



Orosz Engineering Group, Inc.

July 17, 2009

OEG Ref: 08-50304

Mr. Don Righetti  
c/o Jeremy Freund  
Wallace Group  
612 Clarion Court  
San Luis Obispo, CA 93460

Subject: Traffic Analysis for the Proposed Righetti Ranch Subdivision

Dear Mr. Righetti:

Orosz Engineering Group, Inc. (OEG) has prepared the following traffic analysis that evaluates the potential traffic impacts that could be expected with the construction of the proposed project. The following study addresses the project trip generation and line of sight adequacy for the proposed access to Orcutt Road.

#### Proposed Project

The proposed project anticipates that the existing 199.08 acres property be subdivided into six residential lots and one agricultural operation lot. The project site is located southeasterly of the City of San Luis Obispo along Orcutt Road, north of Avocado Lane. The project site plan is attached as Exhibit 1.

The proposed access to the property would relocate the existing ranch entrance located approximately ½ mile northwesterly of Avocado Lane, approximately 100 feet to the northwest. The existing dirt access and gate are proposed to be relocated to provide access to the six new residential lots.

Based on the project location and design, the number of traffic trips per dwelling unit should be based on the slightly higher residential estate trip generation rates listed in the SANDAG<sup>1</sup> trip generation reference. The trip generation rates per lot for this project would then be 12 Average Daily Trips (ADT), with 8% of the total trips occurring during the AM peak hour and 10% occurring during the PM peak hour. With the six new residential lots, the project is expected to generate a total of 72 ADT with 6 AM peak hour trips and 7 PM peak hour trips.

At traffic levels of less than 5 peak hour trips in a given direction, the project traffic results in a number of trips that cannot be reasonably tracked through the road system with any reliability on a daily or peak hour basis. At these trip levels, the project would not noticeably impact the existing road system operation.

#### Sight Distance Evaluation

The project driveway is proposed to relocate the existing ranch entrance on Orcutt Road currently located approximately ½ mile to the north/west of Avocado Lane. The existing entrance gate is set back from the edge of the road and will be relocated as shown on the site distance map. The County has required that the intersection be constructed in accordance with Caltrans Standard 405.7 including the provision for a bike lane along the project frontage.

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<sup>1</sup> SANDAG – San Diego Association of Governments, Trip Generators, 2002

Orcutt Road in the vicinity of the project provided two travel lanes, one in each direction, with some paved shoulder width. The posted speed limit along this portion of Orcutt Road is 55 MPH. To the south/east of the project driveway, Orcutt Road is relatively straight and on a slight incline from south/east to north/west. Similarly to the north/west of the project entrance, the slight incline continues and there is a slight curve in the road approximately 600 feet to the north/west.

The County of San Luis Obispo has stopping sight distance standards that for 55 MPH notes that 500 feet of clear sight distance is required to provide for adequate line of sight between the driver on Orcutt Road and one exiting the project site.

Existing field topography was obtained and plotted with the line of sight parameters noted on a sight distance analysis plan. The line of sight analysis plan is attached to the rear of this report. Based on the line of sight shown on the plan, there is adequate stopping sight distance per County of San Luis Obispo Standards.

To maintain this clear line of sight, the shrubs/trees within the line of sight need to be trimmed to no more than 30" above the roadway surface for a distance of 15-20 feet from the edge of pavement along Orcutt Road.

Additionally, the dirt entrance area between the gate and Orcutt Road should be paved to minimize the amount of dirt and rocks that are transferred to Orcutt Road.

#### Left Turn Channelization

The criteria for the installation of a left turn lane are based on conflicting traffic volumes, crash history, and geometric factors. The County has not identified this area of roadway as one that has a significant crash history and the roadway is straight and with a slight gradual slope.

To determine if a left turn lane should be considered, the AASHTO recommendations for left turn lane installations were used. In the AASHTO reference, the combination of percentage turning traffic is compared with the opposing traffic volumes and the total advancing traffic volumes. When traffic volume conditions exceed these values, a left turn lane should be considered.

The existing traffic volume on Orcutt Road<sup>2</sup> is 2,200 ADT. The forecast traffic volumes (2030) reach 3,600 ADT. The directional split of traffic based on the County provided data is 55%/45% in the peak direction and the peak hour traffic volume is 10% of the ADT.

The existing traffic volumes were used for this analysis. The traffic volumes in this case are 4 trips entering the site, with the opposing traffic being 162 vehicles and the total advancing traffic totaling 202 vehicles during the peak afternoon hour. The percentage left turns for this project are roughly 2% during the peak entering time frame. Using the AASHTO guidelines, the minimum traffic volumes for consideration of the installation of a left turn lane are not met and the installation of a left turn lane is not warranted. The minimum approaching volume to consider the left turn channelization is 504 vehicles; the existing plus project conditions total is 126 vehicles.

To provide a worst case analysis, a build out condition analysis was conducted with the future traffic volumes and the left turn lane warrants were recalculated. Based on the build out volumes, a left turn lane was still not warranted at this location. The minimum approaching volume to consider the left turn channelization is 473 vehicles; the build out plus project conditions total is 202 vehicles.

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<sup>2</sup> Based on County of San Luis Obispo traffic counts 2005 provided for this analysis.

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Summary

The proposed project consists of the development of six new residential lots on an existing 199.08 acre site located northeasterly of Orcutt Road, near Avocado Lane. The project is expected to generate 72 ADT with 6 AM and 7 PM peak hour trips. Based on these traffic levels, the project is not expected to significantly impact the area road system.

The existing ranch entrance is proposed to be relocated to provide access for the project to Orcutt Road. Based on a line of sight analysis, there is adequate visibility to meet the County of San Luis Obispo stopping sight distance standards. To ensure that this visibility is maintained, the shrubs/trees within the line of sight for the entrance should be trimmed back 15-20 feet from the roadway to a maximum height of 30" above the roadway surface. Lastly, the dirt entrance area between Orcutt Road and the site gate should be paved with asphalt.

Based on the AASTHO analysis procedures for left turn channelization requirements, the project traffic conditions do not warrant the construction of a left turn lane under existing or build out conditions.

This concludes our traffic analysis for the proposed Righetti subdivision. Should you have any questions, feel free to contact me.

Sincerely,

*Stephen A. Orosz*

Stephen A. Orosz, PE  
Orosz Engineering Group, Inc.

Attachments

