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Traffic Study

Anthem Winery P14-00320-MOD and Exception to Road and Street Standards,
Variance P14-00321-VAR and Viewshed, and
Agricultural Erosion Control Plan P14-00322-ECPA
Planning Commission Hearing Date (Wednesday, October 3, 2018)

March 7, 2018

Ms. Julie Arbuckle
Anthem Winery and Vineyards, LLC
3454 Redwood Road
Napa, CA 94558

Amended Final Traffic Analysis for Anthem Winery

Dear Ms. Arbuckle;

In June 2015 W-Trans completed a focused traffic analysis addressing potential cumulative traffic impacts associated with the proposed new tasting room to be accessed via 3123 Dry Creek Road in the County of Napa. Specific attention was given to the trips generated by the proposed project in addition to the new trips that will be generated by Woolls Ranch Winery at 1032 Mount Veeder Road. The proposed project and Woolls Ranch Winery would be accessed from different roads but some traffic from both wineries would go through the Redwood Road/Dry Creek Road intersection. The traffic study addressed the County's request for an analysis of cumulative traffic impacts from both as well as concerns about emergency ingress/egress. The study was amended in March 2016 to address potential impacts associated with construction traffic. To address comments regarding the emergency ingress/egress plan, that section of the analysis has been expanded. This amended final analysis incorporates and replaces the original letter report dated June 25, 2015 as well as the addendum dated March 16, 2016.

Project Description

The site is currently occupied by a winery facility that is permitted to produce 30,000 gallons of wine per year and a single-family residence. Though no wine is currently produced on-site, wine storage, fulfillment, compliance, sales, marketing, and other office functions are performed at the site. The site is served by driveways on Redwood Road and Dry Creek Road, though access is currently taken only via the Redwood Road driveway as the Dry Creek Road driveway does not currently connect all the way to the project site. The proposed project would allow production of up to 50,000 gallons of wine annually and operation of a tasting room for a maximum of 32 visitors per day on weekdays and 48 visitors per day on weekends plus special events with 30 people two times per month, 100 people ten times per year, 200 people one time per year, 300 people one time per year, and Wine Auction participation. Access for the existing residence and agricultural activities would continue to be taken via the Redwood Road driveway, while all winery trips will occur via the Dry Creek Road driveway. It is noted that, while not part of the project, a new family home will be built on the site that would also take access from Dry Creek Road.

Study Area

The study area consists of the project site and segments of Redwood Road from Browns Valley Road to Dry Creek Road and Dry Creek Road from Orchard Avenue to Redwood Road. The project site is located between Redwood and Dry Creek Roads, with existing driveways on both. Dry Creek Road is a two-lane undivided roadway that runs north-south in the study segment with 12-foot travel lanes in each direction and a posted speed limit of 40 miles per hour (mph). Redwood Road is a two-lane undivided roadway that generally runs east-west in the study area with 10.5-foot travel lanes in each direction and a posted speed limit of 30 mph.

Based on mechanical tube counts collected January 21-24, the average daily traffic (ADT) on Dry Creek Road between Trower Avenue and Redwood Road is approximately 4,600 vehicles per day on weekdays. Data from the Napa-Solano model shows that volumes on Dry Creek Road drop substantially north of Wine Country Avenue, which is reasonable given the large residential neighborhood to the east, and remain at about the same level continuing north of Orchard Avenue. Counts taken north of Orchard Avenue, which indicate p.m. peak hour volumes that are similar to the 2010 model volumes, indicate that the daily volume on Dry Creek Road near the project site is about 800 vehicles per day. A volume of 850 vehicles per day was conservatively used for this analysis. The ADT on

Redwood Road between Browns Valley Road and Dry Creek Road is approximately 4,000 vehicles per day on weekdays based on data collected April 14-18, 2014. The segment counts and model output are enclosed.

Collision History

The collision history for the study segment of Dry Creek Road one mile south of Orchard Avenue was reviewed to determine any trends or patterns that indicate a safety risk that may be exacerbated by the addition of project traffic. Average annual collision rates were calculated based on records for October 2008 through September 2013 obtained through the California Highway Patrol and published in their Statewide Integrated Traffic Records System (SWITRS) reports.

The statewide average collision rate for a rural two-lane, flat road with a speed limit of 55 mph or less is 1.23 collisions/million vehicle miles (c/mvm). The one-mile segment of Dry Creek Road south of Orchard Avenue (including the intersection at Linda Vista Avenue) had three reported collisions over the five-year study period for a calculated collision rate of 1.93 c/mvm, which is higher than the statewide average for similar facilities of 1.23. Due to the low number of collisions, it is difficult to identify a trend, though two of the three were single-vehicle crashes where the drivers ran off the road.

A copy of the collision rate spreadsheet is enclosed for reference.

Trip Generation and Distribution

The anticipated trip generation for a proposed project is typically estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 9th Edition, 2012. However, the publication contains no such information for a winery. Therefore, the County of Napa's Winery Traffic Information/Trip Generation Sheet was used to determine the anticipated traffic generated with the current staff as well as that would be generated by both production that is already permitted at the site and with the proposed tasting room. The trip generation spreadsheet is assumed to capture all activities associated with a winery, including any deliveries of grapes, barrels, tanks, supplies, etc. All trip estimates represent one-way trip ends, so a round trip results in two trip ends. Copies of the worksheets are enclosed for reference.

Since the County of Napa's Winery Traffic Information/Trip Generation Sheet does not include guidance on inbound versus outbound trips, it was assumed that 75 percent of trip ends at the winery would be outbound during the weekday p.m. peak hour since most of the trips would be associated with employees and customers leaving at closure of the winery. The tasting room will close at 6:00 p.m., which means some of the employees and visitors would leave outside the p.m. peak hour. For a more conservative analysis, the 38 percent of daily was still used to estimate the weekday p.m. peak hour trips. For the Saturday midday peak hour, it was assumed that inbound and outbound trip ends would be evenly split. While the winery is permitted for 30,000 gallons of production and four full-time employees, there are currently only two employees on site with no production. The differences between the trip generations for Existing and Proposed conditions as well as Permitted and Proposed conditions are shown in Table 1.

Table 1 – Trip Generation

Trip Type	Daily	Weekday PM Peak			Saturday Midday Peak		
	Trips	Trips	In	Out	Trips	In	Out
Existing Use							
Winery	-6	-2	0	-2	-2	-1	-1
Permitted Use							
Winery	-12	-4	0	-4	-2	-1	-1
Truck Trips	-1	0	0	0	0	0	0
Proposed Winery and Tasting Room							
Winery	55	19	5	14	29	15	14
Truck Trips	1	0	0	0	0	0	0
Net New Trips (Proposed minus Existing Use)	**50**	**17**	**5**	**12**	**27**	**14**	**13**
Total New Trips (Proposed minus Permitted Use)	**43**	**15**	**5**	**10**	**27**	**14**	**13**

Trip Generation and Distribution by Roadway

For the proposed project at Anthem Winery, it is anticipated that trips to and from the north would typically be via Orchard Avenue to Dry Creek Road while trips to and from the south would typically arrive at Dry Creek Road via Trower Avenue or Redwood Road. It is estimated that 95 percent of trips to and from the south will use Trower Avenue and 5 percent will use Redwood Road.

The trip generation for the Woolls Ranch Winery project was taken from the "Traffic Analysis for the Woolls Ranch Winery," March 4, 2014, which indicated the estimated trip generation for a proposed winery plus tasting room. It was assumed that 95 percent of the trips generated would use Redwood Road and 5 percent of the trips would use Mount Veeder Road. Only the trips on Redwood Road were applicable for this analysis. A copy of the Woolls Ranch Winery traffic study is enclosed for reference.

Existing truck trips for 30,000 gallons of production is estimated to be 0.54 daily trips. The proposed production of 50,000 gallons of wine is estimated to generate 0.90 daily trips. Based on the County's estimating form, the increase in production would result in 0.36 additional trips per day on Dry Creek Road, so one additional truck trip end per day was applied for analysis purposes.

A summary of the change in trips on Redwood Road and Dry Creek Road associated with the proposed project and the Woolls Ranch project is provided in Table 2.

Table 2 – Estimated Winery Trips by Roadway

Trip Type	Daily Trips	Weekday PM Peak Trips	Weekday PM Peak In	Weekday PM Peak Out	Saturday Midday Peak Trips	Saturday Midday Peak In	Saturday Midday Peak Out
Winery Trips on Redwood Rd west of Dry Creek Rd							
Woolls Ranch Winery							
Winery plus Tasting Room	65	26	7	19	31	15	16
Existing Winery Use							
Winery	-6	-2	0	-2	-2	-1	-1
Permitted Use							
Winery	-12	-4	0	-4	-2	-1	-1
Truck Trips	-1	0	0	0	0	0	0
Proposed Winery & Tasting Room							
Winery plus Tasting Room	3	1	0	1	1	1	0
Net New Trips on Redwood Rd (Woolls Ranch plus Proposed minus Existing Use)	**62**	**25**	**7**	**18**	**30**	**15**	**15**
Total New Trips on Redwood Rd (Woolls Ranch plus Proposed minus Permitted Use)	**55**	**23**	**7**	**16**	**30**	**15**	**15**
Winery Trips on Dry Creek Rd north of Redwood Rd							
Proposed Winery & Tasting Room							
Winery plus Tasting Room	55	19	5	14	29	15	14
Truck Trips	1	0	0	0	0	0	0
Total New Trips on Dry Creek Rd	**56**	**19**	**5**	**14**	**29**	**15**	**14**

Segment Level of Service

The County of Napa's adopted LOS Standard is contained in Napa County General Plan Update 2008. Policy CIR-16 states that the County shall seek to maintain an arterial Level of Service D or better on all county roadways. There are no standard methodologies for evaluating low-speed two-lane roadways such as Dry Creek Road and Redwood Road, so the volume-to-capacity method was applied. Level of Service is assigned based on volume-to-capacity ratios, where a v/c ratio of 0.60 or less is LOS A and a v/c ratio of 1.00 or more is LOS F.

Dry Creek Road is identified in the County's model as a collector road, while Redwood Road is a collector in some areas and an arterial in others. According to the Napa County General Plan Environmental Impact Report, February 16, 2007, the model used to evaluate future operating conditions used volume thresholds of 500 vehicles per hour per lane for collectors; this threshold was applied to both roadways.

Volume data provided by the County indicates that the volume on Dry Creek Road peaks at about 530 vehicles per hour for both directions. It was estimated that 45 percent of vehicles travel northbound and 55 percent of vehicles travel southbound based on existing volume data from the County's model.

Similarly, the peak volume measured on Redwood Road was 394 vehicles per hour for both directions and it was estimated that 40 percent of vehicles travel eastbound and 60 percent of vehicles travel westbound, also based on directional volumes from the County's model.

Future plus Project Conditions

The Future plus Project condition during a typical weekday p.m. peak period was analyzed as it typically reflects worst case conditions. The Future volumes for the horizon year of 2030 were taken from the Napa-Solano Travel Demand Model, which was created and is maintained by the Solano Transportation Authority and the Napa County Transportation Planning Agency. The model was built using local land use databases as well as countywide and regional travel models. Future volumes from the model were used along with the threshold of 500 vehicles per hour per lane to determine each link's volume-to-capacity ratio. Assuming a ratio of 1.00 or above represents LOS F, and each increment of 0.10 below 1.00 represents the ranges from LOS E down to LOS A, which is 0.60 or less, levels of service were assigned to the two study roadways. Under future volumes with and without project-generated traffic, Dry Creek Road would operate acceptably at LOS C. Under future volumes without project-generated traffic, Redwood Road is expected to operate acceptably at LOS B in the eastbound direction and LOS D in the westbound direction. Upon the addition of project-generated traffic, Redwood Road would operate at the same levels of service as without the project. These results for Future and Future plus Project scenarios are summarized in Table 3.

Table 3 – Future and Future plus Project PM Peak Hour Roadway Segment Levels of Service

Study Segments	Future – No Project		Future plus Project	
	v/c	LOS	v/c	LOS
Dry Creek Road (Class II)				
Northbound	0.77	C	0.78	C
Southbound	0.72	C	0.74	C
Redwood Road (Class IV)				
Eastbound	0.61	B	0.65	B
Westbound	0.87	D	0.89	D

Notes: v/c = volume to capacity ratio; LOS = Level of Service

Consideration was given to the potential impacts of the project on nearby intersections, such as those along Dry Creek Road at Orchard Avenue, Linda Vista Avenue, and Trower Avenue. The volume of traffic on Dry Creek Road at Orchard Avenue is so minimal that there is more than adequate capacity to accommodate project-generated trips while maintaining acceptable operation. A limited volume of traffic would be added to the intersections to the south, and the predominant movements that would be made, the westbound right turns and southbound left turns, are not as critical as a stop-controlled left turn, so would not be expected to result in substantial changes in the average delay. Based on this review it is anticipated that the project would have a less-than-significant impact at nearby intersections as well as on the road segments.

Access Analysis

Site Access

The proposed winery and tasting room project would be accessed via the driveway on Dry Creek Road by visitors and employees, while the winery is currently accessed via Redwood Road. The new driveway on Dry Creek Road will be widened to 20 feet, where possible, to provide adequate width for two-way traffic.

Sight Distance

At driveways, a substantially clear line of sight should be maintained between the driver of a vehicle waiting on the driveway and the driver of an approaching vehicle. Adequate time must be provided for the waiting vehicle to either cross, turn left, or turn right, without requiring the through traffic to radically alter their speed.

Sight distance along Dry Creek Road at the project driveway was evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distances for minor street approaches that are either a private road or a driveway are based on stopping sight distance with the approach travel speeds used as the basis for determining the recommended sight distance. Additionally, the stopping sight distance needed for a following driver to stop if there is a vehicle waiting to turn into a side street or driveway is evaluated based on stopping sight distance criterion and the approach speed on the major street.

For 40 mph, the minimum stopping sight distance required is 305 feet. Based on a field visit, sight lines exceed 500 feet in both directions, so are adequate for approach speeds of at least 55 mph. Therefore, sight distance is adequate for the project driveway.

Left-Turn Lane Warrants

The need for a left-turn lane on Dry Creek Road at the project driveway was evaluated based on criteria contained in the *Napa County Road and Street Standards*, 2011. Dry Creek Road near the project driveway, between Orchard Avenue and Linda Vista Avenue, has an approximate ADT volume of 850 vehicles.

Using the County's criteria, for an average daily traffic volume of approximately 850 vehicles on Dry Creek Road and the proposed daily new trips at the Dry Creek Road driveway, a left-turn lane is not currently warranted on Dry Creek Road at the driveway serving the project site for the 56 project-generated trips in addition to the 10 daily trips associated with adding a single family dwelling.

Future projected traffic volumes were estimated using the growth factor of 1.49. The estimated future ADT on Dry Creek Road near the project driveway is 1,300 vehicles per day. Under these projected future volumes, a left-turn lane would still not be warranted on Dry Creek Road at the project driveway, as shown on the enclosed graph. Even during harvest the daily volume of traffic would be insufficient to trigger the turn lane warrant.

While turn lanes are not needed to accommodate project-generated traffic, the conditions during a special event were also taken into account. AASHTO's *Geometric Design of Highways and Streets* indicates that the hourly traffic volume used in design should not be exceeded very often. To avoid facilities with excessive capacities, AASHTO recommends that designs be based on volumes during the 30th highest hour. Since the proposed project results in added trips due to 300-person special events only once per year, this scenario is not appropriate for evaluation purposes. Further, it is unlikely that events will begin during the peak hours evaluated, but rather, they are more likely to begin and end during off-peak hours. Finally, even with the 29 trips associated with a 30-person event added to the driveway ADT, a turn lane is still not warranted. Given that the start times will not typically coincide with a peak hour and a 30-person event does not trigger the need for a turn lane even under future volumes, turn lanes are not warranted for the project-added traffic under any of the potential conditions evaluated.

The potential for traffic to queue up in Dry Creek Road was also considered. Assuming that all inbound traffic during the peak hour came from the south, therefore making a left turn inbound, under Future plus Project conditions the maximum queue that would be expected to occur is one vehicle. Based on this analysis, essentially no queuing is expected to occur on Dry Creek Road, so the project has a less-than-significant impact in this regard. A copy of the spreadsheet is enclosed for referenced.

Emergency Ingress/Egress Plan

The proposed driveway plans and emergency ingress/egress plans prepared by RSA+ were reviewed. The two-lane Dry Creek Road driveway will vary in width from 17 to 22 feet except for a short segment crossing over a small creek. Outbound drivers will be yield-controlled through signing located at the westerly end of each segment that is less than 20 feet wide, directing outbound vehicles to yield to inbound vehicles. In the event of an emergency that requires a fire truck or other emergency vehicle to use the Dry Creek Road driveway, RSA+ has designed an emergency ingress/egress plan to ensure sufficient access for larger emergency response vehicles. A review of the Emergency Ingress/Egress Plan and the message signs proposed indicates sufficient emergency

access to and from the project site. It is noted that there are two options for the emergency plan, with the difference between them being the design of the driveway connection at Dry Creek Road and the drainage crossing at the end of the pan handle portion of the flag lot. Either option would be expected to operate acceptably; a copy of the "Option 2" plan is enclosed for reference.

Review of the sight lines available at each of the points where the signs would be employed indicates that outbound drivers would reach the yield sign and would be able to see far enough ahead to determine if they could safely proceed or there were an inbound vehicle to which they had to yield. Because inbound traffic would be given the right-of-way over outbound traffic at all times through the suggested signing, there is no reason to expect that traffic would back up on Dry Creek Road; drivers entering would be able to proceed toward the winery without delay. Peak conditions would be expected to occur during events, at which times traffic would generally be either predominantly inbound or outbound, resulting in limited potential for conflict between opposing streams of traffic, and again, unhampered access to the driveway from Dry Creek Road.

Consideration was given to the delay that would be incurred by an outbound driver that yields to an incoming vehicle. The longest section that is limited to one-way traffic is about 350 feet long. Assuming a speed of about 20 mph, or 29 feet per second, it would take a driver about 12 seconds to traverse this distance. If the outbound driver arrived at any time after the inbound driver entered the segment, the wait would be less, and the delay would also be less at the other one-way segments, which are shorter. Given the limited potential for drivers to be traveling in opposite directions at the same time as well as the short delays that would be experienced, it is reasonable to expect that drivers will not be unduly inconvenienced by the one-way travel restriction.

While lit signs are not suggested for use on the driveway, it is recommended that such signs be used in the parking lot where they would be connected to the power at the main winery facility, including back-up generation, if such exists. During an emergency event these signs could easily be switched on with a simple on/off switch (or switches) located where they would be convenient to access, and could be activated quickly. As proposed, on-site personnel would direct traffic to exit via Redwood Road verbally, as well as with the signing. To ensure that personnel were able to react quickly and appropriately to an emergency, preparation of written procedures and routine training of staff are suggested.

Impacts Associated with Construction Traffic

The project as proposed is expected to add 56 new daily trips to Dry Creek Road, including one daily truck trip, with 19 trips during the weekday p.m. peak hour and 29 trips during the weekend midday peak hour. However, before the new winery will open, the access road off of Dry Creek Road as well as the septic system on-site will be upgraded. The project is anticipating two to six truck trips per day on Dry Creek Road during construction and due to removal of some cave spoils. While truck traffic will generally occur prior to expansion of uses on the site that will generate more daily trips than the two to six associated with the construction, enduring the latter part of the construction period, the new winery will be open for visitation so the total daily trips could be slightly higher at 58 to 62, assuming peak visitation this short period. Despite the slight change in daily trips, it is anticipated that truck trips related to winery construction would occur outside of peak hours, and not affect typical morning commute or evening commute traffic, so even with the overlap of both the visitor/employee trips and construction truck trips, there are still expected to be 19 weekday p.m. peak hour trips and 29 weekend p.m. peak hour trips. No change to the analysis is therefore necessary to reflect conditions during construction and the conclusions and recommendations in our report remain unchanged.

Conclusions and Recommendations

- The proposed project would generate an average of 56 trips daily, including 19 weekday p.m. peak hour trips and 29 Saturday midday peak hour trips. After accounting for the existing trips to and from Anthem Winery, the project is expected to generate 50 net new trips daily, including 17 during the p.m. peak hour and 27 net new trips during the Saturday midday peak hour.

- The Woolls Ranch Winery would generate an average of 65 new trips daily, including 26 weekday p.m. peak hour trips and 31 Saturday midday peak hour trips onto Redwood Road.

- The combined Anthem and Woolls Ranch wineries would add an average of 62 new trips daily onto Redwood Road, including 25 weekday p.m. peak hour trips and 30 Saturday midday peak hour trips. The project would add an average of 56 trips daily to Dry Creek Road, including 19 trips during the weekday p.m. peak hour and 29 trips during the Saturday midday peak hour.

- Under Future and Future plus Project conditions, the Dry Creek Road study segment is expected to operate at LOS C and the Redwood Road study segment is expected to operate at LOS B in the eastbound direction and LOS D in the westbound direction.

- Installation of a left-turn lane is not warranted at the Dry Creek Road project driveway.

- The existing driveways will provide sufficient emergency access to and from the project site with the installation of yield signs, as proposed.

Thank you for asking W-Trans to provide these services.

Sincerely,

Dalene J. Whitlock, PE, PTOE
Principal

REGISTERED PROFESSIONAL ENGINEER
DALENE J. WHITLOCK
TR001552
TRAFFIC
STATE OF CALIFORNIA

DJW/lgd/NAX080.L1

Enclosures: Segment Counts
Segment Collision Rate Spreadsheet
Winery Traffic Information/Trip Generation Sheet
Traffic Analysis for the Woolls Ranch Winery
Left-turn Lane Warrant Spreadsheets
Queuing Spreadsheet
Emergency Ingress/Egress Plan, Option 2

Dry Creek Rd.
Trower Ave.
Redwood Rd.

1/21/2014
Tuesday

Daily Volume, per Channel (Volume factor 0.500)

NB-SB					
Interval Start			Interval Start		
12:00 AM	-	-	12:00 PM	-	-
12:15 AM	-		12:15 PM	-	
12:30 AM	-		12:30 PM	-	
12:45 AM	-		12:45 PM	-	
1:00 AM	-	-	1:00 PM	58	256
1:15 AM	-		1:15 PM	80	
1:30 AM	-		1:30 PM	54	
1:45 AM	-		1:45 PM	64	
2:00 AM	-	-	2:00 PM	64	315
2:15 AM	-		2:15 PM	77	
2:30 AM	-		2:30 PM	82	
2:45 AM	-		2:45 PM	92	
3:00 AM	-	-	3:00 PM	92	401
3:15 AM	-		3:15 PM	117	
3:30 AM	-		3:30 PM	98	
3:45 AM	-		3:45 PM	94	
4:00 AM	-	-	4:00 PM	74	400
4:15 AM	-		4:15 PM	98	
4:30 AM	-		4:30 PM	118	
4:45 AM	-		4:45 PM	110	
5:00 AM	-	-	5:00 PM	104	428
5:15 AM	-		5:15 PM	132	
5:30 AM	-		5:30 PM	112	
5:45 AM	-		5:45 PM	80	
6:00 AM	-	-	6:00 PM	92	262
6:15 AM	-		6:15 PM	57	
6:30 AM	-		6:30 PM	64	
6:45 AM	-		6:45 PM	49	
7:00 AM	-	-	7:00 PM	40	142
7:15 AM	-		7:15 PM	38	
7:30 AM	-		7:30 PM	21	
7:45 AM	-		7:45 PM	43	
8:00 AM	-	-	8:00 PM	30	100
8:15 AM	-		8:15 PM	36	
8:30 AM	-		8:30 PM	20	
8:45 AM	-		8:45 PM	14	
9:00 AM	-	-	9:00 PM	24	83
9:15 AM	-		9:15 PM	23	
9:30 AM	-		9:30 PM	18	
9:45 AM	-		9:45 PM	18	
10:00 AM	-	-	10:00 PM	9	41
10:15 AM	-		10:15 PM	15	
10:30 AM	-		10:30 PM	9	
10:45 AM	-		10:45 PM	8	
11:00 AM	-	-	11:00 PM	5	21
11:15 AM	-		11:15 PM	6	
11:30 AM	-		11:30 PM	6	
11:45 AM	-		11:45 PM	4	

24 Hour Total 2449

12:00 AM - 12:00 PM	
12 Hour Count	0
Peak Hour	-
Peak Volume	-
Factor	-

12:00 PM - 12:00 AM	
12 Hour Count	2449
Peak Hour	4:30 PM
Peak Volume	464
Factor	0.88

Dry Creek Rd.
Trower Ave.
Redwood Rd.

1/22/2014
Wednesday

Daily Volume, per Channel (Volume factor 0.500)

NB-SB

Interval Start			Interval Start		
12:00 AM	2	7	12:00 PM	72	283
12:15 AM	2		12:15 PM	56	
12:30 AM	0		12:30 PM	70	
12:45 AM	3		12:45 PM	85	
1:00 AM	3	7	1:00 PM	70	275
1:15 AM	3		1:15 PM	68	
1:30 AM	1		1:30 PM	63	
1:45 AM	0		1:45 PM	74	
2:00 AM	3	8	2:00 PM	76	311
2:15 AM	0		2:15 PM	67	
2:30 AM	3		2:30 PM	76	
2:45 AM	2		2:45 PM	92	
3:00 AM	1	3	3:00 PM	82	392
3:15 AM	1		3:15 PM	104	
3:30 AM	0		3:30 PM	104	
3:45 AM	1		3:45 PM	102	
4:00 AM	0	7	4:00 PM	90	470
4:15 AM	2		4:15 PM	101	
4:30 AM	1		4:30 PM	135	
4:45 AM	4		4:45 PM	144	
5:00 AM	5	37	5:00 PM	123	471
5:15 AM	3		5:15 PM	127	
5:30 AM	10		5:30 PM	106	
5:45 AM	19		5:45 PM	115	
6:00 AM	15	124	6:00 PM	86	300
6:15 AM	21		6:15 PM	80	
6:30 AM	42		6:30 PM	74	
6:45 AM	46		6:45 PM	60	
7:00 AM	44	352	7:00 PM	46	165
7:15 AM	57		7:15 PM	48	
7:30 AM	87		7:30 PM	39	
7:45 AM	164		7:45 PM	32	
8:00 AM	104	340	8:00 PM	24	120
8:15 AM	88		8:15 PM	34	
8:30 AM	66		8:30 PM	34	
8:45 AM	82		8:45 PM	28	
9:00 AM	66	216	9:00 PM	34	89
9:15 AM	47		9:15 PM	18	
9:30 AM	54		9:30 PM	18	
9:45 AM	49		9:45 PM	19	
10:00 AM	53	225	10:00 PM	23	52
10:15 AM	60		10:15 PM	11	
10:30 AM	46		10:30 PM	12	
10:45 AM	66		10:45 PM	6	
11:00 AM	62	251	11:00 PM	8	23
11:15 AM	66		11:15 PM	6	
11:30 AM	49		11:30 PM	2	
11:45 AM	74		11:45 PM	7	

24 Hour Total 4528

12:00 AM - 12:00 PM	
12 Hour Count	1577
Peak Hour	7:30 AM
Peak Volume	443
Factor	0.68

12:00 PM - 12:00 AM	
12 Hour Count	2951
Peak Hour	4:30 PM
Peak Volume	529
Factor	0.92

Dry Creek Rd.
Trower Ave.
Redwood Rd.

1/23/2014
Thursday

Daily Volume, per Channel (Volume factor 0.500)

NB-SB

Interval Start			Interval Start		
12:00 AM	5	12	12:00 PM	72	258
12:15 AM	3		12:15 PM	66	
12:30 AM	3		12:30 PM	61	
12:45 AM	1		12:45 PM	59	
1:00 AM	2	4	1:00 PM	60	241
1:15 AM	0		1:15 PM	66	
1:30 AM	1		1:30 PM	55	
1:45 AM	1		1:45 PM	60	
2:00 AM	2	4	2:00 PM	76	363
2:15 AM	0		2:15 PM	90	
2:30 AM	2		2:30 PM	79	
2:45 AM	0		2:45 PM	118	
3:00 AM	0	1	3:00 PM	93	435
3:15 AM	0		3:15 PM	131	
3:30 AM	1		3:30 PM	104	
3:45 AM	0		3:45 PM	107	
4:00 AM	1	9	4:00 PM	110	491
4:15 AM	0		4:15 PM	116	
4:30 AM	4		4:30 PM	134	
4:45 AM	4		4:45 PM	131	
5:00 AM	8	40	5:00 PM	124	487
5:15 AM	8		5:15 PM	130	
5:30 AM	6		5:30 PM	114	
5:45 AM	18		5:45 PM	119	
6:00 AM	13	134	6:00 PM	100	280
6:15 AM	26		6:15 PM	76	
6:30 AM	41		6:30 PM	50	
6:45 AM	54		6:45 PM	54	
7:00 AM	46	339	7:00 PM	60	168
7:15 AM	62		7:15 PM	38	
7:30 AM	97		7:30 PM	36	
7:45 AM	134		7:45 PM	34	
8:00 AM	130	400	8:00 PM	26	122
8:15 AM	102		8:15 PM	38	
8:30 AM	86		8:30 PM	26	
8:45 AM	82		8:45 PM	32	
9:00 AM	60	199	9:00 PM	33	106
9:15 AM	46		9:15 PM	28	
9:30 AM	49		9:30 PM	20	
9:45 AM	44		9:45 PM	25	
10:00 AM	53	200	10:00 PM	18	47
10:15 AM	54		10:15 PM	10	
10:30 AM	47		10:30 PM	11	
10:45 AM	46		10:45 PM	8	
11:00 AM	62	249	11:00 PM	6	24
11:15 AM	63		11:15 PM	8	
11:30 AM	56		11:30 PM	6	
11:45 AM	68		11:45 PM	4	

24 Hour Total 4613

12:00 AM - 12:00 PM

12 Hour Count	1591
Peak Hour	7:30 AM
Peak Volume	463
Factor	0.86

12:00 PM - 12:00 AM

12 Hour Count	3022
Peak Hour	4:30 PM
Peak Volume	519
Factor	0.97

Dry Creek Rd.
Trower Ave.
Redwood Rd.

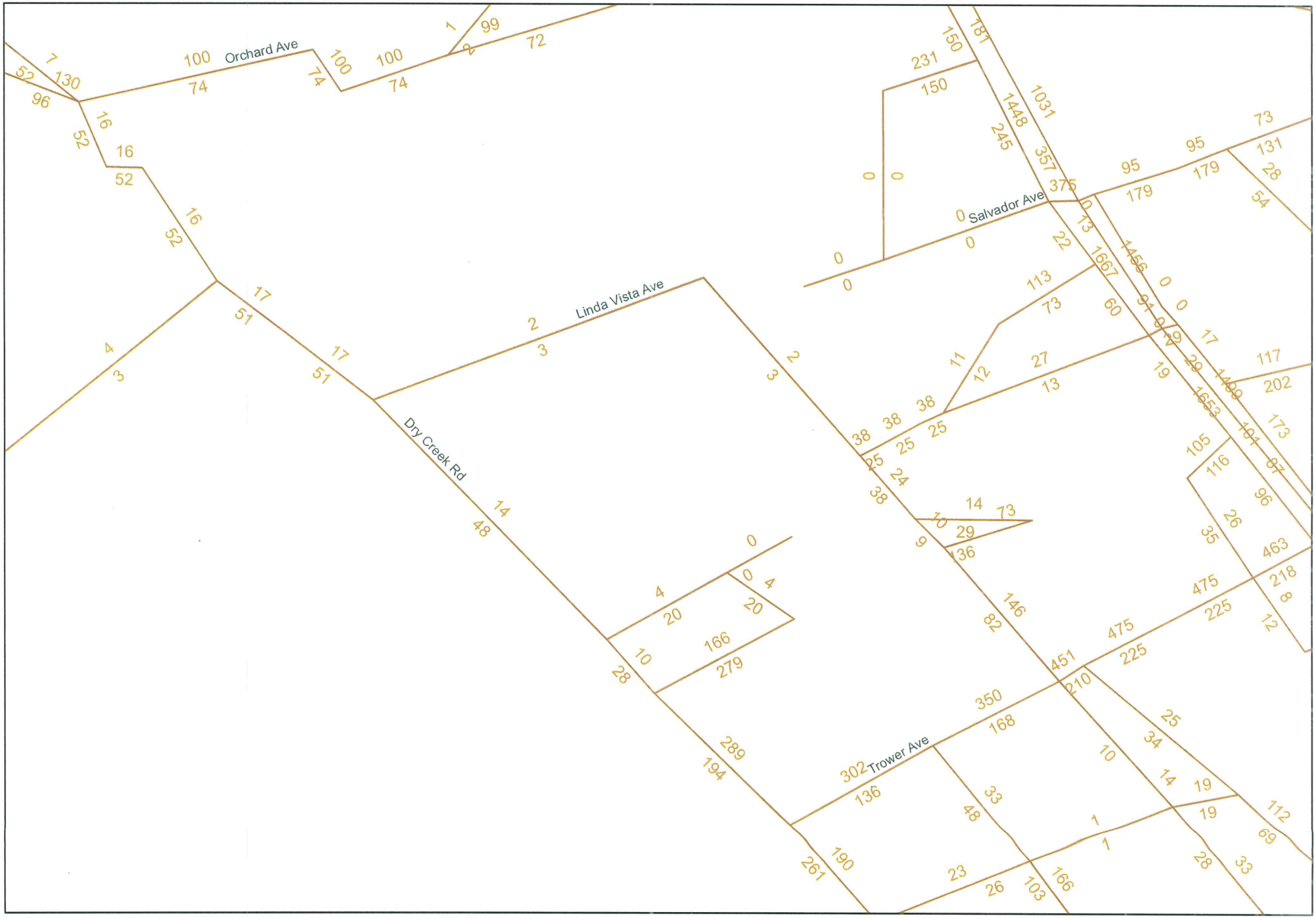
1/24/2014
Friday

Daily Volume, per Channel (Volume factor 0.500)

Interval Start	NB-SB		Interval Start
12:00 AM	1	11	
12:15 AM	4		
12:30 AM	4		
12:45 AM	2		
1:00 AM	2	8	
1:15 AM	2		
1:30 AM	0		
1:45 AM	4		
2:00 AM	1	2	
2:15 AM	0		
2:30 AM	1		
2:45 AM	0		
3:00 AM	1	3	
3:15 AM	0		
3:30 AM	2		
3:45 AM	0		
4:00 AM	2	10	
4:15 AM	2		
4:30 AM	4		
4:45 AM	2		
5:00 AM	7	29	
5:15 AM	8		
5:30 AM	5		
5:45 AM	9		
6:00 AM	17	116	
6:15 AM	22		
6:30 AM	32		
6:45 AM	45		
7:00 AM	42	304	
7:15 AM	48		
7:30 AM	82		
7:45 AM	132		
8:00 AM	107	260	
8:15 AM	73		
8:30 AM	80		

24 Hour Total 743

12:00 AM - 12:00 PM		**12:00 PM - 12:00 AM**	
12 Hour Count	743	12 Hour Count	0
Peak Hour	7:30 AM	Peak Hour	-
Peak Volume	394	Peak Volume	-
Factor	0.75	Factor	-


Orchard Ave
Linda Vista Ave
Dry Creek Rd
Salvador Ave
Trower Ave

PM (2010)

Volumes for: Wednesday, April 15, 2015 City: Napa County Project #: 15-7314-001
Location: 4104 Dry Creek Road

Start	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	5			1	1				
12:15	1	2			0	8				
12:30	0	3			0	5				
12:45	0	5	1	15	1	5	2	19	3	34
1:00	0	6			0	7				
1:15	1	6			0	2				
1:30	1	4			0	4				
1:45	0	2	2	18	0	2	0	15	2	33
2:00	0	5			0	9				
2:15	0	3			0	4				
2:30	0	5			0	3				
2:45	1	3	1	16	1	5	1	21	2	37
3:00	0	8			0	9				
3:15	0	10			0	3				
3:30	0	11			1	7				
3:45	0	4	0	33	0	4	1	23	1	56
4:00	0	10			0	6				
4:15	0	12			2	9				
4:30	0	8			1	7				
4:45	0	11	0	41	2	10	5	32	5	73
5:00	0	3			1	13				
5:15	1	10			3	6				
5:30	2	12			3	11				
5:45	0	8	3	33	1	7	8	37	11	70
6:00	2	10			0	3				
6:15	1	6			6	5				
6:30	4	6			3	2				
6:45	10	6	17	28	6	5	15	15	32	43
7:00	4	7			8	0				
7:15	5	6			6	6				
7:30	7	3			10	1				
7:45	5	4	21	20	11	1	35	8	56	28
8:00	5	5			7	4				
8:15	3	5			3	8				
8:30	3	2			7	2				
8:45	5	4	16	16	10	0	27	14	43	30
9:00	2	5			9	0				
9:15	1	7			7	2				
9:30	1	2			5	0	0			
9:45	7	4	11	18	8	2	29	4	40	22
10:00	7	0			9	1				
10:15	8	2			10	0				
10:30	2	2			6	1				
10:45	5	0	22	4	8	0	33	2	55	6
11:00	6	0			3	0				
11:15	5	0			5	2				
11:30	6	2			3	0				
11:45	8	0	25	2	8	1	19	3	44	5
Total	119	244	119	244	175	193	175	193	294	437
Combined Total	363		363		368		368		731	
AM Peak	6:45 AM				7:00 AM					
Vol.	26				35					
P.H.F.	0.650				0.795					
PM Peak		4:00 PM				4:45 PM				
Vol.		41				40				
P.H.F.		0.792				0.769				
Percentage	32.8%	67.2%			47.6%	52.4%				

Volumes for: Thursday, April 16, 2015 City: Napa County Project #: 15-7314-001
Location: 4104 Dry Creek Road

Start	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	1	7			1	6				
12:15	2	5			1	7				
12:30	0	2			0	6				
12:45	0	6	3	20	0	8	2	27	5	47
1:00	0	4			0	4				
1:15	0	10			0	7				
1:30	3	5			0	0				
1:45	0	8	3	27	1	8	1	19	4	46
2:00	0	6			2	3				
2:15	1	7			0	4				
2:30	0	7			1	8				
2:45	0	5	1	25	0	4	3	19	4	44
3:00	0	4			0	4				
3:15	0	6			0	8				
3:30	0	3			0	10				
3:45	1	5	1	18	1	8	1	30	2	48
4:00	0	12			1	8				
4:15	0	9			1	7				
4:30	1	6			0	10				
4:45	0	5	1	32	3	10	5	35	6	67
5:00	0	9			0	6				
5:15	0	8			2	11				
5:30	3	5			2	6				
5:45	2	8	5	30	6	5	10	28	15	58
6:00	4	6			2	7				
6:15	1	11			4	9				
6:30	5	9			5	3				
6:45	5	5	15	31	5	10	16	29	31	60
7:00	10	4			7	7				
7:15	2	9			5	2				
7:30	5	8			10	0				
7:45	6	7	23	28	6	2	28	11	51	39
8:00	6	5			9	6				
8:15	8	4			7	2				
8:30	4	9			3	3				
8:45	5	2	23	20	8	1	27	12	50	32
9:00	5	3			7	1				
9:15	1	5			7	2				
9:30	3	2			5	1	0			
9:45	5	4	14	14	7	0	26	4	40	18
10:00	6	1			5	0				
10:15	3	0			5	0				
10:30	3	2			4	0				
10:45	4	3	16	6	3	1	17	1	33	7
11:00	3	0			6	0				
11:15	8	2			8	0				
11:30	12	1			12	2				
11:45	5	0	28	3	7	0	33	2	61	5
Total	133	254	133	254	169	217	169	217	302	471
Combined Total	387		387		386		386		773	
AM Peak	11:15 AM				11:00 AM					
Vol.	32				33					
P.H.F.	0.667				0.688					
PM Peak		5:45 PM				4:30 PM				
Vol.		34				37				
P.H.F.		0.818				0.841				
Percentage	34.4%	65.6%			43.8%	56.2%				

Volumes for: Friday, April 17, 2015 City: Napa County Project #: 15-7314-001
Location: 4104 Dry Creek Road

Start	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	3	8			1	5				
12:15	0	4			1	6				
12:30	1	7			0	9				
12:45	2	7	6	26	2	7	4	27	10	53
1:00	0	6			0	10				
1:15	0	9			0	9				
1:30	1	6			0	9				
1:45	1	5	2	26	0	5	0	33	2	59
2:00	0	5			0	7				
2:15	0	5			0	10				
2:30	0	14			0	10				
2:45	0	6	0	30	0	11	0	38	0	68
3:00	0	7			0	5				
3:15	1	7			1	9				
3:30	0	7			0	4				
3:45	0	5	1	26	0	7	1	25	2	51
4:00	0	11			1	8				
4:15	0	5			1	8				
4:30	0	5			2	14				
4:45	1	11	1	32	0	2	4	32	5	64
5:00	0	8			1	4				
5:15	1	9			5	12				
5:30	2	4			2	7				
5:45	4	5	7	26	1	8	9	31	16	57
6:00	6	5			3	9				
6:15	2	9			3	5				
6:30	2	8			4	6				
6:45	8	4	18	26	3	7	13	27	31	53
7:00	5	11			7	7				
7:15	2	7			6	8				
7:30	3	7			8	2				
7:45	7	7	17	32	6	5	27	22	44	54
8:00	7	4			7	2				
8:15	3	4			7	1				
8:30	7	1			8	5				
8:45	4	5	21	14	9	0	31	8	52	22
9:00	4	2			9	1				
9:15	8	4			6	2				
9:30	8	4			12	0	0			
9:45	6	1	26	11	10	3	37	6	63	17
10:00	3	1			4	1				
10:15	6	2			7	1				
10:30	3	5			4	2				
10:45	7	2	19	10	7	1	22	5	41	15
11:00	7	1			2	3				
11:15	6	0			9	0				
11:30	9	5			5	2				
11:45	6	2	28	8	5	1	21	6	49	14
Total	146	267	146	267	169	260	169	260	315	527
Combined Total	413		413		429		429		842	
AM Peak	10:45 AM				9:00 AM					
Vol.	29				37					
P.H.F.	0.806				0.771					
PM Peak		2:30 PM				2:00 PM				
Vol.		34				38				
P.H.F.		0.607				0.864				
Percentage	35.4%	64.6%			39.4%	60.6%				

Redwood Rd.
Dry Creek Rd.
Browns Valley Rd.

4/14/2014
Monday

Daily Volume, per Channel (Volume factor 0.500)

EB-WB

Interval Start			Interval Start		
12:00 AM	-	-	12:00 PM	62	249
12:15 AM	-		12:15 PM	56	
12:30 AM	-		12:30 PM	54	
12:45 AM	-		12:45 PM	77	
1:00 AM	-	-	1:00 PM	66	253
1:15 AM	-		1:15 PM	68	
1:30 AM	-		1:30 PM	55	
1:45 AM	-		1:45 PM	64	
2:00 AM	-	-	2:00 PM	48	301
2:15 AM	-		2:15 PM	69	
2:30 AM	-		2:30 PM	86	
2:45 AM	-		2:45 PM	98	
3:00 AM	-	-	3:00 PM	71	313
3:15 AM	-		3:15 PM	80	
3:30 AM	-		3:30 PM	80	
3:45 AM	-		3:45 PM	82	
4:00 AM	-	-	4:00 PM	75	347
4:15 AM	-		4:15 PM	94	
4:30 AM	-		4:30 PM	86	
4:45 AM	-		4:45 PM	92	
5:00 AM	-	-	5:00 PM	100	388
5:15 AM	-		5:15 PM	86	
5:30 AM	-		5:30 PM	111	
5:45 AM	-		5:45 PM	91	
6:00 AM	-	-	6:00 PM	72	277
6:15 AM	-		6:15 PM	78	
6:30 AM	-		6:30 PM	69	
6:45 AM	-		6:45 PM	58	
7:00 AM	-	-	7:00 PM	52	191
7:15 AM	-		7:15 PM	43	
7:30 AM	-		7:30 PM	51	
7:45 AM	-		7:45 PM	45	
8:00 AM	-	-	8:00 PM	38	128
8:15 AM	-		8:15 PM	34	
8:30 AM	-		8:30 PM	27	
8:45 AM	-		8:45 PM	29	
9:00 AM	-	-	9:00 PM	27	90
9:15 AM	-		9:15 PM	23	
9:30 AM	-		9:30 PM	18	
9:45 AM	-		9:45 PM	22	
10:00 AM	-	-	10:00 PM	15	52
10:15 AM	-		10:15 PM	11	
10:30 AM	-		10:30 PM	12	
10:45 AM	-		10:45 PM	14	
11:00 AM	-	69	11:00 PM	6	35
11:15 AM	-		11:15 PM	10	
11:30 AM	-		11:30 PM	8	
11:45 AM	69		11:45 PM	11	

24 Hour Total 2693

12:00 AM - 12:00 PM	
12 Hour Count	69
Peak Hour	-
Peak Volume	-
Factor	-

12:00 PM - 12:00 AM	
12 Hour Count	2624
Peak Hour	4:45 PM
Peak Volume	389
Factor	0.88

Redwood Rd.
Dry Creek Rd.
Browns Valley Rd.

4/15/2014
Tuesday

Daily Volume, per Channel (Volume factor 0.500)

EB-WB

Interval Start			Interval Start		
12:00 AM	4	19	12:00 PM	58	249
12:15 AM	5		12:15 PM	54	
12:30 AM	4		12:30 PM	61	
12:45 AM	6		12:45 PM	76	
1:00 AM	4	7	1:00 PM	64	232
1:15 AM	1		1:15 PM	56	
1:30 AM	2		1:30 PM	50	
1:45 AM	0		1:45 PM	62	
2:00 AM	0	3	2:00 PM	80	307
2:15 AM	0		2:15 PM	74	
2:30 AM	2		2:30 PM	66	
2:45 AM	1		2:45 PM	87	
3:00 AM	0	3	3:00 PM	74	314
3:15 AM	2		3:15 PM	65	
3:30 AM	0		3:30 PM	85	
3:45 AM	1		3:45 PM	90	
4:00 AM	1	10	4:00 PM	87	371
4:15 AM	2		4:15 PM	76	
4:30 AM	2		4:30 PM	96	
4:45 AM	5		4:45 PM	112	
5:00 AM	4	29	5:00 PM	92	356
5:15 AM	4		5:15 PM	94	
5:30 AM	6		5:30 PM	80	
5:45 AM	15		5:45 PM	90	
6:00 AM	25	132	6:00 PM	62	247
6:15 AM	31		6:15 PM	77	
6:30 AM	36		6:30 PM	60	
6:45 AM	40		6:45 PM	48	
7:00 AM	28	222	7:00 PM	56	189
7:15 AM	32		7:15 PM	42	
7:30 AM	64		7:30 PM	39	
7:45 AM	98		7:45 PM	52	
8:00 AM	108	331	8:00 PM	45	124
8:15 AM	84		8:15 PM	32	
8:30 AM	78		8:30 PM	22	
8:45 AM	61		8:45 PM	25	
9:00 AM	50	213	9:00 PM	22	74
9:15 AM	43		9:15 PM	17	
9:30 AM	72		9:30 PM	21	
9:45 AM	48		9:45 PM	14	
10:00 AM	43	194	10:00 PM	24	59
10:15 AM	48		10:15 PM	12	
10:30 AM	56		10:30 PM	12	
10:45 AM	47		10:45 PM	11	
11:00 AM	62	218	11:00 PM	6	21
11:15 AM	54		11:15 PM	7	
11:30 AM	50		11:30 PM	4	
11:45 AM	52		11:45 PM	4	

24 Hour Total 3924

12:00 AM - 12:00 PM	
12 Hour Count	1381
Peak Hour	7:45 AM
Peak Volume	368
Factor	0.85

12:00 PM - 12:00 AM	
12 Hour Count	2543
Peak Hour	4:30 PM
Peak Volume	394
Factor	0.88

Redwood Rd.
Dry Creek Rd.
Browns Valley Rd.

4/16/2014
Wednesday

Daily Volume, per Channel (Volume factor 0.500)

EB-WB

Interval Start			Interval Start		
12:00 AM	3	7	12:00 PM	60	214
12:15 AM	1		12:15 PM	52	
12:30 AM	3		12:30 PM	48	
12:45 AM	0		12:45 PM	54	
1:00 AM	2	8	1:00 PM	62	289
1:15 AM	2		1:15 PM	81	
1:30 AM	2		1:30 PM	80	
1:45 AM	2		1:45 PM	66	
2:00 AM	0	2	2:00 PM	47	266
2:15 AM	0		2:15 PM	59	
2:30 AM	2		2:30 PM	70	
2:45 AM	0		2:45 PM	90	
3:00 AM	0	4	3:00 PM	74	351
3:15 AM	1		3:15 PM	88	
3:30 AM	1		3:30 PM	105	
3:45 AM	2		3:45 PM	84	
4:00 AM	0	14	4:00 PM	73	321
4:15 AM	2		4:15 PM	96	
4:30 AM	6		4:30 PM	73	
4:45 AM	6		4:45 PM	79	
5:00 AM	6	36	5:00 PM	70	350
5:15 AM	4		5:15 PM	97	
5:30 AM	8		5:30 PM	102	
5:45 AM	18		5:45 PM	81	
6:00 AM	18	115	6:00 PM	68	285
6:15 AM	29		6:15 PM	86	
6:30 AM	35		6:30 PM	78	
6:45 AM	33		6:45 PM	53	
7:00 AM	32	242	7:00 PM	42	194
7:15 AM	38		7:15 PM	55	
7:30 AM	78		7:30 PM	49	
7:45 AM	94		7:45 PM	48	
8:00 AM	118	325	8:00 PM	42	143
8:15 AM	89		8:15 PM	42	
8:30 AM	62		8:30 PM	27	
8:45 AM	56		8:45 PM	32	
9:00 AM	52	234	9:00 PM	42	110
9:15 AM	55		9:15 PM	15	
9:30 AM	55		9:30 PM	34	
9:45 AM	72		9:45 PM	19	
10:00 AM	50	220	10:00 PM	18	43
10:15 AM	58		10:15 PM	10	
10:30 AM	52		10:30 PM	6	
10:45 AM	60		10:45 PM	9	
11:00 AM	46	205	11:00 PM	6	26
11:15 AM	40		11:15 PM	6	
11:30 AM	64		11:30 PM	8	
11:45 AM	55		11:45 PM	6	

24 Hour Total 4004

12:00 AM - 12:00 PM

12 Hour Count	1412
Peak Hour	7:30 AM
Peak Volume	379
Factor	0.80

12:00 PM - 12:00 AM

12 Hour Count	2592
Peak Hour	3:30 PM
Peak Volume	358
Factor	0.85

Redwood Rd.
Dry Creek Rd.
Browns Valley Rd.

4/17/2014
Thursday

Daily Volume, per Channel (Volume factor 0.500)

EB-WB

Interval Start			Interval Start		
12:00 AM	6	20	12:00 PM	55	262
12:15 AM	5		12:15 PM	75	
12:30 AM	5		12:30 PM	72	
12:45 AM	4		12:45 PM	60	
1:00 AM	2	5	1:00 PM	54	265
1:15 AM	2		1:15 PM	69	
1:30 AM	0		1:30 PM	80	
1:45 AM	1		1:45 PM	62	
2:00 AM	0	2	2:00 PM	52	299
2:15 AM	1		2:15 PM	71	
2:30 AM	0		2:30 PM	76	
2:45 AM	1		2:45 PM	100	
3:00 AM	2	5	3:00 PM	82	319
3:15 AM	0		3:15 PM	85	
3:30 AM	0		3:30 PM	72	
3:45 AM	3		3:45 PM	80	
4:00 AM	2	14	4:00 PM	83	327
4:15 AM	3		4:15 PM	64	
4:30 AM	4		4:30 PM	82	
4:45 AM	5		4:45 PM	98	
5:00 AM	4	36	5:00 PM	86	322
5:15 AM	5		5:15 PM	70	
5:30 AM	8		5:30 PM	92	
5:45 AM	19		5:45 PM	74	
6:00 AM	14	129	6:00 PM	69	276
6:15 AM	40		6:15 PM	64	
6:30 AM	37		6:30 PM	81	
6:45 AM	38		6:45 PM	62	
7:00 AM	37	233	7:00 PM	66	193
7:15 AM	38		7:15 PM	43	
7:30 AM	66		7:30 PM	43	
7:45 AM	92		7:45 PM	41	
8:00 AM	112	320	8:00 PM	40	165
8:15 AM	77		8:15 PM	48	
8:30 AM	71		8:30 PM	39	
8:45 AM	60		8:45 PM	38	
9:00 AM	39	210	9:00 PM	31	99
9:15 AM	50		9:15 PM	23	
9:30 AM	50		9:30 PM	26	
9:45 AM	71		9:45 PM	19	
10:00 AM	64	222	10:00 PM	10	48
10:15 AM	54		10:15 PM	16	
10:30 AM	52		10:30 PM	11	
10:45 AM	52		10:45 PM	11	
11:00 AM	65	235	11:00 PM	10	36
11:15 AM	54		11:15 PM	10	
11:30 AM	52		11:30 PM	10	
11:45 AM	64		11:45 PM	6	

24 Hour Total 4042

12:00 AM - 12:00 PM	
12 Hour Count	1431
Peak Hour	7:45 AM
Peak Volume	352
Factor	0.79

12:00 PM - 12:00 AM	
12 Hour Count	2611
Peak Hour	4:45 PM
Peak Volume	346
Factor	0.88

Redwood Rd.
Dry Creek Rd.
Browns Valley Rd.

4/18/2014
Friday

Daily Volume, per Channel (Volume factor 0.500)

	EB-WB		
Interval Start			Interval Start
12:00 AM	1	10	
12:15 AM	2		
12:30 AM	2		
12:45 AM	5		
1:00 AM	3	8	
1:15 AM	2		
1:30 AM	0		
1:45 AM	3		
2:00 AM	0	1	
2:15 AM	1		
2:30 AM	0		
2:45 AM	0		
3:00 AM	1	7	
3:15 AM	3		
3:30 AM	0		
3:45 AM	3		
4:00 AM	1	7	
4:15 AM	2		
4:30 AM	1		
4:45 AM	3		
5:00 AM	5	29	
5:15 AM	3		
5:30 AM	11		
5:45 AM	10		
6:00 AM	18	111	
6:15 AM	31		
6:30 AM	35		
6:45 AM	27		
7:00 AM	32	155	
7:15 AM	36		
7:30 AM	42		
7:45 AM	45		
8:00 AM	58	258	
8:15 AM	44		
8:30 AM	72		
8:45 AM	84		
9:00 AM	52	103	
9:15 AM	51		

24 Hour Total 689

12:00 AM - 12:00 PM		**12:00 PM - 12:00 AM**	
12 Hour Count	689	12 Hour Count	0
Peak Hour	8:30 AM	Peak Hour	-
Peak Volume	259	Peak Volume	-
Factor	0.77	Factor	-

SEGMENT COLLISION RATE CALCULATIONS

Anthem Winery

Location: Dry Creek Road

Date of Count: Tuesday, January 21, 2014
ADT: 850

Number of Collisions: 3
Number of Injuries: 2
Number of Fatalities: 0
Start Date: October 1, 2008
End Date: September 30, 2013
Number of Years: 5

Highway Type: Conventional 2 lanes or less
Area: Rural
Design Speed: ≤55
Terrain: Flat

Segment Length: 1.0 miles
Direction: North/South

$$\frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Segment Length x Number of Years}}$$

$$\frac{3 \times 1{,}000{,}000}{850 \times 365 \times 1 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Segment	**1.93 c/mvm**	**0.0%**	**66.7%**
Statewide Average*	**1.23 c/mvm**	**2.4%**	**40.1%**

ADT = average daily traffic volume
c/mvm = collisions per million vehicle miles
* 2010 Collision Data on California State Highways, Caltrans

Winery Traffic Information / Trip Generation Sheet

Project Name: Anthem Winery 2014 Existing Conditions

Traffic during a Typical Weekday

Number of FT employees: 2 x 3.05 one-way trips per employee = 6.10 daily trips.

Number of PT employees: 0 x 1.90 one-way trips per employee = 0.00 daily trips.

Average number of weekday visitors: 0 / 2.6 visitors per vehicle x 2 one-way trips = 0.00 daily trips.

Gallons of production: 0 / 1,000 x .009 truck trips daily[3] x 2 one-way trips = 0.00 daily trips.

Total = 6 **daily trips.**

(№ of FT employees) + (№ of PT employees/2) + (sum of visitor and truck trips x .38) = 2 **PM peak trips.**

Traffic during a Typical Saturday

Number of FT employees (on Saturdays): 2 x 3.05 one-way trips per employee = 6.10 daily trips.

Number of PT employees (on Saturdays): 0 x 1.90 one-way trips per employee = 0.00 daily trips.

Average number of Saturday visitors: 0 / 2. 8 visitors per vehicle x 2 one-way trips = 0.00 daily trips.

Total = 6 **daily trips.**

(№ of FT employees) + (№ of PT employees/2) + (visitor trips x .57) = 2 **PM peak trips.**

Traffic during a Crush Saturday

Number of FT employees (during crush): 2 x 3.05 one-way trips per employee = 6.10 daily trips.

Number of PT employees (during crush): 0 x 1.90 one-way trips per employee = 0.00 daily trips.

Average number of Saturday visitors: 0 / 2. 8 visitors per vehicle x 2 one-way trips = 0.00 daily trips.

Gallons of production: 0 / 1,000 x .009 truck trips daily x 2 one-way trips = 0.00 daily trips.

Avg. annual tons of grape on-haul: 165 / 144 truck trips daily[4] x 2 one-way trips = 2.29 daily trips.

Total = 8 **daily trips.**

Largest Marketing Event- Additional Traffic

Number of event staff (largest event): 0 x 2 one-way trips per staff person = 0 trips.

Number of visitors (largest event): 0 / 2.8 visitors per vehicle x 2 one-way trips = 0 trips.

Number of special event truck trips (largest event): 0 x 2 one-way trips = 0 trips.

[3] Assumes 1.47 materials & supplies trips + 0.8 case goods trips per 1,000 gallons of production / 250 days per year (see *Traffic Information Sheet Addendum* for reference).

[4] Assumes 4 tons per trip / 36 crush days per year (see *Traffic Information Sheet Addendum* for reference).

Winery Traffic Information / Trip Generation Sheet

Project Name: Anthem Winery

Project Scenario: Permitted Conditions

Traffic during a Typical Weekday

Number of FT employees:	4	x 3.05 one-way trips per employee	=	12.20 daily trips.
Number of PT employees:	0	x 1.90 one-way trips per employee	=	0.00 daily trips.
Average number of weekday visitors:	1	/ 2.6 visitors per vehicle x 2 one-way trips	=	0.55 daily trips.
Gallons of production:	30000	/ 1,000 x .009 truck trips daily[3] x 2 one-way trips	=	0.54 daily trips.
		Total	=	13 **daily trips.**
		(№ of FT employees) + (№ of PT employees/2) + (sum of visitor and truck trips x .38)	=	4 **PM peak trips.**

Traffic during a Typical Saturday

Number of FT employees (on Saturdays):	2	x 3.05 one-way trips per employee	=	6.10 daily trips.
Number of PT employees (on Saturdays):	0	x 1.90 one-way trips per employee	=	0.00 daily trips.
Average number of Saturday visitors:	1	/ 2. 8 visitors per vehicle x 2 one-way trips	=	0.71 daily trips.
		Total	=	7 **daily trips.**
		(№ of FT employees) + (№ of PT employees/2) + (visitor trips x .57)	=	2 **PM peak trips.**

Traffic during a Crush Saturday

Number of FT employees (during crush):	2	x 3.05 one-way trips per employee	=	6.10 daily trips.
Number of PT employees (during crush):	0	x 1.90 one-way trips per employee	=	0.00 daily trips.
Average number of Saturday visitors:	0	/ 2. 8 visitors per vehicle x 2 one-way trips	=	0.00 daily trips.
Gallons of production:	30000	/ 1,000 x .009 truck trips daily x 2 one-way trips	=	0.54 daily trips.
Avg. annual tons of grape on-haul:	165	/ 144 truck trips daily[4] x 2 one-way trips	=	2.29 daily trips.
		Total	=	9 **daily trips.**

Largest Marketing Event- Additional Traffic

Number of event staff (largest event):	0	x 2 one-way trips per staff person	=	0 trips.
Number of visitors (largest event):	0	/ 2.8 visitors per vehicle x 2 one-way trips	=	0 trips.
Number of special event truck trips (largest event):	0	x 2 one-way trips	=	0 trips.

[3] Assumes 1.47 materials & supplies trips + 0.8 case goods trips per 1,000 gallons of production / 250 days per year (see *Traffic Information Sheet Addendum* for reference).

[4] Assumes 4 tons per trip / 36 crush days per year (see *Traffic Information Sheet Addendum* for reference).

Winery Traffic Information / Trip Generation Sheet

Project Name: Anthem Winery Project Scenario: Proposed Conditions

Traffic during a Typical Weekday

Number of FT employees: 7	x 3.05 one-way trips per employee	=	21.35 daily trips.
Number of PT employees: 5	x 1.90 one-way trips per employee	=	9.50 daily trips.
Average number of weekday visitors: 32	/ 2.6 visitors per vehicle x 2 one-way trips	=	24.62 daily trips.
Gallons of production: 50000	/ 1,000 x .009 truck trips daily[3] x 2 one-way trips	=	0.90 daily trips.
	Total	=	56 **daily trips.**
(№ of FT employees) + (№ of PT employees/2) + (sum of visitor and truck trips x .38)		=	19 **PM peak trips.**

Traffic during a Typical Saturday

Number of FT employees (on Saturdays): 7	x 3.05 one-way trips per employee	=	21.35 daily trips.
Number of PT employees (on Saturdays): 5	x 1.90 one-way trips per employee	=	9.50 daily trips.
Average number of Saturday visitors: 48	/ 2. 8 visitors per vehicle x 2 one-way trips	=	34.29 daily trips.
	Total	=	65 **daily trips.**
(№ of FT employees) + (№ of PT employees/2) + (visitor trips x .57)		=	29 **PM peak trips.**

Traffic during a Crush Saturday

Number of FT employees (during crush): 7	x 3.05 one-way trips per employee	=	21.35 daily trips.
Number of PT employees (during crush): 5	x 1.90 one-way trips per employee	=	9.50 daily trips.
Average number of Saturday visitors: 48	/ 2. 8 visitors per vehicle x 2 one-way trips	=	34.29 daily trips.
Gallons of production: 50000	/ 1,000 x .009 truck trips daily x 2 one-way trips	=	0.90 daily trips.
Avg. annual tons of grape on-haul: 275	/ 144 truck trips daily[4] x 2 one-way trips	=	3.82 daily trips.
	Total	=	70 **daily trips.**

Largest Marketing Event- Additional Traffic

Number of event staff (largest event): 10	x 2 one-way trips per staff person	=	20 trips.
Number of visitors (largest event): 300	/ 2.8 visitors per vehicle x 2 one-way trips	=	214 trips.
Number of special event truck trips (largest event): 10	x 2 one-way trips	=	20 trips.

[3] Assumes 1.47 materials & supplies trips + 0.8 case goods trips per 1,000 gallons of production / 250 days per year (see *Traffic Information Sheet Addendum* for reference).
[4] Assumes 4 tons per trip / 36 crush days per year (see *Traffic Information Sheet Addendum* for reference).

March 4, 2014

Mr. Paul Woolls
Woolls Ranch, LLC
1032 Mt. Veeder Road
Napa, CA 94558

Traffic Analysis for the Woolls Ranch Winery

Dear Mr. Woolls;

Whitlock & Weinberger Transportation, Inc. (W-Trans) has completed a focused traffic analysis addressing potential traffic impacts and circulation needs for the proposed new winery to be located at 1032 Mount Veeder Road in the County of Napa. The traffic study was completed in accordance with the criteria established by the County of Napa, and is consistent with standard traffic engineering techniques.

Project Description

The site is currently vacant. The proposed project would allow production of up to 50,000 gallons of wine annually and operation of a tasting room for a maximum of 60 visitors per day. The site is served by a single driveway on Redwood Road that also provides access to two single family homes; this entrance would be improved as part of the project.

Study Area

The study area consists of the project site, the connection of the project driveway to Redwood Road, and the segment of Mount Veeder Road-Redwood Road within one-half mile of the project frontage. The project site is located on the east side of Mount Veeder Road, with an existing driveway on Redwood Road approximately 180 feet south of the intersection of Mount Veeder Road/Redwood Road. Mount Veeder Road-Redwood Road is a two-lane undivided highway that runs north-south in the study area with twelve-foot travel lanes in each direction. The configurations of both Redwood Road and the project driveway are shown in Figure 1, which is enclosed.

There is no posted speed limit on Mount Veeder Road-Redwood Road in the vicinity of the project driveway. However, based on speed data collected, the 85th percentile speed for traffic approaching the driveway was found to be approximately 30 miles per hour (mph). Therefore, 30 mph was used for the design speed.

Based on mechanical tube counts collected in August 2013, the average daily traffic (ADT) on Redwood Road just south of Mt. Veeder Road is approximately 1,400 vehicles per day on weekdays and 1,100 vehicles per day on weekend days.

Collision History

The collision history for the study segment of Mount Veeder Road within one-half mile of the project site was reviewed to determine any trends or patterns that indicate a safety risk that may be exacerbated by the addition of project traffic. Average annual collision rates were calculated based on

records for January 2006 through December 2010 obtained through the California Highway Patrol and published in their Statewide Integrated Traffic Records System (SWITRS) reports.

The statewide average collision rate for a rural two-lane, mountainous road with a speed limit of 55 mph or less is 1.88 collisions/million vehicle miles (c/mvm). The one-mile segment of Mount Veeder Road within one-half mile of the project site had 11 reported collisions over the five-year study period for a calculated collision rate of 4.02 c/mvm, higher than the statewide average for similar facilities. While the collision rate is higher than the statewide average, both the fatality and injury rates are lower. A review of the crashes recorded indicates that a majority of collisions were hit-object collisions, with unsafe speed and improper turning the primary collision factor. These types of collisions are generally related to driver behavior rather than the volume of traffic using the roadway, and tend to involve drivers who are familiar with the road. Drivers who are unfamiliar with a roadway tend to drive more slowly, and are therefore less likely to run off the road due to excessive speed around a curve.

A copy of the collision rate spreadsheet is enclosed for reference.

Existing Conditions

Under existing conditions and with just the traffic generated by existing uses on the driveway, operation is well within the acceptable range, with drivers experiencing less than ten seconds of delay on average. While the concept of "Level of Service" is generally not applied to private driveways, the calculated average delay is consistent with LOS A operation. The existing traffic volumes are shown in Figure 1. Copies of the calculations are enclosed

Future Conditions

Future traffic volumes are typically developed based on information produced by the Napa County Traffic Model; however, due to the remote location of the proposed project, no projections are available for any roads in the vicinity of the proposed project. However, given the very low delays currently experienced at the driveway, substantial increases in traffic on Redwood Road would be needed to trigger unacceptable delays on the driveway. It is therefore anticipated that future operation will continue to be well within the range of what is considered tolerable by drivers exiting a private driveway to an arterial roadway.

Trip Generation

The anticipated trip generation for a proposed project is typically estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 9th Edition, 2012. However, the publication contains no such information for a winery. Therefore, the County of Napa's Winery Traffic Information/Trip Generation Sheet was used to determine the anticipated traffic that would be generated by the proposed tasting room. A copy of this worksheet is enclosed for reference.

Since the County of Napa's Winery Traffic Information/Trip Generation Sheet does not include guidance on inbound versus outbound trips, it was assumed that 75 percent of trips at the winery would be outbound during the weekday p.m. peak hour since most of the trips would be associated with employees and customers leaving at closure of the winery. For the weekend midday peak hour it was assumed that inbound and outbound trips would be evenly split. A summary of the project's trip generation potential is provided in Table 1.

Table 1
Trip Generation Summary

Trip Type	Daily Trips	Weekday PM Peak			Weekend Midday Peak		
		Trips	In	Out	Trips	In	Out
Existing Trips on Driveway							
Single Family Home (2 units)	19	2	1	1	2	1	1
Proposed Project							
Winery plus Tasting Room	68	25	6	19	31	16	15
Total Trips on Driveway	**87**	**27**	**7**	**20**	**33**	**17**	**16**

Note: Trip generation does not include traffic associated with special events

Trip Distribution

Given the limited potential for trips to be generated by uses to the north of the site, it was assumed that nearly all of the project traffic will be to and from the south. The applied distribution assumptions and resulting trips are shown in Table 2.

Table 2
Trip Distribution Assumptions

Route	Percent	Daily Trips	PM Trips	Wknd MD Trips
Mount Veeder Road North	5%	3	1	2
Redwood Road South	95%	65	26	31
TOTAL	**100%**	**68**	**27**	**33**

Existing plus Project Conditions

Upon adding project-generated traffic to the driveway, operation is expected to continue to be acceptable, with drivers still experiencing less than ten seconds of delay on average, which is again representative of LOS A operation. The project-added and existing plus project traffic volumes are shown in Figure 1.

Site Access

Sight Distance

At driveways a substantially clear line of sight should be maintained between the driver of a vehicle waiting on the driveway and the driver of an approaching vehicle. Adequate time must be provided for the waiting vehicle to either cross, turn left, or turn right, without requiring the through traffic to radically alter their speed.

Sight distance along Mount Veeder Road-Redwood Road at the project driveways was evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The

recommended sight distances for minor street approaches that are either a private road or a driveway are based on stopping sight distance. The approach travel speeds are used as the basis for determining the recommended sight distance. Additionally, the stopping sight distance needed for a following driver to stop if there is a vehicle waiting to turn into a side street or driveway is evaluated based on stopping sight distance criterion and the approach speed on the major street.

A radar survey was completed to determine the speed of traffic on Redwood Road approaching the site's driveway. The observed 85th percentile speed was 30 mph for both directions, and 29 mph for the northbound approach. For 30 mph, the minimum stopping sight distance required is 200 feet. Based on a review of the project site and the proposed driveway, the sight distance for drivers exiting the proposed driveway is currently approximately 100 feet to the south and over 400 feet to the north. The sight distance for drivers along Mount Veeder Road-Redwood Road following a driver turning into the project driveway is at least 400 feet for both northbound and southbound traffic. Therefore, with the exception of sight lines for drivers exiting the driveway looking south, sight distance is adequate for the project driveway.

As part of the proposed project, the project driveway would be modified. The site plan indicates that the driveway would be widened and parts of the embankment on the southeast corner of the driveway access would be removed. Based on the information available, including the proposed site entrance modifications, it is expected that sight distance would be improved and that adequate sight distance of at least 200 feet achieved.

Left-Turn Lane Warrants

The need for a left-turn lane on southbound Mount Veeder Road at the project driveway was evaluated using Napa County's Left-Turn Lane Warrant, which is based on the ADT of the roadway and the projected ADT of the proposed use, as well as safety criteria. Under Existing conditions, a left-turn lane is not warranted on southbound Redwood Road at the project driveway.

Based on Napa County's Left-Turn Lane Warrant, a left-turn lane would be warranted when the average daily traffic on Mount Veeder Road-Redwood Road reach 1,700 vehicles per day, or more than a 20 percent increase over existing volumes. Given the limited potential for any growth in this area a 20 percent increase seems highly unlikely. Further, 95 percent of project-related traffic is expected to originate from the south and make a right turn into the site. Therefore, even if volumes reach the level in the future where the left-turn lane is warranted based on the daily trips, a left-turn lane is still not recommended because so little project-related traffic would utilize it. A copy of the turn lane warrant graph is enclosed for reference.

Conclusions and Recommendations

- The proposed project would generate an average of 68 new trips daily, including 25 weekday p.m. peak hour trips and 31 weekend p.m. peak hour trips.

- Under existing conditions without and with the project, operation of the project driveway is expected to remain well within the limits of acceptability, with drivers experiencing, on average, less than ten seconds of delay. This is consistent with LOS A operation.

- Given the limited number of trips that the project would generate, it would increase volumes by considerably less than one percent on the regional road system. This would be a less-than-significant impact.

- Sight lines from the project driveway and along Mount Veeder Road-Redwood Road are expected to be adequate in all directions upon completion of proposed modifications to the site entrance.

- Based on Napa County's Left Turn Lane Warrants, a left-turn lane at the proposed project site entry is not warranted for existing volumes, or even with future volumes that might reasonably be expected.

Thank you for asking W-Trans to provide these services.

Sincerely,

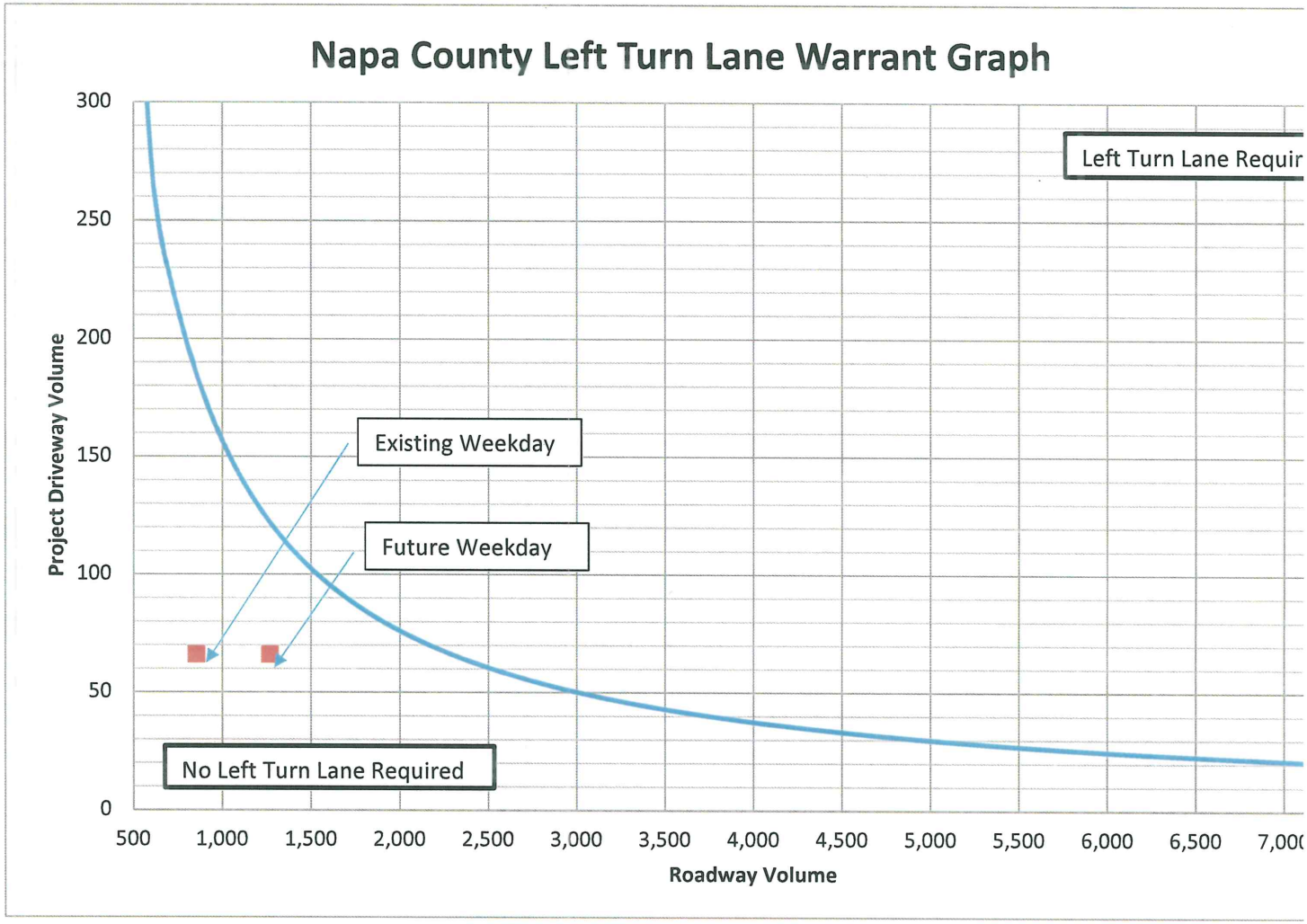
Sam Lam, PE
Transportation Engineer

Dalene J. Whitlock, PE, PTOE
Principal

DJW/stl/NAX069.L1

Enclosures: Collision Rate Calculations Spreadsheet
Figure 1: Lane Configurations and Volumes
LOS Calculations
Winery Traffic Information/Trip Generation Sheet
Turn Lane Warrant Graph

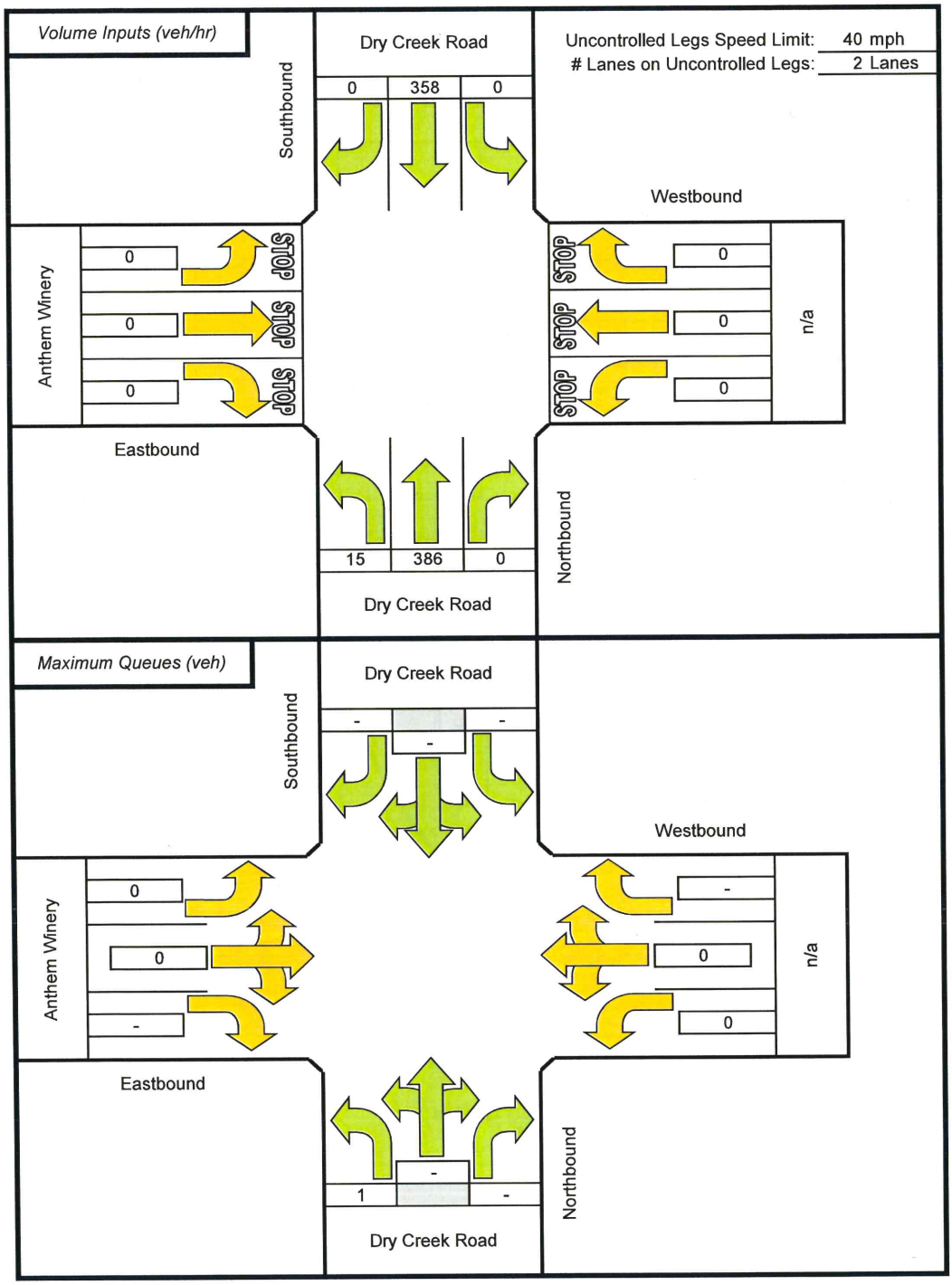
Factor
1
1.49


Napa County Left Turn Lane Warrant Graph
Project Driveway Volume
300
250
200
150
100
50
0
500
1,000
1,500
2,000
2,500
3,000
3,500
4,000
4,500
5,000
5,500
6,000
6,500
7,000
Roadway Volume
Left Turn Lane Requir
Existing Weekday
Future Weekday
No Left Turn Lane Required

Maximum Queue Length
Two-Way Stop-Controlled Intersections

Through Street: Dry Creek Road
Side Street: Anthem Winery

Scenario: Future plus Project
Stop Controlled Legs: East/West



Source: John T. Gard, ITE Journal, November 2001, "Estimating Maximum Queue Length at Unsignalized Intersections"

EMERGENCY INGRESS/EGRESS PLAN
OPTION 2

Prepared for

ANTHEM WINERY
3454 REDWOOD ROAD
NAPA, CA 94558

Prepared for:
Justin and Julie Arbuckle
400 Spear Street, Suite #122
San Francisco, CA 94105

RSA+ Project No. 4111010.0

December 13, 2016
Revised: December 28, 2017

TABLE OF CONTENTS

ATTACHMENTS

I. Purpose

This report provides an overview of permanent and operational control measures intended to support access for emergency wildland fire equipment, safe civilian evacuation, and avoid delays in emergency equipment response.

II. Site Description

The Anthem Winery project is located at 3454 Redwood Road, Napa, California. The winery site straddles the ridge between the Redwood Creek and Salvador Channel watersheds. The existing winery shares a 10' driveway connection to Redwood Road with a single-family residence on the same parcel. A second single-family residence exists on an adjacent parcel under common ownership. This residence is on a flag lot, with a 10' driveway connection to Dry Creek Road.

Primary access to the expanded winery will be via a shared driveway along a 20' wide flag lot connection to Dry Creek Road that is shared with the applicants' Dry Creek Road residence. It is not feasible to expand some segments of this driveway to meet the current Napa County Road & Street Standards due to steep slopes and environmental and legal constraints. This driveway will be improved to the maximum extent practicable to provide the same overall practical effect as the Road & Street Standards with regard to defensible space.

The existing shared driveway connection to Redwood Road will remain to provide an alternate emergency egress route for the winery.

III. Permanent Traffic Controls

Permanent traffic controls include static signage along the driveway, a convex mirror at the driveway crest, and electronic signage at the winery site.

Electronic signage will be manually operated by a switch at the winery. Employees will be trained in evacuation procedures as described in the Emergency Plan below.

IV. Emergency Plan

In case of fire or medical emergency at the winery, the senior manager on duty will assess the situation and determine if evacuation is necessary.

No Evacuation Necessary

During an isolated emergency, when the building is safe and no evacuation is necessary, the manager will close Dry Creek access to outgoing vehicles. The manager will give verbal notification of driveway closure, via intercom or similar, to all employees, guests, and residents.

Traffic controls will include:

- Electronic signage at winery parking lot:

  DRY CREEK ROAD CLOSED
  EXIT REDWOOD ROAD
  →

- Electronic signage at Dry Creek residence driveway:

  DRIVEWAY CLOSED
  EXIT REDWOOD ROAD
  →

- Electronic signage at Redwood Road residence driveway:

  EXIT REDWOOD ROAD
  ↑

The Dry Creek Road driveway will remain open to incoming and outgoing emergency vehicles.

Evacuation to Redwood Road

When evacuation is necessary and it is safe to do so, the manager will close Dry Creek access to outgoing vehicles and initiate evacuation. The April 2, 2001 Exception Request Letter by Bartelt Engineering identified the irrigated vineyard as a "safe-to-stay" area, which may be used at the manager's discretion. The manager will give verbal notification of driveway closure and evacuation instructions, via intercom or similar, to all employees, guests, and residents. Traffic controls will be the same as in the preceding section.

Evacuation to Dry Creek Road

When evacuation is necessary and Redwood Road is inaccessible, the manager will close Redwood Road access to outgoing vehicles and initiate evacuation.

Traffic controls will include:

- Electronic signage at winery parking lot:

  REDWOOD ROAD CLOSED
  EXIT DRY CREEK ROAD
  ←

- Electronic signage at Dry Creek residence driveway:

  EXIT DRY CREEK ROAD
  ↑

- Electronic signage at Redwood Road residence driveway:

DRIVEWAY CLOSED
EXIT DRY CREEK ROAD
↓

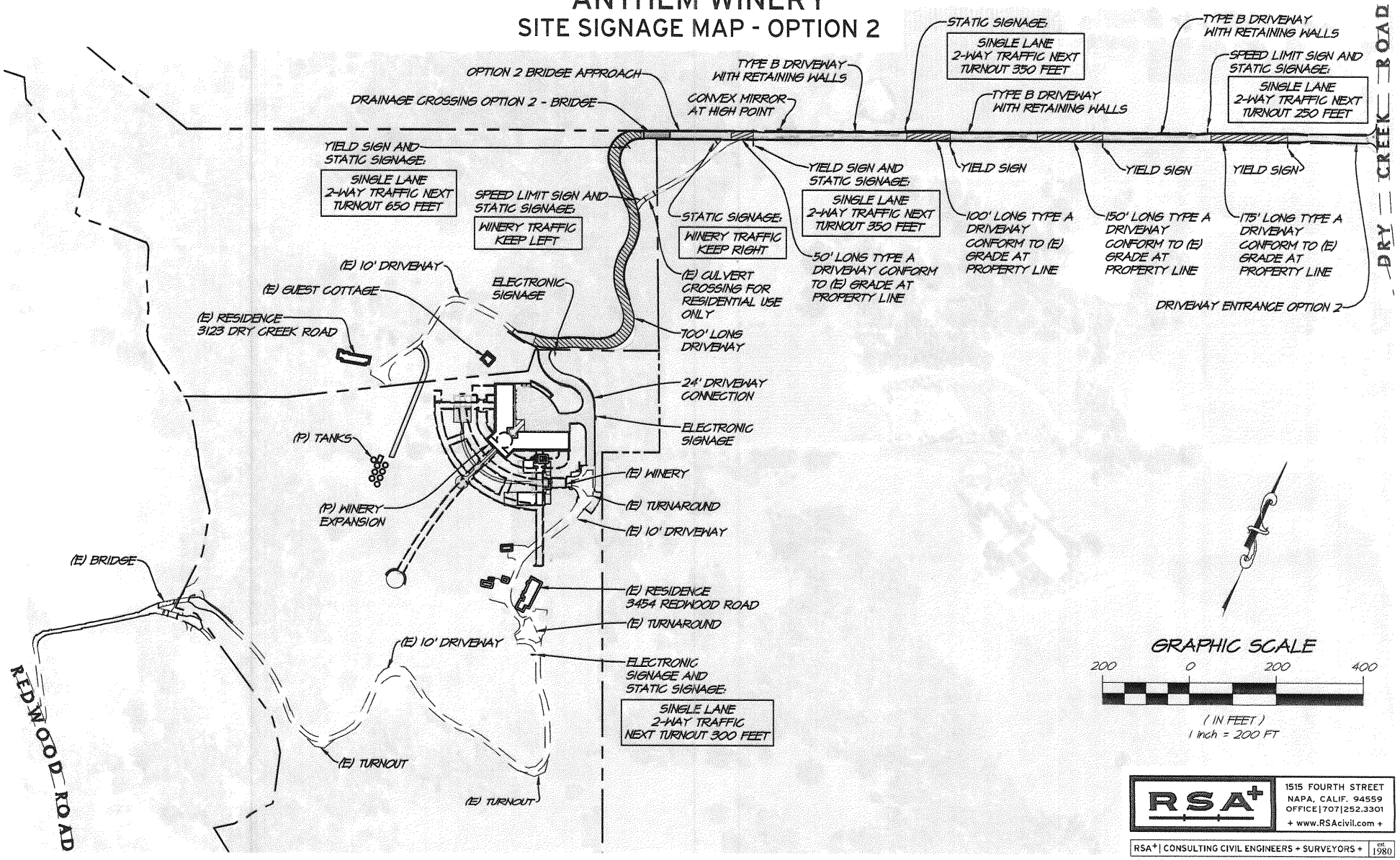
V. Conclusions

The Emergency Plan identified above provides mitigation measures for requested exceptions to the Napa County Road & Street Standards by providing access for emergency wildland fire equipment, safe civilian evacuation, and signage that avoids delays in emergency equipment response.

ATTACHMENT 1

Site Signage Map
Option 2

ANTHEM WINERY
SITE SIGNAGE MAP - OPTION 2



GRAPHIC SCALE

200 0 200 400

(IN FEET)
1 inch = 200 FT

RSA+
1515 FOURTH STREET
NAPA, CALIF. 94559
OFFICE|707|252.3301
+ www.RSAcivil.com +

RSA+| CONSULTING CIVIL ENGINEERS + SURVEYORS + | est. 1980

DEC. 28, 2017 4111010.0 Exh-Site Signage-Opt2.dwg

R:\2011\4111010.0_Arbuckle_Residence\DESIGN\EXHIBITS\Exh-Site Signage-Opt2.dwg 12/28/2017