

**PUBLIC TRAFFIC/SAFETY COMMISSION
AGENDA REPORT**

TO: Public/Traffic Safety Commission

FROM: Patrick Thomas, Director of Public Works/City Engineer

DATE: April 22, 2021

SUBJECT: Traffic Calming on Pujol Street – Stop Controls Analysis

PREPARED BY: Erick Escobedo, Assistant Engineer II
Anissa Sharp, Office Specialist II

RECOMMENDATION: That the Public/Traffic Safety Commission:

1. Recommend the City Council adopt a Resolution establishing Multi-Way Stop Controls at the intersection of Pujol Street and First Street.
2. Recommend staff implement striped pedestrian crosswalks at intersection of Pujol Street and First Street pending City Council adoption of Multi-Way Stop Controls.

BACKGROUND: In January of 2021, City of Temecula staff received a citizen request to consider the feasibility of implementing all way stop controls to address concerns of excessive speeding and unsafe conditions at the intersection of Pujol Street at First Street (Exhibit A). The citizen request also requested consideration of pedestrian crosswalks at the intersections of Pujol Street at First Street address concerns of unsafe pedestrian crossings to access Old Town and existing bus stops.

Pujol Street is a forty (40) foot wide local residential roadway providing access to numerous single family and multi-family residences from Felix Valdez road to southern city limits. The posted speed limit on Pujol Street varies from 30 MPH south of First Street to 25 MPH north of First Street due to varying roadway conditions (**Exhibit B**).

The Average Daily Traffic (ADT) volume on Pujol Street is approximately 3,071 ADT for the segment from Felix Valdez road to southern city limits.

First Street is a fifty-six (56) foot wide secondary arterial roadway that provides access to Pujol Street from Old Town Front Street. First Street has a speed limit of 35 MPH and carries approximately 2,375 ADT.

In March 2021, Staff collected volume data over a three (3) day period, which included entering volume data and pedestrian/bicycle volume data at the intersection of Pujol Street at First Street. The volume data was used to establish circulation patterns and determine potential “cut-through” traffic volumes. In addition to the data collection, a review of conditions was performed, which

included an evaluation of sight distance, collision history, and completion of a multi-way stop warrant analysis at the Pujol Street at First Street intersection.

An evaluation of sight distance was performed at the intersection of Pujol Street at First Street. A minimum unobstructed sight distance of 200 feet is required for the posted 30 mph speed limit south of First Street and 150 feet for the posted 25 mph speed limit north of First Street. The results of the evaluation are shown in the table below:

<i>Location</i>	<i>Sight Distance</i>	<i>Required Visibility (Posted 25 & 30 MPH)</i>
<u>First Street (Westbound)</u>		
• Looking South	380'	200'
• Looking North	420'	150'
<u>First Street (Eastbound)</u>		
• Looking South	170'	200'
• Looking North	400'	150'

As shown, the visibility at the intersection is appropriate for westbound conditions at Pujol Street and First Street. However, the visibility for eastbound conditions at Pujol Street and First Street falls below the required minimum distance due to the concave roadway alignment, above ground utilities and landscaping constraints.

A review of the collision history for the twelve (12) month period from April 1, 2020 to March 31, 2021, indicates there were 5 reported collisions at the intersection. Three of the five collisions were broadside in nature due to vehicles merging across uncontrolled Pujol Street traffic from First Street. One of the five collisions involved a pedestrian being struck by a vehicle heading south along Pujol Street.

The Multi-Way Stop Sign Installation Policy for Residential Streets' warrant criteria was used to evaluate the need for multi-way stop signs at the intersection. The warrants allow for the installation of multi-way stop signs when the following conditions are satisfied:

1. Minimum Traffic Volumes

- a. The total vehicular volume entering the intersection from all approaches is equal to or greater than three-hundred (300) vehicles per hour for any eight (8) hours of an average day; and
- b. The combined vehicular volume and pedestrian volume from the minor street is equal to or greater than one-hundred (100) per hour for the same eight (8) hours.

2. Collision History

- a. Three (3) or more reported collisions within a twelve (12) month period of a type susceptible to correction by a multi-way stop installation. Such accidents include right and left-turn collisions as well as right-angle collisions.

3. Roadway Characteristics

- a. The traffic volume on the uncontrolled street exceeds two thousand (2,000) vehicles per day,
- b. The intersection has four (4) legs, with the streets extending 600 feet or more away from the intersection on at least three (3) of the legs;
- c. The vehicular volumes on both streets are nearly equal to a forty/sixty percent (40/60%) split; and
- d. Both streets are 44 feet wide or narrower.

Warrants for Minimum Traffic Volumes, Collision History and Roadway Characteristics must be met to justify the installation of a multi-way stop. Other criteria that may be considered when evaluating the need for multi-way stop signs include:

4. Visibility

- a. The intersections sight distance is less than:
 - 150 feet for 25 MPH
 - 200 feet for 30 MPH
 - 250 feet for 35 MPH

5. The need to control left-turn conflicts.

6. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes such as schools, parks and activity centers.

7. The roadways and intersection appear on a Suggested Route to School plan.

8. There are no traffic signals or all-way stop controls located within 600 feet of the intersection.

9. The installation of multi-way stop signs is compatible with overall traffic circulation needs of the residential area.

The multi-way stop warrant analysis performed found that volumes are lower than the applicable criteria for warrant 1 and all-way stop controls are not justified at the intersection. The Policy does however provide the flexibility to consider all-way stop controls at locations where there is a need to provide right-of-way control to eliminate conflicts between vehicles due to visibility constraints. An evaluation of the intersection sight distance criteria indicates there is justification for all-way stop controls at the intersection of Pujol Street and First Street due to limited sight distance. An evaluation of the intersection pedestrian activity determined that the 197 ADT is justification for intersection crosswalks. Staff recommends establishing all-way stop controls and striped pedestrian crosswalks at the intersection.

FISCAL IMPACT: Minor cost associated with the recommended action.

ATTACHMENTS:

1. Location Map (Exhibit A)
2. Pujol Street Speed Limits (Exhibit B)
3. Multi-Way Stop Warrant Analysis
4. Collision Reports