CLEAR THE SITE AS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN THIS SECTION. CLEARING AND GRUBBING SHALL CONSIST OF ALL WORK INCLUDING, BUT NOT LIMITED TO, SALVAGED MATERIALS REMOVAL, PROVIDING AND INSTALLING TEMPORARY EROSION CONTROL, AND PLACEMENT OF TREES, TREE BRANCHES, TREE STUMPS, BRUSH, ROOTS, Boulders, SHRUBS, SEDIMENT, AND ALL OBJECTIONABLE MATERIALS IN AN AGREED UPON LOCATION ADJACENT TO THE WORK SITE.

EXAMINE THE AREAS AND CONDITIONS UNDER WHICH THE WORK OF THIS SECTION WILL BE PERFORMED. CORRECT CONDITIONS DETRIMENTAL TO TIMELY AND PROPER COMPLETION OF THE WORK. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED.

ALL WASTES DISPOSAL SHALL BE CONDUCTED AS FOLLOWS:
A. REMOVE WASTE FROM CLEARING OPERATIONS.
B. DISPOSE OF WASTE FROM THE SITE IN A LEGAL MANNER.
C. DO NOT STORE OR PERMIT DEBRIS TO ACCUMULATE ON THE JOB SITE.
D. DO NOT BURN DEBRIS AT THE SITE.

6. DELETERIOUS MATERIALS

MATERIALS CONTAINING AN EXCESS OF 5% (BY WEIGHT) OF VEGETATION OR OTHER DELETERIOUS MATTER MAY BE UTILIZED IN AREAS OF LANDSCAPING OR OTHER NON-STRUCTURAL FILLS. DELETERIOUS MATERIAL INCLUDES ALL VEGETATIVE AND NON-MINERAL MATTER, AND ALL NON-REDUCIBLE STONE, RUBBLE AND/OR MINERAL MATTER OF GREATER THAN 6 INCHES.

7. UTILITY TRENCHES

A. A SELECT, NONCORROSIVE, GRANULAR, EASILY COMPACTED MATERIAL SHOULD BE USED AS BEDDING AND SHADING IMMEDIATELY AROUND UTILITY PIPES. THE SITE SOILS MAY BE USED FOR TRENCH BACKFILL ABOVE THE SELECT MATERIAL, IF OBTAINING COMPACTION IS DIFFICULT WITH THE SITE SOILS. USE OF A MORE EASILY COMPACTED SAND MAY BE DESIRABLE. THE UPPER FOOT OF BACKFILL IN LANDSCAPED OR OTHER OPEN AREAS SHOULD CONSIST OF NATIVE MATERIAL TO REDUCE THE POTENTIAL FOR SEEPAGE OF WATER INTO THE BACKFILL.
B. TRENCH BACKFILL IN THE UPPER 12 INCHES OF SUBGRADE BENEATH AREAS TO RECEIVE PAVEMENT SHOULD BE COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DRY DENSITY. TRENCH BACKFILL IN OTHER AREAS SHOULD BE COMPACTED TO A MINIMUM OF 90 PERCENT OF MAXIMUM DRY DENSITY. JETTING OF UTILITY TRENCH BACKFILL SHOULD NOT BE ALLOWED.

8. PIPE INSTALLATION

8.1. GENERAL
PIPE SHALL BE JOINED BY SOCKET TYPE SOLVENT-WELDED FITTINGS OR THREADED FITTINGS. PLASTIC PIPE SHALL BE CUT SQUARE, EXTERNALLY CHAMFERED APPROXIMATELY 10 TO 15 DEGREES, AND ALL BURRS AND FINIS REMOVED. SOLVENT-WELDED JOINTS SHALL BE MADE IN ACCORDANCE WITH ASTM D 2855. THE SOLVENT RECOMMENDED BY THE MANUFACTURER SHALL BE USED.

CARE SHALL BE EXERCISED IN ASSEMBLING A PIPELINE WITH SOLVENT WELDED JOINTS SO THAT STRESS ON PREVIOUSLY MADE JOINTS IS AVOIDED. HANDLING OF THE PIPES FOLLOWING JOINTING, SUCH AS LOWERING THE ASSEMBLED PIPELINE INTO THE TRENCH, SHALL NOT OCCUR PRIOR TO THE SET TIMES SPECIFIED BY THE MANUFACTURER. SOLVENTS SHALL BE APPLIED TO PIPE ENDS IN SUCH A MANNER THAT NO MATERIAL IS DEPOSITED ON THE INTERIOR SURFACE OF THE PIPE OR EXTRUDED INTO THE INTERIOR OF THE PIPE DURING JOINTING. EXCESS CEMENT ON THE EXTERIOR OF THE JOINT SHALL BE WIPED CLEAN IMMEDIATELY AFTER ASSEMBLY.

THREADED PIPE JOINTS SHALL BE MADE USING TEFLON TAPE OR OTHER APPROVED JOINTING MATERIAL. SOLVENT SHALL NOT BE USED WITH THREADED JOINTS. PLASTIC PIPE WHICH HAS BEEN NICKED, SCARRED, OR OTHERWISE DAMAGED SHALL BE REMOVED AND REPLACED. PLASTIC PIPE SHALL BE SNAGGED FROM SIDE TO SIDE IN THE TRENCH TO ALLOW 1 FOOT OF EXPANSION AND CONTRACTION PER 100 FEET OF STRAIGHT RUN. THE PIPELINE SHALL NOT BE EXPOSED TO WATER FOR 24 HOURS AFTER THE LAST SOLVENT-WELDED JOINT IS MADE.

8.2 GRAVITY PIPE
GRAVITY PIPE FOR WASTEWATER SHALL PROVIDE 2 FT VERTICAL AND 10 FT HORIZONTAL CLEARANCE FROM WATER LINES, AND SHALL CROSS SUCH LINES AS NEARLY AS POSSIBLE TO 90 DEGREES, IF CROSSING CAN NOT BE AVOIDED.

PIPE SLOPES SHALL NOT BE LESS THAN 2% FOR 4" PIPE. PIPES SHALL ENTER AND LEAVE CONNECTIONS AS CLOSE TO PARALLEL AS POSSIBLE, BUT IN NO WAY TO EXCEED AN ANGLE OF 45°. 90° TEE CONNECTIONS ARE NOT ALLOWED.

8.3 GENERAL TRENCHING
EXCAVATION OF PIPE TRENCHES SHALL FOLLOW NEAT AND PARALLEL LINES, WITH TRENCH WIDTH IN GENERAL, TO BE ONE FOOT, WITH SUCH WIDENING, AS REQUIRED TO PLACE VALVES AND FITTINGS WITH A MINIMUM OF 4 INCH CLEARANCE TO TRENCH WALL. THE TRENCH SHALL BE NO LESS THAN 24 INCHES DEEP, EXCEPT WHEN IT IS NECESSARY, TO AVOID UNDERGROUND OBSTRUCTIONS OR ROCKY CONDITIONS. IN ALL CASES, THE PIPE SHALL BE PLACED ON A BEDDING OF IMPORTED OR NATIVE MATERIAL PROVIDING CONTINUOUS SUPPORT THROUGHOUT ITS LENGTH.

BACKFILL FOR THE PIPE TO THE TOP OF THE PIPE PLUS 4 INCHES SHALL BE SELECTED OR IMPORTED SANDY MATERIAL, FREE OF STONE, CLAY, LIMBS OR OTHER DELETERIOUS MATERIALS IN EXCESS OF 1/2 INCH IN DIMENSION. BACKFILL SHALL BE PLACED AND COMPACTED ABOVE THE PIPE TO ENSURE PROPER BEDDING PRIOR TO COMPLETION OF TRENCH FILL. THE REMAINING BACKFILL SHALL BE PLACED AT 90% RELATIVE COMPACTION.

9. FLUSHING AND TESTING

AFTER COMPLETION, ALL PIPELINES SHALL BE THOROUGHLY FLUSHED TO REMOVE DIRT, SCALE, OR OTHER MATERIAL AFTER FLUSHING, THE LINE SHALL BE PRESSURE TESTED. ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS SHALL BE FURNISHED BY THE CONTRACTOR AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER OR ENGINEER.

THE CONTRACTOR SHALL PERFORM A TEST TO DEMONSTRATE THAT THE TANKS AND BASINS ARE WATER TIGHT. THE INLET AND OUTLET PIPES OF THE TANKS SHALL BE CAPPED AND THE TANKS SHALL BE COMPLETELY FILLED WITH WATER. THE WATER LEVEL SHALL REMAIN CONSTANT FOR MORE THAN 24 HOURS, OR DURATION BY THE REVIEWING AGENCY JURISDICTION, WHICHEVER IS GREATER, TO DETERMINE IF IT IS WATER TIGHT.

10. OPERATIONAL TEST

THE PERFORMANCE OF ALL COMPONENTS OF THE SYSTEMS SHALL BE EVALUATED BY THE CONTRACTOR.

DURING THE TEST PERIOD AND AT LEAST 15 DAYS PRIOR TO FINAL INSPECTION, THE SYSTEM SHALL OPERATE SATISFACTORY DURING SUCH PERIOD. ALL NECESSARY REPAIRS, REPLACEMENTS, AND

EROSION CONTROL NOTES:

GENERAL. THE CONTRACTOR SHALL INSTALL, MAINTAIN AND INSPECT EROSION CONTROL AND TEMPORARY STORMWATER CONTROL MEASURES TO CONTROL SEDIMENT AND RUNOFF IN ACCORDANCE WITH THESE PLANS AND THE LOCAL JURISDICTION.

1.1. THE CONSTRUCTION OF THIS PROJECT IS NOT EXPECTED TO OCCUR DURING THE WINTER SEASON (OCTOBER 15TH THROUGH APRIL 15TH).

1.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL BMP INSTALLATION AND MAINTENANCE.

1.3. ALL GRADING SHALL CONFORM TO THE LOCAL GRADING ORDINANCE, EROSION CONTROL ORDINANCES, AND CALIFORNIA BUILDING CODE.

1.4. ALL DISTURBED SURFACES SHALL BE PREPARED AND MAINTAINED TO CONTROL EROSION AND TO ESTABLISH NATIVE OR NATURALIZED VEGETATIVE GROWTH COMPATIBLE WITH THE AREA. THIS CONTROL SHALL CONSIST OF: A. EFFECT TEMPORARY PLANTING SUCH AS RYE GRASS, SOME OTHER FAST-GERMINATION SEED, AND MULCHING WITH STRAW AND/OR OTHER SLOPE STABILIZATION MATERIAL; B) PERMANENT PLANTING OF NATIVE OR NATURALIZED DROUGHT RESISTANT SPECIES OF SHRUBS, TREES, OR OTHER VEGETATION PURSUANT TO THE COUNTY'S LANDSCAPE CRITERIA. WHEN THE PROJECT IS COMPLETED, C) MULCHING, FERTILIZING, WATERING OR OTHER METHODS MAY BE REQUIRED TO ESTABLISH NEW VEGETATION, ON SLOPES LESS THAN 20%. TOPSOIL SHOULD BE STOCKPILED AND REAPPLIED.

SEED AND MULCH. ALL AREAS ON- AND OFF-SITE EXPOSED DURING CONSTRUCTION ACTIVITIES, IF NOT PERMANENTLY LANDSCAPED PER PLAN, SHALL BE PROTECTED BY MULCHING AND/OR HAND BROADCASTING OF THE FOLLOWING STERIL, WEEF FREE, SEED MIX AND INCORPORATED OVER ALL DISTURBED SLOPES.

BROMUS CARINATUS 10#/ACRE
LYMUS TRITICOIDES 8#/AC
HORDEUM BRACHYANTHERUM 5#/AC.
FESTUCA RUBRA 8#/AC.
DESCHAMPSIA CESPIITOSA 8#/AC.

THE MIX/APPLICATION SHALL ALSO CONTAIN:
-FERTILIZER (6-3-3) SHALL BE HAND BROADCAST AND INCORPORATED AT 30-LB/ACRE OVER ENTIRE AREA.
-MYCHORRHIZAL FUNGI SHALL BE ADDED AT 50 LB/ ACRE.
-IF HYDROSEEDING, ADD MULCH AND TACKIFIER TO ABOVE.

ALL EXCAVATED MATERIAL SHALL BE REMOVED TO AN APPROVED DISPOSAL SITE OR DISPOSED OF ON-SITE IN A MANNER THAT WILL NOT CAUSE EROSION.

CONCRETE WASHOUT. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES, AND WATERCOURSES. THE CONCRETE WASHOUT FACILITY SHALL BE BELOW GRADE AND CONSTRUCTED WITH A MINIMUM LENGTH AND MINIMUM WIDTH OF 10 FEET. TEMPORARY CONCRETE FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. THE WASHOUT SHALL HAVE A 10 MIL POLYETHYLENE PLASTIC LINER. WHEN CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE AND MATERIALS FOR THE WASHOUT SHALL BE REMOVED AND DISPOSED OF. HOLES, DEPRESSIONS, OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE CONCRETE WASHOUT SHOULD BE BACKFILLED AND REPAIRED.

OTHER PROVISIONS. IF CONSTRUCTION OCCURS BETWEEN OCTOBER 15TH AND APRIL 15TH, EXPOSED SOIL NOT INVOLVED IN IMMEDIATE CONSTRUCTION ACTIVITY SHALL BE PROTECTED FROM EROSION AT ALL TIMES. AFTER APRIL 15TH, EROSION CONTROL MEASURES SHALL BE IN PLACE DURING INCLEMENT WEATHER.

EROSION CONTROL MEASURES SHALL BE KEPT IN PLACE BY THE CONTRACTOR UNTIL NATIVE VEGETATION HAS BEEN ESTABLISHED AND PROVIDES NECESSARY SLOPE COVER (MINIMUM 70% COVER).

Worksheet 3 - Parts List

Table with columns: Qty/Units, Item Number, Description. Lists items such as Dripline, Airvent and box, Pressure Regulators, Controllers, Pre-assembled Headworks, Solenoid Flush valves, Filters, Pressure Gauges, Flow Meters, Zone valves, Dripline fittings, Check Valves, and Unions.

Orengo Technical Data Sheet
PF-Series Submersible Effluent Pumps:
3-Phase, 60-Hz, 4-inch (100-mm)
Applications, Features/Specifications, Standard Models, Product Code Diagram

WASTEWATER SYSTEM SPECIFICATIONS

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