ONSITE WASTEWATER DISPOSAL FEASIBILTY STUDY

FOR THE

RELIC WINE CELLARS USE PERMIT

LOCATED AT:
2400 Soda Canyon Road
Napa, CA 94558
NAPA COUNTY APN 032-090-024

PREPARED FOR:
Relic Wine Cellars
c/o Schatzi Throckmorton & Michael Hirby
Post Office Box 327
St. Helena, CA 94574
Telephone: (707) 967-9380

PREPARED BY:

APPLIED CIVIL ENGINEERING INCORPORATED

2074 West Lincoln Avenue
Napa, California 94558
Telephone: (707) 320-4968
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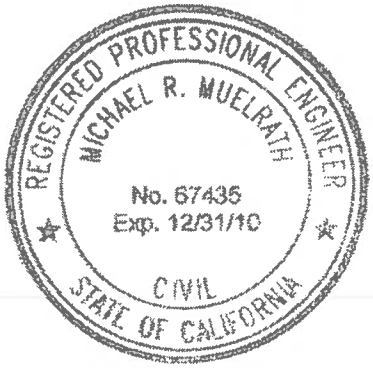
Job Number: 09-124



Michael R. Muelrath 3/31/2010

Michael R. Muelrath R.C.E. 67435 Date

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INTRODUCTION

Relic Wine Cellars is applying for a Use Permit to construct and operate a new winery at their property located at 2400 Soda Canyon Road, in Napa County, California. The subject property is located along the east side of Soda Canyon Road, approximately five miles northeast of the intersection of Soda Canyon Road and Silverado Trail. The subject parcel is also known as Napa County Assessor's Parcel Number 032-090-024.

There is an existing well and driveway on the subject parcel but no existing structures. The use permit application under consideration proposes the construction of a new winery building and winery cave. The details of the proposed winery are as follows:

- Wine Production:
  - 20,000 gallons of wine per year
  - Full wine production including:
    - Crushing
    - Fermenting
    - Aging
    - Bottling
- Employees:
  - Four (4) full-time employees

- Marketing Plan:
  - Daily Tours and Tastings by Appointment
    - 20 visitors per day maximum
  - Private Food and Wine Tasting for Trade
    - 6 per year
    - 25 guests maximum
  - Private Food and Wine Events
    - 6 per year
    - 25 guests maximum
  - Wine Auction & Release Party Events
    - 2 per year
    - 50 guests maximum
    - Portable sanitary facilities

Relic Wine Cellars has requested that Applied Civil Engineering Incorporated (ACE) evaluate the feasibility of disposing of the winery process wastewater and domestic sanitary wastewater that will be generated by the proposed winery via an onsite wastewater disposal system.

The remainder of this report describes the onsite soil conditions, the predicted process and sanitary wastewater flows and outlines the conceptual design of an onsite wastewater disposal system to serve the proposed winery.

SOILS INFORMATION

The United States Department of Agriculture Soil Conservation Service Soils Map for Napa County shows a majority of the parcel mapped as Aiken loam, 30 to 50 percent slopes. The steeply sloping eastern corner of the property is mapped as Rock outcrop and the western panhandle near Soda Canyon Road is mapped as Aiken loam, 15 to 30 percent slopes.

Two recent site specific soils evaluations have been conducted. The first site evaluation was conducted by Always Engineering on May 15, 2007 in an effort to locate an area to install a septic system for a new residence that was never constructed. The most current site evaluation was performed by Applied Civil Engineering Incorporated on November 12, 2009. The purpose of that site evaluation was to determine if additional suitable area could be located to accommodate the wastewater flows from a winery.

In total, 21 test pits were excavated, observed and recorded during the two site evaluations. The site evaluation reports indicate variable acceptable soil depths ranging from 12 inches to 50 inches of acceptable clay loam / sandy clay loam soil overlying dense sandy clay and / or bedrock. Analysis of soil texture was based on field methods and laboratory testing was not performed. Perched groundwater was not noted in any of the test pits at the time of excavation. Please refer to the Site Evaluation Reports in Appendix 3 for further soil information.

PREDICTED WASTEWATER FLOW

Winery Process Wastewater

We have used the generally accepted standard that six gallons of winery process wastewater are generated for each gallon of wine that is produced each year and that 1.5 gallons of wastewater are generated during the crush period for each gallon of wine that is produced. Based on the size of the winery and the expectation that both white and red wine will be produced at the winery, we have assumed a 45 day crush period. Using these assumptions, the annual, average daily and peak winery process wastewater flows are calculated as follows:

$$\text{Annual Winery Process Wastewater Flow} = \frac{20{,}000 \text{ gallons wine}}{\text{year}} \times \frac{6 \text{ gallons wastewater}}{1 \text{ gallon wine}}$$

Annual Winery Process Wastewater Flow = 120,000 gallons per year

$$\text{Average Daily Process Wastewater Flow} = \frac{120{,}000 \text{ gallons wastewater}}{\text{year}} \times \frac{1 \text{ year}}{365 \text{ days}}$$

Average Daily Winery Process Wastewater Flow = 329 gallons per day

$$\text{Peak Winery Process Wastewater Flow} = \frac{20{,}000 \text{ gallons wine}}{\text{year}} \times \frac{1.5 \text{ gallons wastewater}}{1 \text{ gallon wine}} \times \frac{1 \text{ year}}{45 \text{ crush days}}$$

Peak Winery Process Wastewater Flow = 667 gallons per day (gpd)

Winery Sanitary Wastewater

The peak sanitary wastewater flow from the winery is calculated based on the number of winery employees, the number of daily visitors for tours and tastings and the number of guests attending marketing events. In accordance with Table 4 of the Napa County Environmental Management Department "Regulations for Design, Construction, and Installation of Alternative Sewage Treatment Systems" we have used a design flow rate of 15 gallons per day per employee and 3 gallons per day per visitor for tours and tastings. Table 4 does not specifically address design wastewater flows for guests at marketing events. We have estimated 5 gallons of wastewater per guest at marketing events since meals will be prepared offsite. Based on these assumptions, the peak winery sanitary wastewater flows are calculated as follows:

Employees

Peak Sanitary Wastewater Flow = 4 employees X 15 gpd per employee

Peak Sanitary Wastewater Flow = 60 gpd

Daily Tours and Tastings

Peak Sanitary Wastewater Flow = 20 visitors per day X 3 gallons per visitor

Peak Sanitary Wastewater Flow = 60 gpd

Private Food and Wine Events – Meal Prepared Offsite

Peak Sanitary Wastewater Flow = 25 guests X 5 gallons per guest

Peak Sanitary Wastewater Flow = 125 gpd

Total Peak Winery Sanitary Wastewater Flow

Assuming that daily tours and tastings and private food and wine events may occur on the same day and that all events with more than 25 guests will utilize portable sanitary facilities, the total peak winery sanitary wastewater flow is calculated as follows:

Total Peak Winery Sanitary Wastewater Flow = 60 gpd + 60 gpd + 125

Total Peak Winery Sanitary Wastewater Flow = 245 gpd

Combined Peak Wastewater Flow

Combined Peak Wastewater Flow = Peak Winery Process Wastewater Flow + Total Peak Winery Sanitary Wastewater Flow

Combined Peak Flow = 667 gpd + 245 gpd

Combined Peak Flow = 912 gpd, use 1,000 gpd

RECOMMENDATIONS

Given the soil conditions reported from the site evaluations, the proposed site plan layout and the design wastewater flows calculated above, we recommend that the area in the vicinity of the Always Engineering Test Pits #2 and #3 be used for wastewater disposal. We have identified two possible scenarios for disposing of the process and sanitary wastewater generated at the subject parcel:

Option #1 – Combined Sanitary and Process Wastewater Disposal Field

Option #2 - Sanitary Wastewater Disposal Field and Process Wastewater Hold and Haul

The decision about which type of wastewater disposal system to implement will be made by the property owner and the engineer at the time of building permit submittal.

The following sections of this report outline the conceptual design of the wastewater disposal systems for both of these options.

Option #1 – Combined Sanitary and Process Wastewater Disposal Field

In this scenario all sanitary and process wastewater would be treated and disposed of onsite in a subsurface drip type septic system.

Required Disposal Field Area

The soil encountered in the proposed disposal field area consists of sandy clay loam with a strong subangular blocky structure. We recommend a soil application rate of 0.6 gallons per square foot per day. Since the slope of the existing ground in the disposal field area is in excess of 20% we recommend that the drip tubing spacing be increased from the standard two foot spacing to three feet. This will increase the required disposal field area by 50%. The required disposal field area is calculated as follows:

$$\text{Required Disposal Field Area} = \frac{1{,}000 \text{ gpd}}{0.6 \text{ gpd per square foot}} \times 150\%$$

Required Disposal Field Area = 2,500 square feet

Available Disposal Field Area

Based on the topographic mapping prepared by REB Engineering, ACE has determined that there is enough area to install the required 2,500 square feet of subsurface drip disposal field in the vicinity of Always Engineering Test Pits #2 and #3. The conceptual layout of the disposal field is shown on the Relic Wine Cellars Use Permit Site Plan, prepared by Albion Surveys, which is included in reduced format in Appendix 2 of this document.

200% Reserve Area

Napa County code requires that an area be set aside to accommodate a future onsite wastewater disposal system in the event that the primary system fails. For subsurface drip disposal fields, the reserve area must be two times the area of the primary system. Based on the topographic map prepared by REB Engineering, ACE has determined that there is enough area to set aside for an additional 5,000 square feet of subsurface drip disposal field in the vicinity of Test Pits #1, #2, #3 and #5.

Septic Tank Capacity

The process and sanitary wastewater from the winery buildings should be collected in septic tanks and must be treated to Napa County Environmental Management Department Pretreated Effluent requirements (BOD_5 < 30 mg/l and TSS < 30 mg/l) prior to delivery to the disposal field.

We recommend that at least two 1,500 gallon septic tanks be installed to provide a minimum of three to five days of hydraulic retention time for peak winery process wastewater flows. Furthermore, for ease of operation and maintenance, we recommend that the sanitary wastewater flows from the winery building be kept separate from the process wastewater flows and be directed to a separate 1,200 gallon septic tank. Effluent from the winery process wastewater septic tanks and effluent from the winery sanitary wastewater septic tank should join in a common vessel from which it will be dosed to the treatment system. Depending on the type of treatment system selected, additional septic tanks may be required. Furthermore, a sump tank and pumping system will be required to deliver effluent from the treatment system to the disposal field.

Option #2 – Sanitary Wastewater Subsurface Drip Disposal and Process Wastewater Hold and Haul

In this scenario the sanitary wastewater would be disposed of in a subsurface drip disposal field and process wastewater would be temporarily stored and then would be hauled offsite for treatment and disposal by the Napa Sanitation District, East Bay Municipal Utility District or a similar municipal wastewater treatment plant.

Required Disposal Field Area

Sanitary wastewater disposal is the same as that described in Option #1 above. The required disposal field area is calculated as follows:

$$\text{Required Disposal Field Area} = \frac{245 \text{ gpd}}{0.6 \text{ gpd per square foot}} \times 150\%$$

Required Disposal Field Area = 613 square feet

Available Disposal Field Area

The disposal field would be located in the same area as described in Option #1 above.

200% Reserve Area

The 200% reserve area would be located in the same area as described in Option #1 above.

Septic Tank Capacity

Sanitary wastewater septic tank capacity and pretreatment requirements are similar to Option #1 described above.

Winery Process Wastewater Disposal

The winery process wastewater hold and haul system must be designed to hold at least seven days of peak flow. The required holding tank volume is calculated as follows:

Required Holding Tank Volume = 667 gallons per day × 7 days

Required Holding Tank Volume = 4,669 gallons

The holding tank must have a water level alarm and be designed and constructed in accordance with the requirements outlined in the Napa County Environmental Management Department Hold and Haul for Winery Process Wastewater Management information sheet. Based on the anticipated wastewater flows and site access conditions it is likely that a 3,500 gallon septic pumping truck would service the hold and haul system. This would mean that pumping of the hold and haul system would need to occur one to two times per week during crush and approximately two to three times per month outside of the crush season.

CONCLUSION

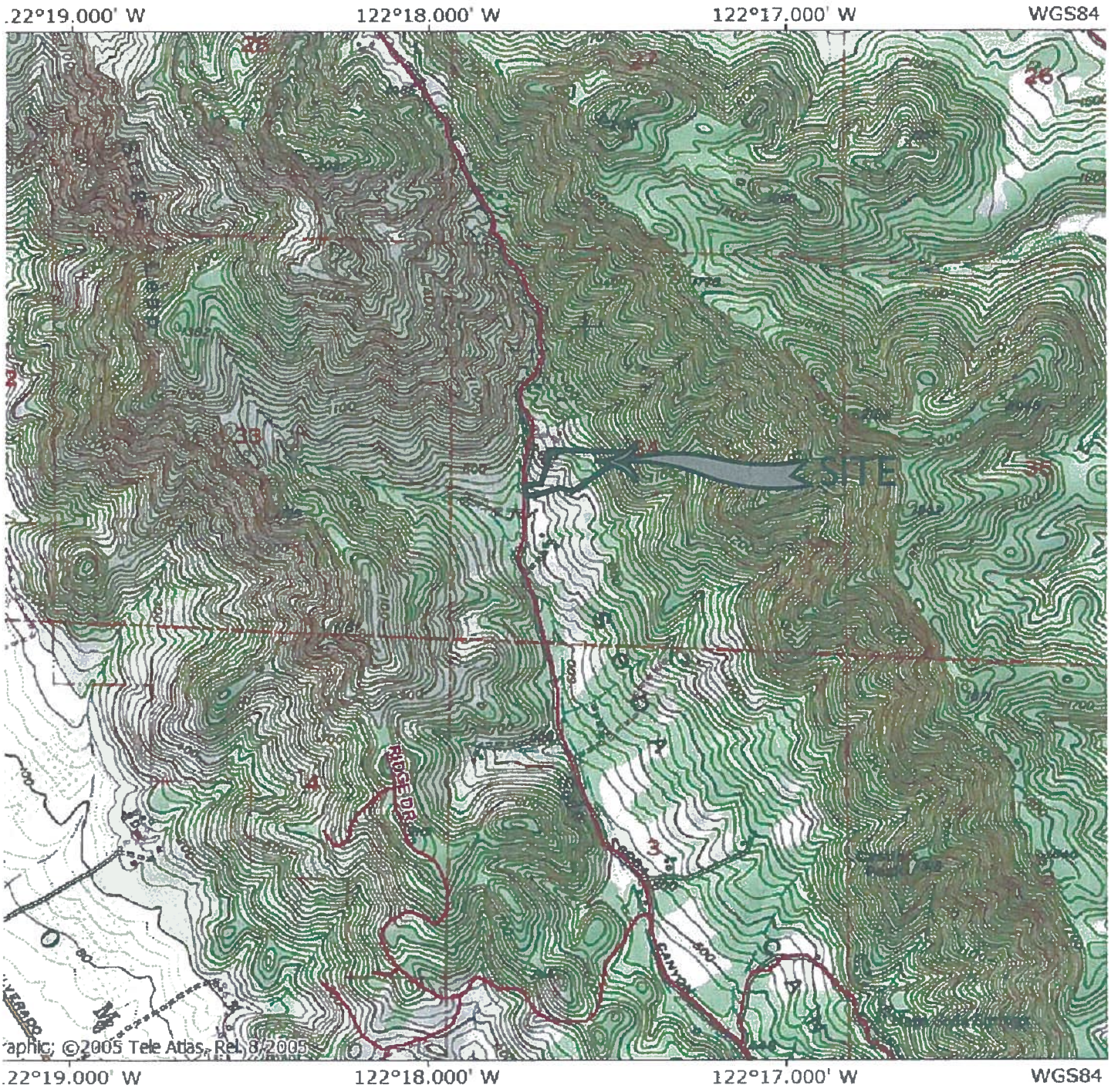
It is our opinion that the wastewater from the proposed winery can be accommodated in either of the two options previously described. Full design calculations and construction plans for the wastewater system(s) should be prepared in accordance with Napa County Environmental Management Department standards at the time of building permit application.

APPENDIX 1: Site Topography Map

SITE TOPOGRAPHY MAP

REPRESENTS A PORTION OF THE USGS 7.5 MINUTE QUADRANGLE "YOUNTVILLE"
REPRODUCED FROM NATIONAL GEOGRAPHIC TOPO!
OUTDOOR RECREATION MAPPING SOFTWARE

SCALE: 1" = 2,000'

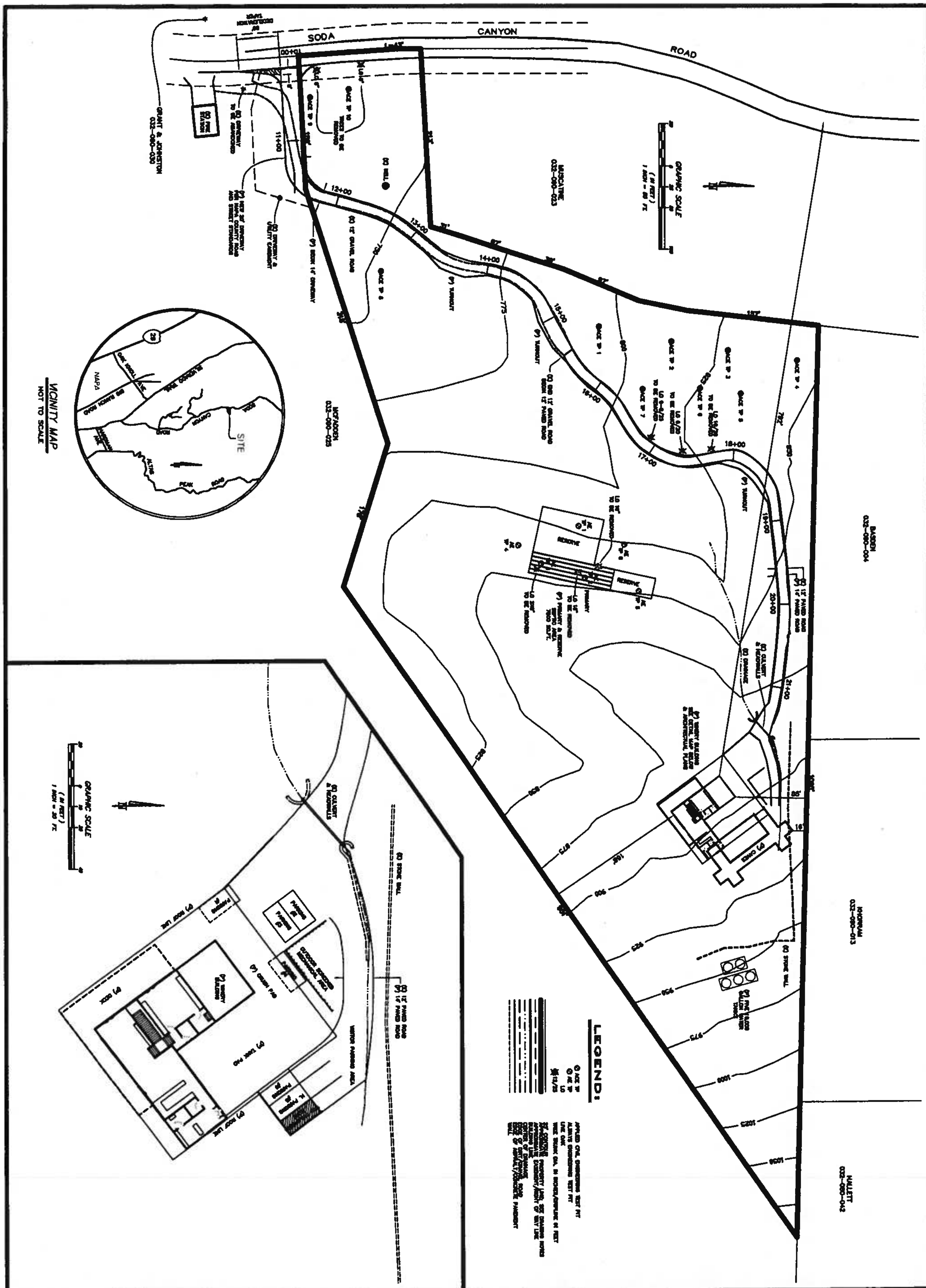


APPLIED
CIVIL ENGINEERING
INCORPORATED
2074 West Lincoln Avenue
Napa, CA 94558
(707)320-4968 (707)320-2395 Fax

RELIC WINE CELLARS

2400 SODA CANYON ROAD
NAPA, CA 94558
APN 032-090-024

APPENDIX 2: Relic Wine Cellars Use Permit Site Plan



ALBION SURVEYS, INC.
1113 HUNT AVENUE
ST. HELENA, CA 94574
(707) 963-1217

DRAWING NOTES

SITE INFORMATION

ARCHITECT

ENGINEER

OWNER'S REPRESENTATIVE

WINERY USE MAP
OF THE LANDS OF
HIRBY & THROCKMORTON,
RELIC WINERY
COUNTY OF NAPA STATE OF CALIFORNIA

REVISIONS & ADDITIONS

ALBION REFERENCES

APPENDIX 3: Site Evaluation Reports and Test Pit Maps

Napa County Department of
Environmental Management

SITE EVALUATION REPORT

Please attach an 8.5" x 11" plot map showing the locations of all test pits triangulated from permanent landmarks or known property corners. The map must be drawn to scale and include a North arrow, surrounding geographic and topographic features, direction and % slope, distance to drainages, water bodies, potential areas for flooding, unstable landforms, existing or proposed roads, structures, utilities, domestic water supplies, wells, ponds, existing wastewater treatment systems and facilities.

Permit #: E07-00268

APN: 032-090-024

(County Use Only)
Reviewed by: DC Date: 6.4.07

PLEASE PRINT OR TYPE ALL INFORMATION

Property Owner: Wirt	☒ New Construction ☐ Addition ☐ Remodel ☐ Relocation ☐ Other:
Property Owner Mailing Address:	☒ Residential - # of Bedrooms: 5 Design Flow: 600 gpd
City State Zip	☐ Commercial – Type: Sanitary Waste: gpd Process Waste: gpd
Site Address/Location: 2400 SODA CANYON RD. NAPA, CA	☐ Other: Sanitary Waste: gpd Process Waste: gpd

Evaluation Conducted By:

Company Name: Always Engineering	Evaluator's Name: Ben W. Monroe	Signature (Civil Engineer, R.E.H.S., Geologist, Soil Scientist)
Mailing Address: 6865 LOIS LANE		Telephone Number: (707) 318-7099
City: FORESTVILLE State: CA Zip: 95436		Date Evaluation Conducted: 5-15-07

Primary Area

Acceptable Soil Depth: 24-50 in. Test pit #'s: TP1, TP2, TP3, TP5, TP7

Soil Application Rate (gal. /sq. ft. /day): 1675F/100 GPD

System Type(s) Recommended: Subsurface Drip

Slope: 20-40 %. Distance to nearest water source: 100 ft +

Hydrometer test performed? No ☒ Yes ☐ (attach results)

Bulk Density test performed? No ☒ Yes ☐ (attach results)

Groundwater Monitoring Performed? No ☒ Yes ☐ (attach results)

Expansion Area

Acceptable Soil Depth: in. Test pit #'s:

Soil Application Rate (gal. /sq. ft. /day): SAME AS

System Type(s) Recommended: PRIMARY

Slope: %. Distance to nearest water source: ft.

Hydrometer test performed? No ☐ Yes ☐ (attach results)

Bulk Density test performed? No ☐ Yes ☐ (attach results)

Groundwater Monitoring Performed? No ☐ Yes ☐ (attach results)

Site constraints/Recommendations:

- 25' SETBACK TO EPHEMERAL DRAINAGE
- 30%+ SLOPES
- SEE ATTACHED REPORT

✓

Always Engineering, Inc.
14479 Western Avenue
Guerneville, CA 95446
phone (707) 318-7099

Logged By: BWM
Date: 9/15/2007

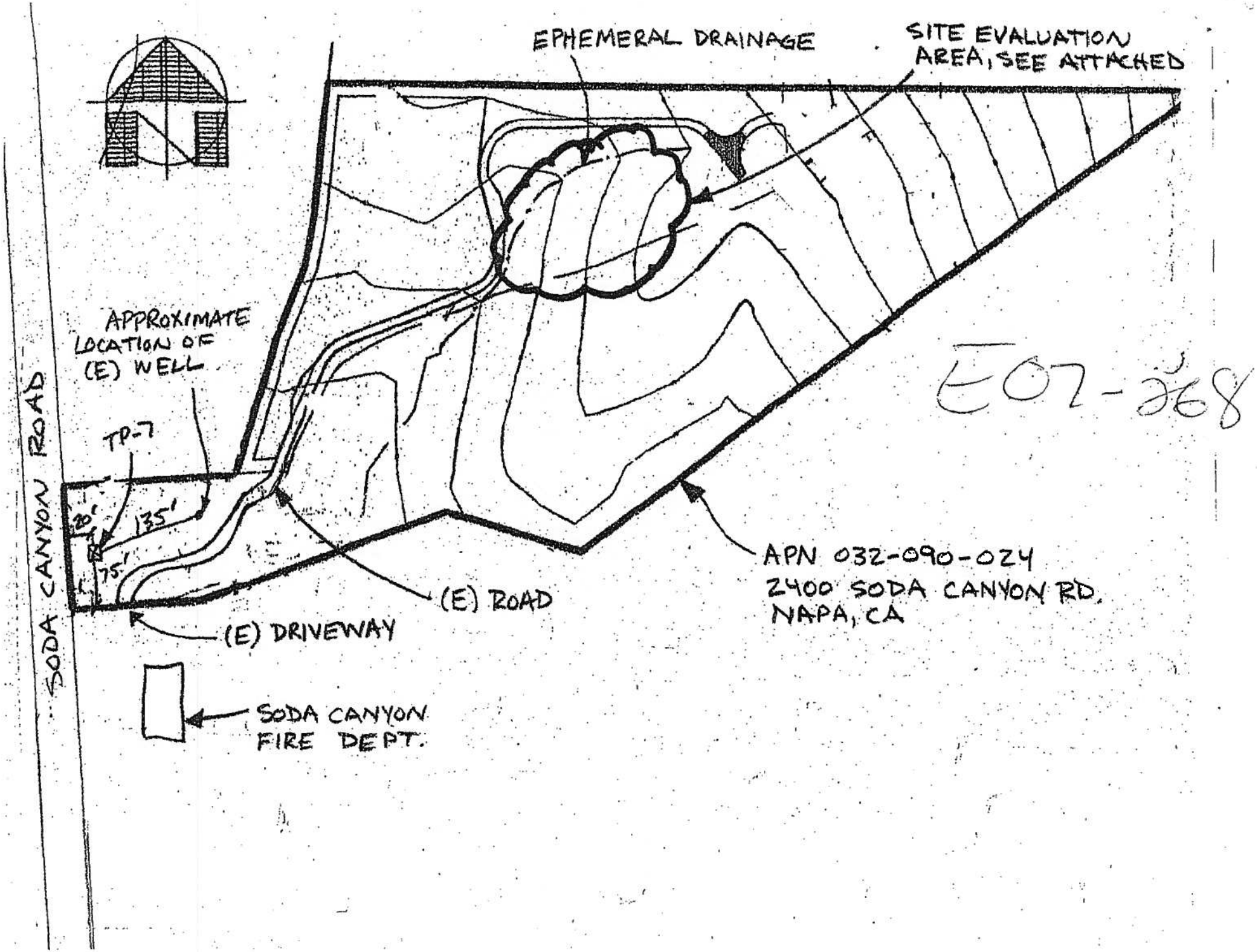
Soil Profile Data

for
Jack and Jane McSorley
2400 Soda Canyon Road, Napa, Ca
APN: 032-090-024

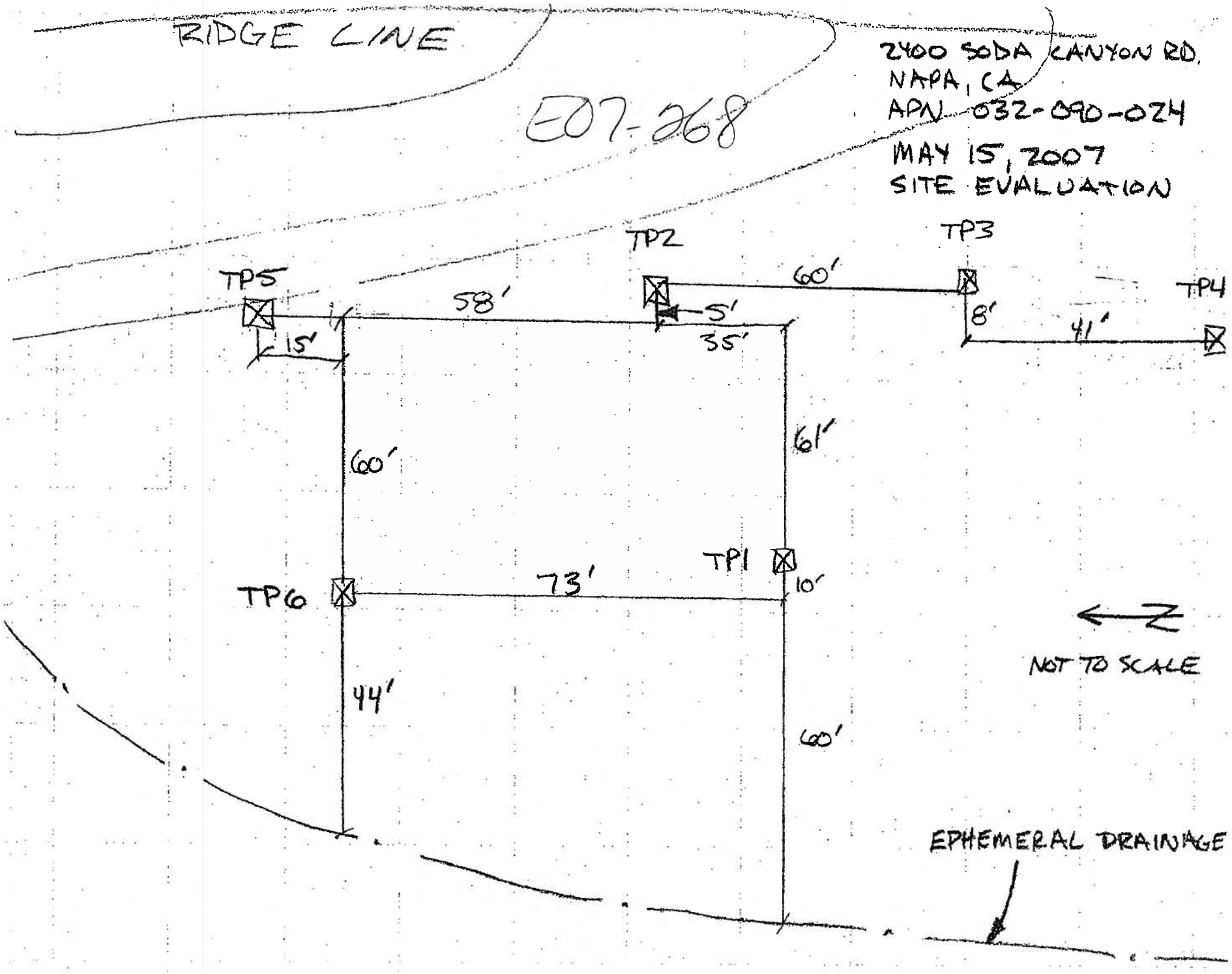
Checked By: Daniel Chaote
Date: 5/15/2007

PROFILE	HORIZON DEPTH	BOUNDARY	% ROCK	TEXTURE	STRUCTURE	CONSISTENCY			POROSITY	ROOTS	MOTTLING	Notes
						Side Wall	Ped	Wet				
TP1	Slope = 30%		Hillside Area									
A	22	C	10	SCL	SSAB	VF	VH	SS	C,C	M,C	0	
B	48	C	10	SCL	SSAB	VF	VH	SS	C,C	F,F	0	
C	54	-	20	SC	SAB	VF	VH	SS	F,F	0	0	
TP2	Slope = 30%		Hillside Area									
A	22	C	10	SCL	SSAB	VF	VH	SS	C,C	M,C	0	
B	32	D	10	SCL	SSAB	VF	VH	SS	C,C	C,M	0	
C	50	D	10	SCL	SSAB	VF	VH	SS	C,M	F,M	0	
D	60	-	20	SC	SAB	VF	VH	SS	F,F	-	0	
TP3	Slope = 20% - 30%		Hillside Area									
A	30	D	30	SCL	SSAB	VF	VH	SS	C,C	M,VC	0	
B	34	-	65	SCL/ROCK	SB	ExF	ExF	SS	M,C	C,M	0	
C	On uphill side, rock begins at 28". If slope exceeds 30% at this profile, then this shall be considered uphill limit. Fill may be used and systemprovided uphill if less than 30% slope.											
TP4	Slope = 20% - 30%		Hillside Area									
A	18	C	30	SCL	SSAB	VF	VH	SS	C,C	M,VC	0	
B	33	-	75	SCL/ROCK	SB	ExF	ExF	SS	M,C	C,M	0	
C												
TP5	Slope = 30%		Hillside Area									
A	24	D	15	SCL	SSAB	VF	H	SS	M,C	M,VC	0	
B	32	D	40	SCL	SSAB	VF	H	SS	C,M	C,C	0	
C	42	-	75	SCL/ROCK	SB	ExF	VH	SS	F,F	0	0	
TP6	Slope = 30%		Hillside Area									
A	24	C	10	SCL	SSAB	VF	VH	SS	C,C	M,C	0	
B	32	D	40	SHALE/ROCK	SPLATY	ExF	ExH	SS	F,VF	0	0	
C												
TP7	Slope = 5% - 10%		Between Soda Canyon Rd. and Well									
A	24	D	15	SCL	SSAB	F	H	SS	C,M	C,M	0	
B	34	D	65	SCL/ROCK	SSAB	ExF	ExH	SS	C,M	0	0	
C												

USDA Texture Class	Structure	Consistence			Porosity	Roots	Mottling
G = Gravel S=Sand LS = Loamy Sand SCL = Sandy Clay Loam SI = Silt SIL = Silty Loam SICL = Silty Clay Loam SC = Sandy Clay SIC = Silty Clay C = Clay	G = Granular PL = Platey PR = Prismatic Cpr = Columnar BK = Blocky ABK = Angular Blocky SBK = Subangular Blocky M= Massive Grade: Weak = 1 Med = 2 Strong = 3 Size: Fine = F Medium = M Coarse = C Very Coarse = VC	Side Wall L= Loose S = Soft SH = Slightly Hard H = Hard VH = Very Hard ExH = Extremely Hard	Ped L = Loose VFRB = Very Friable FRB = Friable F = Firm VF = Very Firm ExF = Extremely Firm	Wet NS = NonSticky SS = Slightly Sticky S = Sticky VS = Very Sticky NP = NonPlastic SP = Slightly Plastic P = Plstic VP = Very Plastic	Qty: 1 = Few 2 = Common 3= Many Size: VF = Very Fine F = Fine M = Medium C = Coarse VC = Very Coarse	Qty: 1 = Few 2 = Common 3= Many Size: F = Fine M = Medium C = Coarse VC = Very Coarse ExC = Extremely Coarse Dec/SS = Decomposing Sandstone SMPL = Sample	Qual/Redox = O/R Qty: 1 = Few 2 = Common 3= Many Size: F = Fine M = Medium C = Coarse Contrast: F = Faint D = Distinct P = Prominent


EPHEMERAL DRAINAGE
SITE EVALUATION AREA, SEE ATTACHED
APPROXIMATE LOCATION OF (E) WELL
TP-7
20'
135'
75'
SODA CANYON ROAD
(E) ROAD
(E) DRIVEWAY
APN 032-090-024
2400 SODA CANYON RD.
NAPA, CA
SODA CANYON FIRE DEPT.

E07-368


RIDGE LINE
E07-268
2400 SODA CANYON RD.
NAPA, CA
APN 032-090-024
MAY 15, 2007
SITE EVALUATION
TP1
TP2
TP3
TP4
TP5
TP6
58'
60'
5'
35'
8'
41'
15'
60'
61'
73'
10'
44'
60'
NOT TO SCALE
EPHEMERAL DRAINAGE

Napa County Department of Environmental Management

SITE EVALUATION REPORT

Please attach an 8.5" x 11" plot map showing the locations of all test pits triangulated from permanent landmarks or known property corners. The map must be drawn to scale and include a North arrow, surrounding geographic and topographic features, direction and % slope, distance to drainages, water bodies, potential areas for flooding, unstable landforms, existing or proposed roads, structures, utilities, domestic water supplies, wells, ponds, existing wastewater treatment systems and facilities.

Permit #:E09-00500
APN: 032-090-024
(County Use Only) Reviewed by: Date:

PLEASE PRINT OR TYPE ALL INFORMATION

Property Owner Michael Hirby Schatzi Throckmorton	X New Construction ☐ Addition ☐ Remodel ☐ Relocation ☐ Other:
Property Owner Mailing Address Post Office Box 327	☐ Residential - # of Bedrooms: 0 Design Flow :0 gpd
City State Zip St. Helena CA 94574	X Commercial – Type: Winery Sanitary Waste: 150-300 gpd Process Waste: 500-750 gpd
Site Address/Location 2400 Soda Canyon Road Napa, CA 94558	☐ Other: Sanitary Waste: gpd Process Waste: gpd

Evaluation Conducted By:

Company Name Applied Civil Engineering Incorporated	Evaluator's Name Michael R. Muelrath, R.C.E. 67435	Signature (Civil Engineer, R.E.H.S., Geologist, Soil Scientist) Michael R. Muelrath
Mailing Address: 2074 West Lincoln Avenue		Telephone Number (707) 320-4968
City State Zip Napa CA 94558		Date Evaluation Conducted November 12, 2009

Primary Area

Acceptable Soil Depth: 27 to 30 inches Test pit #'s: 9 & 10

Soil Application Rate (gal. /sq. ft. /day): 0.6

System Type(s) Recommended: Subsurface Drip

Slope: <5% Distance to nearest water source: 100+ feet

Hydrometer test performed? No X Yes ☐ (attach results)

Bulk Density test performed? No X Yes ☐ (attach results)

Percolation test performed? No X Yes ☐ (attach results)

Groundwater Monitoring Performed? No X Yes ☐ (attach results)

Expansion Area

Acceptable Soil Depth: 27 to 30 inches Test pit #'s: 9 & 10

Soil Application Rate (gal. /sq. ft. /day): 0.6

System Type(s) Recommended: Subsurface Drip

Slope: <5% Distance to nearest water source: 100+ feet

Hydrometer test performed? No X Yes ☐ (attach results)

Bulk Density test performed? No X Yes ☐ (attach results)

Percolation test performed? No X Yes ☐ (attach results)

Groundwater Monitoring Performed? No X Yes ☐ (attach results)

Site constraints/Recommendations:

The property owner is planning to build a new winery on the subject parcel. A subsurface drip type septic system was previously designed and approved for this site however the residence was never constructed and the system was never installed. The purpose of this site evaluation was to see if it is possible to locate any additional area that is acceptable for wastewater disposal.

The limiting condition in each of the areas tested was the presence of >50% rock at a shallow depth. The only two test pits that had acceptable soil conditions were #9 & #10 located near Soda Canyon Road. The primary constraints in this area are the setback from Soda Canyon Road and the well setback.

Test Pit #1

PLEASE PRINT OR TYPE ALL INFORMATION

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-20	G	30-50	CL	MSB	S	VFRB	SS	CF/FM	CF/CM	NONE
20+		>50%								

Test Pit #2

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-12	G	30-50	CL	MSB	SH	FRB	SS	CF/FM	CF/CM	NONE
12+		>50%								

Test Pit #3

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-20	G	0-15	CL	MSB	SH	VFRB	SS	CF/CM	CF/CM	NONE
20+		>50%								

Test Pit #4

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-18	G	15-30	CL	MSB	S	VFRB	SS	CF/FM	FF/FM	NONE
18+		>50%								

Test Pit #5

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-20	G	0-15	CL	MSB	S	VFRB	SS	CF/FM	CF/CM /FC	NONE
20+		>50%								

Test Pit #6

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-12	G	0-15	CL	MSB	S	VFRB	SS	CF/CM	CF/CM	NONE
12+		>50%								

Test Pit #7

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-20	G	0-15	CL	G	S	VFRB	SS	CF	CF/CM/ FC	NONE
20+		>50%								

Test Pit #8

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-18	G	30-50	CL	G	S	VFRB	SS	CF/FM	CF/FM	NONE
18+		>50%								

Test Pit #9

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-27	G	0-15	CL	MSB	S	VFRB	SS	CF/CM	FF/FM	NONE
27+		>50%								

Test Pit #10

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-30	G	0-15	CL	MSB	S	VFRB	SS	CF/CM	FF/FM	NONE
30+		>50%								

Test Pit #11

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-12	G	0-15	CL	MSB	S	VFRB	SS	CF/CM	CF/CM	NONE
12+		>50%								

Test Pit #12

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-24	G	0-15	CL	MSB	S	VFRB	SS	CF/FM	CF/FM	NONE
24+		>50%								

Note: Ground slope = 30% +

Test Pit #13

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-12	G	0-15	CL	MSB	S	VFRB	SS	CF/FM	CF/FM	NONE
12+		>50%								

Test Pit #14

Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
					Side Wall	Ped	Wet			
0-14	G	0-15	CL	MSB	S	VFRB	SS	CF/FM	CF/FM	NONE
14+		>50%								

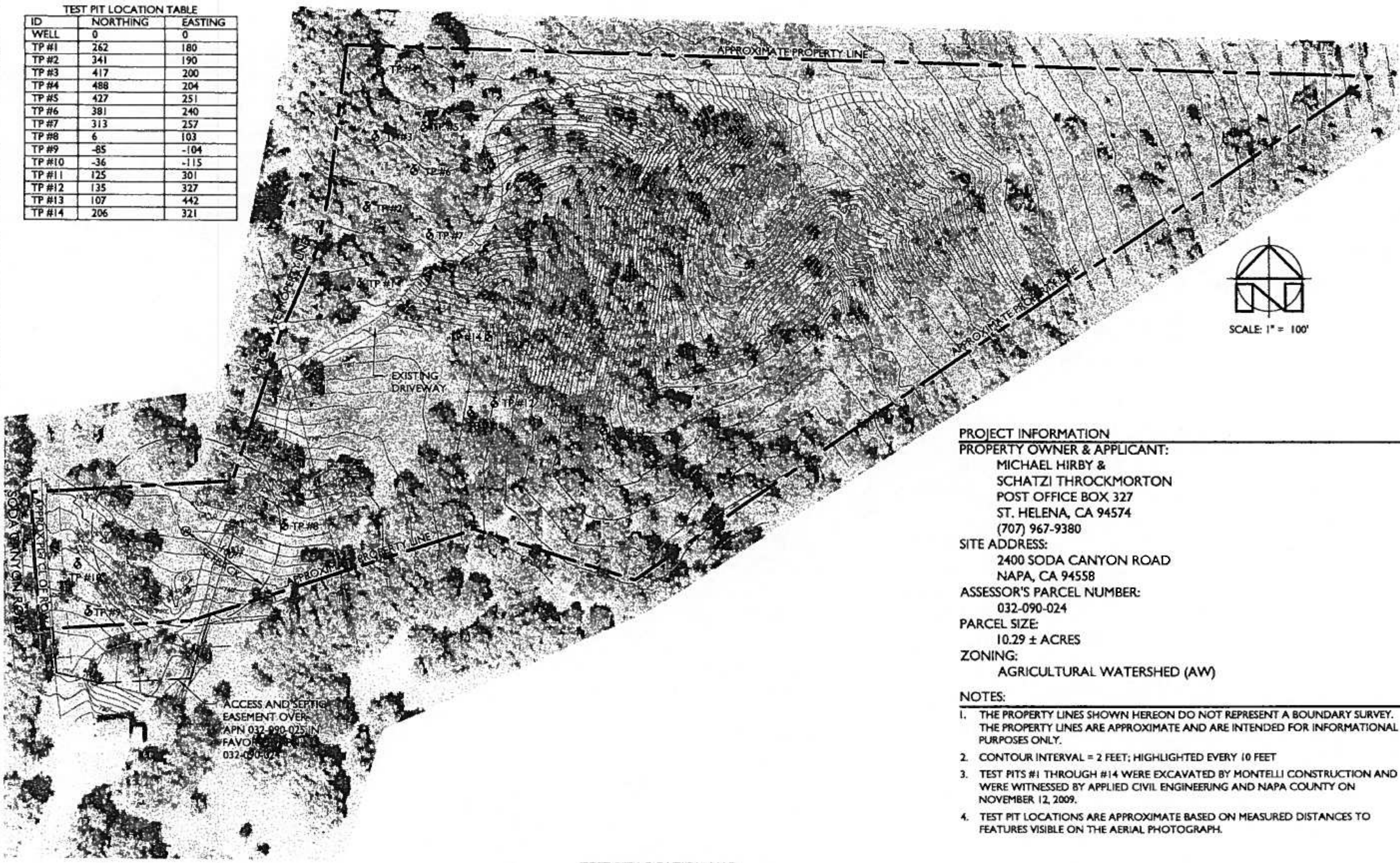
LEGEND

Boundary	Texture	Structure	Consistence			Pores	Roots	Mottling
			Side Wall	Ped	Wet			
A=Abrupt <1"	**S**=Sand	**W**=Weak	**L**=Loose	**L**=Loose	**NS**=NonSticky	**Quantity:**	**Quantity:**	**Quantity:**
C=Clear 1"-2.5"	**LS**=Loamy Sand	**M**=Moderate	**S**=Soft	**VFRB**=Very Friable	**SS**=Slightly Sticky	**F**=Few	**F**=Few	**F**=Few
G=Gradual 2.5"-5"	**SL**=Sandy Loam	**S**=Strong	**SH**=Slightly Hard	**FRB**=Friable	**S**=Sticky	**C**=Common	**C**=Common	**C**=Common
D=Difuse >5"	**SCL**=Sandy Clay Loam	**G**=Granular	**H**=Hard	**F**=Firm	**VS**=Very Sticky	**M**=Many	**M**=Many	**M**=Many
	SC=Sandy Clay	**Pl**=Platy	**VH**=Very Hard	**VF**=Very Firm	**NP**=NonPlastic	**Size:**	**Size:**	**Size:**
	CL=Clay Loam	**Pr**=Prismatic	**ExH**=Extremely Hard	**ExF**=Extremely Firm	**SP**=Slightly Plastic	**VF**=Very Fine	**F**=Fine	**F**=Fine
	L=Loam	**C**=Columnar			**P**=Plastic	**F**=Fine	**M**=Medium	**M**=Medium
	C=Clay	**B**=Blocky			**VP**=Very Plastic	**M**=Medium	**C**=Coarse	**C**=Coarse
	SiC=Silty Clay	**AB**=Angular Blocky				**C**=Coarse	**VC**=Very Coarse	**Contrast:**
	SiCL=Silty Clay Loam	**SB**=Subangular Blocky				**VC**=Very Coarse	**ExC**=Extremely Coarse	**Ft**=Faint
	SiL=Silt Loam	**M**=Massive						**D**=Distinct
	Si=Silt	**SG**=Single Grain						**P**=Prominent
		CEM=Cemented						

Notes:
Structure is recorded as Modifier then Structure - for example, Moderate (M) Subangular Blocky (SB) is recorded as MSB
Pores and Roots are recorded as Quantity then Size – for example Few (F) Coarse (C) is recorded as FC
Mottling is recorded as Quantity then Size then Contrast – for example Few (F) Coarse (C) Distinct (D) is recorded as FCD

TEST PIT LOCATION TABLE

ID	NORTHING	EASTING
WELL	0	0
TP #1	262	180
TP #2	341	190
TP #3	417	200
TP #4	488	204
TP #5	427	251
TP #6	381	240
TP #7	313	257
TP #8	6	103
TP #9	-85	-104
TP #10	-36	-115
TP #11	125	301
TP #12	135	327
TP #13	107	442
TP #14	206	321



TEST PIT LOCATION MAP
SCALE: 1" = 100'

PROJECT INFORMATION

PROPERTY OWNER & APPLICANT:
MICHAEL HIRBY &
SCHATZI THROCKMORTON
POST OFFICE BOX 327
ST. HELENA, CA 94574
(707) 967-9380

SITE ADDRESS:
2400 SODA CANYON ROAD
NAPA, CA 94558

ASSESSOR'S PARCEL NUMBER:
032-090-024

PARCEL SIZE:
10.29 ± ACRES

ZONING:
AGRICULTURAL WATERSHED (AW)

NOTES:

1. THE PROPERTY LINES SHOWN HEREON DO NOT REPRESENT A BOUNDARY SURVEY. THE PROPERTY LINES ARE APPROXIMATE AND ARE INTENDED FOR INFORMATIONAL PURPOSES ONLY.
2. CONTOUR INTERVAL = 2 FEET; HIGHLIGHTED EVERY 10 FEET
3. TEST PITS #1 THROUGH #14 WERE EXCAVATED BY MONTELLI CONSTRUCTION AND WERE WITNESSED BY APPLIED CIVIL ENGINEERING AND NAPA COUNTY ON NOVEMBER 12, 2009.
4. TEST PIT LOCATIONS ARE APPROXIMATE BASED ON MEASURED DISTANCES TO FEATURES VISIBLE ON THE AERIAL PHOTOGRAPH.

APPLIED CIVIL ENGINEERING

DRAWN BY: MRM
CHECKED BY: MRM

2400 SODA CAYNON ROAD

TEST PIT LOCATION MAP

MICHAEL HIRBY &
SCHATZI THROCKMORTON
POST OFFICE BOX 327
ST. HELENA, CA 94574
APN 032-090-024

DATE: DECEMBER 11, 2009
JOB NUMBER: 09-134
FILE: 09-134TP.DWG
ORIGINAL SIZE: 11"X17"
SCALE: AS NOTED
SHEET NUMBER: 1 OF 1

Napa County Department of Environmental Management
CUPA-Related Business Activities Form

Business Name: Relic Winery

Business Address: PO 327, St Helena, CA 94574

Contact: Schatzi Throckmorton **Phone #:** 707-967-9380

A. HAZARDOUS MATERIALS Have on site (for any purpose) hazardous materials at or above 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases (include liquids in AST's and UST's or handle radiological materials in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40 or 70?	☐ YES ☒ NO
B. UNDERGROUND STORAGE TANKS (UST's) 1. Own or operate underground storage tanks? 2. Intend to upgrade existing or install new UST's?	☐ YES ☒ NO ☐ YES ☒ NO
C. ABOVE GROUND STORAGE TANKS (AST's) Own or operate AST's above these thresholds: -Any tank capacity with a capacity greater than 660 gallons, or -The total capacity for the facility is greater than 1,320 gallons?	☐ YES ☒ NO
D. HAZARDOUS WASTE 1. Generate hazardous waste? 2. Recycle more than 220 lbs/month of excluded or exempted recyclable materials (per H&SC §25143.2)? 3. Treat hazardous waste on site? 4. Treatment subject to financial assurance requirements (for Permit by Rule and Conditional Authorization)? 5. Consolidate hazardous waste generated at a remote site?	☐ YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO
E. OTHER 1. Does the business activity include car/fleet washing, mobile detailing, auto-body related activities? 2. Does the business handle Extremely Hazardous Substances in amounts that would qualify for the Risk Management Program? Some examples and their thresholds common to Napa County include: Ammonia – 500 lbs, Sulfur Dioxide – 500 lbs, Chlorine – 500 lbs.	☐ YES ☒ NO ☐ YES ☒ NO

UPHILL SEPTIC
CAVE CLEARANCE

Hornisher, Trish

From: Mike Muelrath [Mike@appliedcivil.com]
Sent: Thursday, July 15, 2010 6:46 AM
To: Withrow, Kim
Cc: Hornisher, Trish; Jon Webb; Michael Hirby; Schatzi Throckmorton
Subject: Relic Winery - Uphill Septic System
Attachments: 2444 Soda Canyon Road Septic - Doug Rowser Letter Regarding Septic History.pdf

Hi Kim,

Attached is the letter from Doug Rowser, previous owner and builder of the house located at 2444 Soda Canyon Road, confirming that the test pits were in fact excavated where the septic system was installed and that the original test pit map was incorrect.

Please review and let me know if you have any further questions.

Thank you,

Mike

Mike Muelrath, P.E.
Principal

APPLIED
CIVIL ENGINEERING
INCORPORATED

2074 West Lincoln Avenue
Napa, CA 94558

(707) 320-4968 (Telephone)
(707) 320-2395 (Facsimile)

www.appliedcivil.com

APPLIED
CIVIL ENGINEERING
INCORPORATED

July 8, 2010

Job No. 09-124

Doug Rowser
18871 Rocky Trail
Lower Lake, CA 95457

Re: 2444 Soda Canyon Road (Napa County APN 032-080-042, formerly 032-080-015)

Dear Mr. Rowser:

Thank you for taking the time to discuss the history of development of the property located at 2444 Soda Canyon Road in Napa, California. I understand that you owned the property and developed a residence on the property in the late 1980's / early 1990's. The purpose of this letter is to confirm my understanding of how the property was developed and to document the actual location of where septic system test pits were excavated and where the septic system was installed because there is an apparent discrepancy in the information contained in the County files. Below is my understanding:

- Test pits were excavated in 1989 by Napa Septic and were observed by Napa County Environmental Management Department
- The "Test Pit Map" dated 9/13/1989 (Attachment A) shows the house site and test pits located incorrectly
- The house site and test pits were actually located on an adjacent parcel and a lot line adjustment was completed to bring the house site and septic site onto your property (then APN 032-080-015)
- The test pits excavated in 1989 were actually located in the same location where the septic system was installed
- The house site and actual septic system locations are accurately reflected on the "As Built" dated 6/9/1994 (Attachment B)

Please review and confirm that this information is correct. In particular we are trying to establish that the test pits were excavated in the same location as where the septic system was installed so that we can determine the appropriate setback for a new cave on an adjoining property.

2074 West Lincoln Avenue ◆ Napa, CA 94558 ◆ (707) 320-4968 ◆ Fax (707) 320-2395 ◆ www.appliedcivil.com

Please feel free to contact me if you have any questions or need me to clarify anything outlined above. If this information is correct we would appreciate your acknowledgement by signing in the space provided below. We will then file this letter with Napa County so that their files have the correct information.

Thank you again for your assistance in clarifying this information.

Sincerely,

Michael R. Muelrath

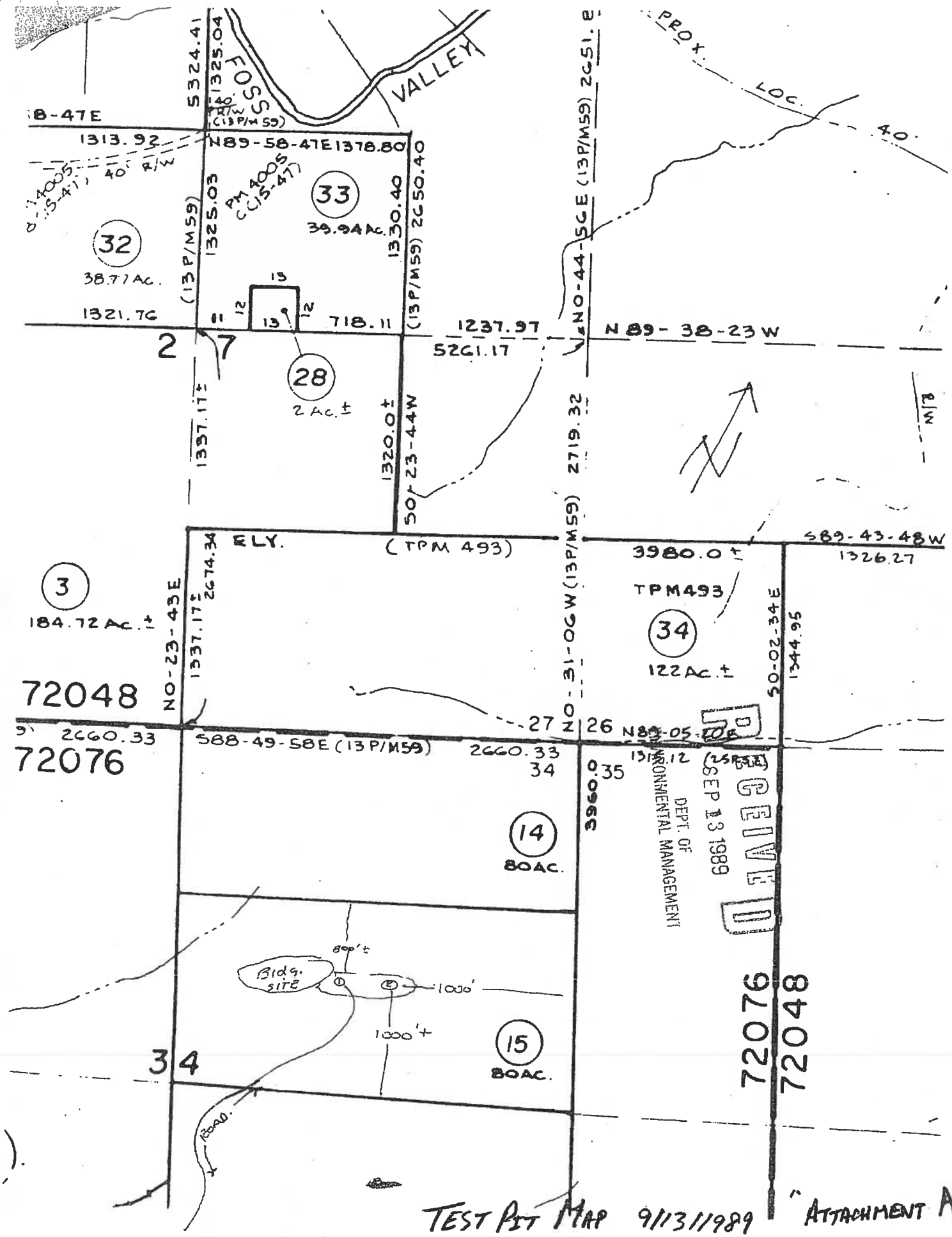
Michael R. Muelrath, P.E.
Principal

Enclosures:
Attachment A "Test Pit Map"
Attachment B "As Built"

The information described in this letter correctly describes the location of the test pits and septic system to the best of my knowledge:

Doug Rowser 7-12-2010

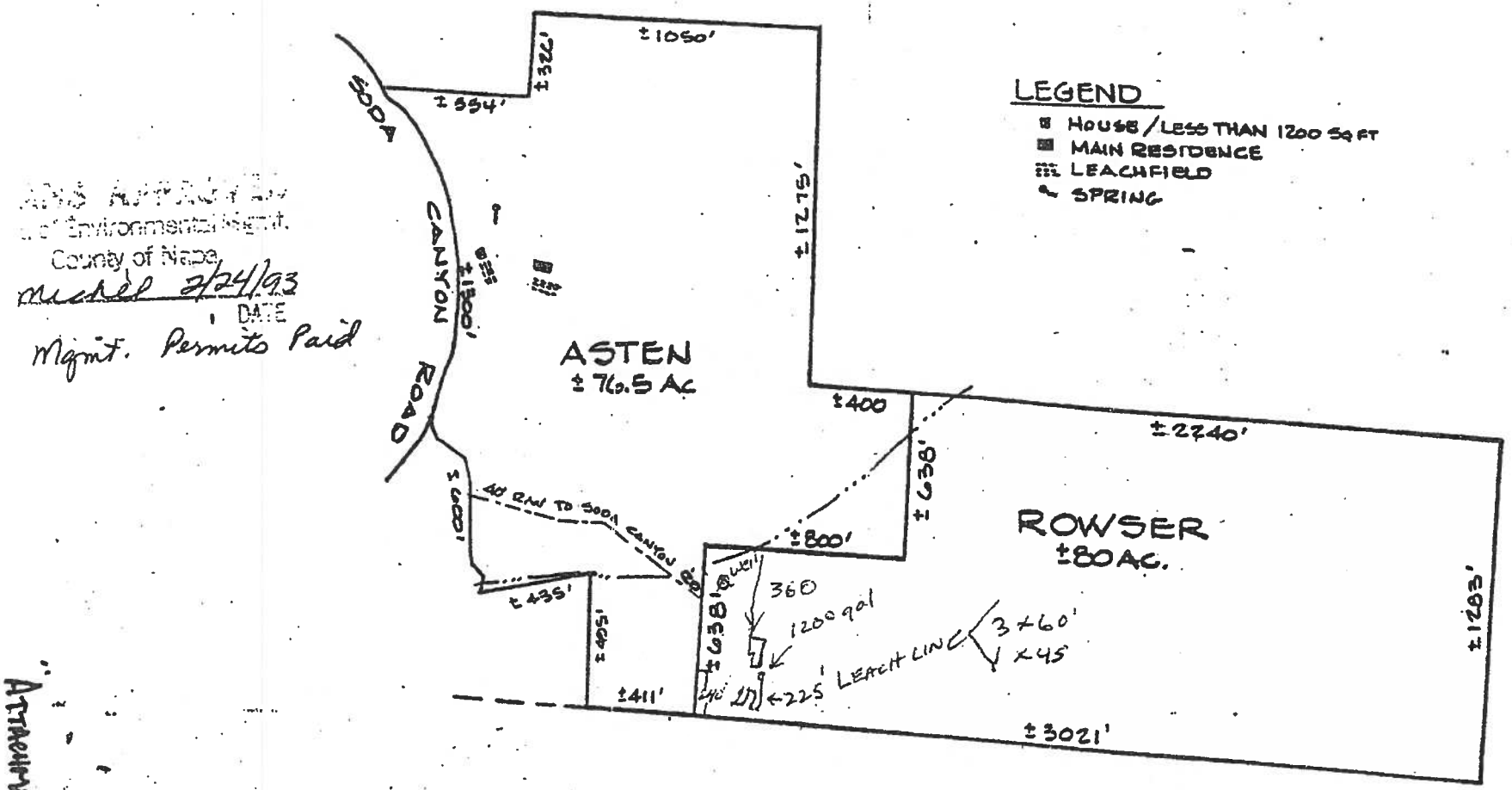
Doug Rowser Date



TEST PIT MAP 9/13/1989 "ATTACHMENT A"

TENTATIVE MAP
FOR A LOT LINE ADJUSTMENT
OF THE LANDS OF
DOUGLAS ROWSER (APN 32-080-~~35~~ 42)
AND
ZORKA ASTEN (APN 32-090-03)

RECEIVED
JUN 9 1994
ENVIRONMENTAL MANAGEMENT



APNS Authorized by
the Environmental Health
County of Napa
Michael 2/24/93
DATE
Mgmt. Permits Paid

ATTACHMENT B

PROPOSED

SEPTIC AS-BUILT - 6/9/1994