



# Memorandum Engineering Division

July 19, 2017

**To:** Planning Commission  
**From:** Jennifer Rosales, Senior Transportation Engineer JR  
**Subject:** Speed Cushions on Riachuelo  
**Copies:** Thomas Bonigut, Public Works Director / City Engineer  
Thomas Frank, Transportation Engineering Manager

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## ISSUE:

Should the Planning Commission forward to the City Council a recommendation to implement speed cushions on Riachuelo?

## BACKGROUND:

A petition was received in January 2016 requesting traffic engineering review of Riachuelo between Calle Sarmentoso and Camino Vera Cruz (about half of the length of Riachuelo) for speed humps. The petition was signed by 88% of residents on Riachuelo between Calle Sarmentoso and Camino Vera Cruz. Staff conducted traffic counts and speed surveys in March and April 2016 for the review of the entire length of Riachuelo. Staff conducted a neighborhood meeting with local residents on November 14, 2016 to discuss the traffic engineering staff review and speed hump/cushion alternatives on Riachuelo. Following the neighborhood meeting, a second petition for the other half of Riachuelo was received in March 2017. The second petition was signed by 51% of residents on the other half of Riachuelo. This results in a combined total of 69% of all residents on Riachuelo.

Riachuelo is a local residential collector street with a 25 miles per hour (mph) posted speed limit. The street is 40 feet from curb to curb with on street parking permitted on both sides.

### Traffic Volume and Speeding

Staff have conducted traffic studies on Riachuelo. These studies include data on the Average Daily Traffic (ADT), speed surveys, accident records, and sight distance measurement. The average daily traffic (ADT) and speeds were collected in March and April 2016. The ADT on Riachuelo was measured between 250 to 600 vehicles per day.

The speed surveys conducted by staff concluded that the 85<sup>th</sup> percentile on Riachuelo southbound is 35 mph and northbound is 25 mph. The combined northbound and southbound 85<sup>th</sup> percentile speed is 33 mph. Speeding in the area

is occasional and not confined to an isolated time of day or day of week. Approximately 19% of the vehicles are traveling 32 mph or greater with 34 vehicles exceeding 45 mph during the one week survey period. The speeding pattern on Riachuelo is found to be higher in the southbound direction with an 85<sup>th</sup> percentile speed 10 mph over the posted speed when compared to similar residential streets in San Clemente.

#### City of San Clemente Speed Hump Policy

The City of San Clemente speed hump policy including the basic criteria for speed humps is posted on the City's website and link follows: <http://san-clemente.org/Home/ShowDocument?id=7673>. The link to the City's traffic calming policy follows: <http://san-clemente.org/Home/ShowDocument?id=1838>. The City's Speed Hump policy states, if 67% of the residents of the street are in favor of the speed humps installation, staff will present the item to the Planning Commission for its recommendation and to the City Council for its approval even if the basic criteria are not met.

City engineering staff evaluated Riachuelo using the criteria in the City's speed hump policy and found Riachuelo meets the basic criteria for the installation of speed humps/cushions. In addition, 69% of the residents on Riachuelo signed the petition and support the installation of speed humps or cushions.

#### Speed Humps/Cushions

Staff understands the importance of community input for street improvements that affect the functionality and character of neighborhoods. Staff conducted a neighborhood meeting with local residents on November 14, 2016 to discuss the following:

- Process for traffic calming and speed humps/cushions
- City's speed hump policy
- Traffic data, speeds, and criteria evaluations
- Speed humps versus speed cushions
- Neighborhood traffic issues
- Design alternatives for speed humps and cushions
- A holistic approach for the neighborhood

At the meeting, speed hump and speed cushion alternatives were discussed. Speed cushions are similar to speed humps with the major difference that speed cushions include wheel cutouts to allow emergency vehicles to pass unaffected, while reducing passenger car speeds. Speed cushions extend across one direction of travel from the centerline, with longitudinal gap provided to allow the wide wheel base of an emergency vehicle to avoid going over the speed cushion. By straddling the speed cushion, a fire engine is minimally impacted by the cushion and can maintain speed while traveling to an emergency. In addition, speed cushions are better for bicyclists since bicyclists can use the gap. During the neighborhood meeting, a majority of the attendees supported the speed cushion option.

Public feedback forms were provided to the 26 residents who attended the neighborhood meeting, and the majority of responses preferred speed cushions on Riachuelo. Specifically, staff received the following responses from 19 residents who completed the feedback forms for Riachuelo:



- Only 2 individuals selected or commented “no speed cushions or humps”
- 79 percent of the responses supported speed cushions or speed humps
- 58 percent of the responses preferred speed cushions
- 5 percent of the responses preferred speed humps
- 11 percent of the responses did not have a preference, and supported either speed cushions or speed humps

The proposed locations for 10 speed cushions on Riachuelo are provided in Attachment 2. The proposed speed cushions are placed to meet spacing guidelines and to avoid driveways. The proposed speed cushions can be purchased as a ready-made rubber product and installed by a contractor. The speed cushion plan is being reviewed by the Orange County Fire Authority (OCFA), and the speed cushion design will meet the OCFA speed cushion requirements.

The proposed speed cushions for Riachuelo support the implementation of the City’s Centennial General Plan. The following policies in the City’s General Plan reference traffic calming and the Model Design Manual for Living Streets:

- Policy M-1.19. Traffic Calming, “We design the circulation system serving new developments, and retrofit existing streets, where feasible, to control traffic speeds and maintain safety in all residential neighborhoods, in accordance with the City’s Street Design Standards and Traffic Calming Manual.”
- Policy M-1.11. Innovative Design, “We support the design principles in the City’s Design Manual of Living Streets.”

If the Planning Commission moves the project forward to the City Council, staff will recommend to City Council appropriating the required funds from the Traffic Calming budget.

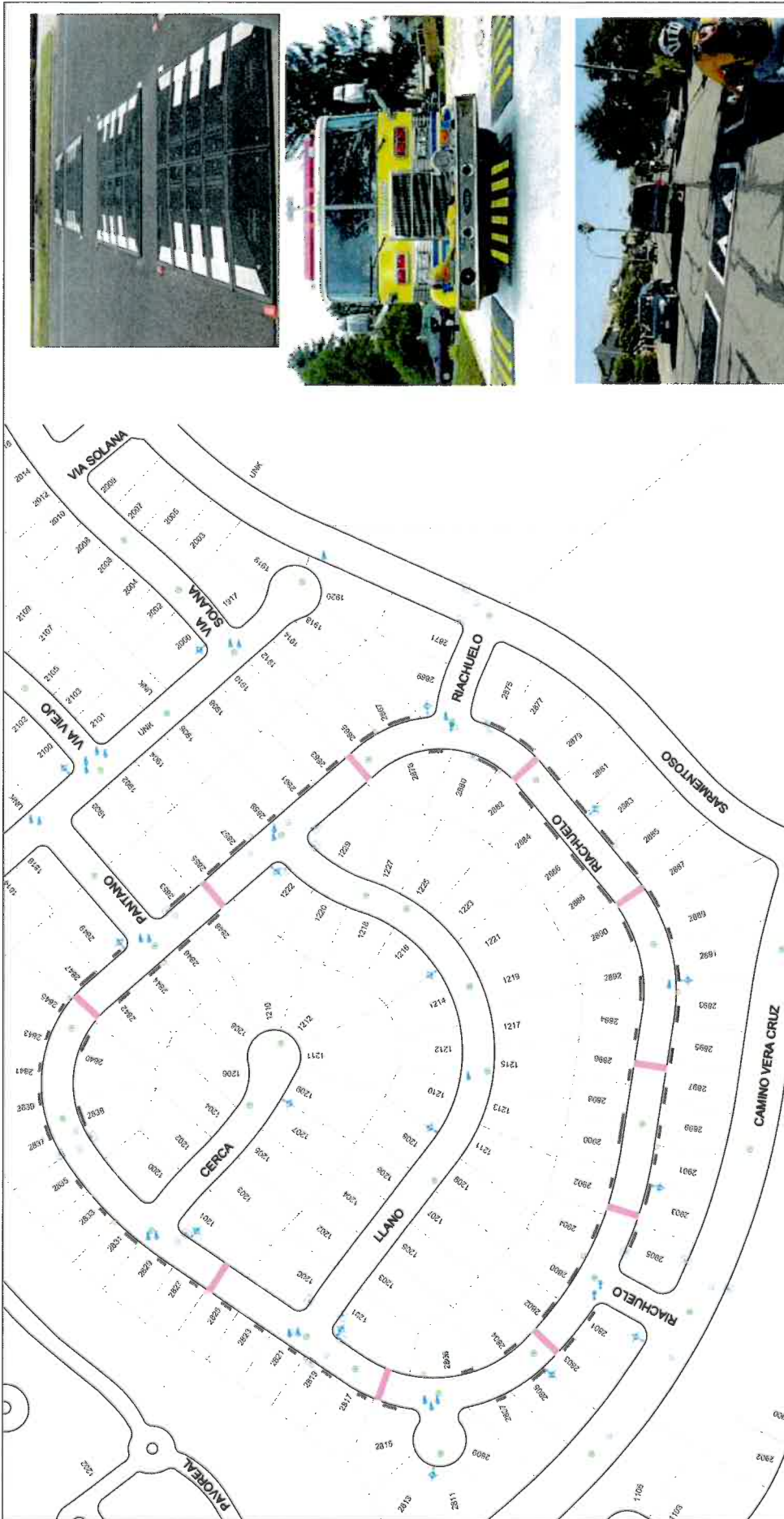
**RECOMMENDATION:**


STAFF RECOMMENDS THAT the Planning Commission forward to the City Council a recommendation to approve proposed speed cushions on Riachuelo as follows:

1. Speed cushion design concept for 10 speed cushions on Riachuelo as provided in Attachment 2.
2. Request Police Services to consider increasing speed enforcement in the neighborhood.

Attachments: 1. Location Map  
2. Proposed Speed Cushions







**CITY OF SAN CLEMENTE, CA**

**PROPOSED  
SPEED CUSHIONS ON RIACHUELO**

**LEGEND**

- PROPOSED SPEED CUSHION
- EXISTING DRIVEWAY
- EXISTING SEWER MANHOLE
- EXISTING STORM DRAIN MANHOLE
- EXISTING CATCH BASIN
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING STREET LIGHT

**REVISIONS**

REV #	DATE	DESCRIPTION	APPD

