



## Council Agenda Correspondence

**DATE:** February 4, 2025

**TO:** Mayor and Council

**FROM:** Matt Horn, Public Works Director

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**VIA:** Whitney McDonald, City Manager

**SUBJECT:** ITEM 7A – STUDY SESSION ON HIGUERA COMPLETE STREETS PROJECT

Staff received the following questions, regarding the Higuera Complete Streets Project. The questions are below with staff's responses shown in *italics*:

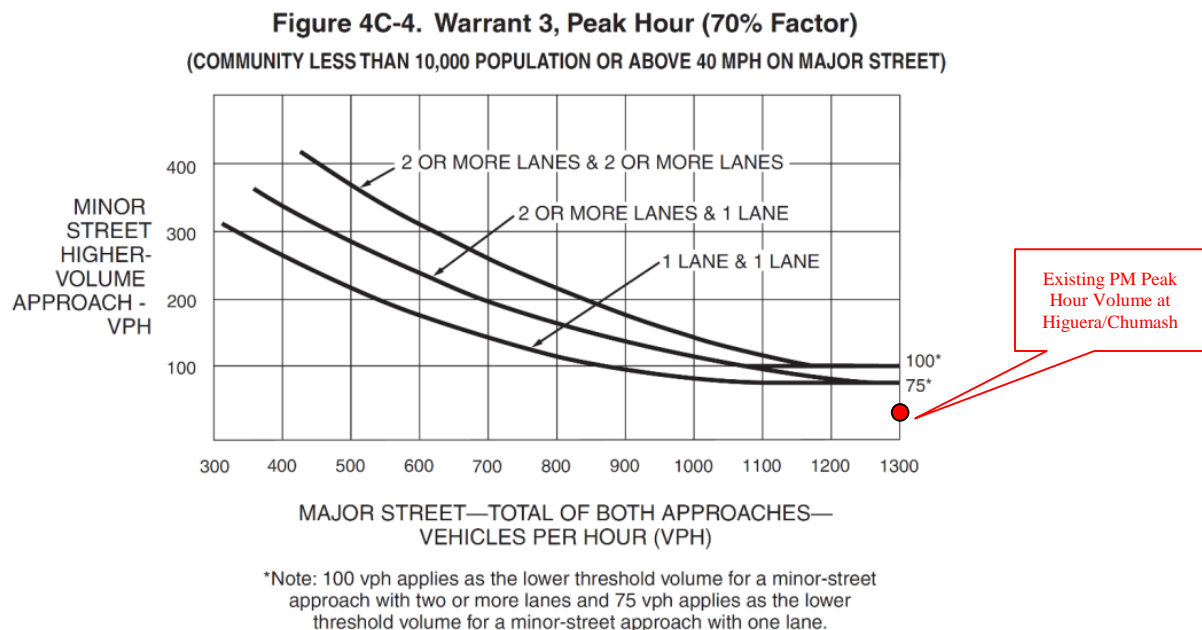
- 1) The report states that Chumash Dr. does not meet criteria for a traffic signal. How close is it to the criteria? Is the issue traffic volume, collision history, or other factors? Can average age of the resident in the neighborhood be considered? My understanding is that traffic engineers can waive MUTCD warrants when other factors are present?**

*Current conditions at this intersection were not particularly close to meeting required warrants for installation of a traffic signal pursuant to the California Manual on Uniform Traffic Control Devices (CAMUTCD). For reference, to satisfy warrants for signalization based on volume, the Peak Hour Warrant on a 40 mph street would require side street volumes that exceed 100 vehicles per hour (if two lanes per direction are present on the major street) or 75 vehicles per hour (if one lane per direction is present on the major street). Current peak hour approach volumes on the minor street (Chumash Drive) are 26 vehicles/hour during the AM peak hour and 31 vehicles/hour on during the PM peak hour period. Current volumes on the major street (Higuera Street) meet the required thresholds for signalization, but side street volumes (Chumash Drive) would need to more than double to meet volume-based warrants for signalization. The chart below shows existing volumes at Higuera/Chumash compared to Peak Hour warrant thresholds.*

*In terms of crash experience, the CAMUTCD requires there to be at least five (5) collisions within a 12-month period before installation of a signal is warranted based on collision history. In the most recent 10-year history, there has been one crash reported at the Higuera/Chumash intersection itself—this was a fatal collision involving a motorist who had a medical emergency and left the roadway, striking a utility pole. There are high overall collision rates elsewhere along this segment of Higuera Street, but insufficient crash history at the Higuera/Chumash intersection to justify installation of a traffic signal.*

Other warrants for signalization per the CAMUTCD, such as warrants based on school crossing proximity, proximity to an at-grade rail crossing, pedestrian crossing volumes, etc., were reviewed, but not evaluated in detail as they were not applicable to this location.

The CAMUTCD allows for consideration of other location-specific characteristics (i.e. approach conditions, driver confusion, future land use plans, etc.) and engineering judgement when considering justification for installation of a traffic signal, but ultimately states that a traffic signal **should not** be installed unless one or more of the standard warrants are met. Agencies may choose to deviate from the CAMUTCD standards where the term “should” is applied; however, detailed documentation would need to be provided to support the decision to deviate from these standards, and this may ultimately increase the agency’s risk/liability if a future incident were to occur following installation of an unwarranted traffic signal.



**2) If Council wanted to pursue the two-way path extension on Madonna, would that preclude doing the currently proposed improvements to Madonna?**

Advancing a two-way path on Madonna Road in the future would not preclude advancing the improvements currently proposed with the Higuera Complete Street Project. Implementation of the two-way path would require modifications to roadway striping and modifications to traffic signals (i.e. relocating loop detectors), which would incur additional costs, but the currently proposed improvements would not preclude a future two-way path.

**3) What are the cost savings with using flex posts versus concrete barriers? Could the saving be used for additional enhancements of the project?**

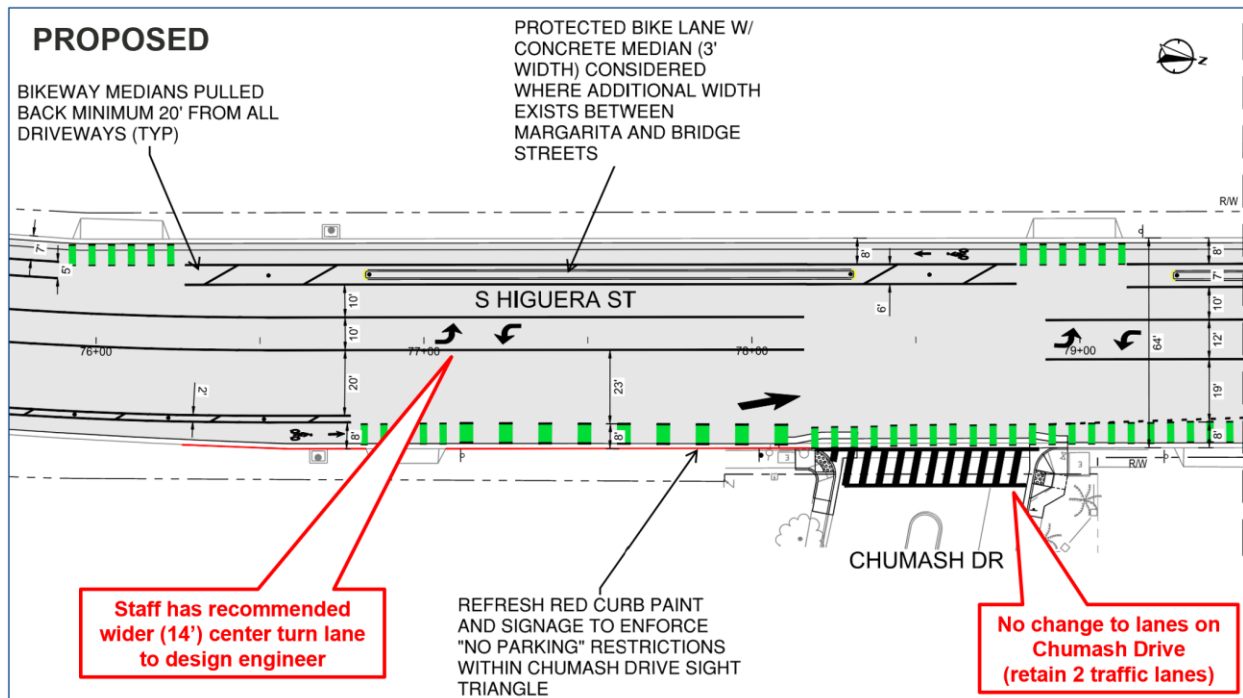
*The current cost savings of replacing the concrete barriers currently shown in the project plans on Higuera between Margarita and Bridge Streets with flex posts is estimated at approximately \$400,000.*

*As noted in the staff report, total project costs exceed available project funding and an additional budget allocation of at least \$1M will be requested as part of the 2025-27 Financial Plan. Council could reduce project cost or add enhancements to the project by replacing the concrete barriers with flex posts. It should be noted that some enhancements might not be grant reimbursement eligible.*

**4) What is the change in width to the center turn lane at Chumash Dr.?**

*The current width of the center turn lane at Chumash Drive is approximately 11 feet. While the current draft striping plans included in the Council Agenda Report show a 10-foot wide center turn lane as part of the project, staff intends to increase this width to at least 12 feet and has already provided this direction to the project design engineering consultant preparing the final plans. There may be flexibility to increase this turn lane width further, if desired by the Council.*

*The images below show existing and proposed configuration of the Higuera/Chumash intersection. Note that Higuera Street currently has one lane in the northbound direction at Chumash Drive, which would remain with the proposed project. The project would provide one lane in the southbound direction, which opens up to two lanes just south of Chumash Drive. The center turn lane and two lanes exiting Chumash Drive would remain with the project.*



- 5) Do we have any data on southbound bicyclists through the LOVR intersection? My observation is these are mostly recreational bicyclists rather than commuters.**

*Yes, based on recent traffic count data, approximately 60% of southbound cyclists continue straight on southbound Higuera Street through this intersection, with the remaining 40% of cyclists turning right onto westbound Los Osos Valley Road. Note that the direction and mix of cyclists navigating this intersection may change in the future as additional homes are completed and occupied at Avila Ranch and when the County's Bob Jones Trail Extension between Avila Beach and Octagon Barn is completed.*

- 6) Have additional bicycle safety improvements been considered for the Higuera/Suburban intersection beyond what is shown in the proposed plan?**

*Yes. Following the tragic death of a cyclist involved in a "right-hook" collision with a truck in 2021, the City installed a "RIGHT TURN YIELD TO BICYCLES" warning sign and green bike lane pavement markings through this intersection conflict area. As part of the Higuera Complete Streets Project, staff is pursuing additional improvements that can be reasonably accommodated within the project grant funding and schedule constraints—focusing on installation of an illuminated "RIGHT TURN YIELD TO BICYCLES" sign that is activated when an approaching bicyclist is detected upstream of the intersection. This sign is not shown on the current striping plans, but staff plans to install this illuminated sign as part of the Complete Streets Project, or sooner, if feasible. Staff is currently coordinating with the manufacturer of the City's traffic signal controller equipment to verify that the existing equipment at this intersection can accommodate this somewhat unique sign operation. More information on this proposed illuminated sign design from a previous installation in the City of Portland is available here: <https://bikeportland.org/2015/04/02/right-hook-risk-drops-flashing-yield-bikes-sign-ne-couch-136458>*

*Staff has identified opportunities for more substantive improvements at this intersection to reduce potential for bicycle right-hook collisions; however, these recommendations would require acquisition of private property for additional right-of-way for improvements that are beyond what can be reasonably funded within the current grant-funded project funding and schedule limitations. These future options are recommended in the City's Draft Vision Zero Action Plan, which will be presented to the City Council on March 18, 2025, and include potential to widen the intersection to provide (a) a dedicated right-turn lane with bike lane channelization to the left of the turn lane and potential for a bicycle signal phase, or (b) construction of a setback bikeway crossing, commonly referred to as a "protected intersection" or "bend-out" crossing. Either option would require off-site right-of-way, relocation of drainage infrastructure, relocation of a fire hydrant, relocation/replacement of traffic signal poles, and likely removal of off-street private parking stalls within the adjacent property.*

**7) For the Bridge St path crossing at Exposition, rather than having a speed hump just north and south of the crossing, could the crossing itself be raised instead?**

*Yes, this mid-block crossing could be designed as a raised crosswalk, if desired by the Council. The purpose behind the current design, which includes speed humps upstream and downstream of the crosswalk is to not only slow speeds at the crosswalk itself, but along the longer segment of Exposition Drive-Woodbridge Street, where prevailing speeds (30 mph) currently exceed the posted speed limit and General Plan Circulation Element Target (25 mph). The intent is to not only reduce speeds and improve safety at this mid-block crossing, but also at the intersection with Corrida Drive to the south, which is part of the Meadow Park Greenway alignment an intersection where pedestrians cross to access the South Hills Open Space trails.*

**8) Will speed limits be reduced on any portion of Higuera?**

*Speed limits on Higuera Street are currently posted as low as legally allowed pursuant to the California Vehicle Code, as speed limits generally need to be set within 5 mph of the prevailing travel speeds. Some further reductions of 5 mph are allowed when certain circumstances are met, but staff has already applied these reductions where feasible. The segment between Prado Road and Tank Farm Road was recently reduced from 40 mph to 35 mph, as prevailing speeds had decreased in recent years, which allowed for this reduction. Staff would endeavor to lower speed limits on other segments of Higuera wherever feasible after study speed surveys can be conducted following completion of the Higuera Complete Streets Project.*

**9) Is Higuera a designated evacuation route?**

*The City's [2023 General Plan Climate Adaptation and Safety Element](#) identifies areas of the city near high fire risk zones and areas with limited evacuation route options, where particular focus is required for providing ingress and egress during emergency events. Higuera Street is not designated as a formal evacuation route in this plan. Based on discussions with the consultant team who prepared the Climate Action and Safety Element, and from previous experience, during closures on US 101 that divert significant traffic to Higuera Street, bottlenecks occur at Higuera/Madonna Road intersection and Higuera/Los Osos Valley Road intersections. The proposed project increases overall delay at the Higuera/Madonna intersection but increases capacity for the direction approaching the US 101 ramps (northbound left-turn from Higuera to westbound Madonna Road) by striping a second northbound left turn lane. At the Higuera/Los Osos Valley Road intersection, design Option 1, which retains the existing bike lane configuration, provides similar traffic operations to existing conditions, while Option 2 (add bike signal phase) increases vehicle delays and queueing, particularly in the southbound direction heading to the US 101 ramps on Los Osos Valley Road. Ultimately, staff anticipates that the proposed road diet will not represent a primary bottleneck on Higuera Street during a significant emergency event or evaluation—the primary bottleneck would be at the signalized intersections upstream and downstream. If the Council desires to minimize concerns regarding*

*emergency evaluation scenarios on Higuera Street within the framework of including the proposed road diet in some form, staff would recommend considering the following options presented in the staff report:*

- Use flex posts only for the proposed bikeway separation along the road diet segment, which provides more functional roadway clearance for emergency vehicle throughput, and allows for easy removal/adjustments in the short-term, with flexibility to remove the road diet all together in the future if traffic conditions change significantly beyond current growth projections.*
- Adjust the proposed road diet limits to retain four lanes on Higuera at unsignalized side streets and major driveways, such as Chumash Drive. This would retain the road diet along the narrowest roadway segment near the cemetery, while retaining the majority of the benefits of the road diet and reducing potential impacts to drivers on side streets turning to/from Higuera Street during an emergency event.*

*Lastly, it should be noted that the Transportation Division has the ability to make urgent traffic signal timing changes to flush traffic along major streets during major incidents. This has been used several times in the past during major incidents along US 101 when traffic is detoured to local streets.*

**10) Can the City paint red curbs on Higuera, north of Chumash Dr up to the bus stop?**

*Yes, there is an existing “NO PARKING” sign posted at the bus stop itself, but staff can add installation of red curb paint north of Chumash Drive for further visibility.*

**11) Can you clarify the type of signalization proposed at Elks Lane?**

*Installation of a full traffic signal is proposed at Elks Lane, including signalized pedestrian crossings at all legs of the intersection. Initially, a Pedestrian Hybrid Beacon was proposed, as initial analysis indicated that warrants for full signalization were not met. However, staff has conducted additional analyses in 2024 with newer traffic count data and confirmed that warrants are now met, allowing for full signalization. Full signalization is the preferred design alternative, as signalization will improve level of service and these improvements will be required to support the construction of the Prado Creek Bridge. During construction of the Prado Creek Bridge project as Elks Lane will be the primary route to/from the City Corporation Yard, SLO Transit and RTA Bus Yards, and the various commercial businesses on Prado Road, including JB Dewar Fueling Facility.*

*The current traffic signal designs for Higuera/Elks include a “protected only” northbound left-turn phase turning from Higuera Street to Elks Lane, and a dedicated east/west signal phase that can be actuated by bicyclists from the street-level bike lanes. If the Council recommends removal of the proposed road diet on Higuera between Bridge Street and Elks Lane, the traffic signal plans will need to be modified*

*to (a) remove the protected only left-turn phase, which can not be used without a dedicated left turn pocket, and (b) to remove the on-street bicycle queue area for the northbound-to-westbound bicycle movement, as there is in sufficient road space to accommodate these features without removing traffic lanes on Higuera Street. Staff is happy to elaborate on these design details during the study session, if desired.*

- 12) We have received some emails over the past few days expressing that some of the improvements proposed in the Meadow Park neighborhood (bulbouts, speed bumps, etc.) are not necessary and/or worth the money. Can you explain how it was decided that these were relevant additions to the plan, and what the approximate costs of these improvements are estimated to be?**

*Preliminary project plans proposed more substantial traffic calming measures in the Meadow Park neighborhood, including more frequent speed humps, addition of neighborhood traffic circles at several intersections, and reconstruction of several intersection corners to add permanent curb extensions (“bulbouts”). Staff held a focused community workshop at Meadow Park during early plan development to invite input from neighbors on the project plans. Staff received several comments from Meadow Park neighbors requesting a more “gentle touch” with the traffic calming elements in this neighborhood, expressing general opposition to neighborhood traffic circles and suggestions to only include features that are truly warranted based on existing traffic conditions and safety concerns.*

*Based on this input, the project designs within the Meadow Park area were modified significantly—all neighborhood traffic circles were eliminated, permanent bulbouts were removed, and speed humps were limited only to Exposition and Woodbridge Streets, where existing prevailing speeds reach 30 mph, exceeding the 25 mph speed limits and General Plan target speed for local residential streets. The current plans include recommendation for an all-way stop at the Woodbridge/Meadow intersection in lieu of a traffic circle, as originally proposed, to improve pedestrian safety crossing to and from Meadow Park. Other than these features, elements are limited to greenway wayfinding signs, pavement legends and striped bulbouts at a few intersections on Exposition and Woodbridge Streets where existing corners have wide radii, which encourage high turning speeds and impact pedestrian safety and comfort. Staff does not have a detailed cost breakdown readily available that isolates only the costs for various features in the Meadow Park neighborhood but would estimate the costs for these features at approximately \$150,000, excluding ADA curb ramp upgrades and roadway sealing.*

- 13) We received an email from a constituent that asked the following questions about the Higuera/Walker and Marsh/Higuera intersections.**
- a. At Higuera and Walker Streets, green paint needs to mark where a cyclist should ride to make a left on Marsh Street. As a cyclist, I am not sure where to cut over and the buffered bike lane markings further confuse this.**



- b. At Higuera and Marsh Streets, green paint needs to mark where the cyclist should ride to travel on Marsh under the highway. Initially, is it between the northbound and southbound lanes? Is it the right side of the road and then cut across the northbound on-ramp. I am confused here as a cyclist and motorist.**

*Thank you for the questions and responses are as follows:*

- a) If a cyclist is traveling northbound on Higuera Street and wishes to turn left onto westbound Marsh Street to access the Madonna Inn Bike Path or Cerro San Luis Trailhead, they have two options. First, they can merge to the left across the adjacent vehicle lane and into the center left-turn lane to make this left turn as a vehicle would. There are several gaps in the proposed protected bike lane separation (flex posts) upstream of the Higuera/Marsh intersection to provide gaps to make this maneuver, including at the Higuera/Walker/Pacific intersection. Staff is supportive of adjusting flex post placement in the final plans to provide greater flexibility to make this maneuver approaching the intersection, if desired. The second option is to continue to the Higuera/Marsh intersection, dismount and queue at the pedestrian curb ramp, and use the signalized pedestrian crosswalk on foot to cross Higuera Street towards this destination. This option may be more comfortable for cyclists who do not feel confident merging across vehicle traffic lanes.*
- b) This portion of Marsh Street connecting to the US 101 Northbound and Southbound On-Ramps is within Caltrans right-of-way and outside of the limits of the City's Higuera Complete Streets Project. No formally designated on-street or off-street bicycle facilities exist currently along this stretch of Marsh Street. Per the California Vehicle Code, bicyclists have the legal right to ride in the vehicle traffic lane, or within the right shoulder where width allows, where formal bicycle facilities are not provided. The City's Active Transportation Plan includes a recommendation for a future project to improve bicycle facilities along this segment of Marsh Street, but those improvements would require additional funding and design review with Caltrans beyond what is feasible within the resources and schedule of the current grant-funded complete street project.*
- 14) Flex posts are proposed as separation between cyclists and car traffic for most of the project area, with the exception of concrete curbs recommended between Bridge Street and Margarita. Some community members have commented that the curbs already installed in some parts of the city are low, and therefore hard to see for drivers. Is it possible to add features to the curbs to make them more visible? (Some ideas might be reflective paint along the entirety of the curb, vertical flex-type posts along the curbs, etc.)**

*Yes, based on observations of the existing concrete bike lane medians installed in the City, the primary point where vehicles tend to hit these medians is at the end points or “noses”. For this reason, the City has focused several visibility enhancements at these end points, including yellow paint, reflective markers, and tall vertical flex posts with reflective strips. In between median end points, the previous strategy has been to include a solid white edge stripes on the pavement along the medians for added mid-block visibility. Staff can certainly modify median designs to include frequent mid-span vertical flex posts on top of the concrete medians to increase visibility, if desired.*

- 15) On page 524 of the packet, you mention rubberized or pre-made concrete barriers, that could be used instead of curbs. It states there that these are less expensive but are more expensive to install. Can you explain this a little more...are they more expensive to install than more permanent curbs, or than flex posts, and what is the approximate difference in costs?**

*In general, rubber pre-made barriers/curbs are less costly to install than cast-in-place concrete barriers, as currently proposed in the plans. Concrete pre-made barriers/curb stops are also generally less costly to install than cast-in-place concrete barriers, but more costly than rubber options. Both pre-made rubber and pre-made concrete barriers/curb stops generally incur more ongoing maintenance costs compared to permanent concrete barriers, as they are more likely to be damaged if struck by vehicles. Both pre-made barrier options would still require placement of vertical flex posts in between each barrier to provide sufficient vertical visibility of these objects. Below is a comparison between barrier material options with an estimated cost difference for the road diet segment of Higuera Street (Bridge to Margarita Street)/*

- *Current Plans (Cast-in-place Concrete Barriers):* \$600,000
- *Flex Posts Only:* \$200,000
- *Flex Posts with Pre-Made Rubber Barrers:* \$300,000
- *Flex Posts with Pre-Made Concrete Barriers:* \$400,000

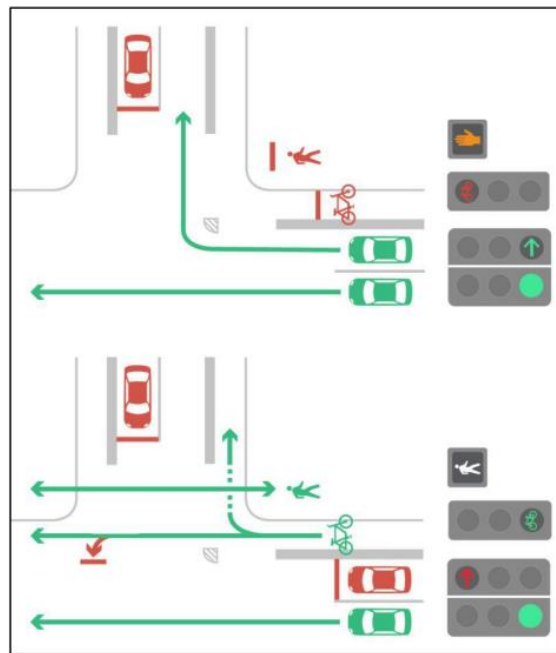
*Note that the current plans propose flex posts only for protected bike lanes outside of the road diet segment of Higuera Street. If Council prefers the addition of rubber or concrete pre-made barriers along all protected bike lane segments, the total project cost is estimated to increase from \$300,000 to \$500,000.*

- 16) Regarding the intersection of S. Higuera and Suburban, in addition to the lighted signage being proposed for this intersection, have staff considered disallowing “right on red” at this intersection?**

*Yes, right-turns on red are already prohibited at this intersection (see image below).*



- 17) Regarding the intersection at LOVR/Higuera, was there any discussion (or is it possible) to implement protected intersection elements on the two eastern corners of LOVR similar to those at Dalidio Drive, allowing cyclists to take refuge behind a physical barrier while cars turn right in front of them? Related to this, can you please clarify the two diagrams on page 527? The bottom diagram (below) shows physical barriers between the cyclist and the car on Higuera and LOVR with a triangular item at the corner (looks like a post, maybe), but Option 2 photo above it doesn't show those features. Does Option 2 intend to provide cyclist their own turning lane?



*Staff did evaluate the possibility of constructing a setback bicycle crossing at the Higuera/Los Osos Valley Road intersection, often referred to as a “protected intersection” or “bend-out” crossing. However, there is insufficient right-of-way to provide this style of bicycle crossing and acquisition of additional right-of-way would*

*likely not occur within the schedule constraints of the grant-funding. In addition to right-of-way, subsequent design and coordination work would need to occur to relocate a PG&E utility pole, a traffic signal electrical service box and controller cabinet, and traffic signal poles.*

*The diagram shown above is intended to illustrate the potential traffic signal phasing strategy, where the vehicle right-turn movement is held with a red light during a conflicting bicycle signal phase. The bicycle barrier elements would differ in the project plans – a curbside protected bike lane with flex posts would be proposed on southbound Higuera Street approaching the intersection, but there would be no porkchop island or receiving protected bike lane on westbound Los Osos Valley Road, as the existing turning paths of large trucks would conflict with those vertical elements without further intersection widening.*