



City of Mission Viejo

Memorandum

Date: April 14, 2025

To: Planning and Transportation Commission

From: Mario Gutierrez, Transportation Engineer

Subject: **Traffic Control at the Intersection of Marguerite Parkway at La Sierra Drive**

RECOMMENDED ACTION

Recommend to the City Council approval of a new FY25-26 Capital Improvement Project (CIP) for the installation of a left-turn acceleration lane at the intersection of Marguerite Parkway at La Sierra Drive.

DISCUSSION

At the January 2025 Traffic Committee meeting, Staff presented a City-initiated request to review the traffic control at the intersection of Marguerite Parkway at La Sierra Drive and determine potential traffic control improvements, specifically to mitigate safety concerns associated with the left-turn movement from La Sierra Drive onto northbound Marguerite Parkway. See Exhibit A for a location map.

Staff noted that Marguerite Parkway at La Sierra Drive is a three-legged intersection. Marguerite Parkway is a north-south four-lane divided roadway and is classified as a “primary arterial” in the City of Mission Viejo’s General Plan. Marguerite Parkway’s posted speed limit is 45 mph. It is primarily used by the community to access other major arterials that connect to the I-5 freeway. Marguerite Parkway features sidewalks, bike lanes, raised medians, and left-turn pockets. The center medians include various landscaping features and utilities. La Sierra Drive is an east-west local street and is a local road for the adjacent residential neighborhood to the west. There is a one-way stop for vehicles traveling on La Sierra Drive as they approach Marguerite Parkway. There is an existing bus stop on the east side of Marguerite Parkway. Finally, there is a “Side Road Ahead” warning sign with a yellow flashing beacon for the southbound approach. Exhibit B illustrates the existing intersection geometry, and number of lanes along each roadway at this location.

Staff noted that the scope of work for the *2021 Citywide Systemic Safety Analysis Report (SSAR)* conducted a signal warrant analysis for the study intersection. An engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the study intersection was performed to determine whether installation of a traffic control signal is justified. There are eight (8) different traffic signal warrants per the California Manual on Uniform Traffic Control Devices (CAMUTCD), and the installation of a traffic signal should be considered if one or more warrants

are satisfied. Based on the analysis, three (3) traffic signal warrants were met. It should be noted that all warrants met are vehicular volumes warrants, indicating that large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. Staff noted that they pursued several grants to fund the installation of the traffic signal; however, all the grants required pedestrian volume or crash experience warrants to be met. For reference, the crash experience warrant is met when five (5) or more collisions, types susceptible to correction by a traffic signal (broadside collisions), are reported within a 12-month period. Over the study period from 2019 to 2023, the study intersection experienced at most two (2) broadside collisions over a 12-month period.

Staff then presented the alternatives being considered, a traffic signal and a left-turn acceleration lane. The advantages and disadvantages of each option were presented. The traffic signal option offers the maximum control for all approaches, may reduce broadside collisions, provides direct pedestrian access to the bus stop, and provides crossing of minor street movements through the heavy Marguerite Parkway traffic volumes. However, there are some disadvantages to the traffic signal. High cost of equipment and installation (\$500K+), constructability challenges, potential sight-line issues, potential for increased number of rear-end collisions, and diversion of traffic towards La Sierra Drive were some of the disadvantages presented.

Some of the advantages of the left-turn acceleration lane include lower cost of equipment and installation (~\$250K), promotes two-stage left-turn onto Marguerite Parkway, may reduce minor street delay, and may reduce broadside collisions. It was noted that there have been no reported broadside collisions at the intersection of Alicia Parkway at Lanzarote since the installation of a left-turn acceleration lane. The disadvantages are it may cause some initial confusion with motorists, motorists along Marguerite Parkway may not expect traffic to merge from the median, removal of landscaping, and diversion of traffic onto La Sierra Drive.

The minutes from the January 2025 Traffic Committee meeting are provided in Appendix A. The PowerPoint presentation from the January 2025 Traffic Committee meeting is provided in Appendix B.

During the public comment period, a total of 13 residents spoke on the agenda item. Most of the residents spoke in support of the City making modifications to the intersection to improve safety. Residents cited past traffic collisions and close calls when driving through the intersection. Of the two alternatives, the left-turn acceleration lane was the most requested. Other requested improvements included restricting left-turns from La Sierra and trimming landscaping to improve sight distance visibility. Only one resident spoke in opposition to making any changes to the intersection. A summary of the public comments is provided in Appendix C.

Conclusion

Given Public Works staff's review of both alternatives and initial public feedback, Staff recommends the Commission to recommend to the City Council approval of a new FY25-26 Capital Improvement Project (CIP) for the installation of a left-turn acceleration lane at the intersection of Marguerite Parkway at La Sierra Drive.

Attachments

1. Exhibit A – Location Map
2. Exhibit B – Existing Conditions
3. Appendix A – January 2025 Traffic Committee Minutes
4. Appendix B – January 2025 Traffic Committee Presentation
5. Appendix C – January 2025 Traffic Committee Resident Comment Summary

Location Map

Study Area

Marguerite Parkway at La Sierra Drive





MINUTES

Traffic Committee of the City of Mission Viejo Planning and Transportation Commission January 31, 2025

A regular Meeting of the Traffic Committee of the City of Mission Viejo Planning and Transportation Commission was called to order at 2:02 p.m., Friday, January 31, 2025, at 200 Civic Center Mission Viejo, California.

A complete copy of the agenda for the meeting containing all items as shown herein was posted by 2:00 p.m. on January 28, 2025, on the outdoor bulletin board at City Hall. Copies were also posted at the Montanoso Recreation and Fitness Center, 25800 Montanoso Drive, and the Norman P. Murray Community and Senior Center, 24932 Veterans Way.

Present: Commissioner Brewer
Commissioner Molinari

Staff Present: Mark Chagnon, Public Works Director
Mario Gutierrez, Transportation Engineer
Brett Canedy, Transportation Analyst
Tom Vago, OCSO

Absent: *None*

Agenda Items:

1) Approve November 1, 2024 Committee Minutes

The minutes were received and filed by the Committee.

2) All-Way Stop Signs on Avenida Calidad at Calle Ganador

Staff presented a request for all-way stop signs at the intersection of Avenida Calidad and Calle Ganador. The request came from a resident whose house was damaged in a traffic collision when a vehicle did not stop and drove into the homes across the “T” intersection. Staff noted that the warrants for the all-way stop sign installation were not met, but a one-way stop sign warrant based on sight distance was met indicating that a stop sign could be installed at the end of Calle Ganador where it meets Avenida Calidad. Multiple residents spoke expressing a concern for safety at the intersection and in support of making improvements to increase safety. Residents also spoke about some landscaping that needs to be trimmed. Another resident spoke in opposition to any changes stating that the traffic collision was an isolated incident. The Committee expressed concern about placing a one-way stop sign based on sight distance when that wasn’t a contributing factor to the collision that occurred. The Committee directed staff to install a “T” intersection warning sign on Calle Ganador and to install between 50 and 100 feet of centerlines on all three approaches to the intersection of Avenida Calidad and Calle Ganador. The Committee also requested that staff reach out to the resident with the overgrown landscaping that needs to be trimmed.

3) Review of Traffic Control on Marguerite Parkway at La Sierra Drive

Staff presented an overview of traffic control options for the intersection of Marguerite and La Sierra. The presentation primarily focused on existing conditions, historical collision data, and the construction of either a traffic signal or a left-turn acceleration lane. Staff also outlined current traffic flows at the intersection including a discussion of average daily traffic volumes and peak-hour turning movement counts. Staff also presented the advantages and disadvantages of the traffic signal and acceleration lane option. There was also a discussion of restricting left turns from La Sierra onto northbound Marguerite. Thirteen residents addressed the Traffic Committee about traffic control at this intersection. The majority of the residents spoke in support of the City making modifications to the intersection to improve safety. Residents cited past traffic collisions and close calls when driving through the intersection. Construction of a traffic signal or a left turn acceleration lane were the most common requested improvements. Other requested improvements included turn restrictions and trimming landscaping to improve sight distance visibility. Only one resident spoke in opposition to making any changes to the intersection. The Committee directed staff to compile the information and comments collected for future discussions of potential intersection improvements at the Planning & Transportation Commission and at City Council.

4) Updates

Staff provided brief updates on the La Paz Bridge Widening Project and the MV Shuttle.

ADJOURNMENT

At the hour of 3:52 p.m., with no further business to come before the Committee at this session, the Committee adjourned the meeting.



Brett Canedy, Transportation Analyst

Marguerite Parkway at La Sierra Traffic Control



Traffic Committee Meeting

January 31, 2025



Location Map

Study Area

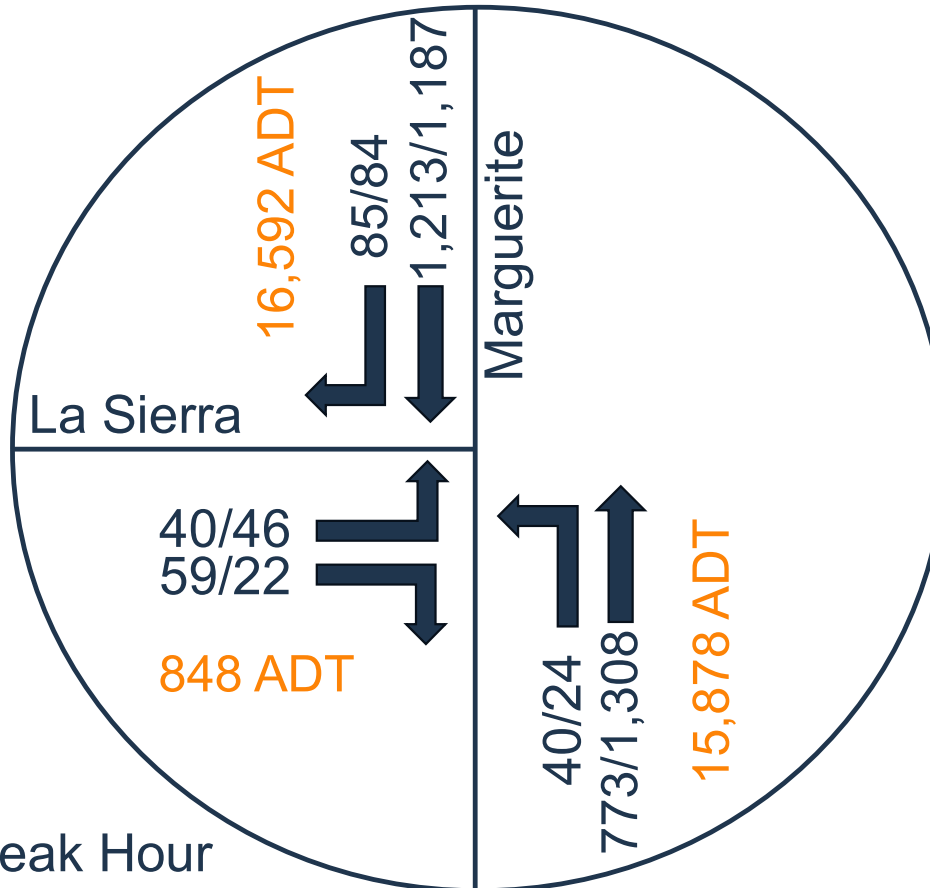
Marguerite Parkway at La Sierra Drive



Existing Conditions



Turning Movement Counts



AM Peak Hour/PM Peak Hour
ADT – Average Daily Traffic



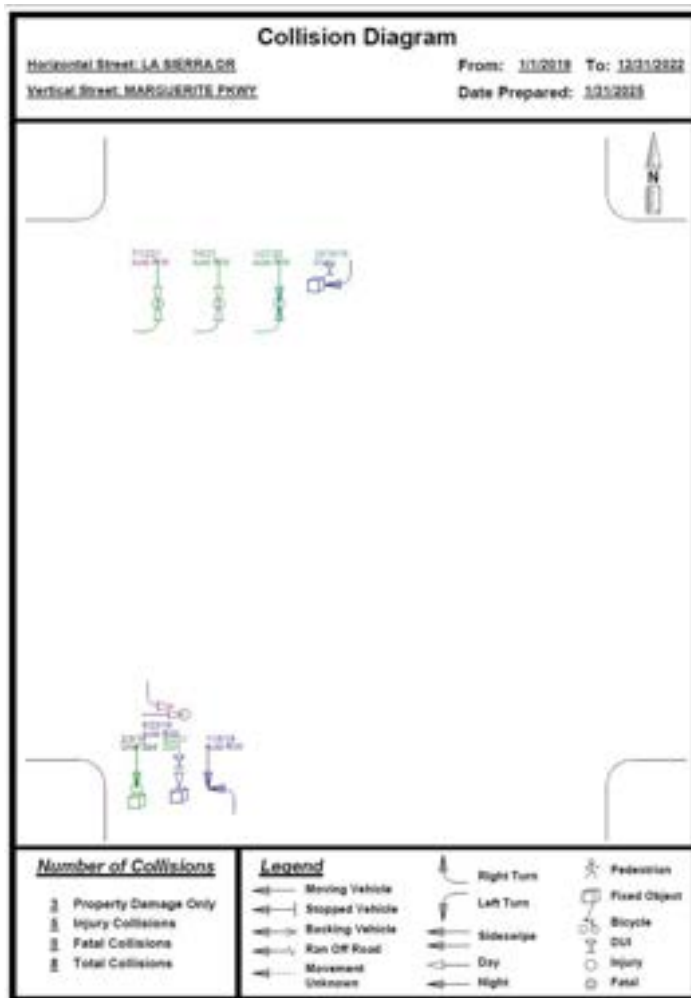
Traffic Signal Warrant Analysis

2021 Citywide Systemic Safety Analysis Report

- Eight-Hour Vehicular Volume - MET
- Four-Hour Vehicular Volume - MET
- Peak Hour Vehicular Volume - MET
- Pedestrian Volume – NOT MET
- School Crossing – NOT MET
- Crash Experience (5 or More within 1-Year) – NOT MET

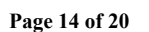
Only Vehicular Volume Warrants Met

Collision History – 2019-2023



of Collision (Broadside) Susceptible to Correction By Traffic Signal

- 2019 - 1
- 2020 - 0
- 2021 - 2
- 2022 - 0
- 2023 - 1



Traffic Signal – Advantages/Disadvantages

Advantages

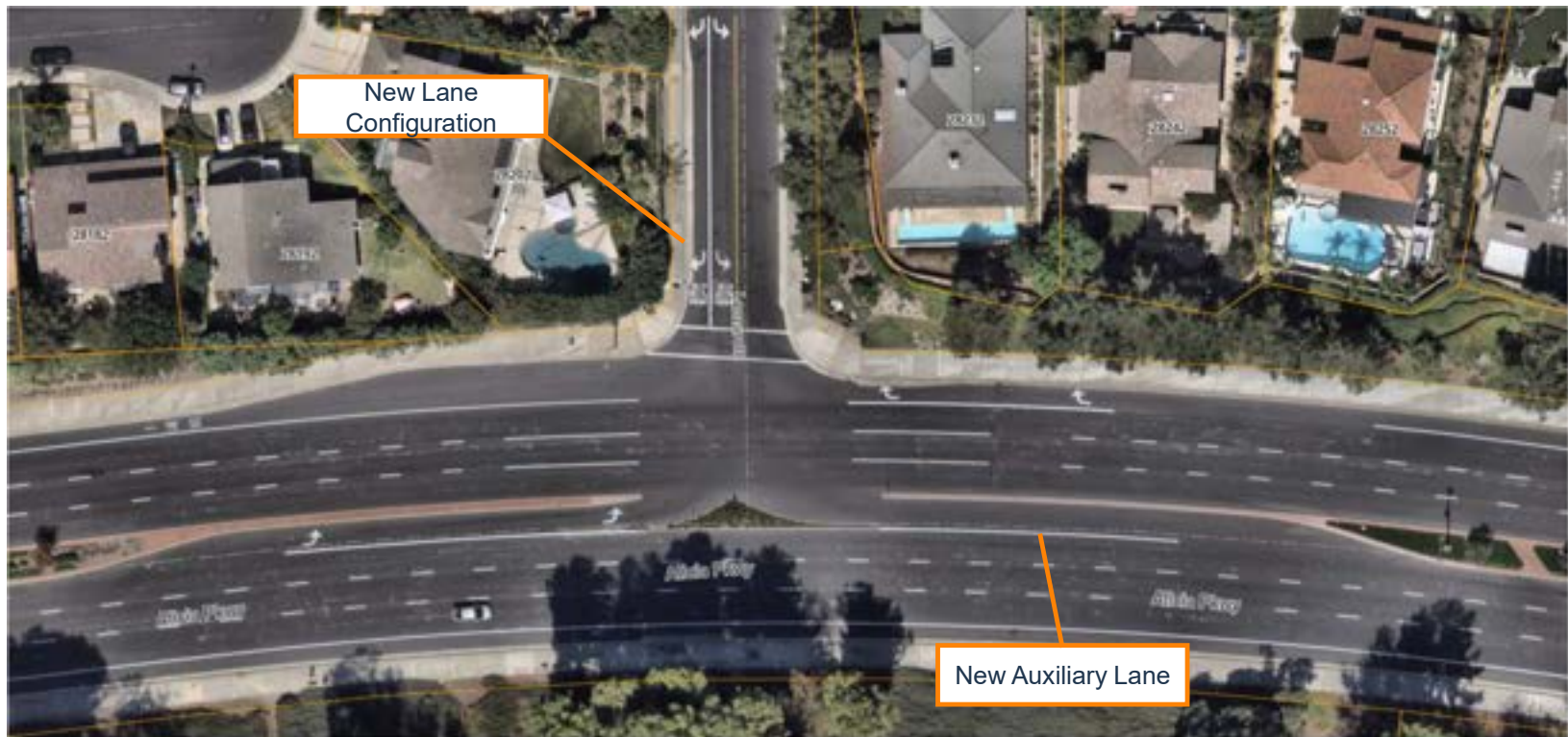
- Offers maximum control for all approaches
- Assigns right-of-way for both vehicles, pedestrians, & bicyclists
- Provides crossing of minor movements through heavy traffic flows
- May reduce broadside collisions (4 over 6 Year-Period)
- Provides direct pedestrian crossing to bus stop

Disadvantages

- High cost of equipment and installation (\$500k+)
 - Constructability challenges on eastside of Marguerite due to limited ROW
- Located along a horizontal curve, potential sight line issues
- May significantly increase rear-end collisions
- Adds additional delay to Marguerite Parkway (33,000 ADT vs. 1,000 ADT)
- Closely-spaced to Felipe/Marguerite, potential queueing issues
- Potential for red-light running.
- Diversion of traffic towards La Sierra Drive

Left-Turn Acceleration Lane

- An auxiliary lane that allows left-turning vehicles from the minor road to accelerate along the major road before merging into the through lane.



Alicia Parkway at Lanzarote (Existing Example)

Left-Turn Acceleration – Advantages/Disadvantages

Advantages

- Lower cost compared to traffic signal (~\$200K)
- Addresses misjudgment of gaps, may lower impatience
- Promotes a two-stage left turn onto the major road.
- May reduce minor road delay
- May reduce broadside collisions (4 in Analysis Period)
 - No reported broadside collisions at Alicia/Lanzarote since installation (2020-2023)

Disadvantages

- May cause confusion, motorists may not yield when entering mainline
- Mainline traffic may not be aware of the left-turn acceleration lane
- Increase in supplemental signing & striping
- Diversion of traffic to residential street
- Removal of landscaping and potential impact to streetlight & irrigation utilities

Resident Comment

To Whom it May Concern,

Please let me start this email by stating my thank you for organizing a meeting for the traffic control on the above crossing.

Unfortunately I am not sure if I will be [...] on time to attend this meeting, but it is too important to not send you an email and let you know the opinions of the residents of your town affected by this intersection.

I am attaching a couple pages of signatures in favor of a traffic signal/crosswalk.

1. There is NOT ONE PERSON in the neighborhood, NOT ONE PARENT driving their kid to and from Viejo Elementary, NOT ONE MEMBER of the gym at La Sierra who does not want a signal to cross at La Sierra.
2. High School students need to cross Marguerite Parkway to come home on the Mission Shuttle.

It is impossible for them to cross Marguerite, unless they walk all the way down to Crown Valley or cross at Felipe, which means crossing Felipe, then Marguerite and then La Mancha. This intersection in itself is dangerous, I do it a lot and often have to wait until 3 to 4 seconds are left on the pedestrian signal to cross Felipe, as right turning cars simply do not watch for pedestrians and just turn.

3. Do we have to wait for a kid to be killed? A police officer was killed there years ago.

I am saying it just like that. Mothers are scared to make a left turn from La Sierra onto Marguerite and avoid this intersection.

I am so thankful you organized a meeting. I am here to assist in any way. I can get hundreds of signatures, anything you need. But I work. [...]



QUESTIONS?

Public Comment Summary

An overview of each resident comment is summarized below:

- **Resident #1:** Feels intersection is unsafe. Avoids intersection if possible. States some fender benders go unreported. Has wanted a traffic signal here for decades.
- **Resident #2:** Feels the main issues is northbound left-turn movement due to landscaping issues. Would like the City to look at trimming some of the landscaping.
- **Resident #3:** Does not like any option and would like to keep the existing conditions. Feels like the issue is impatient drivers.
- **Resident #4:** Questioned if restricting the left-turn from La Sierra is an option.
- **Resident #5:** Stated safety improvements are needed, but there is no clear option.
- **Resident #6:** Concerned about jaywalkers, high speeds along Marguerite Parkway, and traffic flows along Marguerite Parkway. Prefers the left-turn median option.
- **Resident #7:** Stated he has seen multiple accidents at the intersection. Prefers to restrict left-turns from La Sierra.
- **Resident #8:** Prefers the left-turn acceleration lane option since it feels like the middle ground option.
- **Resident #9:** Stated he has seen many accidents and would like to see something done.
- **Resident #10:** Stated that he has lived in the area for 36 years and has always felt it was too risky to turn left from La Sierra. While he wants safety improvements installed, he sees issues with all the options presented.
- **Resident #11:** Stated his main concern is regarding the budgetary impacts.
- **Resident #12:** Feels unsafe and prefers to use the La Manch traffic signal. Prefers the left-turn acceleration lane or restricting left-turns from La Sierra. Stated there are sight line issues from the northbound left-turn movement.
- **Resident #13:** Questioned the timeline of the improvements.