



Memorandum Engineering Division

February 22, 2023

To: Planning Commission
From: Ryan Kim, Senior Civil Engineer-Traffic
Zak Ponsen, Assistant City Engineer
Subject: **Calle Del Cerro Bike Lane and Stop Sign Improvements**
Copies: Kiel Koger, Public Works Director – City Engineer
Jered Streeter, Police Administrative Sergeant

ISSUE:

A request to consider forwarding a recommendation to the City Council on bike lane and stop sign improvements for Calle Del Cerro

BACKGROUND:

Calle Del Cerro has undergone a recent tree replacement project and now is scheduled for an upcoming pavement rehabilitation and slurry seal project. Consistent with the City's General Plan goal to implement complete streets concepts where feasible, staff investigated options for reconfiguring the lane alignments to best balance the street for all users.

Consideration of Bicycle Lane Improvements:

Calle Del Cerro is listed as a Local Collector street and connects to Avenida Pico to the west/northwest and to Avenida La Pata at its eastern terminus. The City's adopted Bicycle and Pedestrian Master Plan (BPMP) includes adding Class 3 bicycle facilities to the lower segment of Calle Del Cerro between Avenida Pico and the western intersection of Avenida Vista Montana. Class 3 facilities are shared vehicle lanes and are utilized when there is not enough available street right of way to construct either Class 1 or Class 2 improvements. Improvements in this lower segment of Calle Del Cerro were identified in the BPMP to help provide connections to Clarence Lobo Elementary School and Rancho San Clemente Park.

Although not included in the BPMP, staff is also proposing to add Class 2 bicycle facilities to most of the remaining segments of Calle Del Cerro. A Class 2 lane in the uphill direction will help serve as a climbing lane for bicyclists. The addition of buffered Class 2 bicycle lanes will narrow the travel lanes in both directions and should help reduce vehicle travel speeds. Wide roads promote higher vehicular speeds¹, and higher speeds may negatively influence the safety and quality of life for the adjacent neighborhood.

The proposed striping design includes narrowing travel lanes to 11 feet, maintaining left turn lanes at intersections, installing 5-foot bicycle lanes where feasible, and installing bike lane buffers where feasible.

Travel lane widths of 10 feet generally provide adequate safety in urban settings while discouraging speeding.² Studies have shown that traffic speed is dependent upon how comfortable the driver feels, and therefore, reducing the travel lane widths would increase the side friction and may lower traffic speeds.³

The benefits of implementing the bike lanes include:

Benefits

1. Increased potential to help manage collector street traffic speeds due to increased perceived “friction” resulting from the narrower vehicle travel widths.
2. Improved environment and more room for bicyclists.
3. Visually reminds motorists of bicyclists’ right to the street⁴.
4. Increased bicyclist’s comfort and confidence on busy streets⁴.
5. Increased total capacity of street carrying mixed bicycle and motor vehicle traffic⁴.
6. Improved sight distance at intersections.
7. Maintains existing left turn lanes.

It should be noted that the City is currently in the process of two on-going studies for traffic and roadway safety. The Complete Streets Safety Assessment (CSSA) is being done by UC Berkeley. The Local Roadway Safety Plan (LSRP) is being done by Kimley Horn. These studies are nearly complete and staff is implementing some of their recommendations via these proposed improvements. Both studies note a lack of bicycle facilities on Calle Del Cerro. Staff expects to bring both these studies to the Planning Commission in the next couple of months.

Consideration of Stop Sign Improvements at the eastern intersection of Calle Del Cerro and Avenida Vista Montana (East):

Avenida Vista Montana is listed as a Local Collector street and connects with Calle Del Cerro in two locations. The eastern connection is located near the crest of the Calle Del Cerro slope. City staff has received complaints from the residents indicating concerns regarding traffic speeds, safety, and pedestrians on Calle Del Cerro. Staff has also received a request for a crosswalk at the nearby intersection of Calle Sol. The crosswalk request raised the issue of this area being a school bus drop off and pick up stop. Staff would not be supportive of a crosswalk at their community’s entrance (Calle Sol) due to it being an uncontrolled intersection on an approximate 8% grade. The CSSA study has also reviewed this location, and noted the poor sight distance due to the vertical and horizontal curves of the street.

The CSSA study includes potential modifications to the Calle Del Cerro intersection with Vista Montana for a potential all-way stop sign. City staff conducted a field study to determine if additional stop signs are warranted. During the study period, the actual number of vehicles coming from Avenida Vista Montana did not meet the qualifications for adding stop signs on Calle Del Cerro, but staff noted the line of sight distance of the crest of the hill poses an issue when vehicles are travelling at

the 85th percentile speed of 40 mph or higher. Due to the potential for line of sight/stopping sight distance issues and the request for a crosswalk in the vicinity, staff can support the addition of both the stop sign and crosswalk improvements. Due to the vertical and horizontal curves of the street, the addition of stop signs in both travel directions on Calle Del Cerro would include advance warning flashing signs to alert drivers of the upcoming intersection.

This meeting was noticed to residents within a 300 feet radius of the project area to inform the residents that the subject would be considered at this meeting, and the City Council meeting on March 7, 2023. Additionally, notices were sent to all ~1600 Rancho San Clemente properties within their HOA financial mailings.

RECOMMENDATION:

STAFF RECOMMENDS THAT the Planning Commission:

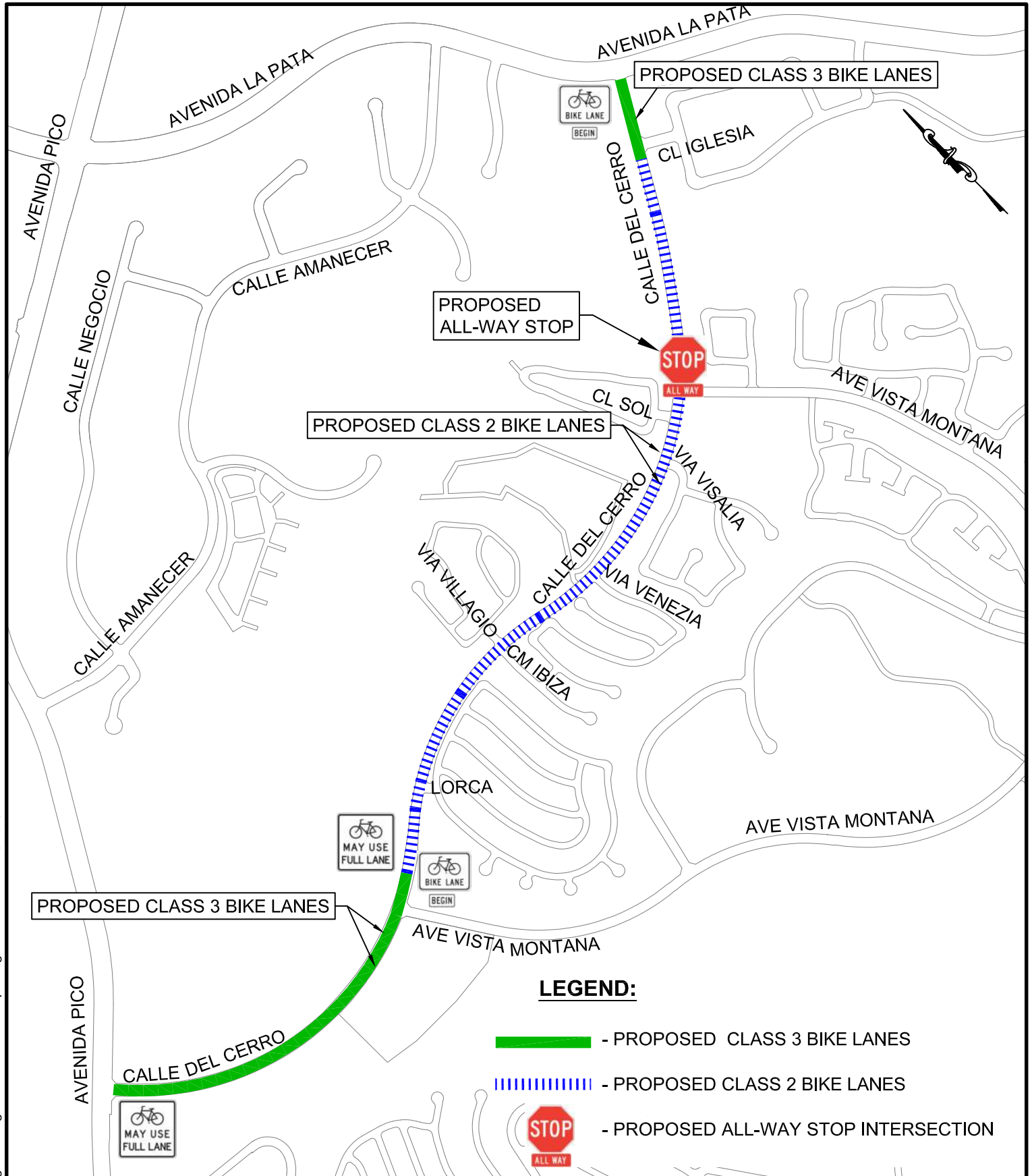
1. Forward to the City Council a recommendation to approve restriping Calle Del Cerro for bicycle lane facilities; and
2. Forward a Resolution to the City Council for the addition of an all-way stop and crosswalk at the intersection of Avenida Vista Montana as shown in the Attachments and with minor revisions as needed to conform with California Manual on Uniform Traffic Control Devices.

Attachments:

- 1 Location Map
2. Proposed Striping Plan including bike lanes




Footnotes:

1. Fitzpatrick, Kay et al, "Design Factors That Affect Driver Speed on Suburban Arterials," Research Report 1769-3, Texas Transportation Institute, June 2000.
2. "Urban Street Design Guide", National Association of City Transportation Officials (NACTO), October 2013.
3. Relationship Between Lane Width and Speed, Review of Relevant Literature, by the Parsons Transportation Group, September 2003, https://nacto.org/docs/usdg/review_lane_width_and_speed_parsons.pdf
4. "Urban Bikeway Design Guide", National Association of City Transportation Officials (NACTO), March 2014.



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LEGEND:

-  - PROPOSED CLASS 3 BIKE LANES
-  - PROPOSED CLASS 2 BIKE LANES
-  - PROPOSED ALL-WAY STOP INTERSECTION

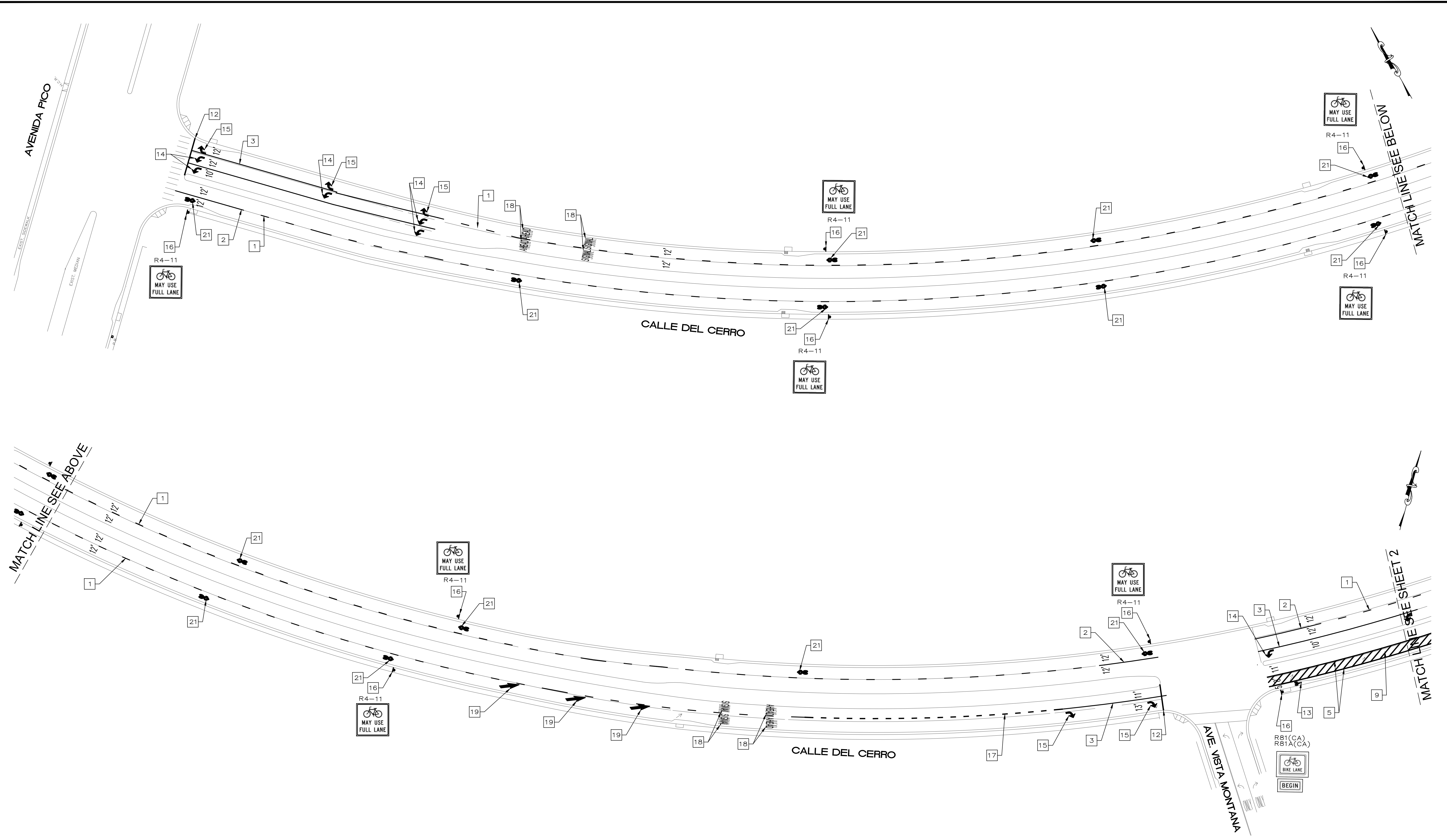


CITY OF SAN CLEMENTE
 910 Calle Negocio
 San Clemente, CA 92673
www.san-clemente.org

LOCATION MAP

**CALLE DEL CERRO
 BIKE LANES &
 STOP SIGN IMPROVEMENT**

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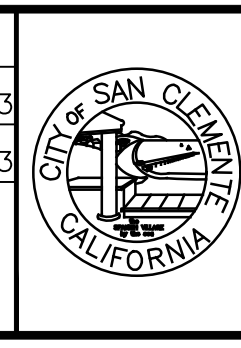


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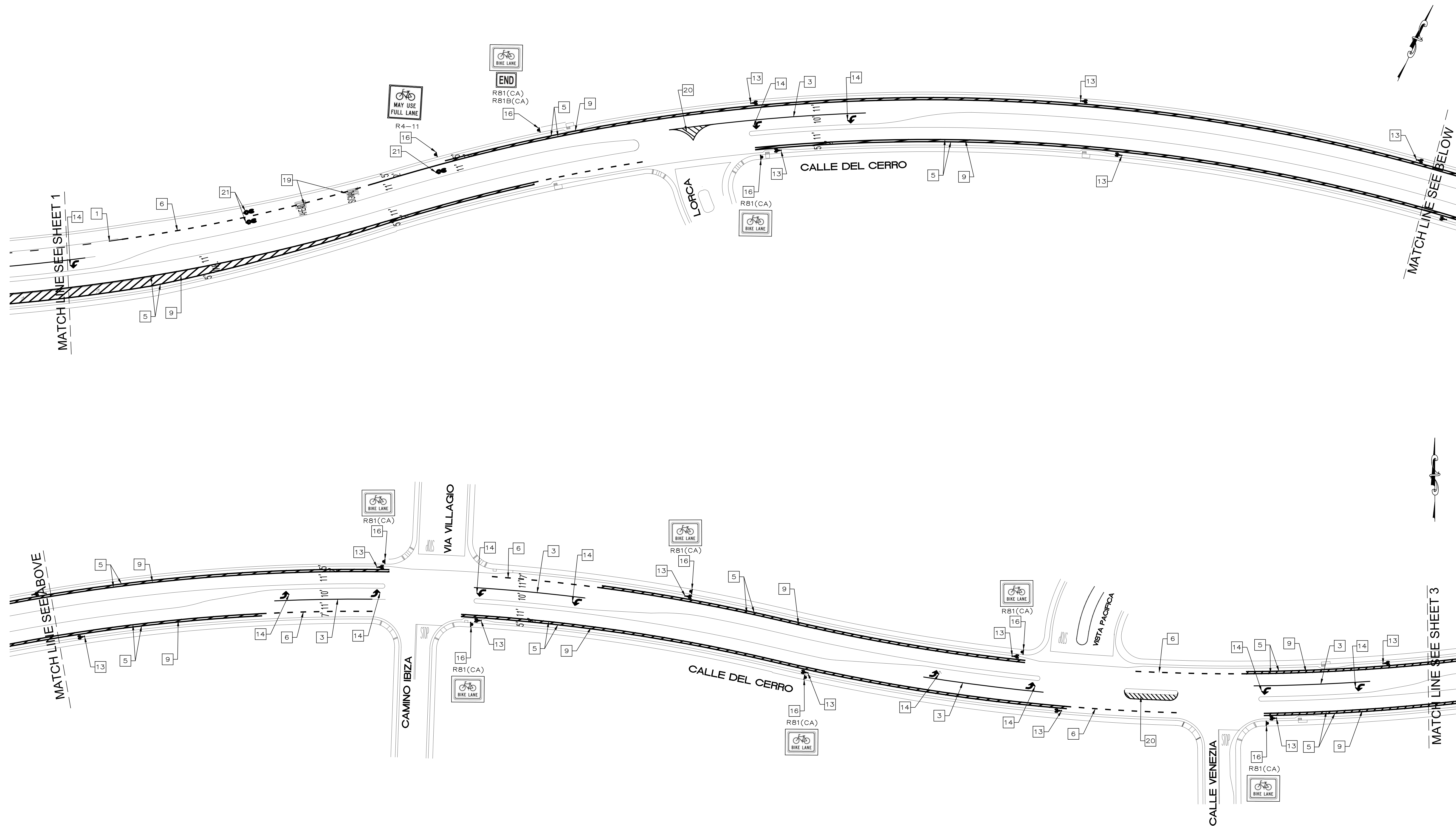
STRIPING AND SIGNING PLAN
STREET IMPROVEMENT FOR CALLE DEL CERRO
 (Ave. Pico to Ave. La Pata)
 Project No. 12306

CITY OF SAN CLEMENTE

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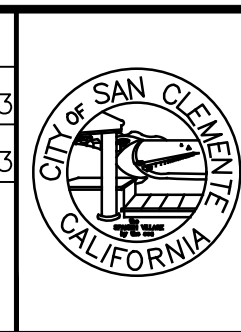


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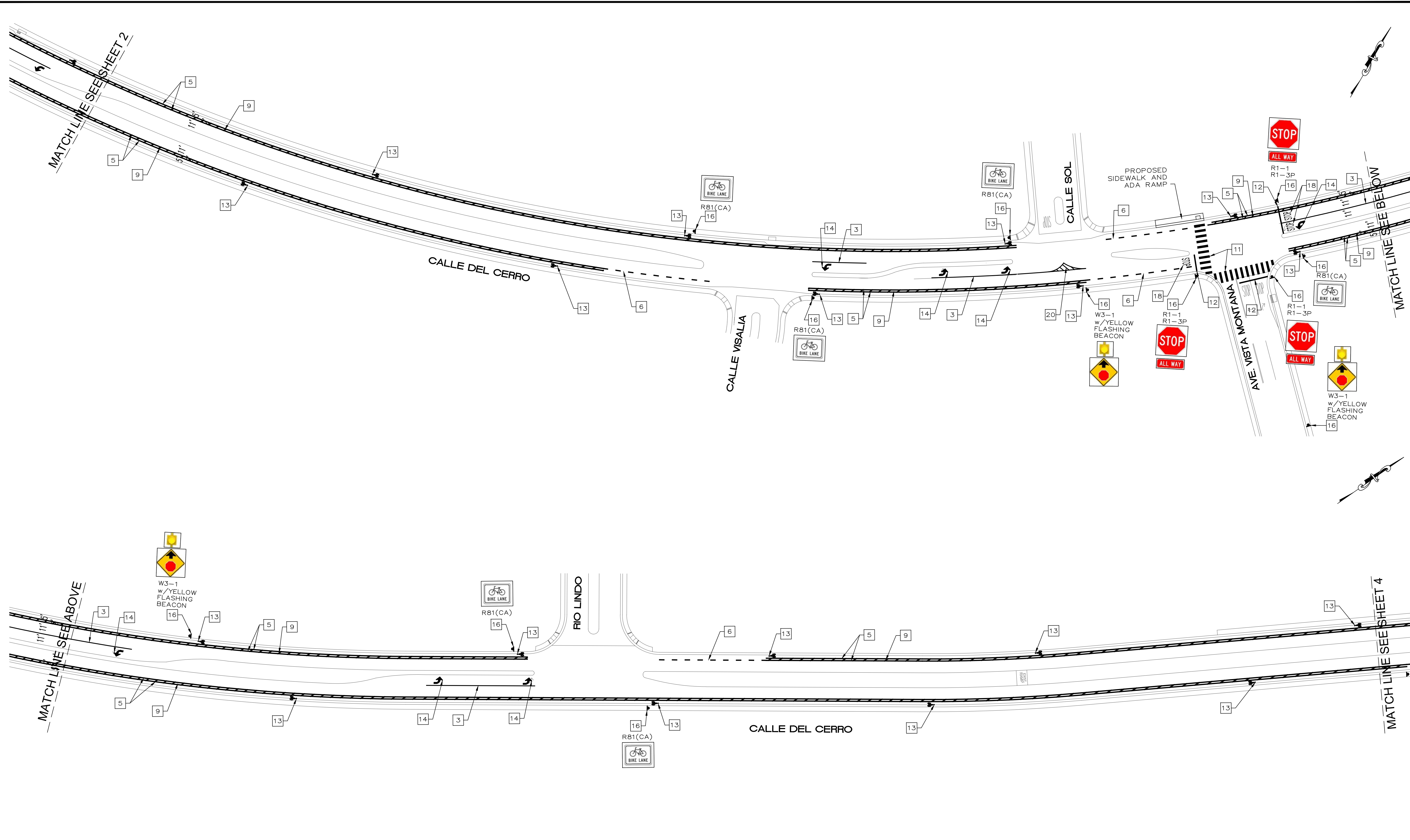
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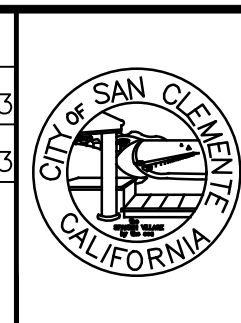


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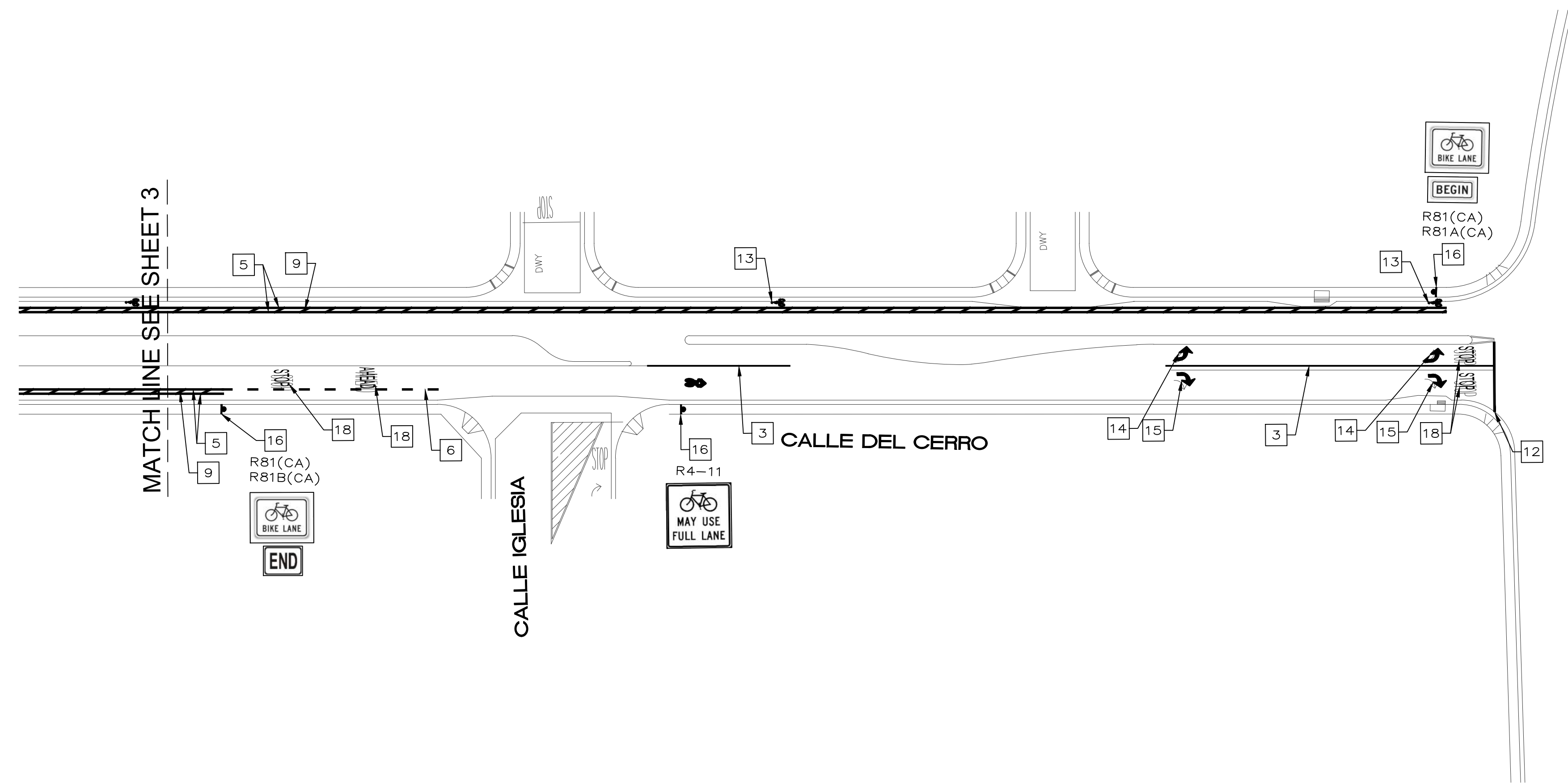
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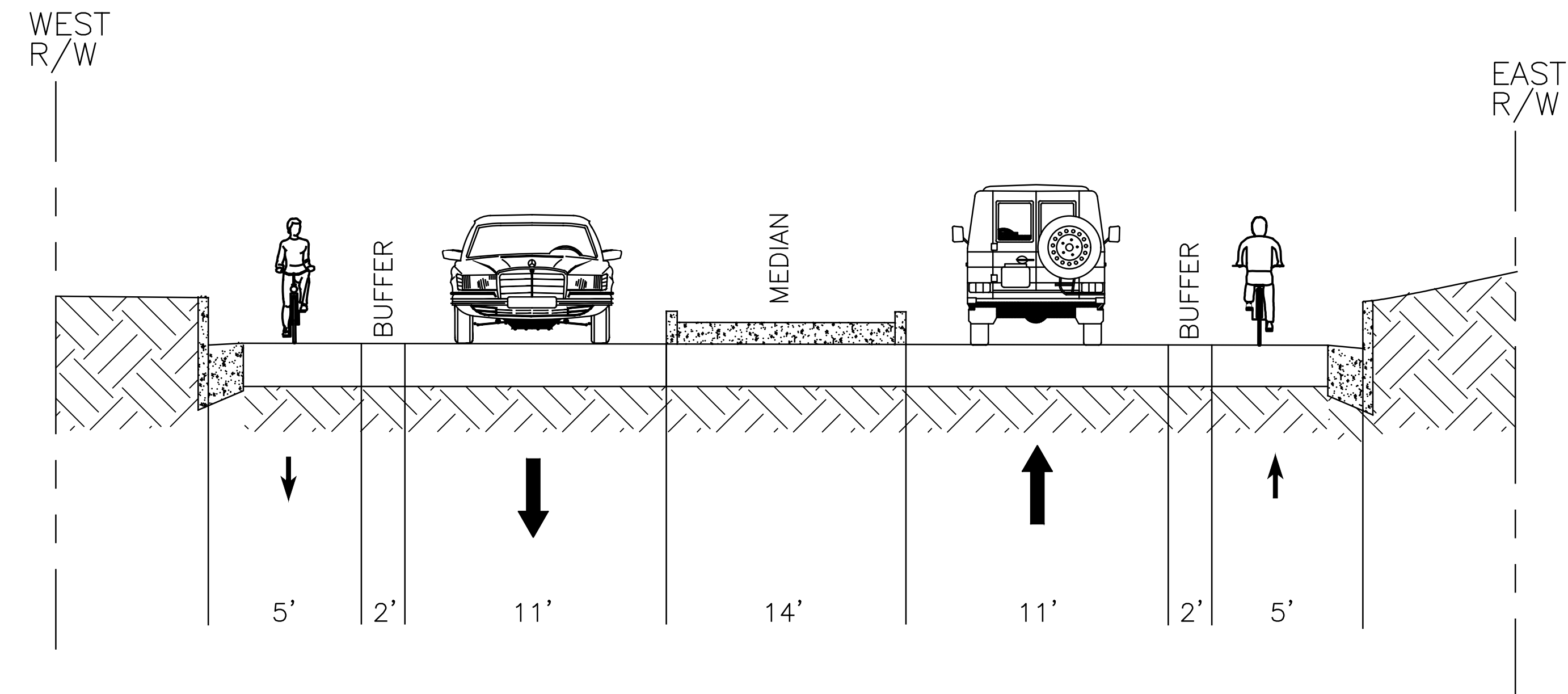
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STRIPING AND SIGNING NOTES:

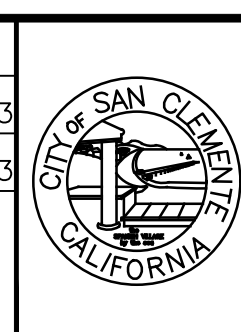
- 1 INSTALL 4" WHITE LINE PER CALTRANS STD. PLAN A20A DETAIL 9
- 2 INSTALL 4" SOLID WHITE LANE LINE (50' LONG) WITH RPM
- 3 INSTALL 8" WHITE CANALIZING LINE PER CALTRANS STD. PLAN A20D DETAIL 38
- 4 INSTALL LEFT EDGELINE PER CALTRANS STD. PLAN A20B DETAIL 26
- 5 INSTALL 6" WHITE BIKE LANE LINE PER CALTRANS STD. PLAN A20D DETAIL 39
- 6 INSTALL 6" WHITE BIKE LANE DROP LINE PER CALTRANS STD. PLAN A20D DETAIL 39A
- 7 INSTALL 4" WHITE RIGHT EDGELINE PER CALTRANS STD. PLAN A20B DETAIL 27B
- 8 INSTALL 4" WHITE LANE LINE EXTENSION PER CALTRANS STD. PLAN A20D DETAIL 40
- 9 INSTALL 12" WHITE DIAGONAL MARKING AT 45°, SPACING AT 40' O.C.
- 10 INSTALL YELLOW MEDIAN ISLAND STRIPE PER CALTRANS STD. PLAN A20B DETAIL 29
- 11 INSTALL 24" WHITE CONTINENTAL CROSSWALK PER CSC STD. NO. ST-21
- 12 INSTALL 12" WHITE LIMIT LINE PER CALTRANS STD. PLAN A24E
- 13 INSTALL BIKE LANE SYMBOL WITH PERSON PER CALTRANS STD. PLAN A24C
- 14 INSTALL TYPE IV (L) ARROW PER CALTRANS STD. PLAN A24A
- 15 INSTALL TYPE IV (R) ARROW PER CALTRANS STD. PLAN A24A
- 16 INSTALL SIGN AND POST
- 17 INSTALL 4" LANE DROP LINE PER CALTRANS STD. PLAN A20C DETAIL 37B
- 18 INSTALL PAVEMENT MARKING WORDS PER CALTRANS STD. PLAN A24D
- 19 INSTALL TYPE VI RIGHT LANE DROP ARROW PER CALTRANS STD. PLAN A24A
- 20 INSTALL 12" WHITE DIAGONAL MARKING AT 45°, SPACING AT 4' O.C.
- 21 INSTALL SHARED ROADWAY BICYCLE MARKING PER CALTRANS STD. PLAN A24C



**TYPICAL SECTION with PROPOSED BIKE LANES
LANES
CALLE DEL CERRO**

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