



TECHNICAL MEMORANDUM

Date: October 30, 2008
To: James Adams, California Energy Commission
From: Matthew Manjarrez, P.E.
Steven Brown, P.E.

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Subject: *Orange Grove Project Traffic Safety Assessment*

RS08-2632

Fehr & Peers has completed a traffic safety assessment of the water haul routes proposed for the Orange Grove Project. Specifically, we evaluated historical traffic collision data for the roadway segments that are part of the proposed haul routes, and we reviewed the physical characteristics of each segment to identify conditions that may be incompatible with the vehicles that will serve the project. The historical collision data was obtained from the Statewide Integrated Traffic Records System (SWITRS), and included all collisions on each roadway segment for the 36-month period from 2005 through 2007. The physical characteristics of each roadway segment were recorded during a field visit conducted by our staff on October 16, 2008.

Two different water haul routes are proposed, which are illustrated in Figure 6.11-3 of the Application for Certification. Fresh water would be brought in from the Fallbrook Public Utility District (FPUD) fresh water pickup station located on East Mission Road. The fresh water haul route would include East Mission Road (FPUD facility to I-15), I-15 (East Mission Road to SR 76), and SR 76 (I-15 to Pala del Norte Road). Reclaimed water would be brought in from the FPUD wastewater treatment plant located on Alturas Road. The reclaimed water haul route would include Alturas Road (FPUD facility to Ammunition Road), Ammunition Road (Alturas Road to South Mission Road), South Mission Road (Ammunition Road to SR 76), and SR 76 (South Mission Road to Pala del Norte Road). I-15 meets freeway design standards and is clearly able to safely carry the amount and type of truck traffic that would result from the Orange Grove project, so no detailed assessment of I-15 was performed. The traffic safety assessment included the following roadway segments:

- SR 76 between Pala del Norte Road and South Mission Road
- South Mission Road between SR 76 and Ammunition Road
- Ammunition Road between South Mission Road and Alturas Road
- Alturas Road between Ammunition Road and the FPUD fresh water facility
- East Mission Road between I-15 and the FPUD wastewater facility

HISTORICAL COLLISION DATA

Table 1 summarizes the historical collision data for each roadway segment listed above. The collision rate (collisions per million vehicle miles) was compared to published statewide average collision rates for similar facilities.

The total collision rate on the SR 76, South Mission Road, and Ammunition Road segments are higher than the statewide average. Only the SR 76 roadway segment has a fatal collision rate that is higher than the statewide average. The highest collision rates occur on Ammunition Road and Alturas Road. Notably, neither of these two roadways had any collisions involving trucks. In addition, the Alturas Road segment is very short and it carries a low traffic volume, so the collision rate may be subject to volatility due to the small statistical sample size; Alturas Road only experienced 4 collisions during the 36-month period being considered. Nearly half of the collisions on Ammunition Road were broadside type probably involving vehicles turning into and out of the driveways that are located throughout that roadway segment.

PHYSICAL ROADWAY CHARACTERISTICS

The field observations conducted on October 16th revealed that there were no sub-standard geometric features or conditions that would be incompatible with the types of trucks that will be using these roadways for the Orange Grove project. However, the following two issues should be considered.

- Alturas has a number of fronting properties with driveways and on-street parking. The fronting property owners may express concern that the planned truck activity deviates from the character of the roadway.
- East Mission and SR 76 both have a number of relatively sharp curves. However, the curves are clearly visible and well marked with advisory signs. Trucks can easily travel through these curves as long as their drivers are using reasonable care.

We hope this information is useful. Please contact Matthew Manjarrez at (916) 779-1900 with any questions, comments, or concerns.