



## MEMORANDUM

Date: January 17, 2007

To: John Cherbone, City of Saratoga Public Works Director

From: Sohrab Rashid/Franziska Holtzman

**Subject: Proposed Raised Median on Prospect Road – Traffic Data**

1025-446-1

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Fehr & Peers has completed an evaluation of traffic data to support the proposed installation of raised center medians between Sunnyvale-Saratoga Road and Saratoga Avenue on Prospect Road in Saratoga, California. Most of this section of Prospect Road is located in both Saratoga (south side) and the City of San Jose (north side) with the city limit line located in approximately the center of the road. Currently, raised and/or planted medians exist between Titus Avenue and English Drive, and to the west of Blaney Avenue. The installation of center median between Blaney Avenue and Titus Avenue would provide for continuous raised medians on Prospect Road. For this study, we examined current road geometries, traffic volumes, speed, and accident data. This memorandum summarizes our findings.

### PHYSICAL LAYOUT

The study segment of Prospect Road is a four lane arterial road with a posted speed limit of 40 miles per hour (mph). A continuous Class II bike lane is provided along the entire length of the segment. Signalized intersections are located at Miller Avenue between Titus Avenue and Ardenwood Drive.

No residential properties in Saratoga front onto Prospect Road along the study segment. All fronting residential properties are located in San Jose and include on-street parking adjacent to the bike lane. Prospect Road includes painted medians between Titus Avenue and Blaney Avenue. The medians are designated by double yellow lines, which indicate that vehicles are prohibited from crossing or using the medians for left turns. Therefore, the installation of a raised median would not add any turning movement restrictions on Prospect Road that do not already exist.

Separate left-turn pockets are provided at all intersections within the study segment. A short, two-way left-turn lane is located between Scully Avenue and Larkin Avenue to provide a refuge area for vehicles turning into and out of these streets. An eastbound left-turn pocket is provided at Scully Avenue and provides U-turn access for up to eight residential properties on the north side of the street in San Jose. With installation of raised medians, several options are possible for this specific area including maintaining the existing configuration or restricting turning movements at one or both intersections. The details of this design could be developed during project design.

Staff from both Cities have reviewed plans for modifying the street design in the vicinity of Prospect Road and Titus Avenue near Christa McAuliffe School. Improvements at this location were intended to improve the ability for pedestrians to cross Prospect Road by reducing vehicle travel speeds, increasing driver awareness and improving visibility of vehicles and pedestrians. As part of this study, we measured existing travel lane widths well in excess of standard lane widths of 12 feet. Installation of median would help to reduce lane widths to standard sizes and could help to reduce travel speeds.

**VOLUME AND SPEED DATA**

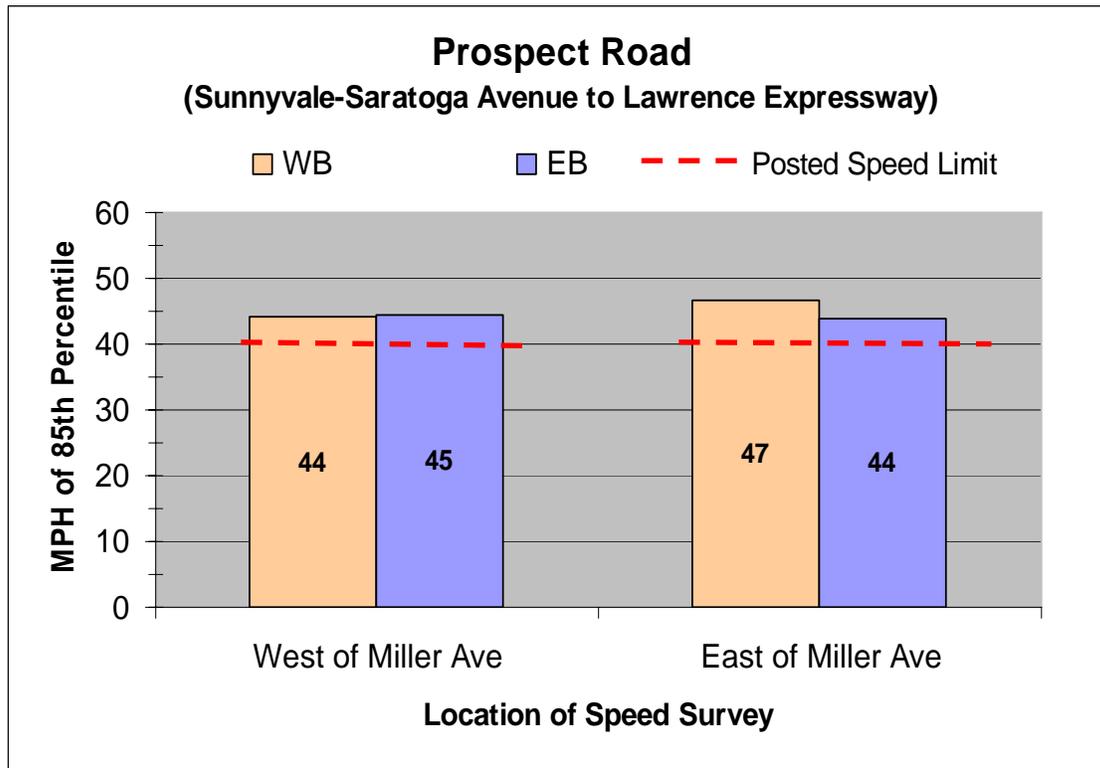
Speeds on Prospect Road were monitored at the following two locations for a two-day period on November 15, 2006 and November 16, 2006:

1. Between Sunnyvale-Saratoga Road and Miller Avenue
2. Between Miller Avenue and Lawrence Expressway

These mechanical counts were conducted as part of a Citywide speed survey and showed that approximately 8,000 to 9,000 vehicles travel in each direction on these sections of Prospect Road. Speed data was obtained for all vehicles on the road and was used to calculate the average speed and 85<sup>th</sup> percentile speeds in both directions. The 85<sup>th</sup> percentile speed is the speed at or below 85 percent of vehicles are traveling and is a standard engineering threshold. Speed data are presented on Figure 1

The survey indicates that the 85<sup>th</sup> percentile speed in both directions on Prospect Road is within approximately five (5) miles of the posted speed limit. Vehicles traveling in the westbound direction east of Miller Avenue travel the fastest at approximately 47 miles per hour (mph).

**Figure 1**



## ACCIDENT DATA

Accident data for Prospect Road was evaluated for the three-year period between 2003 and 2005 and summarized on Figure 2. On Figure 2, accident data is categorized by the primary collision factor and the year of the incident. The primary collision factors are designated for accidents related to excessive speeding, unsafe turns, and all other factors.

The accident data indicates that a majority of accidents on Prospect Road are related to speeding. Additionally, there are two clusters of accidents near Miller Avenue and Titus Avenue, which are within the study roadway segment of Prospect Road. The accidents at these two locations are primarily related to side-street traffic entering Prospect Road without first coming to a complete stop.

## CONCLUSIONS

Installation of raised medians between Titus Avenue and S. Blaney Avenue could occur without resulting in any substantial changes to existing access to properties fronting on Prospect Road and intersecting streets. Overall, the fundamental operating characteristics of the street would not change with raised medians. The medians and associated landscaping would help to reduce travel speeds and possibly result in a reduction in the number of collisions along the study segment. Raised medians would reduce the potential severity of head-on collisions between intersections. Lastly, medians could be designed to provide refuge areas for pedestrians crossing at unsignalized intersections.

**Figure 2: Collision Locations and Causes on Prospect Road, Saratoga, California.**

