

Meeting Date: August 23, 2021

Staff: Mike Moran, Director of Engineering and Public Works

Siavash Shojaat, Associate Traffic Engineer

Subject: Proposed Pilot Study for the Safe Routes to School (near the Burton Valley Elementary

School)

Background

The City has heard from numerous residents over the years who have expressed a concern regarding vehicle speed and traffic safety in the Burton Valley area of Lafayette. Many residents have requested traffic calming and are particularly concerned with the safety of pedestrians and bicyclists in Burton Valley. These concerns have only been exacerbated during the pandemic as more community members have been working or schooling from home and have taken advantage of getting outside for a walk or a ride throughout all hours of the day. In response to these concerns, City staff sought, and has now received, a grant to conduct a "Safe Routes to School" pilot study for the area surrounding Burton Valley Elementary School. A pilot study will allow alterations to the roadway, intended to improve the safety for multi-modal traffic that can be adjusted over the duration of the study and may or may not be left in place permanently. Staff recommends the study last for one year.

The Transportation and Circulation Commission (TransCirc) held four public meetings and discussed different alternatives to improve safety of the students, pedestrians, and bicyclists near Burton Valley Elementary School. Ultimately, the TransCirc has recommended implementing several traffic calming strategies and installing a berm-protected walkway. Below, staff will discuss the highlights of those meetings and point out some of the alternatives considered for inclusion in the pilot study. The Council may also wish to look through the staff reports for the previous meetings and the public comments staff received regarding the proposed pilot study, all of which is included as an attachment to this report.

Problem Statement

Based on the site visits conducted by the staff (to observe the traffic near the school and the riding/walking behavior of children leaving school), two major factors are recognized that contribute to the risk of vehicle-pedestrian crashes in the area under study. The first factor is the high vehicle speed near the school (especially on Silverado and Burton Drive), and the second factor is the absence of a dedicated pathway near the school. This shortage forces the children and pedestrians to do weaving maneuvers around the parked vehicles and walk or ride in the vehicle travel lane. Figure 1 shows such walking and biking maneuvers. To lower the risk of crashes and reduce the risk of fatality, staff believes that both factors should be addressed in the study area.

1

Item 10B



Figure 1. Children riding and walking in the travel lane on Merriewood Drive

Geometric Limitations

Providing a pathway for children and pedestrians is dependent on the existing roads and their shoulder widths (unless a sidewalk is added, which will be discussed later in this report). Table 1 shows the widths of the different roadways included in the proposed pilot plan.

Table 1. Width of different roadways (per lane in one direction)

Street Name	Travel Lane Width (ft)	Shoulder Lane Width (ft)	Sidewalk Presence
Silverado Dr Burton to Indian	10	10	Minimal
Silverado Dr Indian to Rohrer	12	8	None
Merriewood Dr	10	8	None
Burton Dr	10	8	Partly
Rohrer Dr	10	7	Partly
Indian Way	10	7	None

As can be seen in Table 1, most roadways have travel lanes that are 10 feet wide. A 10-foot lane width is Lafayette's standard for residential and residential collector streets, and staff does not recommend narrower lanes. The one exception shown above is Silverado between Indian and Rohrer and TransCirc ultimately did recommend that we stripe a 10-foot-wide lane for this section also. Note that widths of all shoulder lanes are less than 10 feet, and 10 feet is the standard width for a <u>shared bidirectional pathway</u>. Additionally, approximately 1.5 feet of the shoulder widths noted above is the concrete gutter. The gutters in this area are very steep and should not be considered a part of the shoulder that could be used for walking or riding, so the effective shoulder width available for walking and riding varies between 5.5 feet and 6.5 feet. This suggests that even if vehicles are prohibited from

parking on a shoulder lane, assigning a shoulder to the pedestrians is not sufficient to create a standard shared bidirectional pathway.

First TransCirc Meeting (May 19, 2021):

Although it would not meet standard widths, a shared bidirectional pathway was proposed as an initial plan at the Transportation and Circulation Commission's May 19, 2021 meeting. The proposed pathway traversed through Merriewood Drive, Silverado Drive, Rohrer Drive, Indian Way, and Burton Drive. While some parents and neighbors supported the proposed pathway (which required removal of parking on one side of the road), other residents expressed concerns about the width of pathway, arguing that width would not be standard and therefore the pathway should not even be considered. As a result, the commission asked staff to examine the feasibility of implementing other alternatives.

Second TransCirc Meeting (June 16, 2021):

To address the concerns raised by TransCirc, staff generated unique alternatives for each of the roadways located in the study area (i.e. Merriewood Drive, Silverado Drive, Rohrer Drive, Indian Way, and Burton Drive). At each roadway, the staff suggested the following alternatives, based on its geometric limitations and proximity to the school.

Merriewood Drive

For Merriewood Drive, the first alternative was the 'do nothing' alternative (shown as Alternative a in Figure 2). This alternative could also be paired with a 'restricted parking' alternative during school drop-off and pick-up times.

The second alternative was the 'directional pathway' for Merriewood Drive. Since width of shoulder lane at Merriewood Drive is not enough for a standard shared bidirectional pathway, and given the unidirectional nature of trips to/from school during the drop-off/pick up times, creating a narrower (6.5 ft) directional pathway was suggested as one alternative. Children and pedestrians could use this pathway in one direction during the morning time and in the opposite direction during the afternoon. Implementation of this alternative would require educating the children and parents. This option is shown as Alternative b in Figure 2.

The third alternative for Merriewood Drive was removing a travel lane and making Merriewood a one-way roadway. This option would provide a standard 10-foot wide shared bidirectional pathway. Also, in this scenario, no parking lanes would be removed from either side of Merriewood Drive. This option is shown as Alternative c in Figure 2.

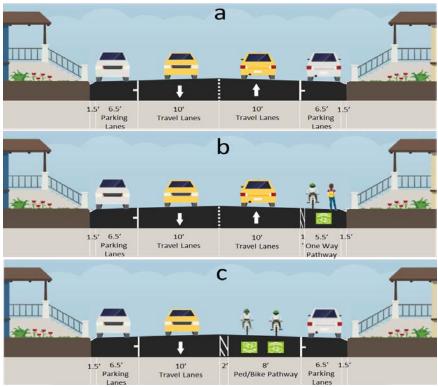


Figure 2. Proposed Alternatives for Merriewood Drive

Silverado Drive

For Silverado Drive, the first alternative was the 'do nothing' alternative (shown as Alternative a in Figure 3). This alternative could also be paired with a 'restricted parking' alternative during school drop-off and pick-up times.

The second alternative for Silverado Drive was to re-stripe it and narrow its travel lanes to 10 feet. This would allow reduction of 2 feet from each travel lane (overall 4 feet)¹. The additional width could be added to a shoulder lane on one side of the road to create a standard 10-foot-wide shared bidirectional pathway. This option is shown as Alternative b in Figure 3.

The third alternative for Silverado Drive was reducing the vehicle travel lanes by 2 feet and striping a 2-foot wide buffer zone between the parking lanes and the travel lanes. This zone could help reduce the risk of pedestrian-vehicle crashes by moving the vehicles to the center of the roadway and providing a narrow buffer between the parked vehicles and the pedestrians and bicyclists. It would not require loss of any parking lane. This option is shown as Alternative c in Figure 3.

¹ 1- Since the second meeting, a portion of Silverado Drive was re-striped as part of a previously-planned maintenance project, and the width of travel lanes was reduced to 10 feet (adding approximately 2 feet to the shoulder lanes on both sides).

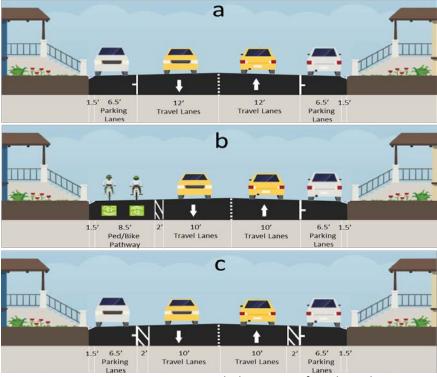


Figure 3. Proposed Alternatives for Silverado Drive

Indian Way

Given the short length of Indian Way, its limited width, and its typical lower driving speeds, staff did not recommend any changes to Indian Way.

Rohrer Drive

Rohrer Drive between Merriewood Drive and Silverado Drive is located between two all-way stop intersections. Given this and the typically slower speeds between the two stops, staff did not recommend any changes to this portion of Rohrer Drive as part of the pilot study. The portion of Rohrer Drive between Merriewood Drive and Read Drive has a sidewalk on one side and staff did not recommend a dedicated pathway on this section of roadway either. On this portion, instead of adding a new pathway for pedestrians, staff recommended adding a new crosswalk at the school driveway to connect the two sidewalks on both sides of the street. Since this crosswalk will require an ADA-compliant curb ramp, staff noted this option as a good idea for the future, but an option that will be fairly expensive and take a pretty large bite out of the allotted pilot study budget.

Burton Drive

Burton Drive is the same width as Merriewood and has intermittent sections of sidewalks that can be used by pedestrians. An option discussed at this meeting was to continue the dedicated pathway on Burton Drive.

Speed Reduction Strategies

Along with the efforts to create a walking space for children and pedestrians, in the second meeting, staff also proposed a couple of speed-reduction strategies such as adding speed humps, crosswalks, striping, red curbs, and stop signs near Burton Valley School.

At the end of the second TransCirc meeting where the proposed pilot study was proposed, the Commission continued the item to a Town Hall workshop.

<u>Third Meeting – Town Hall Workshop (July 8, 2021):</u>

Following the second meeting, staff were contacted by several members of the community concerned with next steps for the pilot study process. Staff encouraged several residents to talk with their neighbors, particularly neighbors that may have an opposing view to their own, regarding the proposed pilot study to see if they could reach some common ground.

Community-Suggested Option A:

One household put together a proposal for the pilot study to balance traffic safety concerns while preserving the semi-rural character of the neighborhood. The proposal was intended to minimize direct negative impacts to some residents while acknowledging some tradeoffs in favor of public safety. The entire packet or "neighborhood-submitted proposal" was included in the public correspondence attachment to the third staff report.

To create a walking space for pedestrians and children, the proposal suggested prohibiting parking on both sides of Merriewood Drive for ½ hour before and after school start times and school dismissal times. The proposal also suggested re-striping 10-foot-wide vehicle travel lanes with 8-foot shoulders and a 2-foot-wide buffer zone in between the shoulder and travel lane on Silverado Drive (Figure 3, Alternative c). The proposal also acknowledged many of the speed-reduction strategies suggested by staff in the second meeting.

Community-Suggested Option B:

Another community group put together a proposal for an asphalt-berm-protected pathway in the shoulder space on one side of roadway to separate vulnerable road users from traffic and connect critical corridors to community destinations. This berm-protected pathway was originally proposed to include Merriewood Drive, Silverado Drive, Burton Drive, Rohrer Drive, and Glenside Drive, either continuously or as sidewalk gap fillers (this suggestion was modified after the town hall meeting to shorten the proposed limits of a berm-protected pathway). According to the proponents of this proposal, adding a berm-separated path is common throughout Lamorinda. Some examples of such facilities can be found on Happy Valley Road and Carol Lane in Lafayette and Glorietta Boulevard in Orinda. This proposal also acknowledged many of the speed-reduction strategies suggested by staff in the second meeting. This alternative is shown in Figure 4.



Glorietta Blvd.. Orinda





Happy Valley Road (L) and Carol Lane (R), Lafayette

Figure 4. Examples of asphalt berm-protected pathways (as presented by community members)

While there seemed to be a consensus among most of the public who provided input for the proposed pilot study regarding speed-reduction strategies near the school, the community remained split over the pathway. One group supported a permanent pathway that is protected with an asphalt berm and would eliminate parking on one side of the street (Community-Suggested Option B), and the other supported only temporary unimpeded use of the shoulders so that parking was only restricted during school commute times.

Fourth Meeting - TransCirc (July 21, 2021):

By the fourth meeting there seemed to be a strong consensus that implementing traffic-calming strategies including speed humps would be of benefit to the community. The Commission ultimately directed staff to recommend to the Council that we install speed humps and implement other signing and striping features to help control vehicle speeds and provide a better line of sight between drivers and active transportation users. The locations of the traffic-calming features are shown in Figures 5 to 9 below, with the exception of one speed hump to be placed on Michael Lane. Because Michael Lane was an add-on, staff and the residents have not yet sited the proposed speed hump location

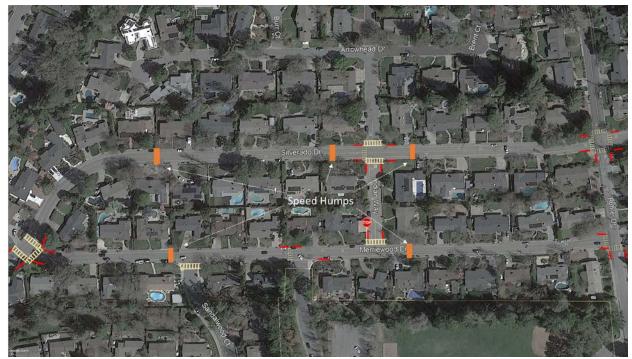


Figure 5. Speed humps, red curbs, and a stop sign



Figure 6. Speed hump at Silverado Drive

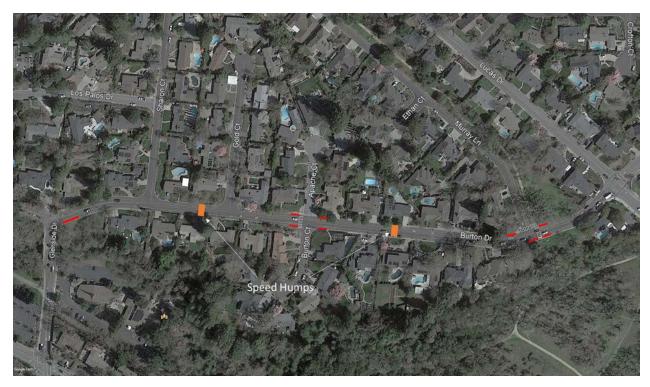


Figure 7. Speed humps and red curbs at Burton Drive



Figure 8. Speed humps at Rohrer Drive



Figure 9. Speed hump at Lucas Drive

The topic of installing a berm-protected path was affirmed to be very divisive among the many public speakers on the topic. Based on emails and public comment, many of those who would be directly impacted by the new parking restrictions required to install the berm-protected path are not in favor of the berm. Others, who may not be directly impacted, are more likely to be in favor of the berm. Pros and cons were pointed out during the meeting and, based on public comment and emails received, it is clear that many members of the public are in favor of the berm because it will provide a physical barrier and separation between pedestrians and vehicles. Others pointed out that loss of parking on one side of the street will lead to more mid-block crossings and more vehicles parked on one side of the road, making conditions worse for those who want to ride with the direction of traffic and walk against the direction of traffic. Other logistics, such as receiving mail, having a cluttered path on garbage days, and the berm itself being a tripping hazard for pedestrians and bicyclists, were also reasons mentioned for not installing the berm. Regarding the newly created path itself, it was noted that placing the berm will narrow the usable space of the roadway shoulder by about 1.5 feet for pedestrian and bicycle use due to the width of the berm and the required separation of the berm from the travel lane edge line. It was also noted that bike riders aged 9 and older would likely need to share the roadway with vehicles but now it would be more difficult for a rider to pull over onto the shoulder to let a car pass because the berm would be in the way. Although these drawbacks to installing a berm were mentioned at the July 21st meeting, ultimately the Transportation and Circulation Commission voted to recommend installing an asphalt-berm-protected path along the north side of Rohrer (Merriewood to Silverado), the west side of Merriewood, and the west side of Silverado between Merriewood and the park trail entrance located approximately 100 feet south of Burton Drive.



Figure 10. Asphalt berm-protected pathway (on Merriewood Drive)

Installing an asphalt-protected berm was not recommended by staff but by other proponents of the Burton Valley neighborhood, and since TransCirc's recommendation, staff has researched the technical feasibility of installing a berm at the proposed pilot study locations. Although Lafayette does have berm-protected walkways in other locations, none of those locations resemble the proposed pilot study locations in Burton Valley. In no location has Lafayette just placed a berm on what was already a wide shoulder of the road that was previously used for parking. For the other locations, a path was built, typically over a dirt shoulder, and on streets where the home frontages tend to be wider so there are longer stretches of berm between the berm breaks at the driveways. Mail delivery at the other bermprotected path locations is at driveways, and discussions with our post office have confirmed that all mailboxes will need to be relocated to driveways if they are not already located next to one if a berm is added. This means the breaks in the berms at driveways will need to be wide enough for a mail truck to swing in and out of the mailbox locations and this will limit the length of berm that can be placed between the driveways. However, even though all these logistical issues can be overcome if it is determined that the benefit of the berm-protected path outweighs the tradeoffs, currently the shoulder of the road that would be utilized as a dedicated path does not meet the Americans with Disabilities Act (ADA) requirements for cross slopes and it will be very expensive to make it so.

Currently many of the roadway shoulder cross slopes are about 4 percent and the maximum allowed slope for a sidewalk or pathway is 2 percent. After receiving notice that the proposed berm-protected path would not meet ADA requirements, our City Attorney's office confirmed that the addition of a berm is an alteration to a public facility, and that alteration to the road would trigger additional ADA compliance measures and the City would be required to flatten the cross slope. Flattening the cross slopes on the road shoulder will require grinding out or excavating the existing pavement and some base material and lowering the crown in the middle of the street before repaving the street. This is effectively a reconstruction of the entire street and the cost would easily exceed \$700,000. If the Council or the community were to be interested in spending such a large sum of money to allow the proposed path to be built, staff would strongly suggest building sidewalks instead of a path on the roadway shoulder. Because the subject streets have curb and gutter, alignment for a standard sidewalk is already in place. Additionally, there is plenty of public right of way to allow a 6-foot-wide sidewalk to be built on the house-side of the existing curbs and none of it would fall on private property.

If the residents are interested in pursuing a sidewalk option, then an assessment district could be implemented with the City's help. However, an assessment district can only be formed by a vote of 50 percent plus one, so it would ultimately be up to the residents and not the City. If an assessment district were to be formed, then the residents in the district would have an annual assessment on their property taxes to pay for the construction and future maintenance of the sidewalks.

Next Steps

TransCirc, most of the public we have heard from, and staff seem to agree with installing the traffic calming features. Staff is recommending the Council affirm installing the traffic-calming measures that TransCirc recommended.

Deleting residential parking that has been in place for about six decades and utilizing that space as a dedicated path is not popular with everyone, but it is a tradeoff of a public use and many would claim that increased public safety is far more valuable than on-street parking, particularly since there should be adequate street parking on one side of the street (except during special events such as swim meets and back-to-school nights). Staff is not recommending installation of the berm, primarily for the ADA reasons spelled out in this report, but the Council could still decide to restrict parking on one side of the street for the duration of the pilot study and let the unparked shoulder be used by pedestrians and bicyclists. Restricting parking would require the placement of signs, which is inexpensive compared to placing a berm, but it will also require enforcement to be fully effective. If the Council elects to restrict parking, they could choose to make the restriction 24/7, limited to school commute times, or limited to Monday through Friday during the school year between the hours of approximately 7:30 am to 4:00 pm. In any case, staff sees the issue of restricted parking in this case as a policy issue and respectfully request that the Council provide direction to staff. If the Council recommends modifying parking as part of a pilot study, a parking resolution will be brought to the Council for adoption.

Fiscal Impact

The City of Lafayette has been awarded a \$50,000 TDA (Transportation Development Act) grant for this study. The City is also required to provide \$5,000 in matching funds, for a total pilot study budget of \$55,000. Because the traffic calming features combined with the berm installation would have exceeded this budget, TransCirc recommended that staff request an additional \$45,000 from the City's traffic calming fund. This fund currently has a balance of approximately \$93,000, so it would utilize about half of the fund for this pilot study if the Council were to affirm installation of the berm. If the berm were not installed, staff would still request \$20,000 from the traffic calming fund to supplement the funding from the TDA grant and matching funds. This would allow an adequate budget to adjust features during the pilot study as needed and remove any of the features at the end of the study if they do not warrant being left in place.

Recommendations

- Affirm installation of the traffic calming and visibility improvement strategies in Burton Valley
 including: 11 speed humps, vegetation pruning and painting curbs red near corners to improve
 line of sight, a stop sign on Indian Way at Merriewood, striping 10-foot vehicle lanes on
 Silverado between Indian Way and Rohrer, and adding reflectors where emphasis is needed to
 help drivers remain in the vehicle lane.
- 2. Direct staff not to install a berm-protected pathway.
- 3. Provide direction regarding use of the parking shoulder for pedestrians and bicyclists and regarding restricted parking.
- 4. Allocate up to \$20,000 from the traffic calming sinking fund to be used for the pilot study.

Attachments

- 1. Previous Staff Reports
- TransCirc Meeting, May 19, 2021
- TransCirc Meeting, June 16, 2021
- Town Hall Workshop, July 8, 2021
- TransCirc Meeting, July 21, 2021

2. Public Correspondence

- Part 1: 5/15/21 to 6/16/21

- Part 2: 6/16/21 to 7/8/21

- Part 3: 7/8/21 to 7/21/21

- Part 4: 7/21/21 to 8/17/21

Attachment 1 PREVIOUS STAFF REPORTS

Staff Report TransCirc Meeting, May 19, 2021



City of Lafayette Staff Report

Transportation & Circulation Commission

Meeting Date: May 19, 2021

Staff: Siavash Shojaat, Traffic Engineer and Mike Moran, Director of Engineering and Public

Works

Subject: Burton Valley Elementary Safe Routes to School Pilot Study

Background and Discussion

The City has heard from numerous residents over the years who have expressed a concern regarding vehicle speed and traffic safety in the Burton Valley area of Lafayette. Many residents have requested traffic calming and are particularly concerned with the safety of pedestrians and bicyclists in Burton Valley. These concerns have only been exacerbated during the pandemic as more community members have been working or schooling from home and have taken advantage of getting outside for a walk or a ride throughout all hours of the day. In response to these concerns, City staff sought, and has now received, a grant to conduct a "Safe Routes to School" pilot study for the area surrounding Burton Valley Elementary School. A pilot study will allow alterations to the roadway intended to improve the safety for multi-modal traffic that can be adjusted over the duration of the pilot study and may or may not be left in place permanently. Staff recommends the study last for one year.

Staff has prepared several slides to show the major suggestions and elements of the proposed study. The slides are not intended to be all-inclusive, but to stimulate discussion regarding techniques and changes to make to the roadways leading to and from the school safer. The pilot study should include suggestions from the public and school representatives, recommendations from the 2020 Complete Streets Safety Assessment, and safe system concepts in line with Vision Zero (no serious injuries or deaths). Education and a fundamental change in the way we all think about sharing the road, along with enforcement, primarily to keep speeding under control, should both be included as part of this pilot study. However, traffic engineering will also play a vital role in the study and the biggest suggested changes to help improve multi-modal safety are:

- to create a dedicated portion of the road for active transportation participants (pedestrians, bicyclists, skateboarders, etc.)
- to reduce driver speed.

Two-Way Shared Pathways

Although the Burton Valley area does not have continuous sidewalks, several streets surrounding the school currently have enough street width to accommodate two vehicle lanes and two parking lanes. To allow a dedicated space for pedestrians and bicyclists, one of the key features of the proposed pilot study is to utilize the parking lane on one side of the street as a two-way shared pathway. The tradeoff to allow this to occur will be to eliminate one side of street parking. The proposed pilot study would

eliminate street parking on the odd-address side of Burton, the odd-address side of Merriewood, the north side of Indian (between Merriewood and Silverado), the odd-address side of Silverado (between Burton and Lowell), and the north side of Rohrer (between Silverado and Read).

Reduce Driver Speed

Measures to reduce vehicle speed are critical to improving safety in any residential neighborhood. If a crash occurs between a vehicle and a pedestrian or bicyclist, the slower the vehicle speed, the greater the chance of avoiding serious injury or death. Therefore, another key feature of the pilot study is to reduce the speed limits to 15 mph on street segments that are within 500 feet of the elementary school and possibly to 20 mph on street segments that are within 1,000 feet of the school. These reduced speeds are suggestions to improve safety in the vicinity of the school. For street segments within 500 feet of a school there is an assembly bill (AB-321, 2007) that allows speeds to be reduced to 15 or 20 mph, with a supporting traffic study and when children are present. However, reduced speeds beyond 500 feet from a school would typically default to 25 mph, not the 20 mph that staff is suggesting. Alternatives to posting lower speed limits can include speed humps or similar devices that will reduce most driver speeds to below 25 mph due to the repercussions to their vehicle if they do not slow down.

Next Steps

Presentation slides are attached to this report to provide some visual aids and show some of the alternatives that could be tried as part of the pilot study. Since this is the first meeting, staff suggests the Commission receive the presentation and public comments to help decide the next steps. Based on the input staff receives, we can return with more specific recommendations at a future meeting.

Fiscal Impact

The City of Lafayette has been awarded a \$50,000 TDA grant for this study. The City is also required to provide \$5,000 in matching funds for a total pilot study budget of \$55,000. Most of the suggestions for the pilot study include signing and striping items. Although these items can add up quickly in cost, most should be able to be included within our budget. However, the presented shared pathway will include some curb cuts and ADA ramps to provide accessible access on and off the existing sidewalks. These ramps can be quite expensive and combined with other items of work may contribute to exceeding our budget.

Recommendations

- 1. Receive staff presentation and public comment.
- 2. Provide staff input for items to bring back to the Commission regarding the pilot study and schedule a second hearing for the item.

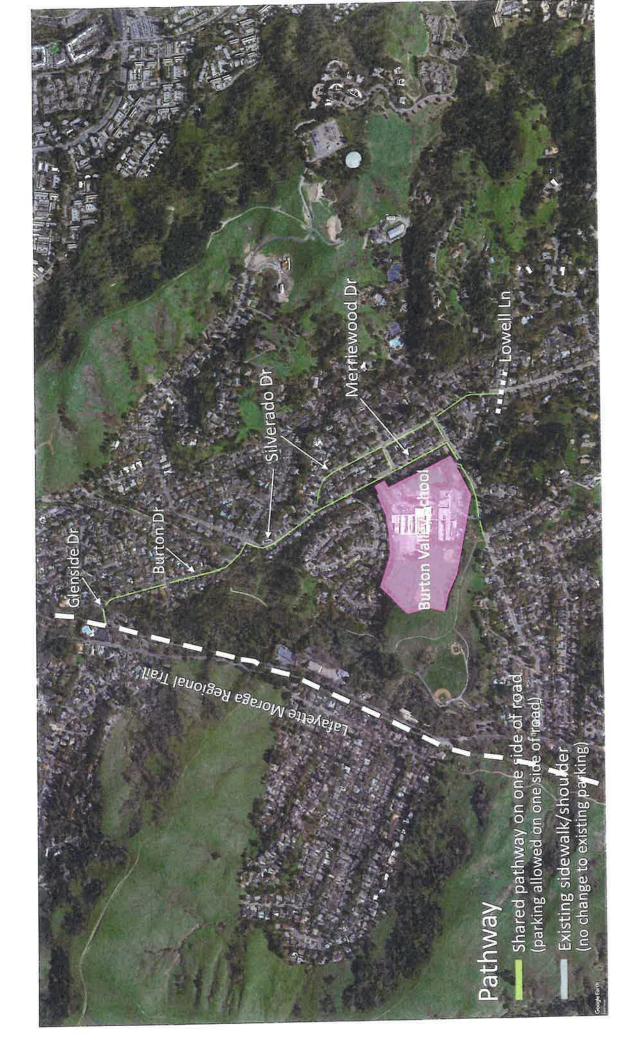
Attachments

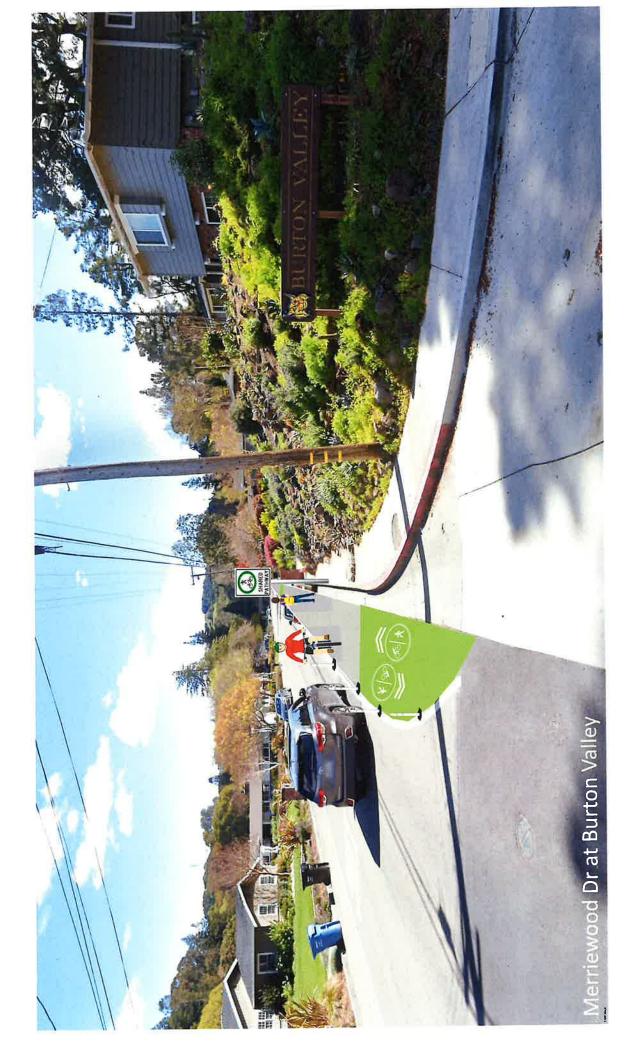
- 1. Presentation Slides
- 2. Resident Notification Letter

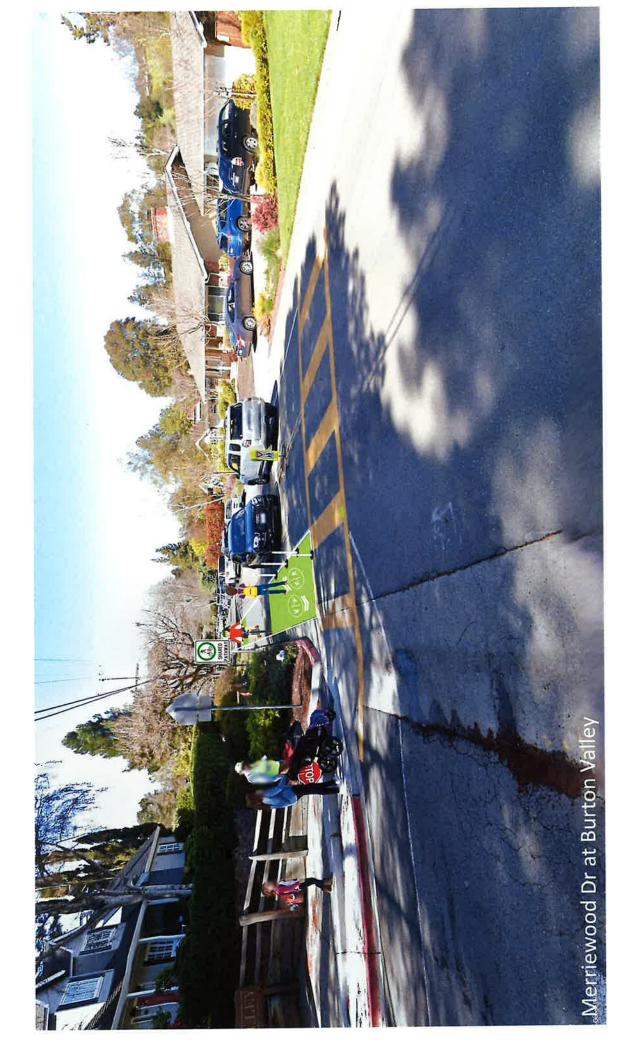
ATTACHMENT 1 May 19, 2021 Presentation Slides

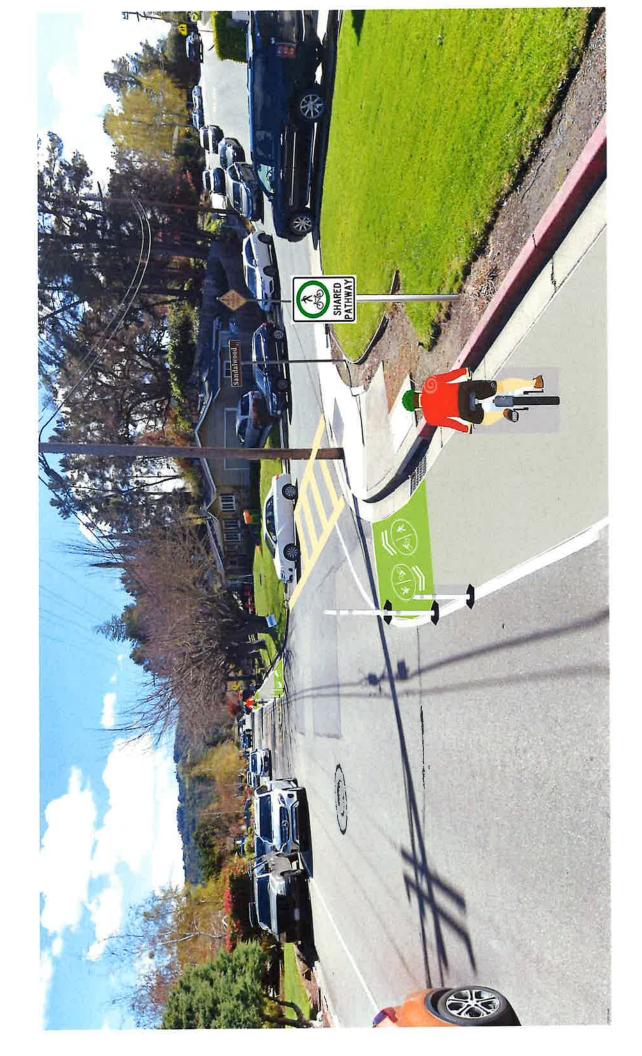


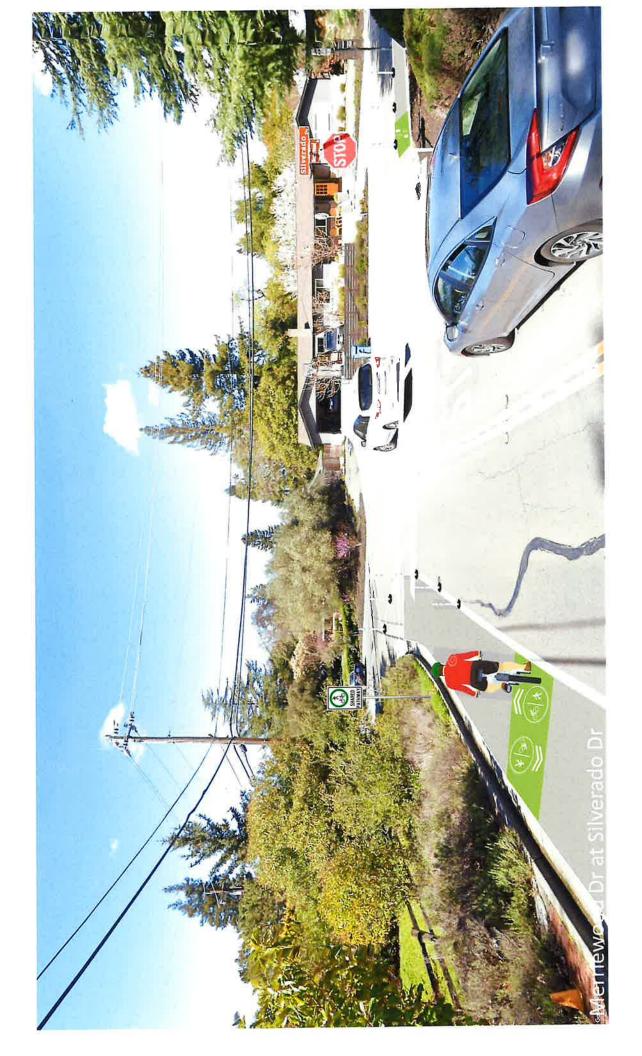


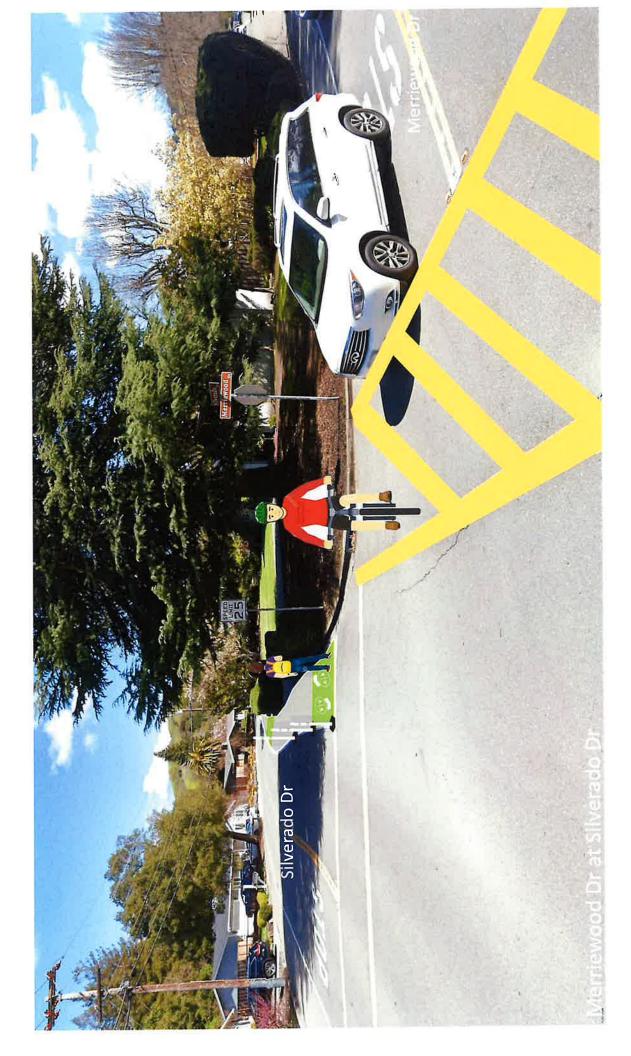








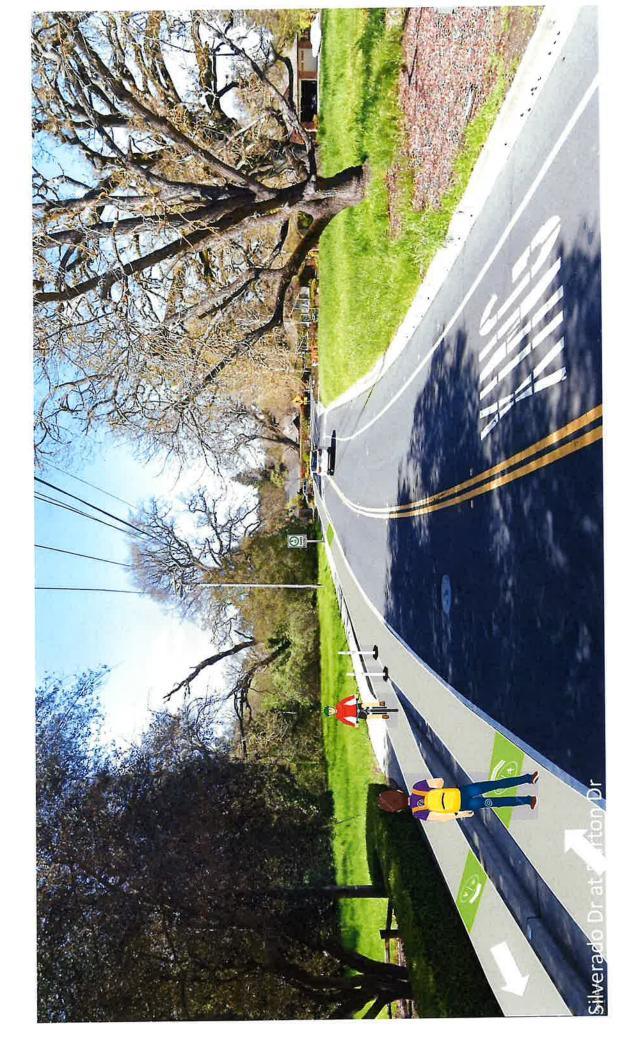


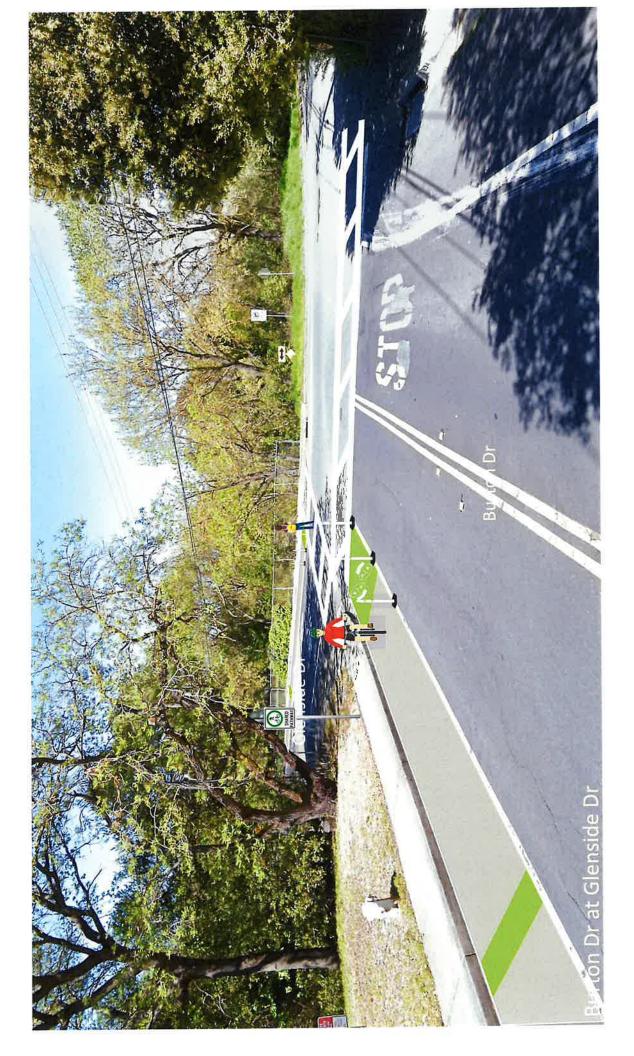


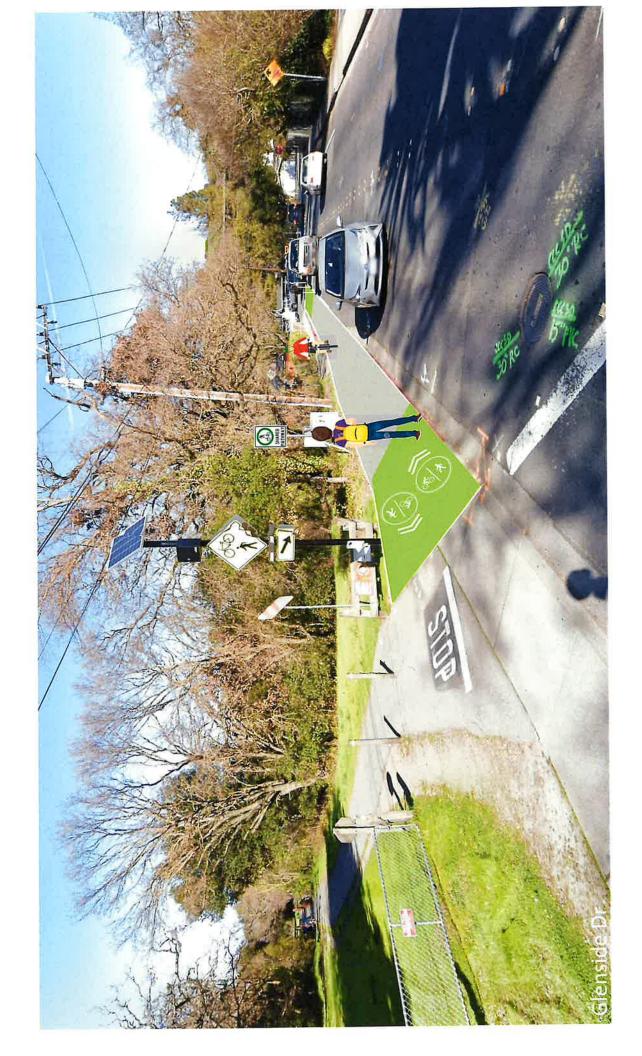


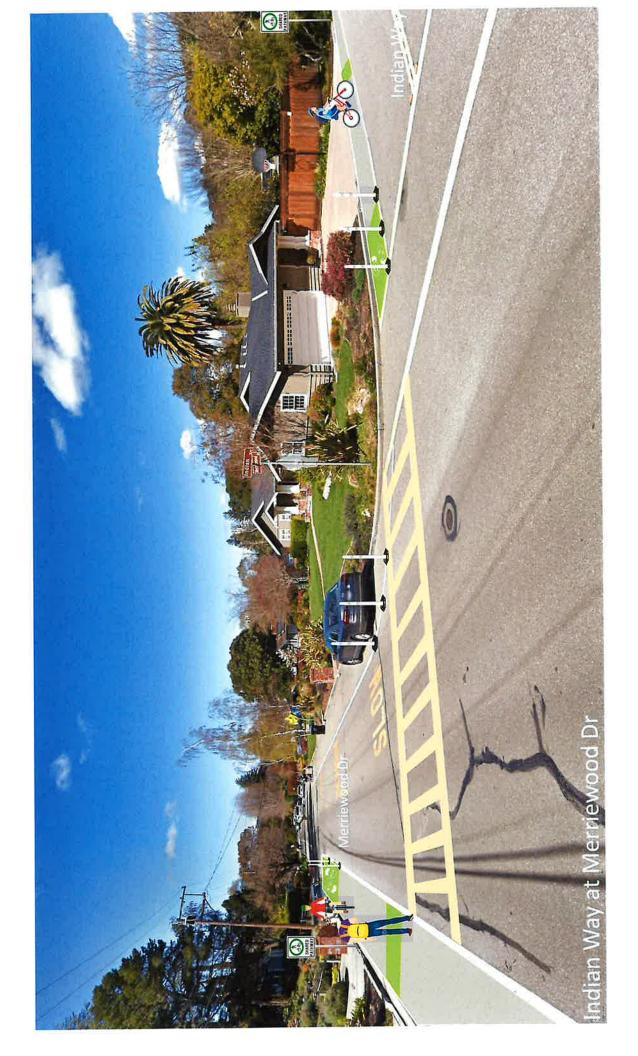






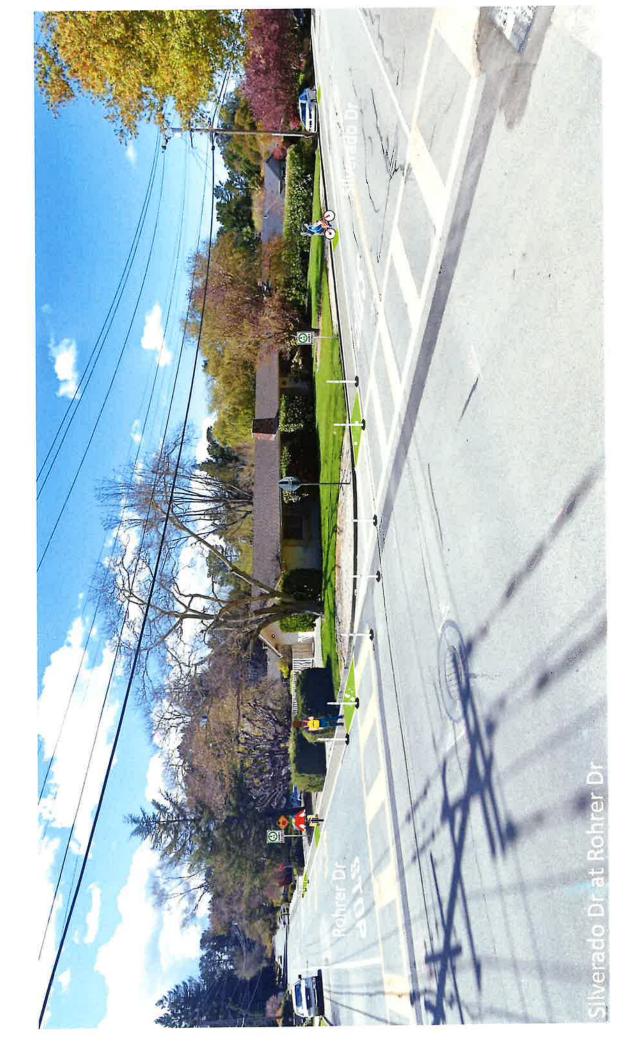




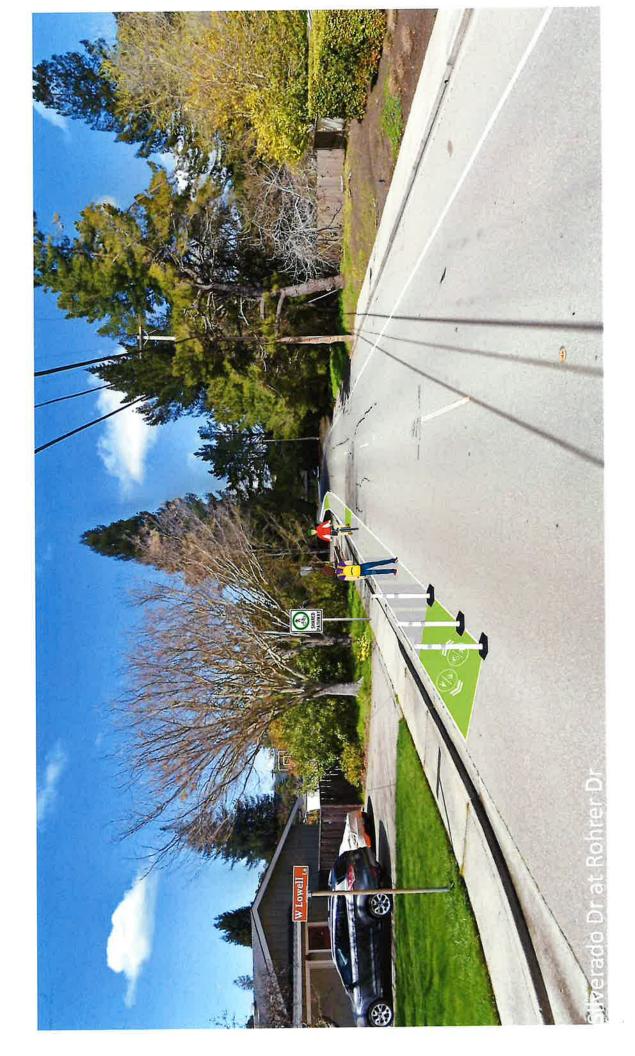


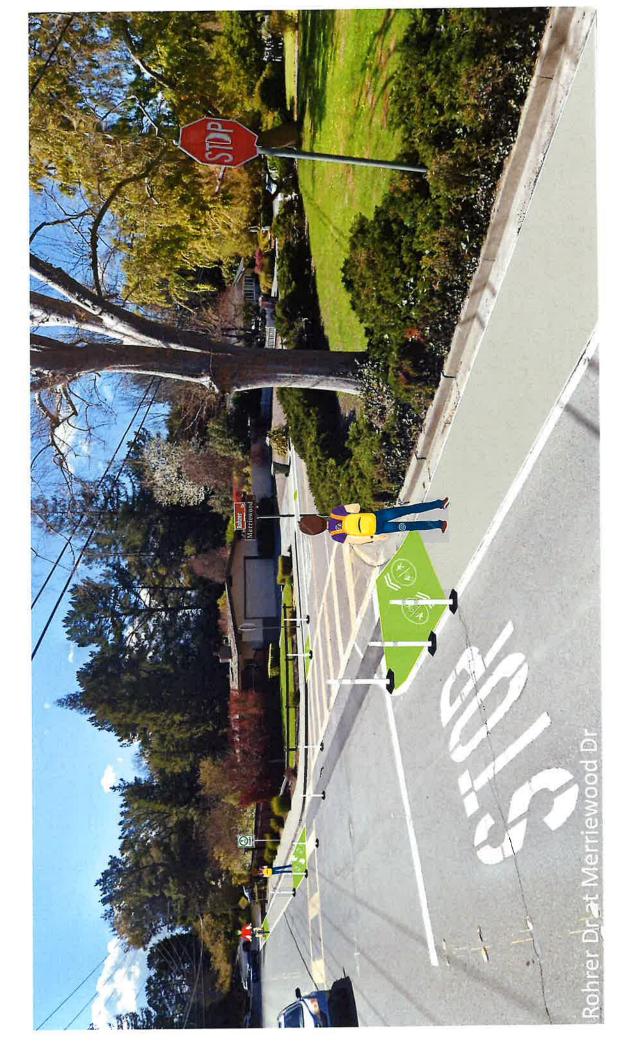


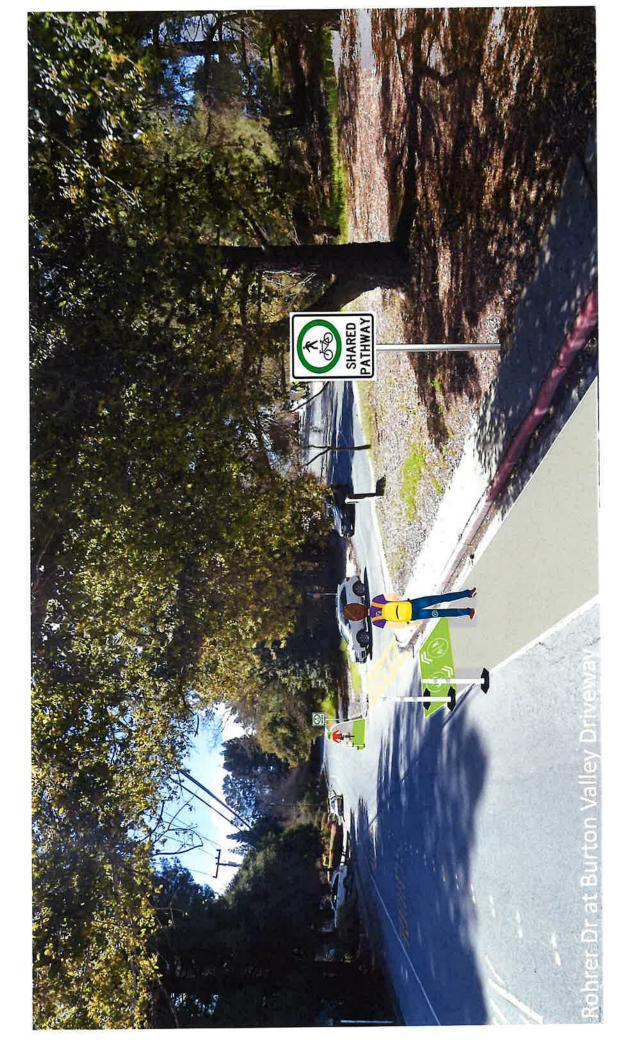


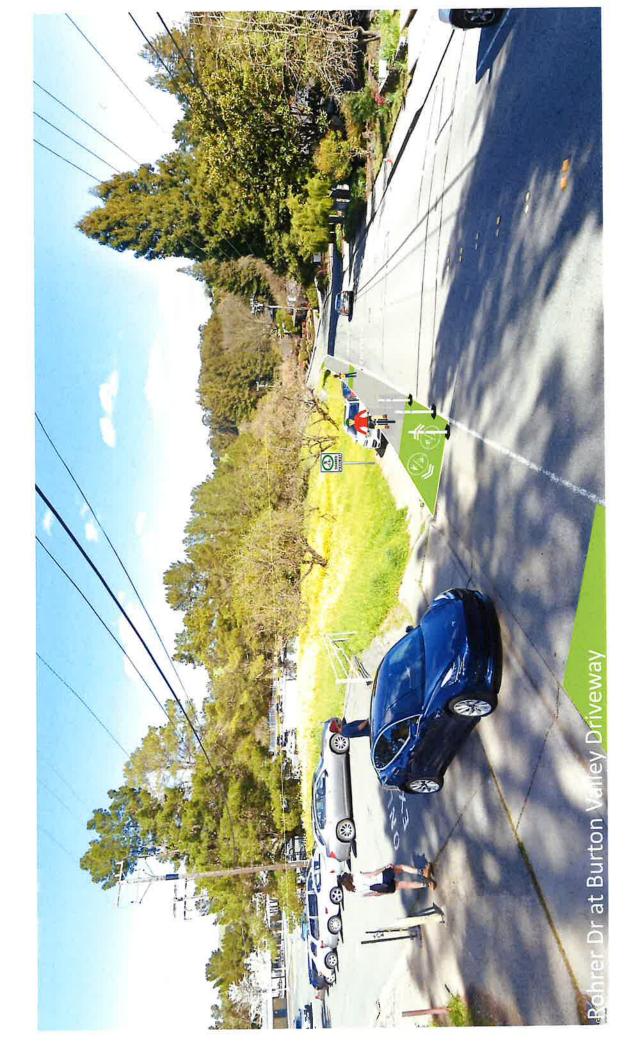














ATTACHMENT 2 Resident Notification Letter



City Council

Susan Candell, Mayor Teresa Gerringer, Vice Mayor Carl Anduri, Council Member Cameron Burks, Council Member Gina Dawson, Council Member

Dear Resident: May 12, 2021

The City of Lafayette has heard from numerous residents over the years who have expressed a concern regarding vehicle speed and traffic safety in the Burton Valley area of Lafayette. Many residents have requested traffic calming and are particularly concerned with the safety of pedestrians and bicyclists in Burton Valley. In response to these concerns, City staff sought, and has now received, a grant to conduct a "Safe Routes to School" pilot study for the area surrounding Burton Valley Elementary School. A pilot study will allow alterations to the roadway intended to improve the safety for multi-modal traffic that can be adjusted over time, and may or may not be left in place permanently. The study is anticipated to last one year.

Although the Burton Valley area does not have continuous sidewalks, several streets surrounding the School currently have enough street width to accommodate two vehicle lanes and two parking lanes. To allow a dedicated space for pedestrians and bicyclists, one of the key features of the proposed pilot study is to utilize the parking lane on one side of the street as a two-way shared pathway. The tradeoff to allow this to occur will be to eliminate one side of street parking. The proposed pilot study would eliminate street parking on the odd-address side of Burton, the odd-address side of Merriewood, the north side of Indian (between Merriewood and Silverado), the odd-address side of Silverado (between Burton and Lowell), and the north side of Rohrer (between Silverado and Read).

Measures to reduce vehicle speed are also critical to improving safety in your neighborhood. If a crash occurs between a vehicle and a pedestrian or bicyclist, the slower the vehicle speed, the greater the chance of avoiding serious injury or death. Therefore, another key feature of the pilot study is to reduce the speed limits to 15 mph on street segments that are within 500 feet of the elementary school and to 20 mph on street segments that are within 1,000 feet of the school.

Enclosed with this letter are two maps and a schematic example of the proposed shared pathway for your information. The discussion for the pilot study will start as part of our regularly-scheduled Transportation and Circulation Commission meeting on Wednesday, May 19th at 7:00 pm via Zoom. Please visit the Calendar on the City's website www.lovelafayette.org for the meeting's Zoom information. If you are unable to participate in the public meeting, you may submit written comments that will be forwarded to the Commissioners if they are received prior to the afternoon of the meeting. Also, there will be more than one meeting on the pilot study prior to making changes to the roadways.

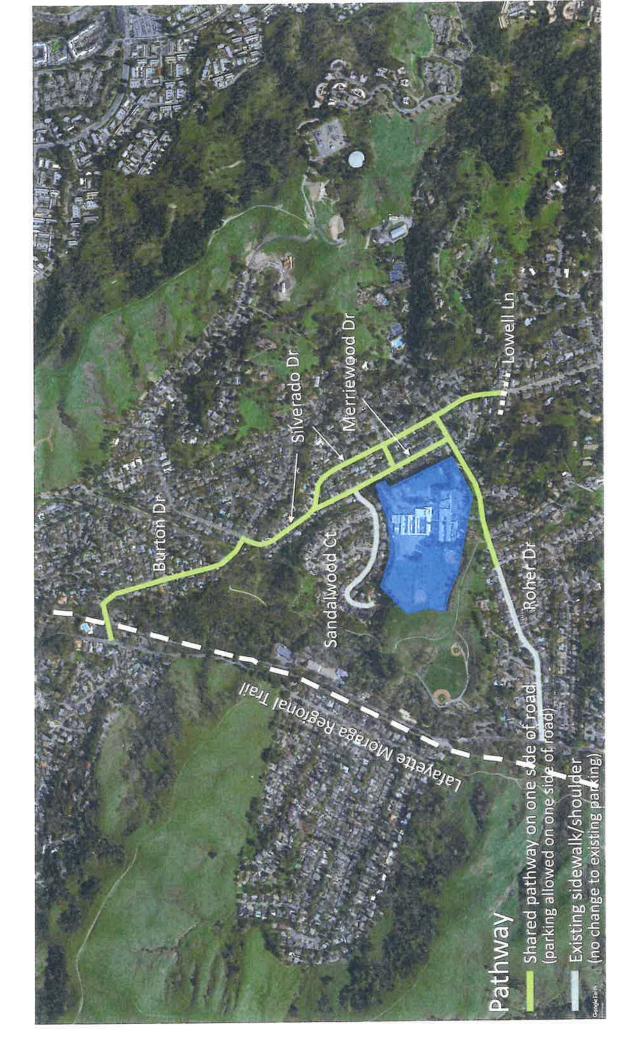
If you would like to submit written comments, please send them to the City's traffic engineer, Siavash (Sia) Shojaat, at sshojaat@ci.lafayette.ca.us or you may call him at (925) 299-3229.

The City looks forward to your participation and has hope that at the end of this process your great neighborhood will be even safer,

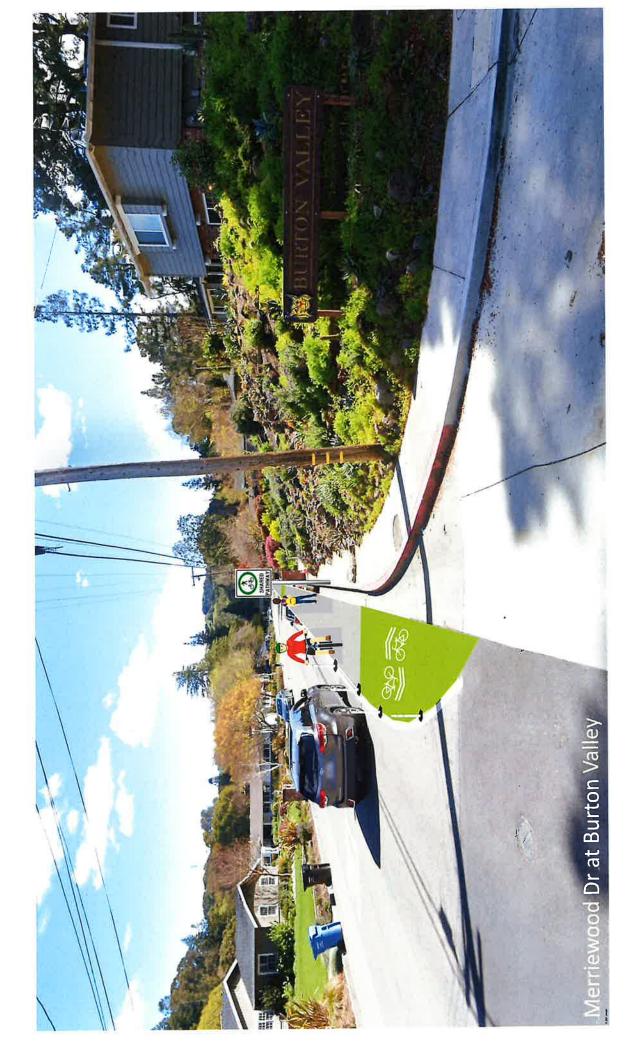
Mike Moran

Mike Moran
Director of Engineering and Public Works

www.ci.lafayette.ca.us







Staff Report TransCirc Meeting, June 16, 2021



City of Lafayette Staff Report

Transportation & Circulation Commission

Meeting Date: June 16, 2021

Staff: Siavash Shojaat, Traffic Engineer

Mike Moran, Director of Engineering and Public Works

Subject: Supplemental Staff Report for Proposed Pilot Study for the Safe Routes to School

(near Burton Valley Elementary School) - May 19, 2021

To improve safety of schoolchildren and pedestrians near Burton Valley Elementary School, a shared bidirectional pathway was proposed as an initial plan at the Transportation and Circulation (TransCirc) Commission's May 19, 2021 meeting. The proposed pathway would traverse through Merriewood Drive, Silverado Drive, Rohrer Drive, Indian Way, and Burton Drive. While some parents and students of the school generally supported the proposed pathway (which requires removal of parking lanes to allow a dedicated pedestrian/bike path), residents also expressed concerns about removal of parking spots and the inconveniences it may cause for them, delivery trucks, and service vehicles. Others had concerns regarding a bidirectional path that is not wide enough to meet advised standards. Some residents also expressed their opinion that speed reduction is the solution to improve safety near Burton Valley Elementary School and that expanded traffic enforcement is all that is needed to alleviate parent concerns and provide a safe route to school.

At this point it should be re-stated that a safe route to school pilot study has been requested by members of the community, and staff and the Commission are responding to those requests. The proposed pilot study is intended to address two major concerns. The first is that the streets surrounding Burton Valley Elementary School have limited sidewalks, pathways or dedicated spaces for pedestrians and bicyclists. The second major concern is that vehicles are being driven too fast in Burton Valley. Staff's presentation at the May 19th TransCirc meeting focused primarily on trying to utilize existing roadway width to provide a dedicated walk and bike path. Reducing speed was also mentioned, but beyond the request for increased traffic enforcement, the topic did not receive much attention.

This report is intended to help provide answers to some of the questions raised at and since the last TransCirc meeting and also to provide more options for the public to consider for increasing pedestrian and bicycle safety near Burton Valley Elementary School.

Problem Statement

Since the last meeting, staff conducted another site visit to observe the traffic near the school and the riding/walking behavior of children leaving school. Based on this site visit, staff still believe that two major factors contribute to the risk of vehicle-pedestrian/bicycle crashes in the area under study. The first factor is the high vehicle speed near the school (especially on Silverado and Burton Drive). Since the risk of fatality in vehicle-pedestrian crashes increases as vehicle speed increases, minimizing speed is very

important. The second factor is the absence of a dedicated pathway for the children near the school. This shortage forces the children and pedestrians to do weaving maneuvers around the parked vehicles and walk or ride in the vehicle travel lane. Figure 1 shows such walking and biking maneuvers. To lower the risk of crashes and reduce the risk of fatality when a crash occurs, staff believes that both factors should be addressed in the study area. Depending on characteristics of the roadway and its proximity to the school, more weight can be given to either factor.



Figure 1. Children riding and walking in the travel lane at Merriewood Drive

Geometric Limitations

Providing an isolated pathway for schoolchildren is dependent on the existing roadway widths. Staff previously suggested a 7-foot-wide dedicated path because this is the available shoulder width (not including the gutter) that could be utilized for a path. Residents did express concern when staff suggested a 7-foot-wide shared pathway, and in fact, 10 feet wide is the standard width for a shared bidirectional pathway. Table 1 shows the widths of the different roadways included in the proposed pilot plan.

Street Name	Vehicle Lane Width (ft)	Shoulder Lane Width (ft)	Sidewalk Presence
Silverado Dr	12	8	Partly
Merriewood Dr	10	8	None
Burton Dr	10	8	Partly
Rohrer Dr	10	7	Partly
Indian Way	10	7	None

As can be seen in Table 1, except for Silverado Drive, all roadways have travel lanes that are 10-feet wide (in one direction). A 10-foot width is Lafayette's standard for residential and residential collector streets and staff does not recommend narrower lane widths. Therefore, only the vehicle travel lanes on Silverado Drive could be narrowed to 10 feet wide to provide more shoulder width that could ultimately provide a buffer or dedicated space for pedestrians or bicyclists.

Proposed Alternatives for Dedicated Pathways

At each roadway, the staff recommend the following alternatives based on its geometric limitations and proximity to the school.

1- Merriewood Drive

Merriewood Drive is 36 feet wide with parking lanes on both sides. Since one of the main school entrances is on Merriewood, it receives a great deal of vehicle, pedestrian, and bicycle traffic during the morning drop-off and afternoon pick-up times. Suggested alternatives are shown in Figure 2 below:

For Merriewood Drive, the first alternative is the do-nothing alternative (shown as Alternative a). This alternative could also be paired with restricted parking hours during school drop-off and pick-up times.

Shoulder lanes at Merriewood Drive are 8 feet wide (6.5 feet asphalt and 1.5 feet curb) which is not enough for a standard shared bidirectional pathway. Also, since existing widths of travel lanes on Merriewood Drive are only 10 feet wide and should not be narrowed, its shoulder lanes cannot be widened either. This suggests that the 6.5 feet of paved shoulder (not including the 1.5 feet of concrete gutter) is not sufficient for a bidirectional pathway. However, given the unidirectional nature of trips to and from school during the drop-off and pick up times (i.e. during the drop-off time everyone is traveling towards the school and during the pickup time everyone is traveling away from the school), creating a narrower directional pathway remains a viable alternative. Children and pedestrians could use this pathway in one direction during the morning time and in the other direction during the afternoon. To implement this alternative, educating the children and parents will be necessary and additional help could also come from crossing guards. This option is shown as Alternative b in Figure 2.

The other option for Merriewood Drive, shown as Alternative c, is removing a travel lane, making Merriewood a one-way road, and providing an isolated 10-foot-wide shared bidirectional pathway. In this scenario, no parking lanes will be removed from either side of Merriewood Drive, but of course residents of Merriewood would now have to travel one-way to enter and exit their street.

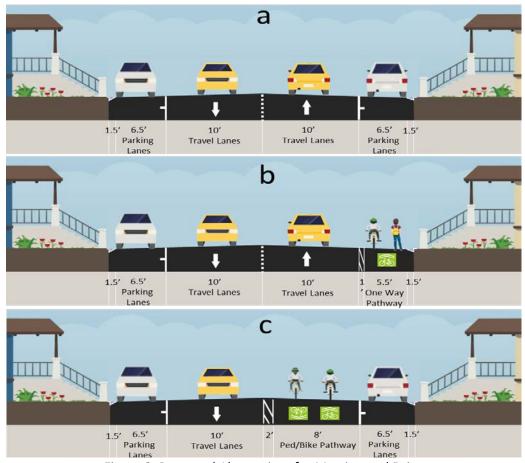


Figure 2. Proposed Alternatives for Merriewood Drive

2- Silverado Drive

Silverado Drive is 40 feet wide with parking lanes on both sides. Many parts of Silverado Drive are greatly impacted by the school during the drop-off and pick-up times.

For Silverado Drive, the first alternative is the do-nothing alternative which is shown as Alternative a in Figure 3 below. This alternative may also be paired with a restricted parking hour plan during certain times of day tied to the school drop-off and pick-up schedules.

Silverado Drive has a travel lane width of 12 feet in each direction. Since these lanes could be striped 10 feet wide, this allows a reduction of 2 feet from each travel lane. This 4 feet of street width could be added to a parking lane on one side of the road to create a shared bidirectional pathway for schoolchildren and pedestrians, provided parking is eliminated from that side of the road. This option is shown as Alternative b in Figure 3.

Another option for Silverado Drive, shown as Alternative c below, is reducing the vehicle travel lanes by 2 feet and striping a 2-foot-wide buffer zone between the parking lanes and the travel lanes. This zone may help reduce the risk of pedestrian-vehicle crashes by moving the vehicles to the center of the roadway, and although the width would not be adequate to be considered a bike lane, it would still provide a narrow buffer between parked vehicles and pedestrians/bicyclists. This option would not require a loss of any parking.

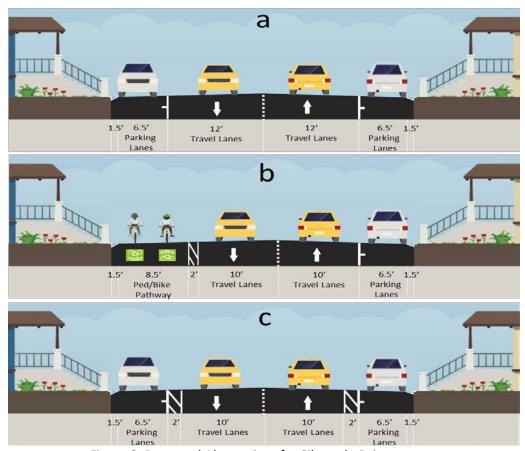


Figure 3. Proposed Alternatives for Silverado Drive

3- Indian Way

Given the short length of Indian Way, its limited width, and its lower driving speed, staff would not recommend any changes to Indian Way.

4- Rohrer Drive

Rohrer Drive between Merriewood Drive and Silverado Drive is only 34 feet wide and has parking on both sides of the street. This portion of Rohrer is located between two all-way stop intersections. Therefore, staff does not recommend any changes to this portion of the Rohrer Drive as part of the pilot study. The portion of Rohrer Drive between Merriewood Drive and Read Drive has a sidewalk, and staff also does not recommend any changes to this section of roadway regarding a dedicated path. However, a crosswalk could be added at the eastern-most school entrance on Rohrer Drive. This is one suggestion noted in the Berkeley SafeTrek report, but this option would require adding an ADA ramp on the school side of the crossing, which would likely price this option out of consideration as part of a pilot study.

5- Burton Drive

Burton Drive is the same width as Merriewood and has intermittent sections of sidewalks that can be used by pedestrians. Staff does not recommend any changes to Burton Drive regarding a dedicated path.

Problem Statement

Although there was certainly disagreement expressed regarding the implementation of a dedicated pathway at the last TransCirc meeting, most residents acknowledged that vehicle speeding is an issue. As mentioned previously, not only is reducing speed important for helping to reduce the numbers of vehicle crashes but lower speeds reduce the chance of severe injury or death when a crash does occur. Slower speeds may also encourage more walking and biking to and from school. Combined with speed reduction, staff also suggests that we improve the line of sight between pedestrians and drivers near some crosswalks to improve driver compliance with yielding to pedestrians in the crosswalk. Below are some speed reducing strategies that can be considered as part of the proposed pilot study. It is important to note that the strategies below can be mixed and matched to cater to the neighborhood's preference.

Speed Reduction Strategies

Speed reduction strategies were briefly discussed but not fully explored during the last commission meeting. Methods for vehicle speed reduction are explored more fully below:

1- Additional Enforcement: The speed reduction method most discussed at the last meeting was increased traffic enforcement. Since that meeting, staff has had discussions with the police chief and there was agreement that Burton Valley will be added to traffic enforcement's list of hot spots and the neighborhood should notice an increase in enforcement. However, Lafayette's police force has a limited number of personnel and consequently traffic enforcement is also limited. A traffic enforcement officer could be added to Lafayette's force, but the additional cost to add one shift to Lafayette is approximately \$295,000, without allowing for overtime. Additionally, traffic enforcement tends to have only a temporary effect, rather than a long-term impact, in reducing speeding. Also, traffic enforcement in California is somewhat limited to citing the worst speeding offenders because tickets issued for speeds slightly above the speed limit often do not hold up in court if the ticket is challenged. As a result, even though the speed limit on residential streets is 25 mph, the effective enforceable speed is significantly higher than 25 mph. In summary, increasing enforcement may have a short-term positive impact, but it cannot be considered an effective measure in keeping vehicle speeds to 25 mph or less.

2- Speed Humps:

Adding speed humps has been shown to be an effective way (likely the most effective way) to reduce speed along short stretches of roadway. However, adding speed humps is always a very polarizing topic and actual placement of speed humps can be problematic. Additionally, emergency services would prefer to minimize the number of speed humps because they can increase response times to emergency calls. Staff has prepared a layout showing suggested speed hump locations in Figures 4 through 7 of Appendix A. Figures 4 and 6 also show suggested locations for red curb to restrict parking and help improve the line of sight between drivers and pedestrians at crosswalks. Speed humps are most effective when grouped together or located fairly near existing STOP signs. The cost of adding speed humps varies, but typically costs about \$6,000 for each location (\$3,000 per lane per direction) including the speed hump signage, and striping.

3- Radar Speed Signs

In addition to the alternatives above, radar speed signs can be added to remind drivers that they may be inadvertently exceeding the speed limit. These signs are fairly expensive (\$4,500 to \$5,000

each installed). The effectiveness of these signs is mixed. Some conscientious drivers will slow down when they are reminded that their speed exceeds the speed limit, but some drivers will not.

4- Added Stop Signs

Although STOP signs are not typically to be used to reduce speed per the California Manual of Uniform Traffic Control Devices (MUTCD), the public has suggested that stops could be added at Indian Way on both Silverado Drive and Merriewood Drive. Stops at either of these locations could help meter cross traffic (provide natural gaps in traffic so drivers making left turns onto or off of Indian Way will have a break in traffic that allows a safe turn without backing up traffic), and would also provide a stop to help protect pedestrian crossings at Silverado. A layout for adding these additional stops is shown on Figure 8 in Appendix B. Figure 8 also shows suggested locations for red curb to restrict parking and help improve the line of sight between drivers and pedestrians at crosswalks.

Other Questions

As requested by the commissioners, City staff have researched legality of riding bicycles on sidewalks. Our research shows that no state-wide law forbids bicyclists from riding on sidewalks. Local municipalities have the freedom to initiate their own laws on sidewalk riding. According to Chapter 6 of Lafayette Municipal Code, bicyclists may ride on the sidewalk as long as the sidewalk is not within the business district. When riding on sidewalks, the bicyclists should yield the right-of-way to pedestrians. Additionally, staff has asked our police chief to clarify Lafayette's policy for policing bicycle riders on sidewalks. His response was that they would not cite riders, particularly younger riders, because their biggest concern is safety. However, they might educate riders that they are required to yield to pedestrians if a rider is failing to do so.

Appendix A: Speed Humps



Figure 4. Proposed Speed Reduction Strategies for Burton Drive

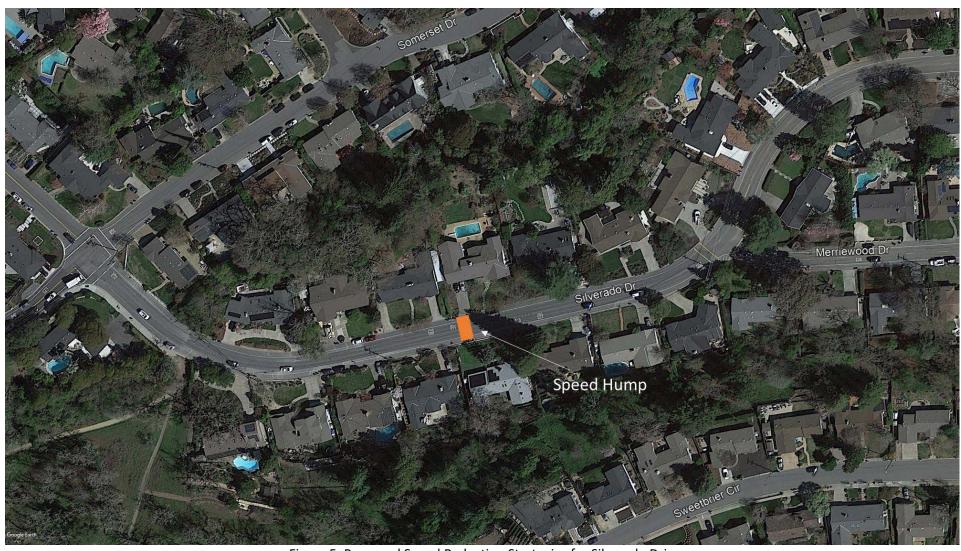


Figure 5. Proposed Speed Reduction Strategies for Silverado Drive

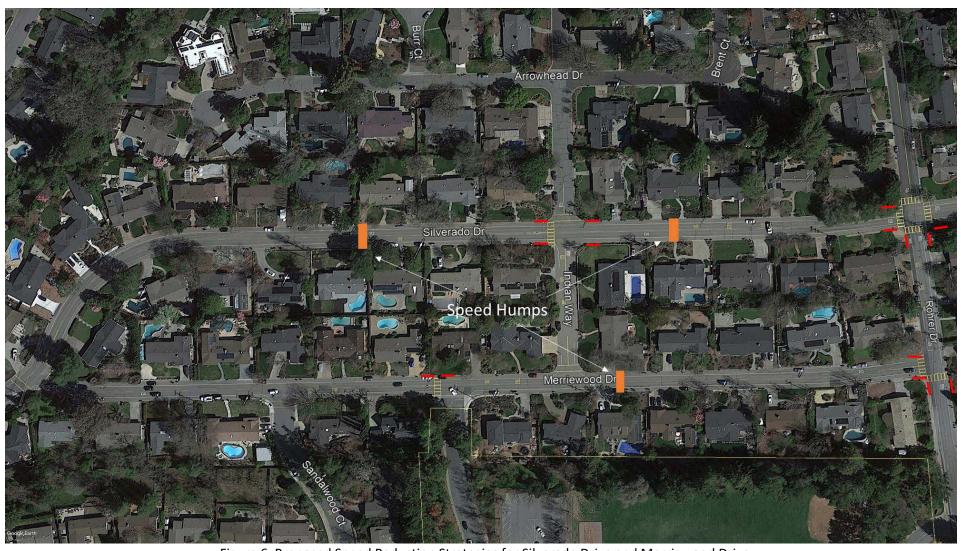


Figure 6. Proposed Speed Reduction Strategies for Silverado Drive and Merriewood Drive

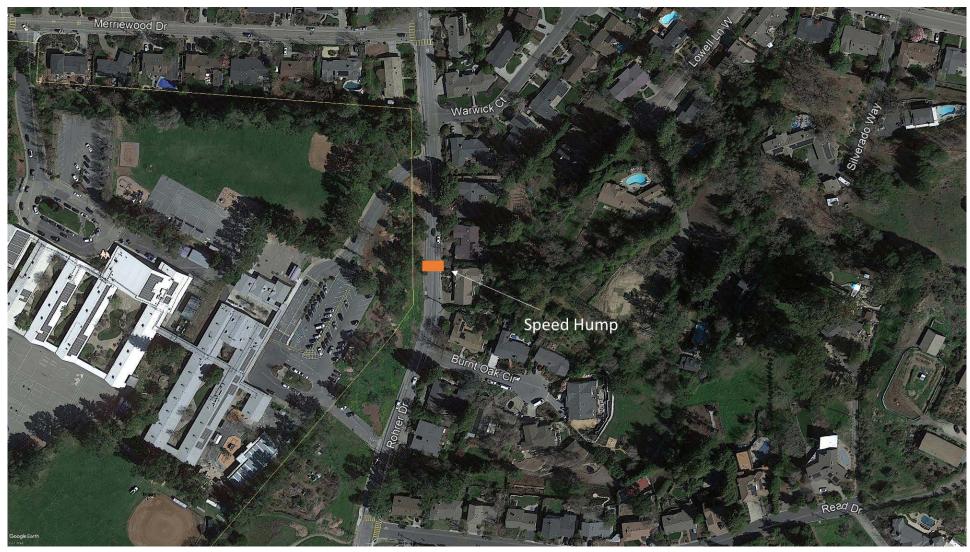


Figure 7. Proposed Speed Reduction Strategies for Rohrer Drive

Appendix B: Stop Sign

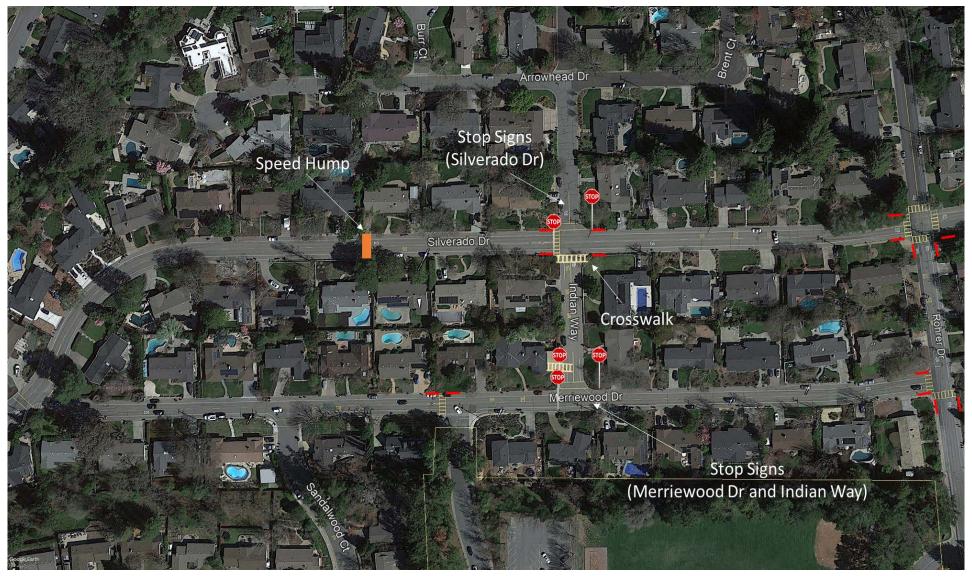


Figure 8. Proposed Speed Reduction Strategies for Silverado Drive and Merriewood Drive

Staff Report Town Hall Workshop, July 8, 2021



City of Lafayette Staff Report

Transportation & Circulation Commission

Meeting Date: July 8, 2021

Staff:

Mike Moran, Director of Engineering and Public Works

Siavash Shojaat, Associate Traffic Engineer

Subject: Third Staff Report for Proposed Pilot Study for the Safe Routes to School (near Burton

Valley Elementary School)

Background

Proposed options for a safe route to school pilot study for the Burton Valley Elementary area have been presented by staff and discussed by members of the community and by the Transportation and Circulation commissioners at the last two TransCirc meetings. At the first meeting ideas were presented to provide dedicated lanes for pedestrians and bicyclists and to reduce speed. Although there was some support for dedicated walking and riding lanes, staff received significant input from community members who were not in favor of the dedicated multi-directional path because it is not wide enough to meet advised standards, because it will restrict parking, because it will add inconveniences for delivery and service crews, and because it could make conditions less safe due to an increased amount of street crossings and because the non-standard traffic flows may be confusing. However, vehicle speed was acknowledged by almost every speaker as a valid concern and an issue that should be addressed.

At the second meeting, staff presented additional alternatives for safer ped/bike spaces and more specifics to help reduce vehicle speeds, such as narrower lanes and speed humps. Like the first meeting, the Commission heard from several public speakers and received written correspondence from many others right up to the time of the second meeting. The comments were very similar to those received at the first meeting and the Commission was asked by staff not to make a recommendation for action, but to schedule a town-hall or community workshop type meeting in the near future. The town-hall format is intended to provide a more amenable forum to work through the pros and cons of the proposed traffic safety items and hopefully form a consensus regarding which techniques to try as part of the pilot study.

Neighbor-Suggested Compromise

Since the second meeting, staff has been contacted by several members of the community concerned with next steps for the pilot study process and several wanted to know how decisions would be made moving forward. Staff's response has been that the goal would be to obtain some sort of consensus neighborhood-wide since the requested changes are intended to benefit the entire neighborhood. Further, staff encouraged several residents to talk with their neighbors, particularly neighbors that may have an opposing view to their own, regarding the proposed pilot study to see if they could reach some

common ground. One household took this suggestion to heart and reached out to over 50 of their neighbors to put together a comprehensive proposal for the pilot study that is intended to balance traffic safety concerns while preserving the semi-rural character of the neighborhood. The proposal is also intended to minimize direct negative impacts to some residents while also acknowledging that some tradeoffs are worth it if public safety can be improved and if more of the neighborhood is encouraged to walk or ride to school or nearby destinations instead of taking a vehicle. The entire packet or "neighborhood-submitted proposal" with narrative and graphics is included as Attachment 1 to this staff report.

The "neighborhood-submitted proposal" is summarized below, street by street, and presented in the graphics that follow. Staff believes that on the whole this proposal represents a good compromise and includes several of the features presented in the last two TransCirc meetings and even a couple of items that are new. Although the proposal has not been vetted by all of Burton Valley, a significant number of community members were able to weigh in on this compromise, and staff has some hope that their responses will be indicative of the larger community. If this is the case, and some consensus is reached regarding which features to include for the pilot study, as worked out at this town-hall meeting, then the Commission can take action and ask staff to confirm the recommendations at the next available Council Meeting.

Merriewood Drive

<u>Institute Right Turn Only when exiting Merriewood School Entrance</u>

Prohibiting the left turn eliminates a conflict between crosswalk users and drivers exiting the school. It may also reduce the vehicle queue to leave the school grounds, making drop-off and pick-up of school children more efficient.

Prohibit Parking at the School Entrance/Exit

Painting the curb red on each side of the school driveway will provide a better line of sight between drivers and pedestrians. Staff would add that this should be done near other street corners throughout the neighborhood for the same reason. The intent is not to remove parking, so care would be taken to limit the extent of the red curbs.

Prohibit Parking on Both Sides Merriewood on School Days at Drop-off and Pick-up Times

Add signs to prohibit parking on both sides of the street for ½ hour before and after school start time and school dismissal time. Start with neighborhood participation and cooperation and use the neighborhood volunteers to help remind and enforce drivers not to park at the listed times. Add enforcement if needed over time.

Speed Hump

Install one speed hump between Indian and Rohrer.

Marking and Pruning at the intersection of Merriewood and Silverado

Re-stripe the corner of Merriewood to better delineate the vehicle lane from the shoulder and encourage the corner owner to prune vegetation at the corner to improve the line of sight between drivers and pedestrians.

Silverado Drive

Traffic Lane Striping

Either leave existing 12-foot-wide vehicle travel lanes with 8-foot-wide shoulders or re-stripe 10-foot-wide vehicle travel lanes with 8-foot-wide shoulders and a 2-foot-wide buffer zone in between the shoulder and travel lane. Staff strongly recommends trying the 2-foot-wide buffer because there will be no loss of parking, drivers may be encouraged to drive at or below the speed limit with the narrower lane, and bikers and pedestrians would be able to pass a parked vehicle without entering the vehicle travel lane.

Prohibit Parking at Corners

Paint curbs red at the corners of Silverado/Indian and Silverado/Rohrer to improve line of sight between drivers and pedestrians.

Speed Humps

Place two speed humps between Merriewood and Rohrer and another speed hump between Burton and Merriewood.

Marking and Pruning Near 590 Silverado

Refresh and enhance markings near 590 Silverado and encourage pruning of vegetation along the roadway curve to help improve the line of sight between drivers and pedestrians.

Indian Way

Stop Sign Visibility

Suggest pruning or possibly even relocation of STOP sign on Indian Way at Silverado. Add a STOP sign, legend and stop bar on Indian at Merriewood.

Prohibit Parking at Corners

Paint curbs red at the corners of Silverado and Indian to improve line of sight between drivers and pedestrians.

Burton Drive

Speed Humps

Install two speed humps on Burton Drive to improve line of sight between drivers and pedestrians.

Rohrer Drive

Prohibit Parking at Corners

Paint curbs red at the corners of Silverado and Indian to improve line of sight between drivers and pedestrians.

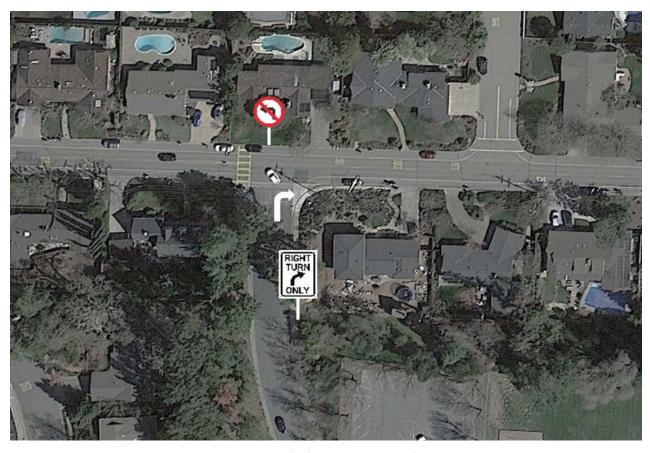


Figure 1. Right turn only (left turn prohibition) at school exit



Figure 2. Parking prohibition at Merriewood Drive

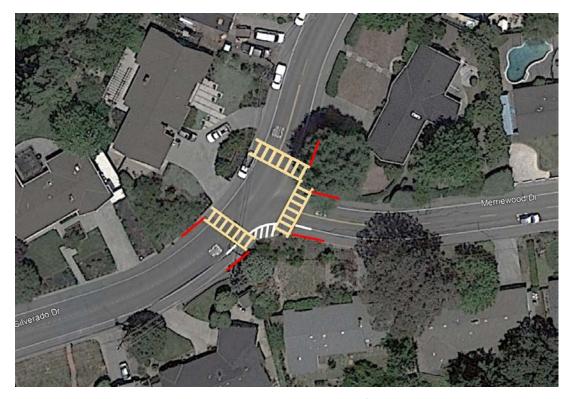


Figure 3. Markings and red curbs at the Intersection of Merriewood and Silverado



Figure 4. Speed humps, red curbs, and a stop sign

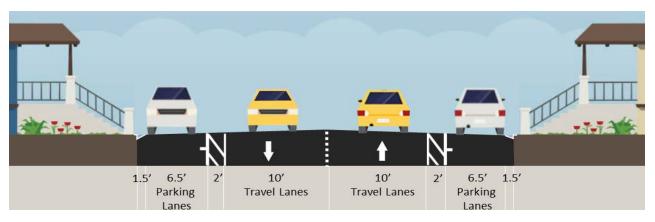


Figure 5. Lane configurations at Silverado Drive



Figure 6. Marking and white reflectors at 590 Silverado Drive

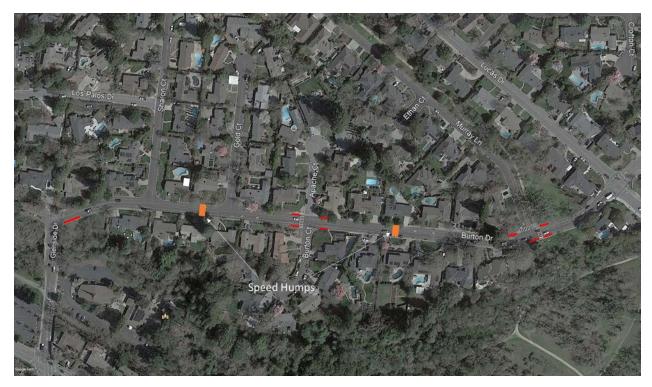


Figure 7. Speed humps and red curbs at Burton Drive

Pilot Study Evaluation criteria

A pilot study has been proposed for the area around Burton Valley Elementary School to reduce safety concerns for all modes of transportation and to encourage more walking and biking in the neighborhood. Although the study was first intended to improve the safety of school children, it is worth mentioning that any safety improvements added will be to the benefit of all users and all ages, but to judge the effectiveness of the pilot study, staff suggests the following:

Speed Survey

A speed survey should be performed before and approximately five or six months after installing any speed humps or narrowing any vehicle travel lanes. Speeds can be collected at multiple locations throughout the neighborhood. Although staff would anticipate a decrease in average speed where trafficalming measures are installed, a speed survey will help confirm effectiveness.

Observations of Pedestrians and Younger Bicyclists in Vehicle Travel Lane

Although somewhat subjective, there should be noticeably fewer pedestrians and younger bicyclists entering the vehicle travel lanes, particularly before and after school start and end times. If measures are not put into place prior to the start of school in August (which is almost a certainty at this late date), counts of pedestrians and bikers entering the vehicle travel lanes could be taken at the beginning of the school year and then taken again after restrictions and changes are implemented.

Increase in the Number of Walkers and Bikers to School

For past grant applications, estimates have been provided by Burton Valley Elementary School regarding the number of bikers and walkers to and from school. These numbers can be compared to new estimates and counts following the start of the pilot study to see if more students have been encouraged to commute to school using an active transportation mode.

Summary

The City has a Transportation Action Request system in place for the public to express concerns and suggest improvements within the City. Several suggestions have been discussed and presented for this proposed pilot study that will both help to calm vehicle traffic and encourage more active transportation users. Every suggestion is intended to improve current conditions, but staff and the public recognize that some suggestions require tradeoffs that not everyone is in favor of supporting. It is up to our public, the Transportation and Circulation Commission, and ultimately our City Council to decide and affirm which strategies to implement for the pilot study. Staff's past experience indicates that compromises are often required to allow meaningful changes to occur.

Recommendations

Based on the input from the previous two meetings, the written feedback received from many residents, and tonight's discussions, recommend which pilot study treatments to implement and ask staff to affirm those recommendations at the next available Council Meeting.

<u>Attachment</u>

Neighborhood-submitted Proposal

Attachment 1

Neighborhood-submitted Proposal

Safer Routes to School Proposal

Lafayette was incorporated for the preservation and enhancement of the semi-rural character of the Community. This is part of our City Charter, the guiding document that City officials are sworn to uphold and defend. Acting counter to the Charter by any residents or City officials would be a betrayal to the City.

What are the characteristics of a semi-rural environment?

- Automobile dependent
- No urban infrastructure
- Narrow two-way streets (often winding)
- No street lighting
- No sidewalks
- Limited street painting
- Limited signage
- No electric signage
- Minimal traffic lights
- Minimal police and fire services

- Little traffic enforcement
- A small city staff
- A volunteer system of governmental committees
- Proximity to farmlands and/or open space
- Aesthetically and visually pleasing architecture

When Burton Valley was built in the 1960s, it was with this semi-rural character in mind. With these design elements and limitations, Burton Valley has not only had a good record with traffic/pedestrian safety, *it has had a perfect record for 60 years*. In the history of Burton Valley, there has not been one recorded incident of a vehicle hitting a child on the way to or from school. City officials consider Burton Valley to be the safest walking neighborhood in the entire City of Lafayette.

Consequently, the City's proposal for *Safe Routes To School Pilot Project* with no explanation of what now makes the neighborhood unsafe is difficult to understand. Virtually every household in this community has raised kids here, and for 60 years not one of those kids has suffered from a vehicle collision.

Many of us have worked over the years to improve school-related safety in the neighborhood on an incremental basis. That may be the primary reason there continue to be no incidents. It also suggests that as a community, we have done a good job – a record to be proud of.

The purpose of this report is to address identified problems and to solve them with commonsense, engineering-approved methods that do not create additional or more serious problems, and do not disrupt the entire neighborhood. The goal is to achieve what can be defined as "the common good:" a neighborhood that respects the rights of all to continue to enjoy its semi-rural character while providing reasonable safety measures to support everyone's—old, young and in-between—safety.

Among the 52 Burton Valley households whom we have contacted about the proposed *Safe Routes to School Pilot Project*, the constituents break into groups as follows:

- There is no problem and no issue whatsoever.
- There is only a temporary COVID related traffic issue at BVE pick up times.
- The traffic problem is limited to 1 hour per day so who cares.
- Parked cars on the shoulder block kids from the bike lane, especially near the school.
- Speed bumps and/or more stop signs are needed to slow or meter traffic.
- Removal of stop signs is needed because drivers and bikers don't stop anyway.
- The City needs to provide more "safety," though "safety" is undefined.
- The City is overreacting to a relatively minor problem.

The definition of the issues is further confused by anecdotal evidence, emotional responses, a specific street dependency and lack of data. When focusing on getting kids to and from school safely, it is important to consider there are 180 school days and one 1/2 hour in the morning and one 1/2 hour in the afternoon when the primary potential conflicts with vehicles exist. That is a total of 180 hours per year or 2% of the time that safer corridors are needed. Appropriate solutions should reflect these times.

To help define and solve the problems, this report focuses on three separate categories of problem by specific street: **speeding, vehicles blocking the parking lane (primarily during school commute times), and line of sight issues.** As one gets further from the school, the student/parent commute density disperses in several different directions. Therefore, this report focuses on the core geographic area of perceived problems.

The information in this report was not scientifically collected. The problems identified were culled from email responses to community newsletters sent out regarding this project. Further information was collected from neighbors talking with neighbors.

EXISTING PROBLEMS IDENTIFIED

Merriewood Drive

- Speed surveys from seven years ago indicate that speeding was not a big issue, especially not during school commute hours when the traffic is too thick for anyone to speed.
- No Merriewood residents reported that cars parking on the shoulder were a problem, but residents of other streets complained about cars on the shoulder during school commute hours only.
- One line of sight issue was reported.
- Many Merriewood residents expressed concern about Rancho Swim Club meets and evening/weekend school event parking.

Silverado Drive

- Speed surveys from seven years ago indicate that speeding was an issue, primarily for cars traveling downhill northbound near the curves. The neighborhood today says speeds have not slowed down, with the average for the street remaining at 36 mph.
- No Silverado residents reported that cars parking on the shoulder were a problem.
- A few Silverado residents said a wider parking lane (or a narrower driving lane) would be "nice".
- No line of sight issues were reported.
- Many Silverado residents expressed concern about parking during Rancho Swim Club meets; current parking overwhelms the street during meets.

Burton Drive

- Speed situation similar to Silverado, today and historically.
- No Burton residents reported that cars parking on the shoulder were a problem.
- No line of sight issues were reported.

Indian Way

- Several people from the neighborhood, but not from Indian Way, wanted 3-way stop signs on Indian Way at Silverado and Merriewood.
- Just as many people said no stop signs needed there and they would do more harm than good and are unnecessary.

Rohrer Drive

• Everyone from everywhere expressed concern about parking here during swim meets and evening/weekend school events. The street is overwhelmed with parking at these times. The overflow effect spreads the problem onto more neighboring streets.

RECOMMENDED STREET-BY-STREET SAFETY IMPROVEMENTS

1- Merriewood Drive

Institute Right Turn Only when Exiting the Merriewood Drive School Entrance Prohibiting a left turn from the school entrance would create greater safety for pedestrians and bike riders using the crosswalk. It would also improve flow exiting the school by reducing wait times for those making left hand turns against traffic. A simple "Right Turn Only" sign at the bottom of the driveway is recommended (perhaps limited to certain hours).

Limit On-Street Parking

Prohibit parking 24/7 within 20(?) feet of school entrance on both sides of street; painted red curbs.



Figure 1. No Parking sign near Lafayette Elementary

Add signs to prohibit parking on both sides of the entire street for ½ hour before and after school start time and ½ hour before and after school dismissal time; make this voluntary at first, mandatory with enforcement after six months if no cooperation. Use neighborhood volunteers to request participation and cooperation.

Speed Hump

Install one speed hump, position TBD, somewhere between Indian and Rohrer. This is primarily to prevent traffic from diverting from Silverado to avoid speed humps there.

Merriewood/Silverado Intersection

The Merriewood/Silverado intersection presents a hazard to pedestrians and bikers. It is a curved right turn off of Silverado onto Merriewood and motorists frequently roll through the stop signs and cut into pedestrian/bike right away. We endorse repainting the semi-circular pavement pattern that has worn away that was around that corner, using bright yellow or green paint. (Figure 2)

Line of Sight Issues at Merriewood/Silverado

In order to improve line of sight visibility for both drivers and bicyclists/pedestrians, we recommend the City work with the homeowner at 575 Merriewood to remove overgrowth/shrubbery at the Merriewood/Silverado corner. Foliage at this corner makes it essentially a blind corner. (Figure 2)



Figure 2. Line of Sight Issue

2- Silverado Drive

Traffic Lane Re-configuration

We endorse either Alternative A (Fig 3) or C (Fig 4) in the City's Staff Reported dated 6/11/21.

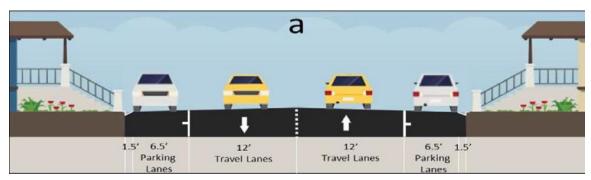


Figure 3. Silverado: Current travel configuration.

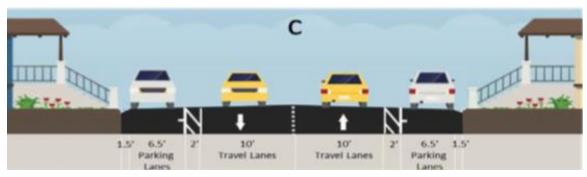


Figure 4. Silverado: Alternative C narrows travel lanes for cars, widens pedestrian and bicycle access

Alternative C, shown above (Figure 4), would narrow travel lanes for traffic by 2 feet, making 10-foot lanes in each direction. This approach has been shown to slow travel speeds. "Parking Lanes," which are bicycle and pedestrian travel areas, would be widened to 10 feet on each side, providing more room to detour around the occasional parked car.

As was suggested by the City, Alternative C could include striping a 2-foot-wide buffer zone between the parking lanes and the travel lanes in both directions. This zone may help reduce the risk of pedestrian-vehicle crashes by moving the vehicles to the center of the roadway, and although the width would not be adequate to be considered a bike lane, it would still provide a narrow buffer between parked vehicles and pedestrians/bicyclists. This option would not require a loss of any parking.

The alternative chosen should be decided by the residents on Silverado who will be the most affected by these changes and the City Engineering Dept.

Line of Sight Improvement: No Parking on Corners

We recommend improving line of sight for bicyclists and pedestrians by instituting "No Parking" 10 feet from all corners, designated with red paint on corners. These would include corners of Silverado/Indian Way and Silverado/Rohrer Dr.

Speed Humps

We recommend the placement of 2 speed humps on Silverado Dr. The speed humps suggested in the 6/11 revised pilot study are reasonable. We suggest that a speed hump also be considered at approximately 588 Silverado to slow cars down before the curve.

590 Silverado - curved roadway across from entrance to Community Park

The area of street directly across from the Community Park entrance represents a hazard to cyclists and pedestrians (Figure 5). It is a blind curve that motorists tend to cut into if they are driving above the speed limit. We have two recommendations:

- Have the City work with the property owner to mitigate line of sight issues created by shrubbery around curve.
- Paint the roadway with yellow lines at the curve to signify hazard.



Figure 5.

3- Indian Way

Stop Sign/Visibility

Work with residents to improve visibility of the stop sign at the SE corner of Indian Way and Silverado when tree is leaved out. Currently, the stop sign is nearly obscured by foliage.

Install one stop sign from Indian onto Merriewood.

Paint Curbs Red

Limit parking at intersections with Silverado and with Merriewood by painting curbs red.

4- Burton Drive

Speed Humps

Install two speed humps, location TBD.

5- Rohrer Drive

We have no proposal to address swim meet parking issues, except to point out that prohibiting parking on one side of the street will further limit swim meet parking.

Crosswalk

A crosswalk could be added at the eastern-most school entrance on Rohrer Drive as noted in prior pilot study proposals.

Paint Curbs Red

Improve line of sight for bicyclists and pedestrians by instituting No Parking ten feet from all corners, designated with red paint on the corners of Rohrer/Merriewood and Rohrer/Silverado.

All The Above Streets In The Core Area

Speed limits

Speed limits below 25 mph will not be observed if not enforced. We assume there will be no consistent enforcement, so we cannot recommend lower speed limits. Speed humps should create some slowing.

Line of Sight Issues

The City of Lafayette does have a small Code Enforcement Department. If there are any intersections with overgrown bushes, residents can identify the offenders and ask them to trim back. If they don't comply, they can be reported anonymously to Code Enforcement.

WHAT THIS REPORT DOES NOT RECOMMEND

Our report does not address any recommendation that would create MORE or more severe unsafe conditions for kids commuting to/from school. Specifically, we do not endorse:

Directional Route Changes

Any route to school and home that would change direction mid-day on some days is too confusing and dangerous. The City rejected a similar idea in the 1970s.

Multi-Use Lanes

Any multi-use lane that is too narrow adjacent to a driving lane is too dangerous. Every single federal, state, and local standard prohibits this. The City has a legal, moral, and ethical obligation to comply with these guidelines. The proposed multi-use lane would not be wide enough to accommodate walkers, bikers, and skateboarders at the same time, let alone in two directions. Insufficient space is unsafe and sure to produce car to pedestrian accidents. The gutters in this area are angled too steeply to allow for safe biking in a too-narrow lane.

Parking on One Side of the Street Only

Any recommendation requiring all vehicles to permanently park on one side of the street and placing a two-way "trail" on the other. This arrangement will attract "pop-up" children who are not crossing at any corner to dart between the parked cars to get to the pathway on the other side. Again, very dangerous as this circumstance would have drivers seeing children too late to stop.

One-Way Streets

One-way streets would create massive backups and a myriad of other problems. This would be an extreme change, especially for a problem that exists only 2% of the time. The potential unintended consequences of this act:

- Making Merriewood one-way would force more traffic onto Indian Way, Rohrer, and Silverado and across the entrance to BVE where kids cross.
- There are 70 homes off Sandalwood. In an emergency evacuation in case of fire, how would those families escape?
- Nobody has yet solved the riddle of how those on the left side of the street would get their mail. Already existing mailboxes would need to be moved to one side, because mail delivery trucks are all right-hand drive. Combined with no parking on one side, this creates a real nightmare for kids and everyone else in the area. Retrofitting a neighborhood is not easy, and often much more difficult than creating a new one.

Contravention of Existing Vehicular Code

Any pathway that teaches children to ride bikes or walk in the wrong direction (walkers—against traffic; bikers—with traffic). The most difficult and dangerous sections of such designs often exist at an intersection where neither car nor bike expects to meet something coming at them from the wrong direction.

Stop signs on Silverado and Merriewood at Indian Way

CalTrans Highway Safety guide advises traffic engineers to NOT use stop signs as a speed reduction method. When used in excess with no enforcement, stop signs give pedestrians a false sense of security because drivers often roll through them without stopping. Drivers know there is no enforcement and they are unlikely, if ever, going to encounter another vehicle at certain intersections (see Rohrer at Cordova, Rohrer at Bavarian, Rohrer at Merriewood). Some residents want stop signs added to act as a metering device, but Indian Way and the surrounding streets have very little traffic to meter. We cannot recommend installing any other stop signs at Indian Way other than the one mentioned above.

CONTINGENCIES

We request that \$10,000 of the \$55,000 grant to held in reserve to evaluate the success of this plan. We would like clear criteria for evaluation to be determined prior to initiation of the study. One objective measure of success would be to measure pre- and post-intervention speeds at key locations.

We suggest utilizing the City's mobile speed radar device beginning summer 2021 and through the 2021-22 academic year. This device could be positioned at key locations as a traffic calming measure. If this device is able to record speeds, the information can be used as a data collection tool.

Prior to the installation of speed humps on Burton, Merriewood, and Silverado, a speed study must be done to establish a baseline of the average speeds on those streets. This will be compared to another speed study done one year after installation of the humps to see the effectiveness. The speed humps to be installed initially will be temporary in nature until the effectiveness is judged. If they are effective, they can then be permanently installed.

Any old, illegible traffic control signs that have been installed over the years but are no longer in use must be removed.

We embrace the 6E's of Safe Routes to School initiatives which include **Engagement** of all stakeholders including school leaders; **Equity** for all demographic groups, including our seniors; safe **Engineering**; **Encouragement** and **Education** for students and the community; and **Evaluation**.

We strongly endorse increased bicycle and pedestrian education at the elementary school level, which could include bike safety rodeos, assemblies with safety experts, and parent-led safety sessions. We request that a portion of the grant funds be reserved for bicycle/pedestrian safety education at BVE.

CONCLUSION

Lafayette already has an exceptional safety record. The 2017 OTS safety rankings for Lafayette are shown in Table 1 below. Based on the OTS 2017 statistics, Lafayette ranked 92 out of 94 California cities in Group D, in total fatal and injury collisions (with a ranking of "1" being the worst and "94" the best). It ranked 86 for pedestrian collisions, and 77 for bicyclist collisions.

Type of Collision	Victims Killed & Injured	OTS Ranking (of 94 cities)
Injury		
Alcohol Involved	0	91
Motorcycles	0	90
Pedestrians	2	86
Pedestrians < 15	0	64
Pedestrians 65+	0	71
Bicyclists	2	77
Bicyclists < 15	1	35

Table 1. OTS Safety Rankings 2017

The recommendations contained herein will not satisfy everyone, and that is reasonable. The common good is rarely a unanimous choice. No federal, state, local government or person can guarantee a child's safety 100% of the time, 24/7. However, by implementing these measures, we can all achieve the following goals:

- reducing kids' risk when biking and walking to school, making their trip easier;
 (We want to keep our perfect history and track record in vehicle/kids accidents.)
- incurring limited inconveniences to the neighborhood as a whole;
- maintaining the semi-rural character of our neighborhood and uphold the City Charter.

Nobody can promise complete safety for pedestrians or bicyclists unless they live in a bubble. Instituting common sense steps, educating our children, and following the existing rules of the road will go a long way toward enhancing safety. Parents have a role to play in educating their children on safety. The American Academy of Pediatrics recommends that children under the age of ten be accompanied by a parent or adult as they walk to school. Walking to school with your child provides an opportunity to enforce good safety habits. Additionally, children should not ride their bikes to and from school until they have the intellectual maturity to act responsibly and make safe judgments.

The quote "Eternal vigilance is the price of freedom" is often attributed to Thomas Jefferson. Here in Lafayette (named after Jefferson's Revolutionary War ally), eternal vigilance is the price of protecting and preserving our neighborhood for ourselves and future generations. We have done an excellent job so far. In addition to the many issues contained herein, aesthetics are a factor of day-to-day quality of life for those of us lucky enough to live here and who hope to make Lafayette our home for decades. Nothing recommended in this report sacrifices anyone's safety for aesthetics or inconvenience. It strives to reach a balance between lifestyle and safety without compromising either. The City's byline is "Love Lafayette". We want to and we are trying.

Staff Report TransCirc Meeting, July 21, 2021



City of Lafayette Staff Report

Transportation & Circulation Commission

Meeting Date: July 21, 2021

Staff: Mike Moran, Director of Engineering and Public Works

Siavash Shojaat, Associate Traffic Engineer

Subject: Fourth Staff Report for Proposed Pilot Study for the Safer Routes to School

(near Burton Valley Elementary School)

Background

Proposed options for a safer route to school pilot study for the Burton Valley Elementary area have been presented by staff at the past two TransCirc meetings and the Town Hall meeting held on July 8. At these meetings, several ideas were presented by staff to: 1) reduce the speed near the Burton Valley Elementary School, and 2) create a dedicated/temporary pathway for pedestrians and bicyclists. While there seems to be a consensus among most of the public who have provided input for the proposed pilot study regarding the speed reduction strategies near the school, the community is split regarding a dedicated pathway. One group supports a permanent pathway that is protected with an asphalt berm and would eliminate parking on one side of the street, and the other supports only temporary pathways that restrict parking on both sides of a street (Merriewood) but only during school commute times.

Speed Reduction Strategies

Many neighbors have voiced concerns about vehicle speed limit violations in the Burton Valley neighborhood, and the old speed survey, implemented in 2012, also suggests that speeding is a valid concern. Therefore, to help reduce the speed, several speed reduction strategies were discussed at the past in-person Town Hall meeting and it seemed that a consensus was reached to implement some of the speed reduction strategies to lower the speeds near the school. The discussed strategies are as follows and are shown on Figures 1 to 5.

Merriewood Drive

Prohibit Parking at the School Entrance/Exit

Painting the curb red on each side of the school driveway will provide a better line of sight between drivers and pedestrians. Staff would add that this should be done near other street corners throughout the neighborhood for the same reason. The intent is not to remove parking, so care would be taken to limit the extent of the red curbs.

Speed Humps

Install one speed hump between Indian and Rohrer and another one between Silverado and Sandalwood.

Marking and Pruning at the Intersection of Merriewood and Silverado

Re-stripe the corner of Merriewood to better delineate the vehicle lane from the shoulder and encourage the corner owner to prune vegetation at the corner to improve the line of sight between drivers and pedestrians.



Figure 1. Speed humps, red curbs, and a stop sign



Figure 2. Speed hump at Silverado Drive



Figure 3. Speed humps and red curbs at Burton Drive



Figure 4. Speed humps at Rohrer Drive



Figure 5. Speed humps at Lucas Drive

Silverado Drive

Prohibit Parking at Corners

Paint curbs red at the corners of Silverado/Indian and Silverado/Rohrer to improve line of sight between drivers and pedestrians.

Speed Humps

Place three speed humps between Merriewood and Rohrer and another speed hump between Burton and Merriewood, for a total of four speed humps on Silverado Drive.

Marking and Pruning near 590 Silverado

Refresh and enhance markings near 590 Silverado and encourage pruning of vegetation along the roadway curve to help improve the line of sight between drivers and pedestrians.

Indian Way

Stop Sign Visibility

Suggest pruning or possibly even relocation of STOP sign on Indian Way at Silverado. Add a STOP sign, legend and stop bar on Indian at Merriewood.

Prohibit Parking at Corners

Paint curbs red at the corners of Silverado and Indian to improve line of sight between drivers and pedestrians.

Burton Drive

Speed Humps

Install two speed humps on Burton Drive and prohibiting parking at corners to improve line of sight between drivers and pedestrians.

Rohrer Drive

Prohibit Parking at Corners

Paint curbs red at the corners of Rohrer and Silverado and Rohrer and Merriewood to improve line of sight between drivers and pedestrians.

Lucas Drive

Speed Humps

Install two speed humps on Lucas Drive to deter drivers from using Lucas Drive to avoid the new speed humps installed on Burton Drive. These speed humps were not previously shown in a staff report, but were discussed at the Town Hall meeting.

Dedicated/Temporary Pathway

At the first meeting, ideas were presented to provide dedicated bidirectional pathways for pedestrians and bicyclists and to reduce speed. Although many members of the community supported dedicated walking and riding lanes, other members, specifically the neighbors that are directly impacted by the shared pathway, stated that such a pathway will restrict their parking, add inconveniences for delivery and service crews, and will increase the amount of street crossings. Also, one of the transportation commissioners and some neighbors raised the point that the proposed width of the shared pathway is less than the standard bidirectional pathways (i.e., 10 feet). It was suggested that the bidirectional pathway, as suggested by the staff, may create more hazards for pedestrians and bicyclists than the current configuration. Staff were asked to provide appropriate solutions for this limitation.

At the second meeting, staff presented additional alternatives for safer ped/bike spaces. These included: 1) do nothing (or restricted parking on the shoulder during certain times of the day), 2) unidirectional pathway (along the shoulder of roadways), and 3) removing one travel lane on Merriewood Drive to create a standard-width bidirectional pathway, but making Merriewood a one-way street. Like the first meeting, the Commission heard from several public speakers and received written correspondence from many others. The Commission was asked by staff not to make a recommendation for action, but to schedule a Town Hall meeting.

The Town Hall meeting was held on July 8th. At the meeting, staff presented the alternatives that were discussed in previous meetings and two new alternatives that were suggested by different members of the community for the dedicated/temporary pathway

Community-Suggested Option A

One household put together a proposal for an asphalt-berm-protected pathway in the shoulder space on one side of roadway to separate vulnerable road users from traffic and connect critical corridors to community destinations. This berm-protected pathway was proposed to include Merriewood Drive, Silverado Drive, Burton Drive, Rohrer Drive, and Glenside Drive either continuously or as sidewalk gap

fillers. According to this proposal, adding a berm-separated path is fairly common throughout Lamorinda. Some examples of such facilities can be found on Happy Valley Road and Carol Lane in Lafayette and Glorietta Boulevard in Orinda.



Figure 6. Examples of asphalt-berm-protected pathways (as presented by a community member)

If a berm-protected pathway is selected as the preferred alternative, staff would recommend starting with only the west side of Merriewood Drive (as the section closest to the school and most utilized by the schoolchildren). Since this is a pilot study and the proposal will substantially change the mobility and parking configuration of the street, staff recommends a trial period for just one section. Other roadway sections, including Silverado, Burton, and Rohrer, could be phased in later, but it will be important to see how well the berm-protected path works prior to installing berm on all proposed streets. Adding a berm is fairly costly, and it is also somewhat difficult to remove cleanly. Other concerns with adding a bermprotected path are that the path will be narrow, about 5. 5 feet wide, requiring bikers to yield to pedestrians, and bicyclists will only be able to enter and exit the path at a driveway (where there is a gap in the berm). Garbage and recycling pickup and mail delivery will also need to be worked out. The post office may not be able to maintain a driving delivery route if their vehicles will not fit inside the berm on the new path side, unless all the mailboxes are moved to the non-path side of the street. Similarly, garbage and recycling receptacles will either be placed in the path on garbage night/day or need to all be placed on one side of the street for pickup. Having all mailboxes on one side of the street and/or placing waste receptacles on one side of the street will inherently lead to more street crossings compared to current conditions and may also be problematic as the mailboxes and receptacles would now be competing for curb space because all the street parking would be on the non-path side of the street.

Since there will be an adjustment period if a berm-protected path is added, and there are likely some unintended consequences that have not yet been mentioned, starting with one section of path will be helpful. This will provide the neighborhood a chance to test the path and see if the tradeoffs make sense

before adding additional sections. Finally, it should also be noted that an alternative to a berm-protected path is the addition of a sidewalk behind the existing street curb. Any home that already has a sidewalk, with appropriate ramps, would not need the path in front of their home. This would allow that home to maintain street parking along their frontage. Each homeowner would be responsible for adding sidewalk, but an assessment district could be set up if more than half of the households on the street were in favor of installing sidewalks. The benefit of an assessment district is that the up-front cost of adding a sidewalk would be distributed over a long period of time and the cost would be assessed and paid with each homeowner's property tax bill.

Community-Suggested Option B

Another household put together a proposal for the pilot study that is intended to balance traffic safety concerns while preserving most of the existing street layout, street usability, and parking (except during school commute times). This proposal suggests adding signs to prohibit parking on both sides of Merriewood Drive for ½ hour before and after school start times and ½ hour before and after school dismissal times. It is suggested to make this prohibition voluntary at first, and mandatory with enforcement after six months if cooperation is not observed. The proposal also suggests using neighborhood volunteers to request participation and provide reminders of the parking restriction, as opposed to the City providing parking enforcement.



Figure 7. Example of No Parking sign near Lafayette Elementary (as presented in the letter)

Summary

The City has a Transportation Action Request system in place for the public to express concerns and suggest improvements within the City. Several suggestions have been discussed and presented for this proposed pilot study that will both help to calm vehicle traffic and encourage more active transportation users. Every suggestion is intended to improve current conditions, but staff and the public recognize that

some suggestions require tradeoffs that not everyone is in favor of supporting. While there seems to be a consensus between most users over the speed reduction strategies near the school, the community is separated into two primary pathway groups: one supporting the permanent (protected) pathway, and the other supporting only a temporary pathway (limited to school commute times). It is up to our public, the Transportation and Circulation Commission, and ultimately our City Council to decide and affirm which strategies to implement for the pilot study. Staff's past experience indicates that compromises are often required to allow meaningful changes to occur.

In addition to the public comments heard at the last two Transportation and Circulation Commission meetings and the Town Hall meeting, staff has received numerous emails regarding a proposed pathway for this pilot study. All of these emails have been forwarded to the Commission members, but staff has sorted through the emails to note the number of community members that seem to be in favor of the berm-protected pathway and the number that are against a berm-protected pathway but would still support restricted parking at school commute times to allow the parking shoulders to be used for pedestrians and bicyclists. As of Friday, July 17th the number of emailers in favor of the permanent pathway is 44 and the number against the permanent protected pathway, but open to restricted parking at school commute times, is 59.

Fiscal Impact

The City has budgeted \$55,000 for the proposed pilot study. If all of the speed humps are installed as proposed, that will drain the entire \$55,000 budget. Adding berms will cost at least \$8 per linear foot, so just placing the berm on Merriewood will cost approximately \$10,000 and that is if we can have the berm installed as part of one of the City's larger paving projects and benefit from the scale of economy of that project. The added red curbs near corners, signs, and other minor changes will also add some cost, so a total budget of \$75,000 may be needed to start this pilot study. Since this is a pilot study, the City should also have some reserve funding to modify features during the trial period and for removing features that do not work out as planned. For example, removing the berm is estimated to cost \$5 per linear foot, and the street surface may also need to be sealed if the berm is not removed cleanly. Staff would recommend having another \$10,000 in reserve for this purpose, bringing the total to \$85,000, or a \$30,000 shortfall. If the Commission wanted to add berms along additional street sections, the budget would need to be increased by approximately \$8 per linear foot.

The \$30,000 shortfall could be made up if the City Council allocated use of some of the City's other "traffic calming funds". Currently the City has about a \$93,000 sinking fund for traffic calming.

Recommendations

Based on input from the previous three meetings and the numerous emails received, staff has the following recommendations:

- Support implementing the speed reduction strategies as shown on Figures 1 to 5 and direct staff
 to have the City Council affirm those strategies as part of the pilot study, including speed humps,
 signage, and painted curbs near intersections.
- Provide direction to staff regarding the implementation of a curb-protected path or use of parking lanes for pedestrians and bicyclists during school commute times. Have staff affirm that direction with the City Council.
- 3. Direct staff to request an additional \$30,000 from the traffic calming fund if the Commission selects the curb-protected path option, or a lesser amount if a less expensive option is selected.