CITY OF TEMECULA
AGENDA REPORT

TO: City Manager/City Council

FROM: Ron Moreno, Director of Public Works/City Engineer

DATE: January 28, 2025

SUBJECT: Establish All-Way Stop Control at the Intersection of La Serena Way and Calle Medusa

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PREPARED BY: Nick Minicilli, Senior Traffic Engineer
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RECOMMENDATION: That the City Council adopt a resolution entitled:

RESOLUTION NO.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEMECULA, ESTABLISHING AN ALL-WAY STOP CONTROL AT THE INTERSECTION OF LA SERENA WAY AND CALLE MEDUSA AND FINDING THAT THE ACTION IS EXEMPT FROM CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) UNDER SECTION 15301(C) OF THE CEQA GUIDELINES

BACKGROUND: In 2024, City of Temecula staff received several resident requests to consider the feasibility of implementing all-way stop controls to address concerns of excessive speeding and limited visibility at the intersection of La Serena Way and Calle Medusa (Exhibit A). The citizens referenced concerns with high volumes, speeding and limited visibility at this intersection specifically during peak morning and afternoon travel times due to resident commuters and nearby schools. For this request, staff performed several field reviews at this intersection and based on review of vehicular speed and volume data, it was determined that the intersection of La Serena Way and Calle Medusa warranted further analysis for stop controls.

La Serena Way is a sixty-four (64) foot wide secondary arterial roadway providing access to numerous single-family residences between Butterfield Stage Road and Margarita Road. The posted speed limit on La Serena Way is 40 MPH and the Average Daily Traffic (ADT) volume on is approximately 6,895 ADT.

Calle Medusa is a forty-four (44) foot wide residential collector roadway that provides access to numerous single-family residences between Nicolas Road and La Serena Way. Calle Medusa has a speed limit of 25 MPH and carries approximately 2,465 ADT.

In October 2024, staff generated speed and volume data during the school semester from January 2023 thru March 2023 using Streetlight Data software. Over this three (3) month period, review of prevailing (85th percentile) speeds indicates that speeds vary from 44 to 47 miles per hour during peak AM and PM hours on La Serena Way near the intersection with Calle Medusa. The results of the speed data review indicate that most speeding is occurring during peak AM and PM hours.

In addition to the data collection, a review of intersection characteristics and conditions were performed, which included an evaluation of sight distance, collision history, and completion of a multi-way stop warrant analysis (Exhibit B) at this intersection.

An evaluation of sight distance was performed at the intersection of La Serena Way and Calle Medusa. A minimum unobstructed sight distance of 300 feet is required for the posted 40 mph speed limit on La Serena Way. The results of the evaluation are shown in the table below:

Location	***Sight Distance***	***Required Visibility (Posted 40 MPH)***
Calle Medusa (Southbound) • Looking East • Looking West	**255'** **900'**	**300'** **300'**

As shown, the visibility at the intersection of La Serena Way and Calle Medusa is more than adequate for conditions looking in the westerly direction. However, the visibility looking in the easterly direction falls below the required minimum distance due to the concave alignment and vertical grade difference of the roadway.

A review of the collision history for the three (3) year period from October 1, 2021 to September 30, 2024, indicates there was one (1) reported collisions at the intersection of La Serena Way and Calle Medusa.

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
        - 300 feet for 40 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 the required Warrants 2 & 3 were not satisfied and all-way stop controls are not justified at the intersection based on quantitative data.

The Policy does however provide the flexibility to consider multi-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 multi-way stop controls at the intersection of La Serena Way and Calle Medusa due to limited sight distance.

At the meeting on December 19, 2024, the Traffic Safety Commission considered the all-way stop and approved (4-0) the staff recommendation that the City Council adopt an Ordinance establishing the all-way stop at the intersection of La Serena Way and Calle Medusa.

Staff recommend establishing all-way stop controls at the intersection of La Serena Way and Calle Medusa.

FISCAL IMPACT: Minor cost associated with the recommended action.

ATTACHMENTS:

1. Resolution
2. Exhibit A - Location Map
3. Exhibit B – Multi-Way Stop Warrant Analysis