

# City of Lafayette Staff Report

**For:** Circulation Commission  
**By:** /s/ Leah C. Greenblat, Transportation Planner  
**Date Written:** June 13, 2005  
**Meeting Date:** June 20, 2005  
**Subject:** Request to Address Limited Sight Distance at the Intersection of Reliez Station Rd. and Richelle Ct.

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## **Introduction**

The City has received several citizen requests to review the ability for drivers to turn out of Las Trampas Rd. / Richelle Ct. at the intersection of Reliez Station Rd. due to limited sight distance. While this intersection has been reviewed in the past, technological advances in traffic devices have been made that staff believed warranted a re-evaluation. Staff received a grant for consultant services from MTC to conduct a limited scope traffic operations and safety evaluation. Based on this report and consultation with Chuck DeLeuw, Consulting Traffic Engineer, staff recommends that the Commission forward a recommendation to City Council to install advance warning signs with flashing beacons on Reliez Station Rd. to be activated when vehicles and pedestrians are detected on the side streets.

## **Discussion**

Las Trampas Rd. intersects Reliez Station Rd. at the apex of a curvy, steep hill, see attached map. Reliez Station Rd. is a two-lane arterial that serves as a primary travel route connecting the Town of Moraga and the southern half of Lafayette with SR-24, I-680 and the downtowns of Lafayette and Walnut Creek. It carries over 14,500 vehicles each day on an undivided roadway with a speed limit of 25 mph. A recent Engineering and Traffic Survey, attached, notes the 85<sup>th</sup> percentile speed as 33 mph at Dianne Ct. which is south of the subject intersection along a straighter section of road. Las Trampas Rd. serves as a neighborhood collector and intersects Reliez Station Rd. at a right angle on the west leg of the intersection. On the east leg, the street is called Richelle Ct., a residential street. Only part of Las Trampas Rd. is a public street and it is public at the intersection of Reliez Station Rd. Street addresses below 820 Las Trampas Rd. are on the private portion of the road that has an outlet onto Glenside Dr. north, see attached map.

According to the Statewide Integrated Traffic Records System (SWITRS), between January 2000 and September 2004 only one reported collision occurred near this intersection. That collision involved the driver hitting a fixed object. According to SWITRS data, the driver's sobriety was listed as "impairment unknown" and traveling at an unsafe speed was listed as an associated factor in the collision.

The intersection study, attached, was conducted by Dowling Associates and contains an analysis of several different options for that intersection. The consultant also prepared a brief evaluation of the roadway north to the Reliez Station Rd. and Olympic intersection. At this time, staff recommends that the Commission focus its discussion on the Las Trampas Rd. /Richelle Ct. sight distance related matters.

The high traffic volume on Reliez Station Rd. creates smaller gaps in the traffic flow therefore allowing less time between vehicles for side street vehicles and pedestrians to cross the street. Several years ago, the City installed mirrors at the subject intersection to assist drivers entering Reliez Station Rd. from the side streets. The effectiveness of the mirrors varies based on weather conditions, lighting and the occurrence of vandalism. While the mirrors may facilitate turns from the side streets, motorists on Reliez Station Rd. still have limited sight distance of vehicles and pedestrians at side streets.

In addition to the difficulty drivers have turning onto Reliez Station Rd., pedestrians and bicyclists also experience similar difficulties. Between Olympic Blvd. and Las Trampas Rd., there is a non-motorized path on the west side of Reliez Station Rd. At Las Trampas Rd., the path continues south on the east side of the street. South of Las Trampas Rd. there are no non-motorized facilities on the west side of the street so for pedestrians and less experienced bicyclists to continue along Reliez Station Rd., they must cross at Las Trampas Rd. There are marked crosswalks on the west and south leg of the subject intersection. The limited sight distance and high volume of vehicles combined with a low adherence to pedestrian crosswalk laws also impacts the ability of pedestrians and bicyclists to cross the street. Due to sight distance concerns, the Lamorinda School Bus program will not establish a stop at this intersection. Their buses stop further south at Dianne Ct. or on Glenside Dr. at Las Trampas Rd. The program will also not accept riders who want to disembark in the afternoon at Dianne Ct. and walk north on the path to cross at Las Trampas Rd. due to the school bus operator's liability concerns.

The consultant's report does not include a traffic signal warrant study; nevertheless, the report recommends against the installation of traffic signal due to the limited visibility of the signal from approaching motorist. The report also discusses the feasibility of a modern roundabout. Staff does not recommend a roundabout at this location due to the low side street volumes, adjacent roadway grades and sight distance concerns. Additionally, staff discussed with Chuck DeLeuw, Consulting Traffic Engineer, enhancing the pedestrian crossing on the south leg of the intersection with a standard in-pavement flashing light system at the crosswalk. Again due to the limited sight distance, this option is not recommended.

The key to improving conditions for side street traffic and pedestrians appears to be in providing an advance warning of their presence to the vehicles traveling along Reliez Station Rd. Advance flashing beacons that continually flash would not provide the type of warning staff would find desirable. Drivers on Reliez Station Rd. would likely stop noticing the flashing beacon and it would therefore become no more effective than the existing static advance warning signs.

A flashing beacon, with a static warning sign below, which is triggered by the presence of side street traffic or pedestrians, provides more relevant information to motorists. Loop detectors can be placed on side streets and motion-activated bollards can be placed on either end of the crosswalk. When the loop detector is activated by the presence of a vehicle or when a pedestrian walks between the two bollards, the advance warning beacon would be triggered. Below the beacon would be a standard, yellow warning sign that reads "Pedestrians or Side Street Traffic Ahead When Flashing". The sign and beacon would be located north and south of the intersection at a distance that would provide adequate time for motorists to slow down or stop.

### **Fiscal Impact**

Currently, there are no funds budgeted for the improvements discussed in this report; however, Reliez Station Rd. is scheduled to be resurfaced in 2006. When the City overlays the road that would be an ideal time to incorporate any additional improvements. If the Commission supports staff's recommendation, the Commission could request that the Council allocate funds for these improvements to be incorporated into the repaving project. A planning level estimate for the advance queue and pedestrian warning system is approximately \$60,000.

### **Recommendation**

Forward a recommendation to City Council to allocate funds for and install advance warning signs with flashing beacons on Reliez Station Rd. to be activated when pedestrians and vehicles are detected on the side streets.

### **Attachments**

1. September 27, 2004 letter from Rae Eckholm
2. June 1, 2005 South Glenside / Reliez Station Rd. Engineering and Traffic Survey
3. Map showing private and public portions of Las Trampas Rd.
4. March 23, 2005 memo from Mark Bowman, Dowling Associates
5. Aerial photo of Reliez Station Rd. and Las Trampas Rd. / Richelle Ct.

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