

June 28, 2007  
#06-43

Christine Secheli  
Napa County Department of  
Environmental Management  
1195 Third Street, Room 101  
Napa, CA 94559

Re: Onsite Wastewater Disposal Feasibility Study for the Calistoga Artisan Village, Bennett Lane, Calistoga, CA, APN 017-130-034

Dear Ms. Secheli:

At the request of Robert Pecota we have evaluated the feasibility of providing onsite sanitary and process wastewater disposal for the proposed Calistoga Artisan Village located at Bennett Lane in Napa County, California. It is our understanding that the proposed Calistoga Artisan Village facility will consist of a new winery with a full crushing production of 48,000 gallons of wine per year, a new cheese production building with the capacity to produce 70,000 pounds of cheese per year and a new olive oil production building with the capacity to process 150 tons of olives per year. Each production activity will occur in one of three separate buildings arranged around a central square (see Calistoga Artisan Village Conceptual Site Plan prepared by Bartelt Engineering, dated June 2007).

Information about the proposed staffing level at the proposed facility was provided by the Applicant (see attached "Narrative Regarding Employees, Visitors & Traffic"). The following is a summary of the proposed staffing levels:

Winery Personnel:

Full-Time Cellar Workers	2	(Daily)
Part-Time Winemaker	1	(Daily)
Part-Time Crush Workers	4	(Daily September & October)
Part-Time Bottling Workers	6	(Daily April & August)

Cheese Production Personnel:

Full-Time Cheese Maker	1	(Daily)
Full-Time Production Assistant	1	(Daily)
Part-Time Cheese Packers	2	(Daily)

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## Olive Oil Production Personnel:

Part-Time Production Foreman	1	(Daily November & December)
Part-Time Production Workers	4	(Daily November & December)
Part-Time Bottling Workers	4	(Daily January)

## Retail Personnel:

Full-Time Store Manager	1	(Daily)
Full-Time Store Worker	1	(Daily)

## Administration Personnel:

Full-Time Facilities Manager	1	(Daily)
Full-Time Office Administrator	1	(Daily)

The Calistoga Artisan Village facility is proposing a modest marketing program. The facility will be open to the public by appointment only. It is planned that there will be an average of 240 visitors per week with 60 visitors on a peak day. The Calistoga Artisan Village will host up to eight community events per year with up to 48 visitors in attendance. Catered food service will be provided for special events. No large scale food preparation or dishwashing will occur onsite for special events.

This feasibility study is based on the "Topographic Map of a Portion of the Lands of Pecota", prepared by Michael W. Brooks & Associates dated September 2006, revised October 2006 and a site evaluation performed on October 18, 2006 by Taylor Bailey Construction and Napa County Department of Environmental Management.

As part of our work we have reviewed the files at Napa County Department of Environmental Management, held conversations with Napa County Department of Environmental Management staff, as well as performed several visits to the site to view existing conditions.

The following paragraphs outline the anticipated process and sanitary wastewater flows from the facility and our recommendations for onsite wastewater disposal.

**Winery Process Wastewater Flow**

We have calculated the peak daily and annual daily average winery process wastewater flow based on Napa County standards and our past experience with projects of this type.

For our calculations we have assumed that the peak water usage period will occur during crush operations, that crush will last approximately 45 days and that 1.5 gallons of wastewater will be generated during crush for every gallon of wine that is processed. We have also assumed that, on average, six gallons of wastewater will be generated each year for every gallon of wine produced.

Peak Winery Process Wastewater Flow =

$$\frac{(48,000 \text{ gallons of wine per year})(1.5 \text{ gallons of water per 1 gallon of wine})}{45 \text{ days of crush per year}} = 1,600 \text{ gpd}$$

Average Winery Process Wastewater Flow:

$$\frac{(48,000 \text{ gallons of wine per year})(6 \text{ gallons of water per 1 gallon of wine})}{365 \text{ days per year}} = 789 \text{ gpd}$$

#### **Cheese Production Process Wastewater Flow**

We have calculated the average daily process wastewater flow based on information provided by the Applicant. The calculation is based on the assumption that the production of cheese and the generation of wastewater occurs uniformly throughout the year and that three gallons of wastewater will be generated for each pound of cheese produced.

Average Cheese Production Wastewater Flow:

$$\frac{(70,000 \text{ pounds of cheese per year})(3 \text{ gallons of water per 1 pound of cheese})}{365 \text{ days per year}} = 575 \text{ gpd}$$

#### **Olive Oil Production Process Wastewater Flow**

We have calculated the peak daily process wastewater flow based on information provided by the Applicant. The calculation is based on the assumption that the processing of olives and the generation of wastewater occurs uniformly throughout the months of November and December and that 420 gallons of water will be used to process one ton of olives.

Average Olive Processing Wastewater Flow:

$$\frac{(150 \text{ tons of olives per year})(420 \text{ gallons of water per 1 ton of olives})}{61 \text{ days in November \& December}} = 1,033 \text{ gpd}$$

### **Sanitary Wastewater Flow**

All plumbing fixtures in the proposed buildings will be low flow, water saving fixtures per the Uniform Plumbing Code as adopted by the Napa County Building Department.

Based on the planned employee numbers presented above, we have determined that the maximum staffing level will consist of 17 employees during the bottling season. However, we recommend that the septic system be designed for 21 employees (the total number of planned employees) to allow a degree of flexibility.

Peak sanitary wastewater flows can be itemized as follows:

Employees:

$$(21 \text{ employees}) \times (15 \text{ gpd per employee}) = 315 \text{ gpd}$$

Visitors:

$$(60 \text{ visitors per day}) \times (3 \text{ gallons per visitor}) = 180 \text{ gpd}$$

Special Events:

$$(48 \text{ visitors per day}) \times (5 \text{ gallons per visitor}) = 240 \text{ gpd}$$

$$\text{Peak sanitary wastewater} = 315 \text{ gpd} + 180 \text{ gpd} + 240 \text{ gpd}$$

$$\text{Peak sanitary wastewater flow} = 735 \text{ gallons per day}$$

### **Recommendations**

Based on the site evaluation, proposed wastewater flows and available area, Bartelt Engineering recommends that the process wastewater from the winery facility, cheese production facility and the olive oil production facility be pre-treated via an aerated lagoon and that final disposal be via surface irrigation of the onsite vineyard. We recommend that the sanitary wastewater from the entire facility be disposed of via a subsurface drip type septic system.

The remainder of this report outlines the conceptual design of the process wastewater and sanitary wastewater disposal systems.

### Process Wastewater Disposal System

Process wastewater from each of the three production buildings will be combined into a single waste stream. The combined waste stream will be screened and the pH will be adjusted prior to entering the proposed aerated lagoon.

Bartelt Engineering proposes that the existing onsite pond be converted to an aerated lagoon for treating the process wastewater. The existing pond will need to be modified to meet State and County requirements for wastewater ponds. We have analyzed the capability of the existing pond to serve as an aerated lagoon. For this feasibility study we have assumed that the existing pond would be divided into two cells by a baffle, have a total depth of 12 feet with two feet of free board and interior side slopes of 3:1. The analysis of the existing pond was performed using a water balance calculation accounting for inflow from each of the three processing facilities and rainfall and outflow due to evaporation and irrigation of the onsite vineyards (see attached spreadsheets). Based on the design flows presented above, historical precipitation and evaporation data, as well as a proposed irrigation schedule for 4.9 ± acres of onsite vineyard we have determined that the existing pond will provide in excess of 150 days of hydraulic retention time which should be more than adequate for the level of treatment required.

Treatment requirements for the process wastewater stream are as follows:

<u>Characteristic</u>	<u>Units</u>	<u>Pre-Treatment</u>	<u>Post-Treatment</u>
pH	N/A	2.5 to 5.5	6.0 to 8.0
BOD <sub>5</sub> Mass Loading	mg/l	2,000 to 7,000	160
Total Suspended Solids	mg/l	10 to 500	80
Settleable Solids (SS)	mg/l	25 to 100	1.0

Disposal of the treated process wastewater will be via irrigation of 4.9 ± acres of onsite vineyard (see attached spreadsheets). The disposal area is located outside of all required disposal field setbacks (see Calistoga Artisan Village Conceptual Site Plan prepared by Bartelt Engineering, dated June 2007). Furthermore, all disposal field areas will be labeled with signage indicating the use of treated process wastewater for irrigation in accordance with Napa County Department of Environmental Management standards.

### Sanitary Wastewater Disposal System

This design consists of collecting all sanitary wastewater from the proposed buildings, removing the settleable solids, treating the wastewater to lower the BOD and suspended solids levels to Napa County's Pre-Treated Effluent standards and ultimately disposing of the treated sanitary wastewater via a subsurface drip disposal field.

A site evaluation was performed by Taylor Bailey Construction and Napa County Department of Environmental Management on October 18, 2006 to locate an area for the sanitary wastewater disposal field (see attached). The soils encountered in the area of the proposed disposal field can generally be described as having a United States Department of Agriculture soil texture classification of clay/sandy clay, moderate sub-angular blocky structure and a shallow acceptable depth of approximately 30 inches.

Based on the site evaluation, we have determined that the soil in the disposal field area is Class IV. The design hydraulic loading rate for a Class IV soil is 0.20 gallons per square foot per day (reference Table 10 in Napa County's Design, Construction and Installation of Alternative Sewage Treatment Systems). The required disposal field area is calculated as follows:

$$\text{Disposal Field Area} = \frac{735 \text{ gallons per day}}{0.20 \text{ gallons per square foot per day}} = 3,675 \text{ square feet}$$

There is adequate area to install the required disposal field and to accommodate the 200% reserve area (see Calistoga Artisan Village Conceptual Site Improvement Plan prepared by Bartelt Engineering, dated June 2007).

### Summary

It is our opinion that the proposed project is feasible from an onsite wastewater disposal standpoint. Full design calculations and construction plans will be completed after your approval of the Use Permit and the conceptual designs presented above. If you have any questions regarding our recommendations please feel free to call me.

Sincerely,

*Michael R. Muelrath*

Michael R. Muelrath, P.E.  
Project Engineer



MRM:sd

enclosures

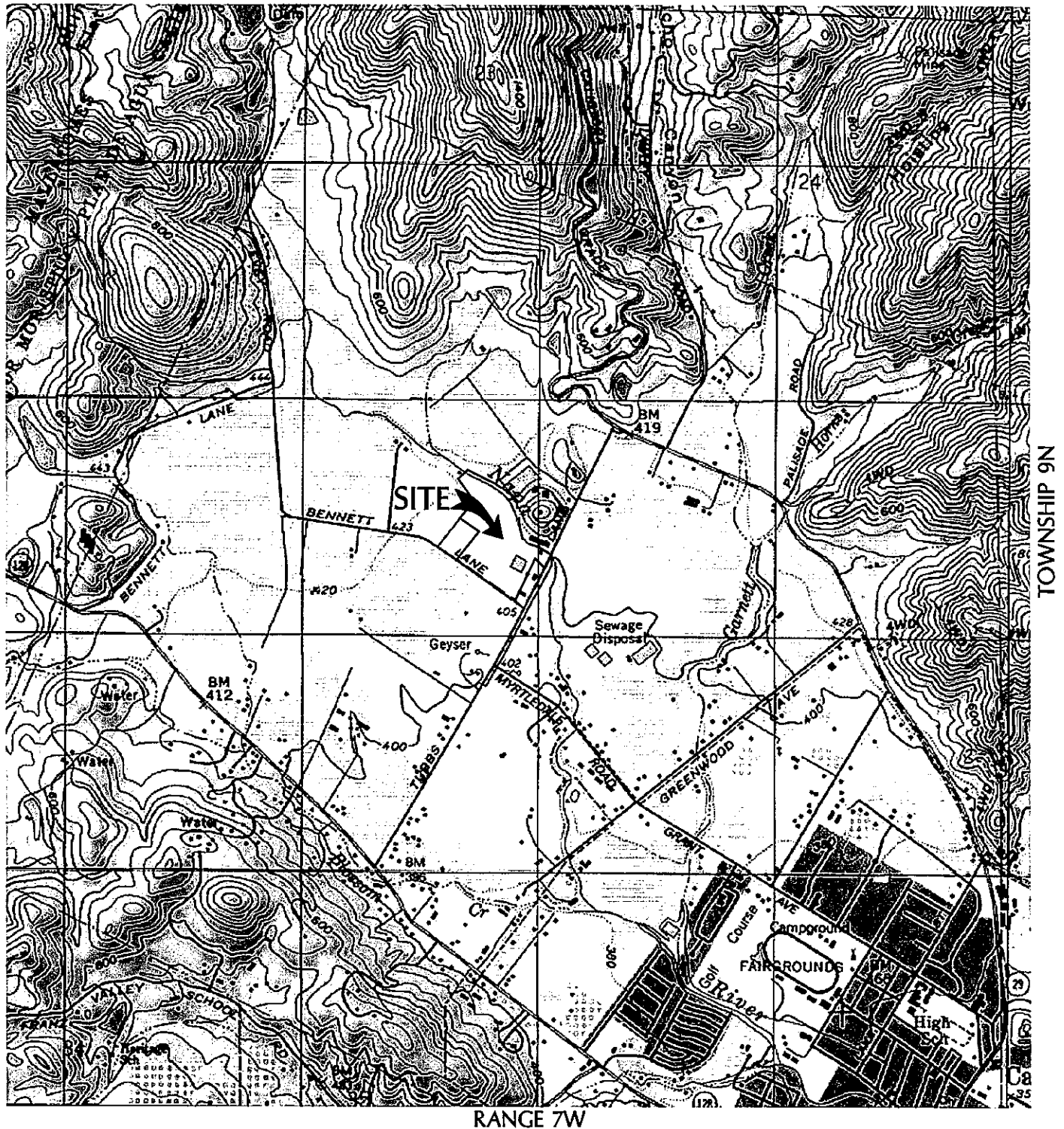
cc: Robert Pecota, Calistoga Artisan Village, LLC

# TOPOGRAPHIC SITE LOCATION INFORMATION



USGS 7.5 MINUTE QUADRANGLE "CALISTOGA"

Scale: 1" = 2000'



**BARTELT**  
**engineering**

civil engineering • land planning  
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(707) 258-1301 • fax (707) 258-2926

Calistoga Artisan Village

Bennett Lane

Calistoga, CA 94515

APN 017-150-004

Job no. 06-43

June 2007

Calistoga Artisan Village  
**Wastewater Pond Balance**

Table I

**WASTEWATER POND BALANCE (GALLONS):**

Month	Beginning Balance	Wastewater Flow	10 year Rainfall	Evaporation	Irrigation	Ending Balance
September	1,909,644	66,460	19,746	217,058	23,778	1,755,015
October	1,755,015	66,460	118,478	143,246	47,555	1,749,152
November	1,749,152	70,600	227,083	61,927	199,570	1,785,338
December	1,785,338	70,600	483,786	41,598	0	2,298,126
January	2,298,126	31,900	483,786	38,157	0	2,775,655
February	2,775,655	31,900	424,547	52,544	0	3,179,557
March	3,179,557	31,900	325,815	94,767	199,570	3,242,935
April	3,242,935	34,780	167,844	145,748	199,570	3,100,241
May	3,100,241	37,660	88,859	222,688	79,259	2,924,813
June	2,924,813	37,660	19,746	275,232	79,259	2,627,728
July	2,627,728	40,540	0	330,904	106,999	2,230,365
August	2,230,365	40,540	0	301,817	59,444	1,909,644
<b>TOTALS</b>		561,000	2,359,691	1,925,686	995,004	0

*Maximum Pond Capacity (gallons):* 3,242,935  
*Maximum Pond Capacity (acre-feet):* 9.95  
*Minimum Hydraulic Retention Time (days):* 158

**Notes:**

- > Evaporation volume was determined from the water surface area at a 6 foot depth
- > Starting depth was set to be 6 feet in September
- > Minimum pond depth was set to be 5 feet
- > Wastewater Flow includes flow from winery, cheese production and olive oil production activities. See Tables IIa, IIb and IIc.



Calistoga Artisan Village  
**Winery Process Wastewater Flow**

Table IIa

<b>Total annual wine production (gallons):</b>	<b>48,000</b>
<b>Peak process wastewater flow (gpd):</b>	1,600
<b>Annual process wastewater flow (gallons):</b>	288,000
<b>Average process wastewater flow (gpd):</b>	789

*MONTHLY PROCESS WASTEWATER FLOW (gallons/month):*

<b>Month</b>	<b>Percent</b>	<b>Wastewater Flow</b>
September	17.0%	48,960
October	17.0%	48,960
November	7.5%	21,600
December	7.5%	21,600
January	5.0%	14,400
February	5.0%	14,400
March	5.0%	14,400
April	6.0%	17,280
May	7.0%	20,160
June	7.0%	20,160
July	8.0%	23,040
August	8.0%	23,040
<b>TOTALS</b>	<b>100%</b>	<b>288,000</b>

Note:

>Winery process wastewater generation distribution is based on our past experience with projects of this type.

Calistoga Artisan Village  
**Cheese Production Process Wastewater Flow**  
 Table IIb

<b>Total annual cheese production (pounds):</b>	<b>70,000</b>
<b>Wastewater generation rate (gallons per pound)</b>	<b>3</b>
<b>Annual process wastewater flow (gallons):</b>	<b>210,000</b>
<b>Average process wastewater flow (gpd):</b>	<b>575</b>

*MONTHLY PROCESS WASTEWATER FLOW (gallons/month):*

<b>Month</b>	<b>Percent</b>	<b>Wastewater Flow</b>
September	8.33%	17,500
October	8.33%	17,500
November	8.33%	17,500
December	8.33%	17,500
January	8.33%	17,500
February	8.33%	17,500
March	8.33%	17,500
April	8.33%	17,500
May	8.33%	17,500
June	8.33%	17,500
July	8.33%	17,500
August	8.33%	17,500
<b>TOTALS</b>	<b>100%</b>	<b>210,000</b>

Note:

>Cheese production process wastewater generation rates are based on informat provided by Calistoga Artisan Village

Calistoga Artisan Village  
**Olive Oil Production Process Wastewater Flow**

Table IIc

<b>Total annual olive processing (tons):</b>	<b>150</b>
<b>Wastewater generation rate (gallons per ton)</b>	<b>420</b>
<b>Annual process wastewater flow (gallons):</b>	<b>63,000</b>

*MONTHLY PROCESS WASTEWATER FLOW (gallons/month):*

<b>Month</b>	<b>Percent</b>	<b>Wastewater Flow</b>
September	0%	0
October	0%	0
November	50%	31,500
December	50%	31,500
January	0%	0
February	0%	0
March	0%	0
April	0%	0
May	0%	0
June	0%	0
July	0%	0
August	0%	0
<b>TOTALS</b>	<b>100%</b>	<b>63,000</b>

Note:

>Olive processing wastewater generation rates are based on information provided by Calistoga Artisan Village

Calistoga Artisan Village  
**Rainfall & Evaporation Rates**  
 Table III

*MONTHLY RAINFALL & EVAPORATION RATES (inches/month):*

Month	Site Rainfall	10-year Rainfall	Evaporation
September	0.33	0.47	6.94
October	2.01	2.81	4.58
November	3.85	5.39	1.98
December	8.20	11.48	1.33
January	8.20	11.48	1.22
February	7.20	10.08	1.68
March	5.52	7.73	3.03
April	2.85	3.98	4.66
May	1.51	2.11	7.12
June	0.33	0.47	8.80
July	0.00	0.00	10.58
August	0.00	0.00	9.65
TOTALS	40.0	56.0	61.57

*Notes:*

- > Site rainfall reference Napa County Road & Street Standards page 37. Monthly distribution was proportioned from the City of Napa precipitation data presented in the USDA Soil Survey of Napa County at page 98.
- > 10 year rainfall = Site rainfall x 1.4
- > Evaporation = Lake Berryessa evaporation pan (#705) x .80 (Earthinfo)

Calistoga Artisan Village

**Irrigation Flow**

Table IV

<b>Vineyard area (acres):</b>	<b>4.9</b>
<b>Row spacing (feet):</b>	<b>8</b>
<b>Vine spacing (feet):</b>	<b>6</b>
<b>Total number of irrigated vines:</b>	<b>4,447</b>

*Seasonal irrigation (May - October):*

<b>Seasonal irrigation per vine (gallons/season):</b>	<b>89</b>
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*Non-Seasonal irrigation\* (November - March):*

<b>Depth of irrigation (inches/month):</b>	
November	<b>1.50</b>
December	<b>0.00</b>
January	<b>0.00</b>
February	<b>0.00</b>
March	<b>1.50</b>

*Frost protection irrigation\* (April):*

<b>Depth of irrigation (inches/month):</b>	<b>1.50</b>
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*MONTHLY IRRIGATION FLOW (gallons/month):*

<b>Month</b>	<b>Seasonal Percent</b>	<b>Seasonal Irrigation per Vine</b>	<b>Total Irrigation</b>
September	<b>6%</b>	5.3	23,778
October	<b>12%</b>	10.7	47,555
November*			199,570
December*			0
January*			0
February*			0
March*			199,570
April			199,570
May	<b>20%</b>	17.8	79,259
June	<b>20%</b>	17.8	79,259
July	<b>27%</b>	24.1	106,999
August	<b>15%</b>	13.4	59,444
<b>TOTALS</b>	<b>100%</b>	<b>89.1</b>	<b>995,004</b>

*\* Total non-seasonal irrigation =*

*(vineyard area)\*(43,560 sq.-ft./acre)\*(depth of irrigation/12 in./ft.)\**

*(7.48 gal./cu.-ft.)*

**Proposed Pond Dimensions**

Table V

<b>Length of Pond (feet):</b>	<b>260</b>
<b>Width of Pond (feet):</b>	<b>260</b>
(Dimensions measured from inside top of bank)	
<b>Depth of Pond (feet):</b>	<b>12</b>
<b>Maximum Depth of Wastewater (feet):</b>	<b>10</b>
<b>Minimum Depth of Wastewater (feet):</b>	<b>3</b>
<b>Interior Embankment Slope (horizontal:vertical):</b>	<b>3 : 1</b>
	<b>0.3333</b>

**CUMULATIVE POND VOLUME:**

<b>Depth of Wastewater (feet)</b>	<b>Surface</b>		<b>Volume</b>	
	<b>Area (sq.-ft.)</b>	<b>cubic-feet</b>	<b>gallons</b>	<b>acre-feet</b>
1	37,636	36,490	272,945	0.84
2	40,000	75,308	563,304	1.73
3	42,436	116,526	871,614	2.68
4	44,944	160,216	1,198,416	3.68
5	47,524	206,450	1,544,246	4.74
6	50,176	255,300	1,909,644	5.86
7	52,900	306,838	2,295,148	7.04
8	55,696	361,136	2,701,297	8.29
9	58,564	418,266	3,128,630	9.60
10	61,504	478,300	3,577,684	10.98
11	64,516	541,310	4,048,999	12.43
12	67,600	607,368	4,543,113	13.94

**Notes:**

- >Approximate length and widths were based on topographic information provided by Michael W. Brooks and Associates.
- >The existing pond may need to be graded to achieve the geometry assumed in this study.

## EXHIBIT C.

### CALISTOGA ARTISAN VILLAGE (APN 017-150-004) USE PERMIT APPLICATION NARRATIVE REGARDING EMPLOYEES, VISITORS AND TRAFFIC

Calistoga Artisan Village is a complex of three buildings arranged around an open court yard for the processing of Napa Valley agricultural products: grapes for wine, milk for cheese, and olives for pressing. It is modeled after a European style square or plaza typical of many small European villages.

The project is located on Bennett Lane in Calistoga just off of Tubbs Lane which is a main thoroughfare connecting Highway 128 and Highway 29 at the very north of the Napa Valley. The parcel has access directly to Tubbs Lane, but this entrance to the property will not be used. It will be fenced and open only to farm vehicle traffic on an occasional basis. Bennett Lane is a low traffic street and presents the best location for the entrance to the complex.

#### EMPLOYEES

Calistoga Artisan Village will employ the following number of people on a full time and part time basis:

	Employees	Hours of work
<b>Winery</b>		
Cellarmen (FT)	2	8-5/ M-F
Winemaker (PT)	1	2 Hours/ M-F
Crush Workers (PT)	4	8-5/ M-F Sept/Oct
Bottling Workers (PT)	6	8-5/ M-F
		(2 weeks in April and August)
<b>Cheese</b>		
Cheese Maker (FT)	1	7-4/ M-F
Production Assistant (FT)	1	7-4/ M-F
Cheese Packers (PT)	2	12-4/ M-F
<b>Olive Pressing</b>		
Production Foreman (PT)	1	8-5/ M-F Nov/Dec
Production Workers (PT)	4	8-5/ M-F Nov/Dec
Bottling Workers (PT)	4	8-5/ M-F
		(2 weeks in January)
<b>Retail</b>		
Store Manager (FT)	1	9-5/ TU-SAT
Store Worker (FT)	1	9-5/ M-F
<b>Administration</b>		
Facilities Manager (FT)	1	9-5/ M-F
Office Administration (FT)	1	9-5/ M-F

Winery harvest operations are at a peak in September and October. The next peak time is April for bottling of white wine and August for bottling of red wine.

The majority of the year the winery will require two full time cellar men and a regular part time winemaker. Production workers hired for the wine crush will continue on into November and December as workers in the olive pressing operation. Bottling of oil will occur in January for only 2 weeks. The balance of the year the olive pressing operation will only require monitoring and routine maintenance. Cheese making and packing operations will continue throughout the year Monday to Friday. In sum, a total of 8 full time workers will be employed by all elements in the complex. Part time workers will include 2 workers at 50% time, 5 workers at 33% time, and 6 bottling workers employed only occasionally.

#### **VISITORS BY APPOINTMENT**

The complex will be open to public visit by appointment. The single tasting/sales room will sample and retail all products made at the complex. It is anticipated at peak production, on the average day, 40 people will visit the complex Monday through Saturday.

#### **MARKETING EVENTS**

It is anticipated the complex will host about 8 larger marketing events each year of between 20 to 40 persons for a maximum 40 persons on each event day. The facility will be closed to visitors by appointment on these event days. These events are likely to be held in the late afternoon and early evening, either in the winery cellar or courtyard of the complex, but will conclude no later than 10:00PM. Any food service for these events will be catered.

#### **GRAPE/ MILK AND OLIVE DELIVERIES**

At full capacity the following raw agricultural products will be delivered to the complex:

**Grapes:** The estate will produce about 60 tons of grapes each year and 230 tons will be purchased from local Napa growers at an average of 10 tons per truck = 23 trucks in the months of September and October.

**Milk:** The complex will require about 660,000 pounds of Napa grown milk which is equivalent to 79,000 gallons annually which is equivalent to one small tanker truck each day of about 400 gallons of milk. The same truck will load the high protein whey at the complex to be hauled to an animal feeder.

**Olives:** The estate will produce about 30 tons of olives each year and 120 tons will be purchased from Napa growers at an average of 5 tons per truck = 24 trucks of olives in the months of November and December only.



# Site Evaluation Results

Date: 10-18-06

Page 1 of 1

EHS: TDC

Permit # EDG-01277

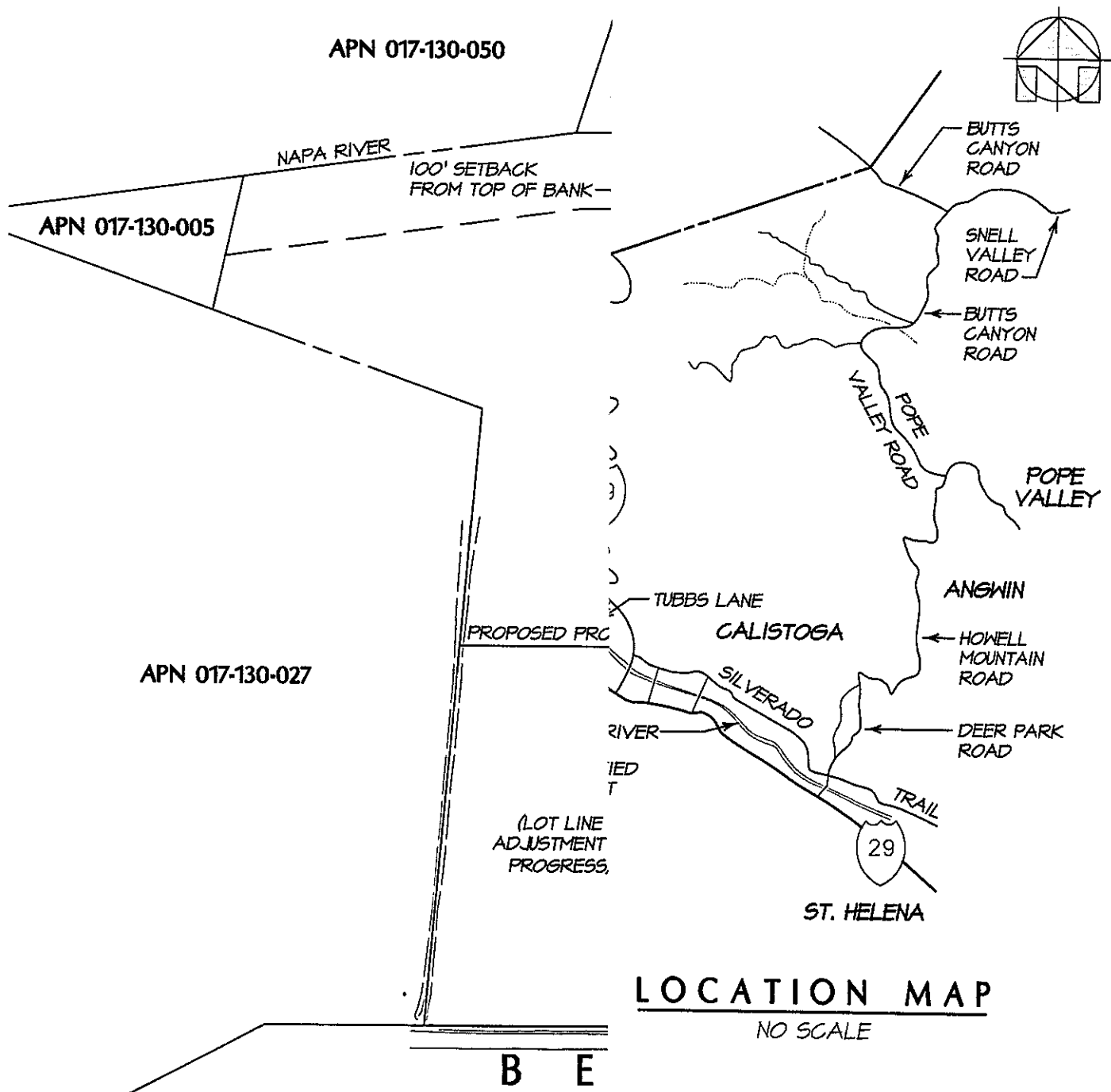
Site Evaluator: TAYLOR BAILEY

Site Address: BENNETT LANE

APN: 017-130-034

Test Pit #	Horizon Depth (inches)	Boundary	% Rock	Texture	Structure	Consistence			Pores	Roots	Mottling
						Side Wall	Ped	Wet			
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	30-54		0-15 <input checked="" type="checkbox"/> 15-30 <input type="checkbox"/> 30-50 <input type="checkbox"/> >50 <input type="checkbox"/>	SC	MASS	H	VF	—	FUF	NO	MCD
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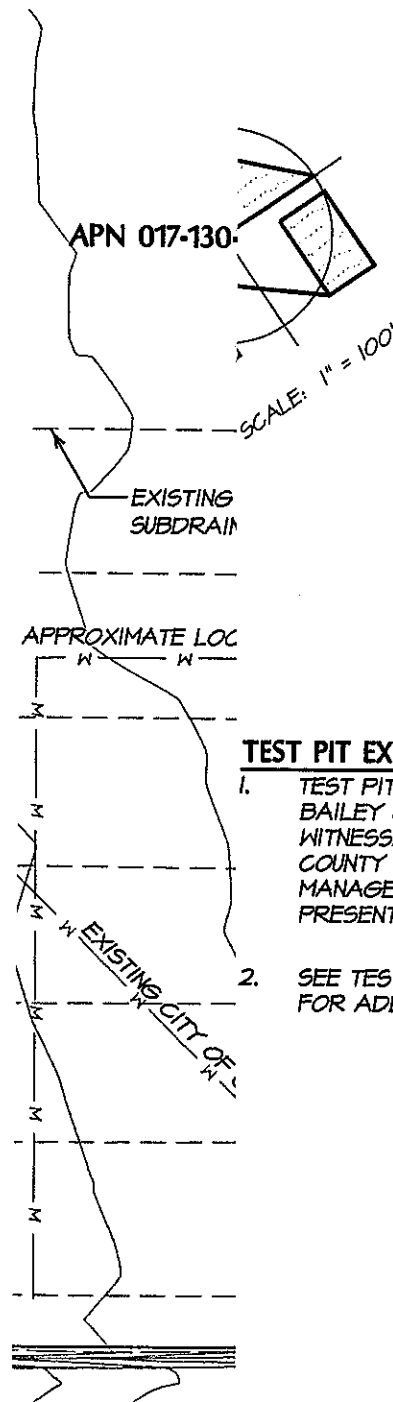
Boundary	Texture	Structure	Consistence			Pores	Roots	Mottling
A=Abrupt <1" C=Clear 1"-2.5" G=Gradual 2.5"-5" D=Diffuse >5"	S=Sand LS=Loamy Sand SL=Sandy Loam SCL=Sandy Clay Loam SC=Sandy Clay CL=Clay Loam L=Loam C=Clay SiC=Silty Clay SiCL=Silty Clay Loam SiL=Silt Loam Si=Silt	W=Weak M=Moderate S=Strong G=Granular Pl=Platy Pr=Prismatic C=Columnar AB=Angular Blocky SB=Subangular Blocky M=Massive C=Cemented	Side Wall	Ped	Wet	Quantity:	Quantity:	Quantity:
			L=Loose S=Soft; SH=Slightly Hard H=Hard VH=Very Hard ExH=Extremely Hard	L=Loose; VFRB=Very Friable FRB=Friable F=Firm VF=Very Firm ExF=Extremely Firm	NS=NonSticky SS=Slightly Sticky S=Sticky VS=Very Sticky NP=NonPlastic SP=Slightly Plastic P=Plastic VP=Very Plastic	F=Few C=Common M=Many Size: VF=Very Fine F=Fine M=Medium C=Coarse	F=Few C=Common M=Many Size: VF=Very Fine F=Fine M=Medium C=Coarse VC=Very Coarse	F=Few C=Common M=Many Size: F=Fine M=Medium C=Coarse VC=Very Coarse ExC=Extremely Coarse Contrast: Ft=Faint D=Distinct P=Prominent



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 Job no. 06-43  
 January 2007  
 Sheet 1 of 3



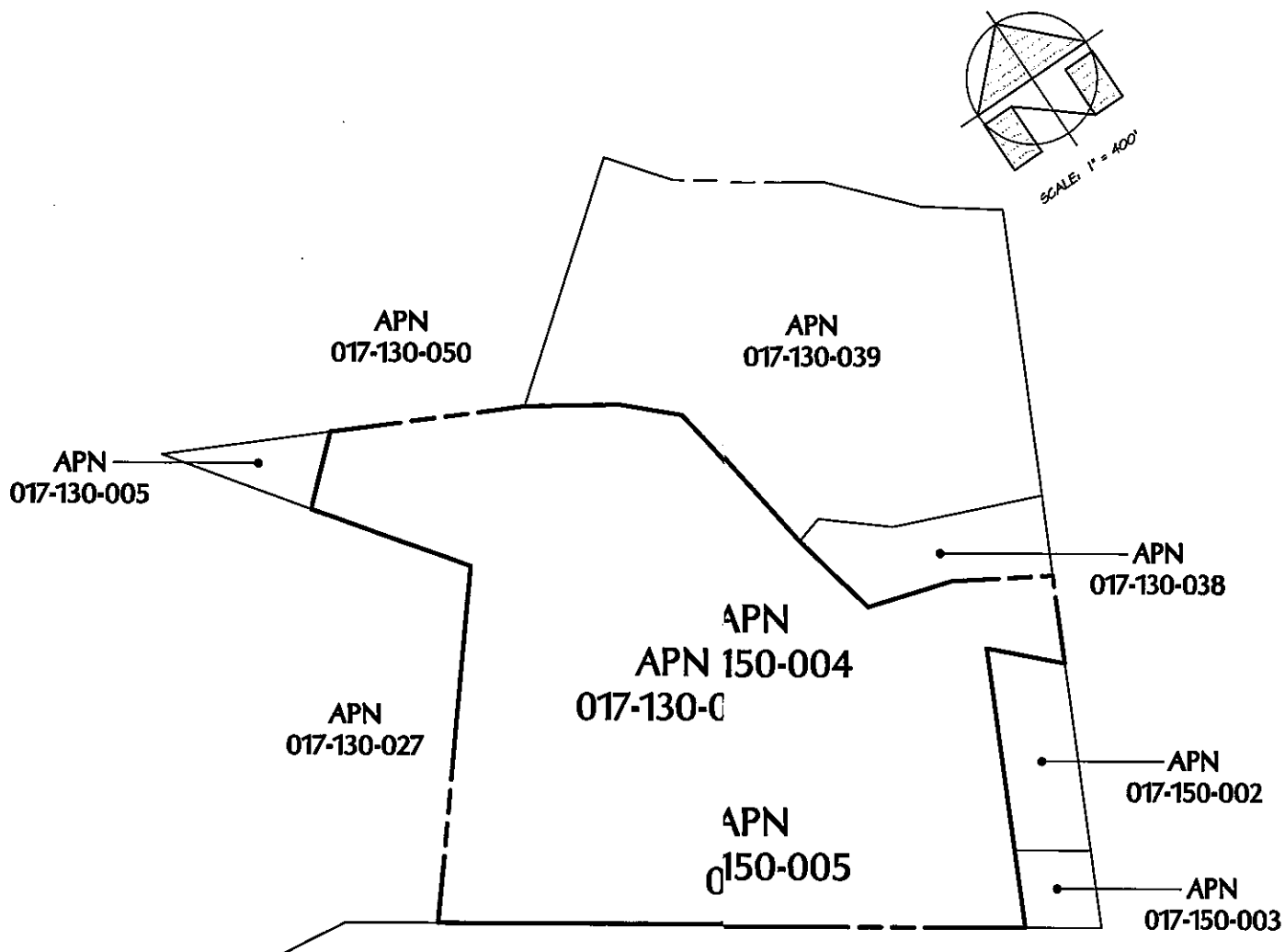
#### TEST PIT EXPLORATION NOTES:

1. TEST PITS #1 AND #2 WERE EXCAVATED BY TAYLOR BAILEY CONSTRUCTION ON OCTOBER 18, 2006 AND WITNESSED BY A REPRESENTATIVE FROM NAPA COUNTY DEPARTMENT OF ENVIRONMENTAL MANAGEMENT. BARTELT ENGINEERING WAS NOT PRESENT AT THE SITE EVALUATION.
2. SEE TEST PIT LOCATION MAP FOR APN 017-130-034 FOR ADDITIONAL TEST PITS.

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FORMER APN'S  
SCALE: 1" = 400'

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June 2007  
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