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# George W. Nickelson, P.E.

Traffic Engineering – Transportation Planning

April 22, 2009

Mr. Rick Marshall  
Principal Transportation Engineer  
Napa County Public Works Department  
1195 Third Street  
Napa, CA 94559

Subject: *Focused Traffic Study for a Proposed Suscol Creek Winery on Soscol Ferry Road in Napa County*

Dear Mr. Marshall:

This letter report summarizes a focused traffic study for a proposed Suscol Creek Winery on Soscol Ferry Road in Napa County. This study has identified the existing traffic conditions, calculated the added traffic due to the proposed winery and evaluated the effects of that traffic.

## **1. Existing Traffic Conditions**

Soscol Ferry Road is a two-lane road in the area of the winery site. At the winery site Soscol Ferry Road does not have a left turn lane. Based on Napa County records, Soscol Ferry Road has a daily traffic volume of 2,995 vehicles.<sup>(1)</sup> The posted speed limit on Soscol Ferry Road is 40 mph.

## **2. Traffic Effects of the Proposed Winery**

### a. Project Description

The proposed project would involve a winery shared by various vintners with a total annual production of 600,000 gallons.<sup>(2)</sup> It is expected that during both a typical weekday and a typical Saturday, about 15 persons would visit the winery (by appointment only). The winery's employment is expected to include 25 persons on a weekday and 15 persons on a Saturday. Table 1 outlines the winery's expected daily traffic generation on a typical weekday (67 daily trips), a typical Saturday (48 daily trips) and a day during the harvest season (84 daily trips).

The project would have two driveways on Soscol Ferry Road. The driveways would provide access for the various site users (employees, visitors, and trucks). The westerly driveway would be expected to serve most of the visitor and employee traffic. The easterly driveway would primarily serve truck traffic.

### b. Site Access Design Issues

The primary traffic design issue would be the need for a left-turn lane at either of the site driveways. Standards for left-turn lanes relate to the left-turn volume conflicting with the volume of opposing

through traffic. Napa County has adopted a warrant methodology based on daily traffic volumes on the highway and daily traffic volumes on the access road or driveway.<sup>(3)</sup> As noted in this report the daily volume on Soscol Ferry Road is 2,995 vehicles. If the daily visitor and employee traffic primarily uses the westerly driveway, that driveway would carry about 55-60 weekday vehicles, about 35-40 Saturday vehicles and about 55-60 vehicles during a harvest season day.

Napa County standards for left-turn lanes indicate that the volume on Soscol Ferry Road and the daily volumes in/out of the westerly driveway would exceed the levels at which a left-turn lane would be warranted (left turn lane graph is attached). Volumes at the easterly driveway would be well below the minimum threshold for a left turn lane.

### 3. Napa Airport Industrial Area (NAIA) Traffic Fees

Development projects within the NAIA pay a traffic impact fee based on a calculation of the development's PM peak hour trip generation. The most recent guidelines for calculating the PM peak hour trips indicate that for developments in the GI (General Industrial) zoning category, the trip generation shall be calculated as per the Institute of Transportation Engineers (ITE) "General Light Industrial" land use category.<sup>(4)</sup> Using this trip rate, the project would have a calculated 68 PM peak hour trips (70,000 sq.ft. building area @ 0.97 trips/1,000 sq.ft.).<sup>(5)</sup>

As noted in this report, the detailed calculations of this project's traffic identified 67 daily trips on a weekday. Clearly, the above calculation of 68 PM peak hour trips provides an extremely conservative estimate of the project's contribution to weekday commute traffic. Even if it were conservatively assumed that peak hour trips were 25% of the daily total, the project would only generate about 17 PM peak hour trips (67 daily trips x 25%).

### 4. Summary and Conclusions

As outlined in the report, the combination of volumes on Soscol Ferry Road and volumes in/out of the westerly project driveway would exceed the level at which a left turn lane would be warranted. Volumes at the easterly driveway would be well below Napa County thresholds for installation of a left-turn lane.

The paved width of Soscol ferry Road is 45 feet adjacent to the project site. This width would allow a restriping to accommodate a separate left turn lane (see attached plan). Based on Caltrans design standards (sufficient storage for a two-minute volume of left turns), only one vehicle would be expected to queue at any given time.<sup>(6)</sup> However, Caltrans recommends a minimum 50 foot left-turn storage lane, and a left turn lane design with that storage length could be provided at the westerly driveway.

With regard to the project trip calculation for NAIA traffic impact fee purposes, it is our conclusion that the unique nature of this project would result in trip generation well below the levels that would

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April 22, 2009  
Mr. Rick Marshall  
Page 3 of 4

be associated with a typical General Light Industrial development. In this regard, the project applicant will provide documentation that will support this project's characteristics relative to trip generation.

I trust that this study responds to the needs of Napa County. Please let me know if there are any questions or if further input is required.

Sincerely,



George W. Nickelson, P.E.

References:

- (1) Napa County Department of Public Works, traffic counts on Soscol Ferry Road conducted 2004.
- (2) Project information provided by Mr. Mark Phillips, Dickenson, Peatman & Fogarty, April 9, 2009.
- (3) Napa County Department of Public Works, *Adopted Road & Street Standards*, Revised August 31, 2004.
- (4) Napa County, *Policy on Calculation of Trips Generated By Developments Subject to Traffic Mitigation Fee*, adopted by Board of Supervisors September 9, 2008.
- (5) ITE, *Trip Generation – 8<sup>th</sup> Edition*, 2008.
- (6) Caltrans, *Guidelines for Reconstruction of Intersections*, August 1985.

**TABLE 1  
 DAILY TRIP GENERATION FOR  
 THE PROPOSED SUSCOL CREEK WINERY  
 ON SOSCOL FERRY ROAD**

Daily Traffic During a Typical Weekday:

|   |   |                       |
|---|---|-----------------------|
| • 15 visitors/2.6 per vehicle x 2 one-way trips       | = | 12 daily trips        |
| • 25 employees/1.1 per vehicle x 2 one-way trips      | = | 45 daily trips        |
| • 5 trucks x 2 one-way trips per truck <sup>(1)</sup> | = | <u>10 daily trips</u> |
|   |   | 67 daily trips        |

Daily Traffic During a Typical Saturday:

|   |   |                       |
|---|---|-----------------------|
| • 15 visitors/2.8 per vehicle x 2 one-way trips       | = | 11 daily trips        |
| • 15 employees/1.1 per vehicle x 2 one-way trips      | = | 27 daily trips        |
| • 5 trucks x 2 one-way trips per truck <sup>(1)</sup> | = | <u>10 daily trips</u> |
|   |   | 48 daily trips        |

Daily Traffic During Harvest Season (6 weeks):

|  |   |                       |
|--|---|-----------------------|
| • 15 visitors/2.8 per vehicle x 2 one-way trips        | = | 11 daily trips        |
| • 25 employees/1.1 per vehicle x 2 one-way trips       | = | 45 daily trips        |
| • 14 trucks x 2 one-way trips per truck <sup>(2)</sup> | = | <u>28 daily trips</u> |
|  |   | 84 daily trips        |

(1) During the 46-week non-harvest season, a maximum of one daily truck would be generated related to routine deliveries associated with the winery production (600,000 gallons/2.38 gallons per case = 252,100 cases).

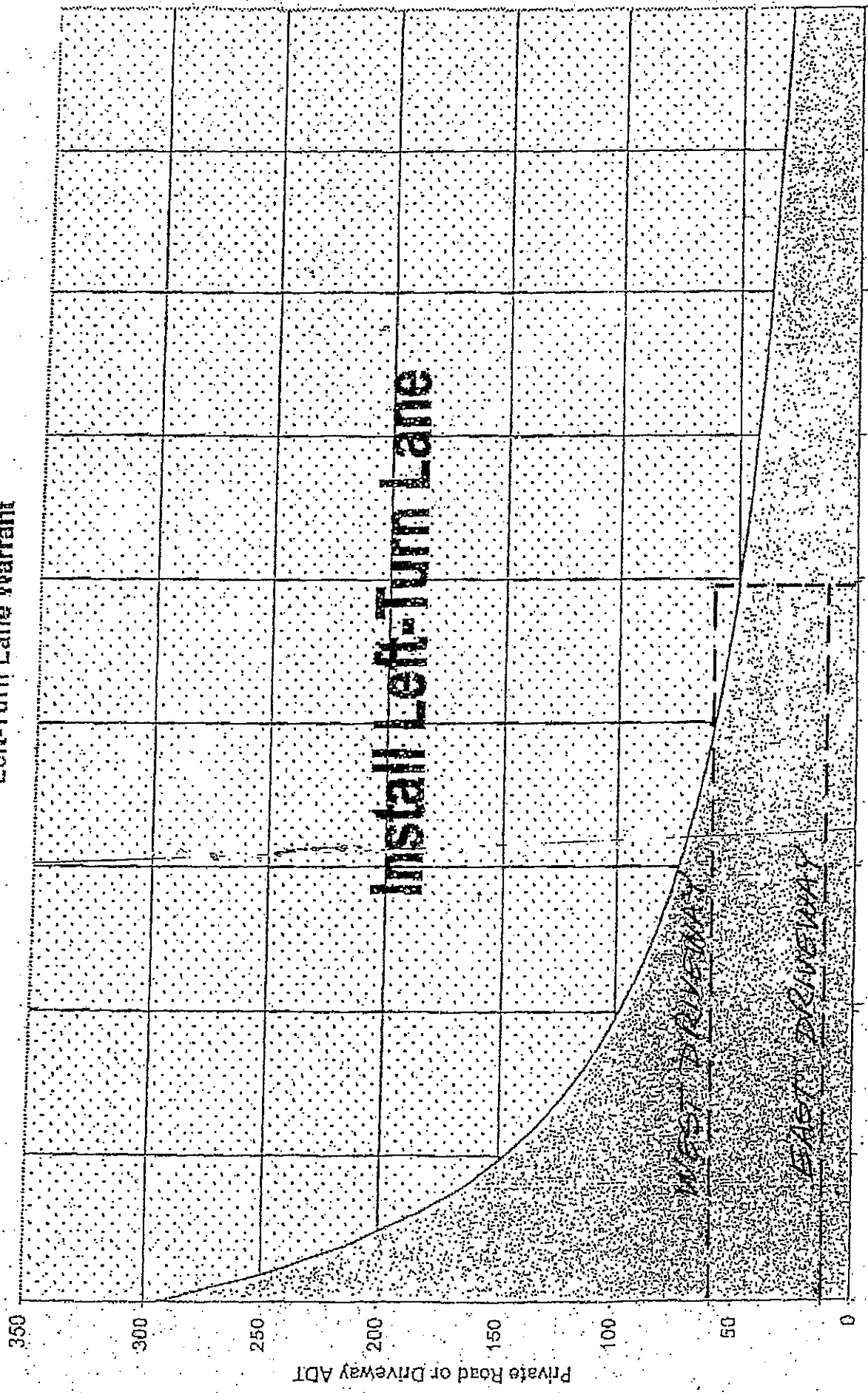
|                                       |   |                                   |
|---------------------------------------|---|-----------------------------------|
| • 252,100 cases/2,310 cases per truck | = | 109 glass delivery trucks         |
| • 252,100 cases/1,232 cases per truck | = | 205 wine shipment trucks          |
| • 25 miscellaneous weekly deliveries  | = | <u>1,150 miscellaneous trucks</u> |
|                                       |   | 1,464 annual trucks               |

1,464 trucks/46 weeks = 32 weekly trucks or 4-5 trucks per day.

(2) During the 6-week harvest season, 8-9 added daily grape delivery trucks would be generated, calculated as follows:

- 3,636 tons of imported grapes/10 tons per truck/6 weeks = 61 trucks/week or 8-9 added trucks per day; and pick up of empty bins = 8-9 added truck per day.

Left-Turn Lane Warrant



Private Road or Driveway ADT

500

1500

2500

3500

4500

Roadway ADT

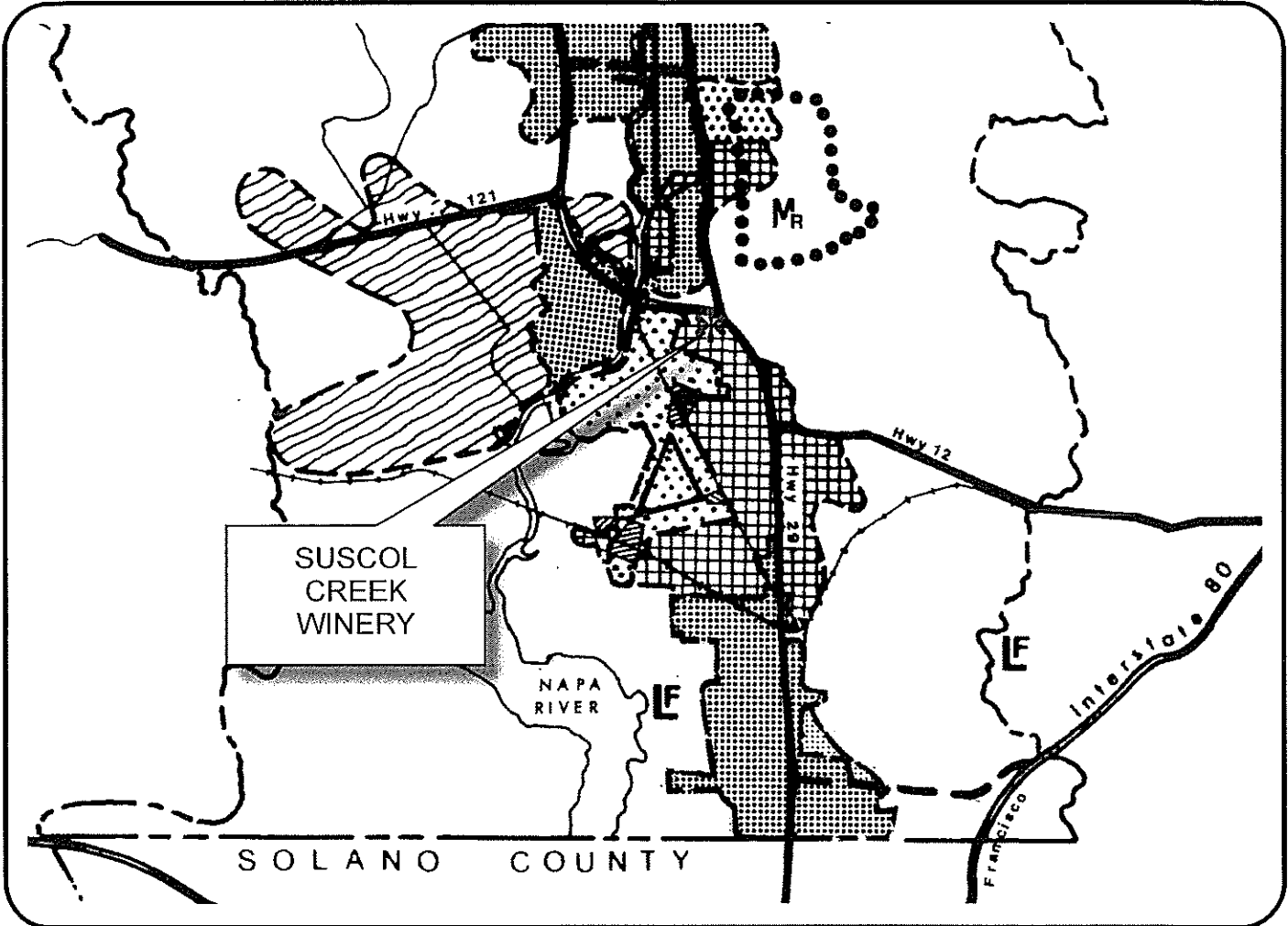
No Left-Turn Lane Necessary

5050 COL FERRY ROAD

PROJECT DRIVEWAYS



# NAPA COUNTY LAND USE PLAN 1998 - 2000



## LEGEND

### TRANSPORTATION

- LIMITED ACCESS HIGHWAY
- MAJOR ROAD
- SECONDARY ROAD
- RAILROAD
- AIRPORT
- LANDFILL SITE

### OPEN SPACE

- AGRICULTURE, WATERSHED & OPEN SPACE
- AGRICULTURAL RESOURCE

### URBAN

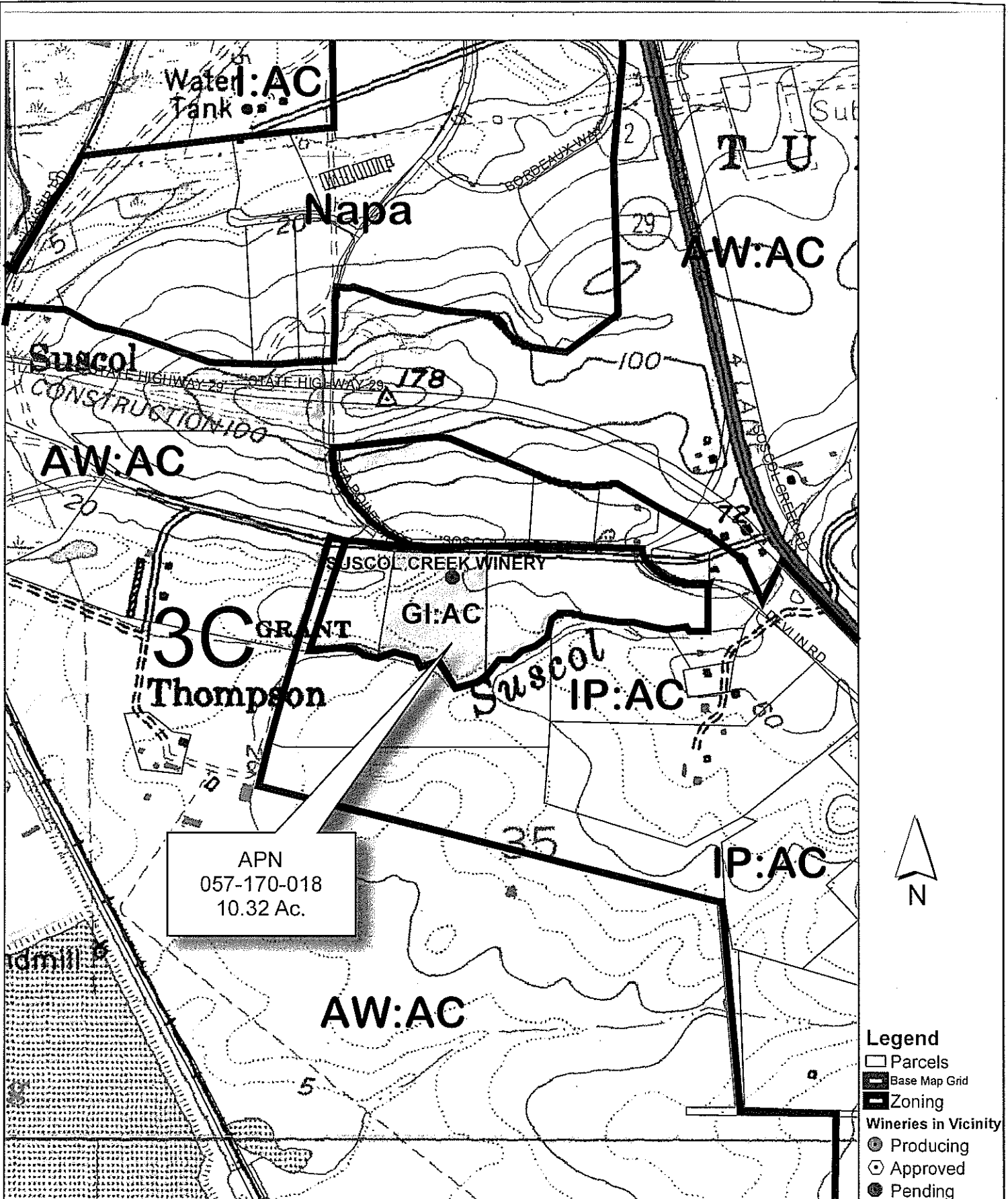
- CITIES
- URBAN RESIDENTIAL
- RURAL RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- PUBLIC - INSTITUTIONAL

SCALE IN MILES



APN  
057-170-018  
01-25-2006  
3C UP

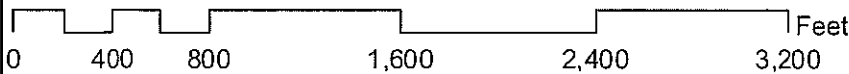
# SUSCOL CREEK WINERY



APN  
057-170-018  
10.32 Ac.



- Legend**
- Parcels
  - Base Map Grid
  - Zoning
  - Wineries in Vicinity**
  - Producing
  - Approved
  - Pending



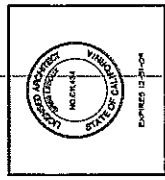


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FOR USE PERMIT

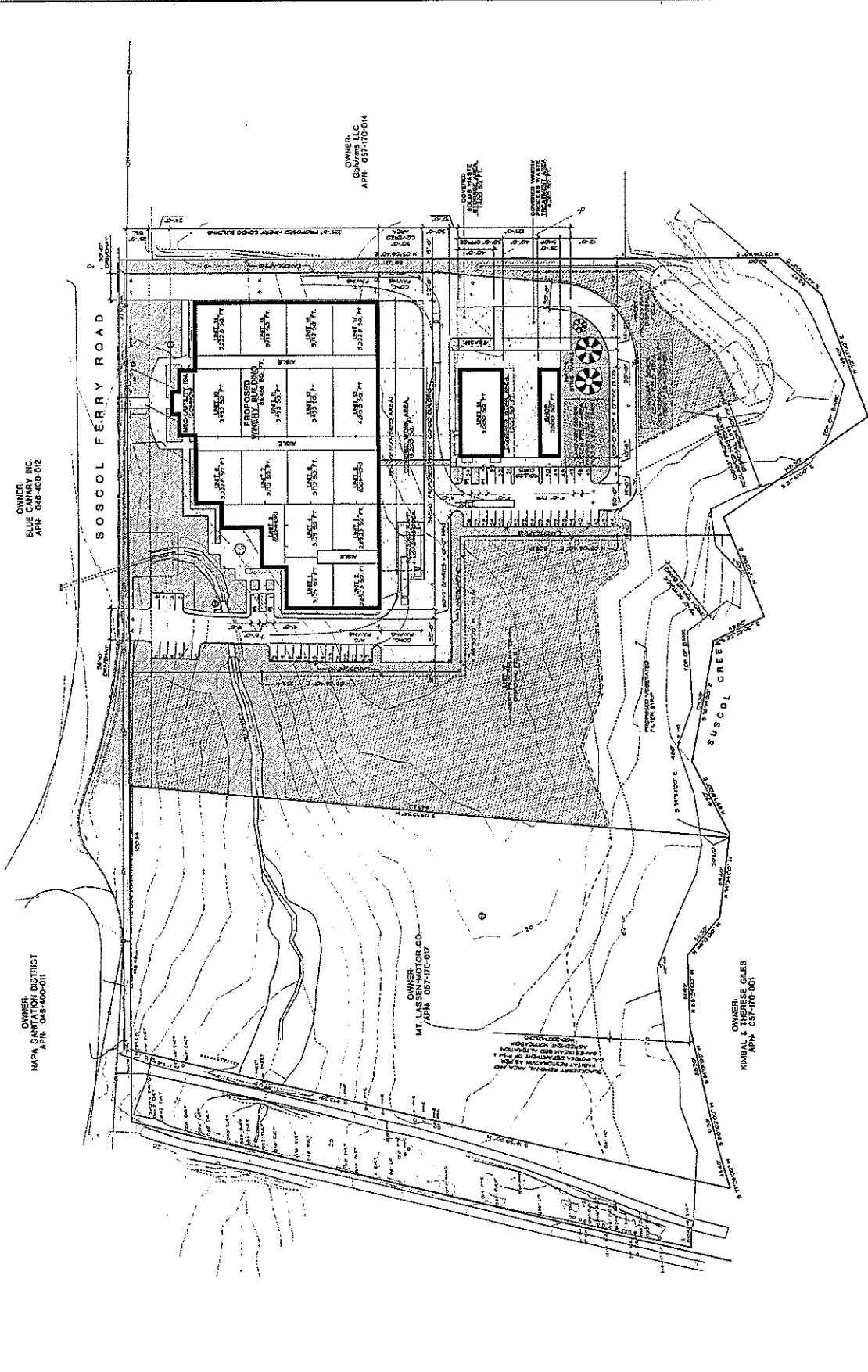
A NEW WINERY  
BUILDING FOR:  
**SUSCOL CREEK  
WINERY  
CONDOMINIUMS**  
1055 SUSCOL FERRY ROAD  
NAPA, CALIFORNIA  
APN: 057-170-016

SITE PLAN



**GREG  
LEDOUX  
AND  
ASSOCIATES,  
INC.**  
40 W. SIERRA AVE.  
COTATI, CA  
(707) 765-9955

**A1**  
SHEET NO. 1 OF 1  
DATE: 08/10/04  
SCALE: 1" = 30'-0"



OWNER:  
BLUE CANARY, INC.  
APN: 048-400-012

OWNER:  
MAPA SANTATION DISTRICT  
APN: 048-400-011

OWNER:  
GB/THMS LLC  
APN: 057-170-014

OWNER:  
MT. LASSEN MOTOR CO.  
APN: 057-170-017

OWNER:  
KIMBAL & THERESE GILES  
APN: 057-170-001

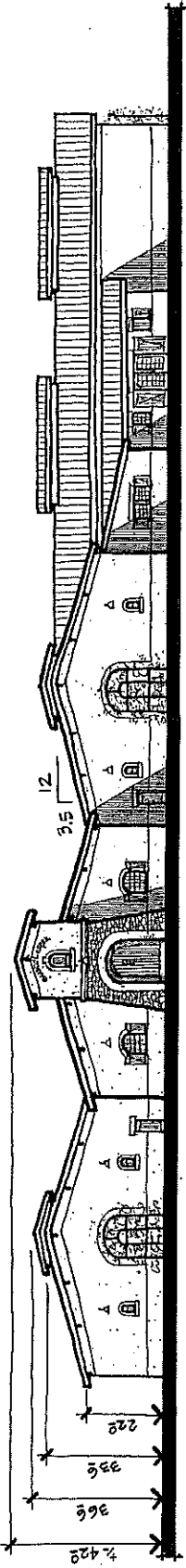
OWNER:  
GREGORY TURNER  
SUSCOL FERRY  
NAPA, CA 94958

**SITE PLAN**  
SCALE: 1" = 30'-0"



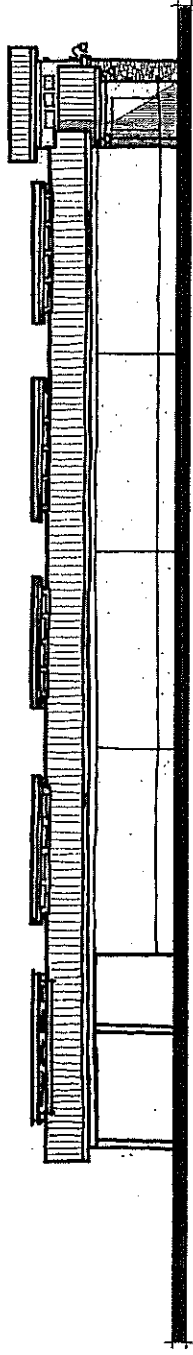
# SUSCOL CREEK WINERY CONDOS

GREG LEDOUX & ASSOCIATES, INC. FEBRUARY, 2009

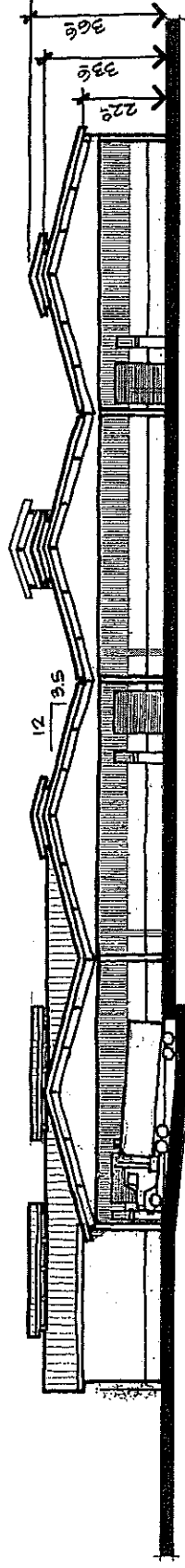


NORTH ELEVATION (FACING SOSCOL FERRY ROAD)

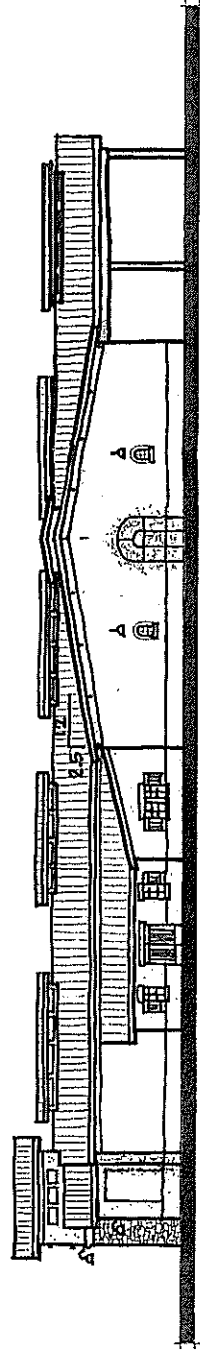
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EAST ELEVATION (FACING R.V. STORAGE)



SOUTH ELEVATION (FACING SUSCOL CREEK)



WEST ELEVATION (FACING VACANT PARCEL)

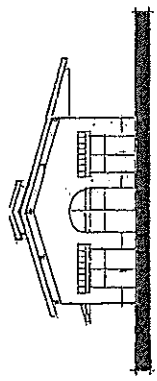
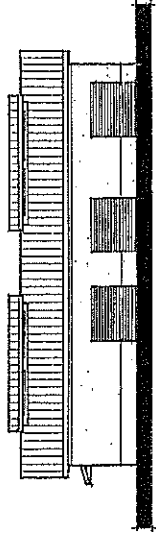
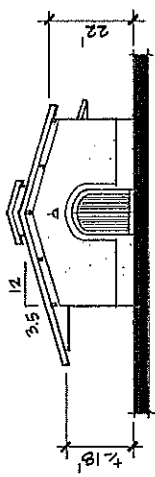
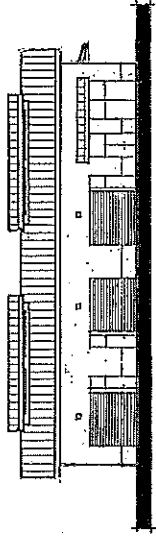
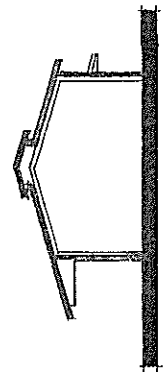
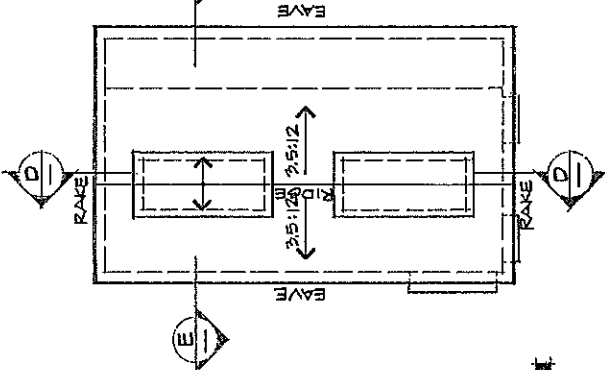
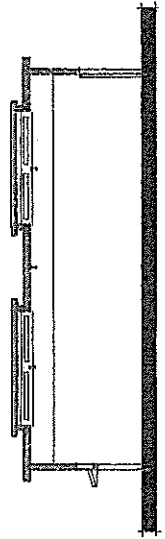
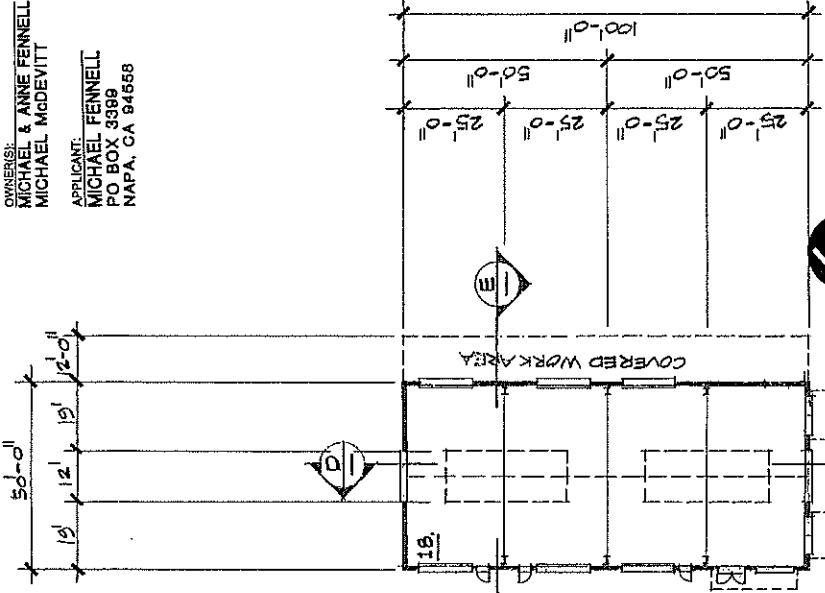
OWNERS:  
MICHAEL & ANNE FENNELL  
MICHAEL McDEVITT  
APPLICANT:  
MICHAEL FENNELL  
PO BOX 3999  
NAPA, CA 94558

# SUSCOL CREEK WINERY CONDOS

GREG LEDOUX & ASSOCIATES, INC. FEBRUARY, 2009

OWNERS:  
MICHAEL & ANNE FENNEL  
MICHAEL McDEVITT

APPLICANT:  
MICHAEL FENNEL  
PO BOX 3389  
NAPA, CA 94558



| REVISIONS | BY |
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DATE: 03/20/07  
 DRAWN BY: J. LAMP  
 CHECKED BY: J. LAMP  
 PROJECT NO: 03-0007  
 SHEET NO: 1

CONCEPTUAL LANDSCAPE PLAN

A NEW WINEERY BUILDING FOR:  
**SUSCOL CREEK WINERY CONDOMINIUMS**  
 1055 SUSCOL FERRY ROAD  
 NAPA, CALIFORNIA  
 APR. 05-70-016

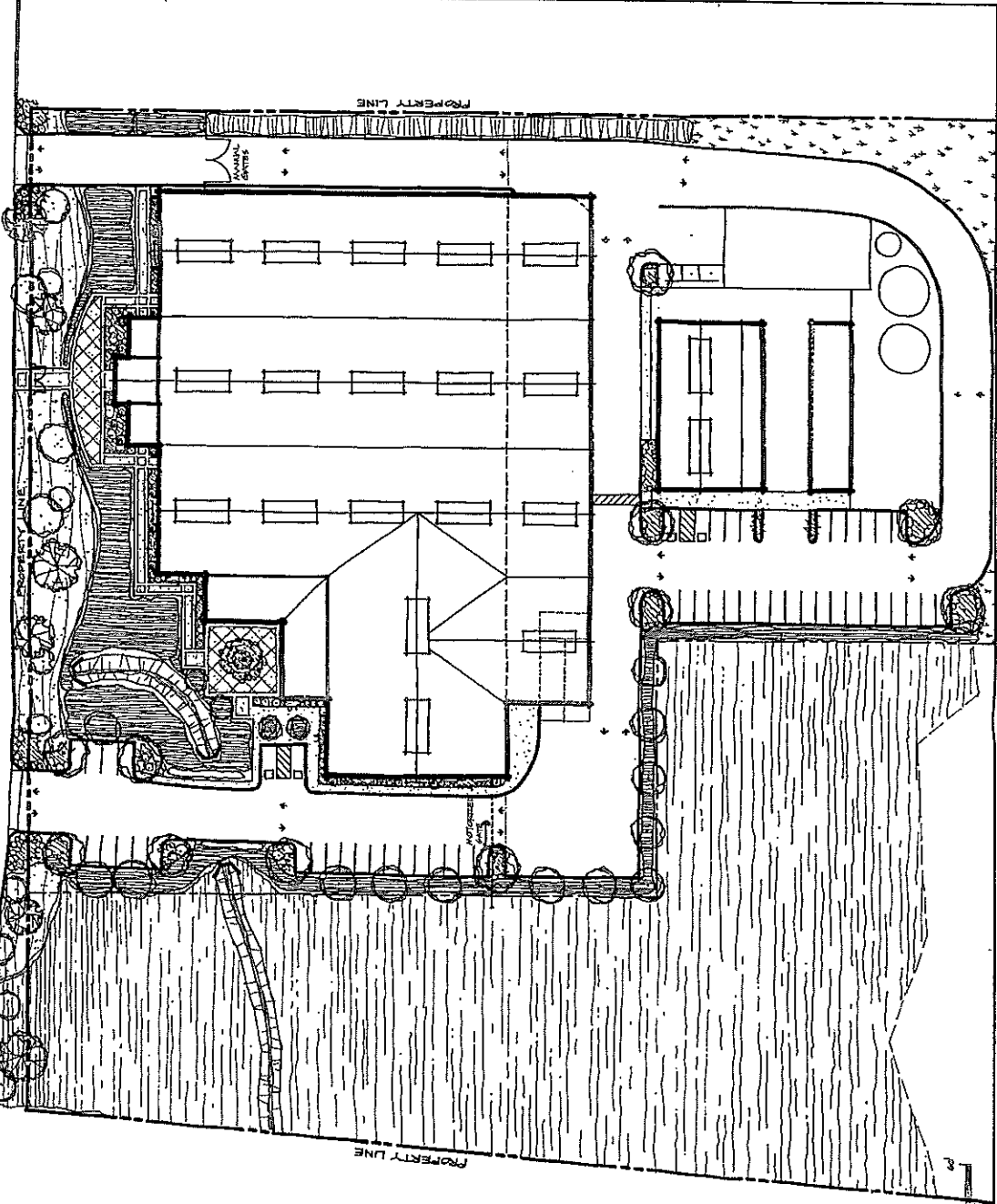
CONCEPTUAL LANDSCAPE PLAN



**GREG LEDOUX**  
 ASSOCIATES, INC.  
 48 W. SHERMAN AVE.  
 SUITE 200  
 COLMA, CA 94015  
 (415) 752-0555

**L1**

SUSCOL FERRY ROAD



LANDSCAPE LEGEND:

- NATIVE TREES
- ORNAMENTAL TREES
- OLIVE TREES
- TUSOCK CYPRESSES
- NATURAL BRUSHWATER WITH FLOROUS VINES
- SHRUBS
- GROUND COVER
- NATIVE GRASSES
- DEER GRASS
- BIG-SHADE
- LAWN
- CONCRETE
- PRESERVATIVE CONCRETE



CONCEPTUAL LANDSCAPE PLAN

DATE: 03/20/07  
 DRAWN BY: J. LAMP  
 CHECKED BY: J. LAMP  
 PROJECT NO: 03-0007  
 SHEET NO: 1

**LOCATION MAP**  
 NO SCALE

**PROJECT INFORMATION:**  
 PROPERTY OWNER/APPLICANT:  
 PAUL N. BARTELLE  
 P.O. BOX 8941  
 NAPA, CA 94555  
 707-471-5764

**PROJECT ADDRESS:**  
 10324 SUSCOL FERRY ROAD  
 NAPA, CA 94558

**CIVIL ENGINEER:**  
 PAUL N. BARTELLE ENGINEERING  
 10324 SUSCOL FERRY ROAD, BOX B  
 NAPA, CA 94554  
 707-258-1821

**ASSESSOR'S PARCEL NUMBER:**  
 057-070-014

**PARCEL SIZE:** 10324 ACRES  
**LOT COVERAGE:** 4.0%

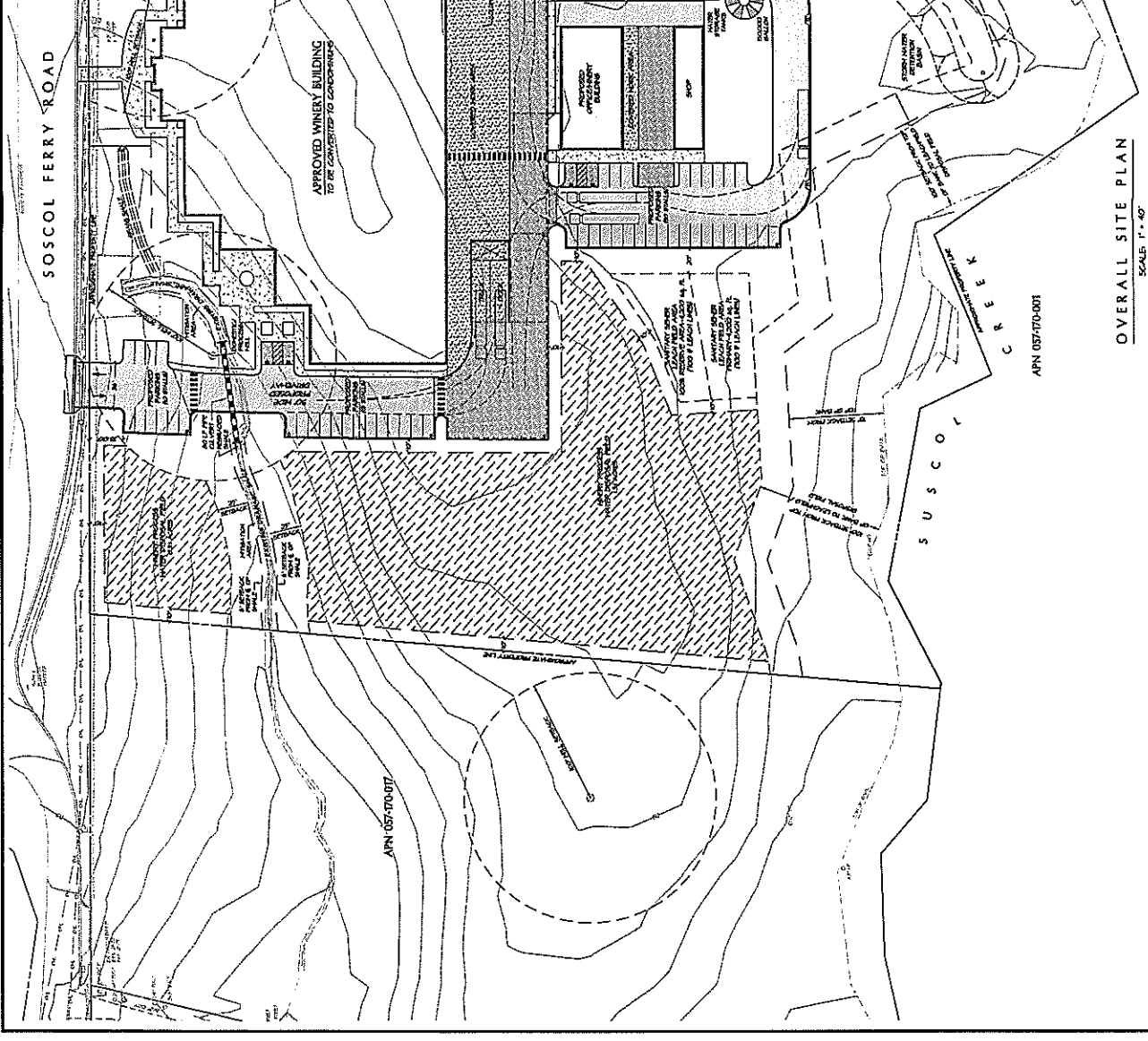
**LEGEND:**

- AG PAVEMENT
- NON-TRAFFIC AREA PUG PAVEMENT
- TRAFFIC AREA PUG PAVEMENT
- COVERED TRAFFIC AREA PUG PAVEMENT
- DISPOSAL FILL AREA - 1.01 ACRES

**PARKING SUMMARY:**

|                               |    |
|-------------------------------|----|
| TOTAL                         | 25 |
| TYPE OF PARKING               |    |
| AG PAVEMENT                   | 7  |
| NON-TRAFFIC AREA PUG PAVEMENT | 18 |

APPROVED BY THE DIRECTOR OF  
 PLANNING AND DEVELOPMENT  
 DIVISION  
 PAUL N. BARTELLE, REGISTERED CIVIL ENGINEER  
 No. 45300 Exp. 8-20-11



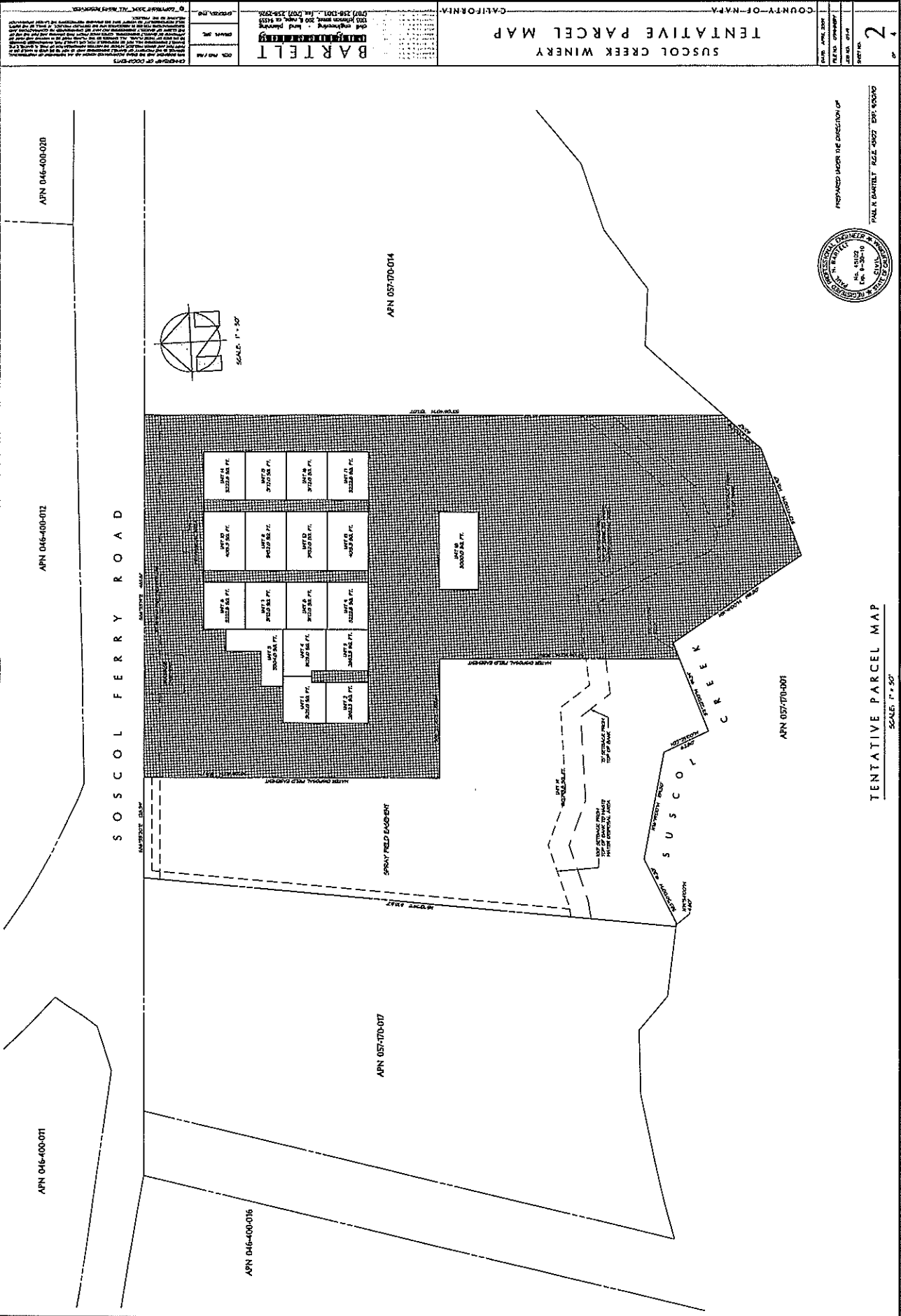
SUSCOL CREEK WINERY  
 TENTATIVE PARCEL MAP

COUNTY OF NAPA  
 CALIFORNIA

**BARTLETT**  
 1000 PERSON ROAD, 200 E. 4th ST.  
 LAND (PREVIOUS)  
 (D) 218-1001, (A) 070, (Z) 239-070

OWNER: [Name]  
 ADDRESS: [Address]  
 CITY: [City]

PREPARED UNDER THE DIRECTION OF  
**PAUL K. BARTLETT, REG. #0027, EXP. 10/09/10**



COUNTY OF NAPA  
 SUSCOL CREEK WINERY  
 CONCEPTUAL GRADING PLAN  
 COUNTY OF NAPA  
 CALIFORNIA

DATE: APRIL 2007  
 PREPARED BY: PAUL W. BARTLETT  
 CHECKED BY: PAUL W. BARTLETT  
 SHEET NO. 1

BARTLETT  
 CIVIL ENGINEERING  
 2425 BARTLETT ROAD, SUITE 200  
 NAPA, CALIFORNIA 94930  
 (707) 255-2925  
 FAX: (707) 255-2925

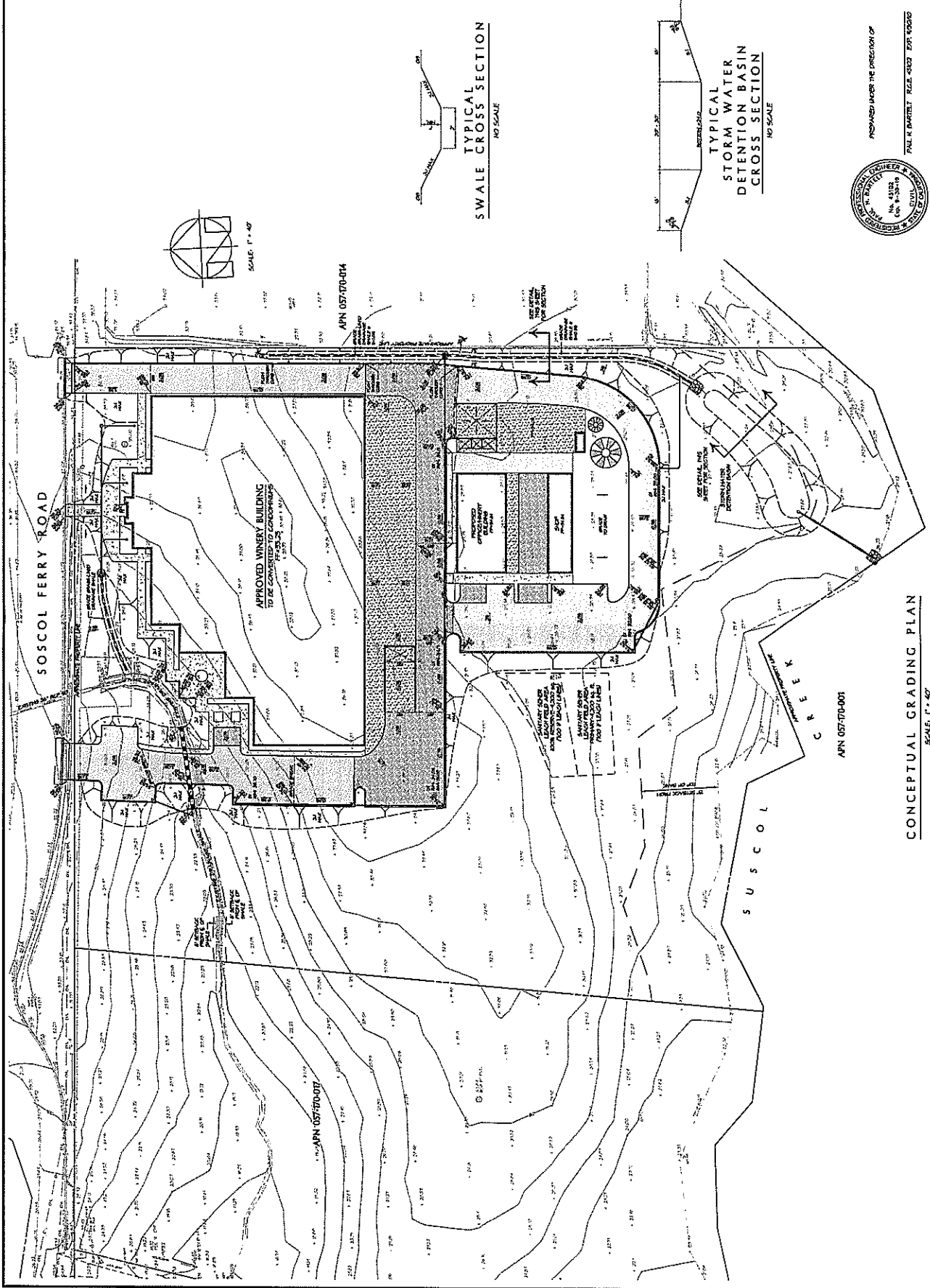
APN 057-070-001  
 APN 057-070-014  
 APN 057-070-017

SUSCOL CREEK WINERY  
 CONCEPTUAL GRADING PLAN  
 SCALE: 1" = 40'

TYPICAL SWALE CROSS SECTION  
 NO SCALE

TYPICAL STORM WATER DETENTION BASIN CROSS SECTION  
 NO SCALE

PAUL W. BARTLETT, REGISTERED PROFESSIONAL ENGINEER  
 CIVIL ENGINEERING  
 No. 45218  
 State of California



CONCEPTUAL GRADING PLAN  
 SCALE: 1" = 40'

COUNTY OF NAPA  
 SUSCOL CREEK WINERY  
 CONCEPTUAL GRADING PLAN  
 COUNTY OF NAPA  
 CALIFORNIA

DATE: APRIL 2007  
 PREPARED BY: PAUL W. BARTLETT  
 CHECKED BY: PAUL W. BARTLETT  
 SHEET NO. 1

BARTLETT  
 CIVIL ENGINEERING  
 2425 BARTLETT ROAD, SUITE 200  
 NAPA, CALIFORNIA 94930  
 (707) 255-2925  
 FAX: (707) 255-2925

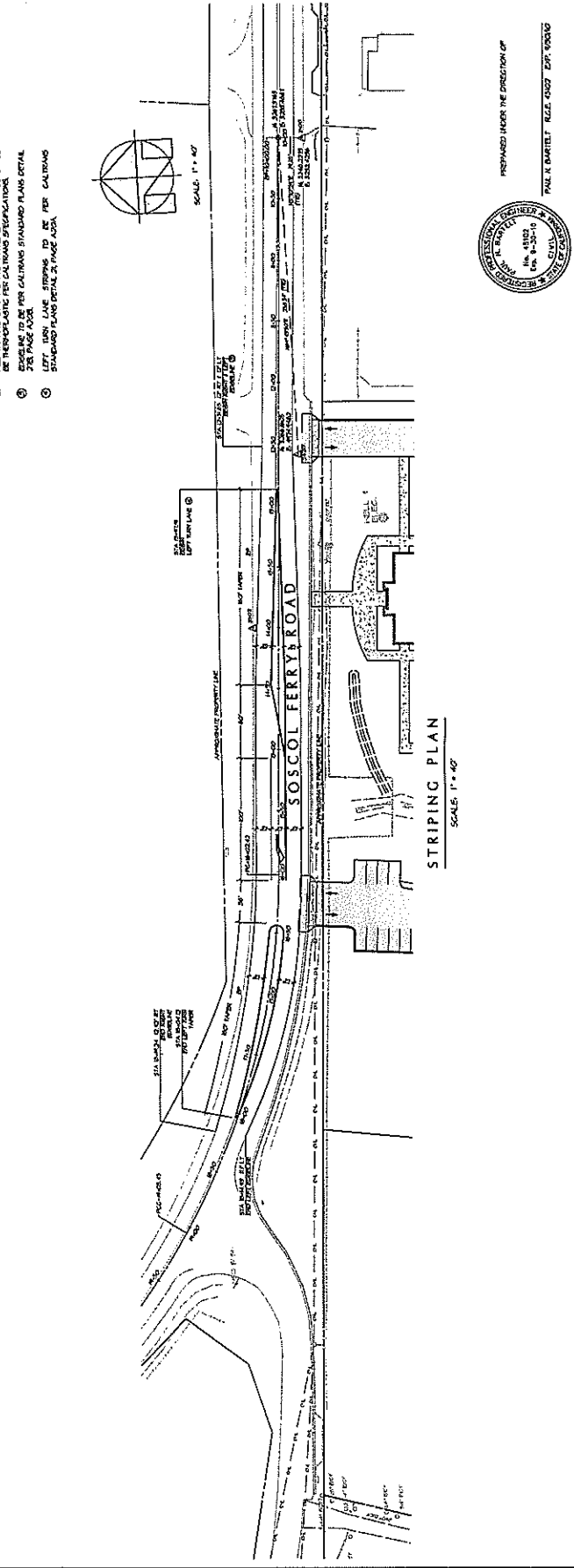
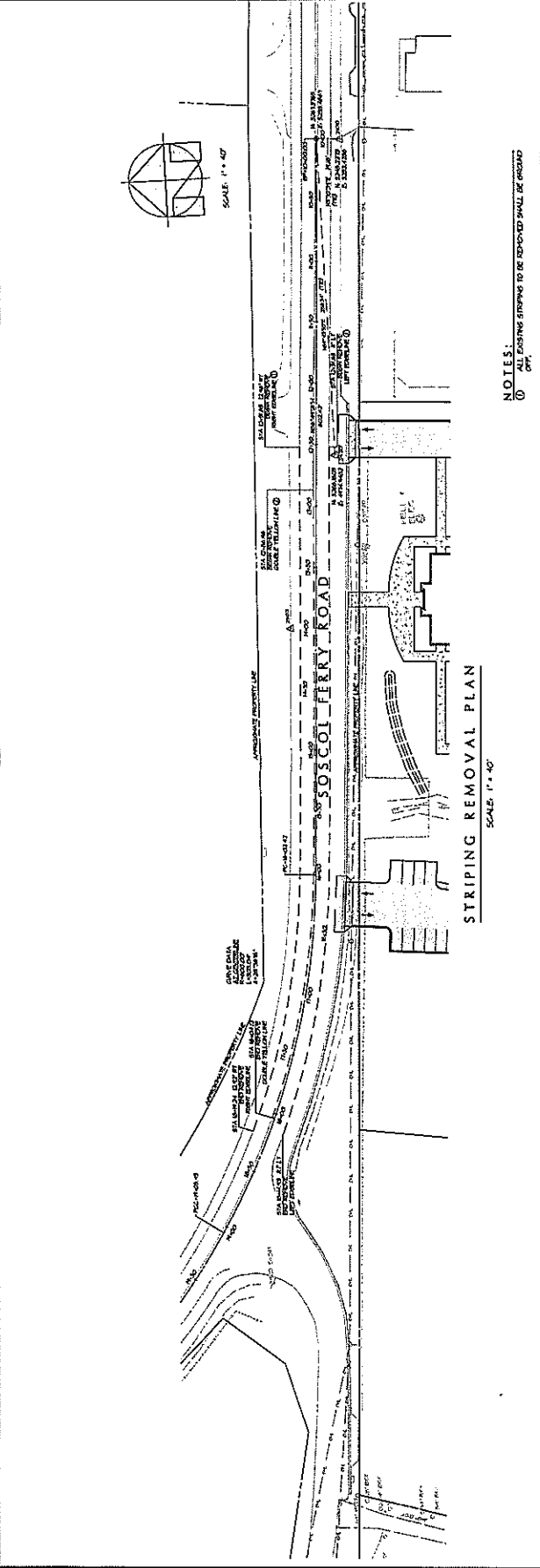
APN 057-070-001  
 APN 057-070-014  
 APN 057-070-017

SUSCOL CREEK WINERY  
 CONCEPTUAL GRADING PLAN  
 SCALE: 1" = 40'

TYPICAL SWALE CROSS SECTION  
 NO SCALE

TYPICAL STORM WATER DETENTION BASIN CROSS SECTION  
 NO SCALE

PAUL W. BARTLETT, REGISTERED PROFESSIONAL ENGINEER  
 CIVIL ENGINEERING  
 No. 45218  
 State of California



- NOTES:
1. ALL EXISTING STRIPING TO BE REMOVED SHALL BE GRADED
  2. ALL NEW STRIPING AND SIGNAGE INSTALLATIONS SHALL BE THERMOPLASTIC PER CALIFORNIA SPECIFICATIONS
  3. SIGNAGE TO BE PER CALIFORNIA STANDARD PLANS DETAIL 708 PAGE A008
  4. LEFT TURN LANE STRIPING TO BE PER CALIFORNIA STANDARD PLANS DETAIL 708 PAGE A008

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

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