



MEMORANDUM

Public Works Department

DATE: August 25, 2021

TO: Bicycle/Pedestrian Advisory Committee

FROM: Marichrisse Hoang, Associate Civil Engineer
Robert Gonzales, Principal Civil Engineer
Ria Hutabarat Lo, Transportation Manager
Dawn S. Cameron, Public Works Director

SUBJECT: Stierlin Road Bicycle and Pedestrian Improvements, Project 17-41

RECOMMENDATION

Review draft plans for Stierlin Road Bicycle and Pedestrian Improvements, Project 17-41.

BACKGROUND

Shoreline Boulevard Corridor Study

The [2014 Shoreline Boulevard Corridor Study](#) (Study) planned for integrated transit, bicycle, and pedestrian facilities on the Shoreline Boulevard Corridor from the Downtown Transit Center to the North Bayshore Area. Several funded projects that provide bicycle and pedestrian enhancements have emerged from this study:

- Castro Street/Moffett Boulevard/Central Expressway Intersection Near-Term Improvements (16-40) – completed;
- Castro Grade Separation and Transit Center Access Improvements (18-65, 21-35) – engineering design under way;
- Shoreline Boulevard Reversible Bus Lane and Protected Bikeways from Middlefield Road to Pear Avenue (16-58, 16-56, 18-47, 18-43), in construction; and
- Shoreline Boulevard/101 Pedestrian/Bicycle Bridge Overcrossing (16-60, 20-38) – preliminary design under way.

Stierlin Road Bicycle and Pedestrian Improvements, Project 17-41, provides the final corridor segment of bicycle and pedestrian improvements outlined in the Study. These improvements are along Stierlin Road, from its southerly terminus near Central Expressway to its northerly terminus at the intersection of Shoreline Boulevard. Additionally, the project includes pedestrian and bicycle improvements along Central Avenue, between Moffett Boulevard and Stierlin Road, and along Shoreline Boulevard, between Montecito Avenue and Middlefield Road. This project fills in the gap between the bicycle and pedestrian undercrossing of the train tracks and Central Expressway (Transit Center Grade Separation Project) to the protected bikeways on Shoreline Boulevard, being constructed as part of the Shoreline Reversible Bus Lane project (see Figure 1).

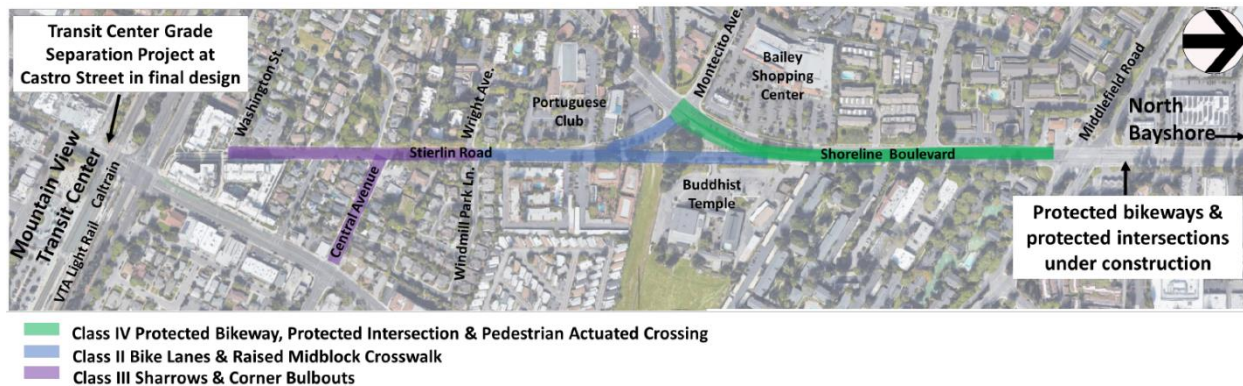


Figure 1: Stierlin Road Bicycle and Pedestrian Improvements

As shown in Figure 1, project elements include:

- Class IV protected bikeways on Shoreline Boulevard from south of Middlefield Road to Montecito Avenue;
- A pedestrian-activated midblock crossing on Shoreline Boulevard adjacent to the Bailey Park (Safeway) Shopping Center;
- Protected intersection at Shoreline Boulevard/Montecito Avenue/Stierlin Road;
- Class II bike lanes on the Stierlin Road slip ramp to Shoreline Boulevard;
- Green-backed sharrows on Stierlin Road between Washington Street and Windmill Park Lane/Wright Avenue; and

- Traffic-calming and pedestrian improvements on Central Avenue and Stierlin Road, including bulb-outs, high-visibility crosswalks, pedestrian and street lighting improvements, and speed hump.

Grant Funding

With reduced revenues, resulting from COVID-19, staff has transformed the City's transportation funding stream from a focus on City funds to carefully targeted grant applications for strategically important Capital Improvement Program (CIP) projects. As a result of this effort, the City has been awarded more than \$30 million in grants since March 2020 for various projects aimed at increasing walking, biking, and transit usage in Mountain View.

In order to encourage "Quick Strike" projects during a period when all cities are facing budgetary contraction, the Metropolitan Transportation Commission (MTC) issued a call for projects for the Safe and Seamless Competitive Grant Program in February 2021. MTC's Safe and Seamless Grant Program is a one-time, competitive Federal grant program, emphasizing bicycle/pedestrian safety and mobility projects, connections to transit, and projects that advance equitable mobility. A primary requirement for the grant is that the project be implemented quickly with final design completed by March 2022 and construction starting by fall 2022. Any city failing to meet the grant deadlines is at risk of losing the grant funds.

After careful review of the grant requirements, staff selected the Stierlin Road Improvements project to compete for the grant funding. Concept engineering for the project had already begun, and the City had already committed \$649,700 toward environmental clearance and engineering design, allowing for quicker delivery. The project also met the other grant eligibility criteria and had a strong potential to be successful in the grant competition.

In June 2021, the City was awarded \$4,007,000 for 100% of construction costs for the Stierlin Road Bicycle and Pedestrian Improvements Project.

AccessMV: Mountain View's Comprehensive Modal Plan

In 2021, the City Council adopted [AccessMV, Mountain View's Comprehensive Modal Plan](#). Citywide analysis, undertaken as part of AccessMV, identified conditions along Stierlin Road and Central Avenue, between Moffett Boulevard and Stierlin Road, as having a bicycle level of traffic stress (BLTS) of 2, which is suitable for interested but concerned cyclists (i.e., most adults). Conditions along Shoreline Boulevard were

identified as having a BLTS of 3 and posted travel speeds of 35 miles per hour, which are less than suitable for interested but concerned cyclists.

DISCUSSION

The following sections provide information on the recommended design for the project from north to south.

Class IV Protected Bikeways on Shoreline Boulevard Between Montecito Avenue and Middlefield Road

The recommended project covers the segment of Shoreline Boulevard from Middlefield Road to Montecito Avenue/Stierlin Road. Bicycle improvements within this segment of Shoreline Boulevard include installing a Class IV protected bikeway.

The current width of Shoreline Boulevard from curb to curb is 70', and it is striped with one 6' bike lane, two 12' travel lanes in each direction, and a 10' wide, two-way left-turn pocket (see Figures 2 and 3). For the southern portion of the segment (close to Stierlin Road), a median exists and lane widths are 11' (for both travel lanes as well as the left-turn pocket at Stierlin Road) with a 5' bike lane in each direction.

As part of the recommended project, a raised buffer between 1.5' to 2' wide will be added between the existing 6' bike lanes and travel lanes, reducing the travel lanes' width to 11' (see Figure 4). In the area close to Stierlin Road, narrower 5' bike lanes and 2' painted buffers would be provided due to limited right-of-way and the presence of a left-turn lane. The existing and recommended cross sections are shown below.



Figure 2: Shoreline Boulevard Existing Conditions

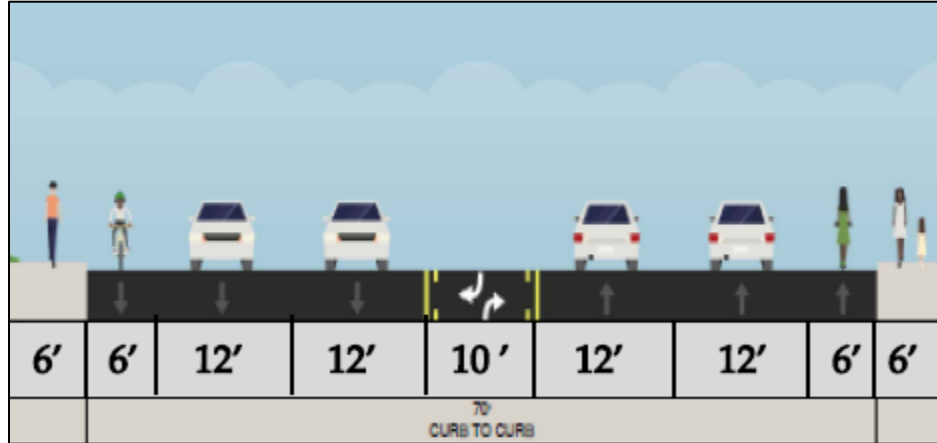


Figure 3: Existing Conditions, Cross Section A-A

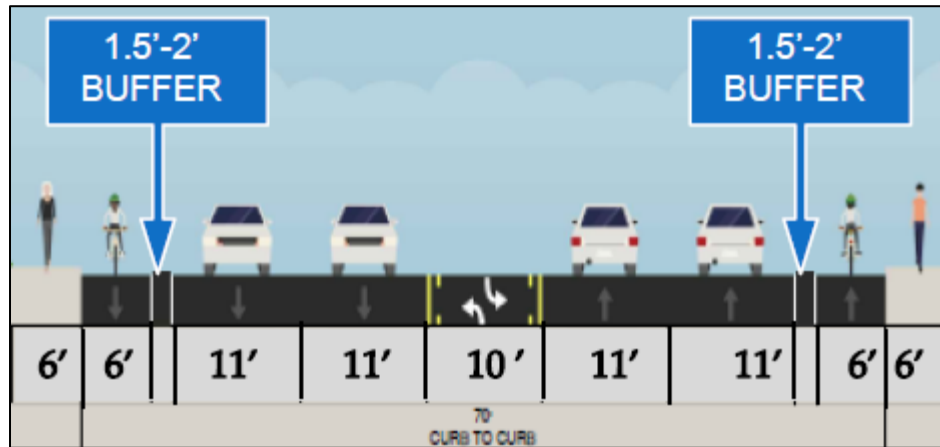


Figure 4: Recommended Conditions, Cross Section A-A

Pedestrian-Activated Midblock Crossing on Shoreline Boulevard

On Shoreline Boulevard north of Stierlin Road, the project would add a midblock crossing for pedestrians. The distance between the Middlefield Road and Montecito Avenue intersections is more than one-quarter mile, and there are no marked pedestrian crossings. Given this distance, pedestrians are reluctant to walk 10 minutes out of their way to cross Shoreline Boulevard at the signalized crossing. The result is that some pedestrians cross Shoreline Boulevard midblock in order to access the Bailey Park Plaza shopping center. Low-pedestrian volumes between nearby housing and retail land uses suggest that other potential pedestrians choose not to walk in this area.

Traffic volumes and turning movement counts were taken near Mountain Shadows Drive/Shoreline Boulevard and the northern driveway of the Bailey Park Plaza shopping center. The data indicated a new full signal is not warranted; however, a new midblock

pedestrian crossing is an improvement for pedestrians. As shown in Figure 5, the crossing would be a highly visible pedestrian crosswalk with pedestrian push button-activated LED-enhanced signs and would benefit pedestrians crossing Shoreline Boulevard from the Bailey Park Plaza shopping center.

The new crossing, with left-turn access into the proposed development, and the protected bikeway would require modifying the median, which would likely result in a loss of between 8 and 16 trees of varying diameter from 4" to 14", subject to final design.

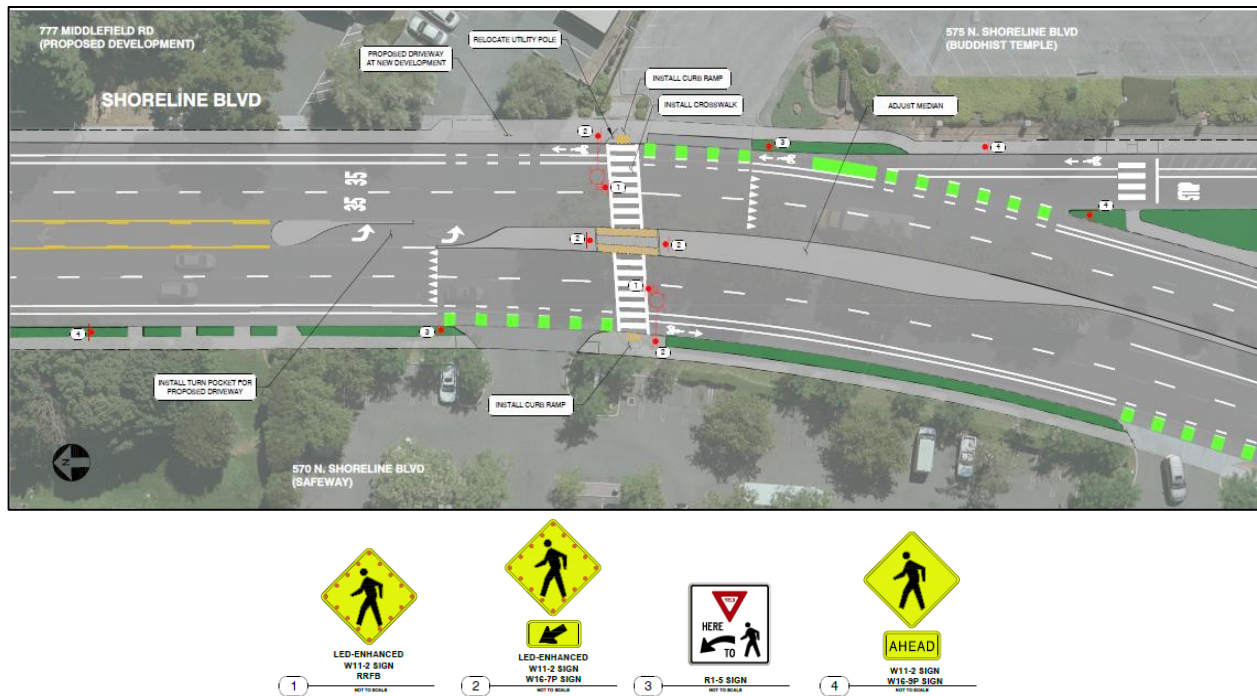


Figure 5: Push button-activated pedestrian crossing with LED-enhanced signs.

Protected Intersection at Shoreline Boulevard/Montecito Avenue/Stierlin Road Intersection

At the intersection of Shoreline Boulevard/Montecito Avenue/Stierlin Road, the recommended improvements include modifying the intersection to be a protected intersection for bicyclists and pedestrians, as shown in Figure 6. Protected intersection improvements include: corner-safety islands, protected corner areas, pedestrian and bike crosswalks, high-visibility crosswalks, and new Americans with Disabilities Act (ADA)-compliant curb ramps.

The southeast corner of the intersection lies within San Francisco Public Utilities Commission (SFPUC) right-of-way (ROW), and all improvements within the SFPUC

ROW will be subject to SFPUC approval. Generally, SFPUC allows surface improvements. The new utilities and traffic signal poles would require deep excavations and need to be avoided within the SFPUC ROW. For this reason, the protected intersection has been designed to retain one of the existing traffic signal poles within a corner-safety island at this location.

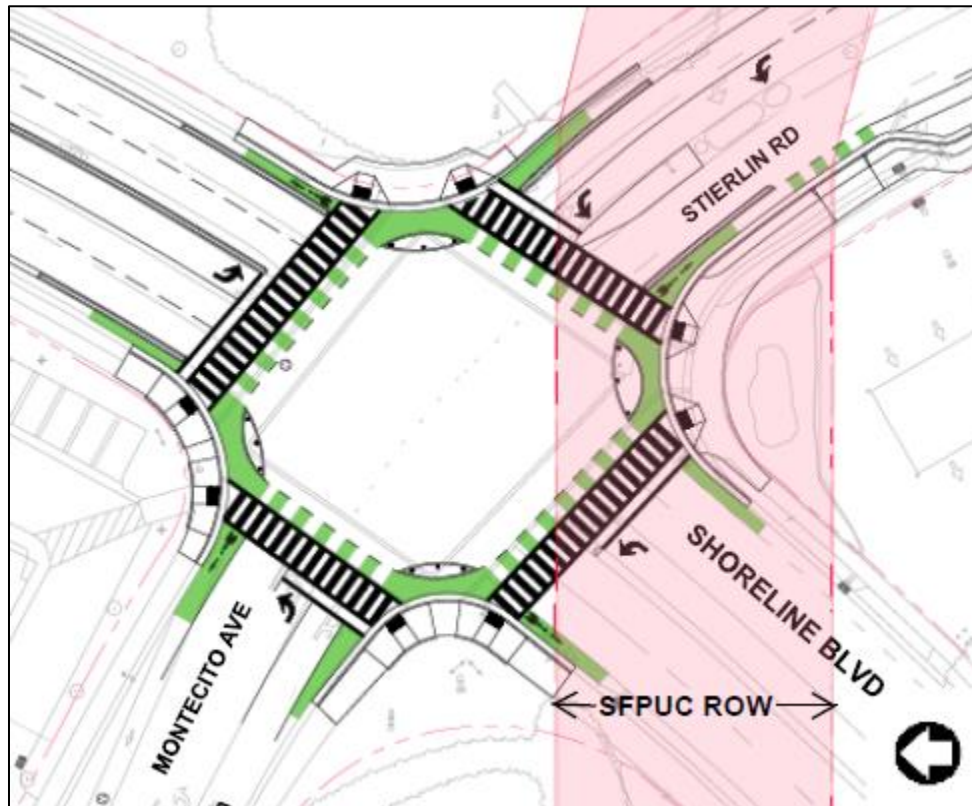


Figure 6: Protected Intersection

Class II Bike Lanes on the Stierlin Road Slip Ramp

Stierlin Road does not have a uniform street width (see Figure 7). The slip ramp is 22' wide with parking on the east side and one-way northbound travel (Section 1-1). Along the Stierlin Road slip ramp, Class II bike lanes with a 4' buffer are recommended in order to achieve low-stress biking conditions (see Figures 8 and 9). Adding the bike lanes will require removal of 18 on-street parking spaces with 8 spaces remaining. Based on parking utilization survey data, the loss of the 18 parking spaces would not adversely affect the adjacent land uses.



Figure 7: Stierlin Road

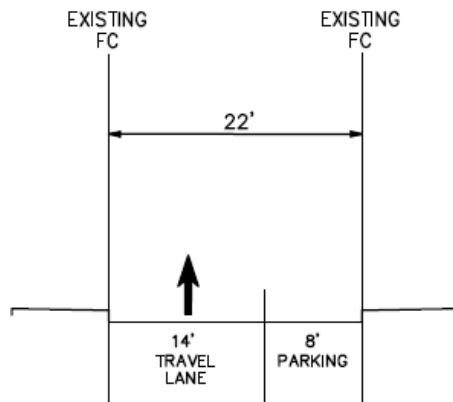


Figure 8: Existing Conditions, Section 1-1

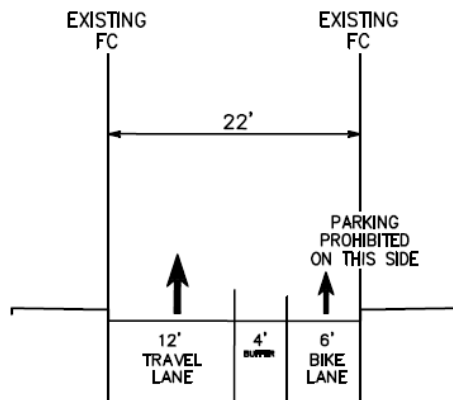


Figure 9: Section Adding a Bike Lane, Section 1-1

Bike Lanes on Stierlin Road North of Windmill Park Lane

Close to Shoreline Boulevard, Stierlin Road has a road width of more than 69' (Section 2-2). The northbound direction (the portion of the street heading toward Shoreline Boulevard and Montecito Avenue) is approximately 27' wide with a through lane and left-turn lane. The southbound direction (heading away from Montecito Avenue) is approximately 32' wide with two travel lanes and parking on the west side (see Figure 10).

The recommended design for Stierlin Road north of Windmill Park Lane northbound toward Montecito Avenue includes a 7' Class II bike lane and a 6' buffered Class II bike lane southbound (heading away from Montecito Avenue) as shown in Figure 11. This design eliminates one southbound vehicle travel lane just east of Shoreline Boulevard. With these bike lanes, most of the existing parking on the west side would be maintained with a loss of two to three parking spaces.

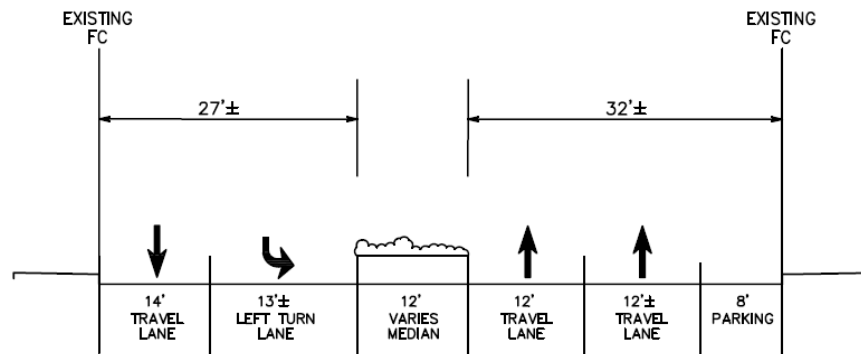


Figure 10: Existing Conditions, Section 2-2

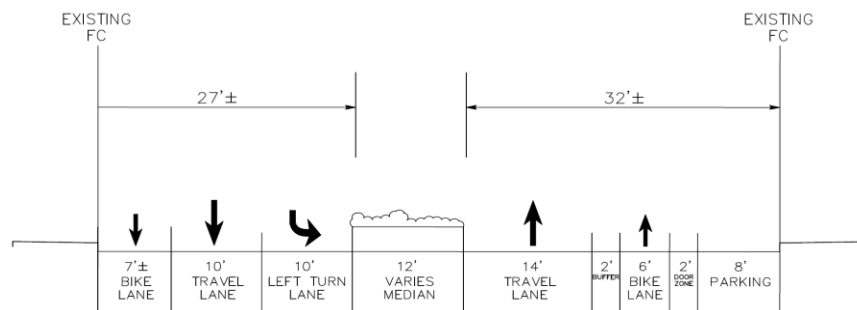


Figure 11: Recommended Conditions, Section 2-2

Between the slip ramp near the Montecito Avenue/Shoreline Boulevard intersection and just north of Windmill Park Lane, Stierlin Road is 47' wide with parking on both sides of

the street and one travel lane in each direction as shown in Figure 12. For this segment (Section 3-3), 5' bike lanes are recommended on Stierlin Road as shown in Figure 13.

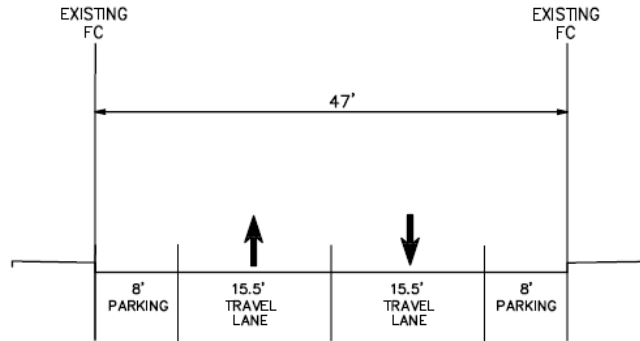


Figure 12: Existing Conditions, Section 3-3

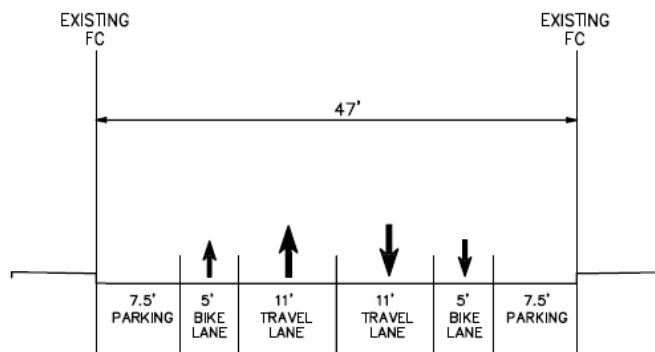


Figure 13: Recommended Conditions, Section 3-3

Bulb-Outs, High-Visibility Crosswalks, Pedestrian Lighting, and Green-Backed Sharrows on Stierlin Road South of Windmill Park Lane

From Windmill Park Lane/Wright Avenue to Washington Street, Stierlin Road is 40' wide from curb to curb (Section 4-4 and Section 5-5). The segment south of Jackson Street has existing sharrows. The recommended project includes a combination of green-backed Class III sharrows, traffic-calming and lighting improvements. Traffic-calming elements include corner bulb-outs on both sides of the street, stop control, and high-visibility crosswalks specifically at the intersection of Central Avenue and Stierlin Road, as conceptually shown in Figure 14.

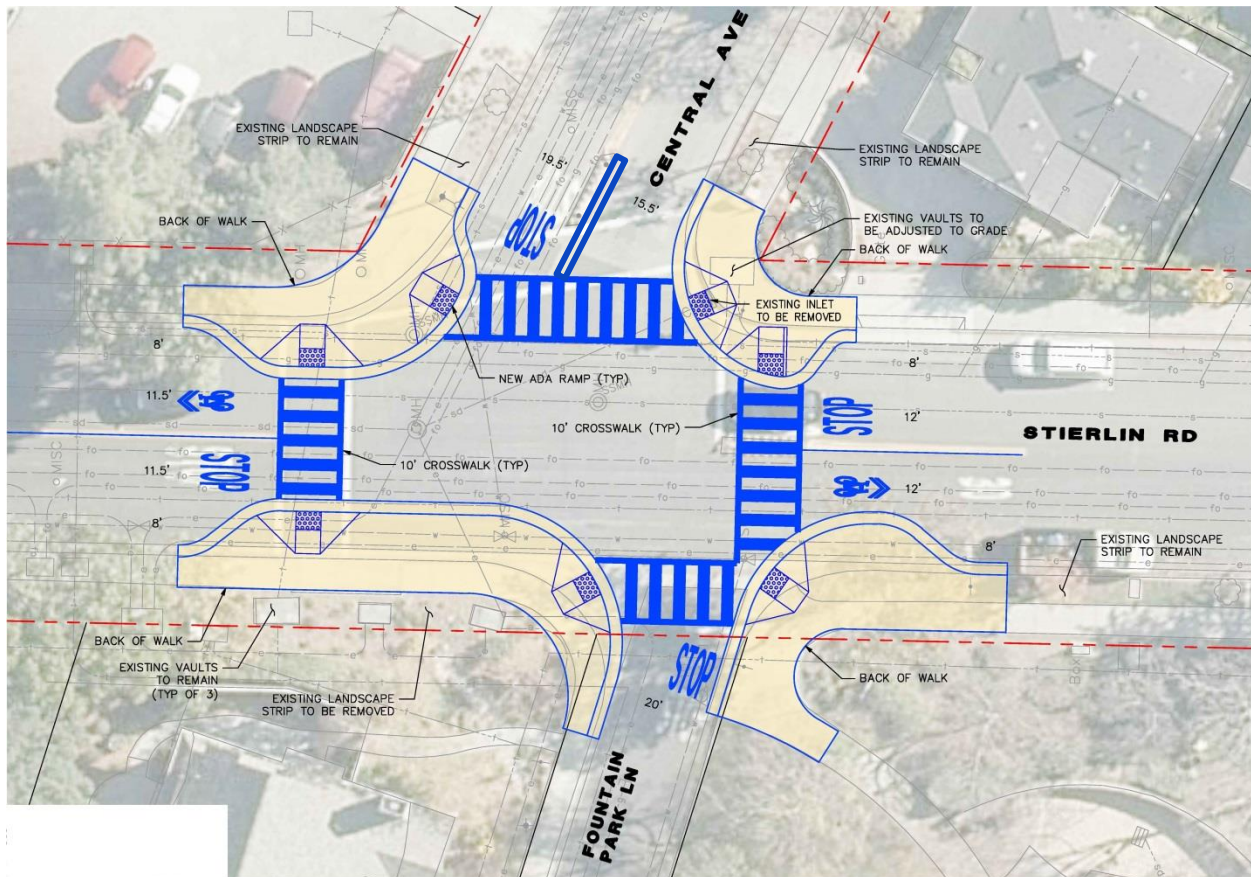


Figure 14: Recommended Concept for Bulb-Outs on Central Avenue and Stierlin Road

The recommended design retains the on-street parking along this section, which is highly utilized. With an existing BLTS of 2, the removal of parking would impact local residents with only marginal benefit for cyclists.

In addition to traffic-calming improvements, pedestrian-level lighting is recommended along Stierlin Road at the crosswalks and near the park on Central Avenue. The recommended project includes five 30' light poles, including one at Windmill Park Lane, two at Central Avenue/Fountain Park Lane, and two at Jackson Street. Additionally, three 14' light poles would be added in front of Jackson Park. Figures 15 and 16 show the existing streetlight poles and areas of illuminance and recommended augmentations to existing street lighting levels with new light fixtures.

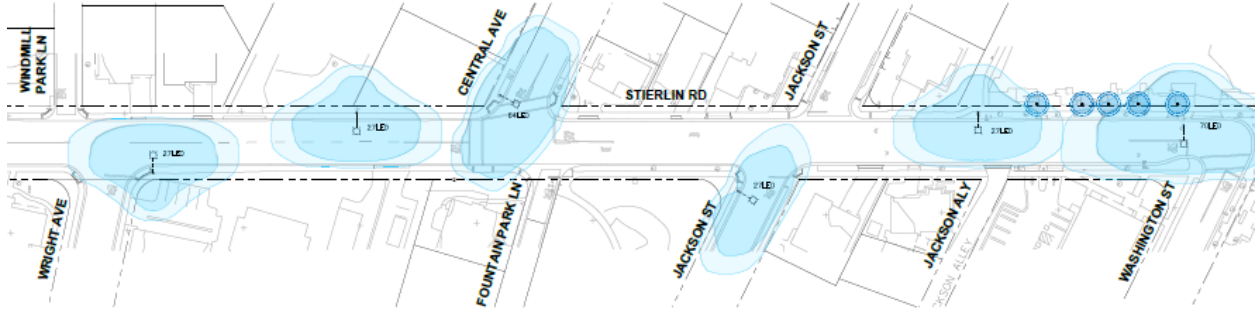


Figure 15: Existing Street Lighting Levels



Figure 16: Recommended Street Lighting Levels

Green-Backed Sharrows and Speed Hump on Central Avenue

The final segment of the recommended project is Central Avenue, between Stierlin Road and Moffett Boulevard. Along this segment, recommended improvements include green-backed sharrow markings and a speed hump on Central Avenue in a midblock location between Stierlin Road and Moffett Boulevard. These elements are recommended to calm traffic accessing Stierlin Road from Central Avenue.

Community Outreach

In addition to community engagement that occurred as part of the Shoreline Boulevard Corridor Study, staff held a virtual community meeting on June 24, 2021 in relation to the recommended project described above. A notice was sent to 2,380 residents and property owners located within a 750' radius of the project area.

Nine members of the public attended the meeting. The results of a poll conducted during the meeting showed that a majority of the attendees mainly drive through this area, followed by biking and walking.

Participants raised concerns about the speed of traffic along Stierlin Road and the existing pavement and conditions of the Stierlin Road slip ramp. Traffic-calming elements are

recommended along this segment, including the addition of bulb-outs and high-visibility crosswalks. The project also proposes repaving to allow a smooth surface for the new striping improvements. One community member also requested staff to consider native, drought-tolerant plantings in the existing medians on Stierlin Road and Shoreline Boulevard; however, landscaping is not included in the grant-funded project scope.

Overall, attendees of the community meeting expressed support for the project.

CONCLUSION

The recommended improvements along Stierlin Road and Shoreline Boulevard align with those needed to achieve low-stress biking conditions, improve pedestrian connectivity, and increase pedestrian and bicycle usage, while minimizing impacts on residents and visitors to Jackson Park and multi-family housing in the area. The project design recommended can meet the grant requirements for completing design and starting construction.

NEXT STEPS

Staff will work with the design consultant to complete final design of the project by March 2022. B/PAC feedback will be incorporated into the project design where feasible. The final design package will then be submitted to Caltrans for approval, as required for Federal grant funds. Caltrans will take to four months to review and approve the plans, after which time Caltrans will obligate the \$4 million in grant funds to the project. Following Caltrans approval, staff will go to Council for approval of plans and specifications for construction. Construction would begin in fall 2022 and be completed in 2023.

If the B/PAC proposes major design changes to the project, additional steps will be taken before the project proceeds into final design. Staff would take the B/PAC's recommendation to the Council Transportation Committee for consideration and possible recommendation to the City Council. This change in project timing may jeopardize the City's ability to meet the grant funding deadlines, and the City may also need to reconsider funding sources and scheduling associated with the construction phase of the project.

PUBLIC NOTICING

Agenda posting. Noticing for this meeting included a mailer to residents and property owners within 750' of the project site and an announcement on the City website.

MH-RG-RHL-DSC/1/PWK

921-08-25-21M

cc: PWD, APWD – Arango, TM – Lo, PCE – Gonzales, ACE – Hoang