



City of Sunnyvale

Agenda Item-No Attachments (PDF)

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REPORT TO COUNCIL

SUBJECT

Speed Survey on Caribbean Drive [Between Crossman Avenue and Moffett Park Drive (Information Only)]

BACKGROUND

There was a fatal collision involving a truck and a bicyclist in February 2018 on Caribbean Drive approximately 430 feet east of the intersection of Caribbean Drive and Borregas Avenue. In May 2018, taking into consideration the fatal crash, the proximity to the Bay Trail, the high-speed limit and the increasing traffic on Caribbean Drive, City Council directed staff to investigate the prevailing speed on Caribbean Drive. To analyze the existing travel speed, staff subsequently conducted an Engineering and Traffic Survey (E&TS) on Caribbean Drive between Crossman Avenue and Moffett Park Drive.

EXISTING POLICY

General Plan - Land Use and Transportation Element Policy 35:

Set speed limits at the lowest practicable levels consistent with state law.

Sunnyvale Municipal Code - Title 10:

The city traffic engineer shall have the authority to place and maintain official traffic control devices specified in the traffic control regulations document, per the latest standards or guidelines established by Caltrans.

DISCUSSION

Title 10 of the Sunnyvale Municipal Code requires that speed limits be set forth by City Council resolution in accordance with the latest standards or guidelines established by Caltrans.

As per the California Manual on Uniform Traffic Control Devices (CA MUTCD) and California Vehicle Code, state and local authorities maintain E&TS for a number of street segments in order to establish speed limits that facilitate the orderly movement of traffic and is reasonable and safe. Speed surveys are conducted to measure the speeds of vehicles under free-flow conditions. The CA MUTCD recommends setting a speed limit at the nearest 5 miles per hour (mph) increment to the 85th percentile speed of free-flowing traffic and allows for speed limit reduction up to 5 mph below the 85th percentile under certain conditions.

Factors that may be considered when establishing speed limits include the following: road characteristics, roadway shoulder conditions, grade, alignment and sight distance, pace speed, roadside development and environment, parking practices and pedestrian activity, and reported crash experience. E&TS are typically valid for seven (7) years if certain findings are met, but may be extended to 10 years if a registered Civil or Traffic Engineer evaluates the segment and determines

that no significant changes in roadway or traffic conditions have occurred.

Per the California Road System maps and the City's General Plan, Caribbean Drive is classified as an arterial with a posted speed limit of 45-mph. Caribbean Drive is also designated as one of the truck routes within the City. In its existing condition, the roadway section is three lanes in each direction with raised median. There is an existing bike lane without buffer on both sides of the roadway. The roadway is in a commercial/industrial area with frequently used commercial driveways. The most eastern intersection (Caribbean Drive and Moffett Park Drive) is the entrance to Baylands Park. A dedicated sidewalk does not exist and pedestrians share the roadway with vehicles and bicycles. On-street parking is currently not allowed and there are existing bus transit stops. This roadway also provides a direct access to the Bay Trail for the bicyclists and pedestrians. A horizontal curve is located north of Moffett Park Drive.

A segment of Caribbean Drive will be reconfigured when Carl Road is vacated to facilitate the re-build of the water pollution control plant. The westbound segment between the westernmost beginning of Caribbean Drive (at Mathilda Avenue) to just easterly of Geneva Drive will be revised to: eliminate one westbound travel lane to accommodate on-street parking, stormwater treatment, and an off-street multi-use trail for pedestrian and bicyclists. Construction is anticipated to occur Spring 2020, with completion towards the end of that calendar year.

Traffic data, including traffic volume and vehicle speeds, were collected in May 2019. Speed data was obtained using electronic data collection equipment (pneumatic hoses) for one hour during the off-peak period between 9:00 a.m. and 10:00 a.m. on a typical weekday. The E&TS used a pneumatic hose method to measure traffic speeds, which have historically been measured using radar or lidar (i.e., laser). City staff selected this method with the goal of obtaining more accurate speed measurements due to the increased volume of data that could be collected. Moreover, City staff was present to observe the traffic flow during the entire one-hour period to ensure that there were no abnormal traffic conditions. Based on speed data collected, the 85th percentile speed of free-flowing traffic was 52-mph.

In the past year, new developments have occupied the commercial/industrial buildings along the south side of roadway segment, which changed the characteristics of the roadway. Considering that development levels in the area have increased along with driveway usage, pedestrian and bicycle activity, the presence of the regional Baylands Park and Twin Creeks Sports Complex, transit bus stops, and that there are no sidewalks present on this segment, it is recommended that the existing 45-mph speed limit shall remain as-is even though the 85th percentile speed was shown to be 52-mph in accordance with Section 2B.13 of the CA MUTCD. The 45-mph speed limit was obtained by a 5-mph reduction of the rounded critical (85th percentile) speed of 50-mph as permitted by Section 2B.13 of the CA MUTCD. This speed limit is within the pace speed of this segment.

PUBLIC CONTACT

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's website.

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