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Wastewater Feasibility Study

O’Brien Winery P18-00175-MOD & Conservation Regulations
Exception P18-00305
Planning Commission Hearing March 20, 2019

WASTEWATER FEASIBILITY REPORT

O'BRIEN WINERY
1200 ORCHARD AVE
NAPA, CALIFORNIA

APN: 035-041-015

PROPERTY OWNER:

Bart O'Brien
1200 Orchard Ave
Napa, CA 94558

Project# 4116036.0

May 7, 2018
Revised: July 06, 2018

1515 Fourth Street, Napa, CA 94559 www.rsacivil.com 707.252.3301.v 707.252.4966.f

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APPENDICES

INTRODUCTION

O'Brien Winery has an approved Use Permit allowing wine production up to 20,000 gallons per year and is requesting recognition and authorization of existing visitation, employees and marketing events.

The parcel also has an existing 4-bedroom dwelling. The O'Brien Winery is located at 1200 Orchard Avenue, Napa, California 94558. The APN 035-041-015 and has an area of 26.93 acres.

Most of the property is relatively level and has the existing winery and vineyards. Appendix 1 contains a Vicinity Map and a USGS Site Map showing the parcel topography, features and boundary.

This report evaluates the disposal of the winery process and domestic wastewater.

WINERY PROCESS WASTEWATER SYSTEM

There is no proposed change to winery production. The existing process wastewater system was repaired under permit E16-00424 for treatment and dispersal of winery process wastewater and will continue to treat the winery process wastewater.

DOMESTIC WASTEWATER CHARACTERISTICS

The existing domestic wastewater system will be repaired under Permit E17-00715, to provide a capacity of 720 GPD. The number of visitors and employees is based on information provided by the owner. The projected flow is based on Napa County Environmental Management guidelines.

Table 1

Use	Source	Number	Projected Flow (gpd)	Total Flow No Event Day (gpd)	Total Flow Small Event Day (gpd)	Total Flow Large Event Day (gpd)
WINERY	Employees	7	15	105	105	105
	Visitors (210 per week, 40 max per day)	40	3	120	0	0
	Private Event with Off-Site Catered Meals	12/30	10	0	120	300
	Event Staff	1/2	15	0	15	30
Winery Subtotals		**Total Peak Winery Flow**		225	240	535
Residential		4	120	480	480	480
Grand Total		**Total Peak Flow**		705	720	915

DOMESTIC WASTEWATER TREATMENT AND DISPERSAL

The domestic wastewater system is proposed to be repaired under permit E17-00715 and will include a 2,000-gallon septic tank, a 1,000-gallon recirculation tank with 2 Advantex AX-20 treatment pods, a 2,000-gallon pump tank, and 1,200 square feet geoflow dispersal field to serve a flow of 720 gpd. See attached Domestic Wastewater System Plan.

OPERATION AND MAINTENANCE

The winery process and domestic wastewater systems will be fully automated and will be designed so minimal input from winery staff is required. Per Napa County guidelines, a Registered Civil Engineer, Registered Environmental Health Specialist, or Licensed Contractor will provide semi-annual monitoring and evaluation of the system. The contract with the responsible party will be provided prior to the final inspection for the proposed system repair.

CONCLUSION

This report demonstrates that O'Brien Winery can treat and disperse process and domestic wastewater on site meeting Napa County Environmental Management Design standards for the treatment of winery and domestic wastewater.

Appendix 1

Vicinity Map & USGS Site Map

OBRIEN WINERY
VICINITY MAP

VICINITY MAP

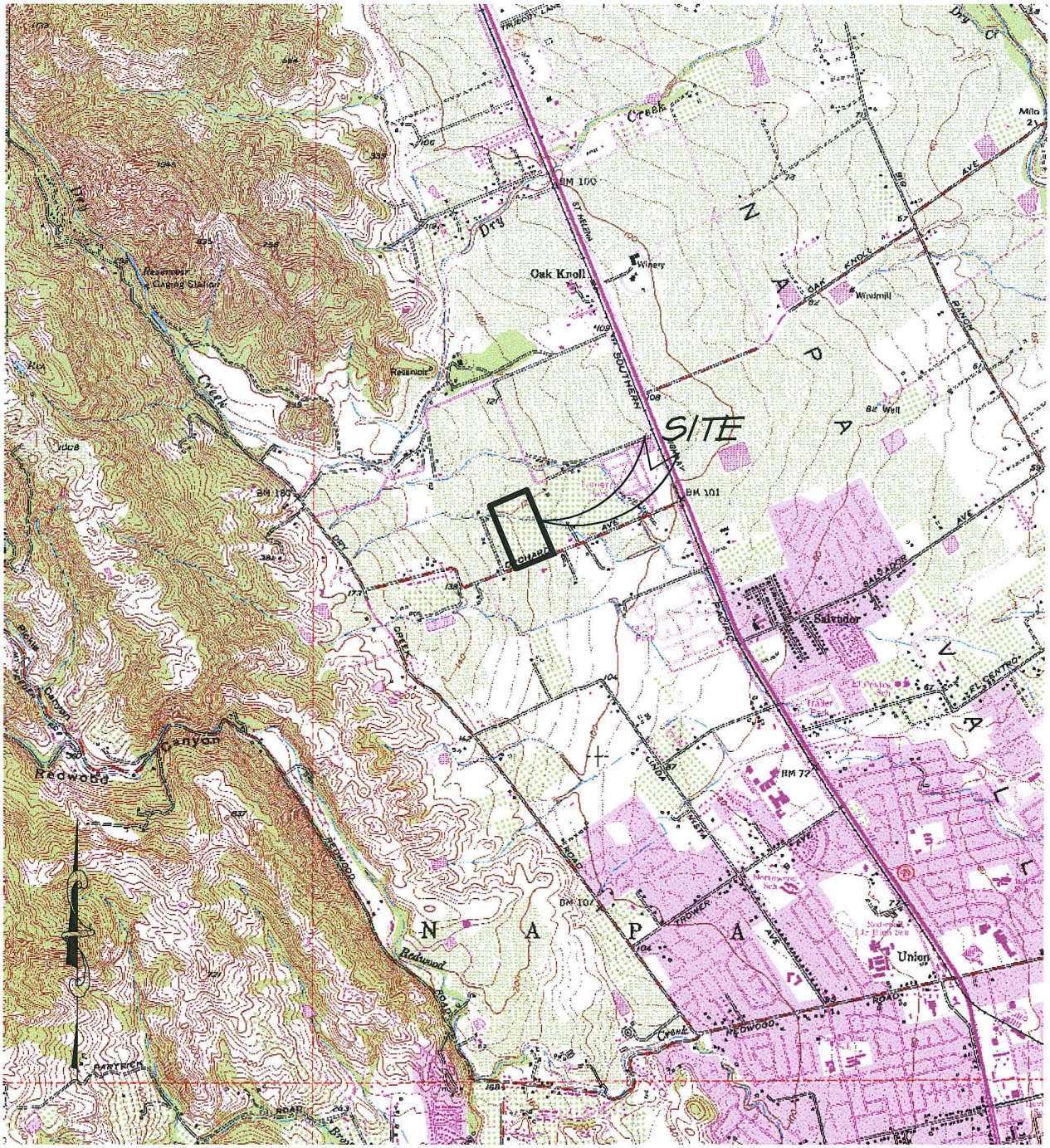
SCALE: 1" = 3000'

RSA+
1515 FOURTH STREET
NAPA, CALIF. 94559
OFFICE | 707 | 252.3301
+ www.RSAcivil.com +

RSA+ | CONSULTING CIVIL ENGINEERS + SURVEYORS + | est. 1980

Aug 24, 2017 4116036.0 Exh-Vic Map.dwg

OBRIEN WINERY
USGS MAP



USGS MAP

SCALE: 1" = 3000'

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Aug 24, 2017 *4116036.0* *Exh-Vic Map.dwg*

Appendix 2

Domestic Wastewater System Plan

O'BRIEN FAMILY VINEYARD, LLC

DOMESTIC WASTE WATER SYSTEM PLAN

ALTERNATIVE SEWAGE TREATMENT SYSTEM (ASTS) INSTALLATION, OPERATION, AND MAINTENANCE REQUIREMENTS

05/2014

1. ALL ALTERNATIVE SEWAGE TREATMENT SYSTEMS (ASTS) ARE REQUIRED TO MAINTAIN AN ANNUAL OPERATING PERMIT ISSUED BY THE NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES (PBES) DEPARTMENT.
2. THE ASTS SHALL BE OPERATED AND MAINTAINED IN CONFORMANCE WITH THE CONDITIONS PRESCRIBED IN THE ANNUAL OPERATING PERMIT. ALL REQUIRED OPERATING, MAINTENANCE, AND MONITORING OF THE ASTS IS THE RESPONSIBILITY OF THE PERMIT HOLDER. CONTACT NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT FOR INFORMATION ON CONDITIONS OF THIS PERMIT.
3. PRIOR TO ISSUANCE OF THE ASTS INSTALLATION PERMIT, THE OWNER OF THE PROPERTY SHALL APPLY FOR THE ANNUAL OPERATING PERMIT BY SUBMITTING TO THE NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT A SIGNED AND NOTARIZED "SUPPLEMENTAL APPLICATION TO CONSTRUCT AND OPERATE AN ASTS", AND A "MASTER FILE RECORD". FORMS ARE AVAILABLE FROM THE DEPARTMENT.
4. ALL INSTALLERS OF AN ASTS MUST HAVE AN ACTIVE CALIFORNIA CLASS A GENERAL ENGINEERING CONTRACTOR, CLASS C-42 SANITATION SYSTEM CONTRACTOR, OR CLASS C-36 PLUMBING CONTRACTOR LICENSE.
5. PRIOR TO ISSUANCE OF THE ASTS OPERATING PERMIT, ALL INSPECTIONS SHALL BE COMPLETED (SEE SEPARATE INSPECTION SCHEDULE) AND THE OWNER OF THE PROPERTY SHALL SUBMIT A COPY OF THE SIGNED SERVICE PROVIDER MAINTENANCE CONTRACT.
6. THE ASTS IS REQUIRED TO UNDERGO ONGOING INSPECTION AND MONITORING BY AN APPROVED SERVICE PROVIDER REGISTERED WITH THE NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT AT A FREQUENCY OF ONCE DURING EVERY SIX (6) MONTH PERIOD. EACH SIX MONTH PERIOD IS DENOTED AS "WINTER SEASON" (NOVEMBER 1ST TO APRIL 30TH) AND "SUMMER SEASON" (MAY 1ST TO OCTOBER 31ST). THE TWO INSPECTIONS SHALL BE PERFORMED A MINIMUM OF NINETY (90) DAYS APART.
7. CONTACT THE NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT FOR CURRENT INSPECTION REQUIREMENTS. THE INSPECTION, AT A MINIMUM, SHOULD EVALUATE THE FOLLOWING ITEMS AS APPLICABLE TO THIS ASTS.
   - A. CONDITION AND OPERATION OF SEPTIC AND PUMP TANKS INCLUDING CHECKING SLUDGE, GREASE, AND SCUM LEVELS AND CONDITION OF ALL EFFLUENT FILTERS.
   - B. CONDITION AND OPERATION OF ANY PRE-TREATMENT SYSTEM.
   - C. CONDITION AND OPERATION OF PURGE VALVES, BALANCING VALVES, DISTRIBUTION VALVES, AND ALL OTHER CONTROL VALVES.
   - D. CONDITION OF THE DISPERSAL FIELD GROUND COVER.
   - E. CONDITION OF EROSION CONTROL MEASURES.
   - F. FLOW METER AND/OR PUMP COUNTER MEASUREMENTS AND COMPARISON TO DESIGN CAPACITY.
   - G. FULL OPERATIONAL PERFORMANCE TEST OF ALL INSTALLED COMPONENTS (PUMPS, CONTROL PANELS, VALVES, ETC.)

SEPTIC & PUMP TANKS

05/2014

1. GENERAL
   - A. ALL SEPTIC TANKS MUST BE ACCEPTED BY IAPMO AS MEETING STANDARD PS-1.
   - B. ALL SEPTIC TANKS SHALL BE OF TWO COMPARTMENT CONSTRUCTION. THE FIRST SHALL BE TWICE THE CAPACITY OF THE SECOND AND SEPARATED BY A BAFFLE.
   - C. TANKS MUST HAVE A STRENGTH CAPABLE OF WITHSTANDING ANTICIPATED LOADS.
   - D. MAXIMUM DEPTH OF BURY FOR ALL TANKS SHALL BE 4 FEET.
2. MATERIALS
   - A. THE ENGINEER ASSUMES CONCRETE SEPTIC PUMP & RECIRCULATION TANKS IN THESE CALCULATIONS, IF THE CONTRACTOR DESIRES TO USE A TANK MATERIAL OTHER THAN CONCRETE, THEN THE CONTRACTOR MUST SUPPLY TO THE ENGINEER THE SPECIFICATIONS FOR ANCHORING AND BALLASTING.
   - B. METAL OR WOODEN TANKS ARE PROHIBITED.
   - C. IF SEPTIC OR PUMP TANKS ARE MADE FROM HIGH DENSITY POLYETHYLENE (HDPE) OR FIBERGLAS, THEN TANKS MUST BE ANCHORED TO PREVENT HEAVING OR BUOYANT FORCES.
   - D. IF SEPTIC OR SUMP TANKS ARE MADE FROM HDPE OR FIBERGLASS, THEN PROPER SIDEWALL PROTECTION MUST BE INSTALLED TO PREVENT SIDEWALL FAILURE. SUFFICIENT PROTECTION MUST BE INSTALLED TO PREVENT VEHICLES FROM CROSSING OVER THE TOP OF THE HDPE OR FIBERGLASS TANKS.
   - E. ALL SEPTIC AND PUMP TANKS SHALL BE WATER TIGHT. CONCRETE TANKS SHALL BE A MONOLITHIC CASTING OR JOINTS SEALED WITH THOROPLUG OR OTHER APPROVED SEALANTS. CONCRETE SUMPS SHALL BE PROTECTED WITH "XYPEX", "THOROSEAL" OR "ULTRA-BLOC" ON THE INSIDE. ASPHALT EMULSION OR TAR SHALL NOT BE USED AS JOINT SEALANTS.
3. SUBMITTAL TO ENGINEER
   - A. IF TANKS ARE MADE FROM HDPE OR FIBERGLASS, THEN PROPER SIDEWALL PROTECTION MUST BE INSTALLED TO PREVENT SIDEWALL FAILURE. SUFFICIENT PROTECTION MUST BE INSTALLED TO PREVENT VEHICLES FROM CROSSING OVER THE TOP OF THE HDPE OR FIBERGLAS TANKS. DETAILS TO BE SUBMITTED TO ENGINEER PRIOR TO INSTALLATION.
   - B. ALL TANKS SHALL BE WATER TIGHT. CONCRETE TANKS SHALL BE A MONOLITHIC CASTING OR JOINTS SEALED WITH THOROPLUG OR OTHER APPROVED SEALANTS. CONCRETE SUMPS SHALL BE PROTECTED WITH "XYPEX", "THOROSEAL" OR "ULTRA-BLOC" ON THE INSIDE. ASPHALT EMULSION OR TAR SHALL NOT BE USED AS JOINT SEALANTS.
4. PLACEMENT
   - A. SEPTIC PUMP & RECIRCULATION TANKS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATION.
   - B. THE TANK SHALL BE INSTALLED ON A SOLID LEVEL BED.
   - C. SOIL AROUND THE TANK MUST BE COMPACTED. SAND MUST BE JETTED.
5. ACCESS RISERS
   - A. ACCESS TO EACH TANK COMPARTMENT MUST BE PROVIDED BY A MANHOLE AT LEAST TWENTY INCHES IN DIAMETER AND HAVING A DURABLE HANDLE TO FACILITATE REMOVAL TO ALLOW ACCESS FOR INSPECTION AND MAINTENANCE OF THE TANK AND OF SUFFICIENT SIZE FOR REMOVAL OF THE MANHOLE COVER.
   - B. A RISER MUST EXTEND FROM EACH MANHOLE COVER TO OR ABOVE THE SURFACE OF THE GROUND. THE RISER MUST BE OF A SIZE LARGER THAN THE MANHOLE COVER, BE BOTH GAS- AND WATERTIGHT, AND BE CONSTRUCTED OF DURABLE MATERIAL AND SHALL BE CAPABLE OF WITHSTANDING ANTICIPATED LOADS FROM SOIL BACKFILL.
   - C. CONCRETE RISERS SHALL BE SEALED WITH XYPEX OR APPROVED EQUAL.
   - D. ALL RISERS SHALL BE FITTED WITH AIRTIGHT DURABLE LIDS THAT HAVE A LOCKING MECHANISM TO PREVENT UNWANTED ENTRY AND PREVENT INSECT/RODENT ACCESS.
6. SEPTIC TANK CONNECTIONS
   - A. ALL CONNECTIONS FROM BUILDINGS TO TANKS SHALL BE MADE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE UNIFORM PLUMBING CODE.
   - B. GRAVITY LINES FOR SEWAGE DISPOSAL SYSTEMS MUST BE FOUR INCHES IN DIAMETER.
   - C. FOR ALL GRAVITY LINES, INSTALL CLEANOUTS ON ALL ELLS AND EVERY 100 FEET ON STRAIGHT RUNS.
   - D. ALL SOLID PIPE JOINTS AND CONNECTIONS MUST BE GLUED, CEMENTED, OR MADE WITH AN ELASTOMERIC SEAL SO AS TO BE WATERTIGHT.
   - E. WHERE ENTERING THE TANK, A MINIMUM OF 4 INCH DIAMETER PVC SCHEDULE 40 STUB SHALL BE CAST IN PLACE OR SEALED WITH THOROPLUG OR OTHER WATERPROOF MATERIAL.
   - F. BRASS TYPE FITTINGS, VALVES, AND PIPING ARE PROHIBITED IN SEPTIC AND SUMP TANKS.
   - G. EFFLUENT FILTERS ARE TO BE USED IN ALL SEPTIC TANKS AND SHALL HAVE A FILTRATION OF NO GREATER THAN 1/8", OR AS SPECIFIED ON THE PLANS.

SEPTIC & PUMP TANKS CONTINUED

7. ELECTRICAL CONNECTIONS
   - A. ALL ELECTRICAL CONDUITS AND FITTINGS ENTERING THE SUMP SHALL BE GAS TIGHT AND WATER TIGHT PVC. METALLIC GAS TIGHT FITTINGS ARE NOT ALLOWED.
   - B. ALL WIRES SHALL BE INDIVIDUALLY SEALED AT THE JUNCTION BOX OR ALARM/CONTROL PANEL AS APPROPRIATE. GROUT OR ASPHALT EMULSION IS NOT AN ACCEPTABLE SEALANT.
   - C. THE PUMP POWER LEAD AND THE NODE CONTROL WIRES SHALL NOT BE RUN IN A COMMON CONDUIT.
   - D. NODE CONTROLS FOR THE PUMP SHALL BE MOUNTED TO A SCHEDULE 40 PVC POLE MOUNTED INSIDE THE PUMP CHAMBER THAT CAN BE REMOVED FOR MAINTENANCE.
   - E. CONTROL PANEL REQUIRES 110 VOLT, SINGLE PHASE ELECTRICAL CONNECTION.
8. CONTROL PANEL
   - A. ALL CONTROL PANELS SHALL BE EQUIPPED WITH A VISUAL AND AUDIBLE ALARM.
   - B. CONTROL PANEL, AND VISUAL AND AUDIBLE ALARMS SHALL BE LOCATED NO GREATER THAN 25' FROM THE RESIDENCE SERVED BY THE SYSTEM.

SEWAGE TREATMENT SYSTEM CONSTRUCTION NOTES

03/2016

GENERAL

1. THE SYSTEM LAYOUT SHALL CONFORM TO THIS PLAN. IF THE FIELD CONDITIONS DO NOT ALLOW FOR THIS CONDITION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IN ORDER TO MAKE A DESIGN ADJUSTMENT.
2. THE CONTRACTOR SHALL OBTAIN CERTIFICATIONS FROM THE SUPPLIER FOR THE MATERIALS, STATING THAT THEY MEET THE SPECIFIED CRITERIA ON THE PLANS.
3. EQUIPMENT SUSCEPTIBLE TO FREEZING MUST BE ADEQUATELY PROTECTED TO PREVENT FREEZING.
4. COMPLETE PROPER DRAINAGE WORK AND EROSION CONTROL MEASURES BEFORE FINAL INSPECTION.

GEOFLOW DRIP FIELD

1. INSTALLERS ARE RESPONSIBLE FOR OBTAINING PROPER TRAINING BEFORE ATTEMPTING TO INSTALL A SUBSURFACE DRIP DISPERSAL SYSTEM.
2. DRIP LINES SHOULD BE INSTALLED IN THE "A" HORIZON (AS DEFINED BY THE NATIONAL RESOURCES CONSERVATION SERVICES) WITH SIX TO EIGHT INCHES (6"-8") OF COVER SOIL ABOVE THE DRIP LINE. THE MAXIMUM COVER SOIL MAY NOT EXCEED EIGHTEEN INCHES (18") ABOVE THE DRIP LINE. IN ALL CASES THERE SHALL BE A MINIMUM OF TWENTY-FOUR INCHES (24") SEPARATION BETWEEN THE DRIP LINE AND WATER TABLE AND/OR RESTRICTIVE HORIZON.
3. THE DRIP LINES MAY BE INSTALLED USING ANY OF THE FOLLOWING METHODS:
   - A. INSTALLED IN A TRENCH EXCAVATED BY A TRENCHING MACHINE OR BY HAND.
   - B. INSTALLED USING AN APPROVED PLOWING METHOD. THE INSERTION TOOL MUST BE OF THE TYPE THAT DOES NOT PULL OR STRETCH THE DRIP LINE DURING INSERTION. THE USE OF "CABLE PLOWS" OR ANY TYPE INSERTION METHOD THAT EMPLOYS PULLING THE DRIP LINE THROUGH THE PLOWED TRENCH IS PROHIBITED.
   - C. LINES SHALL BE ON CONTOUR AND SHALL NOT BE INSTALLED PERPENDICULAR TO THE SLOPE. ELEVATION DIFFERENCE IN A LINE OR THE ENTIRE GRID SHALL NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS.
   - D. SEPARATION BETWEEN EMITTER LINE LATERALS SHALL BE A MINIMUM OF TWO FEET.
   - E. MINIMUM EMITTER SPACING IS TWELVE INCHES (12") FOR ALL SOIL TYPES.
   - F. LATERAL SPACING OF THREE FEET (3') OR MORE SHOULD BE USED FOR SLOPES OF TWENTY PERCENT (20%) OR GREATER.
   - G. EQUIPMENT SUSCEPTIBLE TO FREEZING MUST BE ADEQUATELY PROTECTED TO PREVENT FREEZING.
   - H. GEOFLOW DRIP DISPERSAL SYSTEM SHALL BE INSTALLED AND MAINTAINED PER MANUFACTURER'S GUIDELINES.

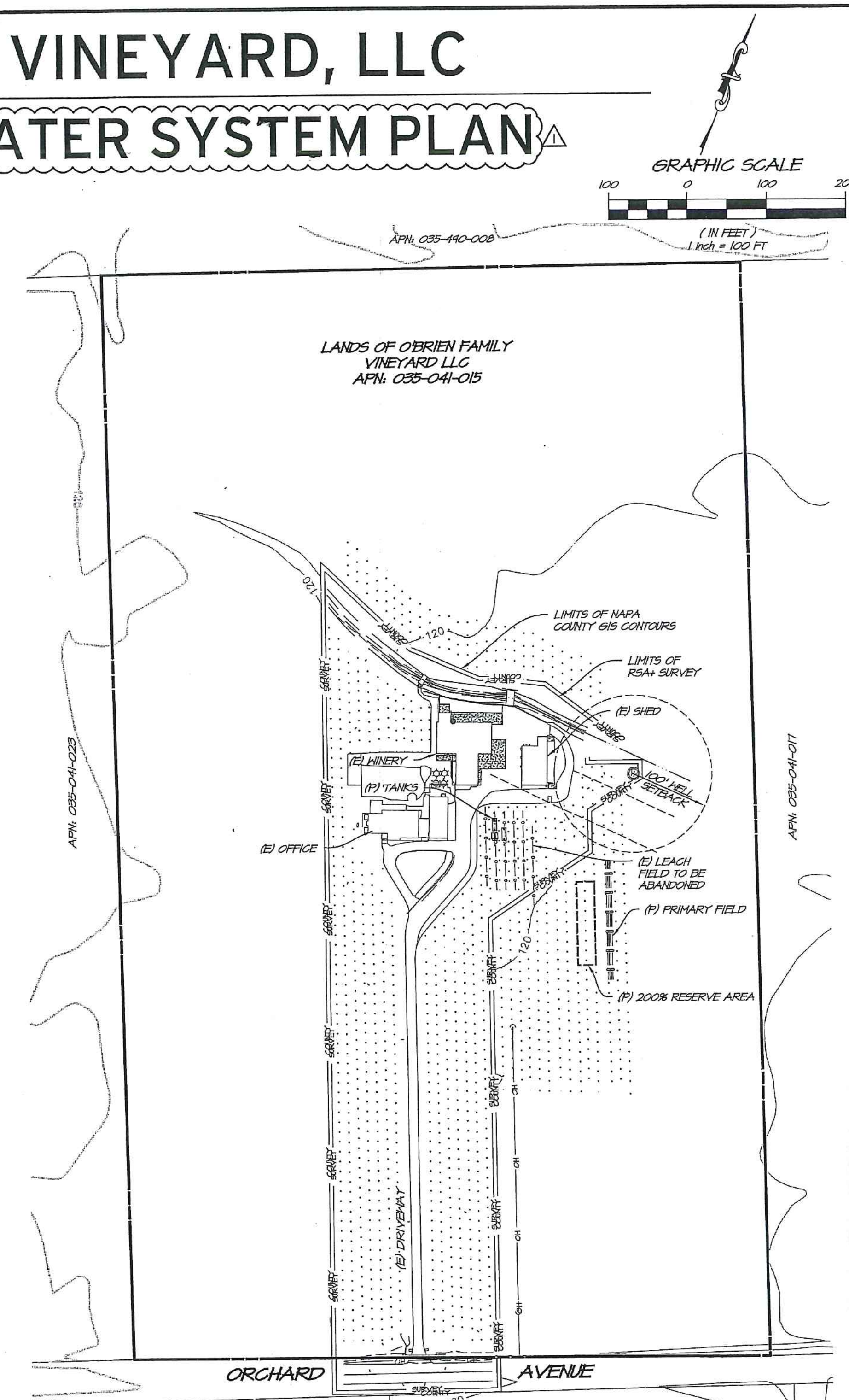
     MANUFACTURER: GEOFLOW, INC.
     506 TAMAL PLAZA
     CORTE MADERA, CA 94925
     TEL: 1800-828-3388
     FAX: 415-927-0120
     web: http://www.geoflow.com
4. NO RUBBER TYPED OR TRACKED VEHICLES SHALL BE PERMITTED TO DRIVE ON OR NEAR THE DISPERSAL FIELD AREA. DISPERSAL FIELD AND RESERVE AREA SHALL BE FENCED OFF WITH CONSTRUCTION FENCING DURING CONSTRUCTION ACTIVITIES.

STAGES TO BE INSPECTED BY THE DESIGNER

05/2014

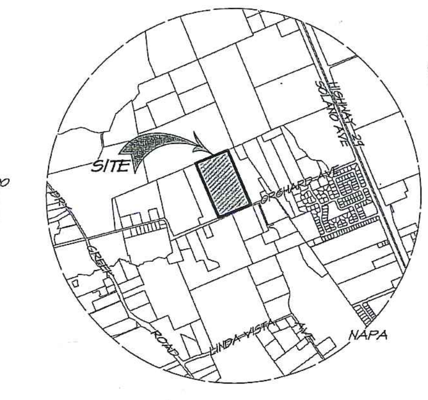
CONTRACTOR IS REQUIRED TO HAVE ENGINEER AND NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES (PBES) DEPARTMENT INSPECT THE CONSTRUCTION AT THE FOLLOWING STAGES. FAILURE TO REQUEST THESE INSPECTIONS WILL RESULT IN THE CONTRACTOR HAVING TO UN-EARTH AND RE-DO THE WORK. THE CONTRACTOR SHALL GIVE 48-HOUR ADVANCE NOTICE TO THE ENGINEER FOR ANY OF THESE INSPECTIONS:

1. PRE-CONSTRUCTION MEETING WITH NAPA COUNTY PBES STAFF.
2. CHECK LAYOUT OF ALL TANKS BEFORE EXCAVATION.
3. WATERTIGHT TEST OF ALL TANKS BEFORE BACKFILL.
4. SQUIRT TEST OF ADVANTEX POD SYSTEM.
5. HYDRAULIC TEST OF PRESSURE AND DISPERSAL LINES IN TRENCH BEFORE COVER.
6. FINAL INSPECTION AND STARTUP AFTER PERMANENT POWER HOOK-UP.



SITE PLAN

SCALE: 1" = 100'



VICINITY MAP

SCALE: 1" = 2000'

PROJECT INFORMATION

OWNER:	O'BRIEN FAMILY VINEYARDS, LLC 1200 ORCHARD AVENUE NAPA, CA 94558 CONTACT: RON COX TEL: 707-396-9051
CIVIL ENGINEER:	RSA+ 1515 FOURTH STREET NAPA, CA 94559 CONTACT: BRUCE FENTON TEL: 707-252-3301
APN & AREA:	035-041-015 (26.9± ACRES)
ZONING:	AP
EXISTING USE:	WINERY
PROPOSED USE:	WINERY
WATER:	WELL

BOUNDARY NOTES

BOUNDARY SHOWN IS APPROXIMATE.

TOPOGRAPHY NOTES

TOPOGRAPHY PROVIDED BY RSA+ SURVEY, DATED MAY 2016, WITH CONTOURS SHOWN EVERY ONE FOOT (1'), HIGHLIGHTED EVERY FIVE FEET (5')

ADDITIONAL SURROUNDING AREAS OF THE PROPERTY ARE SHOWN USING TOPOGRAPHIC CONTOURS PROVIDED BY NAPA COUNTY GIS. THESE CONTOURS ARE TO BE CONSIDERED APPROXIMATE AND USED FOR REFERENCE ONLY.

BENCHMARK

HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83) 2011 EPOCH BASED UPON G.P.S. OBSERVATIONS ON NETWORK UTILIZING CONTINUALLY OPERATING REFERENCE STATION (C.O.R.S.) INFORMATION FROM THE CALIFORNIA SPATIAL REFERENCE CENTER (C.S.R.C.)
VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

SHEET INDEX

SYMBOL LEGEND

EXISTING		EXISTING		PROPOSED	
— — — —	APPROXIMATE PROPERTY LINE	EPB	ELECTRIC PULLBOX	—o—o—o—	PROPOSED LEACH LINE
———	APPROXIMATE ADJOINER PROPERTY LINE		FOUND MONUMENT AS NOTED	——>——	SUPPLY OR RETURN LINE
— — —	SETBACK	GPST	GATE POST	——SS——	SANITARY SEWER LINE
	EDGE OF GRAVEL	HB	HOSE BIB	——E——	ELECTRICAL CONDUIT
	EDGE OF PAVEMENT		SURVEY CONTROL POINT	MW#	MONITORING WELL
——X——	FENCE LINE		WELL	TP#	TEST PIT LOCATIONS
	FLOWLINE	WM	WATER METER	TP#	TEST PIT NO GOOD
- - - - - -	GRADE BREAK: TOP OR TOE OF SLOPE	WV	WATER VALVE		CLEANOUT
———	EDGE OF CONCRETE	o TREE	TREE AS NOTED		AIR RELEASE VALVE
					CHECK VALVE

ABBREVIATIONS

AC	ASPHALT CONCRETE	MH	MANHOLE
℄	CENTERLINE	OC	ON CENTER
CO	CLEANOUT	PC	PRESSURE COMPENSATING
CONF	CONFORM	ℙ	PROPERTY LINE
DWW	DOMESTIC WASTE WATER	(P)	PROPOSED
EP	EDGE OF PAVEMENT	PW	PROCESS WASTE
EX / (E)	EXISTING	PWW	PROCESS WASTE WATER
FF	FINISH FLOOR	R	RADIUS
FH	FIRE HYDRANT	RSV	RECIRCULATING SPLITTER VALVE
FL	FLOW LINE	S	SLOPE (FEET/FOOT)
FPWW	FORCE PROCESS WASTE WATER	S.A.D.	SEE ARCHITECTS DRAWINGS
FRP	FIBERGLASS REINFORCED PLASTIC	S/B	SETBACK
FSS	FORCE SANITARY SEWER	SF	SQUARE FEET
GAL	GALLON	S.M.D.	SEE MECHANICAL DRAWINGS
GB	GRADE BREAK	SS	SANITARY SEWER
GPM	GALLON PER MINUTE	SSCO	SANITARY SEWER CLEANOUT
HP	HIGH POINT	STA	STATION
INV	INVERT	TP	TEST PIT
LF	LINEAL FEET/FOOT	TYP	TYPICAL
LP	LOW POINT	WW	WASTE WATER

CALL USA BEFORE EXCAVATING

48 HOURS IN ADVANCE
1 (800) 227-2600

NO.	DATE	REVISIONS	BY	APPD
1	04/11/2018	PLAN CHECK COMMENTS	LMM	BWF

RSA+ 1515 FOURTH STREET NAPA, CALIF. 94559 OFFICE (707) 252.3301 + www.RSAcivil.com +
RSA+ CONSULTING CIVIL ENGINEERS + SURVEYORS + EST. 1980

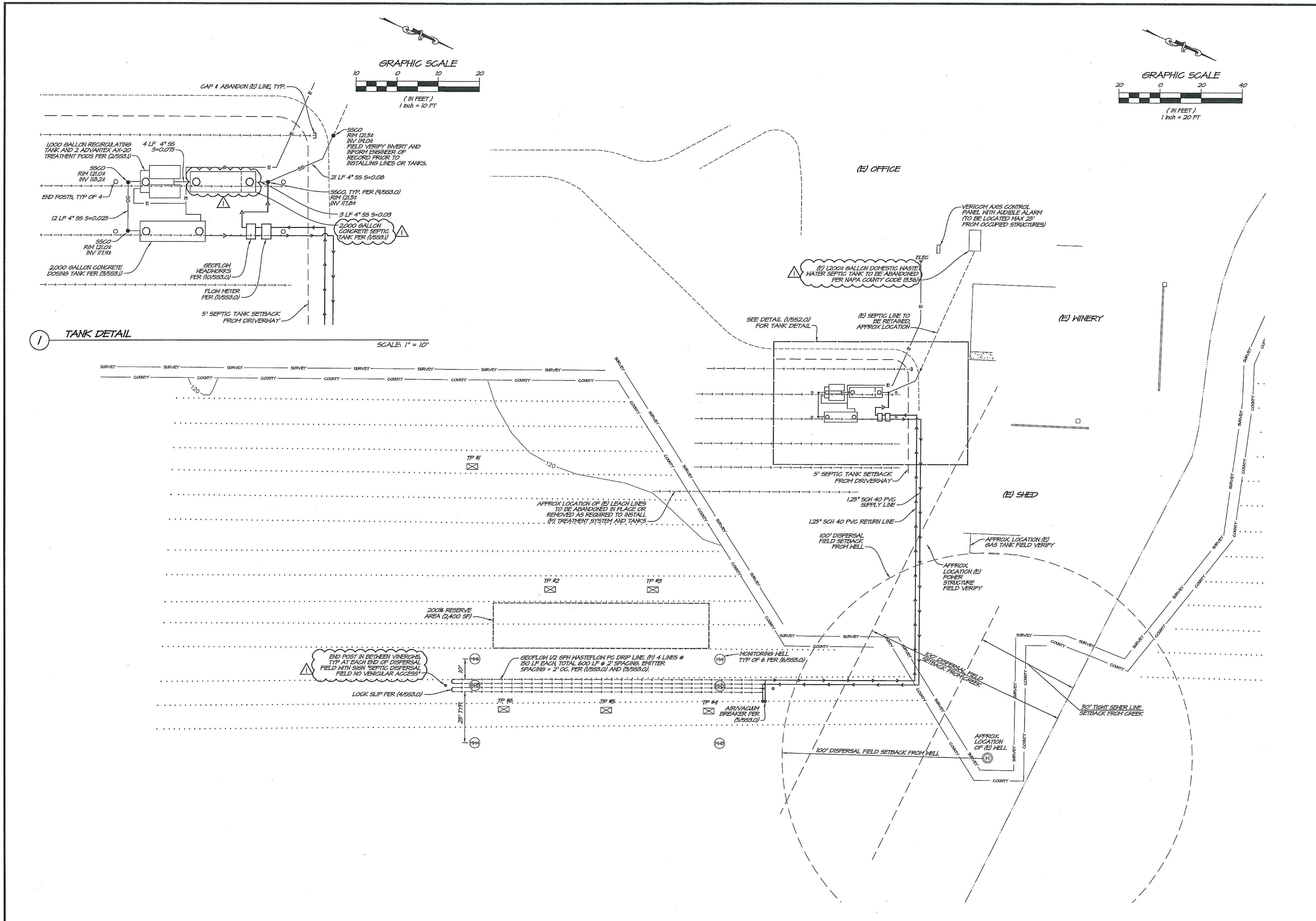
O'BRIEN FAMILY VINEYARD, LLC
COVER SHEET
NAPA COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER BRUCE WILLIAM FENTON No. 17859 Exp. 6-30-19 CIVIL ENGINEER STATE OF CALIFORNIA

DATE	APRIL 11, 2018
DRAWN	DRL/LMM
DESIGNED	DOB
CHECKED	PSW
JOB NO.	4116036.0

SHEET NO. SS1.0
1 OF 4 SHEETS

R:\2016\4116036.0_O'Brien_Orchard_Ave_Winery_Compliance_Assistance\DESIGN\Septic\SS1.0-COVER.dwg 04/04/2018 3:44:19PM LMilgrom COPYRIGHT Riechers Spence & Assoc.


GRAPHIC SCALE
10 0 10 20
(IN FEET)
1 inch = 10 FT
CAP & ABANDON (E) LINE, TYP.
1,000 GALLON RECIRCULATING TANK AND 2 ADVANTEX AX-20 TREATMENT PODS PER (2/SS3.1)
4 LF 4" SS S=0.075
SSCO RIM 121.5± INV 119.0± FIELD VERIFY INVERT AND INFORM ENGINEER OF RECORD PRIOR TO INSTALLING LINES OR TANKS.
SSCO RIM 121.0± INV 118.2±
END POSTS, TYP OF 4
21 LF 4" SS S=0.08
SSCO, TYP. PER (4/SS3.0) RIM 121.5± INV 117.8±
12 LF 4" SS S=0.025
3 LF 4" SS S=0.03
2,000 GALLON CONCRETE SEPTIC TANK PER (1/SS3.1)
SSCO RIM 121.0± INV 117.9±
2,000 GALLON CONCRETE DOSING TANK PER (3/SS3.1)
GEOFLOW HEADWORKS PER (10/SS3.0)
FLOW METER PER (11/SS3.0)
5' SEPTIC TANK SETBACK FROM DRIVEWAY
1 TANK DETAIL
SCALE: 1" = 10'
GRAPHIC SCALE
20 0 20 40
(IN FEET)
1 inch = 20 FT
(E) OFFICE
VERICOM AXIS CONTROL PANEL WITH AUDIBLE ALARM (TO BE LOCATED MAX 25' FROM OCCUPIED STRUCTURES)
ELEC
(E) 1,200± GALLON DOMESTIC WASTE WATER SEPTIC TANK TO BE ABANDONED PER NAPA COUNTY CODE 13.56
SEE DETAIL (1/SS2.0) FOR TANK DETAIL
(E) SEPTIC LINE TO BE RETAINED, APPROX LOCATION
(E) WINERY
SURVEY
COUNTY
120
TP #1
5' SEPTIC TANK SETBACK FROM DRIVEWAY
(E) SHED
APPROX LOCATION OF (E) LEACH LINES TO BE ABANDONED IN PLACE OR REMOVED AS REQUIRED TO INSTALL (P) TREATMENT SYSTEM AND TANKS
1.25" SCH 40 PVC SUPPLY LINE
1.25" SCH 40 PVC RETURN LINE
100' DISPERSAL FIELD SETBACK FROM WELL
APPROX. LOCATION (E) GAS TANK FIELD VERIFY
APPROX. LOCATION (E) POWER STRUCTURE FIELD VERIFY
TP #2
TP #3
200% RESERVE AREA (2,400 SF)
END POST IN BETWEEN VINEROWS, TYP AT EACH END OF DISPERSAL FIELD WITH SIGN "SEPTIC DISPERSAL FIELD NO VEHICULAR ACCESS"
GEOFLOW 1/2 GPH WASTEFLOW PC DRIP LINE. (P) 4 LINES @ 150 LF EACH, TOTAL 600 LF @ 2' SPACING. EMITTER SPACING = 2' OC. PER (1/SS3.0) AND (9/SS3.0).
MONITORING WELL TYP OF 6 PER (6/SS3.0)
100' DISPERSAL FIELD SETBACK FROM CREEK
10'
LOCK SLIP PER (4/SS3.0)
25' TYP.
TP #6
TP #5
TP #4
AIR/VACUUM BREAKER PER (5/SS3.0)
50' TIGHT SEWER LINE SETBACK FROM CREEK
APPROX. LOCATION OF (E) WELL
100' DISPERSAL FIELD SETBACK FROM WELL

NO.	DATE	REVISIONS	BY	APPD
1	04/11/2018	PLAN CHECK COMMENTS	LMM	DWF

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O'BRIEN FAMILY VINEYARD, LLC
SITE PLAN
NAPA COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER · STATE OF CALIFORNIA · CIVIL ENGINEER

DATE	APRIL 11, 2018
DRAWN	DRL/MM
DESIGNED	DDB
CHECKED	PSH
JOB NO.	4116036.0

SHEET NO.
SS2.0
2 OF 4 SHEETS

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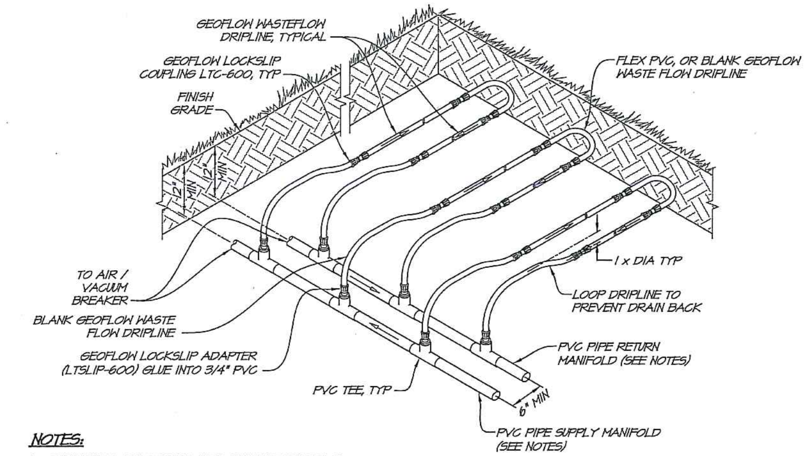
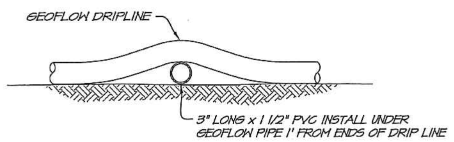


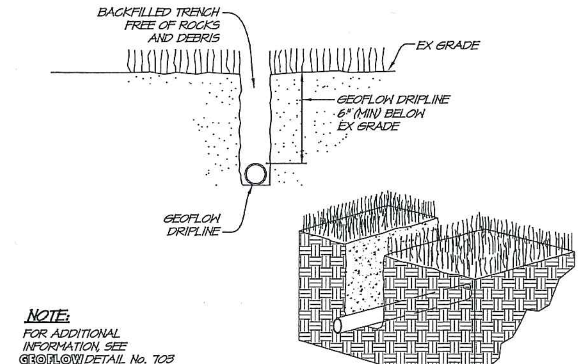
NOTES:

1. SEE LINE LAYOUT DETAIL FOR SIZE AND RELATIVE POSITION OF SUPPLY AND RETURN MANIFOLDS.
2. SEE TRENCHING DETAIL FOR DEPTH OF BURY.

(1) SUPPLY AND RETURN MANIFOLDS DETAIL
WW0000-DD-02 NOT TO SCALE

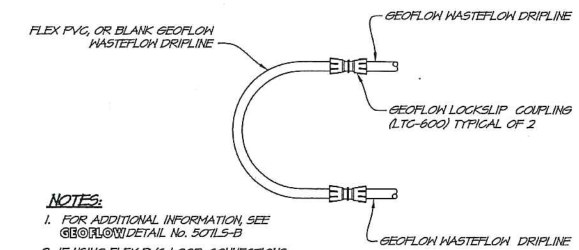


(2) SHIM DETAIL
WW0000-DD-08 NOT TO SCALE



NOTE:
FOR ADDITIONAL INFORMATION, SEE GEOFLOW DETAIL No. 703

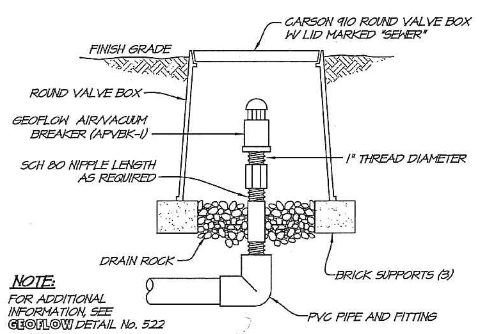
(3) TRENCHING DETAIL (NO FILL)
WW0000-DD-03A NOT TO SCALE



NOTES:

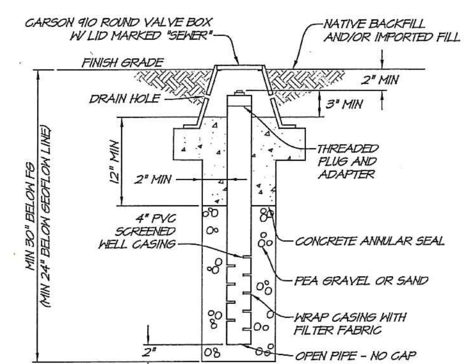
1. FOR ADDITIONAL INFORMATION, SEE GEOFLOW DETAIL No. 501LS-B
2. IF USING FLEX PVC LOOP, CONNECTIONS SHALL BE GEOFLOW LOCKSLIP ADAPTER (LTSLIP-600) TO PVC COUPLING

(4) LOCKSLIP COUPLING LOOP DETAIL
WW0000-DD-04 NOT TO SCALE

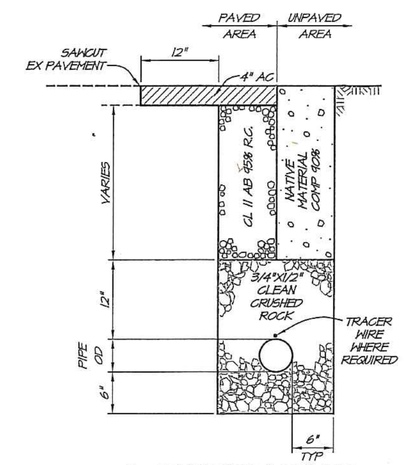


NOTE:
FOR ADDITIONAL INFORMATION, SEE GEOFLOW DETAIL No. 522

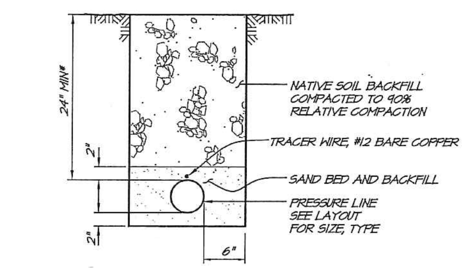
(5) 1" AIR/VACUUM BREAKER DETAIL
WW0000-DD-05 NOT TO SCALE



(6) GEOFLOW MONITORING WELL
WW0000-DD-06 NOT TO SCALE

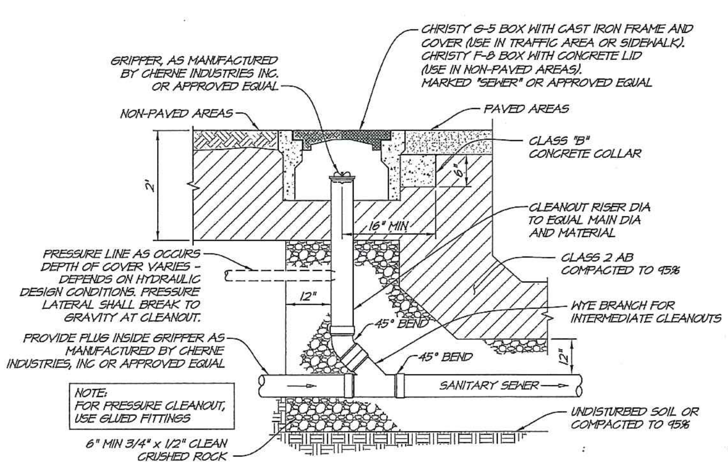


(7) SANITARY SEWER
RSA SS0000-05 NOT TO SCALE

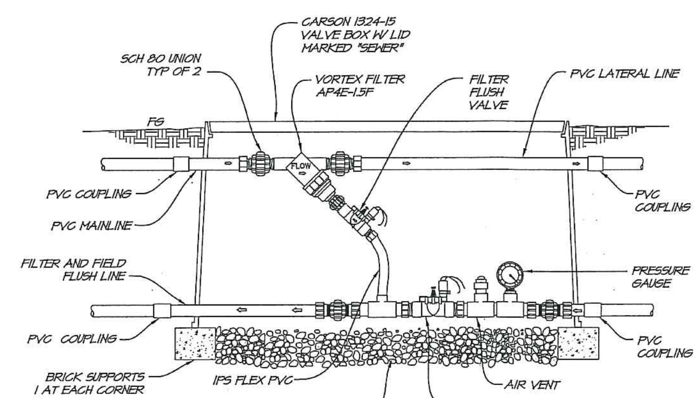


* EXCEPT AS NECESSARY TO REACH SYSTEM COMPONENTS SUCH AS METERS, VALVES AND DISTRIBUTION MANIFOLD

(8) PRESSURIZED SEWER LINE DETAIL
NOT TO SCALE

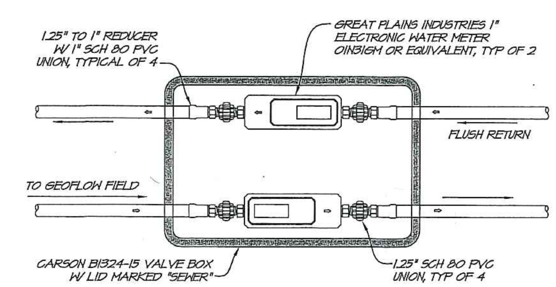


(9) SANITARY SEWER CLEANOUT DETAIL
SS0000-02 NOT TO SCALE



NOTE:
FOR ADDITIONAL INFORMATION, SEE GEOFLOW DETAIL No. 515

(10) GEOFLOW HEADWORKS & PRESSURE REDUCER DETAIL
WW0000-DD-01 NOT TO SCALE



(11) FLOW METER DETAIL
WW0000-DD-07 NOT TO SCALE

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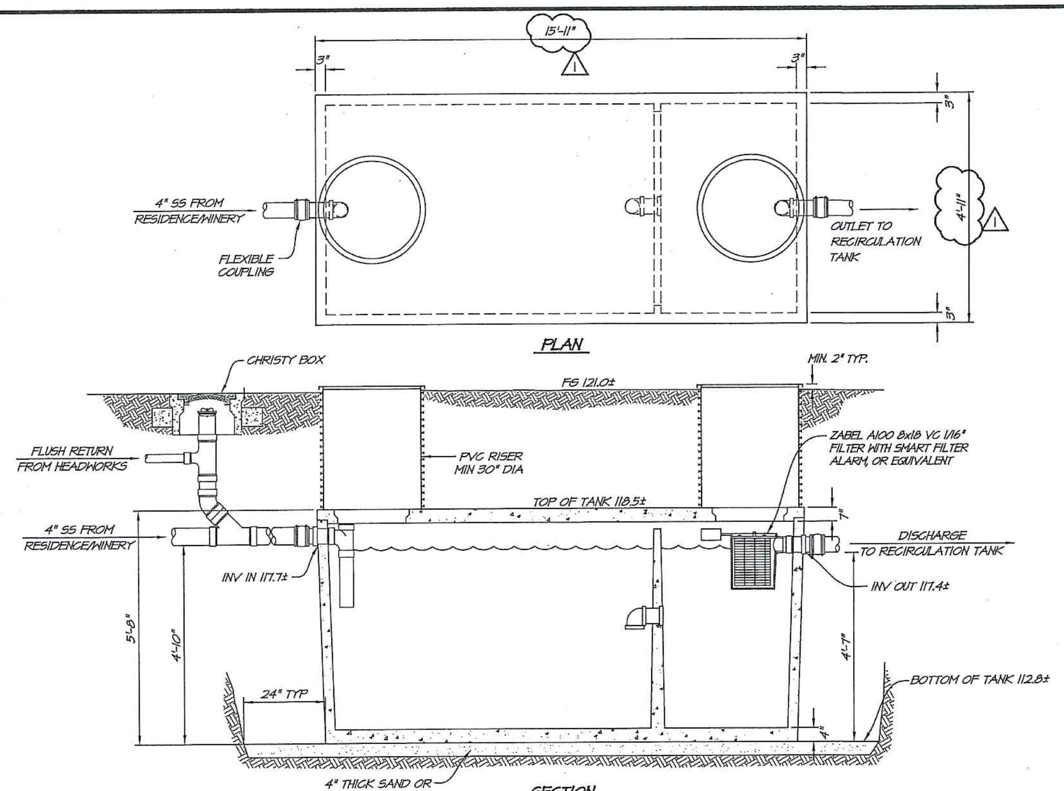
O'BRIEN FAMILY VINEYARD, LLC
DETAILS
NAPA COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER - BRIAN WILLIAM FULLER - No. 71169 - Exp. 6-30-19 - CIVIL ENGINEER - STATE OF CALIFORNIA

DATE	APRIL 11, 2018
DRAWN	DRL/LWM
DESIGNED	DOB
CHECKED	PSH
JOB NO.	4116036.0
SHEET NO.	SS3.0
	3 OF 4 SHEETS

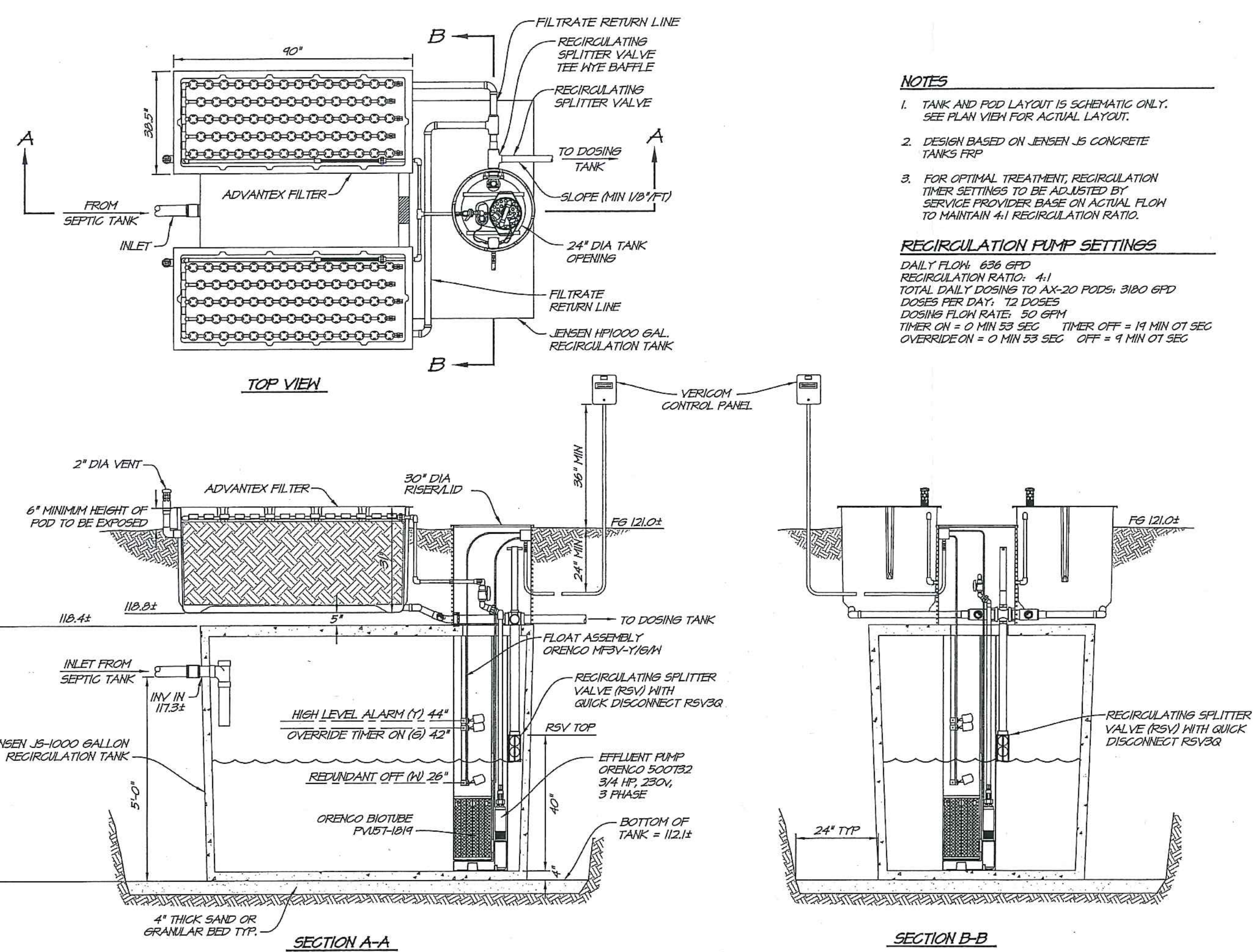


NOTES

1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. SEPTIC TANK MANUFACTURED BY: SELVAGE CONCRETE PRODUCTS, INC.
3309 SEBASTOPOL ROAD
SANTA ROSA, CA 95407
TEL: (707) 542-2762

(1) JS-2000 GALLON SEPTIC TANK DETAIL

NOT TO SCALE



NOTES

1. TANK AND POD LAYOUT IS SCHEMATIC ONLY. SEE PLAN VIEW FOR ACTUAL LAYOUT.
2. DESIGN BASED ON JENSEN JS CONCRETE TANKS FRP
3. FOR OPTIMAL TREATMENT, RECIRCULATION TIMER SETTINGS TO BE ADJUSTED BY SERVICE PROVIDER BASE ON ACTUAL FLOW TO MAINTAIN 4:1 RECIRCULATION RATIO.

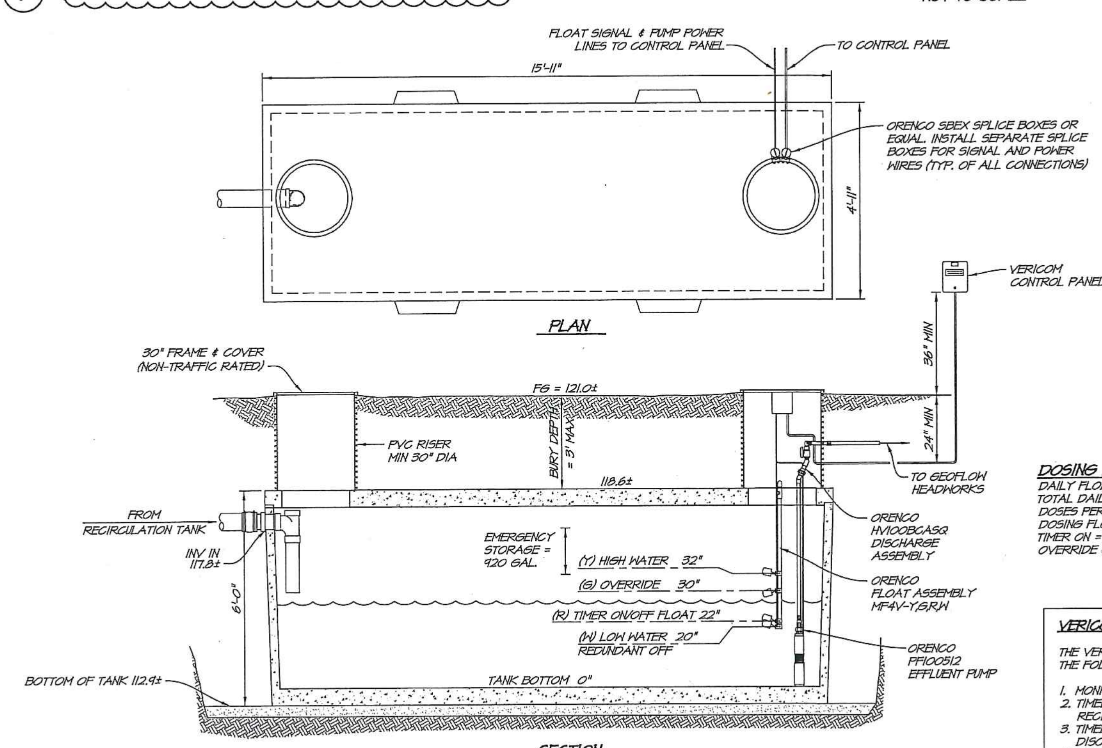
RECIRCULATION PUMP SETTINGS

DAILY FLOW: 636 GPD
RECIRCULATION RATIO: 4:1
TOTAL DAILY DOSING TO AX-20 PODS: 3180 GPD
DOSES PER DAY: 72 DOSES
DOSING FLOW RATE: 50 GPM
TIMER ON = 0 MIN 53 SEC TIMER OFF = 19 MIN 07 SEC
OVERRIDE ON = 0 MIN 53 SEC OFF = 9 MIN 07 SEC

(2) ADVANTEX TREATMENT SYSTEM AND RECIRCULATION TANK

TANK PER JENSEN HP1000-EPP

NOT TO SCALE



DOSING PUMP SETTINGS

DAILY FLOW: 636 GPD
TOTAL DAILY DOSING TO GEOFLOW FIELD: 636 GPD
DOSES PER DAY: 12 DOSES
DOSING FLOW RATE: 2.34 GPM
TIMER ON = 22 MIN 39 SEC TIMER OFF = 1 HR 37 MIN 21 SEC
OVERRIDE ON = 22 MIN 39 SEC OFF = 37 MIN 21 SEC

VERICOM CONTROL PANEL NOTES

THE VERICOM CONTROL PANEL IS TO PROVIDE THE FOLLOWING FUNCTIONALITY:

1. MONITOR SEPTIC TANK HIGH WATER ALARMS.
2. TIMED DOSING OF AX-20 TREATMENT SYSTEM RECIRCULATION PUMP.
3. TIMED DOSING OF DOSING TANK DISCHARGE PUMP.
4. REMOTE ALARM NOTIFICATION.
5. REMOTE TELEMETRY ACCESS FOR SYSTEM CONTROL AND DATA ACQUISITION.

NOTES

1. LIQUID CAPACITY: 2000 GALLONS, APPROXIMATELY 28 GALLONS PER INCH.
2. DESIGN LOAD: H-20 TRAFFIC FROM 1' TO 6' OF SOIL COVER.
3. CONTACT JENSEN PRODUCTS FOR ADITIONAL INFORMATION. http://www.jensenprecast.com

(3) JENSEN HP-2000-EPP COMMERCIAL DOSING TANK

NOT TO SCALE

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DETAILS
NAPA COUNTY CALIFORNIA

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SHEET NO.
SS3.1
4 OF 4 SHEETS