



September 11, 2007

Ms. Sigrid Swedenborg  
Sonoma County Permit and Resource Management Department  
2550 Ventura Avenue  
Santa Rosa, CA 95403

Subject: Delectus Winery – Mitigated Negative Declaration

Dear Ms. Swedenborg:

TJKM Transportation Consultants has been retained by concerned neighbors and residents of Knights Valley to perform a peer review of the transportation analysis conducted for the Delectus Winery. This review includes the studies by W-Trans as well as assertions by Common Ground. In addition to reviewing the traffic studies and materials, I also made a trip along the entire route from Route 128 to SR 29 near Middletown and return on September 4, 2007.

This letter is organized by our numbered comments. We can summarize the comments by saying that traffic impacts due to the project are not successfully mitigated and remain potentially significant traffic impacts.

#### Comments

- I. The American Association of State Highway and Transportation Officials (AASHTO) references used by W-Trans are neither quoted correctly nor completely applied. Their safe stopping sight distance standards are not correct. The Caltrans and AASHTO safe stopping sight distance for a 20 mph design speed is 125 feet, not 95 feet. Similar differences exist for stopping sight distance for 15 mph, but AASHTO and Caltrans standards do not go that low. Using the AASHTO and Caltrans formula, the value at 15 mph would be 75 feet, not 65 feet. Considering the next paragraph, these are not insignificant differences.

AASHTO and Caltrans minimum safe stopping sight distance standards assume an almost 18-foot road width with 2 feet for shoulders on each side. Safe stopping sight distance criteria for various speeds are based on there being sufficient road width for two passing vehicles at the sight obstruction. Safe stopping sight distance is the required sight distance to perceive and then stop in time to avoid hitting a 6-inch high object in the driver's lane. That object is assumed to not be moving. On a road the width of Ida Clayton, approaching vehicles are in the same lane because the road is only 14 to 16 feet wide. A better measure would be adding the 20 mph stopping sight distance for *both vehicles*, because they both must stop in time to avoid a head on collision. The 125 feet needed for 20 mph would thus be doubled to 250 feet if two lanes were not available for the vehicles to pass by each other without colliding. Of course, this is far more sight distance than is available at all 21 corners where sight distance was measured. Mitigation is needed at all of these corners, either in the form of adding to the road width (including shoulders), removing the obstacles obscuring sight distance, adding a centerline stripe (the 15 mph advisory speed applies to all the blind corners by definition), or perhaps other, more high-tech types of strategies in lieu of physical reconstruction. Centerline striping alone would mitigate curves 2, 3, 6,

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7, 8, 10, 12, and 15 because the road is at least 18 feet wide at these locations. Curves numbered as 1, 4, 5, 9, 11, 13, 14, 16, 17, 18, 19, 20, and 21 are not wide enough to stripe, so they would need to be widened to at least 18 feet and then striped with a centerline, or have the sight obstruction eliminated otherwise.

The simple issue is that the needed sight distance is sensitive to whether there is sufficient room on the road to pass another vehicle coming from the opposite direction. At eight of the 21 curves, the road is 18 or more feet wide, and could be striped with a centerline. At thirteen of the curves, additional width is needed to reduce the sight distance needed to only 125 feet (20 mph design speed). Stopping sight distance is also increased on a downgrade, but this is balanced by a similar reduction on an upgrade. If the curves that need widening are reconstructed along with the striping changes as noted, then the project traffic impacts could be considered as mitigated, at least for Ida Clayton Road from the winery to Route 128 (but not north of the winery driveway – this would require more study). The fact that collisions have occurred on Ida Clayton Road involving vehicles from opposing directions clearly implies that the sight distance issues are valid. While these accidents may have occurred north of the Delectus Winery driveway on the whole, it must be remembered that traffic to and from the proposed project will arrive from both directions, not just Route 128. The road does become narrower and even more restricted in terms of sight distance north of the project, and this probably explains why the accidents are primarily to the north.

2. While we accept the W-Trans assumption of assigning all additional traffic to and from Route 128 so that a worst-case analysis can be made for impacts on that highway, it is more likely that some of the added traffic will travel between the winery and Middletown, including construction traffic and workers and the vineyard laborers. These additional trips will go around even sharper corners on a road that is even narrower than Ida Clayton Road is between the proposed winery and Route 128. Again, the addition of traffic to the road north of the winery is an unmitigated impact because it adds that traffic at severely deficient curves.
3. The W-Trans studies say that the daily traffic volumes on Ida Clayton Road are 125 vehicles, combined for both directions. What is missing is the classification of these vehicles. If there are few trucks on the road at present, the certain addition of truck traffic is an impact that has neither been analyzed nor evaluated. Trucks have a collision rate three to seven times higher than passenger vehicles. If the trucks for future winery operations, plus the trucks needed during construction of the winery facilities significantly increase the proportion of trucks on the road, this is a significant impact in terms of both safety as well as in future pavement deterioration. These potential impacts are not discussed or defined in the studies to date. The report does say that truck traffic should be limited to “very small trucks and vans, as Ida Clayton Road is not appropriate for larger trucks.”
4. The W-Trans traffic studies did not describe traffic impacts due to construction traffic for the winery. If construction adds truck traffic over a period of time, this should be discussed, because again, traffic is being added to a road with severely deficient curves.
5. In the March 28, 2006 W-Trans report, they state that “the low volumes on Ida Clayton Road allow for only a limited potential for two opposing vehicles to meet, and certainly the project would be unlikely to generate sufficient traffic for heavy vehicles

traveling to and from the site to be on the road simultaneously.” The total distance from Route 128 to the winery is approximately 18,000 feet along Ida Clayton Road. If there are 21 measured curves with deficient sight distance, and if one considers that the approach on each side of the curve requires 125 feet of stopping sight distance, then 21 curves at 250 feet each constitute almost 30 percent of the entire length of the road. At 150 vehicles daily, during the day each hour outside the peak hour could experience 7 to 8 vehicles (total of both directions). At an average speed of 15 mph, it takes about 13 to 14 minutes to travel between Route 128 and the winery, and vice versa. If there is an average of one vehicle every 7 to 8 minutes (60 minutes divided by 7 vehicles/hour), it is quite likely that opposing vehicles will meet each other during a typical non-peak hour, and of course, more so during the peak hours where you might expect 12 to 15 vehicles. If about 30 percent of the road is subject to inadequate sight distance, then the probability of two vehicles meeting at a blind curve is higher than you would think. Of course, if there is only an added truck trip every other day, approximately, their statement that two trucks meeting each other at a curve is unlikely is correct. However, a vehicle meeting a truck should be considered likely. In a trip taken to view the length of the road, I met two vehicles between the winery and Route 128 on the way up (and was passed by two), and three on the return trip, each at one of the blind corners. Each time this happened, there was a startle response, even when expecting the unexpected – an opposing vehicle. The significant impact, of course, is adding to an existing deficiency with both automobile and truck traffic. Mitigation, again, is needed in the form of added sight distance and road width at least at the blind corners, if not along the entire route.

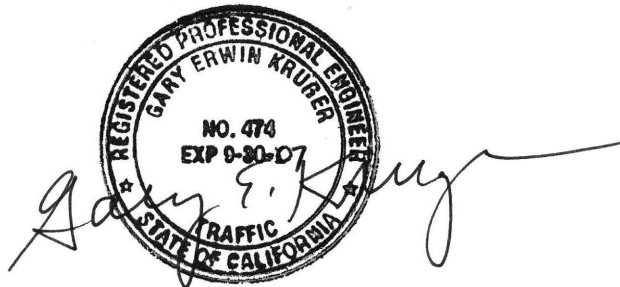
6. The argument by both W-Trans and Common Ground that the “posted speed limit of 15 mph” then allows the use of a 15 mph speed for safe stopping sight distance is not valid. In fact, the posted sign is an advisory speed plate that supplements a warning sign and has no direct enforcement value. Without some official action by the Sonoma County Board of Supervisors, the assumed speed limit on Ida Clayton Road is 55 miles per hour (CVC 22349) (b). This maximum speed limit may be reduced to as low as 25 mph on the basis of an engineering and traffic survey (CVC 22358). It can be further reduced to 20 or 15 mph (CVC 22358.3) for roads less than 25 feet wide, but again, only by official action by the Sonoma County Board of Supervisors. An advisory sign of 15 mph does not meet these requirements. The 25 mph approach speed should be assumed, excepting that I would concur that the 85<sup>th</sup> percentile speeds on this road are probably closer to 20 mph. It would seem that some formal posting of an official speed is required in addition to the 15 mph advisory speed on the proposed winding road sign. Finally, the comment from Michael B. Morrison of Common Ground that the average speed of 16 mph argues against assuming any approach speed higher than 15 mph is not valid. Traffic control and road design, when considering speed, should use the 85<sup>th</sup>, and sometimes even the 95<sup>th</sup> percentile speed as the basis for regulation, design, and also in the definition of potentially significant safety impacts due to additional traffic from the project, especially truck traffic.
7. While trip generation estimates were made using the Sonoma County Winery Trip Generation form, there are continuing questions regarding the number of trucks that will need to access the winery, particularly in the early years while the new vines are not productive. In other words, at the outset it is likely that all grapes and juice will need to be imported from elsewhere for some years, and this means that additional truck traffic will be using the road. It is estimated that the winery could import up to 225 tons of grapes for the first several years at 5 tons per truck, assuming the winery

uses its full authorized capacity of 15,000 cases/year. At this level, truck trips would be far higher than described in the supporting documentation, say over 40 truck trips for importing grapes and juice alone. Yet, the Winery Trip Generation form shows only three truckloads per year in September and October. While my estimates are speculative, there is no clear calculation for how many tons will be imported – especially before the vines on site start producing. There is a need for the traffic study to address these potential scenarios, especially in the early years of the winery operation.

In conclusion, there are several areas of potentially significant impacts that are not addressed in the traffic study, and inappropriate criteria were used in defining potential impacts, primarily in the form of the safe approach speed for approaching vehicles on a one-lane road. It is the width of Ida Clayton Road coupled with blind curves that creates the primary problem, the added hazard for head on collisions. The fact that truck traffic will be increased adds significantly to this hazard.

I have not commented on several other areas of potential concern with the traffic study and recommendations, believing that the issues mentioned above show that a mitigated negative declaration is not appropriate at this stage of planning for the project.

Very truly yours,



Gary E. Kruger, T.E.  
Branch Manager, Santa Rosa