

DEPARTMENT OF TRANSPORTATION

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March 2, 2012

NAP029892
 NAP-029-37.90
 SCH# 2012022044

Mr. Erik Lundquist
 City of Calistoga
 Planning and Building Department
 1232 Washington Street
 Calistoga, CA 94515

Dear Mr. Lundquist:

Brian Arden Winery – Mitigated Negative Declaration

Thank you for including the California Department of Transportation (Department) in the environmental review process for the Brian Arden Winery project. The following comments are based on the Mitigated Negative Declaration. As the lead agency, the City of Calistoga is responsible for all project mitigation, including any needed improvements to state highways. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. This information should also be presented in the Mitigation Monitoring and Reporting Plan of the environmental document.

Traffic Analysis

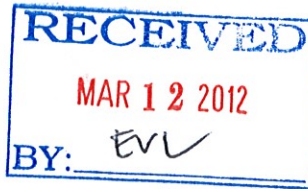
Please provide an analysis of the project's impact to the intersection (I/S) of State Route (SR) 29/Silverado Trail. The analysis should also include a section of describing cumulative impacts to the SR 29/Silverado Trail I/S from this project and other planned and pending projects.

Please feel free to call or email Sandra Finegan at (510) 622-1644 or sandra_finegan@dot.ca.gov with any questions regarding this letter.

Sincerely,

Isaia Gerboni

for GARY ARNOLD
 District Branch Chief
 Local Development – Intergovernmental Review



March 9, 2012

Mr. Dan Takasugi, PE
 City of Calistoga
 1232 Washington Street
 Calistoga, CA 94515



Whitlock & Weinberger
 Transportation, Inc.

490 Mendocino Avenue
 Suite 201
 Santa Rosa, CA 95401

voice 707.542.9500
 fax 707.542.9590
 web www.w-trans.com

**Response to Caltrans Comments on the Focused Traffic Impact
 Analysis for the Brian Arden Winery**

Dear Mr. Takasugi;

Whitlock & Weinberger Transportation, Inc. (W-Trans) is in receipt of comments from Ms. Lisa Carboni of Caltrans in a letter dated March 2, 2012, relative to the *Focused Traffic Impact Analysis for the Brian Arden Winery*, November 29, 2011. The letter requested an analysis of the project's impact on operation of the intersection of SR 29/Silverado Trail under both short-term and long-term conditions.

As discussed with Ms. Sandra Finegan of Caltrans, an operational analysis was not completed since this intersection has already been identified by the City as requiring mitigation to address future operational deficiencies and safety issues. The City, in coordination with Caltrans, has been working towards installation of a modern roundabout to replace the existing all-way stop controls. Further, the City has established a traffic impact fee to fund this improvement as well as others needed to accommodate long term growth, including the proposed winery.

In the *Concept Approval Report for the Route 29 (Lincoln Avenue)/Silverado Trail-Lake Street Roundabout*, dated August 19, 2009, the intersection of SR 29/Silverado Trail is reported to be operating at LOS B during both the morning and evening peak periods as well as during the midday peak on Saturday under its existing all-way stop controls. Under projected 2030 volumes and with the proposed roundabout, LOS B operation is expected to be retained. Given the low delay and high levels of service currently experienced and projected for the future, the few trips added by the project can reasonably be expected to have a less-than-significant impact, with operation remaining at LOS C or better.

Finally, the *Caltrans Guide for the Preparation of Traffic Impact Studies* indicates that for projects generating 1-49 peak hour trips, the need for a traffic analysis would generally be triggered by one of three conditions, including affecting a State facility that is operating unacceptably, increased potential for a traffic incident, or a change in the local circulation network that impacts a State facility. None of these conditions apply to the project. Since the project generates fewer than 10 vehicle trips during peak hours, and the adjacent State facility (SR 29) is *not* experiencing significant delay, there does not appear to be a need for further traffic analysis.

We hope this information adequately addresses the comments. Please call if you need any further information.

Sincerely,

Dalene J. Whitlock, PE, PTOE
 Principal



DJW/djw/CAL033.R2CC

RECEIVED

FEB 03 2012

BY: EVV

ATTACHMENT 12

February 3, 2012

To Kenneth MacNab, Dan Takasugi and Derek Rayner

The Luvisi ranch has several questions that need to be clarified or answered regarding the drainage from the property. We are not engineers but have been associated with the property for 100 years. Currently the property is covered with pasture that slows down the runoff from winter rains. This will be altered with development of the Arden winery and is discussed in the Drainage & detention Narrative. (Revised 11-16-11)

1 The hillside water is diverted around the winery and directed into a diverter adjacent to our property. The other half is diverted along the Silverado trail. Are both of these uncontrolled releases?? If so what is the effect on the release of TMDL's into the drainage area? In addition channeling this water into a single flow can result in vineyard erosion.

2 Calculations are based on a 100-year rainfall of approximately 2.9 in/hr. and if I understand the calculation it is for a single event of 1 hour or 149,229 gallons or 19,949cu/ft of water. The detention installation reduces the flow from 5.07cfs to 2.9-2.37 cfs at 16 and 28 minutes, after the 1-hour rainfall. Does the detention area empty completely or is water retained in the detention area? After 28 minutes 3,981 cubic feet will have drained from the retention pond (about 20%). How long will it take for the remainder to drain??? More realistic scenarios are:

- a After 14-17 inches of winter rainfall the soil profile is saturated and all subsequent rainfall is runoff. What happens if the 100-year rainfall occurs then??? The retention ponds could be full of water and the 2.9 inches in one hour equals the 5.07cfs post peak flow without detention.
- b Another more probable event is consistent rainfall occurring during a several day period. (Dec 18 1955

February 3, 2012

5.0in, 19th 6.42in, 20th 3.91in, and Dec 21, 1955 4.22in Angwin weather station) I would presume that the retention ponds are full and overflowing and the full flow would be entering our property and creating additional erosion as well as increased TDML entering the Luvisi ditch and the Napa River. How would the retention system handle this type of rainfall?

- c Currently any drainage from the Arden property sheet flows into our vineyards slowly depending upon rainfall rate. No noticeable erosion has occurred.
- d The velocity of storm water leaving the proposed "Valley Drains" is 2.0 CFS at approximately 900 gpm this is not sheet flow but a flow that can cause erosion.
- e The proposed re-grading of the entrance road to slope it back to the Silverado Trail will concentrate the flow and contribute to additional erosion. The area between our vineyard and the Silverado trail does not have a ditch to handle any increased water flows.
- f Arden proposes adding 3-0' of fill to raise the buildings and parking lots up to increase the water retention area. Water is still concentrated into two points for release. In addition raising the area by 3 feet creates a view-shed problem since the facility will now be above the surrounding area. What type of screening is needed to integrate the facility into the landscape?
- g The ditches on our property are private especially the ditch between Frediani and Luvisi properties. .

We are looking forward to your comments and to your disposing of your drainage water in a responsible manner.

Don Luvisi, 5102 Lyra Ct, Bakersfield, Calif. 93306
(661) 319-8374

CITY OF CALISTOGA



February 10, 2012

Mr. Don Luvisi
5102 Lyra Ct
Bakersfield, Ca 93306

Dear Mr. Luvisi:

The City of Calistoga Department of Public Works (CDPW) has reviewed your letter (dated February 3, 2012) regarding drainage concerns related to the proposed Brian Arden winery project. We understand your concerns and have been working closely with the developer's engineers to provide analysis that demonstrates a reduction in peak runoff.

As you may be aware, the developer's engineering consultants have prepared a preliminary drainage study (Delta Consulting & Engineers *Hydrology & Drainage Report*, dated February 1, 2012) that describe how the proposed improvements will work.

Their initial plans and report show similar drainage patterns for the pre and post developed site; generally easterly sheet flow that is routed to the southerly corner of the project site. The report also describes the engineering analysis done to demonstrate how total project peak flow will be less for the post developed condition than their pre-developed condition. The proposed improvements will provide detention/meter box that will attenuate and release storm water runoff below the existing conditions (for the 2, 10, 100 year, 24 hour storm events; depth of 4.5", 6.8" and 10" respectively).

With a reduction in peak discharge and onsite storm water filtering, storm water quality should be improved from this site and not increase TMDL levels from their current conditions. It appears, based on average discharge rates, a full pond will empty in approximately 12-hours which is general good engineering practice.

CDPW believes that the developer's engineer has provided a report that adequately demonstrates a reduction in runoff for the use permit phase. In addition, CDPW will be issuing conditions of approval to ensure these facilities are installed per design, maintained properly, and quantify water quality benefits.

We would encourage you to come by public works to chat further at your convenience.

Sincerely,

Digitally signed by Derek Rayner, PE
DN: cn=Derek Rayner, PE, o=City of
Calistoga, ou=Public Works Dept,
email=drayner@ci.calistoga.ca.us, c=US
Date: 2012.02.10 11:03:23 -08'00'

Derek Rayner, PE
Senior Civil Engineer
LEED Green Associate

cc: Dan Takasugi, Bill McBride, Erik Lundquist, Ken McNab



CRANE TRANSPORTATION GROUP

Central Valley Office:
2621 E. Windrim Court
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(916) 647-3406 *phone*
(916) 647-3408 *fax*

San Francisco Bay Area Office:
6220 Bay View Avenue
San Pablo, CA 94806
(510) 236-9375 *phone*
(510) 236-1091 *fax*

MEMORANDUM

TO: Chuck Meibeyer,
Meibeyer Law Group

FROM: Carolyn Cole, AICP
Mark Crane, P.E.
Crane Transportation Group

DATE: January 28, 2012

RE: **REVIEW OF TRAFFIC IMPACT ANALYSIS FOR THE BRIAN ARDEN WINERY, NOVEMBER 29, 2011**

Dear Mr. Meibeyer:

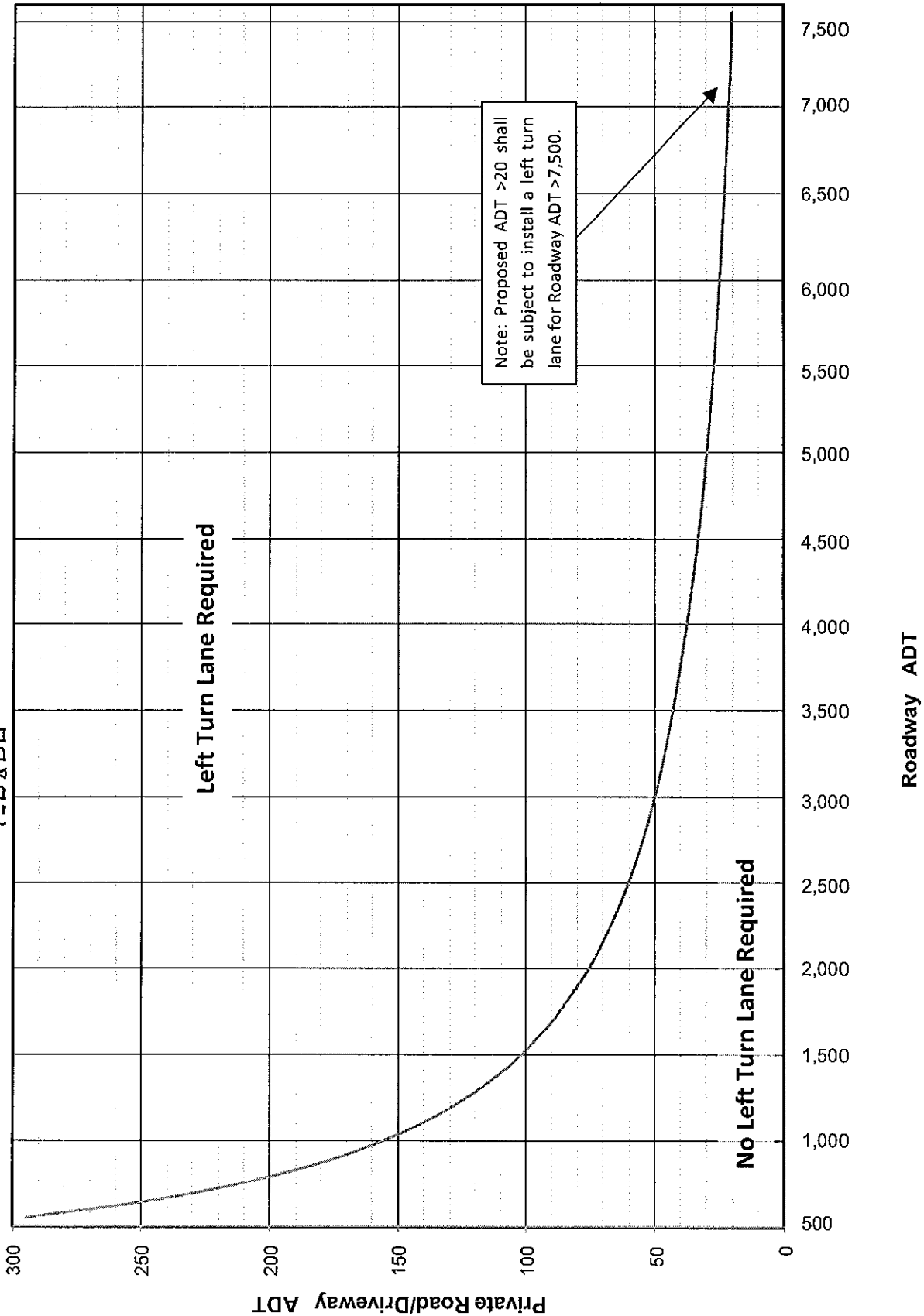
At your request, we have conducted a review of the above-referenced traffic study and question several aspects of the study.

1. **Left Turn Lane Warrant:** the Washington State DOT Left Turn Lane warrant was used in this study rather than the year 2001 update of the referenced NHRCP Report No. 279 (i.e., the update is NCHRP Report # 457, TRB). However, since Silverado Trail is a county road, Napa County standards should govern the requirement for left turn lanes. Use of the Napa County Left Turn Lane warrant has been required by Napa County of the nearby Lava Vine Winery (comment letter re: *Mitigated Negative Declaration for Lava Vine Winery*, to Erik Lundquist, Senior Planner, Calistoga, CA, from Nathan J. Galambos, Principal Engineer, Napa County Public Works, January 11, 2012.) Preliminary application of this warrant indicates that a left turn lane would be warranted. The Napa County Left Turn Lane warrant chart is provided as an attachment to this memo.
2. **Saturday Analysis Needed:** The Saturday PM peak hour should be analyzed, as well as the as project driveway and Silverado Trail volumes may be higher during this time period.
3. **All Components of Existing and Future Traffic Should be Clearly Identified:** To fully disclose the basis of the analysis, the study should provide graphics showing each increment of traffic referenced: existing volumes, future volumes without project, project

increment, etc. Traffic volumes must account for all uses, not just the proposed new uses.

4. **New Traffic Counts Needed:** The study should not rely on turning movements that are nine years old (August Briggs Traffic Analysis, W-Trans, 2002) and 2007 machine counts. New counts conducted during the weekday PM peak hour and a Saturday peak hour would provide a reasonable basis for this analysis. These volumes could then be factored to present a "worst case," based on historical counts, if needed.
5. **Basis for Future Traffic Projections:** The study should state why the County model (Solano-Napa Travel Demand Model) was not used to provide future traffic projections for Silverado Trail: instead, a growth factor was applied to determine future projections.
6. **Silver Rose Inn and Winery Access:** The study assumes there is only one "secondary" driveway to the Silver Rose Inn and Winery project 200 yards to the west of the Brian Arden driveway. Is this correct per current circulation plans for this winery? The study should include reference to any planned future changes to circulation and access at the Silver Rose Inn and Winery.

LEFT TURN LANE WADIANI GRAPH





TRUSTED COUNSEL TO THE WINE INDUSTRY

ATTORNEYS

CHARLES W. MEIBEYER
meibeyerlaw@aol.com

LYNN S. SLETTO
lynn@meibeyerlaw.com

PRACTICE AREAS

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Business Transactions
Entity Formations
Estate Planning
Land Use
Real Estate Transactions
Succession Planning

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707.431.4240 phone

February 16, 2012

Mr. Derek Rayner, Senior Civil Engineer
City of Calistoga Public Works Department
414 Washington St.
Calistoga, CA 94515

Re: Brian Arden Winery

Dear Mr. Rayner:

I am enclosing an additional "peer review" by Bartelt Engineering, of the revised Hydrology & Drainage Report dated February 1, 2012, and related documents. Bartelt Engineering continues to identify deficiencies in that Report.

As counsel for the neighboring property owner, Mark and Teresa Aubert, I have carefully reviewed the Report, and the comments of both Bartelt Engineering and Green Valley Consulting Engineers. After numerous iterations of submittals by the Brian Arden Winery I would recommend that the focus shift from merely technical issues to the "big picture". Under the California drainage law, owners cannot concentrate water resulting in damage to downstream property. Furthermore, property owners must not increase drainage runoff, divert natural flow, or block any drainage channel. It is our belief that the applicants own materials have established that the project, as currently designed, cannot comply with the California drainage law, nor the general plan policies applicable to the property. As neighbors of the project the Aubert family requests that the City ensure that the project comply with the drainage laws and protect the Aubert property from discharge that is not in full compliance with those obligations.

The Brian Arden property is presently undisturbed land that collects substantial amount of rain fall and surface water before releasing relatively modest amounts through sheet flow to east. Site inspections will review that there is no currently existing "point of discharge" in the southeasterly corner of the Brian Arden property. The applicant's plan dramatically changes current drainage patterns and results, as noted by Bartelt

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Page 2.

Engineering, "Under the proposed post-construction condition, flows are being broken up, redirected and allowed to release as concentrated point discharges which have higher flow rates than the pre-construction conditions". As such, the proposed plan violates California law and exposes my clients to substantial increased risk of harm due to increased flooding caused by the Brian Arden project. My clients will take any measures necessary to ensure that this issue be resolved to prevent this potential harm to their property, which is a significant environmental effect that must be addressed under CEQA before the project can be approved.

Moreover, the Report has failed to address the impacts of this proposed plan not just on my clients, but on other downstream neighbors. As noted by Bartelt Engineering: "The proposed project will discharge at rates that peak sooner, last longer and will be greater overall than current conditions. This will have an impact on the hydraulics of the regional downstream conveyance structures (ditches, swales, streams, etc.) because the site will maintain a higher flow rate for a longer time which will subsequently increase the regional watershed's peak flow". As further noted, no regional watershed impact analysis has been conducted to determine how downstream conveyance structures will be affected by the increased flow.

We believe these adverse results will occur because this project is too large on too small a parcel. The project is more than 15,000 sf in size, and has a very large amount of impervious surface, generating a substantial amount of additional runoff. This urbanization of the site violates General Plan policies such as LU-29 Maxfield/Adams Beverage Company Properties which requires: "Protection of natural resources, **including retention of onsite drainage**, mature trees and sensitive habitat."

Moreover, the applicant has proposed elevating a currently high profile two story structure by as much as three feet to create a detention basin necessitated by the amount of impervious surface to be constructed. The project was already in violation of the requirements for Entry Corridor properties, as expressed in LU-33: "New buildings should reflect **small-scale, low-rise design characteristics with an understated visual appearance** [emphasis supplied], and should maintain existing small town rural and open space qualities." To the contrary, the applicant has **increased** the height of what were already oppressively tall structures.

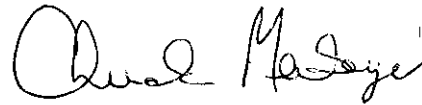
It appears to us the applicant's project design has created an intolerable condition for the project's neighbors. We strongly encourage the applicant to downsize the winery and impervious surface to reduce the amount of run-off. We also

February 16, 2012

Page 3.

believe the relocation of the parking area toward the Solage property will allow the applicant to release the reduced water flows in a manner that will more closely replicate the historic sheet flow drainage pattern. The combined reduction in drainage and elimination of concentrated point discharges will serve to avoid the damage to neighboring properties that is bound to occur under the current plan.

Very truly yours,

A handwritten signature in black ink, appearing to read "Charles W. Meibeyer". The signature is written in a cursive style with a large initial "C" and "M".

Charles W. Meibeyer

cc: Mark and Teresa Aubert
Calistoga Planning Department
Law Offices of James Rose

February 14, 2012
#11-22



Derek Rayner, Senior Civil Engineer
City of Calistoga Public Works Department
414 Washington Street
Calistoga, CA 94515

Re: Brian Arden Winery, Silverado Trail, Calistoga, CA, APN 011-050-030

Dear Mr. Rayner:

Bartelt Engineering is in receipt of Delta Consulting and Engineering's (Delta) revised Hydrology & Drainage Report dated February 1, 2012 for the Brian Arden Winery. We also hold the review memorandums from Mr. Joe Gaffney of Green Valley Consulting Engineers dated January 28 and February 6, 2012 and Mr. Bryan Jackson of Delta Consulting and Engineering's response to Mr. Gaffney dated February 1, 2012.

What remains of great concern to us is the preservation of historical flow patterns throughout the watershed after the Brian Arden Winery project is constructed. After our review of the revised design plans, communications and reports it appears that this still has yet to be achieved. We have the following comments regarding the project as it is currently proposed:

1. Very small amounts of discharge have been observed leaving the site during the most recent rain events. Historic flows leave the subject property primarily as sheet flow across the east property line and not as point discharge at the southeastern corner as the Delta report suggests. Under the proposed post-construction condition, flows are being broken up, redirected and allowed to release as concentrated point discharges which have higher flow rates than the pre-construction conditions.
2. We are unable to find information in the Delta report on how the different Time of Concentration (T_c) values were calculated under each storm event. At the very least, we would like maps showing the storm water path of travel through the watersheds and the associated calculations of the individual travel time (T_t) values and final T_c 's used in the Delta report for each condition.
3. We have concerns with the hydrographs provided in the Delta report. It is best practice that when summarizing the impacts a potential development may have on a watershed, each of the pre- and post-development condition hydrographs are displayed as single curvilinear lines.

The TR-55 documentation states that the method “can be used for a heterogeneous watershed that is divided into a number of homogeneous subwatersheds.” Therefore, each of the different areas (upper, site, basin, etc.) are actually individual “subwatersheds” with corresponding hydrographs.

Although showing each subwatershed’s hydrograph individually may be helpful to the design engineer when analyzing the different elements of a complex drainage system, a watershed hydrograph showing the summation of each subwatershed hydrograph is warranted. The hydrograph should be constructed using values obtained at the watershed’s ultimate discharge location, clearly showing the rate and duration, and include data from all areas generating runoff (subwatersheds) that contribute to the watershed. The upper subwatershed should not be removed from the pre- or post-construction analysis.

We request that pre- and post-construction hydrographs of each storm event at the ultimate discharge location of the entire watershed (upper and site) be provided for comparison.

4. Section 8.4.1 of the Federal Highway Administration’s (FHWA) Urban Drainage Design Manual discusses the method used to calculate the required storage volume as shown by Figure 5, on page 6 of the Delta report, as a preliminary volume estimating tool. Direct hydrograph volume comparisons should be utilized to determine the actual required volume.
5. *Figure 3: Pre-Construction Hydrograph, 100 Year Design Storm* on page 4 of the Delta report does not match the *100 Year Design Storm Pre-Construction Peak Flow at Southern corner of Property, Q_{PEAK} @ $t=8.58$ -Hours* hydrograph in Appendix H.
6. Each of the hydrograph output pages in the Delta report have an annotation stating that each subwatershed’s peak discharge rate occurs at the same time; however, this is highly improbable.

For instance, under post-construction conditions during the 10 year design storm, the annotation states that each subwatershed’s peak discharge occurs at 8.33 hours. However, by observing each subwatershed’s plotted hydrograph line, one can clearly see the peak discharge rates occur at different times. Furthermore, the time of peak discharge rate for the detention basin seems to be closer to 10 hours rather than the annotated 8.33 hrs. Is the annotation of the overall watershed’s time to peak value rather than the individual subwatershed’s?

7. In addition to the graphs, output tables should be provided for review. Such tables will provide discharge rates, stage-storage volumes relationships, water surface elevations (WSE) and maximum stage (STG) values for the structures that we can compare with the Delta report’s assumptions and summaries.
8. Attempts to meter the post-construction flows to pre-construction values have resulted in an increase in the duration of flows for all storm events. The proposed project will discharge at rates that peak sooner, last longer and will be greater overall than current conditions. This

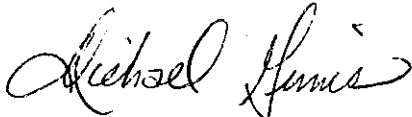
will have an impact on the hydraulics of the regional downstream conveyance structures (ditches, swales, streams, etc) because the site will maintain a higher flow rate for a longer time which will subsequently increase the regional watershed's peak flow. Has a regional watershed impact analysis been conducted for this project? How will the downstream conveyance structures be affected by the increased flow?

9. We continue to be concerned about the overall maintenance of the storage chambers and underground vault. How do the storage chambers maintain their functionality over the lifetime of the project?
10. Additional calculations should be provided to aid in the understanding and validation of the proposed design as well as the design engineer's assumptions.
 - a. Calculations showing drainage inlet capacities should be provided,
 - b. Calculations showing conduit sizing should be projected; and,
 - c. Orifice calculations for the subsurface system should be presented.
11. The *Mean Seasonal Precipitation* map found in the Sonoma County Water Agency's (SCWA) Flood Control Design Criteria (FCDC) manual (Plate No B-3) require interpolation between isohyetal lines when appropriate. Therefore, the "K" factor value used in the Delta report should be revised.
12. The *Metering Box Design Calculations* spreadsheets, found in Appendix H of the Delta report, are unclear where the input values for "Peak Flow, Q" were obtained from and therefore unclear how the metering box plates were sized.
13. In Appendix H of the Delta report, the tables that compare each design storm's peak runoff rates at the south corner of the property for the pre- and post-construction condition do not match the values used in the *Metering Box Design Calculations* spreadsheets.
14. In Appendix H, *Metering Box Detail* of the Delta report, the dimensions of the steel plate (A, B & C) as shown in the table exceed the annotated dimensions directly above it.
15. What is Napa County's position on the proposed drainage structure in the road side ditch along Silverado Trail? Will the County accept a drainage structure operating under pressure (head)? Will the County accept a system that will become silted in over time and will eventually fail in its proposed function? Will the County accept a system that will allow standing water and that could create a vector breeding situation?
16. We request further explanation about the design for the parking area with chip seal and the adjacent drive lane. The design seems to imply that the flow from these areas is directed as sheet flow to the south, into a rock lined swale and then captured by two catch basins. Flow is then allowed to discharge out of a 4 inch PVC pipe at the invert of one of the catch basins into a concrete valley gutter and eventually onto the driveway. The design does not seem to address either storm water quality or quantity regulations for this area. Furthermore, calculations for the 3 inch reducer within the catch basin have not been provided to make sure the flow out of the basin is limited to pre-construction rates.

While we recognize the level of effort by the applicant that has gone into proving this development project can be constructed, we feel that the design team should investigate the concerns we have brought forth and provide additional information to the City of Calistoga prior to approval of the Use Permit Application currently under review by the City.

If you have any questions or comments regarding our comments, please feel free to contact me at (707) 258-1301 at your earliest convenience.

Sincerely,

A handwritten signature in cursive script that reads "Michael Grimes".

Michael Grimes, P.E.
Project Engineer

MG:sd

cc: Chuck Meibeyer, Meibeyer Law Group
Mark Aubert

February 13, 2012

Mr. Dan Takasugi, PE
 City of Calistoga
 1232 Washington Street
 Calistoga, CA 94515



Whitlock & Weinberger
 Transportation, Inc.
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 web www.w-trans.com

Response to Comments on the *Focused Traffic Impact Analysis for the Brian Arden Winery*

Dear Mr. Takasugi;

Whitlock & Weinberger Transportation, Inc. (W-Trans) is in receipt of comments from Carolyn Cole and Mark Crane of Crane Transportation Group contained in a letter addressed to Chuck Meibeyer dated January 28, 2012, relative to the *Focused Traffic Impact Analysis for the Brian Arden Winery*, November 29, 2011. Following is a discussion of each comment (paraphrased and indicated in *italics*) along with our response.

1. *Left Turn Lane Warrant: the Washington State DOT Left Turn Lane warrant was used in this study rather than the year 2001 update of the referenced NHRCP Report No. 279 (i.e., the update is NCHRP Report # 457, TRB). However, since Silverado Trail is a county road, Napa County standards should govern the requirement for left turn lanes. Preliminary application of this warrant indicates that a left turn lane would be warranted.*

Response: The references cited in the report are those which contain the formulas and methodologies used for this evaluation, so are the appropriate reference. The proposed access driveway is located along a segment of Silverado Trail that is within Calistoga's City Limits; therefore, application of Napa County's left turn lane warrant is not appropriate for this proposed project.

2. *Saturday Analysis Needed: The Saturday PM peak hour should be analyzed, as well as the project driveway and Silverado Trail as volumes may be higher during this time period.*

Response: A sensitivity analysis was performed on the left-turn lane warrants, and it was determined that weekend peak hour volumes on Silverado Trail would need to be over three times greater than weekday a.m. peak hour volumes and more than double weekday p.m. peak hour volumes to warrant a left-turn lane at the proposed Brian Arden Winery access driveway. Based on previous studies conducted along Silverado Trail, weekend peak hour volumes are slightly lower or equal to volumes experienced during the weekday a.m. and p.m. peak periods. Therefore, the left-turn lane evaluation contained in the Traffic Impact Analysis represents a worst case scenario and adequately addresses the potential need during the Saturday peak periods as well.

3. *All Components of Existing and Future Traffic Should be Clearly Identified: The study should provide graphics showing each increment of traffic referenced: existing volumes, future volumes without project, project increment, etc. Traffic volumes must account for all uses, not just the proposed new uses.*

Response: The left-turn lane warrant calculations that were provided with the Traffic Impact Analysis display the projected future a.m. and p.m. peak hour volumes, so the data needed to evaluate the project's potential impacts is available. To further clarify the data used, the referenced 2007 machine counts used to evaluate existing conditions are enclosed. As regards to the level of analysis performed, since a turn pocket is not warranted under the worst case condition (Future

plus Project) it can reasonably be concluded that the turn lane would likewise not be warranted for scenarios with lower volumes.

- 4. *New Traffic Counts Needed: The study should not rely on turning movements that are nine years old (August Briggs Traffic Analysis, W-Trans, 2002) and 2007 machine counts. New counts conducted during the weekday PM peak hour and a Saturday peak hour would provide a reasonable basis for this analysis. These volumes could then be factored to present a "worst case," based on historical counts, if needed.*

Response: As noted on Page 3 of the Traffic Impact Analysis, a comparison of traffic volumes obtained for various projects in and around Calistoga has shown that volumes collected in 2011 are either equal to or less than volumes collected in 2007 and 2008, so the applied volumes can reasonably be expected to result in a conservative analysis. As regards the reference to 2002 counts, the volumes used were for turns into and out of the project site, and unless the use has changed, there is no reason to expect that the volumes would have, so new counts at this location were deemed unnecessary, especially given the findings of the sensitivity analysis discussed in the response to Comment 2 above.

- 5. *Basis for Future Traffic Projections: The study should state why the County model (Solano-Napa Travel Demand Model) was not used to provide future traffic projections for Silverado Trail: instead of a growth factor.*

Response: Based on previous evaluations, it has been determined that volumes produced by the Solano-Napa Travel Demand Model appear unreasonable for the study segment of Silverado Trail as well as Brannan Street and Lincoln Avenue (SR 29). Therefore, a growth factor, which was calculated based on the population growth of the area, was applied to existing volumes to determine future traffic projections.

- 6. *Silver Rose Inn and Winery Access: Is only going to be one "secondary" driveway to the Silver Rose Inn and Winery project 200 yards to the west of the Brian Arden driveway.*

Response: Based on the most recent site plan for the Silver Rose Winery and Resort project there is only one secondary access being proposed and it would be located approximately 200 feet (not yards) west of the existing driveway that will provide access to the Brian Arden Winery. Given the distance separating these driveways, adequacy of line-of-sight, and the direction of the offset, operation of both driveways is expected to be acceptable.

We hope this information adequately addresses the comments. Please call if you need any further information.

Sincerely,

Chris Helmer
Transportation Planner

Dalene J. Whitlock, PE, PTOE
Principal



DJW/ch/CAL033.R2C

Enclosure: 2007 Machine Count Data

Latitude: 0' 0.000 Undefined

Start Time	26-Feb-07		Tue		Wed		Thu		Fri		Weekday Average		Sat		Sun	
	South B	North Bo	South B	North Bo	South B	North Bo	South B	North Bo	South B	North Bo	South B	North Bo	South B	North Bo	South B	North Bo
12:00	*	*	*	*	*	*	4	7	5	13	4	10	19	34	13	23
AM																
01:00	*	*	*	*	*	*	4	5	7	7	6	6	9	17	14	10
02:00	*	*	*	*	*	*	2	4	7	3	4	4	17	9	8	6
03:00	*	*	*	*	*	*	7	11	8	5	8	8	5	8	9	6
04:00	*	*	*	*	*	*	26	12	29	15	28	14	16	11	13	12
05:00	*	*	*	*	*	*	62	11	47	13	54	12	32	5	39	16
06:00	*	*	*	*	*	*	205	43	176	44	190	44	69	29	9	2
07:00	*	*	*	*	*	*	241	82	241	67	241	74	80	70	19	20
08:00	*	*	*	*	*	*	231	96	195	116	213	106	110	71	30	21
09:00	*	*	*	*	*	*	172	113	170	113	171	113	157	128	66	33
10:00	*	*	*	*	*	*	136	119	164	146	150	132	177	155	88	58
11:00	*	*	*	*	*	*	154	147	136	184	145	166	148	184	105	86
12:00																
PM																
01:00	*	*	*	*	*	*	161	162	191	176	176	169	180	224	141	140
02:00	*	*	*	*	*	*	156	128	180	175	168	152	195	230	195	165
03:00	*	*	*	*	*	*	127	170	187	219	157	194	234	230	181	158
04:00	*	*	*	*	*	*	153	273	171	313	162	293	221	268	222	144
05:00	*	*	*	*	*	*	141	300	187	324	164	312	197	293	212	156
06:00	*	*	*	*	*	*	135	278	154	323	139	285	232	209	168	150
07:00	*	*	*	*	*	*	109	181	102	211	94	179	128	149	105	97
08:00	*	*	*	*	*	*	55	91	59	103	56	88	71	93	71	69
09:00	*	*	*	*	*	*	41	48	61	71	50	59	74	81	69	60
10:00	*	*	*	*	*	*	26	46	26	60	33	44	51	53	27	34
11:00	*	*	*	*	*	*	23	21	39	52	25	33	47	37	32	18
11:00	*	*	*	*	*	*	9	15	26	32	17	23	28	42	17	25
Total	0	0	355	587	2402	2380	2568	2784	2455	2520	4975	5127	1853	3362	1509	
Day	0	0	942	4782	5352	5127	4975	5127	4975	5127	5127	5127	5127	5127	5127	
AM																
Peak																
Vol.																
PM																
Peak			17:00	17:00	07:00	11:00	07:00	11:00	07:00	11:00	07:00	11:00	10:00	11:00	11:00	11:00
Vol.			129	254	161	300	191	324	176	312	234	293	222	165	222	165

Project: K-149
Brian Arden Winery
PPC#2

←—————→
DELTA CONSULTING & ENGINEERING
OF ST. HELENA



February 13, 2012

Joe Gaffney
Project Manager
Green Valley Consulting Engineering
335 Tesconi Circle
Santa Rosa, CA 95401

Subject: Brian Arden Winery Hydrology Report
Response Letter to Peer-Review Comments

Joe,

In response to your memorandum dated February 06, 2012 addressed to Derek Rayner of the City of Calistoga's Public Works Department regarding your review of the Brian Arden Winery Hydrology Report dated February 01, 2012, the following are our itemized responses to your comments:

1. *Comment: The Table of Contents and the first sheet were omitted from the revised report. The Table of Contents should include a listing of the Appendices to the report.*

Response:

The Table of Contents and the first sheet were submitted with the revised report provided to the City of Calistoga. The list of appendices is located on page 17 of the report. The revised report dated February 13, 2012 will include these sheets.

2. *Comment: The engineer wants to exclude the runoff from the upstream watershed areas in his analysis of peak runoff from the site. I feel that this is not correct for the following reasons:*

Response:

The upstream watershed areas are included in the analysis to determine the peak storm water runoff from the site. Please see the Pre-Construction Runoff Map on sheet 3 of **Appendix A**, and the Post-Construction Map on sheet 4 of **Appendix A**. Also, refer to **Appendix G** for the Post-Construction Runoff Map. These maps show the breakdown of the on-site and upstream watersheds used to determine the peak storm water runoff.

The pre-construction watersheds are partitioned into two watersheds: Site Watershed and Upstream Watershed. The storm water derived within each of these watersheds is taken into account in the analysis of the peak storm water runoff exiting the site (which occurs at the southern corner of the property).

The post-construction watersheds include five watersheds, including: Site Watershed (storm water not entering Detention Basin), Site Watershed (storm water entering Detention Basin), Upstream Watershed 1, Upstream Watershed 2, and Upstream Watershed 3. Each watershed is routed through the property based each watershed's proposed runoff pattern, and the composite peak storm water flow is calculated at the southern corner of the property.



- a. *Comment: In the three different methods of peak runoff computation that are compared in the study, slope has a big impact on the final runoff. There is a large difference in the slopes of the upper watersheds and the project site area, which will have a large difference in the peak runoff from the total area.*

Response:

Two analyses were presented in this report: 1.) the determination of required on-site detention, and 2.) the determination of the peak runoff flows exiting the property for the pre-construction and post-construction conditions. In the analysis to quantify the required on-site storm water detention (using the three methods mentioned in this comment), the footprint of the proposed site improvements was identified and used to create the pre- and post-construction watershed. This watershed was determined to be 1.908 acres and located within the flatter plain of the property. The slight increase in slopes along the west side of this watershed has been taken into account in the calculation of the runoff coefficients within each design method (SCS and Rational). The steep hillside of Mount Washington (also noted in this comment) is identified as the upstream watershed in the report exhibits, is not included in the detention storage calculations as this is irrelevant to the impact of the proposed site improvements for this project due to the fact this area shall remain undisturbed by the proposed project development. The upstream watershed shall produce the same storm water runoff flows in the pre-construction and post-construction conditions and does not have an effect on the required on-site storm water detention quantity.

However, the second analysis of this report described in Section VI is purposed to determine the peak runoff from the site. In this analysis, the upstream watersheds were included as the storm water runoff derived in the upstream watershed combines with the site watershed's runoff to produce the total flow exiting the property. The steep slopes of the hillside were taken into account and a time of concentration was determined as a product of the slopes, the surface cover, and the length of flow.

- b. *Comment: In the pre-construction scenario, both in reality and in Appendix H, the flows from the upstream watersheds are physically included in the final discharge at the southeast corner of the site. The study should show the computation of these flows.*

Response:

The peak discharge from the pre-construction conditions has been computed by producing the rainfall-runoff hydrographs for each design storm within each watershed. The hydrographs from each watershed were then combined to determine the peak composite storm water runoff rate from the property. Please see the composite hydrographs and results tables in **Appendix I** of this report.

- c. *Comment: In the post-construction scenario, the upstream watersheds have a big impact on the routing of the stormwater runoff:*
- i. *Upstream Watershed #1 is allowed to flow onto the north end of the property and is included in the final discharge at the southeast corner.*
 - ii. *Upstream Watershed #2 is collected in the drain inlet at the northwest corner of the building. Storm flows are conveyed via an 8" pipe (how was this pipe sized?) to a bubble-up inlet in the swale south of Silverado Trail. The flow is then routed in the swale until it sheet flows across the north end of the site and is then included in the*



final discharge at the southeast corner.

Response:

The proposed 8" pipe purposed to convey the storm water flows from Upstream Watershed #2 has been analyzed, and has been determined to be adequately sized to handle the flow from the watershed. Please refer to **Appendix L** of the hydrology report. The 8" pipe has a capacity of 1.18 cubic feet per second, exceeding the peak storm water demand from Upstream Watershed #2 during the 100-year design storm of 0.92 cubic feet per second.

- iii. *Upstream Watershed #3 is collected in the infiltration ditch at the southwest corner of the driveway. A portion of the flow is collected in the rainwater storage tanks, and the remainder is routed into the underground detention basin. Any overflows from the infiltration ditch are routed to the storm water dissipater above the south end of the driveway.*
- d. *Comment: The three factors described above are not adequately addressed in the study.*

Response to 2c. and 2d.:

Please refer to **Appendix G** of the hydrology report for the Post-Construction Runoff Map. The map shows each watershed in the post-construction scenario, including descriptions and arrows depicting the flow patterns for all three Upstream Watersheds and the Site Watersheds. The storm water derived from each watershed has been routed through the site based on the post-construction conditions. The storm water runoff derived in the Upstream Watersheds has been routed as described above in 2c. i, ii, and iii.

- 3. *Comment: In Appendix H, in the design calculations for the openings in the metering plates, the peak flow through the opening are input variables to the calculations for each of the three plates. The study does not describe how these peak flow values were selected.*

Response:

The peak flow through each opening within the metering box was selected to restrain the post-construction storm water runoff flows to remain less than the pre-construction runoff flows while preventing the detention basin from flooding due to undersized orifices. The flows presented in **Appendix H** were determined through an iterative design process. This information has been added in the fourth paragraph on Page 14 of the revised hydrology report dated February 13, 2012.

- 4. *Comment: In Appendix H, in the tables comparing pre- and post-construction flows, it appears that SCS curve numbers are used to determine peak runoff from the different subareas. Given the wide range of results from the three methods of determining peak runoff studied in the report, the report should provide justification for the exclusive use of the SCS Method in determining peak runoff at the southeast corner of the property. Also, the peak runoff from the Site Watershed (only the area to be developed) in the 100-year storm does not match the value in Table 9, the summary of results from the three different calculation methods in the report.*



Response:

The SCS method was used to determine the flows in **Appendix H (Appendix I** in the revised hydrology report dated 02-13-12). The SCS Method is calibrated to localized rainfall information and is capable of producing a rainfall-runoff hydrographs over an entire storm event (in this case, the 100-year 24 hour storm event). The storm water runoff is able to be routed through the detention basin and metering box and able to provide flow information over the extent of the storm event. This has been stated in Section VI of the revised hydrology report dated February 13, 2012.

In volume-sensitive calculations and for storm water routing, the SCS method is more appropriate than the Rational Method. The Rational Method was developed for the purpose of approximating peak flow rates from a watershed, and typically considers only a critical (short) duration of the storm to determine the peak flow. The Rational Method is not capable of routing storm water flows through volume-based features such as a detention basin as it does not consider volumes over time.

The composite peak runoff values in **Appendix H (Appendix I** in the revised hydrology report dated 02-13-12) are not meant to match the values in Table 9. The peak flow values provided in Table 9 were determined, in the analysis to quantify the required on-site water detention. The extent of the watershed for this analysis was the footprint of the proposed site improvements and did not include the area within the upstream watershed. See the response to 2a in this letter for an explanation of the watershed partitioning between the two analyses.

The post-construction peak flow values in **Appendix H (Appendix I** in the revised hydrology report dated 02-13-12) were determined in the second analysis when determining the peak flow at the southern corner of the property. This flow includes storm water runoff derived from the upstream watershed and shows the peak storm water flow leaving the property higher than those shown in Table 9.

5. *Comment: Again, in the tables in Appendix H, it is not clear that the runoff from Upper Watershed #3 is included in the Outflow from the Detention Basin.*

Response:

Upstream Watershed #3's runoff was included in the inflow and outflow analysis of the detention basin. A sentence in the second paragraph of Section VI on page 13 of the revised hydrology report dated February 13, 2012 denotes this.

6. *Comment: Finally, in Appendix H, the outflow hydrograph from the detention basin is included in the post-construction hydrographs for the project. The report should include a separate inflow-outflow hydrograph for the detention basin, including flows from the developed site and collected flows from Upstream Watershed #3 less any overflow that is routed to the flow dissipater above the south end of the driveway.*

Response:

Inflow-Outflow hydrographs have been produced for each storm event using the SCS Design Method and added to **Appendix I** of the hydrology report. In addition to the inflow-outflow hydrographs for each storm event, two additional exhibits have been added to **Appendix I** for clarification:



- 1.) Hydrograph showing the storm water runoff entering the detention basin from Upstream Watershed 3 and the Site Detention Basin Watershed for each storm event.
- 2.) Volume analysis of the detention basin over the 24-hour storm event for each storm interval.

In total, **Appendix I** has 4 exhibits per storm event:

- Peak Storm Water Runoff at Southern Corner of Property
- Storm Water Runoff Entering Detention Basin
- Inflow-Outflow Hydrograph
- Detention Basin Volume throughout 24-Hour Storm Event

Additional Notes:

To utilize the full capacity of the detention basin, an impermeable liner is proposed to be lined around the extent of the basin. This will avoid the potential for high groundwater to reduce the capacity within the basin. Page 12 of the hydrology report has been revised to note this.

Please feel free to contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Bryan Jackson".

Bryan Jackson
Project Engineer

From: Joe Gaffney [mailto:Joe@Gvalley.com]
Sent: Friday, February 17, 2012 10:05 AM
To: Derek Rayner
Subject: RE: Arden Hydrology Response Letter

Derek:

I'm sorry I didn't get back to you sooner. I was out of town most of this week.

With these changes, the hydrology report should be deemed complete.

Please let me know if you need any further help with this matter.

Joe Gaffney, PE QSD
Project Manager
gaffney@gvalley.com

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94515-0352



JONES
Family Vineyards

PHONE & FACSIMILE:
707-942-0467
email@joneswine.com



March 5, 2012

Erik V. Lundquist
Senior Planner
City of Calistoga
1232 Washington Street
Calistoga, CA 94515

Dear Mr. Lundquist:

I am writing to urge you, the Planning Commission and the City Council to reconsider the Brian Arden Winery application. As currently proposed, the winery appears to be inconsistent with the 2003 General Plan guidelines and the Entry Corridor overlays and completely out of proportion with its neighbors. I would urge that any approval of a winery at this location should be conditioned on a reduction in the scale of the project (size and height) to be more compatible with the small parcel size.

In addition, approval of a winery at this location should be contingent on meeting the newly adopted grape sourcing requirements for wineries in the rural residential areas of Calistoga.

Sincerely,

Rick Jones
Vintner and Calistoga supporter



Erik Lundquist

From: Brooks, Kennedy [kennedy@colbrook.com]
Sent: Wednesday, March 07, 2012 12:10 PM
To: Erik Lundquist
Subject: Opposition to Brian Arden Winery Application



Dear Mr. Lundquist:

As Senior Planner for the City of Calistoga, we are writing to urge you, the Planning Commission and the City Council to reconsider the Brian Arden Winery application.

It is our understanding that, as currently proposed, the Brian Arden Winery application does not conform to the General Plan guidelines, and that it is also not in compliance with either the Maxfield Adams Planned development or the Entry Corridor overlays that are listed in the General Plan.

It is also our understanding that this proposed project concentrates storm water flow that would dump illegally on the neighboring Aubert property. This project simply appears to be too massive for a small parcel. It is neither low-rise nor small-scale in design but would completely dwarf the neighboring Aubert property.

Finally, and perhaps most significantly, there is no mention in the Brian Arden Winery development plan materials of any intention by the Brian Arden Winery to comply with the newly adopted 75% Napa Valley grape sourcing requirements for wineries in the rural residential areas of Calistoga.

We strongly urge your reconsideration and thank you for your attention to this request.

Kennedy Brooks
Resident and Calistoga supporter

T: 707.942.4889
kennedy@colbrook.com

Erik Lundquist

From: Karen Cakebread [karen@ziatawines.com]
Sent: Wednesday, March 07, 2012 1:36 PM
To: Erik Lundquist
Subject: Arden Winery

Dear Erik:

I am writing to urge you, the Planning Commission and the City Council to reconsider the Brian Arden Winery application. Although they have specific feedback from the Planning Commission they generally have not addressed all the issues.

In addition, the Brian Arden Winery application does not conform to the General Plan guidelines. It also does not comply with the Maxfield Adams Planned development or the Entry Corridor overlays that are listed in the General Plan. The winery looks like a "high rise" building and not at all "low rise" per the Entry Corridor overlays. In previous meetings with the City, the owners were asked to downscale the project, but rather, they up scaled it with new retail and hospitality areas.

As stated by others in previous public hearings, I too have concerns about traffic congestion in this Silverado Trail corridor. I've worked at wineries for 20+ years and have first-hand experience in "back-of-the-house" operations of a winery. The scale of this project leaves very little room to support SAFE visitor/pedestrian traffic let alone all the trucks, forklifts, mobile bottling lines, etc. that are necessary for both wineries to run their operations via one single driveway accessing the two properties. I do hope you can visualize visitors parking on the shoulder of Silverado Trail for overflow parking, or when access is blocked due to routine operations.

There is no mention in the Brian Arden Winery development plan materials of any intention to comply with the newly adopted 75% Napa Valley grape sourcing requirements for wineries in the rural residential areas of Calistoga. I echo Chairman Manfredi's earlier comments "when the grape sourcing rule is adopted Brian Arden Winery will need to be in full compliance on Day 1, not when they reach full capacity" as stated in previous documents.

My conclusion is this is the wrong location for this scale of project. Let's keep Calistoga's entry and Mt. Washington as it should be; rural. I applaud the Aubert's for doing a beautiful job of enhancing the original structure to blend into the landscape.

Regards,
Karen

Karen Cakebread
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P.O. Box 407
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karen@ziatawines.com
www.ziatawines.com

3/7/2012

Erik Lundquist

From: Piper Cole [piper@colbrook.com]
Sent: Wednesday, March 07, 2012 12:13 PM
To: Erik Lundquist
Subject: Opposition to Brian Arden Winery Application



Dear Mr. Lundquist:

As Senior Planner for the City of Calistoga, we are writing to urge you, the Planning Commission and the City Council to reconsider the Brian Arden Winery application.

It is our understanding that, as currently proposed, the Brian Arden Winery application does not conform to the General Plan guidelines, and that it is also not in compliance with either the Maxfield Adams Planned development or the Entry Corridor overlays that are listed in the General Plan.

It is also our understanding that this proposed project concentrates storm water flow that would dump illegally on the neighboring Aubert property. This project simply appears to be too massive for a small parcel. It is neither low-rise nor small-scale in design but would completely dwarf the neighboring Aubert property.

Finally, and perhaps most significantly, there is no mention in the Brian Arden Winery development plan materials of any intention by the Brian Arden Winery to comply with the newly adopted 75% Napa Valley grape sourcing requirements for wineries in the rural residential areas of Calistoga.

We strongly urge your reconsideration and thank you for your attention to this request.

**Piper Cole
Calistoga resident and supporter**

Piper Cole
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ELAINE MARIA SCZUKA
454 KORTUM CANYON ROAD
CALISTOGA, CA 94515
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SCZUKA@AOL.COM
~~~~~



March 6, 2012

Erik V. Lundquist  
Senior Planner  
City of Calistoga  
1232 Washington Street  
Calistoga, CA

Dear Mr. Lundquist:

I am writing to urge you, the Planning Commission and the City Council to reconsider the Brian Arden Winery application.

As currently proposed, the Brian Arden Winery application does not conform to the General Plan guidelines. It also does not comply with the Maxfield Adams Planned development or the Entry Corridor overlays that are listed in the General Plan.

In addition, this proposed project concentrates storm water flow and illegally dumps it on the neighboring Aubert property. This project simply appears to be too massive for a small parcel and is neither low-rise nor small-scale in design and will completely dwarf the neighboring Aubert property.

Finally, there is no mention in the Brian Arden Winery development plan materials of any intention to comply with the newly adopted 75% Napa Valley grape sourcing requirements for wineries in the rural residential areas of Calistoga.

Most sincerely,

Elaine Sczuka  
Resident and Calistoga supporter