J. REDDING AICP
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January 27, 2012

Ron Gee, Project Planner
Department of Conservation, Development and Planning
County of Napa
1195 Third Street, room 210
Napa, California 94559

Re: Honing Vineyard & Winery--Use Permit Modification #P11-00405-MOD
850 Rutherford Road Rutherford, California 94573
APN 030-090-003

Dear Mr. Gee:

Enclosed please find a copy of the recently completed traffic study prepared by Omni-Means Engineers-Planners, dated January 23, 2012 and incorporated by reference. The purpose of the traffic study was in part to determine whether or not the proposed changes to the winery operations would necessitate the construction of a left turn lane within State Highway 128, aka Rutherford Road. The potential need for a left turn lane on S.R. 128 was evaluated based on CalTrans guidelines as directed. The study also evaluated potential traffic issued associated with the proposed changes in winery production, employees and visitation levels. Sight distance and adequacy of the internal access road was also evaluated.

Based upon this study, Omni-Means concluded that volumes associated with the proposed project conditions would not warrant the construction of a left turn lane on S.R. 128. Hence, we are removing this construction from our proposed project.

The submission of this study together with the materials submitted on December 5, 2011 completes all information requests. Our application is now complete. Please advise us as to the date of the Planning Commission hearing.

Thank you.

Sincerely,

Jeffrey Redding AICP for
Honing Vineyard & Winery

CC: Paul Wilkinson, Department of Public Works
Tony Benedetti, Honig Vineyard & Winery

omni · means
ENGINEERS · PLANNERS

January 23, 2012

Honig Vineyards Winery
c/o Mr. Jeff Redding, AICP
2423 Renfrew Street
Napa, CA 94558

Subject: ***Traffic Analysis for the proposed Honig Vineyards Winery Expansion Project***

Dear Mr. Redding:

We are pleased to provide this traffic study for a proposed expansion to the existing Honig Vineyards Winery located at 850 Rutherford Road (State Route 128) in Napa County (Figure 1 shows the site location). The study evaluated potential traffic issues associated with the proposed winery production increases as a result of additional employees, visitors, and wine-making operations. Traffic counts and field surveys were combined with the calculated increases in assessing the project's traffic conditions.

Our analysis has determined that the winery expansion would not significantly impact traffic conditions at the Honig Access/Rutherford Road intersection. Levels-of-service and delays would be satisfactory (LOS 'A') for the stopped outbound and left turn inbound turning movements. The available sight distance along Rutherford Road is adequate. The site's internal access road is generally consistent with Napa County standards (18 foot paved width) though some segments fall below this standard.

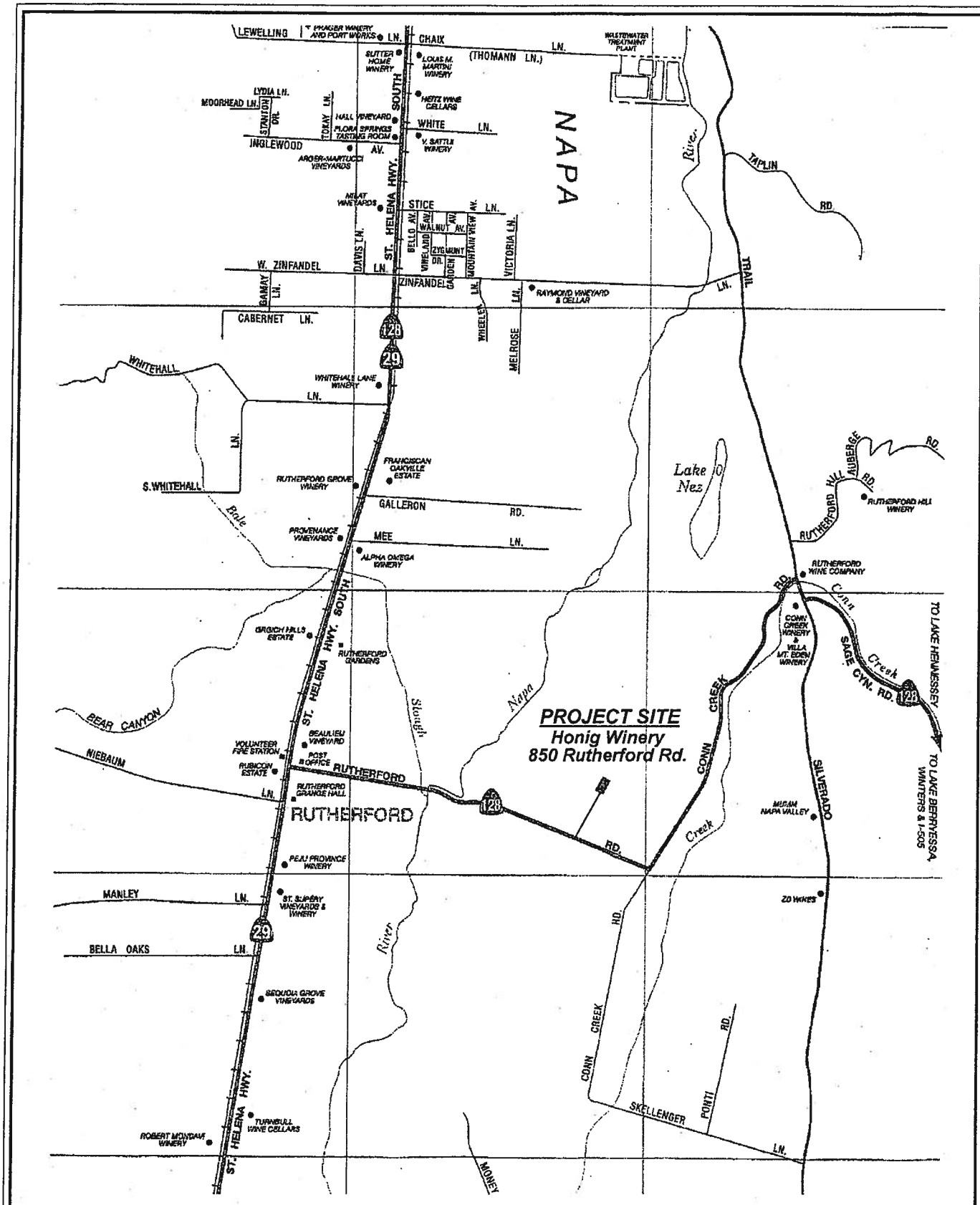
The potential need for a left-turn lane on S.R. 128 at the winery access was evaluated based on Caltrans guidelines. The guidelines compare the advancing and opposing S.R. 128 peak hour volumes with the percentage of left turning vehicles into the access road. Volumes associated with the proposed project conditions would not require a left turn lane based on the Caltrans thresholds.

Please feel free to contact us with any questions or comments.

Sincerely,

George Nickelson

George W. Nickelson, P.E
OMNI-MEANS, Ltd.
Engineers & Planners



Project Site Location Map

North

omni-means

figure 1

1. Baseline (Existing Use Permit) Traffic Conditions

The Honig Winery access road intersects with Rutherford Road (State Route 128) midway between State Route 29 and Silverado Trail. Rutherford Road is a two lane rural road oriented in an east-west direction and is primarily straight and flat with unpaved shoulders in the vicinity of the winery. The winery access road extends north from Rutherford Road. The intersection has single lane approaches and the winery road is stop sign controlled at Rutherford Road. The winery road also serves private residences and the Round Pond Olive Mill.

Existing winery volume counts were conducted at the Honig Winery access road and Rutherford Road (S.R. 128) during the typical peak periods of travel on a weekday (Friday evening, 4:00-6:00 p.m.) and a weekend (Saturday afternoon, 1:00-3:00 p.m.).[1] From the peak period counts, the peak one hour volumes were identified.

The total peak hour volumes in and out of the winery access road were found to be 13 trips on Friday and 16 trips on Saturday. Subtracting the trips not associated with the winery resulted in peak hour winery only vehicles of 8 trips (2 in, 6 out) on Friday and 14 trips (10 in, 4 out) on Saturday.

The existing use permit allows for the following operations at the winery:

- 150,000 gallons of production
- 12 employees
- 10 daily visitors
- Four marketing events with up to 50 people annually.

The number of daily trips calculated with the maximum existing permitted uses is outlined in Table 2. Weekday visitation is typically lower than weekend visitation. However, for this study weekday and weekend visitation assumed ten daily visitors in order to remain conservative. As shown, the current use permit generates approximately 47 daily trips on a typical weekday and 47 trips on a Saturday. During the harvest season, additional employee and truck trips result in 66 daily trips.

Peak hour volumes are conservatively assumed to be about 25% of the daily volumes. The calculated use permit peak hour volumes of 12 trips correspond closely with the counted volumes of 8-14 trips. Therefore the counted volumes were used for the baseline conditions analysis. The baseline peak hour winery-only trips and total intersection volumes (including residential and olive mill trips) are shown in Figure 2.

The recently counted (January, 2012) through volumes on Rutherford Road were compared to machine tube counts conducted near the Honig Winery access road in March/April of 2006.[2] The recently counted volumes were lower than the 2006 counts. The numbers indicate traffic volumes have not significantly increased since the previous counts. In order to remain conservative, the higher (2006) volumes were used in the traffic calculations.

The peak hour two-way volumes on Rutherford Road just west of the site access were found to be 183 vehicles on Friday and 195 vehicles on Saturday. The average daily volume on Rutherford Road just west of the Honig access road is about 1,980 vehicles weekdays and 1,670 vehicles on Saturday (and 1,240 vehicles on Sunday). The daily volumes are well within the roadway's carrying capacity and are equivalent to LOS 'A' conditions.

Peak hour intersection conditions are measured by Level of Service (LOS), which applies a letter ranking to successive levels of intersection performance. LOS 'A' represents optimum conditions with free-flow travel and no congestion. LOS 'F' represents severe congestion with long delays at the approaches. For intersections with minor street stop control, the LOS reflects the delays experienced by the minor street approach. (LOS calculation worksheets are attached in the Appendices.)

The Honig Access/Rutherford Road intersection operates at LOS 'A' during weekday and Saturday peak hours for the stopped southbound approach (with a calculated nine seconds of delay on weekdays and Saturdays). The eastbound entering left turn movement operates at LOS 'A' (less than one second delay) The intersection operates very efficiently with minimal delays and no vehicle queuing. The LOS are shown in Table 4.

2. Evaluation of Sight Distance

Primary issues for access design are vehicle visibility and operation relative to vehicles traveling on Rutherford Road and vehicles turning out of the winery access road. Vehicle sight distance at the Honig Access/Rutherford Road intersection was evaluated. The required vehicle visibility or "corner sight distance" is a function of travel speeds on Rutherford Road. Caltrans design standards indicate that for appropriate corner sight distance, "a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the cross road and the driver of an approaching vehicle in the right lane of the main highway". Caltrans design guidelines also indicate that at private access intersections the minimum corner sight distance "shall be equal to the stopping sight distance".

The posted speed limit is 45 mph on Rutherford Road. Radar surveys (conducted for a previous report) recorded a critical speed of 50 mph on Rutherford Road approaching the project site. Based on Caltrans design standards, the 50 mph critical speed requires a stopping sight distance of 430 feet, measured along the travel lanes on Rutherford Road.[3]

The site access intersection is located on a straight section of S.R. 128. Initial field measurements indicate sight distance is well over 1,000 feet in both directions. Thus, the sight distances are satisfactory for the observed vehicle speeds.

3. Traffic Effects of the Proposed Project

a. Project Description

The proposed winery expansion would allow for the following operations:

- Increase annual wine production to 300,000 gallons
- Increase the number of employees to 25
- Increase the maximum number of daily visitors to 100
- Increase marketing events to eight with up to 50 people, and four with up to 100 people.

b. Traffic Operations With The Project

The Winery's daily traffic generated by the proposed project has been calculated in Table 3. On a typical weekday 158 daily trips would be expected and on Saturdays 152 daily trips would be expected assuming maximum visitation. During harvest season, 194 daily trips would be expected. A comparison of existing and proposed use permit trips is shown below in Table 1.

TABLE 1
DAILY TRAFFIC COMPARISON BETWEEN CURRENT USE PERMIT AND PROPOSED USE PERMIT

Condition	Average Weekday	Average Saturday	Harvest Season Saturday
Current Use Permit	47 trips	47 trips	66 trips
Proposed Use Permit	158 trips	152 trips	194 trips

Peak hour intersection levels of service were evaluated. Using a conservative assumption that peak hour volumes represent 25% of daily volumes, the proposed project would generate 40 weekday peak hour trips and 38 Saturday peak hour trips. It was assumed that the added winery trips would be distributed comparable to existing flows (60% to/from the west and 40% to/from the east). The peak hour turning volumes with the proposed use permit are shown in Figure 3.

With the proposed expansion, the Honig Winery access road southbound approach would remain LOS 'A' (ten seconds of delay) and the eastbound left turn approach would remain at LOS 'A' (one second of delay). LOS are shown in Table 4.

With the expansion, daily volumes on Rutherford Road west of the site access would be expected to be approximately 2,075 vehicles on weekdays and 1,760 vehicles on Saturdays. The daily volumes would remain well within the capacity of a two lane rural road with conditions equivalent to LOS 'A'.

c. Site Access

The winery access intersection was evaluated for a potential left turn lane on S.R. 128 based on Caltrans design guidelines.[4, 5] Peak hour traffic volumes are utilized by comparing the advancing and opposing S.R. 128 volumes with the percentage of left turning vehicles into the access road. The volumes associated with the project conditions are less than the Caltrans minimum thresholds. Therefore a left turn lane would be not be warranted based on the Caltrans guidelines (turn lane warrant graphs are attached in the Appendices).

d. Internal Circulation

An existing paved roadway that extends from S.R. 128 about 0.5 mile to the site serves the winery. The road also serves several residences and the Round Pond Olive Mill which is located closer to S.R. 128. Napa County standards are 18 feet of width for private roads of this type.[6] Field measurements indicate the winery roadway varies in width. Portions of the road are consistent with the standard, including the higher volume section between S.R. 128 and the Olive Mill. Further north toward the winery some sections are narrower in part due to natural obstacles (trees). The reductions in width do not appear to affect site access.

If changes to the access road result from the proposed expansion, the road design should continue to accommodate truck turns to/from Rutherford Road.

e. Special Events

With the proposed expansion, winery events would increase from four to eight annually with up to 50 people, plus four with up to 100 people.

Presumably the events would be scheduled on non-peak days, and as such, would not generate daily trips beyond the maximum visitor traffic levels calculated in Table 3. It is also expected that events would be scheduled so that traffic flows would be outside the peak periods.

3. Summary and Conclusions

The Honig Winery access road / Rutherford Road (S.R. 128) intersection operates at satisfactory levels-of-service (LOS 'A') with minimal delays under existing/baseline conditions. With the proposed expansion all turning movements would continue to operate at LOS 'A' with little or no change in delays during weekday and weekend peak hours.

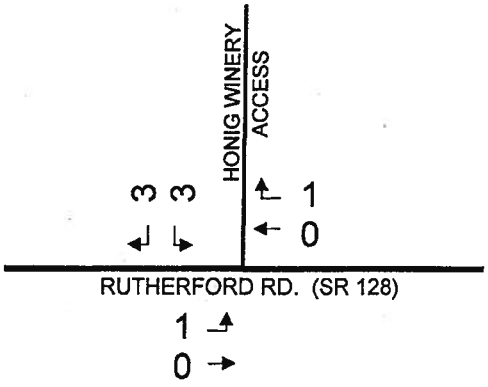
Sight distances from the winery access road exceed the recommended distances in both directions along Rutherford Road, therefore sight distances are adequate. (The project's Civil Engineer should confirm the adequacy of sight distances along Rutherford Road.)

The winery's peak hour volumes would not warrant a left turn lane on S.R. 128 based on Caltrans standards.

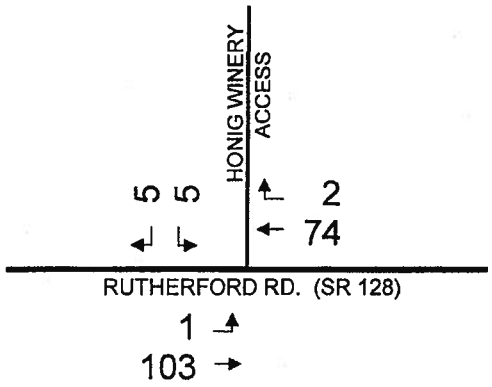
The winery is served by an existing access road which generally meets the Napa County standard of 18 feet. North of the Olive Mill the road varies in width, including a short section near two trees where the road narrows. The reduced width does not appear to measurably affect site access. The access road design should accommodate truck turns on/off of S.R. 128.

CURRENT USE PERMIT WEEKDAY PEAK HOUR VOLUMES:

WINERY TRIPS ONLY



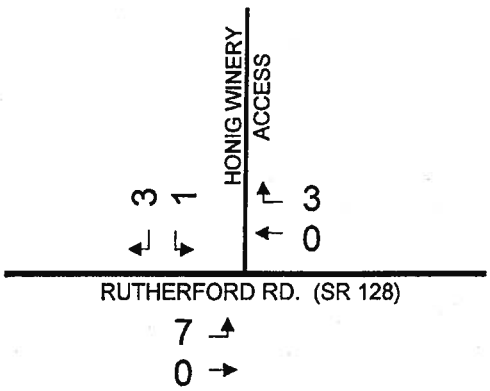
TOTAL TRIPS
(Winery, Residential,
Olive Mill, & Through Trips)



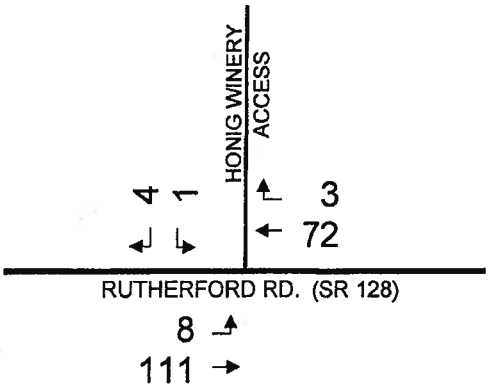
WINERY TRIPS:
8 (2 in, 6 out)

CURRENT USE PERMIT SATURDAY PEAK HOUR VOLUMES:

WINERY TRIPS ONLY



TOTAL TRIPS
(Winery, Residential,
Olive Mill, & Through Trips)



WINERY TRIPS:
14 (10 in, 4 out)

Current Use Permit (Baseline) Peak Hour Volumes

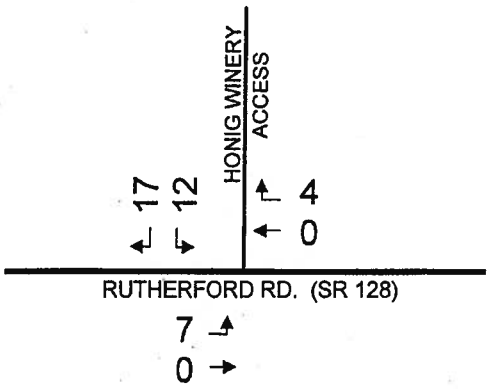
North

omni-means

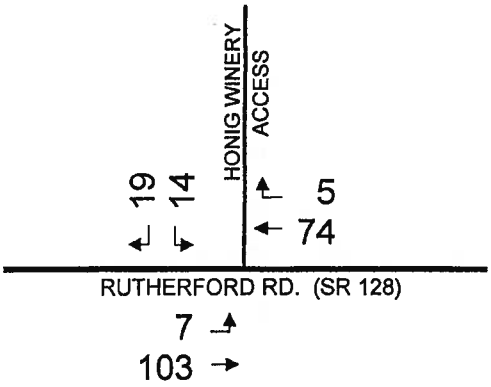
figure 2

PROPOSED USE PERMIT WEEKDAY PEAK HOUR VOLUMES:

WINERY TRIPS ONLY



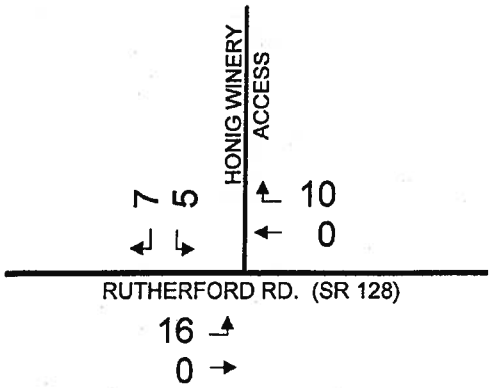
TOTAL TRIPS
(Winery, Residential,
Olive Mill, & Through Trips)



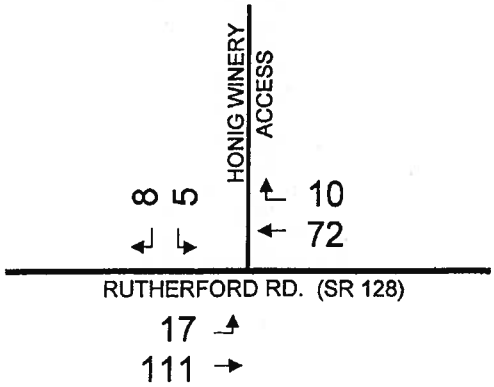
WINERY TRIPS:
40 (11 in, 29 out)

PROPOSED USE PERMIT SATURDAY PEAK HOUR VOLUMES:

WINERY TRIPS ONLY



TOTAL TRIPS
(Winery, Residential,
Olive Mill, & Through Trips)



WINERY TRIPS:
38 (26 in, 12 out)

Proposed Use Permit Peak Hour Volumes

North

omni-means

figure 3

TABLE 2
DAILY BASELINE TRIP GENERATION
OF THE HONIG VINEYARDS WINERY
AS PER THE CURRENT USE PERMIT

Daily Traffic During a Typical Saturday:

• 10 visitors/2.8 per vehicle x 2 one-way trips	=	8 daily trips
• 12 employees x 3.05 one-way trips per employee	=	37 daily trips
• 1 truck x 2 one-way trips per truck(1)	=	2 daily trips
		47 daily trips

Daily Traffic During a Typical Weekday:

• 10 visitors/2.6 per vehicle x 2 one-way trips	=	8 daily trips
• 12 employees x 3.05 one-way trips per employee	=	37 daily trips
• 1 truck x 2 one-way trips per truck(1)	=	2 daily trips
		47 daily trips

Daily Saturday Traffic During Harvest Season (6 weeks):

• 10 visitors/2.8 per vehicle x 2 one-way trips	=	8 daily trips
• 17 employees x 3.05 one-way trips per employee	=	52 daily trips
• 3 trucks x 2 one-way trips per truck(2)	=	6 daily trips
		66 daily trips

(1) During the 46-week non-harvest season, a maximum of 1 daily truck would be generated related to routine deliveries associated with the winery production (150,000 gallons/2.38 gallons per case = 63,025 cases).

• 63,025 cases/2,310 cases per truck	=	27 glass delivery trucks
• 63,025 cases/1,232 cases per truck	=	51 wine shipment trucks
• 7 miscellaneous weekly deliveries	=	322 miscellaneous trucks
		400 annual trucks

400 trucks/46 weeks = 9 weekly trucks or about 1 truck per day.

(2) During the 6-week harvest season, a maximum of 2 additional daily grape delivery trucks would be generated, calculated as follows:

- 150,000 gallons/165 gallons per ton = 909 tons of off-site grapes.
- 909 tons of off-site grapes/10 tons per truck/6 weeks = 15 trucks/week or about 2 trucks per day (assume truck would also pick up an empty bin).

TABLE 3
DAILY TRIP GENERATION WITH THE
PROPOSED HONIG VINEYARDS WINERY USE PERMIT

Daily Traffic During a Typical Saturday:

• 100 visitors/2.8 per vehicle x 2 one-way trips	=	72 daily trips
• 25 employees x 3.05 one-way trips per employee	=	76 daily trips
• 2 trucks x 2 one-way trips per truck(1)	=	4 daily trips
		152 daily trips

Daily Traffic During a Typical Weekday:

• 100 visitors/2.6 per vehicle x 2 one-way trips	=	78 daily trips
• 25 employees x 3.05 one-way trips per employee	=	76 daily trips
• 2 trucks x 2 one-way trips per truck(1)	=	4 daily trips
		158 daily trips

Daily Saturday Traffic During Harvest Season (6 weeks):

• 100 visitors/2.8 per vehicle x 2 one-way trips	=	72 daily trips
• 36 employees x 3.05 one-way trips per employee	=	110 daily trips
• 6 trucks x 2 one-way trips per truck(2)	=	12 daily trips
		194 daily trips

(1) During the 46-week non-harvest season, a maximum of 2 daily trucks would be generated related to routine deliveries associated with the winery production (300,000 gallons/2.38 gallons per case = 126,050 cases).

• 126,050 cases/2,310 cases per truck	=	55 glass delivery trucks
• 126,050 cases/1,232 cases per truck	=	102 wine shipment trucks
• 14 miscellaneous weekly deliveries	=	644 miscellaneous trucks
		801 annual trucks

801 trucks/46 weeks = 17 weekly trucks or about 2 trucks per day.

(2) During the 6-week harvest season, a maximum of 4 additional daily grape delivery trucks would be generated, calculated as follows:

- 300,000 gallons/165 gallons per ton = 1,818 tons of off-site grapes.
- 1,818 tons of off-site grapes/10 tons per truck/6 weeks = 30 trucks/week or about 4 trucks per day (assume truck would also pick up an empty bin).

TABLE 4
PEAK HOUR OPERATIONS AT
HONIG WINERY ACCESS ROAD / RUTHERFORD ROAD
LOS AND SECONDS OF DELAY

Current Use Permit	Weekday	Saturday
Honig Winery road southbound stopped approach	A / 9 sec.	A / 9 sec.
Rutherford Road eastbound left turn movement	A / <1 sec.	A / <1 sec.

Proposed Use Permit	Weekday	Saturday
Honig Winery road southbound stopped approach	A / 10 sec.	A / 9 sec.
Rutherford Road eastbound left turn movement	A / <1 sec.	A / 1 sec.

References:

(1) Omni-Means Engineers & Planners, traffic counts on January 6, 2012 (4:00-6:00 p.m.) & January 7, 2012 (1:00-3:00 p.m.).

(2) Baymetrics Data Services, Daily traffic counts on Rutherford Road adjacent to the Honig Winery access road, March 27, 2006 – April 2, 2006.

(3) Caltrans, *Highway Design Manual – Sixth Edition*, July 1, 2009.

(4) Caltrans, "Guidelines for Reconstruction of Intersections", August, 1985.

(5) Transportation Research Board, National Cooperative Highway Research Program Report 279, "Intersection Channelization Design Guide", November, 1985.

(6) Napa County, *Adopted Road and Street Standards*, revised August 31, 2004.

APPENDICES

- Level of Service Definitions
- Level of Service Calculations
- Existing Counts
- Left Turn Lane Warrant Graphs

LEVEL-OF-SERVICE CRITERIA FOR INTERSECTIONS

LEVEL OF SERVICE	TYPE OF FLOW	DELAY	MANEUVERABILITY	CONTROL DELAY (SECONDS/VEHICLE)		
				SIGNALIZED	UNSIGNALIZED	ALL-WAY STOP
A	Stable Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 10.0 secs ≤ 0.60 v/c	≤ 10.0	≤ 10.0
B	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	>10 and ≤ 20.0 secs. 0.61 – 0.70 v/c	>10 and ≤ 15.0	>10 and ≤ 15.0
C	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>20 and ≤ 35.0 secs. 0.71 – 0.80 v/c	>15 and ≤ 25.0	>15 and ≤ 25.0
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles of stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	>35 and ≤ 55.0 secs. 0.81 – 0.90 v/c	>25 and ≤ 35.0	>25 and ≤ 35.0
E	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>55 and ≤ 80.0 secs. 0.91 – 1.00 v/c	>35 and ≤ 50.0	>35 and ≤ 50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	> 80.0 secs. > 1.00 v/c	> 50.0	> 50.0

References: 1. Highway Capacity Manual, Fourth Edition, Transportation Research Board, 2000, Contra Costa Transportation Authority (CCTA), Technical Procedures Update, Final, July 9, 2006

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	103	74	2	5	5
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	1	137	99	3	7	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	101				240	100
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	101				240	100
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	1491				748	956

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	139	101	13
Volume Left	1	0	7
Volume Right	0	3	7
cSH	1491	1700	839
Volume to Capacity	0.00	0.06	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.1	0.0	9.4
Lane LOS	A		A
Approach Delay (s)	0.1	0.0	9.4
Approach LOS			A

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	16.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	8	111	72	3	1	4
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	10	134	87	4	1	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	90				242	89
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	90				242	89
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	100
cM capacity (veh/h)	1505				742	970

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	143	90	6
Volume Left	10	0	1
Volume Right	0	4	5
cSH	1505	1700	914
Volume to Capacity	0.01	0.05	0.01
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.5	0.0	9.0
Lane LOS	A		A
Approach Delay (s)	0.5	0.0	9.0
Approach LOS			A

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	22.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	103	74	5	14	19
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	9	137	99	7	19	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	105				258	102
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	105				258	102
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	97
cM capacity (veh/h)	1486				726	953

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	147	105	44
Volume Left	9	0	19
Volume Right	0	7	25
cSH	1486	1700	842
Volume to Capacity	0.01	0.06	0.05
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.5	0.0	9.5
Lane LOS	A		A
Approach Delay (s)	0.5	0.0	9.5
Approach LOS			A

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	17	111	72	10	5	8
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	20	134	87	12	6	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	99				267	93
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	99				267	93
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				99	99
cM capacity (veh/h)	1494				712	964

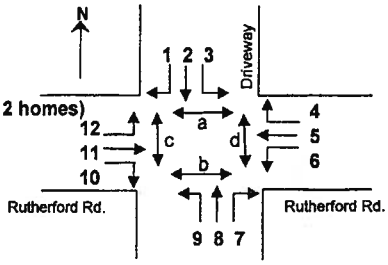
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	154	99	16
Volume Left	20	0	6
Volume Right	0	12	10
cSH	1494	1700	849
Volume to Capacity	0.01	0.06	0.02
Queue Length 95th (ft)	1	0	1
Control Delay (s)	1.1	0.0	9.3
Lane LOS	A		A
Approach Delay (s)	1.1	0.0	9.3
Approach LOS			A

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	23.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Volume Worksheet

Honig Winery

Rutherford Rd. (SR 128) / Honig Winery Access (+ R.P. Olive Mill & 2 homes)
1/6/12 Fri. & 1/7/12 Sat.
Weather: Clear



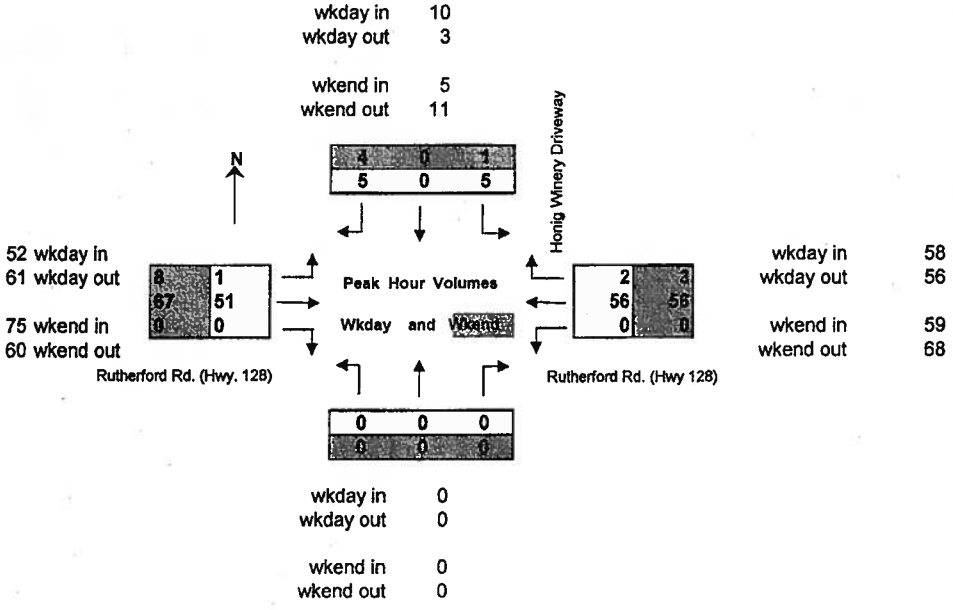
Weekday PM

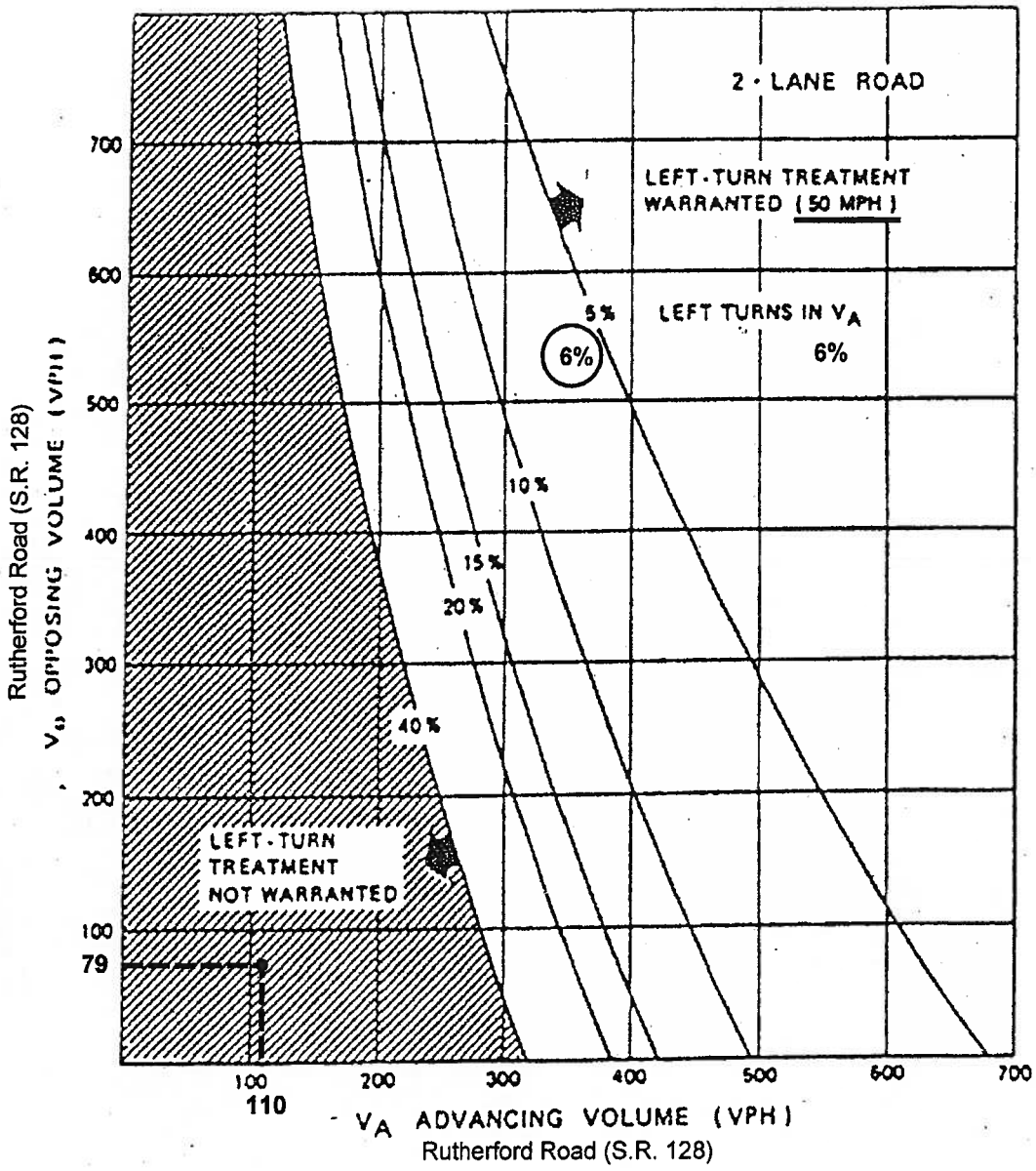
	1	2	3	4	5	6	7	8	9	10	11	12	15 MIN.	60 MIN.	Pds & Bicy a-b / c-d	Site Access IN	OUT
4:00-4:15	0		0	0	11						11	0	22		0	0	0
4:15-4:30	0		1	0	12						10	0	23		0	0	1
4:30-4:45	2		2	1	15						8	0	28		0	1	4
4:45-5:00	3		1	1	15						19	1	40	113	0	2	4
5:00-5:15	0		1	0	14						14	0	29	120	0	0	1
5:15-5:30	0		0	0	10						12	0	22	119	0	0	0
5:30-5:45	0		0	0	7						10	0	17	108	0-1A/0-0	0	0
5:45-6:00	5		1	0	7						4	0	17	85	0-1A/0-0	0	6
PeakHour:																	
4:15-5:15	**5**		**5**	**2**	**56**						**51**	**1**	113	120	0-2A/0-0	**3**	**10**
													phf = 0.75				

Saturday Mid-day

	1	2	3	4	5	6	7	8	9	10	11	12	15 MIN.	60 MIN.	Pds & Bicy a-b / c-d	Site Access IN	OUT
1:00-1:15	1		0	0	9						15	0	25		0	0	1
1:15-1:30	3		0	1	15						21	2	42		0-1AB/0-0	3	3
1:30-1:45	1		0	1	16						14	1	33		0	2	1
1:45-2:00	0		0	0	13						17	1	31	131	0	1	0
2:00-2:15	0		0	0	12						15	1	28	134	0	1	0
2:15-2:30	0		1	0	12						11	2	26	118	0	2	1
2:30-2:45	1		0	2	13						11	1	28	113	0-1AB/0-0	3	1
2:45-3:00	3		0	1	11						13	4	32	114	0	5	3
PeakHour:																	
1:15-2:15	4		0	2	56						67	5	134	134		7	4
Balanced	**4**		**1**	**3**	**56**						**67**	**8**	139	139	0-1AB/0-0	**11**	**5**
													phf = 0.83				

A = Adult Ped
AB = Adult Bike





Honig Vineyards Winery With Proposed Use Permit

Rutherford Road (S.R. 128) / Winery Access Road Intersection

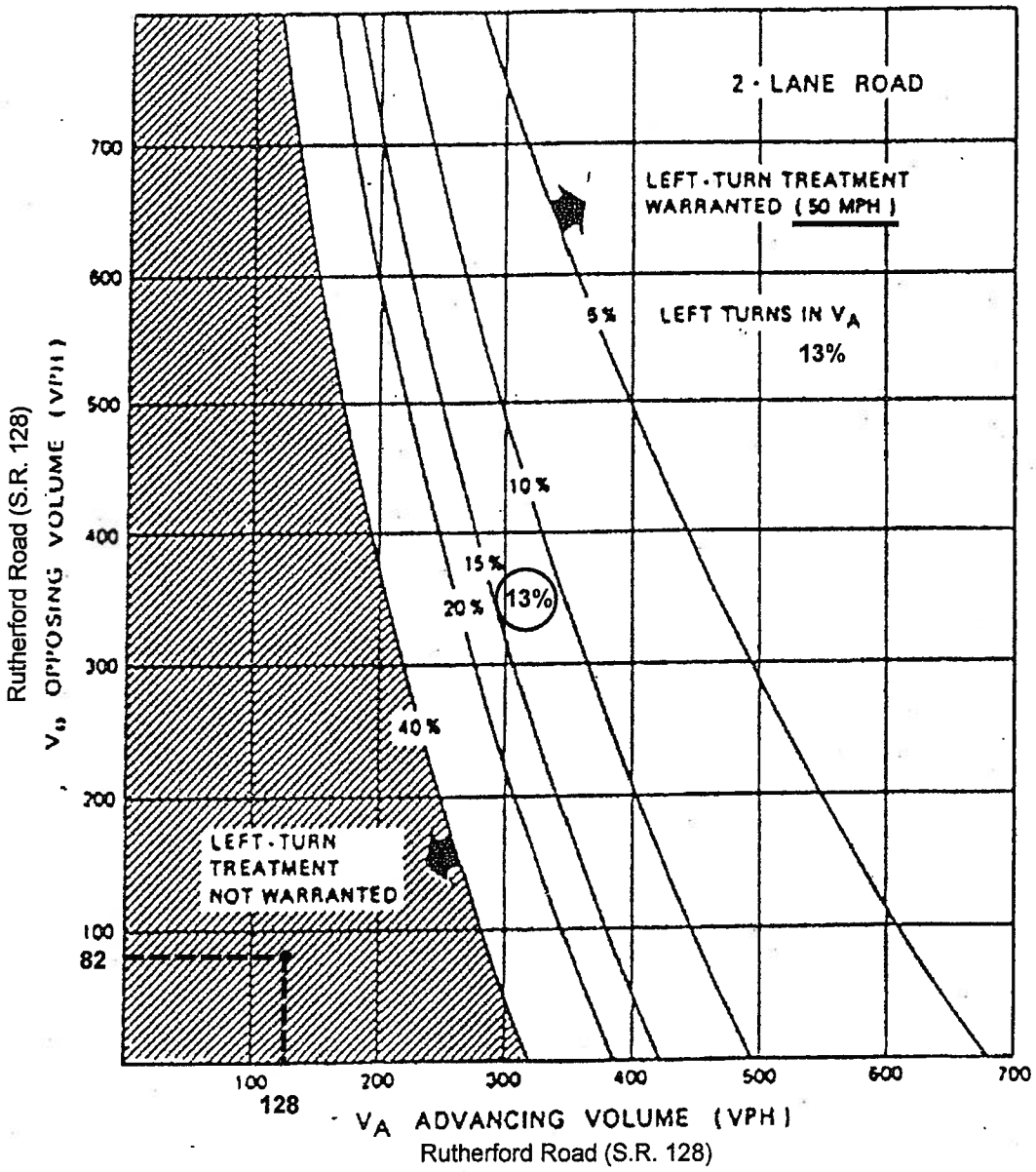
Average Weekday PM Peak Hour Volumes

V_A = 110 L.T. % = 7/110 = 6% V_o = 79

Left-Turn Lane Not Warranted

Caltrans, "Guidelines for Reconstruction of Intersections", August 1985.

Transportation Research Board, National Cooperative Highway Research Program Report 279, "Intersection Channelization Design Guide", November, 1985.



Honig Vineyards Winery With Proposed Use Permit

Rutherford Road (S.R. 128) / Winery Access Road Intersection

Average Saturday Peak Hour Volumes

V_A = 128 L.T. % = 17/128 = 13% V_o = 82

Left-Turn Lane Not Warranted

Caltrans, "Guidelines for Reconstruction of Intersections", August 1985.

Transportation Research Board, National Cooperative Highway Research Program Report 279, "Intersection Channelization Design Guide", November, 1985.