

Tom Brohard and Associates

September 14, 2017

W.A.T.E.R.
P.O. Box 873
Mt. Shasta, California 96067

SUBJECT: Review of Final Environmental Impact Report for the Proposed Crystal Geyser Bottling Plant Project in Siskiyou County - Transportation and Traffic Comments

Dear Sir or Madam:

As authorized by We Advocate Thorough Environmental Review (W.A.T.E.R.), I have reviewed the August 2017 Final Environmental Impact Report (FEIR) prepared by Analytical Environmental Services for the Proposed Crystal Geyser Bottling Plant Project (Project) in Siskiyou County. My review has focused on Volume I, Section 3.1 - Master Responses, and Section 3.3 - Responses to Individual/Private Comments, particularly to Letter P28, my comment letter of February 16, 2017 on the DEIR. I have also reviewed various other sections of the FEIR including Volume II, Revised Section 4.11 (Transportation and Circulation) and Volume III, Revised Appendix U, the July 7, 2017 Traffic Impact Analysis (Traffic Report) prepared by Abrams Associates.

While a few comments raised in my February 16, 2017 letter have been addressed in the FEIR, other significant issues and concerns remain unaddressed and unresolved. This letter only focuses on those prior comments that were not properly addressed or mitigated by proposed actions that are now contained in the FEIR.

The FEIR and the Traffic Report for the Crystal Geyser Bottling Plant Project continue to be fatally flawed. Errors in methodology must be corrected to provide proper bases for analyses of the Project. Comments and conclusions throughout the documents are not supported by facts or by proper analyses. After correcting the flaws, significant impacts must then be disclosed and addressed by the development of appropriate and enforceable mitigation measures. Each of the following items requires correction followed by subsequent recirculation of a revised EIR for the Project.

1) Traffic Impacts in Winter Not Addressed

- a) Initial Comment P28-4 - The FEIR and the Traffic Report do not consider or properly evaluate project traffic impacts caused by snow and ice on roadway segments and intersections. As the Contract City Traffic Engineer for the City of Big Bear Lake in Southern California and in accordance with City Policy, all traffic impact studies for proposed development projects must analyze both summer and winter roadway

conditions. To account for winter conditions, the background traffic volumes are typically increased by 15% and the traffic flow rates are decreased by 10%.

- b) FEIR Response – The FEIR Response totally missed the need to analyze summer and winter conditions by responding “It should be noted that the City of Big Bear Lake likely experiences more traffic in the winter due to increased tourism associated with the ski resorts in the City. There are no ski resorts in the City of Mt. Shasta.”
- c) Necessary Further Action - While there are ski resorts near Mt. Shasta, minor adjustments in traffic volumes and in traffic flow rates are needed for a proper analysis of winter driving conditions. Heavy trucks require greater braking distances and their impacts are much greater than passenger vehicles. To properly analyze the proposed Crystal Geyser Bottling Plant Project during winter conditions, adjustments similar to those mandated in the City of Big Bear Lake must be made, evaluated, and mitigated in a separate scenario in the Traffic Report and the DEIR.

2) Truck Traffic Access Driveway Geometry Not Evaluated

- a) Initial Comment P28-5 – Critical information including stopping sight distance for vehicles entering and exiting the driveway has not been provided, verified, or analyzed for the prevailing speeds on Mt. Shasta Boulevard. With all truck traffic to and from the north, there is a need for the widening of the Mt. Shasta Boulevard roadway to install a southbound left turn lane so that trucks do not block the single southbound through traffic lane while waiting for northbound traffic to pass before entering the driveway. The truck traffic impacts on the existing Class 2 Bicycle Lanes must also be evaluated.
- b) FEIR Response – The FEIR indicates “...Project site entrances were reviewed for safety and it was determined they both have adequate sight distance according to Caltrans standards. The evaluation of sight distance was based on the stopping sight distance and the prevailing speeds on Mt. Shasta Boulevard.”
- c) Necessary Further Action – No collision data, field measurements, or calculations have been provided to support the claims put forth in the FEIR response – Is it safe? What is the length of sight distance provided? What are the prevailing speeds? Do the conditions meet or exceed Caltrans standards? The additional information is required to determine if proper stopping sight distance is provided or will be provided. Requiring all trucks to stop and wait in a through lane for opposing vehicles to clear before turning left is not a safe practice.

3) Urban Traffic Signal Warrant Sheets Incorrectly Used

- a) Initial Comment P28-7 - The DEIR indicated no traffic signal warrants are met at any of the five study intersections, but the Traffic Report did not provide any of the required analysis (warrant sheets) or evidence to support these conclusions.
- b) FEIR Response – Traffic signal warrant sheets have been added to Revised Appendix U.
- c) Necessary Further Action – While traffic signal warrant sheets have been added to Revised Appendix U, the wrong warrant sheets have been completed. Depending on the prevailing speeds and other conditions, two different sets of warrant sheets are provided, and the analyst must pick the proper set. The numeric values are lower for conditions involving high speeds over 40 MPH as well as for rural conditions involving communities with populations under 10,000. Instead of using the correct values, the warrant sheets in the Appendix use higher numeric values that are only applicable to urban locations. Without a proper analysis including completion of the traffic signal warrant sheets applicable to rural locations, the FEIR and the Traffic Report cannot conclude that none of the traffic signal criteria are met at the five study intersections.

4) Spring Hill Drive/Mt. Shasta Boulevard/I-5 Ramps – Collisions Not Studied

- a) Initial Comment P28-8 - The Traffic Report and the DEIR have not properly evaluated traffic safety at the intersection of Spring Hill Drive/Mt. Shasta Boulevard/I-5 Ramps and have failed to consider the impacts of Project truck traffic at this intersection. The City of Mt. Shasta also has indicated in their February 13, 2017 letter that the safety assessment in the DEIR of this intersection "... is insufficient and does not properly consider the safety hazard of southbound vehicles exiting Interstate 5."
- b) FEIR Response – No direct response to this comment was provided and no additional studies or evaluations were conducted. The FEIR states it is not "anticipated" that the trucks will use Spring Hill Road but there are no limitations or restrictions that preclude its use.
- c) Necessary Further Action - The Traffic Report did not review reported traffic collisions but it concluded, without any data or analysis, that the intersection was and is safe. To the contrary, Google Earth driver's eye photography shows lengthy dual tire locked wheel skids approaching the intersection. Additional study and the development of necessary mitigation measures at this location are required.

5) Spring Hill Drive/Mt. Shasta Boulevard/I-5 Ramps – Design Speed Too Low

- a) Initial Comment P28-8 - Mt. Shasta Boulevard is an extension of the southbound I-5 Freeway which has a posted 65 MPH speed limit. The I-5 off-ramp has a posted 50 MPH advisory speed when the ramp leaves the I-5 Freeway mainline about 2,000 feet north of Spring Hill Drive. On both sides of Spring Hill Drive, the Mt. Shasta Boulevard roadway also has a slight downgrade from north to south which increases the distance required for stopping even further. Speeds on Mt. Shasta Boulevard near Spring Hill Drive of at least 60 MPH must be evaluated since design speeds are at least 10 MPH higher than posted speeds.
- b) FEIR Response – The commentor provides no evidence to support the assertion that the design speed (the 85th percentile speed) is 10 MPH higher than the posted speed limit.
- c) Necessary Further Action – The design speed is NOT the same as the 85th percentile speed that is used to establish posted speed limits. According to Pages 2-55 to 2-57 of A Policy on Geometric Design of Highways and Streets 2011 Edition: “The selected design speed should be a high-percentile value in the speed distribution curve (i.e., inclusive of nearly all the desired speeds of drivers.) It is desirable that the running speed of a large proportion of drivers be lower than the design speed.... Posted speed limits, as a matter of policy, are not the highest speeds that might be used by drivers. Instead, such limits are usually set to approximate the 85th percentile speed of traffic as determined by measuring the speeds of a sizeable sample of vehicles.”

The speed of 60 MPH is appropriate for determining the adequacy of the improvements required at this intersection. Table 9-8 on Page 9-41 indicates that intersection sight distance of 575 feet must be used for a design speed of 60 MPH. By assuming design speeds of only 45 or 55 MPH, the DEIR has incorrectly assumed that only 430 or 530 feet of stopping sight distance is required, less than AASHTO requires. Measures must be implemented to either increase the stopping sight distance to at least 575 feet or to warn approaching motorists of the intersection ahead.

6) Bicycle and Pedestrian Impacts Wrongfully Dismissed Without Study

- a) Initial Comment P28-11 - There are frequent pedestrian and bicycle crossings of Mt. Shasta Boulevard at Mt. Shasta City Park (at Ski Village and Nixon intersections) as well as Class 2 bicycle lanes at all times of the year. While the Project could certainly create significant bicycle and pedestrian impacts, none are identified, analyzed, or mitigated.

W.A.T.E.R.

**Crystal Geyser Bottling Plant DEIR – Transportation/Circulation Comments
September 14, 2017**

- b) FEIR Response – “To justify the installation of marked crosswalks at uncontrolled intersections, the volume of pedestrians would need to be high enough so that motorists would anticipate the possibility of pedestrian crossings occurring there... there is no evidence that there are significant existing safety issues in the area.”
- c) Necessary Further Action – The enclosed photos show southbound Mt. Shasta Boulevard from the I-5 Freeway to Mt. Shasta City Park. These photos show the existing bicycle lane and the roadway curvature. A pedestrian crossing warning sign is posted for approaching motorists but the effectiveness of this sign alone is not known. No consideration has been given to the safety of pedestrians and bicyclists with increased Project truck traffic. No data regarding pedestrian volumes, bicycle volumes, and collision histories has been provided. Without any data or analyses, the FEIR concludes there will be no impacts associated with the additional truck traffic generated by the proposed project. Data for existing conditions plus further analyses of conditions with Project truck traffic is required to support the conclusion there will be no impacts on pedestrian and bicycle traffic and that no mitigation measures are needed.

7) Mt. Shasta Boulevard/Spring Hill Road/I5 Interchange – Improvements

- a) Initial Comment P28-12 – Page 4-10 states “There is need for improvement of this intersection and its relation to the North Mt. Shasta Boulevard interchange with Interstate 5. The current intersection will not be suitable to handle increased traffic related to the development of the Spring Hill Specific Plan Area.”
- b) FEIR Response – “As discussed in more detail in Responses to Comments A1-1 and A4-6, development of the Spring Hill Specific Plan Area is not reasonably foreseeable and thus has not been considered in cumulative traffic projections.”
- c) Necessary Further Action – Brush clearing has occurred in anticipation of further Spring Hill development. Comment A1-1 from Caltrans suggested that the County and the City “...may want to discuss whether this project should agree to enter into an agreement with the City to contribute toward future improvements to the affected intersection.” Referenced Comment A4-6 discusses the area water supply and has nothing whatsoever to do with the interchange. The portion of the response indicating that “...development of the Spring Hill Specific Plan Area is not reasonably foreseeable” is not supported by any of the materials presented in the EIR.

As indicated in my February 167, 2017 letter and as supported by Caltrans in Comment Letter A1, the Crystal Geyser Bottling Plant must be required

W.A.T.E.R.

**Crystal Geyser Bottling Plant DEIR – Transportation/Circulation Comments
September 14, 2017**

to pay its “fair share” of traffic improvements at the Mt. Shasta
Boulevard/Spring Hill Road/I5 Interchange.

Numerous errors continue throughout the FEIR and in the Traffic Report for the
Crystal Geyser Bottling Plant. Each of these must be corrected to provide the
bases for a proper analysis of the Project impacts and the development of
enforceable mitigation measures. From my review of these documents, the
Project will create significant traffic impacts that have not been properly
disclosed, analyzed or mitigated through alternatives and/or traffic improvements.
The errors identified in this letter require that each of these issues be reanalyzed
and reevaluated through additional study in a revised and recirculated DEIR and
Traffic Report.

If you should have any questions regarding these findings, please contact me at
your convenience.

Respectfully submitted,

Tom Brohard and Associates



Tom Brohard, PE
Principal



Enclosures

Mt. Shasta Boulevard Photos – September 14, 2017
Comment Letter P28

**W.A.T.E.R.
Crystal Geyser Bottling Plant DEIR – Transportation/Circulation Comments
September 14, 2017**



Southbound Mt. Shasta Boulevard Just South of I-5 at Beginning of Bike Lane

**W.A.T.E.R.
Crystal Geyser Bottling Plant DEIR – Transportation/Circulation Comments
September 14, 2017**



Southbound Mt. Shasta Boulevard North of Ski Village Drive - City Park

**W.A.T.E.R.
Crystal Geyser Bottling Plant DEIR – Transportation/Circulation Comments
September 14, 2017**



Southbound Mt. Shasta Boulevard Approaching Ski Village Drive – City Park

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February 16, 2017

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P.O. Box 873
Mt. Shasta, California 96067

SUBJECT: Review of Draft Environmental Impact Report for the Proposed Crystal Geyser Bottling Plant Project in Siskiyou County - Transportation and Traffic Comments

Dear Sir or Madam:

As authorized by We Advocate Thorough Environmental Review (W.A.T.E.R.), I have reviewed the January 2017 Draft Environmental Impact Report (DEIR) prepared by Analytical Environmental Services for the Proposed Crystal Geyser Bottling Plant Project (Project) in Siskiyou County. My review has focused on Section 4.11 of the DEIR, Transportation and Circulation. I have also reviewed various other sections of the DEIR including Section 3.0 (Project Description) and Appendix U, the November 5, 2016 Transportation Impact Analysis (Traffic Report) prepared by Abrams Associates.

Education and Experience

Since receiving a Bachelor of Science in Engineering from Duke University in Durham, North Carolina in 1969, I have gained over 45 years of professional engineering experience. I am licensed as a Professional Civil Engineer both in California and Hawaii and as a Professional Traffic Engineer in California. I formed Tom Brohard and Associates in 2000 and now serve as the City Traffic Engineer for the City of Indio and as Consulting Transportation Engineer for the Cities of Big Bear Lake and San Fernando. I have extensive experience in traffic engineering and transportation planning. During my career in both the public and private sectors, I have reviewed numerous environmental documents and traffic studies for various projects. Several recent assignments are highlighted in the enclosed resume.

DEIR and Traffic Report Are Fatally Flawed

As detailed throughout this letter, the DEIR and the Traffic Report for the Crystal Geyser Bottling Plant Project are fatally flawed. Numerous conflicts and inconsistencies between the DEIR and the Traffic Report exist. Many errors in methodology must be corrected to provide proper bases for analyses of the Project. Comments and conclusions throughout the documents are not supported by facts or by proper analyses. After correcting the flaws, significant impacts must then be disclosed and addressed by the development of appropriate and enforceable mitigation measures. Each of the following items requires correction followed by subsequent recirculation of the DEIR for the Project.

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W.A.T.E.R.

**Crystal Geyser Bottling Plant DEIR – Transportation/Circulation Comments
February 16, 2017**

- 1) Truck Trip Generation - The 100 daily truck trips shown in Table 4.11-4 of the DEIR do not come from any forecasts of truck trips published by ITE. For General Light Industrial uses, Trip Generation Manual, 9th Edition provides vehicle trip rates based on the number of employees and the square footage of the building but it does not provide truck trip rates for the General Light Industrial category. The DEIR must provide source data to support the assumption of 100 daily truck trips as well as a breakdown into two-axle, three-axle, four-axle, and five-axle truck forecasts.

Truck trips have not been properly converted to passenger car equivalent (PCE) trips in the analyses of traffic impacts. The source footnote to Table 4.11-4 indicating "Truck trips were converted to passenger car equivalents by multiplying them by a factor of 1.5 - ITE 2012" refers to the Trip Generation Manual, 9th Edition. This ITE publication does **NOT** contain passenger car equivalent factors for Land Use 110, General Light Industrial, or for any other land use. The DEIR must disclose the source for converting truck trips to passenger car equivalents and then properly analyze them.

The PCE factor of 1.5 shown in Table 4.11-4 for all project truck trips only represents two-axle (single unit) trucks. Other typical factors include a PCE of 2.0 for a three-axle (single unit) truck, a PCE of 2.5 for a four-axle combination truck (cab and trailer), and a PCE of at least 3.0 for a five-axle truck (cab and trailer). The DEIR must forecast the number of trucks by axle and calculate the significantly higher number of passenger car equivalents to correctly analyze potentially significant traffic impacts of the Project.

- 2) Passenger Car Equivalents – Truck trips made by tractors pulling 53-foot long trailers loaded with water are heavy five-axle trucks and must be factored up using at least 3.0 passenger car equivalents to properly analyze the Project traffic impacts. Page 3-11 of the DEIR identifies 11 truck bays and 17 truck parking spaces for five-axle trucks, and none for two-axle light duty trucks. Pictures of trucks at the loading docks at the existing Crystal Geyser plant in Olancha disclose five-axle heavy duty trucks with each equivalent to at least 3.0 passenger cars, not two-axle single unit trucks equivalent to 1.5 passenger cars (see enclosure).

In other parts of the DEIR, Page 4.10-26 in the Noise and Vibration Section of the DEIR states "The Proposed Project would generate 100 daily heavy duty truck trips." Page 4.10-27 then states "The Proposed Project is expected to generate 50 heavy truck loads per day (100 trips), with approximately 15 semi-trailer truck movements during the peak hour..." These statements, together with those in the Traffic Report and those in Chapter 4.11 regarding Transportation and Circulation, indicate that the Project will generate 100 heavy truck trips (five-axle trucks) per day.

P28-2

**W.A.T.E.R.
Crystal Geyser Bottling Plant DEIR – Transportation/Circulation Comments
February 16, 2017**

Many agencies in California require the use of higher PCE factors. For example, enclosed Appendix C to the San Bernardino County CMP, 2005 Update ("Guidelines for CMP Traffic Impact Analysis Reports in San Bernardino County") which is used by all agencies in San Bernardino County requires a PCE of 3.0 for all heavy-duty trucks that have 4 axles or more.

By using a PCE of only 1.5, the passenger car equivalent volumes of the large trucks associated with the Project have been underestimated by at least 100 percent. Increasing the PCE to 3.0 is required to properly analyze the equivalent passenger car traffic volume forecasts for the Project so that all significant traffic impacts can be properly identified and analyzed, enabling feasible mitigation measures to then be developed.

- 3) Trip Distribution – Employee trips are forecast to arrive and depart from all directions but truck trips are forecast to only arrive from and depart to the north. While the DEIR indicates that signing will be provided to direct truck traffic accordingly, some trucks will likely end up on the streets through downtown and in residential neighborhoods unless other measures such as weight limits and truck routes are implemented, together with dedicated enforcement against trucks found off the designated routes. If a truck gets lost, there are no readily available areas to turn around.

Figures must be provided to show the percentages and corresponding number of project trips associated with employees, with trucks, and with passenger car equivalents. Volumes must flow from intersection to intersection. Graphics illustrating the traffic volumes for daily and peak hour trips are required by the December 2002 Guide to the Preparation of Traffic Impact Studies published by Caltrans. The DEIR must provide figures demonstrating and documenting these volumes in the traffic analysis.

- 4) Traffic Impacts in Winter – The DEIR and the Traffic Report do not consider or properly evaluate project traffic impacts caused by snow and ice on roadway segments and intersections. As the Contract City Traffic Engineer for the City of Big Bear Lake in Southern California and in accordance with City Policy, all traffic impact studies for proposed development projects must analyze both summer and winter roadway conditions. To account for winter conditions, the background traffic volumes are typically increased by 15% and the traffic flow rates are decreased by 10%. To properly analyze the proposed Crystal Geyser Bottling Plant Project during winter conditions, these or similar adjustments must be made, evaluated, and mitigated in a separate scenario in the Traffic Report and the DEIR.
- 5) Truck Traffic Access Driveway – Page 4.11-17 of the DEIR indicates that all truck traffic will be required to use the Mt. Shasta Boulevard driveway

P28-2
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P28-3

P28-4

P28-5

W.A.T.E.R.

**Crystal Geyser Bottling Plant DEIR – Transportation/Circulation Comments
February 16, 2017**

according to the Traffic Report. Installation of a guide sign alone will not insure that this will actually occur.

The DEIR states the Traffic Report has evaluated conditions along the truck access driveway and there will be no issues or problems. However, the Traffic Report does not contain any analysis whatsoever of the Project truck driveway, CGWC Drive. The roadway has several horizontal curves as well as an incline. Empty trucks have difficulty gaining traction in snow and ice conditions without the weight of their loads, causing these trucks to get stuck. The suitability of this driveway to provide a suitable, accessible secondary emergency access has not been evaluated.

Critical information including stopping sight distance for vehicles entering and exiting the driveway has not been provided, verified, or analyzed for the prevailing speeds on Mt. Shasta Boulevard. With all truck traffic to and from the north, there is a need for the widening of the Mt. Shasta Boulevard roadway to install a southbound left turn lane so that trucks do not block the single southbound through traffic lane while waiting for northbound traffic to pass before entering the driveway. The truck traffic impacts on the existing Class 2 Bicycle Lanes must also be evaluated.

Table 5 on Page 13 of the Traffic Report indicates the Existing and the Existing plus Project analyses at Intersection #4, Mt. Shasta Boulevard at the Project Truck Access also known as CGWC Drive, have the same delay values at the Project Truck driveway. In the AM peak hour, the LOS is shown as "B" and the LOS is "A" when project traffic is added. Adding project trips cannot improve the LOS. Table 7 on Page 18 of the Traffic Report contains the same types of errors.

- 6) Employee Access – Vehicle access for employees is planned to occur through the driveway on Ski Village Drive at the Project. No analysis has been provided of this location where stopping sight distance of only about 300 feet to the west exists or of the possible need for left and right turn lanes. In addition, the stopping sight distance for southbound traffic on Mt. Shasta Boulevard at Ski Village Drive, about 400 feet, must also be evaluated for stopping sight distance and the possible need for left and right turn lanes since a number of Project employees will use this intersection as well.
- 7) Traffic Signal Warrant Sheets – Page 4.11-17 of the DEIR indicates no traffic signal warrants are met at any of the five study intersections. However, the Traffic Report does not provide any of the required analysis (warrant sheets) or evidence to support these conclusions. Without a complete analysis including the completion of traffic signal warrant sheets, the DEIR and the Traffic Report cannot conclude that none of the traffic signal criteria are met.

P28-5
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P28-6

P28-7

W.A.T.E.R.

**Crystal Geyser Bottling Plant DEIR – Transportation/Circulation Comments
February 16, 2017**

- 8) Spring Hill Drive/Mt. Shasta Boulevard/I-5 Ramps – Page 4.11-17 of the DEIR indicates that the intersection meets requirements for minimum stopping sight distance and is “not considered hazardous” for speeds of 45 or 55 MPH. The Traffic Report did not measure or document prevailing traffic speeds at this location. Without actual speed measurements, the DEIR incorrectly assumes that speeds of 45 or 55 MPH are the appropriate speeds to be evaluated.

Mt. Shasta Boulevard is an extension of the southbound I-5 Freeway which has a posted 65 MPH speed limit. The I-5 off-ramp has a posted 50 MPH advisory speed when the ramp leaves the I-5 Freeway mainline about 2,000 feet north of Spring Hill Drive. On both sides of Spring Hill Drive, the Mt. Shasta Boulevard roadway also has a slight downgrade from north to south which increases the distance required for stopping even further. Speeds on Mt. Shasta Drive near Spring Hill Drive of at least 60 MPH must be evaluated since design speeds are at least 10 MPH higher than posted speeds.

According to A Policy on Geometric Design of Highways and Streets published by the American Association of State Highway and Transportation Officials (AASHTO), Table 9-8 on Page 9-41 indicates that intersection sight distance of 575 feet must be used for a design speed of 60 MPH. By assuming design speeds of only 45 or 55 MPH, the DEIR has incorrectly assumed that only 430 or 530 feet of stopping sight distance is required, less than the requirements of AASHTO for an appropriate design speed.

For a proper evaluation of traffic safety at the intersection of Spring Hill Drive/Mt. Shasta Boulevard/I-5 Ramps, the prior collision history of the intersection must be evaluated. The Traffic Report did not review reported traffic collisions but it concluded, without any data or analysis, that the intersection is safe. To the contrary, Google Earth driver's eye photography shows lengthy dual tire locked wheel skids approaching the intersection (see enclose photo).

Recommendations are made in the Traffic Report to trim landscaping and to relocate a guide sign for better stopping sight distance, but those are not carried forward into the DEIR. Trimming landscaping is only temporary in nature and must be periodically repeated to maintain appropriate stopping sight distance. Instead, it would be much more effective to physically remove the interfering landscaping.

The Traffic Report and the DEIR have not properly evaluated traffic safety at the intersection of Spring Hill Drive/Mt. Shasta Boulevard/I-5 Ramps and have failed to consider the impacts of Project truck traffic at this intersection. The City of Mt. Shasta also has indicated in their February 13, 2017 letter that the safety assessment in the DEIR of this intersection “... is insufficient and does not properly consider the safety hazard of southbound vehicles exiting

P28-8

**W.A.T.E.R.
Crystal Geyser Bottling Plant DEIR – Transportation/Circulation Comments
February 16, 2017**

Interstate 5." Additional study and the development of necessary mitigation measures at this location are required.

P28-8
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9) Errors in Calculations and in Tables – Various tables and calculations do not match up internally within the Traffic Report itself or between the Traffic Report and the DEIR as follows:

- a. No calculations appear in the Traffic Report Appendix for Intersection #5 (Everitt Memorial Highway and Ski Village Drive) for Existing conditions in the AM peak hour.
- b. Existing AM plus Project calculations in the Appendix for Intersection #4 (Mt. Shasta Boulevard at the Project truck access) do not match up with Table 5 in the Traffic Report.
- c. Existing PM plus Project calculations in the Appendix for Intersection #4 (Mt. Shasta Boulevard at the Project truck access) do not match up with Table 5 in the Traffic Report.
- d. Cumulative AM plus Project calculations in the Appendix for Intersection #4 (Mt. Shasta Boulevard at the Project truck access) do not match up with Table 7 in the Traffic Report.
- e. Cumulative PM plus Project calculations in the Appendix for Intersection #4 (Mt. Shasta Boulevard at the Project truck access) do not match up with Table 7 in the Traffic Report.

P28-9

10) Traffic Control Plans – Page 4.11-13 of the DEIR notes that construction of pipelines could create temporary traffic impacts and that the preparation of work area traffic control plans would mitigate these impacts. Providing construction warning signs and other devices that are typically shown on Work Area Traffic Control Plans during pipeline construction cannot and do not mitigate traffic impacts. These impacts could likely be significant when traffic must be detoured off roadways that are under construction. Further, extreme care must be taken to avoid rerouting traffic through intersections and roadway segments that are not able to accommodate the diverted trips at LOS "C" or better in accordance with the City's requirements.

P28-10

11) Impacts and Mitigation Measures – Page 23 of the Traffic Report lists several potential impacts that are not analyzed or mitigated as follows:

- a. TR-1 Bicycle and Pedestrian Impacts – While the Project could certainly create significant bicycle and pedestrian impacts, none are identified, analyzed, or mitigated. While there are pedestrian and bicycle crossings of Mt. Shasta Boulevard at Mt. Shasta City Park as

P28-11

W.A.T.E.R.

**Crystal Geyser Bottling Plant DEIR – Transportation/Circulation Comments
February 16, 2017**

well as Class 2 bicycle lanes, no analyses of impacts on pedestrian and bicycle traffic has been conducted at this or any other locations.

- b. TR-3 Construction Impacts – This measure discusses impacts of construction of the building housing the bottling plant which already exists. There is no discussion of impacts associated with pipelines which are a part of the Project that then appear in the Draft EIR with mitigation measures.

12) Forgotten Mitigation Measures – Important future intersection improvements identified in the Circulation Element of the City of Mt. Shasta General Plan as well as the need to mitigate damage caused by heavy Project truck trips have been omitted from discussion in the DEIR and the Traffic Report as follows:

- a. Mt. Shasta Boulevard/Spring Hill Road/I5 Interchange – Page 4-10 states "There is need for improvement of this intersection and its relation to the North Mt. Shasta Boulevard interchange with Interstate 5. The current intersection will not be suitable to handle increased traffic related to the development of the Spring Hill Specific Plan Area."
- b. Ski Village Drive/Mt. Shasta Boulevard Intersection – Page 4-10 states "Providing for a direct connection with Mt. Shasta Boulevard will improve the efficiency of this intersection."

Certainly, the Crystal Geyser Bottling Plant, with its traffic forecasts of trips through these locations, must be required to pay its "fair share" of traffic improvements at these locations.

In addition, the heavy fully loaded five-axle truck trips to and from the Project will likely cause damage to City streets. An assessment of the streets and roads that will be used by Project truck trips must be made before the Crystal Geyser Bottling Plant begins operating. Periodic monitoring of these routes must then be made to identify and assess any damage caused by Crystal Geyser truck traffic, and the Project must be conditioned to repair damage caused by its trucks. Damage to City streets caused by large, heavy vehicles traveling to and from the Project as also requested by the City of Mt. Shasta in their February 13, 2017 letter must be analyzed further.

Numerous errors throughout the DEIR and in the Traffic Report for the Crystal Geyser Bottling Plant must be corrected to provide the bases for a proper analysis of the Project impacts and the development of enforceable mitigation measures. From my review of these documents, the Project will create significant traffic impacts that have not been properly disclosed, analyzed or mitigated through alternatives and/or traffic improvements. The errors identified in this

P28-11
(Cont.)

P28-12

**W.A.T.E.R.
Crystal Geyser Bottling Plant DEIR – Transportation/Circulation Comments
February 16, 2017**

letter require that each of these issues be reanalyzed and reevaluated through additional study in a revised and recirculated DEIR and Traffic Report.

If you should have any questions regarding these findings, please contact me at your convenience.

Respectfully submitted,

Tom Brohard and Associates



Tom Brohard, PE
Principal

Enclosures



P28-12
(Cont.)

Tom Brohard, PE

Licenses: 1975 / Professional Engineer / California – Civil, No. 24577
1977 / Professional Engineer / California – Traffic, No. 724
2006 / Professional Engineer / Hawaii – Civil, No. 12321

Education: 1969 / BSE / Civil Engineering / Duke University

Experience: 45+ Years

Memberships: 1977 / Institute of Transportation Engineers – Fellow, Life
1978 / Orange County Traffic Engineers Council - Chair 1982-1983
1981 / American Public Works Association – Life Member

Tom is a recognized expert in the field of traffic engineering and transportation planning. His background also includes responsibility for leading and managing the delivery of various contract services to numerous cities in Southern California.

Tom has extensive experience in providing transportation planning and traffic engineering services to public agencies. Since May 2005, he has served as Consulting City Traffic Engineer for the City of Indio. He also currently provides “on call” Traffic and Transportation Engineer services to the Cities of Big Bear Lake and San Fernando. In addition to conducting traffic engineering investigations for Los Angeles County from 1972 to 1978, he has previously served as City Traffic Engineer in the following communities:

- Bellflower..... 1997 - 1998
- Bell Gardens..... 1982 - 1995
- Huntington Beach..... 1998 - 2004
- Lawndale..... 1973 - 1978
- Los Alamitos..... 1981 - 1982
- Oceanside..... 1981 - 1982
- Paramount..... 1982 - 1988
- Rancho Palos Verdes..... 1973 - 1978
- Rolling Hills..... 1973 - 1978, 1985 - 1993
- Rolling Hills Estates..... 1973 - 1978, 1984 - 1991
- San Marcos..... 1981
- Santa Ana..... 1978 - 1981
- Westlake Village..... 1983 - 1994

During these assignments, Tom has supervised City staff and directed other consultants including traffic engineers and transportation planners, traffic signal and street lighting personnel, and signing, striping, and marking crews. He has secured over \$10 million in grant funding for various improvements. He has managed and directed many traffic and transportation studies and projects. While serving these communities, he has personally conducted investigations of hundreds of citizen requests for various traffic control devices. Tom has also successfully presented numerous engineering reports at City Council, Planning Commission, and Traffic Commission meetings in these and other municipalities.

Tom Brohard and Associates

In his service to the City of Indio since May 2005, Tom has accomplished the following:

- ❖ Oversaw preparation and adoption of the 2008 Circulation Element Update of the General Plan including development of Year 2035 buildout traffic volumes, revised and simplified arterial roadway cross sections, and reduction in acceptable Level of Service criteria under certain conditions.
- ❖ Oversaw preparation of fact sheets/design exceptions to reduce shoulder widths on Jackson Street and on Monroe Street over I-10 as well as justifications for protected-permissive left turn phasing at I-10 on-ramps, the first such installations in Caltrans District 8 in Riverside County; reviewed plans and provided assistance during construction of both \$2 million projects to install traffic signals and widen three of four ramps at these two interchanges under Caltrans encroachment permits.
- ❖ Reviewed traffic signal, signing, striping, and work area traffic control plans for the County's \$45 million I-10 Interchange Improvement Project at Jefferson Street.
- ❖ Reviewed traffic impact analyses for Project Study Reports evaluating different alternatives for buildout improvements of the I-10 Interchanges at Jefferson Street, Monroe Street, Jackson Street and Golf Center Parkway.
- ❖ Oversaw preparation of plans, specifications, and contract documents and provided construction assistance for over 50 traffic signal installations and modifications.
- ❖ Reviewed and approved over 1,200 work area traffic control plans as well as signing and striping plans for all City and developer funded roadway improvement projects.
- ❖ Oversaw preparation of a City wide traffic safety study of conditions at all schools.
- ❖ Obtained \$47,000 grant from the California Office of Traffic Safety and implemented the City's Traffic Collision Database System. Annually reviews "Top 25" collision locations and provides traffic engineering recommendations to reduce collisions.
- ❖ Prepared over 900 work orders directing City forces to install, modify, and/or remove traffic signs, pavement and curb markings, and roadway striping.
- ❖ Oversaw preparation of engineering and traffic surveys to establish enforceable speed limits on over 400 street segments.
- ❖ Reviewed and approved traffic impact studies for more than 35 major projects and special events including the annual Coachella and Stagecoach Music Festivals.
- ❖ Developed and implemented the City's Golf Cart Transportation Program.

Since forming Tom Brohard and Associates in 2000, Tom has reviewed many traffic impact reports and environmental documents for various development projects. He has provided expert witness services and also prepared traffic studies for public agencies and private sector clients.