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Applicant Response to Public Comments  
After April 20, 2016

Part 2

**EXHIBIT B**



January 13, 2016

Mr. Jonah Beer, Vice President/General Manager  
Frog's Leap Winery  
8815 Conn Creek Road  
Rutherford, CA 94573

**RE: Initial Outline Response Letter to Shute Mihaly & Weinberger Comment Letter (12-23-15); Frog's Leap Winery, Use Permit Major Modification #P14-00054**

Dear Mr. Beer:

The following letter provides our initial responses and thoughts related to the recent comment letter provided by Shute Mihaly and Weinberger (SM&W) dated December 23, 2015 related to the proposed Frog's Leap Winery Use Permit Major Modification project (attached). Omni-Means provides the following initial responses to SM&W comments on the proposed project:

**Page 3; B. The IS's Transportation Analysis is Inadequate, and There Is a Fair Argument that the Project May Have Significant Transportation Impacts.**

Comment noted.

**Page 4: Second paragraph; First, the IS does not establish a proper baseline to evaluate the Project's impacts during the highest volume traffic season. The applicant's traffic analysis did not evaluate existing traffic conditions near the Project site during the harvest and crush season...**

As stated in the Focused Traffic Impact Analysis (TIA) for the Frog's Leap Winery, existing traffic volumes collected as part of the analysis were increased by 9% to account for the "peak month" of traffic flow along Conn Creek Road. This was based on the most recent Caltrans volume data available at the time the Notice of Preparation was published and represents the highest month of traffic volumes recorded on Conn Creek Road during the year, period. Caltrans does not identify the month (only the volume). However, whether traffic volume is recorded during the harvest/crush season or not, it represents the absolute highest volumes on Conn Creek Road and Rutherford Road. In addition, volume increases on SR-29 are comparatively less (based on Caltrans data) and no recent counts are available for Silverado Trail. Therefore, a very conservative increase of 9% is acceptable for project study roadways.

The County does not typically require traffic analysis of proposed project impacts during the crush/harvest season (established at six weeks over an August, September, or October period dependent on weather and harvest conditions). However, as stated above the traffic analysis used the highest volume representations in the project study area as established by Caltrans. In addition, the Focused TIA provided proposed project crush/harvest information related to

production, employment, visitation, and trucks along with resulting daily and peak period trip generation.

SM&W has not provided any facts or expert opinion that peak traffic volumes increase during harvest due to "the change in traffic character during harvest, when [according to the letter] an increased number of large agricultural equipment and trucks hauling grapes are on the roadways." It is our understanding that a majority of winery trucks hauling grapes, including those from Frog's Leap Winery, complete their hauls before sunrise to limit sun exposure and protect grape quality and therefore, do have any significant impact on peak hour trips. Regardless, even if such information had been provided the traffic analysis used the highest available traffic volume data and the proposed project's harvest traffic data.

**Page 4: Fifth paragraph; Second, the IS does not establish proper thresholds of significance for determining whether traffic from the Project will result in significant impacts to intersections it analyzes. The document merely recites the CEQA Appendix G checklist...**

The above statement is not correct as it relates to stated impact thresholds for proposed project conditions. The Focused TIA for the Frog's Leap Winery clearly states project significance thresholds based on the updated Napa County General Plan for roadway and intersection operations (in addition to CEQA) as follows:

- The County shall seek to maintain a Level of Service D or better at all intersections, except where the level of service already exceeds this standard (i.e. Level of Service E or F) and where increased intersection capacity is not feasible without substantial additional right-of-way;
- No single level of service standard is appropriate for un-signalized intersections, which shall be evaluated on a case-by-case basis to determine if signal warrants are met.

In all cases, where study intersection LOS was found to be below County standards of LOS D (with or without the project) potential mitigation measures were suggested (i.e. at the Conn Creek Road/Silverado Trail Intersection). In previous reviews of transportation studies the County has established that a proposed project's overall contribution to cumulative traffic volumes shall be no greater than one percent.<sup>1</sup> This cumulative impact threshold was also applied to the Conn Creek Road/Silverado Trail intersection.

In addition, the Napa County General Plan Draft EIR analyzed cumulative traffic impacts related to winery development in the County and determined that the impact was significant and unavoidable and adopted a Statement of Overriding Considerations to justify these unavoidable traffic impacts.<sup>2</sup> CEQA Guidelines expressly provide that projects which are consistent with the development density established by general plan policies for which an EIR was certified "shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site." CEQA Guidelines Section 15183(a). Cumulative impacts by their nature are not peculiar to a project or its site and therefore, require no additional analysis in this instance.

<sup>1</sup> Mr. Rick Marshall, Deputy Director of Public Works, Memorandum on Flynnville Wine Company Use Permit Application P15-00225, July 28, 2015.

<sup>2</sup> Napa County General Plan Update, Draft Environmental Impact Report, Section 4.4, Transportation, Napa County, February 2007.



**Page 5: Second paragraph; Third, the IS traffic analysis contains an improperly narrow study area, again rendering it incapable of evaluating all the Project's potential traffic impacts. The IS only considers potential impacts at three intersections on Conn Creek Road, Silverado Trail, the Frog's Leap Driveway, and Rutherford Road.**

The Focused TIA was reviewed extensively by County Planning and Transportation for scope, content, and methodology during the draft application process. Specifically, after reviewing the traffic analysis on March 31, 2014, the County requested to expand the scope of the analysis to include all key intersections located east and west of the project site including Conn Creek Road/Rutherford Road and Conn Creek Road/Silverado Trail. After re-submitting a draft report that included these additional intersections and analyses, the County then requested further cumulative analysis on two projects that the County has not approved: the Caymus Vineyards project to the southwest and proposed Frank Family Vineyards project to the northeast (both located on Conn Creek Road). In addition, the intersection of Rutherford Road/SR-29 is located over 1.8 miles from the Frog's Leap Winery project driveway and County staff did not expand the scope to include this intersection deeming its location (appropriately) outside of the study area. The Focused TIA's study area is consistent with County practice and professional standards for evaluating traffic impacts.

**Page 5: Fourth paragraph; Fourth, the IS and the Traffic report neglect to account for the traffic impacts from increased marketing events even though the applicant is proposing to host up to 500 people for a single event.**

As previously noted, the Focused TIA included proposed project crush/harvest information related to production, employment, visitation, and trucks with resulting daily and peak period trip generation. The analysis also identified daily trip generation related to the largest marketing event that would accommodate 500 guests. Specifically, Table 2 (Peak Hour and Daily Trip Generation; Proposed Frog's Leap Winery Project) of the Focused TIA indicates a total trip generation of 403 daily trips. This daily trip total includes 500 guests, 20 event staff, and 3 catering trucks. These events are typically of sufficient duration in length that the inbound and outbound trips occur at separate hours, thus the number of trips on the street network at one time are half of the total volume. Additionally, these events are held outside of typical peak traffic periods (during the middle of the day or after 6:00 p.m.) and therefore generally do not impact peak hour operations and no other visitation or events would occur during the annual events. The same applies to events held for Auction Napa Valley; however those events would host significantly less than 500 people. Accordingly, the Focused TIA adequately evaluated the project's marketing events.

**Page 6: First paragraph; Fifth, the IS acknowledges that traffic conditions near the Project Site are already poor. The intersection of Silverado Trail and Conn Creek Road currently operates at LOS E—the second worst traffic rating—and is projected to worsen to LOS F by 2030.**

The intersection of Conn Creek Road/Silverado Trail is operating at LOS E during the weekday PM peak hour and LOS F during the weekend mid-day peak hour without proposed project traffic. Under cumulative year 2030 (no project) conditions, as evaluated in the County General Plan EIR, the intersection would be operating at LOS F during both the weekday PM and weekend mid-day peak hours. Napa County's General Plan volume projections for the year 2030 are quite conservative for Conn Creek Road/Silverado Trail intersection. Overall



operations at the intersection would be LOS F regardless of proposed project development. Consistent with County General Plan significance criteria, mitigation suggested for the intersection with proposed project traffic is as follows:

The Silverado Trail/Conn Creek Road intersection would continue to qualify for signalization under year 2030 (no project) conditions. With proposed project traffic, the total project contribution to the intersection during the weekday PM peak hour would be 11 vehicle trips or 0.0049% of total cumulative year 2030 volumes at this location.

Additional improvements to the street network are anticipated and have been included in the General Plan's Improved 2030 Network model. As noted, the County has also adopted several measures identified in the General Plan to reduce vehicle trips through public transit and Transportation Demand Management (TDM) strategies: "The project should support programs to reduce single occupant vehicle use and encourage alternative travel modes."

- In keeping with the policy, the winery project provides bicycle racks for visitors who may arrive by bike. The project should also promote the use of public transportation and carpooling of employees (by adjusting work schedules, etc.) to facilitate the use of other transportation modes.

In addition, the Napa County General Plan Draft EIR analyzed cumulative traffic impacts related to winery development in the County and determined that the impact was significant and unavoidable and adopted a Statement of Overriding Considerations to justify these unavoidable traffic impacts.<sup>3</sup> CEQA Guidelines expressly provide that projects which are consistent with the development density established by general plan policies for which an EIR was certified "shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site." CEQA Guidelines Section 15183(a). Cumulative impacts by their nature are not peculiar to a project or its site and therefore, require no additional analysis in this instance.

**Page 6: Second Paragraph; Finally, the County's own assessment of the Project traffic impacts indicates that there will be a significant impact at the intersection of Conn Creek Road and the winery's main entrance.**

As clearly stated in the Focused TIA, the Frog's Leap Winery driveway/Conn Creek Road intersection was evaluated for potential left-turn warrant (for northeast Conn Creek Road) as follows:

The existing plus project and near-term plus project volumes were compared with the Napa County guidelines for installing a northbound left-turn lane on Conn Creek Road at the Frog's Leap Winery driveway.<sup>4</sup> (The warrant graphs for weekday and Saturday conditions are provided in the Appendix). Napa County left-turn lane warrants are based on the combination of total proposed project daily trips at the driveway and overall ADT on Conn Creek Road. With 202-255 daily

<sup>3</sup>Napa County General Plan Update, Draft Environmental Impact Report, Section 4.4, Transportation, Napa County, February 2007.

<sup>4</sup>Napa County, Adopted Road and Street Standards, revised November 21, 2006.



weekday/weekend trips at the proposed project driveway and 2,438 daily trips on Conn Creek Road, a northbound left-turn lane would be warranted on Conn Creek Road.

Existing plus project and near-term plus project volumes were also compared with Caltrans guidelines for installing a left-turn lane on Conn Creek Road at the project driveway. Compared to Napa County standards, Caltrans guidelines for installation of a left-turn lane are based on peak hour volumes and include actual left-turn volumes. As identified under near-term plus project conditions (worst case), the winery would generate 30 peak hour trips on a typical Friday and 86 peak hour trips on a Saturday, while the peak hour volumes on Conn Creek Road are projected to be 144 vehicles on Friday and 286 vehicles on Saturday.

The peak hour traffic volumes at the winery access have been compared with left turn lane warrants outlined in a Caltrans intersection design guide.<sup>5</sup> By comparing the advancing and opposing S.R. 128 (Conn Creek Road) volumes with the percentage of left turning vehicles into the access road, the volumes are **well below** the Caltrans minimum threshold at which a left turn lane would be warranted. In addition, vehicle queuing analysis conducted for the intersection indicates the northbound left-turn movement from Conn Creek Road into the Frog's Leap driveway would require approximately one vehicle length (95% queue @ 30 feet) during normal weekday PM peak hour or Saturday mid-day peak hour conditions (see vehicle queuing report sheet in the Focused TIA for the Frog's Leap Winery Appendix).<sup>6</sup>

The projected right turn volumes at the site driveway are well below minimum thresholds at which right turn lane would be required (right turn lane warrant graphs are included in the Focused TIA for the Frog's Leap Winery Appendix).<sup>7</sup>

The project applicant has requested an "exception to standards" related to the Napa County warrant being satisfied for the installation of a northbound left-turn lane at the project driveway on Conn Creek Road with proposed project traffic.<sup>8</sup> Consistent with the Napa County Adopted Road and Street Standards (Item #3—Exception To Standards), the request provided all supporting materials, details of the exceptions and mitigating factor, and map with the proposed location and sighting of the exception.<sup>9</sup> As stated in the exceptions section, "Standards that effect native trees or other geological features are prime examples of those circumstances where exceptions may be reviewed." Large native oak tree(s) are located off Conn Creek Road immediately adjacent to the proposed project driveway that would encroach on necessary ROW for installation of a left-turn lane. Subsequently, County Engineering staff has indicated that they will defer to

<sup>5</sup> Caltrans, *Highway Design Manual*, 6<sup>th</sup> Edition, 2009.

<sup>6</sup> Vehicle queuing analysis, *Frog's Leap Driveway/Conn Creek Road, Saturday mid-day peak hour, Near-term plus project conditions (worst case)*, Synchro-Simtraffic software (version 6.0).

<sup>7</sup> Transportation Research Board, *National Cooperative Highway Research Program Report 279, "Intersection Channelization Design Guide"*, November, 1985.

<sup>8</sup> Mr. Jonah Beer, General Manager, Frog's Leap Winery, Exception Request Letter to Mr. Nate Galambos, Engineering Services, Napa County, Frog's Leap Winery Use Permit Modification #P14-00054, 8815 Conn Creek Road, Rutherford, August 13, 2014.

<sup>9</sup> Napa County California, *Adopted Road and Street Standards Napa County, Item #3—Exceptions To Standards*, Revised August 31, 2004.



Caltrans for any work conducted in their ROW should an encroachment permit be sought (see Appendices---Napa County Memorandum).<sup>10</sup>

The Napa County Road and Street Standards for requiring a left-turn lane has no relationship on actual left-turn trips or safety issues. Instead the standard is based on overall daily traffic volumes—even if the project at issue has zero effect on left-turn trip volume. That is why the County's Road and Street Standards provide the Department of Public Works an opportunity to grant an exception to the standards for a public road. As recognized in the attached October 12, 2015 memo from Rick Marshall, Deputy Director of Department of Public Works, the request for an exception to the left-turn lane is acceptable. The proposed operational characteristics noted in the memo are not mitigation measures due to them not addressing any traffic or safety related impacts.

Page 7:

**C. The IS's Analysis of Traffic Hazards is Inadequate, and There Is a Fair Argument that the Project May Have Significant Safety-Related Impacts.**

**Third paragraph: CEQA requires that agencies evaluate a project's potential to create traffic-related hazards. Despite this requirement, the IS's discussion is entirely cursory. It only focuses on the installation of a new turn lane or shoulder widening next to Frog's Leap entrance. It never considers whether adding the Project's traffic to the narrow, two lane Conn Creek Road itself will create a significant impact.**

Comment note. As clearly stated in the Focused TIA, vehicle safety at the proposed project's driveway was considered as follows:

New radar speed surveys of Conn Creek Road were conducted for the roadway in the project area.<sup>11</sup> The "critical" vehicle speed (the speed at which 85% of all surveyed vehicles travel at or below) along Conn Creek Road was measured at 48 mph. Caltrans' design standards indicate that these vehicle speeds require a stopping sight distance of 415-430 feet, measured along the travel lanes on Conn Creek Road.<sup>12</sup> Based on field measurements, sight distance from the current Frog's Leap Winery driveway to the north on Conn Creek Road is approximately 460 feet. Sight distance from the existing driveway to the south is at least 1,600 feet. Therefore, the sight distance recommendations would be met for the speed limit and measured vehicle speeds. It is noted that sight distance to the north is predicated on keeping the shoulder free of vegetation/plantings adjacent to existing vineyards.

Vehicle sight distance at the proposed project driveway is acceptable looking northeast or southwest on Conn Creek Road. In addition, the project driveway is extremely "flared" at Conn Creek Road (approximately 140 feet of driveway frontage at Conn Creek Road) which allows safer ingress and egress for both vehicular and truck traffic. The evaluation of the County's left-turn lane warrant at the Frog's Leap Driveway/Conn Creek Road intersection is merely a daily volume satisfaction. Specifically, the warrant is met with the daily trips being generated in/out of the project

<sup>10</sup> Mr. Peter Corelis, Engineering and Conservation Division, Napa County, Memorandum to Ms. Shaveta Sharma, Planning Division, Napa County, Frog's Leap Ag. Processing Facility Use Permit Modification #P14-00054, 8815 Conn Creek Road, Rutherford, October 23, 2014.

<sup>11</sup> Omni Means Engineers & Planners, Radar vehicle speed surveys, Conn Creek Road, November 16, 2013.

<sup>12</sup> Caltrans, Highway Design Manual, Table 405.1A, Corner (Stopping) Sight Distance, 6<sup>th</sup> Edition, 2009.






driveway and the total daily vehicle trips on Conn Creek Road. The warrant is not directly related to the amount of vehicle traffic turning left (inbound) from Conn Creek Road into the project driveway or the amount/type of vehicle accidents that occur on Conn Creek Road. Therefore, the County left-turn lane warrant is not required to mitigate any safety issues and the proposed exception also not mitigation for either traffic impacts or safety concerns but rather simply required to comply with the County requirements.

As noted in the Focused TIA, overall peak period volumes on Conn Creek Road would be considered "light" for this major two-lane arterial street. This is evidenced by calculated operations of LOS A (less than 10 seconds vehicle delay) at the Frog's Leap Driveway/Conn Creek Road intersection under existing and near-term "with project" conditions.

Lastly, it is understood that the occurrence of DUI vehicular accidents in the Napa Valley is a concern given the nature of winery visitation/tasting. However, from an engineering standpoint there are little if any mitigation-related intersection or roadway improvements that can guard against DUI accidents.

Sincerely,

Omni-Means, Ltd.



Peter Galloway  
Transportation Planner

Cc: Mr. Jeff Dodd & Mr. Thomas Adams (DP&F), Mr. Jeff Redding (Planning Consultant), George Nickelson, P.E.  
(Omni-Means)

Enc. Shute, Mihaly & Weinberger Comment Letter (12-23-15); Memorandum from Department of Public Works Re: Frog's Leap Winery (10-12-15).

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December 23, 2015

*Via E-Mail and U.S. Mail*

Members of the Planning Commission  
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1195 Third Street, Suite 210  
Napa, CA 94559

Attn: John McDowell, Deputy Planning Director  
[John.McDowell@countyofnapa.org](mailto:John.McDowell@countyofnapa.org)

Re: Frog's Leap Winery, Use Permit Major Modification # P14-00054

Dear Commissioners:

On behalf of Nancy Hammonds and Charlotte Blank, we submit these comments on the Initial Study/proposed Negative Declaration ("IS") for the proposed Frog's Leap Winery Use Permit ("Project"). The Project would entail a substantial increase in visitor-serving commercial uses at the winery. Frog's Leap's current use permit limits tastings to 350 visitors per week (with a maximum of 50 visitors per day) and marketing events to three events per month with an average of 25 visitors per event, or 900 visitors per year. As the IS recognizes, Frog's Leap's current uses already exceed this permitted level. IS at 1. But the applicant is requesting approval of even greater visitor-serving uses, increasing weekly tastings limits by more than threefold to 1,100 visitors per week, and allowing for an additional 5,740 visitors each year for marketing events, as well as an undefined number of visitors for the annual Auction Napa Valley event.

As should be expected from such a large increase in visitors to the winery, substantial evidence shows that the Project could have numerous potentially significant impacts on the environment. Accordingly, and as a matter of law, the Planning Commission would violate the California Environmental Quality Act, Pub. Res. Code § 21000 et seq. ("CEQA"), if it adopts the proposed Negative Declaration and approves the Project without first requiring the preparation of an environmental impact report ("EIR"). As discussed below, the IS neither accurately identifies nor analyzes the project-specific and cumulative environmental impacts that will accompany the Project. The

document therefore lacks the necessary evidence to support its conclusion that the Project will not have adverse transportation, public safety, noise, and water supply impacts.

In addition to these CEQA deficiencies, the Project likely violates the Winery Definition Ordinance (“WDO”) and is inconsistent with significant provisions of the Napa County General Plan designed to preserve the rural and agricultural character of Napa. Thus, approval of the Project would not just violate CEQA, but would also violate California Planning and Zoning Law, Gov’t Code § 65000 et seq.

As you know, the County has been processing and approving an exceptionally high number of use permits for new or expanded wineries throughout Napa Valley. Like this Project, a great number of these permits propose significant expansions of tourist-serving commercial uses. At the same time, many wineries have been hosting largescale tourism events in violation of their use permits. Such violations have gone largely unenforced by the County. The result has been a substantial increase in tourism across Napa that not only undermines the agriculture-centered land use goals embodied by the WDO, the General Plan, and Measure P, but also creates significant cumulative environmental impacts that the County must analyze and mitigate. Without further information and analysis of the Project’s likely impacts, the Commission cannot legally approve the Project. Consequently, the Commission should deny the application before it.

**I. The Project Violates CEQA, and the Project’s Potentially Significant Impacts Prohibit the County from Approving the Project Without First Preparing an EIR.**

**A. Legal Standard**

It is well settled that CEQA establishes a “low threshold” for initial preparation of an EIR, especially in the face of conflicting assertions concerning the possible effects of a proposed project. *Pocket Protectors v. City of Sacramento*, 124 Cal. App. 4th 903, 928 (2005). CEQA provides that a lead agency may issue a negative declaration and avoid preparing an EIR only if “[t]here is no substantial evidence, in light of the whole record before the lead agency, that the Project may have a significant effect on the environment.” CEQA § 21080(c)(1). A lead agency may adopt a negative declaration only when all potentially significant impacts of a project will be avoided or reduced to insignificance. Pub. Res. Code § 21080(c)(2); Guidelines § 15070(b).<sup>1</sup> A negative

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<sup>1</sup> The CEQA Guidelines, 14 Cal. Code Regs. § 15000 et seq., are referred to as “Guidelines.”

declaration will also be set aside if its conclusions are not based on substantial evidence in the record. *Sundstrom v. County of Mendocino*, 202 Cal. App. 3d 296, 311 (1988).

An initial study must provide the factual and analytic basis for an agency's determination that no significant impact will result from the project. Guidelines § 15063(d)(3). An agency must prepare an EIR whenever it is presented with a "fair argument" that a project may have a significant effect on the environment, even if there is also substantial evidence to indicate that the impact is not significant. *No Oil, Inc. v. City of Los Angeles*, 13 Cal. 3d 68, 75 (1974); Guidelines § 15064(f)(1). Where there are conflicting opinions regarding the significance of an impact, the agency must treat the impact as significant and prepare an EIR. Guidelines § 15064(f)(1); *Stanislaus Audubon Soc'y v. County of Stanislaus*, 33 Cal. App. 4th 144, 150-51 (1995).

Further, where the agency fails to study an entire area of environmental impacts, deficiencies in the record "enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences." *Sundstrom v. County of Mendocino*, 202 Cal. App. 3d 296, 311 (1988). In marginal cases, where it is not clear whether there is substantial evidence that a project may have a significant impact and there is a disagreement among experts over the significance of the effect on the environment, the agency "shall treat the effect as significant" and prepare an EIR. Guidelines § 15064(g); *City of Carmel-by-the-Sea v. Board of Supervisors*, 183 Cal. App. 3d 229, 245 (1986).

Given this standard, an EIR is required for this Project.<sup>2</sup> The County cannot approve this use permit until it prepares a legally-adequate EIR, as CEQA requires.

**B. The IS's Transportation Analysis Is Inadequate, and There Is a Fair Argument that the Project May Have Significant Transportation Impacts.**

With winery expansions and increasing tourism in recent years, County residents have noticed significantly worsening traffic conditions in Napa Valley, especially on Silverado Trail and SR 29. The primary entrance to the Project site is located on the two-lane Conn Creek Road (SR 128), which serves an arterial connector between SR 29 and Silverado Trail. Ms. Hammonds, who owns property on Conn Creek Road, has observed increasing traffic volumes on the road as more vehicles use it to bypass heavy traffic on

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<sup>2</sup> Although it is our legal opinion that the County must prepare an EIR for this Project, if the County decides to rely on the IS, but modifies the Project or adopts mitigation measures, it must, at the very least, recirculate the IS for further public review and comment. Guidelines § 15073.5.

Silverado Trail or SR 29. But despite observations of negative traffic conditions immediately surrounding the Project site, the IS relies on a legally inadequate transportation analysis to conclude that the substantial proposed expansion would not result in any traffic impacts.

First, the IS does not establish a proper baseline to evaluate the Project's impacts during the highest volume traffic season. The applicant's December 14, 2015 Focused Traffic Analysis ("Traffic Report"), on which the IS relies, did not evaluate existing traffic conditions near the Project site during the harvest and crush season, when traffic volumes in the County reach their highest. Traffic Report at 4. Instead, the applicant relied on seasonal Caltrans data for a single segment of SR 128 in front of the Project site to project that traffic volumes on SR 128 and Silverado Trail would increase by 9% during this season.

This attempt to extrapolate baseline conditions during harvest from limited data is flawed. The seasonal increase on SR 128 provides no information about how traffic volumes change on the more heavily-used Silverado Trail and SR 29 during harvest season. The IS and Traffic Report cannot simply assume that the percentage traffic increase on these main County thoroughfares will be the same as the increase in traffic for smaller arterials like SR 128. Moreover, a simple percentage increase does not account for the change in traffic character during harvest, when an increased number of large agricultural equipment and trucks hauling grapes are on the roadways. These slow-moving vehicles make frequent stops and can further exacerbate traffic conditions during the County's peak traffic season.

Without a study of traffic conditions during harvest season, the IS completely fails to evaluate Project impacts against the heaviest traffic periods in the County. This failure to establish a proper baseline is fatal to any purported analysis of transportation impacts. "Without a determination and description of the existing physical conditions . . . at the start of the environmental review process, [the IS] cannot provide a meaningful assessment of the environmental impacts of the proposed project." *Save Our Peninsula Committee v. Monterey County Board of Supervisors*, 87 Cal. App. 4th 99, 119 (2001).

Second, the IS does not establish proper thresholds of significance for determining whether traffic from the Project will result in significant impacts to the intersections it analyzes. The document merely recites the CEQA Appendix G checklist, which, among other things, requires the County to determine whether additional traffic is "substantial in relation to the existing traffic load or capacity of the street system." IS at 25. But the IS never offers a specific numerical threshold to determine whether the new traffic from the site will be "substantial." CEQA recognizes that "the significance of an activity may vary

with the setting.” Guidelines § 15064(b). Without establishing how many new daily trips would constitute a significant traffic impact, it is impossible for the public and County decision makers to know whether the Project’s traffic impact will be significant.

Third, the IS’s traffic analysis contains an improperly narrow study area, again rendering it incapable of evaluating all of the Project’s potential traffic impacts. The IS only considers potential impacts at three intersections on Conn Creek Road (SR 128)—Silverado Trail, the Frog’s Leap driveway, and Rutherford Road. By focusing only on these three intersections, the IS ignores the Project’s contribution to traffic congestion at other nearby intersections, most notably the intersection of SR 29 and Rutherford Road (SR 128). As noted above, cars frequently travel over the SR 128 sections of Conn Creek Road and Rutherford Road to connect between Silverado Trail and SR 29. Yet the IS never considers impacts to the SR 29/Rutherford Road intersection. This oversight is especially glaring considering that applicant’s own Traffic Report acknowledges that the majority of weekend and weekday trips from the winery currently travel south on Conn Creek Road toward Rutherford Road and SR 29. Traffic Report at 12. This data suggests that Project traffic is more likely to impact the Rutherford Road/SR 29 intersection than the Conn Creek Road/Silverado Trail intersection, which the IS purports to evaluate.

Significantly, a volunteer fire station is located at the Rutherford Road/SR 29 intersection. *Id.* at 3. Thus, the Project’s increase in traffic at this intersection could also impair emergency response times in the area. For this reason as well, it is critical that the County’s environmental analysis consider the Project’s impacts to additional intersections in the immediate vicinity of the Project.

Fourth, the IS and the Traffic Report neglect to account for the traffic impacts from increased marketing events even though the applicant is proposing to host up to 500 people for a single event. IS at 25. Even this number excludes additional staff and traffic from catering and valet services that will be used for marketing events. *See id.* at 17, 26. The Traffic Report dismisses traffic increases from these events by claiming that they are “usually” held outside of peak traffic hours. Traffic Report at 21. Yet nothing prohibits the applicant from holding marketing events during Saturday afternoons or other peak traffic periods. Without such a use restriction that is a legally-binding, the traffic analysis cannot assume that marketing events will occur outside of peak hours.

Indeed, the applicant also proposes to use the site as a venue for the annual Auction Napa Valley. IS at 2. But the applicant’s Traffic Report and the IS completely ignore increased traffic from this multi-day event. The County must also evaluate the potential impacts that event traffic will have on the transportation system surrounding the Project site.

Fifth, even with this faulty analysis, the IS acknowledges that traffic conditions near the Project site are already poor. The intersection of Silverado Trail and Conn Creek Road currently operates at LOS E—the second worst traffic rating—and is projected to worsen to LOS F by 2030. IS at 25-26. The Project’s contribution to these substandard and worsening traffic conditions is likely a significant cumulative transportation impact that must be evaluated in an EIR and properly mitigated. *Kings County Farm Bureau v. City of Hanford*, 221 Cal. App. 3d 692, 721 (1990) .

Finally, the County’s own assessment of the Project’s traffic impacts indicates that there will be a significant impact at the intersection of Conn Creek Road and the winery’s main entrance. To mitigate that impact, the County’s Road and Street Standards require the installation of a left-turn pocket on the northbound section of Conn Creek Road at this intersection. Memorandum from Paul Wilkinson to Shaveta Sharma, dated January 20, 2015. As alternative mitigation, the applicant has proposed to expand the shoulder across from the winery entrance. IS at 26. Yet even though Project traffic would violate the County’s Road and Street Standards without a new left turn lane or other adequate mitigation, the IS fails to acknowledge this significant traffic impact.

Courts have found that this approach violates CEQA. An agency may not include mitigation measures as part of the project when determining whether it may have a significant effect on the environment. *Lotus v. Department of Transportation*, 223 Cal. App. 4th 645, 665 (2014) . Instead, the agency must first determine whether the project will have a significant effect on the environment and then identify and adopt feasible mitigation measures that will reduce the impacts of the project below a level of significance. CEQA requires this approach for two reasons. First, acknowledging potentially significant impacts obligates an agency to adopt definite and enforceable mitigation through a mitigation monitoring and reporting program. Guidelines § 15097. Second, agencies must consider secondary impacts associated with adopted mitigation measures. *Id.* § 15126.4(a)(1)(D). This latter requirement is especially important here, since construction on the eastern shoulder of Conn Creek Road could impact large heritage oak trees that grow along the road.

But based on the record before the Commission, it is impossible to know what mitigation the County will require for this intersection. The IS does not commit to any particular mitigation, observing that the department of public works *may* grant an exception to the left turn lane requirement. IS at 26. Section 3(G) of the County’s Road and Street Standards grants the Director of Public Works the discretion to approve the proposed exception, but staff has indicated that this determination will not be made until *after* the Commission’s hearing on the Project. Thus, the public and the Commission are left in the dark about the mitigation that will be required for this impact. Without this

information, the IS is incapable of assessing whether the mitigation will be adequate to reduce the Project's intersection impact, much less what secondary impacts that the required mitigation might create.

**C. The IS's Analysis of Traffic Hazards Is Inadequate, and There Is a Fair Argument that the Project May Have Significant Safety-Related Impacts.**

CEQA requires that agencies evaluate a project's potential to create traffic-related hazards. Guidelines, Appendix G § XVI(d); *see City of Maywood v. Los Angeles Unified School Dist.*, 208 Cal. App. 4th 362, 393 (2012). Despite this requirement, the IS's discussion of such hazards is entirely cursory. It focuses only on installation of a new turn lane or shoulder widening next to the Frog's Leap Winery entrance. It never considers whether adding the Project's traffic to the narrow, two lane Conn Creek Road itself will create a significant cumulative safety impact.

The added traffic from wine tasting and marketing events is especially worrisome given the frequency of drunk driving incidents in wine country.<sup>3</sup> In fact, in the past weekend alone, there were two serious drunk driving incidents on the segment of Conn Creek Road between Silverado Trail and Rutherford Road. One incident involved a drunk driver hitting a telephone pole and fence and then crossing over Conn Creek Road and crashing into a vineyard. The other incident involved a drunk driver veering off the road and crashing into a rock wall on the Caymus Vineyards property. With increased traffic from the Project and other nearby winery expansions, these dangerous incidents will become even more frequent. The IS must evaluate this serious public safety concern. It cannot simply ignore it.

**D. The IS's Noise Analysis Is Inadequate, and There Is a Fair Argument That Noise Impacts Would Be Significant.**

A particularly glaring inadequacy of the IS is its analysis of the Project's noise impacts. Although construction and operation of the Project is all but certain to result in a significant increase in noise levels, the IS makes no attempt to quantify these impacts. Instead it provides a generic overview, simply stating the obvious: that noise could create additional impacts and that these impacts would be less than significant. IS at 20-21. To conclude as the IS does that an impact is less than significant, the analysis must be

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<sup>3</sup> *See* NBC Bay Area, *Drunk Driving In Wine Country* (available at <http://www.nbcbayarea.com/investigations/WINE-COUNTRY-DUI-INVESTIGATION-151467295.html>)



supported with substantial evidence. Substantial evidence consists of “facts, a reasonable presumption predicated on fact, or expert opinion supported by fact,” not “argument, speculation, unsubstantiated opinion or narrative.” Pub. Res. Code § 21080(e)(1)-(2). Once again, the IS fails on many levels.

First, the IS provides no information about the Project’s environmental setting, other than to state that the nearest residences are located about 600 feet away. IS at 21. This contravenes CEQA’s requirements for environmental documents, which “must include a description of the physical environmental conditions in the vicinity of the project.” Guidelines § 15125(a). Moreover, the significance of an impact may vary with the setting. While increased noise levels may not be significant in an urban area, they may be extraordinarily burdensome in a rural area. Here, without any information on the area’s acoustical setting, including existing ambient noise levels, the impact analysis in the IS quickly becomes meaningless.

Nor does the IS identify the standard or threshold of significance for determining a significant noise impact.<sup>4</sup> Instead, it appears to assume that because the County’s Noise Ordinance regulates noise events between 10 p.m. and 7 a.m., there will be no significant impact. IS at 21. Thus, the IS entirely fails to consider that Project-related construction and event noise might impact nearby properties during other hours. The failure to establish an adequate noise threshold of significance is critical. Without a threshold, there is no means by which to determine whether impacts would or would not be significant. Since the requirement to provide mitigation is triggered by the identification of a significant impact, the IS’s failure to identify all of the Project’s significant impacts also results in a failure to mitigate these impacts.

Given the failure to describe the existing noise environment and to establish thresholds of significance, it comes as no surprise that the IS fails to identify the noise levels that would accompany construction of the Project. In fact, the document, never even attempts to predict noise levels during each phase of construction on nearby receivers. As the attached table shows, construction-related equipment and operations can be extraordinarily loud. A typical noise level for a jackhammer, for example, is upwards of 96 decibels, while loaders, backhoes and bulldozers can generate noise upwards of 85 decibels. *See* OSHA Construction-Related Noise levels, attached as Exhibit 1. The

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<sup>4</sup> The IS does refer to the Napa County Noise Ordinance, explaining that it sets a maximum permissible sound level for rural residences as 45 dB between the hours of 10 p.m. and 7 a.m. (at 21), but the IS fails to demonstrate that the Project will even meet these evening noise standards.

County must analyze how construction of the Project will impact noise levels in the vicinity.

Operational noise from the winery can also be quite intrusive. Noise from the winery's marketing events, in particular, such as vehicular traffic, truck traffic, buses and amplified sound could be particularly burdensome to the Project's neighbors, yet the IS provides no analysis of these impacts. Instead, the IS suggests that impacts will be less than significant because marketing events already occur at Frog's Leap Winery, and the County does not have a record of noise complaints associated with these events. First, it is improper to rely solely on noise complaints to evaluate the Project's potential noise impacts. Receptors who are impacted by existing event noise levels might never file an official complaint. Moreover, the IS must actually analyze the noise caused by the substantial increase in the size of marketing events that the applicant is requesting—from a current average of 75 people per event to events that will host up to 500 people. IS at 1-2. Before it can lawfully conclude that the Project's noise impacts are insignificant, the IS must analyze and, if necessary, mitigate the noise associated with these increased marketing events.

**E. The IS's Water Supply Analysis Is Inadequate.**

The IS admits that California is in the middle of an extreme, multiyear drought, which lead Governor Brown to declare a drought emergency in January 2014 and the State Water Resources Control Board to impose mandatory water restrictions on California's municipalities in 2015. IS at 15. But the IS makes no attempt to determine how these drought conditions have impacted groundwater supply near the Project site. Instead, the IS mechanically relies on a pre-drought groundwater assessment that the County completed in February 2011. Thus, the IS fails to establish baseline water conditions near the Project site, as CEQA requires.

With this study, the County has established a 1 acre-foot-per-year (afy) water use allocation for each acre of agricultural production in Napa Valley. The IS makes no attempt to show that this 1 afy per acre threshold is appropriate to evaluate groundwater impacts near the Project site. In fact, in light of California's extreme drought and the IS's further acknowledgment that "Groundwater availability, recharge, storage and yield is not consistent across the County," the IS lacks evidence to support its use of this threshold to evaluate impacts at the Project site. *See Center for Biological Diversity v. California Dept. of Fish and Wildlife* 195 Cal. Rptr. 3d 247 (2015) (substantial evidence must show that general impact thresholds are appropriate when applied to a specific project). Without a local assessment of groundwater conditions in the Project area, it is impossible for the public and County decisionmakers to know whether the Project's proposed

increase in water usage, or even the winery's existing water usage, is sustainable. This incomplete analysis further defeats CEQA's core informational requirements. *Laurel Heights Improvement Ass'n v. Regents of University of California* 6 Cal. 4th 1112, 1123 (1993).

**II. The Project is Inconsistent with the Winery Definition Ordinance and the County General Plan.**

**A. The Project Is Inconsistent with the Winery Definition Ordinance.**

The Winery Definition Ordinance ("WDO") contains several statements of legislative intent directly relevant to this Project. These include a declaration that the ordinance must be interpreted to achieve the goal of protecting agriculture and open space use as the primary land use in the Agricultural Preserve, and to "prohibit" the use of agricultural land for non-agricultural purposes "except to the extent expressly permitted" by the General Plan and County ordinances. *See* WDO, § 6.

Significantly, the WDO restricts the scope and maximum square footage of "accessory uses" such as "marketing of wine" and "tours and tastings." All such accessory uses, "in their totality[,] must remain clearly incidental, related and subordinate to the primary operation of the winery as a production facility." *See, e.g.,* Napa County Code ("NCC") § 18.08.370; 18.16.030(G)(5); 18.08.020. In addition, the WDO places an absolute numerical cap of the square footage of structures that may be "used for accessory uses." *See* NCC § 18.104.200 ("The maximum square footage of structures used for accessory uses that are related to a winery shall not exceed forty percent of the area of the production facility.").

The Project documents provide incomplete descriptions of the square footage that Frog's Leap will utilize for accessory uses if the Project is approved. The application asserts that with the Project, the square footage assigned to accessory uses will be roughly 30 percent of the square footage used for production (11,850 and 39,306 square feet, respectively). Application at 12. But neither the application nor the IS provides a detailed description of which areas of the site are currently used for accessory uses compared to commercial uses. For example, the applicant is proposing to add an 845 square foot porch to the Project site, which already has an "existing porch with the admin building [that] would remain available for tasting . . ." *Id.* at 6. Drawings of the site also show a small "orchard" located in the middle of the winery compound that contains interior paths and a fountain. All of these areas would be available for tasting and marketing uses, but it is impossible to determine whether they have been included in the

accessory use calculation.<sup>5</sup> Without further information about the nature and location of accessory uses on the Project site, it is impossible for the Commission to find that the proposed expansion in accessory uses complies with the WDO.

Moreover, even if the Project sufficiently reduces accessory areas to comply with the letter of the WDO, the Project contravenes the intent expressed in the WDO by elevating nonagricultural uses over agricultural uses. The accessory, tourism-focused uses of the Project are not “clearly incidental, related and subordinate” to the Project’s primary operation as a winery. Rather, the largescale expansion of these nonagricultural uses is the Project’s core purpose. Therefore, the Project cannot be approved unless it is modified to substantially reduce the amount of accessory uses at the Project site.

**B. The Project is Inconsistent with the County’s General Plan.**

Contrary to the IS’s conclusions, the Project is not consistent with the Napa County General Plan. In particular, the Project is inconsistent with the Plan’s Agricultural Preservation and Land Use requirements including: Goals AG/LU-1, AG/LU-3, AG/LU-4, the Agricultural Resources (“AR”) designation on the General Plan’s Land Use Map, and Economic Development Policy E-1. The purpose of these goals and policies, and of the AR designation, is to preserve and promote the existing agricultural land uses on agriculturally designated lands and to support the economic viability of agriculture, including the necessary industries that support agriculture.

Although the IS provides almost no analysis, it appears that its finding that the Project is consistent with the General Plan is predicated on its determination that the Project’s accessory uses comply with the WDO and “would allow for the continuation of agriculture as a dominant land use within the County.” *Id.* at 15. As demonstrated above, however, the Project’s visitor-serving uses do not comply with the WDO and do not qualify as permissible accessory uses. These uses are not necessary to support the economic vitality of agriculture and will, if anything, undermine the continued economic vitality of agriculture by allowing and encouraging excessive reliance on tourism.

Perhaps even more importantly, these uses are clearly inconsistent with the intent of the General Plan’s Agricultural Resources designation. As County voters reaffirmed in approving Measure P in 2008, “agriculture is and should continue to be the predominant

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<sup>5</sup> Notably, the Planning Commission calculated accessory use square footage in two actions concerning the B Cellars and Titus Vineyards projects, by counting outdoor terraced spaces as part of the percentage of the project used for accessory uses. The County should treat the present Project in the same manner.

Members of the Planning Commission  
December 23, 2015  
Page 12

land use, where uses incompatible with agriculture should be precluded . . . .” In short, the proposed vast expansion of marketing events and daily tasting are commercial uses, not agricultural ones. Accordingly, they are inconsistent with the General Plan and may not lawfully be approved.

**III. Conclusion**

For all of these reasons, the Commission should deny the proposed Project.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP



Ellison Folk

cc: Nancy Hammonds

Attachment

734923.3



A Tradition of Stewardship  
A Commitment to Service

Department of Public Works

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Steven Lederer  
Director

October 12, 2015

Jonah Beer, General Manager  
Frog's Leap Winery  
8815 Conn Creek Road  
P.O. Box 189  
Rutherford, CA 94573

Subject: Frog's Leap Winery  
P14-00054

Dear Jonah,

Thank you for your letter of October 9, 2015 regarding the requirement for left-turn lane improvements on State Route 128 Conn Creek Road at your project's main access driveway. The project, as proposed, warrants the installation of a left-turn pocket at this location. Your request for an exception to this requirement is acceptable, as follows:

1. Your engineer has demonstrated a thorough exploration of alternative strategies for complying with the left-turn lane requirement, having produced drawings depicting both widening the road to the west and to the east.
2. Sight-distance limitations, involving obstructions on other properties, constrain the ability to construct the improvement by widening to the west; a significant (56" diameter) oak tree would be impacted by widening to the east.
3. You have proposed specific operational characteristics designed to limit the number of trips turning left into the sight, including directing daily and marketing event visitors to arrive from Silverado Trail, and directing employees to use only the secondary driveway (on SR 128 Rutherford Road) to the site. While these actions do not reduce the project below the warrant for a left-turn lane, they represent a significant improvement in the management of site access traffic.
4. You have proposed to provide improvement on SR 128 Conn Creek Road in the form of a six-foot wide shoulder along the east side of the road, a total length of 280 feet, centered on (and across from) the project entry driveway. This is the amount of widening which can be added without significant impact to the oak tree mentioned in #2 above. This widening will provide an area where northbound traffic on Conn Creek Road could carefully bypass a waiting left-turning vehicle, if necessary.

I will convey this recommendation to the Department of Planning, Building and Environmental Services, related to your application P14-00054. I will also convey this information to Caltrans for their consideration in evaluating the encroachment permit for the safety widening described in #4 above.

Please email me at [Rick.Marshall@countyofnapa.org](mailto:Rick.Marshall@countyofnapa.org) or call (707) 259-8381 if you have questions or need additional information.

Jonah Beer  
October 12, 2015  
Page 2 of 2

Regards,

Rick Marshall  
Deputy Director of Public Works  
Road Commissioner & County Surveyor

C: PBES staff  
Caltrans District 4

# **EXHIBIT B**



M R O

ENGINEERS

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April 13, 2016

Mr. Edward Schexnayder  
Shute, Mihaly & Weinberger LLP  
396 Hayes Street  
San Francisco, California 94102

Subject: ***Review of January 13, 2016 Omni-Means Response to Shute Mihaly & Weinberger Letter (Dated December 23, 2015) and Revised Initial Study/Negative Declaration (March 2016)***  
***Proposed Frog's Leap Winery Use Permit Modifications - Napa County, California***

Dear Mr. Schexnayder:

As requested, MRO Engineers, Inc., (MRO) has reviewed the January 13, 2016 "Initial Outline Response Letter" prepared by Omni-Means with respect to the proposed Use Permit modifications at Frog's Leap Winery on Conn Creek Road (State Route 128) in Napa County, California. That document was intended to respond to issues raised in the December 23, 2015 letter submitted to the Napa County Planning Commission by Shute, Mihaly & Weinberger (SMW). This letter report documents the results of our review of the Omni-Means letter, as well as the revised Initial Study/Negative Declaration (IS/ND) released by Napa County in March 2016. The revised IS/ND incorporates information from the Omni-Means letter.

### **Background**

The proposed Frog's Leap Winery project is intended to remedy violations of the winery's existing Use Permit, as well as to make certain modifications to the on-site facilities. The traffic impacts of the proposed project were evaluated by Omni-Means, with the results of that analysis documented in a revised report dated December 15, 2014. The Omni-Means study was incorporated into the Initial Study/Negative Declaration for the proposed project. Subsequently, a revised IS/ND was prepared by Napa County staff and released in March 2016.

### **Review of Omni-Means "Initial Outline Response Letter" and Revised Initial Study/Negative Declaration**

Our review of these documents raised several questions that require further attention. Those issues are summarized below.

1. ***Thresholds of Significance*** – In response to a comment from SMW regarding the thresholds of significance employed in the traffic study, Omni-Means responded that, ". . . the County has established that a proposed project's overall contribution to cumulative traffic volumes shall be no greater than one percent." Further, the letter states that this standard was specifically applied to the intersection of Conn Creek Road (SR 128)/Silverado Trail, and that the volume of project-generated traffic at the intersection will be 11 weekday PM peak-hour vehicles, or 0.0049 percent of the total year 2030 traffic volume. We have identified two issues here: the traffic volume estimate and the appropriate standard of significance.

#### ***Traffic Volume Estimate***

As noted above, the Omni-Means analysis determined that 11 project-related vehicles would pass through the intersection of Conn Creek Road (SR 128)/Silverado Trail in the weekday PM peak hour. However, in our letter dated March 24, 2016, we noted problems with this estimate.

First, the peak-hour traffic estimates do not conform to Napa County requirements. As a result, those estimates substantially understate the volume of weekday and Saturday peak-hour traffic associated with the proposed project. In fact, correct application of the adopted Napa County trip generation factor indicates that the project would generate over 150 percent more weekday PM peak-hour trips than the Omni-Means estimate. Further, in the Saturday midday peak hour, application of the adopted Napa County factor for this time period would indicate total trip generation of almost 70 percent more than the Omni-Means estimate.

In addition, our examination of the project traffic assignment at the Conn Creek Road/Frog's Leap Winery Driveway intersection showed that only a small percentage of the project trips have been included in the analysis. In the weekday PM peak hour, only 17 percent of the total project trips were assigned to the Conn Creek Road driveway and, therefore, to the entire study area road system. In the weekend peak-hour period, only 43 percent of the estimated project traffic was assigned to the road system.

In short, the analysis has substantially underestimated the volume of project-related traffic that will pass through the Conn Creek Road (SR 128)/Silverado Trail intersection. Therefore, the assessment of the project-related traffic impacts at all of the study intersections is erroneously understated.

#### Standard of Significance

As described in the December 2014 Omni-Means analysis, the intersection of Conn Creek Road (SR 128)/Silverado Trail operates at Level of Service (LOS) E under Existing Conditions and LOS F under Near-Term No Project conditions, in both the weekday PM peak hour and the Saturday midday peak hour. Addition of the project-generated traffic will cause no change in those levels of service, but will cause the average vehicular delay values to increase, as shown in Table 1 below. The project-related delay increases are particularly noteworthy in the Saturday midday peak hour.

Given that Conn Creek Road is designated as State Route 128, it is under the jurisdiction of Caltrans, the California Department of Transportation, and is, therefore, subject to policies established by that agency. With regard to state highway facilities that operate at substandard levels of service, the Caltrans *Guide for the Preparation of Traffic Impact Studies* (December 2002) states:

*If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE [measure of effectiveness] should be maintained.*

The Caltrans document designates "average control delay per vehicle" as the measure of effectiveness for unsignalized intersections such as Conn Creek Road (SR 128)/Silverado Trail. That MOE is consistent with the level of service results provided in the Omni-Means analysis. For reference, pertinent pages from the Caltrans document are presented in Attachment A.

Referring to Table 1, it is readily apparent that implementation of the proposed project would violate the Caltrans policy, as the average control delay will not be maintained. (Instead, the project will cause average control delay values to increase at the Conn Creek Road (SR 128)/Silverado Trail intersection. Consequently, using the threshold in the Caltrans policy, the intersection of Conn Creek Road (SR 128)/Silverado Trail would be significantly impacted by the project. This issue has not been adequately evaluated or even identified in the revised IS/ND. (The January 13, 2016 Omni-Means letter (p. 4) states that, ". . . mitigation suggested for the intersection with proposed project traffic is as follows . . .," but then provides no mitigation

measures. Instead, it repeats the inaccurate finding of a less-than-significant impact and states that the project will provide bike racks to conform to Napa County’s policy regarding Transportation Demand Management. It does not show that bike racks will affect the project’s traffic impacts.)

Table 1 Level of Service Summary <sup>1</sup> Conn Creek Road (State Route 128)/Silverado Trail					
		Weekday PM Peak Hour		Saturday Midday Peak Hour	
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay	LOS
Existing Conditions	No Project <sup>4</sup>	43.9	E	43.8	E
	With Project <sup>5</sup>	44.1	E	47.9	E
Near-Term Conditions	No Project <sup>4</sup>	85.8	F	110.2	F
	With Project <sup>5</sup>	85.8	F	127.6	F

Notes:  
<sup>1</sup> Reference: Transportation Research Board, *Highway Capacity Manual*, 2000.  
<sup>2</sup> Average control delay per vehicle (seconds per vehicle).  
<sup>3</sup> Level of service.  
<sup>4</sup> Omni-Means, *Focused Traffic Analysis for the Proposed Frog’s Leap Winery Modifications Project*, December 15, 2014 (Revised), Table 1, p. 7.  
<sup>5</sup> Ibid., Table 3, p. 17.

2. **Study Area** – The SMW letter includes a comment with respect to the “improperly narrow study area,” which included only three intersections in the immediate vicinity of the project site. In response, the Omni-Means letter describes the traffic study review process undertaken by Napa County and resulting expansions of the initial study area. In conclusion, Omni-Means states that the study area is, “. . . consistent with County practice and professional standards for evaluating traffic impacts.”

It is unclear what professional standards Omni Means is referring to as it provides no citation to support this statement. Two potential sources of such standards would be Caltrans and the Institute of Transportation Engineers (ITE), the foremost professional organization for traffic and transportation engineers.

Caltrans Guidelines

The Caltrans *Guide for the Preparation of Traffic Impact Studies* states, under the heading “Boundaries of the Traffic Impact Study” (p. 2):

*All State highway facilities impacted in accordance with the criteria in Section II should be studied.*

Section II, as referenced here, describes the level of service guidelines imposed by Caltrans, including the requirement that, “. . . the existing MOE should be maintained” at State highway facilities that are operating at substandard levels of service under existing conditions.

Institute of Transportation Engineers Guidelines

ITE has published a September 2010 document entitled, *Transportation Impact Analyses for Site Development*. That document states (p. 8):

*Care should be taken to include in the study all known congested locations that may be adversely impacted by the proposed development.*

Study Area Based on Caltrans and ITE Guidelines

Considering both of the study area guidelines described above, the intersection of Rutherford Road (SR 128)/St. Helena Highway (SR 29) should clearly be included in the Frog’s Leap Winery traffic analysis, as it is the intersection of two State highways and has been documented as operating at LOS F. In particular, the *Amended Caymus Winery Traffic Impact Study* (W-Trans, April 28, 2015) describes that intersection as operating at LOS F in both the weekday PM peak hour and the weekend midday peak hours under Existing Conditions and Cumulative Conditions (which includes two other projects: Frog’s Leap Winery and Frank’s Family Vineyards Winery). LOS F conditions are also projected to prevail under Future Conditions, reflecting General Plan buildout. Table 2 presents the detailed delay and level of service values for this intersection as presented in the W-Trans study.

Table 2 Level of Service Summary <sup>1</sup> Rutherford Road (SR 128)/St. Helena Highway (SR 29)				
Analysis Scenario & Critical Approach	Weekday PM Peak Hour		Weekend Midday Peak Hour	
	Delay <sup>2</sup>	LOS <sup>3</sup>	Delay	LOS
<b>Existing Conditions</b>				
Eastbound Approach	29.7	D	85.3	F
Westbound Approach	-- <sup>4</sup>	F	-- <sup>4</sup>	F
<b>Cumulative Conditions</b>				
Eastbound Approach	57.4	F	-- <sup>4</sup>	F
Westbound Approach	-- <sup>4</sup>	F	-- <sup>4</sup>	F
<b>Future Conditions</b>				
Eastbound Approach	-- <sup>4</sup>	F	-- <sup>4</sup>	F
Westbound Approach	-- <sup>4</sup>	F	-- <sup>4</sup>	F
Notes:				
<sup>1</sup> Source: W-Trans, <i>Amended Caymus Winery Traffic Impact Study</i> , April 28, 2015.				
<sup>2</sup> Average control delay per vehicle (seconds per vehicle).				
<sup>3</sup> Level of service.				
<sup>4</sup> Delay value exceeds 120 seconds per vehicle.				

Although the Rutherford Road (SR 128)/St. Helena Highway (SR 29) intersection clearly requires evaluation under the guidelines established by Caltrans and ITE, Omni-Means argues that it is appropriate to exclude this location simply because it is 1.8 miles from the project

driveway. Omni Means provides no justification for why this distance warrants exclusion of the intersection from the traffic study. This arbitrary cutoff ignores the fact that a substantial proportion of the project-generated traffic will pass through this deficient intersection, given the lack of alternate routes available in the area. In particular, according to the Omni-Means December 15, 2014 traffic study (p. 12), 63 percent of project traffic will be oriented to/from the south. It is reasonable to expect that the bulk of these vehicles will travel by way of Rutherford Road and State Route 29 (St. Helena Highway) and will, therefore, impact this intersection.

In addition, as previously noted in our March 24, 2016 letter, it is important to note that Caltrans has designated this intersection as a location needing safety improvements. Specifically, the *California State Route 128 Transportation Concept Report* (Caltrans District 4, April 2013) says:

*. . . the intersection of SR 29/128 and Rutherford Road/SR 128 is targeted for traffic and pedestrian safety improvements. Napa County studied and rejected a roundabout intersection at this location because of the proximity of a rail crossing. Other traffic control alternatives are being studied, but no decision has been made as of the time this document is being published.*

In summary, despite the fact that the intersection of Rutherford Road (SR 128)/St. Helena Highway (SR 29) exceeds the arbitrary distance criterion supposedly used to establish the list of study intersections, the failure to analyze project-related impacts at that location is a substantial deficiency in the traffic analysis. Considering the significant traffic delays already occurring at the Rutherford Road (SR 128)/St. Helena Highway (SR 29) intersection, and the fact that the bulk of the traffic from the project will pass through this intersection, it is likely that the project will significantly impact this intersection as well.

3. ***Analysis of Major Marketing Events*** – In response to a comment from SMW regarding the traffic study’s failure to evaluate the effects of a major marketing event (500 attendees) at Frog’s Leap Winery, Omni-Means responds that the total trip generation of such an event would be 403 trips, and that, “. . . the number of trips on the street network at one time are [*sic*] half of that volume,” or approximately 200 trips. Virtually all of those 200 trips would, presumably, be inbound toward the site prior to the event and outbound from the site after the event.

We note that this volume substantially exceeds the peak-hour volumes considered in the Omni-Means analysis (i.e., 30 weekday PM peak-hour trips and 86 Saturday peak-hour trips). Given the already-deficient operations at Conn Creek Road (SR 128)/Silverado Trail and Rutherford Road (SR 128)/St. Helena Highway (SR 29), the County should consider a detailed traffic analysis of a major marketing event, so as to ensure that the impacts of such an event are fully considered.

Omni-Means also responds that:

*Additionally, these events are held outside the typical peak traffic periods (during the middle of the day or after 6:00 p.m.) and therefore generally do not impact peak hour operations . . .*

In addition to providing a detailed traffic analysis, we believe it would be appropriate for Napa County to impose a Condition of Approval on the Frog’s Leap Winery to ensure that the traffic associated with such events does, in fact, occur outside of peak traffic hours. Without such a

Condition of Approval, event traffic (including traffic from guests, staff, and vendors) could exacerbate already substandard peak travel conditions.

4. **Cumulative Traffic Impacts** – In response to a comment from SMW regarding projected LOS F operations at the intersection of Conn Creek Road (SR 128)/Silverado Trail in the year 2030, Omni-Means states:

*In addition, the Napa County General Plan Draft EIR analyzed cumulative traffic impacts related to winery development in the County . . . CEQA Guidelines expressly provide that projects which are consistent with the development density established by general plan policies for which an EIR was certified ‘shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site.’ CEQA Guidelines Section 15183(a). Cumulative impacts by their nature are not peculiar to a project or its site and therefore, require no additional analysis in this instance.*

If we were to accept the conclusion of the preceding statement, as presented in its last sentence, there would never be a need for analysis of cumulative conditions. In reality, though, project-specific impacts do sometimes occur under cumulative conditions that are “peculiar to a project or its site.” Here, impacts that are peculiar to the Frog’s Leap site include issues related to the left-turn lane warrant and the applicant’s proposal to widen Conn Creek Road (SR 128) across from the project driveway.

Additionally, it is notable that the Napa County General Plan DEIR is inapplicable here because it did not evaluate the traffic impacts that occur in this section of the County or would be caused by this project.

First, the traffic analysis incorporated into the General Plan DEIR was based on evaluation of roadway segment operations. In contrast, the Frog’s Leap Winery IS/ND considers impacts at intersections. These two types of analyses are not directly comparable, as they address different time periods (daily operations for road segments versus peak hours for intersections) and employ vastly different methodologies. In short, the level of service results for road segments bear no relationship to the level of service results for intersections.

Moreover, even if we were to accept the road segment analyses as adequate for this purpose, the General Plan DEIR does not consider traffic on segments within the study area for the proposed Frog’s Leap Winery project. In particular, the segments of Conn Creek Road that are within the Omni-Means study area (i.e., between Silverado Trail and Rutherford Road) are simply not addressed in the General Plan DEIR at all. Consequently, the General Plan environmental analysis did not consider potential traffic conditions on the roads surrounding the project site.

5. **Left-Turn Lane on Conn Creek Road** – The December 2014 Omni-Means report documents that the proposed project meets Napa County warrants for installation of a northbound left-turn lane on Conn Creek Road at the Frog’s Leap Winery driveway. However, in an attempt to justify an exception from that requirement, it also states that the location falls short of meeting a warrant that is described as being from the Caltrans *Highway Design Manual*. In reality, the “Caltrans” warrant is over three decades old; it was taken from a 1985 report of the National Cooperative Highway Research Program (NCHRP), *NCHRP Report 279 – Intersection Channelization Design Guide*.)

A more recent NCHRP report addresses when it is appropriate to construct left-turn lanes. *NCHRP Report 745 – Left-Turn Accommodations at Unsignalized Intersections* (NCHRP, 2013), which documents the results of research conducted by the Texas Transportation Institute at Texas A&M University, provides updated warrants for left-turn lanes in both urban and rural areas, on two- and four-lane roads. Attachment B contains an excerpt from that report, showing a tabular listing of the applicable traffic volumes, as well as a graphical treatment. Table 3 summarizes the left-turn lane warrants for a three-legged intersection on a rural, two-lane highway; this is similar to the intersection of Conn Creek Road/Frog’s Leap Winery Driveway.

<b>Table 3</b> <b>Left-Turn Lane Warrants</b> <b>Three-Legged Intersection on a Two-Lane Rural Highway</b>	
Left-Turn Lane Peak-Hour Volume (Vehicles/Hour)	Two-Lane Highway Peak-Hour Volume That Warrants a Left-Turn Lane (Vehicles/Hour/Lane)
5	200
10	100
15	100
20	50
25	50
30	50
35	50
40	50
45	50
50 or more	50

Source: National Cooperative Highway Research Program, *NCHRP Report 745 - Left-Turn Accommodations at Unsignalized Intersections*, 2013.

Attachment C presents a copy of the NCHRP 745 left-turn warrant graphic showing the analysis of the Conn Creek Road/Frog’s Leap Winery Driveway. The traffic volumes employed here (i.e., 19 left turns/hour and a “Major Highway Volume” of 158 vehicles/hour/lane) are taken from the “Caltran’s [sic] Left-Turn Warrant” graphic attached to the December 15, 2014 Omni-Means report. As shown in Attachment C, under the current NCHRP guidelines, a northbound left-turn lane is clearly warranted on Conn Creek Road at the driveway. This reinforces the results of the left-turn lane warrant analysis conducted by Omni-Means using the Napa County standards.

The traffic volumes used in the left-turn lane warrant analyses described above represent “typical” conditions during the weekend midday peak hour. In evaluating the need for a left-turn lane, it is also important to consider conditions in advance of a major marketing event at Frog’s Leap Winery. As noted above, Omni-Means has estimated that such an event would generate a total of 403 trips, with half (i.e., about 200) on the road immediately prior to the event and half (again, about 200) traveling immediately after the event. The December 2014 Omni-Means study indicated that 53 percent of project-related trips would approach from the south on Conn Creek Road in the Saturday midday peak hour and 63 percent would do so in the weekday PM peak hour. Assuming that these percentages also apply to event-related traffic, between 106 and 126 drivers will desire to make a left turn into the site in the hour preceding a major marketing event.



Mr. Edward Schexnayder  
April 13, 2016  
Page 8

The value of a left-turn lane on Conn Creek Road under those circumstances is obvious, even without conducting a formal warrant analysis.

Finally, we note that the January 13, 2016 Omni-Means letter (p. 6) says that the “Napa County Road and Street Standards” warrant for provision of left-turn lanes has no relationship to safety. In reality, of course, provision of a dedicated left-turn lane is primarily a safety issue and secondarily about road capacity. Having a left-turn lane to serve northbound traffic on Conn Creek Road at the Frog’s Leap Winery will largely eliminate the potential for rear-end collisions involving vehicles waiting to enter the project site. Thus, if the County does not make the applicant comply with the County’s adopted left-turn warrant for the project, it should evaluate the safety impacts of failing to install a left turn lane at the project driveway.

### CONCLUSION

Based on our review of Napa County’s revised Initial Study/Negative Declaration and the January 13, 2016 “Initial Outline Response Letter” prepared by Omni-Means with respect to the proposed Use Permit modifications at Frog’s Leap Winery on Conn Creek Road (State Route 128) in Napa County, we believe that several issues relating to traffic operations and safety remain that have not been adequately addressed. Additionally, based on the information provided by the County, we find that the project will create a significant traffic impact.

We hope this information is useful. If you have questions concerning anything presented here, please feel free to contact me at (916) 783-3838.

Sincerely,

MRO ENGINEERS, INC.

A handwritten signature in blue ink that reads "Neal K. Liddicoat".

Neal K. Liddicoat, P.E.  
Traffic Engineering Manager





**ATTACHMENT A**

**Excerpts from the**  
*Guide for the Preparation of Traffic Impact Studies*  
**(Caltrans, December 2002)**



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**GUIDE FOR THE PREPARATION**

**OF**

**TRAFFIC IMPACT STUDIES**

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**STATE OF CALIFORNIA**  
**DEPARTMENT OF TRANSPORTATION**

**December 2002**

## I. INTRODUCTION

Caltrans desires to provide a safe and efficient State transportation system for the citizens of California pursuant to various Sections of the California Streets and Highway Code. This is done in partnership with local and regional agencies through procedures established by the California Environmental Quality Act (CEQA) and other land use planning processes. The intent of this guide is to provide a starting point and a consistent basis in which Caltrans evaluates traffic impacts to State highway facilities. The applicability of this guide for local streets and roads (non-State highways) is at the discretion of the effected jurisdiction.

Caltrans reviews federal, State, and local agency development projects<sup>1</sup>, and land use change proposals for their potential impact to State highway facilities. The primary objectives of this guide is to provide:

- ❑ guidance in determining if and when a traffic impact study (TIS) is needed,
- ❑ consistency and uniformity in the identification of traffic impacts generated by local land use proposals,
- ❑ consistency and equity in the identification of measures to mitigate the traffic impacts generated by land use proposals,
- ❑ lead agency<sup>2</sup> officials with the information necessary to make informed decisions regarding the existing and proposed transportation infrastructure (see Appendix A, Minimum Contents of a TIS)
- ❑ TIS requirements early in the planning phase of a project (i.e., initial study, notice of preparation, or earlier) to eliminate potential delays later,
- ❑ a quality TIS by agreeing to the assumptions, data requirements, study scenarios, and analysis methodologies prior to beginning the TIS, and
- ❑ early coordination during the planning phases of a project to reduce the time and cost of preparing a TIS.

## II. WHEN A TRAFFIC IMPACT STUDY IS NEEDED

The level of service<sup>3</sup> (LOS) for operating State highway facilities is based upon measures of effectiveness (MOEs). These MOEs (see Appendix "C-2") describe the measures best suited for analyzing State highway facilities (i.e., freeway segments, signalized intersections, on- or off-ramps, etc.). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" (see Appendix "C-3") on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained.

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<sup>1</sup> "Project" refers to activities directly undertaken by government, financed by government, or requiring a permit or other approval from government as defined in Section 21065 of the Public Resources Code and Section 15378 of the California Code of Regulations.

<sup>2</sup> "Lead Agency" refers to the public agency that has the principal responsibility for carrying out or approving a project. Defined in Section 21165 of the Public Resources Code, the "California Environmental Quality Act, and Section 15367 of the California Code of Regulations.

<sup>3</sup> "Level of service" as defined in the latest edition of the Highway Capacity Manual, Transportation Research Board, National Research Council.

## **A. Trip Generation Thresholds**

The following criterion is a starting point in determining when a TIS is needed. When a project:

1. Generates over 100 peak hour trips assigned to a State highway facility
2. Generates 50 to 100 peak hour trips assigned to a State highway facility – and, affected State highway facilities are experiencing noticeable delay; approaching unstable traffic flow conditions (LOS “C” or “D”).
3. Generates 1 to 49 peak hour trips assigned to a State highway facility – the following are examples that may require a full TIS or some lesser analysis<sup>4</sup>:
  - a. Affected State highway facilities experiencing significant delay; unstable or forced traffic flow conditions (LOS “E” or “F”).
  - b. The potential risk for a traffic incident is significantly increased (i.e., congestion related collisions, non-standard sight distance considerations, increase in traffic conflict points, etc.).
  - c. Change in local circulation networks that impact a State highway facility (i.e., direct access to State highway facility, a non-standard highway geometric design, etc.).

Note: A traffic study may be as simple as providing a traffic count to as complex as a microscopic simulation. The appropriate level of study is determined by the particulars of a project, the prevailing highway conditions, and the forecasted traffic.

## **B. Exceptions**

Exceptions require consultation between the lead agency, Caltrans, and those preparing the TIS. When a project’s traffic impact to a State highway facility can clearly be anticipated without a study and all the parties involved (lead agency, developer, and the Caltrans district office) are able to negotiate appropriate mitigation, a TIS may not be necessary.

## **C. Updating An Existing Traffic Impact Study**

A TIS requires updating when the amount or character of traffic is significantly different from an earlier study. Generally a TIS requires updating every two years. A TIS may require updating sooner in rapidly developing areas and not as often in slower developing areas. In these cases, consultation with Caltrans is strongly recommended.

# **III. SCOPE OF TRAFFIC IMPACT STUDY**

Consultation between the lead agency, Caltrans, and those preparing the TIS is recommended before commencing work on the study to establish the appropriate scope. At a minimum, the TIS should include the following:

## **A. Boundaries of the Traffic Impact Study**

All State highway facilities impacted in accordance with the criteria in Section II should be studied. Traffic impacts to local streets and roads can impact intersections with State highway facilities. In these cases, the TIS should include an analysis of adjacent local facilities, upstream and downstream, of the intersection (i.e., driveways, intersections, and interchanges) with the State highway.

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<sup>4</sup> A “lesser analysis” may include obtaining traffic counts, preparing signal warrants, or a focused TIS, etc.



**ATTACHMENT B**

**Excerpts from**  
*NCHRP Report 745 – Left-Turn Accommodations at Unsignalized Intersections* (NCHRP, 2013)

# **NCHRP**

**REPORT 745**

**NATIONAL  
COOPERATIVE  
HIGHWAY  
RESEARCH  
PROGRAM**

## **Left-Turn Accommodations at Unsignalized Intersections**

**TRANSPORTATION RESEARCH BOARD**  
*OF THE NATIONAL ACADEMIES*

**NCHRP REPORT 745**

**Left-Turn Accommodations at  
Unsignalized Intersections**

**Kay Fitzpatrick  
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Wallingford, CT

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2013  
[www.TRB.org](http://www.TRB.org)

of the steps a designer could take to determine whether a left-turn lane is appropriate for a particular location. Where there are no applicable access management guidelines, adequate spacing and design consistency are both essential requirements to consider.

## Apply Left-Turn Lane Warrants

### Warrants

After compiling all of the relevant information pertaining to a particular intersection, it is necessary to determine whether that information indicates that a left-turn lane is indeed necessary or beneficial. Left-turn lanes can reduce the potential for collisions and improve capacity by removing stopped vehicles from the main travel lane. The recommended left-turn lane warrants developed based on the NCHRP Project 3-91 research (1) are:

- Rural, two-lane highways (see Table 1),
- Rural, four-lane highways (see Table 2), and
- Urban and suburban roadways (see Table 3).

Table 1 also present warrants for a bypass lane treatment on two-lane rural highways. Given a peak-hour left-turn volume and a particular intersection configuration (i.e., number of legs, number of lanes on the major highway), the tables show the minimum peak-hour volume on the major highway that warrants a left-turn lane or bypass lane. Figure 2 displays the warrants for rural two-lane highways graphically. Figure 3 shows graphical warrants for four-lane rural highways, and Figure 4 shows the recommended warrants for urban and suburban arterials.

Technical warrants are an important element of the decision-making process; however, other factors should also be considered when deciding whether to install a left-turn lane, including:

- Sight distance relative to the position of the driver and
- Design consistency within the corridor.

These factors should be considered in conjunction with the numerical warrants. For example, if volumes indicate that a left-turn lane is not warranted but there is insufficient sight distance at the location for the left-turning vehicles, then the left-turn lane should be considered along with other potential changes (e.g., remove sight obstructions, realign the highway, etc.).

### Source of Warrants—Benefit-Cost Approach

A benefit-cost approach was conducted as part of NCHRP Project 3-91 (1) to determine when a left-turn lane would be justified. Economic analysis can provide a useful method for combining traffic operations and safety benefits of left-turn lanes to identify situations in which left-turn lanes are and are not justified economically. The development steps included:

- Simulation to determine delay savings from installing a left-turn lane,
- Crash costs,
- Crash reduction savings determined from safety performance functions available in the AASHTO *Highway Safety Manual* (Chapter 10 discusses rural two-lane, two-way roads; Chapter 11 discusses rural multilane highways; and Chapter 12 discusses urban and suburban arterials) (4),

**Table 1. Recommended left-turn treatment warrants for rural two-lane highways.**

Left-Turn Lane Peak-Hour Volume (veh/hr)	Three-Leg Intersection, Major Two-Lane Highway Peak-Hour Volume (veh/hr/ln) That Warrants a Bypass Lane	Three-Leg Intersection, Major Two-Lane Highway Peak-Hour Volume (veh/hr/ln) That Warrants a Left-Turn Lane	Four-Leg Intersection, Major Two-Lane Highway Peak-Hour Volume (veh/hr/ln) That Warrants a Bypass Lane	Four-Leg Intersection, Major Two-Lane Highway Peak-Hour Volume (veh/hr/ln) That Warrants a Left-Turn Lane
5	50	200	50	150
10	50	100	< 50	50
15	< 50	100	< 50	50
20	< 50	50	< 50	< 50
25	< 50	50	< 50	< 50
30	< 50	50	< 50	< 50
35	< 50	50	< 50	< 50
40	< 50	50	< 50	< 50
45	< 50	50	< 50	< 50
50 or More	< 50	50	< 50	< 50

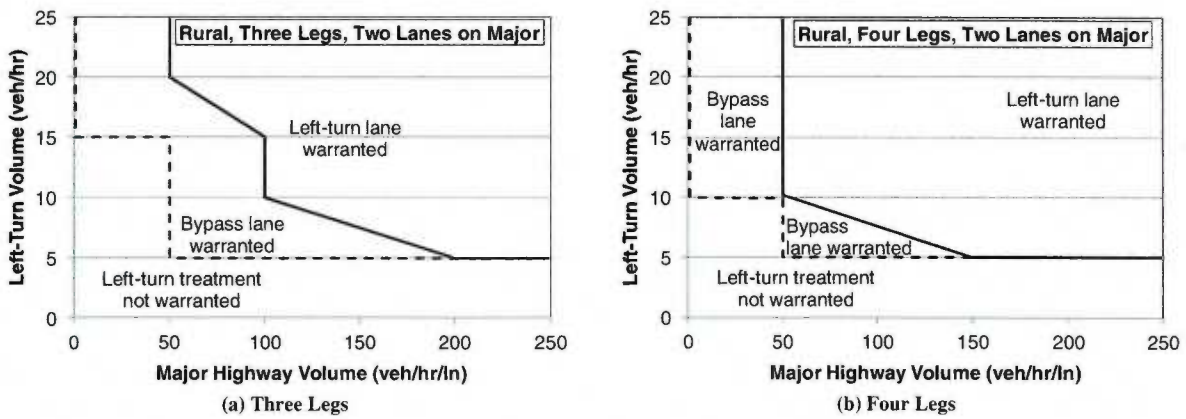


**Table 2. Recommended left-turn lane warrants for rural four-lane highways.**

Left-Turn Lane Peak-Hour Volume (veh/hr)	Three-Leg Intersection, Major Four-Lane Highway Peak-Hour Volume (veh/hr/ln) That Warrants a Left-Turn Lane	Four-Leg Intersection, Major Four-Lane Highway Peak-Hour Volume (veh/hr/ln) That Warrants a Left-Turn Lane
5	75	50
10	75	25
15	50	25
20	50	25
25	50	< 25
30	50	< 25
35	50	< 25
40	50	< 25
45	50	< 25
50 or More	50	< 25

**Table 3. Recommended left-turn lane warrants for urban and suburban arterials.**

Left-Turn Lane Peak-Hour Volume (veh/hr)	Three-Leg Intersection, Major Urban and Suburban Arterial Volume (veh/hr/ln) That Warrants a Left-Turn Lane	Four-Leg Intersection, Major Urban and Suburban Arterial Volume (veh/hr/ln) That Warrants a Left-Turn Lane
5	450	50
10	300	50
15	250	50
20	200	50
25	200	50
30	150	50
35	150	50
40	150	50
45	150	< 50
50 or More	100	< 50



**Figure 2. Recommended left-turn treatment warrants for intersections on rural two-lane highways.**



**ATTACHMENT C**

**Left-Turn Lane Warrant Analysis  
Based on**

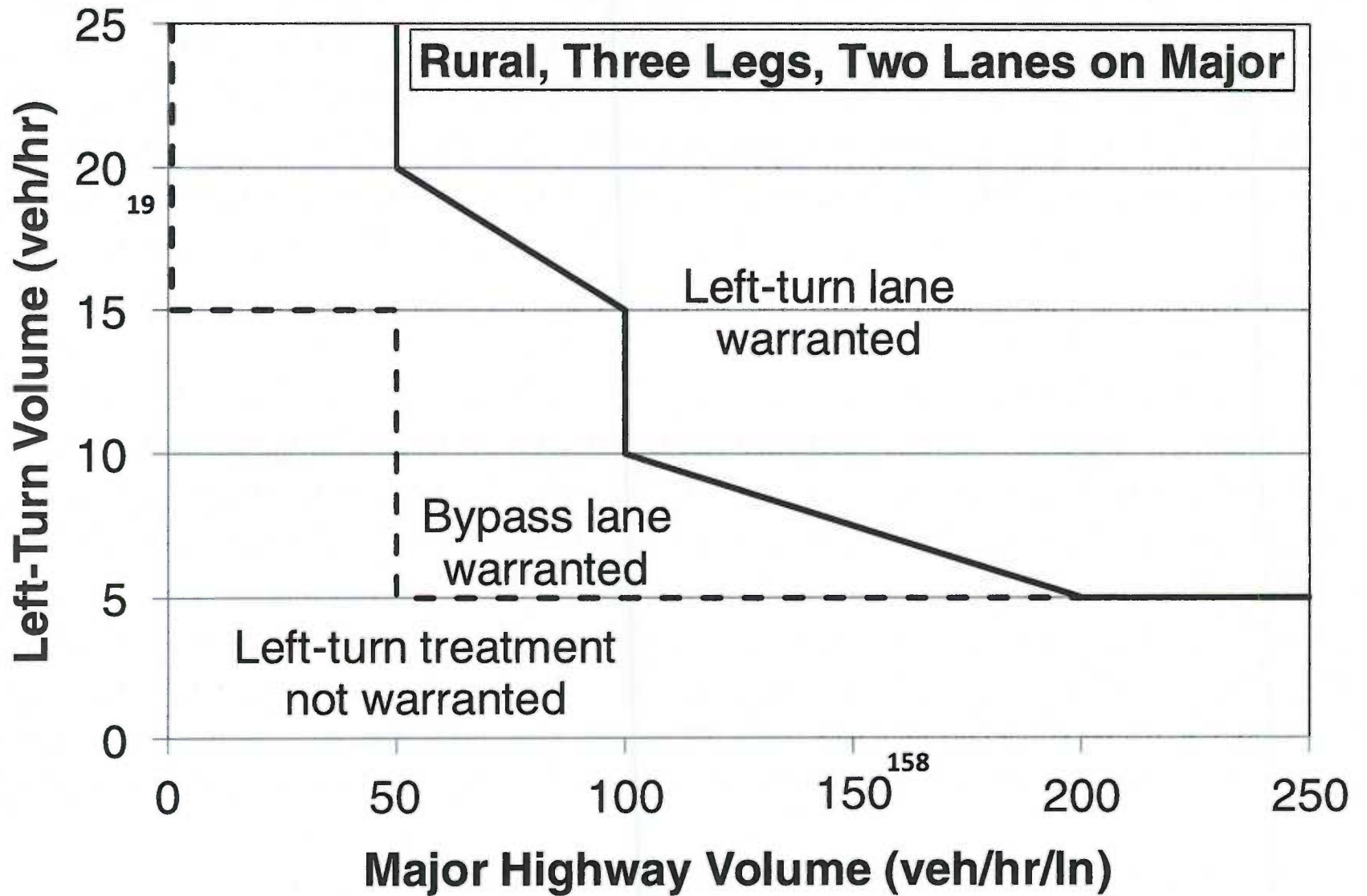
***NCHRP Report 745 – Left-Turn Accommodations at Unsignalized Intersections***

(Traffic Volume Source: Omni-Means, *Focused Traffic Analysis for the Proposed Frog's Leap Winery Modifications Project*, December 15, 2014 (Revised), Figure 6, p. 16)

775498.2

**LEFT-TURN LANE WARRANT ANALYSIS -- CONN CREEK RD. (SR 128)/FROG'S LEAP WINERY DRIVEWAY  
NEAR-TERM + PROJECT -- WEEKEND MIDDAY PEAK HOUR**

(Traffic Volume Source: Omni-Means, *Focused Traffic Analysis for the Proposed Frog's Leap Winery Modifications Project*, December 15, 2014 (Revised), Figure 6, p. 16.)



(a) Three Legs