

# DEVELOPMENT SERVICES DEPARTMENT

COUNTY OF EL DORADO

<http://www.edcgov.us/devservices>



**PLACERVILLE OFFICE:**  
2850 FAIRLANE COURT PLACERVILLE, CA 95667  
BUILDING (530) 621-5315 / (530) 622-1708 FAX  
[biddept@edcgov.us](mailto:biddept@edcgov.us)  
PLANNING (530) 621-5355 / (530) 642-0508 FAX  
[planning@edcgov.us](mailto:planning@edcgov.us)

**LAKE TAHOE OFFICE:**  
3388 LAKE TAHOE BLVD. SUITE 302  
SOUTH LAKE TAHOE, CA 96150  
(530) 573-3330  
(530) 542-9082 FAX  
[tahobuild@edcgov.us](mailto:tahobuild@edcgov.us)

October 2, 2012

Norm Rowett  
Area Planning Advisory Committee (APAC)  
1021 Harvard Way  
El Dorado Hills, CA 95762

**RE: Response to APAC Letter of February 20, 2012  
Green Valley Center Project  
File Nos. A11-0003/Z11-0004/PD11-0002/P11-0003**

Dear Mr. Rowett:

I am writing in response to APAC's letter indicated above. I've coordinated with the Department of Transportation (DOT) for assistance in analyzing and responding to each item of concern identified in your letter. The attached memorandum from DOT details the response.

Staff believes that each item has been adequately addressed. If you should have further specific traffic and transportation concerns, please direct any questions to Eileen Crawford or Natalie Porter of DOT. Eileen Crawford can be reached directly at 530-621-6077 or email at [eileen.crawford@edcgov.us](mailto:eileen.crawford@edcgov.us). Natalie Porter can be reached at 530-621-5442 and email at [natalie.porter@edcgov.us](mailto:natalie.porter@edcgov.us). Should you have project related questions, you may contact me at 530-621-5363 or email at [Rommel.Pabalinas@edcgov.us](mailto:Rommel.Pabalinas@edcgov.us).

Cordially,

  
Mel Pabalinas, Senior Planner  
Planning Services

Attachment: DOT Memorandum dated October 1, 2012

Cc. Department of Transportation (DOT)  
George Carpenter  
Project File

EXHIBIT R



**COUNTY OF EL DORADO  
DEPARTMENT OF TRANSPORTATION  
INTERDEPARTMENT MEMORANDUM**



Date: October 1, 2012

To: Mel Pabalinas, Project Planner, Development Services Department

From: Eileen Crawford, P.E., Department of Transportation *E. Crawford*

**Subject: Area Planning Advisory Committee (APAC) Subcommittee Review of the Traffic Study for Francisco/Green Valley, Family Real Property LP/Winn Communities/RSC Engineering, Inc  
P11-0003, A11-0003, Z11-0003, & PD11-0003  
Response to APAC Comment Letter**

I have reviewed the APAC letter dated February 20, 2012 and have several comments and responses to their list of concerns. For ease of reference, I have repeated the APAC concerns and the Department of Transportation's (DOT) response.

1. *First, the Subcommittee found arithmetic errors in the Study; specifically Table 1. These inaccuracies put the veracity of the Study itself into question. The appendixes were not included with the study, making it very difficult to determine the accuracy of the study as a whole.*

**DOT Response:** Although there appear to be "arithmetic errors" in the trip generation table, these differences are only due to rounding (cannot have a half a trip). The actual number of trips studied by Kimley Horn and Associates (KHA) is the in/out volumes, which result in a higher number of trips and a more conservative result as it relates to the "total" trips volume. DOT did provide a copy of the appendixes on February 23, 2012 for APAC's review upon the request.

2. *In its cumulative projections, the study failed to include the traffic impacts of the following known development projects in the area: Grande Amis, Alto, La Canada and Dixon Ranch. Jointly and severally these developments will have major traffic impacts on the GV corridor.*

**DOT Response:** KHA conducted this traffic study according to County protocols and were directed to use the County's traffic model to arrive at cumulative volumes in which General Plan land uses and projections are assumed. The County traffic model includes build out of the various land uses in a manner consistent with the General Plan. Although the projects were not individually listed in the Traffic Impact Analysis (TIA), the projects were included in the study with the exception of Dixon Ranch. Dixon Ranch had not been submitted at the



time the scope of work was determined for the TIA, and therefore, was not considered a pending project at that time.

- 3. The Study peak hour traffic volumes for the study area were obtained from the county for the years 1998 and 2025<sup>6</sup>, and used to calculate five year growth rates. It then used these data for 2015 traffic conditions. This approach is flawed: the inherent projected growth rate of 2% completely ignores the housing boom on the western slopes between 2000 and 2005, which was approximately 9 percent.*

DOT Response: All on the ground traffic count data was obtained in 2005 or after. As such, the baseline intersection count data was collected after the 2000-2005 boom so the 9% growth between 2000 and 2005 was not a factor in the analysis. Consistent with County protocols, 2015 conditions study the worst case scenario of adding the growth assumed in the model or the addition of approved projects in the area. As an example of the general lack of growth in the project area during the time period following the "boom", the calculated annual growth rate determined between 2004 and 2010 at the intersection of El Dorado Hills and Francisco is 2%. Therefore, this analysis is correct and consistent with DOT's guidelines.

- 4. Traffic levels at the major intersections and the projection of traffic patterns from and through the Project are incorrect. A resident's traffic count taken on 1-10-2012 revealed a traffic count significantly more than that reported by the Project. The Subcommittee believes that the already deteriorated traffic level of service (LOS) at the Green Valley Road intersections of Silva Valley, Salmon Falls, and Francisco must not be made worst. Meaningful assessments must be completed using timely data: An updated traffic study must be completed using 2011 data to properly address the impacts.*

DOT Response: The Traffic Impact Study (TIS) is a required submittal at the time the application is submitted to the Planning Department and the project is deemed complete in accordance with the Subdivision Map Act § 66474.2. It is not uncommon for the TIS to be two-three years old by the time the application is brought before the Planning Commission or Board of Supervisors for approval. Please note that the process by which volumes were either counted in 2010 or used an assumed 2%/year growth rate is demonstrated as being appropriate pursuant to item #3. Therefore, this analysis is correct and consistent with DOT's guidelines.

- 5. The Study's recommendation that mitigations for existing LOS F conditions can be achieved by changing green light calibrations at the intersection at Salmon Falls/GV, (Table 9 indicates that the wait time could go from 83 to 49 by simply changing the lighting) is questionable. The Subcommittee believes this is not achievable without major capital improvements to road. The Subcommittee requests the County immediately test its ability to mitigate traffic impacts by changing the timing of the stop lights at these key intersections before approving any traffic plan for this Project. It should also share results with APAC and the public.*

DOT Response: To mitigate this impact, the average vehicle delay only needs to be reduced by 4 seconds (to the no-project conditions). The reallocation of signal green time is widely recognized as an effective and appropriate means by which to "mitigate" intersection operations resulting from a change in volumes. The software (Synchro) used to model these mitigated conditions is the same tool that the County routinely uses to determine signal timing parameters. Documentation of the mitigation's ability to achieve the



necessary operating conditions validates the mitigation's validity. Therefore, the DOT has determined that this analysis is correct and consistent with DOT's guidelines.

- 6. The Subcommittee also believes that "signal cycle length optimization" of this nature may not be a viable solution for improving the LOS at these locations. There was no evidence that the Study considered the impacts of those intersections taking up signal delays at various critical times, to include school hour commute traffic. The general comment of "signal cycle length optimization" does not clearly offer a site specific timing distribution analysis and as such, the general comment that it would mitigate to less than significant cannot be substantiated.*

*To be credible, the study must include an actual signal timing distribution analysis relative to circulations and counts inclusive of school commute traffic for these intersections. Clearly, for example, if the signal cycle time is lengthened for Green Valley Road, then the North bound El Dorado Hills Blvd could potentially overlapping congestion at El Dorado Hills Blvd at Francisco which already operates at LOS F at peak hours. This is not a reasonable solution and will not improve the intersection LOS. The County has tried signal cycle length optimizations at other locations unsuccessfully. There are many variables overlapping considerations to consider when proposing signal cycle length changes.*

DOT Response: The school peak during the AM is included in the analysis collected. The PM school peak occurs earlier than the traditional PM peak and analysis during this time period would not be conservative. It is worth noting that the evaluation of signalized intersection LOS is based on the overall intersection and not an individual approach or movement. Therefore, the DOT has determined that this analysis is correct and consistent with DOT's guidelines.

- 7. The Subcommittee believes that the proposed lane configuration of southbound Salmon Falls of one left lane, one through lane, and one right turn lane would require extensive intersection modifications.*

DOT Response: While the pavement section north of the intersection is 65-feet which could more than accommodate 3 approach lanes, one receiving lane, and 2 bike lanes, DOT Staff has further confirmed that additional right-of-way is available if needed based on the ultimate intersection reconfiguration. It should be noted that relocation of the signal control boxes and signal arms would likely be required with substantial reconfiguration of the north intersection approach.

- 8. Further, the proposed dedicated right turn lane from southbound Salmon Falls to westbound Green Valley will require signal relocation, significant peak hour cycle length changes affecting other legs (that were not been analyzed in this analysis), and the relocation of several utilities at that corner. There may be set back requirements or public utility easements to consider from the adjoining residential properties at the NW corner of intersection. The geometrics to provide a dedicated right turn lane onto westbound Green Valley would require widening; signal relocation and utility relocation were only mentioned qualitatively. This Study must analyze the necessary constructability, right of way, signal timing, lighting and traffic encroachment issues to residential properties bordering the corner before assigning a less than significant impact.*



**DOT Response:** Please see response to comment item #7. The analysis that is implied by APAC is not required at this time as part of the planning process. Typically, the improvement plans and associated engineering for development projects are submitted after a project has been approved by the Planning Commission or Board of Supervisors. The DOT has reviewed the Project application planning level documents and has determined that the proposed improvements, with DOT conditions at this intersection, are constructible and feasible. Therefore, DOT has determined that this analysis is correct and consistent with DOT's guidelines and will not be requiring additional planning studies.

9. *Referring to Table TC-2 of the General Plan regarding the volume to capacity ratio of roadway segments (which states: shall not exceed the ratio specified in the GP table), the Subcommittee did find any mention of the capacity ratio in the Study.*

**DOT Response:** Table TC-2 within the 2004 General Plan lists the roadways within the County that are allowed to operate at LOS F, with the associated maximum volume to capacity ratios. The roadways within this TIA are not included within table TC-2, therefore, the volume to capacity ratios is not applicable to this Project and the calculation is not a required analysis. Therefore, DOT has determined that this analysis is correct and consistent with DOT's guidelines.

10. *The Subcommittee would challenge the Study's assumptions about the volume of traffic to be created by the Project. For example, the study projects only on(e) car exiting onto Cambria Way from the Project during peak AM & PM periods. Cambria is the primary neighborhood adjacent to the project. Clearly, more than one car, AM or PM, will be entering the Project. The committee challenges this number and requests a review by an independent source.*

**DOT Response:** The DOT believes that the distribution percentage within the TIA is appropriate for the area. If the distribution percentage was increased to the Cambria residential neighborhood it would only decrease the number of trips distributed throughout the network, which could in-turn reduce or eliminate Project impacts throughout the roadway network. The TIS Figure 7, #8 Intersection shows one trip turning right into the subdivision and 85 AM(126 PM) peak trips turning left towards Francisco Drive, which appear to be reasonable.

The DOT utilizes Dowling and Associates as an outside consultant to complete the peer review of TIS's/TIA's generated by Developers within the County. For this Project, the developer hired KHA to complete the TIS/TIA and Dowling and Associates was used by the DOT to complete the peer review. DOT also reviews the TIS/TIA in coordination with the consultant peer review. Therefore, DOT has determined that this analysis is correct and consistent with DOT's guidelines and the necessary independent source review has been completed.

11. *Equally as important, the study failed to address the fact that Cambria Way is a gated road, adding complexity to the traffic flows and essentially restricting traffic to only one east bound exit point from the Project.*

**DOT Response:** There are two ingress/egress points for the Project. It is unlikely that gate operation at the end of Cambria will have a significant effect on the operations at the project driveway on Cambria. Quoting Supplemental Traffic Evaluation for Green Valley Center-El Dorado Hills, CA, Dated January 6, 2012, page 6, -Cambria Way Residential Gate



Operations:

"Approximately one-half (30 of the 60) of the Francisco Oaks gated residential neighborhood units are reasonably anticipated to currently or eventually utilize the Cambria Way access gate. This volume of traffic is generally supported by the existing traffic count data presented in the previous traffic study (Figure 6).

Due to the absence of traffic signal control at the Francisco Drive intersection with Cambria Way, traffic entering the residential neighborhood are reasonably assumed to arrive at a uniform rate at which one (1) trip is assumed to arrive per minute (30 trips per hour = 0.5 trips per minute, rounding up to 1 trip per minute). For the purposes of this analysis, the entry gate is assumed to have a service rate of 4 vehicles per minute (30 seconds and 2 vehicles per gate actuation). Given the conservative arrival and service rates, the likelihood of the neighborhood gate operations queuing entering vehicles back to or past the proposed project site access driveway is extremely low. The approximately 130-feet of storage space (between the gate and project site driveway) could easily accommodate up to 5 vehicles, far more than the anticipated arrival rate would produce."

*The Subcommittee would also offer the following specific observations and questions:*

- I. M5 Francisco Drive @ Embarcadero Drive – Is this proposed eastbound right turn flare on eastbound Cambria to southbound Francisco? The Study fails to analyze and mitigate for significant site distance to the south from eastbound Cambria at intersection #5.*

**DOT Response:** Site distance(s) at the intersection of Francisco and Cambria /Embarcadero have been analyzed and found to be adequate. A speed survey and intersection review was completed on March 9, 2012 by DOT Traffic Operations Staff. A one-hour traffic count of Francisco Drive and Cambria Way/Embarcadero Drive substantiated the values in the TIA. The 85<sup>th</sup> percentile speed survey yielded an average speed of 40 mph. The minimum Corner Sight Distance (CSD) for an 85<sup>th</sup> percentile speed of 40 mph is 440 feet. The CSD from a vehicle stopped on Cambria and looking at southbound traffic on Francisco is 460 feet and from northbound Francisco 375 feet, less than the standard value. The CSD is limited by the vertical curve of Francisco Drive. The Stopping Sight Distance (SSD) for an 85<sup>th</sup> percentile speed of 40 mph is 300 feet. The SSD for vehicles traveling southbound on Francisco is 400 feet and on northbound Francisco 325 feet (slightly greater than standard). In accordance with Caltrans Highway Design Manual 405.1(2b) where restrictive conditions exist, the minimum value for the corner sight distance shall be equal to the stopping sight distance. The final analysis looked at the Accidents per Million Entering Vehicles (MEV), a value of 1.0 or greater is considered a safety issue. For a period beginning January 1, 2008 and ending December 31, 2010, this intersection has a value of 0.07. Therefore, the Stopping Sight Distance is at an allowable standard and the Accidents per Million Entering Vehicles do not substantiate a safety issue at this intersection.

- II. Project Access Green Valley location (figure 2)- Eastbound Green Valley approaching proposed access needs deceleration lane with appropriate taper length per traffic engineer. Will Right of Way be needed to be acquired for this widening?*



**DOT Response:** The deceleration lane is a Condition of Approval for the Project. Adequate right-of-way exists along Green Valley Road for this improvement.

- III. *M6 El Dorado Hills @ Francisco Drive – this same mitigations given in Mitigation #2 & #3 it fails to address significant constructability, right of way and design issues as they relate to the traffic analysis. This does not address the two lane road capacity on southbound El Dorado Hills Blvd is this assumed to be 4 lanes in this analysis?*

**DOT Response:** The DOT Capital Improvement Program (CIP) Project #72332 for Francisco Drive/El Dorado Hills Blvd is currently included within the future CIP projects, but not fully funded. The DOT has determined that the recommended Project mitigation improvements are consistent with components in the proposed future CIP improvements. The various Figures for El Dorado Hills @ Francisco Drive (Intersection #8 in the TIA) show the existing lane configuration of a two-lane road. The DOT has reviewed the Project application planning level documents and has determined that the proposed mitigation improvements, with DOT conditions at this intersection, are constructible and feasible. Therefore, DOT has determined that this analysis is correct and consistent with DOT's guidelines and will not be requiring additional planning studies.

- IV. *Site Distance Evaluation pg 24 – Was only evaluated at Intersections #7 & #8 proposed site access driveway only! The site distance at Intersection #5 is completely deficient. The Study graphically terminates the geometrics immediately south of Cambria. There are significant site distance issues relative to horizontal and vertical curve for traffic making left turn movement out of Cambria on northbound Francisco nearly impossible. Due to southbound Francisco at Cambria, the distance that cars exiting Cambria would need to cross over to merge into northbound Francisco requires much greater site distance than exists. Site distance to the west is not adequate. There would have to be significant alignment improvements and geometric changes to improve site distance.*

**DOT Response:** In accordance with the TIS Policy and Procedures a project evaluates the sight distance at the project entrances only. The intersection of Francisco/Cambria would have been analyzed when the Francisco Oaks subdivision plans were submitted. However, DOT did have Traffic Operations Staff investigate the intersection, see response to comment "11, i".

- V. *Plan Access and On Site Circulation pg 25 – Study should state "Right in and Right out" only and include signing and median delineation called out to affect this. Northbound right turn movements from project access will be blocked by eastbound approaching traffic, it already backs up. Signal timing changes are not thought out adequately in this analysis: there will be significant carry over to other legs of intersections and other intersections that will adversely affect delays and circulation. A simulation needs to be done for all improvement and signal timing proposals.*

**DOT Response:** All proposed signal timing mitigations are modeled/simulated using industry standard traffic analysis software (Synchro). Specific to the comment pertaining to the project access being blocked by eastbound approaching traffic, please see the January 6, 2012, supplemental traffic evaluation letter report in which the eastbound approach operations and queuing are documented. Therefore, DOT has determined that this analysis is correct and consistent with DOT's guidelines.

- VI. *Bicycle and Pedestrian Facilities pg 27 – The Study only specifies on-site requirements. Please provide all pedestrian/ ADA offsite for review. No analysis was provided for offsite in this study. Off-site pedestrian improvements are critical to safety and circulation resulting in the development of this corner.*

DOT Response: Both Green Valley Road and Francisco Drive along the property frontage have existing striping for Class 2 bike lanes as per the El Dorado County Transportation Commission 2010 Bicycle Plan. CIP project 72303 was completed in 1999 and provided the pedestrian/ADA improvements for three legs of the intersection with existing improvements. This Project will be required to complete the pedestrians/ADA improvements along their frontage as conditioned.

- VII. *Onsite traffic circulation (figure 2) shows 90 degree at access from Green Valley. This design is not to County Design Standards and will not meet fire safe truck turning radius requirements. Please show actual onsite geometrics.*

DOT Response: Turning radius geometrics have been submitted under separate cover by the developer. The DOT has determined from this submittal that adequate turning radiuses have been substantiated.

- VIII. *Traffic Plan to Scale-The Subcommittee would like an existing offsite traffic layout and improvements sheet for review. Include full width lanes and intersection inclusive of entire study area for this project and include pedestrian / American Disabilities Act Improvements (ADA) as required.*

DOT Response: The DOT can provide the Record Drawings of the Green Valley Road/Francisco Drive Intersection Improvements (Construction completed in 1999) for APAC's review.

If you have any further inquiries from APAC, please refer them to Natalie Porter at 621-5442 or me at 621-6077

Thanks,

Eileen Crawford, P.E.

CC: Steve Kooyman, P.E.  
George Carpenter  
Natalie Porter, P.E., T.E.