“I”

Wastewater Feasibility Study

Vine Cliff Winery Alteration Use Permit and Minor Modification
P25-00161-UP & P24-00191-MM
Planning Commission Hearing – June 18, 2025

WATER SYSTEM FEASIBILITY

Vine Cliff Winery

7400 Silverado Trail

Napa, CA 94558

APN 032-030-027

SUMMIT

CIVIL STRUCTURAL ELECTRICAL WATER|WASTEWATER PLANNING

Project No. 2024040

August 21, 2024

TABLE OF CONTENTS

LIST OF ENCLOSURES

Enclosure A: Overall Site Plan

Enclosure B: Well Completion Report
4-hour Well Yield Test
Water Quality Test Results

Enclosure C: Water System Schematic

SYSTEM DESCRIPTION

Vine Cliff Winery ("Facility") is located at 7400 Silverado Trail in Napa, CA (APN 032-030-027). Refer to Enclosure A for the Use Permit Site Plan. The Facility is applying for a use permit modification that will allow for food to be prepared onsite for marketing events during non-harvest. Existing uses on the property include vineyards, wine production, wine caves, and hospitality, as well as a 5-bedroom house, barn, and cottage. The Facility is proposing to operate a Transient Non-Community Public Water System (PWS) due to the proposed changes. The Facility will need to make minor improvements to the existing water system in order to operate as a public PWS. Consolidation with another water system is not feasible as this existing water system will only require minor upgrades to become a PWS.

Napa County Planning, Building, and Environmental Services (PBES) approved Use Permit P17-00129-MOD in 2017 which allows for annual wine production of 48,000 gallons per year, tasting visitation, and events. With this modification, the Facility intends to construct a commercial kitchen to be used for event food preparation during non-harvest periods. There are no proposed changes to the frequency or number of events. There are two existing wells in operation at the site (Table 1), one of which is proposed to be used for the PWS. The residence, barn, cottage, and vineyard irrigation water are served by a separate well that was drilled in 1986 which will not be connected to the PWS. The PWS will be supplied by the well drilled in 1996 (Well 001), located by the existing winery building, and will provide water for the winery domestic and process water demands as well as landscape irrigation. The well log for Well 001 is provided in Enclosure B.

Table 1. Summary of existing well information.

Source Name	Primary Use	Year Drilled	Status	Capacity (gpm)	Annular Seal Depth (ft)
Well 001	Domestic, Process, Landscape	1996	Active	70 [1]	57

1. A 4-hour well test was conducted on June 6, 2023 (Enclosure B).

Water quality results from Well 001 meet the primary drinking water standards for a transient non-community PWS. Water quality testing found arsenic at 3.9 mg/L, which is below the Maximum Contaminant Level (MCL) of 10 mg/L, as well as 1.8 mg/L of iron and 0.27 mg/L of manganese which exceed the secondary standards and are a non-public health concern. Treatment is provided for arsenic, iron, and manganese removal in the potable water source. A precautionary disinfection system is proposed to be added to the system. Well 001 feeds four Amtrol Well-X-Trol WX302 pressure tanks at the well area. The Facility proposes to install a minimum of 4,900 gallons of storage by the well to meet the estimated maximum daily demand (MDD) of the PWS. At the winery building, water is treated in parallel sets of Randomglass FRP polyester filters (total of three) and Kinetico twin tank water softeners (total of three). Treated water goes to the distribution system for winery process, domestic, and irrigation demand. See Enclosure C for a water system schematic.

WATER DEMAND

The proposed use permit modification includes an increase in water demand in the form of kitchen flows for a proposed commercial kitchen. The commercial kitchen will be preparing food for events which occur during

the non-harvest season. The water demand increase is expected to correlate to the estimated wastewater flows for sanitary sewage.

Proposed Water Uses

Peak water use at the Facility for the PWS will be based on the following PBES prescribed values:

- Process needs for production capacity of 48,000 gallons of wine per year,
- Full Time Employees = 10 per day,
- Part Time Employees = 6 per day,
- Tasting Visitors = 50 per day (closed on event days),
- Marketing Events
    - Wine Trade Tours and Tasting: 2 times per week, 4 people
    - Wine Trade Luncheons: 2 times per month, 50 people
    - Private Promotional Dinners: 6 times per year, 50 people
    - Private Food and Wine Events: 6 times per year, 100 people

The 5-bedroom residence, barn, cottage, and vineyard irrigation water demand will not be provided by the proposed PWS, so they are not included in the water demand and MDD calculations.

Daily water demand will fluctuate depending on if there is a marketing event scheduled and/or production activities, but the MDD scenario outlined above represents the anticipated peak demand.

Winery Process Water Demand

Water demand for wine production is expected to correlate to the process wastewater (PW) generated at the Facility. Based on typical flow data from wineries of similar size and characteristics, the projected process wastewater generation for wine production has a peak demand of 1,600 gpd (Table 2).

Table 2. Estimated water use based on PW generation for Vine Cliff Winery.

Parameter	Units
Wine Produced Onsite, gal wine/year	48,000
PW Generation Rate, gal water/gal wine[1]	6.0
Total PW Generation from Wine Production, gal water/year	288,000
Average Daily PW Generation	790
Peak Daily Water Use/PW Generation[2]	**1,600**
PBES Peak Day Flow[3]	1,600
Peak Non-Harvest Daily PW Generation[4]	710

Notes:

1. Industry standard PW generation rate.
2. Assumes that peak harvest PW generation occurs in September, which accounts for 16.4% of total annual production. Monthly percentage of annual flow based on average of PW flow data from similar wineries.
3. PBES Peak Daily Flow is calculated using the Napa County OWTS (Final Draft 2013). A peaking factor of 1.5 is applied to the total wine production volume (gallons). Assume the harvest duration is 45 days based on production volume.
4. Assumes that peak non-harvest PW generation occurs in March, which accounts for 7.6% of total annual production.

The expected annual water use for the existing 48,000 gallons of wine per year production capacity is 288,000 gallons per year, with an average demand of 790 gpd, a peak harvest demand of 1,600 GPD, and a peak non-harvest demand of 710 gpd. The winery process water demand will continue to be provided by Well 001 and the proposed PWS.

Domestic Water Demand

Domestic water use at the Facility is determined based on the total number of employees, daily visitors, and event guests. Sanitary sewage (SS) generation is expected to be equivalent to the water demand for domestic uses. Water demands for harvest and non-harvest event days for the Facility were estimated using PBES standards for peak domestic SS production. These estimates are presented in Table 3.

Table 3. Estimated SS generation for Vine Cliff Winery.

Peak Non-Harvest Day Event Flows							
Employee (full-time)	10	x	15	gpcd	=	150	gal/day
Employee (part-time)	6	x	15	gpcd	=	90	gal/day
Tasting Visitors [1]	0	x	3	gpcd	=	0	gal/day
Marketing event [2]	100	x	5	gpcd	=	500	gal/day
Total					**=**	**740**	**gal/day**
Harvest Peak Day flows (based on 2018 WWFS)							
Employee (full-time)	10	x	15	gpcd	=	150	gal/day
Employee (part-time)	6	x	15	gpcd	=	90	gal/day
Tasting Visitors [3]	50	x	3 gpcd x 50% utilization factor		=	75	gal/day
Marketing event [2]	0	x	5	gpcd	=	0	gal/day
Wine Trade Tours and Tasting [4]	4	x	3	gpcd	=	12	gal/day
Total					**=**	**327**	**gal/day**

Notes:

1. There will be no tasting visitors on event days.
2. Portable toilets will continue to be provided for events with over 15 guests. Assumes kitchen waste only and multi-use utensils for marketing events guests during the non-harvest season.
3. A 50% utilization factor was previously approved as part of the 2018 WWFS prepared by Applied Civil Engineering and has been carried forward for this evaluation.
4. Portable toilets will continue to be provided. During harvest, food for events will be prepared off-site. Therefore, peak harvest day flows will occur on days where the tasting room is open and not on event days.
5. Wine Trade Tours and Tastings twice per week are an approved use per the current Use Permit #P17-00129-MOD but were not included in the 2018 WWFS by Applied Civil Engineering.

The estimated peak harvest day domestic demand is 327 gpd and the estimated peak non-harvest event day demand is 740 gpd. Domestic water demand for the winery will continue to be provided by Well 001 and proposed PWS.

MAXIMUM DAILY DEMAND (MDD)

Based on the proposed Use Permit modifications, it was calculated that a peak water demand of approximately 2,147 gpd will be required for all process, domestic, and landscape needs. Well 001 is

anticipated to be capable of meeting this peak demand over the course of a day. A 2,147 gpd peak flow corresponds to a 4,830 gpd maximum daily demand (MDD) based on a peaking factor of 2.25 (Table 3). The Facility proposes to install a minimum of 4,900 gallons of storage to meet this MDD. The Facility will begin measuring and reporting water use as required for a PWS, and additional storage will be added if metered usage exceeds the MDD.

The system currently has pressure tanks only and additional storage will need to be installed with a minimum volume of 4,900 gallons. Water use monitoring will occur as required and this data will then be used to update the MDD, if required.

Table 2. Estimated MDD for the Facility.

Demand	Flow (gpd)	24-hr Demand(gpm)
Domestic Demand	327	0.23
Process Demand	1,600	1.11
Landscape Demand [1]	220	0.15
TOTAL	**2,147**	**1.49**

Note:

1. Landscape demand is estimated based on an annual usage of 0.5 acft of landscaping water use per 100,000 gallons of wine produced from the Napa County WAA guidelines and 48,000 gallons of wine produced annually.

MAX DAY DEMAND

Estimated MDD		
2,147 gpd X 2.25	=	4,830 Gallons
Existing Storage Onsite	=	0 Gallons

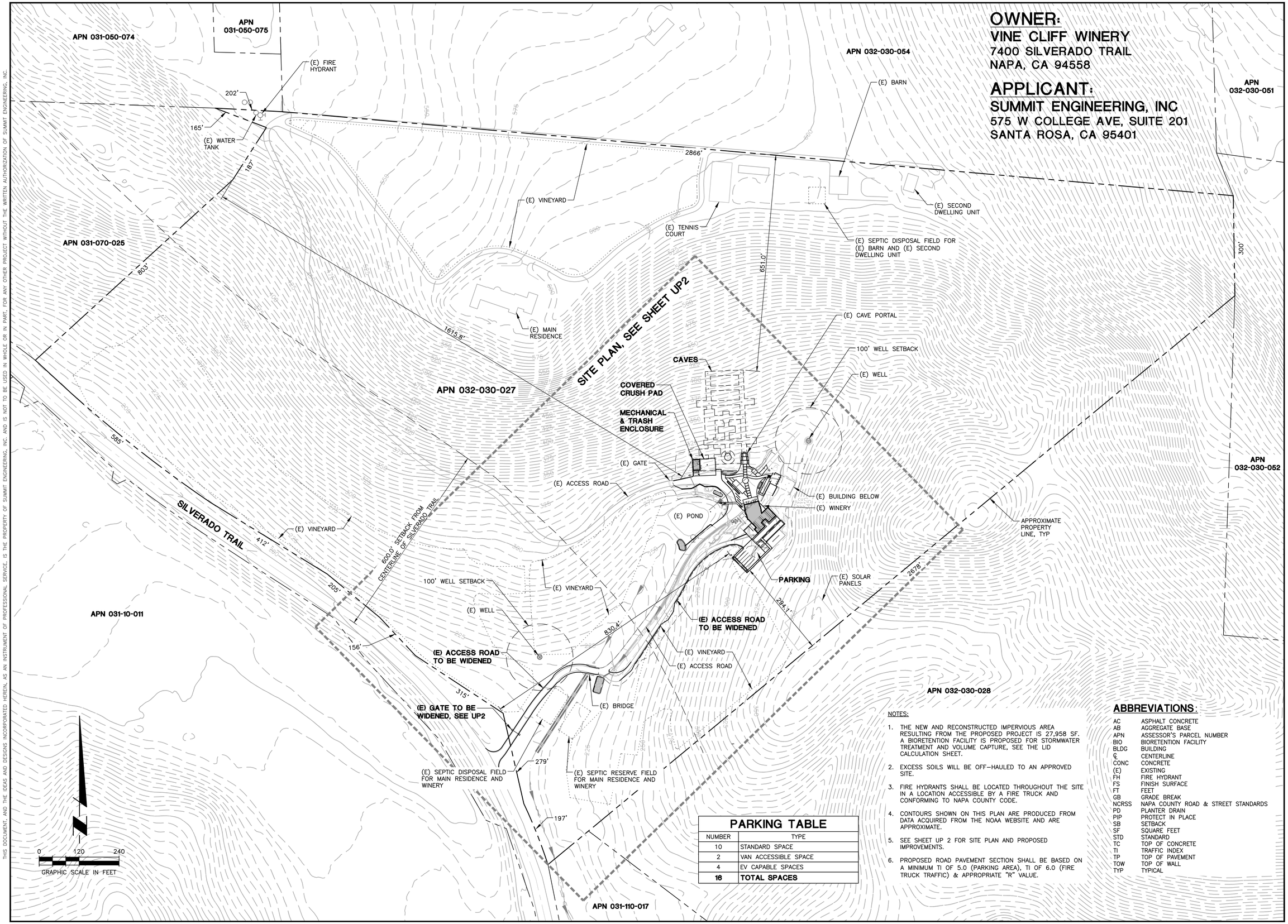
MANAGEMENT

Vine Cliff Winery is an existing facility and is responsible for all finances, operations, compliance requirements, and establishment of policies. The Facility's existing water system is not currently permitted as a PWS and is managed by employees of the winery. Upon approval of the Use Permit, an application to become a PWS will be submitted. The PWS will require a certified operator due to the level of treatment provided and the Facility will contract with a third-party certified operator. Major repairs, replacements and other engineering and professional services will also be contracted out.

FINANCIAL

Vine Cliff is not currently encumbered by any judgements, liens, or other financial liability that would prevent the operation of the Facility's water system. The capital, operating, and maintenance costs of the system are covered by the income from retail wine sales.

ENCLOSURE A
OVERALL SITE PLAN



OWNER:

VINE CLIFF WINERY
7400 SILVERADO TRAIL
NAPA, CA 94558

APPLICANT:

SUMMIT ENGINEERING, INC
575 W COLLEGE AVE, SUITE 201
SANTA ROSA, CA 95401

PARKING TABLE	
NUMBER	TYPE
10	STANDARD SPACE
2	VAN ACCESSIBLE SPACE
4	EV CAPABLE SPACES
16	**TOTAL SPACES**

NOTES:

1. THE NEW AND RECONSTRUCTED IMPERVIOUS AREA RESULTING FROM THE PROPOSED PROJECT IS 27,958 SF. A BIORETENTION FACILITY IS PROPOSED FOR STORMWATER TREATMENT AND VOLUME CAPTURE, SEE THE LID CALCULATION SHEET.
2. EXCESS SOILS WILL BE OFF-HAULED TO AN APPROVED SITE.
3. FIRE HYDRANTS SHALL BE LOCATED THROUGHOUT THE SITE IN A LOCATION ACCESSIBLE BY A FIRE TRUCK AND CONFORMING TO NAPA COUNTY CODE.
4. CONTOURS SHOWN ON THIS PLAN ARE PRODUCED FROM DATA ACQUIRED FROM THE NOAA WEBSITE AND ARE APPROXIMATE.
5. SEE SHEET UP 2 FOR SITE PLAN AND PROPOSED IMPROVEMENTS.
6. PROPOSED ROAD PAVEMENT SECTION SHALL BE BASED ON A MINIMUM TI OF 5.0 (PARKING AREA), TI OF 6.0 (FIRE TRUCK TRAFFIC) & APPROPRIATE "R" VALUE.

ABBREVIATIONS:

AC	ASPHALT CONCRETE
AB	AGGREGATE BASE
APN	ASSESSOR'S PARCEL NUMBER
BIO	BIORETENTION FACILITY
BLDG	BUILDING
℄	CENTERLINE
CONC	CONCRETE
(E)	EXISTING
FH	FIRE HYDRANT
FS	FINISH SURFACE
FT	FEET
GB	GRADE BREAK
NCRSS	NAPA COUNTY ROAD & STREET STANDARDS
PD	PLANTER DRAIN
PIP	PROTECT IN PLACE
SB	SETBACK
SF	SQUARE FEET
STD	STANDARD
TC	TOP OF CONCRETE
TI	TRAFFIC INDEX
TP	TOP OF PAVEMENT
TOW	TOP OF WALL
TYP	TYPICAL

SUMMIT
Summit Engineering, Inc
575 W College Ave, Suite 201 • Santa Rosa, CA 95401
707-527-0775 • www.summit-sr.com

VINE CLIFF WINERY
7400 SILVERADO TRAIL
NAPA, CA 94558
APN 032-030-027

USE PERMIT

OVERALL SITE PLAN

#	DATE	DESCRIPTION
	06/28/2024	PERMIT SUBMITTAL

PRELIMINARY
NOT FOR CONSTRUCTION

JOB NO: 2024040
SCALE: AS SHOWN
DRAWN: TF
CHECKED: JTG

SHEET UP1
1 OF 4

NOTES:

1. CONTOURS SHOWN OUTSIDE OF GROUND SURVEY LIMITS ARE PRODUCED FROM DATA ACQUIRED FROM THE NOAA WEBSITE AND ARE APPROXIMATE.
2. TURNOUTS TO MEET THE MAXIMUM DISTANCE REQUIREMENT OF 400' PER NCRSS.

APN 031-10-011

SILVERADO TRAIL

(E) VINEYARD

APN 032-030-027

22' WIDE GATE (MIN.) WITH KNOX BOX

(E) GATE

112' (GATE SETBACK FROM CENTER OF ROAD)

ACCESS ROAD ENTRANCE PER NCRSS

100' WELL SETBACK

(E) WELL

(E) TWO-WAY ACCESS ROAD IS APPROXIMATELY 16' WIDE WITH 2 FT SHOULDERS ON EACH SIDE FOR A TOTAL WIDTH OF 20'. ROAD TO BE WIDENED TO 20' PAVED ROAD AND 2' OF SHOULDER

20.0'

24.0'

R78.0'

(E) SEPTIC DISPOSAL FIELD FOR MAIN RESIDENCE AND WINERY

2 (E) 36" SD

(E) BRIDGE ROAD WIDTH = 17'±, TO BE WIDENED TO 20' CLEARANCE = 25'±

(E) SEPTIC FIELD FOR MAIN RESIDENCE AND WINERY

LID 1
900 SF
BOTTOM EL
219.5

(E) SWALE

R50.0'

16.0'

LIMITS OF GROUND SURVEY, TYP, SEE NOTE 1

(E) ACCESS ROAD TO BE WIDENED
(12 FT WIDE WITH A 2 FT WIDE SHOULDER AND SWALE ON EAST SIDE)

(E) TWO-WAY ACCESS ROAD IS APPROXIMATELY 16' WIDE WITH A 4 FT WIDE DRIVABLE SWALE TO THE EAST FOR A TOTAL WIDTH OF 20'

TURNOUT PER NCRSS

LID 2
500 SF
BOTTOM EL
254.0

(E) SWALE

TO RESIDENCE

16.0'

COVERED CRUSH PAD

MECHANICAL & TRASH ENCLOSURE

(E) GATE

CAVE PLAN, SEE SHEET UP4

CAVE LIMITS, TYP

FIRE WATER STORAGE

30'x10' FIRE TRUCK STAGING AREA

MEADOW

FH

TURNOUT PER NCRSS

(E) DRAFT HYDRANT

(E) POND

FIRE SHUNT TURNAROUND

(E) CAVE PORTAL

100' WELL SETBACK

30'x10' FIRE TRUCK STAGING AREA

PLAZA

FH

(E) WELL

(E) PUMP HOUSE

(E) WINERY

(E) PROPANE TANK

REFER TO UP3 FOR UTILITIES CONTINUATION

ENTRY COURTYARD

(E) BUILDING BELOW

WINERY PLAN, SEE SHEET UP3

GUEST PARKING
(10 TANDEM SPACES & 2 EV CAPABLE SPACE)

GARBAGE TRUCK TURNAROUND

WINERY BUILDING

COURTYARD ENTRY

BACK OF HOUSE/ TRASH ENCLOSURE

(E) PRODUCTION AREA TO BE REMOVED AND REGRADED

APPROXIMATE LIMITS OF (E) VINEYARD, TYP

GUEST PARKING
(1 VAN ACCESSIBLE SPACE & 2 EV CAPABLE SPACE)

(E) VINEYARD

(E) SOLAR PANELS

APN 031-110-017

APN 032-030-028

APPROXIMATE PROPERTY LINE, TYP

0 50 100
GRAPHIC SCALE IN FEET

SUMMIT
Summit Engineering, Inc
575 W College Ave, Suite 201 • Santa Rosa, CA 95401
707-527-0775 • www.summit-sr.com

VINE CLIFF WINERY
7400 SILVERADO TRAIL
NAPA, CA 94558
APN 032-030-027

USE PERMIT

SITE PLAN

#	DATE	DESCRIPTION
	06/28/2024	PERMIT SUBMITTAL

PRELIMINARY
NOT FOR CONSTRUCTION

JOB NO:	2024040
SCALE:	AS SHOWN
DRAWN:	TF
CHECKED:	JTG
SHEET	UP2
	2 OF 4

(E) POND

FOR CONTINUATION, SEE SHEET UP2

SD, TYP.

LIMITS OF GROUND SURVEY, TYP. SEE NOTE 1

DI TG 278.50

FS/TP 278.27
EG 275.2

DI TG 275.15

TP 273.30
EG 273.0

R50.0'

11+00

(E) RETAINING WALL, PIP

SAWCUT AND CONFORM TO (E) GRADE, TYP

STAIRS, TYP

20.0'

12+00

14.0'

RELOCATED PW SETTLING TANK

RELOCATED SS SEPTIC TANK

(E) WINERY SS SEPTIC TANK

(E) WINERY PW SETTLING TANK

FS 279.00

FS 285.43

FF DOOR 285.64

(E) WINERY

WINERY

SAWCUT AND CONFORM TO (E) GRADE, TYP

(E) RETAINING WALL, PIP

2.0'

17.5%

5 FT WALL

CLASS 2 AB SHOULDER

(E) VINEYARD

SHADING REPRESENTS LIMITS OF AC PAVING, TYP

R50.0'

BACK OF HOUSE/ TRASH ENCLOSURE

1,250 GAL GREASE INTERCEPTOR

FF 298.96

LID 7
75 SF
BOTTOM EL 293.85

DETECTABLE WARNING SURFACE

DI PD 297.35

PD TG 294.90

FS/EG 295.90

FS/EG 296.78

FS 297.67

FS 297.81

ACCESSIBLE PATH OF TRAVEL, TYP

DI PD 297.50

10 FT WALL

TREE, TYP

DI TG 306.50

LID 8
145 SF
BOTTOM EL 294.00

LIMITS OF GROUND SURVEY, TYP, SEE NOTE 1

PD TG 294.90

FS 295.90

FS 297.81

LID 9
250 SF
BOTTOM EL 291.40

HATCH REPRESENTS LIMITS OF PLANTING, TYP

RETAINING WALL, TYP

(E) TREE TO BE REMOVED, TYP

HATCH REPRESENTS LIMITS OF CL 2 AGG BASE, TYP

HATCH REPRESENTS LIMITS OF CONCRETE SURFACING, TYP

15 FT WALL

(E) RETAINING WALL, TO BE REMOVED

(E) CONCRETE PRODUCTION AREA TO BE REMOVED & REGRADED

(E) CULVERT, PIP

PLAZA

(E) PW SETTLING TANK TO BE RELOCATED

(E) SS SEPTIC TANK TO BE RELOCATED

HATCH REPRESENTS LIMITS OF GRAVEL SURFACING, TYP

(E) RETAINING WALL TO BE REMOVED

FS 286.00

FS 285.14

FS 278.85

FS 278.93

FS 285.60

FS 285.14

PD 284.60

FS 285.00

FS 287.68

LID 6
115 SF
BOTTOM EL 281.25

FG 286.50

FS 287.73

RETAINING WALL, TYP

FS 285.71

FS 285.67

STAIRS, TYP.

FS 289.65

FS 289.65

ENTRY COURTYARD

FS 289.68

ACCESS RAMP

FF DOOR CONFORM 290.05±

NOTES:

1. CONTOURS SHOWN OUTSIDE OF GROUND SURVEY LIMITS ARE PRODUCED FROM DATA ACQUIRED FROM THE NOAA WEBSITE AND ARE APPROXIMATE.

0 5 10 20
GRAPHIC SCALE IN FEET

SUMMIT
Summit Engineering, Inc.
575 W College Ave., Suite 201 • Santa Rosa, CA 95401
707-527-0775 • www.summit-sr.com

VINE CLIFF WINERY
7400 SILVERADO TRAIL
NAPA, CA 94558
APN 032-030-027

USE PERMIT

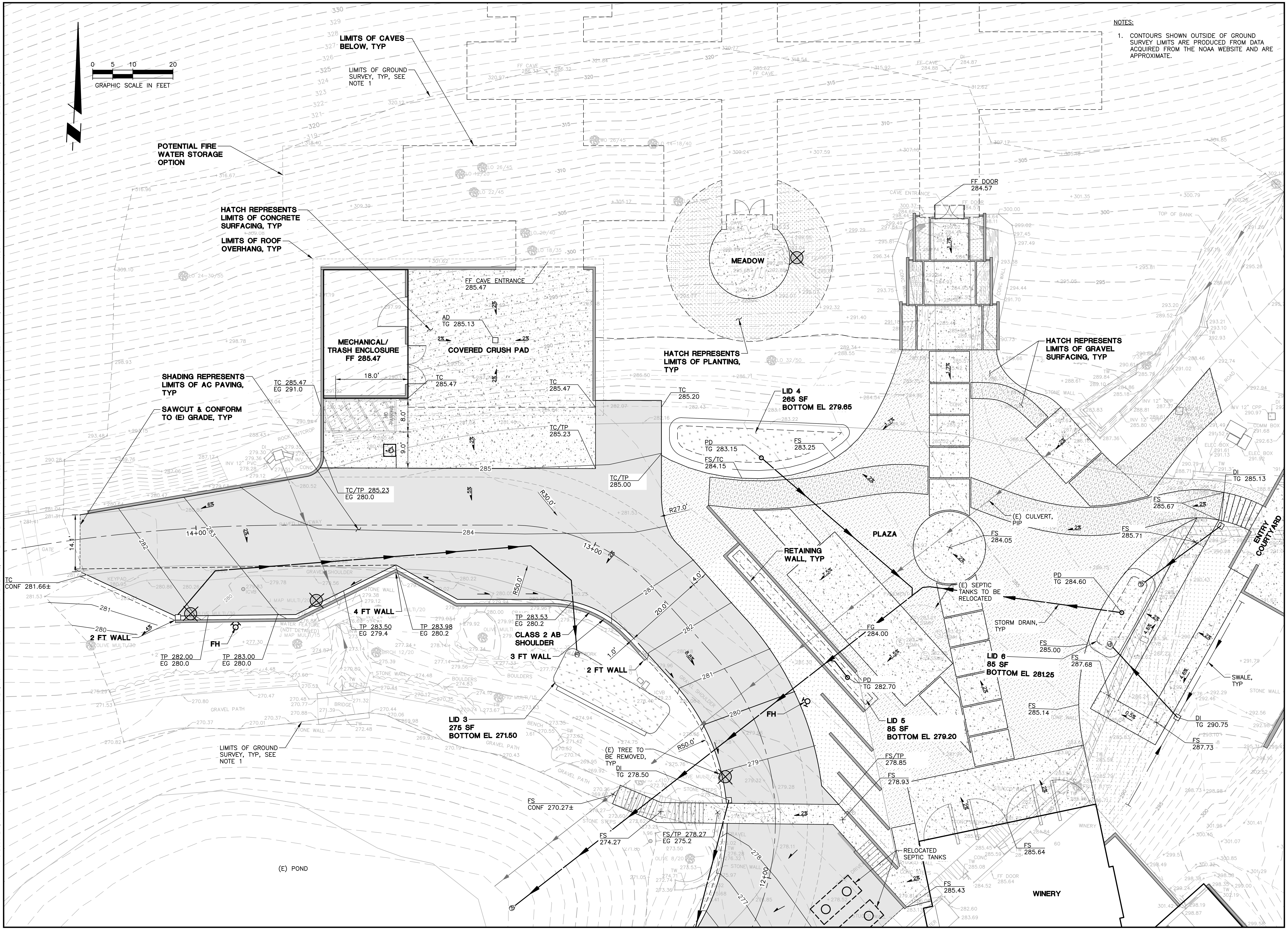
PRELIMINARY GRADING & DRAINAGE PLAN - WINERY

#	DATE	DESCRIPTION
	06/28/2024	PERMIT SUBMITTAL

PRELIMINARY
NOT FOR CONSTRUCTION

JOB NO: 2024040
SCALE: AS SHOWN
DRAWN: TF
CHECKED: JTG

SHEET UP3
3 OF 4


NOTES:
1. CONTOURS SHOWN OUTSIDE OF GROUND SURVEY LIMITS ARE PRODUCED FROM DATA ACQUIRED FROM THE NOAA WEBSITE AND ARE APPROXIMATE.
0 5 10 20
GRAPHIC SCALE IN FEET
LIMITS OF CAVES BELOW, TYP
LIMITS OF GROUND SURVEY, TYP, SEE NOTE 1
POTENTIAL FIRE WATER STORAGE OPTION
HATCH REPRESENTS LIMITS OF CONCRETE SURFACING, TYP
LIMITS OF ROOF OVERHANG, TYP
FF CAVE ENTRANCE 285.47
AD TG 285.13
MECHANICAL/ TRASH ENCLOSURE FF 285.47
COVERED CRUSH PAD
18.0'
TC 285.47
SHADING REPRESENTS LIMITS OF AC PAVING, TYP
SAWCUT & CONFORM TO (E) GRADE, TYP
TC 285.47 EG 291.0
TC/TP 285.23
TC/TP 285.23 EG 280.0
TC/TP 285.00
TC 285.20
MEADOW
HATCH REPRESENTS LIMITS OF PLANTING, TYP
LID 4 265 SF BOTTOM EL 279.65
PD TG 283.15
FS 283.25
FS/TC 284.15
FF DOOR 284.57
HATCH REPRESENTS LIMITS OF GRAVEL SURFACING, TYP
PLAZA
(E) CULVERT, PIP
FS 284.05
FS 285.71
FS 285.67
DI TG 285.13
ENTRY COURTYARD
RETAINING WALL, TYP
(E) SEPTIC TANKS TO BE RELOCATED
PD TG 284.60
STORM DRAIN, TYP
FG 284.00
FS 285.00
FS 287.68
LID 6 85 SF BOTTOM EL 281.25
PD TG 282.70
LID 5 85 SF BOTTOM EL 279.20
FS 285.14
DI TG 290.75
FS 287.73
SWALE, TYP
R30.0'
R27.0'
R50.0'
14+00
13+00
12+00
TC CONF 281.66±
2 FT WALL
FH
TP 282.00 EG 280.0
TP 283.00 EG 280.0
4 FT WALL
TP 283.50 EG 279.4
TP 283.98 EG 280.2
TP 283.53 EG 280.2
CLASS 2 AB SHOULDER
3 FT WALL
2 FT WALL
20.0'
4.0'
1.0'
LID 3 275 SF BOTTOM EL 271.50
LIMITS OF GROUND SURVEY, TYP, SEE NOTE 1
(E) TREE TO BE REMOVED, TYP
DI TG 278.50
FS CONF 270.27±
FS 274.27
FS/TP 278.27 EG 275.2
FS/TP 278.85
FS 278.93
RELOCATED SEPTIC TANKS
FS 285.64
FS 285.43
WINERY
(E) POND

SUMMIT

Summit Engineering, Inc
575 W College Ave., Suite 201 • Santa Rosa, CA 95401
707-527-0775 • www.summit-sr.com

VINE CLIFF WINERY
7400 SILVERADO TRAIL
NAPA, CA 94558
APN 032-030-027

USE PERMIT

PRELIMINARY GRADING & DRAINAGE PLAN - CAVES

#	DATE	DESCRIPTION
	06/28/2024	PERMIT SUBMITTAL

PRELIMINARY
NOT FOR CONSTRUCTION

JOB NO:	2024040
SCALE:	AS SHOWN
DRAWN:	TF
CHECKED:	JTG
SHEET	UP4

P:\2024\2024040 VINE CLIFF USE PERMIT\DWG\CVL\USE PERMIT\24040-UP1-UP5.DWG

PLOTTED ON: 6/27/2024 2:45 PM

ENCLOSURE B

WELL COMPLETION REPORT
4-HOUR WELL YIELD TEST
WATER QUALITY TEST RESULTS

QUADRUPLICATE
For Local Requirements

Page 1 of 1
Owner's Well No. _____

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 547492

Date Work Began 9-19-96, Ended 10-2-96
Local Permit Agency Napa Co. Dept. of Environmental Mgmt
Permit No. 42920 Permit Date 8-27-96

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO.
RECEIVED
LATITUDE LONGITUDE
OCT 21 1996
ENVIRONMENTAL SERVICES

GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	43	Brown rock
43	65	Soft brown rock
65	88	Soft brown shale
88	155	Black and grey rock
155	192	Red rock
192	200	Hard black rock
200	280	Hard grey rock
280	385	Hard black rock

Continued from below

		blank	screen	slot size
300	320	x		
320	340		x	.030
340	360	x		
360	380		x	.030
380	385	x		

TOTAL DEPTH OF BORING 385 (Feet)
TOTAL DEPTH OF COMPLETED WELL 385 (Feet)

WELL OWNER

Name [redacted]
Mailing Address [redacted]
CITY [redacted] STATE [redacted] ZIP

WELL LOCATION

Address 7400 Silverado Trail
City Napa
County Napa
APN Book 32 Page 030 Parcel 27
or
Township ___ Range ___ Section ___
or
Latitude ___ DEG. ___ MIN. ___ SEC. NORTH
Longitude ___ DEG. ___ MIN. ___ SEC. WEST

LOCATION SKETCH

NORTH
WEST
EAST
SOUTH
Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

X NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USE(S) (✓)

___ MONITORING
WATER SUPPLY
___ Domestic
___ Public
___ Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
___ OTHER (Specify)

DRILLING METHOD Rotary-Air FLUID Foam

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED 10-2-96
ESTIMATED YIELD* 120 (GPM) & TEST TYPE Airlift
TEST LENGTH 4 (Hrs.) TOTAL DRAWDOWN Complete
** May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CONDUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	200	13¾	x				F-480	8"	cl 200	
200	220			x						.030
220	240		x							
240	260			x						.030
260	280		x							
280	300			x						.030

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	55	x			
55	57		x		
57	385			x	Pea gravel

ATTACHMENTS (✓)

___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other ___

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Doshier-Gregson Inc
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

5365 Napa-Vallejo Hwy — American Canyon, Ca 94589
ADDRESS — CITY — STATE — ZIP

Signed _____ DATE SIGNED _____
WELL DRILLER/AUTHORIZED REPRESENTATIVE

258826
C-57 LICENSE NUMBER

DWR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Phone: 707 823 3191 **Fax:** 707 317 0057 **Email:** rayswelltesting@gmail.com **Lic#**:903708
Address: 4853 Vine Hill Rd, Sebastopol Ca 95472

Date: 06/01/23
Report #: 14742-2
Report By: Matt Owens

Subject Property Address: 7400 Silverado Trail, Napa CA 94558
Customer Name: Willis Blakewell

WELL DATA:

Location/Description of well:	Winery Well
Type of Well:	Drilled
Depth of Well:	385 Feet – per provided well log
Diameter of Well Casing:	8” PVC
Sanitary Seal (plate seal at top of well):	Yes
Annular Well Seal (in ground seal of bore hole):	57' Cement/Bentonite Seal

PUMP DATA:

Pump HP and Type:	7.5 HP 460V 3PH Goulds 65GS75 Submersible
Depth of Pump Suction:	Unknown – Please refer to installer records
Size of Tee at Well Head:	2 Inch
Submersible Cable Size:	#12-4
Water Level Control:	N/A
Backpressure Test:	52.7 GPM @ 100 PSI @ 200 Feet, 13.2 amps 70 GPM @ 0 PSI @ 253.1 Feet

WELL PRODUCTION SUMMARY (see next page for pumping log):

Length of Test: 4 Hours
Type of Test: Drawdown & Constant Pumping Level

Static Water Level:	179 Feet	**Starting Flow**	72 GPM
Water Level Drawdown:	74.1 Feet		
Final Pumping Level:	253.1 Feet	**Final Flow**	70 GPM

WELL PRODUCTION DATA & PUMPING LOG:

Date	Time	Interval	Water Level	Appearance	Sulfur Odor	Sand	GPM
06/01/23	09:30 AM	0 Minutes	179	Yellow Tint	No	No	72
06/01/23	09:45 AM	15 Minutes	242	Yellow Tint	No	No	71
06/01/23	10:00 AM	15 Minutes	245	Clear	Slight	No	71
06/01/23	10:15 AM	15 Minutes	250	Clear	Slight	No	70
06/01/23	10:30 AM	15 Minutes	253.1	Clear	Slight	No	70
06/01/23	11:00 AM	30 Minutes	253.1	Clear	Slight	No	70
06/01/23	11:30 AM	30 Minutes	253.1	Clear	Slight	No	70
06/01/23	12:00 PM	30 Minutes	253.1	Clear	Slight	No	70
06/01/23	12:30 PM	30 Minutes	253.1	Clear	No	No	70
06/01/23	01:30 PM	1 Hour	253.1	Clear	No	No	70

Final Pumping Level: 253.1 Feet
Final Flow Rate: 70 GPM

Water levels and well depth are measured as feet below top of well casing unless otherwise noted.

DISCLAIMER:
Results of well production are accurate only at time of test. We cannot predict future production or water yield.

WATER QUALITY: (The following samples are being analyzed, please refer to follow up report)
Analysis Choice: Basic Residential/Irrigation **Turnaround:** Rush

Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

05 June 2023

Ray's Well Testing Service
Attn: Ray's Well Testing Service
4853 Vine Hill Rd.
Sebastopol, CA 95472

RE: Water Quality
7400 Silverado Trail Winery Well

Work Order: 23F0104

Enclosed are the results of analyses for samples received by the laboratory on 06/01/23 13:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen F. McWeeney
Project Manager

Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | 925-828-6226 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | 916-686-5190 | ELAP# 2922
North Bay: 737 Southpoint Blvd Unit D| Petaluma, CA 94954 | 707-769-3128 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | 760-930-2555 | ELAP# 3055
Los Angeles: 1230 E. 223rd Street Suite 205 | Carson, CA 90745 | 424-267-5032 | ELAP# 3091

Ray's Well Testing Service	Project:	Water Quality	
4853 Vine Hill Rd.	Project #:	7400 Silverado Trail Winery Well	Reported:
Sebastopol CA, 95472	Project Mgr:	Ray's Well Testing Service	06/05/23 17:02

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Raw Well	23F0104-01	Water	05/31/23 16:00	06/01/23 13:20

Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

Sample Name:	Raw Well	Report Date:	06/05/23 17:02
Laboratory ID:	23F0104-01	Sample Date:	05/31/23 16:00
Notes:		Sample Received:	06/01/23 13:20

Parameter	Result	MCL	Reporting Limit	Units	Test Method	ELAP #	Notes
Total Coliforms	<1.0	1	1.0	MPN/100mL	SM9223B	2303	
E. Coli	<1.0	1	1.0	MPN/100mL	SM9223B	2303	

General Mineral and Physical

Parameter	Result	MCL	Reporting Limit	Units	Test Method	ELAP #	Notes
Total Dissolved Solids	170	*	10	mg/L	Calculation	2303*	
Calcium	16		5.0	mg/L	EPA 200.7	2303	
Magnesium	12		0.60	mg/L	EPA 200.7	2303	
Sodium	16		5.0	mg/L	EPA 200.7	2303	
Sulfate as SO4	6.1	TMC	0.50	mg/L	EPA 300.0	2303	
Chloride	5.3	TMC	0.50	mg/L	EPA 300.0	2303	
Total Alkalinity as CaCO3	220		5.0	mg/L	SM2320B	2303	
Bicarbonate Alkalinity as CaCO3	220		5.0	mg/L	SM2320B	2303	
Carbonate Alkalinity as CaCO3	<5.0		5.0	mg/L	SM2320B	2303	
Hydroxide Alkalinity as CaCO3	<5.0		5.0	mg/L	SM2320B	2303	
Hardness, Total	89		3	mg/L	SM2340B	2303	

Inorganic Chemicals

Parameter	Result	MCL	Reporting Limit	Units	Test Method	ELAP #	Notes
Arsenic	3.9	10	2.0	ug/L	EPA 200.5	2303*	
Zinc	50	5000	50	ug/L	EPA 200.7	2303	

Inorganic: Additional Analyses

Parameter	Result	MCL	Reporting Limit	Units	Test Method	ELAP #	Notes
Boron	<0.10		0.10	mg/L	EPA 200.7	2303	
Sodium Adsorption Ratio	0.74			NA	SAR	2303*	

Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

Notes and Definitions

QM-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
MCL	Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water regulated by the state of California. If no MCL is listed, the MCL has not been established.
ND	Analyte NOT DETECTED at or above the reporting limit
*	Tiered Maximum Contaminant and/or Action Levels: Sulfate and Chloride 250-500-600 mg/L, Specific Conductance 900-1600-2200 umho/cm, TDS 500-1000-1500 mg/L.

* ELAP does not offer accreditation in this matrix for the requested analyte/method combination.

Phone: (707) 823-3191 **Fax:** (707) 317-0057 **Email:** rayswelltesting@gmail.com
Address: 4853 Vine Hill Rd, Sebastopol Ca 95472 CA Lic. #: 903708

Report of Mineral Analysis

DATE: 6/2/23

CUSTOMER NAME: Willis Blakewell

PROPERTY ADDRESS: 7400 Silverado Trail - Winery Well

PARAMETER	RESULT		RECOMMENDED RANGES
	Raw - Well		
PH	6.73		< 7 Increasingly acidic - may be corrosive 6.8 to 8.5 - Recommended Range >7 Increasingly basic
TOTAL HARDNESS	5.2 gpg		< 1 gpg Soft 1 to 3.5 gpg Slightly Hard 3.5 to 7 gpg Moderately Hard 7 to 10.5 gpg Hard > 10.5 gpg Very Hard
TOTAL IRON	1.80 mg/l		0.3 mg/l - SMCL
TOTAL MANGANESE	0.27 mg/l		0.05 mg/l - SMCL
CONDUCTIVITY	261 us/cm		900 us/cm - Recommended Upper Limit 1600 us/cm - SMCL
NITRATES	ND		45 mg/l - MCL (tested as N03)
SILICA	72 mg/l		*There is no EPA recommended Limit

*Silica is increasingly reported as a nuisance at levels above 50 mg/l. 30 mg/l to 70 mg/l is common for the region.

Abbreviations: gpg = grains per gallon
mg/l = milligrams per liter
us/cm = microseimens/centimeter
< = less than
> = greater than

MCL = Primary maximum contaminant level as set by the EPA
SMCL = Secondary maximum contaminant level as set by the EPA
NT = not tested
ND = not detected

IMPORTANT INFORMATION ON THE LIMITATIONS OF THIS REPORT:
The purpose of this report is to provide information regarding the general mineralogical character of a water supply. Unless specifically noted, this report does not include analysis for bacteria or any other health related contaminants. This analysis alone is therefore not suitable for determining the safety of a drinking water supply. This report is intended for the sole and exclusive use of our client named above. Our liability for error or omissions is expressly limited to the amount paid for the analysis.

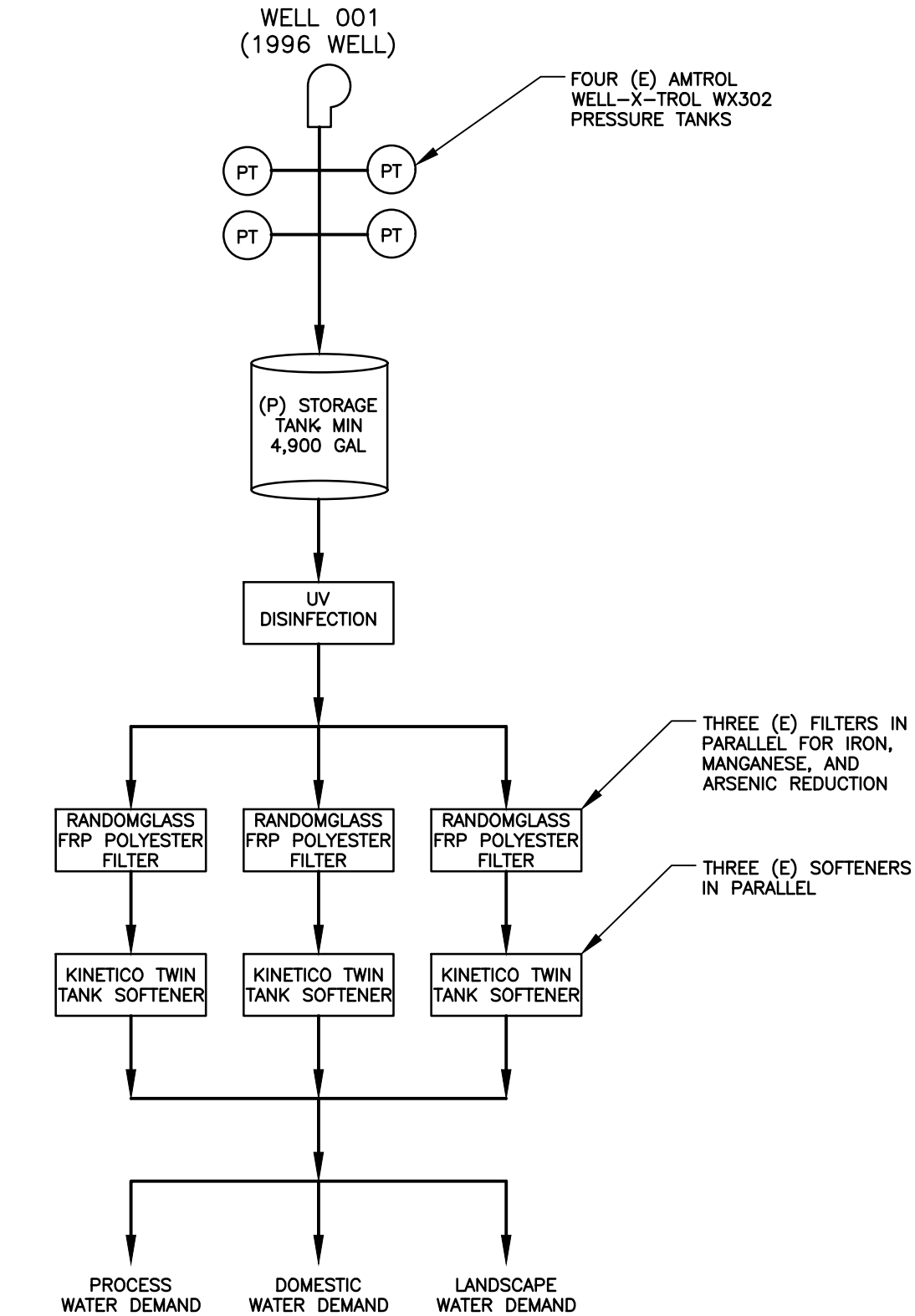
ENCLOSURE C
WATER SYSTEM SCHEMATIC

SUMMIT

VINE CLIFF WINERY
7400 SILVERADO TRAIL
NAPA, CA
APN 032-030-027

WATER SYSTEM SCHEMATIC

PROJECT NO. 2024-040
DATE 2024-08-21
SHT NO 1 OF 1
BY CC CHK GG



PLOTTED ON: 8/21/2024 2:36 PM
P:\2024\2024040 VINE CLIFF USE PERMIT\DWG\WWW\24040-W SCHEMATIC.DWG

Summit Engineering, Inc
575 W College Ave., Suite 201 • Santa Rosa, CA 95401 • 707-527-0775 • www.summit-sr.com

SUMMIT ENGINEERING, INC.
575 W. College Ave., Suite 201
Santa Rosa, CA 95401
707 527-0775
sfo@summit-sr.com