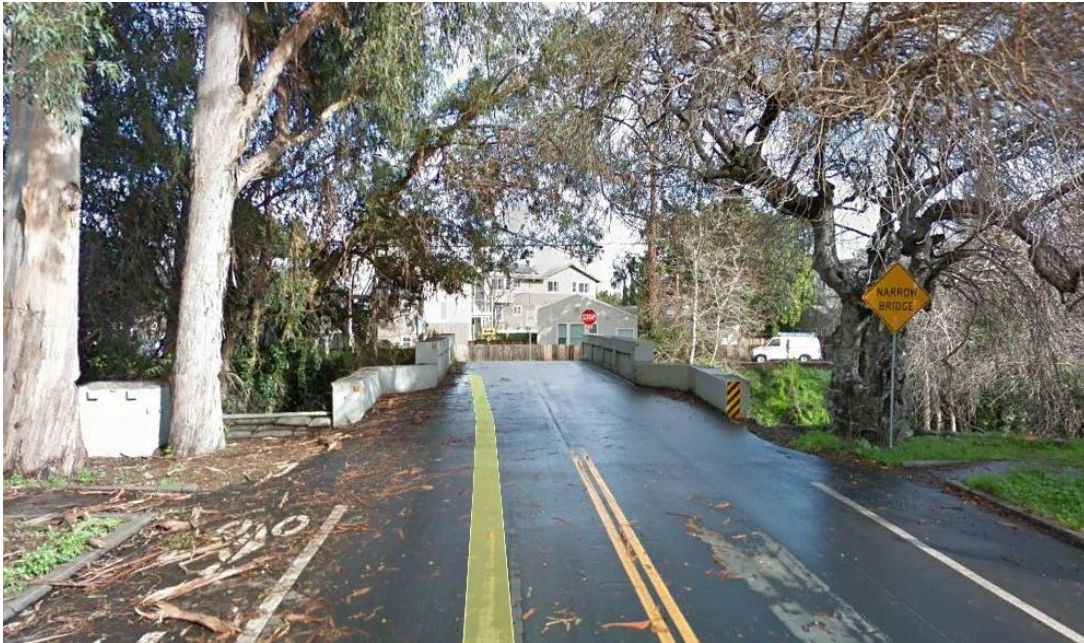


Newell Road Bridge Replacement Project

SANTA CLARA COUNTY AND SAN MATEO COUNTY, CALIFORNIA
DISTRICT 4 – SCL/SM-Newell Road
BRLS 5100(017)

Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact



Prepared by the
State of California Department of Transportation
and
City of Palo Alto

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.



April 2020

General Information about This Document

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this Final Environmental Impact Report/Environmental Assessment (EIR/EA) for the proposed project located in the cities of Palo Alto and East Palo Alto, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). The City of Palo Alto is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, the selected preferred alternative, and the proposed avoidance, minimization, and/or mitigation measures. The Draft EIR/EA circulated to the public for 60 days between May 31, 2019 and July 30, 2019. Comments received during this period are included in Appendix F.

Elsewhere throughout this document, a vertical line in the margin indicates a change made since the draft document circulation. Minor editorial changes and clarifications have not been so indicated.

Additional copies of this document and the related technical studies are available for review at: Caltrans District 4, Office of Local Assistance, 111 Grand Avenue, Oakland, CA 94612; Palo Alto City Hall, 250 Hamilton Ave Floor 5, Palo Alto, CA 94301; and Rinconada Library, 1213 Newell Rd, Palo Alto, CA 94303. This document may be downloaded at the following website: https://www.cityofpaloalto.org/gov/city_information/projects/newell_road_bridge_replacement_project.asp.

At a future date, FHWA, on behalf of Caltrans, may publish a notice in the Federal Register, pursuant to 23 United State Code Section 139(I)(1), indicating that a final federal action has been taken on this project. If such notice is published, a lawsuit or other legal claim will be barred unless it is filed within 150 days from the date of publication of the notice (or within such shorter time period as is specified in the federal laws pursuant to which jurisdictional review of the federal agency action is allowed). If no notice is published, then the lawsuit can be filed as long as the periods of time provided by other federal laws that govern claims are met.

Alternative Formats:

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternative formats, please write to Caltrans, Attn: Dan Rivas, Office of Local Assistance, 111 Grand Avenue, Oakland, CA 94623-0660; or call (510) 286-6233 (voice); or use the California Relay Service TTY number, (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

Demolish and reconstruct Newell Road Bridge, including roadway improvements on Newell Road from Edgewood Drive to Woodland Avenue in the Cities of Palo Alto and East Palo Alto, in Santa Clara and San Mateo Counties

Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C)

THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
and
City of Palo Alto

Responsible Agency under California Environmental Quality Act: City of East Palo Alto

Date of Approval

Tony Tavares
District Director
California Department of Transportation
NEPA Lead Agency

4/21/2020

DocuSigned by:


Jonathan Lait
Director of Planning and Community Environment
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CALIFORNIA DEPARTMENT OF TRANSPORTATION
FINDING OF NO SIGNIFICANT IMPACT (FONSI)

(Newell Road Bridge Replacement Project)

FOR

The California Department of Transportation (Caltrans) has determined that Build Alternative 2 will have no significant impact on the human environment. This FONSI is based on the attached Environmental Assessment (EA) which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached EA (and other documents as appropriate).

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

Date

Caltrans District Director

S.1 Introduction

The project is subject to federal as well as City of Palo Alto and state environmental review requirements because the City of Palo Alto proposes the use of federal funds from the Federal Highway Administration (FHWA) and/or the project requires an approval from FHWA. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The City of Palo Alto is the project proponent and the lead agency under CEQA.

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 U.S. Code (USC) Section 327, for more than 5 years, beginning July 1, 2007, and ending September 30, 2012. The Moving Ahead for Progress in the 21st Century Act (Public Law 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the California Department of Transportation (Caltrans) entered into a Memorandum of Understanding (MOU) pursuant to 23 USC 327 (NEPA Assignment MOU) with FHWA. The NEPA Assignment MOU became effective October 1, 2012, and was renewed on December 23, 2016, for a term of 5 years. In summary, Caltrans continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and Caltrans assumed all of the United States Department of Transportation Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 USC 326 Categorical Exclusion Assignment MOU, projects excluded by definition, and specific project exclusions.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, often a “lower level” document is prepared for NEPA. One of the most common joint document types is an Environmental Impact Report (EIR)/Environmental Assessment (EA).

The City of Palo Alto and Caltrans circulated the Draft EIR/EA for the Newell Bridge Road Project (Project) for public review from May 31, 2019 to July 30, 2019. Oral comments on the Draft EIR/EA received at public hearings, as well as written comments from individuals, organizations, and public agencies received during the circulation period, are included in Appendix F. After receiving comments from the public and reviewing agencies, this Final EIR/EA was prepared. The Final EIR/EA includes responses to comments received on the Draft EIR/EA and identifies the preferred alternative, Build Alternative 2. The Draft EIR/EA identified the preferred alternative (i.e., “the project”) for CEQA purposes and is referred to throughout this document as the locally preferred alternative (LPA). If the decision is made to approve the project, a Notice of Determination will be published for compliance with CEQA. Caltrans, as assigned by the FHWA, has determined that a Finding of No Significant Impact (FONSI) is appropriate. The FONSI is included in this document. A Notice of Availability of the FONSI will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

S.2 Overview of the Project Area

The Project is located in the southern region of the San Francisco Bay Area in Santa Clara and San Mateo counties, in the cities of Palo Alto and East Palo Alto. The Project site is located on Newell Road between Edgewood Drive in Palo Alto and Woodland Avenue in East Palo Alto. San Francisquito Creek, over which the Project crosses, delineates the city limits between Palo Alto and East Palo Alto, as well as the boundary between Santa Clara and San Mateo counties.

In the general project area, additional improvements include enhanced bike lanes along Homer Avenue and Channing Avenue and Greer Road and pedestrian and bicycle overcrossings at U.S. Highway 101 (US 101), Pad D New Municipal Water Well, Route 101/University Avenue (State Route 109) Interchange Modification Project, San Francisquito Creek Bridge Replacement at US 101, and San Francisquito Creek Flood Protection.

S.3 Statement of Project Purpose and Need

The purpose of the Project is to:

- Maintain connections for vehicular, bicycle, and pedestrian transportation across San Francisquito Creek at Newell Road while avoiding the following:
 - diversion of a substantial number of vehicles to adjacent streets.
 - a substantial increase in the number of vehicles using Newell Road.
 - an increase in average vehicle speed on Newell Road.
- Improve pedestrian and bicycle access across San Francisquito Creek at Newell Road.
- Improve safety for all modes of transportation across San Francisquito Creek at Newell Road.
- Design a bridge that accommodates increased flows related to San Francisquito Creek improvements to address anticipated flooding risk.
- Upgrade the channel width beneath the bridge to allow for the 70-year storm event (7,500 cubic feet per second [cfs]) to pass.

The Project need is demonstrated by the following deficient conditions:

- The existing bridge is classified as being functionally obsolete because:
 - It does not accommodate two-way vehicular traffic.
 - It does not provide access for pedestrians or bicyclists.
- The bridge abutments are within the San Francisquito Creek channel, reducing the flows that pass under the bridge and making the bridge hydraulically deficient.
- The bridge provides poor drivability for vehicular traffic due to substandard sight distances and vertical profile.

S.4 Project Description

The Project includes four build alternatives (Build Alternatives 1–4) and the No Build Alternative. Build Alternative 2 is the LPA and “the project” for CEQA purposes and the preferred alternative for NEPA purposes. Project improvements would extend for approximately 500 feet along Newell Road and 350 feet along Woodland Avenue. Within the limits of the Project, the bridge is a substandard two-lane bridge that does not provide bicycle or pedestrian access. Criteria used for evaluation included, but were not limited to, Project cost, potential for environmental impacts, and the ability of an alternative to meet the Project’s objectives and purpose.

S.4.1 Build Alternatives

Taking agency and public input into account, the City of Palo Alto and Caltrans, as Lead Agencies for CEQA and NEPA, have evaluated four build alternatives.

- Build Alternative 1: A one-lane bridge with two-way traffic (under signal control) on the existing alignment of Newell Road.
- Build Alternative 2 (LPA): A two-lane bridge (with stop signs) on the existing alignment of Newell Road.
- Build Alternative 3: A two-lane bridge (with stop signs) on a partial realignment of Newell Road.
- Build Alternative 4: A two-lane bridge (with stop signs) on a full realignment of Newell Road.

The design features of these Build Alternatives, shown in Figures 3a through 3d, could include removal of the existing bridge; construction of new approaches, either a one-lane bridge (Build Alternative 1) or a two standard lanes bridge (Build Alternatives 2–4), and accommodation for bicycle and pedestrian travel (including sidewalk and potential road widening for sharrows or a mixed-use path); potential addition and reconfiguration of utilities including street lighting; modification to street signage or new traffic signals; addition of retaining walls; and bank stabilization measures in the portion of San Francisquito Creek disturbed by the construction. The Project would adhere to the American Association of State Highway and Transportation Officials standards to the degree feasible.

S.4.1.1 Roadway Improvements

The following roadway improvements would be included in all build alternatives (Build Alternatives 1–4).

- The proposed roadway improvements will accommodate either a two-way single lane bridge or two 14-foot-wide shared lanes (vehicles and bicycles) bridge. This includes 10-foot-wide travel lanes and 4-foot-wide shoulders. The roadway profile at the new bridge would be raised approximately 1.6 feet higher than the existing bridge in order to minimize flood hazards for the adjacent communities, and provide sufficient structure depth beneath the bridge needed to span the creek. Additional vertical and horizontal work would be required at each end of the bridge in order to transition from the new bridge profile and geometry to the existing roadway.
- To provide clear sight distance, there would be a red curb approach and railings installed, along with landscaping not to exceed 30 inches along Woodland Avenue near its intersection with Newell Road.

S.4.2 Bicycle and Pedestrian Facilities

The following bicycle and pedestrian facility improvements would be included in all build alternatives (Build Alternatives 1–4).

- The proposed bridge will accommodate either a two-way single lane bridge or two 14-foot-wide shared lanes (vehicles and bicycles). This includes 10-foot-wide travel lanes for vehicles and 4-foot-wide shoulders for bicyclists, although bicyclists would be permitted to use the entire 14-foot-wide shared lanes. Five-foot-wide sidewalks on either side of the bridge will also be constructed to enhance pedestrian access and safety through the site. Under Build Alternatives 2, 3, and 4, this is Option 1.
- Under Build Alternatives 2, 3, and 4, Option 2 has also been developed which would include the same 10-foot-wide travel lanes for vehicles but would include two 9-foot-wide, raised, mixed-use paths on either side of the bridge for bicyclists and pedestrians. This option would allow the curb to act as a barrier between vehicles and bicyclists and pedestrians.

S.4.3 Utility Relocations

The following utility relocations would be included in all build alternatives (Build Alternatives 1–4).

- Sanitary Sewer: No impacts are expected on the sanitary sewer on the East Palo Alto side of the bridge. On the Palo Alto side of the bridge an existing sewer manhole may need to be replaced on Newell Road to match the grade of the new roadway profile.
- Domestic Water: On the East Palo Alto side an existing water main runs along Woodland Avenue and a fire hydrant is located on the corner of Woodland and Newell Road. This line will remain in place and valve boxes within the street will be raised to grade to match the new roadway profile. The fire hydrant would be adjusted to match the new roadway profile. On the Palo Alto side a 6-inch PVC water main runs along Newell Road and terminates at a fire hydrant on the west side of the road near the existing bridge. The water main will remain but the fire hydrant assembly, lateral, and valves will be removed and replaced to accommodate the new roadway profile and sidewalk modifications.
- Overhead Electrical: No overhead electrical utilities exist on the Palo Alto side. On the East Palo Alto side overhead electrical poles and lines run along the south edge of Woodland Avenue within the Project limits. At least two utility poles are expected to require relocation to accommodate the proposed bridge and roadway improvements. Under Build Alternatives 2, 3, and 4, additional pole relocations may be required in order to accommodate clearances between the new bridge profile and the lowest power lines. This will be determined during final design based on coordination with PG&E.
- Street Lights: One street light on the Palo Alto side along Newell Road would be impacted by the proposed roadway improvements and would need to be removed and replaced to meet the new grades. On the East Palo Alto side street lights are integral with the overhead electrical poles; therefore, relocation will correspond with the overhead electrical pole impacts.
- Existing Steel Electrical Conduit: The 2-inch electrical conduit attached to the downstream edge of the existing bridge would be temporarily relocated prior to bridge removal and would be run within the sidewalk or mixed-use path on the new bridge.

- **Water Quality Sampling Station:** The boxes and monitoring equipment located on the upstream side of the creek is associated with a water quality sampling station. The equipment inside the station would be removed by City of Palo Alto staff prior to construction; however, the contractor will remove anything that remains and let City of Palo Alto staff know when it is available for pick-up. A new water sampling station would not be installed with the Project. However, the power and fiber that serve the water sampling station would be maintained.
- **Non-Utility Relocation of Eruv:** The existing eruv¹ is supported on steel poles crossing the south side of Newell Road. Construction activities may require the temporary removal and relocation of the existing poles supporting the eruv over Newell Road. Coordination with the religious group associated with its original installation would be required before a relocation process could be established.
- **Survey Monuments²:** Two Survey Monuments on Woodland Avenue would need to be adjusted. Existing monument number 2433 located on the south west corner of the bridge would be removed. New survey monuments would be added on the bridge.
- **Other Utilities:** Fiber and power for camera and flow sensors would need to be provided.

S.4.4 Retaining Walls

The following retaining wall improvements would be included in all build alternatives (Build Alternatives 1–4).

- Retaining walls are needed adjacent to the creek near the approaches and where the proposed roadway elevation is higher than the existing conform grades. The maximum height of these retaining walls is expected to be approximately 4.75 feet at the roadway approach nearest to the bridge on the City of Palo Alto side and at the north side of Woodland Avenue under Build Alternatives 1 and 2. The profile of the retaining walls would mimic that of the roadway approaches on both sides of the bridge. Railing would be required along the top of the retaining wall in order to provide pedestrian safety in areas where the vertical differential between the top of wall and adjacent ground is greater than 30 inches or greater.

S.4.5 Channel Stabilization

The following channel improvements would be included in all build alternatives (Build Alternatives 1–4).

- Bank stabilization measures, such as rock slope protection or soil nail wall, would be required in the portion of San Francisquito Creek disturbed by construction. These measures would be implemented approximately 50 feet upstream and 50 feet downstream of the bridge for a total of 100 linear feet.
- The only channel widening that would occur under any of the build alternatives would be from removing the existing bridge abutments, which would upgrade the channel width beneath the bridge to allow 7,500 cfs conveyance.

¹ A virtual wall or border surrounding a community which allows Orthodox Jews to travel, carry, and push objects on the Sabbath.

² A survey marker that shows the survey point for a land survey.

S.4.5.1 Construction Staging Areas

Construction staging/laydown would be included in all build alternatives (Build Alternatives 1–4) and would likely occur on Newell Road between San Francisquito Creek, Woodland Avenue, and Edgewood Drive within the roadway right-of way. The final location of staging/laydown areas would be determined during the design phase and will require additional analysis if there are any changes that result in impacts that are not described in this Draft EIR/EA or addressed by standard measures included in the project description.

S.4.6 No Build Alternative

Under the No Build (No-Action) Alternative, no changes would be made to the existing bridge and approaches. No construction activities would occur, and there would be no change in the operations of the existing facilities. Other planned and approved land use development and transportation improvements along local routes may be implemented by local agencies or under other projects. Under the No-Build Alternative, the flooding issue along the creek would also not be addressed. The existing bridge flow that can pass under is 6,600 cfs, which can handle the existing flow of 5,400 cfs, but would not be sufficient to handle the future natural creek flow of 7,500 cfs. If upstream improvements are completed, flows exceeding 6,600 cfs would not be able to pass under the existing bridge. This would result in flooding upstream of the Newell Road Bridge.

S.5 Summary of Environmental Impacts and Mitigation Measures

Table S-1 provides a summary of the environmental impacts of the Project and associated avoidance, minimization, and/or mitigation measures. Refer to Chapter 2, Environmental Setting, Impacts, and Avoidance, Minimization and/or Mitigation Measures, for a detailed impact analysis of each resource area, including the regulatory setting and existing conditions.

Table S-1. Summary of Environmental Impacts and Avoidance, Minimization, and/or Mitigation Measures

Environmental Impact Topic	Potential Impact				Avoidance, Minimization, and/or Mitigation Measures
	No Build Alternative	Build Alternative 1	Build Alternative 2 (LPA)	Build Alternative 3	
Land Use	No impacts.	The build alternatives would be constructed within existing transportation right-of-way. Accordingly, no changes to existing land uses would occur. Temporary Construction Easements may be required to allow the contractor access to some portions of the Project area; however, these would not affect the existing land uses adjacent to the Project. The replacement of a bridge with no increase in roadway capacity is not typically considered to have potential to induce growth. Therefore, land use impacts related to growth are not anticipated.			No avoidance, minimization, and/or mitigation measures are required.
Consistency with State, Regional, and Local Plans and Programs	No impacts.	The build alternatives would not conflict with any goals or policies of relevant plans and programs.			No avoidance, minimization, and/or mitigation measures are required.
Community Character and Cohesion	No impacts.	Construction of the Project would require temporary closure of the existing Newell Road Bridge crossing for all build alternatives, which could temporarily affect access between the cities of Palo Alto and East Palo Alto. However, access will be maintained at other existing nearby crossings (Embarcadero Road, University Avenue, and West Bayshore Road). Construction activities would also require partial closure of Woodland Avenue and Newell Road on the East Palo Alto side of the Project site to accommodate construction activities and equipment movement/stockpiling. To the extent possible, at least one lane along Woodland Avenue would remain open for the majority of construction to ensure access. To maintain the integrity of the symbolic “doorway” presented by the eruv, the contractor will be required to install temporary conduits across the creek bank between Friday evening and Saturday night during the construction period if needed to avoid any potential impact on the local Jewish community’s religious practices, beliefs, and traditions. The Project would provide operational benefits in terms of vehicular safety, as well as the larger community benefit of providing safe pedestrian and bicycle access.			The contractor would be required to provide bilingual notification of construction activities including any utility disruptions to the local residents and businesses. The contractor will also be required to maintain coordination with the Orthodox Jewish community during pre-construction and construction of the Project and in the event that the poles supporting the eruv over Newell Road require moving during any period of construction when the bridge structure is in place and accessible to pedestrians, to ensure a temporary eruv is in place prior to any Friday evening.
Acquisitions	No impacts.	One permanent easement would be required as a result of the Project in the City of East Palo Alto. Temporary Construction Easements (TCEs) are anticipated from all parcels within and adjacent to the Project improvements. One or two TCEs are expected on the Palo Alto side (one under Build Alternatives 1 and 2, two under Build Alternatives 3 and 4) and five on the East Palo Alto side. All TCEs would be minor and would be required to modify the driveways, backyards, or sidewalks to match the new grade of the roadways.			Access to all properties for property owners and users will be maintained by the contractor during construction.
Environmental Justice	No impacts.	The population of the Palo Alto portion of the study area is not considered an environmental justice population while the population of the East Palo Alto portion of the study area is considered an environmental justice population. There would be some adverse effects on residents of both East Palo Alto and Palo Alto in the study area related to temporary construction-period nuisances, including noise and staging. However, effects related to on-street parking availability would be experienced entirely on the City of East Palo Alto side of San Francisquito Creek and therefore would be predominantly borne by minority and low-income populations. The effects would be temporary and on-street parking would be restored upon completion of construction. All construction effects posed by the Project would be minimized through the implementation of measures included in the project. Permanent on-street parking impacts would consist of the loss of one space due to the new pedestrian sidewalk along the bridge approach along Woodland Avenue, which would not constitute a substantial change. As such, the Project would not result in disproportionately high adverse effects on minority and low-income populations.			The contractor will be required to maintain access along Woodland Avenue during construction or to provide a detour route. The contractor will also be required to provide accommodations for nighttime parking during non-construction hours. This would include opening the work zone up for residents to park at night and utilizing head-in (perpendicular) parking rather than parallel parking in these areas.
Utilities and Emergency Services	No impacts.	A number of utility relocations would be required under all build alternatives during construction, including relocations of sewer, domestic water, overhead electrical, street lights, electrical conduits, water quality sampling station, survey monuments, and other utilities. Because the Newell Road Bridge crossing would be closed during construction, first responders would have to use other existing nearby crossings (University Avenue and West Bayshore Road). However, advance notice and coordination with emergency service providers will be included in the Traffic Management Plan prepared as part of the project to minimize any potential temporary impacts on response times. Ultimately, the Project, under all build alternatives, could improve emergency response conditions in this area by creating a safer crossing over Newell Road for emergency response vehicles.			The contractor will be required to provide bilingual notification of construction activities including any utility disruptions to the local residents and businesses. Advance notice and coordination with emergency service providers will be included in the Traffic Management Plan prepared as part of the project to minimize any potential temporary impacts on response times.

Environmental Impact Topic	Potential Impact				Avoidance, Minimization, and/or Mitigation Measures	
	No Build Alternative	Build Alternative 1	Build Alternative 2 (LPA)	Build Alternative 3		Build Alternative 4
Traffic and Transportation, Pedestrian and Bicycle Facilities	Traffic conditions under 2020 and 2040 scenarios are similar to the build alternatives.	Construction of all build alternatives would temporarily affect access and on-street parking. In addition, the effect of diverted traffic during construction would cause increased delay at the East Crescent Drive/University Avenue, resulting in unacceptable level of service F and E during the a.m. and p.m. peak periods respectively, exceeding the CEQA delay threshold of 4 seconds. However, under 2020 and 2040 scenarios, there is no substantial difference in level of service and delay between the build alternatives, with the exception of Build Alternative 1. Build Alternatives 2, 3, and 4, accounting for the increase in traffic along Newell Road, do not substantially alter the level of service under either of the scenarios. Build Alternative 1, however, results in a higher delay at Newell Road/Woodland Avenue (North Leg) and Newell Avenue/Edgewood Drive for both scenarios, as compared to Build Alternatives 2, 3, and 4. None of the transportation impacts during operations would substantially alter delay, congestion, or safety.				The contractor will implement a Traffic Management Plan during construction activities. Access along Edgewood Drive for the southeast resident's driveway will be maintained at all times during construction. Access will be maintained along Woodland Avenue or a detour route provided. During construction, the contractor will also make accommodations for nighttime parking during non-construction hours. This would include opening the work zone up for residents to park at night and utilizing head-in (perpendicular) parking rather than parallel parking in these areas. There is no feasible mitigation available to reduce the increased delay associated with diverted traffic at the East Crescent Drive/University Avenue intersection during construction.
Visual/ Aesthetics	No impacts.	While construction activities will be noticeable, the proposed Project would not have a negative effect on a scenic vista, damage scenic resources (trees, rock outcroppings, and/or historic buildings within a state scenic highway), or degrade the visual character or quality of the site and its surroundings over the long-term. Street light adjustments and/or removals are not expected to change ambient illumination levels in a noticeable way with implementation of mitigation measures. Therefore, the proposed Project would not create a new source of substantial light or glare that would negatively affect daytime or nighttime views in the area with mitigation. Under all of the proposed Build Alternatives, the proposed Project would result in a moderate-low resource change for Build Alternatives 1, 2, and 3 and moderate resource change for Build Alternative 4 (under construction and operation), and the average response of all viewer groups would be moderate-high for all build alternatives. This would result in a moderate visual impact for Build Alternatives 1, 2, and 3 and a moderate-high visual impact for Build Alternative 4 over the short-term. In all cases, the visual changes expected as a result of the project would be modest with implementation of mitigation measures.				The contractor will install visual barriers to obstruct undesirable views of construction activities and staging areas from sensitive receptors, namely residents and viewers on neighborhood sidewalks and streets, which are located adjacent to the construction site. Where appropriate and to the degree possible, landscaping and related appurtenances, such as fencing, driveway gates, and similar features that would be removed from private properties as a result of construction will be relocated, replaced, or restored in place and in-kind to mitigate for visual impacts and to maintain the quality of views from neighborhood roadways and sidewalks. The Project will implement an aesthetic design treatment with a consistent motif for new structures such as retaining walls, bridge sides, fencing, and wing walls. Streetscaping (urban design and improvements made to the street) and planting native vegetation at the tops of the creek's banks will improve the visual quality of the roadway corridor. All artificial outdoor lighting will be limited to safety and security requirements, designed using Illuminating Engineering Society's design guidelines, and in compliance with International Dark-Sky Association approved fixtures.
Cultural Resources	No impacts.	There are no historic properties present in the Area of Potential Effects (APE). Therefore, there would be no historic properties affected during construction or operation of any of the build alternatives. There is limited archaeological sensitivity within the APE and it is not anticipated that previously unidentified prehistoric or historic archaeological sites are located in the APE.				If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will cease until a qualified archaeologist can assess the nature and significance of the find and recommend/implement appropriate data collection/recovery activities. If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities will stop in any area or nearby area suspected to overlie remains, and the County Coroner will be contacted.
Hydrology and Floodplain	In the absence of additional bank stabilization activities, the banks of San Francisquito Creek would be expected to erode further. In addition to erosion continuing along some banks and beginning along others, existing structures may degrade and present additional threats to bank stability.	The base flood elevation would be lowered compared to existing conditions. Further, the existing 70-year and 100-year flood events would be minimized compared to existing conditions. Therefore, there would be no increased flood risk and no risk to life or property associated with implementation of the Project. The Project would not support incompatible floodplain development since the areas surrounding the Newell Bridge floodplain are already developed. Construction of the Project would result in additional flow capacity in the project area. However, upstream constraints along the creek currently restrict lower flows (i.e., Pope Chaucer Road Bridge limits creek flows downstream to approximately 5,400 cubic feet per second (cfs), Middlefield Road Bridge limits creek flows downstream to approximately 7,500 cfs), which means increasing the flow at the Newell Road Bridge would not cause flooding elsewhere. Operation of the Project is not anticipated to impact the natural and beneficial floodplain values of San Francisquito Creek. The proposed action does not constitute a significant floodplain encroachment as defined in 23 Code of Federal Regulations Section 650.105(q).				No avoidance, minimization, and/or mitigation measures are required.

Environmental Impact Topic	Potential Impact				Avoidance, Minimization, and/or Mitigation Measures	
	No Build Alternative	Build Alternative 1	Build Alternative 2 (LPA)	Build Alternative 3		Build Alternative 4
Water Quality and Stormwater Runoff	No impacts during construction. In the absence of additional bank stabilization activities, the banks of San Francisquito Creek would be expected to erode further.	Potential impacts of the build alternatives on existing water quality conditions in San Francisquito Creek include temporary increases in sediments, oil, grease, and chemical pollutants during construction, as well as potential long-term discharges of sediments and other pollutants collected in stormwater runoff. Short-term or temporary construction impacts on water quality have the potential to occur during grading, demolition, land-disturbance activities, material and equipment use and storage at staging areas, and other construction activities. Long-term impacts on water quality could occur from increased impervious area, operation and maintenance activities (such as bridge maintenance), and inspections. Build Alternative 1 would result in 45,000 square feet of disturbed soil area and 666 square feet of added impervious area.	Build Alternative 2 would result in 45,000 square feet of disturbed soil area and 1,700 square feet of added impervious area.	Build Alternative 3 would result in 46,000 square feet of disturbed soil area and 1,983 square feet of added impervious area.	Build Alternative 4 would result in 55,000 square feet of disturbed soil area and 2,023 square feet of added impervious area.	A Stormwater Pollution Prevention Plan will be implemented during construction, as well as an National Pollutant Discharge Elimination System Permit and Construction General Permit water quality measures. Best management practices will be included to prevent adverse changes in downstream water quality. Measures will include feasible temporary best management practices such as temporary sediment control, temporary soil stabilization, scheduling waste management, materials handling, and other non-stormwater best management practices.
Geology, Soils, and Seismicity	The No Build Alternative would have the same potential impacts as described for the Build Alternatives.	Site preparation and grading associated with Project construction activities would potentially expose bare soil to erosive forces; however, the effects of erosion will be addressed by preparation and implementation of a Stormwater Pollution Prevention Plan. Earthquake shaking potential for this site is considered strong, and the risk of secondary seismic hazards to affect users of the intersection (i.e., liquefaction, seismically induced landslides, rock falls, settlement, and subsidence) is low. These hazards will be addressed by use of California Department of Transportation (Caltrans) design standards.			The City of Palo Alto will adhere to current Caltrans seismic design criteria for bridge design and construction.	
Paleontology	No impacts.	Construction of Build Alternatives 1 and 2 would involve excavation for the roadway to a depth of 2 feet from existing grade to remove existing asphalt and base, excavation to a depth of 5 feet for installation of retaining walls, and excavation to a depth of 6 feet for installation of bridge abutments. Because the excavation work is shallow and would proceed within the previously disturbed roadbed any effect on sensitive paleontological resources would be minor.	Similar to Build Alternatives 1 and 2, construction of Build Alternatives 3 and 4 would involve excavation for the roadway to a depth of 2 feet from existing grade to remove existing asphalt and base, excavation to a depth of 5 feet for installation of retaining walls, and excavation to a depth of 6 feet for installation of bridge abutments. The excavation work is shallow; however, it would involve disturbance of previously undisturbed soil in the area of the road realignment. Because sensitive paleontological resources could occur at depths below 5 feet, it is possible that excavation could encounter sensitive paleontological resources, necessitating mitigation.		A qualified paleontologist will be required to educate workers and the construction crew will stop work in the event of discovery of paleontological resources to reduce impacts on paleontological resources. Construction work in the affected areas will remain stopped or be diverted to allow recovery of fossil remains in a timely manner. Caltrans and the City of Palo Alto will retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in accordance with Society of Vertebrate Paleontology guidelines. The recovery plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings.	
Hazardous Waste and Materials	No impacts.	Based on the status of the three hazardous material release sites within 0.25 mile of the Project site, none of the hazardous material releases is considered likely to have the potential to affect development of the Project. Asbestos was not found during surveys, and no naturally occurring asbestos has been mapped in the project vicinity. Impacts from lead contamination from paint could occur where reconstruction of the bridge involves disturbing or removing the existing paint. Direct contact with contaminated paint and subsequent hand-to-mouth activities (e.g., smoking, drinking, or eating) could result in the inadvertent ingestion of contaminated paint. Construction activities could produce dust, which could expose workers or nearby residents and business occupants to lead via inhalation. Mitigation is required.			The contractor will be required to treat all paint as lead-containing for the purposes of complying with Division of Occupational Safety and Health worker safety requirements, which apply to all worksites where construction workers may be exposed to lead. The contractor will be required to implement standard dust control measures.	
Air Quality	No impacts.	Construction activities associated with the Project would generate short-term emissions of reactive organic gases (ROG), nitrogen oxides (NO _x), carbon monoxide (CO), particulate matter 10 micrometers or smaller (PM ₁₀), and particulate matter 2.5 micrometers or smaller (PM _{2.5}). NO _x emissions would be above the Bay Area Air Quality Management District threshold for CEQA purposes, requiring mitigation. Implementation of Caltrans standard specification and measures to control dust during construction would also help to minimize air quality impacts from construction activities. Operation-related emissions of ozone precursors, such as ROG, NO _x , CO, and PM ₁₀ , would increase slightly as a result of the Project; however, the increases would not exceed any ambient air quality standards.			Implementation of Caltrans Standard Specification, Bay Area Air Quality Management District Basic Control Measures to control dust by the contractor, and the use of Tier 4 construction equipment during construction would help to minimize air quality impacts from construction activities.	

Environmental Impact Topic	Potential Impact					Avoidance, Minimization, and/or Mitigation Measures	
	No Build Alternative	Build Alternative 1	Build Alternative 2 (LPA)	Build Alternative 3	Build Alternative 4		
Noise	No impacts.	Noise from Project construction activities may intermittently dominate the noise environment in the immediate area of construction, and could be substantial at nearby residences. Construction would be conducted in accordance with Caltrans Standard Specifications Section 14-8.02 and applicable local noise standards, but additional mitigation is required for CEQA purposes. The operation of heavy equipment would generate localized ground-borne vibration during construction of the Project. Vibration impacts at homes closest to the bridge and for homes located within approximately 50 feet of the construction site would be substantial and could cause annoyance. During operation, traffic noise levels are not predicted to approach or exceed the noise abatement criteria for Activity Category B land uses located adjacent to the Project study area limits. The bridge alignment under Build Alternative 4 would result in a slightly higher noise increase at the nearest receivers of up to 2 dB relative to existing conditions, and up to 1 dB under future no-Project conditions. An increase of less than 3 dB would generally not be perceptible during daytime hours.					The construction contractor must comply with Caltrans Standard Specifications Section 14-8.02, Noise Control and local noise standards. All equipment used by the contractor will have sound-control devices that are no less effective than those provided on the original equipment. No equipment will have an unmuffled exhaust. In addition, advance notice to nearby residences would be provided, a disturbance coordinator to handle resident complaints would be designated, and noise barriers installed to further attenuate noise. To address vibration impacts, vibration monitoring at homes would be required and control approaches would be implemented.
Natural Communities	No impacts.	Build Alternative 1 would permanently remove 0.020 acres of intermittent stream and 0.014 acres of valley foothill riparian, and affect 23 trees with removal of 10 trees.	Build Alternative 2 would permanently remove 0.029 acres of intermittent stream and 0.022 acres of valley foothill riparian, and affect 24 trees with removal of 12 trees.	Build Alternative 3 would permanently remove 0.028 acres of intermittent stream and 0.022 acres of valley foothill riparian, and affect 23 trees with removal of 14 trees.	Build Alternative 4 would permanently remove 0.023 acres of intermittent stream and 0.031 acres of valley foothill riparian, and affect 25 trees with removal of 18 trees.	The contractor will be responsible for implementation of avoidance, minimization, and mitigation measures including installing construction barrier fencing around environmentally sensitive areas, preparing an environmental awareness program and training for construction employees, retaining a biological monitor on site, avoiding and minimizing disturbance of valley foothill riparian, and protecting water quality and preventing erosion and sedimentation in the creek. In addition, loss of native riparian trees will be compensated by replanting at a ratio of 3:1 and loss of non-native riparian trees will be compensated at a ratio of 1:1.	
Wetland and Other Waters of the United States	No impacts.	No jurisdictional wetlands are present within the Biological Study Area (BSA); therefore, no impacts from any of the build alternatives would result during construction or operation. Impacts on the creek and intermittent stream habitat are described above under Natural Communities.				Implementation of avoidance and minimization measures such as protecting water quality and preventing erosion and sedimentation in the creek will minimize potential impacts.	
Plant Species	No impacts.	None of the build alternatives would affect special-status plant species during construction or operation because none are present in the BSA.				No avoidance, minimization, or mitigation measures are required.	
Animal Species	No impacts.	Construction activities could affect western pond turtle, pallid bat, hoary bat, snowy egret, and saltmarsh common yellowthroat. If pond turtles are present in the creek channel or along the creek bank during the construction period, they could be injured or killed during construction. Potential bat roosting areas that could be directly disturbed during new bridge construction occur in portions of the existing bridge and more mature trees in the BSA. Construction of the proposed Project could result in the loss or abandonment of active nests for special-status raptors and migratory birds. Permanent tree removal could remove roosting habitat for bats and birds. All of these potential impacts would be addressed via avoidance and minimization measures prior to or at the time of construction.				The City of Palo Alto will implement avoidance and minimization measures such as conducting preconstruction surveys for western pond turtle and relocating if needed, conducting preconstruction surveys for bats, and implementing nesting bird avoidance measures will minimize potential impacts.	
Threatened and Endangered Species	No impacts.	California red-legged frogs could be directly and indirectly affected by construction activities occurring in or adjacent to the BSA. If California red-legged frogs are present within the construction work area, they could be inadvertently killed or wounded by construction vehicles, construction personnel, and accidental spill of toxic fluids. Construction activities associated with road and bridge construction in potential California red-legged frog habitat in the Project area could result in indirect effects on water quality downstream from the construction work area. The proposed Project could affect habitat conditions for steelhead. Activities associated with bridge removal and reconstruction and revegetation could increase erosional processes, thereby increasing sedimentation and turbidity in downstream waterways. Excessive sediment deposited in or near stream channels can degrade aquatic habitats. Increased turbidity can increase fish mortality, reduce feeding opportunities for fish including rearing steelhead, and cause fish to avoid important habitat. All of these potential impacts would be addressed via avoidance, minimization, and mitigation measures prior to or at the time of construction.				The City of Palo Alto or its contractor will implement avoidance, minimization, and mitigation measures such as avoiding work during the breeding and dispersal season, conducting preconstruction surveys, providing construction worker awareness training, installing exclusion fencing and construction monitoring, and limiting stream bank construction to the dry season will minimize impacts on listed species.	

Environmental Impact Topic	Potential Impact				Avoidance, Minimization, and/or Mitigation Measures
	No Build Alternative	Build Alternative 1	Build Alternative 2 (LPA)	Build Alternative 3	
Invasive Species	No impacts.	The Project is not anticipated to increase or decrease the area currently occupied by invasive weeds or the potential for spreading invasive weed species. It is possible that new invasive species could be introduced into San Francisquito Creek during construction; however, none of the identified species on the California list of invasive species is currently used by Caltrans or the Cities of Palo Alto and East Palo Alto for erosion control or landscaping in order to stop the spread of invasive species. For this reason, and because the contractor will be required to implement standard precautions, impacts would be minor.			The Project proponent, or their contractor, will be responsible for avoiding the introduction of new invasive plants and the spread of invasive plants previously documented in the BSA.
Cumulative Impacts	No impacts.	The Project would replace an existing bridge with one that is substantially similar and would not contribute to any identified cumulative transportation or flooding impacts. The Project has the potential to result in cumulative impacts on aesthetics, paleontological resources, hazardous materials and waste, and the natural communities of valley foothill riparian and protected trees. With implementation of the measures prescribed for minimizing impacts and compensating for remaining impacts, the proposed Project's incremental contribution to cumulative impacts would not be cumulatively considerable.			The avoidance, minimization and mitigation measures described above for aesthetics, paleontological resources, hazardous materials and waste, and the natural communities of valley foothill riparian and protected trees, will be implemented to minimize impacts.

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Acronyms and Abbreviations

µg/m ³	micrograms per cubic meter
AB	Assembly Bill
AB 32	California Global Warming Solutions Act of 2006
ACHP	Advisory Council on Historic Preservation
ACS	American Community Survey
ADA	Americans with Disabilities Act
ADT	average daily traffic
AMM	Avoidance and Minimization Measure
APE	Area of Potential Effects
APN	Assessor's Parcel Number
ARB	California Air Resources Board
ASAR	Alternatives Screening Analysis Report
AWSC	All Way Stop Control
BAAQMD	Bay Area Air Quality Management District
BAU	business-as-usual
BMPs	best management practices
bridge	Newell Road Bridge
BSA	Biological Study Area
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH ₄	methane
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO ₂	carbon dioxide
creek	San Francisquito Creek
CRHRs	California Register of Historical Resources
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
dbh	diameter at breast height

DDT	dichlorodiphenyltrichloroethane
DSA	disturbed soil area
EA	Environmental Assessment
EFH	essential fish habitat
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EOs	Executive Order
EPA	U.S. Environmental Protection Agency
EPACT92	Energy Policy Act of 1992
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FHWA	Federal Highway Administration
FO	functionally obsolete
FONSI	Finding of No Significant Impact
FR	Federal Register
FTIPs	Federal Transportation Improvement Programs
GHGs	greenhouse gas
Guidelines	Section 404(b)(1) Guidelines
H ₂ S	hydrogen sulfide
HBP	Caltrans Highway Bridge Program
Kw	soil erodibility factor
lbs	pounds
LED	light-emitting diode
LEDPA	least environmentally damaging practicable alternative
LOS	Level of Service
LPA	Locally Preferred Alternative
MLD	Most Likely Descendant
MM	Mitigation Measure
MMTCO _{2e}	million metric tons of carbon dioxide equivalent
MOU	Memorandum of Understanding
MRP	Municipal Regional Permit
MS4	municipal separate storm sewer system
MSAT	mobile source air toxics
MTC	Metropolitan Transportation Commission
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NACs	noise abatement criteria
NAHCs	Native American Heritage Commission
NEPA	National Environmental Protection Act

NHPAs	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NO ₂	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NOA	naturally occurring asbestos
NOAA Fisheries Service	National Oceanic and Atmospheric Administration's National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRHPs	National Register of Historic Places
O ₃	ozone
OHWM	ordinary high water mark
OWSC	One-Way Stop Control
PA	Programmatic Agreement
Pb	lead
PCB	polychlorinated biphenyl
PM	particulate matter
PM ₁₀	particles of 10 micrometers or smaller
PM _{2.5}	particles of 2.5 micrometers and smaller
POAQC	project of air quality concern
ppm	parts per million
PPV	peak particle velocity
PRCq	Public Resources Code
Project	Newell Road Bridge Replacement Project
ROG	reactive organic gases
ROW	right-of-way
RSA	resource study area
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCVWD	Santa Clara Valley Water District
SDCs	Seismic Design Criteria
SF ₆	sulfur hexafluoride
SFCJPA	San Francisquito Creek Joint Powers Authority
SFRWQCB	San Francisco Bay Regional Water Quality Control Board
SHPO	State Historic Preservation Officer
SIPs	State Implementation Plan
SLR	sea-level rise
SM	standardized measure
SO ₂	sulfur dioxide
SWMP	Storm Water Management Plan

SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCE	Temporary Construction Easement
TIP	Transportation Improvement Program
TIRE	Traffic Infusion on Residential Environment
TMDLs	Total Maximum Daily Load
TMP	Traffic Management Plan
TWSC	Two-Way Stop Control
US 101	U.S. Highway 101
USACEs	U.S. Army Corps of Engineers
USCs	U.S. Code
USDOTs	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles travelled
vpd	vehicles per day
WDRs	Waste Discharge Requirements
WSEL	water surface elevation level

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1.1 Introduction

The California Department of Transportation (Caltrans) in cooperation with the City of Palo Alto, proposes to replace the Newell Road Bridge (bridge) and roadway approaches across San Francisquito Creek (creek).

The Newell Road Bridge Replacement Project (Project) is subject to state and federal environmental review requirements. Accordingly, Project documentation is being prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans is the lead agency under NEPA (under assignment from the Federal Highway Administration) and the City of Palo Alto is the lead agency under CEQA. As the bridge connects two separate jurisdictions, the City of East Palo Alto, pursuant to CEQA, is a responsible agency. The Project is identified in the April 18, 2011, Federal State Transportation Improvement Program (California Department of Transportation 2011).¹ It is also included in the City of East Palo Alto's Capital Improvement Plan (City of East Palo Alto 2014) and the City of Palo Alto's Capital Budget Plan (City of Palo Alto 2018).

Funding for the Project (Project # BRLS-5100[017], Bridge #37C-0223) is being provided through a Caltrans Highway Bridge Program (HBP) grant (contributing 88.5% of design, planning, and construction costs) and by the Santa Clara Valley Water District (SCVWD) (11.5% of design, planning, and construction costs) with Project management assumed by the City of Palo Alto.

1.1.1 Project Location

The Project is located in Santa Clara and San Mateo counties, in the cities of Palo Alto and East Palo Alto. The Project is located southwest of U.S. Highway 101 (US 101) and east of State Route 82 (El Camino Real), as shown in Figure 1-1. The Project site is located on Newell Road between Edgewood Drive in Palo Alto and Woodland Avenue in East Palo Alto, as shown in Figure 1-2. The limits of the Project, Project footprint (including build alternatives), street names, and prominent landmarks are shown in Figures 1-3a through 1-3d. San Francisquito Creek, over which the Project crosses, delineates the city limits between Palo Alto and East Palo Alto, as well as the boundary between Santa Clara and San Mateo counties.

1.1.2 Project Background

The San Francisquito Creek Joint Powers Authority (SFCJPA), formed in 1999, was established to address flooding issues affecting the several jurisdictions within the San Francisquito Creek watershed. The Project is within the study area for proposed channel and bridge improvements that would provide increased flood protection and hydraulic capacity in this waterway.

¹ The Project description in the April 18, 2011, Federal State Transportation Improvement Program is to "replace existing two-lane bridge with a new two-lane bridge conforming to current standards."



Figure 1-1. Project Vicinity

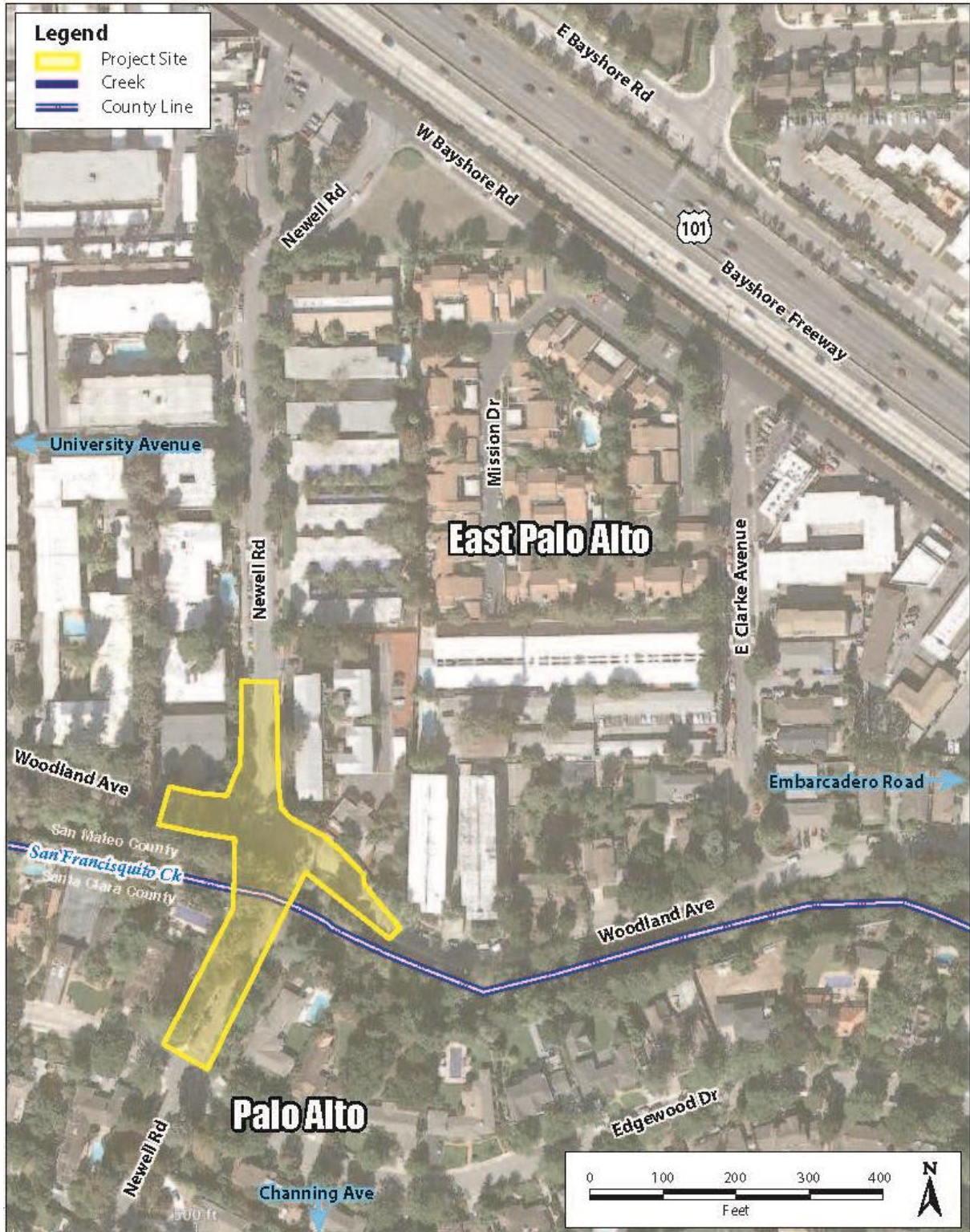


Figure 1-2. Project Location

The SCVWD-estimated 1% flow rate² for San Francisquito Creek is 8,150 cubic feet per second (cfs). The 2016 SCVWD hydraulic model indicates that the existing bridge opening can convey peak flows of approximately 6,600 cfs. However, upstream constraints along the creek currently restrict lower flows (i.e., Pope Chaucer Road Bridge limits creek flows downstream to approximately 5,400 cfs).

The Middlefield Road Bridge currently allows flows of up to 7,500 cfs. A separate SFCJPA project (San Francisquito Creek Upstream of Highway 101 Project) is currently underway, which would affect the crossing at Pope/Chaucer Street and could allow flows of up to approximately 7,500 cfs to reach the Project, with the remainder of the 8,150 cfs (i.e., the 100-year flow) being accommodated through upstream detention.³ The SFCJPA's San Francisquito Creek Upstream of Highway 101 Project's improvements could also increase the downstream capacity to at least 7,500 cfs. This Project is separate from the SFCJPA San Francisquito Creek Upstream of Highway 101 Project because in addition to taking potential flooding risk into consideration, it is funded by the Caltrans HBP as a functionally obsolete (FO) bridge and addresses better accessibility for vehicular, bicycle, and pedestrian users. The purpose of the HBP is to replace or rehabilitate public highway bridges over waterways, other topographical barriers, other highways, or railroads when the state and Federal Highway Administration determine that the bridge is significantly important and has structural deficiencies, physical deterioration, or functional obsolescence.⁴ Analysis and design included in the San Francisquito Creek Upstream of Highway 101 Project is outside the scope of this Project, although the Project would not preclude SFCJPA's implementation of these proposed future improvements to accommodate the 100-year flow in the vicinity of the Newell Road Bridge. In addition, the SFCJPA does not currently have plans to replace the Middlefield Road Bridge.

Caltrans has Project oversight authority and manages the financing for HBP-funded projects. This Project is within the jurisdiction of the Caltrans District 4 Office of Local Assistance. As a result, the Caltrans District 4 Office of Local Assistance is responsible for review, comment, and approval of NEPA Project documentation, including environmental technical studies and reports, engineering, and construction documents.

1.1.3 Existing Bridge Information

The existing bridge, located between Woodland Avenue (East Palo Alto) and Edgewood Drive (Palo Alto), was built in 1911. In East Palo Alto, Newell Road connects to Woodland Avenue, which provides access to University Avenue and US 101. In the City of Palo Alto, Newell Road connects to two main thoroughfares, Channing Avenue and Embarcadero Road, which also provide access to US 101.

The bridge is 42 feet long, 40 feet of which is clear span. It consists of a reinforced concrete rigid frame through girder structure, with an 18-foot-wide curb-to-curb width and overall bridge width of 22 feet. The existing abutments are within the creek bed and channel slopes, causing flow constriction in the channel that will not accommodate the natural creek capacity of 7,500 cfs.

² A 1% flow rate (also informally referred to as the 100-year flow rate) is the creek flow rate that has a 1% chance of being equaled or exceeded in any given year.

³ The Revised Notice of Preparation for the Draft Environmental Impact Report (EIR) for the San Francisquito Creek Flood Protection, Ecosystem Restoration, and Recreation Project Upstream of Highway 101 was published on December 21, 2016. The public comment period closed in February 2017. It can be accessed at: http://www.sfcjpa.org/documents/SFCJPA_Upstream_NOP_1.6_16.pdf.

⁴ Overview of the Local Highway Bridge Program is provided on the Caltrans Division of Local Assistance Website. Accessed on March 28, 2017 at: <http://www.dot.ca.gov/hq/LocalPrograms/hbrr99/hbrr99a.htm#overview>.

The October 2016 Caltrans Structure Maintenance & Investigations Report indicates that the bridge is considered FO⁵ with a sufficiency rating⁶ of 47.5 (California Department of Transportation 2016) per Code 31,⁷ indicating substandard roadway geometry. The bridge's traffic lanes and sight distance are substandard because it does not accommodate two standard-width lanes for vehicle traffic, and the bridge has no provision for bicycle or pedestrian access. As a result, the existing bridge is classified as being FO. The FO status and low sufficiency rating of the existing bridge make it eligible for replacement under the Federal HBP.

The Newell Road right-of-way (ROW) western approach to the bridge is over 70 feet wide, accommodating a two-lane road and two designated bike lanes within a 36-foot-wide curb-to-curb section, and 5-foot-wide sidewalks and planter areas on both sides.

1.1.3.1 Newell Road

Newell Road, within the Project limits, is an urban collector road with a current average daily traffic (ADT) volume of 3,300 vehicles per day. The roadway approach width (in the City of Palo Alto) is 36 feet wide, which provides for two 11-foot lanes and two 7-foot shoulders which are designated as part of a bike route. The public road ROW also includes planter strips and sidewalks on both sides of Newell Road. Approximately 20 feet north of the bridge span, Newell Road intersects Woodland Avenue. There are no shoulders, planter strips, or sidewalks in the area within East Palo Alto. The horizontal alignment of Newell Road between the two cities is offset 90 feet from centerline. There are no public transit facilities in the immediate Project area. The closest transit service includes SamTrans bus routes on University Avenue and Santa Clara Valley Transportation Authority bus routes on University Avenue. Santa Clara Valley Transportation Authority also operates a weekday shuttle along University Avenue between East Palo Alto and the Caltrain Palo Alto Station.

1.2 Purpose and Need

The Project proposes to improve the vehicle, bicycle, and pedestrian access on the Newell Road Bridge over San Francisquito Creek. Construction of the proposed Project improvements have independent utility⁸ because the Project is not dependent on other projects in the area to meet the Project's purpose and need. This Project could proceed with or without additional upstream or downstream improvements. However, the Project does take into consideration upstream and downstream improvements that are planned or underway, and addresses potential flooding risk by increasing the area below the bridge to allow larger flows to pass. Other closely related past,

⁵ "Functionally obsolete" is a description or classification of highway bridges in the Highway Bridge Replacement and Rehabilitation Program (23 Code of Federal Regulations 650.409). A "deficient" bridge is defined as having a Sufficiency Rating ≤ 80 and is Structurally Deficient and/or Functionally Obsolete (FO). Inadequate appraisal ratings of deck geometry, under clearances, approach roadway alignments, structural conditions, and waterway adequacy, can result in FO classification. This is described in Section 6.12.1, page 6-35 and 6-36 of the Local Assistance Program Guidelines.

⁶ "Sufficiency rating" is a 0 to 100 score, with 100% representing an entirely structurally sufficient bridge and 0% representing an entirely structurally insufficient or deficient bridge.

⁷ This code is defined in *Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges* as: "Replacement of bridge or other structure because of substandard load carrying capacity or substandard roadway geometry."

⁸ "Independent utility" is defined as being a usable and reasonable expenditure even if no additional transportation improvements in the area are made.

present, and reasonably foreseeable future projects are discussed in greater detail as part of Section 2.4, *Cumulative Impacts*. The Project has logical termini in that the footprint and extent were chosen to provide the greatest potential for resolving the deficiencies identified in the Project need.⁹ Refinements to proposed alternatives were made in response to expressed public input and preference, as well as to avoid unacceptable traffic operations such as unsafe conditions and extensive queuing.

1.2.1 Purpose of the Project

The purpose of the Project is to:

- Maintain connections for vehicular, bicycle, and pedestrian transportation across San Francisquito Creek at Newell Road while avoiding the following:
 - diversion of a substantial number of vehicles to adjacent streets.
 - a substantial increase in the number of vehicles using Newell Road.
 - an increase in average vehicle speed on Newell Road.
- Improve pedestrian and bicycle access across San Francisquito Creek at Newell Road.
- Improve safety for all modes of transportation across San Francisquito Creek at Newell Road.
- Design a bridge that accommodates increased flows related to San Francisquito Creek improvements to address anticipated flooding risk.
- Upgrade the channel width beneath the bridge to allow for the 70-year storm event (7,500 cfs) to pass.

1.2.2 Need for the Project

The Project need is demonstrated by the following deficient conditions:

- The existing bridge is classified as being FO because:
 - It does not accommodate two-way vehicular traffic.
 - It does not provide access for pedestrians or bicyclists.
- The bridge abutments are within the San Francisquito Creek channel, reducing the flows that pass under the bridge and making the bridge hydraulically deficient.
- The bridge provides poor drivability for vehicular traffic due to substandard sight distances and vertical profile.

1.2.2.1 Capacity, Transportation Demand, and Safety

As previously described, the existing bridge is a narrow, substandard two-lane bridge. According to the 2019 Supplemental Traffic Evaluation Report (TJKM 2019) prepared for this Project, the 2016 ADT is approximately 3,300 vehicles per day (vpd) on the bridge, 3,423 vpd on Newell Road between Edgewood Drive and Hamilton Avenue (south of the bridge), and 1,805 vpd on Newell

⁹ “Logical termini” is defined as endpoints or Project limits that are of sufficient length and location to address environmental matters on a broad scope and not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Road from Woodland Avenue to W. Bayshore Road (north of the bridge). On Woodland Avenue, 2016 ADT was 4,144 vpd from Cooley Avenue to Newell Road (west of Newell Road), and 1,314 vpd from Newell Road to Clarke Avenue (east of Newell Road). On Edgewood Drive, 2016 ADT was 582 vpd from Newell Road to Island Drive (west of Newell Road), and 434 vpd from Newell Road to Jefferson Drive (east of Newell Road).

The City of East Palo Alto adopted their general plan update, *2035 East Palo Alto General Plan*, in October 2016, and the City of Palo Alto adopted the Updated Comprehensive Plan on November 13, 2017. Based on the updated East Palo Alto General Plan, and with concurrence from City of Palo Alto staff, an annual growth rate of 1% is assumed for traffic volumes in the area. This increase would increase the transportation demand on the bridge.

1.2.2.2 Roadway Deficiencies

Existing roadway deficiencies include:

- **Operational Deficiencies:** The existing traffic lanes are substandard. The minimum bridge width, per state requirements, is 28 feet. Standard traffic lanes per Palo Alto and East Palo Alto requirements are 11-foot-wide lanes and 5-foot-wide sidewalks. The existing roadway width is not striped, is 18 feet wide between bridge rails, and does not include sidewalks. Also, sight distances from the bridge are poor (sight stopping distance would only accommodate a speed of 15 miles per hour and the current listed speed is 25 miles per hour).
- **Bridge Age:** The existing bridge was constructed in 1911 and is over 100 years old. It was originally constructed at a time when vehicular travel was limited.
- **Roadway Section:** The existing bridge has non-standard lane and shoulder widths. The existing bridge is 18 feet wide between curbs as compared to the Caltrans and City of Palo Alto standard 11-foot-wide lanes plus separate 5-foot-wide bike lanes (32 foot total width) or 14-foot-wide standard sharrows¹⁰ lanes (28 foot total width).
- **Vertical Alignment:** The vertical roadway alignment at the bridge connection has steep approach grades (up to 7%) that reduce the amount of roadway a driver can see entering or leaving the bridge and reduces response time for drivers to respond to conditions in front of the vehicle. Vertical curves are required between grade differences, but none exist on the existing bridge.
- **Stopping Sight Distance:** The existing bridge does not provide adequate stopping sight distance. At the intersection of Newell Road and Woodland Avenue, the sight distance is limited by the existing bridge barriers and flood walls. Per current Caltrans standards, the stopping sight distance would only accommodate a speed of 15 miles per hour.

1.2.2.3 Social Demands/Economic Development

According to the *2035 East Palo Alto General Plan* (City of East Palo Alto 2016), Newell Road Bridge is one of two secondary gateways into East Palo Alto and is one of six routes into and out of the Westside area of East Palo Alto (west of US 101). The 2035 East Palo Alto General Plan includes planned improvements at the bridge to improve connectivity and add pedestrian and bicycle facilities. According to the Palo Alto Comprehensive Plan, adopted on November 13, 2017 (City of

¹⁰ A “sharrow” is a shared vehicle/bicycle lane. Sharrow markings alert motorists of the location a bicyclist may occupy within the traveled roadway. The markings also assist bicyclists with positioning themselves on a shared roadway.

Palo Alto 2017), Newell Road is a concern due to flooding in the vicinity. In addition, the goals of the Metropolitan Transportation Commission's Regional Transportation Plan, *Plan Bay Area 2040* (Metropolitan Transportation Commission 2013) include improving pedestrian and bicycle facilities in the region.

Growth management is a concern for both jurisdictions. In the 2035 East Palo Alto General Plan, future growth is prioritized in the University Avenue corridor, Ravenswood Business District, Gateway District, and in the Westside areas; preserving and enhancing residential neighborhoods is also prioritized. The Palo Alto Comprehensive Plan establishes the limits to urban growth and sets the direction for maintaining the City of Palo Alto's scale and character. It states that the amount of urban land in Palo Alto will remain essentially the same going forward, with growth occurring through infill and redevelopment. There are no planned land use changes in the vicinity of the Newell Road Bridge.

1.2.2.4 Modal Interrelationships and System Linkages

The City of Palo Alto *Bicycle + Pedestrian Transportation Plan*, adopted in July 2012, identifies this Project as a top recommended project, which would provide enhanced (dedicated) bicycle and pedestrian facilities and planning (City of Palo Alto 2012). The Bicycle + Pedestrian Transportation Plan also calls for new or enhanced Class II bikeways along Newell Road from Woodland Avenue to Embarcadero Road, and recommends that the Project be compatible with the proposed overcrossing of Highway 101 in East Palo Alto, which was the highest bicycle priority identified in the City of East Palo Alto's 2011 *Bicycle Transportation Plan* (City of East Palo Alto 2011). With an option for a touchdown at Newell Road near Woodland Avenue, there is potential for direct linkage to the Gateway 101 Shopping Center and the Bay Trail from Palo Alto's Community Center and adjacent neighborhoods. The proposed Project would support the goals of these plans.

1.2.2.5 Air Quality Improvements

The Project proposes to add pedestrian and bicycle facilities to the bridge in the form of sidewalks and shared vehicle/bicycle lanes¹¹ (sharrows). This multimodal option could encourage more people to walk and/or bike, which would have the effect of improving air quality by reducing vehicle miles travelled. This is discussed in greater detail in Section 2.2.6, *Air Quality*.

1.3 Project Description

This section describes the proposed action and the Project alternatives that were developed to meet the purpose and need of the Project while avoiding and minimizing environmental impacts. The alternatives are Build Alternative 1 through Build Alternative 4, and the No-Build Alternative. Build Alternative 2 is the locally preferred alternative (LPA) and "the project" for CEQA purposes.

¹¹ Separated bike lanes could be painted in the future if there is a bicycle facility to connect to in East Palo Alto, or the bridge could also have separated bike lanes.

The Project (Figures 1-1 and 1-2) is located in Santa Clara and San Mateo counties on Newell Road across San Francisquito Creek. The Project proposes to replace the existing bridge crossing San Francisquito Creek at Newell Road to safely accommodate vehicle, bicycle, and pedestrian traffic and also to accommodate increased flow conveyance when other upstream creek improvements are completed.

The current flow of the creek is 5,400 cfs and the future flow of the creek is 7,500 cfs, which accounts for the improvements proposed by the Upstream of 101 project as well as for the 70-year flood. Environmental impacts for hydrology and water quality will take the future flow into account. The baseline for all other environmental resource topics is existing physical conditions.

Project improvements would extend for approximately 500 feet along Newell Road and 350 feet along Woodland Avenue. Within the limits of the Project, the bridge is a substandard two-lane bridge that provides limited vehicle, bicycle, or pedestrian access. The purpose of the Project is to construct a two-lane bridge that accommodates both vehicles and bicycles, includes access for pedestrians, and improves safety for multi-modal traffic (Section 1.2, *Purpose and Need*). The Project will also be designed to protect adjacent communities from flood hazards by accommodating larger flows. The need for the Project is demonstrated by the existing creek flow capacity limitations after other creek projects are completed and the transportation deficiencies described in Section 1.2.2.2, *Roadway Deficiencies*.

1.4 Alternatives

This following is a description of the proposed Project Alternatives. In February 2014, the City of Palo Alto prepared an Alternatives Screening Analysis Report (ASAR), which evaluated a total of eight alternatives, including alternatives to remove the existing bridge or construct a bicycle/pedestrian-only bridge, as well as various alternatives that would maintain vehicular use. The ASAR evaluated the alternatives, taking public input collected to date into account.

The ASAR recommended carrying forward two of the seven considered build alternatives (specifically Build Alternative 6: Two-lane Bridge on Existing Alignment and Build Alternative 7: Two-Lane Bridge with Partial Realignment). Taking agency and public input into account, the City of Palo Alto advanced the following four build alternatives (Figures 1-3a through 1-3d) to be carried forward through the Environmental Impact Report (EIR)/Environmental Assessment (EA) analysis:

- Build Alternative 1: A one-lane bridge with two-way traffic (under signal control) on the existing alignment of Newell Road (ASAR #5)
- Build Alternative 2 (LPA): A two-lane bridge on the existing alignment of Newell Road (ASAR #6).
- Build Alternative 3: A two-lane bridge on a partial realignment (offset) of Newell Road (ASAR #7).
- Build Alternative 4: A two-lane bridge on a full realignment (offset) of Newell Road (ASAR #8).

As required by CEQA and NEPA, the effect of not implementing the proposed Project has also been included as the No-Build (No Action) Alternative. Additional information explaining why alternatives from the ASAR were not carried forward is provided in Section 1.4.5, *Alternatives Considered but Eliminated from Further Discussion*.

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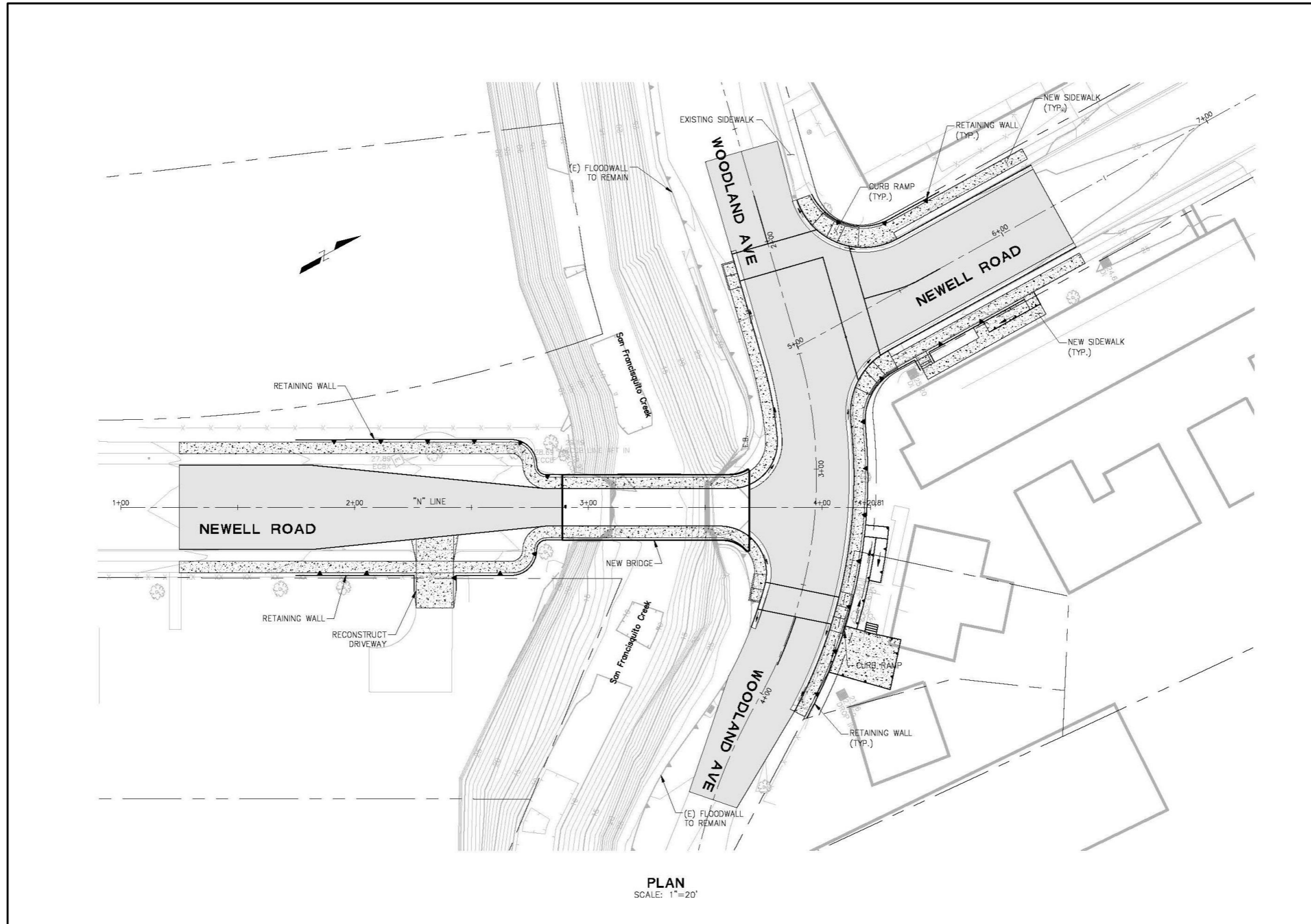


Figure 1-3a. Build Alternative 1

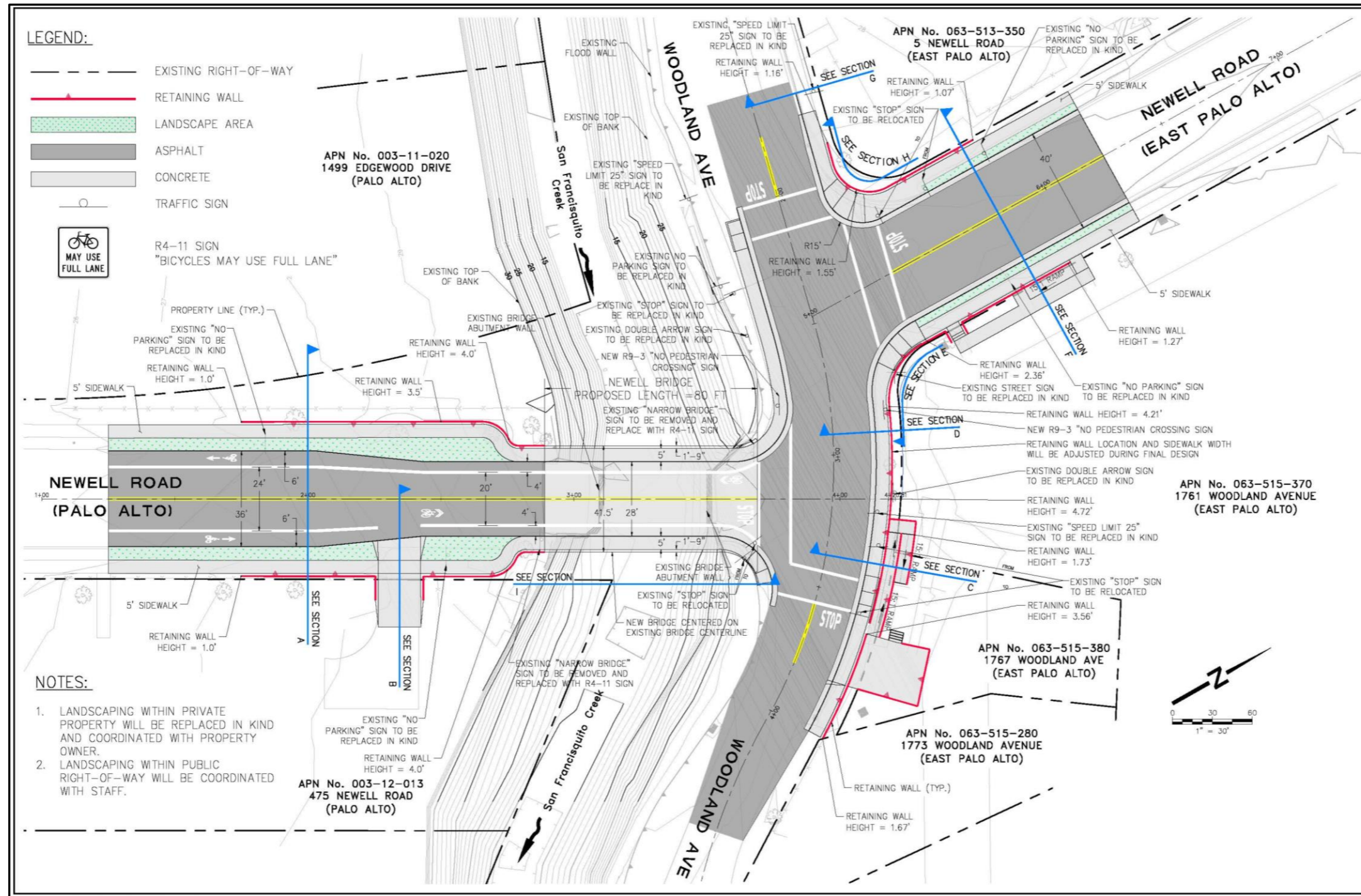


Figure 1-3b.i. Build Alternative 2 with Option 1 (LPA)

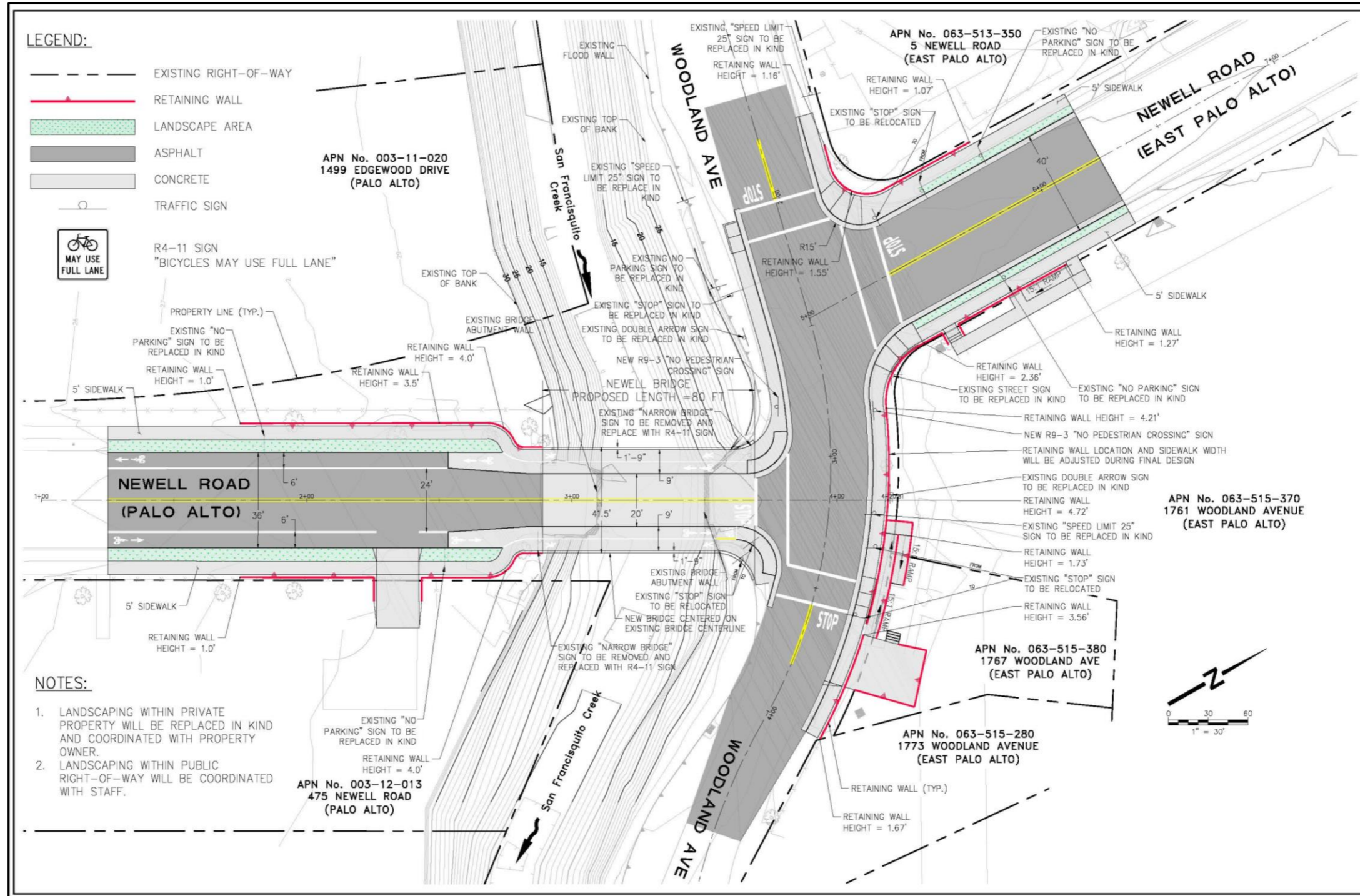


Figure 1-3b.ii. Build Alternative 2 with Option 2 (LPA)

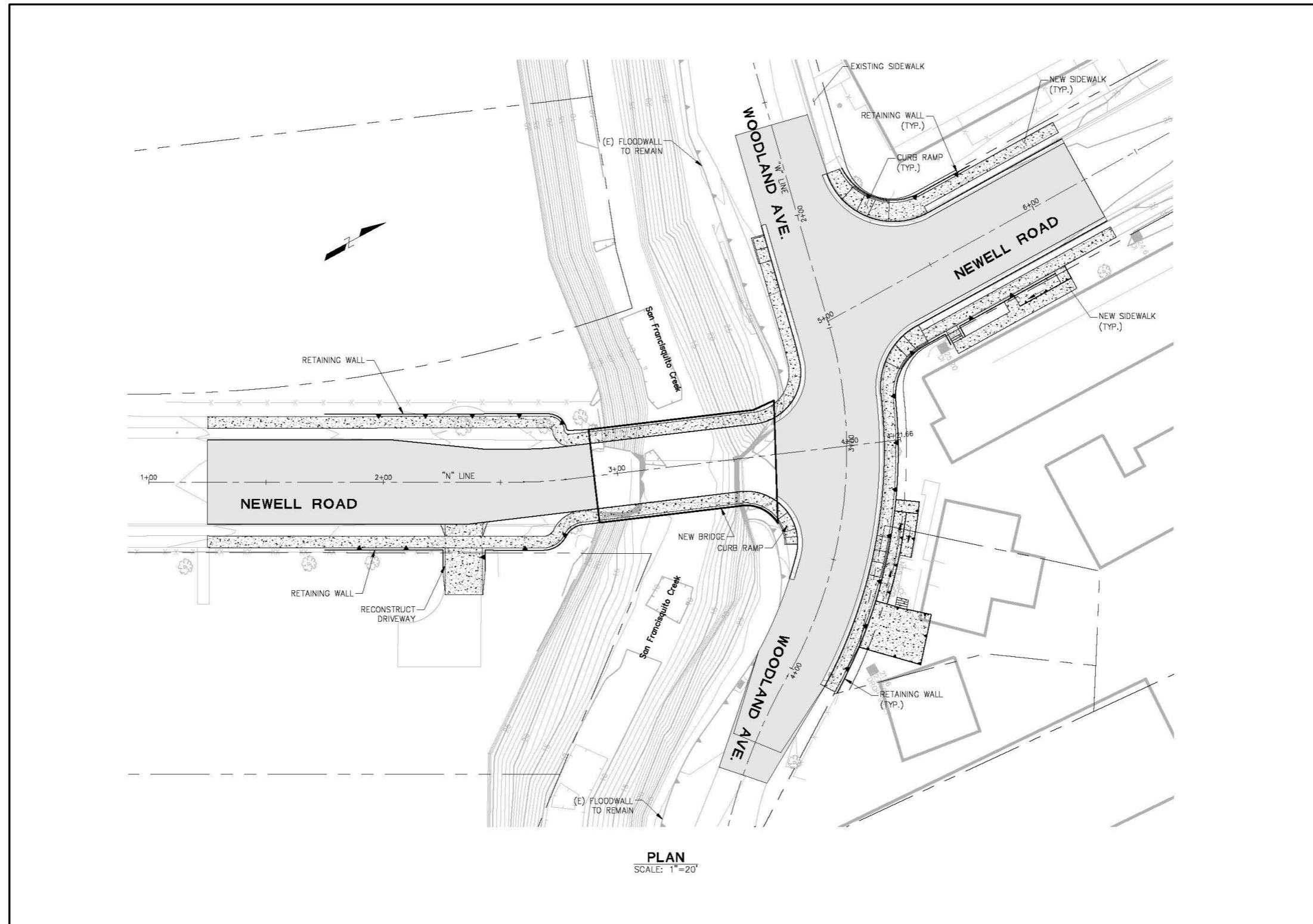


Figure 1-3c. Build Alternative 3

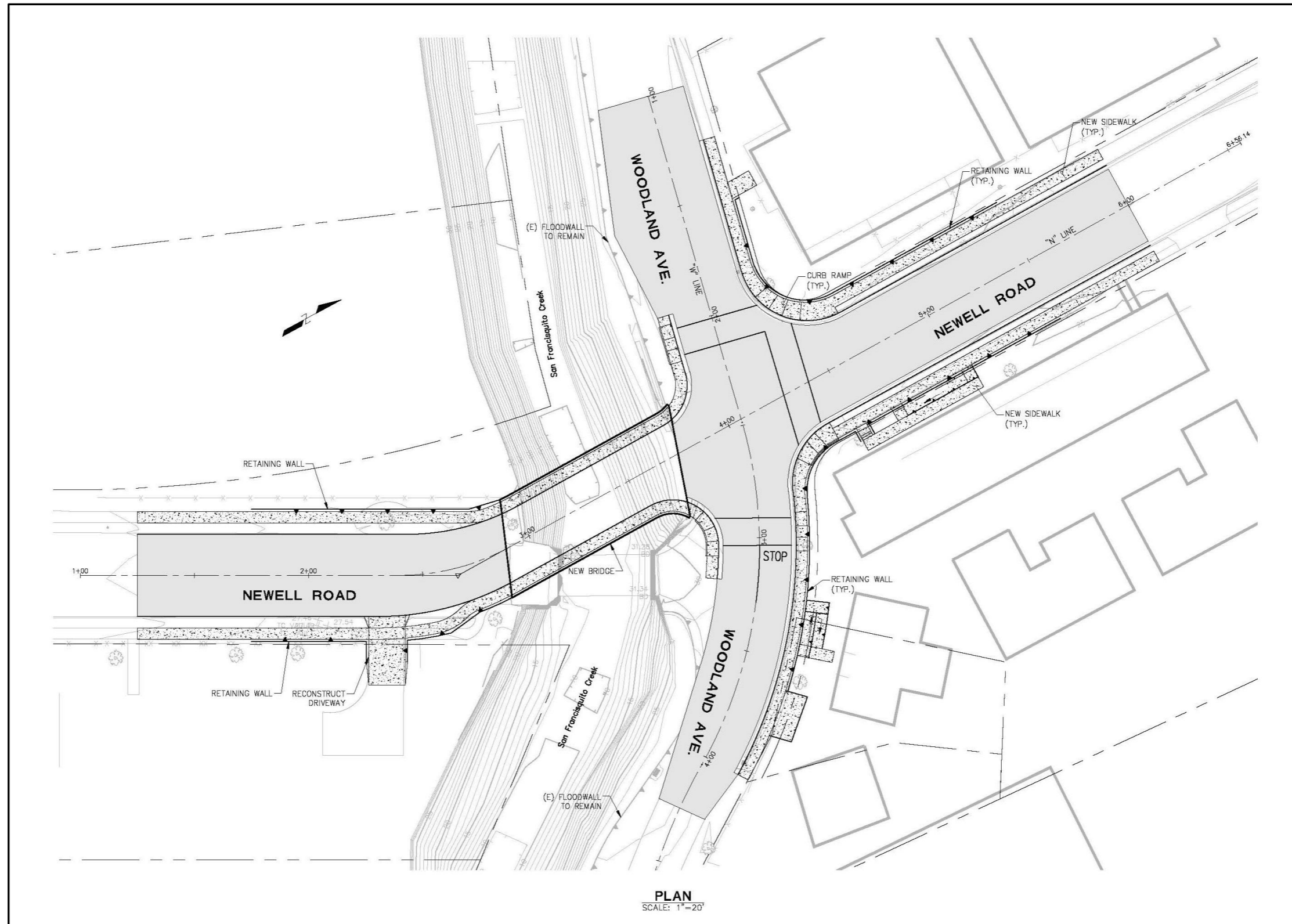


Figure 1-3d. Build Alternative 4

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1.4.1 Common Design Features of the Build Alternatives

The design features of these build alternatives could include removal of the existing bridge; construction of new approaches, either a one-lane bridge (Build Alternative 1) or a two-standard-lane bridge (Build Alternatives 2–4), and accommodation for bicycle and pedestrian travel (including sidewalk and potential road widening for sharrow or a mixed-use path); potential addition and reconfiguration of utilities including street lighting; modification to street signage or new traffic signals; addition of retaining walls; and bank stabilization measures in the portion of San Francisquito Creek disturbed by the construction. The Project would adhere to American Association of State Highway and Transportation Officials standards to the degree feasible. Through replacement of the existing bridge, the channel would be widened to increase the flow capacity to allow for the 70-year storm event (7,500 cfs) to pass.

1.4.1.1 Roadway Improvements

The following roadway improvements would be included in all build alternatives (Build Alternatives 1–4).

- The proposed roadway improvements would accommodate either a two-way single lane bridge or two 14-foot-wide shared lanes (vehicles and bicycles) bridge to meet Caltrans standards. This includes 10-foot-wide travel lanes and 4-foot-wide shoulders. The roadway profile at the new bridge would be raised approximately 1.6 feet higher than the existing bridge in order to minimize flood hazards for the adjacent communities, and would provide sufficient structure depth beneath the bridge to span the creek. Additional vertical and horizontal work would be required at each end of the bridge in order to transition from the new bridge profile and geometry to the existing roadway.
- To provide clear sight distance, there would be a red curb approach and railings installed, along with landscaping not to exceed 30-inches, along Woodland Avenue near its intersection with Newell Road.

1.4.1.2 Bicycle and Pedestrian Facilities

The following bicycle and pedestrian facility improvements would be included in all build alternatives (Build Alternatives 1–4).

- The proposed bridge would accommodate either a two-way single lane bridge or two 14-foot-wide shared lanes (vehicles and bicycles). This includes 10-foot-wide travel lanes for vehicles and 4-foot-wide shoulders for bicyclists, although bicyclists would be permitted to use the entire 14-foot-wide shared lanes. Five-foot-wide sidewalks on either side of the bridge would also be constructed to enhance pedestrian access and safety through the site. Under Build Alternatives 2, 3, and 4, this is Option 1.
- Under Build Alternatives 2, 3, and 4, Option 2 has also been developed which would include the same 10-foot-wide travel lanes for vehicles but would include two 9-foot-wide, raised, mixed-use paths on either side of the bridge for bicyclists and pedestrians. This option would allow the curb to act as a barrier between vehicles and bicyclists and pedestrians.

1.4.1.3 Utility Relocations

The following utility relocations would be included in all build alternatives (Build Alternatives 1–4).

The following utility relocations or facility adjustments are expected:

- Sanitary Sewer: No impacts are expected on the sanitary sewer on the East Palo Alto side of the bridge. On the Palo Alto side of the bridge an existing sewer manhole may need to be replaced on Newell Road to match the grade of the new roadway profile.
- Domestic Water: On the East Palo Alto side an existing water main runs along Woodland Avenue and a fire hydrant is located on the corner of Woodland and Newell Road. This line will remain in place and valve boxes within the street will be raised to grade to match the new roadway profile. The fire hydrant would be adjusted to match the new roadway profile. On the Palo Alto side a 6-inch PVC water main runs along Newell Road and terminates at a fire hydrant on the west side of the road near the existing bridge. The water main will remain but the fire hydrant assembly, lateral, and valves will be removed and replaced to accommodate the new roadway profile and sidewalk modifications.
- Overhead Electrical: No overhead electrical utilities exist on the Palo Alto side. On the East Palo Alto side overhead electrical poles and lines run along the south edge of Woodland Avenue within the Project limits. At least two utility poles are expected to require relocation to accommodate the proposed bridge and roadway improvements. Under Build Alternatives 2, 3, and 4, additional pole relocations may be required in order to accommodate clearances between the new bridge profile and the lowest power lines. This will be determined during final design based on coordination with PG&E.
- Street Lights: One street light on the Palo Alto side along Newell Road would be impacted by the proposed roadway improvements and would need to be removed and replaced to meet the new grades. On the East Palo Alto side street lights are integral with the overhead electrical poles; therefore, relocation will correspond with the overhead electrical pole impacts.
- Existing Steel Electrical Conduit(s): Any electrical conduits that would be affected by Project construction would be temporarily relocated prior to bridge removal and would be run within the sidewalk or mixed-use path on the new bridge.
- Water Quality Sampling Station: The boxes and monitoring equipment located on the upstream side of the creek are associated with a water quality sampling station. The equipment inside the station would be removed by City of Palo Alto staff prior to construction; however the contractor shall remove anything that remains and let City of Palo Alto staff know when it is available for pick-up. A new water sampling station would not be installed with the Project. However, the power and fiber that serve the water sampling station would be maintained.
- Non-Utility Relocation of Eruv: The existing eruv¹² is supported on steel poles crossing the south side of Newell Road. Construction activities may require the temporary removal and relocation of the existing poles supporting the eruv over Newell Road. Coordination with the religious group associated with its original installation would be required before a relocation process could be established.

¹² A virtual wall or border surrounding a community which allows Orthodox Jews to travel, carry, and push objects on the Sabbath.

- Survey Monuments: Two Survey Monuments on Woodland Avenue would need to be adjusted. Existing monument number 2433 located on the south west corner of the bridge would be removed. A new survey monument would be added on the bridge.
- Other Utilities: Fiber and power for camera and flow sensors would need to be provided.

1.4.1.4 Retaining Walls

The following retaining wall improvements would be included in all build alternatives (Build Alternatives 1-4).

- Retaining walls are needed adjacent to the creek near the approaches and where the proposed roadway elevation is higher than the existing conform grades. The maximum height of these retaining walls is expected to be approximately 4.75 feet at the roadway approach nearest to the bridge on the City of Palo Alto side and at the north side of Woodland Avenue under Build Alternatives 1 and 2. The profile of the retaining walls would mimic that of the roadway approaches on both sides of the bridge. Railing would be required along the top of the retaining wall in order to provide pedestrian safety in areas where the vertical differential between the top of wall and adjacent ground is 30 inches or greater.

1.4.1.5 Channel Stabilization

The following channel improvements would be included in all build alternatives (Build Alternatives 1-4).

- Bank stabilization measures, such as rock slope protection or soil nail wall, would be required in the portion of San Francisquito Creek disturbed by construction. These measures would be implemented approximately 50 feet upstream and 50 feet downstream of the bridge, for a total of 100 linear feet.
- The only channel widening that would occur under any of the build alternatives would be from removing the existing bridge abutments, which would upgrade the channel width beneath the bridge to allow 7,500 cfs conveyance.

1.4.1.6 Construction

Methodology

The construction of the Newell Road Bridge replacement structure and associated roadway approaches and features would be completed by closing Newell Road on both the Palo Alto and East Palo Alto sides, from Edgewood drive to the existing crossing.

Prior to initiation of construction, a temporary surface water diversion would be installed in San Francisquito Creek to allow for construction activities to take place along the banks of the active creek. Check dams, such as clean gravel dams or any other type of approved Caltrans standard dam, would be installed both upstream and downstream of the construction zone within 50 feet of the bridge, and culvert piping would route surface water flows through the construction zone. Best management practices (BMPs) would be employed to protect the active stream.

Bridge Demolition and Construction

The existing bridge would be removed by jackhammers, cranes, and excavators. All reasonable methods available would be used to catch the broken concrete from the bridge and to protect the channel slopes from erosion. If any concrete falls into the creek, it would be removed.

Heavy equipment such as excavators, backhoes, and other machinery would be used for the removal and excavation of the proposed abutments, and the driving or drilling of the new piles to the required depth. Once the required lengths of the piles are completed and accepted, then the temporary forms for the foundations and abutments would be constructed using timber materials, and steel reinforcement installed. Dewatering may be necessary in order to pour the foundation and abutment walls should shallow groundwater be encountered. Following these activities, the concrete abutments would be poured, cured, tested, and accepted, after which the wingwalls¹³ would be formed. After the adjoining retaining walls have been constructed, the abutments would be backfilled with earth in accepted lifts and compacted per engineered specifications with the proper structure drainage in place.

Following the construction of the abutment walls and retaining walls, construction of the new cast-in-place post-tensioned slab-type bridge structure will begin, including falsework within the creek channel, as follows.

1. The falsework would be constructed across the creek. It is anticipated that two falsework bents would be constructed on each side of the creek in the channel. Falsework materials consist of timber materials and steel beams. No heavy equipment would be required in the creek.
2. Steel reinforcement would be installed for the deck, timber forms would be installed, and then concrete would be poured into the forms for the deck.
3. Once the concrete deck is cured, timber forms and steel reinforcement would be installed, and concrete would be poured into the forms for the pedestrian safety barriers.
4. The barriers would then be cured, inspected, and accepted, and guard railings would be installed in concrete for permanent attachment. Once the proposed bridge is constructed, the Caltrans standard approach slabs would be formed and poured. Once the approach slabs are cured and accepted, improvements to the roadway approaches and shoulder would take place.

Anticipated equipment that would be used for construction of the Newell Road Bridge includes the following.

- Front end loaders
- Backhoes
- Graders
- Dump trucks
- Concrete trucks
- Excavators
- Asphalt compactor (roller)

¹³ The wing walls are adjacent to the abutments and act as retaining walls.

- Crane
- Pile drivers (vibratory)
- Fork lifts
- Trailer-mounted portable generators
- Pick-up trucks
- Light hand tools
- Pumps (for dewatering)

No heavy equipment would be used in the creek. Minor construction activities that could occur within the creek include installation of the check dams, such as clean gravel dams or any other type of approved Caltrans standard dam, and implementation of BMPs.

Construction Staging Areas and Temporary Traffic Detour and Access

Construction staging/laydown is anticipated to occur on Newell Road between the creek, Edgewood Drive, and Woodland Avenue within the roadway ROW. The final location of staging/laydown areas would be determined during the design phase and will require additional review if there are impacts that are not described in this EIR/EA.

Construction of the Project would require closure of the existing Newell Road Bridge crossing for all build alternatives. Closing the existing bridge crossing would require detouring traffic to other existing nearby crossings (University Avenue and West Bayshore Road).

Newell Road on the Palo Alto side would be closed from Edgewood Drive to the existing bridge crossing but would allow access to the southeast resident's driveway. On the East Palo Alto side, Woodland Avenue would have limited access during construction. Complete closure of Woodland Avenue would have impacts on access and parking for multi-family residential units. The contractor would use one-lane traffic detours to the extent possible to assure passage along Woodland Avenue during construction. The construction zone would be established so that limited parking can be made available in the area during off hours.

1.4.1.7 Standardized Measures

Each build alternative includes the following standardized measures (SM) that are included as part of the Project description. Standardized measures (such as BMPs) are those measures that are generally applied to most or all Caltrans projects. These standardized or pre-existing measures allow little discretion regarding their implementation and are not specific to the circumstances of a particular project. Where these SMs address potential impacts of the Project, additional measures to avoid or mitigate impacts will not be required. More information on each measure can be found in the applicable sections of Chapter 2, *Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures*.

- SM-UT-1: Bilingual notification of utility disruptions will be provided to the local residents and businesses.
- SM-TR-1: A Traffic Management Plan will be prepared for the Project.

- SM-CUL-1: Standard provisions dealing with the discovery of unanticipated cultural materials will be included in the Project plans and specifications.
- SM-CUL-2: Standard provisions dealing with the discovery of human remains will be included in the Project plans and specifications.
- SM-WQ-1: The Project will implement the National Pollutant Discharge Elimination System Permit and Construction General Permit Water Quality Measures.
- SM-WQ-2: The Project will prepare and implement a storm water pollution prevention plan.
- SM-GEO-1: Bridge design and construction will adhere to current Caltrans Seismic Design Criteria.
- SM-AQ-1: The construction contractor must comply with Caltrans Standard Specifications in Section 14.
- SM-AQ-2: The construction contractor must implement dust control BMPs.
- SM-NOI-1: The construction contractor must comply with Caltrans Standard Specifications Section 14-8.02, Noise Control.
- SM-NOI-2: The construction contractor must have sound-control devices that are no less effective than those provided on the original equipment.
- SM-NOI-3: The Project proponent and/or their construction contractor will review and ensure that construction activities are conducted in accordance with local noise standards from the cities of Palo Alto and East Palo Alto.

1.4.2 Unique Design Features of the Build Alternatives

Utility improvements, channel improvements, and construction staging areas would be identical for each build alternative. Thus, this section focuses on the build alternative alignments, bicycle and pedestrian facilities, and retaining walls only. The primary differences between Build Alternatives 1 through 4 are the alignments.

1.4.2.1 Build Alternative 1

The following roadway improvements are unique to Build Alternative 1 and can be seen in Figure 1-3a.

Build Alternative 1 would remove the existing bridge structure and construct a new one-lane bridge with bi-directional traffic on the existing alignment. Only one direction of travel for vehicles and bicycles would be provided on the bridge at a time.

To eliminate all potential conflicting vehicle movements, Build Alternative 1 would require complete signalization of the intersections of Newell Road with Woodland Avenue and Edgewood Avenue in order to control the direction of travel on the bridge and adjacent roadways. One additional signal would be provided for the sole residential driveway on the Palo Alto side of the bridge to indicate the direction of traffic on Newell Road at all times.

Build Alternative 1 would provide bicycle access across the bridge via shared vehicle/bicycle lanes (sharrows) (10-foot-wide travel lanes for vehicles and 4-foot-wide shoulders for bicyclists), but bicycles would only be allowed to travel in the same direction as the vehicle traffic. Control of

bicyclist movement would rely on the ability/willingness of bicyclists to obey the traffic signals at each intersection. Five-foot-wide sidewalks on either side of the bridge would also be constructed to enhance pedestrian access and safety through the site.

The new bridge would be approximately 1.6 feet higher than the existing roadway profile at the bridge to improve flood hazard protection for the adjacent communities. Retaining walls (approximately 120 linear feet by 12 inches wide, varying between 1 foot and 4 feet in height) would be required on both sides of the roadway to limit the ROW needs for the Project.

On the East Palo Alto side of the bridge, Woodland Avenue would also be raised to meet the higher bridge profile and would require approximately 300 feet to conform to the existing roadway to the east and west of the bridge. Newell Road would also require approximately 125 feet of improvements. Retaining walls (approximately 290 linear feet by 12 inches wide, varying between 1 foot and 4.75 feet in height) would be required along the north side of Woodland Avenue and both sides of Newell Road to limit the ROW needs for the Project. The south side of Woodland Avenue would use the existing flood wall to support the raised roadway.

1.4.2.2 Build Alternative 2 (LPA)

The following are roadway improvements unique to Build Alternative 2 and can be seen in Figures 1-3b.i and 1-3b.ii.

Build Alternative 2 would remove the existing bridge and construct a new two-lane bridge on the existing bridge alignment. Two options have been developed to provide bicycle and pedestrian access across the bridge. Option 1 includes bicycle access on both the northbound and southbound lanes of Newell Road via shared vehicle/bicycle lanes (sharrows) (10-foot-wide travel lanes for vehicles and 4-foot-wide shoulders for bicyclists). Five-foot-wide sidewalks would also be provided. Option 2 would include the same 10-foot-wide travel lanes for vehicles but would include two 9-foot-wide, raised, mixed-use paths on either side of the bridge for bicyclists and pedestrians. This option would allow the curb to act as a barrier between vehicles and bicyclists and pedestrians.

Build Alternative 2 does not realign the existing north and south intersections with Woodland Avenue, but clear sight distance would be provided through a combination of red-curb striping, providing either no landscaping or landscaping that does not exceed 30-inches in height, and bridge barriers would be either open spaced concrete walls or railings.

The new bridge would be approximately 1.6 feet higher than the existing roadway profile at the bridge to improve flood hazard protection for the adjacent communities. Retaining walls (approximately 120 linear feet by 12 inches wide, varying between 1 foot and 4 feet in height) would be required on both sides of the roadway to limit the ROW needs for the Project.

On the East Palo Alto side of the bridge, Woodland Avenue would be raised to meet the new bridge profile and would require approximately 300 feet to conform to the existing roadway on the east and west sides of the bridge. Newell Road would also require approximately 125 feet of improvements. Retaining walls (approximately 290 linear feet by 12 inches wide, varying between 1 foot and 4.75 feet in height) would be required along the north side of Woodland Avenue and both sides of Newell Road to limit the ROW needs for the Project. The south side of Woodland Avenue would use the existing flood wall to support the raised roadway.

1.4.2.3 Build Alternative 3

The following are roadway improvements unique to Build Alternative 3 and can be seen in Figure 1-3c.

Build Alternative 3 is identical to Build Alternative 2, except that Newell Road south of Woodland Avenue would be partially realigned (approximately 30 feet) so that the degree of offset between the existing north and south intersections with Woodland Avenue would be reduced compared to the existing condition.

Build Alternative 3 provides an intersection where the centerline-to-centerline connection on Newell Road from Edgewood Road to Woodland Avenue is partially aligned, which would improve sight lines for vehicles, pedestrians, and bicyclists entering the intersection.

The new bridge would be approximately 1.6 feet higher than the existing roadway profile at the bridge to improve flood hazard protection for the adjacent communities. Similar to previous alternatives, the entire Newell Road roadway would be raised 3.5 feet on the Palo Alto side in order to meet the higher profile of the new bridge. Retaining walls (approximately 120 linear feet long by 12 inches wide varying between 1 foot and 4 feet in height) would be constructed on both sides of the roadway to limit the ROW needs for the Project.

On the East Palo Alto side of the bridge, Woodland Avenue would be raised to meet the new bridge profile and would require approximately 275 feet to conform to the existing roadway on Woodland Ave on the east and west sides of the bridge. Newell Road would also require approximately 125 feet of improvements on Newell Road on the East Palo Alto side to conform to the existing sidewalks, driveways, curbs, and gutters. Retaining walls (approximately 290 linear feet by 12 inches wide, varying between 1 foot and 4.5 feet in height) would be required along the north side of Woodland Avenue and both sides of Newell Road to limit the ROW needs for the Project. The south side of Woodland Avenue would use the existing flood wall to support the raised roadway.

1.4.2.4 Build Alternative 4

The following are roadway improvements unique to Build Alternative 4 and can be seen in Figure 1-3d.

Build Alternative 4 is similar to Build Alternatives 2 and 3, except that Newell Road south of Woodland Avenue would be fully realigned (approximately 90 feet) to eliminate the offset between the existing north and south intersections with Woodland Avenue.

This build alternative would provide a standard four-way intersection at Newell Road and Woodland Avenue, improving sight lines for vehicles, pedestrians, and bicyclists at the intersection.

The new bridge would be approximately 1.6 feet higher than the existing roadway profile at the bridge to improve flood hazard protection for the adjacent communities. Similar to previous build alternatives, the entire Newell Road roadway would be raised 4 feet on the Palo Alto side in order to meet the higher profile of the new bridge. Retaining walls (approximately 110 linear feet long by 12 inches wide, varying between 1 foot and 4.5 feet in height) would be constructed on both sides of the roadway to limit the ROW needs for the Project.

On the East Palo Alto side of the bridge, Woodland Avenue would be raised to meet the new bridge profile and would require approximately 325 feet to conform to the existing roadway on the east

and west sides of the bridge. Newell Road would also require approximately 125 feet of improvements, including reconstruction of sidewalks and readjustments of an existing driveway and walkways. Retaining walls (approximately a total of 390 linear feet long by 12 inches wide, varying between 1 foot and 4.5 feet in height) would be required on the north side of Woodland Avenue and both sides of Newell Road to limit the ROW needs for the Project.

1.4.3 No-Build (No-Action) Alternative

Under the No-Build (No-Action) Alternative, no changes would be made to the existing bridge and approaches. No construction activities would occur, and there would be no change in the operations of the existing facilities. Other planned and approved land use development and transportation improvements along local routes may be implemented by local agencies or under other projects. Under the No-Build Alternative, the flooding issue along the creek would also not be addressed. The existing bridge flow that can pass under is 6,600 cfs, which is not sufficient to handle the natural creek flow of 7,500 cfs. If upstream improvements are completed, flows exceeding 6,600 cfs would not be able to pass under the existing bridge, resulting in flooding upstream of the Newell Road Bridge.

Under NEPA, the No-Build (No-Action) Alternative is considered the environmental baseline against which potential environmental effects of the build alternatives are evaluated. For CEQA, the baseline for environmental impact analysis consists of the existing conditions at the time of the Notice of Preparation. For the purposes of the hydrology and water quality, the current baseline flow of the creek (5,400 cfs) and the future baseline flow of the creek (7,500 cfs), which accounts for the improvements proposed by the separate SFCJPA Project, will be taken into account. The baseline for all other environmental resource topics is existing physical conditions.

1.4.4 Comparison of Alternatives

The criteria developed to evaluate the build alternatives are the points outlined in the purpose statement. These criteria were developed in coordination with Caltrans, the City of Palo Alto, the City of East Palo Alto, and through the public participation process. They are based on what each of these entities hopes the Project will achieve. The build alternatives and the No-Build Alternative have been evaluated based on how well they accomplished the criteria outlined in the purpose statement. A comparison of the build alternatives is provided in Table 1-1. Refer to Table ES-1 in the Summary and the various sections of Chapters 2 and 3 for a comparison of environmental impacts of the build alternatives. Refer to Section 3.4, *Environmentally Superior Alternative*, for a description of the environmentally superior alternative as required by CEQA.

Table 1-1. Comparison of Alternatives

Potential Impact	Build Alternative 1	Build Alternative 2 (LPA)	Build Alternative 3	Build Alternative 4	No-Build (No-Action) Alternative
Traffic Signal	Y	N	N	N	N
Pedestrian and Bicycle Access	Y	Y	Y	Y	N
Right-of-Way Impacts	N	N	N	N	N
Displacements	N	N	N	N	N
Flood Control	Y	Y	Y	Y	N
Landscape Changes	Y	Y	Y	Y	N
Utility Relocation	Y	Y	Y	Y	N

After comparing and weighing the benefits and impacts of all feasible alternatives, the City of Palo Alto as the Lead Agency under CEQA and East Palo Alto have selected Build Alternative 2 as the LPA (or “the project” for CEQA purposes). For the purposes of NEPA, Build Alternative 2 has also been selected as the preferred alternative, described further below.

1.4.5 Identification of a Preferred Alternative

Build Alternative 2, with either design option for pedestrian and bicycle access, has been selected as the preferred alternative by the City of Palo Alto and Caltrans. The City of East Palo Alto, as a responsible agency for the Project, has also selected Build Alternative 2 as the preferred alternative. Build Alternative 2 was selected as the preferred alternative because it best meets the purpose and need of the Project, minimizes environmental impacts, and addresses public comments and concerns about the Project.

Build Alternative 2 maintain connections for vehicular, bicycle, and pedestrian transportation across the creek while avoiding diversion of a substantial number of vehicles to adjacent streets; a substantial increase in the number of vehicles using Newell Road; and an increase in average vehicle speed on Newell Road. It improves pedestrian and bicycle access across San Francisquito Creek at Newell Road through implementation of either design option. It improves safety for all modes of transportation across the creek through standard lane widths and pedestrian and bicycle infrastructure. Finally, it accommodates increased flows related to the creek to address anticipated flooding risk and upgrades the channel width beneath the bridge to allow for the 70-year storm event (7,500 cfs) to pass.

Table ES-1 in the *Summary* and the various sections of Chapters 2 and 3 provide a comparison of the environmental impacts of the build alternatives. Build Alternative 2 would generally result in fewer environmental impacts when compared to the other build alternatives because the existing alignment of the bridge would not change. Build Alternative 2 would not result in the higher delay at Newell Road/Woodland Avenue (North Leg) that Build Alternative 1 would cause. Build Alternative 2 would also require one less Temporary Construction Easement than Build Alternatives 3 and 4. Build Alternative 2 would result in a moderate visual impact, while Build Alternative 4 would result in a moderate-high visual impact. Build Alternatives 3 and 4 could affect sensitive paleontological resources during construction, while Build Alternative 2 would not. The bridge alignment under Build Alternative 4 would result in a slightly higher noise increase at the nearest receivers of up to 2

decibels (dB) relative to existing conditions, and up to 1 dB under future no-Project conditions. Therefore, Build Alternative 2 would result in fewer environmental impacts than the other build alternatives.

Lastly, Build Alternative 2 addresses public comments and concerns received during the scoping process. Many residents expressed a desire for the bridge to be replaced in-kind, or that the bridge be widened to the minimum extent possible while still addressing the flood control issue. The bridge cannot be replaced in-kind because it would not meet American Association of State Highway and Transportation Officials, Caltrans, or City bridge design or safety standards, but Build Alternative 2 does address this concern because the bridge would be kept on the same alignment, minimizing the degree to which the bridge has changed from existing conditions.

Therefore, for all the reasons described above, Build Alternative 2, with either design option, is the preferred alternative.

1.4.6 Alternatives Considered but Eliminated from Further Discussion Prior to Draft Environmental Impact Report/Environmental Assessment

As described in Section 1.4, *Alternatives*, an ASAR was conducted that considered feasible build alternatives. A total of eight conceptual build alternatives were considered; two were recommended for carrying forward to the EIR/EA, and four were ultimately determined to be feasible.

Build alternatives proposed in the ASAR that were considered but eliminated from further discussion include the following:

- ASAR Alternative 2: Remove Existing Bridge (Without Replacement)
- ASAR Alternative 3: Bicycle-Pedestrian (only) Bridge
- ASAR Alternative 4: Bicycle-Pedestrian Bridge with Emergency Access

These build alternatives were dropped from further consideration because they did not meet the criteria identified in the purpose statement and would not satisfy the Project's basic purpose and needs, in particular the objective of maintaining vehicular transportation across San Francisquito Creek at Newell Road. In addition, it was determined in the ASAR that ASAR Alternatives 2, 3, and 4 would have had a negative effect on Level of Service and would have increased the Traffic Infusion on Residential Environment (TIRE) index¹⁴ on residential streets by more than 0.1 (any projected change of 0.1 or greater would be noticeable to residents). These three alternatives also performed poorly when evaluated against accommodating multi-modal traffic, including vehicles, bicycles, and pedestrians. For these reasons, ASAR Alternatives 2, 3, and 4 were eliminated from further consideration.

Transportation Demand Management, Transportation System Management, and Mass Transit alternatives, which assume retention of the existing bridge, were considered but eliminated from further discussion because the proposed build alternatives already include measures to improve

¹⁴ TIRE is the measure of traffic impact on residents along a roadway. TIRE represents the effect of traffic on the safety and comfort of human activities, such as walking, bicycling, and playing on or near a roadway, and on the freedom to maneuver personal autos in and out of residential driveways.

accessibility for other modes of travel (bicycle and pedestrian facilities). Furthermore, implementation of other measures typically included as part of Transportation Demand Management and Transportation System Management alternatives, as well as a stand-alone Mass Transit alternative, would not meet the basic Project objectives (purpose and need).¹⁵

Lastly, a previous version of the Project included downstream channel widening. This downstream channel widening was removed from the Project through coordination with SFCJPA, new drainage basin data, and changes in hydrology requirements for flood control projects. As SFCJPA reduced the flow requirements for the creek, the downstream channel widening was no longer required, and it was subsequently removed from the Project.

1.5 Permits and Approvals Needed

The permits, reviews, and approvals in Table 1-2 would be required for Project construction.

Table 1-2. Permits and Approvals Needed

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service (USFWS)	Concurrence letter documenting informal consultation for threatened and endangered species under Section 7 of the Federal Endangered Species Act.	Caltrans sent a letter to USFWS on January 22, 2018, to complete Section 7 informal consultation requirements. Concurrence from USFWS was received on March 20, 2018.
National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service)	Concurrence letter documenting informal consultation for threatened and endangered species under Section 7 of the Federal Endangered Species Act.	Caltrans sent a letter to the NOAA Fisheries Service on January 22, 2018, to complete Section 7 informal consultation. Concurrence from the NOAA Fisheries Service was received on March 29, 2018.
U.S. Army Corps of Engineers, San Francisco District	Concurrence of wetland/waters of the U.S. delineation.	The City of Palo Alto will consult with the U.S. Army Corps of Engineers to obtain a Wetland/Waters of the U.S. Determination before the Final EIR/EA is approved.
	Section 404 Nationwide Permit.	The City of Palo Alto will begin consultation with the U.S. Army Corps

¹⁵ Transportation Demand Management alternatives focus on regional strategies for reducing the number of trips and miles traveled as well as increasing vehicle occupancy. As stated, the Project build alternatives already include improved bicycle and pedestrian facilities, expanding traveler choice in terms of travel method and routes. Transportation System Management alternatives include actions that increase the efficiency of existing facilities and the number of vehicle trips a facility can accommodate and include strategies such as auxiliary lanes, turning lanes, reversible lanes, and traffic signal coordination, as well as encouraging automobile, public, and private transit as elements of a unified transport system. Similar to Transportation Demand Management, the Project build alternatives already include Transportation System Management improvements like auxiliary lanes, turning lanes, and signal coordination. Other measures such as reversible lanes and/or expanded transit options would either be infeasible (in part due to limited ROW and potential for increased environmental impacts) or would not meet the basic Project objectives (purpose and need).

Agency	Permit/Approval	Status
		of Engineers to obtain this permit before the Final EIR/EA is approved.
U.S Environmental Protection Agency	Section 402 Clean Water Act controls discharges of Municipal Separate Storm Sewer Systems.	The City of Palo Alto will begin consultation to obtain this permit before the Final EIR/EA is approved.
Federal Highway Administration	Project-level transportation conformity determination.	Caltrans requested that the Federal Highway Administration issue a Project-level transportation conformity determination for the Project. The conformity determination was issued on February 24, 2020.
Federal Emergency Management Agency	Variance due to lack of 2 feet of freeboard ¹ on 70-year bridge design.	The City of Palo Alto will begin consultation with the Federal Emergency Management Agency before the Final EIR/EA is approved.
California Department of Fish and Wildlife	1602 Notification of Lake or Streambed Alteration.	The City of Palo Alto will begin consultation with the California Department of Fish and Wildlife before the Final EIR/EA is approved.
State Historic Preservation Officer	Concurrence with the project Historic Property Survey Report and Section 106 requirement.	Caltrans sent a letter to the State Historic Preservation Officer on October 27, 2017, to complete Section 106 requirements. Concurrence from the State Historic Preservation Officer was received on November 30, 2017.
San Francisco Bay Regional Water Quality Control Board	Report of discharge.	If necessary, the City of Palo Alto will begin consultation with the San Francisco Bay Regional Water Quality Control Board before the Final EIR/EA is approved.
	San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (Order No. R2-2015-0049-DWQ).	The City of Palo Alto will begin consultation with the San Francisco Bay Regional Water Quality Control Board before the Final EIR/EA is approved, during construction and post-construction.
State Water Resources Control Board	National Pollutant Discharge Elimination System Permit for Stormwater Discharges Associated with Construction Activities (Construction General Permit).	The City of Palo Alto will obtain coverage under the General Permit by preparation and submittal of a Notice of Intent before start of construction.
	Section 402 Clean Water Act National Pollutant Discharge Elimination System Permit for Stormwater Discharges Associated with Construction Activities.	The City of Palo Alto will begin consultation for permit before the Final EIR/EA is approved.

Agency	Permit/Approval	Status
Santa Clara Valley Water District	District Well Ordinance Permit, Encroachment Permits, and Water Resources Protection Ordinance Permit.	The City of Palo Alto will begin consultation for these permits before the Final EIR/EA is approved.
San Mateo County Flood Control District	Encroachment Permit.	The City of Palo Alto will begin consultation for this permit before the Final EIR/EA is approved.
California Department of Transportation	Design Exception to approve 10-foot travel lanes.	The City of Palo Alto will obtain this exception during final design.
City of Palo Alto	Architectural Review.	The City of Palo Alto will provide architectural review of the final design of the bridge.
	Construction Contract.	The City of Palo Alto will approve the construction contract.
City of East Palo Alto	Tree Removal Permit.	If required, the City of Palo Alto will apply for and obtain the approvals prior to construction and vegetation clearing.
	Encroachment Permits.	The City of Palo Alto will obtain this permit during final design.

¹ Freeboard is a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. Freeboard tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

1.6 Right-of-Way Requirements

One permanent easement would be required as a result of the Project in the City of East Palo Alto, as shown in Table 1-3. All other permanent improvements proposed are within available Palo Alto and East Palo Alto ROW.

Temporary construction easements in Table 1-3 are anticipated from all parcels within and adjacent to the proposed Project improvements for all build alternatives unless otherwise stated. Two temporary construction easements are expected on the Palo Alto side and five on the East Palo Alto side.

Table 1-3. Permanent and Temporary Construction Easements

Assessor's Parcel Number	Address	Owner	Existing Use/Proposed Work	Type of Acquisition
003-12-013	475 Newell Road (Palo Alto)	Private property	Home/driveway would be reconstructed to match new grade, landscaping would be redone, and construction of retaining wall would occur ¹	Permit to enter and construct

Assessor's Parcel Number	Address	Owner	Existing Use/Proposed Work	Type of Acquisition
003-11-020 ²	1499 Edgewood Dr. (Palo Alto)	Private property	Home/backyard would be reconstructed to match new grade, landscaping would be redone, and construction of retaining wall would occur ¹	Permit to enter and construct for Build Alternatives 3 and 4 only
063-513-350	5 Newell Road (East Palo Alto)	Woodland Park Property Owner	Apartments/walkways would be reconstructed to match new grade, landscaping would be redone, and construction of retaining wall would occur ¹	Permit to enter and construct
063-513-440	15 Newell Road (East Palo Alto)	Woodland Park Property Owner	Apartments/walkways would be reconstructed to match new grade, landscaping would be redone, and construction of retaining wall would occur for Build Alternative 4 only ¹	Permit to enter and construct
063-514-130 063-515-370	1761 Woodland Avenue (East Palo Alto)	Woodlands Newell Associates	Ongoing maintenance of the bridge; apartments/walkways would be reconstructed to match new grade, landscaping would be redone, and construction of retaining wall would occur ¹	Permanent easement and permit to enter and construct
063-515-380	1767 Woodland Avenue (East Palo Alto)	Woodlands Newell Associates	Apartments/walkways would be reconstructed to match new grade, landscaping would be redone, and construction of retaining wall would occur ¹	Permit to enter and construct
063-515-280	1773 Woodland Avenue (East Palo Alto)	Woodland Park Property Owner	Apartments/walkways would be reconstructed to match new grade	Permit to enter and construct

Source: Nolte Vertical Five 2017.

¹ The retaining walls would be constructed within City of Palo Alto or East Palo Alto ROW, but access to the parcels are needed in order to construct the retaining walls.

² Not all of the side yard is part of this parcel. There is an encroachment permit along the side yard of this parcel, which can be revoked.

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Chapter 2

Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter explains the impacts that the Project would have on the environment. It describes the regulatory setting, existing environment that could be affected by the Project, potential impacts (environmental consequences), and proposed avoidance, minimization, and/or mitigation measures. Potential impacts are broken up into construction impacts, which are temporary impacts during construction, and operational impacts, which occur permanently during project operation. The environmental resource discussions presented in this chapter are based on the technical studies cited at the beginning of each discussion and listed at the end of this document. An evaluation of the Project per the CEQA checklist criteria is provided in Chapter 3, *California Environmental Quality Act Evaluation*. Avoidance, minimization, and/or mitigation measures for each of the environmental resource areas are discussed in the following sections. Standardized measures are coded as SM, avoidance and minimization measures are coded as AMM, and mitigation measures are coded as MM.

As part of the scoping and environmental analysis carried out for the Project, the following environmental issues were considered but no adverse impacts were identified. As a result, there is no further discussion about these issues in this document.

- Coastal Zone: The study area is not within a coastal zone; therefore, no impact on this resource is anticipated (Data Basin 2017). In addition, the study area is not within San Francisco Bay Conservation and Development Commission jurisdiction.
- Wild and Scenic Rivers: There are no wild and scenic rivers within the study area, as defined by the National Wild and Scenic Rivers System. The closest wild and scenic rivers are Big Sur River in Big Sur and the American River in Sacramento; therefore, no impact on this resource is anticipated (National Wild and Scenic Rivers System 2017).
- Parks and Recreational Facilities: There are no parks, recreational facilities, or Section 4(f) resources of this type near the Project. The closest parks and recreational facilities are 0.35 miles southwest in Palo Alto (Eleanor Pardee Park) and 0.35 miles northeast in East Palo Alto, (University Square Park); therefore, no impacts are anticipated. Although these parks are within the 0.5-mile radius normally analyzed for Section 4(f), given the project type (bridge replacement) in a heavily built-up urban location, the radius within which 4(f) properties were analyzed was reduced to 0.25 miles.
- Growth: The California Department of Transportation (Caltrans) and the City of Palo Alto conducted the first-cut screening in accordance with the Caltrans Standard Environmental Reference (California Department of Transportation 2016) Guidance for Preparers of Growth-Related, Indirect Impact Analyses to determine whether there would be growth impacts due to implementation of the Project. The purpose of the Project is to maintain connections for vehicular, bicycle, and pedestrian transportation, improve bicycle and pedestrian access, improve safety for all modes of transportation, and design a bridge that accommodates increased flows related to San Francisquito Creek improvements. These improvements could

change the accessibility of the area by making this intersection a more attractive travel option (e.g., safer), which could encourage additional pedestrians, bicyclists, and vehicles to use the bridge. However, the project type (bridge reconstruction) would only widen the existing two travel lanes and shoulders to standard widths; it would not increase capacity in an already heavily built up area. Capacity would not be increased because the number of lanes provided on the bridge would not change; Newell Road Bridge would remain a two-lane bridge under all build alternatives. Therefore, no growth-related impacts are anticipated.

- Farmlands/Timberlands: There are no farmlands or timberlands within the study area; therefore, no impacts on these resources are anticipated.
- Mineral Resources: There are no mineral resources within the study area; therefore, no impacts on these resources are anticipated.

2.1 Human Environment

2.1.1 Land Use

The information in this section is from the Community Impact Assessment (September 2017).

2.1.1.1 Existing and Future Land Use

The Project is located in Santa Clara and San Mateo Counties, in the cities of Palo Alto and East Palo Alto. The Project is located southwest of U.S. Highway 101 (US 101) and east of State Route 82 (El Camino Real). The Project site is located on Newell Road between Edgewood Drive in Palo Alto and Woodland Avenue in East Palo Alto. San Francisquito Creek, over which the Project crosses, delineates the city limits between the City of Palo Alto and the City of East Palo Alto, as well as the boundary between Santa Clara and San Mateo Counties. The bridge provides vehicular access across San Francisquito Creek but does not have sidewalks or marked bicycle paths. There are sidewalks on both sides of Newell Road in Palo Alto and there is a sidewalk on the opposite side of Woodland Avenue in East Palo Alto. There is a marked bicycle lane on Newell Road in Palo Alto, but no marked bicycle lane on either Woodland Avenue or Newell Road in East Palo Alto. In East Palo Alto, Newell Road connects to West Bayshore Road which provides access to University Avenue and US 101. In Palo Alto, Newell Road connects to main thoroughfares, including Channing Avenue and Embarcadero Road.

An initial site visit was conducted on May 23, 2012, with follow up site visits conducted in August 2015 and April 2017. Reconnaissance surveys were conducted to determine locations of community facilities and resources, public utilities, and land-use characteristics within and surrounding the Project area. Overhead and underground electrical systems were visually located. Development adjacent to the Project site includes single-family residential homes on the City of Palo Alto (west) side of the existing bridge, and multi-family residential development on the City of East Palo Alto (east) side of the existing bridge. Public parking is available on the northern side of the bridge along both sides of Woodland Avenue.

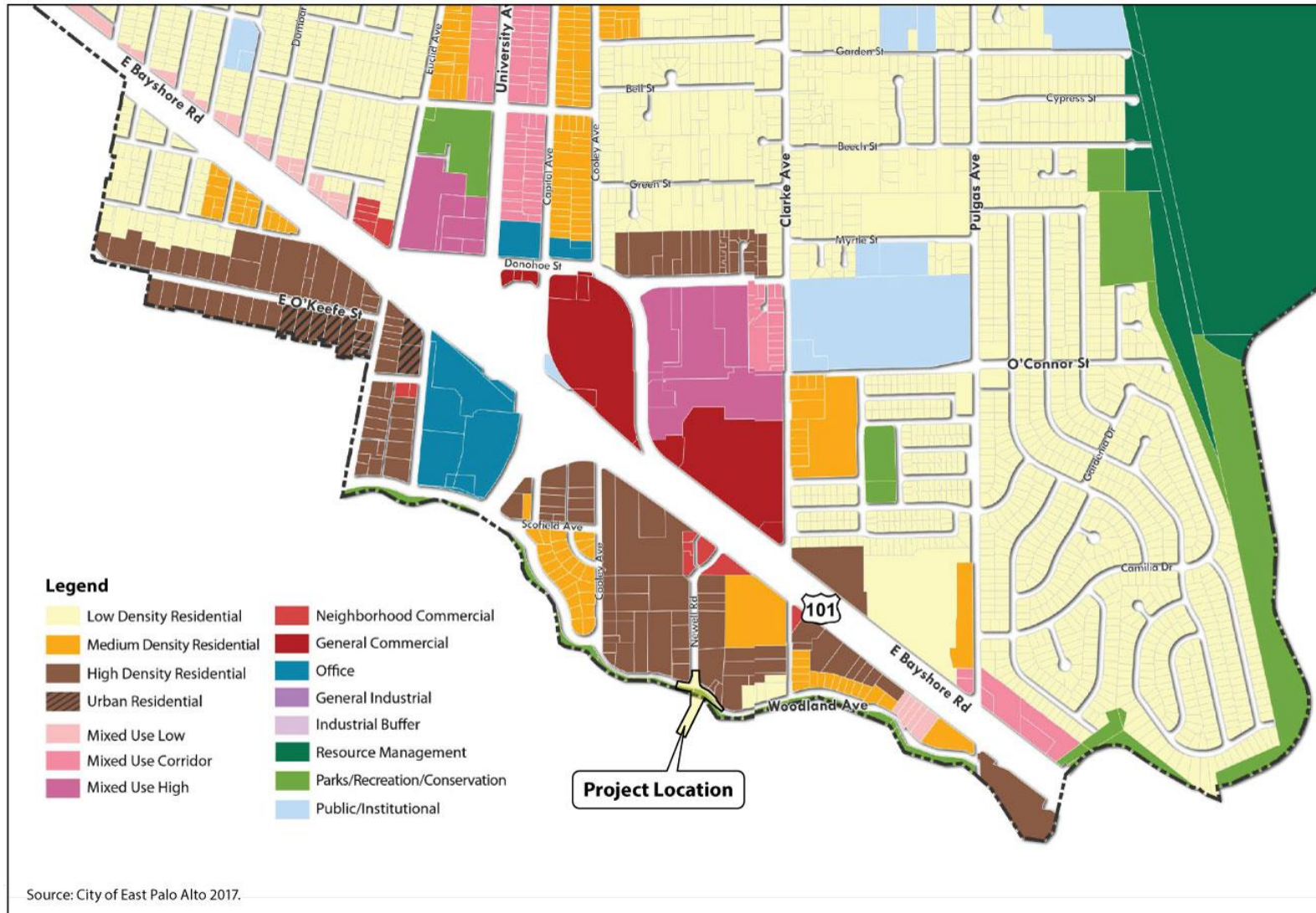


Figure 2.1.1-1. Land Use Designations, City of East Palo Alto

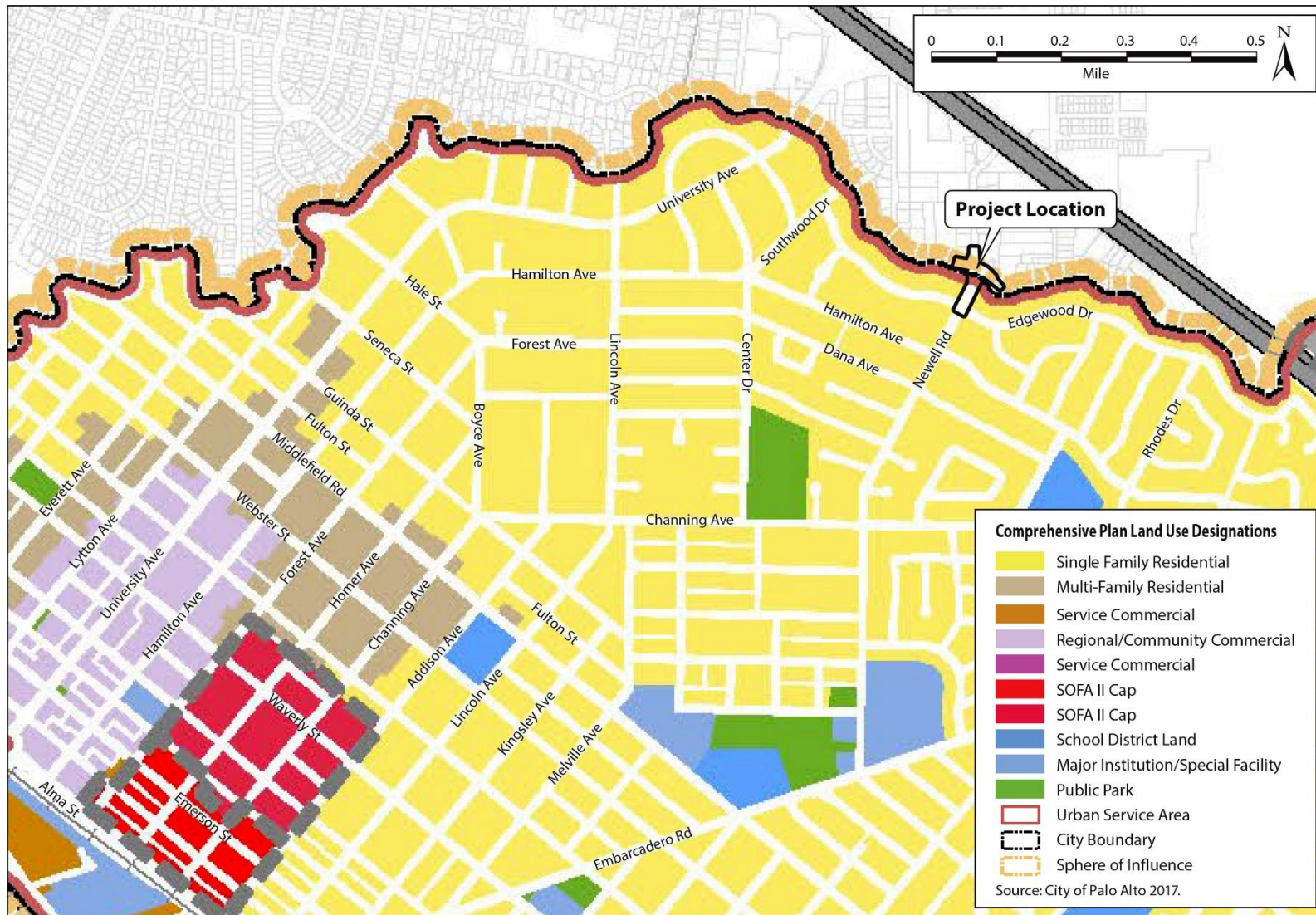


Figure 2.1.1-2. Land Use Designations, City of Palo Alto

Figures 2.1.1-1 and 2.1.1-2 show the land uses surrounding the Project site in the cities of East Palo Alto and Palo Alto, respectively. The land use and setting south of the bridge is characterized by single-family residential homes and is adjacent to a landscaped strip alongside a sidewalk, and a private residential fence, backyard, and single-story residence on the southwest. On the southeast is a landscaped strip alongside a sidewalk; and a private residential front yard, gated driveway, and single-story residence. The residences to the south of the bridge are detached and have no on-street parking.

The area north of the bridge is perpendicularly crossed by Woodland Avenue (which includes public on-street parking parallel to the street on both sides [a few car lengths and marked as restricted for clearance and safety] from the mouth of the bridge) and is characterized by landscaped areas and private detached, multi-story, multi-family residential development and associated structures on the northwest (two-story development immediately west of Newell Road) and northeast (one-, two-, and three-story development immediately east of Newell Road). The on-street parallel parking spaces on the north side of the bridge are fully utilized. Further northeast is US 101.

There are a number of planned projects in the Project vicinity that demonstrate the development trends within both Palo Alto and East Palo Alto. In the vicinity of the Project, the City of Palo Alto includes many development requests for additions to single-family homes or reconstruction of new single-family homes (City of Palo Alto 2017a). There are no development projects in the vicinity of the study area that would increase the size of the local population. For the purposes of this analysis, only larger size projects have been included. Table 2.1.1-1 identifies these planned projects.

Table 2.1.1-1. Planned Projects in the Vicinity of the Project

Name	Jurisdiction	Proposed Uses	Status
Homer Avenue-Channing Avenue Enhanced Bikeway	City of Palo Alto	The project proposes enhanced bikeway facilities between Guinda Street and Alma Street.	Planning stage
Greer Road Bicycle Boulevard Project	City of Palo Alto	The proposed Greer Road Bicycle Boulevard will provide a new north-south bicycle route for the community from Edgewood Drive to the north to Louis Road to the south.	Planning stage
Bay Road Phase II and III	City of East Palo Alto	The project consists of three phases of roadway improvements between University Avenue and Cooley Landing. The proposed Phase II/III project will include the design of the roadway to accommodate new sidewalks, bike lanes, ADA accessibility, lighting, landscaping, and street furniture.	Construction Summer 2019 through Winter 2020
Highway 101 Pedestrian/Bicycle Overcrossing Project	City of East Palo Alto	The project will consist of constructing a Class I Pedestrian/Bicycle Overcrossing Structure over U.S. Highway 101 between West and East Bayshore Roads, aligned with Clarke Avenue and connecting to West Bayshore Road at Newell Road, to provide a direct connection between the south side and north side of U.S. Highway 101 in East Palo Alto.	Under Construction

Name	Jurisdiction	Proposed Uses	Status
Pad D New Municipal Water Well	City of East Palo Alto	Construct a new municipal water supply well at the “Pad D” site, located at the intersection of Clarke Avenue and East Bayshore Road.	Design stage
Route 101/University Avenue (State Route 109) Interchange Modification Project	City of East Palo Alto	Construct safety and traffic operational improvements at the U.S. Highway 101/ University Avenue Overcrossing. The project will include widening the overcrossing to accommodate wider sidewalk and class 2 bicycle lanes to fill a missing bicycle gap over U.S. Highway 101 to improve bicycle and pedestrian access and safety along University Avenue.	Design stage
San Francisquito Creek Flood Protection, Ecosystem Restoration, and Recreation Project: Upstream of U.S. 101	San Francisquito Creek Joint Powers Authority	The Upstream of Highway 101 proposed project includes channel widening at five sites, replacement of the Pope-Chaucer Bridge, construction of creekside parks, and enhancement of aquatic habitat. The alternative involves, rather than channel widening at four of the five sites, construction of floodwalls. The project also includes a program-level upstream detention basin that would be constructed adjacent to the channel at one of two potential sites. The Upstream of U.S. 101 project cannot be constructed until the Newell Road Bridge Replacement Project is completed to accommodate larger flows.	Design stage
San Francisquito Creek Flood Protection	San Francisquito Creek Joint Powers Authority	A regional comprehensive plan for both the waters that flow into San Francisquito Creek and on to San Francisco Bay (its watershed) and the waters that threaten our communities from the Creek and from Bay tides (our floodplains).	Planning stage

Source: City of East Palo Alto 2017a, 2017b, 2017c, 2017d, 2017e; City of Palo Alto 2017b; San Francisquito Creek Joint Powers Authority 2017; Santa Clara Valley Water District 2018.

2.1.1.2 Consistency with State, Regional, and Local Plans and Programs

The Palo Alto Comprehensive Plan,¹ adopted on November 13, 2017, dictates the land use patterns and development for the western portion of the bridge (located within the City of Palo Alto). This area is designated as Single-Family Residential in the update, with no plan for land use modification.

The City of East Palo Alto General Plan (City of East Palo Alto 2016), the West Side Area Plan (City of East Palo Alto 2016), and the City of East Palo Alto Housing Element (City of East Palo Alto 2015) dictate the land use patterns and development on the eastern portion of the bridge (located within the City of East Palo Alto). This area, which falls within the Westside Area Plan (Chapter 11 of the General Plan), is zoned for Multi-Family Residential and designated as High-Density Residential. The plan permits higher residential densities than currently exist in the neighborhood adjacent to the Newell Road Bridge, but development will require a Master Plan or Specific Plan. Westside Area Plan

¹ The comprehensive plan, also known as a general plan, master plan or land-use plan, is a document designed to guide the future actions of a community. It presents a vision for the future, with long-range goals and objectives for all activities that affect the local government.

policies and goals include language to discourage and prevent displacement of existing residents/renters as well as to establish a process and framework for future development.

The Project is identified in the April 18, 2011, Federal State Transportation Improvement Program (California Department of Transportation 2011).²

2.1.1.3 Environmental Consequences

Construction Impacts

Land use impacts during construction would be the same for all build alternatives. The Project would be constructed within the existing transportation right-of-way, the stream corridor, and immediately adjacent areas. Accordingly, no changes to existing land uses would occur. Existing land use designations would also remain unaffected. Modifications would be consistent with existing land use plans, programs, and policies. Temporary Construction Easements may be required to allow the contractor access to some portions of the Project area; however, these would not affect the existing land uses adjacent to the Project. Since on-street parking would be unavailable along a portion of Woodland Avenue in the City of East Palo Alto, residents of the multi-family developments along Woodland Avenue and Newell Road may have to park farther away than they typically do during the period of construction. However, this impact would be temporary and would not have any permanent effect related to zoning requirements for on-street parking.

Operational Impacts

Land use impacts during operation would be the same for all build alternatives. No land use impacts on adjacent private property are anticipated during Project operation. Additionally, the replacement of a bridge is not typically considered to have potential to induce growth. Therefore, land use impacts related to growth are not anticipated. The expressed purpose and need of the Project is to safely accommodate vehicle, bicycle, and pedestrian traffic. The Project would also provide adequate capacity to allow for larger stormwater flows to be conveyed under the bridge. No changes to existing or planned land uses are anticipated to result from the Project because the Project would be consistent with local planning documents that guide land use decisions in the area. Only Temporary Construction Easements may be necessary in order to construct the bridge, retaining walls, and associated infrastructure.

Table 2.1.1-2 analyzes the consistency of the Project with the relevant plans and programs. As detailed in Table 2.1.1-2, the Project would not conflict with any goals or policies of relevant plans and programs.

² The Project Description in the April 18, 2011, Federal State Transportation Improvement Program is to “replace existing two-lane bridge with a new two-lane bridge conforming to current standards.”

Table 2.1.1-2. Consistency with State, Regional, and Local Plans and Programs

Policy	Build Alternatives 1-4
East Palo Alto Bicycle Transportation Plan	
Pedestrian overcrossing project for consistency with the 2004 Bay Area Access Master Plan.	No Conflict. The proposed Project is identified as supporting the potential pedestrian overcrossing project the City of East Palo Alto is pursuing at Clarke Avenue/Newell Road and Bayshore Road.
East Palo Alto General Plan	
Goal LU-1. Maintain an urban form and land use pattern that enhances the quality of life and meets the community's vision for its future.	No Conflict. Build Alternatives 1-4 would improve existing infrastructure, which would enhance the quality of life for those using any component of the proposed Project.
LU-1.1: Balanced Land uses. Create a balanced land use pattern to support a jobs-housing balance, minimize traffic and vehicle miles traveled, reduce greenhouse gas emissions, and promote a broad range of housing choices, retail businesses, employment opportunities, cultural venues, educational institutions and other supportive land uses.	No Conflict. Build Alternatives 1-4 would improve access/connections between the Cities of Palo Alto and East Palo Alto and would not result in a change in land use.
LU-1.3: Coherent pattern of land use. Ensure that new development occurs in a unified and coherent pattern that avoids conflicts between uses and promotes job creation and fiscal stability, creating a high-quality environment for East Palo Alto residents.	No Conflict. Build Alternatives 1-4 would improve access/connections between the Cities of Palo Alto and East Palo Alto and would not result in a change in land use. The Project supports the City's Transportation Plan implementation.
Goal LU-9. Provide an urban environment that is tailored to the pedestrian.	No Conflict. Build Alternatives 1-4 would improve existing pedestrian infrastructure.
Goal LU-16. Enable new pedestrian connections, improve safety, and provide guidelines for incremental improvements to the neighborhood.	No Conflict. Build Alternatives 1-4 would improve existing pedestrian infrastructure.
Goal ED-1. Grow and stabilize revenue-generating land uses and tools to diversify and expand the City's tax revenue base and provide jobs for local residents.	No Conflict. Build Alternatives 1-4 would not prevent the growth and stabilization of revenue-generating land uses or tools to expand the City of Palo Alto's tax revenue base and provide jobs for local residents.
Goal T-1. Improve safety through the design and maintenance of sidewalks, streets, intersections, and other roadway improvements.	No Conflict. Build Alternatives 1-4 would improve safety of the existing Newell Road Bridge.
Goal T-2. Foster the creation of complete, multimodal streets.	No Conflict. Build Alternatives 1-4 would improve a portion of Newell Road by improving pedestrian, bicycle, and automotive infrastructure.

Policy	Build Alternatives 1-4
Goal T-3. Create a complete, safe, and comfortable pedestrian network for people of all ages and abilities.	No Conflict. Build Alternatives 1-4 would improve existing pedestrian infrastructure.
POC 2.3 Access to parks. Improve bike and pedestrian access to existing parks and school	No Conflict. Build Alternatives 1-4 would improve bike and pedestrian infrastructure along Newell Road, which would improve bike and pedestrian access to parks and schools in the area.
Palo Alto Bicycle + Pedestrian Transportation Plan	
Chapter 5 – Recommended Programs, Across Barrier Connections Chapter 7 – Implementation and Funding	No Conflict. The proposed Project is identified as a recommended project (ABC-5) to address across barrier connections.
Palo Alto Comprehensive Plan	
Goal L-1: A compact and resilient city providing residents and visitors with attractive neighborhoods, work places, shopping districts, public facilities, and open spaces.	No Conflict. Build Alternatives 1-4 would provide the city with a more attractive bridge area because final design of the bridge is subject to review by the City of Palo Alto Architectural Review Board and subject to the Architectural Review findings in the City of Palo Alto Municipal Code.
Policy L-1.3: Infill development in the urban service area should be compatible with its surroundings and the overall scale and character of the city to ensure a compact, efficient development pattern.	No Conflict. Build Alternatives 1-4 would be compatible with its surroundings and the overall scale and character of the city because the improvements would be designed with the character and scale of the area in mind.
Goal L-6: Well-designed buildings that create coherent development patterns and enhance city streets and public spaces.	No Conflict. Build Alternatives 1-4 would be compatible with its surroundings and would enhance city streets because the improvements are required to comply with the Architectural review findings, which include a requirement that the improvements “provide a harmonious transition in scale, mass and character to adjacent land uses and land use designations.”
Policy L-6.1: Promote high-quality design and site planning that is compatible with surrounding development and public spaces.	No Conflict. Build Alternatives 1-4 would be compatible with surrounding development and public spaces because there would be no change in land use. Final design of the bridge would be subject to the City of Palo Alto Architectural Review Board.

Policy	Build Alternatives 1-4
Goal L-9: Attractive, inviting public spaces and streets that enhance the image and character of the city.	No Conflict. Build Alternatives 1-4 would design an attractive street and bridge because final design of the bridge would be subject to the Architectural review findings, which require that the “The design is of high aesthetic quality, using high quality, integrated materials and appropriate construction techniques, and incorporating textures, colors, and other details that are compatible with and enhance the surrounding area.”
Policy L-9.10: Design public infrastructure, including paving, signs, utility structures, parking garages and parking lots to meet high-quality urban design standards and embrace technological advances. Look for opportunities to use art and artists in the design of public infrastructure. Remove or mitigate elements of existing infrastructure that are unsightly or visually disruptive.	No Conflict. Build Alternatives 1-4 would design public infrastructure to be compatible with the surrounding areas. Final design of the bridge would be subject to the City of Palo Alto Architectural Review Board.
Goal T-1: Create a sustainable transportation system, complemented by a mix of land uses, that emphasizes walking, bicycling, use of public transportation and other methods to reduce greenhouse gas emissions and the use of single-occupancy motor vehicles.	No Conflict. Build Alternative 1-4 would improve vehicle circulation along a portion of Newell Road and would improve existing pedestrian and bike safety.
Policy T-1.19: Provide facilities that encourage and support bicycling and walking.	No Conflict. Build Alternatives 1-4 would improve existing pedestrian and bike safety.
Goal T-3: Maintain an efficient roadway network for all users.	No Conflict. Build Alternatives 1-4 would improve vehicle circulation along a portion of Newell Road and provide safe access for pedestrians and bicyclists, encouraging multi-model transportation.
Policy T-3.2: Enhance connections to, from and between parks, community centers, recreation facilities, libraries and schools for all users.	No Conflict. Build Alternatives 1-4 would improve existing pedestrian and bike safety.
Policy T-3.5: When constructing or modifying roadways, plan for use of the roadway by all users.	No Conflict. Build Alternatives 1-4 would improve bike, pedestrian, and automotive safety along a portion of Newell Road.
Goal T-6: Provide a safe environment for motorists, pedestrians and bicyclists on Palo Alto Streets.	No Conflict. Build Alternatives 1-4 would improve safety for motorists, pedestrians, and bicyclists along a portion of Newell Road.

Policy	Build Alternatives 1–4
Policy T-6.1: Continue to make safety the first priority of citywide transportation planning. Prioritize pedestrian, bicycle, and automobile safety over motor vehicle level of service at intersections and motor vehicle parking.	No Conflict. Build Alternatives 1–4 would improve safety for motorists, pedestrians, and bicyclists along a portion of Newell Road.
Goal T-7: Provide mobility options that allow people who are transit dependent to reach their destinations.	No Conflict. Build Alternatives 1–4 would be compliant with Americans with Disabilities Act requirements and would improve infrastructure to allow for all modes of transit to more safely utilize this bridge.
Policy T-7.1: Support mobility options for all groups in Palo Alto who require transit for their transportation.	No Conflict. Build Alternatives 1–4 would be compliant with Americans with Disabilities Act requirements and would improve automotive infrastructure along a portion of Newell Road.
Policy T-7.2: Utilize the principles of Universal Design, and local and State design standards, to guide the planning and implementation of transportation and parking improvement projects to ensure the needs of community members with limited mobility, including some seniors and people with disabilities, are addressed.	No Conflict. Build Alternatives 1–4 would be compliant with Americans with Disabilities Act requirements.
Policy N-2.3: Enhance the ecological resilience of the urban forest by increasing and diversifying native species in the public right-of-way, protecting the health of soils and understory vegetation, encouraging property owners to do the same and discouraging the planting of invasive species.	No Conflict. Build Alternatives 1–4 would require the removal of trees, riparian habitat, and intermittent stream habitat, but avoidance, minimization, and mitigation measures would ensure that native species are replanted at a greater ratio than the trees and habitat removed.
Policy N-3.5: Preserve the ecological value of creek corridors by preserving native plants and replacing invasive, non-native plants with native plants.	No Conflict. Build Alternatives 1–4 would removal non-native species and replace them with native species.
Policy N-3.6: Discourage bank instability, erosion, downstream sedimentation, and flooding by minimizing site disturbance and nearby native vegetation removal on or near creeks and by reviewing grading and drainage plans for development near creeks and elsewhere in their watersheds.	No Conflict. Build Alternatives 1–4 would replace non-native species with native species and would implement channel stabilization improvements to discourage bank instability, erosion, downstream sedimentation, and flooding.

Source: City of East Palo Alto 2011, 2016; City of Palo Alto 2012, 2017; County of San Mateo 1986; County of Santa Clara 1994.

2.1.1.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures would be required.

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2.1.2 Community Impacts

2.1.2.1 Community Character and Cohesion

Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). The Federal Highway Administration, in its implementation of NEPA (23 USC 109[h]), directs that final decisions on projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act (CEQA), an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

Affected Environment

The information in this section is from the *Community Impact Assessment* (September 2017).

Population and Housing

A population and housing study area has been defined to include the 2015 U.S. Census of Population and Housing census tracts located adjacent to the Project. The study area is intended to encompass an area where the potential population and housing impacts, if any, of construction and operation of the Project would be reasonably foreseeable. The study area encompasses four census tracts adjacent to the Project site (Figure 2.1.2-1). Two of the census tracts are located within the City of Palo Alto and two of the census tracts are located within the City of East Palo Alto. Demographic data are provided for the study area and for the cities of Palo Alto and East Palo Alto in Table 2.1.2-1 through Table 2.1.2-3.

As shown in Table 2.1.2-1, according to the U.S. Census Bureau (California Department of Transportation 2017), 2011–2015 American Community Survey (ACS) 5-year estimates, racial and ethnic data was collected for 66,478 persons in the City of Palo Alto. Of these, 56.7% identified themselves as White; 29.9% as Asian; 1.6% as Black or African American; <0.1% as American Indian and Alaska Native; <0.1% as Native Hawaiian and Other Pacific Islanders; 0.3% as “some other race”; and 4.1% as “two or more race.” According to the U.S. Census Bureau (2015), 7.3% persons identified themselves as of Hispanic or Latino ethnicity in the City of Palo Alto.

In the City of East Palo Alto, racial and ethnic data was collected for 29,198 persons. Of these, 7.6% identified themselves as White; 3.1% as Asian; 13.0% as Black or African American; <0.1% as American Indian and Alaska Native; 8.8% as Native Hawaiian and Other Pacific Islanders; 0.3% as

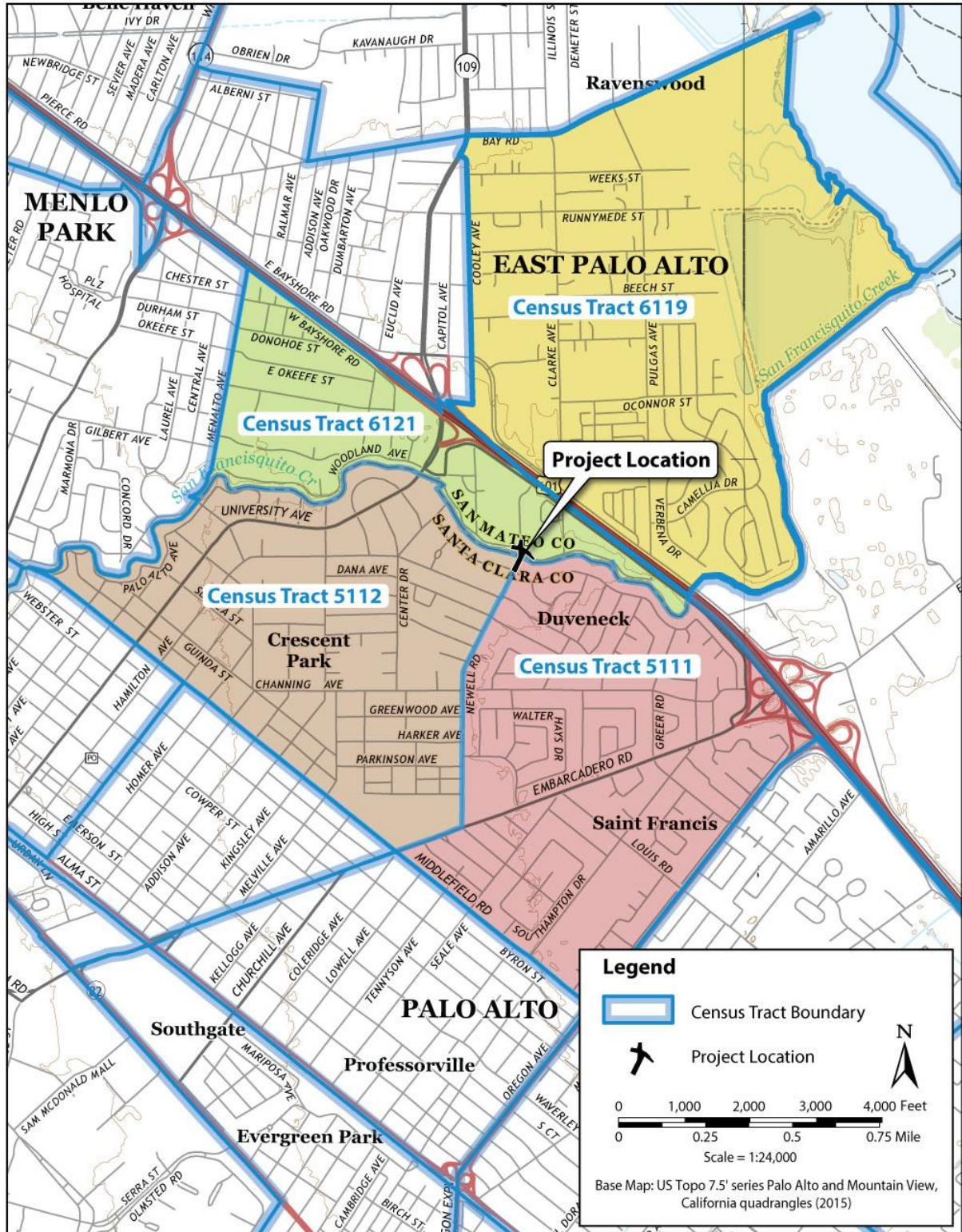


Figure 2.1.2-1. Census Tracts in the Study Area

Table 2.1.2-1. Census 2015 Race and Ethnicity for the City of Palo Alto, the City of East Palo Alto, and the Study Area

	Total Population for which Data was Compiled	White Alone		Black or African American Alone		American Indian and Alaskan Native Alone		Asian Alone		Native Hawaiian and Other Pacific Islanders Alone		Some other Race Alone		Two or More Races Alone		Hispanic Ethnicity	
City of Palo Alto	66,478	37,698	56.7%	1,054	1.6%	14	0.0%	19,867	29.9%	62	0.1%	173	0.3%	2,734	4.1%	4,876	7.3%
City of East Palo Alto	29,198	2,217	7.6%	3,786	13.0%	4	0.0%	902	3.1%	2,577	8.8%	83	0.3%	609	2.1%	19,020	65.1%
Study Area Total*	28,941	9,558	33.0%	2,042	7.1%	10	0.0%	3,619	12.5%	881	3.0%	143	0.5%	747	2.6%	11,941	41.3%
Census Tract 5111	5,586	3,069	54.9%	42	0.8%	10	0.2%	1,799	32.2%	-	0.0%	49	0.9%	176	3.2%	441	7.9%
Census Tract 5112	5,024	3,679	73.2%	74	1.5%	-	0.0%	876	17.4%	-	0.0%	-	0.0%	206	4.1%	189	3.8%
Census Tract 6119	10,170	1,172	11.5%	1,127	11.1%	-	0.0%	421	4.1%	366	3.6%	75	0.7%	271	2.7%	6,738	66.3%
Census Tract 6121	8,161	1,638	20.1%	799	9.8%	-	0.0%	523	6.4%	515	6.3%	19	0.2%	94	1.2%	4,573	56.0%

*Study area comprises 4 census tracts.

Source: California Department of Transportation 2017

Table 2.1.2-2. Housing Characteristics for the City of Palo Alto, the City of East Palo Alto, and the Study Area

	Total Households	Average Household Size	Housing Units					Occupied Housing Units			
			Total	Occupied		Vacant		Owner Occupied		Renter Occupied	
City of Palo Alto	26,087	2.51	27,555	26,087	(94.7%)	1,468	(5.3%)	14,358	(55.0%)	11,729	(45.0%)
City of East Palo Alto	7,065	4.15	7,455	7,065	(94.8%)	390	(5.2%)	2,476	(35.0%)	4,589	(65.0%)
Study Area*	8,621	3.37	9,113	8,621	(94.6%)	492	(5.4%)	4,466	(51.8%)	4,155	(48.2%)
Census Tract 5111	1,847	3.29	1,924	1,847		77		1,550	(83.9%)	297	(16.1%)
Census Tract 5112	1,668	3.12	1,793	1,668		125		1,315	(78.8%)	353	(21.2%)
Census Tract 6119	2,486	4.05	2,578	2,486		92		1,188	(47.8%)	1,298	(52.2%)
Census Tract 6121	2,620	3.03	2,818	2,620		198		413	(15.8%)	2,207	(84.2%)

*Study area comprises 4 census tracts.

Source: California Department of Transportation 2017

“some other race”; and 2.1% as “two or more race.” According to the U.S. Census Bureau (California Department of Transportation 2017), 65.1% persons identified themselves as of Hispanic or Latino ethnicity in the City of East Palo Alto.

In comparison, the study area had a lower percentage of White (33.0%), Asian (12.5%), and “two or more race” (2.6%) and a higher percentage of Black or African American (7.2%), Native Hawaiian and Other Pacific Islanders (3.0%), “some other race” (16.5%), and Hispanics (41.3%) than the City of Palo Alto. The study area had a lower percentage of Black or African American (7.1%), Native Hawaiian and Other Pacific Islander (3.0%), “some other race” (16.5%), and Hispanics (41.3%). The study area has a similar percentage (<0.1%) of American Indian and Alaska Native as the City of Palo Alto and City of East Palo Alto.

As shown in Table 2.1.2-2, according to the U.S. Census Bureau (California Department of Transportation 2017), 2011–2015 ACS 5-year estimates, there were 27,555 total housing units within the City of Palo Alto, of which 94.7% were occupied and 5.3% were vacant. The average household size within the occupied housing units was 2.51 persons, with 55.0% housing units being owner occupied and 45.0% renter occupied.

Within the City of East Palo Alto, there were 7,455 total housing units, of which 94.8% were occupied and 5.2% were vacant. The average household size within the occupied housing units was 4.15 persons, with 35.0% housing units being owner occupied and 65.0% renter occupied.

Overall, the study area had a slightly lower percentage of occupied units (94.6%) than the City of Palo Alto (94.7%) and the City of East Palo Alto (94.8%). Of the occupied units, the study area has a lower percentage of owner-occupied housing units (51.8%) than the City of Palo Alto (55.0%), but a higher percentage than the City of East Palo Alto (35.0%). The average household size within the study area (3.37 persons) was larger than the average household size of the City of Palo Alto (2.51 persons), but nearly 1 person on average smaller than the average household size of the City of East Palo Alto (4.15 persons).

Economic Characteristics

As shown in Table 2.1.2-3, according to the U.S. Census Bureau (California Department of Transportation), 2011–2015 ACS 5-year estimates, per capita income in the City of Palo Alto was \$77,419. As of 2015, 5.4% of citizens within the City of Palo Alto were expected to be living below the poverty level. Per capita income in the City of East Palo Alto was \$18,675. As of 2015, 18.5% of citizens within the City of East Palo Alto were expected to be living below the poverty level.

The per capita income for the study area is significantly less than that of the City of Palo Alto (\$59,499 in the study area) and more than that of the City of East Palo Alto. The number of citizens within the study area living below the poverty level is 3,883, which is slightly higher than the City of Palo Alto (3,596), but less than the City of East Palo Alto (5,360).

Table 2.1.2-3. Economic Data for the City of Palo Alto, the City of East Palo Alto, and the Study Area (2015)

	Per Capita Income	Population for Whom Poverty Status is Determined: Total	Population for Whom Poverty Status is Determined: Estimated Income in 2015 Below Poverty Level	
City of Palo Alto	77,419	66,013	3,596	(5.4%)
City of East Palo Alto	18,675	29,023	5,360	(18.5%)
Study Area*	59,499	28,833	3,883	(13.5%)
Census Tract 5111	79,985	5,586	295	(5.3%)
Census Tract 5112	106,639	5,024	29	(0.6%)
Census Tract 6119	21,932	10,062	1,642	(16.3%)
Census Tract 6121	29,441	8,161	1,917	(23.5%)

*Study area comprises 4 census tracts.

Source: California Department of Transportation 2017

Community Character

The Project area is characterized by residential uses. Housing in the immediate vicinity of the Project area on the Palo Alto side is predominantly single-family residential, and the character of the community is well defined by the City of Palo Alto’s urban forest. Housing in the immediate vicinity of the Project area on the East Palo Alto side is predominantly medium- to high-density residential. For the portion of the study area in Palo Alto, there are two neighborhood associations, the Crescent Park Neighborhood Association and the Duveneck/St. Francis Neighborhood Association (California Department of Transportation 2017). The Crescent Park Neighborhood Association encompasses the area from Newell Road, to Channing Avenue, to Middlefield Road, and to Palo Alto Road in the north. The Duveneck/St. Francis Neighborhood Association includes the area from Newell Road south to Oregon Expressway and Embarcadero Road. For the portion of the study area in East Palo Alto, there is no distinct neighborhood association. However, it should be noted that residents from the study area of both cities have been active in public outreach activities for the Project. Additionally, the vacancy rate in Palo Alto (5.3%), East Palo Alto (5.2%), and the study area (5.4%) are similarly low, which may suggest these places are desirable places to live with strong interconnected neighborhoods, indicating strong community character and cohesion. Newell Road Bridge over San Francisquito Creek serves as one of the connections between the residential neighborhoods in the cities of East Palo Alto and Palo Alto.

There are a number of community facilities within the study area, including six schools and four parks. A number of places of worship, including Faith Missionary Baptist Church, True Light Missionary Church, 24HR Prayer Center, Bay Christian Ministries, East Palo Alto Seventh-Day Adventist Church, Chùa Giác Minh, Seventh-Day Adventist Church of Palo Alto, St. Albert the Great Roman Catholic Church, St. Albert the Great Rectory, Byzantine Catholic Church, Trinity Lutheran Church, and Chabad Israeli Community are found within the study area. In addition, there is a thin metal wire suspended across Newell Road between two steel poles on the south end of the bridge in Palo Alto. This installation is an eruv (a virtual wall or border surrounding a community which allows Orthodox Jews to travel, carry, and push objects on the Sabbath) surrounding the City of Palo Alto.

Environmental Consequences

Construction Impacts

Build Alternatives

Construction of the Project would require closure of the existing Newell Road Bridge crossing for all build alternatives, which could temporarily affect access between the cities of Palo Alto and East Palo Alto. However, access will be maintained at other existing nearby crossings (Embarcadero Road, University Avenue, and West Bayshore Road). Construction activities would also require partial closure of Woodland Avenue and Newell Road on the East Palo Alto side of the Project site to accommodate construction activities and equipment movement/stockpiling. To the extent possible, at least one lane along Woodland Avenue would remain open for the majority of construction to ensure access throughout the neighborhood in East Palo Alto adjacent to the Project. Newell Road on the East Palo Alto side would be closed for Stage 4 of construction (see Section 2.1.4.3, *Environmental Consequences*, for possible construction stages); however, access for residents of the housing developments along Newell Road would be maintained. Further detail related to access and parking is provided in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*.

Additionally, some trees would be removed during construction in both the cities of Palo Alto and East Palo Alto under all build alternatives. Tree removal is discussed in more detail in Section 2.3.1, *Natural Communities*. Construction activities may require the temporary removal of the existing poles supporting the eruv over Newell Road. To maintain the integrity of the symbolic “doorway” presented by the eruv, the contractor will install temporary conduits across the creek bank between Friday evening and Saturday night during the construction period (Section 2.1.2.1, *Avoidance, Minimization, and/or Mitigation Measures*). This would avoid any potential impact on the local Jewish community’s religious practices, beliefs, and traditions.

Construction work would result in a small and temporary increase in the demand for construction workers under all build alternatives. Given the minor nature of the Project scope, a limited number of construction workers would be required and could easily be accommodated by the local labor force. Temporary impacts on circulation and access would result from construction activities, which may affect local residents’ ability to commute to their places of employment. These effects on access to employment would be addressed through implementation of the Traffic Management Plan, described in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*.

No Build Alternative

The No Build Alternative would not affect the community because construction activities would not occur.

Operational Impacts

Build Alternatives

The Project does not include changes that could result in an effect on the regional population or housing characteristics. The Project would not result in the displacement or relocation of any people. The Project is intended to maintain connections for vehicular, bicycle, and pedestrian transportation; address bicycle and pedestrian safety, all while avoiding changes to traffic, such as

diversions of vehicles to adjacent streets, increases in the number of vehicles, and/or increasing speeds. As such, the Project would not affect the population characteristics in the region.

Build Alternatives 1–4 would not have impacts on housing. The Project would not result in the displacement or relocation of any housing nor would the Project have impacts on land use development or housing types. While construction would limit street parking along Woodland Avenue and Newell Road and operation would result in the loss of one unmarked parallel parking space on Woodland Avenue adjacent to the bridge, it is not anticipated that the Project would affect tenure and vacancies as the existing housing developments along Newell Road in East Palo Alto that have parking spaces provided to tenants. The Project would not create the need for additional housing in the project area.

Because the Project is not growth-inducing, the Project would not directly increase the number of people or school-aged children in the area. The Project would not result in the need for new or physically altered school facilities, fire protection, police protection, park, or other public facilities.

The Project would not result in the creation of permanent jobs in the cities of Palo Alto or East Palo Alto. No adverse impacts on employment and income are anticipated with implementation of the Project. The Project would improve access for residents in the neighborhood surrounding the Project site, particularly those who bicycle to work as the proposed bridge would include bicycle facilities. A minor improvement in access to employment would result from the Project.

The Project would provide operational benefits in terms of vehicular safety, as well as the larger community benefit of providing safe pedestrian and bicycle access. Under the build alternatives, the Project would improve safety for all modes of transportation with two standard lanes and accommodation for bicycle and pedestrian travel (including sidewalk and potential road widening for sharrows or a mixed-use path) while avoiding diversion of a significant number of vehicles to adjacent streets, a significant increase in the number of vehicles using Newell Road, or an increase in average vehicle speed on Newell Road. This would provide improved access to community facilities in the area and lead to improved community interaction as residents could more freely walk or bicycle through their neighborhood.

The Project would support the goals of the City of Palo Alto Bicycle + Pedestrian Transportation Plan (City of Palo Alto 2012) and City of East Palo Alto's 2011 Bicycle Transportation Plan (City of East Palo Alto 2011) to provide enhanced bicycle and pedestrian facilities, and specifically new or enhanced Class II bikeways along Newell Road from Woodland Avenue to Embarcadero Road that would be compatible with the proposed overcrossing of U.S. Highway 101 in East Palo Alto from Newell Road/West Bayshore Road to Clarke Avenue/East Bayshore Road. This multimodal option could encourage more people to walk and/or bicycle, which would have the effect of improving air quality by reducing vehicle miles travelled.

No Build Alternative

The No Build Alternative would not affect the community during operations, but benefits accrued under the build alternatives would also not occur.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures (AMM) are proposed to ensure that impacts on the community are minimized and will be implemented under all build alternatives. Measures to reduce impacts associated with access and parking are included in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*.

- AMM-COM-1: The contractor will provide bilingual notification of construction activities including any utility disruptions to the local residents and businesses.
- AMM-COM-2: The contractor will maintain ongoing coordination with the Orthodox Jewish Community during pre-construction and construction of the Project. In the event that the poles supporting the eruv over Newell Road require moving during any period of construction when the bridge structure is in place and accessible to pedestrians, the contractor will take the following steps to ensure a temporary eruv is in place prior to any Friday evening.
 - The existing poles must be dug out completely so that they may be reused.
 - Temporary replacement shall be installed consisting of 20-foot conduits to be fastened to nearby structures.
 - Fishing line, or other unobtrusive wire, shall be fastened to the conduits to maintain the eruv alignment.

2.1.2.2 Relocations and Real Property Acquisition

Regulatory Setting

The California Department of Transportation's (Caltrans') Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and Title 49 Code of Federal Regulations (CFR) Part 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix A for a copy of Caltrans' Title VI Policy Statement.

Affected Environment

The information in this section is from the *Community Impact Assessment* (September 2017). The properties that would be affected by the Project include the eight parcels immediately adjacent to the project limits on both the Palo Alto and East Palo Alto sides of Newell Road Bridge. They are all residential parcels, either single-family residential or multiple-family residential.

Environmental Consequences

Construction Impacts

Build Alternatives

As shown in Table 2.1.2-4, one permanent easement would be required as a result of the Project in the City of East Palo Alto. In addition, temporary Construction Easements (TCEs) are anticipated from all parcels within and adjacent to the Project improvements. Two TCEs are expected on the Palo Alto side and five on the East Palo Alto side, as shown in Table 2.1.2-4. All TCEs would be minor and would be required to modify the driveways, backyards, or sidewalks to match the new grade of the roadways. Property acquisition will be conducted in compliance with Title VI of the Civil Rights Act (42 USC 2000d, et seq.), the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended), and Title 49 CFR Part 24.

Table 2.1.2-4. Permanent and Temporary Construction Easements

APN No.	Address	Owner	Existing Use/ Proposed Improvements	Type of Acquisition
003-12-013	475 Newell Road (Palo Alto)	Private property	Home/driveway would be reconstructed to match new grade, landscaping would be redone, and construction of retaining wall would occur ¹	Permit to enter and construct
003-11-020 ²	1499 Edgewood Dr. (Palo Alto)	Private property	Home/backyard would be reconstructed to match new grade, landscaping would be redone, and construction of retaining wall would occur ¹	Permit to enter and construct for Build Alternatives 3 and 4 only
063-513-350	5 Newell Rd (East Palo Alto)	Woodland Park Property Owner	Apartments/walkways would be reconstructed to match new grade, landscaping would be redone, and construction of retaining wall would occur ¹	Permit to enter and construct
063-513-440	15 Newell Rd (East Palo Alto)	Woodland Park Property Owner	Apartments/walkways would be reconstructed to match new grade, landscaping would be redone, and construction of retaining wall would occur for Build Alternative 4 only ¹	Permit to enter and construct
063-514-130 063-515-370	1761 Woodland Ave (East Palo Alto)	Woodlands Newell Associates	Ongoing maintenance of the bridge; apartments/walkways would be reconstructed to match new grade, landscaping would be redone, and construction of retaining wall would occur ¹	Permanent easement and permit to enter and construct

APN No.	Address	Owner	Existing Use/ Proposed Improvements	Type of Acquisition
063-515-380	1767 Woodland Ave (East Palo Alto)	Woodlands Newell Associates	Apartments/walkways would be reconstructed to match new grade, landscaping would be redone, and construction of retaining wall would occur ¹	Permit to enter and construct
063-515-280	1773 Woodland Ave (East Palo Alto)	Woodland Park Property Owner	Apartments/walkways would be reconstructed to match new grade	Permit to enter and construct

Source: Nolte Vertical Five 2017

¹ The retaining walls would be constructed within City of Palo Alto or East Palo Alto right-of-way, but access to the parcels are needed in order to construct the retaining walls.

² Not all of the side yard is part of this parcel. There is an encroachment permit along the side yard of this parcel, which can be revoked.

No Build Alternative

The No Build Alternative would not require any right-of-way acquisitions because construction would not occur.

Operational Impacts

Build Alternatives

As shown above in Table 2.1.2-4, one permanent easement would be required as a result of the Project in the City of East Palo Alto. All other permanent improvements proposed are within available Palo Alto and East Palo Alto right-of-way.

No Build Alternative

The No Build Alternative would not require any right-of-way acquisitions because no improvements are proposed.

Avoidance, Minimization, and/or Mitigation Measures

Property acquisition will be conducted in compliance with Title VI of the Civil Rights Act (42 USC 2000d, et seq.), the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended), and Title 49 CFR Part 24. The following avoidance and minimization measure will be implemented for all build alternatives to minimize the effects of TCEs on property owners.

- AMM-COM-3: Access to all properties for property owners and users will be maintained by the contractor during construction.

2.1.2.3 Environmental Justice

Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President William J. Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2017, this was \$24,600 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964, and related statutes, have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is demonstrated by its Title VI Policy Statement, signed by the Director, which can be found in Appendix A of this document.

Affected Environment

The information in this section is from the *Community Impact Assessment* (September 2017). To determine if environmental justice populations exist within the study area, the demographic profile of the study area census tracts was developed to identify the low-income and minority populations present in the study area. For the purposes of this analysis, a census tract was considered to contain an environmental justice population if:

- The total minority population of the census tract is more than 50% of the total population; or
- The proportion of the census tract population that is below the Federal Poverty level exceeds that of the city where it is located.

The Project straddles the cities of Palo Alto and East Palo Alto. The City of East Palo Alto has a high concentration of low-income and minority residents, based on available U.S. Census information. Census tracts are shown in Figure 2.1.2-1. Tables 2.1.2-1 and 2.1.2-3 present the ethnicity and income data for the study area and census tracts. The 2011–2015 ACS 5-year estimates estimated per capita income of East Palo Alto to be \$18,675 compared to \$77,419 in Palo Alto, and \$59,499 in the study area. The percentage of low-income populations in East Palo Alto was 18.5% compared to 5.4% in Palo Alto, and 13.5% in the study area. The 2011–2015 ACS 5-year estimates indicate that the minority population in the East Palo Alto portion of the study area was particularly high as approximately 88.5% of census tract 6119 identified as a racial minority or Hispanic, and approximately 79.9% of the population of census tract 6121 identified as a racial minority or Hispanic. The 2011–2015 ACS 5-year estimates indicate that the City of Palo Alto portion of the study area has a smaller minority population, with only 45.1% of census tract 5111 considered a racial minority or Hispanic and approximately 26.8% of census tract 5112 considered a racial minority or Hispanic. Accordingly, the population of the Palo Alto portion of the study area is not considered an environmental justice population while the population of the East Palo Alto portion of the study area is considered an environmental justice population.

Environmental Consequences

Construction Impacts

Build Alternatives

There would be some adverse effects on residents of both East Palo Alto and Palo Alto in the study area related to temporary construction-period nuisances. However, once the replacement bridge is constructed, the benefits of the Project would include improved access and safety benefits for the local community.

According to the Section 2.2.7, *Noise*, noise from Project construction activities may intermittently dominate the noise environment in the immediate area of construction. This would include noise generated from construction equipment that may exceed 96 decibels L_{max} at 50 feet if pile driving is required for construction. No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 14-8.02 and applicable local noise standards. Construction noise would be experienced on both the Palo Alto and East Palo Alto sides of the Project area and would be short-term and intermittent. Despite this, minimization measures have been identified to address potential noise impacts posed by construction. Section 2.2.7, *Noise*, provides more information related to noise.

While the East Palo Alto side of the study area has a high concentration of low-income and minority residents, the Project is proposed in this general location because there is an existing (although functionally obsolete) bridge structure. The Project would replace this bridge in the same vicinity and provide the same accessibility over San Francisquito Creek in this area. While effects related to on-street parking availability would be experienced entirely on the City of East Palo Alto side of San Francisquito Creek; and therefore would be predominantly borne by minority and low-income populations, the effects would be temporary and on-street parking would be restored upon completion of construction.

Construction staging, which would include equipment and materials storage as well as access to the bridge, would be sited along Newell Road in Palo Alto and East Palo Alto, and along Woodland Avenue in East Palo Alto. It is anticipated that the staging area in East Palo Alto would be larger due to the extent of construction activities (related to the approach, utility relocations, and retaining walls) in East Palo Alto; not due to the socioeconomic status of the population residing in the vicinity. Parking disruption in East Palo Alto would be due to construction requirements related to the partial closure of Woodland Avenue and the complete closure of Newell Road Bridge depending on the stage of construction, as described in more detail in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*. There is no on-street parking on the Palo Alto side of the Project area and residents on this side utilize their own driveways and garages for parking. Additional discussion of parking effects is provided in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*.

All effects posed by the Project would be minimized through the implementation of avoidance, minimization, and/or mitigation measures, including potential parking accommodations for residents on the East Palo Alto side of San Francisquito Creek which would be developed in coordination with both cities. Further, local motorists from the immediate study area, as well as those traveling to and from the Project area from elsewhere, would all be inconvenienced by construction-period delays and other disruptions during the Project construction period. Outreach efforts associated with the Project will continue to involve the local community and will target

minority and low-income residents to ensure their involvement in the planning process. As such, the Project would not result in disproportionately high adverse effects on minority and low-income populations.

No Build Alternative

The No Build Alternative would not affect environmental justice populations because construction activities would not occur.

Operational Impacts

Build Alternatives

According to Section 2.2.7, *Noise*, no long-term adverse noise impacts are anticipated to result from any of the build alternatives. Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, concludes that under each of the Project alternatives potential increases in traffic would not result in changes in level of service such that existing traffic circulation would be significantly affected. While Build Alternative 2 would result in a higher delay at Newell Road/Woodland Avenue on the East Palo Alto side of the Project area, this impact would not be considered adverse. Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, provides more information related to traffic impacts. Operation would also result in the loss of one unmarked parallel parking space on Woodland Avenue adjacent to the bridge, which would not be considered a substantial change. As such, the Project would not result in disproportionately high adverse effects on minority and low-income populations.

No Build Alternative

The No Build Alternative would not affect environmental justice populations during operations, but benefits accrued under the build alternatives would also not occur.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures would be required beyond those described in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, to address access and parking impacts.

Based on the above discussion and analysis, the build alternatives will not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of EO 12898. No further environmental justice analysis is required.

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2.1.3 Utilities/Emergency Services

2.1.3.1 Affected Environment

The information in this section is from the *Community Impact Assessment* (September 2017). For this analysis, the study area includes the area within 0.25 mile of the Newell Road Bridge.

Utilities

For the portion of the study area within the City of Palo Alto, the City of Palo Alto Utilities Department provides electricity and natural gas to residents and businesses. Pacific Gas and Electric Company (PG&E) provides electricity and natural gas to residents and businesses in the portion of the study area within the City of East Palo Alto.

The City of Palo Alto receives water from the City and County of San Francisco's Regional Water System, operated by the San Francisco Public Utilities Commission. The City of East Palo Alto receives water from the American Water Enterprises and Palo Alto Park Mutual Water Company or the O'Connor Tract Co-Op Water Company. American Water Enterprises supplies water from the San Francisco Public Utilities Commission.

Emergency Services

The City of Palo Alto Police Department, headquartered at 275 Forest Avenue (west of the Project site), provides public safety services for the portion of the study area within the City of Palo Alto. The department maintains a full-service police department with approximately 169 personnel, including over 80 sworn officers (California Department of Transportation 2017). The Palo Alto Police Department responds to around 60,000 calls for service annually (California Department of Transportation 2017). No Palo Alto police stations are located in the study area. The closest Palo Alto Police Department is approximately 1.5 miles away.

The East Palo Alto Police Department, headquartered at 141 Demeter Street (north of the Project site) provides public safety services for the portion of the study area within the City of East Palo Alto. The department is budgeted for 36 sworn police officers (California Department of Transportation 2017).

The City of Palo Alto is responsible for fire protection services in the study area within the city limits of Palo Alto. The fire department primarily responds to medical calls, but also responds to fires in homes, cars, dumpsters, and wildland. The fire department, which employs approximately 121 staff, responds to over 8,000 incidents annually. The City of Palo Alto Fire Department covers roughly 50 square miles from its six full time stations located throughout the city (California Department of Transportation 2017). One fire station—Fire Station 3, located at 799 Embarcadero Road—is within the study area.

The Menlo Park Fire Protection District is responsible for providing fire protection services in the study area within the city limits of East Palo Alto. The Menlo Park Fire Protection District has seven fire stations to cover approximately 30 square miles and responds to around 8,500 emergencies a year, with the majority of the calls (approximately 60%) being emergency medical incidents (California Department of Transportation 2017). For the portion of the study area in the City of East Palo Alto, Station 2, located at 2290 University Avenue, of the Menlo Park Fire Protection District

provides fire protection and emergency medical services. The department maintains three personnel (one captain and two firefighters) per shift (California Department of Transportation 2017).

2.1.3.2 Environmental Consequences

Construction Impacts

Build Alternatives

Utilities

A number of utility relocations would be required under all build alternatives during construction:

- **Sanitary Sewer:** No impacts are expected on the sanitary sewer on the East Palo Alto side of the bridge. On the Palo Alto side of the bridge an existing sewer manhole may need to be replaced on Newell Road to match the grade of the new roadway profile.
- **Domestic Water:** On the East Palo Alto side an existing water main runs along Woodland Avenue and a fire hydrant is located on the corner of Woodland and Newell Road. This line will remain in place and valves boxes within the street will be raised to grade to match the new roadway profile. The fire hydrant would be adjusted to match the new roadway profile. On the Palo Alto side a 6-inch PVC water main runs along Newell Road and terminates at a fire hydrant on the west side of the road near the existing bridge. The water main will remain but the fire hydrant assembly, lateral, and valves will be removed and replaced to accommodate the new roadway profile and sidewalk modifications.
- **Overhead Electrical:** No overhead electrical utilities exist on the Palo Alto side. On the East Palo Alto side overhead electrical poles and lines run along the south edge of Woodland Avenue within the Project limits. At least two utility poles are expected to require relocation to accommodate the proposed bridge and roadway improvements. Under Build Alternatives 2, 3, and 4, additional pole relocations may be required in order to accommodate clearances between the new bridge profile and the lowest power lines. This will be determined during final design based on coordination with PG&E.
- **Street Lights:** One street light on the Palo Alto side along Newell Road would be impacted by the proposed roadway improvements and would need to be removed and replaced to meet the new grades. On the East Palo Alto side, street lights are integral with the overhead electrical poles; therefore, relocation will correspond with the overhead electrical pole impacts.
- **Existing Steel Electrical Conduit(s):** Any electrical conduits that would be affected by project construction would be temporarily relocated prior to bridge removal and would be run within the sidewalk or mixed-use path on the new bridge.
- **Water Quality Sampling Station:** The boxes and monitoring equipment located on the upstream side of the creek is associated with a water quality sampling station. The equipment inside the station would be removed by City of Palo Alto staff prior to construction; however the contractor shall remove anything that remains and let City staff know when it is available for pick-up. A new water sampling station would not be installed with the Project. However, the power and fiber that serve the water sampling station would be maintained.

- **Survey Monuments:** Two survey monuments on Woodland Avenue would need to be adjusted. Existing monument number 2433 located on the south west corner of the bridge would be removed. A new survey monument would be added on the bridge.
- **Other Utilities:** Fiber and power for camera and flow sensors would need to be provided.

As specified in standardized measure (SM) SM-UT-1 below, bilingual notification of construction activities including any utility disruptions will be provided to the local residents and businesses, which would reduce the potential impact from utility relocations.

Construction of the build alternatives would generate minor amounts of wastewater, but they would not exceed wastewater treatment requirements of the Regional Water Quality Control Board due to requirements set forth in waste discharge requirements and in the Section 401 Water Quality Certification Permit.

The Project would generate small amounts of solid waste during construction. The City of Palo Alto's Construction and Debris Diversion Ordinance requires projects to salvage, and/or divert at least 75% of project debris from landfills (City of Palo Alto 2015). The diverted debris would primarily be recycled at Zanker Recycling in San Jose. The remaining waste would go to landfill in which there is sufficient permitted capacity, such as Kirby Canyon Landfill in Morgan Hill or Ox Mountain Landfill in Half Moon Bay. The Project would comply with all federal, state, and local statutes and regulations related to solid waste.

Emergency Services

Construction of the Project would require closing of the existing Newell Road Bridge crossing for all build alternatives. As a result, first responders would have to use other existing nearby crossings (University Avenue and West Bayshore Road). However, the temporary detour would not result in the need for additional emergency personnel or provision of or need for new or physically altered facilities to serve the Project. In addition, advance notice and coordination with emergency service providers will be included in the Traffic Management Plan to minimize any potential temporary impacts on response times, as discussed in SM-TR-1, further described in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*.

No Build Alternative

No impacts on utilities or emergency service providers would occur under the No Build Alternative because construction would not occur.

Operational Impacts

Build Alternatives

Utilities

Impacts to utilities would not occur during project operation under any of the build alternatives because all utility modifications and relocations would occur during construction. Because the Project is not growth-inducing, the Project would not result in the construction of new water or wastewater treatment facilities or expansion of existing facilities; existing capacity is sufficient to serve the Project. Operation of the Project would also not increase demand for potable water. No

new or expanded entitlements would be needed to serve the Project. The Project would not result in substantial physical deterioration of public water facilities.

Emergency Services

The Project would continue to receive emergency services from the City of Palo Alto Police Department, the East Palo Alto Police Department, the Palo Alto Fire Department, and the Menlo Park Fire Protection District. Operation of the Project would include two standard lanes and accommodation for bicycle and pedestrian travel (including sidewalk and potential road widening for sharrows or mixed-use path). Therefore, operation of the Project under all build alternatives would not result in an impact on the physical environment due to the incremental increase in demand for emergency services, and the potential increase in demand for services is not expected to adversely affect existing response times to the site or within the two cities. In addition, the Project, under all build alternatives, could improve emergency response conditions in this area by creating a safer crossing over Newell Road for emergency response vehicles.

No Build Alternative

No impacts on utilities or emergency service providers would occur under the No Build Alternative because operational changes would not occur.

2.1.3.3 Avoidance, Minimization, and/or Mitigation Measures

The following standardized measures (SM) will be implemented as part of the project description to ensure that impacts on the community are minimized.

- SM-UT-1: The contractor will provide bilingual notification of construction activities including any utility disruptions to the local residents and businesses.
- SM-TR-1: The contractor will include advance notice and coordination with emergency service providers in the Traffic Management Plan to minimize any potential temporary impacts on response times, further described in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*.

2.1.4 Traffic and Transportation/Pedestrian and Bicycle Facilities

2.1.4.1 Regulatory Setting

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of Federal-aid highway projects (see 23 Code of Federal Regulations [CFR] 652). It further directs that the special needs of the elderly and the disabled must be considered in all Federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the U.S. Department of Transportation regulations (49 CFR 27) implementing Section 504 of the Rehabilitation Act (29 United States Code 794). The Federal Highway Administration has enacted regulations for the implementation of the 1990 Americans with Disabilities Act, including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the Americans with Disabilities Act requirements to federal-aid projects, including Transportation Enhancement Activities.

2.1.4.2 Affected Environment

The information in this section is from the *Supplemental Traffic Evaluation Report* (January 2019), the *Comparison of Peak Hour Volumes at Newell Road/Woodland Avenue for Vehicles, Pedestrian, and Bikes* (November 2019), and *Community Impact Assessment* (September 2017). Newell Road Bridge is a narrow 18-foot (not striped), two-lane bridge that connects Palo Alto and East Palo Alto. Within East Palo Alto's jurisdiction the intersection is currently offset into two intersections, forming two stop-controlled T-intersections at Woodland Avenue. The bridge provides vehicular access across San Francisquito Creek but does not have sidewalks or marked bicycle paths. There are sidewalks on both sides of Newell Road in Palo Alto. Samtrans bus routes 280 and 81 use Woodland Avenue at the north end of the bridge, but no transit service uses the bridge (Samtrans 2016; Santa Clara Valley Transportation Authority 2017).

The study area for the traffic operations analysis includes the following seven intersections. The peak periods observed were from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

1. Newell Road/Edgewood Drive (Unsignalized)
2. Newell Road/Channing Avenue (Signalized)
3. Newell Road/Woodland Avenue (Unsignalized)
4. University Avenue/Woodland Avenue (Signalized)
5. University Avenue/East Crescent Drive (Unsignalized)

6. Saint Francis Drive/Embarcadero Road (Signalized)
7. West Bayshore Road/Newell Road (Unsignalized)

The operational analysis evaluated existing and future traffic conditions. Existing conditions represent the year 2016. Opening year traffic forecasts were projected for the year 2020, and design year traffic forecasts were developed for 2040. Intersection turning movement counts were collected at the study intersections for vehicles, pedestrians, and bicycles on Tuesday, March 29, 2016, and Wednesday, February 24, 2016, on typical weekdays when schools were in session. The turning movement counts were collected for weekday a.m. (7:00 a.m. to 9:00 a.m.) and p.m. (4:00 p.m. to 6:00 p.m.) peak periods. Twenty-four-hour bi-directional counts were also collected for two days from Tuesday, February 23, 2016, to Wednesday, February 24, 2016, at the following six locations.

1. Edgewood Drive from Newell Road to Island
2. Edgewood Drive from Newell Road to Jefferson Drive
3. Newell Road from Edgewood Drive to Hamilton Avenue
4. Woodland Avenue from Cooley Avenue to Newell Road
5. Newell Road from Woodland Avenue to West Bayshore Road (East Palo Alto)
6. Woodland Avenue from Newell Road to Clarke Avenue

Existing Year Traffic, Bicycle, and Pedestrian Conditions

The Existing Conditions (Year 2016¹) analysis was conducted for all of the study intersections, for the highest one-hour volume during the weekday a.m. and p.m. peak periods. Level of service (LOS) is an indicator of the operating performance of a road or intersection. It rates congestion and varies on a scale from LOS A to LOS F, where LOS A represents stable flow with very slight delay and LOS E represents unstable flow, poor progression, and long cycle lengths. At LOS F, an intersection is considered over capacity and operates at forced-flow, jammed conditions. In accordance with Caltrans criteria, the traffic analysis used LOS D or better (LOS A, B, C, or D) to indicate intersections that function or will function in the future at an “acceptable” level of performance, while LOS E or F indicate an “unacceptable” level of congestion. The acceptable LOS in the City of Palo Alto at signalized intersections is to maintain a “D” or better for non-Congestion Management Program Agency intersections and LOS E for Congestion Management Program intersections. At unsignalized intersections, the City of Palo Alto considers LOS D to be the minimum acceptable operations level. A project-generated increase in traffic is considered to be an impact if intersection operations degrade to LOS E or LOS F and the intersection satisfies the peak hour signal warrants from the California Manual of Uniform Traffic Control Devices.

For purposes of this analysis, LOS E or worse at unsignalized intersections along University Avenue are considered unacceptable. Based on the City of East Palo Alto 2016 General Plan, the acceptable LOS is also LOS D. The results of the LOS and delay analysis are presented in Table 2.1.4-1.

The CEQA significance thresholds for determining whether a transportation impact would occur are discussed in Chapter 3, *California Environmental Quality Act Evaluation*.

¹ 2016 was selected as the existing year because it was the year the lead agencies began analysis of the traffic following the filing of the Notice of Preparation in 2015.

Table 2.1.4-1. Existing Conditions (Year 2016) LOS and Delay Analysis

ID	Study Intersections	Control	Peak Hour	No Build Alternative		Build Alternative 1		Build Alternative 2 (LPA)		Build Alternative 3		Build Alternative 4	
				Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS
1	Newell Rd./ Edgewood Dr.	AWSC	AM	8.1	A	11.1	B	8.1	A	8.2	A	8.2	A
			PM	8.8	A	27.0	C	8.8	A	8.9	A	8.9	A
2	Newell Rd./ Channing Ave.	Signal	AM	15.5	B	15.5	B	15.5	B	15.5	B	15.6	B
			PM	15.7	B	15.7	B	15.7	B	15.7	B	15.7	B
3 ²	Newell Rd./ Woodland Ave. (South Leg)	AWSC	AM	7.7	A	6.3	A	7.7	A	7.7	A	7.9	A
			PM	9.5	A	5.1	A	9.6	A	9.6	A	9.4	A
	Newell Rd./ Woodland Ave. (North Leg)	AWSC	AM	8.1	A	23.1	C	8.2	A	8.1	A	-	-
			PM	9.2	A	14.0	B	9.3	A	9.3	A	-	-
4	University Ave./ Woodland Ave.	Signal	AM	37.8	D	37.8	D	36.8	D	36.9	D	37.0	D
			PM	41.3	D	41.3	D	40.5	D	40.7	D	40.9	D
5	University Ave./ E. Crescent Dr.	TWSC	AM	49.0	E	49.0	E	48.6	E	48.4	E	48.0	E
			PM	32.2	D	32.2	D	31.8	D	31.6	D	31.2	D
6	St. Francis Dr./ Embarcadero Rd.	Signal	AM	27.1	C	27.1	C	27.0	C	27.0	C	27.0	C
			PM	16.4	B	16.4	B	16.3	B	16.3	B	16.3	B
7	W. Bayshore Rd./Newell Rd.	OWSC	AM	10.3	B	10.3	B	10.3	B	10.3	B	10.3	B
			PM	11.4	B	11.4	B	11.4	B	11.4	B	11.4	B

Source: TJKM 2019a.

¹ Delay: Overall intersection delay in seconds per vehicle for signalized intersections. Delay for minor approach worst movement at unsignalized intersections.

² Newell Road/Woodland Avenue is a four-legged intersection for Build Alternative 4.

AWSC = All Way Stop Control; TWSC = Two-Way Stop Control; OWSC = One-Way Stop Control; LOS = level of service; LPA = Locally Preferred Alternative

Under the existing conditions (Year 2016) scenario, all of the study intersections operate within applicable jurisdictional standards of the Cities of Palo Alto and East Palo Alto (LOS D or better) during the a.m. and p.m. peak hours, with the exception of the University Avenue/East Crescent Drive intersection, which operates at LOS E during the a.m. peak hour.

Additional peak hour turning movements counts were conducted at the intersection of Newell Road and Woodland Avenue in 2019. Based on the comparison of turning movement counts from 2016 to 2019, the vehicular volumes in the a.m. peak period increased by approximately 11%, and in the p.m. peak hour, the volumes decreased by approximately 18%. In addition, the number of pedestrians and bicyclists using Newell Road Bridge has increased. Between 2016 and 2019, in the a.m. peak hour, the number of pedestrians using the bridge increased from 5 to 11 pedestrians and in the p.m. peak hour, pedestrians increased from 1 to 10 pedestrians. For bicyclists, between 2016 and 2019, in the a.m. peak hour, the number of bicyclists increased from 13 to 60 bicycles and in the p.m. peak hour, bicyclists increased from 3 to 27 bicycles. The increase in pedestrian and bicycle traffic can be attributed to the recent opening of the Clarke Avenue–Highway 101 Bicycle/Pedestrian Overcrossing Bridge in East Palo Alto (TJKM 2019b).

Access and Parking

Access to the portion of Newell Road within the Project site is provided via Edgewood Drive in Palo Alto, and via Woodland Drive in East Palo Alto. On-street parking is not permitted along Newell Road on the Palo Alto side of the creek; however, parking is permitted along Edgewood Drive. Parking in the vicinity of the Project site consists of approximately 27 unmarked on-street parking spots along Woodland Avenue and Newell Road on the East Palo Alto side of San Francisquito Creek.

2.1.4.3 Environmental Consequences

Construction Impacts

Build Alternatives

Construction impacts would be similar for all build alternatives. Construction work for all build alternatives would be done during allowed hours.² Construction of the Project would require closure of the existing Newell Road Bridge crossing for all build alternatives, which would temporarily affect access between the cities of Palo Alto and East Palo Alto. Newell Road on the Palo Alto side would be closed from Edgewood Drive to the existing crossing but would allow access to the southeast resident's driveway. As described under standardized measure SM-TR-1 below, a Traffic Management Plan (TMP) will be prepared and implemented during construction to provide public noticing of construction activities, traffic control implementation, signage, property and business access, parking, and safety during construction.

Closure of the existing Newell Road Bridge would cause traffic to be diverted to other bridge crossings. An analysis was conducted to assess impacts of redirected traffic. It is assumed that approximately 50% of the trips that use the Newell Road Bridge crossing under existing conditions would be diverted to the University Avenue crossing, which is the closest alternative crossing

² The allowed hours of construction are Monday through Friday, 8AM–6PM, Saturday 9AM–6PM in Palo Alto (Municipal Code 09.10.060) and Monday through Friday, 7AM–6PM, Saturday 9AM–5PM in East Palo Alto (Municipal Code 15.04.125). Both jurisdictions prohibit construction activities on Sunday/Holidays.

between East Palo Alto and Palo Alto. This percentage was based on professional judgement using reasonable assumptions as to how trips may be diverted depending on their potential origin and destination. It is assumed that the remaining trips would generally be dispersed at other existing creek crossings such as West Bayshore Road to/from Embarcadero Road or Channing Avenue, Pope Chaucer, or Middlefield Road. Because these other trips would be dispersed to several other intersections, the total number of additional trips in any one direction at each of these intersections would be nominal. However, the addition of 50% of trips at University Avenue was analyzed to determine whether a temporary impact would occur at this intersection due to the closure of Newell Road Bridge during construction. Table 2.1.4-2 shows the weekday a.m. and p.m. delay and LOS under existing 2018 conditions and existing conditions with the bridge closure.

Table 2.1.4-2. Bridge Closure (Year 2018) LOS and Delay Analysis

ID	Study Intersections	Peak Period	Existing (2018) Conditions		Existing Conditions + Bridge Closure Conditions	
			Delay	LOS	Delay	LOS
1	University Ave./Woodland Ave.	AM	37.4	D	40.0	D
		PM	41.3	D	46.2	D
2	University Ave./E. Crescent Dr.	AM	51.7	F	65.7	F
		PM	33.6	D	49.1	E

Source: TJKM 2019a.
LOS = level of service

Based on the LOS and delay analysis conducted, the closure of Newell Road Bridge during construction would cause the East Crescent Drive/University Avenue intersection to operate at unacceptable LOS E (where it currently operates at LOS D) during the p.m. peak hour. It would also cause a delay of more than 4 seconds during the a.m. peak hour (where this intersection already operates at unacceptable LOS F during the a.m. peak hour). Therefore, this would result in a temporary impact during construction.

Access for both Palo Alto and East Palo Alto will be maintained at other existing nearby crossings, as discussed previously.

On the East Palo Alto side, Woodland Avenue would have limited access during construction. The contractor would utilize one-lane traffic detours to the extent possible to assure passage along Woodland Avenue during construction. Complete closure of Woodland Avenue could occur intermittently under any of the build alternatives and would have impacts on parking for multi-family residential units. However, access for residents along Woodland Avenue in the study area would be maintained at all times.

Because on-street parking would be unavailable along a portion of Woodland Avenue in the City of East Palo Alto during construction, residents of the multi-family developments along Woodland Avenue and Newell Road may have to park farther away than they typically do during the period of construction. The construction zone could be established so that limited parking could be made available in the area during off hours and to maintain the maximum amount of existing parking available in the Project area. There would be no impact on on-street parking in the City of Palo Alto during construction because parking is not currently allowed on Newell Road within the proposed work area in Palo Alto.

The following describes the anticipated construction staging scenario and the associated on-street parking impacts. Impacts would be the same for all Build Alternatives.

- Stage 1: Bridge Reconstruction. Limited number of on-street parking spaces would be lost (approximately 5 spaces along Woodland Avenue) during this stage as all construction work would take place along the existing bridge structure and alignment.
- Stage 2: Construction work on the south side of Woodland Avenue. All parking on Woodland Avenue (approximately 15 spaces) would be unavailable during this stage.
- Stage 3: Construction work on the north side of Woodland Avenue. All parking on Woodland Avenue (approximately 15 spaces) would be unavailable during this stage.
- Stage 4: Construction work on East Palo Alto side of Newell Road. All parking on Newell Road (approximately 11 spaces) would be unavailable during this stage (Jeremias pers. comm.).

The actual construction staging scenario shall be determined during final design, coordinated by the construction contractor and the cities of Palo Alto and East Palo Alto, and consistent with the requirements detailed in the TMP. Furthermore, construction activities shall be coordinated with other nearby projects to reduce potential construction impacts, delays, and inconvenience related to on-street parking loss. Minimization measures have been developed to minimize on-street parking impacts during construction (Section 2.1.4.4 *Avoidance, Minimization, and/or Mitigation Measures*).

No Build Alternative

The No Build Alternative would have no effect on the transportation system because construction would not occur.

Operational Impacts

Pedestrian/Bicycle Facilities, Access, and Parking

Build Alternatives

Build Alternatives 1 through 4 would accommodate either a two-way single lane bridge or two 14-foot-wide shared lanes for use by vehicles and bicycles. This includes 10-foot-wide travel lanes for vehicles and 4-foot-wide shoulders for bicyclists, although bicyclists would be permitted to use the entire 14-foot-wide shared lanes. Five-foot-wide sidewalks or a 9-foot-wide raised mixed-use path on either side of the bridge would also be constructed to enhance pedestrian safety though the site for all build alternatives.

Build Alternative 1 would provide bicycle access across the bridge via shared vehicle/bicycle lanes (sharrows) (10-foot-wide travel lanes for vehicles and 4-foot-wide shoulders for bicyclists), but bicycles would only be allowed to travel in the same direction as the vehicle traffic. Control of bicyclist movement would rely on the ability/willingness of bicyclists to obey the traffic signals at each intersection.

Build Alternatives 2, 3, and 4 would include two options for bicycle access. Option 1 includes sharrows (10-foot-wide travel lanes for vehicles and 4-foot-wide shoulders for bicyclists) on both the northbound and southbound lanes of Newell Road. Option 2 would include the same 10-foot-wide travel lanes for vehicles but would include two 9-foot-wide, raised, mixed-use paths on either side of the bridge for bicyclists and pedestrians. This option would allow the curb to act as a barrier

between vehicles and bicyclists and pedestrians. Build Alternative 3 would provide an intersection where the centerline-to-centerline connection on Newell Road from Edgewood Road to Woodland Avenue would be almost aligned, which would improve sight lines for vehicles, pedestrians, and bicyclists entering the intersection. Build Alternative 4 would also provide a standard four-way intersection at Newell Road and Woodland Avenue, improving sight lines for vehicles, pedestrians, and bicyclists at the intersection.

Upon completion of construction, access between the neighborhoods on either side of San Francisquito Creek would be improved. Permanent on-street parking impacts would consist of the loss of one space under Build Alternatives 1 through 4 due to the new pedestrian sidewalk along the bridge approach along Woodland Avenue (Montes pers. comm.).

No Build Alternative

The No Build Alternative would have no effect on existing pedestrian facilities, nor would it create any new pedestrian or bicycle facilities within the study area.

Traffic Operations

Build Alternatives

The opening year scenario (Year 2020) and design year scenario (Year 2040) evaluates LOS for the No Build Alternative and each of the four build alternatives using newly collected data, and applying a growth rate of 1% per year. This is based on the *East Palo Alto General Plan Update*, dated April 2016, existing and projected 2040 information provided by the City of Palo Alto for the University Avenue/Woodland intersection, and is a standard anticipated growth rate based on best practices. In addition to the 1% assumed growth rate, Build Alternatives 2, 3, and 4 assume additional background trips generated by the Car Dealership Project on 1700 Embarcadero Road that would be added to the Saint Francis Drive/Embarcadero Road intersection, and the rerouting of the vehicles through the study area, to show a 3%, 5%, and 2% increase respectively in traffic through the Newell Road Bridge under these three scenarios. The 3%, 5%, and 2% assumptions regarding rerouting were based a conservative planning estimate to accommodate for the potential that improving and/or re-aligning the bridge would mean that some drivers who currently avoid the area could use the new bridge instead. The results of the LOS and delay analysis are presented in Tables 2.1.4-3 and 2.1.4-4.

Table 2.1.4-3. Opening Year Scenario (Year 2020) LOS and Delay Analysis

ID	Study Intersections	Control	Peak Hour	No Build Alternative		Build Alternative 1		Build Alternative 2 (LPA)		Build Alternative 3		Build Alternative 4	
				Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS
1	Newell Rd./ Edgewood Dr.	AWSC	AM	8.2	A	11.9	B	8.2	A	8.2	A	8.3	A
			PM	8.9	A	28.3	C	9.0	A	9.0	A	9.1	A
2	Newell Rd./ Channing Ave.	Signal	AM	15.6	B	15.6	B	15.6	B	15.9	B	15.9	B
			PM	15.8	B	15.8	B	15.7	B	16.1	B	16.1	B
3 ²	Newell Rd./ Woodland Ave. (South Leg)	AWSC	AM	7.7	A	6.4	A	7.7	A	7.8	A	8.0	A
			PM	9.7	A	5.3	A	9.8	A	9.8	A	9.8	A
	Newell Rd./ Woodland Ave. (North Leg)	AWSC	AM	8.1	A	24.3	C	8.2	A	8.2	A	-	-
			PM	9.4	A	14.3	B	9.5	A	9.5	A	-	-
4	University Ave./ Woodland Ave.	Signal	AM	38.3	D	38.3	D	38.4	D	38.5	D	38.6	D
			PM	42.4	D	42.4	D	42.6	D	42.8	D	43.2	D
5	University Ave./ E. Crescent Dr.	TWSC	AM	54.8	F	54.8	F	54.3	F	54.3	F	53.8	F
			PM	35.1	E	35.1	E	34.7	D	34.6	D	34.0	D
6	St. Francis Dr./ Embarcadero Rd.	Signal	AM	28.1	C	28.1	C	28.1	C	28.1	C	28.1	C
			PM	16.8	B	16.8	B	16.8	B	16.8	B	16.8	B
7	W. Bayshore Rd./Newell Rd.	OWSC	AM	10.4	B	10.4	B	10.6	B	10.4	B	10.4	B
			PM	11.6	B	11.6	B	11.6	B	11.6	B	11.6	B

Source: TJKM 2019a.

¹ Delay: Overall intersection delay in seconds per vehicle for signalized intersections. Delay for minor approach worst movement at unsignalized intersections.

² Newell Road/Woodland Avenue is a four-legged intersection for Build Alternative 4.

AWSC = All Way Stop Control; TWSC = Two-Way Stop Control; OWSC = One-Way Stop Control; LOS = level of service; LPA = Locally Preferred Alternative

Table 2.1.4-4. Design Year Scenario (Year 2040) LOS and Delay Analysis

ID	Study Intersections	Control	Peak Hour	No Build Alternative		Build Alternative 1		Build Alternative 2 (LPA)		Build Alternative 3		Build Alternative 4	
				Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS
1	Newell Rd./ Edgewood Dr.	AWSC	AM	8.6	A	12.7	B	8.7	A	8.7	A	8.7	A
			PM	9.7	A	32.7	C	9.8	A	9.8	A	9.8	A
2	Newell Rd./ Channing Ave.	Signal	AM	16.5	B	16.5	B	16.0	B	16.5	B	16.0	B
			PM	16.7	B	16.7	B	16.2	B	16.7	B	16.2	B
3 ²	Newell Rd./ Woodland Ave. (South Leg)	AWSC	AM	8.1	A	6.8	A	8.1	A	8.1	A	8.1	A
			PM	11.0	B	6.4	A	11.1	B	11.2	A	11.4	A
	Newell Rd./ Woodland Ave. (North Leg)	AWSC	AM	8.6	A	25.5	C	8.6	A	8.6	A	-	-
			PM	10.7	B	16.2	B	10.8	B	10.9	A	-	-
4	University Ave./ Woodland Ave.	Signal	AM	56.3	E	56.3	E	56.5	E	56.7	E	56.9	E
			PM	67.7	E	67.7	E	69.8	E	69.4	E	70.1	E
5	University Ave./ E. Crescent Dr.	TWSC	AM	110.5	F	110.5	F	108.5	F	108.6	F	107.4	F
			PM	66.6	F	66.6	F	64.7	F	64.5	F	63.2	F
6	St. Francis Dr./ Embarcadero Rd.	Signal	AM	40.7	D	40.7	D	40.7	D	40.7	D	40.7	D
			PM	20.2	C	20.2	C	20.2	C	20.2	C	20.2	C
7	W. Bayshore Rd./Newell Rd.	OWSC	AM	11.1	B	11.1	B	11.1	B	11.1	B	11.1	B
			PM	12.8	B	12.8	B	12.8	B	12.8	B	12.8	B

Source: TJKM 2019a.

¹ Delay: Overall intersection delay in seconds per vehicle for signalized intersections. Delay for minor approach worst movement at unsignalized intersections.

² Newell Road/Woodland Avenue is a four-legged intersection for Build Alternative 4.

AWSC = All Way Stop Control; TWSC = Two-Way Stop Control; OWSC = One-Way Stop Control; LOS = level of service; LPA = Locally Preferred Alternative

Under the opening year (Year 2020) scenario, all of the study intersections operate within applicable jurisdictional standards of the Cities of Palo Alto and East Palo Alto (LOS D or better) during the a.m. and p.m. peak hours, with the exception of the University Avenue/East Crescent Drive intersection, which is anticipated to operate at LOS F during the a.m. peak hour and LOS E during the p.m. peak hour under the No Build Alternative. Under Build Alternative 1, anticipated delay at the University Avenue/East Crescent Drive intersection would not change in comparison to the Year 2020 No Build Alternative and would remain at LOS F and LOS E, respectively, during the a.m. and p.m. peak hours. It should be noted that this scenario would result in further delays at other intersections, as shown in Table 2.1.4-3. While it would not cause other intersections to operate at an unacceptable level and therefore would not exceed the thresholds identified in Section 2.1.4.2, *Affected Environment*, it would result in increases in critical delay of more than 4 seconds at both the Newell Road/Edgewood Drive and the Newell Road/Woodland Avenue (north leg) intersections, causing the LOS to deteriorate during both the a.m. and p.m. peak hours at both of these intersections. Build Alternatives 2 through 4 would improve operations at the University Avenue/East Crescent intersection during both the a.m. and p.m. peak hours. Under the p.m. peak hour all three of these alternatives would reduce delay at the University Avenue/East Crescent intersection such that the intersection would operate at an acceptable level (LOS D). Although Build Alternatives 2 through 4 would nominally increase delay at other intersections in some cases, in most cases the Project would not affect delay, or would otherwise reduce delay in comparison with the Year 2020 No Build Alternative. Therefore, under Build Alternatives 1 through 4, the Project would not result in impacts on traffic operations under the opening year scenario.

Under the design year (Year 2040) scenario, all of the study intersections operate within applicable jurisdictional standards of the Cities of Palo Alto and East Palo Alto (LOS D or better) during the a.m. and p.m. peak hours, with the exception of the University Avenue/Woodland Drive and University Avenue/East Crescent Drive intersections. The University Avenue/Woodland Drive and University Avenue/East Crescent Drive intersections operate at LOS E or worse during the a.m. and p.m. peak hours for all study alternatives, including the No Build Alternative. Similar to the Year 2020 scenario, Build Alternative 1 would result in a critical delay of more than 4 seconds at both the Newell Road/Edgewood Drive and the Newell Road/Woodland Avenue (north leg) intersections, causing the LOS to deteriorate during both the a.m. and p.m. peak hours at both of these intersections due to the single lane bi-direction bridge design. However, these intersections would still operate at an acceptable level and, therefore, would not exceed the thresholds identified in Section 2.1.4.2, *Affected Environment*. Under Build Alternatives 2 through 4, the delay could nominally increase at some intersections, but in no case would the project cause a critical delay of more than 4 seconds at any of the study intersections. In most cases the delay would not change in comparison to the No Build Alternative, or would otherwise be reduced in comparison with the Year 2040 No Build Alternative. Therefore, the Project would not result in impacts on traffic operations under the design year scenario.

No Build Alternative

Future traffic conditions for the No Build Alternative are shown in Table 2.1.4-3 for the opening year scenario (Year 2020) and in Table 2.1.4-4 for the design year scenario (Year 2040). Similar to the build alternatives, under the opening year (Year 2020) scenario, all of the study intersections operate at LOS D or better during the a.m. and p.m. peak hours, with the exception of the University Avenue/East Crescent Drive intersection, which operates at LOS F during the a.m. peak hour and LOS E during the p.m. peak hour. Under the design year (Year 2040) scenario, all of the study intersections operate at LOS D or better during the a.m. and p.m. peak hours, with the exception of

the University Avenue/Woodland Drive and University Avenue/East Crescent Drive intersections, which operate at LOS E or worse during the a.m. and p.m. peak hours.

Traffic Infusion on Residential Environment Index

Residential areas tend to be especially sensitive to traffic because relatively small increases in traffic can impact the livability of the neighborhood. Traffic Infusion on Residential Environment (TIRE) is the measure of traffic impact on residents along a roadway. TIRE represents the effect of traffic on the safety and comfort of human activities, such as walking, bicycling, and playing on or near a roadway, and on the freedom to maneuver personal autos in and out of residential driveways.

The TIRE index is based on daily traffic conditions and uses average daily traffic (ADT) volumes to determine the amount of daily traffic that could be added to a roadway before residents would perceive the increase in traffic. The amount of daily traffic that can be added before residents would notice directly correlates to the amount of daily traffic already present on the roadway. The TIRE index scale ranges from 0 to 5, depending on daily traffic volume. An index of 0 represents the least infusion of traffic. An index of 5 represents the greatest traffic volume, and thereby the poorest residential environment. A roadway with a TIRE value of 3 or greater is considered to exhibit a significantly impaired residential environment. The projected difference between a pre- and post-project TIRE value is the predicted impact of the project on a residential environment. Any projected change of 0.1 or greater would be noticeable to residents. An increase in index of 0.10 corresponds to an approximate increase in ADT of between 20% and 30%.

Build Alternative

ADT for six roadway segments was collected, as mentioned in Section 2.1.4.2, *Affected Environment*. A TIRE analysis for the Existing Conditions (Year 2016), Opening Year (Year 2020), and Design Year (Year 2040) was conducted for the No Build Alternative and build alternatives. The results of the TIRE analysis for the Existing Conditions (Year 2016) are shown in Table 2.1.4-5, Opening Year (Year 2020) are shown in Table 2.1.4-6, and Design Year (Year 2040) are shown in Table 2.1.4-7. The results indicate that there is no increase on any of the roadways selected for the study under all build alternatives under any scenario. This indicates that reconfiguration of the Newell Road Bridge would not affect the residential homes in the neighborhood under any scenario, as the deviation of traffic on the bridge would not be substantial enough for the residents to notice the change or to affect the livability and environment of the study segments.

No Build Alternative

A TIRE analysis for the Existing Conditions (Year 2016) was conducted for the No Build Alternative. The results of the TIRE analysis for the Existing Conditions (Year 2016) are shown in Table 2.1.4-5. The results indicate that there is no increase on any of the roadways selected for the study under the No Build Alternative.

Table 2.1.4-5. Existing Conditions (Year 2016) TIRE Analysis

ID	Roadway	Segment	No Build Alternative and Build Alternative 1		Build Alternative 2 (LPA)		Build Alternative 3		Build Alternative 4		Volume to cause + 0.1 Change in Index Significant Impact?	
			Existing ADT	TIRE Index	Project Trips ¹	TIRE Index	Project Trips ¹	TIRE Index	Project Trips ¹	TIRE Index	Project Trips ¹	TIRE Index
1	Edgewood Dr.	From Newell Rd. to Island	582	2.8	5	2.8	10	2.8	15	2.8	140	No
2	Edgewood Dr.	Between Newell Rd. and Jefferson Dr.	434	2.6	0	2.6	10	2.6	10	2.6	97	No
3	Newell Rd.	Between Edgewood Dr. and Hamilton Ave.	3,425	3.5	60	3.5	95	3.5	150	3.5	825	No
4	Woodland Ave.	Between Cooley Ave. and Newell Rd.	4,144	3.6	60	3.6	95	3.6	155	3.6	1,025	No
5	Newell Rd.	Between Woodland Ave. and W. Bayshore Rd. (East Palo Alto)	1,805	3.3	0	3.3	0	3.3	0	3.3	500	No
6	Woodland Ave.	Between Newell Rd. and Clarke Ave.	1,314	3.1	10	3.1	10	3.1	25	3.1	290	No

Source: TJKM 2019a.

¹ For Build Alternatives 2, 3, and 4, rerouting of vehicles through Newell Bridge Road has been increased by 3%, 5%, and 2% respectively.

Daily Project Trips = (A.M. + P.M. Peak Hour Trips)*5

ADT = average daily traffic; LPA = Locally Preferred Alternative; TIRE = Traffic Infusion on Residential Environment

Table 2.1.4-6. Opening Year Conditions (Year 2020) TIRE Analysis

ID	Roadway	Segment	No Build Alternative and Build Alternative 1		Build Alternative 2 (LPA)		Build Alternative 3		Build Alternative 4		Volume to cause + 0.1 Change in Index Significant Impact?	
			Existing ADT	TIRE Index	Project Trips ¹	TIRE Index	Project Trips ¹	TIRE Index	Project Trips ¹	TIRE Index	Project Trips ¹	TIRE Index
1	Edgewood Dr.	From Newell Rd. to Island	606	2.8	5	2.8	10	2.8	16	2.8	140	No
2	Edgewood Dr.	Between Newell Rd. and Jefferson Dr.	452	2.7	0	2.7	10	2.7	10	2.7	114	No
3	Newell Rd.	Between Edgewood Dr. and Hamilton Ave.	3,562	3.6	62	3.6	99	3.6	156	3.6	1,025	No
4	Woodland Ave.	Between Cooley Ave. and Newell Rd.	4,312	3.6	62	3.6	99	3.6	161	3.6	1,025	No
5	Newell Rd.	Between Woodland Ave. and W. Bayshore Rd. (East Palo Alto)	1,878	3.3	0	3.3	0	3.3	0	3.3	500	No
6	Woodland Ave.	Between Newell Rd. and Clarke Ave.	1,367	3.1	10	3.1	10	3.1	26	3.1	290	No

Source: TJKM 2019a.

¹ For Build Alternatives 2, 3, and 4, rerouting of vehicles through Newell Bridge Road has been increased by 3%, 5%, and 2% respectively.

Daily Project Trips = (A.M. + P.M. Peak Hour Trips)*5

ADT = average daily traffic; LPA = Locally Preferred Alternative; TIRE = Traffic Infusion on Residential Environment

Table 2.1.4-7. Design Year Conditions (Year 2040) TIRE Analysis

ID	Roadway	Segment	No Build Alternative and Build Alternative 1		Build Alternative 2 (LPA)		Build Alternative 3		Build Alternative 4		Volume to cause + 0.1 Change in Index Significant Impact?	
			Existing ADT	TIRE Index	Project Trips ¹	TIRE Index	Project Trips ¹	TIRE Index	Project Trips ¹	TIRE Index	Project Trips ¹	TIRE Index
1	Edgewood Dr.	From Newell Rd. to Island	739	2.9	6	2.9	13	2.9	19	2.9	170	No
2	Edgewood Dr.	Between Newell Rd. and Jefferson Dr.	551	2.7	0	2.7	13	2.8	13	2.8	114	No
3	Newell Rd.	Between Edgewood Dr. and Hamilton Ave.	4,346	3.6	76	3.6	121	3.6	190	3.7	1,025	No
4	Woodland Ave.	Between Cooley Ave. and Newell Rd.	5,262	3.7	76	3.7	121	3.7	197	3.7	1,250	No
5	Newell Rd.	Between Woodland Ave. and W. Bayshore Rd. (East Palo Alto)	2,292	3.4	0	3.4	0	3.4	0	3.4	650	No
6	Woodland Ave.	Between Newell Rd. and Clarke Ave.	1,668	3.2	13	3.2	13	3.2	32	3.2	380	No

Source: TJKM 2019a.

¹ For Build Alternatives 2, 3, and 4, rerouting of vehicles through Newell Bridge Road has been increased by 3%, 5%, and 2% respectively.

Daily Project Trips = (A.M. + P.M. Peak Hour Trips)*5

ADT = average daily traffic; LPA = Locally Preferred Alternative; TIRE = Traffic Infusion on Residential Environment

2.1.4.4 Avoidance, Minimization, and/or Mitigation Measures

Implementation of the standardized measure (SM) and avoidance and minimization measures (AMM) listed in this section would reduce temporary access, circulation, and parking impacts of the Project caused by potential traffic delays and obstructed access during construction.

However, there is no feasible mitigation available to reduce the increased delay associated with diverted traffic at the East Crescent Drive/University Avenue intersection during construction. It is not feasible to keep the bridge open during construction due to the constricted area surrounding the bridge.

Access and Circulation

- SM-TR-1: A TMP will be prepared by the Project proponent or its contractor, approved by the City of Palo Alto, and will be implemented by the contractor during construction activities. The TMP will contain requirements for public noticing, traffic control implementation, signage, property and business access, parking, and safety during construction. It also will contain information about the construction schedule and detours.
 - Advance notice and coordination with businesses and property owners will be included in the TMP to minimize any potential temporary impacts on commute times.
 - Advance notice and coordination with emergency service providers will be included in the TMP to minimize any potential temporary impacts on response times.
- AMM-TR-1: Access along Edgewood Drive for the southeast resident's driveway will be maintained by the contractor at all times during construction.
- AMM-TR-2: On Woodland Avenue, the contractor will maintain one-lane of traffic to assure passage along Woodland Avenue during the majority of construction. When one-lane of traffic is not available, a detour route will be identified. The construction zone will be established such that the maximum amount of existing parking is available in the area during non-construction hours.³ Access for all residents on Woodland Avenue in the study area will be maintained throughout the construction period.

Parking

- AMM-TR-3: The City of Palo Alto shall coordinate with the City of East Palo Alto to identify nearby locations including private parcels where additional parking accommodations can be provided during construction.
- AMM-TR-4: During stages 2, 3, and 4 of construction, the contractor will make accommodations for nighttime parking during non-construction hours. This would include opening the work zone up for residents to park at night and utilizing head-in (perpendicular) parking rather than parallel parking in these areas.

³ The allowed hours of construction are Monday through Friday 8AM–6PM, Saturday 9AM–6PM in Palo Alto (Municipal Code 09.10.060) and Monday through Friday 7AM–6PM, Saturday 9AM–5PM in East Palo Alto (Municipal Code 15.04.125). Both jurisdictions prohibit construction activities on Sunday/Holidays.

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2.1.5 Visual/Aesthetics

2.1.5.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). To further emphasize this point, the Federal Highway Administration, in its implementation of NEPA (23 USC 109[h]), directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including, among others, the destruction or disruption of aesthetic values.

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of aesthetic, natural, scenic and historic environmental qualities” (California Public Resources Code Section 21001[b]).

2.1.5.2 Affected Environment

The information in this section is from the *Visual Impact Assessment* (April 2018). The Visual Impact Assessment assesses potential visual impacts of the proposed Newell Road Replacement Project (Project) based on guidance outlined in the *Visual Impact Assessment for Highway Projects* published by the Federal Highway Administration (1988).

Project Setting

The Project is located in Santa Clara and San Mateo counties, within the San Francisco Bay Region of California. The landscape in the vicinity is characterized by dense urban and suburban development on valley bottoms and along the San Francisco Bay shoreline, woodlands and grasslands covering the hills and mountains visible from many locations, and large expanses of open water of San Francisco Bay and the Pacific Ocean. The Santa Cruz Mountains form the background beyond the urban area and block views to the ocean and valleys beyond. The flat expanse of San Francisco Bay allows views across it and to the communities and mountains on the opposite side. These landscape views are strongly characteristic of the Silicon Valley and have contributed to the regional identity.

The Project corridor is defined as the area of land that is visible from, adjacent to, and outside the roadway right-of-way (ROW), and is determined by topography, vegetation, and viewing distance. The land use within the corridor is primarily suburban residential, with one story, single-family homes in Palo Alto and mostly two- to three-story, multi-family housing in East Palo Alto. The existing Newell Road Bridge consists of a narrow, one-lane bridge with solid concrete parapets. The portions of the parapets that cross the creek have four rectangular recesses on each side of the bridge that provide some architectural relief to the parapet. However, the parapets are aged; the surfaces varies from being exposed concrete to being painted with two different shades of gray; and they have signs of damage such as cracks, portions of missing concrete, and marks and scrapes from car strikes. The bridge deck is paved with asphalt and there is no roadway striping over the bridge.

The tree canopy dominates many views within the immediate vicinity of the Newell Road Bridge. The trees and landscaping also provide diversity and continuity in views throughout the area, and vary in form, dominance, and scale, depending on the location, distance, and angle of the viewer.

Mature trees along the portion of Newell Road in Palo Alto provide good canopy cover that shades much of the street but younger ginkgo trees along the north side of the street create a break in the canopy cover resulting in sunny areas along this segment of roadway. The entire bridge is covered by the canopy of mature trees along the creek, resulting in shade and dappled sunlight on the bridge. The portion of Newell Road in East Palo Alto is not as densely vegetated as the Palo Alto side and the street trees are not as mature, resulting in more open, brighter conditions along this segment of roadway. Overall, however, the tree canopy provides a mostly enclosed, pedestrian-scale environment that is visually appealing. In addition to the mature tree canopy, residential landscaping associated with single- and multi-family residences contributes to an attractive project corridor. However, the multi-family housing and associated parking lots and driveway aprons along the project corridor exhibit less vegetative cover. Views provide seasonal interest such as in the winter and spring when vegetation is in active growth and most plants are in bloom versus the summer and fall when vegetation fades, turns color, or provides a display of fruit or seed. In addition, evergreen species provide greenery year-round. From the bridge itself, the creek extends upstream and downstream along Woodland Avenue and provides a natural visual character in contrast to the developed character of the surrounding residences. The creek is seasonally dry in the summer, exposing a dirt and graveled bed, with bank protection made of sacked concrete bags that are overgrown in many places with Himalayan blackberry and ivy. Sidewalks are present within the Project corridor except over the bridge, on the southern side of Woodland Avenue, and on the north side of Woodland Avenue near the Woodlands Newell Apartments Community Center and Clarke Avenue.

Other visible, built elements that contribute to the existing visual environment and character of the project corridor include parking lots and driveway aprons, as well as other human-made elements typically found in residential areas, such as paved roadways, sidewalks, curbs, gutters, signage, utility poles, and street lights. Sacrete retaining walls are located along the banks of the creek. These retaining walls are mostly visible to passing pedestrians because the bridge railing and vegetation along the top of bank limit most views to passing drivers. The retaining walls are weathered and overgrown with vines and moss, so they blend fairly well with the natural creek corridor. On the south side of the Project site, utility lines are underground and not visible. However, vertical utility poles and overhead utility lines are common visual elements found in the landscape within the City of East Palo Alto. Lighting in the project corridor is associated with interior and exterior residential lighting and vehicle headlights. Minimal street lighting is present and is directed downwards towards the roadbed and sidewalks. The project corridor is fairly well-lit, except for open space areas and within the creek.

Development densities and building heights differ on either side of the bridge, detracting slightly from the uniformity of views along the Project corridor; however, the dense, mature tree canopy; residential landscaping; and riparian corridor serve to create more uniformity and intactness and improve views associated with the Project corridor and contribute to a vividness, intactness, and unity that are moderate-high. The resulting existing visual quality is moderate-high.

There are no scenic routes designated in federal or state plans as scenic roadways or corridors worthy of protection for maintaining and enhancing scenic viewsheds (California Department of Transportation 2017). University Avenue, just east of the Project corridor, is a Palo Alto-designated scenic roadway (City of Palo Alto 2017). There are no city-designated scenic routes in East Palo Alto (California Department of Transportation 2017). In addition, there are no scenic vistas because

terrain, surrounding development, sound walls, and mature trees and shrubs limit views to the immediate foreground and prevent expansive views out and over the landscape.

Viewer Groups and Viewer Response

Neighbors (people with views *to* the Project area) and *roadway users* (people with views *from* the Project area) would be affected by the proposed Project. For the purposes of this Visual Impact Assessment, *neighbors* include the residents of single and multi-family homes in Palo Alto and East Palo Alto on either side of the Newell Road Bridge within viewing distance of the proposed Project. This includes residents of single and multi-family homes, condominium or apartment dwellers, and others who occupy permanent shelter. They can be owners or renters, tend to be permanent rather than transitory, and are anticipated to have high visual sensitivity because of their familiarity with and proximity to the Project site. Neighbors' views of the Project vary based on location within the landscape and distance from the Project site. Most roadway neighbors do not have immediate and direct views of the Project site (views are limited by development, vegetation, topography, etc.) except for those that are directly adjacent to the affected area. Roadway neighbors have a cumulative moderate degree of exposure. Immediately adjacent residents have high exposure in low numbers, while surrounding residents have moderate exposure in moderate numbers.

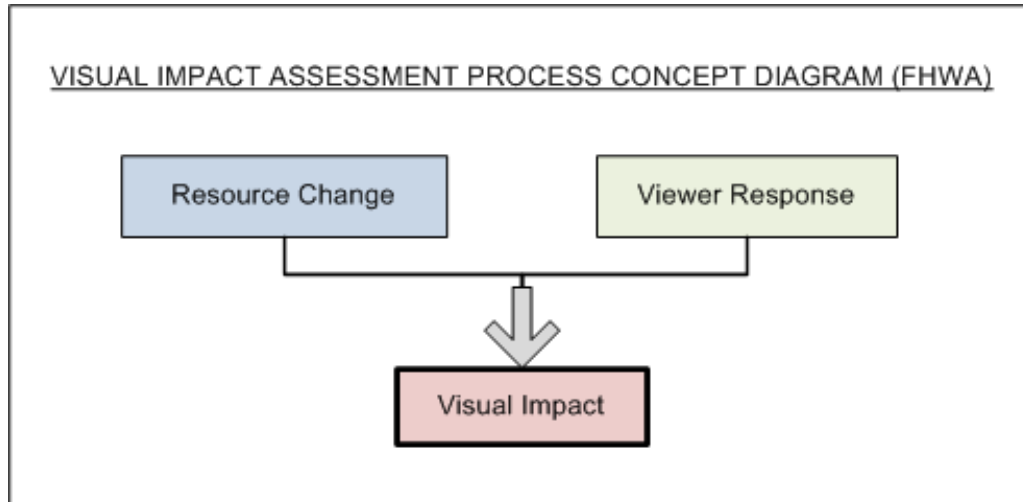
Roadway Users include local commuters traveling to and from work, recreational travelers, pedestrians, cyclists, motorists, and other roadway users that utilize various modes of transportation for commuting, touring, and the shipment and delivery of mail and goods to local residences. Pedestrians use only their feet (or a wheelchair or other device), most often on a sidewalk or trail. Cyclists use bicycles at greater speeds than pedestrian travel, and may use trails, traffic lanes, and sidewalks. Motorists use vehicles with engines (e.g., cars, trucks, buses, motorcycles, mopeds, or any other technology that is not self-propelled, regardless of fuel source). Motorists move at higher speeds than other groups. Depending on speeds, drivers and other roadway travelers are able to take in brief to longer views of the scenery around them. By necessity, the driver of a motor vehicle focuses less on the view outside the vehicle. Although drivers are focused on driving and safety and use trees and familiar landmarks (development, utilities, signage, built elements) as resources for wayfinding, they are likely to enjoy the quality of views provided by the well-kept residential area and the mature tree canopy. Pedestrians are focused on commuting or their associated recreational activity, but tend to take in and enjoy their surroundings. Cyclists pass through the area more quickly, but also enjoy their surroundings. Because most users are intimately familiar with the area, they are considered to have high visual sensitivity over views. It is anticipated that the average response of all viewer groups would be moderate-high, however, due to a lower number of viewers.

2.1.5.3 Environmental Consequences

Visual Resources and Resource Change

Visual resources of the Project setting are defined and identified by assessing *visual character* and *visual quality* in the Project corridor. *Resource change* is assessed by evaluating the visual character and the visual quality of the visual resources within the Project corridor before and after the construction of the proposed Project. Trees along the San Francisquito Creek (creek) corridor, street trees, and residential landscaping form a dense tree canopy within the Project corridor which is captured in the key views selected for the proposed Project and depicted in Key View 1 and Key View 2 in Figure 2.1.5-1.

Visual impacts are determined by assessing changes to visual resources and predicting viewer response to those changes. These impacts can be beneficial or detrimental. A generalized visual impact assessment process is illustrated in the following diagram.



The table below provides a reference for determining levels of visual impact by combining resource change and viewer response.

Table 2.1.5-1. Visual Impact Ratings Using Viewer Response and Resource Change

		Viewer Response (VR)				
		Low (L)	Moderate-Low (ML)	Moderate (M)	Moderate-High (MH)	High (H)
Resource Change (RC)	Low (L)	L	ML	ML	M	M
	Moderate-Low (ML)	ML	ML	M	M	MH
	Moderate (M)	ML	M	M	MH	MH
	Moderate-High (MH)	M	M	MH	MH	H
	High (H)	M	MH	MH	H	H

Key views, shown on Figure 2.1.5-1, have been chosen for their representation of views associated with Palo Alto and East Palo Alto and those viewers affected.



Figure 2.1.5-1. Key View Locations

The visual character of the proposed Project would be somewhat compatible with the existing visual character of the corridor.¹ The proposed bridge would be made of the same materials as the existing bridge and would have concrete bridge railings and a paved deck; once these new materials weather, the proposed bridge would have a similar color to the existing bridge. Rectangular openings in the bridge railing would be reminiscent of the rectangular recesses in the existing parapet. The one-lane bridge under Build Alternative 1 would be slightly wider in total width than the existing bridge (26 feet versus 22 feet) even though the travel way on the bridge would be narrower (16 feet versus 18 feet). Build Alternatives 2 through 4 would be nearly twice as wide to accommodate a two-lane bridge (28 feet wide travel way and 38 feet wide with sidewalks or a mixed-use path). The alignment for Build Alternatives 1 and 2 would remain the same as the existing bridge. The alignment would shift approximately 30 degrees so that the northern abutment would shift westward approximately 30 feet for Build Alternative 3 and be most pronounced and notable, shifting the northern abutment 90 feet to the west from its current location under Build Alternative 4. The concrete retaining walls along the creek would be removed and replaced with rock slope protection or soil nail walls. This would likely be more visible to passersby due to vegetation removal opening up views toward the creek. The proposed retaining walls along Newell Road North that are needed to accommodate the higher roadway surface of the bridge would create a taller wall surface that hinders views to opposite sides of the road and would be more visually intrusive under Build Alternative 4 than under Build Alternatives 1–3, which propose shorter retaining walls. The new rock slope protection and retaining walls also would increase the amount of hardscape seen along the project corridor.

The texture of the Project corridor would be altered under Build Alternatives 1–3 because all three alternatives would affect the same 23 trees through removals and trimming.² The tree canopy would be slightly reduced where trimming occurs, but the remainder of the canopy would not be affected. However, tree removal would completely remove the canopy, remove the shading that canopy provides, remove the aesthetic qualities provided by the impacted trees, make views more open and bright, and slightly increase glare, when seen from both Palo Alto and East Palo Alto. As many as 10 trees could be removed under Build Alternative 1, 12 trees could be removed under Build Alternative 2, and 14 trees could be removed under Build Alternative 3, which would create a more open view corridor from Newell Road in Palo Alto toward the portion of the Woodlands Newell Apartments along Woodland Avenue in East Palo Alto. However, trees and vegetation associated with the Woodlands Newell Apartments facing Newell Road would remain, continuing to provide some amount of tree canopy. The view corridor from East Palo Alto would also become more open due to vegetation removal, but trees beyond the area of impact along the creek would be visible, in addition to trees associated with residential landscaping on the Palo Alto side. Residential structures on the Palo Alto side would not be readily visible from East Palo Alto, though, because the raised bridge would obscure most views of the structures. Tree and vegetation removal would also act to increase the prominence of development and roadway infrastructure because the dense, enclosed tree canopy would no longer be present to reduce their apparent scale through vegetative screening, canopy cover, and shading so that structures recede more into views. Build Alternative 4 would only affect two additional trees. However, a total of 18 trees would be removed and the additional tree removal, coupled with the shifted alignment, would create a more open corridor than Build

¹ Design decisions will be made during final design of the Project and will be approved by the City of Palo Alto Architectural Review Board and City Council.

² The total number of trees affected may be slightly more or less than the numbers presented in this analysis based on the final project design.

Alternatives 1–3 because it would allow for additional views from Newell Road in Palo Alto toward portions of the Woodlands Newell Apartments along both Woodland Avenue and Newell Road in East Palo Alto. Build Alternative 4 would reduce shading and increase glare that is present along the Project corridor to a greater degree than Build Alternatives 1–3. The proposed Project would be consistent with the applicable rules, regulations, standards, and policies relating to visual elements and aesthetic quality within the Project area, such as the City of East Palo Alto General Plan and the Palo Alto Comprehensive Plan—Land Use and Community Design. However, as described above, all build alternatives would require tree removal. Therefore, the Project would be required to comply with the City of Palo Alto and City of East Palo Alto tree ordinances. The Palo Alto tree ordinance refers to the City's *Tree Technical Manual* guidance on when tree replacement is required. Tree replacement numbers are based on canopy size (see Table 3-1 in Section 3-4 of the *Tree Technical Manual*) and are specified by the Director or the Director's designee when protected or designated trees are removed and by the terms of the permit for street trees (City of Palo Alto 2001). Section 18.28.40 of the East Palo Alto Development Code identifies that trees removed will need to be replaced by tree(s) of equivalent value or an in-lieu fee will need to be paid (City of East Palo Alto 2017). In addition, MM-AES-4 would ensure that street trees and trees and shrubs along the tops of the creek's banks are replaced to minimize the visual effects of the project.

Changes to the visual character of Project corridor associated with each build alternative would result in changes to the existing visual quality, which is moderate-high and would be altered to varying degrees by the proposed Project. Views and the visual quality associated with the Project corridor would be somewhat degraded under Build Alternative 1, represented by Key View 1 and Key View 2 (Figures 2.1.5-2 and 2.1.5-3), but are somewhat harmonious because the narrower bridge is visually similar to and in keeping with the existing bridge. Vegetation removal and trimming would affect the tree canopy and open up views down across the bridge and down the roadway corridors under Build Alternative 1. Build Alternative 1 would also require signalization that would introduce traffic lights and vertical utilities into views associated with Palo Alto and East Palo Alto. Views and the visual quality associated with the Project corridor under Build Alternatives 2 and 3 are similar, represented by Key View 1 and Key View 2 (Figures 2.1.5-4 through 2.1.5-7) for each of the build alternatives. Like Build Alternative 1, Build Alternatives 2 and 3 would also be slightly degraded because the two-lane bridges would open up views from Palo Alto to East Palo Alto due to vegetation removal and views to the bridge would be more apparent from East Palo Alto. While there would be slightly more vegetation removal under Build Alternative 3 than under Build Alternative 2, the difference is not visually notable and both build alternatives would have the same degree of visual effect. While views would be slightly more exposed under Build Alternatives 2 and 3 than under Build Alternative 1, Build Alternatives 2 and 3 would not require traffic lights, reducing visual intrusions associated with Build Alternative 1. Therefore, the changes to visual quality are relatively the same under Build Alternatives 1–3. Although the unity would remain much the same, the vividness and intactness would be reduced from moderate-high to moderate, and the resulting visual quality for these build alternatives would also be reduced from moderate-high to moderate. Views and the overall visual quality would be altered the most by Build Alternative 4, represented by Key View 1 and Key View 2 (Figures 2.1.5-8 and 2.1.5-9). The shifted two-lane bridge would require the greatest modification to the roadway alignment and the greatest amount of vegetation removal. This would create a much more open and bright corridor than Build Alternatives 1–3 and would expose views of the Woodlands Newell Apartments along both Woodland Avenue and Newell Road in East Palo Alto. In addition, views toward the bridge and Palo Alto would be more open and bright when seen from East Palo Alto. Therefore, the vividness, intactness, and unity would be

reduced from moderate-high to moderate and the overall visual quality would be reduced from moderate-high to moderate-low under Build Alternative 4.

Resource change (changes to visual resources as measured by changes in visual character and visual quality) would be moderate for Build Alternatives 1–3 during the short-term until replacement plantings, specified in Mitigation Measure (MM) AES-4 can mature. As the replacement planting matures and the canopy is replaced, the visual character would regain some of its existing qualities associated with shading and creating an enclosed, intimate streetscape that would result in long-term resource change that is moderate-low. Build Alternative 4 would result in a resource change that is moderate for the short- and long-term because, even with mitigation, the tree canopy would not provide the sense of enclosure because view corridors would remain open and more development would be visible due to the bridge and roadway intersection realignment in East Palo Alto. Primary visual resource changes associated with the proposed Project would be dependent on the Build Alternative selected and would be attributed to the introduction of new vertical utilities and lighting under Build Alternative 1 and vegetation removal and the new replacement bridge (including its revised profile, adjustments to its alignment, overall geometrics, and associated roadway/sidewalk/mixed-use path improvements associated with each Build Alternative) under all build alternatives. Other visual changes include the proposed improvements along the Palo Alto and East Palo Alto sides of Newell Road (approximately 500 feet total) and along Woodland Avenue (approximately 350 feet), which would include the construction of retaining walls, potential roadway realignments, sidewalk improvements, roadway striping, and the adjustment/relocation of existing street lights and power poles. These changes, as depicted in the visual simulations, can be accomplished without substantial visual impacts throughout the Project corridor. Thus, Build Alternatives 1–3 would somewhat alter the visual character or quality of views when compared to existing visual conditions and Build Alternative 4 would have a greater affect. Since the visual character of the bridge would be in keeping with the existing visual character of residential areas in Palo Alto and in East Palo Alto that surround the Project corridor, Project activities would not be great enough to constitute a major visual resource change over the long-term for most viewers once mitigation plantings mature even though visual changes would be noticeable.

Construction Impacts

Build Alternatives

Construction of the proposed Project would last approximately 12 months total, with a full road closure of Newell Road Bridge between Edgewood Drive and Woodland Avenue during this time. Therefore, roadway users would be removed from this portion of the Project corridor during construction, but roadway neighbors would still be able to see construction activities. The residence located at 475 Newell Road, which has driveway access to Newell Road in Palo Alto, would continue to have access to their driveway during construction. Roadway neighbors located on the detour route would not see construction activities but would see a temporary increase in local traffic along the detour route. Visual barriers associated with MM-AES-1 would not be installed along detour routes because the visual changes associated with minor traffic increases are not likely to be very noticeable and the introduction of visual barriers would create a negative visual effect along detour routes. Because the proposed Project would take less than 2 years to construct, visual presence of construction activities and detour traffic is considered temporary. Nighttime construction would not occur; therefore, high-intensity lighting for illuminating construction activities would not be needed.

Equipment that would be used for construction includes graders, excavators, backhoes, pavers, compactors, and various types of construction vehicles/trucks. Under all Build Alternatives, general construction activities, construction staging/stockpiling, the storage of building materials, the presence of construction equipment, and temporary traffic barricades would result in temporary visual impacts by altering the composition of the viewsheds throughout the Project corridor. However, construction activities would be temporary in duration and would be governed by city, state, and federal regulations and standards designed to minimize their potential to affect adjacent sensitive uses in significantly adverse ways. Construction activities would comply with the applicable regulations, standards, and policies outlined in guidance documents such as the City of East Palo Alto General Plan and the *Land Use and Community Design Element* of the Palo Alto Comprehensive Plan. Construction staging and laydown areas occurring on Newell Road between Woodland Avenue and Edgewood Drive would be located within the roadway ROW. The residence in the City of Palo Alto that is west of Newell Road is separated from the area that may be used as staging by privacy fencing and dense landscaping, so would not likely be affected by construction staging. However, views seen by the residence in the City of Palo Alto that is east of Newell Road and roadway users and recreationists passing by the intersection of Newell Road and Edgewood Drive would be disrupted by construction staging at this location. In East Palo Alto, residents located in the apartments along Newell Road that are closest to Woodland Avenue and roadway users and recreationists passing by could have disruptive views of staging areas if they are located along this portion of the roadway corridor. MM-AES-1 would ensure that staging areas are screened, minimizing the amount of visual disruption caused by construction staging.

Active construction areas would primarily occur within street ROWs and would have construction signs and barricades to delineate the work zone and partially screen construction activities available to nearby viewers that have unobstructed lines of sight to the Project area. Visual changes due to construction signaling, signage, and surface glare may occur, though they are not considered to be adverse due to their temporary nature. MM-AES-1 would ensure that staging areas are maintained in a clean and orderly manner throughout the construction period. Due to residential/neighboring viewers' familiarity with the existing bridge and thru-traffic, negative visual effects are expected to occur, but because of the temporary nature of construction these effects would be temporary.

Visual changes resulting from the proposed Project are depicted in simulations prepared for the Project, discussed below by build alternative, and shown in Figures 2.1.5-2 through 2.1.5-9. The proposed Project would remove the existing bridge; construct new approaches, and accommodate bicycle and pedestrian travel (including sidewalk and potential road widening for sharrow or a mixed-use path); add and reconfigure utilities including street lighting; modify street signage; add retaining walls; and stabilize creek bank disturbed by the construction. Construction would also require the removal of trees to accommodate grading to stabilize the creek banks and the widened bridge structure and roadway approaches. This would create a project corridor that is more open and bright. The Project would be required to comply with the City of Palo Alto and City of East Palo Alto tree ordinances, which would specify tree replacement as a condition of the permits. In addition, MM-AES-4 would ensure that street trees and trees and shrubs along the tops of the creek's banks are replaced to minimize the visual effects of the project. Although visual changes resulting from the Project would not be minimized over the short-term, on-site mitigation would ensure that long-term visual changes are minimized as the replacement vegetation matures to largely replace the canopy that would be lost during construction. The concrete retaining walls along the creek would be removed and replaced with rock slope protection or soil nail walls. This would likely be more visible to passersby due to vegetation removal opening up views toward the creek.

Even though this would not be readily visible to many viewers, the proposed bank protection would increase the amount of hardscape seen along the project corridor to those that do see it. Instead of a weathered sacrete wall that is partially covered in moss and vines, a hardscaped surface that is devoid of vegetation would be present. This would change the visual character of the affected segment of creek by creating a more engineered looking creek channel, as opposed to a more naturalized creek channel. Once the proposed bank protection weathers and vegetation colonizes interstices in the bank protection, it would not appear as stark.

The roadway profile of the new bridge would be raised approximately 1.6 feet higher than the existing bridge in order to provide a higher bridge clearance over the creek and improve flood hazard for the adjacent communities. Roadway approach work would be required at each end of the bridge in order to transition from the new bridge profile and geometry to the existing roadway. On the Palo Alto side of the bridge, the residence along the east side of Newell Road that is closest to the bridge, 475 Newell Road, would have a portion of its driveway demolished and reconstructed as a result of the Project. In addition, the sidewalk would be relocated closer to this residence's fence line, requiring the removal of shrubbery lining their fence and planted in between the existing roadway and sidewalk. The fence would not be affected, but removal of the shrubbery would negatively affect this residence and passersby. In addition, formal landscaping planted between the sidewalk and curb and also between the sidewalk and the residential fence line along the west side of Newell Road, which is associated with 1499 Edgewood Drive, would also be affected by construction, slightly reducing the quality of views along this segment of roadway for all viewer groups. MM-AES-2 would relocate or replace affected landscaping, fencing, and other landscape features to the degree possible, reducing visual impacts. The presence of vertical and horizontal hardscape features would also increase due to the railings needed to provide safety barriers at the top of retaining walls, inclusion of sidewalks across the bridge, and taller bridge railings. The railings create the appearance of fencing and the increased presence of the railings would impact existing views by replacing vegetation with fencing and increasing the dominance of fencing in the area. However, the proposed fencing would be largely in keeping with the existing residential fencing and it would have gaps that would allow for vegetation to be seen beyond the proposed fencing, minimizing effects. Bridge surfaces would also slightly increase glare levels along the Project corridor. MM-AES-3 would apply aesthetic treatments to bridge, wall surfaces, and fences, improving Project aesthetics and reducing visual impacts and the potential for glare. Specific aesthetic treatments will be determined during final design and in coordination with the City of Palo Alto Architectural Review Board. Lastly, the plantable area between the roadway and sidewalks would be enlarged on the Palo Alto Side, creating geometrically shaped islands of grass that taper down to meet the existing planter strips. These larger grassy areas could take on a degraded visual appearance if not properly maintained. Therefore, in addition to measures specified in Section 2.3, *Biological Resources*, MM-AES-4 would reduce the apparent scale of vertical features by introducing Project streetscaping that would be planted within the roadside planter strips and would improve Project aesthetic by improving the visual quality of planter strips through landscaping.

On the East Palo Alto side of the bridge, Woodland Avenue would also be raised to meet the higher bridge profile and would require approximately 300 feet to conform to the existing roadway to the east and west of the bridge. The bridge sides would appear more prominent than existing conditions. Safety railing that creates the appearance of fencing would also be needed on the East Palo Alto side of the bridge and increase the prominence of railings on this side of the bridge. In addition, approximately 125 feet of improvements (ramps to apartments, curb and gutter modifications, intersection signalization, etc.) and retaining walls would be required on the east and

west sides of Newell Road to limit the ROW needs for the Project. These retaining walls would range from approximately 1 foot to just over 2 feet tall in exposed height and would be taller near Woodland Avenue, decreasing in height as the wall meets existing grade along Newell Road. Residents living in Building 1 of the Woodlands Newell Apartments (1761 Woodland Avenue) and Woodland Park Apartments building at 5 Newell Road would see the short walls, but the walls would not be tall enough to enclose or block existing views.

In addition, the construction of the retaining walls in front of Building 1 of the Woodlands Newell Apartments would require that landscaping be removed in front of the apartments, degrading visual resources at this location. Two entry walks—one leading to a shared entrance patio for two apartments and one leading to a single apartment entrance—associated with the Building 1 apartments would need to be reconstructed to build ramps to provide Americans with Disabilities Act (ADA)-compliant access to the building. Construction of the ramp would require that some of the mulched area on either side of the existing walkway would be converted to a ramp. Plantings are sparse and widely spaced in the mulched bed. However, a small number of individual plants may need to be removed to accommodate the ramp. Retaining walls would also be needed along the north side of Woodland Avenue to support the raised roadway. The tallest portions of this retaining wall segment would be roughly as high as the existing wooden fence that lines the sidewalk in front of the community center, along Woodland Avenue. Raising the grade at this location would elevate the roadway surface so that vehicles on the road would be roughly at eye level, when seen from the community center, making traffic more visible. However, there are no public use spaces (seating or gathering areas) in front of the community center, so the portion of the community center facing Woodland Avenue primarily receives intermittent viewers entering and exiting the community center building through that entrance. The elevated roadway surface would also be visible from the four windows on the southern wall surface of Building 1. Therefore, it is anticipated that only a small number of people would see views from these windows and it is not anticipated that views from these windows serve as primary focal points from within residences. Therefore, it is likely that changes to views from these windows would not be greatly affected by the changes in roadway elevation and the addition of a retaining wall at this location. The paved driveway and entry walk of the Woodlands Newell Apartments Community Center would also need to be reconstructed to build a ramp to provide ADA-compliant access. MM-AES-2 would relocate or replace affected landscaping, fencing, and other landscape features to the degree possible, reducing visual impacts. In addition, MM-AES-3 would apply aesthetic treatments to bridge, wall surfaces, and fencing, improving Project aesthetics and reducing visual impacts and the potential for glare. MM-AES-4 would improve Project aesthetic by improving the visual quality of planter strips along Newell Road through landscaping.

The proposed Project also includes several minor utility relocations, including street light and power poles, and retaining wall improvements. One street light on the Palo Alto side along Newell Road would be impacted by the proposed roadway improvements and would need to be removed and replaced at the same location to meet the new grades. On the East Palo Alto side, street lights are integral with the overhead electrical poles. Therefore, relocation would correspond with the overhead electrical pole work. Overhead street lighting could negatively affect sensitive receptors if the replaced lighting is modified to include light-emitting diode (LED) lighting that is not properly designed. In particular, LED lighting can negatively affect humans by increasing nuisance light and glare, in addition to increasing ambient light glow, if proper shielding is not provided and blue-rich white light lamps are used (American Medical Association 2016; International Dark-Sky Association 2010a, 2010b, 2015). Studies have found that a 4000 Kelvin white LED light causes approximately 2.5 times more pollution than high pressure sodium lighting with the same lumen output, which

would affect sensitive receptors, and more than double the perceived brightness of the affected night sky (Aubé et al. 2013; Falchi et al. 2011, 2016). This would result in a substantial source of nighttime light and glare that would adversely affect nighttime views in the area if lighting is not properly designed and shielding is not employed. These improvements, and associated visual changes, are common to all of the Build Alternatives and would not substantially degrade visual resources associated with the Project corridor when factored with the applied MM-AES-5 that would offset negative visual changes associated with modified street lighting resulting from the proposed Project.

The proposed Project elements constructed under all build alternatives would not impede sightlines to the tree canopy, trees, neighboring vegetation in the Project area, or any other visual resources within the Project corridor, such as the creek (if/where visible). Upon completion of Project construction, the visual character and quality of the existing Project corridor and surrounding residential areas in both Palo Alto and East Palo Alto would be reduced to a degree. However, the proposed mitigation measures would ensure the Project impacts are reduced, improving Project aesthetics.

Visual changes resulting from construction that are unique to each build alternative are discussed below. The mitigation measures proposed would be applied to all build alternatives to ensure the Project impacts are reduced, improving Project aesthetics.

Build Alternative 1

Visual changes resulting from Build Alternative 1 are depicted in the simulations for Key View 1 and Key View 2 (Figures 2.1.5-2 and 2.1.5-3). Up to 10 trees would be removed under Build Alternative 1 to accommodate construction. The roadway profile of the new bridge would be raised and the roadway approaches would be modified to transition from the new bridge profile and geometry to the existing roadway. The driveway that would be demolished and reconstructed, sidewalk relocation, and landscaping changes at 475 Newell Road are visible in Key View 1 in Figure 2.1.5-2. As shown in the simulation of Key View 2 in Figure 2.1.5-3, the bridge sides on the East Palo Alto side of the bridge would be fully visible and appear more prominent than existing conditions. As shown in Figures 2.1.5-2 and 2.1.5-3, vegetation removal would completely remove the canopy and shading that street trees and trees and shrubs along the creek corridor provide. This would remove the aesthetic qualities provided by the impacted trees, affecting the intimate nature of views and making views more open and bright, slightly increasing glare, when seen from both Palo Alto and East Palo Alto. Retaining walls on the east and west sides of Newell Road would range from approximately 1 foot to just over 2 feet tall in exposed height and would be taller near Woodland Avenue, decreasing in height as the wall meets existing grade along Newell Road, which would be seen by residents living in Building 1 of the Woodlands Newell Apartments (1761 Woodland Avenue), Woodland Park Apartments building at 5 Newell Road, and by recreationists and roadway users passing by on Newell Road. However, as seen in Figure 2.1.5-2 for Key View 1, the walls would appear to look more like small ramps up and would not be tall enough to enclose or block existing views. Retaining walls along the north side of Woodland Avenue would range from just over just over 4 feet tall, just east of the corner Woodland Avenue intersection with Newell Road, to just over 1.5 feet tall east of the Woodlands Newell Apartments Community Center under Build Alternative 1. As shown in Figure 2.1.5-3 for Key View 2, these walls would not be very prominent when seen from the raised roadway corridor. They would be more prominent when seen from areas near the apartment entrances.

Additionally, Build Alternative 1 would require the signalization of the southern end of the bridge in Palo Alto to control the direction of travel on the bridge, as shown in simulation in Figure 2.1.5-2 for Key View 1. One additional indicator signal would be provided for the sole residential driveway on the Palo Alto side of the bridge to identify the direction of traffic on Newell Road at all times. As shown in Figure 2.1.5-3 for Key View 2, Build Alternative 1 would also require the complete signalization of the intersections of Newell Road with Woodland Avenue in order to control the direction of travel on the bridge and adjacent roadways. Therefore, these signals could result in an increase in lighting and that could potentially degrade visual resources associated with the Project corridor if not properly screened. MM-AES-5 would reduce negative visual changes associated with the traffic signalization resulting from Build Alternative 1.

The proposed Project elements constructed under Build Alternative 1 would not impede sightlines to the tree canopy, trees, neighboring vegetation in the Project area, or any other visual resources within the Project corridor, such as the creek (if/where visible). Changes to visual character and quality would be moderate, and, as mentioned, would be consistent with applicable regulations, standards, and policies outlined in guidance documents. The resource change associated with Build Alternative 1 would be moderate and the average response of all viewer groups would be moderate-high, resulting in a moderate-high visual impact for this alternative during the short-term. The mitigation measures proposed would ensure the Project impacts are reduced, improving Project aesthetics and resulting in impacts that are moderate over the long-term.



Figure 2.1.5-2. Key View 1, Existing View and Build Alternative 1 Simulated Conditions—from Newell Road in Palo Alto looking toward East Palo Alto



Figure 2.1.5-3. Key View 2, Existing View and Build Alternative 1 Simulated Conditions—from Newell Road in East Palo Alto looking toward Palo Alto

Build Alternative 2 (Locally Preferred Alternative)

Visual changes resulting from Build Alternative 2, which would accommodate two-way traffic with a two-lane bridge, are depicted in the simulations for Key View 1³ and Key View 2 (Figures 2.1.5-4 and 2.1.5-5). Retaining walls would be the same heights as under Build Alternative 1 along Woodland Avenue, Newell Road North, and Newell Road South. Therefore, under Build Alternative 2, construction impacts would be similar to those described for Build Alternative 1. However, the wider bridge structure would impact additional trees directly adjacent to the existing bridge. Up to two more trees could be removed under Build Alternative 2 compared to Build Alternative 1 and create slightly more open and direct views of the Woodlands Newell Apartments facing Woodland Avenue, making the apartments a more pronounced focal point in Key View 1. Views from East Palo Alto would be similar to Build Alternative 1. However, as shown for Key View 2 in Figure 2.1.5-5, utilities would be slightly reduced under this build alternative because traffic signals would not be present. In addition, even though the bridge would be two lanes, it would not appear much wider from Key View 2 due to the angle of the bridge in relation to the view. From Key View 2, the additional vegetation removal under Build Alternative 2 is not distinguishable compared to Build Alternative 1. Like Build Alternative 1, tree and vegetation removal would also reduce the amount of shading that is present along the Project corridor, making the corridor more open and bright and slightly increasing glare.

The traffic signalization would not be necessary under this alternative, avoiding the visual intrusion of utilities required for Build Alternative 1, as seen in the simulations for Build Alternative 2. Overall, visual impacts under Build Alternative 2 would be very similar to those under Build Alternative 1 and, upon completion of Project construction, the visual character and quality of the existing Project corridor and surrounding residential areas in both Palo Alto and East Palo Alto would be reduced to a degree under Build Alternative 2. The resource change associated with Build Alternative 2 would be moderate and the average response of all viewer groups would be moderate-high, resulting in a moderate-high visual impact for this alternative during the short-term. The mitigation measures proposed would ensure the Project impacts are reduced, improving Project aesthetics and resulting in impacts that are moderate over the long-term.

³ Key View 1 shows Option 1, sharrows with 10-foot-wide travel lanes for vehicles and 4-foot-wide shoulders for bicyclists.



Figure 2.1.5-4. Key View 1, Existing View and Build Alternative 2 Simulated Conditions—from Newell Road in Palo Alto looking toward East Palo Alto



Figure 2.1.5-5. Key View 2, Existing View and Build Alternative 2 Simulated Conditions—from Newell Road in East Palo Alto looking toward Palo Alto

Build Alternative 3

Visual changes resulting from Build Alternative 3, which would also accommodate two-way traffic with a two-lane bridge, are depicted in the simulations for Key View 1⁴ and Key View 2 (Figures 2.1.5-6 and 2.1.5-7). The retaining walls would mostly be the same heights under Build Alternative 3, as Build Alternatives 1 and 2 along Newell Road South. However, the retaining walls would be several inches shorter along Woodland Avenue and Newell Road North, due to the realignment, which would not be visually discernable compared to Build Alternatives 1 and 2. However, as shown in the Figures 2.1.5-6 and 2.1.5-7, Build Alternative 3 would partially realign the northern end of the Newell Road Bridge by approximately 30 feet to reduce the Newell Road intersection offsets with Woodland Avenue, compared to the existing condition. Up to two more trees could be removed under Build Alternative 3 compared to Build Alternative 2, and four more trees could be removed compared to Build Alternative 1. However, views associated with the Project corridor under Build Alternatives 2 and 3 are similar, represented by Key View 1 and Key View 2 for each of the build alternatives (Figures 2.1.5-6 through 2.1.5-9). Therefore, visual alterations along Newell Road in Palo Alto and East Palo Alto would generally be the same as described for Build Alternative 2 because the realigned, wider bridge structure would also impact trees that are directly adjacent to the existing bridge and the Woodlands Newell Apartments, and like Build Alternative 2, would be more visible than Build Alternative 1 and more of a focal point in Key View 1, as seen in Figure 2.1.5-7. Tree and vegetation removal would also reduce the amount of shading that is present along the Project corridor, making the corridor more open and bright and slightly increasing glare.

Signalization proposed under Build Alternative 1 would not be necessary under Build Alternative 3. This would avoid the visual intrusion of utilities required for Build Alternative 1. Overall, visual impacts under Build Alternative 3 would be similar to those under Build Alternative 2 and, upon completion of Project construction, the visual character and quality of the existing Project corridor and surrounding residential areas in both Palo Alto and East Palo Alto would be decreased to a higher degree under Build Alternative 3 compared to Build Alternatives 1 and 2. The resource change associated with Build Alternative 3 would be moderate and the average response of all viewer groups would be moderate-high, resulting in a moderate-high visual impact for this alternative during the short-term. The mitigation measures proposed would ensure the Project impacts are reduced, improving Project aesthetics and resulting in impacts that are moderate over the long-term.

⁴ Key View 1 shows Option 1, sharrows with 10-foot-wide travel lanes for vehicles and 4-foot-wide shoulders for bicyclists.



Figure 2.1.5-6. Key View 1, Existing View and Build Alternative 3 Simulated Conditions—from Newell Road in Palo Alto looking toward East Palo Alto



Figure 2.1.5-7. Key View 2, Existing View and Build Alternative 3 Simulated Conditions—from Newell Road in East Palo Alto looking toward Palo Alto

Build Alternative 4

Visual changes resulting from Build Alternative 4, which would also accommodate two-way traffic, are depicted in the simulations for Key View 1⁵ and Key View 2 (Figures 2.1.5-8 and 2.1.5-9). The retaining walls would mostly be the same heights under Build Alternative 4, as Build Alternatives 1–3 along Newell Road South. However, the retaining walls would be a little over a foot taller at the northeastern corner of the Newell Road and Woodland Avenue intersection and west of the crosswalk at the northwestern corner. The remaining segments of the wall along Woodland Avenue would be the same or several inches shorter than Build Alternatives 1–3, due to the realignment. The most notable difference would be along Newell Road North, where the retaining walls would be approximately 1.5 to 2.3 feet taller than the retaining walls for Build Alternatives 1–3 along the eastern side of Newell Road and approximately 9 inches to just over 1 foot taller than the retaining walls for Build Alternatives 1–3 along the western side of Newell Road. In addition, the sidewalks would be a slightly steeper grade under Build Alternative 4 than the other build alternatives, and the entrance ramp to the Woodland Park Apartments building at 5 Newell Road would need to be increased to meet the new grades along Woodland Avenue. The increased heights along Newell Road North would create a taller wall surface that would serve to hinder views from both sides of the roadway to the opposite side of the road and would be more visually intrusive than the other build alternatives.

In addition, up to four more trees could be removed under Build Alternative 4 compared to Build Alternative 3, six more trees could be removed compared to Build Alternative 2, and eight more trees could be removed compared to Build Alternative 1 and, as shown in Figures 2.1.5-8 and 2.1.5-9, Build Alternative 4 would result in a more substantial realignment of the Newell Road bridge (shifting the northern abutment approximately 90 feet west). This would reduce the Newell Road intersection offsets with Woodland Avenue, compared to the existing condition. Visual alterations along Newell Road in Palo Alto and East Palo Alto would generally be the same as described for Build Alternative 3 because the realigned, wider bridge structure would also impact trees that are directly adjacent to the existing bridge or along the creek. However, the realignment and associated vegetation removal would be greater under Build Alternative 4 and would further increase the availability of views toward development on the opposite side of the bridge, as seen in Figure 2.1.5-8. Build Alternative 4 would reduce shading and increase glare that is present along the project corridor to a greater degree than in Build Alternatives 1–3. Also, as seen in the Simulation for Key View 1, the Woodlands Newell Apartments would be highly visible and much more visible than Build Alternatives 1–3 because portions of the apartments along both Woodland Avenue and Newell Road would be visible, whereas only portions of the apartments along Woodland Avenue are visible under Build Alternatives 1–3. This would make development a more prominent feature in views. Build Alternative 4 would create a much more open view corridor down the Newell Road alignment and a direct visual linkage between the Palo Alto and East Palo Alto sides of the bridge.

Signalization would not be necessary under Build Alternative 4, avoiding the visual intrusion of utilities required for Build Alternative 1. Overall, visual impacts under Build Alternative 4 would be similar to those under Build Alternative 3, but upon completion of Project construction, the visual character and quality of the existing Project corridor and surrounding residential areas in both Palo Alto and East Palo Alto would be decreased to a higher degree under Build Alternative 4 compared to Build Alternatives 1, 2, and 3. The resource change associated with Build Alternative 4 would be

⁵ Key View 1 shows Option 1, sharrows with 10-foot-wide travel lanes for vehicles and 4-foot-wide shoulders for bicyclists.



Figure 2.1.5-8. Key View 1, Existing View and Build Alternative 4 Simulated Conditions—from Newell Road in Palo Alto looking toward East Palo Alto.



Figure 2.1.5-9. Key View 2, Existing View and Build Alternative 4 Simulated Conditions—from Newell Road in East Palo Alto looking toward Palo Alto.

moderate and the average response of all viewer groups would be moderate-high, resulting in a moderate-high visual impact for this alternative for both the short- and long-term. The mitigation measures proposed would ensure the Project impacts are reduced, improving Project aesthetics.

Conclusion

The proposed Project would not have a negative effect on a scenic vista, damage scenic resources (trees, rock outcroppings, and/or historic buildings within a state scenic highway), or degrade the visual character or quality of the site and its surroundings over the long-term. Similarly, street light adjustments and/or removals would not change ambient illumination levels. Therefore, the proposed Project would not create a new source of substantial light or glare that would negatively affect daytime or nighttime views in the area with mitigation. Under all of the proposed Build Alternatives, the proposed Project would result in a moderate-low resource change for Build Alternatives 1–3 and moderate resource change for Build Alternative 4 (under construction and operation), and the average response of all viewer groups would be moderate-high for all build alternatives. This would result in a moderate visual impact for Build Alternatives 1–3 and a moderate-high visual impact for Build Alternative 4 over the short-term. The mitigation measures proposed would ensure the Project impacts are reduced, improving Project aesthetics and resulting in impacts that are moderate over the long-term for Build Alternatives 1–3. However, impacts under Build Alternative 4 would remain moderate-high over the long-term as well. Mitigation measures have been identified to help lessen visual impacts.

No Build Alternative

Under the No Build Alternative, the Project would not be constructed and there would be no visual impacts on the existing visual character, visual quality, or affected viewer groups as a result of the proposed Project.

Operational Impacts

Build Alternatives

Once in operation, the primary visual changes associated with all build alternatives would be regular roadway maintenance activities that pre-exist and are a common visual element. Traffic may increase slightly over time, causing slight traffic backups on the roadway, increasing the visible presence of traffic congestion due to singular, timed bridge crossings associated with the installation of traffic signals under Build Alternative 1. Operational impacts associated with Build Alternatives 2 through 4 would be similar to Build Alternative 1. However, the visible presence of traffic congestion would be reduced under Build Alternatives 2 through 4 because a traffic signal would not be needed because the bridge would be two lanes and would accommodate multi-directional traffic at the same time. Light and glare during operation would be the same as discussed under *Construction* for all build alternatives.

No Build Alternative

Under the No Build Alternative, the Project would not be constructed and there would be no visual impacts on the existing visual character, visual quality, or affected viewer groups as a result of the proposed Project.

2.1.5.4 Avoidance, Minimization, and/or Mitigation Measures

This section describes mitigation measures to address specific visual impacts. These will be designed and implemented with concurrence of the District Landscape Architect. The following mitigation measures to avoid or minimize visual impacts will be incorporated into the Project.

- **MM-AES-1: Install Visual Barriers between Construction Work Areas and Sensitive Receptors.** The contractor shall install visual barriers to obstruct undesirable views of construction activities and staging areas from sensitive receptors, namely residents and viewers on neighborhood sidewalks and streets, which are located adjacent to the construction site. The visual barrier may be chain link fencing with privacy slats, fencing with windscreen material, wood, or other similar barrier. The visual barrier shall be a minimum of 6 feet high to help to maintain the privacy of residents and block long-term ground-level views toward construction activities. While this visual barrier would introduce a visual intrusion, it would greatly reduce the visual effects associated with visible construction activities and screening construction activities and protecting privacy is deemed desirable by residents. The contractor shall also provide daily visual inspections to ensure the immediate surroundings of construction staging areas are free from construction-related clutter and to maintain the areas in a clean and orderly manner throughout the construction period.
- **MM-AES-2: Replace or Relocate Site Features and Landscaping Affected by the Project.** Where appropriate and to the degree possible, the contractor will relocate, replace, or restore in-kind landscaping and related appurtenances, such as fencing, driveway gates, and similar features that would be removed from private properties as a result of construction to reduce visual impacts and to maintain the quality of views from neighborhood roadways and sidewalks. If the site cannot accommodate this relocation or replacement, then the Project proponent will compensate parcel owners for site features (e.g., fencing, mailboxes, driveway gates) and landscaping that would be removed or damaged as a result of the Project. Replacement of site features and landscaping would be of value at least equal to that of existing features.
- **MM-AES-3: Implement Project Design Aesthetics.** The City of Palo Alto will implement an aesthetic design treatment with a consistent motif for new structures such as retaining walls, bridge sides, fencing, and wing walls. Choosing earth-toned colors for the surfaces would be less distracting to viewers than light or brightly colored surfaces. The shade of the wall will also be carefully considered to complement the project setting. However, studies have shown that structures two to three degrees darker than the color of the general surrounding area have the ability to complement the surrounding vegetation and create less of a visual impact than matching or lighter hues (U.S. Bureau of Land Management 2008). Safety barriers and fencing will be chosen, and could be plastic, powder, or vinyl coated with colors selected using the U.S. Bureau of Land Management selection techniques to make fences to appear more see-through than non-treated, light grey fencing that acts as a visual barrier to a degree.

The design of the bridge will be reviewed and approved by the City of Palo Alto Architectural Review Board. The Architectural Review Board is a recommending body that reviews projects and provides recommendations to the Director of Planning or Council. The Project would require Architectural Review in accordance with Palo Alto Municipal Code Section 18.76.020. The Architectural Review Board reviews projects for consistency with a series of findings outlined in the municipal code relating to aspects such as compatibility with the immediate environment of the site, compatibility with the design character of the surrounding area, harmonious transitions in scale and character in areas between different designated land uses,

internal sense of order, amount and arrangement of open space, integration of natural features, and appropriate materials, textures, colors, and details of construction and plant material. Although some architectural refinements may be expected as the Architectural Review Board process proceeds, such refinements are not expected to change the impact conclusions in this environmental analysis.

- **MM-AES-4: Implement Project Streetscaping and Plantings along Top of Creek Bank.** Streetscaping and planting native vegetation at the tops of the creek's banks will improve the visual quality of the roadway corridor by improving corridor aesthetics. The City of Palo Alto will select street tree species from the Cities' approved list of street trees or will be selected to match existing street trees in close proximity to the Project corridor and in compliance with the Urban Forest Master Plan⁶, Palo Alto Tree Technical Manual⁷ and East Palo Alto's Development Code (City of East Palo Alto 2017; City of Palo Alto 2001, 2015). Replacement street trees shall have attributes that are at least equivalent to the trees that are removed or that provide a higher degree of aesthetic benefit such as better fall color, interesting bark, or less tree litter. Tree and shrub plantings along the tops of the creek's banks will be installed where space allows and will utilize native plant species that are indigenous to the riparian corridor. Low-lying evergreen and deciduous shrubs and groundcovers, such as *Ceanothus* spp., and an herbaceous understory will also be planted. Plant variety will increase the effectiveness of the streetscape by providing multiple layers, seasonality, and reduced susceptibility to disease. Special attention should be paid to plant choices to prevent driving hazards by obscuring sight distances. Vegetation shall be planted within the first 6 months following Project completion. An irrigation and maintenance program will be implemented during the plant establishment period and carried on, as needed, to ensure plant survival. However, design of the landscaping plan will try to maximize the use of planting zones that are water efficient. The design may also incorporate aesthetic features, such as a cobbling swales or shallow detention areas, which can reduce or eliminate the need for irrigation in certain areas.
- **MM-AES-5: Apply Minimum Lighting Standards.** The contractor and the City of Palo Alto will limit all artificial outdoor lighting to safety and security requirements, designed using Illuminating Engineering Society's design guidelines, and in compliance with International Dark-Sky Association approved fixtures. All lighting is designed to have minimum impact on the surrounding environment and will use downcast, cut-off type fixtures that are shielded and direct the light only towards objects requiring illumination. Therefore, lights will be installed at the lowest allowable height and cast low-angle illumination while minimizing incidental light spill onto adjacent properties, the creek corridor, or backscatter into the nighttime sky. Shielding will also be employed for traffic signals. Light fixtures will have non-glare finishes that will not cause reflective daytime glare. Lighting will be designed for energy efficiency and have daylight sensors or be timed with an on/off program.

LED lighting will avoid the use of blue-rich white light lamps and use a correlated color temperature that is no higher than 3,000 Kelvin, consistent with the International Dark-Sky Associations Fixture Seal of Approval program (International Dark-Sky Association 2010a, 2010b, 2015). In addition, LED lights will use shielding to ensure nuisance glare and that light spill does not affect sensitive residential viewers.

⁶ Available: <https://www.cityofpaloalto.org/civicax/filebank/documents/36187>

⁷ Available: <http://www.cityofpaloalto.org/civicax/filebank/documents/6436>

Technologies to reduce light pollution evolve over time and design measures that are currently available may help but may not be the most effective means of controlling light pollution once the project is designed. Therefore, all design measures used to reduce light pollution will employ the technologies available at the time of project design to allow for the highest potential reduction in light pollution.

Lastly, due to the short bridge length, jurisdiction limitations, and in an effort to provide a sidewalk free of obstructions, lighting is not currently proposed on the bridge. On the East Palo Alto side, electrical services are provided by Pacific Gas and Electric and would need to be slightly relocated to accommodate a wider bridge. On the Palo Alto side, an existing light will be replaced along Newell Road, due to the change in grade, in approximately the same location. The relocated light would be less than 80-feet away from the bridge. It is not anticipated that additional lighting would be needed on the bridge. If an additional light is needed in the vicinity, a City standard light could be added on the roadway on the Palo Alto side. This light, if needed, as well as the other lights being replaced would be required to conform to City standards.

2.1.6 Cultural Resources

2.1.6.1 Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include the following.

The National Historic Preservation Act of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration (FHWA), the ACHP, the California State Historic Preservation Officer (SHPO), and the California Department of Transportation (Caltrans) went into effect for Caltrans projects, both state and local, with FHWA involvement. The PA implements the ACHP’s regulations (36 CFR 800), streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The FHWA’s responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 United States Code 327).

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, thus, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill (AB) 52 added the term “tribal cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects on them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

2.1.6.2 Affected Environment

The information in this section is from the *Historic Property Survey Report* (October 2017). The study area for cultural resources is referred to as the Area of Potential Effects (APE). The APE was established to include all potential direct and indirect effects on cultural resources that may result from the Project and includes built environment and archaeological resources. The same APE was established for all build alternatives for archaeological resources and the built environment, which may include buildings, structures, objects, and cultural landscapes. The APE was finalized on July 12,

2017, by the Caltrans District 4 Principal Architectural Historian, Principal Investigator-Prehistoric and Historical Archaeology, Caltrans District Local Assistance Engineer, City of Palo Alto Engineer, and City of East Palo Alto Engineer.

The *archaeological* APE consists of both the horizontal and vertical maximum potential extent of direct impacts resulting from the Project. The horizontal APE is bounded by the existing rights-of-way limits surrounding the Project footprint. It encompasses the project footprint and includes those areas of new construction, easements, utilities, retaining walls, and operations-related activities associated with the Project. The vertical APE is the maximum extent of ground disturbance within the horizontal APE (i.e., ground surface to maximum depth of soil disturbance) and varies by Project component. For the vast majority of the Project, the vertical APE ranges from 2 feet to no greater than 6 feet below current ground surface. The vertical APE is an estimate based on a proposed depth for piles or abutments that will need to be installed to support the bridge structure; however, no ground disturbance of native soils is necessary if the new piers or abutments are installed within the existing footprint of the bridge. Proposed retaining walls associated with construction of the new bridge would be excavated to a depth of 6 feet. All proposed staging areas would occur within the archaeological APE.

The *architectural* APE encompasses the maximum extent of potential direct *and* indirect effects on built environment resources that could result from the Project, including the bridge and all parcels being affected by the Project (Assessor's Parcel Numbers [APNs] 003-12-013, 063-515-280, 063-515-380, 063-515-370, 063-513-350, 063-513-440, 063-514-130, and 003-11-020). A portion of these parcels would be needed for a proposed temporary construction easement or a permanent easement, they border the approaches for the proposed replacement bridge, or their visual setting is altered by the construction of a retaining wall. The APE encompasses the entirety of each of the parcels listed above, even if the Project is only anticipated to affect portions of the parcels, based on Caltrans procedures.

Archaeological Resources

Bibliographic references, such as the California Historical Landmarks and the California Points of Interest inventories, previous survey reports, historic maps, and archaeological site records pertinent to the APE were compiled through a record search of the California Historical Resources Information System (CHRIS) in order to identify prior technical studies and known archaeological resources within a 0.5-mile radius surrounding the Project APE. A total of 40 studies have been conducted within 0.5 mile of the APE. Of those, none have occurred within the APE.

A CHRIS record search was conducted at the Northwest Information Center, Sonoma State University, Rohnert Park, on June 18, 2012. An update to this record search was conducted on October 27, 2016, and in October 2017. These updated searches were completed to determine if any cultural resources were recorded or submitted after the previous search was conducted. The record search area comprised the Project APE and 0.5-mile radius of the surrounding area. No prehistoric or historical archaeological resources were identified through any of the record searches or literature reviews within or adjacent to the APE. Six archaeological resources were identified within 0.5 mile of the APE.

A field survey of the archaeological APE was conducted on June 13, 2012. The entire archaeological APE was inspected for indications of human activity. Areas inspected include both bridge approaches and the areas designated as within the archaeological APE on both sides of the bridge (Figure 2.1.6-1).

At the time of the survey, San Francisquito Creek was dry, with grasses and rocks visible at the bottom, with steep banks partially covered in vegetation leading down to the creek. A focused survey of all visible (40 to 50% visibility) areas on the tops of the banks and the exposed cut banks on both sides of the creek was completed. This close inspection of the creek banks failed to identify any cultural material or paleosols. No cultural resources were observed anywhere in the APE during the field survey.

Built Environment Resources

The architectural APE was surveyed on June 13, 2012, and again on June 12, 2017. On June 18, 2012, a record search was conducted at the Northwest Information Center at Sonoma State University in Rohnert Park. The record search entailed consulting the state’s database of previous technical studies, known built environment resources, pertinent historical inventories—such as the NRHP, CRHR, California Historical Landmarks, and California Points of Interest listings—and historic maps specific to the project APE.

An update to this record search was conducted on October 27, 2016. This update searched for any built resources recorded or submitted after 2012. The record search area comprised the project APE. No historic-era built resources were identified through the record search and literature review within or adjacent to the APE.

No previous architectural history studies or reports have specifically covered the APE.

The architectural APE includes the bridge and seven properties. In accordance with Caltrans guidelines for identification and evaluation of potential historic properties, the historical significance of buildings, structures, and objects in the APE that predate 1967 was evaluated. These include single-family and multi-family residences in the APE constructed between 1943 and 1960. The project APE contains five residential properties in San Mateo and Santa Clara Counties which were found not to be eligible for listing in the NRHP, as shown in Table 2.1.6-1. The SHPO concurred on these determinations on November 30, 2017. Per Stipulation VIII.C.1 and Attachment 4 of the Section 106 PA, two additional properties within the APE (1767 Woodland Avenue and 1761 Woodland Avenue) were exempt from evaluation because they were either less than 30 years old or had substantial modifications that altered the property so as to appear less than 30 years old.

Table 2.1.6-1. Properties identified in the Area of Potential Effects as a result of the current study and determined not eligible for the National Register of Historic Places.

Assessor’s Parcel Number	Street Address	Year Built	Determination
003-12-013	475 Newell Rd	1943	Not eligible
063-515-280	1773 Woodland Ave	1949	Not eligible
063-513-350	5 Newell Rd	1960	Not eligible
063-513-440	15 Newell Rd	1960	Not eligible
003-11-020	1499 Edgewood Drive	1946	Not eligible



Figure 2.1.6-1. Archaeological Survey Coverage

The evaluation of the Newell Road Bridge (Caltrans Bridge Number 37C0223 – San Francisquito Creek) was administered through the Caltrans Historic Bridge Inventory (2003 and 2015). Through this study, it was determined by Caltrans and the SHPO that the Newell Road Bridge did not meet the criteria for listing in the NRHP (i.e., Category 5). Furthermore, Kathryn Haley, who meets the Professionally Qualified Staff Standards in Section 106 PA Attachment 1 as an Architectural Historian, also reviewed the Caltrans Historic Bridge Inventory documentation regarding the Newell Road Bridge and concluded that the bridge lacks significance and does not meet criteria for listing in the CRHR. As such, the Newell Road Bridge is not considered a historic property under Section 106 and the National Environmental Policy Act (NEPA) nor is it considered a historical resource for the purposes of CEQA.

Consultation

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted on June 20, 2012, to identify any areas of concern within the APE that may be listed in the NAHC's Sacred Lands File. The NAHC responded on July 10, 2012, stating that a search of their files failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC provided a list of ten Native American contacts that might have information pertinent to this project, or have concerns regarding the proposed actions.

A letter explaining the proposed Project, along with a map depicting the APE, was then sent to nine contacts listed by the NAHC on November 16, 2012. The letter also solicited responses from each of the contacts, should they have any questions, comments, or concerns regarding the Proposed Project. Letters were sent to the following contacts.

- Jakki Kehl
- Valentin Lopez, Chairperson, Amah Mutsun Tribal Band
- Edward Ketchum, Amah Mutsun Tribal Band
- Irene Zwierlein, Chairperson, Amah Mutsun Tribal Band
- Katherine Erolinda Perez
- Jean-Marie Feyling, Amah Mutsun Tribal Band
- Ann Marie Sayers, Chairperson, Indian Canyon Mutsun Band of Costanoan
- Rosemary Cambra, Chairperson, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- Ramona Garibay, Representative, Trina Marine Ruano Family

Per his request, an e-mail was sent to Andrew Galvan, a representative of the Ohlone Indian Tribe, which provided the same information as contained in the letters that were mailed out. No responses were received for this initial consultation from any of the 10 individuals contacted.

Due to the passage of time, updated letters were sent on September 2, 2015 to all of the contacts listed above. The letters provided project updates and an updated project map to the Native American contacts. No responses were received. Further follow-up communications were conducted via telephone on September 21, 2015, to all 10 individuals listed by the NAHC. Additional phone calls were made on August 28, 2017, and September 5, 2017. Most individuals were unable to be reached and a phone message with project details and a request for a return call was left at the

number provided. When contacted, Ms. Sayers stated she did not have any concerns and felt comfortable with any work occurring in the area. Ms. Zweirlein requested that an archaeologist be present if any sensitive material is uncovered during project-related ground disturbance. Ms. Feyling was concerned about possible burials and requested that an archaeologist be present during project construction. Mr. Galvan requested an updated record search. Per Mr. Galvan's request, an additional record search was completed in October 2017. One additional study was noted, but no new or additional previously recorded cultural resources have been submitted to the Northwest Information Center since the last record search was completed in 2016.

Historical Society Consultation

On November 2, 2012, a letter was sent to the following historical societies requesting any information on three potential resources in the Project APE (APN 003-12-013, APN 063-515-280, and APN 063-513-350).

- Palo Alto Historical Association (Palo Alto)
- East Palo Alto Historical and Agricultural Society (East Palo Alto)
- California Historical Society (San Francisco)

The Palo Alto Historical Society confirmed that they do not have any information regarding historic resources within the APE. Follow up phone calls were made to the remaining aforementioned historical societies in November, 2012. The project team was informed by the historical societies that they do not have any information regarding historic resources within the APE. Additional outreach was performed in August 2017 due to the passage of 5 years since the last consultation and after two properties (APN 003-11-020, and APN 063-513-440) were added to the APE. The above three historical societies were contacted on August 28, 2017, by phone to request information pertaining to the two additional properties in the APE and inquire if any new information is available for the three properties in the original project APE. A voicemail was left for the Palo Alto Historical Society and the California Historical Society. The East Palo Alto Historical and Agricultural Society said that they do not have any information regarding historic resources within the APE. The California Historical Society responded on August 31, 2017 stating that they do not have any specific historical information regarding the historical resources in the APE. An additional follow up call was made to the Palo Alto Historical Association on September 6, 2017, and a voicemail was left, but no response was received.

2.1.6.3 Environmental Consequences

Construction Impacts

Build Alternatives

It has been determined that there are no historic properties present in the APE. SHPO concurred with this finding on November 30, 2017. Therefore, there would be no historic properties affected during construction of any of the build alternatives, nor would any Section 4(f) resources be affected.

The APE is located near to and along the steep banks of San Francisquito Creek. These creek banks, do not allow for the preservation of in-situ subsurface archaeological deposits due to rapid erosional forces. However, the cutbank along the creek allows for thorough inspection of a large exposure of

the portions of the APE located upslope of the banks. The combination of the bank encompassing a large portion of the APE, and the lack of archaeological material encountered on the ground surface upslope of the banks and in the exposures observed during survey indicates limited archaeological sensitivity within the APE. It is not anticipated that previously unidentified prehistoric or historic archaeological sites are located in the APE.

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find (SM-CUL-1).

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner shall be contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC, which will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact the Caltrans District 4 Office of Local Assistance archaeologist so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable (SM-CUL-2).

No Build Alternative

The No Build Alternative would not affect cultural resources during construction because there would be no ground-disturbing activities.

Operational Impacts

Build Alternatives

It has been determined that there are no historic properties present in the APE. SHPO concurred with this finding on November 30, 2017. Therefore, there would be no historic properties affected during operation of any of the build alternatives, nor would any Section 4(f) resources be affected.

No Build Alternative

The No Build Alternative would not affect cultural resources because no improvements would be implemented.

2.1.6.4 Avoidance, Minimization, and/or Mitigation Measures

The following standardized measures will be implemented during construction of all build alternatives to avoid potential impacts to cultural resources.

- SM-CUL-1: If cultural materials are discovered during construction, the contractor will cease all earth-moving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find and recommend/implement appropriate data collection/recovery activities.
- SM-CUL-2: If human remains are discovered, State Health and Safety Code Section 7050.5 states that the contractor will stop further disturbances and activities in any area or nearby area suspected to overlie remains, and the contractor will contact the County Coroner. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify

the NAHC, which will then notify the MLD. At this time, the person who discovered the remains will contact the Caltrans District 4 Office of Local Assistance archaeologist so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable.

2.2 Physical Environment

2.2.1 Hydrology and Floodplain

2.2.1.1 Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 Code of Federal Regulations (CFR) 650 Subpart A.

To comply, the following must be analyzed.

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

2.2.1.2 Affected Environment

The information in this section is from the *Water Quality Assessment Report* (July 2017), the *Bridge Hydraulics and Evaluation of Proposed Alternatives Technical Memorandum* (August 2012), and the *Location Hydraulic Study* (December 2017).

Watershed Description

The Project site is located within the Lower Peninsula Watershed. Within this watershed, the Project site is within the San Francisquito Creek Subwatershed. Within the Project limits, runoff from the bridge discharges into drainage inlets and into the San Francisquito Creek Pump Station on East Bayshore Road, which discharges into San Francisquito Creek and eventually into San Francisco Bay. Runoff in the Project vicinity remains on the surface through a gutter system with drain inlets along Newell Road and Woodland Avenue. Stormwater runoff converges at these drain inlets, enters the stormwater system and eventually flows into San Francisquito Creek, ultimately discharging to southern San Francisco Bay.

Floodplain Description

The Newell Road Bridge and parts of Woodland Avenue are within the Federal Emergency Management Agency (FEMA) 100-year flood Zone A (Map #06081C0309E, Figure 2.2.1-1). Newell Road is mapped within Flood Zone A and Flood Zone X (unshaded). Zone X is outside the 500-year floodplain. The Zone A floodplain represents areas with a 1% annual chance of flooding. Construction within the Zone A floodplain requires special analysis and engineering to ensure the Project does not increase the base flood elevation by greater than 1 foot. City of Palo Alto Ordinance states that the lowest floor elevation of a structure needs to be at or above the base flood elevation. However, the areas mapped as Zone X (unshaded) would have a less than 0.2% annual chance of flooding; therefore, special engineering issues or restrictions would not be applicable to these parts of the site.

Both the creek and bridges at the lower reach of San Francisquito Creek from downstream of Caltrain Bridge/El Camino Real Bridge to the East Bayshore Road are incapable of carrying the 100-year flow (Nolte Vertical Five 2012, 2017). As of October 2018, the San Francisquito Creek Joint Powers Authority completed the creek improvement project between East Bayshore Road and the San Francisco Bay, allowing that section of the creek to convey the 1% flow rate. The flow capacity of San Francisquito Creek between the El Camino Real Bridge and West Bayshore Road is up to 6,000 cubic feet per second (cfs) based on the FEMA hydraulic model (Nolte Vertical Five 2017). The Santa Clara Valley Water District (SCVWD) model revealed that neither the Newell Road Bridge nor the creek channel has adequate capacity to convey the 100-year flow (Nolte Vertical Five 2012, 2017). SCVWD estimated that the 1% flow rate for San Francisquito Creek is 8,150 cfs at Newell Road Bridge. The 2016 SCVWD hydraulic model indicates that the existing bridge opening can convey peak flows of approximately 6,600 cfs. A previous FEMA hydraulic model indicates that the existing bridge opening can convey peak flows of approximately 6,000 cfs. Nonetheless, upstream constraints along the creek currently restrict lower flows. SCVWD is currently developing a separate project that could allow flows of up to approximately 7,500 cfs to pass through the Project site (Nolte Vertical Five 2017).

Under existing conditions, the bridge would be overtopped in the 100-year storm event (Nolte Vertical Five 2012, 2017). The existing roadway profile is set at 31.4 feet and the bridge underside is set at 29.3 feet. The water surface elevation levels (WSELs) for the 70-year and 100-year events are 31.06 feet and 32.03 feet, respectively. It is expected there could be up to 0.63 feet of water on the bridge roadway under existing 100-year storm event conditions (Nolte Vertical Five 2017). The existing channel would also overflow in both 100-year and 70-year flow events (Nolte Vertical Five 2017).

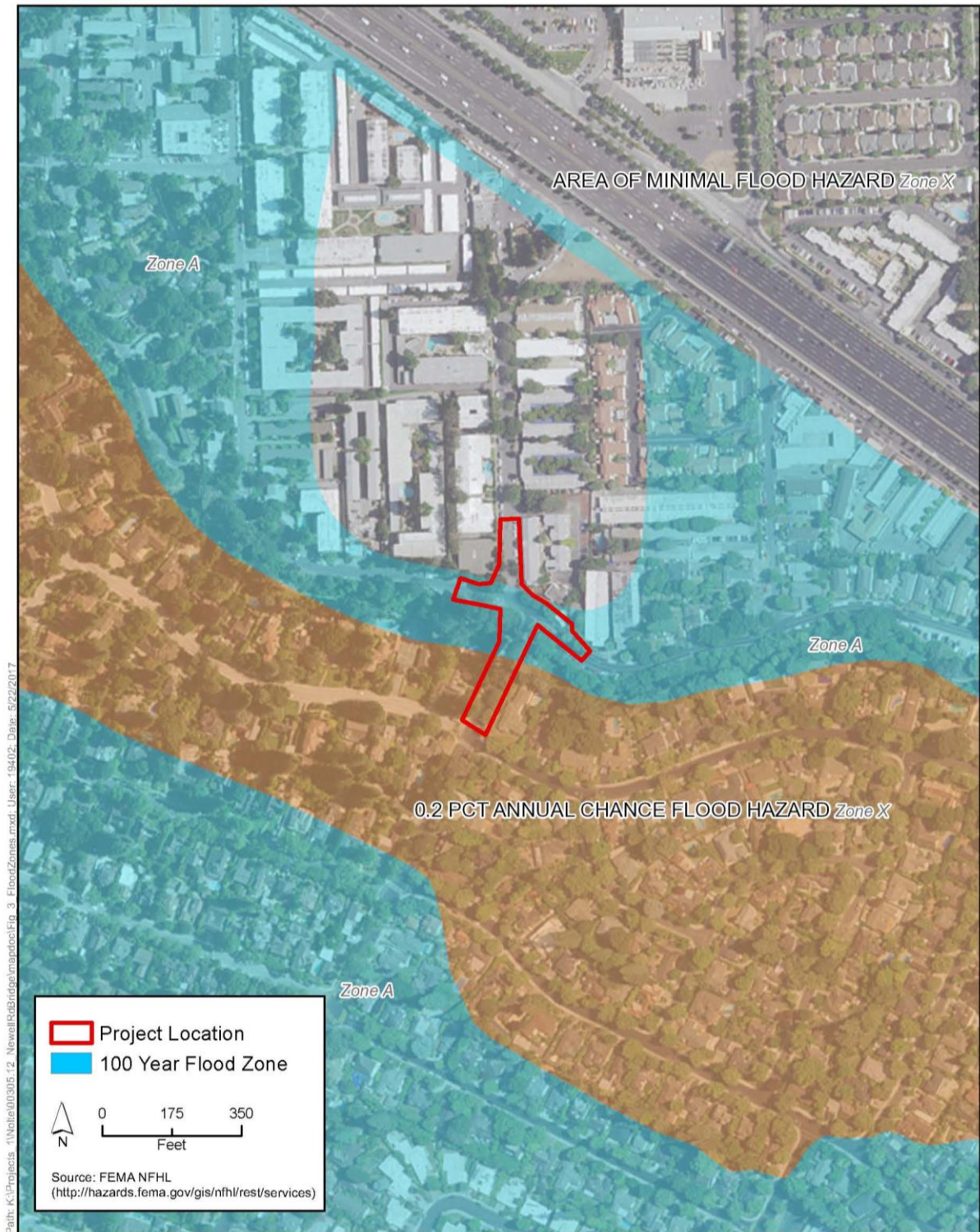


Figure 2.2.1-1. FEMA Flood Zones within the Project Area

2.2.1.3 Environmental Consequences

Construction Impacts

Build Alternatives

The Project includes four build alternatives that result in replacement of Newell Road Bridge over San Francisquito Creek. Heavy construction equipment would be operated along the banks of San Francisquito Creek, but not below the ordinary high water mark. Potential temporary impacts could occur during the widening of the channel, depending on the build alternative, construction of the bridge structure, excavation under the new bridge structure, and reconstruction of the channel banks. Vegetation would be cleared, exposing soil to the potential for erosion and downstream transport of sediments. In addition, during construction, a temporary creek flow diversion method would be installed in San Francisquito Creek to allow for construction activities to take place along the banks of the active creek. Check dams, such as clean gravel dams or any other type of approved California Department of Transportation standard dam, would be installed both upstream and downstream of the construction zone within 50 feet of the bridge, and culvert piping would route surface water flows through the construction zone. Construction of the Project may affect drainage patterns, as well as water volume, depth, and flow rate.

As part of standardized measure SM-WQ-2, under the Construction General Permit, the Project would be required to prepare a Storm Water Pollution Prevention Plan and implement construction Best Management Practices (BMPs) aimed at reducing pollutants of concern in stormwater runoff. The construction BMPs would include Erosion Control, Sediment Control, and Good Housekeeping BMPs designed to minimize erosion, retain sediment on site, and prevent spills. Therefore, the Project would not result in temporary water quality-related impacts on the floodplains of the San Francisquito Creek and construction is not anticipated to impact the natural and beneficial floodplain values of San Francisquito Creek.

No Build Alternative

Under the No Build Alternative, no changes would be made to the existing bridge and approaches. No construction activities would occur, and there would be no direct effect on hydrology and floodplains because construction would not occur.

Operational Impacts

Build Alternatives

The SCVWD model was used to determine the capacity of the existing Newell Road Bridge, as shown in Table 2.2.1-1. Two scenarios were evaluated, one under the bridge removal condition, and one with the bridge soffit at 30 feet. When the existing Newell Road Bridge is removed, both the 70-year and 100-year flows are contained within the bridge cross section and WSELs decrease by 1.65 and 1.87 feet, respectively. The WSELs for the 70-year and 100-year events with the bridge removed are 29.41 feet and 30.16 feet, respectively.

Table 2.2.1-1. Hydraulic Performance of Newell Road Bridge

	Bridge Removal Condition		Bridge Soffit at 30 Feet	
	70-Year Flood	100-Year Flood	70-Year Flood	100-Year Flood
Discharge (cfs)	7,500	8,150	7,500	8,150
WSEL (ft), Existing Condition	31.06	32.03	31.06	32.03
WSEL (ft), Proposed Bridge	29.41	30.16	29.41	30.72
WSEL Decrease (ft)*	-1.65	-1.87	-1.65	-1.31

* The WSEL Decrease (ft) is the difference between the WSEL (ft), Proposed Bridge and the WSEL (ft), Existing Condition.

cfs = cubic feet per second; WSEL = water surface elevation levels; ft = feet

Source: Nolte Vertical Five 2017

The proposed replacement bridge would be a 42-foot-wide by approximately 80-foot-long (for the locally preferred alternative) single-span structure. The new clear span between abutments would address potential flooding risk by increasing the area below the bridge to allow larger flows to pass. In order to provide adequate clearance to convey the required storm flow, the proposed bridge soffit (bridge underside) elevation would need to be raised. To accommodate the larger flows within San Francisquito Creek, the proposed replacement bridge, Newell Road, and Woodland Avenue would all have raised elevations. The new elevations would change slope grades that would extend 500 feet north within Newell Road and 350 feet east and west of the bridge intersection within Woodland Avenue.

The 100-year WSEL with the existing bridge removed was set as the elevation of the soffit (underside) of the proposed bridge with a clear span. As an alternative, the bridge soffit was set at the 70-year WSEL with a clear span. The 70-year WSEL would raise the existing Woodland Avenue vertical alignment to a lesser extent than the 100-year WSEL (Nolte Vertical Five 2017). The bridge soffit was set at 30 feet (less than the 100-year WSEL of 30.16 feet for the bridge removal condition).

As shown in Table 2.2.1-1, under the 100-year WSEL (8,150 cfs) if the soffit is set at 30 feet, the Newell Road Bridge replacement would pass the 100-year flow (30.72 feet WSEL) (Nolte Vertical Five 2017). This is because the upstream constrictions and planned creek improvements limit the flow that would reach Newell Road to the 70-year flow (7,500 cfs). In addition, if the creek is ever enlarged to accommodate the 100-year event, the water surface at Newell Road could be reduced to be below 30 feet with minor downstream creek widening (Nolte Vertical Five 2017). This would result in a decrease of the WSEL over existing conditions by 1.31 feet. However, raising the bridge to be at the 100-year WSEL is not practical due to the severe transition grades that would be required to meet existing grades. Upgrading the bridge to pass a 100-year flow would involve significant excavation of the existing creek or addition of floodwalls to improve the creek capacity. Under 70-year WSEL (7,500), the bridge underside is also set at 30 feet, and the Newell Road Bridge replacement would pass the 70-year flow (29.41 feet WSEL) with no pressure (Nolte Vertical Five 2017). Compared to existing conditions, the proposed 70-year WSEL would decrease by 1.65 feet.

In the proposed Project condition, the base flood elevation would be lowered compared to existing conditions. Further, the existing 70-year and 100-year flood events would be minimized compared to existing conditions (Nolte Vertical Five 2017). Upstream constraints along the creek currently restrict lower flows (i.e., Pope Chaucer Road Bridge limits creek flows downstream to approximately

5,400 cfs), which means increasing the flow at the Newell Road Bridge would not cause flooding elsewhere. Therefore, there would be no increased flood risk and no risk to life or property associated with implementation of the Project. The Project would not support incompatible floodplain development since the areas surrounding the Newell Road Bridge floodplain are already developed. As stated previously, San Francisquito Creek's natural and beneficial floodplain values include, but are not limited to, fish, wildlife, plants, open space, and natural moderation of floods. Construction of the Project would result in additional flow capacity in the Project area. Therefore, operation of the Project is not anticipated to impact the natural and beneficial floodplain values of San Francisquito Creek.

The Project area is not in an area susceptible to inundation by seiche, tsunami, or mudflow; therefore, no impacts would result.

No Build Alternative

The No Build Alternative would have no effect on hydrology and floodplains because construction would not occur. However, in the absence of additional bank stabilization activities, the banks of San Francisquito Creek would be expected to erode further, particularly in response to high discharges. In addition to erosion continuing along some banks and beginning along others, existing structures may degrade and present additional threats to bank stability. Should the supply of sediment in the watershed exceed the transport capacity of San Francisquito Creek, the natural deposition of material may build up on the land surface or in the streambed. Ultimately, the trends of creek bed elevations rising from sedimentation and channel widths increasing from bank instability are likely to continue until a more stable channel form develops. An increase in bed elevation would reduce the sediment transport capacity of San Francisquito Creek and could exacerbate flooding problems (San Francisquito Creek Joint Powers Authority 2004).

Significant Encroachment

"Significant encroachment" as defined at 23 CFR 650.105 is a highway encroachment and any direct support of likely base floodplain development that would involve one or more of the following construction or flood-related impacts.

- A significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or provides a community's only evacuation route.
- A significant risk (to life or property).
- A significant adverse impact on natural and beneficial floodplain values.

The proposed action does not constitute a significant floodplain encroachment as defined in 23 CFR Section 650.105(q). The implementation of the Project would change the capacity of the San Francisquito Creek to carry water but would provide additional capacity in order to meet existing 70-year flood flows. The Project would not result in a reduction of the floodplain boundaries associated with the San Francisquito Creek. The Project would not result in an increase in the water surface elevation compared to existing conditions. The Project would not result in any significant change in flood risks or damage and does not have significant potential for interruption or termination of emergency service or emergency routes. Construction of the Project would require closing of the existing Newell Road Bridge crossing for all build alternatives. As a result, emergency services would have to use other existing nearby crossings (University Avenue and West Bayshore Road). However, advance notice and coordination with emergency service providers will be

included in the Traffic Management Plan to minimize any potential temporary impacts on response times, as discussed in SM-TR-1 and further described in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*. Therefore, the proposed encroachment into the San Francisquito Creek is not significant. The Project would not involve a significant encroachment on a regulatory floodway or substantially increase the base flood elevation.

2.2.1.4 Avoidance, Minimization, and/or Mitigation Measures

The build alternatives would not result in adverse temporary or permanent impacts on floodplain values. The natural and beneficial floodplain values of San Francisquito Creek would not be adversely affected; therefore, the build alternatives would not result in impacts on floodplain values. Therefore, no avoidance, minimization, and/or mitigation measures are required to minimize impacts on the waterway.

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2.2.2 Water Quality and Storm Water Runoff

2.2.2.1 Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States from any point source¹ unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections.

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the United States. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE’s Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency’s (EPA) Section 404 (b)(1) Guidelines (Guidelines) (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Guidelines were developed by the EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the United States) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging

¹ A point source is any discrete conveyance such as a pipe or a man-made ditch.

practicable alternative to the proposed discharge that would have lesser effects on waters of the United States and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent² standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the United States. In addition, every permit from the USACE, even if not subject to the Guidelines, must meet general requirements (33 CFR 320.4). A discussion of the least environmentally damaging practicable alternative determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state are defined more broadly than waters of the United States, and include some types of groundwater and surface waters not considered waters of the United States. Additionally, the Porter-Cologne Act prohibits discharges of “waste” as defined, and this definition is broader than the CWA definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or nonpoint source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, nonpoint, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities.

² The EPA defines “effluent” as “wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.”

National Pollutant Discharge Elimination System Program

Municipal Separate Storm Sewer Systems

CWA Section 402 mandates permits for municipal stormwater discharges, which are regulated under the NPDES General Permit for MS4s. Phase I MS4 regulations cover municipalities with more than 100,000 residents, certain industrial processes, or construction activities that disturb an area of 5 acres or more. Phase II “small” MS4 regulations require stormwater management plans to be developed by municipalities with fewer than 100,000 residents and construction activities that disturb 1 or more acres of land. The City of Palo Alto is subject to the requirements of the Municipal Regional Stormwater NPDES Permit for Phase I municipalities and agencies in the San Francisco Bay area (Order R2- 2015-0049), also known as the Municipal Regional Permit (MRP), which became effective on January 1, 2016.

Construction of new roads is covered by MRP requirements, but projects related to existing roads and adjoining sidewalks and bike lanes are not regulated unless they include creation of an additional travel lane. Provision C.3.j of the MRP requires Permittees to develop and implement long-term Green Stormwater Infrastructure Plans for the inclusion of low impact development measures into storm drain infrastructure on public and private lands, including streets, roads, storm drains, parking lots, building roofs, and other elements. On May 13, 2019, the City of Palo Alto accepted the City of Palo Alto Green Stormwater Infrastructure Plan to meet the MRP requirement and to outline how the city aims to transform its traditional stormwater conveyance and drainage system. The Santa Clara Valley Urban Runoff Pollution Prevention Program is an association of 13 cities and towns, including the City of Palo Alto, the County of Santa Clara, and the Santa Clara Valley Water District, which share the MRP to discharge stormwater to South San Francisco Bay.

Construction General Permit

Construction General Permit, Order No. 2009-2009-DWQ (adopted on September 2, 2009, and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012). The permit regulates storm water discharges from construction sites that result in a disturbed soil area (DSA) of 1 acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least 1 acre must comply with the provisions of the Construction General Permit. Construction activity that results in soil disturbances of less than 1 acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to

develop and implement an effective SWPPP. A Water Pollution Control Program is necessary for projects with DSA less than 1 acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as WDRs under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

2.2.2.2 Affected Environment

The information in this section is from the *Water Quality Assessment Report* (July 2017).

Surface Water

The Project drains to the Lower Peninsula Watershed. Within this watershed, the Project is located within the San Francisquito Creek Subwatershed.

San Francisquito Creek is the main outlet of the San Francisquito Creek watershed, which encompasses an area of approximately 45 square miles extending from the ridge of the Santa Cruz Mountains to the San Francisco Bay. Most of the watershed lies in the Santa Cruz Mountains and foothills northwest of Palo Alto; the remaining 7.5 square miles lie on the San Francisquito alluvial fan near South Bay. San Francisquito Creek is a perennial stream that originates in the largely undeveloped eastern foothills of the Santa Cruz Mountains between Kings Mountain and Russian Ridge, running 13 linear miles from Searsville Dam downstream to the South San Francisco Bay.

Currently, the banks of San Francisquito Creek are subject to erosion, particularly in response to high discharges, where bank instability is present, or where vegetation becomes disturbed. Erosion by surface water flows is most susceptible where slopes are steep. The soil erodibility factor (Kw) for the immediate Project site was unavailable in the Natural Resources Conservation Service soil database. However, both the California Department of Transportation (Caltrans) Water Quality Planning Tool and the State Water Resources Board K Value map estimated a Kw value of 0.32. Generally this equates to a moderate potential for erosion. Topography in the Project area varies in elevation and, therefore, also represents a moderate erosion potential.

Groundwater

The Project is in the San Mateo Groundwater Subbasin, of the larger Santa Clara Valley Groundwater Basin. San Francisco Bay constitutes the eastern boundary of the San Mateo Subbasin, and the Santa Cruz Mountains form the western margin. The Westside Basin bounds it on the north and its

southern limit is defined by San Francisquito Creek. Natural recharge within the San Mateo Groundwater Subbasin occurs by infiltration of water from streams that enter the Santa Clara Valley from the upland areas within the drainage basin and by percolation of precipitation that falls directly on the valley floor. A relatively shallow water table aquifer overlies confined and semi-confined aquifers in this lowland area. Most of the wells in the basin draw water from the deeper confined and semi-confined aquifers. Unless designated otherwise by the San Francisco RWQCB, all groundwater is considered suitable, or potentially suitable, for municipal or domestic water supply.

Existing Water Quality

Water quality in the study area is of particular concern because San Francisquito Creek provides habitat for Central California Coast steelhead, a species federally listed as threatened. As designated by the San Francisco RWQCB, the existing beneficial uses for water bodies in the study area include the following: cold freshwater habitat (COLD), warm freshwater habitat (WARM), fish migration (MGR), fish spawning (SPWN), and preservation of rare and endangered species (RARE). Potential beneficial uses include water contact recreation (REC1) and noncontact water recreation (REC2) (California Department of Transportation 2017). San Francisquito Creek is a CWA 303(d)-listed water body for diazinon, sedimentation/siltation, and trash. Other chemical constituents are also of concern within the San Francisquito Creek watershed because of potential or suspected impacts on aquatic life within the creek, or because of their listing as causes of impairment within South San Francisco Bay on the CWA Section 303(d) list. These include chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, dioxin and furan compounds, invasive species, mercury, polychlorinated biphenyl, and selenium.

The San Francisquito Creek watershed includes urban, agricultural, and rural land use areas. Urban areas contribute storm water and urban dry weather runoff that can carry contaminants, including trace metals, industrial chemicals, lawn and garden care chemicals, nutrients, and trash. Urban nonpoint source pollution includes heavy metals, pesticides, bacteria, organics (oil and grease), dirt, and nutrients. Pollutants are usually deposited on the roadway as a result of fuel combustion processes, lubrication system losses, tire and brake wear, transportation load losses, paint from infrastructure, and atmospheric fallout.

CWA Section 303(d) requires all states to identify the waters of the state that do not meet the CWA’s national goal of “fishable, swimmable” and to develop TMDLs for such waters, with oversight by the EPA. San Francisquito Creek is included in the Section 303(d) list, indicating that this water body does not meet water quality standards. Table 2.2.2-1 shows Section 303(d)-listed impairments for waterbodies within the Project area based on the 2012 California Integrated Report (California Department of Transportation 2017).

Table 2.2.2-1. Section 303(d) list for Waterbodies in the Project Area

Water Body	Pollutant Stressors	Potential Sources	Estimated Size Affected	TMDL Completion Date
San Francisquito Creek	Diazinon	Urban Runoff/Storm Sewers	12 Miles	2007
	Sedimentation/ Siltation	Nonpoint Source	12 Miles	Est. 2013 ¹
	Trash	Illegal dumping and Urban Runoff/Storm Sewers	12 Miles	Est. 2021 ¹

TMDL = total maximum daily load

¹ Expected TMDL completion date. Completion has not yet occurred.

Source: California Department of Transportation 2017

Beneficial Uses

The Project lies within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (SFRWQCB). The SFRWQCB is responsible for implementing its Basin Plan and for protecting the beneficial uses of water resources. Beneficial uses represent the services and qualities of a water body (i.e., the reasons the water body is considered valuable). Table 2.2.2-2 identifies and defines the beneficial uses for the surface water within the Project area as designated by the SFRWQCB. San Francisquito Creek is considered a high receiving water risk because it has the beneficial uses of cold freshwater habitat, fish migration, and fish spawning. Natural and beneficial floodplain values include, but are not limited to, fish, wildlife, plants, open space, and natural moderation of floods.

Table 2.2.2-2. Beneficial Uses for San Francisquito Creek

Beneficial Uses	San Francisquito Creek	Definition
Cold Freshwater Habitat (COLD)	E	Uses of water that support cold water ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
Fish Migration (MGR)	E	Uses of water that support habitats necessary for migration, acclimatization between fresh water and salt water, and protection of aquatic organisms that are temporary inhabitants of waters within the region.
Fish Spawning (SPWN)	E	Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish
Warm Freshwater Habitat (WARM)	E	Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
Wildlife Habitat (WILD)	E	Uses of waters that support wildlife habitats, including, but not limited to, the preservation and enhancement of vegetation and prey species used by wildlife, such as waterfowl.
Water Contact Recreation (REC-1)	E	Uses of water for recreational activities involving body contact with water where ingestion of water is reasonably possible.
Noncontact Water Recreation (REC-2)	E	Uses of water for recreational activities involving proximity to water, but not normally involving contact with water where water ingestion is reasonably possible.

E = Existing beneficial use.

Source: San Francisco Bay Regional Water Quality Control Board 2017.

2.2.2.3 Environmental Consequences

Construction Impacts

Build Alternatives

Short-term or temporary construction impacts on water quality including biological, physical/chemical, and human use constituents have the potential to occur during grading, demolition, and construction related to the proposed Project. All major construction activities involving the use of heavy equipment would occur on the embankment of the creek, above the ordinary high water mark (OHWM). However, some minor construction activities, such as installation of the check dams, such as clean gravel dams or any other type of approved Caltrans standard dam, or Best Management Practices (BMPs), would occur within the creek below the OHWM, and water quality impacts could occur within the creek. Water quality impacts would be associated with above-water and land project activities. Above-water activities include demolition of the existing bridge and construction of the new bridge. Land activities include establishment and use of construction staging area(s), grading and excavation of adjacent roadways, stockpiling, operation of heavy construction equipment (e.g., graders, excavators) alongside the creek, and relocation of drainage facilities.

Substrate

In-creek construction and maintenance activities for the proposed bridge may alter the structure and composition of the river bed (or substrate). Construction work such as cast-in-drilled-holes would disturb sediment on the embankment of San Francisquito Creek, which could remobilize sediments as well as contaminants adsorbed to the sediments and accumulate in the substrate over time. Sedimentation and siltation due to nonpoint sources is also an existing impairment in the creek. The resuspension of contaminants found in bottom substrate can remobilize these contaminants and release them into the water column, which can degrade water quality. In addition, resuspended particulate material could be transported to other locations in San Francisquito Creek as a result of flow patterns, leading to potential degradation of water quality beyond the study area.

Circulation and Drainage

Construction of Project may affect drainage patterns, as well as water volume, depth, and flow rate. During construction, a temporary creek flow diversion method, such as check dams, clean gravel dams, or any other type of approved Caltrans standard dam, will be installed on San Francisquito Creek, to allow for construction activities to take place within the banks of the creek. BMPs will be employed to protect the stream if there are active flows in the creek during construction as a result of any upstream groundwater dewatering project or if hydrant flushing or a water main break brings upstream flows to the project area. In addition, Project in-channel construction activities would occur during periods of low surface flow (dry season).

The existing bridge capacity is 6,600 cubic feet per second (cfs), which can handle the existing flow of 5,400 cfs due to constriction upstream. However, the existing bridge cannot handle the natural creek flow of 7,500 cfs. In addition, there is another project upstream of Newell Road bridge that is proposing to remove the 5,400 cfs constriction and allow the natural creek flow of 7,500 cfs to pass. However, that project cannot occur without replacing the Newell Road bridge first. Due to hydraulics, downstream projects need to be improved prior to making improvements upstream. The Project would widen the channel width beneath the bridge to allow 7,500 cfs conveyance to allow

for the 70-year storm event. The new bridge would be designed to accommodate the natural creek flows, allow future upstream projects to occur, and prevent future flooding. In addition, during construction, the City of Palo Alto will not reduce the flood capacity of existing drainage or water conveyance features within the Project study area in a way that causes ponding or flooding during storm events (AMM-WQ-1).

The Project would result in a minimum permanent increase of impervious surfaces. However, the Project would include adding 660 square feet of impervious area under Build Alternative 1; 1,700 square feet under Build Alternative 2 (locally preferred alternative [LPA]); 1,983 square feet under Build Alternative 3; and 2,023 square feet under Build Alternative 4, as shown in Table 2.2.2-2.

Table 2.2.2-3. Area of Impervious Area

Build Alternative	Disturbed Soil Area (square feet)	Total Impervious (square feet) - Existing	Total Impervious (square feet) - Proposed	Added Impervious (square feet)
Build Alternative 1	45,000	30,036	30,702	666
Build Alternative 2 (LPA)	45,000	30,036	31,974	1,700
Build Alternative 3	46,000	30,036	32,019	1,983
Build Alternative 4	55,000	36,277	38,300	2,023

Source: California Department of Transportation 2017

Runoff from the roadway approaches would use the existing storm water system. The existing storm water system would only need to account for the increase in storm water volume from slope grade changes. Changes within the impervious surfaces are relatively small and would have little effect on runoff volume. Drainage patterns during post-construction conditions would remain unchanged, and would not affect channel erosion or cause hydromodification.

Turbidity

During construction, potential short-term increases in turbidity would result from soil erosion and suspended solids being introduced into San Francisquito Creek from both in-water and land construction activities. As a result, temporary increases in turbidity may occur in the immediate area and potentially downstream. This would violate water quality standards or WDRs related to turbidity since the waterbody is already impaired for sediment, and would have the potential to result in physiological, behavioral, and habitat adverse effects on aquatic life.

In-water construction activities in San Francisquito Creek would directly disturb sediment along the creek bed and result in a temporary increase in turbidity in the immediate area and potentially downstream. As shown in Table 2.2.2-2, Build Alternatives 1 and 2 (LPA) would result in 45,000 square feet of DSA; Build Alternative 3 would result in 46,000 square feet of DSA; and Build Alternative 4 would result in 55,000 square feet of DSA. The potential for disturbance of riverbed sediments and associated increases in sedimentation and turbidity in San Francisquito Creek are anticipated to be greatest during demolition of the abutment walls and installation of cast-in-drilled-holes during in-water work for bridge construction.

Construction activities occurring on land adjacent to the creek, such as demolition and grading, could cause erosion of sediments and soil deposition in the creek, and contribute to short-term

increases in turbidity in the creek. Construction of the road adjacent to the creek could also result in debris falling into the creek, which could directly increase trash and turbidity.

Construction of the Project is expected to disturb 1 acre of land. Because the Project is over San Francisquito Creek, implementation of standardized measure SM-WQ-2 requires preparation of a SWPPP and implementation of erosion and sediment control BMPs to ensure that water quality impacts would not occur from construction. Water quality protection measures would be implemented during construction to prevent or minimize sediment and suspended solids from entering the creek (SM-WQ-1 and SM-WQ-2). In addition, the Project design would incorporate post-construction measures and other permanent erosion control elements to ensure that storm water runoff would not cause soil erosion, and to reduce or avoid permanent impacts on water quality.

Oil, Grease, and Chemical Pollutants

The use of heavy construction equipment or construction-related materials can introduce pollutants of concern or toxic chemicals to the Project site, which has the potential to violate water quality standards or WDRs. Pollutants of concern are toxic chemicals from heavy construction equipment or construction-related materials (e.g., concrete, paint, asphalt).

A typical construction site uses many chemicals or compounds including gasoline, oils, grease, solvents, lubricants, and other petroleum products. Many petroleum products contain a variety of toxic compounds and impurities and tend to form oily films on the water surface, altering oxygen diffusion rates. Concrete, soap, trash, and sanitary wastes are other common sources of potentially harmful materials on construction sites. Washwater from equipment and tools and other waste dumped or spilled on the construction site can easily lead to introduction of pollutants into surface waters or seepage into groundwater. Also, construction chemicals may be accidentally spilled into watercourses. The impact of toxic construction-related materials on water quality varies depending on the duration and time of activities. Because of low precipitation, construction occurring in the dry season is less likely to cause soil and channel erosion or runoff of toxic chemicals into a stream. However, low summer flows are less able to dilute pollutants entering a watercourse. Increases in storm water contamination occur during “first flush” rain events.

The construction contractor’s qualified SWPPP practitioner would be required to regularly inspect and maintain the BMPs to ensure they are in good working order, as required in the Construction General Plan SWPPP (SM-WQ-1 and SM-WQ-2). The contractor’s qualified SWPPP practitioner would implement appropriate hazardous material management practices, spill prevention, and other good housekeeping measures to reduce the potential for chemical spills or releases of contaminants, including any non-storm water discharge to drainage channels. Implementation of these measures would minimize the potential for surface and groundwater contamination.

Overall, construction runoff is not expected to have an adverse effect on water quality in San Francisquito Creek.

Aquifer Recharge/Groundwater

Prior to initiation of construction, a temporary surface water diversion would be installed in San Francisquito Creek to allow for construction activities to take place along the banks of the active creek. Check dams, such as clean gravel dams or any other type of approved Caltrans standard dam, would be installed both upstream and downstream of the construction zone within 50 feet of the bridge, and culvert piping would route surface water flows through the construction zone. BMPs

would be employed to protect the active stream. There could be temporary sheet piling used to construct the replacement bridge abutments that would be used to support the surrounding soils and control the flow of groundwater, if present. This sheet piling would be installed at the top and within the banks of San Francisquito Creek.

Changes to groundwater occurrence and levels due to Project construction, if groundwater levels are affected at all, would not detrimentally affect regional groundwater production or change the existing water quality. Groundwater dewatering would not be necessary.

Aquatic Organisms

The Project would result in temporary impacts on aquatic habitat area, including rearing, migration, and possibly spawning habitat for Central California Coast steelhead. The Project is not expected to permanently affect this habitat because all construction activities would occur during periods of low surface flow (dry season), outside of the active channel, and above the OHWM. Construction activities associated with the Project that would affect fish habitat include removal of the existing bridge structures and revegetation activities. These activities could result in increased erosion, sedimentation and turbidity, degrading of aquatic habitat, and impacts on fish mortality. Bridge replacement and bank stabilization activities would require removal of vegetation, resulting in temporary loss of vegetative cover and reducing fish habitat complexity. Implementation of the Project is not expected to affect fish habitat directly since vegetation is located above the OHWM; therefore, the Project would not adversely affect steelhead or its habitat.

The standardized measure such as preparing and implementing a SWPPP to address all construction-related activities and materials that have the potential to impact water quality (SM-WQ-2) and the avoidance and minimization measure to limit stream bank construction during the dry season (AMM-WQ-2), would avoid or minimize the potential for construction-related effects on aquatic habitat within the Project area.

No Build Alternative

Under the No Build Alternative, construction activities would not occur, avoiding impacts on water quality from construction.

Operational Impacts

Build Alternatives

Long-term water quality impacts are attributable to the changes in storm water drainage and/or soil disturbance from construction. The Project would increase impervious surfaces in the Project area as a result of road and sidewalk reconstruction. Increases in impervious surfaces change the storm hydrograph by increasing flow velocity, and the peak and quantity of storm runoff due to reduced natural infiltration (groundwater recharge) and uptake from native soils and vegetation. Further, if periodic maintenance of the overcrossing were to require in-water work, there would be the potential for increased turbidity. In addition, after the proposed improvements by the SFCJPA project, the future baseline flow of 7,500 cfs would be greater than the existing flows (5,400 cfs). The increased flow velocity and potential quantity of water would further alter the storm hydrograph, and may result in increased turbidity.

Heavy metals, oil, grease, and polycyclic aromatic hydrocarbons are common pollutants in road runoff, and roadside landscaping can introduce pesticides and fertilizers. These and other contaminants are typically washed off the roadway surfaces by rainfall and enter storm water runoff. Urban runoff from vehicles on bridges can be discharged into streams during rain events, vehicle accidents, and through normal wear and tear. Runoff in substantial quantities occurs only during heavy storms that in turn cause these pollutants to be greatly diluted. These storms cause some high flows in the drainage systems which dilute the pollutants as they are carried from the source. Further, after the proposed improvements by the SFCJPA Project, the future baseline flow of 7,500 cfs would be greater than the existing flows (5,400 cfs), and could potentially further dilute pollutants.

The Project would adhere to the San Mateo County and Santa Clara County SWPPP requirements and ensure that storm water pollution during operation and maintenance of the Project would be minimal by implementing post-construction BMPs to ensure compliance with water quality standards and related regulations (SM-WQ-1 and SM-WQ-2). Standard facilities used to handle storm water on site would be an array of structural elements or facilities that would serve to manage, direct, and convey the storm water. The implementation of post-construction BMPs and routine inspections of BMPs (SM-WQ-1 and SM-WQ-2) would minimize impacts on water quality during long-term operations at the site. In addition, during operation, the City of Palo Alto will not reduce the flood capacity of existing drainage or water conveyance features within the Project study area in a way that causes ponding or flooding during storm events (AMM-WQ-1).

No Build Alternative

Under the No Build (No Action) Alternative, no changes would be made to the existing bridge and approaches. In the absence of additional bank stabilization activities, the banks of San Francisquito Creek would be expected to erode further, particularly in response to high discharges. Where bank instability is already apparent, or where vegetation becomes disturbed, further bank erosion would be expected. Additional erosion hotspots (i.e., bridge abutments) may develop in locations where high stresses occur, and no revetment (i.e., rock protection) is present along the banks. As the channel widens, deposition of sediments on sloping surfaces may also form along the channel in response to decreased stresses along the banks and bed. In addition to erosion continuing along some banks and beginning along others, existing revetments may degrade and present additional threats to bank stability.

2.2.2.4 Avoidance, Minimization, and/or Mitigation Measures

The Project would implement construction BMPs based on guidance from several resources including the *Caltrans Construction Site Best Management Practices Reference Manual* (California Department of Transportation 2011). Implementation of water quality measures (management measures and BMPs) are required to avoid and minimize Project-related water quality impacts during construction, operation, and maintenance of the Project.

Compliance with federal, state, and local requirements for potential short-term (during construction) and long-term (post-construction/maintenance) impacts is required. To avoid and minimize water quality or hydrologic issues from Project construction, the Project will need to comply with requirements from the Municipal Regional Storm water NPDES Permit. In addition, the

following standardized measures (SM) and avoidance and minimization measures (AMM) will be implemented.

- **SM-WQ-1: Implement NPDES Permit and Construction General Permit Water Quality Measures**

The Project will comply with the provisions of the California Regional Water Quality Control Board San Francisco Bay Region *Municipal Regional Storm water NPDES Permit* (Order No. R2-2015-0049-DWQ/NPDES No. CAS612008) and the *NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit)* Order No. 2009-0009-DWQ, NPDES No. CAS000002 as amended by 2010-0014-DWQ and 2012-0006-DWQ and any subsequent permits in effect at the time of construction. In addition, the Project proponent and/or their construction contractor shall ensure the construction specifications include water quality protection and erosion and sediment control BMPs to minimize construction-related contaminants and mobilization of sediment to San Francisquito Creek. The Project proponent will perform routine inspections of the construction area to verify the BMPs are properly implemented and maintained.

- **SM-WQ-2: Prepare and Implement SWPPP**

The project will comply with the Construction General Plan by preparing and implementing a SWPPP to address all construction-related activities, equipment, and materials that have the potential to impact water quality for the appropriate risk level. The SWPPP will identify the sources of pollutants that may affect the quality of storm water and include BMPs to control the pollutants, such as sediment control, catch basin inlet protection, construction materials management, and non-storm water BMPs. All work must conform to the construction site BMP requirements specified in the latest edition of the *Caltrans Construction Site Best Management Practices Reference Manual* (California Department of Transportation 2011) to control and minimize the impacts of construction and construction-related activities, materials, and pollutants on the watershed. These include, but are not limited to, temporary sediment control, temporary soil stabilization, scheduling waste management, materials handling, and other non-storm water BMPs. In addition, a temporary creek flow diversion will be installed prior to any construction to prevent sediments from washing downstream. Temporary BMPs will be selected and identified in the SWPPP to protect water bodies, within or near the project limits, from potential storm water runoff resulting from construction activities. Temporary sediment and erosion control measures may include the following.

- Fiber rolls and/or silt fences.
- Gravel bag berm.
- Rolled erosion-control product (e.g., netting).
- Designated construction entrance/exit.
- Re-establishment of vegetation or other stabilization measures (hydroseeding, mulch) on DSAs and newly constructed slopes.
- Wind erosion control.

- **AMM-WQ-1: Flood Capacity**

The City of Palo Alto will not reduce the flood capacity of existing drainage or water conveyance features within the Project study area during construction or operation in a way that causes ponding or flooding during storm events.

- **AMM-WQ-2: Limit Stream Bank Construction to Dry Season**

The contractor will limit stream bank construction from June 1 to October 15 in order to avoid the migratory season for adult steelhead and to limit any excess sedimentation and runoff from entering San Francisquito Creek.

The Project proponent will compensate for temporary construction-related loss of valley foothill riparian habitat by replanting trees in the temporarily disturbed area after completion of the construction activities and before October 15 to minimize erosion and sedimentation into San Francisquito Creek.

The Project proponent will compensate for the permanent loss of riparian vegetation by planting riparian trees at a minimum ratio of 3:1 (three trees planted for every one tree removed) in the project vicinity as determined appropriate by a qualified biologist and Project proponent. This ratio and the location will be confirmed through coordination with the Project proponent and other agencies as part of the permitting process for the Project.

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2.2.3 Geology/Soils/Seismic/Topography

2.2.3.1 Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under the California Environmental Quality Act (CEQA).

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using the California Department of Transportation’s (Caltrans’) Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge’s category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. For more information, please see Caltrans’ Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

The City of Palo Alto Comprehensive Plan (City of Palo Alto 2017) includes policies and programs to minimize risk associated with natural hazards, including hazards related to geology, soils, seismicity, and topography.

- POLICY S-2.5: Minimize exposure of people and structures to geologic hazards, including slope stability, subsidence, and expansive soils, and to seismic hazards including groundshaking, fault rupture, liquefaction, and landsliding.
- PROGRAM S2.5.1: Periodically review and update the City’s Seismic Hazard Ordinance.
- Program S2.5.2: Continue to provide incentives for seismic retrofits of structures throughout the city, particularly those building types that would affect the most people in the event of an earthquake.

The 2035 East Palo Alto General Plan Safety and Noise chapter (City of East Palo Alto 2012) includes policies to minimize risk associated with natural hazards, including hazards related to geology, soils, seismicity, and topography.

- 1.1 Construction requirements. Apply the proper development engineering and building construction requirements to avoid or minimize risks from seismic and geologic hazards.
- 1.2 Robust seismic guidance. Utilize and enforce the most recent State guidance for seismic and geologic hazards when evaluating development proposals.
- 1.3 Licensed geologist. Require that a state licensed engineering geologist prepare and/or review development proposals involving grading, unstable soils, and other hazardous conditions. Incorporate recommendations of the geologist into design plans, potentially including building modifications and open space easements.

2.2.3.2 Affected Environment

The following sources are the basis for analysis of the affected environment and the Project’s potential environmental consequences.

- Preliminary Geotechnical Information Memo, Newell Road Bridge Replacement (Br. No. 37C-0223), Cities of Palo Alto and East Palo Alto, California (Parikh 2012).
- Site-specific soils mapping (Natural Resources Conservation Service 2019).
- State and federal government seismic hazard maps and reports (California Geological Survey 2006a, 2006b; Witter 2006).
- Earthquake probability forecasts (Working Group on California Earthquake Probabilities 2015).

The study area for impacts related to geology, soils, seismicity, and topography is the 1.09-acre Project site.

Regional Geology

The Project area is located in the Coast Ranges geomorphic province, which is characterized by northwest-trending mountain ranges and valleys (California Geological Survey 2006a). The ridges and valleys in the Coast Ranges are controlled by folds and faults that resulted from the collision of the Pacific and North American plates and subsequent strike-slip faulting along the San Andreas fault, Hayward fault, and Calaveras fault. The San Andreas fault includes individual fault strands in a fault zone. Some of the individual strands ruptured to the surface in the 1906 earthquake.

Site Geology

The Project site is primarily underlain by Natural Levee Deposits (Holocene). It is also underlain by Artificial Fill (Historic), Basin Deposits (Holocene), Flood Plain Deposits (Holocene), and Alluvial Fans and Fluvial Deposits (Pleistocene) (Parikh 2012). During boring, groundwater was encountered at approximately 20 feet below ground surface. California Geological Survey (2006a) Seismic Hazard Zone Report 111 shows that the historical groundwater depth is 10 feet below ground surface. Groundwater depth may vary depending on seasonal variations, water level in the creek, ground surface runoff, and other factors.

The Project site is located near several fault systems capable of causing large earthquakes. Table 2.2-3-1 and Figure 2.2-3-1 show the faults within 10 miles of the project site.

Table 2.2.3-1. Faults within 8 Miles of the Project Site

Fault	Symbol	Maximum Moment Magnitude (M_{Max})	Approximate Distance from Project Site (miles)
Cascade fault	92	6.9	3.9
Monte Vista-Shannon fault zone	91	6.7	5.8
Silver Creek fault	152	7.1	6.5
San Andreas fault zone (Peninsula section)	309	7.9	7.1

Source: Parikh 2012

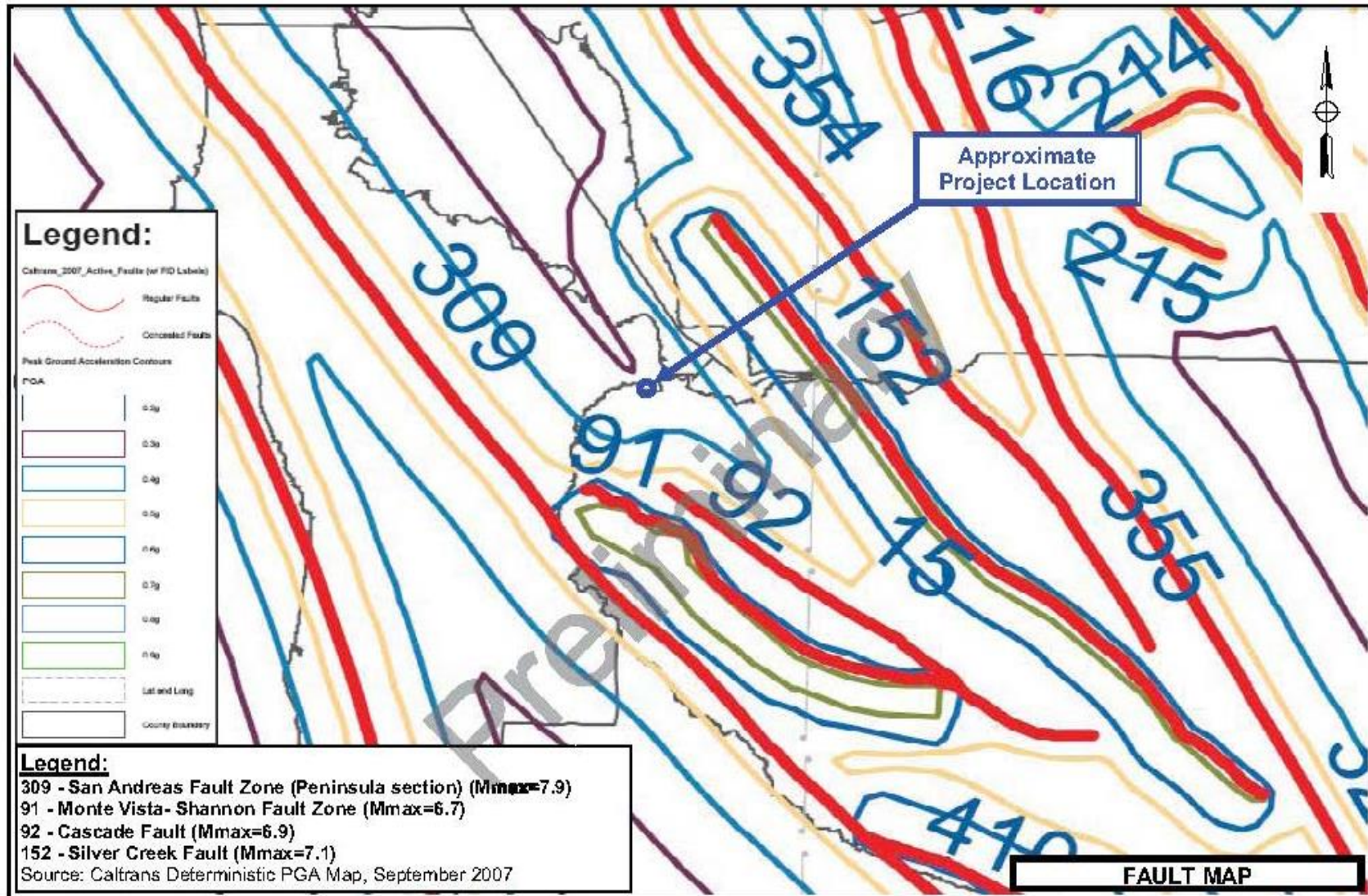


Figure 2.2.3-1. Faults Within 10 Miles of Project Site

Further, there is a 72% likelihood that a magnitude 6.7 earthquake will occur in the Bay Area in the next 30 years (Working Group on California Earthquake Probabilities 2015).

Based on the 2008 U.S. Geological Survey Beta program, the peak ground acceleration for the project site was estimated to be 0.54 g, and the mean maximum moment magnitude was estimated to be 6.9 with a 5% probability of occurrence in 50 years (Parikh 2012).

Geologic Hazards

Fault Rupture

Surface fault rupture is a phenomenon in which fault movement within the earth extends to the earth's surface (U.S. Geological Survey 2016). There is no evidence of active or potentially active faulting at the Project site (Parikh 2012). The site does not lie within a mapped Special Studies Zone under the Alquist-Priolo Earthquake Fault Zoning Act (California Geological Survey 2006b).

Ground Failure

Liquefaction

Liquefaction occurs when saturated cohesionless soils, such as submerged sand or low-plastic, low-density silts, are subjected to a temporary loss of shear strength under cyclic shear stresses such as those associated with earthquake shaking (Parikh 2012). Soils subject to liquefaction, when subjected to sufficient cyclic shaking, lose their ability to bear loads.

The Project site is located in an area with high liquefaction susceptibility, according to mapping by U.S. Geological Survey and California Geological Survey (Witter 2006). Boring studies at the Project site encountered sand above 13 feet below ground surface and thin submerged sand and gravel pockets below this level (Parikh 2012). These submerged pockets have fine content, which generally have only a minor influence on overall soil behavior and thus do not play a role in liquefaction; therefore, local conditions at the Project site have moderate liquefaction susceptibility.¹

Lateral Spreading

Liquefaction-induced lateral spreading is a phenomenon in which gently sloping ground or ground adjacent to an open face or embankment that overlies a liquefiable underlayer displaces laterally (i.e., spreads horizontally) as a result of ground shaking during an earthquake (Parikh 2012). The upper approximately 13 feet of sandy soils at the Project site are potentially liquefiable, depending on factors such as groundwater level, hydraulic features of the creek, configuration of the creek banks, and other factors.

Slope Failure

Slope failure is the downward movement of rock debris and soil in response to gravitational stress. It can be seismically induced or result from static forces (Keller 1996). Slope failure requires sometimes steep slopes, unconsolidated sediments constituting the slope, and the interplay between driving forces and resisting forces. Specifically, the force driving the downward movement of the rock debris and/or soil overcomes the resisting force holding it in place.

¹ Precise determination must be made once design is complete.

In California, triggering mechanisms for slope failures that are relevant to the Project area are unconsolidated sediments; saturated soils; steep slopes at the embankment, potentially undermined at the base through scouring by the creek; and ground shaking caused by earthquake (Harden 1998). While the Project site is not located in a zone mapped for landslide hazard and is thus not subject to large-scale landslide (California Geological Survey 2006b), slope failure on a small, local scale during events that disturb embankment soils is possible where slopes are not stabilized.

Site Soils

Soil at the Project site is Urban land-Elpaloalto complex, 0 to 2% slopes. This soil, composed substantially of artificial fill, is not rated for corrosivity, expansiveness, or susceptibility to erosion.

2.2.3.3 Environmental Consequences

Impacts related to geology and soils were analyzed qualitatively, based in part on analysis presented in the preliminary geotechnical report prepared for this Project (Parikh 2012). The analysis was also based on data from peer-reviewed and government reports and mapping, as described in Section 2.2.3.2, *Affected Environment*. The analysis focused on the Project's potential to affect the environment as a result of Project actions.

Construction Impacts

Build Alternatives

Construction period impacts would be the same for all build alternatives. Site preparation and grading associated with Project construction activities would potentially expose bare soil to erosive forces. Because the Project would disturb 1 acre of land, the preparation and implementation of a stormwater pollution prevention plan in accordance with the National Pollutant Discharge Elimination System would be required, as specified in standardized measure SM-WQ-2. The stormwater pollution prevention plan would list best management practices that would be implemented to minimize stormwater runoff, control erosion, and monitor effectiveness. Further, as part of Caltrans' standard practice, the Project would incorporate best management practices that include but are not limited to stabilizing soil through mulching, hydroseeding, use of soil binders, or other means; temporary sediment control measures; and wind erosion control measures (SM-WQ-2).

Once the existing bridge foundation is removed, sandy, steep, unconsolidated soil would be exposed in the stream bed and at the embankment. This fresh embankment could be vulnerable to slope failure during construction if it is not stabilized. However, as part of Caltrans' standard practice, the Project would incorporate standard measures to prevent slope failure (SM-WQ-2).

No Build Alternative

If the Project is not built, the soil would not be exposed to erosive forces and the embankment would not be destabilized.

Operational Impacts

Build Alternatives

Operational impacts would be the same for all build alternatives. Surface fault rupture could cause road surfaces to buckle or separate and damage bridge foundations, including damaging the bridge up to causing the bridge to collapse. However, as discussed in Section 2.2.3.2, *Affected Environment*, under *Fault Rupture*, the Project site is not located in an Alquist-Priolo Earthquake Fault Zone, nor are there active or potentially active faults in the Project area. The nearest known active fault is the Cascade Fault, approximately 3.9 miles from the Project area. Therefore, the potential for surface fault rupture to affect the Project site is extremely low.

The Project area is likely to experience strong ground shaking due to earthquake during the life of the Project. If the bridge foundations are not properly constructed, ground shaking could damage the bridge or cause it to collapse. However, bridge design and construction would adhere to current Caltrans SDC as specified in standardized measure SM-GEO-1. Accordingly, effects from earthquakes would be minimized, and the potential for damage resulting from strong ground shaking due to earthquake is low.

The structures constructed as part of the Project would exacerbate the liquefaction tendencies of soils present at the site, rendering structures and immediately adjacent land subject to seismically induced liquefaction. Liquefaction-induced settlements can induce down-drag loads on subsurface support structures such as piles. Down-drag is a term used to define the forces on piles installed through soil deposits undergoing consolidation. These forces increase the load on piles and result in additional settlement, thereby reducing the usable capacity of the piles. However, bridge design and construction would adhere to current Caltrans SDC (SM-GEO-1). Accordingly, effects from earthquakes would be minimized, and the potential for damage resulting from liquefaction due to earthquake is low.

The potential for lateral spreading in the Project area is high. However, bridge design and construction would adhere to current Caltrans SDC (SM-GEO-1). Accordingly, effects from earthquakes would be minimized, and the potential for damage resulting from lateral spreading due to earthquake-induced liquefaction is low.

The Project area is underlain by silty sand approximately 13.5 feet thick. The silty sand is classified as Urban land-Elpaloalto complex. This Urban land-Elpaloalto complex is not rated for expansive properties; however, sand is not an expansive soil. Underlying the silty sand is lean clay and sandy lean clay, which is not expansive. The likelihood of damage associated with expansive soils is therefore low.

No Build Alternative

If the Project is not built, likelihood of surface fault rupture would not change. The Newell Road Bridge does not suffer from seismic deficiency, so not building the Project is not necessary for seismic safety.

If the Project is not built, it would prevent future upstream improvements from occurring and current flooding risk would not be reduced. The increased flow that can pass from the No Project Alternative would increase the erosive power of the water, leading to increased potential for slope failure.

2.2.3.4 Avoidance, Minimization, and/or Mitigation Measures

The Project will implement the following standard measure (SM) as part of the project description to avoid impacts from geology, soils, and seismicity. No avoidance, minimization, or mitigation measures are required.

- SM-GEO-1: The City of Palo Alto will adhere to current Caltrans SDC for bridge design and construction.

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2.2.4 Paleontology

2.2.4.1 Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects. 23 United States Code (USC) 1.9(a) requires that the use of Federal-aid funds must be in conformity with all federal and state laws. 23 United States Code (USC) 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 USC 431-433 above and state law. Under California law, paleontological resources are protected by the California Environmental Quality Act (CEQA).

2.2.4.2 Affected Environment

The following sources are the basis for analysis of the affected environment and the Project's potential environmental consequences.

- Preliminary Geotechnical Information Memo, Newell Road Bridge Replacement (Br. No. 37C-0223), Cities of Palo Alto and East Palo Alto, California (Parikh 2012).
- Scientific information regarding paleontological resources in the Project area (Maguire and Holroyd 2016).
- Federal geologic mapping and reports (Brabb et al. 2000; Laughlin et al. 2001; Witter 2006).
- Society of Vertebrate Paleontology guidelines for the assessment and mitigation of adverse impacts to paleontological resources (Society of Vertebrate Paleontology 2010).

The study area for impacts related to paleontological resources is the 1.09-acre Project site.

Paleontological Sensitivity

Paleontological sensitivity is an indicator of the likelihood of a geologic unit to yield fossils, and is defined and discussed in Section 2.2.4.3, *Environmental Consequences*. Unlike archaeological sites, which are narrowly defined, paleontological sites are defined by the entire extent (both areal and stratigraphic) of a unit or formation. Once a unit is identified as containing vertebrate fossils, or other rare fossils, the entire unit is a paleontological site (Society of Vertebrate Paleontology 2010). For this reason, the paleontological sensitivity of geologic units is described and analyzed broadly, rather than being limited to county boundaries.

To identify the geologic units in the paleontological study area, geologic mapping for the Bay Area was consulted (Witter 2006; Brabb et al. 2000).

Paleontological sensitivity of the geologic units in the Project area was assessed using the Impact Mitigation Guidelines Revisions Committee's guidance in the Standard Guidelines (Society of Vertebrate Paleontology 2010). The Standard Guidelines include procedures for the investigation, collection, preservation, and cataloguing of fossil-bearing sites. The Standard Guidelines are widely accepted among paleontologists and are followed by most investigators. The Standard Guidelines identify the two key phases of paleontological resource protection as (1) assessment and

(2) implementation. Assessment involves identifying the potential for a project site or area to contain significant nonrenewable paleontological resources that could be damaged or destroyed by project excavation or construction. Implementation involves formulating and applying measures to reduce such adverse effects. The Society of Vertebrate Paleontology defines the level of potential as one of four sensitivity categories for sedimentary rocks: High, Undetermined, Low, and No Potential (Society of Vertebrate Paleontology 2010).

- **High Potential.** Assigned to geologic units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered; and sedimentary rock units suitable for the preservation of fossils (“e.g., middle Holocene and older, fine-grained fluvial sandstones...fine-grained marine sandstones, etc.”). Paleontological potential consists of the potential for yielding abundant fossils, a few significant fossils, or “recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data.”
- **Undetermined Potential.** Assigned to geologic units “for which little information is available concerning their paleontological content, geologic age, and depositional environment.” In cases where no subsurface data already exist, paleontological potential can sometimes be assessed by subsurface site investigations.
- **Low Potential.** Field surveys or paleontological research may allow determination that a geologic unit has low potential for yielding significant fossils, (e.g., basalt flows). Mitigation is generally not required to protect fossils.
- **No Potential.** Some geologic units have no potential to contain significant paleontological resources, such as high-grade metamorphic rocks (e.g., gneisses and schists) and plutonic igneous rocks (e.g., granites and diorites). Mitigation is not required.

Based on data from the scientific literature, each geologic unit in the study area was assigned a paleontological sensitivity according to Society of Vertebrate Paleontology’s Standard Guidelines.

The paleontological sensitivity of the geologic units exposed at ground surface in the study area is shown in Table 2.2.4-1. Following Table 2.2.4-1 is a description of geologic units in the study area with the potential to contain fossils.

Table 2.2.4-1. Geologic Units in the Paleontological Study Area

Symbol	Geologic Unit	Epoch	Paleontological Sensitivity	Notes
Qhl	Natural Levee Deposits	Holocene	High	In most areas, units are likely too young to yield fossils. ^a However, recent research suggests that the Quaternary alluvium of the Santa Clara Valley may be more paleontologically sensitive than previously recognized. ^b
Qhfp	Floodplain Deposits	Holocene	High	
Qhb	Basin Deposits	Holocene	High	

Sources: Society of Vertebrate Paleontology 2010; Maguire and Holroyd 2016; Parikh 2012; Laughlin et al. 2001
Notes:

^a Geologic units younger than 5,000 years old are generally not considered old enough to contain fossils.

^b Maguire and Holroyd 2016

Quaternary Alluvium of the Santa Clara Valley (Qh1, Qhfp, Qhb)

The Quaternary alluvium of the Santa Clara Valley in the Project area consists of natural levee deposits, floodplain deposits, and basin deposits. Levee deposits are sand, silt, and mud deposited in natural levee settings adjacent to stream channels. Floodplain deposits are sand, silt, mud, and gravel deposited on floodplains of streams that drain into Santa Clara Valley. Basin deposits are mud, silt, and sand that are locally thinly deposited in closed nonmarine depressions and associated lacustrine settings (Laughlin et al. 2001).

Pleistocene vertebrate fossils have been found from multiple localities across Santa Clara Valley, including Lawrence Expressway East, San Jose; Santa Clara Valley Water District lands in the Guadalupe River in San Jose; Sunnyvale Sewer, Sunnyvale; Calabaza Creek, Sunnyvale; and Milpitas, as well as multiple localities farther north. These fossil localities occur in units mapped as surficial Holocene deposits (Maguire and Holroyd 2016). Radiocarbon dating of the mapped Holocene sediments where the Pleistocene remains were found shows Pleistocene age for two of these finds (11 feet and 30 feet below modern ground surface); for the others, no dating was performed. Some of these finds may have washed down from the mountains and been deposited in Holocene waterways, but the two radiocarbon-dated finds likely originated where they were found. These occurrences “demonstrate that older sediments and fossils (>10 thousand years before present) occur at or very near the surface in these areas,” particularly because the amount, association, and orientation of the fossils from these localities indicate that the sediments in which they occur had not been reworked through geologic or artificial processes (Maguire and Holroyd 2016). Accordingly, Pleistocene alluvium may be more widespread in the Santa Clara Valley than was previously thought and in many locations is likely at or very near the ground surface. Pleistocene fossil resources found in the Santa Clara Valley in units mapped as Holocene alluvium include extinct species of mammoth, bear, horse, bison, and camel. The Quaternary alluvium of the Santa Clara Valley is therefore considered sensitive for paleontological resources.

2.2.4.3 Environmental Consequences

The fossil-yielding potential of geologic units in a particular area depends on the geologic age and origin of the units, as well as on the processes they have undergone, both geologic and anthropogenic.¹ The methods used to analyze potential impacts on paleontological resources and to develop mitigation for the identified impacts involved the following steps.

- Assess the likelihood that the sediments affected by implementation of the Project’s improvements contain scientifically important, nonrenewable paleontological resources that could be directly affected.
- Identify the geologic units in the paleontological study area.
- Evaluate the potential of the identified geologic units to contain significant fossils (their *paleontological sensitivity*).
- Identify the geologic units that would be affected by the Project, based on each improvement’s depth of excavation—either at ground surface or below ground surface, defined as at least 5 feet below ground surface.

¹ *Anthropogenic* means caused by human activity.

- Identify and evaluate impacts on paleontologically sensitive geologic units as a result of all construction and operation activities that involve ground disturbance.
- Evaluate impact significance.
- According to the identified degree of sensitivity, formulate and implement measures to mitigate potential impacts.

The potential of the Project's improvements to affect paleontological resources relates to ground disturbance. Ground disturbance caused by the Project would take place during construction phases; therefore, this impact analysis addresses construction impacts.

To identify and evaluate impacts on paleontologically sensitive geologic units as a result of the Project, engineering design drawings were used to identify ground-disturbing activities, including depth of ground disturbance, with respect to the location of geologic units with high potential and undetermined potential.

Construction Impacts

Build Alternatives 1 and 2

Construction of the Project, specifically Build Alternatives 1 and 2 (LPA), would involve excavation for the roadway to a depth of 2 feet from existing grade to remove existing asphalt and base, excavation to a depth of 5 feet for installation of retaining walls, and excavation to a depth of 6 feet for installation of bridge abutments. Because the excavation work is shallow and would proceed within the previously disturbed roadbed (i.e., would not involve excavation in undisturbed soil) any effect on sensitive paleontological resources would be minor. Demolition of the existing bridge would not involve excavation and therefore would not disturb paleontological resources.

Build Alternatives 3 and 4

Similar to Build Alternatives 1 and 2, construction of the Project under Build Alternatives 3 and 4 would involve excavation for the roadway to a depth of 2 feet from existing grade to remove existing asphalt and base, excavation to a depth of 5 feet for installation of retaining walls, and excavation to a depth of 6 feet for installation of bridge abutments. The excavation work is shallow; however, it would involve disturbance of previously undisturbed soil in the area of the road realignment. Because sensitive paleontological resources could occur at depths below 5 feet, it is possible that excavation could encounter sensitive paleontological resources. Implementation of MM-PA-1 under these alternatives would minimize effects on sensitive paleontological resources.

No Build Alternative

The No Build Alternative would have no effect on sensitive paleontological resources because no ground disturbance would occur.

Operational Impacts

Project operation would involve no disturbance below ground surface. There would be no effect on paleontological resources.

2.2.4.4 Avoidance, Minimization, and/or Mitigation Measures

The following mitigation measure (MM) will be implemented during construction for Build Alternative 3 or Build Alternative 4 to reduce potential impacts on paleontological resources.

- **MM-PA-1: Educate Workers, Stop Work in Case of Discovery of Paleontological Resources, and Prepare and Implement a Recovery Plan.** Given the potential for paleontological resources to be present in construction areas at ground surface and at excavation depths below 5 feet in sensitive geologic units in the Project area, the following measures will be undertaken to avoid any potentially significant effect from the improvements on paleontological resources. Before the start of any excavation, the City of Palo Alto will retain a qualified paleontologist, as defined by the Society of Vertebrate Paleontology.

The qualified paleontologist will make periodic visits during earthmoving in high-sensitivity sites to verify that workers are following the established procedures. If paleontological resources are discovered during earthmoving activities, the construction crew will immediately cease work near the find and notify Caltrans and the City of Palo Alto. Construction work in the affected areas will remain stopped or be diverted to allow recovery of fossil remains in a timely manner. The City of Palo Alto will retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in accordance with Society of Vertebrate Paleontology guidelines (Society of Vertebrate Paleontology 2010). The recovery plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by Caltrans and the City of Palo Alto to be necessary and feasible will be implemented before construction activities can resume at the site where the paleontological resources were discovered. Caltrans and the City of Palo Alto will be responsible for ensuring that the paleontologist's recommendations regarding treatment and reporting are implemented.

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2.2.5 Hazardous Waste/Materials

2.2.5.1 Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage, and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980, and the Resource Conservation and Recovery Act (RCRA) of 1976 (RCRA). The purpose of the Comprehensive Environmental Response, Compensation and Liability Act, often referred to as “Superfund,” is to identify and cleanup abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for “cradle to grave” regulation of hazardous waste generated by operating entities. Other federal laws include the following.

- Community Environmental Response Facilitation Act of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act
- Atomic Energy Act
- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control Standards, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during Project construction.

2.2.5.2 Affected Environment

The information in this section is from the *Hazardous Materials Technical Memorandum Update* (March 2017). This memorandum includes a review of federal, state, and local regulatory records for reports of hazardous waste, as well as a lead and asbestos survey conducted at the bridge in 2012. The Project vicinity is residential and there are no businesses that would potentially use, store, transport, or dispose of hazardous materials or waste near the Project site. Newell Road is an urban collector roadway with relatively low traffic (currently around 3,300 vehicles per day) and would not have historically accommodated the high traffic volumes associated with aerially deposited lead deposition concerns during the period prior to the 1980s when gasoline in California was permitted to contain tetraethyl lead.

Federal, state, and local databases pertaining to past and present hazardous materials uses and releases on properties at or near the Project site were reviewed. The Project site was not identified in any of the records, including lists of hazardous materials release sites compiled pursuant to Government Code 65962.5. The following three hazardous material release sites were identified within one-quarter mile of the Project site.

- J&J Rentals and Sales, 1800 West Bayshore Road, East Palo Alto
- Willrich Residence, 1452 Hamilton Avenue, Palo Alto
- Wood Residence, 111 Island Drive, Palo Alto

All three of these sites have reported a release of petroleum from a leaking underground storage tank. All three leak cases have been closed by oversight agencies, indicating that remediation is complete or was not necessary.

A lead and asbestos survey was conducted at the Newell Road Bridge in July 2012. Fifteen representative samples of concrete, asphalt, and paint from the bridge structure were collected and analyzed for asbestos content in accordance with industry standards and federal regulations. None of the samples contained asbestos above laboratory reporting limits. Three samples of paint were collected and analyzed for total lead. The lead concentrations from the paint samples are presented in Table 2.2.5-1.

Table 2.2.5-1. Lead Concentrations in Paint Samples

Location	Concentration (milligrams per kilogram)
White paint on concrete structure, near creek	72
White paint on roadway surface	<41
Yellow paint on roadway surface	1,100

Source: BASELINE Environmental Consulting 2017

Only the yellow roadway paint exceeded the U.S. Consumer Product Safety Commission threshold of 600 milligrams per kilogram for lead-based paint. The survey noted that the paint was in intact condition. The survey did not include an analysis of soils for naturally occurring asbestos; however, as no geologic formations with naturally occurring asbestos have been mapped in the Project vicinity, naturally occurring asbestos would not be expected to affect development of the Project.

2.2.5.3 Environmental Consequences

Construction Impacts

Build Alternatives

Based on the status of the three hazardous material release sites within one-quarter mile of the Project site, none of the hazardous material releases is considered likely to have the potential to affect development of the Project. Asbestos was not found during surveys, and no naturally occurring asbestos has been mapped in the project vicinity; therefore, asbestos and naturally occurring asbestos would not be expected to affect development of the Project, nor could they threaten the public, including worker health and safety.

Impacts from lead contamination from paint could occur where reconstruction of the bridge involves disturbing or removing the existing paint, which could create a hazard to the public or to the environment during routine transport, use, or disposal of hazardous materials or through upset and accident conditions. Direct contact with contaminated paint and subsequent hand-to-mouth activities (e.g., drinking or eating) could result in the inadvertent ingestion of contaminated paint. Lead paint that is adhering to its surface may generally be disposed of as normal construction debris, though additional analyses may be required by the landfill accepting the waste. It is recommended that all paint be treated as lead-containing for the purposes of complying with Division of Occupational Safety and Health worker safety requirements, which apply to all worksites where construction workers may be exposed to lead.

Construction activities could produce dust, which could expose workers or nearby residents and business occupants to lead via inhalation. Because there are no businesses that would potentially use, store, transport, or dispose of hazardous materials or waste near the Project site, impacts are not expected to occur from unreported releases or spills.

There are no existing or proposed schools within 0.25 mile of the Project site; therefore, no impacts related to emissions of hazardous materials within 0.25 mile of a school would occur.

No Build Alternative

The No Build Alternative would have no impact on hazardous waste or materials because ground-disturbing activities would not occur.

Operational Impacts

Build Alternatives

During operation of the Project, the potential for encountering hazardous materials and waste would be low. Remediation of the three hazardous material release sites was completed or was not necessary. The existing lead-based paint would be replaced with paint that does not contain lead, avoiding the chance of users of the area encountering lead in paint. Operation of the Project would not involve the use, storage, or transport of hazardous materials.

The Project is located approximately 1.2 miles from the Palo Alto Airport. The Project would not result in a safety hazard for people residing or working in the Project area because the Project would not change air traffic patterns or otherwise affect airport operations.

The Project is not located in a wildland fire hazard severity zone. In addition, the Project does not involve construction of any buildings that would be at risk of fires. The Project would replace an existing bridge structure, which would not contribute to the risk of wildland fires in urbanized areas.

No Build Alternative

The No Build Alternative would have no impact on hazardous waste or materials because ground-disturbing activities would not occur.

2.2.5.4 Avoidance, Minimization, and/or Mitigation Measures

The following mitigation measures (MM) are recommended to address the potential to encounter hazardous waste during construction.

- **MM-HAZ-1: Properly Dispose of and Abate Potential Lead-Based Paint.** All paint will be treated as lead-containing for the purposes of complying with Division of Occupational Safety and Health worker safety requirements, which apply to all worksites where construction workers may be exposed to lead. The California Department of Transportation (Caltrans) and the City of Palo Alto will have all lead-based paint abated and removed by a licensed lead-based paint contractor. The licensed lead-based paint contractor will dispose of all lead-based paint or coatings at landfills that meet acceptance criteria for the waste being disposed.
- **MM-HAZ-2: Properly Handle and Dispose of Potentially Contaminated Soils and Materials.** Caltrans and the contractor shall stockpile soil generated by construction activities on site in a secure and safe manner. All contaminated soils determined to be hazardous or nonhazardous waste shall be adequately profiled (i.e., sampled and analyzed) prior to acceptable reuse or disposal at an appropriate offsite facility. Specific sampling, handling, and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal agencies' laws, in particular the Regional Water Quality Control Board, the Department of Toxic Substances Control, the City of Palo Alto, the City of East Palo Alto, Santa Clara County, and San Mateo County. Material from existing roadway or bridge elements that is removed or modified by the contractor will be handled and disposed of in accordance with all local, state, and federal requirements.

2.2.6 Air Quality

2.2.6.1 Regulatory Setting

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality while the California Clean Air Act is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (EPA) and the California Air Resources Board, set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM)—which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM₁₀) and particles of 2.5 micrometers and smaller (PM_{2.5})—and sulfur dioxide (SO₂). In addition, national and state standards exist for lead (Pb), and state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H₂S), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act (NEPA). In addition to this environmental analysis, a parallel “Conformity” requirement under the FCAA also applies. Under the California Environmental Quality Act (CEQA), federal and state air quality standards are used to determine significance under CEQA with guidelines promulgated by the Bay Area Air Quality Management District (BAAQMD).

Conformity

The conformity requirement is based on FCAA Section 176(c), which prohibits the U.S. Department of Transportation and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to State Implementation Plan (SIP) for attaining the NAAQS. “Transportation Conformity” applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The proposed project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for CO, NO₂, O₃, particulate matter (PM₁₀ and PM_{2.5}), and in some areas (although not in California), SO₂. California has nonattainment or maintenance areas for all of these transportation-related “criteria pollutants” except SO₂, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation

Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and 4 years (for the FTIP). RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the FCAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization, Federal Highway Administration (FHWA), and Federal Transit Administration make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept and scope and the “open-to-traffic” schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and FTIP; the project has a design concept and scope¹ that has not changed significantly from those in the RTP and FTIP; project analyses have used the latest planning assumptions and EPA-approved emissions models; and in PM areas, the project complies with any control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in CO and PM nonattainment or maintenance areas to examine localized air quality impacts.

2.2.6.2 Affected Environment

The information in this section is from the *Air Quality Technical Memorandum* (November 2017) and *Supplemental Air Quality Technical Memorandum* (October 2018).

Climate, Meteorology, and Topography

The Project lies within the Peninsula region of the San Francisco Bay Area Air Basin. The peninsula region extends from northwest of San Jose to the Golden Gate Bridge. The Santa Cruz Mountains run up the center of the peninsula, with elevations exceeding 2,000 feet at the southern end, decreasing to 500 feet in South San Francisco. Coastal towns experience a high incidence of cool, foggy weather in the summer. Cities in the southeastern peninsula experience warmer temperatures and fewer foggy days because the marine layer is blocked by the ridgeline to the west. San Francisco lies at the northern end of the peninsula. Because most of San Francisco's topography is below 200 feet, marine air is able to flow easily across most of the city, making its climate cool and windy. The blocking effect of the Santa Cruz Mountains results in variations in summertime maximum temperatures in different parts of the peninsula. For example, in coastal areas and San Francisco the mean maximum summer temperatures are in the mid-60s, while in Redwood City the mean maximum summer temperatures are in the low 80s. Mean minimum temperatures during the winter months are in the high 30s to low 40s on the eastern side of the Peninsula and in the low 40s on the coast. Two important gaps in the Santa Cruz Mountains occur on the peninsula. The larger of the two is the San Bruno Gap, extending from Fort Funston on the ocean to the San Francisco Airport. Because the gap is oriented in the same northwest to southeast direction as the prevailing winds, and because the elevations along the gap are less than 200 feet, marine air is easily able to penetrate into the bay. The other gap is the Crystal Springs Gap, between Half Moon Bay and San

¹ *Design concept* means the type of facility that is proposed, such as a freeway or arterial highway. *Design scope* refers to those aspects of the project that would clearly affect capacity and thus any regional emissions analysis, such as the number of lanes and the length of the project.

Carlos. As the sea breeze strengthens on summer afternoons, the gap permits maritime air to pass across the mountains, and its cooling effect is commonly seen from San Mateo to Redwood City. Annual average wind speeds range from 5 to 10 miles per hour throughout the peninsula, with higher wind speeds usually found along the coast. Winds on the eastern side of the peninsula are often high in certain areas, such as near the San Bruno Gap and the Crystal Springs Gap. The prevailing winds along the peninsula's coast are from the west, although individual sites can show significant differences. For example, Fort Funston in western San Francisco shows a southwest wind pattern while Pillar Point in San Mateo County shows a northwest wind pattern. On the east side of the mountains winds are generally from the west, although wind patterns in this area are often influenced greatly by local topographic features. Air pollution potential is highest along the southeastern portion of the peninsula. This is the area most protected from the high winds and fog of the marine layer. Pollutant transport from upwind sites is common. In the southeastern portion of the peninsula, air pollutant emissions are relatively high due to motor vehicle traffic as well as stationary sources. At the northern end of the peninsula in San Francisco, pollutant emissions are high, especially from motor vehicle congestion. Localized pollutants, such as CO, can build up in "urban canyons." Winds are generally fast enough to carry the pollutants away before they can accumulate.

Air Quality Pollutants of Concern and Attainment Status

Air quality studies generally focus on the five pollutants that are most commonly measured and regulated: CO, O₃, NO₂, SO₂, and suspended particulate matter (i.e., PM₁₀ and PM_{2.5}). The NAAQS and California Ambient Air Quality Standards (CAAQS) have been established for criteria pollutants and are summarized in Table 2.2.6-1. The CAAQS are more stringent than the NAAQS; both are used in the air quality analysis for this project. Health effects, typical sources, and the state and federal attainment status of each criteria pollutant for the project area are also identified in Table 2.2.6-1.

Existing Air Quality Conditions

The existing air quality conditions in the Project area can be characterized by monitoring data collected in the region. The Project is located in northern Santa Clara County and San Mateo County. The nearest monitoring station to the Project is in San Mateo County at the Redwood City station located at 897 Barron Avenue. This station is approximately 4 miles northwest of the Project area and monitors for O₃, PM_{2.5}, and NO₂. The nearest station that monitors for PM₁₀ is the San Jose Jackson Street station. Table 2.2.6-2 summarizes O₃, CO, PM_{2.5}, and NO₂ pollutant levels from the Redwood City station for the last 3 years for which complete data are available (2014–2016), and PM₁₀ from the San Jose Jackson Street station. Air quality concentrations are expressed in terms of parts per million (ppm) or micrograms per cubic meter (µg/m³). As shown in Table 2.2.6-2, the monitoring station has experienced one violation of the state and national (2015) 8-hour O₃ standard, and two violations of the national PM₁₀ standard during this time period.

Table 2.2.6-1. State and Federal Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State¹ Standard	Federal² Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Ozone (O ₃)	1 hour	0.09 ppm ³	--- ⁴	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds (ROG or VOC) and nitrogen oxides (NO _x) in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.	Nonattainment	Marginal Nonattainment
	8 hours	0.070 ppm	0.070 ppm (4th highest in 3 years)				
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone. Colorless, odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.	Attainment	Attainment
	8 hours	9.0 ppm ¹	9 ppm				
	8 hours (Lake Tahoe)	6 ppm	---				
Respirable Particulate Matter (PM ₁₀) ³	24 hours	50 µg/m ^{3 6}	150 µg/m ³ (expected number of days above standard < or equal to 1)	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic and other aerosol and solid compounds are part of PM ₁₀ .	Dust- and fume-producing industrial and agricultural operations; combustion smoke and vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.	Nonattainment	Attainment
	Annual	20 µg/m ³	--- ⁵				

Pollutant	Averaging Time	State¹ Standard	Federal² Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Fine Particulate Matter (PM _{2.5}) ⁵	24 hours	---	35 µg/m ³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter—a toxic air contaminant—is in the PM _{2.5} size range. Many toxic and other aerosol and solid compounds are part of PM _{2.5} .	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including NO _x , sulfur oxides (SO _x), ammonia, and ROG.	Nonattainment	Moderate Nonattainment
	Annual	12 µg/m ³	12.0 µg/m ³				
	24 hours (conformity process ⁷)	---	65 µg/m ³				
	Secondary Standard (annual; also for conformity process ⁵)	---	15 µg/m ³ (98th percentile over 3 years)				
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm	0.100 ppm ⁸	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain and nitrate contamination of stormwater. Part of the “NO _x ” group of ozone precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.	Attainment	Attainment
	Annual	0.030 ppm	0.053 ppm				
Sulfur Dioxide (SO ₂)	1 hour	0.25 ppm	0.075 ppm ⁹ (99th percentile over 3 years)	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.	Attainment	Attainment
	3 hours	---	0.5 ppm ¹⁰				
	24 hours	0.04 ppm	0.14 ppm (for certain areas)				

Pollutant	Averaging Time	State¹ Standard	Federal² Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
	Annual	---	0.030 ppm (for certain areas)				
Lead (Pb) ^{ix}	Monthly	1.5 µg/m ³	---	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.	Attainment	Attainment
	Calendar Quarter	---	1.5 µg/m ³ (for certain areas)				
	Rolling 3-month average	---	0.15 µg/m ³ ¹²				
Sulfate	24 hours	25 µg/m ³	---	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.	Attainment	No Federal Standard
Hydrogen Sulfide (H ₂ S)	1 hour	0.03 ppm	---	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea. Strong odor.	Industrial processes such as: refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.	Unclassified	No Federal Standard

Pollutant	Averaging Time	State¹ Standard	Federal² Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Visibility Reducing Particles	8 hours	Visibility of 10 miles or more (Tahoe: 30 miles) at relative humidity less than 70%	---	Reduces visibility. Produces haze. NOTE: not directly related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other "Class I" areas. However, some issues and measurement methods are similar.	See particulate matter above. May be related more to aerosols than to solid particles.	Unclassified	No Federal Standard
Vinyl Chloride ¹¹	24 hours	0.01 ppm	---	Neurological effects, liver damage, cancer. Also considered a toxic air contaminant.	Industrial processes.	No Information Available	No Federal Standard

Pollutant	Averaging Time	State¹ Standard	Federal² Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Notes:							
¹ State standards are “not to exceed” or “not to be equaled or exceeded” unless stated otherwise.							
² Federal standards are “not to exceed more than once a year” or as described above.							
³ ppm = parts per million							
⁴ Prior to June 2005, the 1-hour ozone NAAQS was 0.12 ppm. Emission budgets for 1-hour ozone are still be in use in some areas where 8-hour ozone emission budgets have not been developed, such as the San Francisco Bay Area.							
⁵ Annual PM10 NAAQS revoked October 2006; was 50 µg/m ³ . 24-hr. PM2.5 NAAQS tightened October 2006; was 65 µg/m ³ . Annual PM2.5 NAAQS tightened from 15 µg/m ³ to 12 µg/m ³ December 2012 and secondary annual standard set at 15 µg/m ³ .							
⁶ µg/m ³ = micrograms per cubic meter							
⁷ The 65 µg/m ³ PM2.5 (24-hour) NAAQS was not revoked when the 35 µg/m ³ NAAQS was promulgated in 2006. The 15 µg/m ³ annual PM2.5 standard was not revoked when the 12 µg/m ³ standard was promulgated in 2012. The 0.08 ppm 1997 ozone standard is revoked FOR CONFORMITY PURPOSES ONLY when area designations for the 2008 0.75 ppm standard become effective for conformity use (July 20, 2013). Conformity requirements apply for all NAAQS, including revoked NAAQS, until emission budgets for newer NAAQS are found adequate, SIP amendments for the newer NAAQS are approved with an emission budget, EPA specifically revokes conformity requirements for an older standard, or the area becomes attainment/unclassified. SIP-approved emission budgets remain in force indefinitely unless explicitly replaced or eliminated by a subsequent approved SIP amendment. During the “Interim” period prior to availability of emission budgets, conformity tests may include some combination of build vs. no build, build vs. baseline, or compliance with prior emission budgets for the same pollutant.							
⁸ Final 1-hour NO ₂ NAAQS published in the Federal Register on February 9, 2010, effective March 9, 2010. Initial area designation for California (2012) was attainment/unclassifiable throughout. Project-level hot spot analysis requirements do not currently exist. Near-road monitoring starting in 2013 may cause re-designation to nonattainment in some areas after 2016.							
⁹ EPA finalized a 1-hour SO ₂ standard of 75 parts per billion (thousand million) in June 2010.							
¹⁰ Secondary standard, set to protect public welfare rather than health. Conformity and environmental analysis address both primary and secondary NAAQS.							
¹¹ The California Air Resources Board has identified vinyl chloride and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM10 and, in larger proportion, PM2.5. Both the California Air Resources Board and U.S. EPA have identified lead and various organic compounds that are precursors to ozone and PM2.5 as toxic air contaminants. There are no exposure criteria for adverse health effect due to toxic air contaminants, and control requirements may apply at ambient concentrations below any criteria levels specified above for these pollutants or the general categories of pollutants to which they belong.							
¹² Lead NAAQS are not considered in Transportation Conformity analysis.							
EPA = U.S. Environmental Protection Agency; CO = carbon monoxide; H ₂ S = hydrogen sulfide; NAAQS = National Ambient Air Quality Standards; NO ₂ = nitrogen dioxide; NO _x = nitrogen oxides; O ₃ = ozone; Pb = lead; PM10 = particulate matter less than 10 microns in diameter; PM2.5 = particulate matter less than 2.5 microns in diameter; ppm = parts per million; SIP = State Implementation Plan; SO ₂ = sulfur dioxide; SO _x = sulfur oxides; VOC = volatile organic compounds							

Table 2.2.6-2. Ambient Air Quality Monitoring Data

Pollutant Standards	2014	2015	2016
Ozone (O₃)			
Maximum 1-hour concentration	0.086	0.086	0.075
Maximum 8-hour concentration	0.065	0.071	0.060
4th highest 8-hour concentration	0.064	0.059	0.056
Days state 1-hour standard exceeded (0.09 ppm)	0	0	0
Days state 8-hour standard exceeded (0.070 ppm)	0	1	0
Days 2015 national 8-hour standard exceeded (0.070 ppm)	0	1	0
Days 2008 national 8-hour standard exceeded (0.075 ppm)	0	0	0
Carbon Monoxide (CO)			
Maximum 1-hour concentration	3.2	3.4	2.2
Maximum 8-hour concentration	1.6	1.6	1.1
Days state 1-hour standard exceeded (20 ppm)	--	--	--
Days national 1-hour standard exceeded (35 ppm)	0	0	0
Days state 8-hour standard exceeded (9 ppm)	--	--	--
Days national 8-hour standard exceeded (9 ppm)	0	0	0
Particulate Matter (PM₁₀) (San Jose Jackson Street)			
Maximum state 24-hour concentration	54.7	58.0	41.0
Maximum national 24-hour concentration	56.4	58.8	40.0
Annual average concentration	20.0	21.9	18.3
Days national standard exceeded (expected) (150 µg/m ³)	1	1	0
Fine Particulate Matter (PM_{2.5})			
Maximum state 24-hour concentration	35.0	34.6	19.5
Maximum national 24-hour concentration	35.0	34.6	19.5
Annual average concentration	7.1	5.7	8.3
Days national 24-hour standard exceeded (expected) (35 µg/m ³)	0.0	0.0	0.0
Nitrogen Dioxide (NO₂)			
Maximum 1-hour Concentration	55.2	47.8	45.7
Annual Average Concentration	11	10	9
Days state standard exceeded (0.18 ppm)	0	0	0
Days national standard exceeded (0.100 ppm)	0	0	0

Source: California Department of Transportation 2017

µg/m³ = micrograms per cubic meter; -- = no data available; NA = insufficient data available to determine the value;
PM₁₀ = particulate matter less than 10 microns in diameter; PM_{2.5} = particulate matter less than 2.5 microns in
diameter; ppm = parts per million

Sensitive Receptors

Sensitive receptors are typically defined as facilities that attract children, the elderly, people with illnesses, or others sensitive to the effects of air pollution. Examples of sensitive receptors include residences, hospitals, schools, parks, and places of worship.

The Project area is located in a largely residential area; thus, the primary land uses surrounding the Project area are mostly single- and multi-family residences. The nearest residences are south of the bridge, directly adjacent to the Project site and Newell Road. The nearest residences north of the bridge are on Woodland Avenue, approximately 60 feet from the Project site.

Local air pollutants in the Project area are emitted primarily by vehicular traffic, including trucks, traveling on roadways in the area. U.S. Highway 101 is approximately 960 feet northeast of the Project site.

2.2.6.3 Environmental Consequences

Construction Impacts

Build Alternatives

Ozone Precursors (ROG and NO_x), CO, and PM10

Construction activities associated with the Project would generate short-term emissions of reactive organic gases (ROG), nitrogen oxides (NO_x), CO, PM10, and PM2.5. Emissions would originate from on-road hauling trips, construction worker commute trips, construction site fugitive dust, and off-road construction equipment. Construction-related emissions would vary substantially depending on the level of activity, specific construction operations, and wind and precipitation conditions.

The Sacramento Metropolitan Road Construction Model (version 8.1.0) was used to estimate construction emissions based on Project-specific inputs of the Project size and length, duration of the construction period, soil exported daily, and the maximum amount of area that would be disturbed per day. The Project construction data were provided by the Project's engineering consultant and are assumed to represent the construction activity for all Build Alternatives. Construction equipment defaults from the Road Construction Model, such as emission factors, horsepower, and load factors, were used for the analysis. The default vehicle trip lengths for hauling trucks and workers and the default number and types of construction phases implicit in the Road Construction Model were also used for the analysis.

Table 2.2.6-3 summarizes the maximum daily emissions and the annual emissions for the Project. Project construction is estimated to occur for approximately 12 months. The California Department of Transportation is not required to adopt thresholds of significance established by local air districts in California Department of Transportation documents. However, the City of Palo Alto uses the BAAQMD thresholds to evaluate significance under CEQA. The BAAQMD thresholds are provided in Table 2.2.6-3, and the CEQA significance determinations are provided in Section 3.2.3, *Air Quality*.

Table 2.2.6-3. Summary of Construction Criteria Pollutant Emissions—All Build Alternatives

Daily/Annual Emissions	ROG	NO _x	CO	PM10			PM2.5		
				Dust	Exhaust	Total	Dust	Exhaust	Total
Maximum Daily Emissions (lbs/day)	7.8	75.7	59.3	5.0	3.9	6.9	1.0	3.6	3.6
Total Emissions (tons/construction period)	0.7	6.8	5.2	0.3	0.4	0.7	0.1	0.3	0.4
BAAQMD Daily Thresholds (lbs/day)	54	54	-	BMPs	82	-	BMPs	54	-

See Appendix A of the Air Quality Technical Memorandum for construction assumptions and Road Construction Model inputs and outputs.

BAAQMD = Bay Area Air Quality Management District; BMPs = best management practices; CO = carbon monoxide; lbs = pounds; NO_x = nitrogen oxides; PM10 = particulate matter less than 10 microns in diameter; PM2.5 = particulate matter less than 2.5 microns in diameter; ROG = reactive organic gases

Federal transportation conformity requires the evaluation of construction-related hot-spot emissions if construction activities will last longer than 5 years in one general location. Construction activities will not last for more than 5 years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 CFR 93.123(c)(5)).

Construction activities are subject to requirements found in standardized measure SM-AQ-1, the *Standard Specifications* (California Department of Transportation 2015), Section 14-9.02. This includes specifications relating to air pollution control by complying with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the contract, including air pollution control rules, regulations, ordinances, and statutes provided in Government Code Section 11017 (Public Contract Code §10231) while standard specification Section 10-5 addresses dust control, soil stabilization, and palliative requirements. Additionally, BAAQMD considers dust impacts to be less than significant through the application of best management practices and recommends that construction contractors implement all basic construction mitigation measures as listed in the Air Quality Guidelines to reduce construction emissions from dust (SC-AQ-2). Implementation of California Department of Transportation standard specification (SM-AQ-1), measures to control dust during construction (SM-AQ-2), and mitigation measure MM-AQ-1 to utilize clean diesel-powered equipment during construction to control construction-related NO_x emissions, would help to minimize air quality impacts from construction activities, further described in Section 2.2.6.4, *Avoidance, Minimization, and/or Mitigation Measures*.

Naturally Occurring Asbestos or Structural Asbestos

Depending on a project’s size and geographic location, BAAQMD may require mitigation to address potential impacts from naturally occurring asbestos (NOA). The Project is not located in an area known to contain NOA (California Department of Transportation 2017). Accordingly, the Project is not required to submit NOA notification forms, but must employ the best available dust mitigation measures to reduce and control dust emissions.

Structural asbestos may be released into the air during demolition of a structure if that structure was constructed with asbestos-containing material, such as serpentine rock. As discussed in Section 2.2.5, *Hazardous Materials*, no asbestos above laboratory reporting limits was found in samples of concrete and asphalt collected during surveys conducted at the bridge in 2012. Demolition of the bridge associated with the Project would be subject to the federal National Emission Standards for Hazardous Air Pollutants and BAAQMD Regulation 11, which would require the contractor to inspect the existing bridge for asbestos-containing material, and, if such material is present, to detail the work practices and engineering control procedures for removal and handling of the material. Thus, no asbestos is likely present in the bridge, based on surveys conducted in 2012, but the contractor would nevertheless be required to inspect the existing bridge for asbestos-containing material during demolition. If asbestos-containing materials are present, the contractor would be required to implement asbestos engineering controls and structural asbestos during demolition would be minimized.

Operational Impacts

Build Alternatives

Regional Conformity

Federally funded projects must demonstrate compliance with the SIP through regional and project level conformity analyses. However, not all federally funded projects must complete a conformity analysis. The FCAA lists certain types of highway and roadway transit projects that are exempt from regional conformity requirements but not project-level conformity requirements (40 CFR 93.127). Intersection signalization projects and projects that result in a change in vertical or horizontal alignment are among those listed in the FCAA as exempt from regional conformity. Because all Build Alternatives include signals and/or alignment changes, both of the exemption categories apply to the Project. Consequently, while the proposed Project is federally funded, it may proceed toward implementation without a regional conformity analysis. Since the proposed Project is exempt from the regional transportation conformity analysis per 40 CFR 93.127, an evaluation of inclusion of the proposed Project in the currently conforming RTP and FTIP is not required.

However, the Project is included in the regional emissions analysis conducted by the Metropolitan Transportation Commission (MTC) for the current RTP, Plan Bay Area (RTP ID 240728). The Project is also included in the MTC's financially constrained 2017 TIP (TIP ID VAR170012). FHWA and Federal Transit Administration determined that the TIP conforms to the SIP on December 16, 2016. Thus, although the Project is exempt from regional conformity, its inclusion in the 2017 MTC TIP is discussed here for informational purposes (Metropolitan Transportation Commission 2017).

Project Level Conformity

The Project would be within a nonattainment area for the federal PM_{2.5} standard. Therefore, per 40 CFR Part 93, a Project-level PM_{2.5} analysis is required for conformity purposes.

A quantitative hot-spot analysis is only required for projects identified as a project of air quality concern (POAQC), as defined in 40 CFR 93.123(b)(1). The Project does not match any of the project types considered to be POAQC by EPA's final rule.

(i) **New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles.**

The EPA has noted in the March 2006 final rule that certain project types would not be considered POAQC's under Section 93.123(b)(1)i and ii. One of these examples of projects that would not be considered a POAQC is consistent with the Project.

- Any new or expanded highway project that primarily services gasoline vehicle traffic (i.e., does not involve a significant number or increase in the number of diesel vehicles), including such projects involving congested intersections operating at level of service (LOS) D, E, or F.

The Project is located in a residential area with anticipated traffic of less than 3,600 vehicles per day in 2020 and less than 4,500 vehicles per day in 2040. Given that the Project has relatively small traffic volumes (less than 4,500 total vehicles per day in 2040) and is simply replacing an existing bridge, it is reasonable to assume that there would not be a significant increase in the number of trucks. Thus, it can be determined that the proposed Project is not a POAQC for section (i).

(ii) **Projects affecting intersections that are at LOS D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project.**

The Project is located in a residential area with relatively small daily traffic volumes. The Project traffic volumes are anticipated to be less than 4,500 vehicles per day over the bridge in 2040, which is substantially less than 125,000 vehicles per day. Truck traffic would be well below 10,000 per day as well. Thus, it can be determined that the proposed Project is not a POAQC for section (ii).

(iii) **New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.**

The Project does not include new bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.

(iv) **Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.**

The Project does not include expanded bus or rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.

(v) **Projects in or affecting locations, areas, or categories of sites which are identified in the PM2.5 or PM10 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.**

The application implementation plan, the BAAQMD's 2017 Clean Air Plan, has not identified sites of violations or possible violations.

The Project underwent interagency consultation through MTC's Air Quality Conformity Task Force on May 25, 2017 and on September 10, 2018. Appendix D contains the documentation submitted to the Air Quality Conformity Task Force to support their concurrence on the Project's POAQC determination.

Caltrans also requested that FHWA issue a Project-level transportation conformity determination for the Project. The conformity determination was issued on February 24, 2020 and is included in Appendix D.

Long Term (Operational) Impacts

Existing year (2016)², opening year (2020), and cumulative year (2040) conditions were modeled to evaluate CO concentrations relative to the NAAQS and CAAQS. The two intersections that represent the worst-case scenario were chosen out of the seven intersections included in the Project traffic report. These intersections were the University Avenue and Woodland Avenue intersection (which has the highest intersection volumes in the AM peak hour for all 3 years) and the University Avenue and Crescent Drive intersection (which has the highest delay and lowest LOS in the AM peak hour for all 3 years) and represent the worst-case scenario of any intersections affected by the Project. Both of these intersections are not located within the Project alignment, however, so a third intersection within the Project alignment was modeled (Newell Road and Woodland Avenue intersection), consistent with the CO Protocol guidelines. Table 2.2.6-4 summarizes the results of the intersection CO modeling and indicates that CO concentrations are not expected to exceed the 1- or 8-hour NAAQS and CAAQS for the worst-case scenario intersections both within and outside of the Project alignment.

Long-term air quality impacts are those associated with motor vehicles operating on the roadway network. Emissions of ROG, NO_x, CO, PM10, and PM2.5 for the existing year (2016), opening year (2020), and design year (2040) conditions were evaluated. Table 2.2.6-5 summarizes the operational emissions by year.

Operation-related emissions of ozone precursors, such as ROG, NO_x, CO, and PM10, would increase very slightly as a result of the Project because of the effect of diverted trips. Table 2.2.6-5 shows the BAAQMD's operational thresholds of significance, which are further discussed in Section 3.2.3, *Air Quality*. The Project would not result in substantial impacts to air quality during operations given the minor increases in emissions from vehicle traffic.

Mobile Source Air Toxics

The FHWA has issued an updated interim guidance using a tiered approach on how mobile source air toxics (MSATs) should be addressed in NEPA documents for highway projects (Federal Highway Administration 2016). Depending on the specific project circumstances, FHWA has identified the following three levels of analysis.

1. No analysis for exempt projects or projects that have no potential for meaningful MSAT effects.
2. Qualitative analysis for projects with low potential MSAT effects.
3. Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

The Project falls under FHWA Category 1, no meaningful MSAT impacts, because it would result in minor additional vehicle miles travelled (VMT) increases and increase traffic volumes only slightly. In 2040, it is anticipated that there would be a maximum increase of 210 vehicles per day as a result of the Build Alternatives, with VMT increasing by a maximum of 275 miles per day. Because of the small magnitude of VMT and volume increases relative to most road and highway projects, these increases are not considered to be meaningful with respect to MSAT impacts. Moreover, because the purpose of the Project is to improve bicycle and pedestrian travel in the corridor, it would cause

² 2016 was selected as the existing year because it was the year the supplemental traffic analysis was begun.

Table 2.2.6-4. CO Modeling Concentration Results (Parts per Million)

Alternative & Year	Receptor ^a	Worst-Case Intersections				Worst-Case Intersection within Project Alignment	
		University Ave. and Woodland Ave.		University Ave. and Crescent Dr.		Newell Rd. and Woodland Ave.	
		1-hr CO ^b	8-hr CO ^c	1-hr CO ^b	8-hr CO ^c	1-hr CO ^b	8-hr CO ^c
2016							
Existing	1	4.4	2.5	3.8	2.1	3.4	1.8
	2	4.4	2.5	3.8	2.1	3.4	1.8
	3	3.9	2.1	3.8	2.1	3.3	1.7
	4	4.3	2.4	3.8	2.1	3.4	1.8
Build Alternative 1	1	4.4	2.5	3.8	2.1	3.4	1.8
	2	4.4	2.5	3.8	2.1	3.4	1.8
	3	3.9	2.1	3.8	2.1	3.3	1.7
	4	4.3	2.4	3.8	2.1	3.4	1.8
Build Alternative 2 (LPA)	1	4.4	2.5	3.8	2.1	3.4	1.8
	2	4.4	2.5	3.8	2.1	3.4	1.8
	3	3.9	2.1	3.8	2.1	3.3	1.7
	4	4.3	2.4	3.8	2.1	3.4	1.8
Build Alternative 3	1	4.4	2.5	3.8	2.1	3.4	1.8
	2	4.4	2.5	3.8	2.1	3.4	1.8
	3	3.9	2.1	3.8	2.1	3.3	1.7
	4	4.3	2.4	3.8	2.1	3.4	1.8
Build Alternative 4	1	4.4	2.5	3.8	2.1	3.2	1.6
	2	4.4	2.5	3.8	2.1	3.2	1.6
	3	3.9	2.1	3.8	2.1	3.1	1.6
	4	4.3	2.4	3.8	2.1	3.2	1.6

Alternative & Year	Receptor ^a	Worst-Case Intersections				Worst-Case Intersection within Project Alignment	
		University Ave. and Woodland Ave.		University Ave. and Crescent Dr.		Newell Rd. and Woodland Ave.	
		1-hr CO ^b	8-hr CO ^c	1-hr CO ^b	8-hr CO ^c	1-hr CO ^b	8-hr CO ^c
2020							
No Build Alternative	1	4.0	2.2	3.6	1.9	3.3	1.7
	2	4.0	2.2	3.6	1.9	3.3	1.7
	3	3.6	1.9	3.6	1.9	3.2	1.6
	4	3.9	2.1	3.5	1.9	3.3	1.7
Build Alternative 1	1	4.0	2.2	3.6	1.9	3.3	1.7
	2	4.0	2.2	3.6	1.9	3.3	1.7
	3	3.6	1.9	3.6	1.9	3.2	1.6
	4	3.9	2.1	3.5	1.9	3.3	1.7
Build Alternative 2 (LPA)	1	4.0	2.2	3.6	1.9	3.3	1.7
	2	4.0	2.2	3.6	1.9	3.3	1.7
	3	3.6	1.9	3.6	1.9	3.2	1.6
	4	3.9	2.1	3.5	1.9	3.3	1.7
Build Alternative 3	1	4.0	2.2	3.6	1.9	3.1	1.6
	2	4.0	2.2	3.6	1.9	3.2	1.6
	3	3.6	1.9	3.5	1.9	3.2	1.6
	4	3.9	2.1	3.5	1.9	3.1	1.6
Build Alternative 4	1	4.0	2.2	3.6	1.9	3.3	1.7
	2	4.0	2.2	3.6	1.9	3.3	1.7
	3	3.6	1.9	3.5	1.9	3.2	1.6
	4	3.9	2.1	3.5	1.9	3.3	1.7

Alternative & Year	Receptor ^a	Worst-Case Intersections				Worst-Case Intersection within Project Alignment	
		University Ave. and Woodland Ave.		University Ave. and Crescent Dr.		Newell Rd. and Woodland Ave.	
		1-hr CO ^b	8-hr CO ^c	1-hr CO ^b	8-hr CO ^c	1-hr CO ^b	8-hr CO ^c
2040							
No Build Alternative	1	3.8	2.1	3.5	1.9	3.4	1.8
	2	3.8	2.1	3.5	1.9	3.4	1.8
	3	3.5	1.9	3.4	1.8	3.3	1.7
	4	3.7	2.0	3.4	1.8	3.4	1.8
Build Alternative 1	1	3.8	2.1	3.5	1.9	3.4	1.8
	2	3.8	2.1	3.5	1.9	3.4	1.8
	3	3.5	1.9	3.4	1.8	3.3	1.7
	4	3.7	2.0	3.4	1.8	3.4	1.8
Build Alternative 2 (LPA)	1	3.8	2.1	3.5	1.9	3.4	1.8
	2	3.8	2.1	3.5	1.9	3.4	1.8
	3	3.5	1.9	3.4	1.8	3.3	1.7
	4	3.7	2.0	3.4	1.8	3.4	1.8
Build Alternative 3	1	3.8	2.1	3.5	1.9	3.4	1.8
	2	3.8	2.1	3.5	1.9	3.4	1.8
	3	3.5	1.9	3.4	1.8	3.3	1.7
	4	3.7	2.0	3.4	1.8	3.4	1.8
Build Alternative 4	1	3.8	2.1	3.5	1.9	3.2	1.6
	2	3.8	2.1	3.5	1.9	3.2	1.6
	3	3.5	1.9	3.4	1.8	3.1	1.6
	4	3.7	2.0	3.4	1.8	3.2	1.6

^a Receptors are located at each of the four corners of the intersections and within the mixing zones. All intersections modeled have two intersecting roadways. Each set of receptors is unique to each intersection (i.e., Receptor 1 for the University Ave. and Woodland Ave. intersection is not the same receptor as Receptor 1 for the University Ave. and Crescent Dr. intersection).

^b Average 1-hour background concentration between 2014 and 2016 was 2.9 ppm (U.S. Environmental Protection Agency 2017).

^c Average 8-hour background concentration between 2014 and 2016 was 1.4 ppm (U.S. Environmental Protection Agency 2017).

CO = carbon monoxide; ppm = parts per million; LPA = locally preferred alternative

Table 2.2.6-5. Summary of Operational Criteria Pollutant Emissions Increases—Existing Year, Opening Year, and Design Year

Daily/Annual Emissions	ROG	NO _x	CO	PM10	PM2.5
2016					
<i>Build Alternative 1</i>					
Maximum Daily Emissions (lbs/day)	0.01	0.08	0.26	0.01	0.00
Annual Emissions (tons/year) ¹	< 0.01	0.01	0.05	< 0.01	< 0.01
<i>Build Alternative 2 (LPA)</i>					
Maximum Daily Emissions (lbs/day)	0.01	0.08	0.26	0.01	0.00
Annual Emissions (tons/year) ¹	< 0.01	0.01	0.05	< 0.01	< 0.01
<i>Build Alternative 3</i>					
Maximum Daily Emissions (lbs/day)	0.02	0.12	0.39	0.02	0.01
Annual Emissions (tons/year) ¹	< 0.01	0.02	0.07	< 0.01	< 0.01
<i>Build Alternative 4</i>					
Maximum Daily Emissions (lbs/day)	0.03	0.19	0.65	0.03	0.01
Annual Emissions (tons/year) ¹	< 0.01	0.03	0.11	< 0.01	< 0.01
2020					
<i>Build Alternative 1</i>					
Maximum Daily Emissions (lbs/day)	0.01	0.05	0.18	0.01	0.00
Annual Emissions (tons/year) ¹	< 0.01	< 0.01	0.03	< 0.01	< 0.01
<i>Build Alternative 2 (LPA)</i>					
Maximum Daily Emissions (lbs/day)	0.01	0.05	0.18	0.01	0.00
Annual Emissions (tons/year) ¹	< 0.01	< 0.01	0.03	< 0.01	< 0.01
<i>Build Alternative 3</i>					
Maximum Daily Emissions (lbs/day)	0.01	0.08	0.27	0.02	0.01
Annual Emissions (tons/year) ¹	< 0.01	0.01	0.05	< 0.01	< 0.01
<i>Build Alternative 4</i>					
Maximum Daily Emissions (lbs/day)	0.02	0.13	0.45	0.03	0.01
Annual Emissions (tons/year) ¹	< 0.01	0.02	0.08	< 0.01	< 0.01
2040					
<i>Build Alternative 1</i>					
Maximum Daily Emissions (lbs/day)	< 0.01	0.02	0.10	0.01	< 0.01
Annual Emissions (tons/year) ¹	< 0.01	< 0.01	0.02	< 0.01	< 0.01
<i>Build Alternative 2 (LPA)</i>					
Maximum Daily Emissions (lbs/day)	< 0.01	0.02	0.10	0.01	< 0.01
Annual Emissions (tons/year) ¹	< 0.01	< 0.01	0.02	< 0.01	< 0.01
<i>Build Alternative 3</i>					
Maximum Daily Emissions (lbs/day)	0.01	0.03	0.14	0.02	0.01
Annual Emissions (tons/year) ¹	< 0.01	< 0.01	0.03	< 0.01	< 0.01
<i>Build Alternative 4</i>					
Maximum Daily Emissions (lbs/day)	0.01	0.05	0.24	0.03	0.01

Daily/Annual Emissions	ROG	NO _x	CO	PM10	PM2.5
Annual Emissions (tons/year) ¹	< 0.01	< 0.01	0.04	< 0.01	< 0.01
BAAQMD Daily Thresholds (lbs/day)	54	54	CAAQS²	82	54
BAAQMD Annual Thresholds (tons/year)	10	10	CAAQS²	15	10

¹ Daily emissions were converted into annual emissions by multiplying by a standard factor of 347 days per year, to account for reduced volumes on weekends.

² Violation of a CAAQS.

Emissions were calculated using emission factors from EMFAC2014

BAAQMD = Bay Area Air Quality Management District; CAAQS = California Ambient Air Quality Standards; CO = carbon monoxide; lbs = pounds; NO_x = nitrogen oxides; PM10 = particulate matter less than 10 microns in diameter; PM2.5 = particulate matter less than 2.5 microns in diameter; ROG = reactive organic gases; LPA = locally preferred alternative

minimal air quality impacts for FCAA criteria pollutants and would not be linked with any special MSAT concerns. As such, this Project would not result in substantial changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts compared to the No Build Alternative.

Moreover, EPA regulations for vehicle engines and fuels would cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES model forecasts a combined reduction of over 90% in the annual emissions for the priority MSAT from 2010 to 2050 while VMT are projected to increase by 45% (Federal Highway Administration 2016). This would both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this Project.

No Build Alternative

The No Build Alternative would not cause an increase in operational criteria pollutant impacts because construction activities would not occur.

2.2.6.4 Avoidance, Minimization, and/or Mitigation Measures

Most of the construction impacts on air quality are short-term in duration and, therefore, would not result in long-term adverse conditions. The following standardized measures (SM) and mitigation measure (MM) will reduce any air quality impacts resulting from construction activities.

- **SM-AQ-1: Implement California Department of Transportation Standard Specifications**
 - The Project applicant will comply with California Department of Transportation Standard Specifications in Section 14-9 Air Quality (2015).
 - Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.
 - Section 10-5 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are contained in Section 18.
- **SM-AQ-2: Implement BAAQMD Basic Control Measures to Control Construction-Related Dust**

- In accordance with the BAAQMD's current Air Quality Guidelines (Bay Area Air Quality Management District 2011), the Project applicant will implement the following BAAQMD-recommended control measures to reduce particulate matter emissions from construction activities.
- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day by the contractor.
- All haul trucks transporting soil, sand, or other loose material off site will be covered by the contractor.
- All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day by the contractor. The use of dry power sweeping is prohibited.
- The contractor will limit all vehicle speeds on unpaved roads to 15 miles per hour.
- The contractor will complete all roadways, driveways, and sidewalks to be paved as soon as possible.
- The contractor will post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person will respond and take corrective action within 48 hours. BAAQMD's phone number will also be visible to ensure compliance with applicable regulations.
- **MM-AQ-1: Utilize clean diesel-powered equipment during construction to control construction-related NO_x emissions.** The construction contractor will ensure that all off-road diesel-powered equipment used during construction is equipped with EPA Tier 4 Final engines.

2.2.6.5 Climate Change

Neither the EPA nor FHWA has issued explicit guidance or methods to conduct project-level greenhouse gas analysis. FHWA emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. Because there have been requirements set forth in California legislation and executive orders on climate change, the issue is addressed in Chapter 3, *California Environmental Quality Act Evaluation*. The CEQA analysis may be used to inform the NEPA determination for the Project.

2.2.7 Noise

2.2.7.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analyses and considerations of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

Figure 2.2.7-1 lists the noise levels of common activities to enable readers to compare the predicted noise levels discussed in this section with common activities.

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft) Commercial Area	70	Vacuum Cleaner at 3 m (10 ft) Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime Quiet Suburban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Rural Nighttime	30	Library
	20	Bedroom at Night, Concert Hall (Background)
	10	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Figure 2.2.7-1. Noise Levels of Common Activities

California Environmental Quality Act

City of Palo Alto Noise Ordinance Section 9.10 dictates noise regulations within the City of Palo Alto and provides noise limits for residential properties, commercial and industrial properties, and public properties. CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the NEPA/23 Code of Federal Regulations (CFR) Part 772 (23 CFR 772) noise analysis; please see Chapter 3, *California Environmental Quality Act Evaluation*, for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with Federal Highway Administration involvement (and California Department of Transportation [Caltrans], as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 A-weighted decibels [dBA]) is lower than the NAC for commercial areas (72 dBA). Table 2.2.7-1 lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.

Table 2.2.7-1. Noise Abatement Criteria

Activity Category	NAC, Hourly A- Weighted Noise Level, Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ¹	67 (Exterior)	Residential.
C ¹	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.

Activity Category	NAC, Hourly A- Weighted Noise Level, Leq(h)	Description of Activity Category
F	No NAC— reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC— reporting only	Undeveloped lands that are not permitted.

¹ Includes undeveloped lands permitted for this activity category.
NAC = noise abatement criteria

According to Caltran’s *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011*, a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as an increase of 12 dBA or more) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated into the project.

Caltran’s *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction in future noise levels for all impacted receptors must be achieved for an abatement to be considered feasible. Other considerations include topography, access requirements, other noise sources, and safety considerations. Additionally, a noise reduction of at least 7 dBA must be achieved at one or more benefited receptors for an abatement measure to be considered reasonable. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include residents’ acceptance and the cost per benefited residence.

Title 23, Part 772 of the CFR provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects are provided in. 23 CFR 772. Under Title 23 CFR, Part 772.7 of the CFR, projects are categorized as Type I, Type II, or Type III.

The Federal Highway Administration defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment of the highway. The following projects are also considered to be Type I projects.

- The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a high-occupancy vehicle lane, high-occupancy toll lane, bus lane, or truck climbing lane.
- The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane.

- The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange.
- Restriping existing pavement for the purpose of adding a through-traffic lane or an auxiliary lane.
- The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot, or toll plaza.

A Type II project is a noise barrier retrofit project that involves no changes to highway capacity or alignment. A Type III project is a project that does not meet the classifications of a Type I or Type II project. Type III projects do not require a noise analysis. The proposed Project would not add through lanes, nor would it significantly alter the horizontal alignment of the traveled way (generally defined as halving the distance of the traveled way to the nearest receptor). Therefore, the proposed Project is considered to be a Type III project, and an analysis of traffic noise from Project operations is not required. However, anticipated changes in noise levels due to the future distribution of traffic are analyzed in this section based on projections of existing and future traffic volumes.

Overview of Ground-Borne Vibration

The operation of heavy construction equipment, particularly pile-driving equipment and other impact devices (e.g., pavement breakers), creates seismic waves that radiate along the surface of the ground and downward. These surface waves can be felt as ground vibration. Vibration from the operation of this type of equipment can result in effects that range from annoyance for people to damage for structures.

Perceptible ground-borne vibration is generally limited to areas within a few hundred feet of construction activities. As seismic waves travel outward from a vibration source, they cause rock and soil particles to oscillate. The actual distance that these particles move is usually only a few ten-thousandths to a few thousandths of an inch. The velocity (in inches per second) at which these particles move is referred to as peak particle velocity (PPV), the commonly accepted descriptor of vibration amplitude.

Vibration amplitude attenuates (or decreases) over distance. This attenuation is a complex function of how energy is imparted into the ground as well as the soil or rock conditions through which the vibration is traveling (variations in geology can result in different vibration levels).

The following equation is used to estimate the vibration level at a given distance for typical soil conditions (Federal Transit Administration 2018). PPV_{ref} is the reference PPV at 25 feet:

$$PPV = PPV_{ref} \times (25/\text{distance})^{1.1}$$

Table 2.2.7-2 summarizes typical vibration levels generated by construction equipment at a reference distance of 25 feet and other distances, as determined using the attenuation equation above.

Table 2.2.7-2. Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 Feet	PPV at 50 Feet	PPV at 75 Feet	PPV at 100 Feet	PPV at 175 Feet
Pile driver (vibratory)	0.650	0.3032	0.1941	0.1415	0.0764
Large bulldozer	0.089	0.0415	0.0266	0.0194	0.0105
Loaded trucks	0.076	0.0355	0.0227	0.0165	0.0089
Jackhammer	0.035	0.0163	0.0105	0.0076	0.0041
Small bulldozer	0.003	0.0014	0.0009	0.0007	0.0004

Source: California Department of Transportation 2013.

PPV = peak particle velocity

Tables 2.2.7-3 and 2.2.7-4 summarize the guidelines developed by Caltrans for damage and annoyance from the transient and continuous vibration that is usually associated with construction activity. Impact pile drivers, “pogo stick” compactors (small hand-held soil compactors), crack-and-seat equipment (equipment that breaks and re-seats pavement), excavation equipment, static compaction equipment, tracked vehicles, vehicles on highways, vibratory pile drivers, pile-extraction equipment, and vibratory compaction equipment are typically associated with continuous vibration. The activities that are typically associated with single-impact (transient) or low-rate, repeated impact vibration include blasting and the use of drop balls or dropped metal plates (California Department of Transportation 2013).

Table 2.2.7-3. Vibration Damage Potential, Threshold Criteria Guidelines

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/ Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: California Department of Transportation 2013.

Note: Transient sources create a single, isolated vibration event (e.g., blasting or drop balls).

Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV = peak particle velocity

Table 2.2.7-4. Vibration Annoyance Potential, Criteria Guidelines

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/ Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: California Department of Transportation 2013.

Note: Transient sources create a single, isolated vibration event (e.g., blasting or drop balls). Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV = peak particle velocity; in/sec = inches per second

2.2.7.2 Affected Environment

The information in this section is from the *Noise Study Report* (August 2017). Land uses in the proposed Project area consist primarily of single-family residences (Activity Category B) and multi-family apartment buildings (Activity Category B), as shown in Figure 2.2.7-2. Existing worst-hour traffic noise levels were calculated to range from 55 to 60 dBA $L_{eq}(h)$ for all receivers.

2.2.7.3 Environmental Consequences

Construction Impacts

Build Alternatives

Construction period impacts would be the same for all build alternatives. Noise from Project construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction activities would include demolition of existing structures, building of new structures, and implementation of detours. Equipment operations associated with demolition and building activities would be a source of noise. Implementation of detours may increase noise in some areas as a result of temporarily diverted traffic. However, nighttime construction would not occur.

Construction noise is controlled by standardized measure SM-NOI-1, Caltrans Standard Specifications Section 14-8.02, Noise Control, which states the following (California Department of Transportation 2015).

- Control and monitor noise resulting from work activities.
- Do not exceed 86 dBA at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m.

Table 2.2.7-5 summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 80 to 96 dB at a distance of 50 feet, which would be reduced over distance at a rate of about 6 dB per doubling of distance.

Table 2.2.7-5. Construction Equipment Noise

Equipment	Maximum Noise Level (dBA at 50 feet)
Scrapers	89
Bulldozers	85
Heavy trucks	88
Backhoe	80
Pneumatic tools	85
Concrete pump	82
Vibratory pile driver	96

Source: Federal Transit Administration 2006

Each piece of construction equipment operates as an individual point source. The composite noise level at the nearest residence would be up to 91 dBA L_{max} during construction improvements that do not include pile driving (at a distance of 50 feet from an active construction area).

In addition to standard construction equipment, bridge construction would require the use of vibratory pile drivers. As shown in Table 2.2.7-5, pile driving generates noise levels up to a maximum of 96 dBA L_{max} at 50 feet, which would be the worst-case construction noise level at the nearest residence.

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 14-8.02, would include sound-control devices on construction equipment, and would follow applicable local noise standards (SM-NOI-1, SM-NOI-2, and SM-NOI-3). Construction noise would be short-term and intermittent and would not occur at night.

The operation of heavy equipment would generate localized ground-borne vibration during construction of the Project. Vibration from non-impact construction activity and truck traffic is typically below the threshold of perception when the activity is more than about 50 feet from the receiver (refer to Tables 2.2.7-2 and 2.2.7-4 for vibration reference levels). Consequently, for construction activities without the use of high-impact equipment where the activity is located more than 50 feet from noise-sensitive land uses, ground-borne vibration impacts are expected to be minor.

For construction activities of the bridge, a pile driver, which is considered to be impact equipment, would be required. The level of vibration generated by pile driving and transmitted to nearby structures would depend on the type of pile driver used and site-specific soil properties. Under “average” soil conditions, an impact pile driver is expected to generate a vibration level of 0.650 and 0.303 inches per second PPV at a distance of 25 feet and 50 feet, respectively (California Department of Transportation 2013). Some existing homes are located 25 to 50 feet from where the pile driver could be operated, and under “average” soil conditions, those homes could be exposed to vibration levels in excess of the 0.3 and 0.4 inches per second PPV thresholds at which vibration may damage older residential structures and be severely perceptible to observers, respectively. Consequently, vibration impacts at homes closest to the bridge would be more substantial.

Vibration impacts may also be more substantial for homes located within approximately 50 feet of the construction site when the use of non-impact construction equipment (i.e., a large bulldozer) occurs. These residences could experience vibration levels as high as 0.089 inches per second PPV, which would exceed the threshold of perceptibility and could cause annoyance.

No Build Alternative

There would be no noise-related construction impacts under the No Build Alternative because construction activities would not occur.

Operational Impacts

Build Alternatives

Table 2.2.7-6 summarizes the traffic noise modeling results for existing conditions and design-year conditions with and without the proposed Project. Calculated design-year traffic noise levels with implementation of the proposed Project are compared with existing conditions as well as design-year no-Project conditions. The comparison with existing conditions is included in the analysis to identify traffic noise impacts under 23 CFR 772. The comparison with no-Project conditions indicates the direct effect of the proposed Project.

Locations of modeled receivers are shown in Figure 2.2.7-2. As shown in Table 2.2.7-6, calculated worst-case traffic noise levels for design-year no-Project conditions range from 55 to 60 dBA $L_{eq}(h)$ at Activity Category B land uses (residential). Calculated worst-case traffic noise levels for design-year build conditions under Build Alternatives 1, 2, 3, and 4 also range from 56 to 61 dBA $L_{eq}(h)$ at Activity Category B land uses. Traffic noise levels are therefore not predicted to approach or exceed the noise abatement criteria for Activity Category B land uses located adjacent to the Project study area limits. The bridge alignment under Build Alternative 4 would result in a slightly higher noise increase at the nearest receivers of up to 2 dB relative to existing conditions, and up to 1 dB under future no-Project conditions. An increase of less than 3 dB would generally not be perceptible. There would be no increase in noise anticipated under Alternatives 1 through 3 in comparison to the future No Build Alternative.

As described in Section 2.2.7.1, *Regulatory Setting*, consideration of noise abatement is not required for Type III projects under 23 CFR 772. The analysis in this section indicates that no noise impacts are predicted to occur due to operation of the Project. Accordingly, noise abatement was not evaluated in this analysis.

No Build Alternative

There would be no change in the noise environment under the No Build Alternative because implementation of the Project would not occur.

Table 2.2.7-6. Predicted Noise Levels under Existing and Future Conditions

Receiver	Location	Existing, dBA Leq	Future No-Build, dBA Leq	Increase vs. Existing, dB	Future Build Alternatives 1, 2 and 3, dBA Leq	Increase vs. Existing, dB	Increase vs. Future No-Build, dB	Future Build Alternative 4, dBA Leq	Increase vs. Existing, dB	Increase vs. Future No-Build, dB	Impact Type by Alternative
R-1	Southwest of Newell Road/Woodland Avenue intersection	58	59	+ 1	59	+ 1	0	60	+ 2	+ 1	None
R-2	Southwest of Newell Road/Woodland Avenue intersection	55	56	+ 1	56	+ 1	0	57	+ 2	+ 1	None
R-3	Southwest of Newell Road/Woodland Avenue intersection	56	57	+ 1	57	+ 1	0	57	+ 1	0	None
R-4	Northwest of Newell Road/Woodland Avenue intersection	58	59	+ 1	59	+ 1	0	59	+ 1	0	None
R-5	Northeast of Newell Road/Woodland Avenue intersection	60	61	+ 1	61	+ 1	0	61	+ 1	0	None
R-6	Northeast of Newell Road/Woodland Avenue intersection	58	59	+ 1	59	+ 1	0	59	+ 1	0	None
R-7	Southeast of Newell Road/Woodland Avenue intersection	58	59	+ 1	59	+ 1	0	59	+ 1	0	None

Source: California Department of Transportation 2017



Figure 2.2.7-2. Noise Calculation Locations

2.2.7.4 Avoidance, Minimization, and/or Mitigation Measures

Implementing the following standardized measure (SM) will minimize the temporary noise impacts from construction.

- **SM-NOI-1: The construction contractor must comply with Caltrans Standard Specifications Section 14-8.02, Noise Control, which states the following:**
 - Control and monitor noise resulting from work activities.
 - Do not exceed 86 dBA at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m.
- **SM-NOI-2: All equipment used by the contractor will have sound-control devices that are no less effective than those provided on the original equipment.** No equipment will have an unmuffled exhaust.
- **SM-NOI-3: The Project proponent and/or their construction contractor will do the following.**
 - Review and ensure that construction activities are conducted in accordance with local noise standards from the cities of Palo Alto and East Palo Alto.
 - Ensure that construction activities will not occur at night.
 - Implement additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity to allowed timeframes, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources, as appropriate.

Implementing the following mitigation measures (MM) will reduce the temporary noise and vibration impacts from construction.

- **MM-NOI-1: Provide advance notification of construction schedule and 24-hour hotline to residents.** The construction contractor will provide advance written notification of the proposed construction activities to all residences and other noise-sensitive uses within 750 feet of the construction site. Notification will include a brief overview of the proposed project and its purpose, as well as the proposed construction activities and schedule. It will also include the name and contact information of the project manager at the City of Palo Alto or another City of Palo Alto representative or designee responsible for ensuring that reasonable measures are implemented to address the problem.
- **MM-NOI-2: Designate a noise disturbance coordinator to address resident concerns.** The construction contractor will designate a representative to act as construction noise disturbance coordinator, responsible for resolving construction noise concerns. The disturbance coordinator's name and contact information will be included in the preconstruction notices sent to area residents, per MM-NOI-1. The coordinator will be available during regular business hours to monitor and respond to concerns; if construction hours are extended, the disturbance coordinator will also be available during the extended hours. In the event a noise complaint is received, she or he will be responsible for determining the cause of the complaint and ensuring that all reasonable measures are implemented to address the problem.

- **MM-NOI-3: Install temporary noise barriers.** As described in MM-NOI-2 and MM-NOI-3, the construction contractor will notify noise-sensitive land uses near the site of upcoming activity before construction begins, will require construction-site noise reduction measures, and will provide a 24-hour complaint hotline. If a resident or other noise-sensitive person submits a complaint about construction noise and the contractor is unable to reduce noise to a level that does not cause annoyance or disruption to adjacent land uses through other means, the contractor will install temporary noise barriers to reduce noise levels below the applicable construction noise standard. Barriers will be installed as promptly as possible, and work responsible for the disturbance will be suspended or modified until barriers have been installed. The following minimum criteria will be required of the contractor.
 - The barrier will be 10 feet tall. It will surround the work area to block the line of sight for all diesel-powered equipment on the ground, as viewed from any private residence or any building.
 - The barrier will be constructed of heavyweight plywood (5/8 inch thick) or other material providing a Sound Transmission Classification of at least 25 dBA. Note that 5/8 inch is sufficiently thick to provide optimal noise buffering; increasing the thickness of the barrier above 5/8 inch would not provide a noticeable improvement in noise reduction.
 - The barrier will be constructed with no gaps or holes that would allow noise to transmit through the barrier.
 - To minimize reflection of noise toward workers at the construction site, the surface of the barrier facing the workers will be covered with a sound-absorbing material meeting a Noise Reduction Coefficient of at least 0.70.
- **MM-NOI-4: Conduct construction vibration monitoring and implement control approach(es).** During periods of construction, the construction contractor will retain a qualified acoustical consultant or engineering firm to conduct vibration monitoring at homes or occupied vibration-sensitive buildings located within 315 feet¹ of pile driving locations and 25 feet of construction sites using other non-impact equipment. If at any point the measured PPV is in excess of 0.3 inches per second, construction activity will cease and alternative methods of construction and excavation will be considered to prevent possible exposure of vibration-sensitive buildings and structures to levels of 0.3 in/sec PPV or higher. Prior to construction activity, and assuming the property owner gives permission, a preconstruction survey will be conducted that documents any existing cracks or structural damage at vibration-sensitive receptors located within the distances identified above by means of color photography or video. Additionally, a designated complaint coordinator will be responsible for handling and responding to any complaints received during such periods of construction. The construction contractor will also implement a reporting program that will be required to document complaints received, actions taken, and the effectiveness of these actions in resolving disputes

¹ Beyond 315 feet, vibration from pile driving would attenuate to less than 0.4 inches per second and thus less than the distinctly perceptible threshold.

2.2.8 Energy

2.2.8.1 Regulatory Setting

The National Environmental Policy Act (NEPA) (42 United States Code Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

The California Environmental Quality Act (CEQA) Guidelines, Appendix F, Energy Conservation, state that Environmental Impact Reports are required to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

2.2.8.2 Affected Environment

Existing energy consumption in the study area consists of direct energy consumption resulting from automobile operations. Indirect energy involves the one-time, nonrecoverable energy consumption associated with the construction of roadways, structures, and vehicles. In addition to fuel consumption of vehicles involved in the actual construction of different elements of the alternatives, construction energy consumption also includes the energy used in the production of construction materials. Indirect energy also involves the manufacturing and maintenance of vehicles. Permanent direct energy consumption involves the fuel needed by all of the vehicles (automobile or truck) in the Project area.

2.2.8.3 Environmental Consequences

Construction Impacts

Build Alternatives

It is the California Department of Transportation's (Caltrans') and the City of Palo Alto's goal to complete this Project in the least amount of time by planning and staging the work efficiently. Short-term, indirect energy consumption would be associated with the demolition and reconstruction of the bridge and roadway approaches and associated construction equipment. This impact would not be adverse due to the temporary nature of construction activities. Construction vehicles and activities would increase energy consumption at the Project site for approximately 1 year under all build alternatives, and would cease thereafter. Energy consumption would be a one-time, nonrecoverable occurrence related to the production of construction materials (i.e., cement, steel, asphalt), energy needed to produce these materials, and use of diesel, oil, and fuel by construction equipment. The reduced construction time would lead to a low number of construction-related delays and make the benefits of the Project available sooner. Caltrans and the City of Palo Alto are also proposing to reuse and incorporate existing materials into the final product as much as possible. Any pavement and construction debris that is removed would be considered for recycling or reuse. Recycling saves the fuel and materials that would have been required to create new materials.

Overall, the build alternatives would all result in comparable amounts of energy expended during construction, because the durations of the construction periods and the general types of activity are expected to be similar. Build Alternative 4 would require the greatest amount of material and

energy, because it would have the longest retaining walls and need the greatest distance for Woodland Avenue to conform to the new bridge height. Build Alternative 1, would likely require the least amount of materials and energy because it would involve a one-lane bridge. Build Alternatives 2 and 3 would require very similar material amounts and thus energy consumption.

With respect to the use of construction equipment, Build Alternative 4 would likely require the greatest amount of fuel and energy consumed by construction equipment and vehicles because it would involve the most realignment relative to the existing bridge. Build Alternative 1 would be expected to result in the least amount of fuel and energy consumed by construction equipment and vehicles because it would involve the construction of a one-lane bridge with no horizontal realignment. Build Alternatives 2 and 3 would both involve the construction of a two-lane bridge, with minor realignment occurring for Alternative 3, and both would likely result in more fuel consumed than for Build Alternative 1 but less than for Build Alternative 4.

Although each build alternative would require a different quantity of materials (e.g., cement, steel, asphalt, traffic signal, signage, etc.) and fuel, the differences between these quantities would not be great enough to result in a substantial difference in energy resources used given the relatively small size of the project. Energy reductions could be achieved through the implementation of project-level greenhouse gas reduction strategies, as discussed in Section 3.3.5.3, *Project-Level GHG Reduction Strategies*, which would include ensuring that construction equipment and vehicles are properly maintained, using energy-efficient lighting, and scheduling and routing traffic to reduce vehicle congestion and idling.

No Build Alternative

There would be no energy impacts under the No Build Alternative because construction activities would not occur.

Operational Impacts

Build Alternatives

The Project's direct use of energy beyond fuel and energy needed during construction activities would be minor. Build Alternative 1 would require nine traffic signals, which would require electricity to operate and necessitate occasional maintenance trips. As such, Build Alternative 1 would result in direct energy consumption from new traffic signals, while the other build alternatives would not. As discussed in Section 2.2.6, *Air Quality*, the Project would result in minor increases in vehicle miles traveled and thus operation-related emissions of criteria pollutants, because of the effect of diverted trips. Some portion of vehicle traffic would take alternate routes instead of the bridge, which may result in slightly greater travel distances. As such, there may be slight indirect increases in vehicle fuel consumption during operation of the Project, but this effect is anticipated to be minor.

Indirectly, the Project would result in minor energy reductions on an on-going basis through the reduced need to maintain and repair flood-damaged roadways. Because one of the Project's goals is to increase flood protection and hydraulic capacity within the San Francisquito Creek watershed, the number of flooding events is expected to decrease in the future, which would lead to decreased damage sustained by roadways and bridges in the cities of Palo Alto and East Palo Alto. With operation of the Project resulting in potentially less flood damage to roads and bridges, there would be a reduced need for trucks and other equipment to expend fuel for maintenance and repair

activities. Because of the uncertainty involved in flooding events and the damage sustained by roadways, the decreases in energy expended for maintenance and repair activities cannot be quantified, but the effect is not expected to be substantial. Overall, the Project would not result in an increase of fuel or energy use in large amounts or in a wasteful manner, an increase in the rate of use of any natural resource, or in the substantial depletion of any nonrenewable natural resource. Therefore, the Project would not have a substantial effect on energy resources.

No Build Alternative

The indirect energy consumption of the No Build Alternative would only be associated with the manufacturing and maintenance of passenger vehicles and trucks. As discussed in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, the long-term level of service for traffic under the No Build Alternative would be expected to worsen slightly over existing conditions and delays would increase. Therefore, long-term energy consumption would increase under the No Build Alternative.

2.2.8.4 Avoidance, Minimization, and/or Mitigation Measures

The build alternatives would result in a short-term increase in energy consumption from construction activities, but over the long term would not require avoidance, minimization, or mitigation measures because Project-related impacts would not occur.

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2.3 Biological Environment

2.3.1 Natural Communities

This section discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors, fish passage, and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act (FESA) are discussed in Section 2.3.5, *Threatened and Endangered Species*. Wetlands and other waters are discussed in Section 2.3.2, *Wetlands and Other Waters*.

2.3.1.1 Affected Environment

The information in this section is from the Natural Environment Study (September 2017). The Biological Study Area (BSA), which is the same as the Project area, includes the Project footprint where ground-disturbing construction, staging, or access activities would occur. The BSA encompasses approximately 500 feet along Newell Road Bridge (bridge) spanning San Francisquito Creek (creek), 350 feet along Woodland Avenue, and the adjacent upstream and downstream sections of San Francisquito Creek totaling 1.09 acres. The BSA is the same for all build alternatives.

Biologists visited the BSA in May and December 2012, August 2015, and April 2017. Three land cover types occur in the BSA (also called the Project area): valley foothill riparian, developed, and intermittent stream (Figure 2.3-1). The total area of each land cover type within the BSA is summarized in Table 2.3-1. Only valley foothill riparian and intermittent stream are considered natural communities of special concern.

Table 2.3-1. Land Cover Types in Biological Study Area

Land Cover Type	Acres
Intermittent stream	0.06
Valley foothill riparian	0.13
Developed	0.90
Total	1.09

The valley foothill riparian woodland natural community occurs along both banks of San Francisquito Creek. Valley foothill riparian communities typically provide high-value habitat, offering escape cover, forage, and nesting opportunities for many wildlife species and creating shade that controls instream water temperatures. However the riparian community in the Project area has been highly disturbed from channelization and armoring of San Francisquito Creek and development along the top of bank. The west bank of San Francisquito Creek is dominated by non-native blue gum (*Eucalyptus globulus*) trees, but there are some native plant species in the understory. Dominant tree species on the east bank are willows (*Salix lasiolepis*, *S. laevigata*). Cottonwood (*Populus fremontii* ssp. *fremontii*) and ash (*Fraxinus latifolius*) are less common.



Figure 2.3-1. Land Cover Types in the Biological Study Area

Single native trees of big leaf maple (*Acer macrophyllum*), California black walnut (*Juglans californicus*), and California buckeye (*Aesculus californicus*) occur in the BSA.

The developed land cover type in the BSA includes roads, bridges, paved areas, and residential development surrounding San Francisquito Creek. Vegetation in developed areas is highly variable, ranging from nonexistent in paved areas and along the levees, to mowed grasses, ornamental shrubs, and shade trees associated with residential development. Vegetation on Newell Road and Woodland Avenue is dominated by ornamental trees, shrubs, and perennials. Some native trees (*Quercus agrifolia* and *Sequoia sempervirens*) were probably planted. Manzanita (*Arctostaphylos* sp.) that was planted along Newell Road is most likely a horticultural variety.

The intermittent stream natural community is defined as the creek bed below the ordinary high water mark (OHWM). During the first survey in May 2012, the creek channel was dry except for occasional solitary pools and was characterized by barren, unconsolidated beds of sand, gravel, cobble, or rocky substrates.

There are no Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plan in the project vicinity.

Protected Trees

A tree survey was completed on April 4, 2017. A total of 97 trees were identified within the BSA and consist of both native and non-native species. Planted non-native trees line the neighborhood streets. Blue gum eucalyptus trees line some portions of the upper bank (above the OHWM) on the north bank of San Francisquito Creek. Trees are sparse on the south side of San Francisquito Creek due to the substantial bank modifications and residential development up to the edge of San Francisquito Creek. Native trees are mainly limited to the creek's mid-to lower bank, but some native trees, such as coast live oak (*Quercus agrifolia*) and California buckeye, were probably planted in the adjacent developed areas.

Habitat Connectivity

The channel of San Francisquito Creek provides suitable dispersal habitat for California red-legged frog (*Rana draytonii*) during low flows. Within the BSA, suitable upland habitat and frog dispersal would be limited to the riparian corridor along the creek due to the significant extent of incision of the channel; steep banks; high degree of residential development, landscaping, and roads; relatively frequent traffic conveyed by Woodland Avenue and Edgewood Drive; and further residential and commercial development beyond the Project site. Several ponds were assessed for California red-legged frog habitat suitability near San Francisquito Creek. Movement into and out of the ponds is unlikely due to the high salinity in the lower area of San Francisquito Creek and the degree of isolation from development. Upper San Francisquito Creek (0.6 miles northwest of the Project site and further upstream) provides suitable nonbreeding, dispersal habitat when flows are low. Lower San Francisquito Creek (0.5 miles southwest of the Project site) was also assessed for habitat suitability, but this segment of the creek does not typically offer suitable habitat for the species. When outflow of freshwater pushes the water lower in the drainage, movement by frogs from Lower San Francisquito Creek upstream (or vice versa) could occur within or along the creek.

Currently there are no fish passage issues at the Project site. There are no downstream barriers from the San Francisco Bay to San Francisquito Creek in the BSA. However, San Francisquito Creek in an intermittent stream, the Project site is not subject to tidal influence, and it is dry in the BSA in

the summer. This condition would not allow juvenile steelhead rearing. Biological surveys noted stagnant pools in the creek in the summer, but the pools would be unable to support juvenile steelhead through the summer months due to the poor water quality.

2.3.1.2 Environmental Consequences

Construction Impacts

Build Alternatives

Valley Foothill Riparian

Indirect impacts on riparian vegetation could occur from adjacent construction activity. Trees and woody vegetation adjacent to the construction area would not be removed for construction but could sustain damage from equipment. Because this habitat is located adjacent to the river and functions as riparian habitat, a streambed alteration agreement from the California Department of Fish and Wildlife (CDFW) would likely be required for construction activity within the habitat. The loss or disturbance of riparian vegetation is considered adverse because riparian vegetation provides a variety of important ecological functions and values. Implementation of the avoidance and minimization efforts described in Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, would minimize the impacts of the Project on riparian vegetation.

Intermittent Stream

Bridge construction would occur during the low-flow period in summer, and most construction activities associated with removal and replacement of the bridge abutments would be conducted above the OHWM. Construction activities that could occur within the creek include installation of the check dams, such as clean gravel dams or any other type of approved California Department of Transportation (Caltrans) standard dam, and best management practices (BMPs). Excavation for removal of the existing abutments and construction of the new abutments would be accomplished using an excavator located on the existing roadway and no equipment would enter the creek. Pilings will be placed on the banks with a vibratory hammer.

Indirect impacts on intermittent stream habitat could also occur from adjacent construction activity due to erosion and sedimentation and discharge of pollutants into the creek. Implementation of the avoidance and minimization measures would prevent these indirect effects on San Francisquito Creek during construction.

Protected Trees

All build alternatives would have temporary impacts on trees during construction, including minor pruning or trimming of branches and cutting of minor root systems.

Habitat Connectivity

No habitat connectivity impacts due to Project construction are anticipated because most work would be outside of the OHWM. Construction activities that could occur within the creek include installation of the check dams, such as clean gravel dams or any other type of approved Caltrans standard dam, and BMPs.

No Build Alternative

The No Build Alternative would not affect natural communities because no construction activities would occur.

Operational Impacts

Build Alternatives

Valley Foothill Riparian and Intermittent Stream

Permanent impacts on valley foothill riparian and intermittent stream are provided in Table 2.3-2. Construction of the Project on the proposed alignment would result in permanent loss of some riparian vegetation along San Francisquito Creek within the Project footprint. For the purposes of this analysis, it is assumed that all valley foothill riparian vegetation would be removed within the Project footprint. Additionally, loss of native trees within San Francisquito Creek would adversely affect the valley foothill riparian habitat in the Project area. Table 2.3-3 identifies the impacts on all trees per build alternative.

Project construction would have minimal permanent impacts on intermittent stream habitat within San Francisquito Creek, primarily where banks would be excavated to remove old structures and install new pilings and rip rap.

Table 2.3-2. Impacts on Natural Communities of Special Concern

Community Type	Permanent Impact Area (acres) by Build Alternative ^a			
	Build Alternative 1	Build Alternative 2 (LPA)	Build Alternative 3	Build Alternative 4
Intermittent Stream	0.020	0.029	0.028	0.023 ^c
Valley Foothill Riparian	0.014	0.022	0.022	0.031
Total^b	0.034	0.051	0.050	0.054

^a None of the alternatives have any temporary impact area
^b Total impact area does not include the developed land cover type in the biological study area.
^c The lower impact on under Build Alternative 4 versus the other build alternatives is due to different bridge angles across the stream combined with the creek being narrower in the Build Alternative 4 footprint and wider in Build Alternatives 2 and 3.
 LPA = locally preferred alternative

Implementation of the avoidance, minimization, and mitigation measures described in Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, would reduce impacts on valley foothill riparian vegetation and intermittent stream habitat.

Protected Trees

The Project is not anticipated to result in impacts on any redwood trees in Palo Alto as none are located within the permanent impact area. However, a coast live oak with a diameter at breast height of 43.5 inches would be removed under all build alternatives. This tree is protected in accordance with the City of Palo Alto’s Tree Preservation Ordinance. Seven other regulated trees, which include trees within the public right-of-way within the City of Palo Alto, would also be

removed under all build alternatives. This includes two magnolias, one California Buckeye, and four eucalyptus trees.

Several trees within public right-of-way within East Palo Alto would also be removed. Under Build Alternative 1, two trees—a Freemont’s Cottonwood tree and a Coast live oak tree—would be removed in East Palo Alto. Under Build Alternative 2, both these trees would be removed along with a California buckeye and Arroyo Willow. Under Build Alternative 3, six trees would be removed, including all trees under Build Alternative 2, in addition to another coast live oak tree and a California buckeye. Under Build Alternative 4, 10 trees would be removed, including all those under Build Alternative 3, an Arroyo willow and three eucalyptus. Under the City of East Palo Alto’s Municipal Code (Section 18.28.040(2)), all of the trees within the City of East Palo Alto are considered protected because they are all within the public right-of-way. The City of Palo Alto will continue to work with the City of East Palo Alto to try to retain as many trees as feasible, including in particular the oak tree at the northwestern corner of Newell Road and Woodland Avenue on the East Palo Alto side. However, for the purposes of this analysis, in order to assume a worst-case-scenario, all of the trees described above, including the oak tree, are identified for removal.

Table 2.3-3 identifies the impacts on all trees per build alternative.

Table 2.3-3. Impacts on Trees per Build Alternative

	Build Alternative 1	Build Alternative 2 (LPA)	Build Alternative 3	Build Alternative 4
Number of Trees Affected	23	24	23	25
Number of Trees Removed	10	12	14	18

LPA = locally preferred alternative

The loss of the protected oak and seven other regulated trees (street trees) within the City of Palo Alto would be an impact. Removal of these trees is allowed in accordance with Palo Alto Municipal Code Section 8.10.050(d)(1). As outlined in the code, replacement for these trees is required in accordance with the Tree Technical Manual, which includes a formula for replacement based on the measured size of the canopy lost. Compliance with the Palo Alto Municipal Code and the Tree Technical Manual, which is incorporated by reference as part of the City’s Municipal Code, would help to ensure that impacts associated with removal of the protected and regulated trees within the City of Palo Alto would be reduced. In addition, the City of East Palo Alto requires replacement of trees approved for removal in accordance with the East Palo Alto Municipal Code Section 18.28.040(I). Compliance with the City of East Palo Alto’s Municipal Code, including replacement of the canopy, ensures that impacts within the City of East Palo Alto would also be reduced. However, mitigation measures would still be required in the event that trees cannot be replaced on site.

Habitat Connectivity

No habitat connectivity impacts due to the Project are anticipated. The bridge will be replaced with a free span bridge, so no pilings will be located within the intermittent stream channel. Additionally, the abutments and bank stabilization will be placed outside of the OHWM. The channel and habitat surrounding the creek will remain the same.

No Build Alternative

The No Build Alternative would not affect natural communities because no improvements would occur.

2.3.1.3 Avoidance, Minimization, and/or Mitigation Measures

Valley Foothill Riparian

Implementation of the following avoidance, minimization, and mitigation measures would ensure that the proposed Project minimizes effects on valley foothill riparian habitat in and adjacent to the Project construction area.

- **AMM-BIO-1: Install Construction Barrier Fencing around Environmentally Sensitive Areas.** The Project proponent or its contractor will install orange construction barrier fencing to identify environmentally sensitive areas in and adjacent to the construction area. A qualified biologist will identify sensitive biological resources adjacent to the construction area before the final design plans are prepared so that the areas to be fenced can be included in the plans. The area that would generally be required for construction, including staging and access, is shown in Figure 2.3-1. Portions of this area that are to be avoided during construction will be fenced off to avoid disturbance. Sensitive biological resources that occur adjacent to the construction area include sensitive natural communities and protected trees to be retained. Temporary fences around the environmentally sensitive areas will be installed as one of the first orders of work following Caltrans specifications. Before construction, the construction contractor will work with the Project engineer and a resource specialist to identify the locations for the barrier fencing and will place stakes around the sensitive resource sites to indicate these locations. The protected areas will be designated as environmentally sensitive areas and clearly identified on the construction plans. The fencing will be installed before construction activities are initiated, maintained throughout the construction period, and removed after completion of construction.
- **AMM-BIO-2: Prepare Environmental Awareness Program and Conduct Environmental Awareness Training for Construction Employees.** The Project proponent will retain a qualified biologist to develop an environmental awareness program and conduct environmental awareness training for construction employees. The program will explain the importance of on-site biological resources, including sensitive natural communities, protected trees to be retained, and special-status wildlife habitats, and how to avoid take of listed species. The program will include invasive plant identification and the importance of controlling and preventing the spread of invasive plant infestations.

The environmental awareness program will be provided to all construction personnel to inform them on the life history of special-status species in or adjacent to the Project, the need to avoid impacts on sensitive biological resources, any terms and conditions required by state and federal agencies, and the penalties for not complying with biological mitigation requirements. If new construction personnel are added to the Project, the contractor's superintendent will ensure that the personnel receive the mandatory training before starting work. An environmental awareness handout that describes and illustrates sensitive resources to be avoided during Project construction and identifies all relevant permit conditions will be provided to each person.

- **AMM-BIO-3: Retain a Biological Monitor to Conduct Visits during Construction.** The Project proponent will retain a qualified biologist to conduct construction monitoring in and adjacent to all identified environmentally sensitive areas. The frequency of monitoring will range from daily to weekly depending on the biological resource. The monitor, as part of the overall monitoring duties, will inspect the fencing once a week at a minimum in the construction area along the river and drainages that support woody vegetation; surrounding native trees and woodlands; and special-status plants. The biological monitor will assist the construction crew as needed to comply with all Project implementation restrictions and guidelines. The biological monitor also will be responsible for ensuring that the contractor maintains the staked and flagged perimeters of the construction area and staging areas adjacent to sensitive biological resources.
- **AMM-BIO-4: Avoid and Minimize Potential Disturbance of Valley Foothill Riparian Community.** The Project proponent and its construction contractor will avoid and minimize potential disturbance of the valley foothill riparian community by implementing the following measures.
 - The potential for long-term loss of woody vegetation will be minimized by trimming vegetation rather than removing entire shrubs. Shrubs that need to be trimmed will be cut at least 1 foot above ground level to leave the root systems intact and allow for more rapid regeneration. Cutting will be limited to the minimum area necessary within the construction zone.
 - A certified arborist will be retained to perform any necessary pruning or root cutting of retained trees.
 - The areas that undergo vegetative pruning will be inspected immediately before construction, immediately after construction, and 1 year after construction to determine the amount of pre-Project vegetative cover, cover that has been removed, and cover that regrows. After 1 year, if vegetation in these areas has not regrown sufficiently to return the cover to the pre-Project level, the Project proponent will replant the areas with native species to reestablish the cover to the pre-Project condition.
- **MM-BIO-1: Compensate for Permanent Loss of Valley Foothill Riparian.** The Project proponent will compensate for permanent construction-related loss of valley foothill riparian habitat by replanting trees in the disturbed area after completion of the construction activities. Loss of native riparian trees will be compensated by replanting at a ratio of 3:1 (three native trees planted for every one native tree removed that was at least 4 inches diameter at breast height [approximately 4.5 feet above existing grade]). Loss of non-native riparian trees will be compensated at a ratio of 1:1 (one native tree planted for every one non-native tree removed that was at least 4 inches diameter at breast height). The compensatory ratios and planting locations will be confirmed through coordination with the Project proponent and other agencies as part of the environmental permitting process for the proposed Project.

The Project proponent will prepare a riparian mitigation planting plan, including a species list and number of each species, planting locations, and maintenance and monitoring requirements. Plantings will consist of cuttings taken from native plants, or plants grown at a plant nursery from local native material obtained within the San Francisquito Creek watershed. Planted species will be similar in structure and stature (at maturity) to those removed from the Project area. Plantings will be monitored annually for 5 years or as required in the Project permits. If 75% of the plants survive and the riparian canopy covers 75% at the end of the monitoring period, the revegetation will be considered successful. If this survival and canopy cover criteria

are not met at the end of the monitoring period, planting and monitoring will be repeated after mortality causes have been identified and corrected.

Intermittent Stream

Implementation of AMM-BIO-1 through AMM-BIO-4 for valley foothill riparian and avoidance and minimization effort AMM-BIO-5 would ensure that the proposed Project minimizes direct and indirect effects on intermittent stream habitat.

- **AMM-BIO-5. Protect Water Quality and Prevent Erosion and Sedimentation in San Francisquito Creek.** The Project proponent and/or their construction contractor shall ensure the construction specifications include water quality protection and erosion and sediment control BMPs, based on standard Caltrans requirements, to minimize construction-related contaminants and mobilization of sediment to the San Francisquito Creek.

The BMPs will be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMPs are subject to review and approval by the Project proponent. The Project proponent will perform routine inspections of the construction area to verify the BMPs are properly implemented and maintained. The Project proponent will notify contractors immediately if there is a noncompliance issue and will require compliance.

The BMPs will include, but are not limited to, the following.

- All earthwork or foundation activities involving San Francisquito Creek and the bridge will occur in the dry season (between June 1 and October 15).
- A netting and tarp system will be implemented at the bridge site to prevent and minimize debris from entering the river during demolition and construction activities.
- Equipment used around San Francisquito Creek will be in good working order and free of dripping or leaking engine fluids. All vehicle maintenance will be performed at least 300 feet from all drainages and wetlands. Any necessary equipment washing will be carried out where the water cannot flow into drainages or wetlands.
- A hazardous material spill prevention control and countermeasure plan will be developed before construction begins that will minimize the potential for and the effects of hazardous or toxic substances spills during construction. The plan will include storage and containment procedures to prevent and respond to spills and will identify the parties responsible for monitoring the spill response. During construction, any spills will be cleaned up immediately according to the spill prevention and countermeasure plan. The Project proponent will review and approve the contractors' toxic materials spill prevention control and countermeasure plan before allowing construction to begin. The following types of materials will be prohibited from being rinsed or washed into the streets, shoulder areas, or gutters: concrete, solvents and adhesives, thinners, paints, fuels, sawdust, dirt, gasoline, asphalt and concrete saw slurry, heavily chlorinated water.
- Baseline turbidity, pH, specific conductance, and temperatures in the San Francisquito Creek channel will be measured when flow is present. As required by the Regional Water Quality Control Board (RWQCB), water quality standards specified in the Basin Plan standards will not be exceeded over the natural in-situ conditions. If dewatering activities are required, water samples would be taken periodically during construction.

- Any surplus concrete rubble, asphalt, or other rubble from construction will be taken to a local landfill.
- An erosion and sediment control plan will be prepared and implemented for the proposed Project. It will include the following provisions and protocols. The stormwater pollution prevention plan for the Project will detail the applications and type of measures and the allowable exposure of unprotected soils.
- Discharge from dewatering operations, if needed, and runoff from disturbed areas will be made to conform to the water quality requirements of the waste discharge permit issued by the RWQCB.
- Temporary erosion control measures, such as sandbagged silt fences, will be applied throughout construction of the proposed Project and will be removed after the working area is stabilized or as directed by the engineer. Soil exposure will be minimized through use of temporary BMPs, groundcover, and stabilization measures. Exposed dust-producing surfaces will be sprinkled daily, if necessary, until wet; this measure will be controlled to avoid producing runoff. Paved streets will be swept daily following construction activities.
- The contractor will conduct periodic maintenance of erosion and sediment control measures.
- An appropriate seed mix of native species will be planted on disturbed areas upon completion of construction.
- The contractor will cover or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways.
- The contractor will enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways. Material stockpiles will be located in non-traffic areas only. Side slopes will not be steeper than 2:1. All stockpile areas will be surrounded by a filter fabric fence and interceptor dike.
- Runoff from disturbed areas will be contained and filtered by berms, vegetated filters, silt fencing, straw wattle, plastic sheeting, catch basins, or other means necessary to prevent the escape of sediment from the disturbed area.
- Other temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary re-vegetation or other ground cover) will be used to control erosion from disturbed areas as necessary.
- The contractor will avoid depositing or placing earth or organic material where it may be directly carried into the channel.

Protected Trees

Implementation of MM-BIO-2 would ensure that construction impacts on protected and regulated trees would be mitigated by ensuring that a suitable location is identified for replacement if replacement cannot be accommodated on the Project site. The City of Palo Alto Tree Technical Manual guidance (see Table 3-1 in Section 3-4 of the Tree Technical Manual) and East Palo Alto

Municipal Code will also be followed for determining the ratio of replacement, dependent on the tree canopy.

- **MM-BIO-2: Tree Replacement Plan.** The applicant shall be required, in accordance with the Tree Protection and Management Regulations (Palo Alto Municipal Code 8.10) and Tree Technical Manual (Palo Alto Municipal Code 8.10.120), to replace the tree canopy for the six protected trees, in accordance with the tree canopy formula identified in the Tree Technical Manual (Tree Technical Manual 3.20). If the tree canopy cannot be replaced on site, the canopy shall be replaced off site as close to the Project site as feasible. If trees are being replaced off site, the applicant must submit a Tree Planting Plan to the Urban Forestry Division and obtain the Urban Forestry Division's approval of the plan prior to issuance of a building permit. The Tree Planting Plan must include the following.
 - The canopy calculation for trees removed and the number of trees planned to replace them, consistent with the formula identified in the Tree Technical Manual.
 - The specific location where the new trees would be planted with specific baseline information about that proposed site (e.g., surrounding vegetation or development).
 - The species of trees to be planted.
 - Specific planting details (e.g., size of sapling, size of containers, irrigation plan).
 - Success criteria.
 - Monitoring and maintenance schedule.

Replacement tree planting will be monitored by a qualified arborist. To verify the success of replacement trees, monitoring shall occur for two years after initial planting. After the two-year period, the arborist will determine if the trees are capable of surviving without further maintenance.

Habitat Connectivity

Implementation of AMM-BIO-1 through AMM-BIO-5 will decrease impacts on San Francisquito Creek and the surrounding upland habitat. These measures will keep habitat connectivity the same as the existing condition.

2.3.2 Wetlands and Other Waters

2.3.2.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the OHWM, in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-

loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (EPA).

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities that are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with EPA's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines were developed by the EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the United States) only if there is no practicable alternative which would have less adverse effects. The Section 404 (b)(1) Guidelines state that the USACE may not issue a permit if there is a "least environmentally damaging practicable alternative" to the proposed discharge that would have lesser effects on waters of the United States, and not have any other significant adverse environmental consequences.

The Executive Order (EO) for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as the Federal Highway Administration (FHWA) and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board, the RWQCBs, and the CDFW. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for

activities which may result in a discharge to waters of the United States. This is most frequently required in tandem with a Section 404 permit request. Section 2.2.2, *Water Quality and Storm Water Runoff*, provides more details on water quality.

2.3.2.2 Affected Environment

The information in this section is from the Natural Environment Study (September 2017) and Wetland Delineation (April 2017). The BSA encompasses approximately 500 feet along Newell Road Bridge spanning San Francisquito Creek, 350 feet along Woodland Avenue, and the adjacent upstream and downstream sections of San Francisquito Creek totaling 1.09 acres. The BSA is the same for all build alternatives. A site visit was conducted on August 24, 2015, to evaluate the BSA.

No jurisdictional wetlands were identified in the BSA. Riparian scrub is present in some areas below the OHWM. In the BSA, this vegetation type is dominated by Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), arroyo willow (*Salix lasiolepis*), floating water primrose (*Ludwigia peploides*), and water knotweed (*Persicaria amphibia*) (all facultative wetland or obligate wetland species). The majority of this vegetation type is located on the outer channel edge at the slope toe and is generally rooted below the OHWM, but does not meet the 5% wetland vegetation cover criterion. There is one elevated gravel bar in the center of the creek on the west side of the bridge, vegetated predominantly by Fremont cottonwood and water knotweed, but this vegetation is located outside of the BSA.

Approximately 0.040 acre (84 linear feet with an average width at OHWM of 21 feet) of non-wetland waters of the United States was mapped and characterized along the creek (Figure 2.3-2). The photos referenced in Figure 2.3-2 are included in Appendix D of the Wetland Delineation. The creek bed was dry at the time of field survey. Conditions in the creek are unlikely to have changed since August 2015 because the creek is a highly modified flood control channel which prevents changes in morphology, width, and slope over time. The creek qualifies as a water of the United States and a water of the State because it supports a defined bed and bank and a well-defined OHWM. Unvegetated areas (less than 5% vegetated) in the channel below the OHWM are considered non-wetland waters of the United States and waters of the State, subject to regulation by USACE.



Figure 2.3-2. Delineation of Waters of the United States

Vegetation is present in some areas below the OHWM. Plant communities in these areas include nonnative riparian, nonnative grassland, and ruderal. Generally, these communities were dominated exclusively by one species: either Himalayan blackberry (*Rubus armeniacus*), English ivy (*Hedera helix*), or Bermuda grass (*Cynodon dactylon*) (facultative upland wetland indicator status). Himalayan blackberry and English ivy grow interspersed with bankside riparian forest both below and above the OHWM. Because the dominant vegetation below the OHWM is not strongly hydrophytic, these areas do not qualify as wetlands; rather, they are considered jurisdictional non-wetland waters.

2.3.2.3 Environmental Consequences

Build Alternatives

No jurisdictional wetlands are present within the BSA; therefore, no impacts from any of the build alternatives would result during construction or operation. However, both the creek and intermittent stream habitat are considered waters of the United States and waters of the State. As described in Section 2.3.1.2, *Environmental Consequences*, each build alternative would affect intermittent stream habitat: Build Alternative 1 would affect 0.020 acre, Build Alternative 2 would affect 0.029 acre, Build Alternative 3 would affect 0.028 acre, and Build Alternative 4 would affect 0.023 acre.

Distinct from the alternative analysis required to comply with CEQA and as required by the Clean Water Act Section 404(b)(1) Guidelines (40 CFR 230) and the State Procedures for Discharges of Dredged or Fill Material to Water of the State (Procedures), a range of alternatives that integrate a specific focus on avoiding and minimizing adverse effects to waters of the United States and waters of the State, will be analyzed to determine the least environmentally damaging practicable alternative (LEDPA). According to the EPA Guidelines and State Water Board Procedures, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. The alternatives analysis prepared to determine the LEDPA will be included with the Clean Water Act Section 404 permit application and Section 401 Water Quality Certification application submitted to USACE and RWQCB, respectively, after detailed design has progressed.

No Build Alternative

The No Build Alternative would not impact wetlands, other waters of the United States, or other waters of the State because construction activities would not occur.

2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

The avoidance and minimization measures AMM-BIO-1 through AMM-BIO-5, described in Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, for intermittent streams would minimize potential impacts on other waters of the United States and waters of the State.

2.3.3 Plant Species

2.3.3.1 Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and CDFW have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the FESA and/or the California Endangered Species Act (CESA). Section 2.3.5, *Threatened and Endangered Species*, contains detailed information about these species.

This section discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society rare and endangered plants.

The regulatory requirements for FESA can be found at 16 USC Section 1531, et seq. (see also 50 CFR Part 402). The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900–1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000–21177.

2.3.3.2 Affected Environment

The information in this section is from the Natural Environment Study (September 2017). Based on California Natural Diversity Database (CNDDDB) search results, the California Native Plant Society Inventory, and the USFWS list for the Project region, 28 special-status plant species were determined to have been documented within the Project region. All of these species occur in habitats or soil types that are not present in the BSA, at elevations exceeding those in the Project area, or outside of the species’ geographic range. Floristic surveys have been performed during the blooming period for special-status plant species that could occur in the BSA and none were found. Therefore, there are no sensitive plant species with potential to be present in the Project area.

2.3.3.3 Environmental Consequences

Build Alternatives

None of the build alternatives would affect special-status plant species during construction or operation because none are present in the BSA.

No Build Alternative

The No Build Alternative would not impact special-status plant species.

2.3.3.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are required.

2.3.4 Animal Species

2.3.4.1 Regulatory Setting

Many state and federal laws regulate impacts on wildlife. USFWS, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), and CDFW are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the FESA or CESA. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.5, *Threatened and Endangered Species*. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following.

- National Environmental Policy Act (NEPA)
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following.

- CEQA
- Sections 1600–1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

2.3.4.2 Affected Environment

The information in this section is from the Natural Environment Study (September 2017). Common wildlife species in the BSA include American crow (*Corvus brachyrhynchos*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), and western fence lizard (*Sceloporus occidentalis*).

During the May 23, 2012, wildlife survey, species observed included northern mockingbird, California scrub jay (*Aphelocoma californica*), cliff swallow (*Petrochelidon pyrrhonota*), tree swallow (*Tachycineta bicolor*), black phoebe (*Sayornis nigricans*), and American robin (*Turdus migratorius*). A homeowner in the area observed a western tanager (*Piranga ludoviciana*) nesting in the area as well as a red-tailed hawk (*Buteo jamaicensis*) nesting in the eucalyptus trees.

Based on professional judgment and a review of the USFWS and CNDDDB lists, 27 special-status species (excluding fish species) were identified as having potential to occur in the Project region, in addition to one special-status fish species. Following a survey of the habitats and characteristics within the BSA, six of these species were determined to have potential to occur within the BSA. Special-status wildlife species with potential to occur in the BSA are California red-legged frog (*Rana draytonii*), western pond turtle (*Emys marmorata*), saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*), pallid bat (*Antrozonus pallidus*), hoary bat (*Lasiurus cinereus*), and snowy egret (*Egretta thula*) rookeries. Special-status fish species with potential to occur in the BSA are Central California Coast steelhead (*Oncorhynchus mykiss*). None of these special-status species was observed during the survey; however, suitable habitat for each occurred within or adjacent to the BSA.

California red-legged frog and Central California Coast steelhead are discussed in Section 2.3.5, *Threatened and Endangered Species*.

Western Pond Turtle

Western pond turtle is designated as a state species of special concern. Western pond turtles are thoroughly aquatic, preferring the quiet waters of ponds, reservoirs, and sluggish streams. The species occurs in a wide range of both permanent and intermittent aquatic environments. Western pond turtles also spend time in upland habitats during the spring and summer, frequently moving between aquatic and upland habitats. Western pond turtle could use San Francisquito Creek and its banks as habitat. There is one CNDDDB record within 5 miles of the site, but this species has been observed approximately 3.6 miles southwest of the study area.

Pallid Bat and Hoary Bat

Pallid bat, a species of special concern and a Western Bat Working Group high-priority species, and hoary bat, a Western Bat Working Group medium priority species, have potential to occur in the BSA. Both pallid and hoary bat primarily roost in trees and could occur within the valley foothill riparian habitat. Pallid bat can roost on or in bridges and hoary bat may also use bridges as roosting substrate. Both bats could forage throughout the Project area. For pallid bat, there are two CNDDDB records within 5 miles of the site, and the nearest CNDDDB record is located about 2.2 miles southwest of the BSA and dates to an observation from 1951. There are three CNDDDB records of hoary bats within 5 miles of the Project and the nearest record is located about 2 miles from the Project.

Snowy Egret and Saltmarsh Common Yellowthroat

Snowy egret is found on shores of coastal estuaries, fresh and saline emergent wetlands, ponds, slow rivers, irrigation ditches, and wet fields in coastal lowlands and other lowland areas throughout California. This species nests in dense marsh vegetation or at low heights in trees. Snowy egret has been observed several times along the margins of the San Francisco Bay, west of the Project area. This species could use the trees in the valley foothill riparian habitat as nesting substrate, but the herbaceous/shrub layers are too dense to provide foraging habitat in the Project area. There are numerous observations of the species within the vicinity of the BSA.

Saltmarsh common yellowthroat is a passerine that is a state species of special concern. It occurs throughout the San Francisco Bay and is associated with brackish marsh, riparian woodland, salt marsh, freshwater marsh, and occasionally nearby upland habitat. Saltmarsh common yellowthroat builds nests slightly above the ground in substrate including bulrush, cattails, grasses, poison hemlock, and shrubs. This species could use shrubs, poison hemlock, cattails, or bulrush as nesting substrate within valley foothill riparian habitat and sections of the intermittent stream. Saltmarsh common yellowthroat could forage throughout the valley foothill riparian habitat and over the intermittent stream.

2.3.4.3 Environmental Consequences

Construction Impacts

Build Alternatives

Western Pond Turtle

Because suitable aquatic habitat for western pond turtles is present within the BSA, pond turtles could be affected by the proposed Project. Western pond turtles are very sensitive to disturbances and quickly retreat into the water when threatened. If pond turtles are present in the creek channel or along the creek bank during the construction period, they could be injured or killed during construction.

Pallid Bat and Hoary Bat

Potential bat roosting areas that could be directly disturbed during new bridge construction occur in portions of the existing bridge and more mature trees in the BSA. Noise disturbances associated with new bridge construction could disturb day-roosting bats if they are present in the bridge or suitable adjacent trees during construction. Removal of trees could result in direct injury or mortality of bats if present. Nearby construction noise or vibration could disturb roosting bats if present.

Snowy Egret and Saltmarsh Common Yellowthroat

Construction of the proposed Project could result in the loss or abandonment of active nests for special-status raptors and migratory birds.

Tree removal or noise/vibration associated with construction activities could result in the disturbance of nesting raptors or migratory birds if active nests are present in or near the construction area. These disturbances could cause nest abandonment and death of young or loss of reproductive potential at active nests located in or near the BSA. The proposed Project could result in a substantial adverse effect, through loss of eggs or young, to species protected under the Migratory Bird Treaty Act and California Fish and Game Codes 3503 and 3503.5. Implementation of the avoidance and minimization measure AM-BIO-8 would ensure that the proposed Project would not result in take of eggs or young.

No Build Alternative

The No Build Alternative would have no effect on animal species because habitat removal would not occur.

Operational Impacts

Build Alternatives

The removal of large trees within the Project area that may provide suitable roosting or nesting habitat would impact roosting bats and nesting birds. As described in Section 2.3.1, *Natural Communities*, 23 trees would be affected with 10 trees removed under Build Alternative 1, 24 trees would be affected with 12 trees removed under Build Alternative 2, 23 trees would be affected with 14 trees removed under Build Alternative 3, and 25 trees would be affected with 18 trees removed

under Build Alternative 4. The on-site replacement of trees would restore potential roosting and nesting habitat over time.

No Build Alternative

The No Build Alternative would have no effect on animal species because habitat removal would not occur.

2.3.4.4 Avoidance, Minimization, and/or Mitigation Measures

Western Pond Turtle

The Project proponent will implement the following measures to minimize and avoid impacts on western pond turtle.

- **AMM-BIO-6: Conduct Preconstruction Surveys for Western Pond Turtles; Relocate if Needed.** A qualified biologist will examine the BSA for western pond turtles and their nests no more than 24 hours before Project activities begin and during any initial removal of vegetation, woody debris, or trees, or other initial ground-disturbing activities. If a western pond turtle is observed at any time before or during Project activities, all activities will cease. If western pond turtles are determined to be absent from the Project footprint, no further action will be required with regard to these species. If any western pond turtles are found within the Project footprint, whenever possible construction work in their vicinity will be avoided until they have moved outside of the Project area of their own volition. If the relocation of western pond turtle is necessary, a relocation plan will be developed and submitted to CDFW for approval. The plan will include subsequent details of monitoring by a CDFW-approved biologist, agency-approved disinfection and handling protocols, animal care while being relocated, suitable deposition locations, and reporting requirements. The CDFW-approved biologist will follow all applicable CDFW disinfection and handling protocols per the relocation plan.

Pallid Bat and Hoary Bat

The Project proponent will implement the following measures to minimize and avoid impacts on pallid and hoary bat.

- **AMM-BIO-7: Conduct Preconstruction Surveys for Pallid and Hoary Bats.** A qualified biologist will examine trees within the BSA for roosting hoary bats no more than 24 hours before any initial removal of vegetation, woody debris, or trees, or other initial ground-disturbing activities. If a bat is observed roosting at any time before or during Project activities, all activities will cease. The Project proponent will coordinate with CDFW to develop and implement avoidance measures before commencing Project activities.

Snowy Egret and Saltmarsh Common Yellowthroat

The Project proponent will implement the following measure to minimize and avoid impacts on active nests for special-status raptors and migratory bird species.

- **AMM-BIO-8: Implement Nesting Bird Impact Avoidance Measures.** The Project proponent and/or their construction contractor will be responsible for avoiding effects on migratory and non-migratory birds including special-status species (e.g., snowy egret, saltmarsh common yellowthroat). Accordingly, the following measures will be implemented.

Vegetation (including trees) trimming or removal will be conducted during the nonbreeding season (September 1 to January 31), to the extent feasible.

Construction activities will be conducted during the nonbreeding season (September 1 to January 31), to the extent feasible.

Construction activities will begin during the nonbreeding season (September 1 to January 31) and prior to the nesting season (February 1 to August 31), if feasible. Beginning construction prior to the breeding season will establish a level of noise disturbance that will dissuade noise-sensitive raptors and other birds from attempting to nest within or near the study area.

Bridge work (including existing bridge expansion and new bridge installation) will be conducted during the nonbreeding season (September 1 to January 31), to the extent feasible. It is recommended that inactive nests be removed from any bridge work location and from any vegetation or structure within the Project area or within 50 feet of where bridge work will take place. In addition, nest exclusion measures (e.g., fine mesh netting, panels, or metal projectors) are recommended to be installed outside of the nesting season, to the extent feasible. If installed, exclusionary devices will be monitored and maintained throughout the breeding season to ensure that they are fully functional (i.e., successful in preventing the birds from accessing cavities or potential nesting sites).

If construction activities (including vegetation trimming or removal and bridge work) occur within the breeding season (February 1 to August 31), a qualified wildlife biologist with demonstrated nesting bird survey experience will conduct preconstruction surveys for nesting birds. A minimum of three separate surveys will be conducted for migratory birds, including raptors. Surveys will include a search of all suitable nesting habitat (e.g., grassland, bushes, trees, bridges, culverts, overpasses, and structures) in the Project area. In addition, a 300-foot area around the Project area will be surveyed for nesting raptors. When feasible, surveys should occur during the height of the breeding season (March 1 to June 1) with one survey being conducted in each of 2 consecutive months within this peak period and the final survey being conducted within 1 week of the start of construction. If no active nests are detected during these surveys, no additional measures are required.

If a lapse in construction activities of 3 days or longer at a previously surveyed study area occurs, another preconstruction survey will be conducted.

If an active nest is found in the Project area, a no-disturbance buffer (marked with high-visibility fencing, flagging, or pin flags) will be established by a qualified wildlife biologist around the site to avoid disturbance or destruction of the nest until the end of the breeding season (August 31) or until after the biologist determines that the young have fledged and moved out of the Project area (this date varies by species). The extent of these buffers will be determined by the biologist in coordination with USFWS and/or CDFW as appropriate. Buffer size will depend on the level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Buffer size is based on a species' sensitivity to disturbance and planned work activities in the vicinity and has the potential to vary with different species. Typical buffer sizes are 300 feet for raptors and 50 feet for other birds.

2.3.5 Threatened and Endangered Species

2.3.5.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is FESA (16 USC Section 1531, et seq. [see also 50 CFR Part 402]). This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as FHWA (and Caltrans, as assigned), are required to consult with USFWS and NOAA Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement or a Letter of Concurrence (Appendix D). Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, CESA (California Fish and Game Code Section 2050, et seq.). CESA emphasizes early consultation to avoid potential impacts on rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. CDFW is the agency responsible for implementing CESA. Section 2080 of the California Fish and Game Code prohibits “take” of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts on CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

2.3.5.2 Affected Environment

The information in this section is from the *Natural Environment Study* (September 2017). USFWS, CDFW, and NOAA Fisheries Service are the primary agencies responsible for coordination and review involving special-status species.

The findings summarized in this section were based on extensive research and botanical and wildlife field surveys conducted by Project biologists in May and December 2012, August 2015, and April 2017 for special-status species in the study area and its vicinity. A formal site assessment for California red-legged frog (*Rana draytonii*) was also conducted within 1 mile of the BSA and aquatic habitats on July 27, 2012. In addition to the surveys, record searches of the USFWS and NOAA Fisheries Service species lists and the CNDDDB were conducted.

USFWS and NOAA species records were reviewed at the outset of the biological studies for the Project. A copy of the records list is included in Appendix E. Special-status species that could occur in the area include California red-legged frog, Central California Coast steelhead (*Oncorhynchus mykiss*), and essential fish habitat (EFH). There is no green sturgeon (*A. medirostris*) critical habitat within the BSA. Caltrans completed informal consultation with USFWS and NOAA Fisheries Service by submitting a Biological Assessment to USFWS and NOAA Fisheries Service discussing the studies performed to date and potential impacts on listed species.

California Red-Legged Frog

California red-legged frog (*Rana draytonii*) is listed as threatened under the FESA and is a California species of special concern. The study area does not include critical habitat nor is it adjacent to critical habitat for this species. California red-legged frog breeds in lowland and foothill streams and wetlands, including livestock ponds. It may also be found in upland habitats near breeding areas and along intermittent drainages connecting wetlands.

California red-legged frog could use San Francisquito Creek and its banks as movement habitat. There are 3 CNDDDB records within 5 miles of the BSA, and the nearest CNDDDB record is about 4 miles away from the BSA, on the other side of Palo Alto. This species was not observed during the field survey.

Central California Coast Steelhead

Central California Coast steelhead was listed as threatened by NOAA Fisheries Service on August 18, 1997 (62 Federal Register [FR] 43938). There is no state status. Central California Coast steelhead includes populations from the Russian River to Aptos Creek and the drainages of San Francisco and San Pablo Bays eastward to the Napa River. Historically, runs of steelhead trout were prominent in a number of Santa Clara Basin streams: Guadalupe River, Coyote Creek, San Francisquito Creek, Stevens Creek, and Saratoga Creek. Passage barriers, water diversions, and overall habitat degradation have diminished steelhead populations not only in Santa Clara Basin streams, but also throughout California and the West. Reproducing populations of steelhead are known to exist in Coyote Creek, Guadalupe River, Stevens Creek, and San Francisquito Creek.

Steelhead is the only special-status fish species known to have been historically present in Peninsula watersheds, including San Francisquito Creek. While the present-day hydrology of the San Francisquito Creek watershed has been highly altered, the creek still supports an anadromous run of steelhead up to Searsville Dam, which is the only complete migration barrier in the watershed.

Observations of the BSA indicate that spawning, migration, and rearing habitat is available in the Project area during the winter months. During the survey in May 2012, the channel was dry, with a few solitary pools upstream and downstream of the BSA. If the channel had flow, it would provide spawning, rearing, and migration habitat for steelhead.

Additionally, critical habitat was designated for Central California Coast steelhead by NOAA Fisheries Service (70 FR 52570, September 2, 2005) in the BSA. San Francisquito Creek is included in the Santa Clara Hydrologic Unit. The value of the section of the San Francisquito Creek in the BSA is one of rearing and migration and possibly spawning due to some gravel being present in the channel. However, the creek in the BSA only has flows during large precipitation events and is flashy. High flows would scour out redds and eggs and also transport sediment (i.e. sand) downstream due to residential housing along the banks both in the BSA and upstream and

downstream of the bridge. Because the creek is dry in the summer and fall, it does not provide juvenile migratory or rearing habitat throughout the year. For these reasons, critical habitat conditions are poor.

Essential Fish Habitat

Central Valley fall-run and late-fall-run Chinook salmon are a commercially valuable species, and they are managed by the NOAA Fisheries Service under the Magnuson-Stevens Fishery Conservation and Management Act. This act requires that all federal agencies consult with NOAA Fisheries Service on all proposed projects that may adversely affect EFH. EFH is the aquatic habitat (water and substrate) necessary for fish to spawn, breed, feed, or grow to maturity that will allow a level of production needed to support a long-term, sustainable commercial fishery and contribute to a healthy ecosystem. Important components of EFH for spawning, rearing, and migrating include adequate substrate composition; water quality; water quantity, depth, and velocity; channel gradient and stability; food; cover and habitat complexity; space; access and passage; and habitat connectivity. It is unlikely Chinook salmon use the BSA since the creek is dry during the summer months. However, the proposed Project is located within EFH for Pacific salmon. If fall and late fall-run Chinook salmon use the action area, it would be as a migration corridor during upstream (adult) and downstream (juvenile) migration.

2.3.5.3 Environmental Consequences

Construction Impacts

Build Alternatives

California Red-Legged Frog

California red-legged frogs could be directly affected by construction activities occurring in or adjacent to the BSA. If California red-legged frogs are present within the construction work area, they could be inadvertently killed or wounded by construction vehicles, construction personnel, and accidental spill of toxic fluids (e.g., gasoline and other petroleum-based products). If California red-legged frogs must be captured and relocated outside the construction work area, they could be exposed to increased risk of disease, predation, stress, and competition that could result in increased mortality and/or reduced fitness.

Construction activities associated with road and bridge construction in potential California red-legged frog habitat in the Project area could result in indirect effects on water quality downstream from the construction work area. Increased sedimentation could reduce the suitability of California red-legged frog habitat downstream of the construction area by filling in pools and smothering eggs. Accidental spills of toxic fluids also could result in the subsequent mortality of California red-legged frogs if these substances flow downstream from the construction area and California red-legged frogs are present. Implementation of the avoidance and minimization measures identified for California red-legged frog and construction BMPs identified in Section 2.3.5.4, *Avoidance, Minimization, and/or Mitigation Measures* would reduce direct and indirect effects on California red-legged frog and potential habitat impacts that could occur downstream from the construction area.

The Project, with implementation of the avoidance and minimization measures identified in Section 2.3.5.4, *Avoidance, Minimization, and/or Mitigation Measures*, may affect, but is not likely to

adversely affect, California red-legged frogs. USFWS concurred with this determination on March 20, 2018 (Appendix D).

Central California Coast Steelhead

The proposed Project could affect habitat conditions for Central California Coast steelhead. Activities associated with bridge removal and reconstruction and revegetation could increase erosional processes, thereby increasing sedimentation and turbidity in downstream waterways. Excessive sediment deposited in or near stream channels can degrade aquatic habitats. Increased turbidity can increase fish mortality, reduce feeding opportunities for fish including rearing steelhead, and cause fish to avoid important habitat. Contaminants include toxic substances such as metals, petroleum products, pesticides, fertilizers, sewage, and uncharacteristically high sediment loading. Construction materials such as concrete, sealants, oil, and paint could adversely affect water quality if accidental spills occurred during Project construction. Increased pollutant concentrations could limit fish production, abundance, and distribution by direct mortality of fish or their prey. Steelhead in the BSA require relatively clean, cold, well-oxygenated water for successful growth, reproduction, and survival and are not well adapted for survival in degraded aquatic habitats.

Implementation of the avoidance and minimization effort AMM-BIO-5 would reduce sedimentation from entering San Francisquito Creek. To further reduce the likelihood of adverse construction effects on steelhead, the City of Palo Alto would limit stream bank construction to the summer low-precipitation period (June 1 to October 15), which would minimize adverse effects on rearing juvenile steelhead and on adult fish migrating to upstream spawning areas.

Construction activities associated with the proposed Project that would affect fish habitat include removal of existing bridge structures, removal of riparian vegetation, and activities related to revegetation. Bridge replacement and bank stabilization activities would require removal of vegetation resulting in loss of vegetative cover and reducing fish habitat complexity. Implementation of the proposed Project may affect fish habitat; therefore, the Project may affect steelhead and its habitat.

Noise, vibrations, artificial light, and other physical disturbances can harass fish, disrupt or delay normal activities, and cause injury or mortality. The potential magnitude of effects depends on a number of factors, including the type and intensity of the disturbance, proximity of the action to the water body, timing of actions relative to the occurrence of sensitive life stages, and frequency and duration of activities. For most activities, the effects on fish would be limited to avoidance behavior in response to movements, noises, and shadows caused by construction personnel and equipment operating adjacent to the water body. However, survival may be altered if a disturbance causes fish to leave protective habitat (increasing their exposure to predators) or is of sufficient duration and magnitude to affect growth and spawning success. Injury or mortality may result from direct and indirect contact with humans and machinery, sound pressure, and physiological stress.

Project actions that cause no direct harm but might temporarily disturb fish include movement of construction equipment and personnel, lighting, removal and disturbance of riparian vegetation, and grading and construction of access roads and staging areas adjacent to the stream.

The proposed Project includes the installation of a maximum of fifty 14-inch precast concrete piles that would be driven with a vibratory driver. The piles would be installed on land about 5 feet outside the OHWM, according to the Project engineer. Vibratory hammers generally produce less sound than impact hammers and are often included in mitigation measures to reduce the adverse

effects on fish that result from impact pile driving. There are no established injury criteria for vibration pile driving, and resource agencies in general are not concerned about vibratory pile driving resulting in adverse effects on fish. Therefore, effects on fish from vibratory driving are not expected.

With regards to Central California Coast steelhead critical habitat, bridge construction would occur during the low-flow period in summer, and all construction activities associated with removal and replacement of the bridge abutments would be conducted above the OHWM. Excavation for removal of the existing abutments and construction of the new abutments would be accomplished using an excavator located on the existing roadway and no equipment would enter the creek. Pilings will be placed on the banks with a vibratory hammer. Indirect impacts on critical habitat could also occur from adjacent construction activity due to erosion and sedimentation and discharge of pollutants into the creek. Implementation of the avoidance and minimization measures would prevent these indirect effects on critical habitat during construction.

The Project, with implementation of the avoidance and minimization measures identified in Section 2.3.5.4, *Avoidance, Minimization, and/or Mitigation Measures*, may affect, but is not likely to adversely affect, steelhead and steelhead critical habitat. NOAA Fisheries concurred with this determination on March 29, 2018 (Appendix D).

Essential Fish Habitat

The effects on EFH for Pacific salmon would be same as the effects described for Central California Coast Steelhead. The proposed Project could adversely affect Pacific Salmon EFH through potential, construction-phase effects on the following environmental conditions:

- Noise
- Hazardous materials and contaminants
- Sedimentation and turbidity
- Temporary disturbance and loss of habitat

Based on the effects discussed above for Central California Coast Steelhead, effects on Pacific salmon EFH associated with noise, hazardous materials and contaminants, sedimentation and turbidity, and habitat loss would be minor, localized and temporary. Potential adverse effects on EFH will be avoided or minimized through implementation of the avoidance, minimization, and mitigation measures for riparian vegetation removal. Long-term and permanent effects on EFH from the project would not occur.

The Project, with implementation of the avoidance and minimization measures identified in Section 2.3.5.4, *Avoidance, Minimization, and/or Mitigation Measures*, may affect, but is not likely to adversely affect, Pacific salmon EFH. NOAA Fisheries concurred with this determination on March 29, 2018 (Appendix D).

Other Federally Threatened and Endangered Species

The Project would have no effect on all other federally listed species identified on the species lists in Appendix E and no effect on green sturgeon critical habitat.

No Build Alternative

The No Build Alternative would not affect listed species because Project implementation and habitat removal would not occur.

Operational Impacts

Build Alternatives

California Red-Legged Frog

No impacts on California red-legged frog would occur during Project operations.

Central California Coast Steelhead

The proposed Project is not expected to permanently affect the channel because the abutments and bank stabilization will be placed above the OHWM. Therefore, impacts on Central California Coast steelhead critical habitat would be the same as those described under construction impacts for Central California Coast Steelhead (Section 2.3.5.5, *Environmental Consequences*).

Essential Fish Habitat

Permanent impacts on EFH are not expected to occur due to the proposed Project. Additionally, Project implementation will result in improved habitat for Pacific Salmonids through an increase in riparian habitat.

Other Federally Threatened and Endangered Species

No impacts on other federally threatened and endangered species identified in the species lists in Appendix E or on green sturgeon critical habitat would occur during Project operations.

No Build Alternative

The No Build Alternative would not affect listed species because construction activities would not occur.

2.3.5.4 Avoidance, Minimization, and/or Mitigation Measures

California Red-Legged Frog

The avoidance, minimization, and mitigation measures described in Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, (AMM-BIO-1 through AMM-BIO-5 and MM-BIO-1) would minimize potential impacts on California red-legged frog. The Project proponent will also implement the following measures to minimize and avoid impacts on California red-legged frog.

- **AMM-BIO-9: Avoid Work during Active Breeding and Dispersal Period for Special-Status Frogs (October 15 through June 1).** The contractor will conduct site preparation and construction activities that involve earthwork, other ground disturbance, and/or vehicle traffic through frog-sensitive areas (intermittent stream and riparian habitat) outside the period when special-status frogs are actively breeding and dispersing (October 15 through June 1).

- **AMM-BIO-10: Conduct Preconstruction Surveys at Work Sites in and near Frog-Sensitive Areas** (no more than 3 days prior to onset of construction). No more than 3 days prior to the onset of site preparation and construction activity at each site, a qualified wildlife biologist will conduct a preconstruction survey for special-status frogs within the Project footprint. The survey will cover all areas where special-status frogs may be present or concealed, including cracks, burrows, vegetation adjacent to wet areas, and other temporary refugia, as well as any riparian or intermittent stream habitat affected. If special-status frogs are determined to be absent from the Project footprint, no further action will be required with regard to these species. If any special-status amphibians are found within the Project footprint, whenever possible, construction work in their vicinity will be avoided until they have moved outside of the Project area of their own volition.
- **AMM-BIO-11: Provide Construction Worker Awareness Training for Special-Status Frogs.** The City of Palo Alto will provide, or require contractors to provide, worker awareness training for construction personnel to enable them to recognize special-status frogs and other aquatic and riparian wildlife. Trained construction personnel will also understand where sensitive resource areas are within the construction zone so they can minimize their impact on upland (dispersal and aestivation) habitat. Training will be presented by a qualified wildlife biologist experienced in training non-specialists. The training program will include at least the following: a description of the special-status species likely to use the site, and their habitat needs; photographs of these species; an explanation of the legal status of these species and their protection under the FESA and other regulations; a list of measures being taken to reduce effects to these species during Project construction; and distribution of a fact sheet summarizing training content. The City of Palo Alto will also distribute, or require contractors to distribute, the training summary fact sheet to anyone else who may enter the Project. Upon completion of training, employees will sign a form stating that they attended the training and understand all the conservation and protection measures.
- **AMM-BIO-12: Install Exclusion Fencing and Conduct Construction Monitoring for Special-Status Frogs.** Once it has been determined that no special-status frogs are present on the Project site, the contractor will install barrier fencing along the perimeter of the work area where necessary to ensure that frogs do not enter the site during construction. Fencing will be installed promptly (within 3 days) after clearance surveys are performed, to prevent frogs from entering the work area. A qualified biologist will be present during the installation of exclusion fencing, will determine which areas need to be monitored on a daily basis during construction activities to avoid harm to California red-legged frog, and will be responsible for follow-up monitoring as needed. The monitor will inspect and maintain the integrity of the exclusion fencing.
- **AMM-BIO-13: Limit Stream Bank Construction to Dry Season (June 1 through October 15).** The contractor will limit stream bank construction from June 1 to October 15 in order to avoid the migratory season for adult steelhead. This timing will also limit any excess sedimentation and runoff from entering the San Francisquito Creek.

Central California Coast Steelhead

The avoidance, minimization, and mitigation measures described in Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, (AMM-BIO-1 through AMM-BIO-5, and MM-BIO-1) and AMM-BIO-9 through AMM-BIO-13, described above, would also minimize potential impacts on Central California Coast steelhead.

Essential Fish Habitat

The avoidance, minimization, and mitigation measures described in Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, (AMM-BIO-1 through AMM-BIO-5, and MM-BIO-1) and AMM-BIO-9 through AMM-BIO-13, described above, would minimize potential impacts on EFH.

2.3.6 Invasive Species

2.3.6.1 Regulatory Setting

On February 3, 1999, President William J. Clinton signed EO 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” FHWA guidance issued August 10, 1999, directs the use of the state’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of NEPA analysis for a proposed project.

2.3.6.2 Affected Environment

The information in this section is from the Natural Environment Study (September 2017). Invasive plant species include those that threaten California’s wildlands and are categorized as non-native invasive plants by the California Invasive Plant Council. Roads, highways, and related construction projects are some of the principal dispersal pathways for invasive plant species. The introduction and spread of invasive plants adversely affects natural plant communities by displacing native plant species that provide shelter and forage for wildlife species. Table 2.3-4 lists invasive plant species identified in the BSA. The infestation of the BSA by these species primarily occurs on streambanks.

Table 2.3-4. Invasive Plant Species Identified in the Biological Study Area

Species	California Invasive Plant Council
Bermuda grass (<i>Cynodon dactylon</i>)	Moderate
Bristly ox-tongue (<i>Helminthotheca echioides</i>)	Limited
California burclover (<i>Medicago polymorpha</i>)	Limited
Cut leaved geranium (<i>Geranium dissectum</i>)	Limited
Silverleaf cotoneaster (<i>Cotoneaster pannosus</i>)	Moderate
Fennel (<i>Foeniculum vulgare</i>)	High
Ripgut grass (<i>Bromus diandrus</i>)	Moderate
Bull thistle (<i>Cirsium vulgare</i>)	Moderate
Italian thistle (<i>Carduus pycnocephalus</i>)	Moderate

Species	California Invasive Plant Council
Shortpod mustard (<i>Hirschfeldia incana</i>)	Moderate
English ivy (<i>Hedera helix</i>)	High
Cape ivy (<i>Delairea odorata</i>)	High
Smilo grass (<i>Stipa miliacea</i>)	Limited
Canary Island palm (<i>Phoenix canariensis</i>)	Limited
Himalayan blackberry (<i>Rubus armeniacus [discolor]</i>)	High
Periwinkle (<i>Vinca major</i>)	Moderate

Notes: The California Invasive Plant Council (Cal-IPC) assigns ratings that reflect Cal-IPC views of the statewide importance of the pest, likelihood that eradication or control efforts would be successful, and present distribution of the pest in the state. These ratings are guidelines that indicate the most appropriate action to take against a pest under general circumstances.

The **Cal-IPC categories** indicated in the table are defined as follows:

High: Species with severe ecological impacts, high rates of dispersal and establishment, and usually widely distributed.

Moderate: Species with substantial and apparent ecological impacts, moderate to high rates of dispersal, establishment dependent on disturbance, and limited to widespread distribution.

Limited: Species with minor ecological impacts, low to moderate rates of invasion, limited distribution, and locally persistent and problematic.

2.3.6.3 Environmental Consequences

Construction Impacts

Build Alternatives

The Project would create additional disturbed areas in the valley foothill riparian habitat for a temporary period when native vegetation is removed/trimmed, but it would mitigate for these impacts with native enhancement as required by MM-BIO-1. Therefore, the Project is not anticipated to increase or decrease the area currently occupied by invasive weeds or the potential for spreading invasive weed species. It is possible, however, that new invasive species could be introduced into San Francisquito Creek during construction.

No Build Alternative

The No Build Alternative would not have the potential to affect or spread invasive species because the Project would not be implemented.

Operational Impacts

Build Alternatives

None of the identified species on the California list of invasive species is currently used by Caltrans or the Cities of Palo Alto and East Palo Alto for erosion control or landscaping in order to stop the spread of invasive species. Avoidance and minimization measures would be implemented to prevent the introduction or spread of invasive species.

No Build Alternative

The No Build Alternative would not have the potential to affect or spread invasive species because the Project would not be implemented.

2.3.6.4 Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measure will be implemented during construction to reduce the potential impacts from the spread of invasive species.

- **AMM-BIO-14: Avoid the Introduction of Invasive Plants.** The Project proponent, or their contractor, will be responsible for avoiding the introduction of new invasive plants and the spread of invasive plants previously documented in the BSA. Accordingly, the following measures will be implemented during construction.
 - Surface disturbance within the construction work area will be minimized to the greatest extent possible.
 - All disturbed areas will be seeded with certified weed-free native mixes and mulched with certified weed-free mulch (rice straw may be used in upland areas).
 - Native, noninvasive species will be used in erosion control plantings to stabilize site conditions and prevent invasive species from colonizing.

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2.4 Cumulative Impacts

2.4.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts on resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

The California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations (CFR) Section 1508.7.

2.4.2 Affected Environment

The CEQA Guidelines provide two methods for an adequate analysis of cumulative impacts: the list approach, or the projection approach. The list approach identifies all of the past, present, and probable future transportation or development projects contributing to the cumulative impact. The projection approach bases the cumulative impact analysis on a summary of projections of future development and impacts contained in an adopted general planning or related planning document, or in a prior environmental document that has been certified. This cumulative analysis uses both methods to evaluate cumulative impacts.

To evaluate the potential for cumulative impacts, a list of projects was defined through review of City of Palo Alto and City of East Palo Alto records for transportation and development projects. The Governor's Office of Planning and Research CEQAnet database was also reviewed to identify projects for which notices of preparation or completion of an environmental document were filed with the State Clearinghouse. The study area for the cumulative impacts assessment varies based on the resource affected and considers planned, approved, and recently completed projects.

The projects identified in Table 2.4-1 were considered in the analysis. The analysis is based on the environmental effects of the proposed projects as described in their approved CEQA documents, aerial photograph review, and general knowledge of the project site.

Table 2.4-1. Planned Projects in the Vicinity of the Project

Name	Jurisdiction	Proposed Uses	Status
Homer Avenue- Channing Avenue Enhanced Bikeway	City of Palo Alto	The project proposes enhanced bikeway facilities between Guinda Street and Alma Street.	Planning stage
Greer Road Bicycle Boulevard Project	City of Palo Alto	The proposed Greer Road Bicycle Boulevard will provide a new north-south bicycle route for the community from Edgewood Drive to the north to Louis Road to the south.	Planning stage
Bay Road Phase II and III	City of East Palo Alto	The project consists of three phases of roadway improvements between University Avenue and Cooley Landing. The proposed Phase II/III project will include the design of the roadway to accommodate new sidewalks, bike lanes, Americans with Disabilities Act accessibility, lighting, landscaping, and street furniture.	Construction Summer 2019 through Winter 2020
Highway 101 Pedestrian/Bicycle Overcrossing Project	City of East Palo Alto	The project will consist of constructing a Class I Pedestrian/Bicycle Overcrossing Structure over U.S. Highway 101 between West and East Bayshore Roads, aligned with Clarke Avenue and connecting to West Bayshore Road at Newell Road, to provide a direct connection between the south side and north side of U.S. Highway 101 in East Palo Alto.	Under Construction
Pad D New Municipal Water Well	City of East Palo Alto	Construct a new municipal water supply well at the “Pad D” site, located at the intersection of Clarke Avenue and East Bayshore Road.	Design stage
Route 101/University Avenue (State Route 109) Interchange Modification Project	City of East Palo Alto	Construct safety and traffic operational improvements at the U.S. Highway 101/University Avenue Overcrossing. The project will include widening the overcrossing to accommodate wider sidewalk and class 2 bicycle lanes to fill a missing bicycle gap over U.S. Highway 101 to improve bicycle and pedestrian access and safety along University Avenue.	Design stage
San Francisquito Creek Flood Protection, Ecosystem Restoration, and Recreation Project: Upstream of U.S. 101	San Francisquito Creek Joint Powers Authority	The Upstream of Highway 101 proposed project includes channel widening at five sites, replacement of the Pope-Chaucer Bridge, construction of creekside parks, and enhancement of aquatic habitat. The alternative involves, rather than channel widening at four of the five sites, construction of floodwalls. The project also includes a program-level upstream detention basin that would be constructed adjacent to the channel at one of two potential sites. The Upstream of U.S. 101 project cannot be constructed until the Newell Road Bridge Replacement Project is completed to accommodate larger flows.	Design stage

Name	Jurisdiction	Proposed Uses	Status
San Francisquito Creek Flood Protection	San Francisquito Creek Joint Powers Authority	A regional comprehensive plan for both the waters that flow into San Francisquito Creek and on to San Francisco Bay (its watershed) and the waters that threaten our communities from the Creek and from Bay tides (our floodplains).	Planning stage

Source: City of East Palo Alto 2017a, 2017b, 2017c, 2017d, 2017e; City of Palo Alto 2017; San Francisquito Creek Joint Powers Authority 2017; Santa Clara Valley Water District 2018

In addition to this list of projects, growth projections were used to evaluate cumulative impacts for transportation, air quality, greenhouse gas emissions, and noise. Growth projections are built into the models used to project operational traffic volumes, air quality and greenhouse gas emissions, and noise levels for 2040. These analyses are included in each of their respective resource sections of Chapter 2 or 3, which includes Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*; Section 2.2.6, *Air Quality*; Section 2.2.7, *Noise*; and Section 3.3, *Climate Change*.

2.4.3 Environmental Consequences

The cumulative impacts analysis focuses on the resources that the project may affect. According to the California Department of Transportation eight-step approach for developing a cumulative impact analysis, if the project would not result in impacts on a resource, it could not contribute to a cumulative impact. The build alternatives would only cause impacts requiring mitigation on aesthetics, paleontological resources, hazardous materials (specifically lead contamination), and the natural communities of valley foothill riparian vegetation and protected trees. All other potential impacts will be minimized through the standardized measures and avoidance and minimization measures presented in Chapter 2, *Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures*.

The projects listed in Table 2.4-1 were considered together with the proposed Project for the potential for cumulative impacts. The potential impacts are described by resource area below.

2.4.3.1 Aesthetics

Resource Study Area

The cumulative resource study area (RSA) for aesthetics is the creek corridor and the neighborhoods surrounding Newell Road Bridge, which is defined as the area of land that is visible from, adjacent to, and outside the roadway right-of-way, creek corridor, and surrounding neighborhoods, and is determined by topography, vegetation, and viewing distance. This RSA was chosen because it is sufficiently broad to evaluate potential impacts.

Existing Condition and Historical Context

The land use within the corridor is primarily suburban residential, with one story, single-family homes in Palo Alto and mostly two- to three-story, multi-family housing in East Palo Alto. The existing Newell Road Bridge consists of a narrow, one-lane bridge with solid concrete parapets. The bridge deck is paved with asphalt and there is no roadway striping over the bridge.

The tree canopy dominates many views within the immediate vicinity of the Newell Road Bridge. The trees and landscaping also provide diversity and continuity in views throughout the area, and vary in form, dominance, and scale, depending on the location, distance, and angle of the viewer. Mature trees along the portion of Newell Road in Palo Alto provide good canopy cover that shades much of the street while younger ginkgo trees along the north side of the street create a break in the canopy cover resulting in sunny areas along this segment of roadway. The entire bridge is covered by the canopy of mature trees along the creek, resulting in shade and dappled sunlight on the bridge. The portion of Newell Road in East Palo Alto is not as densely vegetated as the Palo Alto side and the street trees are not as mature, resulting in more open, brighter conditions along this segment of roadway. Overall, however, the tree canopy provides a mostly enclosed, pedestrian-scale environment that is visually appealing.

In addition to the mature tree canopy, residential landscaping associated with single- and multi-family residences contributes to an attractive project corridor. However, the multi-family housing and associated parking lots and driveway aprons along the project corridor exhibit less vegetative cover. Other visible, built elements that contribute to the existing visual environment and character of the project corridor include parking lots and driveway aprons, as well as other human-made elements typically found in residential areas, such as paved roadways, sidewalks, curbs, gutters, signage, utility poles, and street lights. Sacrete retaining walls are located along the banks of the creek. The retaining walls are weathered and overgrown with vines and moss, so they blend fairly well with the natural creek corridor. Lighting in the project corridor is associated with interior and exterior residential lighting and vehicle headlights. Minimal street lighting is present and is directed downwards towards the roadbed and sidewalks.

Project Impacts

Under all build alternatives, general construction activities, construction staging/stockpiling, the storage of building materials, the presence of construction equipment, and temporary traffic barricades would result in temporary visual impacts by altering the composition of the viewsheds throughout the Project corridor. However, construction activities would be temporary in duration and would be governed by city, state, and federal regulations and standards designed to minimize their potential to affect adjacent sensitive uses.

The proposed Project would remove the existing bridge, construct new approaches, and accommodate bicycle and pedestrian travel (including sidewalk and potential road widening for sharrows or mixed-use path); add and reconfigure utilities including street lighting; modify street signage; add retaining walls; and stabilize creek bank disturbed by the construction. The Project would also require the removal of trees to accommodate construction. Resource change (changes to visual resources as measured by changes in visual character and visual quality) would be moderate for Build Alternatives 1–3 during the short-term until replacement plantings can mature. As the replacement plantings mature and the canopy is replaced, the visual character would regain some of its existing qualities associated with shading and creating an enclosed, intimate streetscape that would result in long-term resource change that is moderate-low. The bridge and roadway intersection realignment that would take place in East Palo Alto under Build Alternative 4 would result in a resource change that is moderate for the short- and long-term because the sense of enclosure provided by the tree canopy would be lessened even with mitigation, creating a more open view corridor with more development visible.

In addition, all build alternatives would require utility relocations, including street lights and power poles. Overhead street lighting could negatively affect sensitive receptors if the replaced lighting is modified to include light-emitting diode (LED) lighting that is not properly designed. In particular, LED lighting can negatively affect humans by increasing nuisance light and glare, in addition to increasing ambient light glow, if proper shielding is not provided and blue-rich white light lamps are used.

Cumulative Impacts

Cumulative impacts are those resulting from past, present, and reasonably foreseeable future actions, combined with the potential visual impacts of the Project. The Project includes replacing the existing bridge, which would require the removal of existing trees and vegetation in the study area. Temporary construction impacts associated with the Project would not result in cumulative visual impacts because they would be temporary, especially when compared to other development and transportation projects occurring in the area.

The Project would result in the removal of mature trees, which would change the visual character of the RSA. The projects identified in Table 2.4-1 also have the potential to change the visual character of the area and result in tree removal. It would take several decades for any replacement plantings to reach the same stature as the existing trees, resulting in long-term visual changes to the RSA. However, trees on lands surrounding the Project would not be affected, and mature trees would be retained in the vicinity of the Project. In addition, the City of Palo Alto would ensure that tree removals associated with the projects identified in Table 2.4-1 are replaced and mitigated. Even though mitigation plantings would take a long time to grow, trees would be replanted at a higher rate than they are removed, so the trees would be retained as a scenic resource within the visual landscape for generations to come.

Additionally, projects identified in Table 2.4-1 would add to ambient atmospheric lighting and glare in the area by infilling unlit areas with lit buildings and roadways. The Project would only result in a nominal increase in light and glare from street lights and power poles and would not result in cumulative impacts.

Overall, the Project would not contribute to cumulative impacts related to projects identified in Table 2.4-1 because the build alternatives would not substantially alter the existing visual landscape, degrade the visual quality of the Project area, or alter levels of light and glare after mitigation is implemented. As such, the combined visual effect of the build alternatives with projects identified in Table 2.4-1, recently in construction, or currently in construction would not result in impacts that are cumulatively considerable.

Avoidance, Minimization, and/or Mitigation Measures

Implementation of the mitigation measures described in Section 2.1.5.4, *Avoidance, Minimization, and/or Mitigation Measures*, would ensure that the proposed Project minimizes effects on aesthetics in and adjacent to the Project area, and avoids a cumulative impact.

- MM-AES-1: Install Visual Barriers between Construction Work Areas and Sensitive Receptors
- MM-AES-2: Replace or Relocate Site Features and Landscaping Affected by the Project
- MM-AES-3: Implement Project Design Aesthetics

- MM-AES-4: Implement Project Streetscaping and Plantings along Top of Creek Bank
- MM-AES-5: Apply Minimum Lighting Standards

2.4.3.2 Paleontology

Resource Study Area

The Santa Clara Valley was identified as the cumulative RSA for paleontological resources. This cumulative RSA was selected to develop a broad, regional consideration of cumulative impacts, and because it captures impacts on paleontological resources associated with construction and operations of the proposed project and regional impacts on paleontological resources associated with development anticipated under reasonably foreseeable future actions.

Existing Condition and Historical Context

The Project area is in the northeastern portion of the Santa Clara Valley. The Quaternary alluvium of the Santa Clara Valley in the Project area consists of natural levee deposits, floodplain deposits, and basin deposits. Pleistocene vertebrate fossils have been found from multiple localities across Santa Clara Valley, including Lawrence Expressway East, San Jose; Santa Clara Valley Water District lands in the Guadalupe River in San Jose; Sunnyvale Sewer, Sunnyvale; Calabaza Creek, Sunnyvale; and Milpitas, as well as multiple localities farther north. These fossil localities occur in units mapped as surficial Holocene deposits (Maguire and Holroyd 2016). Radiocarbon dating of the mapped Holocene sediments where the Pleistocene remains were found shows Pleistocene age for two of these finds (11 feet and 30 feet below modern ground surface); for the others, no dating was performed. Accordingly, Pleistocene alluvium may be more widespread in the Santa Clara Valley than was previously thought and in many locations is likely at or very near the ground surface. Pleistocene fossil resources found in the Santa Clara Valley in units mapped as Holocene alluvium include extinct species of mammoth, bear, horse, bison, and camel. The Quaternary alluvium of the Santa Clara Valley is therefore considered sensitive for paleontological resources. Identifiable fossil remains discovered during project construction could provide a more comprehensive documentation of the diversity of animal and plant life that once existed in Santa Clara County and could result in a more accurate reconstruction of the geologic and paleobiologic history of Northern California.

Project Impacts

Construction of Build Alternatives 1 and 2 would involve excavation for the roadway to a depth of 2 feet from existing grade to remove existing asphalt and base, excavation to a depth of 5 feet for installation of retaining walls, and excavation to a depth of 6 feet for installation of bridge abutments. Because the excavation work is shallow and would proceed within the previously disturbed roadbed (i.e., would not involve excavation in undisturbed soil) any effect on sensitive paleontological resources would be minor.

Similar to Build Alternatives 1 and 2, construction of Build Alternatives 3 and 4 would involve excavation for the roadway to a depth of 2 feet from existing grade to remove existing asphalt and base, excavation to a depth of 5 feet for installation of retaining walls, and excavation to a depth of 6 feet for installation of bridge abutments. The excavation work is shallow; however, it would involve disturbance of previously undisturbed soil in the area of the road realignment. Because sensitive paleontological resources could occur at depths below 5 feet, it is possible that excavation could

encounter sensitive paleontological resources. Implementation of MM-PA-1 would minimize effects on sensitive paleontological resources.

Cumulative Impacts

Future projects in the RSA involving ground disturbance during construction would involve geologic units that have produced abundant and diverse fossil resources and are thus considered highly sensitive for paleontological resources (i.e., likely to produce additional similar finds in the future). Construction of planned and future projects in the RSA such as the transportation projects listed in Table 2.4-1 would require ground disturbing work in areas that include Quaternary alluvium; and the construction of other transportation and development projects within the Santa Clara Valley could require ground disturbance in other areas highly sensitive for paleontological resources. These projects would have the potential to cumulatively disturb, damage, or destroy significant (scientifically important) fossil resources. Once lost, such resources cannot be recovered, and impacts are therefore considered permanent. However, regulatory standards and a properly designed and implemented monitoring, collection, and treatment program would minimize impacts on paleontological resources. With these measures in place, construction and operation of planned projects within the cumulative RSA would not result in the widespread destruction of scientifically important fossil resources; therefore, the impact would not be cumulatively significant.

Avoidance, Minimization, and/or Mitigation Measures

Implementation of the mitigation measure described in Section 2.2.4.4, *Avoidance, Minimization, and/or Mitigation Measures*, would ensure that the proposed Project minimizes effects on paleontological resources in and adjacent to the Project construction area, and avoids a cumulative impact.

- MM-PA-1: Educate Workers, Stop Work in Case of Discovery of Paleontological Resources, and Prepare and Implement a Recovery Plan

2.4.3.3 Hazardous Materials and Waste

Resource Study Area

The RSA for the purpose of the hazardous materials and waste cumulative impacts analysis is the creek corridor and the neighborhoods surrounding Newell Road Bridge.

Existing Condition and Historical Context

The Project vicinity is residential and there are no businesses that would potentially use, store, transport, or dispose of hazardous materials or waste near the Project site. Newell Road is an urban collector roadway with relatively low traffic (currently around 3,300 vehicles per day) and would not have historically accommodated the high traffic volumes associated with aerially deposited lead deposition concerns during the period prior to the 1980s when gasoline in California was permitted to contain tetraethyl lead.

A lead and asbestos survey was conducted at the Newell Road Bridge in July 2012. None of the samples contained asbestos above laboratory reporting limits. Of the three samples of paint that were collected and analyzed for lead, only the yellow roadway paint exceeded the U.S. Consumer Product Safety Commission threshold of 600 milligrams per kilogram for lead-based paint.

Project Impacts

Impacts from lead contamination from paint could occur where reconstruction of the bridge involves disturbing or removing the existing paint, which could create a hazard to the public or to the environment during routine transport, use, or disposal of hazardous materials or through upset and accident conditions. It is recommended that all paint be treated as lead-containing for the purposes of complying with Division of Occupational Safety and Health worker safety requirements, which apply to all worksites where construction workers may be exposed to lead. Construction activities could produce dust, which could expose workers or nearby residents and business occupants to lead via inhalation. Operation of the Project would not involve the use, storage, or transport of hazardous materials.

Cumulative Impacts

Planned transportation projects identified in Table 2.4-1 located within the cumulative hazardous materials RSA could contribute to the cumulative release of hazardous substances. The use and release of hazardous materials during construction and operation of the projects identified in Table 2.4-1 is tightly controlled to protect human health and avoid releases. Future and planned development would be required to comply with regulatory requirements that will avoid individual hazardous materials impacts, including the measures listed below under *Avoidance, Minimization, and/or Mitigation Measures*. With such measures and restrictions on the use of hazardous materials in place, the potential for the cumulative accumulation or release of hazardous materials is low. The proposed Project, in combination with the cumulative projects, would not contribute to a cumulative impact related to hazardous materials.

Avoidance, Minimization, and/or Mitigation Measures

Implementation of the mitigation measures described in Section 2.2.5.4, *Avoidance, Minimization, and/or Mitigation Measures*, would ensure that the proposed Project minimizes effects on hazardous materials in and adjacent to the Project area, and avoids a cumulative impact.

- MM-HAZ-1: Properly Dispose of and Abate Potential Lead-Based Paint
- MM-HAZ-2: Properly Handle and Dispose of Potentially Contaminated Soils and Materials

2.4.3.4 Natural Communities

The natural communities with the potential for cumulative impacts are valley foothill riparian and protected trees.

Resource Study Area

The RSA for valley foothill riparian is the creek corridor and the RSA for protected trees is the creek corridor and neighborhoods surrounding the Project.

Existing Condition and Historical Context

Three land cover types occur in the Biological Study Area: valley foothill riparian, developed, and intermittent stream (Figure 2.3-1). The valley foothill riparian woodland natural community occurs along both banks of San Francisquito Creek. Valley foothill riparian communities typically provide high-value habitat, offering escape cover, forage, and nesting opportunities for many wildlife species

and creating shade that controls instream water temperatures. However the riparian community in the Project area has been highly disturbed from channelization and armoring of San Francisquito Creek and development along the top of the bank. Valley foothill riparian is considered a natural community of special concern and is subject to state (California Fish and Game Code Section 1602) regulation.

A total of 97 trees were identified within the Biological Study Area and consist of both native and non-native species. Planted non-native trees line the neighborhood streets. Blue gum eucalyptus trees line some portions of the upper bank (above the ordinary high water mark) on the north bank of San Francisquito Creek. Trees are sparse on the south side of San Francisquito Creek due to the substantial bank modifications and residential development up to the edge of San Francisquito Creek. Native trees are mainly limited to the creek’s mid-to lower bank, but some native trees, such as coast live oak (*Quercus agrifolia*) and California buckeye (*Aesculus californicus*), were probably planted in the adjacent developed areas.

Project Impacts

Construction of the Project on the proposed alignment would result in permanent loss of some riparian vegetation along San Francisquito Creek within the Project footprint. For the purposes of this analysis, it is assumed that all valley foothill riparian vegetation would be removed within the Project footprint. Build Alternative 1 would affect 0.014 acres, Build Alternative 2 would affect 0.022 acres, Build Alternative 3 would affect 0.022 acres, and Build Alternative 4 would affect 0.031 acres.

Indirect impacts on riparian vegetation could also occur from adjacent construction activity. Trees and woody vegetation adjacent to the construction area would not be removed for construction but could sustain damage from equipment. Because this habitat is located adjacent to the river and functions as riparian habitat, a streambed alteration agreement from the California Department of Fish and Wildlife would likely be required for construction activity within the habitat. The loss or disturbance of riparian vegetation is considered adverse because riparian vegetation provides a variety of important ecological functions and values.

Some of the regulated trees in Palo Alto and East Palo Alto would also be removed as a result of Project implementation. Table 2.4-2 identifies the impacts on all trees per build alternative.

Table 2.4-2. Impacts on Trees per Build Alternative

	Build Alternative 1	Build Alternative 2 (LPA)	Build Alternative 3	Build Alternative 4
Number of Trees Affected	23	24	23	25
Number of Trees Removed	10	12	14	18

LPA = locally preferred alternative

Implementation of the avoidance and minimization efforts described in Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, would minimize the impacts of the Project on valley foothill riparian vegetation and protected trees.

Cumulative Impacts

Cumulative impacts on valley foothill riparian habitat and protected trees could occur if the projects listed in Table 2.4-1 also impacted valley foothill riparian habitat and protected trees. Most of the projects do not pass over or involve San Francisquito Creek and so would not affect valley foothill riparian habitat. The San Francisquito Creek Bridge Replacement Project is not in area that contains any valley foothill riparian, avoiding impacts; however, upland vegetation including Coast live oak woodland would be affected (California Department of Transportation 2011). The San Francisquito Creek Flood Protection, Ecosystem Restoration, and Recreation Project: Upstream of U.S. 101 has the potential to impact valley foothill riparian and protected trees along the creek. The Environmental Impact Report for this project is currently under development, so the extent of impact, if any, cannot be verified at this time. Construction of the proposed Project would add to the cumulative loss of valley foothill riparian habitat and protected trees. However, with implementation of the measures prescribed for minimizing impacts and compensating for remaining impacts, the proposed Project's incremental contribution to cumulative impacts would not be cumulatively considerable.

Avoidance, Minimization, and/or Mitigation Measures

Implementation of the avoidance, minimization, and mitigation measures described in Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, would ensure that the proposed Project minimizes effects on valley foothill riparian habitat and protected trees in and adjacent to the Project construction area, and avoids a cumulative impact.

- AMM-BIO-1: Install Construction Barrier Fencing around Environmentally Sensitive Areas
- AMM-BIO-2: Prepare Environmental Awareness Program and Conduct Environmental Awareness Training for Construction Employees
- AMM-BIO-3: Retain a Biological Monitor to Conduct Visits during Construction
- AMM-BIO-4: Avoid and Minimize Potential Disturbance of Valley Foothill Riparian Community
- MM-BIO-1: Compensate for Permanent Loss of Valley Foothill Riparian
- MM-BIO-2: Tree Replacement Plan

California Environmental Quality Act Evaluation

3.1 Determining Significance under CEQA

The Project is subject to federal as well as City of Palo Alto and state environmental review requirements because the City of Palo Alto proposes the use of federal funds from the Federal Highway Administration (FHWA) and/or the Project requires an approval from FHWA. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The City of Palo Alto is the Project proponent and the lead agency under CEQA. FHWA's responsibility for environmental review, consultation, and any other actions required by applicable federal environmental laws for this Project are being, or have been, carried out by the California Department of Transportation (Caltrans) pursuant to 23 U.S. Code (USC) Section 327 and the Memorandum of Understanding dated December 23, 2016, and executed by FHWA and the California Department of Transportation (Caltrans).

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement (EIS), or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (Project) as a whole has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the lead agency to identify each "significant effect on the environment" resulting from the Project and ways to mitigate each significant effect. If the Project may have a significant effect on any environmental resource, then an Environmental Impact Report (EIR) must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this Project and CEQA significance.

3.2 CEQA Environmental Checklist

This checklist identifies environmental factors that might be affected by the proposed Project. In many cases, background studies performed in connection with the Project will indicate that there are no impacts on a particular resource. A NO IMPACT answer in the last column reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

3.2.1 Aesthetics

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Substantially shadow public open space (other than public streets and adjacent sidewalks) between 9:00 a.m. and 3:00 p.m. from September 21 to March 21?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Aesthetics

- a) *Would the project have a substantial adverse effect on a scenic vista?***
- b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?***
- e) *Would the project substantially shadow public open space (other than public streets and adjacent sidewalks) between 9:00 a.m. and 3:00 p.m. from September 21 to March 21?***

As discussed in Section 2.1.5, *Visual/Aesthetics*, there are no scenic vistas because terrain, surrounding development, sound walls, and mature trees and shrubs limit views to the immediate foreground and prevent expansive views out and over the landscape. In addition, there are no state scenic highways within the vicinity of the Project. The existing bridge would be replaced with the new bridge in the same alignment and would not cast a shadow onto public open space.

Therefore, there would be **no impact** under any of these criteria.

- c) *Substantially degrade the existing visual character or quality of the site and its surroundings?***

As discussed in Section 2.1.5, *Visual/Aesthetics*, under all build alternatives, general construction activities, construction staging/stockpiling, the storage of building materials, the presence of construction equipment, and temporary traffic barricades would result in temporary visual impacts

by altering the composition of the viewsheds throughout the Project corridor. However, construction activities would be temporary in duration and would be governed by city, state, and federal regulations and standards designed to minimize their potential to affect adjacent sensitive uses.

The proposed Project would remove the existing bridge; construct new approaches, and accommodate bicycle and pedestrian travel (including a sidewalk and potential road widening for sharrows or a mixed-use path); add and reconfigure utilities including street lighting; modify street signage; add retaining walls; and stabilize creek bank disturbed by the construction. Construction would also require the removal of trees to accommodate construction. Resource change (changes to visual resources as measured by changes in visual character and visual quality) would be moderate for Build Alternatives 1–3 during the short-term until replacement plantings can mature. As the replacement planting matures and the canopy is replaced, the visual character would regain some of its existing qualities associated with shading and creating an enclosed, intimate streetscape that would result in long-term resource change that is moderate-low. Build Alternative 4 would result in a resource change that is moderate for the short- and long-term because, even with mitigation, the tree canopy would not provide the same sense of enclosure; view corridors would remain open and more development would be visible due to the bridge and roadway intersection realignment in East Palo Alto.

Impacts are potentially significant and the following mitigation measures are proposed (see Section 2.1.5.4, *Avoidance, Minimization, and/or Mitigation Measures*, for the full description of each mitigation measure).

- MM-AES-1: Install Visual Barriers between Construction Work Areas and Sensitive Receptors
- MM-AES-2: Replace or Relocate Site Features and Landscaping Affected by the Project
- MM-AES-3: Implement Project Design Aesthetics
- MM-AES-4: Implement Project Streetscaping and Plantings along Top of Creek Bank

MM-AES-1 would ensure that staging areas are screened, minimizing the amount of visual disruption caused by construction staging. MM-AES-2 would relocate or replace affected landscaping, fencing, and other landscape features, reducing visual impacts. MM-AES-3 would apply aesthetic treatments to the bridge, wall surfaces, and fencing, improving Project aesthetics and reducing visual impacts and the potential for glare. MM-AES-4 would improve Project aesthetic by improving the visual quality of planter strips along Newell Road through landscaping. With implementation of the above measures, visual impacts related to visual character and quality are **less than significant with mitigation incorporated**.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

As discussed in Section 2.1.5, *Visual/Aesthetics*, all build alternatives would require utility relocations, including street light and power poles. Overhead street lighting could negatively affect sensitive receptors if the replaced lighting is modified to include light-emitting diode (LED) lighting that is not properly designed. In particular, LED lighting can negatively affect humans by increasing nuisance light and glare, in addition to increasing ambient light glow, if proper shielding is not provided and blue-rich white light lamps are used.

Impacts are potentially significant and the following mitigation measure is proposed (see Section 2.1.5.4, *Avoidance, Minimization, and/or Mitigation Measures*, for the full description of this mitigation measure).

- MM-AES-5: Apply Minimum Lighting Standards

This potential impact would be minimized through implementation of MM-AES-5, which would employ the technologies available at the time of project design to allow for the highest potential reduction in light pollution. With implementation of the above measure, visual impacts related to light and glare are **less than significant with mitigation incorporated**.

3.2.2 Agriculture and Forest Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Agriculture and Forest Resources

- a) *Would the project convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?***
- b) *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?***
- c) *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public***

Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

- d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?**
- e) Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?**

Neither the Project site nor adjacent properties are identified as any farmland type under the Farmland Mapping and Monitoring Program or enrolled in Williamson Act contracts, or support forest land or resources (California Department of Transportation 2017b). The Project site is not located on or adjacent to agricultural land or forest land and the project would not involve any development that could result in the conversion of farmland to non-agricultural uses. For these reasons, the project would have **no impact** with respect to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use; conflict with existing agricultural zoning or Williamson Act contract; result in the loss of forest land or conversion of forest land to non-forest use; or other conversion of farmland to non-agricultural use.

3.2.3 Air Quality

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Air Quality

- a) Conflict with or obstruct implementation of the applicable air quality plan?**
- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

As discussed in Section 2.2.6, *Air Quality*, the Project is located in the San Francisco Bay Area Air Basin and is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The

Project is not a capacity-increasing transportation project and would have no impact on traffic volumes. The Project is included in the regional emissions analysis conducted by the Metropolitan Transportation Commission for the current Regional Transportation Plan (RTP), Plan Bay Area (RTP ID 240728). The Project is also included in the Metropolitan Transportation Commission’s financially constrained 2017 Transportation Improvement Program (TIP) (TIP ID VAR170012). FHWA and the Federal Transit Administration determined that the TIP conforms to the State Implementation Plan on December 16, 2016 (Section 2.2.6, *Air Quality*).

Table 2.2.6-3 in Section 2.2.6, *Air Quality*, summarizes construction criteria pollutant emissions for all build alternatives. The City of Palo Alto uses the BAAQMD daily threshold to evaluate impacts under CEQA. Per Table 2.2.6-3, all construction emissions would be less than the BAAQMD daily threshold except for nitrogen oxides (NO_x), which would be higher than the threshold. Impacts are potentially significant and the following mitigation measure and standard measures are proposed (see Section 2.2.6.4, *Avoidance, Minimization, and/or Mitigation Measures*, for the full description of these measures).

- MM-AQ-1: Utilize clean diesel-powered equipment during construction to control construction-related NO_x emissions
- SM-AQ-1: Implement California Department of Transportation Standard Specifications
- SM-AQ-2: Implement BAAQMD Basic Control Measures to Control Construction-Related Dust

Construction activities are subject to requirements found in standardized measure SM-AQ-1, the *Standard Specifications* (California Department of Transportation 2015), Section 14-9.02. This includes specifications requiring compliance with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the contract and provided in Government Code Section 11017 (Public Contract Code §10231), while standard specification Section 10-5 addresses dust control and palliative requirements. Temporary construction activities could also generate fugitive dust from the operation of construction equipment. The Project will comply with construction standards adopted by BAAQMD as well as Caltrans standardized procedures for minimizing air pollutants during construction (SM-AQ-2). In addition, this potential impact would be minimized through implementation of mitigation measure MM-AQ-1, which would require the use of Tier 4 construction equipment during construction. As shown in Table 3.2-1, construction emissions would be below all applicable BAAQMD pollutant thresholds with equipment that meets Tier 4 standards. Therefore, impacts would be **less than significant with mitigation incorporated**.

Table 3.2-1. Mitigated Construction Criteria Pollutant Emissions—All Build Alternatives

Daily/Annual Emissions	ROG	NO _x	CO	PM10			PM2.5		
				Dust	Exhaust	Total	Dust	Exhaust	Total
Maximum Daily Emissions (lbs/day)	3.2	13.8	65.4	5.0	0.5	5.3	1.0	0.4	1.3
Total Emissions (tons/construction period)	0.3	1.4	5.8	0.3	< 0.1	0.4	< 0.1	< 0.1	0.1
BAAQMD Daily Thresholds (lbs/day)	54	54	-	BMPs	82	-	BMPs	54	-

Daily/Annual Emissions	ROG	NO _x	CO	PM10			PM2.5		
				Dust	Exhaust	Total	Dust	Exhaust	Total
See Appendix A of the Air Quality Technical Memorandum for construction assumptions and Road Construction Model inputs and outputs.									
BAAQMD = Bay Area Air Quality Management District; BMPs = best management practices; CO = carbon monoxide; lbs = pounds; NO _x = nitrogen oxides; PM10 = particulate matter less than 10 microns in diameter; PM2.5 = particulate matter less than 2.5 microns in diameter; ROG = reactive organic gases									

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

As noted in their CEQA Guidelines, BAAQMD states that:

In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project’s individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region’s existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary.

Consequently, exceedances of the project-level thresholds would be cumulatively considerable. Impacts are potentially significant and the following mitigation measure is proposed (see Section 2.2.6.4, *Avoidance, Minimization, and/or Mitigation Measures*, for the full description of this mitigation measure).

- MM-AQ-1: Utilize clean diesel-powered equipment during construction to control construction-related NO_x emissions

Criteria pollutant emissions during construction would not exceed BAAQMD’s thresholds for construction with implementation of MM-AQ-1. In addition, Table 2.2.6-5 in Section 2.2.6, *Air Quality*, summarizes operational criteria pollutant emissions for all build alternatives. The City uses the BAAQMD daily threshold to evaluate impacts under CEQA. Per Table 2.2.6-5, none of the operational criteria pollutant emissions would exceed the BAAQMD threshold. Consequently, criteria pollutant emissions would not be cumulatively considerable for any criteria pollutant and would be **less than significant with mitigation incorporated**.

d) Expose sensitive receptors to substantial pollutant concentrations?

Table 2.2.6-4 in Section 2.2.6, *Air Quality*, summarizes the results of the intersection carbon monoxide (CO) modeling and indicates that CO concentrations are not expected to exceed the 1- or 8-hour National Ambient Air Quality Standards and California Ambient Air Quality Standards for the worst-case scenario intersections both within and outside of the Project alignment. As such, sensitive receptors would not be exposed to substantial concentrations of CO.

With respect to toxic air contaminants, nearby sensitive receptors could be exposed to substantial pollutant concentrations such as diesel particulate matter and emissions of particulate matter less than 2.5 microns in diameter (PM2.5) from exhaust sources during construction. Impacts are potentially significant and the following mitigation measure is proposed (see Section 2.2.6.4, *Avoidance, Minimization, and/or Mitigation Measures*, for the full description of this mitigation measure).

- MM-AQ-1: Utilize clean diesel-powered equipment during construction to control construction-related NO_x emissions

With implementation of MM-AQ-1, nearby sensitive receptors would not likely be exposed to substantial pollutant concentrations, because toxic air contaminant concentrations during construction, such as concentrations of diesel particulate matter, would be reduced through the requirement to use Tier 4 equipment. Emissions of PM_{2.5} from exhaust sources would be reduced by nearly 90% with the use of Tier 4 equipment; therefore, there would be limited potential for construction equipment to expose sensitive receptors to substantial concentrations of diesel particulate matter. No other toxic air contaminants are expected to be released in appreciable quantities during construction. Therefore, the Project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be **less than significant with mitigation incorporated**.

e) Create objectionable odors affecting a substantial number of people?

Table 3-3 in the BAAQMD’s 2017 CEQA Guidelines provides odor screening distances for land uses that have the potential to generate substantial odor complaints. The uses in the table include wastewater treatment plants, landfills or transfer stations, refineries, composting facilities, confined animal facilities, food manufacturing, smelting plants, and chemical plants (Bay Area Air Quality Management District 2017b). The Project involves replacement of a bridge over a creek. None of the uses identified in the table would occur within the Project area. The Project would not generate objectionable odors affecting a substantial number of people during operation.

During construction activities, heavy equipment and vehicles would emit odors associated with vehicle and engine exhaust. However, these odors would be temporary and would cease upon completion of construction. Overall, the Project would not generate objectionable odors affecting a substantial number of people. This impact would be **less than significant**. No mitigation is required.

3.2.4 Biological Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Biological Resources

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

As discussed in Section 2.3.5, *Threatened and Endangered Species*, California red-legged frogs could be directly and indirectly affected by construction activities occurring in or adjacent to the Biological Study Area (BSA). If California red-legged frogs are present within the construction work area, they could be inadvertently killed or wounded by construction vehicles, construction personnel, and accidental spill of toxic fluids. Construction activities associated with road and bridge construction in potential California red-legged frog habitat in the Project area could result in indirect effects on water quality downstream from the construction work area.

The proposed Project could also affect habitat conditions for Central California Coast steelhead, discussed in Section 2.3.5, *Threatened and Endangered Species*. Activities associated with bridge removal and reconstruction and revegetation could increase erosional processes, thereby increasing sedimentation and turbidity in downstream waterways. Excessive sediment deposited in or near stream channels can degrade aquatic habitats. Increased turbidity can increase fish mortality, reduce feeding opportunities for fish including rearing steelhead, and cause fish to avoid important habitat. The effects on essential fish habitat for Pacific salmon would be same as the effects described for Central California Coast steelhead.

Impacts are potentially significant and the following mitigation measure and avoidance and minimization measures are proposed (see Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, and Section 2.3.5.3, *Avoidance, Minimization, and/or Mitigation Measures*, for the full description of these measures).

- MM-BIO-1: Compensate for Permanent Loss of Valley Foothill Riparian
- AMM-BIO-1: Install Construction Barrier Fencing around Environmentally Sensitive Areas
- AMM-BIO-2: Prepare Environmental Awareness Program and Conduct Environmental Awareness Training for Construction Employees

- AMM-BIO-3: Retain a Biological Monitor to Conduct Visits during Construction
- AMM-BIO-4: Avoid and Minimize Potential Disturbance of Valley Foothill Riparian Community
- AMM-BIO-5: Protect Water Quality and Prevent Erosion and Sedimentation in San Francisquito Creek
- AMM-BIO-9: Avoid Work during Active Breeding and Dispersal Period for Special-Status Frogs (October 15 through June 1)
- AMM-BIO-10: Conduct Preconstruction Surveys at Work Sites in and near Frog-Sensitive Areas (no more than 3 days prior to onset of construction)
- AMM-BIO-11: Provide Construction Worker Awareness Training for Special-Status Frogs
- AMM-BIO-12: Install Exclusion Fencing and Conduct Construction Monitoring for Special-Status Frogs
- AMM-BIO-13: Limit Stream Bank Construction to Dry Season (June 1 through October 15)

With implementation of these measures, the impacts on California red-legged frog, Central California Coast steelhead, and essential fish habitat are **less than significant with mitigation incorporated**.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

As discussed in Section 2.3.1, *Natural Communities*, construction of the Project on the proposed alignment would result in permanent loss of some riparian vegetation along San Francisquito Creek within the Project footprint. For the purposes of this analysis, it is assumed that all valley foothill riparian vegetation would be removed within the Project footprint. Project construction would have minimal permanent impacts on intermittent stream habitat within San Francisquito Creek, primarily where banks would be excavated to remove old structures and install new pilings and rip rap. Table 2.3-1 in Section 2.3.12, *Environmental Consequences*, presents the permanent impact area of each build alternative. Impacts are potentially significant and the following mitigation measure and avoidance and minimization measures are proposed.

- MM-BIO-1: Compensate for Permanent Loss of Valley Foothill Riparian (see Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, for the full description of this mitigation measure)
- AMM-BIO-1: Install Construction Barrier Fencing around Environmentally Sensitive Areas
- AMM-BIO-2: Prepare Environmental Awareness Program and Conduct Environmental Awareness Training for Construction Employees
- AMM-BIO-3: Retain a Biological Monitor to Conduct Visits during Construction
- AMM-BIO-4: Avoid and Minimize Potential Disturbance of Valley Foothill Riparian Community
- AMM-BIO-5: Protect Water Quality and Prevent Erosion and Sedimentation in San Francisquito Creek

Implementation of these measures, which would reduce impacts on valley foothill riparian and require compensation for the permanent loss of valley foothill riparian, would reduce impacts to less than significant. In addition, implementation of these measures would ensure that the proposed

Project minimizes direct and indirect effects on intermittent stream habitat and would therefore reduce impacts on intermittent stream habitat to a less-than-significant level. Therefore, with implementation of the above measures, the impacts on valley foothill riparian vegetation and intermittent stream habitat are **less than significant with mitigation incorporated**.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

As discussed in Section 2.3.2, *Wetlands and Other Waters*, no jurisdictional wetlands are present within the BSA; therefore, no impacts from any of the build alternatives would result during construction or operation. The creek qualifies as a water of the U.S. and water of the State because it supports a defined bed and bank and a well-defined ordinary high water mark. Construction activities that could occur within the creek include installation of check dams, such as clean gravel dams or any other type of approved Caltrans standard dam, and best management practices (BMPs). Excavation for removal of the existing abutments and construction of the new abutments would be accomplished using an excavator located on the existing roadway and no equipment would enter the creek. Pilings will be placed on the banks with a vibratory hammer.

Indirect impacts on intermittent stream habitat could also occur from adjacent construction activity due to erosion and sedimentation and discharge of pollutants into the creek. Implementation of the avoidance and minimization measures would prevent these indirect effects on San Francisquito Creek during construction.

In addition, intermittent stream habitat is considered a water of the U.S. and water of the State. Table 2.3-1 in Section 2.3.12, *Environmental Consequences*, presents the permanent impact area of each build alternative on intermittent stream habitat. Each build alternative would affect intermittent stream habitat: Build Alternative 1 would affect 0.020 acre, Build Alternative 2 would affect 0.029 acre, Build Alternative 3 would affect 0.028 acre, and Build Alternative 4 would affect 0.023 acre. Impacts are potentially significant and the following avoidance and minimization measures are proposed.

- AMM-BIO-1: Install Construction Barrier Fencing around Environmentally Sensitive Areas
- AMM-BIO-2: Prepare Environmental Awareness Program and Conduct Environmental Awareness Training for Construction Employees
- AMM-BIO-3: Retain a Biological Monitor to Conduct Visits during Construction
- AMM-BIO-4: Avoid and Minimize Potential Disturbance of Valley Foothill Riparian Community
- AMM-BIO-5. Protect Water Quality and Prevent Erosion and Sedimentation in San Francisquito Creek

Implementation of AMM-BIO-1 through AMM-BIO-4 for valley foothill riparian and avoidance and minimization effort AMM-BIO-5 in Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, would ensure that the proposed Project minimizes direct and indirect effects on intermittent stream habitat and waters of the U.S. Therefore, impacts would be **less than significant with mitigation incorporated**.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

As discussed in Section 2.3.1, *Natural Communities*, the project would not result in impacts on habitat connectivity. The bridge will be replaced with a free span bridge, therefore no pilings will be located within the intermittent stream channel. Additionally, the abutments and bank stabilization will be placed outside of the ordinary high water mark. The channel and habitat surrounding the creek will remain the same.

However, activities associated with bridge removal and reconstruction and revegetation could increase erosional processes, thereby increasing sedimentation and turbidity in downstream waterways. Excessive sediment deposited in or near stream channels can degrade aquatic habitats. Increased turbidity can increase fish mortality, reduce feeding opportunities for fish including rearing steelhead, and cause fish to avoid important habitat, causing impacts on migratory fish. Impacts are potentially significant and the following mitigation measure and avoidance and minimization measures are proposed (see Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, and Section 2.3.5.3, *Avoidance, Minimization, and/or Mitigation Measures*, for the full description of these measures).

- MM-BIO-1: Compensate for Permanent Loss of Valley Foothill Riparian
- AMM-BIO-1: Install Construction Barrier Fencing around Environmentally Sensitive Areas
- AMM-BIO-2: Prepare Environmental Awareness Program and Conduct Environmental Awareness Training for Construction Employees
- AMM-BIO-3: Retain a Biological Monitor to Conduct Visits during Construction
- AMM-BIO-4: Avoid and Minimize Potential Disturbance of Valley Foothill Riparian Community
- AMM-BIO-5: Protect Water Quality and Prevent Erosion and Sedimentation in San Francisquito Creek
- AMM-BIO-9: Avoid Work during Active Breeding and Dispersal Period for Special-Status Frogs (October 15 through June 1)
- AMM-BIO-10: Conduct Preconstruction Surveys at Work Sites in and near Frog-Sensitive Areas (no more than 3 days prior to onset of construction)
- AMM-BIO-11: Provide Construction Worker Awareness Training for Special-Status Frogs
- AMM-BIO-12: Install Exclusion Fencing and Conduct Construction Monitoring for Special-Status Frogs
- AMM-BIO-13: Limit Stream Bank Construction to Dry Season (June 1 through October 15)

With implementation of these measures, the impacts on migratory fish are **less than significant with mitigation incorporated**.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The City of Palo Alto Tree Ordinance requires permits for any activity that affects trees growing on public property or in a city-owned street right-of-way, and for protected tree species, which include coast live oak (*Quercus agrifolia*) more than 11.5 inches diameter at breast height (dbh) (approximately 4.5 feet above natural grade), valley oak (*Quercus lobata*) more than 11.5 inches dbh, and coast redwood (*Sequoia sempervirens*) more than 18 inches dbh. Heritage trees are designated by the Palo Alto City Council; however, none are located within the Palo Alto portion of

the survey area. Trees listed on landscape plans for commercial development are designated trees and require a permit from the Planning Department. The Project is not anticipated to result in impacts on any redwood trees in Palo Alto as none are located within the permanent impact area. However, a coast live oak with a dbh of 43.5 inches would be removed under all build alternatives. This tree is protected in accordance with the City of Palo Alto's Tree Preservation Ordinance. Seven other regulated trees, which include trees within the public right-of-way within the City of Palo Alto, would also be removed under all build alternatives. This includes two magnolias, one California Buckeye, and four eucalyptus trees.

The City of East Palo Alto Tree Regulation states that any tree—private or in the public right-of-way—with a trunk that measures greater than 2 feet in circumference measured at 40 inches above the natural grade, or any tree regardless of size in the public right-of-way, requires a Tree Removal Permit to remove. Several trees within public right-of-way within East Palo Alto would be removed. Under Build Alternative 1, two trees would be removed in East Palo Alto, a Fremont's Cottonwood tree and a coast live oak tree. Under Build Alternative 2, both these trees would be removed along with a California buckeye and Arroyo Willow. Under Build Alternative 3, six trees would be removed, including all trees under Build Alternative 2, in addition to another coast live oak tree and a California buckeye. Under Build Alternative 4, 10 trees would be removed, including all those under Build Alternative 3, an Arroyo willow and three eucalyptuses. Under the City of East Palo Alto's Municipal Code (Section 18.28.040(2)), all of the trees within the City of East Palo Alto are considered protected because they are all within the public right-of-way. The City of Palo Alto will continue to work with the City of East Palo Alto to try to retain as many trees as feasible, including in particular the oak tree at the northwestern corner of Newell Road and Woodland Avenue on the East Palo Alto side. However, for the purposes of this analysis, in order to assume a worst-case-scenario, all of the trees described above, including the oak tree, are identified for removal.

Table 2.3-3 in Section 2.3.1.2, *Environmental Consequences*, identifies the impacts on all trees per build alternative.

The loss of the protected oak and seven other regulated trees (street trees) within the City of Palo Alto would be an impact. However, removal of these trees is allowed in accordance with Palo Alto Municipal Code Section 8.10.050(d)(1). As outlined in the code, replacement for these trees is required in accordance with the Tree Technical Manual, which includes a formula for replacement based on the measured size of the canopy lost. In addition, the City of East Palo Alto requires replacement of trees approved for removal in accordance with the East Palo Alto Municipal Code Section 18.28.040(I), which similarly requires replacement of the canopy. However, because replacement of these trees in accordance with the Tree Technical Manual may not be feasible within the Project area, impacts are potentially significant and the following mitigation measure is proposed (see Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*, for the full description of this measure).

- MM-BIO-2: Tree Replacement Plan

Compliance with the East Palo Alto Municipal Code, Palo Alto Municipal Code, and the Tree Technical Manual, which is incorporated by reference as part of the City's Municipal Code as well as implementation of MM BIO-2 for the replacement of any trees off site, which would ensure that if trees cannot be replaced on site, suitable locations will be found off site, would ensure that impacts associated with removal of the protected and regulated trees within the City of Palo Alto would be **less than significant with mitigation incorporated**.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plan in the Project vicinity. Therefore, there would be **no impact**. No mitigation is required.

3.2.5 Cultural Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Directly or indirectly destroy a local cultural resource that is recognized by City Council resolution?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Cultural Resources

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

e) Directly or indirectly destroy a local cultural resource that is recognized by City Council resolution?

As discussed in Section 2.16, *Cultural Resources*, there are no historic resources or properties, as defined in the CEQA Guidelines §15064.5 or recognized by City Council resolution, present in the Area of Potential Effects (APE). Therefore, there would be no historic resources or properties affected during construction or operation of any of the build alternatives, resulting in **no impact**. No mitigation is required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

As discussed in Section 2.16, *Cultural Resources*, there is limited archaeological sensitivity within the APE and it is not anticipated that previously unidentified prehistoric or historic archaeological sites are located in the APE (California Department of Transportation 2017c). However, unknown cultural materials could be discovered during construction. Impacts are potentially significant and the following standard measure is proposed.

- SM-CUL-1: If cultural materials are discovered during construction, the contractor will cease all earth-moving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find and recommend/implement appropriate data collection/recovery activities.

With implementation of this standard measure, impacts would be **less than significant with mitigation incorporated**.

c) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

As discussed in Section 2.2.4, *Paleontology*, construction of Build Alternatives 1 and 2 would involve excavation for the roadway to a depth of 2 feet from existing grade to remove existing asphalt and base, excavation to a depth of 5 feet for installation of retaining walls, and excavation to a depth of 6 feet for installation of bridge abutments. Because the excavation work is shallow and would proceed within the previously disturbed roadbed, any effect on sensitive paleontological resources would be minor.

Similar to Build Alternatives 1 and 2, construction of Build Alternatives 3 and 4 would involve excavation for the roadway to a depth of 2 feet from existing grade to remove existing asphalt and base, excavation to a depth of 5 feet for installation of retaining walls, and excavation to a depth of 6 feet for installation of bridge abutments. The excavation work is shallow; however, it would involve disturbance of previously undisturbed soil in the area of the road realignment. Because sensitive paleontological resources could occur at depths below 5 feet, it is possible that excavation could encounter sensitive paleontological resources. Impacts are potentially significant and the following mitigation measure is proposed.

- MM-PA-1: Educate Workers, Stop Work in Case of Discovery of Paleontological Resources, and Prepare and Implement a Recovery Plan (see Section 2.2.4.4, *Avoidance, Minimization, and/or Mitigation Measures* for the full description of this mitigation measure)

With implementation of the above measure, the impacts on unique paleontological resources are **less than significant with mitigation incorporated**.

d) *Disturb any human remains, including those interred outside of formal cemeteries?*

As discussed in Section 2.16, *Cultural Resources*, there is limited archaeological sensitivity within the APE and it is not anticipated that previously unidentified prehistoric or historic archaeological sites are located in the APE. However, unknown human remains could be discovered during construction. Impacts are potentially significant and the following standard measure is proposed.

- SM-CUL-2: If human remains are discovered, State Health and Safety Code Section 7050.5 states that the contractor will stop further disturbances and activities in any area or nearby area suspected to overlie remains, and the contractor will contact the County Coroner. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will contact the Caltrans District 4 Office of Local Assistance archaeologist so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable.

With implementation of this standard measure, impacts would be **less than significant with mitigation incorporated**.

3.2.6 Geology and Soils

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
v) Expansive soils?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose people or property to major geologic hazards that cannot be mitigated through the use of standard engineering design and seismic safety techniques?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Geology and Soils

ai) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

As discussed in Section 2.2.3, *Geology/Soils/Seismic/Topography*, the Project site is not located in an Alquist-Priolo Earthquake Fault Zone, nor are there active or potentially active faults in the Project

area. Therefore, the potential for surface fault rupture to affect the Project site is extremely low. Impacts would be **less than significant**. No mitigation is required.

aii) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

As discussed in Section 2.2.3, *Geology/Soils/Seismic/Topography*, the Project area is likely to experience strong ground shaking due to earthquake during the life of the Project. Impacts are potentially significant and the following standard measure is proposed.

- SM-GEO-1: The City of Palo Alto will adhere to current Caltrans Seismic Design Criteria (SDC) for bridge design and construction.

With implementation of this standard measure, bridge design and construction would adhere to current Caltrans SDC. Accordingly, effects from earthquakes would be minimized, and the potential for damage resulting from strong ground shaking due to earthquake is low. Impacts would be **less than significant with mitigation incorporated**.

aiii) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

The Project area contains soils that have a risk of liquefaction, which could result in structural damage to the bridge during an earthquake. Impacts are potentially significant and the following standard measure is proposed.

- SM-GEO-1: The City of Palo Alto will adhere to current Caltrans SDC for bridge design and construction.

With proper bridge design that adheres to current Caltrans SDC, the structures constructed as part of the Project would not exacerbate the liquefaction tendencies of soils present at the site. Accordingly, effects from earthquakes would be minimized, and the potential for damage resulting from liquefaction due to earthquake is low. Impacts would be **less than significant with mitigation incorporated**.

aiv) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

As discussed in Section 2.2.3, *Geology/Soils/Seismic/Topography*, the Project site is not located in a zone mapped for landslide hazard and is thus not subject to large-scale landslide. Impacts would be **less than significant**. No mitigation is required.

av) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving expansive soils?

As discussed in Section 2.2.3, *Geology/Soils/Seismic/Topography*, the Project area is underlain by silty sand approximately 13.5 feet thick. The silty sand is classified as Urban land-Elpaloalto complex. This Urban land-Elpaloalto complex is not rated for expansive properties; however, sand is not an expansive soil. Underlying the silty sand is lean clay and sandy lean clay, which is not expansive. The likelihood of damage associated with expansive soils is therefore low. Impacts would be **less than significant**. No mitigation is required.

b) Result in substantial soil erosion or the loss of topsoil?

As discussed in Section 2.2.3, *Geology/Soils/Seismic/Topography*, site preparation and grading associated with Project construction activities would potentially expose bare soil to erosive forces. Impacts are potentially significant and the following standard measure is proposed.

- SM-WQ-2: Prepare and Implement Stormwater Pollution Prevention Plan (SWPPP) (see Section 2.2.2.4, *Avoidance, Minimization, and/or Mitigation Measures*, for a full description of this measure).

Preparation and implementation of a SWPPP, which is a requirement under the Construction General Permit, would minimize stormwater runoff, control erosion, and monitor effectiveness. Further, as part of Caltrans' standard practice and included in SM-WQ-2, the Project would incorporate BMPs that include but are not limited to stabilizing soil through mulching, hydroseeding, use of soil binders, or other means; temporary sediment control measures; and wind erosion control measures. Therefore, impacts related to soil erosion would be **less than significant with mitigation incorporated**.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

d) Would the project expose people or property to major geologic hazards that cannot be mitigated through the use of standard engineering design and seismic safety techniques?

As discussed in Section 2.2.3, *Geology/Soils/Seismic/Topography*, unstable soils are present in the study area and the potential for lateral spreading in the Project area is high. Impacts are potentially significant and the following standard measure is proposed.

- SM-GEO-1: The City of Palo Alto will adhere to current Caltrans Seismic Design Criteria (SDC) for bridge design and construction.

With implementation of this standard measure, bridge design and construction would adhere to current Caltrans SDC. Accordingly, effects from earthquakes would be minimized, and the potential for damage resulting from unstable soils, lateral spreading due to earthquake-induced liquefaction is low. Impacts would be **less than significant with mitigation incorporated**.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The Project does not include the use or installation of septic tanks. Therefore, there is **no impact**. No mitigation is required.

3.2.7 Greenhouse Gas Emissions

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Greenhouse Gas Emissions

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Table 3.3.2 in Section 3.6.4, *Construction Emissions*, summarizes estimated greenhouse gas (GHG) emissions generated by on-site construction equipment over the 12-month construction period. It was estimated that the total amount of carbon dioxide (CO₂) produced due to bridge replacement construction would be 1,093 tons annually and for the entire construction period, because the construction duration would be 1 year. The BAAQMD CEQA Guidelines and City of Palo Alto do not suggest a threshold of significance for short-term construction-related GHG emissions. Based on the size of the Project, the amount of ground disturbance and construction-related activities necessary, and implementation of BAAQMD BMPs discussed in Section 2.2.6, *Air Quality*, the construction phase of the project would not generate GHG emissions that would have a significant impact on the environment. Impacts during construction would be **less than significant**. No mitigation is required.

Operational GHG emissions for the Project would occur from the effect of diverted trips. Table 3.3-1 in Section 3.6.3, *Project Analysis*, shows the annual GHG emissions that would occur for the build alternatives. This table shows that there would be a reduction in GHG emissions under all build alternatives between 2016, 2020, and 2040 due to improved operation and accessibility for alternative modes of transportation (e.g., pedestrians and bicyclists). There would be **no impact** during operations and no mitigation is required.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The BAAQMD 2017 Clean Air Plan contains control measures, consistent with the state’s climate protection goals, aimed at reducing Bay Area GHG emissions to 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050 (Bay Area Air Quality Management District 2017a). The project would be consistent with the Clean Air Plan because the Project expands the bicycle and pedestrian infrastructure in the Project area to encourage other modes of transportation and would reduce GHG emissions between 2016, 2020, and 2040 due to improved operation and accessibility for alternative modes of transportation. The Project is also consistent with, and partially implements, the City of Palo Alto’s Sustainability and Climate Action Plan framework strategy T-FAC-1, which calls for expanding the City of Palo Alto’s bicycle infrastructure to facilitate non-automobile mobility

options (City of Palo Alto 2016). Therefore, development of the Project would not result in an impact related to consistency with or implementation of the 2017 Clean Air Plan or the City of Palo Alto’s Sustainability and Climate Action Plan. There would be **no impact** and no mitigation is required.

3.2.8 Hazards and Hazardous Materials

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Hazards and Hazardous Materials

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

As discussed in Section 2.2.5, *Hazardous Waste/Materials*, impacts from lead contamination from paint could occur where reconstruction of the bridge involves disturbing or removing the existing paint, which could create a hazard to the public or to the environment during routine transport, use or disposal of hazardous materials or through upset and accident conditions. It is recommended that all paint be treated as lead-containing for the purposes of complying with Division of Occupational Safety and Health worker safety requirements, which apply to all worksites where construction workers may be exposed to lead. Construction activities could produce dust, which could expose workers or nearby residents and business occupants to lead via inhalation. Operation of the Project would not involve the use, storage, or transport of hazardous materials.

Impacts are potentially significant during construction and the following mitigation measures are proposed.

- MM-HAZ-1: Properly Dispose of and Abate Potential Lead-Based Paint
- MM-HAZ-2: Properly Handle and Dispose of Potentially Contaminated Soils and Materials

See Section 2.2.5.4, *Avoidance, Minimization, and/or Mitigation Measures*, for the full description of these mitigation measures. With implementation of the above measures, impacts would be **less than significant with mitigation incorporated**.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

There are no existing or proposed schools within 0.25 mile of the Project site. Therefore, there would be **no impact**. No mitigation is required.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

As discussed in Section 2.2.5, *Hazardous Waste/Materials*, the Project site was not identified in any of the records, including lists of hazardous materials release sites compiled pursuant to Government Code 65962.5. Therefore, there would be **no impact**. No mitigation is required.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

The Project is not located in the vicinity of a private airstrip, but the Project is located approximately 1.2 miles from the Palo Alto Airport. The Project would not result in a safety hazard for people residing or working in the project area because the Project would not change air traffic patterns or otherwise affect airport operations. The Project does not include construction of any tall structures that could cause a hazard for air navigation. Therefore, there would be **no impact**. No mitigation is required.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

As discussed in Section 2.1.3, *Utilities and Emergency Services*, during construction of the Project, the existing Newell Road Bridge would be closed to vehicles, including emergency services. As a result, first responders would have to use other existing nearby crossings (University Avenue and West Bayshore Road). Impacts are potentially significant during construction and the following standard measure is proposed.

- SM-TR-1: A Traffic Management Plan will be prepared by the Project proponent or its contractor, approved by the City of Palo Alto, and will be implemented by the contractor during construction activities (see Section 2.1.4.4, *Avoidance, Minimization, and/or Mitigation Measures*, for a full description of this measure).

With implementation of this measure, advance notice and coordination with emergency service providers will be included in the Traffic Management Plan to minimize any potential temporary impacts on response times. Therefore, impacts would be **less than significant with mitigation incorporated**.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The Project is not located in a wildland fire hazard severity zone. In addition, the Project does not involve construction of any buildings that would be at risk of fires. The Project would replace an existing bridge structure, which would not contribute to the risk of wildland fires in urbanized areas. Therefore, there would be **no impact**. No mitigation is required.

3.2.9 Hydrology and Water Quality

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
k) Result in stream bank instability?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Hydrology and Water Quality

a) *Violate any water quality standards or waste discharge requirements?*

As discussed in Section 2.2.2, *Water Quality and Storm Water Runoff*, during construction, potential short-term increases in turbidity would result from soil erosion and suspended solids being introduced into San Francisquito Creek from both in-water and land construction activities. As a result, temporary increases in turbidity may occur in the immediate area and potentially downstream. This would violate water quality standards or waste discharge requirements related to turbidity since the waterbody is already impaired for sediment, and would have the potential to result in adverse effects on the physiology, behavior, and habitat of aquatic life. Impacts are potentially significant and the following standard measures are proposed (see Section 2.2.2.4, *Avoidance, Minimization, and/or Mitigation Measures*, for a full description of these measures).

- SM-WQ-1: Implement National Pollutant Discharge Elimination System (NPDES) Permit and Construction General Permit Water Quality Measures
- SM-WQ-2: Prepare and Implement SWPPP

With implementation of these measures, water quality protection measures would be implemented during construction to prevent or minimize sediment and suspended solids from entering the creek. In addition, the Project design would incorporate post-construction measures and other permanent

erosion control elements to ensure that stormwater runoff would not cause soil erosion, and to reduce or avoid permanent impacts on water quality. Therefore, impacts would be **less than significant with mitigation incorporated**.

b) *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

As discussed in Section 2.2.2, *Water Quality and Storm Water Runoff*, changes to groundwater occurrence and levels due to Project construction, if groundwater levels are affected at all, would not detrimentally affect regional groundwater production or change the existing water quality. Therefore, there would be **no impact**. No mitigation is required.

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*

d) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*

As discussed in Section 2.2.2, *Water Quality and Storm Water Runoff*, construction activities occurring on land adjacent to the creek could cause erosion of sediments and contribute to short-term increases in turbidity in the creek. Land-disturbing activities (e.g., demolition and grading) could result in erosion and subsequent soil deposition to the creek which would increase turbidity. Long-term water quality impacts are attributable to the changes in stormwater drainage and/or soil disturbance from construction. The Project would increase impervious surfaces in the Project area as a result of road and sidewalk reconstruction. Increases in impervious surfaces change the storm hydrograph by increasing flow velocity, and the peak and quantity of storm runoff due to reduced natural infiltration (groundwater recharge) and uptake from native soils and vegetation. Impacts are potentially significant and the following standard measures are proposed (see Section 2.2.2.4, *Avoidance, Minimization, and/or Mitigation Measures*, for a full description of these measures).

- SM-WQ-1: Implement NPDES Permit and Construction General Permit Water Quality Measures
- SM-WQ-2: Prepare and Implement SWPPP

These measures require preparation of a SWPPP and implementation of erosion and sediment control BMPs to ensure that water quality impacts would not occur from construction. Water quality protection measures would be implemented during construction to prevent or minimize sediment and suspended solids from entering the creek. In addition, the Project design would incorporate post-construction measures and other permanent erosion control elements to ensure that stormwater runoff would not cause soil erosion, and to reduce or avoid permanent impacts on water quality. Therefore, impacts would be **less than significant with mitigation incorporated**.

e) *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

As discussed in Section 2.2.2, *Water Quality and Storm Water Runoff*, the Project would use the existing stormwater system. The existing stormwater system would only need to account for the

increase in stormwater volume from slope grade changes. Changes within the impervious surfaces are relatively small and would have little effect on runoff volume. However, the use of heavy construction equipment or construction-related materials can introduce pollutants of concern or toxic chemicals to the Project site through polluted runoff. Impacts are potentially significant and the following standard measures are proposed (see Section 2.2.2.4, *Avoidance, Minimization, and/or Mitigation Measures*, for a full description of these measures).

- SM-WQ-1: Implement NPDES Permit and Construction General Permit Water Quality Measures
- SM-WQ-2: Prepare and Implement SWPPP

With implementation of these measures, the contractor's qualified SWPPP practitioner would implement appropriate hazardous material management practices, spill prevention, and other good housekeeping measures to reduce the potential for chemical spills or releases of contaminants, including any non-stormwater discharge to drainage channels. Implementation of these measures would minimize the potential for surface and groundwater contamination. Impacts would be **less than significant with mitigation incorporated**.

f) Otherwise substantially degrade water quality?

As discussed in Section 2.2.2, *Water Quality and Storm Water Runoff*, sediment and suspended solids could enter the creek during construction and operation, potentially degrading water quality. Impacts are potentially significant and the following standard measures are proposed (see Section 2.2.2.4, *Avoidance, Minimization, and/or Mitigation Measures*, for a full description of these measures).

- SM-WQ-1: Implement NPDES Permit and Construction General Permit Water Quality Measures
- SM-WQ-2: Prepare and Implement SWPPP

With implementation of these measures, water quality protection measures would be implemented during construction to prevent or minimize sediment and suspended solids from entering the creek. In addition, the Project design would incorporate post-construction measures and other permanent erosion control elements to ensure that stormwater runoff would not cause soil erosion, and to reduce or avoid permanent impacts on water quality. Therefore, impacts would be **less than significant with mitigation incorporated**.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

As discussed in Section 2.2.1, *Hydrology and Floodplain*, the Project does not include the placement of housing within a 100-year flood hazard area or the placement of structures within a 100-year flood hazard area structures which would impede or redirect flood flows. The Project would accommodate larger flows within San Francisquito Creek, resulting in additional flow capacity in the Project area. Therefore, there would be **no impact**. No mitigation is required.

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

As discussed in Section 2.2.1, *Hydrology and Floodplain*, under all build alternatives, the existing 70-year and 100-year flood events would be minimized compared to existing conditions. Therefore, there would be no increased flood risk and no risk to life or property associated with implementation of the Project. There are no levees or dams at risk of failing near the Project area. Therefore, there would be **no impact**. No mitigation is required.

j) Inundation by seiche, tsunami, or mudflow?

As discussed in Section 2.2.1, *Hydrology and Floodplain*, the Project area is not in an area susceptible to inundation by seiche, tsunami, or mudflow. Therefore, there would be **no impact**. No mitigation is required.

k) Result in stream bank instability?

As discussed in Section 2.2.1, *Hydrology and Floodplain*, the banks of San Francisquito Creek are currently subject to erosion, particularly in response to high discharges, where bank instability is present, or where vegetation becomes disturbed. The Project would include bank stabilization measures, such as rock slope protection or soil nail wall, in the portion of San Francisquito Creek disturbed by construction. These measures would be implemented approximately 50 feet upstream and 50 feet downstream of the bridge, for a total of 100 linear feet. These bank stabilization measures would reduce stream instability during construction and operation of the Project, resulting in a beneficial effect. Therefore, there would be **no impact**. No mitigation is required.

3.2.10 Land Use and Planning

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Land Use and Planning

a) Physically divide an established community?

As discussed in Section 2.1.2, *Community Impacts*, the Project would not physically divide a community because it would replace an existing bridge that connects two communities, Palo Alto and East Palo Alto, within the same alignment. Construction of the Project would improve access

between the two communities by providing a wider, safer bridge for all modes of transportation. The addition of sidewalks or a mixed-use path and bicycle facilities would provide safer and more direct access, which would also improve connectivity. Therefore, there would be **no impact**. No mitigation is required.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Table 2.1.1-2 in Section 2.1.1.3, *Environmental Consequences*, analyzes the consistency of the Project with the relevant plans and programs. As detailed in Table 2.1.1-2, the Project would not conflict with any goals or policies of relevant plans and programs. Therefore, there would be **no impact**. No mitigation is required.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

There are no applicable habitat conservation plans or natural community conservation plans within the Project limits. Therefore, there would be **no impact**. No mitigation is required.

3.2.11 Mineral Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Mineral Resources

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**
- b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

The Project site and surrounding properties are part of an urbanized area with no current oil or gas extraction. According to the Natural Environment Element of the City’s Comprehensive Plan, Palo Alto does not contain mineral deposits of regional significance (City of Palo Alto 2017). No mineral resource activities would be altered or displaced by the Project. Therefore, there would be **no impact**. No mitigation is required.

3.2.12 Noise

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Noise

- a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**
- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**
- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

As discussed in Section 2.2.7, *Noise*, noise from Project construction activities may intermittently dominate the noise environment in the immediate area of construction. Equipment operations associated with demolition and building activities would be a source of noise. Implementation of detours may increase noise in some areas as a result of temporarily diverted traffic. Noise increases during construction could be substantial at nearby residences. However, nighttime construction would not occur.

In addition, the operation of heavy equipment would generate localized groundborne vibration during construction of the Project. Vibration from non-impact construction activity and truck traffic is typically below the threshold of perception when the activity is more than about 50 feet from the receiver (refer to Tables 2.2.7-2 and 2.2.7-4 in Section 2.2.7, *Noise*, for vibration reference levels).

Consequently, for construction activities without the use of high-impact equipment where the activity is located more than 50 feet from noise-sensitive land uses, ground-borne vibration impacts are expected to be less than significant.

For construction activities of the bridge, a pile driver, which is considered to be impact equipment, would be required. The level of vibration generated by pile driving and transmitted to nearby structures would depend on the type of pile driver used and site-specific soil properties. Under average soil conditions, an impact pile driver is expected to generate a vibration level of 0.650 and 0.303 inches per second peak particle velocity (PPV) at a distance of 25 feet and 50 feet, respectively (California Department of Transportation 2013). Some existing homes are located 25 to 50 feet from where the pile driver could be operated, and under average soil conditions, those homes could be exposed to vibration levels in excess of the 0.3 and 0.4 inches per second PPV thresholds at which vibration may damage older residential structures and be severely perceptible to observers, respectively. Consequently, vibration impacts at homes closest to the bridge would be potentially significant.

Vibration impacts may also be potentially significant for homes located within approximately 50 feet of the construction site when the use of non-impact construction equipment (i.e., a large bulldozer) occurs. These residences could experience vibration levels as high as 0.089 inches per second PPV, which would exceed the threshold of perceptibility and could cause annoyance. Exceedance of this threshold would be a potentially significant impact.

Impacts related to construction noise and vibration are potentially significant and the following standard measures and mitigation measures are proposed (see Section 2.2.7.4, *Avoidance, Minimization, and/or Mitigation Measures*, for the full description of these measures).

- SM-NOI-1: The construction contractor must comply with Caltrans Standard Specifications Section 14-8.02, Noise Control, which states the following:
 - Control and monitor noise resulting from work activities.
 - Do not exceed 86 A-weighted decibels (dBA) at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m.
- SM-NOI-2: All equipment used by the contractor will have sound-control devices that are no less effective than those provided on the original equipment. No equipment will have an unmuffled exhaust.
- SM-NOI-3: The Project proponent and/or their construction contractor will do the following.
 - Review and ensure that construction activities are conducted in accordance with local noise standards from the cities of Palo Alto and East Palo Alto.
 - Implement additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity to allowed timeframes, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources, as appropriate.
- MM-NOI-1: Provide advance notification of construction schedule and 24-hour hotline to residents
- MM-NOI-2: Designate a noise disturbance coordinator to address resident concerns

- MM-NOI-3: Install temporary noise barriers
- MM-NOI-4: Conduct construction vibration monitoring and implement control approach(es)

Construction noise is controlled by Caltrans Standard Specifications Section 14-8.02, Noise Control and local noise standards (see SM-NOI-1, SM-NOI-2, and SM-NOI-3 in Section 2.2.7.4, *Avoidance, Minimization, and/or Mitigation Measures*) and with adherence to SM-NOI-1, SM-NOI-2, and SM-NOI-3, these potential impacts would be reduced. This potential impact would be further minimized through implementation of mitigation measures MM-NOI-1, MM-NOI-2, and MM-NOI-3, which would ensure that construction noise does not cause excessive increases in ambient noise levels at any noise-sensitive land uses. These mitigation measures would provide advance notice to nearby residences, designate a disturbance coordinator to handle resident complaints, and install noise barriers to further attenuate noise. The resulting noise level after implementation of these mitigation measures cannot be quantified with certainty, but potential increases in noise that residents find to be disturbing would be mitigated through the advance notification and noise disturbance coordinator.

In addition, implementation of MM-NOI-4 would reduce groundborne vibration impacts to a less-than-significant level by ensuring via vibration monitoring that vibration levels are below the applicable thresholds, and that any vibration-related complaints are addressed. Mitigation Measure MM-NOI-1 would also involve a survey of the existing residences to determine if these structures could be damaged by pile driving activities. If it is determined that structures would be damaged by pile driving, an alternative method of construction would be required.

Therefore, impacts would be **less than significant with mitigation incorporated**.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

As shown in Table 2.2.7-6 in Section 2.2.7, *Noise*, predicted worst-case traffic noise levels for design-year no-Project conditions range from 55 to 60 dBA $L_{eq}(h)$ at residential land uses. Predicted worst-case traffic noise levels for design-year build conditions under Build Alternatives 1, 2, 3, and 4 also range from 56 to 61 dBA $L_{eq}(h)$ at residential land uses. Traffic noise levels are predicted to increase at receptor locations by a maximum of 2 decibels (dB) across all design alternatives. This 2 dBA increase between existing noise levels and the build alternatives would be barely perceptible to the human ear. Additionally, an increase of 1 dB would occur at all receptor locations even in the absence of the Project, because growth in the region would result in increases in vehicle traffic. Therefore, impacts would be **less than significant** as a result of the Project and no mitigation is required.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The Project is not located in the vicinity of a private airstrip, but the Project is located approximately 1.2 miles from the Palo Alto Airport. Aircraft activity would not expose people residing or working in the project area to excessive noise levels because the airport has only one runway and the Project

would not change air traffic patterns or otherwise affect airport operations. Therefore, there would be **no impact**. No mitigation is required.

3.2.13 Population and Housing

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a substantial imbalance between employed residents and jobs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Population and Housing

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The Project would not induce population growth in an area because, as described in the beginning of Chapter 2, *Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures*, the Project is not growth-inducing. Therefore, there would be **no impact**. Mitigation is not required.

b) Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The Project would not result in the displacement of any housing or people. Therefore, there would be **no impact**. Mitigation is not required.

d) Create a substantial imbalance between employed residents and jobs?

The Project would not create new housing, residents, or jobs in the study area. The Project is also not growth-inducing, as described in the beginning of Chapter 2, *Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures*. Therefore, the Project would not cause an imbalance between employed residents and jobs, and there would be **no impact**. Mitigation is not required.

3.2.14 Public Services

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Public Services

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire Protection, Police Protection, Schools, Parks, and Other Public Facilities?

Because the Project is not growth-inducing, the Project would not directly increase the number of people or school-aged children in the area. The Project would not result in the need for new or physically altered school facilities, fire protection, police protection, park, or other public facilities. Therefore, there would be **no impact**. Mitigation is not required.

3.2.15 Recreation

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Recreation

- a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

The Project would not increase the use of existing parks or recreational facilities because as described in the beginning of Chapter 2, *Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures*, the Project is not growth-inducing. Therefore, there would be **no impact**. Mitigation is not required.

- b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

The Project does not include construction of recreational facilities. Therefore, there would be **no impact**. Mitigation is not required.

3.2.16 Transportation/Traffic

Analysis of vehicle miles traveled (VMT) is not a required component of this EIR under the CEQA Guidelines or the standards of the City of Palo Alto or Santa Clara County. However, the CEQA Guidelines require that all lead agencies consider VMT starting in July 2020. This VMT analysis is presented to provide information that further characterizes the Project's potential transportation-related environmental effects. As there are no adopted policies or standards that require this analysis and no adopted thresholds of significance, the analysis provided is for informational purposes only.

Under Build Alternatives 2, 3, and 4, the Project would not change the number of lanes on the bridge and, therefore, the replacement of the bridge under these build alternatives is not anticipated to induce growth, as discussed further in the introduction section of Chapter 2, *Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures*. Build Alternative 1 would reduce the capacity of the bridge by replacing a two-lane, bi-directional bridge with a one-lane, bi-directional bridge; therefore, this build alternative would also not induce growth. Under all four build alternatives, the new bridge would improve bicycle and pedestrian infrastructure and access. OPR prepared a "Technical Advisory on Evaluating Transportation Impacts in CEQA" (OPR 2018) which provides guidance on estimating VMT from transportation projects. The guidance states that bicycle and pedestrian infrastructure projects generally reduce VMT. Because the Project would not increase the capacity of the bridge and because it would improve multi-modal access across the bridge, the Project is not anticipated to substantially contribute to existing VMT.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Traffic/Transportation

- a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?***
- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?***

For facilities with a level of service (LOS) E or LOS F under existing, background, or cumulative conditions before the addition of project traffic, a project is said to have a significant impact per CEQA Guidelines Section 15130 if the project will cause LOS to deteriorate by the following amounts.

Signalized Intersections: A project-generated increase in motor vehicle traffic is considered to have significant impact:

- If intersection operations degrade from an acceptable level (LOS D or better) to an unacceptable level (LOS E or F); *or*
- If the critical delay increases by more than 4 seconds **and** the volume-to-capacity ratio increases by 0.01 or more at intersections with unacceptable operations (LOS E or F).

Unsignalized Intersections: LOS D is used as the minimum acceptable operation level at unsignalized intersections. A project-generated increase in traffic is considered to have a significant impact if intersection operations degrade to LOS E or F from acceptable operations **and** the intersection satisfies a peak hour signal warrant from the California Manual on Uniform Traffic Control Devices.

As shown in Table 2.1.4-3 in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, under the opening year (Year 2020) scenario, all of the study intersections under the No Build Alternative and all build alternatives operate within applicable jurisdictional standards of the Cities of Palo Alto and East Palo Alto (LOS D or better) during the a.m. and p.m. peak hours, with the exception of the University Avenue/East Crescent Drive intersection. Under both the No Build Alternative and all build alternatives, the University Avenue/East Crescent Drive intersection would operate at LOS F during the a.m. peak hour for all study alternatives and LOS E during the p.m. peak hour for Build Alternative 1. However, the delay associated with the build alternatives is either the same as or less than the delay under the No Build scenario and does not exceed either threshold. Therefore, the Project would not result in impacts on traffic operations under the opening year scenario.

As shown in Table 2.1.4-4 in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, under the design year (Year 2040) scenario, all of the study intersections operate within applicable jurisdictional standards of the Cities of Palo Alto and East Palo Alto (LOS D or better) during the a.m. and p.m. peak hours, with the exception of the University Avenue /Woodland Drive and University Avenue/East Crescent Drive intersections. The University Avenue/Woodland Drive and University Avenue/East Crescent Drive intersections operate at LOS E or worse during the a.m. and p.m. peak hours for all study alternatives. However, the delay associated with the build alternatives is not greater than 4 additional seconds of delay, and is typically either the same as or less than the delay under the No Build scenario. Therefore, the Project would not result in impacts on traffic operations under the design year scenario.

Table 2.1.4-2 shows the LOS and delay for diverted traffic from Newell Road Bridge to University Avenue during construction. The Woodland Avenue/University Avenue intersection would continue to operate at LOS D during the a.m. and p.m. peak periods, resulting in no impact. However, the East Crescent Drive/University Avenue intersection would operate at unacceptable LOS F and E during the a.m. and p.m. peak periods respectively, exceeding the CEQA delay threshold of 4 seconds.

Although this would be a temporary impact, impacts are potentially significant during construction. There is no feasible mitigation to reduce this impact. It is not feasible to keep the bridge open during construction due to the constricted area surrounding the bridge.

Therefore, the impact is **significant and unavoidable**.

c) *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

The Project is not located in the vicinity of a private airstrip, but the Project is located approximately 1.2 miles from the Palo Alto Airport. The Project would not result in a change air traffic patterns or otherwise affect airport operations because the Project does not include construction of any tall structures that could cause a hazard for air navigation. Therefore, there would be **no impact**. No mitigation is required.

d) *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

The Project would not increase hazards due to a design feature or incompatible uses because the Project would improve the safety of the functionally obsolete Newell Road Bridge. Therefore, there would be **no impact**. No mitigation is required.

e) *Result in inadequate emergency access?*

As discussed in Section 2.1.3, *Utilities and Emergency Services*, during construction of the Project, the existing Newell Road Bridge would be closed to vehicles, including emergency services. As a result, first responders would have to use other existing nearby crossings (University Avenue and West Bayshore Road). Impacts are potentially significant during construction and the following standard measure is proposed.

- SM-TR-1: A Traffic Management Plan will be prepared by the Project proponent or its contractor, approved by the City of Palo Alto, and will be implemented by the contractor during construction activities (see Section 2.1.4.4, *Avoidance, Minimization, and/or Mitigation Measures*, for a full description of this measure).

With implementation of this measure, advance notice and coordination with emergency service providers will be included in the Traffic Management Plan to minimize any potential temporary impacts on response times. Impacts would be **less than significant with mitigation incorporated**.

f) *Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*

As discussed in Section 2.1.1, *Land Use*, the Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Therefore, there would be **no impact**. No mitigation is required.

3.2.17 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Tribal Cultural Resources

- a) *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or***
- b) *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.***

As discussed in Section 2.1.6, *Cultural Resources*, no tribal cultural resources have been identified within the Project APE. Therefore, there would be **no impact**. No mitigation is required.

3.2.18 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Result in a substantial increase in natural gas and electrical service demands that would require the new construction of energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Utilities and Service Systems

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Construction of the build alternatives would generate minor amounts of wastewater, but they would not exceed wastewater treatment requirements of the Regional Water Quality Control Board due to requirements set forth in waste discharge requirements and in the Section 401 Water Quality Certification Permit. Impacts would be **less than significant**. No mitigation is required.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Because the Project is not growth-inducing, the Project would not result in the construction of new water or wastewater treatment facilities or expansion of existing facilities; existing capacity is sufficient to serve the Project. Therefore, there would be **no impact**. No mitigation is required.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

As discussed in Section 2.2.2, *Water Quality*, the Project would use the existing stormwater system. The existing stormwater system would only need to account for the increase in stormwater volume from slope grade changes. Changes within the impervious surfaces are relatively small and would have little effect on runoff volume. Therefore, there would be **no impact**. No mitigation is required.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Because the Project is not growth-inducing, construction of the Project would not increase demand for potable water. No new or expanded entitlements would be needed to serve the Project. The Project would not result in substantial physical deterioration of public water facilities. Therefore, there would be **no impact**. No mitigation is required.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

The Project would generate small amounts of solid waste during construction. The City of Palo Alto's Construction and Debris Diversion Ordinance requires projects to salvage and/or divert at least 75% of project debris from landfills (City of Palo Alto 2015). The diverted debris would primarily be recycled at Zanker Recycling in San Jose. The remaining waste would go to landfill in which there is sufficient permitted capacity, such as Kirby Canyon Landfill in Morgan Hill or Ox Mountain Landfill in Half Moon Bay. Impacts would be **less than significant**. No mitigation is required.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

The Project would comply with all federal, state, and local statutes and regulations related to solid waste. Therefore, there would be **no impact**. No mitigation is required.

h) Result in a substantial increase in natural gas and electrical service demands that would require the new construction of energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities?

Because the Project is not growth-inducing, construction of the Project would not increase demand for natural gas and electrical services. No new construction of energy facilities or distribution infrastructure or capacity enhancing alterations to existing facilities would be required. Therefore, there would be **no impact**. No mitigation is required.

3.2.19 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Mandatory Findings of Significance

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As discussed in Section 2.1.5, *Visual/Aesthetics*, under all build alternatives, general construction activities, construction staging/stockpiling, the storage of building materials, the presence of construction equipment, and temporary traffic barricades would result in temporary visual impacts by altering the composition of the viewsheds throughout the Project corridor. However, construction activities would be temporary in duration and would be governed by city, state, and federal regulations and standards designed to minimize their potential to affect adjacent sensitive uses. In addition, the proposed Project would remove the existing bridge; construct new approaches, and accommodate bicycle and pedestrian travel (including sidewalk and potential road widening for sharrows or a mixed-use path); add and reconfigure utilities including street lighting; modify street signage; add retaining walls; and stabilize creek bank disturbed by the construction. Construction would also require the removal of trees to accommodate construction. Resource change (changes to visual resources as measured by changes in visual character and visual quality) would be moderate for Build Alternatives 1–3 during the short-term until replacement plantings can mature. As the replacement planting matures and the canopy is replaced, the visual character would regain some of its existing qualities associated with shading and creating an enclosed, intimate streetscape that would result in long-term resource change that is moderate-low. Build Alternative 4 would result in a resource change that is moderate for the short- and long-term because, even with mitigation, the tree canopy would not provide the sense of enclosure because view corridors would remain open

and more development would be visible due to the bridge and roadway intersection realignment in East Palo Alto. Finally, overhead street lighting could negatively affect sensitive receptors if the replaced lighting is modified to include LED lighting that is not properly designed. In particular, LED lighting can negatively affect humans by increasing nuisance light and glare, in addition to increasing ambient light glow, if proper shielding is not provided and blue-rich white light lamps are used.

As discussed in Section 2.2.4, *Paleontology*, unique paleontological resources could be affected by the Project because sensitive paleontological resources could occur at depths below 5 feet; therefore, it is possible that excavation could encounter sensitive paleontological resources. Hazardous materials, particularly lead, have the potential to affect the environment if they are released into the environment or not handled properly.

As discussed in Section 2.3, *Biological Resources*, construction of the Project on the proposed alignment would result in permanent loss of some riparian vegetation along San Francisquito Creek within the Project footprint. For the purposes of this analysis, it is assumed that all valley foothill riparian vegetation would be removed within the Project footprint. Protected and regulated trees in the cities of Palo Alto and East Palo Alto would also be removed. California red-legged frogs could be directly and indirectly affected by construction activities occurring in or adjacent to the BSA. If California red-legged frogs are present within the construction work area, they could be inadvertently killed or wounded by construction vehicles, construction personnel, or an accidental spill of toxic fluids. Construction activities associated with road and bridge construction in potential California red-legged frog habitat in the Project area could result in indirect effects on water quality downstream from the construction work area.

The proposed Project could also affect habitat conditions for Central California Coast steelhead. Activities associated with bridge removal and reconstruction and revegetation could increase erosional processes, thereby increasing sedimentation and turbidity in downstream waterways. Excessive sediment deposited in or near stream channels can degrade aquatic habitats. Increased turbidity can increase fish mortality, reduce feeding opportunities for fish including rearing steelhead, and cause fish to avoid important habitat. The effects on essential fish habitat for Pacific salmon would be same as the effects described for Central California Coast steelhead and other migratory fish.

Additionally, the creek qualifies as a water of the U.S. because it supports a defined bed and bank and a well-defined ordinary high water mark. Construction activities that could occur within the creek include installation of check dams, such as clean gravel dams or any other type of approved Caltrans standard dam, and BMPs. Excavation for removal of the existing abutments and construction of the new abutments would be accomplished using an excavator located on the existing roadway and no equipment would enter the creek. Pilings will be placed on the banks with a vibratory hammer. Indirect impacts on intermittent stream habitat could also occur from adjacent construction activity due to erosion and sedimentation and discharge of pollutants into the creek. Implementation of the avoidance and minimization measures would prevent these indirect effects on San Francisquito Creek during construction.

As discussed in Section 2.16, *Cultural Resources*, there is limited archaeological sensitivity within the APE and it is not anticipated that previously unidentified prehistoric or historic archaeological sites are located in the APE (California Department of Transportation 2017c). However, unknown cultural materials or human remains could be discovered during construction.

These impacts are potentially significant and the following mitigation measures are proposed.

- MM-AES-1: Install Visual Barriers between Construction Work Areas and Sensitive Receptors
- MM-AES-2: Replace or Relocate Site Features and Landscaping Affected by the Project
- MM-AES-3: Implement Project Design Aesthetics
- MM-AES-4: Implement Project Streetscaping and Plantings along Top of Creek Bank
- MM-AES-5: Apply Minimum Lighting Standards
- MM-PA-1: Educate workers and stop work in case of discovery of paleontological resources
- MM-HAZ-1: Properly Dispose of and Abate Potential Lead-Based Paint
- MM-HAZ-2: Properly Handle and Dispose of Potentially Contaminated Soils and Materials
- MM-BIO-1: Compensate for Permanent Loss of Valley Foothill Riparian
- MM-BIO-2: Tree Replacement Plan
- AMM-BIO-1: Install Construction Barrier Fencing around Environmentally Sensitive Areas
- AMM-BIO-2: Prepare Environmental Awareness Program and Conduct Environmental Awareness Training for Construction Employees
- AMM-BIO-3: Retain a Biological Monitor to Conduct Visits during Construction
- AMM-BIO-4: Avoid and Minimize Potential Disturbance of Valley Foothill Riparian Community
- AMM-BIO-5: Protect Water Quality and Prevent Erosion and Sedimentation in San Francisquito Creek
- AMM-BIO-9: Avoid Work during Active Breeding and Dispersal Period for Special-Status Frogs (October 15 through June 1)
- AMM-BIO-10: Conduct Preconstruction Surveys at Work Sites in and near Frog-Sensitive Areas (no more than 3 days prior to onset of construction)
- AMM-BIO-11: Provide Construction Worker Awareness Training for Special-Status Frogs
- AMM-BIO-12: Install Exclusion Fencing and Conduct Construction Monitoring for Special-Status Frogs
- AMM-BIO-13: Limit Stream Bank Construction to Dry Season (June 1 through October 15)
- SM-CUL-1: If cultural materials are discovered during construction, the contractor will cease all earth-moving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find and recommend/implement appropriate data collection/recovery activities.
- SM-CUL-2: If human remains are discovered, State Health and Safety Code Section 7050.5 states that the contractor will stop further disturbances and activities in any area or nearby area suspected to overlie remains, and the contractor will contact the County Coroner. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC, which will then notify the MLD. At this time, the person who discovered the remains will contact the Caltrans District 4 Office of Local Assistance archaeologist so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable.

With implementation of the above measures, the impacts on aesthetics, unique paleontological resources, hazardous materials, biological resources, and cultural resources are **less than significant with mitigation incorporated**.

b) Does the project have impacts that are individually limited, but cumulatively considerable?

The Project would not have cumulatively considerable impacts on aesthetics, unique paleontological resources, hazardous materials, and biological resources because avoidance, minimization, and mitigation measures proposed for the Project, identified under Topic (a) above, as well as for other reasonably foreseeable future projects would minimize potential impacts on these resources. Impacts would be **less than significant with mitigation incorporated**.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Per Table 2.2.6-3 in Section 2.2.6, *Air Quality*, all construction emissions would be less than the BAAQMD daily threshold except for NO_x, which would be higher than the threshold. With respect to toxic air contaminants, nearby sensitive receptors could be exposed to substantial pollutant concentrations such as diesel particulate matter and emissions of PM_{2.5} from exhaust sources during construction.

As discussed in Section 2.2.7, *Noise*, noise from Project construction activities may intermittently dominate the noise environment in the immediate area of construction. Equipment operations associated with demolition and building activities would be a source of noise. Implementation of detours may increase noise in some areas as a result of temporarily diverted traffic. Noise increases during construction could be substantial at nearby residences.

Impacts are potentially significant and the following mitigation measures and standard measures are proposed (see Section 2.2.6.4, *Avoidance, Minimization, and/or Mitigation Measures*, and Section 2.2.7.4, *Avoidance, Minimization, and/or Mitigation Measures*, for the full description of these measures).

- MM-AQ-1: Utilize clean diesel-powered equipment during construction to control construction-related NO_x emissions
- SM-AQ-1: Implement California Department of Transportation Standard Specifications
- SM-AQ-2: Implement BAAQMD Basic Control Measures to Control Construction-Related Dust
- SM-NOI-1: The construction contractor must comply with Caltrans Standard Specifications Section 14-8.02, Noise Control, which states the following:
 - Control and monitor noise resulting from work activities.
 - Do not exceed 86 dBA at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m.
- SM-NOI-2: All equipment used by the contractor will have sound-control devices that are no less effective than those provided on the original equipment. No equipment will have an unmuffled exhaust.
- SM-NOI-3: The Project proponent and/or their construction contractor will do the following.
 - Review and ensure that construction activities are conducted in accordance with local noise standards from the cities of Palo Alto and East Palo Alto.

- Implement additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity to allowed timeframes, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources, as appropriate.
- MM-NOI-1: Provide advance notification of construction schedule and 24-hour hotline to residents
- MM-NOI-2: Designate a noise disturbance coordinator to address resident concerns
- MM-NOI-3: Install temporary noise barriers

With implementation of these measures, construction air quality emissions would be below all applicable BAAQMD pollutant thresholds with equipment that meets Tier 4 standards, nearby sensitive receptors would not likely be exposed to substantial pollutant concentrations, and potential increases in noise that residents find to be disturbing would be mitigated through the advance notification and noise disturbance coordinator. Therefore, impacts would be **less than significant with mitigation incorporated**.

3.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to GHG emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions. The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." "Greenhouse gas mitigation" is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. "Adaptation" refers to planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

3.3.1 Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce GHG emissions from transportation sources.

3.3.1.1 Federal

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

NEPA (42 USC Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

FHWA recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices. This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability.” Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

The Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR): With this act, Congress set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.

Energy Policy Act of 2005 (109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Standards: This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy (CAFE) program on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

Executive Order (EO) 13514, Federal Leadership in Environmental, Energy, and Economic Performance, 74 Federal Register 52117 (October 8, 2009): This federal EO set sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. It instituted as policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities.

EO 13693, Planning for Federal Sustainability in the Next Decade, 80 Federal Register 15869 (March 2015): This EO reaffirms the policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities. It sets sustainability goals for all agencies to promote energy conservation, efficiency, and management by reducing energy consumption and GHG emissions. It builds on the adaptation and resiliency goals in previous EOs to ensure agency operations and facilities prepare for impacts of climate change. This order revokes EO 13514.

The U.S. Environmental Protection Agency's (EPA's) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions.

EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010 and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules' long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, EPA, and the California Air Resources Board (ARB) will decide on CAFE and GHG emissions standard stringency for model years 2022–2025. NHTSA has not formally adopted standards for model years 2022 through 2025. However, the EPA finalized its mid-term review in January 2017, affirming that the target fleet average of at least 54.5 miles per gallon by 2025 was appropriate. In March 2017, President Trump ordered EPA to reopen the review and reconsider the mileage target.

NHTSA and EPA issued a Final Rule for "Phase 2" for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO₂ emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

Presidential EO 13783, Promoting Energy Independence and Economic Growth, of March 28, 2017, orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

3.3.1.2 State

With the passage of legislation including State Senate Bills (SBs) and Assembly Bills (ABs) and EOs, California has been innovative and proactive in addressing GHG emissions and climate change.

AB 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002: This bill requires ARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

EO S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80% below year 1990 levels by 2050. This goal was further reinforced with the passage of AB 32 in 2006 and SB 32 in 2016.

AB 32, Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

EO S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency and state agencies with regard to climate change.

EO S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10% by the year 2020. ARB re-adopted the low carbon fuel standard regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

SB 97, Chapter 185, 2007, Greenhouse Gas Emissions: This bill requires the Governor's Office of Planning and Research to develop recommended amendments to the CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

SB 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization for each region must then develop a "Sustainable Communities Strategy" that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the state's long-range transportation plan to meet California's climate change goals under AB 32.

EO B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40% below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80% below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO_{2e}). Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

SB 32 Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40% below 1990 levels by 2030.

3.3.2 Environmental Setting

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 (AB 32), which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020. The Scoping Plan was first approved by ARB in 2008 and must be updated every 5 years. ARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. ARB is moving forward with a discussion draft of an updated Scoping Plan that will reflect the 2030 target established in EO B-30-15 and SB 32.

The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California. ARB is responsible for maintaining and updating California's GHG Inventory per H&SC Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided in Figure 3.3-1 represent a business-as-usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists ARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO_{2e}. The 2017 edition of the GHG emissions inventory (released June 2017) found total California emissions of 440.4 MMTCO_{2e}, showing progress towards meeting the AB 32 goals.

The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 MMTCO_{2e} total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO_{2e}.

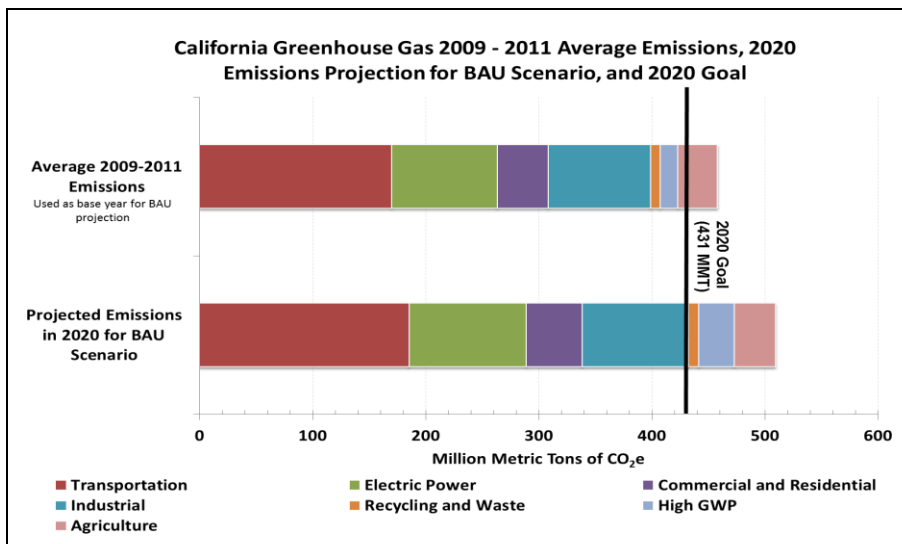


Figure 3.3-1. 2020 Business as Usual (BAU) Emissions Projection 2014 Edition

3.3.3 Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its incremental change in emissions when combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

GHG emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best faith effort to describe the potential GHG emissions related to the proposed project.

Four primary strategies can reduce GHG emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity), (3) transitioning to lower GHG-emitting fuels, and (4) improving vehicle technologies/efficiency. To be most effective all four strategies should be pursued concurrently.

FHWA supports these strategies to lessen climate change impacts, which correlate with efforts that the state of California is undertaking to reduce GHG emissions from the transportation sector.

The highest levels of CO₂ from mobile sources such as automobiles occur at stop-and-go speeds (0–25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0–25 miles per hour (Figure 3.3-2). To the extent that a project relieves congestion by enhancing operations and improving travel times in high-congestion travel corridors, GHG emissions, particularly CO₂, may be reduced.

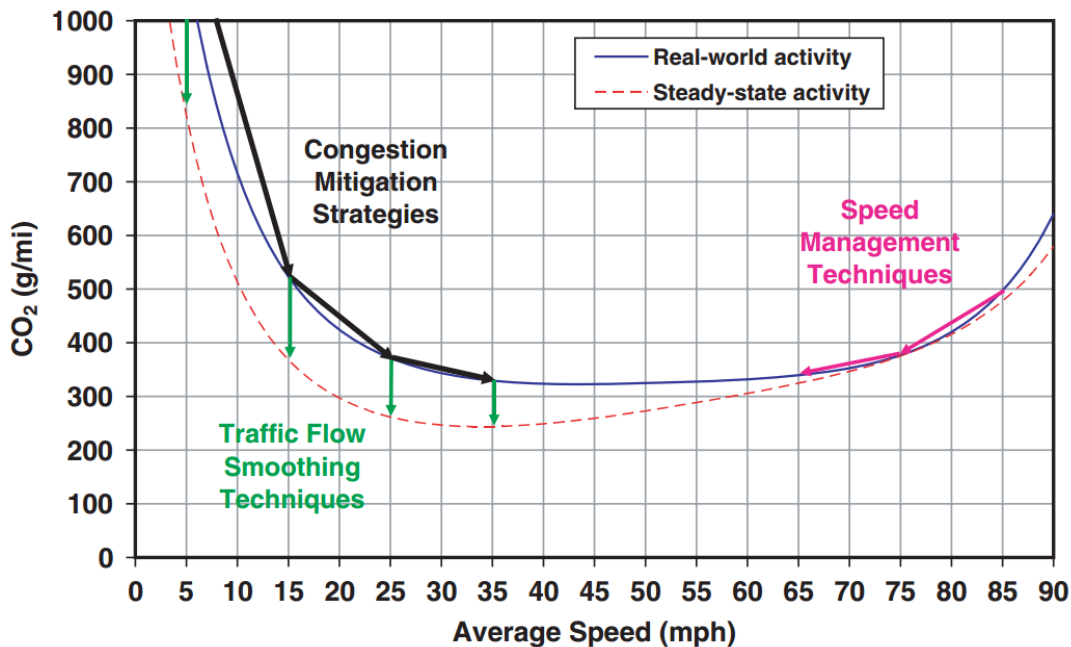


Figure 3.3-2. Possible Effect of Traffic Operation Strategies in Reducing On-Road CO₂ Emission¹

One of the primary purposes of the Project is to improve the operational safety of the existing bridge. Congestion may worsen or improve depending on the specific alternative that is constructed. For example, a one-way bridge with a traffic signal (Build Alternative 1) may result in increased delay and/or congestion due to the addition of the signal. However, replacing the existing one-way bridge with a two-way bridge (Build Alternatives 2–4) may result in improved congestion. The Project is included in the current RTP, Play Bay Area, but, because the Project is intended to improve safety, it is not necessarily consistent with the RTP’s goal of reducing vehicle miles travelled (VMT). It should be noted, however, that replacing the existing bridge with a new bridge would improve bicycle and pedestrian connectivity.

Operational GHG emissions for the Project would occur from the effect of diverted trips. Table 3.3-1 shows the annual GHG emissions that would occur for the Build Alternatives. Currently, there are no federal or state standards set for CO₂ emissions; therefore, the estimated emissions shown in Table 3.3-1 are only useful for a comparison between existing (2016), opening (2020), and design year (2040) conditions. Table 3.3-1 also shows the annual increases in VMT that would occur for each build alternative. This table shows that there would be a reduction in GHG emissions under all build alternatives between 2016, 2020, and 2040 due to improved operation.

As shown in Table 3.3-1, the alternatives would result in different patterns of route diversions, and, consequently, varying increases in VMT and GHG emissions. Increases would be the greatest in 2040 due to the continued growth in population and economic activity in the City of Palo Alto and the surrounding region. Presenting emissions and VMT increases for the existing year, 2020, and 2040 allows for a near- and far-term evaluation of the Project’s impacts on climate change.

¹ Source: Matthew Barth and Kanok Boriboonsomsin, University of California, Riverside, May 2010 (<http://uctc.berkeley.edu/research/papers/846.pdf>)

Table 3.3-1. Summary of Operational GHG Emissions Increases—Existing Year, Opening Year and Design Year (metric tons per year)¹

Year	CO ₂	Other ²	CO _{2e}	Annual VMT Increase Relative to No Build Conditions
2016				
Build Alternative 1	12	1	13	30,002
Build Alternative 2 (LPA)	12	1	13	30,002
Build Alternative 3	18	1	19	45,002
Build Alternative 4	31	2	32	75,004
2020				
Build Alternative 1	11	1	12	31,202
Build Alternative 2 (LPA)	12	1	12	31,202
Build Alternative 3	17	1	18	46,803
Build Alternative 4	29	1	30	78,004
2040				
Build Alternative 1	9	< 1	10	38,093
Build Alternative 2 (LPA)	9	< 1	10	38,093
Build Alternative 3	14	1	15	57,139
Build Alternative 4	24	1	25	95,232

Source: California Department of Transportation 2018

¹ Daily GHG emissions were converted into annual emissions by multiplying by a standard factor of 347 days per year, to account for reduced volumes on weekends

² Includes methane (CH₄), nitrous oxide (N₂O), and other trace GHG emissions emitted by typical passenger vehicles (U.S. Environmental Protection Agency 2014).

CO₂ = carbon dioxide; CO_{2e} = carbon dioxide equivalent; GHG = greenhouse gas; LPA = locally preferred alternative; VMT = vehicle miles travelled

While EMFAC has a rigorous scientific foundation and has been vetted through multiple stakeholder reviews, its emission rates are based on tailpipe emission test data. The numbers are estimates of CO₂ emissions and not necessarily the actual CO₂ emissions. The model does not account for factors such as the rate of acceleration and the vehicles' aerodynamics, which would influence CO₂ emissions. To account for CO₂ emissions, ARB's GHG Inventory follows the Intergovernmental Panel on Climate Change guideline by assuming complete fuel combustion, while still using EMFAC data to calculate CH₄ and N₂O emissions. Though EMFAC is currently the best available tool for use in calculating GHG emissions, it is important to note that the CO₂ numbers provided are only useful for a comparison of alternatives.

3.3.4 Construction Emissions

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

The Sacramento Metropolitan Air Quality Management District’s Road Construction Emissions Model was used to estimate CO₂ emissions from construction activities. Table 3.3-2 summarizes estimated GHG emissions generated by on-site construction equipment over the 12-month construction period. Measures that can be implemented to reduce construction emissions include maintenance of construction equipment and vehicles, limiting of construction vehicle idling time, and scheduling and routing of construction traffic to reduce engine emissions.

Table 3.3-2. GHG Emissions from Construction of Project—All Build Alternatives

Construction Equipment and Construction Worker Commute Trips			
CO₂	CH₄	N₂O	CO₂e
1,093 MT	0.2 MT	0.01 MT	1,000 MT CO ₂ e

Source: California Department of Transportation 2017a

CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent; MT = metric tons

Based on project information available for environmental studies, the construction-related CO₂ emissions were calculated using the Road Construction Emissions Model, version 8.1.0, provided by the Sacramento Metropolitan Air Quality Management District. It was estimated that the total amount of CO₂ produced due to bridge replacement construction would be 1,093 tons annually and for the entire construction period, because the construction duration would be 1 year.

3.3.4.1 CEQA Conclusion

While the build alternatives would result in a slight increase in GHG emissions during construction, it is anticipated that any increase in GHG emissions would be offset by the reduction of GHG emissions from the operational improvements of the build alternatives. Measures to help reduce GHG emissions are outlined in the following section.

3.3.5 Greenhouse Gas Reduction Strategies

3.3.5.1 Statewide Efforts

In an effort to further the vision of California’s GHG reduction targets outlined in AB 32 and SB 32, Governor Brown identified key climate change strategy pillars (concepts), as shown in Figure 3.3-3. These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target. These pillars are (1) reducing today’s petroleum use in cars and trucks by up to 50%; (2) increasing from one-third to 50% our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state’s climate adaptation strategy, Safeguarding California.

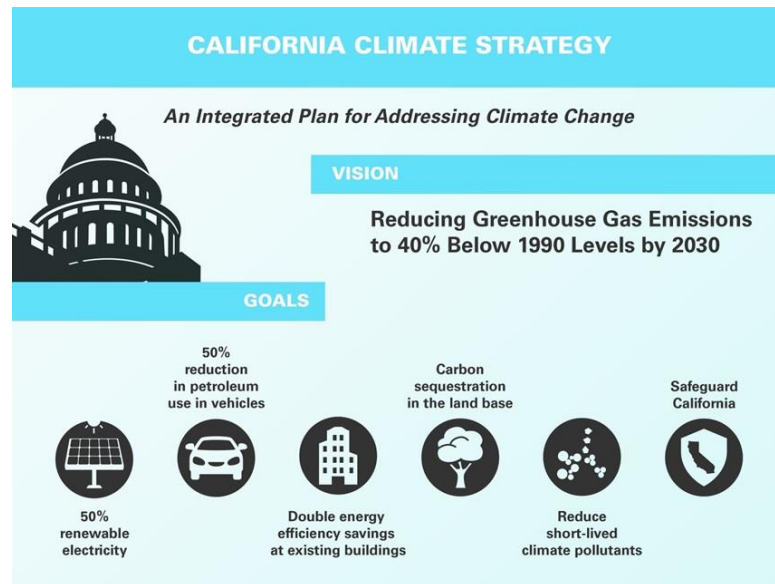


Figure 3.3-3. The Governor’s Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled. One of Governor Brown’s key pillars sets the ambitious goal of reducing today’s petroleum use in cars and trucks by up to 50% by 2030.

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove carbon dioxide from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

3.3.5.2 Caltrans Activities

Caltrans continues to be involved on the Governor’s Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set a new interim target to cut GHG emissions to 40% below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

California Transportation Plan (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California’s future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.

SB 391 (Liu 2009) requires the CTP to meet California’s climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state’s transportation needs. While

Metropolitan Planning Organizations have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

Caltrans Strategic Management Plan

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT per capita
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several funding and technical assistance programs that have GHG reduction benefits. These include the Bicycle Transportation Program, Safe Routes to School, Transportation Enhancement Funds, and Transit Planning Grants. A more extensive description of these programs can be found in Caltrans Activities to Address Climate Change (2013).

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce GHG emissions resulting from agency operations.

3.3.5.3 Project-Level GHG Reduction Strategies

The following measures will also be implemented in the Project to reduce GHG emissions and potential climate change impacts from the Project.

- Landscaping reduces surface warming, and through photosynthesis, decreases carbon dioxide. The Project will include landscaping, as described in Section 2.1.5, *Visual/ Aesthetics*. The landscaping will help to offset potential carbon dioxide emissions.
- The Project will utilize energy-efficient lighting, which will be defined during final design.
- According to the Caltrans Standard Specifications, the contractor must comply with all local Air Pollution Control District's rules, ordinances, and regulations in regards to air quality restrictions, as described in Section 2.2.6, *Air Quality*.
- To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times, as described in Section 2.2.6, *Air Quality*.
- Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by California Code of Regulations Title 17, Section 93114, as described in Section 2.2.6, *Air Quality*.

3.3.5.4 Adaptation Strategies

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage—or, put another way, planning and design for resilience. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. These types of impacts on the transportation infrastructure may also have economic and strategic ramifications.

Federal Efforts

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the Council on Environmental Quality, the Office of Science and Technology Policy, and the National Oceanic and Atmospheric Administration, released its interagency task force progress report on October 28, 2011, outlining the federal government's progress in expanding and strengthening the nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provided an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as fresh water, and providing accessible climate information and tools to help decision-makers manage climate risks.

The federal Department of Transportation (USDOT) issued USDOT Policy Statement on Climate Adaptation in June 2011, committing to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of USDOT in order to ensure that taxpayer resources are invested wisely and that transportation infrastructure, services and operations remain effective in current and future climate conditions.”

To further the USDOT Policy Statement, in December 15, 2014, FHWA issued order 5520 (Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events). This directive established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The FHWA will work to integrate consideration of these risks into its planning, operations, policies, and programs in order to promote preparedness and resilience; safeguard federal investments; and ensure the safety, reliability, and sustainability of the nation’s transportation systems.

FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels.

State Efforts

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California’s vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level

rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, and storm surge and storm wave data.

Governor Schwarzenegger also requested the National Academy of Sciences to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, *Sea-Level Rise for the Coasts of California, Oregon, and Washington (Sea-Level Rise Assessment Report)* was released in June 2012 and included relative sea-level rise projections for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates; and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise impacts on state infrastructure (such as roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and a discussion of future research needs regarding sea-level rise.

In response to EO S-13-08, the California Natural Resources Agency (Resources Agency), in coordination with local, regional, state, federal, and public and private entities, developed *The California Climate Adaptation Strategy* (December 2009), which summarized the best available science on climate change impacts on California, assessed California's vulnerability to the identified impacts, and outlined solutions that can be implemented within and across state agencies to promote resiliency. The adaptation strategy was updated and rebranded in 2014 as *Safeguarding California: Reducing Climate Risk (Safeguarding California Plan)*.

Governor Jerry Brown enhanced the overall adaptation planning effort by signing EO B-30-15 in April 2015, requiring state agencies to factor climate change into all planning and investment decisions. In March 2016, sector-specific Implementation Action Plans that demonstrate how state agencies are implementing EO B-30-15 were added to the Safeguarding California Plan. This effort represents a multi-agency, cross-sector approach to addressing adaptation to climate change-related events statewide.

EO S-13-08 also gave rise to the *State of California Sea-Level Rise Interim Guidance Document (SLR Guidance)*, produced by the Coastal and Ocean Working Group of the California Climate Action Team, of which Caltrans is a member. First published in 2010, the document provided "guidance for incorporating sea-level rise (SLR) projections into planning and decision making for projects in California," specifically, "information and recommendations to enhance consistency across agencies in their development of approaches to SLR." The March 2013 update finalizes the SLR Guidance by incorporating findings of the National Academy's 2012 final *Sea-Level Rise Assessment Report*; the policy recommendations remain the same as those in the 2010 interim SLR Guidance. The guidance will be updated as necessary in the future to reflect the latest scientific understanding of how the climate is changing and how this change may affect the rates of SLR.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation, and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is actively engaged in working towards identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in EO B-30-15.

The Project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts on transportation facilities due to projected sea-level rise are not expected.

3.4 Environmentally Superior Alternative

The State CEQA Guidelines require that an environmentally superior alternative be identified. The environmentally superior alternative is the alternative that would avoid the environmental impacts associated with a project or lessen them to the greatest extent while feasibly obtaining most of the major project objectives. If the alternative with the least environmental impact is determined to be the No-Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Table ES-1 in the Summary and the various sections of Chapters 2 and 3 provide a comparison of the environmental impacts of the build alternatives. The No Build Alternative would have less of an environmental impact on almost all environmental resource topics but a slightly greater impact on hydrology and water quality due to the absence of additional bank stabilization activities. Build Alternatives 1 and 2 would require one less Temporary Construction Easement than Build Alternatives 3 and 4. Under 2020 and 2040 traffic scenarios, there is no substantial difference in LOS and delay between the build alternatives, with the exception of Build Alternative 1. Build Alternatives 2, 3, and 4, accounting for the increase in traffic along Newell Road, do not substantially alter the LOS under either of the scenarios. Build Alternative 1, however, results in a higher delay at Newell Road/Woodland Avenue (North Leg) for both scenarios, as compared to Build Alternatives 2, 3, and 4.

Build Alternatives 1, 2, and 3 would result in a moderate visual impact, while Build Alternative 4 would result in a moderate-high visual impact. Build Alternative 1 would result in the least amount of disturbed soil area, added impervious surfaces, and impact on natural communities and trees, while Build Alternative 4 would result in the greatest amount, with Build Alternatives 2 and 3 in the middle. Build Alternatives 3 and 4 could impact sensitive paleontological resources during construction, while Build Alternatives 1 and 2 would not. The bridge alignment under Build Alternative 4 would result in a slightly higher noise increase at the nearest receivers of up to 2 dB relative to existing conditions, and up to 1 dB under future no-Project conditions.

The No Build Alternative would be the environmentally superior alternative among all of the alternatives because it would result in fewer impacts overall. However, because the No Build Alternative would not fulfill the purpose and need of the Project and is required to be included in the EIR by CEQA, another alternative must be identified as the environmentally superior alternative.

Build Alternative 2 would generally result in fewer environmental impacts when compared to the other build alternatives because the existing alignment of the bridge would not change. In addition, Build Alternative 2 would not result in the higher delay at Newell Road/Woodland Avenue (North Leg) that Build Alternative 1 would result in. Therefore, Build Alternative 2 is considered the environmentally superior alternative.

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Chapter 4

Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this Project have been accomplished through a variety of formal and informal methods, including Project Development Team meetings, interagency coordination meetings, letters, phone calls, and meetings with the public. This chapter summarizes the results of the California Department of Transportation's (Caltrans') and the City of Palo Alto's efforts to fully identify, address, and resolve Project-related issues through early and continuing coordination. Copies of agency correspondence are included in Appendix D.

4.1 Scoping Process

The Notice of Preparation, which initiated the scoping process, was released in August 2015 and is included in Appendix C. A scoping meeting was held by the Cities of Palo Alto and East Palo Alto on September 3, 2015, at 6:30 p.m. at the Palo Alto City Hall Council Chambers, 250 Hamilton Avenue, Palo Alto. City and consultant staff presented a PowerPoint presentation that described the Project and the environmental review process. Following the presentation, oral comments were accepted. Attendees were also invited to fill out public comments. A total of 47 public comments were received during the comment period, which lasted from August 12, 2015, through September 14, 2015. The City of Palo Alto recorded the meeting, which can be viewed online at the following link: <http://midpenmedia.org/newell-roadsan-francisquito-creek-bridge-replacement-project/>.

The main concern raised by commenters was that realigning the bridge would result in an increase in traffic flow, speed, and bad driving behaviors; however, many commenters said that the realignment would increase vehicle, bicycle, and pedestrian safety.

4.2 Agency Consultation

This section summarizes the results of contact and consultation with other public agencies during project development. These include specific consultation with federal, state, and local agencies listed below. Copies of written consultation with agencies are included in Appendix D unless otherwise noted.

4.2.1 U.S. Fish and Wildlife Service

Caltrans conducted informal consultation with the U.S. Fish and Wildlife Service (USFWS). USFWS reviews projects consistent with Section 7 of the Federal Endangered Species Act, focusing on identified or potential impacts to protected plant and wildlife species for the build alternatives as described in Section 2.3.5, *Threatened and Endangered Species*. Consultation with USFWS is also required under the Federal Fish and Wildlife Coordination Act for any impacts to a stream or water

body. Caltrans requested informal consultation on the California red-legged frog and sent a letter to USFWS on January 22, 2018. Concurrence from USFWS was received on March 20, 2018. Correspondence with USFWS is contained in Appendix D.

4.2.2 National Marine Fisheries Service

Caltrans conducted informal consultation with the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service). NOAA Fisheries Service also reviews projects consistent with Section 7 of the Federal Endangered Species Act, focusing on identified or potential impacts to protected marine species for the build alternatives as described in Section 2.3.5, Threatened and Endangered Species. Caltrans requested informal consultation on the Central California Coast steelhead and essential fish habitat and sent a letter to the NOAA Fisheries Service on January 22, 2018. Concurrence from the NOAA Fisheries Service was received on March 29, 2018. Correspondence with NOAA Fisheries Service is contained in Appendix D.

4.2.3 U.S. Army Corps of Engineers

Any filling of wetlands or impacts to the waters of the United States or navigable waters requires permit review and approval by the U.S. Army Corps of Engineers (USACE) consistent with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. Impacts to wetlands are not anticipated under any of the build alternatives, although impacts on waters of U.S. and waters of the State are anticipated, as described in Section 2.3.2, *Wetlands and Other Waters of the United States*. The *Delineation of Waters of the United States* will be submitted to USACE for their review and verification of the presence of jurisdictional waters prior to completion of the environmental process. The City of Palo Alto will also begin consultation with USACE to obtain a Section 404 permit before the Final EIR/EA is approved.

4.2.4 U.S. Environmental Protection Agency

The City of Palo Alto will consult the U.S. Environmental Protection Agency to obtain a Section 402 Clean Water Act permit which controls discharges of Municipal Separate Storm Sewer Systems. Consultation to obtain this permit will begin before the Final EIR/EA is approved.

4.2.5 Federal Highway Administration

The Federal Highway Administration's (FHWA's) plans, programs, and projects are required to conform to the applicable State Implementation Plan for achieving National Ambient Air Quality Standards. This applies to transportation plans, transportation improvement programs, and projects funded or approved by FHWA or the Federal Transit Administration in areas that do not meet or previously have not met air quality standards for ozone (O₃), carbon monoxide (CO), particulate matter, or nitrogen dioxide (NO₂). The Project area is exempt from regional conformity analysis requirements, as described in Section 2.2.6, *Air Quality*. Caltrans requested that FHWA issue a project-level conformity determination for this Project, confirming that the project conforms to the purpose of the State Implementation Plan for achieving the National Ambient Air Quality Standards. FHWA issued the conformity determination on February 24, 2020. Correspondence with FHWA is contained in Appendix D.

4.2.6 State Historic Preservation Officer

Federally funded transportation projects must follow FHWA and Caltrans procedures for historic preservation. A Programmatic Agreement for compliance with Section 106 of the National Historic Preservation Act would apply to this Project. No resources in the Project area were identified as being eligible for the National Register of Historic Places. A letter was sent to the State Historic Preservation Officer on October 27, 2017, to confirm the eligibility determinations of the properties in the area of potential effects. On November 30, 2017, they concurred with the findings that the properties evaluated are not eligible for the National Register of Historic Places. Correspondence with the State Historic Preservation Officer is contained in Appendix D.

4.2.7 State Water Resources Control Board

Projects that disturb 1 acre or more of land must obtain coverage under the statewide Construction General Permit (State Water Resources Control Board Order No. 2009-0009-DWQ, amended by 2010-0014-DWQ and 2012-0006-DWQ). To obtain coverage, a Notice of Intent and a Stormwater Pollution Prevention Plan will be filed with the State Water Resources Control Board prior to the commencement of construction.

4.2.8 San Francisco Bay Regional Water Quality Control Board

The Project will obtain a Section 401 permit from the San Francisco Bay Regional Water Quality Control Board, with consultation beginning prior to approval of the Final EIR/EA. Under Section 401 of the Clean Water Act, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards.

4.2.9 California Department of Fish and Wildlife

The Project will initiate consultation with the California Department of Fish and Wildlife (CDFW) prior to approval of the Final EIR/EA. All four build alternatives proposed would modify the creek and riparian vegetation in a manner that would require Notification of Lake or Streambed Alteration from CDFW.

4.2.10 Santa Clara Valley Water District

Work within the floodwalls adjacent to San Francisquito Creek would require a District Well Ordinance Permit (per Santa Clara Valley Water District Ordinance 90-1) for excavation that intersects a groundwater aquifer, an Encroachment Permit for activities within Santa Clara Valley Water District fee title property or easements, and a Water Resources Protection Ordinance Permit for activities that may impact Santa Clara Valley Water District facilities, or activities located within Santa Clara Valley Water District fee title property or easements.

4.3 Tribal Consultation

The Native American Heritage Commission (NAHC) was contacted on June 20, 2012, to identify any areas of concern within the area of potential effect (APE) that may be listed in the NAHC's Sacred Lands File. The NAHC responded on July 10, 2012, stating that a search of their files failed to indicate the presence of Native American cultural resources in the immediate APE. The NAHC provided a list of nine Native American contacts that might have information pertinent to this project, or have concerns regarding the proposed actions.

A letter explaining the proposed Project, along with a map depicting the APE, was then sent to the contacts listed by the NAHC on November 16, 2012, in addition to one representative who requested the information, for a total of 10. The letter also solicited responses from each of the contacts, should they have any questions, comments, or concerns regarding the proposed Project. Due to the passage of time, updated letters were sent on September 2, 2015, to all of the contacts. The letters provided project updates and an updated project map to the Native American contacts. Further follow-up communications were conducted via telephone on September 21, 2015, to all 10 individuals. Additional phone calls were made on August 28, 2017, and September 5, 2017.

Most individuals were unable to be reached and a phone message with project details and a request for a return call was left at the number provided. Among those who responded, concerns included a request that an archaeologist be present in case any sensitive material or possible burials are uncovered during project-related ground disturbance, and a request for an updated record search. Per this request, an additional record search was completed in October 2017. One additional study was noted, but no new or additional previously recorded cultural resources have been submitted to the Northwest Information Center since the last record search was completed in 2016.

4.4 Public Participation

4.4.1 Community-Based Organizations

A public open house was held by the City of Palo Alto on June 27, 2012, at the Community Room of the East Palo Alto Family YMCA (550 Bell Street). Attendees of the meeting could view Project information and graphics and interact with Project staff. The City of Palo Alto gave a PowerPoint presentation of an overview of the Project, purpose, and alternatives; after the presentation, the attendees were invited to ask questions and fill out comment cards. Written comments were accepted for 2 weeks after the public meeting.

The main concern raised by commenters was that realigning the bridge would result in an increase in traffic flow; however, many commenters said that the realignment would increase vehicle, bicycle, and pedestrian safety.

4.4.2 Public Hearing

A public hearing was conducted for the release of the Draft Environmental Impact Report/Environmental Assessment. The public hearing was held on July 18, 2019, at the Palo Alto City Hall Council Chambers at 250 Hamilton Avenue, Palo Alto, CA 94301, at 8:30 a.m. Caltrans and City of Palo Alto staff were present to discuss the Project's design features and environmental aspects and to answer questions. Three additional meetings were also held to gather feedback from the community, on June 12, 2019 at the City of Palo Alto Planning and Transportation Commission, on June 18, 2019 at the City of Palo Alto Newell Road Bridge Community Meeting, and on June 19, 2019 at the City of East Palo Alto Public Works Transportation Committee.

Members of the public had the opportunity to comment on the Project during public circulation of the Draft Environmental Impact Report/Environmental Assessment. Comments were submitted via post mail to Michel Jeremias at the City of Palo Alto, Department of Public Works, 250 Hamilton Ave 6th Floor, Palo Alto, CA 94301, or via email to Michel.Jeremias@CityofPaloAlto.org. Comments were submitted by July 30, 2019. These comments and responses to all comments are included in Appendix F.

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Chapter 5

List of Preparers

The following City staff, Caltrans staff and consultants contributed to the preparation of this EIR/EA.

California Department of Transportation

Hugo Ahumada, Associate Environmental Planner. Contribution: Environmental document review.

Allen Baradar (retired), Supervising Transportation Engineer. Contribution: Environmental document review.

Helen Blackmore, Associate Environmental Planner, Architectural History. Contribution: Environmental document review.

Keevan Harding, Environmental Planner – Natural Sciences. Contribution: Environmental document review.

Tom Holstein, Senior Environmental Planner. Contribution: Environmental document review.

Daisy Laurino, Transportation Engineer. Contribution: Environmental document review.

Beck Lithander, Landscape Associate. Contribution: Environmental document review.

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Shiang Yang, Transportation Engineer (Retired). Contribution: Environmental document review.

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Jennifer Andersen, AICP, Project Manager. B.A. Environmental Studies, University of Southern California. 6 years of experience in environmental planning and document preparation. Contribution: Project management, author of EIR/EA.

Lily Arias, Archaeologist. B.A. History, University of California, Los Angeles. M.A. Cultural Resources Management, Sonoma State University. 8 years experience in cultural resources management. Contribution: Archaeological Survey Report.

Michael J. Brady, Senior Technical Analyst. B.S. City & Regional Planning, Cal Poly San Luis Obispo. 19 years experience in transportation conformity and advance transportation planning; 12 years experience in CEQA and NEPA document preparation and technical studies; 10 years experience in land use and coastal planning. Contribution: Transportation Conformity interagency consultation and related analysis, AQ tech memo.

Eric Christensen, Biologist. B.S. Evolution and Ecology, University of California at Davis. 13 years experience in special-status species, regulatory compliance, and environmental planning and permitting. Contribution: Environmental document preparation, site assessment for California red-legged frog, and technical review.

Torrey Edell, Senior Botanist/Wetlands Biologist B.S. Ecology and Systematic Biology, California Polytechnic State University. 12 years experience in environmental document preparation, botany, and wetlands biology. Contribution: Wetland Delineation and Environmental Document Preparation.

Tait Elder, Senior Archaeologist, B.A., Anthropology (Geology Minor), Western Washington University, Bellingham. M.A. Anthropology, Portland State University, Portland. 14 year experience in cultural resources management and archaeology. 8 years experience in geoarchaeology. Contribution: Senior review of the Archaeological Survey Report.

Stacy Farr, Architectural Historian. M.A. Architectural History, University of California, Santa Barbara; M. S. Architectural History, University of California, Berkeley. 9 years' experience in architectural evaluation and review. Contribution: Historic Property Survey Report, Historical Resources Evaluation Report.

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Nolte Vertical 5

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6.1 Introduction

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Chapter 1 Proposed Project

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2.2.1 Hydrology and Floodplain

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Appendix A

Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION

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*Making Conservation
a California Way of Life.*

November 2019

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page:
<https://dot.ca.gov/programs/business-and-economic-opportunity/title-vi>.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

A handwritten signature in blue ink, appearing to read "Toks Omishakin".

Toks Omishakin
Director

Avoidance, Minimization, and/or Mitigation Summary

In order to be sure that all of the environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record [ECR] which follows) would be implemented. During project design, avoidance, minimization, and /or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments contained in this ECR are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. Note: Some measures may apply to more than one resource area. Duplicative or redundant measures have not been included in this ECR. Standardized measures are coded as SM, avoidance and minimization measures are coded as AMM, and mitigation measures are coded as MM.

Community Impacts
AMM-COM-1: The contractor will provide bilingual notification of construction activities including any utility disruptions to the local residents and businesses.
<p>AMM-COM-2: The contractor will maintain ongoing coordination with the Orthodox Jewish Community during pre-construction and construction of the Project. In the event that the poles supporting the eruv over Newell Road require moving during any period of construction when the bridge structure is in place and accessible to pedestrians, the contractor will take the following steps to ensure a temporary eruv is in place prior to any Friday evening.</p> <ul style="list-style-type: none"> • The existing poles must be dug out completely so that they may be reused. • Temporary replacement shall be installed consisting of 20-foot conduits to be fastened to nearby structures. • Fishing line, or other unobtrusive wire, shall be fastened to the conduits to maintain the eruv alignment.
AMM-COM-3: Access to all properties for property owners and users will be maintained by the contractor during construction.
Utilities/Emergency Services
SM-UT-1: The contractor will provide bilingual notification of construction activities including any utility disruptions to the local residents and businesses.
Traffic and Transportation/Pedestrian and Bicycle Facilities
<p>SM-TR-1: A TMP will be prepared by the Project proponent or its contractor, approved by the City of Palo Alto, and will be implemented by the contractor during construction activities. The TMP will contain requirements for public noticing, traffic control implementation, signage, property and business access, parking, and safety during construction. It also will contain information about the construction schedule and detours.</p> <ul style="list-style-type: none"> • Advance notice and coordination with businesses and property owners will be included in the TMP to minimize any potential temporary impacts on commute times. • Advance notice and coordination with emergency service providers will be included in the TMP to minimize any potential temporary impacts on response times.
AMM-TR-1: Access along Edgewood Drive for the southeast resident's driveway will be maintained by the contractor at all times during construction.

<p>AMM-TR-2: On Woodland Avenue, the contractor will maintain one-lane of traffic to assure passage along Woodland Avenue during the majority of construction. When one-lane of traffic is not available a detour route will be identified. The construction zone will be established such that the maximum amount of existing parking is available in the area during non-construction hours.¹ Access for all residents on Woodland Avenue in the study area will be maintained throughout the construction period.</p>
<p>AMM-TR-3: The City of Palo Alto shall coordinate with the City of East Palo Alto to identify nearby locations including private parcels where additional parking accommodations can be provided during construction.</p>
<p>AMM-TR-4: During stages 2, 3, and 4 of construction, the contractor will make accommodations for nighttime parking during non-construction hours. This would include opening the work zone up for residents to park at night and utilizing head-in (perpendicular) parking rather than parallel parking in these areas.</p>
<p>Visual/Aesthetics</p>
<p>MM-AES-1: Install Visual Barriers between Construction Work Areas and Sensitive Receptors. The contractor shall install visual barriers to obstruct undesirable views of construction activities and staging areas from sensitive receptors, namely residents and viewers on neighborhood sidewalks and streets, which are located adjacent to the construction site. The visual barrier may be chain link fencing with privacy slats, fencing with windscreen material, wood, or other similar barrier. The visual barrier shall be a minimum of six (6) feet high to help to maintain the privacy of residents and block long-term ground-level views toward construction activities. While this visual barrier would introduce a visual intrusion, it would greatly reduce the visual effects associated with visible construction activities and screening construction activities and protecting privacy is deemed desirable by residents. The contractor shall also provide daily visual inspections to ensure the immediate surroundings of construction staging areas are free from construction-related clutter and to maintain the areas in a clean and orderly manner throughout the construction period.</p>
<p>MM-AES-2: Replace or Relocate Site Features and Landscaping Affected by the Project. Where appropriate and to the degree possible, the contractor will relocate, replace, or restore in kind landscaping and related appurtenances, such as fencing, driveway gates, and similar features that would be removed from private properties as a result of construction to reduce visual impacts and to maintain the quality of views from neighborhood roadways and sidewalks. If the site cannot accommodate this relocation or replacement, then the Project proponent will compensate parcel owners for site features (e.g., fencing, mailboxes, driveway gates) and landscaping that would be removed or damaged as a result of the Project. Replacement of site features and landscaping would be of value at least equal to that of existing features.</p>
<p>MM-AES-3: Implement Project Design Aesthetics. The City of Palo Alto will implement an aesthetic design treatment with a consistent motif for new structures such as retaining walls, bridge sides, fencing, and wing walls. Choosing earth-toned colors for the surfaces would be less distracting to viewers than light or brightly colored surfaces. The shade of the wall will also be carefully considered to complement the project setting. However, studies have shown that structures two (2) to three (3) degrees darker than the color of the general surrounding area have the ability to complement the surrounding vegetation and create less of a visual impact than matching or lighter hues (U.S. Bureau of Land Management 2008). Safety barriers and fencing will be chosen, and could be plastic, powder, or vinyl coated with colors selected using the U.S. Bureau of Land Management selection techniques to</p>

¹ The allowed hours of construction are M-F 8-6PM, Sat 9AM-6PM in Palo Alto (Municipal Code 09.10.060) and M-F 7AM-6PM, Sat 9AM-5PM in East Palo Alto (Municipal Code 15.04.125), and both jurisdictions prohibit construction activities on Sunday/Holidays,

make fences to appear more see-through than non-treated, light grey fencing that acts as a visual barrier to a degree.

The design of the bridge will be reviewed and approved by the City of Palo Alto Architectural Review Board. The Architectural Review Board is a recommending body that reviews projects and provides recommendations to the Director of Planning or Council. The Project would require Architectural Review in accordance with Palo Alto Municipal Code Section 18.76.020. The Architectural Review Board reviews the project for consistency with a series of findings outlined in the municipal code relating to aspects such as compatibility with the immediate environment of the site; compatibility with the design character of the surrounding area; harmonious transitions in scale and character in areas between different designated land uses; internal sense of order; amount and arrangement of open space; integration of natural features; and appropriate materials, textures, colors and details of construction and plant material. Although some architectural refinements may be expected as the Architectural Review Board process proceeds, such refinements are not expected to change the impact conclusions in this environmental analysis.

MM-AES-4: Implement Project Streetscaping and Plantings along Top of Creek Bank.

Streetscaping and planting native vegetation at the tops of the creek's banks will improve the visual quality of the roadway corridor by improving corridor aesthetics. The City of Palo Alto will select street tree species from the Cities' approved list of street trees or will be selected to match existing street trees in close proximity to the Project corridor and in compliance with the Urban Forest Master Plan², Palo Alto Tree Technical Manual³ and East Palo Alto's Development Code. Replacement street trees shall have attributes that are at least equivalent to the trees that are removed or that provide a higher degree of aesthetic benefit such as better fall color, interesting bark, or less tree litter. Tree and shrub plantings along the tops of the creek's banks will be installed where space allows and will utilize native plant species that are indigenous to the riparian corridor. Low-lying evergreen and deciduous shrubs and groundcovers, such as *Ceanothus* spp., and an herbaceous understory will also be planted. Plant variety will increase the effectiveness of the streetscape by providing multiple layers, seasonality, and reduced susceptibility to disease. Special attention should be paid to plant choices to prevent driving hazards by obscuring site distances. Vegetation shall be planted within the first six (6) months following Project completion. An irrigation and maintenance program will be implemented during the plant establishment period and carried on, as needed, to ensure plant survival. However, design of the landscaping plan will try to maximize the use of planting zones that are water efficient. The design may also incorporate aesthetic features, such as a cobbling swales or shallow detention areas, which can reduce or eliminate the need for irrigation in certain areas.

MM-AES-5: Apply minimum lighting standards. The contractor and the City of Palo Alto will limit all artificial outdoor lighting to safety and security requirements, designed using Illuminating Engineering Society's design guidelines, and in compliance with International Dark-Sky Association approved fixtures. All lighting is designed to have minimum impact on the surrounding environment and will use downcast, cut-off type fixtures that are shielded and direct the light only towards objects requiring illumination. Therefore, lights will be installed at the lowest allowable height and cast low-angle illumination while minimizing incidental light spill onto adjacent properties, the creek corridor, or backscatter into the nighttime sky. Shielding will also be employed for traffic signals. Light fixtures will have non-glare finishes that will not cause reflective daytime glare. Lighting will be designed for energy efficiency and have daylight sensors or be timed with an on/off program.

LED lighting will avoid the use of blue-rich white light lamps and use a correlated color temperature that is no higher than 3,000 Kelvin, consistent with the International Dark-Sky Associations Fixture Seal of Approval program (International Dark-Sky Association 2010a, 2010b, 2015). In addition, LED

² Available: <https://www.cityofpaloalto.org/civicax/filebank/documents/36187>

³ Available: <http://www.cityofpaloalto.org/civicax/filebank/documents/6436>

<p>lights will use shielding to ensure nuisance glare and that light spill does not affect sensitive residential viewers.</p> <p>Technologies to reduce light pollution evolve over time and design measures that are currently available may help but may not be the most effective means of controlling light pollution once the project is designed. Therefore, all design measures used to reduce light pollution will employ the technologies available at the time of project design to allow for the highest potential reduction in light pollution.</p> <p>Lastly, due to the short bridge length, jurisdiction limitations, and in an effort to provide a sidewalk free of obstructions, lighting is not currently proposed on the bridge. On the East Palo Alto side, electrical services are provided by Pacific Gas and Electric and would need to be slightly relocated to accommodate a wider bridge. On the Palo Alto side, an existing light will be replaced along Newell Road, due to the change in grade, in approximately the same location. The relocated light would be less than 80-feet away from the bridge. It is not anticipated that additional lighting would be needed on the bridge. If an additional light is needed in the vicinity, a City standard light could be added on the roadway on the Palo Alto side. This light, if needed, as well as the other lights being replaced would be required to conform to City standards.</p>
Cultural Resources
<p>SM-CUL-1: If cultural materials are discovered during construction, the contractor will cease all earth-moving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find and recommend/implement appropriate data collection/recovery activities.</p>
<p>SM-CUL-2: If human remains are discovered, State Health and Safety Code Section 7050.5 states that the contractor will stop further disturbances and activities in any area or nearby area suspected to overlie remains, and the contractor will contact the County Coroner. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC, which will then notify the MLD. At this time, the person who discovered the remains will contact the District 4 Cultural Resources Studies Office so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable.</p>
Water Quality and Storm Water Runoff
<p>SM-WQ-1: Implement NPDES Permit and Construction General Permit Water Quality Measures. The Project will comply with the provisions of the California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Storm water NPDES Permit (Order No. R2-2015-0049-DWQNPDES No. CAS612008) and the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2009-0009-DWQ, NPDES No. CAS000002 as amended by 2010-0014-DWQ and 2012-0006-DWQ and any subsequent permits in effect at the time of construction. In addition, the Project proponent and/or their construction contractor shall ensure the construction specifications include water quality protection and erosion and sediment control BMPs to minimize construction-related contaminants and mobilization of sediment to San Francisquito Creek. The Project proponent will perform routine inspections of the construction area to verify the BMPs are properly implemented and maintained.</p>

<p>SM-WQ-2: Prepare and Implement SWPPP. The project will comply with the Construction General Plan by preparing and implementing a SWPPP to address all construction-related activities, equipment, and materials that have the potential to impact water quality for the appropriate risk level. The SWPPP will identify the sources of pollutants that may affect the quality of storm water and include BMPs to control the pollutants, such as sediment control, catch basin inlet protection, construction materials management, and non-storm water BMPs. All work must conform to the construction site BMP requirements specified in the latest edition of the Caltrans Construction Site Best Management Practices Reference Manual (California Department of Transportation 2011) to control and minimize the impacts of construction and construction-related activities, materials, and pollutants on the watershed. These include, but are not limited to, temporary sediment control, temporary soil stabilization, scheduling waste management, materials handling, and other non-storm water BMPs. In addition, a temporary creek flow diversion will be installed prior to any construction to prevent sediments from washing downstream. Temporary BMPs will be selected and identified in the SWPPP to protect water bodies, within or near the project limits, from potential storm water runoff resulting from construction activities. Temporary sediment and erosion control measures may include the following.</p> <ul style="list-style-type: none"> • Fiber rolls and/or silt fences. • Gravel bag berm. • Rolled erosion-control product (e.g., netting). • Designated construction entrance/exit. • Re-establishment of vegetation or other stabilization measures (hydroseeding, mulch) on DSAs and newly constructed slopes. • Wind erosion control.
<p>AMM-WQ-1: Flood Capacity. The City of Palo Alto will not reduce the flood capacity of existing drainage or water conveyance features within the Project study area during construction or operation in a way that causes ponding or flooding during storm events.</p>
<p>AMM-WQ-2: Limit Stream Bank Construction to Dry Season. The contractor will limit stream bank construction from June 1 to October 15 in order to avoid the migratory season for adult steelhead and to limit any excess sedimentation and runoff from entering San Francisquito Creek.</p> <p>The Project proponent will compensate for temporary construction-related loss of valley foothill riparian habitat by replanting trees in the temporarily disturbed area after completion of the construction activities and before October 15 to minimize erosion and sedimentation into San Francisquito Creek.</p> <p>The Project proponent will compensate for the permanent loss of riparian vegetation by planting riparian trees at a minimum ratio of 3:1 (three trees planted for every one tree removed) in the project vicinity as determined appropriate by a qualified biologist and Project proponent. This ratio and the location will be confirmed through coordination with the Project proponent and other agencies as part of the permitting process for the Project.</p>
<p>Geology/Soils/Seismic/Topography</p>
<p>SM-GEO-1: The City of Palo Alto will adhere to current Caltrans SDC for bridge design and construction.</p>
<p>Paleontology</p>
<p>MM-PA-1: Educate workers, stop work in case of discovery of paleontological resources, and Prepare and Implement a Recovery Plan. Given the potential for paleontological resources to be present in construction areas at ground surface and at excavation depths below 5 feet in sensitive geologic units in the Project area, the following measures will be undertaken to avoid any potentially significant effect from the improvements on paleontological resources. Before the start of any excavation, the California Department of Transportation (Caltrans) and the City of Palo Alto will retain a qualified paleontologist, as defined by the Society of Vertebrate Paleontology. If paleontological</p>

<p>resources are discovered during earthmoving activities, the construction crew will immediately cease work near the find and notify Caltrans and the City of Palo Alto. Construction work in the affected areas will remain stopped or be diverted to allow recovery of fossil remains in a timely manner. Caltrans and the City of Palo Alto will retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in accordance with Society of Vertebrate Paleontology guidelines (Society of Vertebrate Paleontology 2010). The recovery plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by Caltrans and the City of Palo Alto to be necessary and feasible will be implemented before construction activities can resume at the site where the paleontological resources were discovered. Caltrans and the City of Palo Alto will be responsible for ensuring that the paleontologist's recommendations regarding treatment and reporting are implemented.</p>
<p>Hazardous Waste/Materials</p>
<p>MM-HAZ-1: All paint will be treated as lead-containing for the purposes of complying with Division of Occupational Safety and Health worker safety requirements, which apply to all worksites where construction workers may be exposed to lead. The California Department of Transportation (Caltrans) and the City of Palo Alto will have all lead-based paint abated and removed by a licensed lead-based paint contractor. The licensed lead-based paint contractor shall dispose of all lead-based paint or coatings at landfills that meet acceptance criteria for the waste being disposed.</p>
<p>MM-HAZ-2: Caltrans and the contractor shall stockpile soil generated by construction activities on site in a secure and safe manner. All contaminated soils determined to be hazardous or nonhazardous waste shall be adequately profiled (i.e., sampled and analyzed) prior to acceptable reuse or disposal at an appropriate offsite facility. Specific sampling, handling, and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal agencies' laws, in particular the Regional Water Quality Control Board, the Department of Toxic Substances Control, the City of Palo Alto, the City of East Palo Alto, Santa Clara County, and San Mateo County. Material from existing roadway or bridge elements that is removed or modified by the Contractor will be handled and disposed of in accordance with all local, state, and federal requirements.</p>
<p>Air Quality</p>
<p>SM-AQ-1: Implement California Department of Transportation Standard Specifications</p> <ul style="list-style-type: none"> • The Project applicant will comply with California Department of Transportation Standard Specifications in Section 14-9 Air Quality (2010). • Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances. • Section 14-9.03 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are contained in Section 18.
<p>SM-AQ-2: Implement BAAQMD Basic Control Measures to Control Construction-Related Dust</p> <ul style="list-style-type: none"> • In accordance with the BAAQMD's current Air Quality Guidelines (Bay Area Air Quality Management District 2011), the Project applicant will implement the following BAAQMD-recommended control measures to reduce particulate matter emissions from construction activities. • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day by the contractor. • All haul trucks transporting soil, sand, or other loose material off site will be covered by the contractor. • All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day by the contractor. The use of dry power sweeping is prohibited.

<ul style="list-style-type: none"> • The contractor will limit all vehicle speeds on unpaved roads to 15 miles per hour. • The contractor will complete all roadways, driveways, and sidewalks to be paved as soon as possible. • The contractor will post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person will respond and take corrective action within 48 hours. The Air District's phone number will also be visible to ensure compliance with applicable regulations.
<p>MM-AQ-1: Utilize clean diesel-powered equipment during construction to control construction-related NOx emissions. The construction contractor will ensure that all off-road diesel-powered equipment used during construction is equipped with EPA Tier 4 Final engines.</p>
<p>Noise</p>
<p>SM-NOI-1: The construction contractor must comply with Caltrans Standard Specifications Section 14-8.02, Noise Control, which states the following:</p> <ul style="list-style-type: none"> • Control and monitor noise resulting from work activities. • Do not exceed 86 dBA at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m.
<p>SM-NOI-2: All equipment used by the contractor will have sound-control devices that are no less effective than those provided on the original equipment. No equipment will have an unmuffled exhaust.</p>
<p>SM-NOI-3: The Project proponent and/or their construction contractor will do the following.</p> <ul style="list-style-type: none"> • Review and ensure that construction activities are conducted in accordance with local noise standards from the cities of Palo Alto and East Palo Alto. • Ensure that construction activities will not occur at night. • Implement additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity to allowed timeframes, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources, as appropriate.
<p>MM-NOI-1: Provide advance notification of construction schedule and 24-hour hotline to residents</p> <p>The construction contractor will provide advance written notification of the proposed construction activities to all residences and other noise-sensitive uses within 750 feet of the construction site. Notification will include a brief overview of the proposed project and its purpose, as well as the proposed construction activities and schedule. It will also include the name and contact information of the project manager at the City of Palo Alto or another City of Palo Alto representative or designee responsible for ensuring that reasonable measures are implemented to address the problem.</p>
<p>MM-NOI-2: Designate a noise disturbance coordinator to address resident concerns</p> <p>The construction contractor will designate a representative to act as construction noise disturbance coordinator, responsible for resolving construction noise concerns. The disturbance coordinator's name and contact information will be included in the preconstruction notices sent to area residents, per MM-NOI-1. The coordinator will be available during regular business hours to monitor and respond to concerns; if construction hours are extended, the disturbance coordinator will also be available during the extended hours. In the event a noise complaint is received, she or he will be responsible for determining the cause of the complaint and ensuring that all reasonable measures are implemented to address the problem.</p>
<p>MM-NOI-3: Install temporary noise barriers. As described in MM-NOI-1 and MM-NOI-2, the construction contractor will notify noise-sensitive land uses near the site of upcoming activity before construction begins, will require construction-site noise reduction measures, and will provide a 24-hour complaint hotline. If a resident or other noise-sensitive person submits a complaint about construction noise and the contractor is unable to reduce noise to a level that does not cause annoyance or disruption to adjacent land uses through other means, the contractor will install</p>

<p>temporary noise barriers to reduce noise levels below the applicable construction noise standard. Barriers will be installed as promptly as possible, and work responsible for the disturbance will be suspended or modified until barriers have been installed. The following minimum criteria will be required of the contractor.</p> <ul style="list-style-type: none"> • The barrier will be 10 feet tall. It will surround the work area to block the line of sight for all diesel-powered equipment on the ground, as viewed from any private residence or any building. • The barrier will be constructed of heavyweight plywood (5/8 inch thick) or other material providing a Sound Transmission Classification of at least 25 dBA. Note that 5/8 inch is sufficiently thick to provide optimal noise buffering; increasing the thickness of the barrier above 5/8 inch would not provide a noticeable improvement in noise reduction. • The barrier will be constructed with no gaps or holes that would allow noise to transmit through the barrier. <p>To minimize reflection of noise toward workers at the construction site, the surface of the barrier facing the workers will be covered with a sound-absorbing material meeting a Noise Reduction Coefficient of at least 0.70.</p>
<p>MM-NOI-4: Conduct construction vibration monitoring and implement control approach(es). During periods of construction, the construction contractor will retain a qualified acoustical consultant or engineering firm to conduct vibration monitoring at homes or occupied vibration-sensitive buildings located within 315 feet⁴ of pile driving locations and 25 feet of construction sites using other non-impact equipment. If at any point the measured PPV is in excess of 0.3 in/sec, construction activity will cease and alternative methods of construction and excavation will be considered to prevent possible exposure of vibration-sensitive buildings and structures to levels of 0.3 in/sec PPV or higher. Prior to construction activity, and assuming the property owner gives permission, a preconstruction survey will be conducted that documents any existing cracks or structural damage at vibration-sensitive receptors located within the distances identified above by means of color photography or video. Additionally, a designated complaint coordinator will be responsible for handling and responding to any complaints received during such periods of construction. The construction contractor will also implement a reporting program that will be required to document complaints received, actions taken, and the effectiveness of these actions in resolving disputes</p>
<p>Natural Communities</p>
<p>Valley Foothill Riparian</p>
<p>AMM-BIO-1: Install Construction Barrier Fencing around Environmentally Sensitive Areas. The Project proponent or its contractor will install orange construction barrier fencing to identify environmentally sensitive areas in and adjacent to the construction area. A qualified biologist will identify sensitive biological resources adjacent to the construction area before the final design plans are prepared so that the areas to be fenced can be included in the plans. The area that would generally be required for construction, including staging and access, is shown in Figure 2.3-1. Portions of this area that are to be avoided during construction will be fenced off to avoid disturbance. Sensitive biological resources that occur adjacent to the construction area include sensitive natural communities and protected trees to be retained. Temporary fences around the environmentally sensitive areas will be installed as one of the first orders of work following California Department of Transportation (Caltrans) specifications. Before construction, the construction contractor will work with the Project engineer and a resource specialist to identify the locations for the barrier fencing and will place stakes around the sensitive resource sites to indicate these locations. The protected areas will be designated as environmentally sensitive areas and clearly identified on the construction plans. The fencing will be</p>

⁴ Beyond 315 feet, vibration from pile driving would attenuate to less than 0.4 inches per second and thus less than the distinctly perceptible threshold.

<p>installed before construction activities are initiated, maintained throughout the construction period, and removed after completion of construction.</p>
<p>AMM-BIO-2: Prepare Environmental Awareness Program and Conduct Environmental Awareness Training for Construction Employees. The Project proponent will retain a qualified biologist to develop an environmental awareness program and conduct environmental awareness training for construction employees. The program will explain the importance of on-site biological resources, including sensitive natural communities, protected trees to be retained, and special-status wildlife habitats, and how to avoid take of listed species. The program will include invasive plant identification and the importance of controlling and preventing the spread of invasive plant infestations.</p> <p>The environmental awareness program will be provided to all construction personnel to inform them on the life history of special-status species in or adjacent to the Project, the need to avoid impacts on sensitive biological resources, any terms and conditions required by state and federal agencies, and the penalties for not complying with biological mitigation requirements. If new construction personnel are added to the Project, the contractor's superintendent will ensure that the personnel receive the mandatory training before starting work. An environmental awareness handout that describes and illustrates sensitive resources to be avoided during Project construction and identifies all relevant permit conditions will be provided to each person.</p>
<p>AMM-BIO-3: Retain a Biological Monitor to Conduct Visits during Construction. The Project proponent will retain a qualified biologist to conduct construction monitoring in and adjacent to all identified environmentally sensitive areas. The frequency of monitoring will range from daily to weekly depending on the biological resource. The monitor, as part of the overall monitoring duties, will inspect the fencing once a week at a minimum in the construction area along the river and drainages that support woody vegetation; surrounding native trees and woodlands; and special-status plants. The biological monitor will assist the construction crew as needed to comply with all Project implementation restrictions and guidelines. The biological monitor also will be responsible for ensuring that the contractor maintains the staked and flagged perimeters of the construction area and staging areas adjacent to sensitive biological resources.</p>
<p>AMM-BIO-4: Avoid and Minimize Potential Disturbance of Valley Foothill Riparian Community. The Project proponent and its construction contractor will avoid and minimize potential disturbance of the valley foothill riparian community by implementing the following measures.</p> <ul style="list-style-type: none">• The potential for long-term loss of woody vegetation will be minimized by trimming vegetation rather than removing entire shrubs. Shrubs that need to be trimmed will be cut at least 1 foot above ground level to leave the root systems intact and allow for more rapid regeneration. Cutting will be limited to the minimum area necessary within the construction zone.• A certified arborist will be retained to perform any necessary pruning or root cutting of retained trees.• The areas that undergo vegetative pruning will be inspected immediately before construction, immediately after construction, and 1 year after construction to determine the amount of pre-Project vegetative cover, cover that has been removed, and cover that regrows. After 1 year, if vegetation in these areas has not regrown sufficiently to return the cover to the pre-Project level, the Project proponent will replant the areas with native species to reestablish the cover to the pre-Project condition.
<p>MM-BIO-1: Compensate for Permanent Loss of Valley Foothill Riparian. The Project proponent will compensate for permanent construction-related loss of valley foothill riparian habitat by replanting trees in the disturbed area after completion of the construction activities. Loss of native riparian trees will be compensated by replanting at a ratio of 3:1 (three native trees planted for every one native tree removed that was at least 4 inches diameter at breast height [approximately 4.5 feet above existing grade]). Loss of non-native riparian trees will be compensated at a ratio of 1:1 (one native tree planted for every one non-native tree removed that was at least 4 inches diameter at breast height). The compensatory ratios and planting locations will be confirmed through coordination with</p>

the Project proponent and other agencies as part of the environmental permitting process for the proposed Project.

The Project proponent will prepare a riparian mitigation planting plan, including a species list and number of each species, planting locations, and maintenance and monitoring requirements. Plantings will consist of cuttings taken from native plants, or plants grown at a plant nursery from local native material obtained within the San Francisquito Creek watershed. Planted species will be similar in structure and stature (at maturity) to those removed from the Project area. Plantings will be monitored annually for 5 years or as required in the Project permits. If 75% of the plants survive and the riparian canopy covers 75% at the end of the monitoring period, the revegetation will be considered successful. If this survival and canopy cover criteria are not met at the end of the monitoring period, planting and monitoring will be repeated after mortality causes have been identified and corrected.

Intermittent Stream

AMM-BIO-1 through AMM-BIO-4.

AMM-BIO-5. Protect Water Quality and Prevent Erosion and Sedimentation in San Francisquito Creek. The Project proponent and/or their construction contractor shall ensure the construction specifications include water quality protection and erosion and sediment control BMPs), based on standard Caltrans requirements, to minimize construction-related contaminants and mobilization of sediment to the San Francisquito Creek.

The BMPs will be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMPs are subject to review and approval by the Project proponent. The Project proponent will perform routine inspections of the construction area to verify the BMPs are properly implemented and maintained. The Project proponent will notify contractors immediately if there is a noncompliance issue and will require compliance.

The BMPs will include, but are not limited to, the following.

- All earthwork or foundation activities involving San Francisquito Creek and the bridge will occur in the dry season (between June 1 and October 15).
- A netting and tarp system will be implemented at the bridge site to prevent and minimize debris from entering the river during demolition and construction activities.
- Equipment used around San Francisquito Creek will be in good working order and free of dripping or leaking engine fluids. All vehicle maintenance will be performed at least 300 feet from all drainages and wetlands. Any necessary equipment washing will be carried out where the water cannot flow into drainages or wetlands.
- A hazardous material spill prevention control and countermeasure plan will be developed before construction begins that will minimize the potential for and the effects of hazardous or toxic substances spills during construction. The plan will include storage and containment procedures to prevent and respond to spills and will identify the parties responsible for monitoring the spill response. During construction, any spills will be cleaned up immediately according to the spill prevention and countermeasure plan. The Project proponent will review and approve the contractors' toxic materials spill prevention control and countermeasure plan before allowing construction to begin. The following types of materials will be prohibited from being rinsed or washed into the streets, shoulder areas, or gutters: concrete, solvents and adhesives, thinners, paints, fuels, sawdust, dirt, gasoline, asphalt and concrete saw slurry, heavily chlorinated water.
- Baseline turbidity, pH, specific conductance, and temperatures in the San Francisquito Creek channel will be measured when flow is present. As required by the Regional Water Quality Control Board (RWQCB), water quality standards specified in the Basin Plan standards will not be exceeded over the natural in-situ conditions. If dewatering activities are required, water samples would be taken periodically during construction.
- Any surplus concrete rubble, asphalt, or other rubble from construction will be taken to a local landfill.

- An erosion and sediment control plan will be prepared and implemented for the proposed Project. It will include the following provisions and protocols. The stormwater pollution prevention plan for the Project will detail the applications and type of measures and the allowable exposure of unprotected soils.
 - Discharge from dewatering operations, if needed, and runoff from disturbed areas will be made to conform to the water quality requirements of the waste discharge permit issued by the RWQCB.
 - Temporary erosion control measures, such as sandbagged silt fences, will be applied throughout construction of the proposed Project and will be removed after the working area is stabilized or as directed by the engineer. Soil exposure will be minimized through use of temporary BMPs, groundcover, and stabilization measures. Exposed dust-producing surfaces will be sprinkled daily, if necessary, until wet; this measure will be controlled to avoid producing runoff. Paved streets will be swept daily following construction activities.
 - The contractor will conduct periodic maintenance of erosion and sediment control measures.
 - An appropriate seed mix of native species will be planted on disturbed areas upon completion of construction.
 - The contractor will cover or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways.
 - The contractor will enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways. Material stockpiles will be located in non-traffic areas only. Side slopes will not be steeper than 2:1. All stockpile areas will be surrounded by a filter fabric fence and interceptor dike.
 - Runoff from disturbed areas will be contained and filtered by berms, vegetated filters, silt fencing, straw wattle, plastic sheeting, catch basins, or other means necessary to prevent the escape of sediment from the disturbed area.
 - Other temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary re-vegetation or other ground cover) will be used to control erosion from disturbed areas as necessary.
 - The contractor will avoid depositing or placing earth or organic material where it may be directly carried into the channel.

Protected Trees

MM-BIO-2: Tree Replacement Plan. The applicant shall be required, in accordance with the Tree Protection and Management Regulations (Palo Alto Municipal Code 8.10) and Tree Technical Manual (Palo Alto Municipal Code 8.10.120), to replace the tree canopy for the six protected trees, in accordance with the tree canopy formula identified in the Tree Technical Manual (Tree Technical Manual, 3.20). If the tree canopy cannot be replaced on-site, the canopy shall be replaced off-site as close to the Project site as feasible. If trees are being replaced off-site, the applicant must submit a Tree Planting Plan to the Urban Forestry Division and obtain the Urban Forestry Division’s approval of the plan prior to issuance of a building permit. The Tree Planting Plan must include the following:

- The canopy calculation for trees removed and the number of trees planned to replace them, consistent with the formula identified in the Tree Technical Manual
- The specific location where the new trees would be planted with specific baseline information about that proposed site (e.g., surrounding vegetation or development)
- The species of trees to be planted
- Specific planting details (e.g., size of sapling, size of containers, irrigation plan)
- Success criteria
- Monitoring and maintenance schedule

Replacement tree planting will be monitored by a qualified arborist. To verify the success of replacement trees, monitoring shall occur for two years after initial planting. After the two-year period, the arborist will determine if the trees are capable of surviving without further maintenance.
Habitat Connectivity
AMM-BIO-1 through AMM-BIO-5
Wetlands and Other Waters of the U.S.
AMM-BIO-1 through AMM-BIO-5.
Animal Species
Western Pond Turtle
AMM-BIO-6: Conduct Preconstruction Surveys for Western Pond Turtles; Relocate if Needed. A qualified biologist will examine the BSA for western pond turtles and their nests no more than 24 hours before Project activities begin and during any initial removal of vegetation, woody debris, or trees, or other initial ground-disturbing activities. If a western pond turtle is observed at any time before or during Project activities, all activities will cease. If western pond turtles are determined to be absent from the Project footprint, no further action will be required with regard to these species. If any western pond turtles are found within the Project footprint, whenever possible construction work in their vicinity will be avoided until they have moved outside of the Project area of their own volition. If the relocation of western pond turtle is necessary, a relocation plan will be developed and submitted to CDFW for approval. The plan will include subsequent details of monitoring by a CDFW-approved biologist, agency-approved disinfection and handling protocols, animal care while being relocated, suitable deposition locations, and reporting requirements. The CDFW-approved biologist will follow all applicable CDFW disinfection and handling protocols per the relocation plan.
Pallid Bat and Hoary Bat
AMM-BIO-7: Conduct Preconstruction Surveys for Pallid and Hoary Bats. A qualified biologist will examine trees within the BSA for roosting hoary bats no more than 24 hours before any initial removal of vegetation, woody debris, or trees, or other initial ground-disturbing activities. If a bat is observed roosting at any time before or during Project activities, all activities will cease. The Project proponent will coordinate with CDFW to develop and implement avoidance measures before commencing Project activities.
Snowy Egret and Saltmarsh Common Yellowthroat
AMM-BIO-8: Implement Nesting Bird Impact Avoidance Measures. The Project proponent and/or their construction contractor will be responsible for avoiding effects on migratory and non-migratory birds including special-status species (e.g., snowy egret, saltmarsh common yellowthroat). Accordingly, the following measures will be implemented. <ul style="list-style-type: none"> • Vegetation (including trees) trimming or removal will be conducted during the nonbreeding season (September 1 to January 31), to the extent feasible. • Construction activities will be conducted during the nonbreeding season (September 1 to January 31), to the extent feasible. • Construction activities will begin during the nonbreeding season (September 1 to January 31) and prior to the nesting season (February 1 to August 31), if feasible. Beginning construction prior to the breeding season will establish a level of noise disturbance that will dissuade noise-sensitive raptors and other birds from attempting to nest within or near the study area. • Bridge work (including existing bridge expansion and new bridge installation) will be conducted during the nonbreeding season (September 1 to January 31), to the extent feasible. It is recommended that inactive nests be removed from any bridge work location and from any vegetation or structure within the Project area or within 50 feet of where bridge work will take place. In addition, nest exclusion measures (e.g., fine mesh netting, panels, or metal projectors) are recommended to be installed outside of the nesting season, to the extent feasible. If installed, exclusionary devices will be monitored and maintained throughout the breeding season to ensure

<p>that they are fully functional (i.e., successful in preventing the birds from accessing cavities or potential nesting sites).</p> <ul style="list-style-type: none"> • If construction activities (including vegetation trimming or removal and bridge work) occur within the breeding season (February 1 to August 31), a qualified wildlife biologist with demonstrated nesting bird survey experience will conduct preconstruction surveys for nesting birds. A minimum of three separate surveys will be conducted for migratory birds, including raptors. Surveys will include a search of all suitable nesting habitat (e.g., grassland, bushes, trees, bridges, culverts, overpasses, and structures) in the Project area. In addition, a 300-foot area around the Project area will be surveyed for nesting raptors. When feasible, surveys should occur during the height of the breeding season (March 1 to June 1) with one survey being conducted in each of 2 consecutive months within this peak period and the final survey being conducted within 1 week of the start of construction. If no active nests are detected during these surveys, no additional measures are required. • If a lapse in construction activities of 3 days or longer at a previously surveyed study area occurs, another preconstruction survey will be conducted. • If an active nest is found in the Project area, a no-disturbance buffer (marked with high-visibility fencing, flagging, or pin flags) will be established by a qualified wildlife biologist around the site to avoid disturbance or destruction of the nest until the end of the breeding season (August 31) or until after the biologist determines that the young have fledged and moved out of the Project area (this date varies by species). The extent of these buffers will be determined by the biologist in coordination with USFWS and/or CDFW as appropriate. Buffer size will depend on the level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Buffer size is based on a species' sensitivity to disturbance and planned work activities in the vicinity and has the potential to vary with different species. Typical buffer sizes are 300 feet for raptors and 50 feet for other birds.
<p>Threatened and Endangered Species</p>
<p>California Red-Legged Frog</p>
<p>AMM-BIO-1 through AMM-BIO-5, MM-BIO-1</p>
<p>AMM-BIO-9: Avoid Work during Active Breeding and Dispersal Period for Special-Status Frogs. The contractor will conduct site preparation and construction activities that involve earthwork, other ground disturbance, and/or vehicle traffic through frog-sensitive areas (intermittent stream and riparian habitat) outside the period when special-status frogs are actively breeding and dispersing (October 15 through June 1).</p>
<p>AMM-BIO-10: Conduct Preconstruction Surveys at Work Sites in and near Frog-Sensitive Areas. No more than 3 days prior to the onset of site preparation and construction activity at each site, a qualified wildlife biologist will conduct a preconstruction survey for special-status frogs within the Project footprint. The survey will cover all areas where special-status frogs may be present or concealed, including cracks, burrows, vegetation adjacent to wet areas, and other temporary refugia, as well as any riparian or intermittent stream habitat affected. If special-status frogs are determined to be absent from the Project footprint, no further action will be required with regard to these species. If any special-status amphibians are found within the Project footprint, whenever possible, construction work in their vicinity will be avoided until they have moved outside of the Project area of their own volition.</p>

<p>AMM-BIO-11: Provide Construction Worker Awareness Training for Special-Status Frogs. The City of Palo Alto will provide, or require contractors to provide, worker awareness training for construction personnel to enable them to recognize special-status frogs and other aquatic and riparian wildlife. Trained construction personnel will also understand where sensitive resource areas are within the construction zone so they can minimize their impact on upland (dispersal and aestivation) habitat. Training will be presented by a qualified wildlife biologist experienced in training non-specialists. The training program will include at least the following: a description of the special-status species likely to use the site, and their habitat needs; photographs of these species; an explanation of the legal status of these species and their protection under the ESA and other regulations; a list of measures being taken to reduce effects to these species during Project construction; and distribution of a fact sheet summarizing training content. The City of Palo Alto will also distribute, or require contractors to distribute, the training summary fact sheet to anyone else who may enter the Project. Upon completion of training, employees will sign a form stating that they attended the training and understand all the conservation and protection measures.</p>
<p>AMM-BIO-12: Install Exclusion Fencing and Conduct Construction Monitoring for Special-Status Frogs. Once it has been determined that no special-status frogs are present on the Project site, the contractor will install barrier fencing along the perimeter of the work area where necessary to ensure that frogs do not enter the site during construction. Fencing will be installed promptly (within 3 days) after clearance surveys are performed, to prevent frogs from entering the work area. A qualified biologist will be present during the installation of exclusion fencing, will determine which areas need to be monitored on a daily basis during construction activities to avoid harm to California red-legged frog, and will be responsible for follow-up monitoring as needed. The monitor will inspect and maintain the integrity of the exclusion fencing.</p>
<p>AMM-BIO-13: Limit Stream Bank Construction to Dry Season. The contractor will limit stream bank construction from June 1 to October 15 in order to avoid the migratory season for adult steelhead. This timing will also limit any excess sedimentation and runoff from entering the San Francisquito Creek.</p>
<p>Central California Coast Steelhead</p>
<p>AMM-BIO-1 through AMM-BIO-5, AMM-BIO-9 through AMM-BIO-13, MM-BIO-1</p>
<p>Essential Fish Habitat</p>
<p>AMM-BIO-1 through AMM-BIO-5, AMM-BIO-13</p>
<p>Invasive Species</p>
<p>AMM-BIO-14: Avoid the Introduction of Invasive Plants. The Project proponent, or their contractor, will be responsible for avoiding the introduction of new invasive plants and the spread of invasive plants previously documented in the BSA. Accordingly, the following measures will be implemented during construction.</p> <ul style="list-style-type: none"> • Surface disturbance within the construction work area will be minimized to the greatest extent possible. • All disturbed areas will be seeded with certified weed-free native mixes and mulched with certified weed-free mulch (rice straw may be used in upland areas). • Native, noninvasive species will be used in erosion control plantings to stabilize site conditions and prevent invasive species from colonizing.

Appendix C
Notice of Preparation

Notice of Preparation of an Environmental Impact Report/ Environmental Assessment

Date: August 12, 2015
To: Agencies, Organizations, and Interested Parties
From: City of Palo Alto Public Works Department
Project Title: Newell Road at San Francisquito Creek Bridge Replacement Project

The City of Palo Alto (City), as the Lead Agency under the California Environmental Quality Act (CEQA), will prepare an Environmental Impact Report (EIR) for the proposed **Newell Road/San Francisquito Creek Bridge Replacement Project** (herein referred to as the "Project"). Under assignment¹ from the Federal Highway Administration (FHWA), the California Department of Transportation (Caltrans, District 4 Office of Local Assistance acting for the FHWA) is the Lead Agency under the National Environmental Policy Act (NEPA) and will prepare an Environmental Assessment (EA) as a joint document with the EIR (an EIR/EA). The purpose of this Notice of Preparation (NOP) is to notify agencies, organizations, and interested parties about the proposed Project and to request input on the environmental analysis to be performed. From public agencies, we are requesting comments on the scope and content of the environmental information, which is germane to each agency's statutory responsibilities with regard to the proposed Project. Agencies may need to use the EIR/EA prepared when considering permitting or other approvals for the proposed Project.

Due to the time limits mandated by state law, responses must be sent at the earliest possible date, but not later than 30 days after receipt of this notice or **Monday, September 14, 2015**, whichever is sooner.

Please send your comments to:

City of Palo Alto
Public Works Department
Attention: Joe Teresi, Senior Engineer
RE: Newell Road Bridge
250 Hamilton Avenue
Palo Alto, California 94301

Project Vicinity and Location:

Newell Road Bridge at San Francisquito Creek, Palo Alto, CA (refer to Figures 1 and 2).

Project History:

During the 1998 El Niño storms, the banks of the San Francisquito Creek failed damaging approximately 1,700 properties in the cities of Palo Alto, Menlo Park, and East Palo Alto. As a result,

¹ Title 23 USC 327: NEPA Assignment Memorandum of Understanding (MOU), between FHWA and Caltrans, effective October 1, 2012.

the San Francisquito Creek Joint Powers Authority (SFCJPA) was established in 1999 to address flooding issues affecting the several jurisdictions within the San Francisquito Creek watershed. After the 45-year flood in 1998, the SFCJPA and the affected jurisdictions identified the need to replace the Newell Road Bridge (herein referred to as the “bridge”).

The City has conducted a number of public meetings beginning in June 2012, to provide preliminary information about the proposed Project and solicit comments and questions from members of the public. Concurrently, the City has been collecting information and conducting technical analyses to assess the feasibility of implementing the proposed Project. During this early planning period, the City conducted an alternatives screening analysis (including a detailed traffic study) and ultimately identified four (4) potentially feasible alternatives for replacement of the bridge. The identified alternatives are further discussed under *Project Alternatives*, below.

Project Description:

The City proposes to replace the existing Newell Road Bridge² which crosses San Francisquito Creek to safely accommodate vehicle, bicycle, and pedestrian traffic. The proposed Project would also incorporate channel improvements to widen a bottleneck segment of San Francisquito Creek along the northern bank that stretches approximately 900 feet downstream of the bridge (Figure 2).

The bridge is within the SFCJPA study area for proposed channel and bridge improvements that would provide increased flood protection and hydraulic capacity. Previous technical studies conducted by the SFCJPA have determined that the bridge constrains streamflow in San Francisquito Creek. The bridge would need to be reconstructed in order to accommodate the estimated 1% flow rate³ for San Francisquito Creek at Newell Road and to allow for SFCJPA’s planned reconstruction of the upstream bridge at Pope Street/Chaucer Street (the Pope-Chaucer Street Bridge). The height of the bridge would be designed to meet Caltrans’ standards for accommodating the 1% flow rate and freeboard⁴ requirements. The profile of the replacement bridge would be approximately one to two feet higher than the existing bridge, which would require the construction of retaining walls along the edges of the roadway approaches to the bridge.

The existing bridge provides access across San Francisquito Creek between the City of Palo Alto and the City of East Palo Alto. In East Palo Alto, Newell Road connects to Woodland Avenue which provides access to University Avenue and United States Highway 101 (US 101). In Palo Alto, Newell Road connects to Edgewood Drive and main thoroughfares including Channing Avenue and Embarcadero Road. Newell Road is a two (2)-lane roadway facility, but the width of the existing bridge is currently too narrow to safely accommodate two (2) lanes of vehicle traffic. In addition, the existing bridge does not provide safe access for bicycle and pedestrian traffic access across San

² Newell Road Bridge is Bridge #37C-0223.

³ A 1% flow rate (also informally referred to as the 100-year flow rate) is the creek flow rate that has a 1% chance of being equaled or exceeded in any given year.

⁴ Freeboard, expressed as the construction of a barrier above a predicted flood level, provides a factor of safety and compensates for the many unknown factors that could contribute to flood heights greater than the height predicted for a selected size flood.

Francisquito Creek. As a result, the existing bridge is classified by Caltrans as being Functionally Obsolete (FO).⁵ The FO status of the existing bridge along with its low sufficiency rating⁶ of 40.9 makes the existing bridge eligible for replacement under the Federal Highway Bridge Program (HBP).

The creek widening, would increase the capacity of the creek downstream of the bridge, and allow a lower profile for the bridge and reduce impacts on the roadway approaches to the bridge. The creek widening design would utilize a retaining wall or bank stabilization system that could be planted with native vegetation to stabilize the banks of the widened creek channel.

For all Federal HBP funded projects, such as this one, Caltrans has project oversight authority and manages the project financing. The proposed Project falls within the jurisdiction of Caltrans, District 4 Office of Local Assistance. As a result Caltrans will provide review and approval of the following documents prepared for the proposed Project including: environmental technical studies, engineering technical reports, and construction documents.

Purpose and Need:

The purpose of the proposed Project is to:

- Protect adjacent communities from flood hazards by accommodating the 1% flow rate of San Francisquito Creek at Newell Road.
- Maintain connections for vehicular, bicycle, and pedestrian transportation across San Francisquito Creek at Newell Road while avoiding the following:
 - diversion of a significant number of vehicles to adjacent streets;
 - a significant increase in the number of vehicles using Newell Road; and,
 - an increase in average vehicle speed on Newell Road.
- Improve pedestrian and bicycle access across San Francisquito Creek at Newell Road.
- Improve safety for all modes of transportation across San Francisquito Creek at Newell Road.

The Project need is demonstrated by the following deficient conditions:

- The existing bridge is hydraulically deficient and results in flooding at high-flow levels.
- The existing bridge is classified as Functionally Obsolete (FO) because:
 - it does not safely accommodate two (2)-way vehicular traffic;
 - it does not provide safe access for pedestrians or bicyclists; and,

⁵ “Functionally obsolete (FO)” describes a bridge that is not suitable for its current use, such as a lack of safety shoulders.

⁶ “Sufficiency rating” is a 0-100 score (100 percent would represent an entirely structurally-sufficient bridge and zero percent would represent an entirely structurally insufficient or deficient bridge).

- it provides poor drivability for vehicular traffic due to substandard sight distances and vertical profile.

EIR/EA Scope:

The EIR/EA will address the following environmental issues:

- Aesthetics;
- Air Quality and Greenhouse Gas Emissions;
- Biological Resources;
- Cultural Resources;
- Geology and Soils;
- Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning (including Parks and Recreation Facilities);
- Community Impacts;
- Noise and Vibration;
- Population and Housing;
- Public Services and Utilities;
- Traffic and Transportation; as well as,
- Cumulative Impacts, Alternatives to the Project, and Growth-inducing Impacts.

The cumulative impacts analysis in the EIR/EA will consider the potential impacts of the Project and Project alternatives in combination with planned growth and other capital improvement projects in the San Francisquito Creek corridor area.

Project Alternatives:

In accordance with CEQA and NEPA, the EIR/EA will evaluate a reasonable range of alternatives to the proposed Project and a “No-Build”/“No Action” alternative (Figures 3a and 3b). Alternatives will be identified based on their feasibility to meet most of the Project objectives and reduce or avoid significant environmental impacts.

In 2014, the City prepared an Alternatives Screening Analysis Report⁷ (ASAR), which evaluated a total of eight (8) alternatives including alternatives to remove the existing bridge and construct a bicycle/pedestrian-only bridge, as well as various alternatives that would maintain vehicular use on different horizontal alignments. The ASAR evaluated the alternatives taking public input collected to date into account.

⁷ Available at: <<http://www.cityofpaloalto.org/civicax/filebank/documents/39192>>.

Considering the information in the ASAR which took agency and public input into account, the City has since identified the following four (4) Build Alternatives as potentially feasible and that meet the Project purpose and need, and are appropriate to carry through the EIR/EA analysis:

- Build Alternatives (all presume construction of a new bridge)
 - Alternative 1: A one (1)-lane bridge with two (2)-way traffic (under signal control) on the existing alignment of Newell Road (ASAR #5).
 - Alternative 2: A two (2)-lane bridge on the existing alignment of Newell Road (ASAR #6).
 - Alternative 3: A two (2)-lane bridge on a partial realignment of Newell Road (ASAR #7).
 - Alternative 4: A two (2)-lane bridge on a full realignment of Newell Road (ASAR #8).
- No-Build/No Action Alternative (keep existing bridge) proposes to leave the facility as it currently exists (ASAR #1).

The City will consider public and agency input on the scope of the EIR/EA in response to this NOP, including comments on potential alternatives, before making a final decision as to the alternatives to be analyzed in the EIR.

Probable Environmental Effects:

Based on a preliminary review of the Project site and in consideration of the proposed Project activities, the City has determined that potential direct and indirect impacts related to aesthetics; biological resources; cultural resources; hydrology and water quality; land use and planning; community impacts; traffic and transportation; and cumulative impacts as a result of planned, programmed, and reasonably foreseeable growth in the area and including capital improvement projects in the San Francisquito Creek corridor, may occur as a result of Project implementation. The City will prepare a Draft EIR pursuant to Section 15060(d) of the State CEQA Guidelines. An EA will be prepared as a joint document with the EIR (an EIR/EA), in accordance with NEPA, as Caltrans has determined that the significance of environmental impacts is not clearly established.

Notice of Scoping Meeting:

Pursuant to CEQA Guidelines section 15082(c) (Notice of Preparation and Determination of Scope of EIR), the City will conduct a scoping meeting for the purpose of soliciting input on the scope of the analysis in the EIR from bordering cities, responsible agencies, agencies with jurisdiction by law, trustee agencies, interested parties requesting notice, and interested members of the public, concerning the appropriate scope and content of the EIR. Although there is no formal scoping requirements for an EA under NEPA, comments received on the scope and content of the EIR for the proposed Project will be incorporated into the joint EIR/EA environmental document.

The scoping meeting will be held on **Thursday, September 3, 2015, at 6:30 p.m.** in the Palo Alto City Hall Council Chambers, 250 Hamilton Avenue, Palo Alto.

For further information, please contact the City at the address below or visit the Project website provided below:

Newell Road/San Francisquito Creek Bridge Replacement Project
Notice of Preparation of an EIR/EA
August 12, 2015
Page 6 of 6

Address:

City of Palo Alto
Public Works Department
Attention: Joe Teresi, Senior Engineer
RE: Newell Road Bridge
250 Hamilton Avenue
Palo Alto, California 94301

OR

Project Website:

<http://www.cityofpaloalto.org/news/displaynews.asp?NewsID=1964&TargetID=145>



Graphics\Projects\030512_Task#OC2 (072019).SS



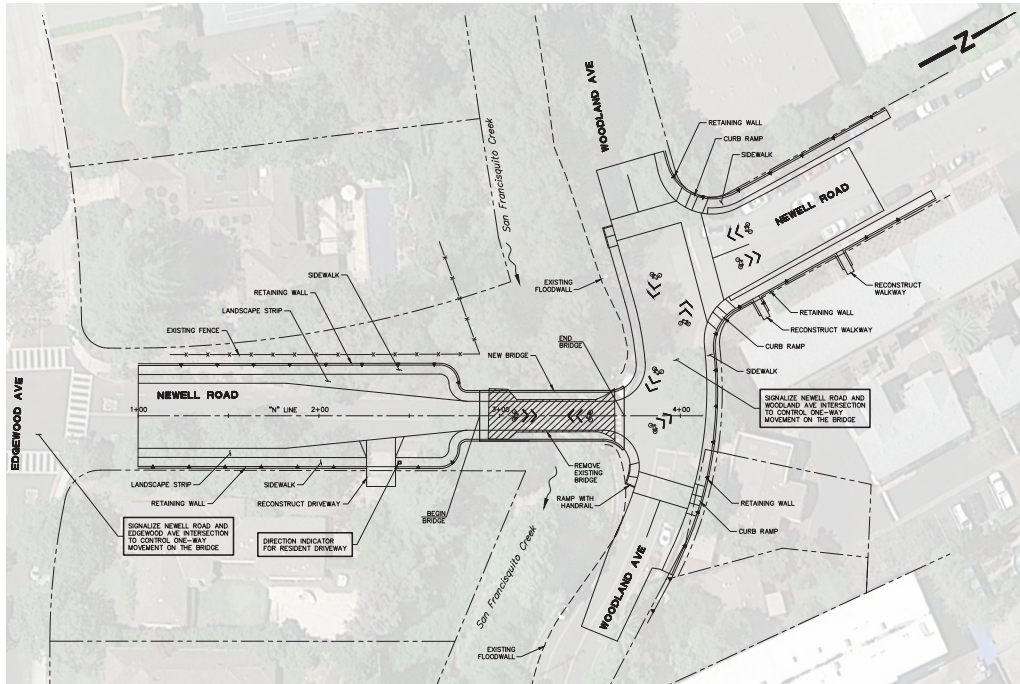
Figure 1
Project Vicinity Map
Newell Road Bridge Replacement Project



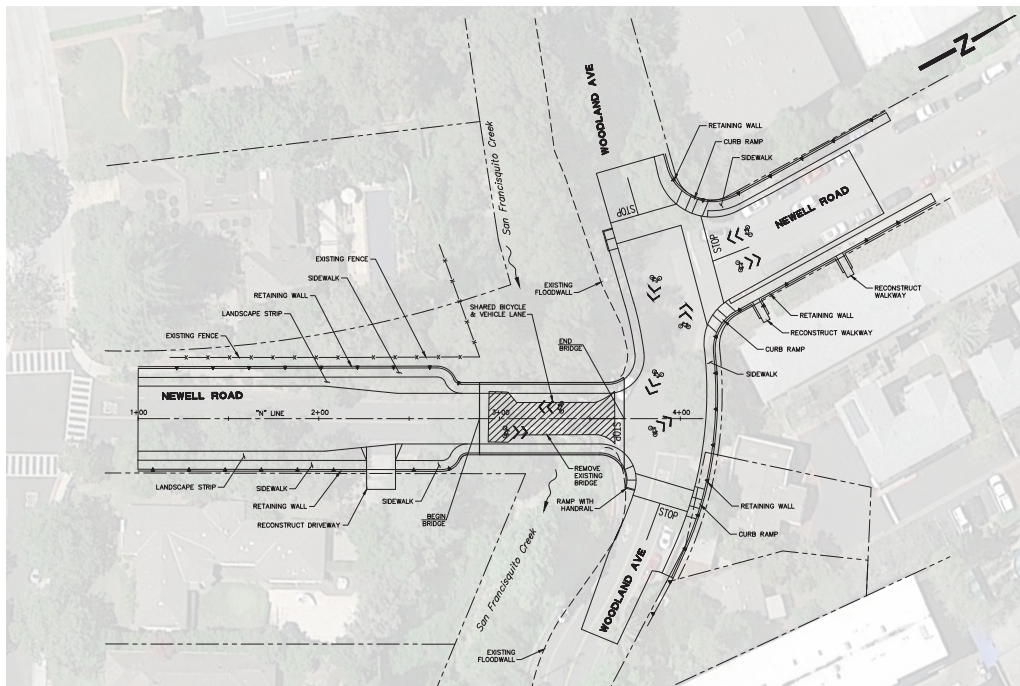
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Figure 2
Project Location Map
 Newell Road Bridge Replacement Project



Alternative 1: A one-lane bridge with two-way traffic (under signal control) on the existing alignment of Newell Road.



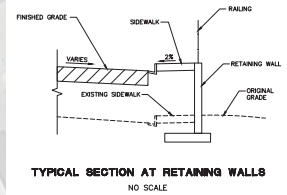
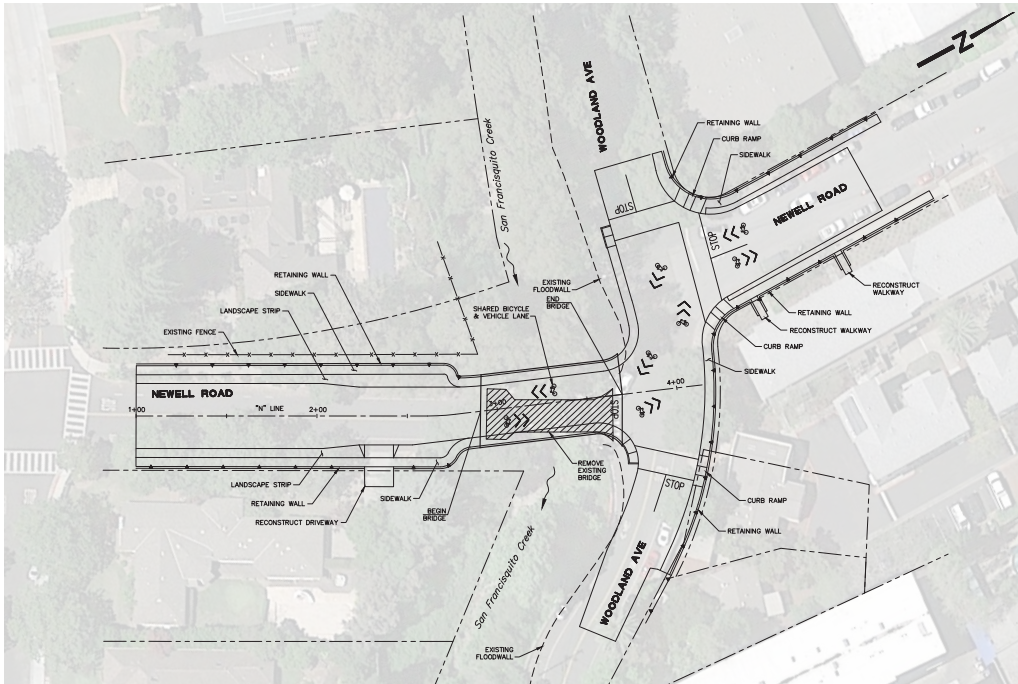
Alternative 2: A two-lane bridge on the existing alignment of Newell Road.

Source: NV5, 2014.

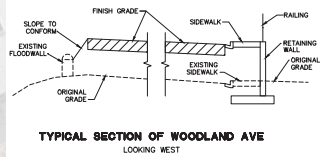
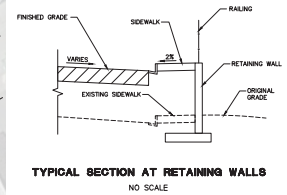
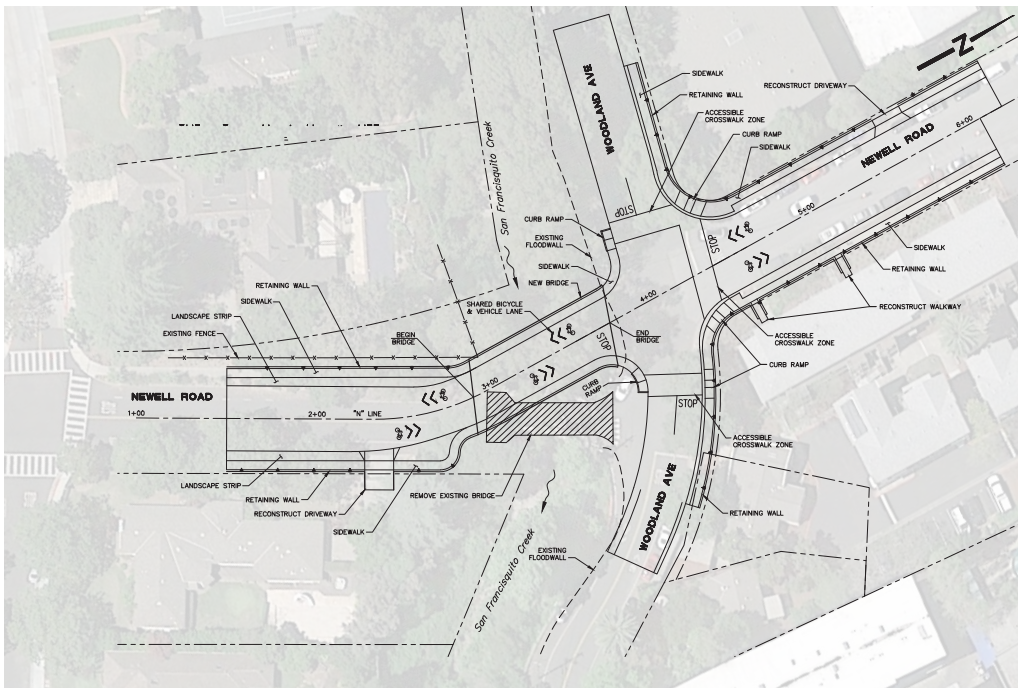
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Figure 3a
Build Alternatives 1 and 2



Alternative 3: A two-lane bridge on a partial realignment of Newell Road.



Alternative 4: A two-lane bridge on a full realignment of Newell Road.

Source: NV5, 2014.

Graphics\Projects\030512 NOP (08-15) SS



Figure 3b
Build Alternatives 3 and 4

Appendix D
Correspondence

From: [Fund Management System](#)
To: rajeev.hada@cityofpaloalto.org; reanna.tong@cityofpaloalto.org
Cc: [Fund Management System](#); [Harold Brazil](#)
Subject: FMS POAQC Project TIP ID SCL170018 (37C0223 - Newell Rd Bridge over San FrancisquitoCr) update: Project is a not a POAQC
Date: Thursday, October 12, 2017 9:27:41 AM

Dear Project Sponsor

Based on the recent interagency consultation with the Air Quality Conformity Task force, Project TIP ID SCL170018 (FMS ID:6694.00) does not fit the definition of a project of air quality concern as defined by 40 CFR 93.123(b)(1) or 40 CFR 93.128 and therefore is not subject to PM2.5 project level conformity requirement. Please save this email as documentation confirming the project has undergone and completed the interagency consultation requirement for PM2.5 project level conformity. Note project sponsors are required to undergo a proactive public involvement process which provides opportunity for public review as outlined by 40 CFR 93.105(e). For projects that are not of air quality concern, a comment period is only required for project level conformity determinations if such a comment period would have been required under NEPA. For more information, please see FHWA PM2.5 Project Level Conformity Frequently Asked Questions (FAQ):

http://www.fhwa.dot.gov/environment/air_quality/conformity/reference/faqs/pm25faqs.cfm

If you have any questions, please direct them to Harold Brazil at hbrazil@bayareametro.gov or by phone at 415-778-6747

Please note that this email shows a different TIP ID (SCL170018) from the TIP ID in the group listing (VAR170012) in Section 2.2.6, Air Quality of this EIR/EA. TIP ID SCL170018 was created solely for the purpose of PM2.5 consultation and it is not a new TIP ID for the project.

DEPARTMENT OF TRANSPORTATION

DISTRICT 4

OFFICE OF LOCAL ASSISTANCE

111 GRAND AVENUE-MS 10B

P. O. BOX 23660

OAKLAND, CA 94623-0660

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FAX (510) 286-5229

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*Making Conservation
a California Way of Life.*

October 27, 2017

Ms. Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Subject: Eligibility Determinations for the Proposed Newell Road over San Francisquito Creek Bridge (Bridge No. 37C-0223) Replacement Project in the Cities of Palo Alto and East Palo Alto in Santa Clara and San Mateo Counties.

Dear Ms. Polanco,

The California Department of Transportation (Caltrans) is initiating consultation with the State Historic Preservation Officer (SHPO) regarding the proposed Newell Road over San Francisquito Creek Bridge (Bridge No. 37C-0223) replacement project (Undertaking). Caltrans, on behalf of the City of Palo Alto, is proposing the undertaking. A full project description can be found on Page 1 of the enclosed Historic Property Survey Report (HPSR).

The studies for this undertaking were carried out in a manner consistent with Caltrans' regulatory responsibilities under Section 106 of the National Historic Preservation Act (36 CFR Part 800) and pursuant to the January 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (Section 106 PA).

Enclosed you will find an HPSR, Historic Resource Evaluation Report (HRER), and an Archaeological Survey Report (ASR) for the proposed Undertaking. In accordance with Stipulation VIII.C.6 of the PA, Caltrans is requesting SHPO's concurrence on the National Register of Historic Places (NRHP) eligibility of the following built resources, which were recorded and evaluated on the attached DPR forms.

The following properties has been determined *not eligible* for inclusion in the NRHP as a result of this study:

Address

- 475 Newell Road, Palo Alto, Santa Clara County (APN: 003-12-013)
- 1499 Edgewood Drive, Palo Alto, Santa Clara County (APN: 003-11-020)
- 1773 Woodland Avenue, East Palo Alto, San Mateo County (APN: 063-515-280)
- 5 Newell Road, East Palo Alto, San Mateo County (APN: 063-513-350)
- 15 Newell Road, East Palo Alto, San Mateo County (APN: 063-513-440)

The following property has previously been determined *not eligible* for inclusion in the NRHP:

Newell Road over San Francisquito Creek Bridge (Bridge No. 37C-0223)

No archaeological resources have been previously recorded in the Undertaking's Area of Potential Effect (APE), nor were any observed during the archaeological identification efforts. The archaeological APE consists of steep creek banks with frequent and regular soil erosion events which prevent stable ground surfaces to build. This inability for ground surfaces to form does not allow for the deposition of prehistoric resources as prehistoric peoples would have conducted activities on stable landforms. Additionally, historic-era archival research did not indicate that historic-era resources would have been deposited within the propose undertaking's APE. Due to these circumstances, it has been determined that there is a low potential for intact buried prehistoric or historic-era archaeological resources within the project's Area of Direct Impacts (ADI).

We would appreciate receiving the SHPO's concurrence on the determination of eligibility within 30 days of your receipt of this submittal. If you have any questions, please contact Carrie Reichardt, Senior Environmental Planner, Office of Local Assistance, at 510-286-5530 or via email sent to karen.reichardt@dot.ca.gov.

Thank you for your assistance with this undertaking.

Sincerely,



KAREN (CARRIE) REICHARDT
Senior Environmental Planner (Cultural Resources)
Office of Local Assistance
California Department of Transportation, District 4

Enclosures

(1) Historic Property Survey Report for the Newell Road over San Francisquito Creek Bridge (Bridge No. 37C-0223) Replacement Project in the Cities of Palo Alto and East Palo Alto in Santa Clara and San Mateo Counties.

(2) Historical Resources Evaluation Report for the Newell Road over San Francisquito Creek Bridge (Bridge No. 37C-0223) Replacement Project in the Cities of Palo Alto and East Palo Alto in Santa Clara and San Mateo Counties.

(3) Archaeological Survey Report for the Newell Road over San Francisquito Creek Bridge (Bridge No. 37C-0223) Replacement Project in the Cities of Palo Alto and East Palo Alto in Santa Clara and San Mateo Counties.

CC: Emily Castano, Branch Chief, Section 106 Coordination; OLA files.



**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

November 30, 2017

VIA EMAIL

In reply refer to: FHWA_2017_1101_001

Ms. Karen Reichardt, Senior Environmental Planner
Office of Local Assistance
Caltrans District 4
111 Grand Avenue, MS-8A
Oakland, CA 94612

Subject: Determinations of Eligibility for the Proposed Newell Road over San Francisquito Creek Bridge (Bridge No. 37C-0223) Replacement Project, Palo Alto and East Palo Alto, Santa Clara and San Mateo Counties, CA

Dear Ms. Reichardt:

Caltrans is initiating consultation for the above project in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA)*.

Caltrans, in cooperation with the City of Palo Alto, proposes to replace the Newell Road Bridge and roadway approaches across San Francisquito Creek. The bridge was constructed in 1911 and is classified as functionally obsolete. In addition to replacing the bridge, the project includes raising the bridge profile as well as the intersection of Newell Road and Woodland Avenue. A full project description is located on Page 1 of the Historic Property Survey Report. As part of the submittal Caltrans also submitted a Historic Resource Evaluation Report and an Archaeological Survey Report.

Caltrans determined that the following properties are not eligible for the National Register of Historic Places (NRHP):

- 475 Newell Road, Palo Alto, CA
- 1499 Edgewood Drive, Palo Alto, CA
- 1773 Woodland Avenue, East Palo Alto, CA
- 5 Newell Road, East Palo Alto, CA
- 15 Newell Road, East Palo Alto, CA

Based on my review of the submitted documentation, I concur.

Ms. Reichardt
November 30, 2017
Page 2

FHWA_2017_1101_001

Thank you for considering historic properties during project planning. If you have any questions, please contact Natalie Lindquist of my staff at (916) 445-7014 with e-mail at natalie.lindquist@parks.ca.gov or Alicia Perez at (916) 445-7020 with e-mail at alicia.perez@parks.ca.gov .

Sincerely,



Julianne Polanco
State Historic Preservation Officer

DEPARTMENT OF TRANSPORTATION

DISTRICT 4

OFFICE OF LOCAL ASSISTANCE

P.O. BOX 23660, MS-10B

OAKLAND, CA 94623-0660

PHONE (510) 286-6371

FAX (510) 286-5229

TTY 711

www.dot.ca.gov

*Serious drought.
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January 22, 2018

Ms. Lisa Van Atta
Assistant Regional Administrator
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
777 Sonoma Avenue, Room 325
Santa Rosa, CA 94504

Initiation of Informal Consultation under Section 7 of the Endangered Species Act for the Newell Road Bridge Replacement Project in the Cities of Palo Alto and East Palo Alto, BRLS-5100 (017)

Dear Ms. Van Atta:

The California Department of Transportation (Caltrans) is initiating *informal* consultation for the Newell Road Bridge Replacement project acting as the National Environmental Policy Act (NEPA) lead agency under direction of the December 2016 *Memorandum of Understanding (MOU)* on the Surface Transportation Project Delivery Program (23 U.S.C. 327) between Caltrans and the Federal Highway Administration. As assigned by the *MOU*, Caltrans is responsible for the environmental review, consultation, and coordination on this project.

Caltrans, acting as the designated federal representative, and the City of Palo Alto, the project proponent, are proposing to replace the Newell Road Bridge across San Francisquito Creek. The project consists removing the existing bridge, constructing new approaches and accommodation for bicycle and pedestrian travel, potential addition and reconfiguration of utilities including street lighting, modification to street signage or new traffic signals, addition of retaining walls, and bank stabilization measures in the portion of San Francisquito Creek disturbed by construction. Further detail is in the enclosed Biological Assessment.

The action area contains designated critical habitat for one federally listed species: the Steelhead Central California Coast (CCC) DPS. As identified in the enclosed document, with the implementation of avoidance, minimization, and mitigation measures, it is considered that the proposed project **may affect, but is not likely to adversely affect** Steelhead CCC DPS (*Oncorhynchus mykiss*), and its critical habitat.

Ms. Lisa Van Atta
January 22, 2018
Page 2

The action area also contains Essential Fish Habitat (EFH) for Pacific salmon (Central Valley fall-run and late fall-run Chinook salmon). It is considered that the proposed project would **not adversely affect EFH**.

We respectfully request your concurrence with the above findings on the impacts to the federally listed species and its designated critical habitat, and to EFH. Please provide confirmation within 30 days of receipt of this letter that all the required information needed for your concurrence has been provided.

Please contact Dan Rivas at Caltrans District 4, Office of Local Assistance, 111 Grand Avenue, MS-10B, Oakland, CA 94612; via email at dan.rivas@dot.ca.gov; or via telephone at 510-286-5743 with any questions about this request.

Sincerely,



Tom Holstein
Environmental Branch Chief
Caltrans, District 4, Office of Local Assistance

Attachment: *Biological Assessment* (January 2018)

DEPARTMENT OF TRANSPORTATION

DISTRICT 4

OFFICE OF LOCAL ASSISTANCE

P.O. BOX 23660, MS-10B

OAKLAND, CA 94623-0660

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*Making Conservation
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January 22, 2018

Mr. Ryan Olah
U.S. Fish and Wildlife Service
Sacramento Fish and Wildlife Office
2800 Cottage Way, W-2605
Sacramento, CA 95825-1846

Initiation of Informal Consultation under Section 7 of the Endangered Species Act for the Newell Road Bridge Replacement Project in the Cities of Palo Alto and East Palo Alto, BRLS-5100 (017)

Dear Mr. Olah:

The California Department of Transportation (Caltrans) is initiating *informal* consultation for the Newell Road Bridge Replacement project acting as the National Environmental Policy Act (NEPA) lead agency under direction of the December 2016 *Memorandum of Understanding (MOU)* on the Surface Transportation Project Delivery Program (23 U.S.C. 327) between Caltrans and the Federal Highway Administration. As assigned by the *MOU*, Caltrans is responsible for the environmental review, consultation, and coordination on this project.

Caltrans, acting as the designated federal representative, and the City of Palo Alto, the project proponent, are proposing to replace the Newell Road Bridge across San Francisquito Creek. The project consists removing the existing bridge, constructing new approaches and accommodation for bicycle and pedestrian travel, potential addition and reconfiguration of utilities including street lighting, modification to street signage or new traffic signals, addition of retaining walls, and bank stabilization measures in the portion of San Francisquito Creek disturbed by construction. Further detail is in the enclosed Biological Assessment.

The project is not located within any critical habitat for species under the jurisdiction of the U.S. Fish and Wildlife Service. However, as identified in the enclosed document, with the implementation of avoidance, minimization, and mitigation measures, it is considered that the proposed project **may affect, but is not likely to adversely affect** California red-legged frog (*Rana draytonii*).

Mr. Ryan Olah
January 22, 2018
Page 2

We respectfully request your concurrence with the above findings on the impacts to the federally listed species. Please provide confirmation within 30 days of receipt of this letter that all the required information needed for your concurrence has been provided.

Please contact Dan Rivas at Caltrans District 4, Office of Local Assistance, 111 Grand Avenue, MS-10B, Oakland, CA 94612; via email at dan.rivas@dot.ca.gov; or via telephone at 510-286-5743 with any questions about this request.

Sincerely,



Tom Holstein
Environmental Branch Chief
Caltrans, District 4, Office of Local Assistance

Attachment: *Biological Assessment* (January 2018)



United States Department of the Interior



In Reply Refer to:
08ESMF00-
2018-I-1118

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

MAR 20 2018

Tom Holstein
Attn: Dan Rivas
California Department of Transportation
District 4, Office of Local Assistance
P.O. Box 23660, MS-10B
Oakland, California 94623-0660

Subject: Informal Consultation on the Newell Road Bridge Replacement Project in the Cities of Palo Alto and East Palo Alto, Santa Clara and San Mateo Counties, California, California Department of Transportation (Caltrans) file number BRLS-5100(017)

Dear Mr. Holstein:

This letter is in response to Caltrans' January 22, 2018, request for initiation of informal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Newell Road Bridge Replacement Project (proposed project) in the cities of Palo Alto and East Palo Alto in Santa Clara and San Mateo Counties, California, Caltrans file number BRLS-5100(017). Your request was received by the Service on January 29, 2018. The Service received from Caltrans the revised project description on March 12, 2018. At issue are the proposed project's effects on the federally threatened California red-legged frog (*Rana draytonii*). Critical habitat has been designated for the California red-legged frog but does not occur within the action area for the proposed project. This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

The federal action on which we are consulting is Caltrans, acting as the designated federal representative, and the City of Palo Alto, the project proponent, are proposing to replace the Newell Road Bridge across San Francisquito Creek. Pursuant to 50 CFR 402.12(j), you submitted a biological assessment and requested concurrence with the findings presented therein. These findings conclude that the proposed project may affect, but is not likely to adversely affect the California red-legged frog.

In considering your request, we based our evaluation on the following: (1) your letter requesting the initiation of informal consultation dated January 22, 2018; (2) the January 2018 *Newell Road Bridge Replacement Project Biological Assessment and Essential Fish Habitat Assessment* (Caltrans 2018); and (3) other information available to the Service.

The proposed project includes removal of the existing bridge; construction of new approaches, a two standard lane bridge and accommodation for bicycle and pedestrian travel (including sidewalk and potential road widening for shared right-of-way for bicyclists); potential addition and reconfiguration of utilities including street lighting; modification to street signage; addition of

retaining walls; bank stabilization measures in the portion of San Francisquito Creek disturbed by the construction; a bridge that accommodates increased flows related to San Francisquito Creek improvements to address anticipated flooding risk; and upgrading the channel width beneath the bridge to allow 7,500 cubic feet per second conveyance. The action area encompasses approximately 500 feet along Newell Road Bridge spanning San Francisquito Creek, 350 feet along Woodland Avenue, and the adjacent upstream (100 feet) and downstream (200 feet) sections of San Francisquito Creek totaling 1.09 acres.

Prior to initiation of construction, a temporary surface water diversion will be installed in San Francisquito Creek to allow for construction activities to take place along the banks of the active creek. Clean gravel dams will be installed both upstream and downstream of the construction zone, and culvert piping will route surface water flows through the construction zone. Best management practices (BMPs) will be employed to protect the active stream. The existing bridge will be removed by jackhammers, cranes, and excavators. All reasonable methods available will be used to catch the broken concrete from the bridge and to protect the channel slopes from erosion. If any concrete falls into the creek, it would be removed. Construction staging/laydown would likely occur on Newell Road between the creek, Edgewood Drive, and Woodland Avenue within the roadway right-of-way. The final location of staging/laydown areas would be determined during the design phase.

The anticipated construction period would be 250 working days or approximately 12 months. Construction of the proposed project is expected to begin in March 2019 and ultimately conclude in March 2020, spanning one dry-season work window. In-channel construction would occur during the dry season (June to October).

Conservation Measures

Caltrans, the City of Palo Alto, and their contractors will implement the following conservation measures and BMPs to avoid and minimize the effects of the proposed project on the California red-legged frog and its habitats and other sensitive wildlife species:

1. Measure 1. Install Construction Barrier Fencing around Environmentally Sensitive Areas;
2. Measure 2. Prepare Environmental Awareness Program and Conduct Environmental Awareness Training for Construction Employees;
3. Measure 3. Retain a Biological Monitor to Conduct Visits during Construction;
4. Measure 4. Avoid and Minimize Potential Disturbance of Valley Foothill Riparian Community;
5. Measure 5. Protect Water Quality and Prevent Erosion and Sedimentation in San Francisquito Creek;
6. Measure 6. Avoid Work during Active Breeding and Dispersal Period for California Red-legged Frogs (October 15 through June 1);
7. Measure 7. Conduct Preconstruction Surveys at Work Sites in and near California Red-legged Frog-Sensitive Areas;

8. Measure 8. Provide Construction Worker Awareness Training for California Red-legged Frogs;
9. Measure 9. Install Exclusion Fencing and Conduct Construction Monitoring for California Red-legged Frogs;
10. Measure 10. Compensate for Permanent Loss of Valley Foothill Riparian Habitat; and
11. Measure 11. Limit In-Channel Construction to the Dry Season.

The action area for the proposed project occurs within a highly urbanized residential environment. Habitats within the 1.09-acre action area include 0.06 acre of intermittent stream, 0.13 acre of valley foothill riparian habitat, and 0.90 acre of developed areas. The portion of San Francisquito Creek within the action area provides suitable non-breeding aquatic foraging and dispersal habitat for the California red-legged frog. There are three California Natural Diversity Database (CNDDDB) occurrences of the California red-legged frog within 5 miles of the action area, and the nearest CNDDDB occurrence is approximately 4 miles away from the action area (California Department of Fish and Wildlife 2018). The California red-legged frog has a low potential to occur within the action area due to the highly urbanized setting and the lack of suitable breeding habitat and known occurrences of the frog within the frog's 2-mile dispersal distance.

The Service concurs that the proposed project is not likely to adversely affect the California red-legged frog because: (1) the California red-legged frog has a low potential to occur within the action area; (2) a qualified biologist will conduct pre-construction surveys, train the construction crew in the identification of the California red-legged frog and the conservation measures, and conduct construction monitoring; (3) the implementation of water quality BMPs will minimize the potential for the degradation of aquatic habitat; (4) construction will occur outside of the California red-legged frog's breeding and dispersal periods; and (5) exclusion fencing will prevent California red-legged frogs from entering the work area.

Therefore, unless new information reveals effects of the proposed project that may affect listed species in a manner or to an extent not considered, or a new species is listed, no further action pursuant to the Act is necessary for the proposed project.

If you have any questions regarding this letter, please contact Joseph Terry (joseph_terry@fws.gov), Senior Biologist, or Ryan Olah (ryan_olah@fws.gov), Coast/Bay Division Chief, at the letterhead address, or telephone (916) 943-6721 or (916) 414-6623.

Sincerely,



Ryan Olah
Coast/Bay Division Chief

LITERATURE CITED

California Department of Fish and Wildlife. 2018. California Natural Diversity Database. RareFind version 5. Natural Heritage Division. Sacramento, California.

California Department of Transportation (Caltrans). 2018. Newell Road Bridge Replacement Project Biological Assessment and Essential Fish Habitat Assessment, Palo Alto and East Palo, California. 04-SCI-0-PA. BRLS 5100(017). January. Prepared by ICF, San Francisco, California, for the California Department of Transportation, Office of Local Assistance, District 4, Oakland, California. 7-1 pp. plus appendices.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404-4731

March 29, 2018

Refer to NMFS No: WCR-2018-8833

Tom Holstein
Environmental Branch Chief
California Department of Transportation, District 4
Office of Local Assistance
P.O. Box 23660, MS-10B
Oakland, California 94623

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Newell Road Bridge Replacement Project in the Cities of Palo Alto and East Palo Alto, California

Dear Mr. Holstein:

On January 29, 2018, NOAA's National Marine Fisheries Service (NMFS) received California Department of Transportation's (Caltrans)¹ request for a written concurrence with Caltrans' determination that the proposed Newell Road Bridge Replacement Project (Project) is not likely to adversely affect (NLAA) species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparations of letters of concurrence.

NMFS also reviewed the proposed action for potential effects on essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation. In this case, NMFS concluded the action would not adversely affect EFH. Thus, consultation under the MSA is not required for this action.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554).

¹ Pursuant to 23 USC 327, and through a series of Memorandum of Understandings beginning June 7, 2007, the Federal Highway Administration (FHWA) assigned and Caltrans assumed responsibility for compliance with Section 7 of the federal Endangered Species Act (ESA) and the Magnuson-Stevens Fishery Conservation and Management Act (MSA) for federally-funded highway projects in California. Therefore, Caltrans is considered the federal action agency for consultations with NMFS for federally funded projects involving FHWA.



The concurrence letter will be available through NMFS' Public Consultation Tracking System (<https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts>).² A complete record of this consultation is on file at NMFS California Coastal Area Office, Santa Rosa, California.

Proposed Action and Action Area

The City of Palo Alto (City), in coordination with Caltrans, proposes to replace the Newell Road Bridge over San Francisquito Creek connecting the Cities of Palo Alto and East Palo Alto, California. The City will complete the construction of this project while Caltrans will complete environmental review, consultation, coordination, and administering of funds for this project. The project is located in the Cities of Palo Alto (Santa Clara County) and East Palo Alto (San Mateo County), California. The project site is located approximately 930 feet south of the West Bayshore Road/Newell Road intersection and is approximately 0.79 mile from the Embarcadero Road/Newell Road intersection.

The purpose of the project is to maintain connections for vehicular, bicycle, and pedestrian transportation across San Francisquito Creek, improve safety for all modes of transportation across the creek, and expand the channel's conveyance capacity under the bridge to accommodate high flow events and address potential flooding risk. Construction of the entire project is anticipated to be completed within a period of approximately 12 months. In-channel construction would be limited to the low-precipitation period of summer and fall between June 1 and October 15.

The proposed action includes project elements that will occur directly within the San Francisquito Creek channel and elements that will occur outside the creek channel. Within the channel, the existing Newell Road bridge will be demolished along with the existing abutments on the bank of the channel. Temporary falsework (scaffolding made of steel and timber) will be erected to facilitate construction of the replacement bridge. The new bridge will be a clear span over the stream channel with two footing supports placed on either side of the creek and wing walls along the banks. A maximum of 50, 14-inch piles will be driven or drilled on the creek banks to support the new bridge structure. A vibratory hammer, operated from an upland location, will be used to install the piles. The new bridge abutments will be backfilled with earthen materials and drainage structure. Riprap rock slope protection or soil nail walls will be installed for bank stabilization along the channel extending approximately 50 feet upstream and downstream of the bridge. During construction, no heavy equipment will be operated within the creek channel.

San Francisquito Creek is typically dry at this location during the summer (*i.e.* June 1 through October 15). Fish handling is not proposed as part of this effort as little to no surface flow is anticipated to be present in the creek during the in-channel construction period. However, the City proposes to be prepared for an unexpected emergency such as a water line break or fire hydrant release by installing cofferdams and a water diversion system at the in-channel work site. If water does arrive at the work site during construction via the stream channel, equipment shall be in place for a temporary surface water diversion. Clean, gravel-filled bags wrapped in plastic sheeting will be used to construct cofferdams upstream and downstream of the construction zone and a temporary culvert pipe will extend through the work site to allow surface flow to bypass the construction zone.

² Once on the PCTS homepage, use the following PCTS tracking number within the Quick Search column: WCR-2018-8833.

To facilitate equipment and worker access to the in-channel work areas, riparian herbaceous understory will be cleared and trees trimmed (leaving roots intact) along the banks immediately adjacent to and beneath the bridge. Loss of native riparian trees will be mitigated through the replanting of native trees at a ratio of 3:1 (three native trees planted for every one native tree, greater than 4-inches diameter at breast height, removed). Loss of non-native riparian trees will be compensated at a ratio of 1:1 (one native tree planted for every one non-native tree removed, greater than 4-inches diameter at breast height). The potential loss of up to 0.031 acre of riparian vegetation will be fully mitigated by the planting of replacement native vegetation at the site, and the removal of the existing non-native vegetation is proposed to improve riparian habitat functions. An appropriate seed mix of native species will be planted on disturbed areas upon completion of construction.

The project elements outside the channel (approximately 5 feet above the ordinary high water mark [OHWM]) of San Francisquito Creek include sanitary sewer manhole replacement, fire hydrant assembly replacement, utility pole relocation, street light replacement, temporary relocation of electrical conduits, survey monument adjustment on Woodland Avenue, street sign modification, and removal of a water quality sampling station owned and operated by the City of Palo Alto. Demolition equipment including jackhammers, cranes, and excavators will be staged and operated from an adjacent upland location outside of the creek.

Avoidance and minimization of direct and indirect effects will be achieved using Best Management Practices (BMPs) described below:

- In-channel work will be limited to the period between June 1 and October 15;
- A netting and tarp system will be utilized to prevent and minimize debris from entering the creek during demolition and construction activities;
- Equipment used around San Francisquito Creek will be in good working order and free of dripping or leaking engine fluids. All vehicle maintenance will be performed at least 300 feet from all drainages and wetlands. Any necessary equipment washing will be carried out where the water cannot flow into drainages or wetlands;
- Any surplus concrete rubble, asphalt, or other rubble from construction will be taken to a local landfill;
- Install construction barrier fencing secured with sandbags around environmentally sensitive areas;
- Exposed dust-producing surfaces will be wetted, daily, where necessary;
- Daily street sweeping;
- Periodic maintenance and monitoring of erosion and sediment control measures;
- The contractor will cover or apply non-toxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) that could contribute sediment to waterways;
- The contractor will enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways. Materials stockpiles will be located in non-traffic areas only. Side slopes will not be steeper than 2:1. All stockpile areas will be surrounded by a filter fabric fence and interceptor dike;

- Runoff from disturbed areas will be contained and filtered by berms, vegetated filters, silt fencing, straw wattle, plastic sheeting, catch basins, or other means necessary to prevent the escape of sediment from the disturbed area;
- The contractor will avoid depositing or placing earth or organic material where it may be directly carried into the channel;
- Conduct environmental awareness training for construction employees; and
- Oversight by a qualified biologist to ensure that fish (and other wildlife) are not harmed and habitat is not altered during scaffolding placement and removal.

There are no interrelated or interdependent activities associated with the proposed action.

The project's action area encompasses approximately 500 feet along the Newell Road including the bridge spanning San Francisquito Creek, 350 feet along Woodland Avenue, and 300 linear feet of the San Francisquito Creek channel (100 feet upstream of the existing bridge to 200 feet downstream of the existing bridge) totaling 1.09 acres. This area includes all locations where ground disturbance, staging, and access would occur on Newell Road between San Francisquito Creek, Edgewood Drive, and Woodland Avenue within the roadway right-of-way. It also includes all areas where direct and indirect effects on listed fish and designated critical habitat are anticipated. Within the action area, San Francisquito Creek is intermittent and seasonally flowing through the suburban eastern portions of the Cities of Palo Alto and East Palo Alto prior to discharging into South San Francisco Bay. The creek banks in many areas of the action area have been hardened with sack-crete (concrete filled bags secured to the creek bank) and riprap in an effort to stabilize the banks. The action area supports the migration of steelhead between the upper San Francisquito Creek watershed and San Francisco Bay during the winter and spring months. However, due to seasonally low and dry streamflow conditions, the action area does not support summer and fall rearing of juvenile steelhead. The creek bed, within this reach, is characterized by largely unvegetated, unconsolidated beds of sand, gravel, cobble, and rocky substrates absent of large woody debris. Riparian vegetation is present along the top of the banks upstream and downstream of the bridge and consists of eucalyptus (*Eucalyptus globulus*), willows (*Salix lasiolepis*, *S. laevigata*), Himalayan blackberry (*Rubus armeniacus*), Cape ivy (*Delairea odorata*), and English ivy (*Hedera helix*).

Action Agency's Effects Determination

Caltrans has determined that the project may affect, but is not likely to adversely affect (NLAA) listed species and their critical habitat. Caltrans' determination is based on the incorporation of measures to avoid and minimize effects.

Available information indicates the following listed species (Evolutionarily Significant Units [ESU]) or (Distinct Population Segments [DPS]) under the jurisdiction of NMFS may be affected by the proposed project:

Central California Coast (CCC) steelhead DPS (*Oncorhynchus mykiss*)
 threatened (71 FR 834; January 5, 2006)
 critical habitat (70 FR 52488; September 2, 2005).

The life history of steelhead is summarized in Busby *et al.* (1996). Central California Coast (CCC) steelhead use San Francisco Bay as a migration corridor and pass through the greater San Francisco Bay on their way to the ocean to rear as juveniles or to upstream areas to spawn as adults. Their migrations generally take place in the winter and spring months. Steelhead migrate to the ocean as smolts from January through May and migrate upstream from the ocean as adults to spawn from December through April (Fukushima and Lesh 1998).

The action area is located within designated critical habitat for CCC steelhead. The designation of critical habitat for CCC steelhead uses the term primary constituent element (PCE) or essential features. The new critical habitat regulations (81 FR 7414) replace this term with physical or biological features (PBFs). This shift in terminology does not change the approach used in conducting our analysis, whether the original designation identified primary constituent elements, physical or biological features, or essential features.

The PBFs of designated critical habitat for CCC steelhead in freshwater include those sites and habitat components that support spawning, rearing, and migration. The action area primarily supports migration of CCC steelhead and PBFs for migration consist of corridors free of obstruction and excessive predation with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival. Within the action area, the PBFs for migration are in fair to good condition, while those supporting adult spawning and juvenile rearing are poor.

Consultation History

By letter dated January 22, 2018, Caltrans transmitted the biological assessment for the Project (Caltrans 2018) and requested initiation of informal consultation with NMFS. Electronic mail (email) correspondence between NMFS and Caltrans occurred between March 1 and March 7, 2018 clarifying timing of in-channel work and construction elements of the cofferdams. Sufficient information was provided to NMFS to initiate consultation on March 8, 2018. Additional correspondence (email) between NMFS and Caltrans occurred between March 21 and March 26, 2018 clarifying the purpose of the temporary cofferdam and water diversion pipe.

Effects of the Action

Under the ESA, “effects of the action” means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is not likely to adversely affect listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

The effects of the proposed action are reasonably likely to include temporary degradation of water quality and temporary impacts to riparian vegetation. By restricting construction activities to the period between June 1 and October 15, the Project’s construction schedule avoids the migration seasons of adult and juvenile CCC steelhead in San Francisquito Creek. During the summer and

fall, there is typically no surface flow within the action area thereby limiting use of this reach of creek by steelhead to winter and spring months. Thus, NMFS anticipates no CCC steelhead will be present in the action area during the in-channel construction period. As presented below, impacts associated with construction are expected to be temporary and fully dissipate when construction activities cease.

Water quality in San Francisquito Creek may be affected by workers, equipment, and installation of the cofferdams disturbing and mobilizing sediment along the creek bed and bank during construction. The City has proposed sediment control devices, such as barrier/silt fences, dust suppression, a netting and tarp system to prevent debris from falling into the creek, and stockpile management to avoid or minimize the discharge of materials. NMFS expects these proposed control measures will effectively prevent sediment from entering San Francisquito Creek and becoming a source of water pollution. In most summer and fall months San Francisquito Creek, within the project area, has no surface flow. With steelhead unlikely to be within the work area during construction and elevated turbidity/suspended sediments expected to be minor, localized, and short-term during construction, the potential effects of project construction on water quality are expected to be insignificant.

Between June 1 and October 15, cofferdams will be constructed in the channel with a bypass culvert to manage unanticipated water intrusion into the creek resulting from an emergency water main break, damage to a hydrant, or similar. For construction of cofferdams, sand bags will be filled with clean gravel and wrapped in heavy plastic sheeting. Since San Francisquito Creek in the action area is expected to be dry during the in-channel construction period, dewatering or fish relocation is not anticipated to be necessary for installation of cofferdams. With a low probability of surface water flow, no steelhead are expected to be present and installation of the cofferdams are not anticipated to entrap threatened steelhead or impeded migration. All cofferdams and other equipment shall be removed from the channel by October 15 which will be prior to the next season's upstream migration of adults.

For installation of 14-inch diameter piles to support the new bridge, a vibratory hammer will be used. Hydroacoustic data collected from various projects within the San Francisco Bay region (Buehler *et al.* 2015) indicates vibratory hammers generate elevated levels of underwater sound; however, elevated levels do not rise to the threshold of physical injury or mortality to fish. Furthermore, this reach of San Francisquito Creek is expected to be dry during the in-channel work period when a vibratory hammer may be operated. Thus, steelhead will not be present in the action area during the operation of a vibratory hammer and the effects of pile driving by this project are anticipated to be discountable.

Some vegetation removal is proposed for equipment access to the channel and to allow for the new alignment of the bridge. The potential loss of up to 0.031 acre of riparian vegetation is expected to be fully mitigated by the planting of replacement native vegetation at the site, and the removal of the existing non-native vegetation is expected to improve riparian habitat functions.

The action area is located within designated critical habitat for CCC steelhead. During project activities, critical habitat will be temporarily affected by potential effects to water quality. As described above, effects to water quality are expected to be minor, localized, and short-term. The City has proposed several control measures to avoid the discharge of contaminants and prevent

sediment from entering the creek. Post-construction, the project will increase the conveyance capacity of San Francisquito Creek flood flows under the bridge and the project's replacement of existing non-native vegetation with native riparian species will benefit the action area by improving the condition of the riparian community. Based on the above, the potential effects of this project are considered insignificant and are not expected to degrade PBFs in the action area or result in adverse impacts to designated critical habitat.

Conclusion

Based on this analysis, NMFS concurs with Caltrans that the proposed action is not likely to adversely affect the subject listed species and designated critical habitats.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by Caltrans or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16).

Please direct questions regarding this letter to Gwen Santos, North-Central Coast Office in Santa Rosa, California at (707) 575-6077, or via email at gwen.santos@noaa.gov.

Sincerely,



Barry A. Thom
Regional Administrator

cc: Dan Rivas, California Dept of Transportation, Office of Local Assistance, Oakland
Copy to ARN File # 151422WCR2018SR00022
Copy to Chron File

Literature Cited

71 FR 834. 2006. Endangered and threatened species: final listing determinations for 10 distinct Population segments of West Coast steelhead. Federal Register 71:834-862.

Buehler, D., R. Oestman, J. Reyff, K. Pommerenck, and B. Mitchell. 2015 Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish. Prepared for California Department of Transportation, 1120 N Street, Sacramento, California 95814. November 2015.

- Busby, P.J., T.C. Wainwright, G.J. Bryant, L. Lierheimer, R.S. Waples, F.W. Waknitz, and I.V. Lagomarsino. 1996. Status review of West Coast steelhead from Washington, Idaho, Oregon and California. United States Department of Commerce, National Oceanic and Atmospheric Administration Technical Memorandum NMFS-NWFSC-27. 261 pages. [Document available at: [http://www.westcoast.fisheries.noaa.gov/publications/statusreviews/salmon steelhead/ steelhead/sr 1997-steelhead.pdf](http://www.westcoast.fisheries.noaa.gov/publications/statusreviews/salmon%20steelhead/steelhead/sr%201997-steelhead.pdf).
- Caltrans (California Department of Transportation). 2018. Biological Assessment and Essential Fish Habitat Assessment Palo Alto and East Palo Alto, California (04-SCI-0-PA) at the Newell Road Bridge Replacement Project.
- Fukushima, L., and E.W. Lesh. 1998. Adult and juvenile anadromous salmonid migration timing in California streams. *California Fish and Game* 84: 133-145.

DEPARTMENT OF TRANSPORTATION

DISTRICT 4

Office of Local Assistance
P.O. BOX 23660, MS-10B
OAKLAND, CA 94623-0660
PHONE (510) 286-6371
FAX (510) 286-5229
TTY 711
www.dot.ca.gov



Making Conservation
a California Way of Life.

January 23, 2020

Ms. Tashia J. Clemons
U.S. Department of Transportation
Federal Highway Administration
650 Capitol Mall, Suite 4-100
Sacramento, CA 95814

Attention: Joseph Vaughn

Dear Ms. Tashia J. Clemons:

The California Department of Transportation (the Department) requests that the Federal Highway Administration issue a project-level conformity determination for the Newell Road Bridge Replacement Project (CTIPS ID# BRLS 5100 (017)). The project would replace the existing bridge crossing San Francisquito Creek at Newell Road with a two-lane bridge on the existing alignment of Newell Road to safely accommodate vehicle, bicycle, and pedestrian traffic and also to accommodate increased streamflow conveyance when other upstream creek improvements are completed. The project is located in Santa Clara and San Mateo counties, in the cities of Palo Alto and East Palo Alto. It is located southwest of U.S. Highway 101 and east of State Route 82 (El Camino Real), on Newell Road between Edgewood Drive in Palo Alto and Woodland Avenue in East Palo Alto.

The project is in an area that is designated Nonattainment or Maintenance for Ozone, CO and PM2.5. Details of the analysis are contained in the enclosed Air Quality Conformity Analysis report and related materials.

The project area is subject to project-level hot-spot analysis requirements for PM2.5. The attached conformity analysis shows that hot-spot analysis requirements listed in 40 CFR 93.116 and 123 are met.

Interagency Consultation and public involvement requirements related to PM2.5 have been completed in accordance with the *Transportation*

Ms. Tashia J. Clemons
January 23, 2020
Page 2

Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas (U.S. EPA, 2015). Interagency Consultation concluded on October 12, 2017. The Interagency Consultation partners concurred, as shown in the attached materials, that the project is not exempt from conformity analysis requirements, but that it is not a Project of Concern for PM2.5 as defined at 40 CFR 93.123(b)(1). As such, an explicit, detailed PM2.5 hot-spot analysis is not required.

Public involvement included advertising the availability of the conformity analysis for 60 days beginning on May 31, 2019. No public comments were received.

This project has been assigned to the Department under 23 USC 327 (NEPA Assignment) and the proposed approval date of the final NEPA document is expected on or about May 2020. We would appreciate your assistance with providing a conformity determination prior to that date.

If you have any questions regarding this conformity analysis, please contact Dan Rivas at (510) 286 5743 or dan.rivas@dot.ca.gov.

Sincerely,



Tom Holstein
Senior Environmental Planner
Caltrans District 4
Office of Local Assistance
(510) 286 6371
tom.holstein@dot.ca.gov

cc: Michel Jeremias, City of Palo Alto; Jennifer Andersen, ICF
Enclosure
Air Quality Conformity Analysis Report; documentation of Interagency Consultation including email, meeting minutes, and TIP/RTP listings; documentation of public involvement.



U.S. Department
of Transportation
**Federal Highway
Administration**

California Division

February 24, 2020

650 Capitol Mall, Suite 4-100
Sacramento, CA 95814
(916) 498-5001
(916) 498-5008 (fax)

Mr. Tony Tavares, District Director
California Department of Transportation,
District 4, P.O. Box 23660
Oakland, CA 94623-0660

In Reply Refer To:
HDA-CA

Attention: Tomas Holstein

SUBJECT: Project Level Conformity Determination for the Newell Bridge Improvement Project (CTIP ID # BRLS 5100 (017))

Dear Mr. Tavares:

On January 23, 2020, the California Department of Transportation (Caltrans) submitted to the Federal Highway Administration (FHWA) a complete request for a project level conformity determination for the Newell Bridge Improvement Project. The project is in an area that is designated Non-Attainment or Maintenance for Ozone and Particulate Matter (PM 2.5).

The project level conformity analysis submitted by Caltrans indicates that the project-level transportation conformity requirements of 40 CFR Part 93 have been met. The project is included in the Metropolitan Transportation Commission's (MTC) current Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP), as amended. The design concept and scope of the preferred alternative have not changed significantly from those assumed in the regional emissions analysis.

As required by 40 CFR 93.116 and 93.123, the localized PM analyses are included in the documentation. The analyses demonstrate that the project will not create any new violations of the standards or increase the severity or number of existing violations.

Based on the information provided, FHWA finds that the Newell Bridge Improvement Project conforms with the State Implementation Plan (SIP) in accordance with 40 CFR Part 93.

If you have any questions pertaining to this conformity finding, please contact Joseph Vaughn at (916) 498-5346 or by email at Joseph.Vaughn@dot.gov.

Sincerely,

Tashia J. Clemons
Director, Planning and Environment

Appendix E
Species Lists

March 30, 2020

Quad Name **Palo Alto**

Quad Number **37122-D2**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) - **X**
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat - **X**
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**
Chinook Salmon EFH - **X**
Groundfish EFH - **X**
Coastal Pelagics EFH - **X**
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -

MMPA Pinnipeds - **X**



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:

March 30, 2020

Consultation Code: 08ESMF00-2015-SLI-0809

Event Code: 08ESMF00-2020-E-04618

Project Name: Newell Street Bridge Replacement Project

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2015-SLI-0809

Event Code: 08ESMF00-2020-E-04618

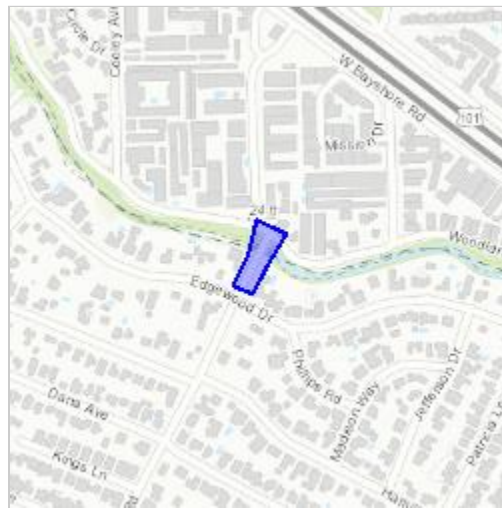
Project Name: Newell Street Bridge Replacement Project

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: Located in a residential area of the cities of Palo Alto, and East Palo Alto in the southeast part of San Mateo County, southwest of U.S. Highway 101 (US 101) and east of State Route 82 (El Camino Real). The Project site is located on Newell Road between Edgewood Drive in Palo Alto and Woodland Avenue in East Palo Alto. Single span cast-in-place pre-stressed slab bridge 86 feet in length, 45.5 width. Possible construction 2016.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.45426263060122N122.13668689979386W>



Counties: San Mateo, CA | Santa Clara, CA

Endangered Species Act Species

There is a total of 17 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Salt Marsh Harvest Mouse <i>Reithrodontomys raviventris</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/613	Endangered

Birds

NAME	STATUS
California Clapper Rail <i>Rallus longirostris obsoletus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Marbled Murrelet <i>Brachyramphus marmoratus</i> Population: U.S.A. (CA, OR, WA) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Western Snowy Plover <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Green Sea Turtle <i>Chelonia mydas</i> Population: East Pacific DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened
San Francisco Garter Snake <i>Thamnophis sirtalis tetrataenia</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5956	Endangered

Amphibians

NAME	STATUS
<p>California Red-legged Frog <i>Rana draytonii</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf</p>	Threatened
<p>California Tiger Salamander <i>Ambystoma californiense</i></p> <p>Population: U.S.A. (Central CA DPS) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076</p>	Threatened

Fishes

NAME	STATUS
<p>Delta Smelt <i>Hypomesus transpacificus</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321</p>	Threatened

Insects

NAME	STATUS
<p>Bay Checkerspot Butterfly <i>Euphydryas editha bayensis</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2320</p>	Threatened
<p>San Bruno Elfin Butterfly <i>Callophrys mossii bayensis</i></p> <p>There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3394</p>	Endangered

Flowering Plants

NAME	STATUS
Fountain Thistle <i>Cirsium fontinale</i> var. <i>fontinale</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7939	Endangered
Marin Dwarf-flax <i>Hesperolinon congestum</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5363	Threatened
San Mateo Thornmint <i>Acanthomintha obovata</i> ssp. <i>duttonii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2038	Endangered
Showy Indian Clover <i>Trifolium amoenum</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6459	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Appendix F

Comment Letters and Responses to Public Comments

F.1 Organization of Public Comments

The City of Palo Alto and the California Department of Transportation (Caltrans) circulated the Draft Environmental Impact Report/Environmental Assessment (EIR/EA) for the Newell Road Bridge Replacement Project (Project) for public review from May 31, 2019 to July 30, 2019. Oral comments on the Draft EIR/EA received at public hearings and written comments from individuals, organizations, and public agencies received during the circulation period are included in this appendix. The entities and individuals below provided comments.

Table F-1. List of Public Comments on the Draft EIR/EA

Comment Letter	Commenter	Date Comment Received
A-1	City of East Palo Alto	July 30, 2019
A-2	San Francisquito Creek Joint Powers Authority	July 30, 2019
A-3	San Francisco Bay Regional Quality Control Board	July 30, 2019
A-4	Santa Clara Valley Water District	July 30, 2019
O-1	MidPen Housing Corporation	July 17, 2019
O-2	MidPen Housing Corporation	July 25, 2019
O-3	Palo Alto Ped/Bike Advisory Committee, Palo Alto PTA, Silicon Valley Bicycle Coalition	June 18, 2019
I-1	Eileen Altman	June 18, 2019
I-2	Ben Ball	June 19, 2019
I-3	Ben Ball	July 24, 2019
I-4	Steve Bisset	July 12, 2019
I-5	Claire Elliot	July 18, 2019
I-6	Angie Evans	June 6, 2019
I-7	Janie and Mike Farn	June 24, 2019
I-8	Rabbi Yitzchok Feldman	June 12, 2019
I-9	Peter Forgie	June 22, 2019
I-10	Paul Gumina (on behalf of Shen Yang)	July 30, 2019
I-11	Xenia Hammer	June 14, 2019
I-12	Xenia Hammer	June 20, 2019
I-13	Xenia Hammer	July 22, 2019
I-14	Jerry Hearn	June 11, 2019
I-15	Hamilton Hitchings	June 16, 2019
I-16	Franklin Pitcher Johnson	July 30, 2019

Comment Letter	Commenter	Date Comment Received
I-17	Megan McCaslin	June 21, 2019
I-18	Bill Michel	June 20, 2019
I-19	Susan Mittmann	June 19, 2019
I-20	Trish Mulvey	June 20, 2019
I-21	Eric Nordman	July 22, 2019
I-22	Norm Picker	July 26, 2019
I-23	Jamie Rapperport and Elspeth Farmer	July 30, 2019
I-24	Jeff Reese and Linda Waters	Not available
I-25	Andrew Rich	June 19, 2019
I-26	Jeff Shore	June 20, 2019
I-27	Jeff Shore	July 30, 2019
I-28	Jay and Sallie Whaley	June 19, 2019
T-1	City of Palo Alto Planning and Transportation Commission	June 12, 2019
T-2	City of Palo Alto Newell Road Bridge Community Meeting	June 18, 2019
T-3	City of East Palo Alto Public Works Transportation Committee	June 19, 2019
T-4	City of Palo Alto Architectural Review Board	July 18, 2019

F.2 Responses to Comments

The City of Palo Alto and Caltrans thank all commenters for participating and providing input during the environmental review process. Comment letters listed below and transcripts from the public hearings that occurred during the circulation period are included in the Final EIR/EA and will be considered during completion of the environmental review phase of the Project. Section F.2.1 provides master responses to commonly received public comments. Section F.2.2 provides responses to all public comments received.

F.2.1 Master Responses

Master Response 1

Public Comment: A wider bridge and/or realigned bridge would increase vehicle cut-through traffic and would increase vehicle speeds, leading to unsafe conditions.

Response: The existing and future analysis for traffic is based on the growth rate of the Project vicinity, which was derived from the general plans and travel demand models (the models account for the future land uses and rerouting, hence the concern of rerouting traffic is part of the analysis). Therefore, the analysis included anticipated growth and development for both the City of Palo Alto and East Palo Alto. As discussed in Section 2.1.4.3, *Environmental Consequences*, shown in Tables 2.1.4-5 through 2.1.4-7, of the Draft EIR/EA and included in the *Newell Road Bridge Replacement Project Supplemental Traffic Evaluation Report* (TJKM 2019a), the City of Palo Alto and Caltrans prepared a Traffic Infusion on Residential Environment (TIRE) analysis. The TIRE analysis evaluated

whether the Project would contribute to increased traffic on nearby residential roadway segments, which could affect the safety and comfort of human activities, such as walking, bicycling, and playing on or near a roadway, and on the freedom to maneuver personal vehicles in and out of residential driveways. Although growth within the area is anticipated to result in increased traffic in this area generally, the TIRE index (which takes into account overall traffic volumes on a roadway) would remain the same under the No Build Alternative as it is under all build alternatives. The Project itself, under any of the build alternatives, would not contribute to a noticeable increase in traffic volumes.

The City of Palo Alto is working with Caltrans to determine striping for the bridge. The City has presented two options that could be implemented under Build Alternatives 2, 3, or 4, one of which would provide a curb between the bicycle lane and the sidewalk, and the other of which would provide a mixed-use path with a curb between the vehicle lane and mixed-use path. In both options, the vehicular traffic lane width would be 10 feet. The change from a 9-foot-wide vehicle lane (existing) to a 10-foot-wide vehicle lane is not anticipated to increase traffic speeds. This is a reasonable conclusion when considering that the stop sign-controlled intersections at the Project location, which would remain under all three of these build alternatives, are not conducive to increasing speeds. Under Build Alternative 1, the two-lane, bi-directional bridge would be changed to a one lane, bi-directional bridge, necessitating the installation of several traffic lights. The traffic analysis concluded that this would result in increased critical delay of more than 4 seconds at both the Newell Road/Edgewood Drive and the Newell Road/Woodland Avenue (north leg) intersections, causing the Level of Service (LOS) to deteriorate during both the a.m. and p.m. peak hours at both of these intersections (TJKM 2019a). With these intersection controls and anticipated increase in delay, it is also reasonable to conclude that speeds would not increase under Build Alternative 1.

Master Response 2

Public Comment: Bicycle and pedestrian circulation, traffic, and analysis should be added to the Final EIR/EA.

Response: The Project would enhance the existing pedestrian and bicycle facilities. Additional analysis (such as Level of Stress analysis) was not a part of the Project because the Project was found to enhance all modes of transportation and would not deteriorate any existing pedestrian or bicycle facilities.

Section 2.4.1.2, *Affected Environment*, and 2.1.4.3, *Environmental Consequences*, of the EIR/EA discuss bicycle and pedestrian traffic and circulation. The City and Caltrans completed counts in 2016 for bicycles and pedestrians, and these counts were used as the basis for the analysis in the Draft EIR/EA. Based on comments received in response to the Draft EIR/EA, and due to the opening of the nearby Bicycle/Pedestrian Overcross Bridge that connects Palo Alto/East Palo Alto to East Palo Alto north of US Highway 101, updated vehicular, pedestrian and bicycle counts were collected in August 2019. Please refer to the *Technical Memorandum – Comparison of Peak Hour Volumes at Newell Road / Woodland Avenue for Vehicles, Pedestrians, and Bikes* (TJKM 2019b). Pedestrian volumes have generally increased from 16 to 35 trips in the a.m. peak hour and 10 to 32 trips in the p.m. peak hour. Bicycle trips have generally increased from 14 to 64 trips in the a.m. peak hour and 6 to 32 trips in the p.m. peak hour. The observed bicycle volumes in 2019 are well below the practical capacity of Class 2 bicycle lanes or Class 3 shared travel lanes. Comparison to the 2016 counts and the analysis confirmed the traffic impacts would remain less than significant under the California Environmental Quality Act (CEQA) based on the 2019 volume counts.

F.2.2 Responses to Public Comments

On the following pages are copies of the comment letters and responses to each comment. The comment letters are included in the order shown in Table F-1. Each written comment has one or more numbers inserted in the margin. These numbers correspond to the written responses that follow each comment. Note that in some cases, responses to comments refer the reader to a master response, a different comment's response, or to a section of the Draft EIR/EA.



City of East Palo Alto

Office of the City Manager

July 30, 2019

City of Palo Alto
Attn: Michel Jeremias
250 Hamilton Ave, 6th Floor,
Palo Alto, CA 94301
Via: Michel.Jeremias@CityofPaloAlto.org.

RE: East Palo Alto Comment Letter on Newell Road Bridge Replacement Project DEIR

Dear Michel Jeremias:

Thank you for the opportunity to review and comment on the Draft EIR for the Newell Road Bridge Replacement Project (Project). The City of East Palo Alto would like to congratulate the City of Palo Alto for its progress with the Newell Road Bridge Replacement project. This project is extremely important for the City of East Palo Alto. The City Council’s adopted priorities include “Work with Palo Alto on design of Newell Road Bridge.” The completion of this project is critical to improve the safety on the bridge, but also to facilitate the San Francisquito Creek JPA Phase II project that will reduce the flooding risk upstream of Highway 101. The City understands that this project is a combined effort between our two communities, which each have different constituencies with varied perspectives, and that the best possible outcome is when we work together to solve these issues. As a Responsible Agency, the City has prepared a detailed comment letter.

1

Alternatives: The City appreciates the inclusion of the full alignment alternative in the analysis. The City believes that the full alignment (alternative 4) would increase the cut through traffic in our neighborhoods. The City does not recommend Alternative 4 for this reason. Alternatives 2 (current alignment) and Alternatives 3 (partial realignment) are substantially similar. Both represent a major improvement in safety for vehicles, pedestrians, and bicycles; sight distance, and flood protection. The environmental analysis and consultation with Palo Alto staff have indicated that the environmental impacts of Alternative 3 (partial alignment) are slightly greater than those of Alternative 2.

2

The City generally supports Alternative 2, but requires the following clarification: A technical explanation of the differences in sight distance between the Alternative 2 and Alternative 3, and any potential impact the sight distance would have on safety.

3

The City requests that the project include in its MMRP or other requirement that an appropriately scaled traffic study be conducted two years after the completion of the bridge to determine if there is a need for additional improvements to improve safety.

4

Traffic: The traffic analysis in the DEIR is based on the Palo Alto Standards including the TIRE method. The City of East Palo Alto uses LOS and critical delay thresholds. Traffic analyses need to

5

use the thresholds established in each respective city. The LOS and critical seconds of delay information is included in the Traffic Impact report in the appendix. Prepare a memo that summarizes the impacts on East Palo Alto intersections based on the East Palo Alto thresholds. The Summary Matrix of Impacts on Page S-8 should clearly identify the significant and unavoidable impact that is identified on page 3-33, Section 3.2.16.

5
cont'd

Bicycle and Pedestrian Access; The May 2019 grand opening of the East Palo Alto pedestrian overcrossing at Newell/Clark and Highway 101 has highlighted the need for improved bicycle and pedestrian access and signage along Newell Road. Please prepare information on how more space on the new bridge can be provided on the bridge for bicyclists and/or pedestrians, and how the signage and improvements along Newell Road will facilitate pedestrian and bicycle access. The East Palo Alto General Plan includes the following policies related to this corridor.

6

- Newell Road as a planned Class II bike route (Figure 6-5)
- Woodland at Newell Road as a “priority traffic calming corridor” (Figure 6-7)
- Newell Road as a “Priority Pedestrian Network” (Figure 8-7)

Construction Impacts; The management of the construction impacts is of great importance. The City requests the following:

7

- A requirement that a traffic control plan for the construction be prepared and approved by East Palo Alto and Palo Alto staff prior to the initiation of construction. If the closure of the Newell Road Bridge occurs at the same time as the closure of the Pope Chaucer Bridge, all three effected cities (East Palo Alto, Menlo Park, and Palo Alto) must review and approve the traffic control plan.

Congratulations on the progress on this critical project and thank you for this opportunity to comment on the DEIR. We look forward to working with you to move quickly on this project and improve safety and reduce flooding risk for both of our communities. The City reserves the right to submit additional comments based on the responses to this letter. If you have any questions regarding this letter, please contact Sean Charpentier, Assistant City Manager, at (650) 833-8946.

Sincerely,



Jaime M. Fontes
City Manager

c: Len Materman, SFCJPA
East Palo Alto City Council
Palo Alto City Council

Letter A-1. City of East Palo Alto, 7/30/19

Response to Comment A-1.1

The City of East Palo Alto's support for the Project is noted. The City of Palo Alto and Caltrans appreciate the City of East Palo Alto's continued involvement in the Project.

Response to Comment A-1.2

The City of East Palo Alto's summary of the four build alternatives is noted. Please see Master Response 1 for an explanation of cut-through traffic. Table S-1, *Summary of Environmental Impacts and Avoidance, Minimization, and/or Mitigation Measures*, Chapter 2, *Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures*, and Chapter 3, *California Environmental Quality Act Evaluation* of the Draft EIR/EA provide a comparison of the build alternatives.

Response to Comment A-1.3

The preliminary geometry for both alternatives satisfies local, state, and American Association of State Highway and Transportation Officials standards. Detailed design has not progressed sufficiently to determine final sight distance for the alternatives. However, appreciable differences are not expected. Sight lines are adequate for an all-way stop controlled intersection and adequate sight lines would be provided to each of the stop approaches. The current configuration for each build alternative provides adequate sight lines per general design standards. Final design for either alternative would meet Caltrans Design Standards sight distance and safety standards.

Response to Comment A-1.4

Please see Master Response 1. In addition, as discussed in Sections 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, and 3.2.16, *Transportation/Traffic* of the Draft EIR/EA, the environmental analysis concludes that the Project would have no significant impact under CEQA with respect to increasing a hazard through introduction of a design feature. The Project eliminates existing hazards by replacing the functionally obsolete bridge with a bridge that meets updated safety standards. In addition, the traffic reports for the Project anticipated growth from the general plans and consider future years as part of the analysis. The analysis concludes that there would be no significant impact on traffic during operations under CEQA. Therefore, additional studies to analyze further safety improvements in the future are not warranted as part of the environmental analysis for the Project. During Project operations, the City of Palo Alto will continue its current practice of monitoring traffic city-wide. As a Condition of Approval, the City of Palo Alto agrees to conduct a one-time post construction study to collect data and evaluate whether additional traffic calming measures are recommended. The City of Palo Alto will consider options available at that time in coordination with the City of East Palo Alto.

Response to Comment A-1.5

As noted by the commenter, the Level of Service (LOS) and critical seconds of delay threshold information utilized by the City of East Palo Alto are provided in the appendices of the *Supplemental Traffic Evaluation Report* (TKJM 2019). The LOS and critical seconds of delay criteria used in the Draft EIR/EA reflect the thresholds used by the City of Palo Alto as well as the thresholds used in the City of East Palo Alto; this has been clarified in Section 2.1.4, *Traffic and Transportation/Pedestrian*

and *Bicycle Facilities* and in Section 3.2.16, *Transportation/Traffic*. Therefore, a separate memo does not appear to be required.

In addition, the following intersections in the City of East Palo Alto were analyzed in the Draft EIR/EA: Newell Road/Woodland Avenue, University Avenue/Woodland Avenue, and W Bayshore Road/Newell Road. As described in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, under the design year (Year 2040) scenario, all of the study intersections in the City of East Palo Alto, except for University Avenue/Woodland Drive, operate within applicable jurisdictional standards of the City of Palo Alto and East Palo Alto (LOS D or better) during the a.m. and p.m. peak hours. The Summary Matrix of Impacts on page S-8 does identify the significant and unavoidable CEQA impact described in Section 3.2.16, *Transportation/Traffic*. Please refer to Table S-1, *Summary of Environmental Impacts and Avoidance, Minimization, and/or Mitigation Measures*.

Response to Comment A-1.6

The replacement bridge planned for Newell Road adds substantially more space on the bridge for pedestrian and bicyclists. Currently, the bridge is only 18-feet wide from barrier to barrier and shared by vehicles, pedestrians and bicyclists. As a result of comments received, and the need to improve access, the City of Palo Alto is advancing two options that will increase the space for bicyclists and pedestrians. The first option is designated 5-foot wide sidewalks and 4-foot wide shoulders/bike lanes. The second option that was not part of the previously released Draft EIR/EA provides 9-foot wide multi-use paths that would be used by pedestrians and bicyclists and would elevate them from vehicle traffic by six inches. The proposed bridge (under any build alternative) would provide substantial bicycle and pedestrian improvements over existing conditions. The bridge would provide bicycle facilities that are consistent and compatible with the existing facilities in the City of Palo Alto as well as with the identified facilities in the East Palo Alto General Plan. The proposed build alternatives consider comments received during the scoping period, many of which indicated a desire for the bridge to be as narrow as possible. The proposed build alternatives respond to public input while accommodating bicycle and pedestrian access in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. The Project would facilitate bicycle and pedestrian access by raising the adjacent roadways to reduce grade changes between the bridge and adjacent roadways, and providing better line-of-sight for all modes of transportation. Roadway signage is planned as part of the Project; the City of Palo Alto will work with the City of East Palo Alto and Caltrans as part of future design phases to determine the type, design, and location of signage to facilitate pedestrian and bicycle access. The City acknowledges policies outlined in the *City of East Palo Alto General Plan* for this corridor. The Project would further these policies by improving bicycle and pedestrian access on the bridge.

Response to Comment A-1.7

As described in Section 2.1.4.4, *Avoidance, Minimization and/or Mitigation Measures*, Standardized Measure SM-TR-1 will require a traffic management plan (TMP) be prepared and approved by the City of Palo Alto. The TMP will contain requirements for public noticing, traffic control implementation, signage, property and business access, parking, and safety during construction. It also will contain information about the construction schedule and detours. Standardized Measure SM-TR-1 has been revised to require approval of the TMP from the City of East Palo Alto in addition to the City of Palo Alto. The construction period for the replacement of the Pope–Chaucer Bridge would not overlap with the construction period for the Project. Replacement of the Project must

occur prior to replacement of the Pope–Chaucer Bridge due to hydrology and flooding considerations.



SAN FRANCISQUITO CREEK
JOINT POWERS AUTHORITY
SFCJPA.ORG

Sent via email to michel.jeremias@cityofpaloalto.org

July 30, 2019

City of Palo Alto
Attn: Michel Jeremias
250 Hamilton Ave, 6th Floor
Palo Alto, CA 94301

This letter constitutes comments on the Draft Environmental Impact Report/Environmental Assessment (Draft EIR/EA) for the Newell Road Bridge Replacement Project. The San Francisquito Creek Joint Powers Authority (SFCJPA) supports the City’s Locally Preferred Alternative (LPA) for the replacement of Newell Bridge, which must be completed prior to our proposed project to replace the Pope-Chaucer Bridge (replacing these bridges simultaneously may create traffic impacts) and widen the creek as described in our Draft Environmental Impact Report for the San Francisquito Creek Flood Protection, Ecosystem Restoration and Recreation Project Upstream of Highway 101.

The SFCJPA plans, designs, funds, and implements regional capital improvement projects that protect against flooding, restore ecosystems, and enhance recreation for the agencies that founded it twenty years ago: the cities of Palo Alto, East Palo Alto and Menlo Park, the San Mateo County Flood Control District and the Santa Clara Valley Water District (Valley Water). Nine years ago, the SFCJPA developed the application for Caltrans funding for the Newell Road Bridge project now managed by the City of Palo Alto, and the SFCJPA first guaranteed the local funding match, which has since been provided by Valley Water. As this was the SFCJPA’s first opportunity to review the Newell Road Bridge Draft EIR/EA, we provide the following comments on it at this time.

1. In Section S.3, the Draft EIR/EA lists two of the five project purposes as “Design a bridge that accommodates increased flows related to San Francisquito Creek improvements to address anticipated flooding risk” and “Upgrade the channel width beneath the bridge to allow for the 50-year storm event (7,500 cubic feet per second [cfs]) to pass.” As described in the SFCJPA’s Draft EIR released prior to the City’s Newell Road Bridge Draft EIR/EA, the increased flows from the SFCJPA’s proposed project would result the channel having capacity to contain an approximately 7,500 cfs, or a 70-year event, and we intend to supplement that with a detention basin upstream to provide 100-year flood protection. So that it is clear to the public and agencies reviewing both environmental documents, the reference to a 50-year event throughout the Newell Road Bridge Draft EIR/EA should be corrected.
2. The August 12, 2015 Notice of Preparation of an EIR/EA for the Newell Road Bridge project states that in addition to replacing the bridge, “the proposed Project would also incorporate channel improvements to widen a bottleneck segment of San Francisquito Creek along the northern bank that stretches approximately 900 feet downstream of the bridge (Figure 2).” The LPA in the Draft EIR does not appear to include the 900-foot section of channel widening, and the Final EIR should describe why this project feature was eliminated.
3. Section 1.5, Permits and Approvals Needed, states that a variance from FEMA would be needed “due to lack of 2 feet of freeboard¹ on 50-year bridge design.” This statement should be modified per comment 1 above, and Palo Alto and Caltrans should confirm whether and under what conditions a variance from FEMA is needed.

It is very important that the City’s proposed project at Newell Road Bridge be well-coordinated with the SFCJPA’s proposed project upstream and downstream of Newell Road. SFCJPA staff look forward to that coordination, and can answer questions regarding the above comments.

Sincerely,

Len Materman
Executive Director

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Letter A-2. San Francisquito Creek Joint Powers Authority, 7/30/19

Response to Comment A-2.1

The role of the San Francisquito Creek Joint Powers Authority (SFCJPA) is noted. The reference to the 50-year storm event has been revised globally in the Final EIR/EA to 70-year storm event.

Response to Comment A-2.2

Coordination with the SFCJPA, new drainage basin data and changes in hydrology requirements for the flood control project allowed for the City of Palo Alto and Caltrans to reduce the channel work for the Project. As the SFCJPA reduced the flow requirements, the channel widening was no longer required. This clarification has been added in Section 1.4.5, *Alternatives Considered but Eliminated from Further Discussion Prior to Draft Environmental Impact Report/Environmental Assessment* of the Final EIR/EA.

Response to Comment A-2.3

As noted in response to comment A.2-1, the reference to the 50-year storm event has been revised globally in the Final EIR/EA to a 70-year storm event. With the intended additional upstream detention described by the SFCJPA in their environmental document, which would increase the flood protection for the creek to the 100-year event, the Federal Emergency Management Agency criteria will be reviewed with Caltrans to determine if the variance is required.

Response to Comment A-2.4

The City of Palo Alto will continue to coordinate with SFCJPA on construction schedules throughout the lifetime of the Project.



San Francisco Bay Regional Water Quality Control Board

Sent via electronic mail: No hard copy to follow

July 30, 2019

City of Palo Alto
 Attn: Michel Jeremias
 250 Hamilton Ave, 6th Floor
 Palo Alto, CA 94301
 Email: Michel.Jeremias@CityofPaloAlto.org

Subject: Comments on the Draft Environmental Impact Report/Environmental Assessment for the Newell Road Bridge Replacement Project, Counties of Santa Clara and San Mateo (SCH No. 2015082026)

Dear Mr. Jeremias:

The San Francisco Regional Water Quality Control Board (Water Board) staff appreciates the opportunity to provide comments on the subject Draft Environmental Impact Report/Environmental Assessment (DEIR/EA) for the Newell Road Bridge Replacement Project (Project). The Project would replace the existing Newell Road Bridge that crosses over San Francisquito Creek (Creek) and connects the cities of East Palo Alto in San Mateo County and Palo Alto in Santa Clara County. The Creek is an important migration corridor for steelhead (*Onchorynchus mykiss*), and the Project area has habitat suitable for other federal or State-listed special status species (e.g., California red-legged frog (*Rana draytonii*) and Western pond turtle (*Emys marmorata*)). The Project has two purposes: (1) to maintain connections and improve safety for vehicular, bicycle, and pedestrian transportation across the Creek at Newell Road; and (2) to increase the Creek's capacity under the bridge from 5,400 cubic feet per second (cfs) to 7,500 cfs, which is about the 50-year flood flow. The City of Palo Alto is the lead agency under the California Environmental Quality Act (CEQA). The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHA), has prepared the DEIR/EA, and is the lead agency under the National Environmental Protection Act (NEPA).

Under CEQA, the Water Board is a responsible agency with permitting authority for the Project under the federal Clean Water Act (CWA) and California Water Code for discharges of stormwater, waste, and dredge and fill materials to waters of the U.S. and

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DR. TERRY F. YOUNG, CHAIR | MICHAEL MONTGOMERY, EXECUTIVE OFFICER

1515 Clay St., Suite 1400, Oakland, CA 94612 | www.waterboards.ca.gov/sanfranciscobay

waters of the State, as well as to locations that could affect waters of the State. In addition to our more-detailed comments below, we note that:

- The DEIR/EA does not yet include information sufficient for us to determine whether the preferred alternative (or any of the alternatives) would comply with the the San Francisco Bay Basin Water Quality Control Plan’s (Basin Plan’s) requirements, including whether impacts to waters of the State have been minimized to the maximum extent practicable; and
- The DEIR/EA does not clearly identify the potential impacts to jurisdictional waters. Thus, we are unable to determine whether mitigation for impacts to waters of the U.S. and waters of the State would comply with the State and Regional Water Board regulations and policies.

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Alternatives Overview

The Project includes four “build” alternatives (Alternatives 1–4) and the No Build Alternative. Alternative 2, the preferred alternative, includes a two-lane bridge on the existing Newell Road alignment. The other build alternatives vary by Newell Road alignments, bridge and lane widths, traffic signage, retaining wall heights, and space designated for vehicles, bicycles, and pedestrians. The improvements would extend for approximately 500 feet along Newell Road and 350 feet along Woodland Avenue. The following elements are some of the key features common to Alternatives 1–4 that would result in impacts requiring Water Board review and, as appropriate, authorization:

- Remove the existing concrete abutments in the Creek, and build a free span, cast-in-place, concrete bridge;
- Remove the existing sacrete retaining walls along the Creek and construct rock slope protection or soil nail walls along about 50 linear feet upstream and downstream of the bridge;
- Redevelop about 30,000 to 36,000 square feet (sq. ft) of impervious surface and, in Alternative 2, increase road surface area by 1,700 sq. ft (the increases in Alternatives 1, 3, and 4, would range from 666 to 2,023 sq. ft); and
- For Alternative 2, permanently remove 0.029 acres of stream and 0.022 acres of riparian habitat, affect 24 trees, and remove 12 trees. Alternatives 1, 3, and 4 would remove similar amounts of stream and riparian waters, and affect or remove similar numbers of trees, with slight variations from Alternative 2 to each of these impacts

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The DEIR/EA notes that habitat and land cover types in the Project consist of 0.19 acres of waters of the State (0.06 acres of stream waters below the ordinary high water mark and 0.13 acres as Valley foothill riparian habitat), and 0.90 acres of developed land.

While we support a free span bridge design and removal of the existing concrete abutments, which are hydraulic constrictions, the DEIR/EA does not yet include information sufficient to support the Water Board’s future authorization of a project. We

have the following comments on aspects of the Project, as presented in the DEIR/EA, which may impact waters of the State.

Comment 1. Basis of Design and Potential Impacts to Aquatic Resources

The DEIR/EA covers the regulatory permits potentially needed for the Project pursuant to the Clean Water Act (CWA) and California Water Code. As presented in the DEIR/EA, both a CWA Section 401 water quality certification from the Water Board and a CWA Section 404 Permit from the U.S. Army Corps of Engineers (Corps) will be necessary to authorize discharges of fill to waters of the U.S. Should the Corps determine that a CWA 404 Permit is not required, Palo Alto and Caltrans may need to file a Report of Waste Discharge under the California Water Code if the Project has discharges that may impact waters of the State (e.g., streambanks above the ordinary high water mark). A Streambed Alteration Agreement from the California Department of Fish and Wildlife may also be necessary since the Project involves the stream channel and riparian habitat.

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The Water Board adopted the U.S. EPA’s Section 404(b)(1) “Guidelines for Specification of Disposal Sites for Dredge or Fill Material,” dated December 24, 1980, in the Basin Plan for determining the circumstance under which filling of wetlands, streams or other waters may be permitted. The 404(b)(1) Guidelines prohibit all discharges of fill material into regulated waters of the U.S., unless a discharge, as proposed, constitutes the least environmentally damaging practicable alternative (LEDPA) that will achieve the basic project purpose.

The Guidelines sequence the order in which proposals should be approached: 1) Avoid—avoid impacts to waters; 2) Minimize—modify project to minimize impacts to waters; and, 3) Mitigate—once impacts have been fully minimized, compensate for unavoidable impacts to waters. When it is not possible to avoid impacts to water bodies, disturbance should be minimized. Compensatory mitigation for lost water body acreage and functions through restoration or creation should only be considered after disturbance has been avoided and minimized to the maximum extent practicable. Where impacts cannot be avoided, the creation of adequate mitigation habitat to compensate for the loss of water body acreage, functions, and values must be provided. Unlike an analysis of alternatives under CEQA, the 404(b)(1) Guidelines do not allow for the use compensatory mitigation¹ as the sole method of reducing environmental impacts in the evaluation of the LEDPA, without also going through the avoidance and minimization steps.

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The Water Board also will evaluate the Project alternative to determine whether it is consistent with the California Wetland Conservation Policy (Governor’s Executive Order W-59-93 and Senate Concurrent Resolution No.28), also known as the No Net Loss Policy. The No Net Loss Policy is intended to ensure that projects preferentially avoid or

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¹ “Compensatory mitigation” refers to the replacement of stream and wetland area, functions, and beneficial uses through creation or restoration as part of a permitting action for a CWA Section 401 water quality certification or waste discharge requirements.

minimize fill or other impacts to waters. Where fill activities are deemed to require mitigation, such mitigation must preferentially be located “within the same section of the Region, wherever feasible.” Ultimately, the project and its mitigation, evaluated together, must result in no net loss of both wetland acreage and functions, where the term “wetland” refers to creek waters from the bank to bank and the riparian zone. We encourage the Palo Alto and Caltrans to develop alternatives in the DEIR/EA that are self-mitigating, such that the Project’s impacts have been minimized and any mitigation required has been incorporated into the Project’s design.

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The project alternatives analyzed in the DEIR/EA and *Technical Study-Newell Road/San Francisquito Creek Bridge Replacement Project Alternatives Screening Analysis Report (February 21, 2014)* (Screening Study) are focused on the Creek’s flow capacity and traffic considerations. For example, Alternative 2 was selected as the environmentally superior alternative, because:

“[T]he existing alignment of the bridge would not change. In addition, Build Alternative 2 would not result in the higher delay at Newell Road/Woodland Avenue (North Leg) that Build Alternative 1 would result in. Therefore, Build Alternative 2 is considered the environmentally superior alternative.” (DEIR/EA, p. 3-56)

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While this screening process may be adequate for CEQA purposes, it would not satisfy the LEDPA alternatives analysis required for future permitting by the Water Board because it does not consider potential impacts to the Creek’s beneficial uses.

The DEIR/EA considers bank stabilization measures using rock riprap or soil nail walls, but does not yet include information to show how these bank treatments were selected. For a complete analysis that could satisfy the Water Board’s LEDPA requirements, the DEIR/EA should include further analysis of project alternatives that use soil bioengineering techniques wherever possible instead of rock slope protection, a soil nail wall, or other approaches resulting in hardscaping the creek banks or bed. We address other aspects of these proposed bank treatments in the next comment.

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Comment 2. Basis of Design

The Water Board regulates waters of the State in part to protect beneficial uses that support the health and success of various species, such as preservation of rare and endangered species (RARE), fish spawning (SPWN), cold and warm freshwater habitat (COLD, and WARM), and wildlife habitat (WILD) (Basin Plan, Chapter 2 and Table 2.1). Though the Project site is in the section of the Creek that is dry during the dry season, the Creek is an important steelhead migration corridor and has habitat that supports a variety of other aquatic species and wildlife. As mentioned in Comment 1, the DEIR/EA does not yet include the basis for the rock slope protection or soil nail wall bank stabilization measures proposed for Alternatives 1-4. In order for us to evaluate the different project alternatives and their potential impacts to the Creek, the DEIR/EA should assess the bridge’s geomorphic function in its current configuration (abutment locations, soffit elevation, bridge width, etc.) and evaluate how the different alternatives would affect Creek geomorphology, including bank stability and sediment transport. A

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geomorphic analysis is also necessary to demonstrate that any bank stabilization or other channel modifications would not result in unintended destabilizing forces after the Project is constructed. We recommend evaluating and including in the Project more-sustainable and fish passage-friendly bank stabilization designs if the geomorphic analysis supports such designs. Using such designs is more likely to protect and enhance the Creek's beneficial uses by preserving or improving the Creek's habitat for salmonids and other aquatic species and wildlife at the Project site.

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Comment 3. Impacts are Not Yet Fully Characterized

The DEIR/EA states that the permanent impacts to the stream (below ordinary high water mark) would be from excavating the banks to remove old structures and install new pilings and riprap, and the impacts to riparian habitat would be from removal of trees. The impacts would be to about 0.03 acres in Alternative 2, and a range of 0.03 to 0.05 acres for the other three alternatives analyzed. Please note that we will require impacts to linear features, such as a creek, to be reported as impact lengths; please add the linear feet of impacts to DEIR/EA's description. Overall, the DEIR/EA does not yet include enough information for us to understand the impacts' scope, scale, or location.

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For example, the DEIR/EA (pp. S-5; 1-17) states that rock slope protection or soil nail walls would be implemented in "...approximately 50 feet upstream and downstream of the bridge. Channel improvements would upgrade the channel width beneath the bridge to allow 7,500 cfs conveyance." Please clarify if this refers to bank stabilization for a total of 50 linear feet, or 50 feet both upstream and downstream (100 linear feet) of Newell Bridge. Also, the DEIR/EA states that channel widening is necessary, but does not yet include information on where widening would be done, other than noting that the existing bridge abutments would be removed. Please add information to clarify the areas of work, a more-detailed description of proposed channel widening elements, including their location, and any work proposed beneath the bridge.

In order for us to authorize the Project pursuant to CWA section 401 and California Water Code sections 13260 and 13367, we will need to understand the type, volume, length, and area of all excavated and fill materials. To facilitate future Project permitting, we suggest the DEIR/EA be revised to include this information, if available. This information is also essential to characterize the Project's impacts and appropriate mitigation, including compensatory mitigation, if necessary. A map or other figures to show the impacts would be helpful. The DEIR/EA includes excellent renderings of road and bridge configurations from a street view perspective for Alternatives 1-4; renderings of the Creek with a similar level of detail would be helpful to better understand the Project's potential Creek impacts.

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Comment 4. Potential Impacts on Natural Communities and Proposed Mitigation

The DEIR/EA evaluated potential environmental impacts to riparian trees that would be removed, and on a variety of special status species observed in the Project site or that have suitable habitat in or near the Project site. We appreciate the avoidance and minimization measures (AMMs) that would protect the Creek from sedimentation and

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erosion during construction, and other species-specific measures during construction. However, the AMMs and proposed mitigation would not be sufficient to address the potential adverse impacts to the Creek from the proposed bank stabilization treatments or other, as yet unspecified channel bed improvements mentioned above in Comment 3. In addition, we have the following specific concerns for proposed mitigation measures (MMs).

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- MM-BIO-2-*Tree Replacement Plan* incorporates the City of Palo Alto’s requirements for restoring tree canopy cover for impacts to protected trees. We recommend that canopy cover metrics also be included in MM MM-BIO-1-*Compensate for Permanent Loss of Valley Foothill Riparian* in evaluating the Project’s impact to riparian vegetation and developing and implementing appropriate performance and success criteria for impacts to riparian vegetation.
- MM-MM-BIO-1 proposed to replace native species at a ratio of 3:1 and non-native species at a ratio of 1:1. Stipulating the replacement ratios is premature, because the impacts have not been fully characterized, and the DEIR/EA is not clear on where the mitigation vegetation would be planted. While we prefer mitigation to be on-site and in-kind, we can accept offsite and/or out-of-kind if necessary. In that situation, the amount of mitigation required would increase as distance or types differ from the impacted habitat in order to achieve no net loss of waters pursuant to the regulations and policies presented in Comment 1. As such, we are not yet able to determine whether the proposed ratios would comply with Basin Plan and related requirements.
- The impact significance criterion under Biological Resources-(c)-*adverse effect on federally protected wetlands and waters of the U.S* is outdated. Please note that the significance criteria for Biological Resources in the 2019 CEQA Statute and Guidelines were updated to read as follows (underline and strikethrough text shows the changes):

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“Have a substantial adverse effect on state or federally protected wetlands ~~as defined by Section 404 of the Clean Water Act~~ (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?”

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Please revise the Biological Resources-(c) significance criterion to fully address not only federal waters, but also waters of the State. In addition, the DEIR/EA alternatives analysis should be reevaluated to ensure it fully considers the Project’s potential environmental impacts to waters of the State.

Comment 5. Cumulative Impacts

The Project design flow is for the 50-year flow event (7,500 cfs), yet the DEIR/EA technical study reports analyze the 100-year flow event, and the Notice of Preparation was for a Project that would accommodate the 100-year flow event at Newell Bridge, estimated at 8,150 cfs. Please clarify this discrepancy and whether other modifications to the Creek in the vicinity of Newell Bridge are being considered to accommodate a

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future 100-year design flow of 8,150 cfs. In addition, we recommend the DEIR/EA include more details on the relationship between this Project and the San Francisquito Creek flood control project from Interstate 101 to Middlefield Road, particularly to show that the Project would not preclude future improvements. if necessary, to accommodate the 100-year flow in the vicinity of Newell Bridge.

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Comment 6. Early Consultation

DEIR/EA Table 1-2, *Permits and Approvals Needed* (p. 1-25), indicates that the Water Board would be consulted on the Project design during the final design stage. We recommend that Palo Alto and Caltrans consult with us as soon as possible, and, before completing CEQA/NEPA environmental review, so that any concerns about potential adverse impacts of the Project can be identified and, if possible, eliminated from the Project design (See also DEIR/EA, Section 4.2.8 (p. 4-3), which also states that the Water Board would not be consulted until the final design stage). This will both facilitate permitting and help avoid and reduce potential costs that could result from a future need to redesign the proposed Project.

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Table 1-2 also indicates that a consultation with the Federal Emergency Management Agency (FEMA) pertaining to a variance needed for freeboard less than two feet in the Project design would not be completed until the final design stage. We urge an earlier FEMA consultation, before the DEIR/EA is finalized, to ensure that FEMA will grant a variance or to address any changes to the Project that FEMA might require.

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Comment 7. Erosion Potential of Creek Banks

The DEIR/EA states that the Creek’s banks are subject to erosion and then uses the “Kw” factor from the NPDES Construction Stormwater Permit² to predict erosion potential of the creek banks (p. 2.2.2-4). While the Kw value is useful for determining erosion potential on the land surface beyond the tops of the creek banks, a geomorphic analysis is necessary to determine the erosion potential of the banks. As presented above in Comment 2, we will require completion of a geomorphic analysis to inform the bank stabilization methods for the Project and to identify the extent to which the Project can incorporate soil bioengineering methods that minimize hardscape.

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Comment 8. Increase in Amount of Impervious Surfaces

This project would redevelop about 30,000 sq. ft. of roads and would increase the amount of impervious surface by 1,700 sq. ft. in the preferred alternative (or add 666 to 2,023 sq. ft. in the other three built alternatives 1, 3, and 4). We appreciate that the DEIR/EA includes provisions to incorporate low impact development measures to treat runoff from Project impervious surfaces. The DEIR/EA states “The Project design would

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² The NPDES Construction Stormwater Permit NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2009- 0009-DWQ, NPDES No. CAS000002 as amended by 2010-0014-DWQ and 2012-0006-DWQ and any subsequent permits. SM-WQ-1-Implement NPDES Permit and Construction General Permit Water Quality Measures

incorporate postconstruction measures and other permanent erosion control elements” (p. 2.2.2-9). In addition, the technical study, *Water Quality Assessment Report*, states the Project will incorporate low impact design (LID) measures “...including, but not limited to: infiltration trenches, vegetated swales, vegetated rock filters, bioretention devices, flow-through planters, permeable pavements, tree well filter units.” We urge Palo Alto and Caltrans to develop concept plans as soon as possible for the LID features in Project design. In addition, we recommend the DEIR/EA main report to be revised with the more-detailed text from the Water Quality Study Report pertaining to LID measures. As appropriate, it should also reference the Green Infrastructure Plan that Palo Alto has prepared pursuant to the Municipal Regional Stormwater NPDES Permit.

We welcome the opportunity to continue to work collaboratively with the Palo Alto and Caltrans on this project. If you have any questions about our comments, please contact Derek Beauduy at derek.beauduy@waterboards.ca.gov, or (510) 622-2348, or Susan Glendening at susan.glendening@waterboards.ca.gov or (510) 622-2462.

Sincerely,



Digitally signed by
Keith H. Lichten
Date: 2019.07.30
18:28:37 -07'00'

Keith H. Lichten, Chief
Watershed Management Division

Cc: State Clearinghouse, State.Clearinghouse@opr.ca.gov

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U.S. EPA, Region IX, Luisa Valiela, valiela.luisa@epamail.epa.gov

Letter A-3. San Francisco Regional Water Quality Control Board, 7/30/19

Response to Comment A-3.1

It is acknowledged that the San Francisco Regional Water Quality Control Board (Regional Water Board) has permitting authority for the Project. Section 2.3.2.3, *Environmental Consequences*, has been clarified with regard to impacts on jurisdictional waters, which now clearly identifies the potential impacts on jurisdictional waters. As described, no jurisdictional wetlands are present in the biological study area (BSA). Table 2.3.-2 identifies impacts on intermittent stream habitat, which is a water of the United States (U.S.) and a water of the state. Additional details about compliance with the Basin Plan will be determined during the permitting phase of the Project, after final design of the Project has progressed enough to allow this analysis to be completed.

Response to Comment A-3.2

The Regional Water Board's summary of the Project and impacts is acknowledged, as well as its support for the free span bridge design and removal of the concrete abutments. Additional information and details will be provided to the Regional Water Board during the permitting phase of the Project.

Response to Comment A-3.3

As noted in Table 1-2, a California Department of Fish and Wildlife Section 1602 permit and a Regional Water Board Section 401 permit have been identified as required for the Project. In addition, it has been determined that a U.S. Army Corps of Engineers Section 404 permit would also be required, which has been added to Table 1-2.

Response to Comment A-3.4

The Regional Water Board's summary of the U.S. Environmental Protection Agency's Section 404(b)(1), *Guidelines for Specification of Disposal Sites for Dredge or Fill Material*, is acknowledged. These guidelines were followed in development of the Project. The Final EIR/EA in Section 2.3.2, *Wetlands and Other Waters*, includes a brief discussion of how the least environmentally damaging practicable alternative (LEDPA) will be selected during the permitting phase of the Project when additional information about bank stabilization measures are determined.

Response to Comment A-3.5

The Regional Water Board's summary of the California Wetland Conservation Policy (Governor's Executive Order W-59-93 and Senate Concurrent Resolution No.28) is acknowledged. The Project's impacts have been avoided or minimized to the maximum extent feasible, and mitigation has been incorporated as necessary, as described in Sections 2.3.1, *Natural Communities*, and 2.3.2, *Wetlands and Other Waters*.

Response to Comment A-3.6

The Final EIR/EA in Section 2.3.2, *Wetlands and Other Waters* includes a brief discussion of how the least environmentally damaging practicable alternative (LEDPA) will be selected during the permitting phase of the Project when additional information about bank stabilization measures are determined.

Response to Comment A-3.7

This level of detail is not required under CEQA and is not required to analyze and identify appropriate mitigation. The details of the bank stabilization features will be developed during detailed design, and at that time the designs will be provided to regulatory agencies for review and comment. Additional analysis has been performed to verify that soil nail walls will not be required for the Project. Soil bioengineering techniques will be considered during detailed design.

Response to Comment A-3.8

This level of detail is not required under CEQA and is not required to analyze and identify appropriate mitigation. More extensive modeling will be conducted for the selected project during the detailed design and permitting phases. Additional analysis has been performed to verify that soil nail walls will not be required for the Project; it is anticipated that the required creek flows could be accommodated using sloped creek bank for a more natural setting and channel. Therefore, it is not expected that a geomorphic analysis would be necessary. The specific bank stabilization measures will be determined during the design phase of the Project and in consultation with permitting agencies, including the Regional Water Board.

Response to Comment A-3.9

The linear feet of impact will be included in the permit application for the Project; it is not required for purposes of CEQA. Bank stabilization would be implemented 50 feet upstream and 50 feet downstream, for a total of 100 linear feet; this has been clarified in the Final EIR/EA in Section 1.4.1.5, *Channel Stabilization*. The only channel widening that would occur would be from removing the bridge abutments. This has also been clarified in the Final EIR/EA in Section 1.4.1.5, *Channel Stabilization*.

Response to Comment A-3.10

The Draft EIR/EA contained all available information regarding excavated and fill materials in Chapter 1, *Proposed Project*, Section 2.2.1, *Hydrology and Floodplain*, and Section 2.2.2, *Water Quality and Storm Water Runoff*. As final design of the Project progresses, the type of information being requested will be developed for the permit application for the Project.

Response to Comment A-3.11

The proposed avoidance, minimization, and mitigation measures address the Project's anticipated impacts as stated in the Draft EIR/EA. Additional impacts from the bank stabilization measures are not anticipated. The specific design of the bank stabilization measures will be discussed and finalized with the Regional Water Board during the permitting phase of the Project. Additional bank protection features may be added as permit conditions at that time.

Response to Comment A-3.12

The replacement ratios in Mitigation Measure MM-BIO-1 was developed in consultation with the U.S. Department of Fish and Wildlife. Additional analysis has been performed to verify that soil nail walls will not be needed. More natural stabilization measures will be evaluated in coordination with permitting agencies and used when feasible. Therefore, it is anticipated that revegetation within the Project site will be possible. Although Mitigation Measure MM-BIO-2 and the City of Palo Alto and East Palo Alto's ordinances require replacement of specific trees (e.g., street trees and specific tree

species), a similar ordinance has not been adopted for riparian vegetation. However, specific canopy cover metrics and performance and success criteria for impacts to riparian vegetation have been added into Mitigation Measure MM-BIO-1 into Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*. This can also be further discussed during the permitting phase of the Project.

Response to Comment A-3.13

The City of Palo Alto acknowledges that the State Office of Planning and Research (OPR) has updated its recommended CEQA significance criteria. However, as lead agency, it is the City's discretion to continue to use the previous CEQA significance criteria for environmental documents that are in progress. Therefore, the CEQA significance criteria in the Final EIR/EA have not been updated. However, Section 2.3.2, *Wetlands and Other Waters*, and Section 3.2.4, *Biological Resources*, have been revised to clarify that the intermittent stream habitat in the study area is both a water of the U.S. and the State.

Response to Comment A-3.14

The City of Palo Alto will continue to coordinate with San Francisquito Creek Joint Powers Authority (SFCJPA) on the details and relationship of this bridge replacement with the SFCJPA's Upstream of Highway 101 Project throughout the life of the Project. The reference to the 50-year storm event has been revised globally in the Final EIR/EA to a 70-year storm event. This adjustment was determined by the SFCJPA for the 7,500 cubic feet per second (cfs) flow. As described by the SFCJPA Upstream of Highway 101 Draft EIR, the projects are being designed for the 7,500 cfs flow, with the remainder of the 8,150 cfs 100-year event being accommodated through upstream detention. The Project would not preclude SFCJPA's implementation of these proposed future improvements to accommodate the 100-year flow in the vicinity of Newell Road Bridge. This information has been added into Section 1.1.2, *Project Background*, of the Final EIR/EA.

Response to Comment A-3.15

The City of Palo Alto began coordination with the Regional Water Board prior to publication of the Final EIR/EA. References in the Final EIR/EA that state coordination would not begin until final design have been revised globally.

Response to Comment A-3.16

Recommendation is acknowledged. With the intended additional upstream detention described by the SFCJPA in their environmental document, which would increase the flood protection for the creek to the 100-year event, the Federal Emergency Management Agency criteria will be reviewed with Caltrans to determine if the variance is required.

Response to Comment A-3.17

This level of detail is not required under CEQA and is not required to analyze and identify appropriate mitigation. More extensive modeling will be conducted for the selected project during the detailed design and permitting phases. Soil bioengineering techniques will be considered during detailed design.

Response to Comment A-3.18

The details for the Low Impact Design features will be developed during detailed design, and at that time the designs will be provided to Regional Water Board for review and comment. After details are finalized, all plans will be submitted with appropriate permit applications needed for the Project. Section 2.2.2.1, *Regulatory Setting*, of the Final EIR/EA has been updated to clarify that the City of Palo Alto has prepared and adopted a Green Infrastructure Plan pursuant to the Municipal Stormwater National Pollutant Discharge Elimination System Permit.



July 30, 2019

City of Palo Alto
Public Works Department
Attn: Michel Jeremias, Senior Engineer
250 Hamilton Ave, 6th Floor,
Palo Alto, CA 94301

**Via US Mail &
Email** Michel.Jeremias@CityofPaloAlto.org

Re: Newell Road Bridge Replacement Project DEIR/EA

Dear Ms. Jeremias:

The Santa Clara Valley Water District (Valley Water) has reviewed the Draft Environmental Impact Report / Environmental Assessment (EIR/EA) and have comments as shown on Attachment "A".

As indicated in the in the Draft EIR/EA, Valley Water will be a responsible agency under CEQA and will rely on the document when it considers its approvals. Valley Water is providing local matching funds of approximately 11 percent for project planning and design work.

Valley Water appreciates the opportunity to review and comment on this public review DEIR/EA.

Please contact me should you have any questions or need additional information.

Sincerely,

A handwritten signature in blue ink that reads "Michael F. Coleman".

Michael F. Coleman, AICP
Environmental Planner
MColeman@valleywater.org
Direct Line: 408-630-3096

Attachments: Attachment A

cc: Valley Water: Saeid Hosseini; Jack Xu; Liang Xu; Alec Nicholas
San Francisquito JPA: Len Materman



Attachment A

Valley Water Comments on the Newell Road Bridge Replacement Project DEIR/EA

- 1. Traffic and Transportation:** The City of Palo Alto Planning and Transportation Commission staff report of June 12, 2019 which was released after the DEIR, discussed on page 8 of the report, that closure of the existing Newell Road Bridge would cause traffic to be diverted to other bridge crossings including the Pope-Chaucer Bridge. This staff report identifies that the bridge closure will cause the East Crescent Drive/University Avenue intersection to operate at unacceptable level of service (LOS) E, resulting in a significant and unavoidable impact to the proposed project and the project alternatives during construction.

Valley Water understands that the Pope-Chaucer Bridge will require closure of the creek crossing for approximately 9 months and is expected to be replaced by the summer of 2022. The Newell Bridge must be replaced prior to the Pope-Chaucer Bridge so that flood risk is not transferred downstream. Measures to ensure that Newell Road Bridge construction timing does not conflict with Pope-Chaucer Bridge construction may need to be added to the final document, so that the local community is not impacted by simultaneous or overlapping construction impacts and cumulative traffic impacts.

The City of Palo Alto Planning and Transportation Commission staff report dated June 12th listed concerns over traffic impacts with a single bridge closure during construction (Newell Bridge). Without carefully controlled construction timing, a two-bridge simultaneous or overlapping construction scenario could easily occur severely impacting local traffic during the construction period. Thus, this aspect should be discussed within the FEIR.

Valley Water therefore request that the City of Palo Alto include in the response to comments and Final EIR/EA, an updated discussion and analysis of Traffic and Transportation Sections 2.1.4, and 3.2.16 to address this transportation impact as well as Section 2.4 the Cumulative Impacts Section.

- 2. Hydrology and Floodplain.** Valley Water would prefer increased clearance (freeboard between the design WSE and the bridge soffit) to accommodate passage of debris under high flow. The current analysis in the Newell Road Bridge Replacement over San Francisquito Creek Location Hydraulic Study ¹ indicates there would be only an approximate ½ foot of freeboard.

¹ <https://www.cityofpaloalto.org/civicax/filebank/blobdload.aspx?t=50925.66&BlobID=71565>

1

2

Letter A-4. Valley Water, 7/30/19

Response to Comment A-4.1

As described in Section 2.1.4.4, *Avoidance, Minimization and/or Mitigation Measures*, Standardized Measure SM-TR-1 will require a traffic management plan (TMP) be prepared and approved by the City of Palo Alto. The TMP will contain requirements for public noticing, traffic control implementation, signage, property and business access, parking, and safety during construction. It also will contain information about the construction schedule and detours. The construction period for the replacement of the Pope–Chaucer Bridge would not overlap with the construction period for the Project. Replacement of the Project must occur prior to replacement of the Pope–Chaucer Bridge due to hydrology and flooding considerations.

Response to Comment A-4.2

Design flows and freeboard requirements were coordinated between the Project and the Pope–Chaucer Street Bridge Replacement, which is part of the San Francisquito Creek Joint Powers Authority (SFCJPA) flood control project. Valley Water provided the background data regarding the flows and participated in the discussions associated with the bridge soffit. In addition, the design flow is based on the largest flows on record and the flow that can pass under the Middlefield Bridge. Further raising of the bridge would impact the roadway approaches and increase the retaining wall heights along the neighboring properties, resulting in additional environmental impacts.

From: [Aditi Mahmud](#)
To: [Jeremias Michel](#)
Cc: [Jacob Nguyen](#)
Subject: Newell Bridge Project
Date: Wednesday, July 17, 2019 2:55:04 PM
Attachments: [image001.png](#)
[Rev Woodland & Newell Sheet 3 of 3 ALTA Survey 09-18-2013.pdf](#)

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Michel,

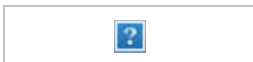
It was good seeing you yesterday.

Attached is the electronic version of the ALTA survey. We are looking into the parcel Jacob discussed as it has MidPen Property Woodland Newell property boulder line. Will let you know what we find out.

I will be out of the Country from August 5th to August 18th. I am hoping to have a site visit with you after the 18th of August. Could you please send dates and times that work for you?

Thank you.

Aditi Mahmud | **Project Asset Manager**
MidPen Housing Corporation
303 Vintage Park Drive, Suite 250, Foster City, CA 94404
t. 650.235.7680 c. 650.393.9768
amahmud@midpen-housing.org

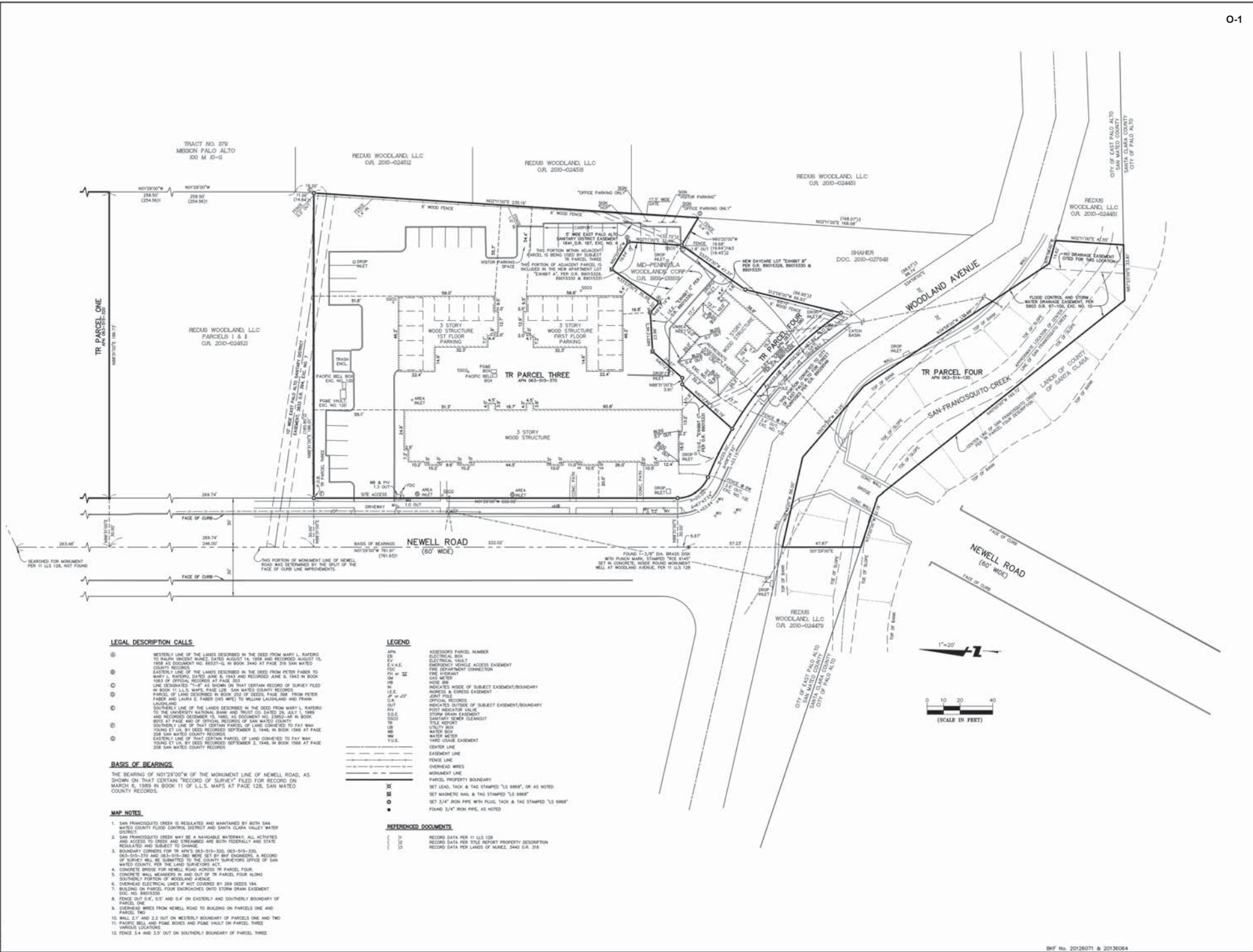




CALIFORNIA

ALTA/ACSM LAND TITLE SURVEY
44-48 NEWELL ROAD AND 1761 & 1767 WOODLAND AVENUE
EAST PALO ALTO, CA 94303

Table with columns: Date, Title, Author, Checker, Engineer, Surveyor, and Job No. (20126071)



LEGAL DESCRIPTION CALLS

- 1. WESTERN LINE OF THE LANDS DESCRIBED IN THE DEED FROM MARY L. RAFFERTO TO RAULM VINCENT HANEZ DATED AUGUST 14, 1958 AND RECORDED AUGUST 15, 1958 AS DOCUMENT NO. 86537-58 IN BOOK 3445 AT PAGE 318 SAN MATEO COUNTY RECORDS.
2. EASTERN LINE OF THE LANDS DESCRIBED IN THE DEED FROM PETER FABER TO MARY L. RAFFERTO, DATED APRIL 8, 1943 AND RECORDED APRIL 8, 1943 IN BOOK 1987 OF OFFICIAL RECORDS AT PAGE 353.
3. LINE DESCRIBED AS BEING ON THAT CERTAIN RECORD OF SURVEY FILED IN BOOK 11 L.L.S. MAPS, PAGE 128, SAN MATEO COUNTY RECORDS.
4. PARCELS OF LAND DESCRIBED IN BOOK 236 OF DEEDS, PAGE 388, FROM PETER FABER AND LARRY E. FISHER (THE APNS) TO HELM LANGLAND AND PEARL LANGLAND.
5. SOUTHERLY LINE OF THE LANDS DESCRIBED IN THE DEED FROM MARY L. WATERS TO THE UNIVERSITY NATIONAL BANK AND TRUST CO. DATED 26, JAN. 1, 1988 AND RECORDED SEPTEMBER 15, 1988, AS DOCUMENT NO. 23862-88 IN BOOK 2078 OF OFFICIAL RECORDS OF SAN MATEO COUNTY.
6. SOUTHERLY LINE OF THAT CERTAIN PARCEL OF LAND CONVEYED TO FAY WAH YOUNG BY LXX BY DEED RECORDED SEPTEMBER 2, 1948, IN BOOK 1586 AT PAGE 208 SAN MATEO COUNTY RECORDS.
7. EASTERN LINE OF THAT CERTAIN PARCEL OF LAND CONVEYED TO FAY WAH YOUNG BY LXX BY DEED RECORDED SEPTEMBER 2, 1948, IN BOOK 1586 AT PAGE 208 SAN MATEO COUNTY RECORDS.

BASIS OF BEARINGS

THE BEARING OF N01°23'00"W OF THE MONUMENT LINE OF NEWELL ROAD, AS SHOWN ON THAT CERTAIN RECORD OF SURVEY FILED FOR RECORD ON MARCH 6, 1989 IN BOOK 11 OF L.L.S. MAPS AT PAGE 128, SAN MATEO COUNTY RECORDS.

MAP NOTES

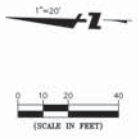
- 1. SAN FRANCISCO CREEK IS REGULATED AND MAINTAINED BY BOTH SAN MATEO COUNTY FLOOD CONTROL DISTRICT AND SANTA CLARA VALLEY WATER DISTRICT.
2. SAN FRANCISCO CREEK MAY BE A NAVIGABLE WATERWAY. ALL ACTIVITIES AND ACCESS TO CREEK AND STREAMS ARE BOTH FEDERALLY AND STATE REGULATED AND SUBJECT TO CHANGE.
3. BOUNDARY CORNERS FOR TR. APNS 003-019-330, 003-019-331, 003-019-332 AND 003-019-333 ARE TO BE SURVEYED AND A RECORD OF SURVEY WILL BE SUBMITTED TO THE COUNTY SURVEYORS OFFICE OF SAN MATEO COUNTY FOR THE LAND RECORDS ACT.
4. CONCRETE BRIDGE FOR NEWELL ROAD ACROSS IN PARCEL FOUR.
5. CONCRETE WALL BEHINDERS IN AND OUT OF TR. PARCELS FOUR ALONG SOUTHERLY PORTION OF WOODLAND AVENUE.
6. OVERHEAD ELECTRICAL LINES IF NOT COVERED BY 269 DEEDS 184.
7. BUILDING ON PARCEL FOUR ENDOCHORES ONTO STORM DRAIN EXISTENCE DOC. NO. 86933330.
8. FENCE OUT 0.5', 0.5' AND 0.4' ON EASTERLY AND SOUTHERLY BOUNDARY OF PARCELS ONE.
9. OVERHEAD WIRES FROM NEWELL ROAD TO BUILDING ON PARCELS ONE AND PARCEL TWO.
10. WIRE 2.2" DIA. ON WESTERLY BOUNDARY OF PARCELS ONE AND TWO.
11. PACIFIC BELL AND POSE BOXES AND POSE VAULT ON PARCEL THREE.
12. FENCE 1.4 AND 3.5' OUT ON SOUTHERLY BOUNDARY OF PARCEL THREE.

LEGEND

- APN ASSessor PARCEL NUMBER
E.V.E. ELECTRICAL VAULT
F.C. FIRE DEPARTMENT CONNECTION
H.M. HOSE MAN
H.B. HOSE BOX
H.W. HOSE WHEEL
I.E.E. IRRIGATED & GRESS EXISTENCE
O.R. OFFICIAL RECORDS
P.O.P. PORTION OUTSIDE OF SUBJECT EASEMENT/BOUNDARY
P.F. POSE VAULT
T.B. TITLE REPORT
U.B. UTILITY BOX
W.B. WATER BOX
W.M. WIRE METER
W.L.C.E. WOOD LANE EASEMENT
C.L. CENTER LINE
E.L. EASEMENT LINE
F.L. FENCE LINE
O.W. OVERHEAD WIRES
M.L. MONUMENT LINE
P.P. PARCELS PROPERTY BOUNDARY
S.L. SET LEAD, TACK & TAG STAMPED 'S 8888', OR AS NOTED
M.S. SET MAGNETIC TAG & TAG STAMPED 'S 8888'
S.F. SET 3/4" IRON PIPE WITH FLUSH TACK & TAG STAMPED 'S 8888'
F.P. FOUND 3/4" IRON PIPE, AS NOTED

REFERENCED DOCUMENTS

- 1. RECORD DATA PER 11 LLS 128
2. RECORD DATA PER TITLE REPORT PROPERTY DESCRIPTION
3. RECORD DATA PER LANDS OF MAPS, 2440 D.R. 318



Letter O-1. MidPen Housing Corporation, 7/17/19

Response to Comment O-1.1

The comment does not raise a specific issue on the substance of the Draft EIR/EA. The City of Palo Alto will continue to work with property owners during design and right-of-way phases.

July 25, 2019

Michel Jeremias
City of Palo Alto
Public Works Department
250 Hamilton Avenue
Palo Alto, CA 94301

Subject: Newell Road Bridge Replacement Project
Potential Impacts to MidPen's Property (1761 Woodland Ave)

Dear Michel,

Please see attached letter from our consultant BKF in response to the Draft EIR/EA.

If you have any questions, please do not hesitate to call me at (650) 235-7680.

Sincerely,



Aditi Mahmud
Project Asset Manager
MidPen Housing Corporation

BKF No. 2019XX

July 25, 2019

Aditi Mahmud

MidPen

303 Vintage Park Drive, Ste. 250

Foster City, CA 94404

**Subject: Newell Road Bridge Replacement Project, Palo Alto,
Potential Impacts to MidPen's Property (1761 Woodland Ave)**

Hi Aditi,

Per MidPen's request, we have reviewed the conceptual design drawings and related documents provided by the City of Palo Alto for the Newell Road Bridge Replacement Project (see attached). Below are our observations and recommendations with respect to the City's preferred Alternative 2 conceptual design:

Project Description – We understand The City of Palo Alto (CPA), in partnership with the City of East Palo Alto (CEPA) and the San Francisquito Creek Joint Powers Authority (SFCJPA), is evaluating options for replacement of the Newell Road Bridge over San Francisquito Creek. The existing bridge, built in 1911, is functionally obsolete. The California Department of Transportation inspected the over-100-year-old bridge on multiple occasions and determined it is functionally obsolete due to its dimensions. The narrow bridge does not accommodate two-directional traffic or meet the current standards for bicycle and pedestrian access. In addition, the bridge presents flood risks due to the bridge abutments that create a creek constriction. Replacing the bridge will improve the safety for all modes of transportation, provide a designated crosswalk for pedestrians, and will enable the creek channel to convey more creek flow and mitigate the risk of flood.

The design and aesthetics for the replacement bridge will be subject to review by the following review bodies: City of Palo Alto – Architectural Review Board, City of Palo Alto – Planning and Transportation Commission, City of East Palo Alto – Public Works & Transportation Committee, and City of East Palo Alto – Planning Commission. The City of Palo Alto has secured funding for project design and environmental assessment, 88.5% is coming from Caltrans' Highway Bridge Program and 11.5% from Santa Clara Valley Water District.

Although MidPen's property (1761 Woodland Ave) is located within CEPA, we understand that CPA will be responsible for the cost of design and construction of all improvements on MidPen's property related to the Newell Bridge improvements.

Proposed Bridge Alignment – We understand that four design alternatives were presented to the Cities of Palo Alto and East Palo Alto, as well as and relevant reviewing agencies; and that both CPA and CEPA prefer design Alternative 2. Specifically, Alternative 2 keeps the bridge alignment more or less the same as the existing bridge; except that the new 2-lane bridge and surrounding roadway elevations would be raised a few feet above the existing bridge and adjacent roadways. Although raising the bridge and roadway elevations would help reduce the flood risk to the Woodland neighborhood, the Alternative 2 bridge alignment could negatively affect MidPen's property – with vehicles coming across the new Newell Bridge towards MidPen's property at higher speeds and potentially jumping the curb and crashing into MidPen's buildings. To mitigate this concern, we recommend that a vehicular barrier (i.e. K-rail) be installed along the proposed back-of-walk. This would also help mitigate headlights from vehicles shining into the residents' homes at night.

Possible Change in Site Drainage – Alternative 2 proposes to install retaining walls along MidPen’s frontage –both on Woodland Ave and Newell Road. While we understand that the retaining walls are necessary due to the raising of the bridge and roadway grades, they could also adversely affect MidPen property’s drainage pattern, ie. by trapping stormwater onsite and/or blocking overland release during larger storm events. As such, we recommend that the City carefully study the locations of the existing onsite storm drain inlets and provide additional lines and drains as needed to mitigate any drainage issues.

3

Existing Parking Space off Woodland Ave – Alternative 2 proposes to reconstruct the existing driveway apron and parking space on MidPen’s property. The conceptual design shows the parking space at a similar elevation to that of the new bridge/roadway; with a retaining wall wrapping around the entire parking space and new steps connecting the space to the existing grade onsite. We recommend that the City carefully study the grading and slopes adjacent to this parking space, to provide a more natural transition that works well for the MidPen site.

4

We understand that CPA will need a temporary construction easement in this area and the CEPA will need a permanent easement. We are requesting clarification regarding the permanent easement as to why this is needed as it appears the proposed ramp is intended to restore the ADA route from the building to the public sidewalk. Next Steps – We recommend that the City of Palo Alto continues to coordinate with MidPen staff on all upcoming design updates. In addition, we are requesting to discuss the following:

5

- Request to review budget for design and construction from CPA as it relates to the MidPen’s property
- We would like to understand the plan for MidPen property landscape which will need to be adjusted due to the ramp and railing proposed along the property
- We would like to discuss maintenance plan from CEPA of the sidewalk and railing that is proposed to runs along the MidPen property
- Please note that APN 063-514-130 is part of the MidPen property based on our survey and title report. Part of the bridge and the creek are in this parcel. We would like the opportunity to speak with both CPA and CEPA about MidPen’s future plan for this parcel.

6

We believe it will benefit both the City and Midpen to have a joint site meeting - to ensure that the proposed design take into account Midpen’s existing site conditions.






Please feel free to contact me at 408.315.9550 for any questions.

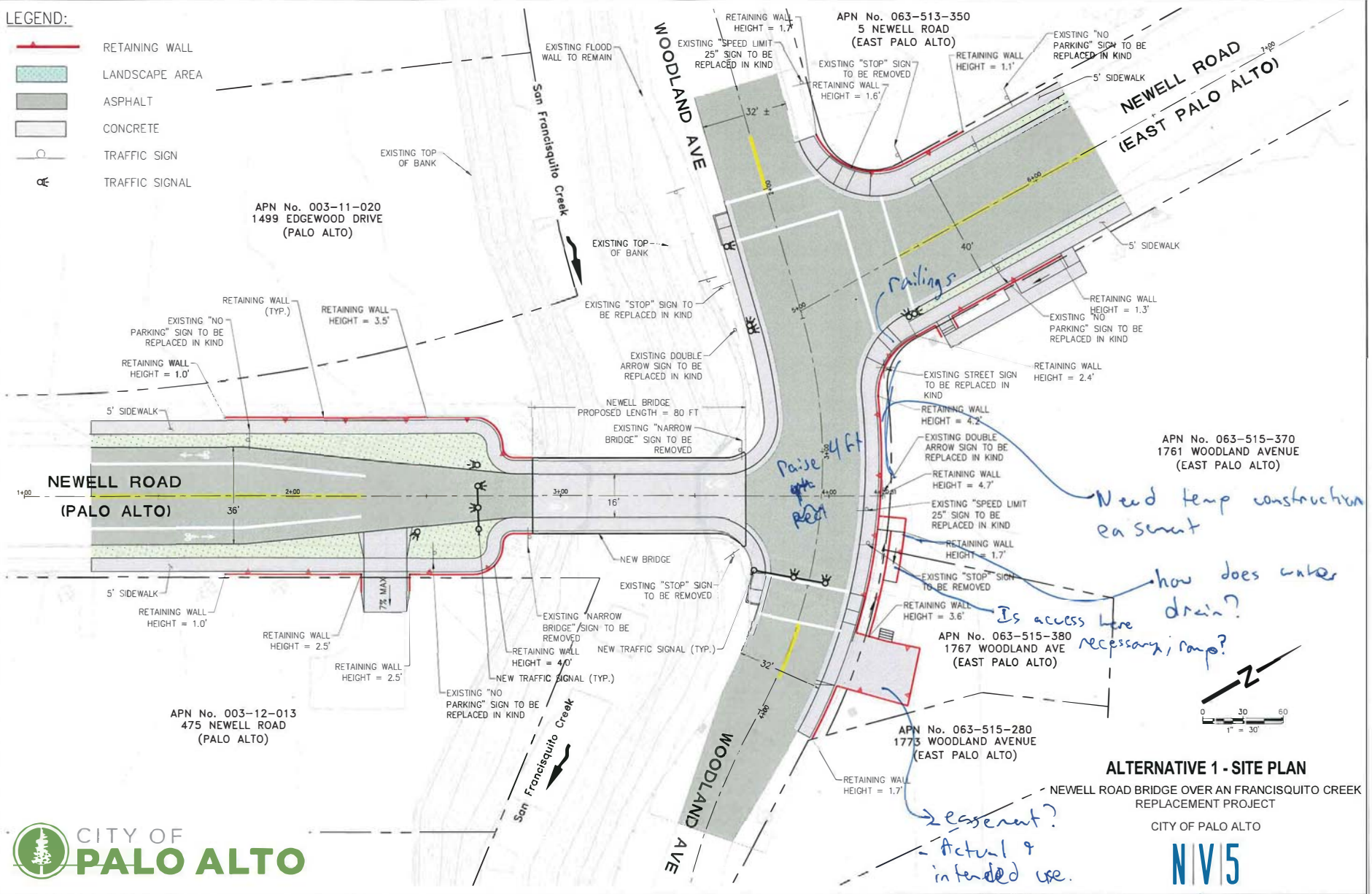
Respectfully,
BKF Engineers



Jacob Nguyen, PE
Principal/Vice

LEGEND:

-  RETAINING WALL
-  LANDSCAPE AREA
-  ASPHALT
-  CONCRETE
-  TRAFFIC SIGN
-  TRAFFIC SIGNAL



ALTERNATIVE 1 - SITE PLAN

NEWELL ROAD BRIDGE OVER AN FRANCISQUITO CREEK REPLACEMENT PROJECT

CITY OF PALO ALTO



Prefer Option

A

O-2

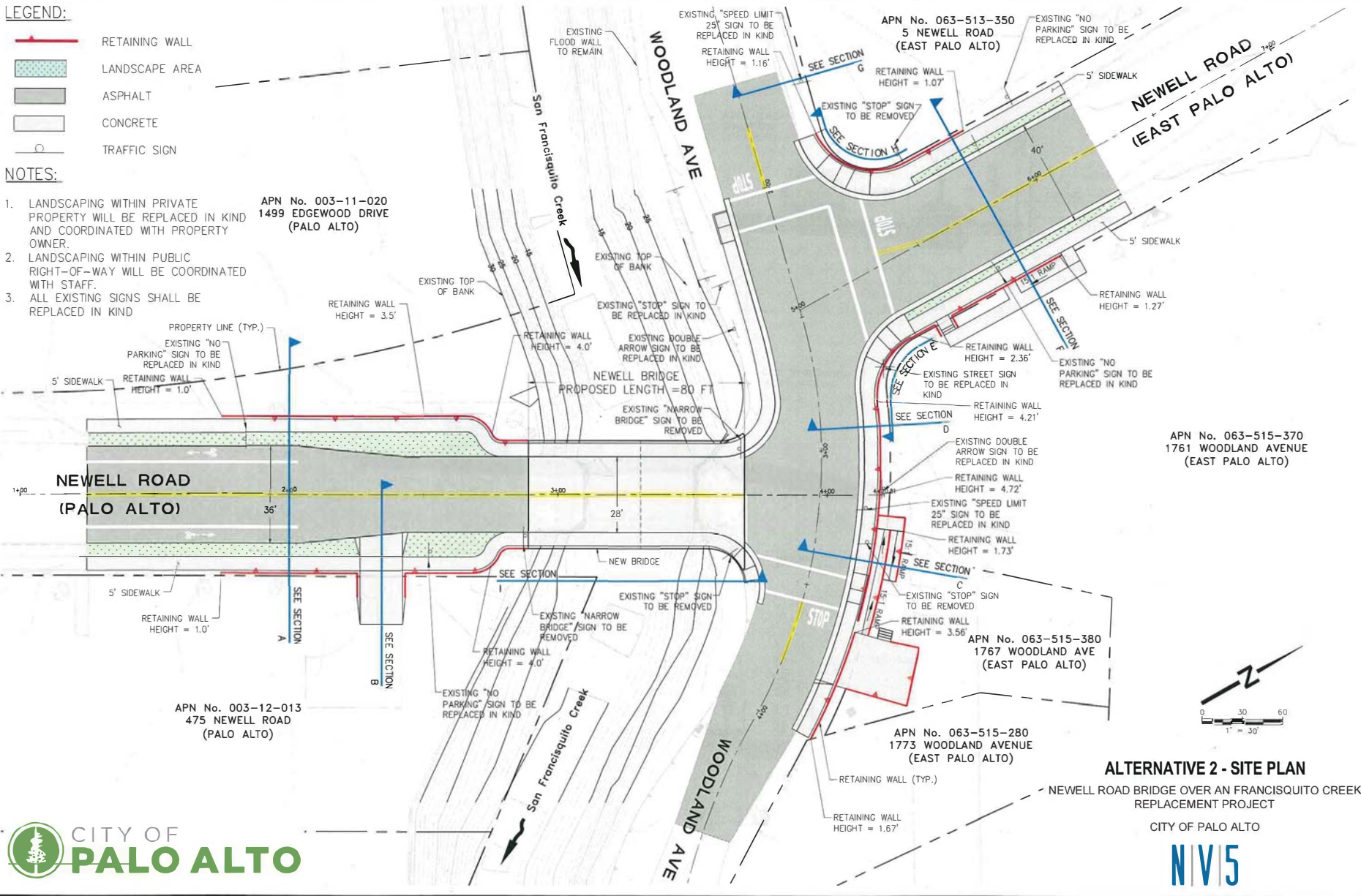
LEGEND:

-  RETAINING WALL
-  LANDSCAPE AREA
-  ASPHALT
-  CONCRETE
-  TRAFFIC SIGN

NOTES:

1. LANDSCAPING WITHIN PRIVATE PROPERTY WILL BE REPLACED IN KIND AND COORDINATED WITH PROPERTY OWNER.
2. LANDSCAPING WITHIN PUBLIC RIGHT-OF-WAY WILL BE COORDINATED WITH STAFF.
3. ALL EXISTING SIGNS SHALL BE REPLACED IN KIND

APN No. 003-11-020
1499 EDGEWOOD DRIVE
(PALO ALTO)



ALTERNATIVE 2 - SITE PLAN
 NEWELL ROAD BRIDGE OVER AN FRANCISQUITO CREEK
 REPLACEMENT PROJECT
 CITY OF PALO ALTO

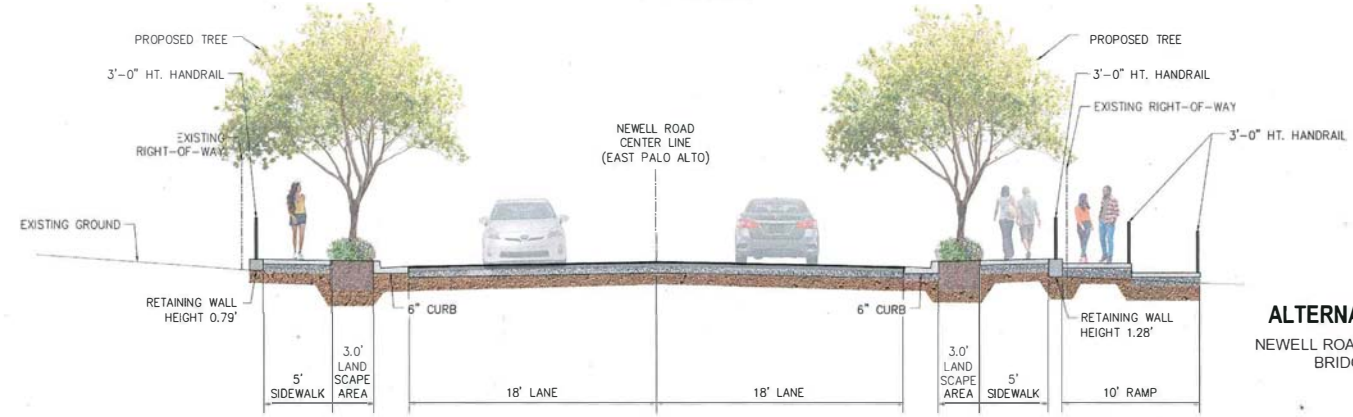
N | V | 5



SECTION D
NOT TO SCALE



SECTION E
NOT TO SCALE



SECTION F
NOT TO SCALE

NOTE:
HANDRAILS REQUIRED WHEN
HEIGHT DIFFERENCE = 30"

ALTERNATIVE 2 - CROSS SECTIONS
NEWELL ROAD OVER SAN FRANCISQUITO CREEK
BRIDGE REPLACEMENT PROJECT

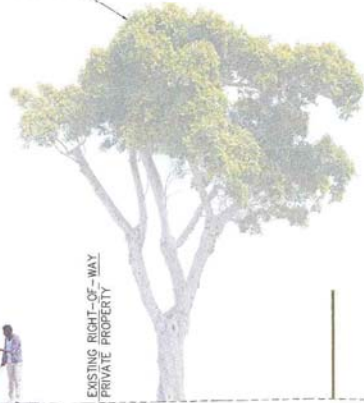
CITY OF PALO ALTO



NEWELL ROAD

WOODLAND AVENUE

EXISTING TREE TO REMAIN



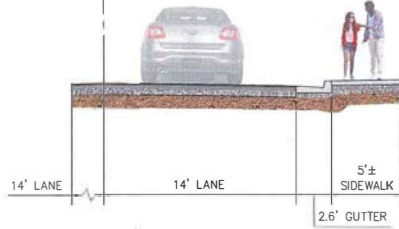
RETAINING WALL HEIGHT VARIES (1.3' TO 2.0')



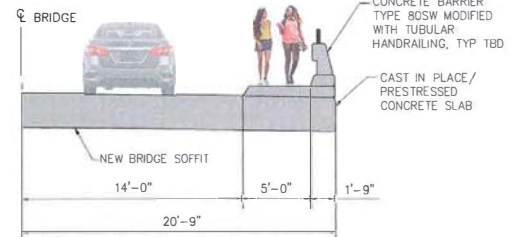
SECTION H NOT TO SCALE

WOODLAND AVENUE CENTER LINE (EAST PALO ALTO)

EXISTING RIGHT-OF-WAY PRIVATE PROPERTY

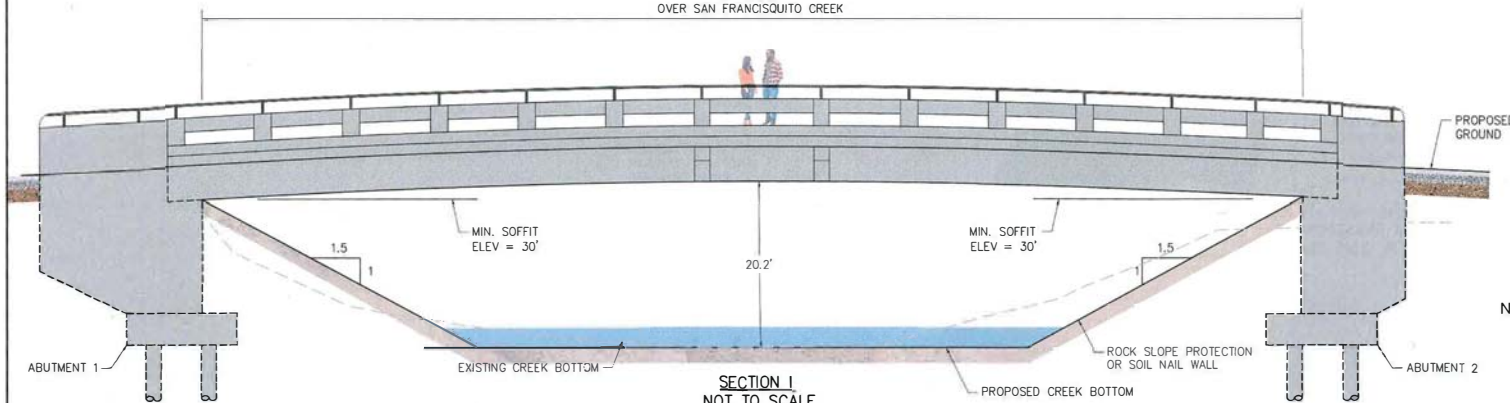


SECTION G NOT TO SCALE



BRIDGE SIDEWALK DETAIL NOT TO SCALE

80' BRIDGE OVER SAN FRANCISQUITO CREEK



SECTION I NOT TO SCALE

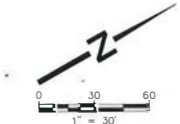
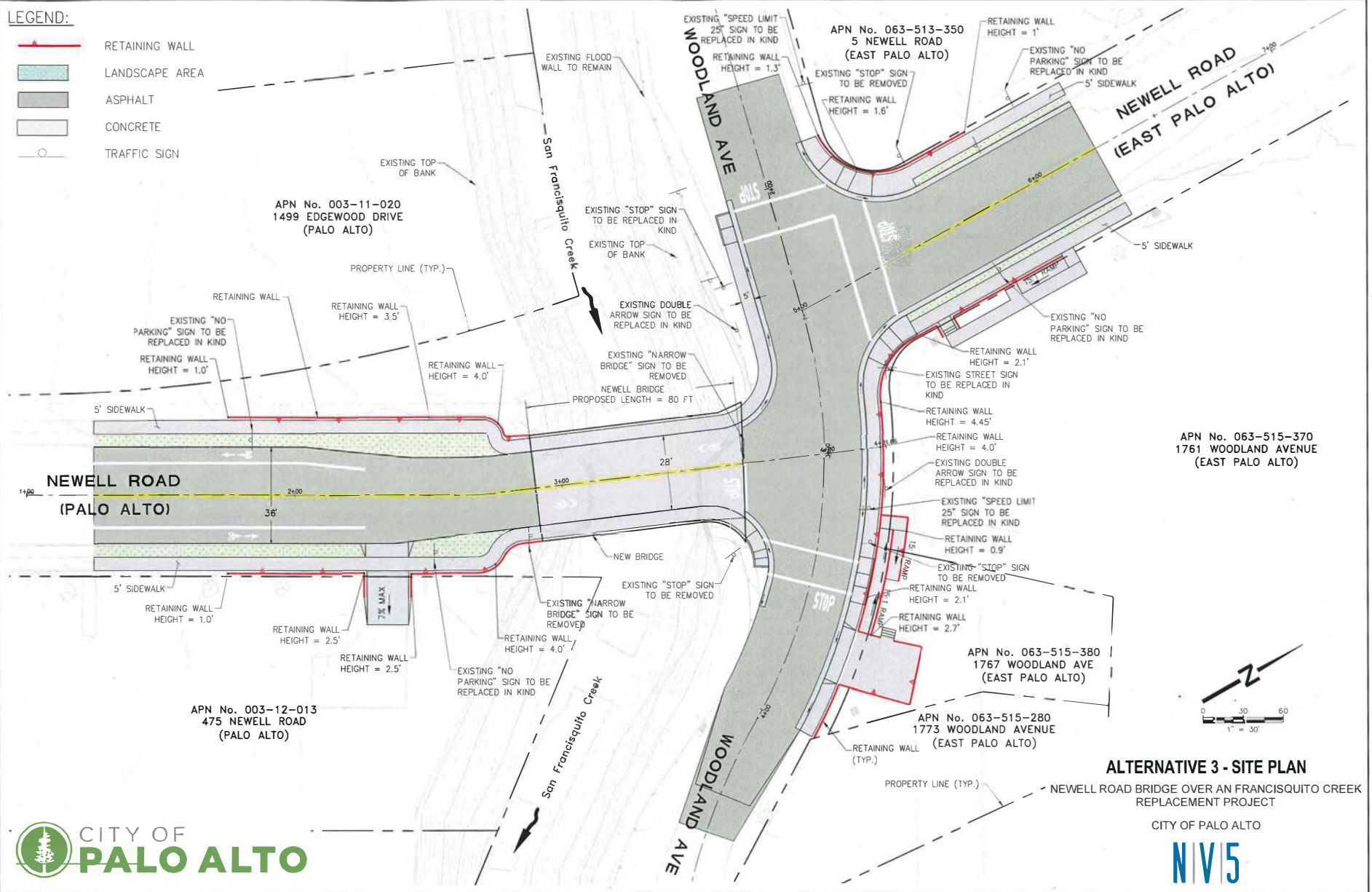
ALTERNATIVE 2 - CROSS SECTIONS
NEWELL ROAD OVER SAN FRANCISQUITO CREEK
BRIDGE REPLACEMENT PROJECT

CITY OF PALO ALTO



LEGEND:

-  RETAINING WALL
-  LANDSCAPE AREA
-  ASPHALT
-  CONCRETE
-  TRAFFIC SIGN



ALTERNATIVE 3 - SITE PLAN
 NEWELL ROAD BRIDGE OVER AN FRANCISQUITO CREEK
 REPLACEMENT PROJECT

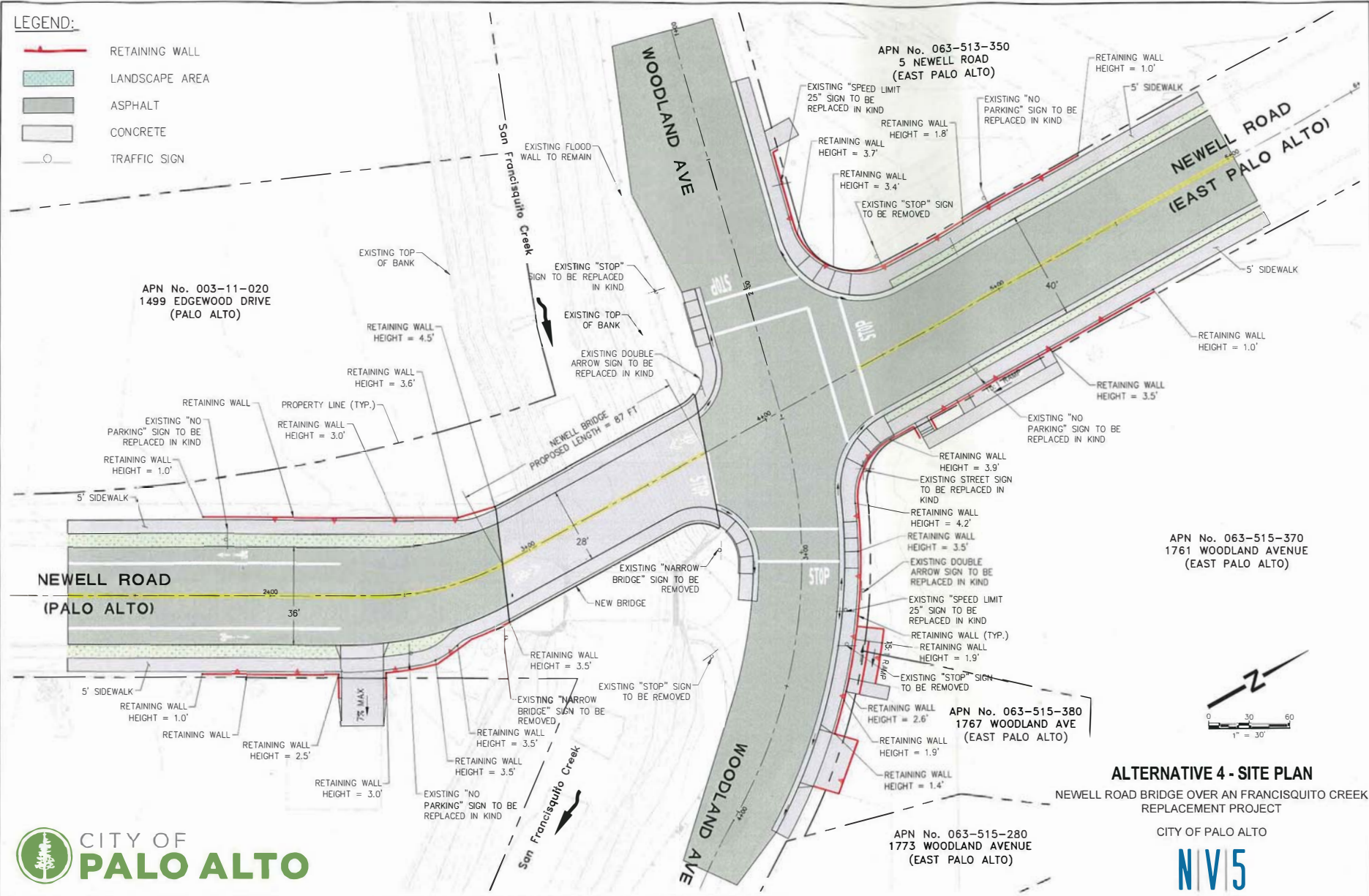
CITY OF PALO ALTO



P:\Info\GIS\2017\06\GIS\Map\003-12-013-003-11-020-063-513-350-063-515-370-063-515-380-063-515-280-Alternative 3.dwg 4/19/18

LEGEND:

-  RETAINING WALL
-  LANDSCAPE AREA
-  ASPHALT
-  CONCRETE
-  TRAFFIC SIGN



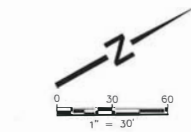
APN No. 003-11-020
1499 EDGEWOOD DRIVE
(PALO ALTO)

APN No. 063-513-350
5 NEWELL ROAD
(EAST PALO ALTO)

APN No. 063-515-370
1761 WOODLAND AVENUE
(EAST PALO ALTO)

APN No. 063-515-380
1767 WOODLAND AVE
(EAST PALO ALTO)

APN No. 063-515-280
1773 WOODLAND AVENUE
(EAST PALO ALTO)



ALTERNATIVE 4 - SITE PLAN
NEWELL ROAD BRIDGE OVER AN FRANCISQUITO CREEK
REPLACEMENT PROJECT

CITY OF PALO ALTO



Letter O-2. MidPen Housing Corporation, 7/25/19

Response to Comment O-2.1

The commenter's summary of the Project description is noted. Build Alternative 2 is the preferred alternative for both cities.

Response to Comment O-2.2

Build Alternative 2 would replace a two-lane, bi-directional bridge where vehicle lanes are 9 feet wide with a two-lane, bi-directional bridge where vehicle lanes are 10 feet wide. The location of the existing stop signs would not change. Therefore, traffic speeds are not anticipated to change as a result of implementation of Build Alternative 2. Retaining walls are proposed between the sidewalk and private properties in order to hold the raised roadway. It is not anticipated that a K-rail would be required in addition to this retaining wall in order to serve as a vehicular barrier. However, during final design, the City of Palo Alto will conform to local ordinances and American Association of State Highway and Transportation Officials specifications and continue to work with property owner.

Response to Comment O-2.3

During design, the City of Palo Alto will carefully study the locations of the existing onsite storm drain inlets to address changes in site drainage in coordination with the City of East Palo Alto and property owners.

Response to Comment O-2.4

During design, the City of Palo Alto will carefully study the grading and slopes adjacent to the existing parking space off Woodland Avenue and work in coordination with the property owner in order to provide the most natural transition possible.

Response to Comment O-2.5

The City of Palo Alto understands that APN 063-514-130 is owned by MidPen property and that a portion of the bridge and the creek are located within this parcel. It is therefore anticipated that both a temporary and a permanent easement will be required to allow construction and ongoing maintenance of the portion of the bridge that is located within this property. This has been added into Section S.5, *Summary of Environmental Impacts and Mitigation Measures*, Section 1.6, *Right-of-Way Requirements*, and Section 2.1.2.2, *Relocations and Real Property Acquisition*.

Response to Comment O-2.6

The comment does not raise a specific issue on the substance of the Draft EIR/EA. The City will continue to work with property owners during design and right-of-way phases.

June 18, 2019

City of Palo Alto and CalTrans District 4
Attention: Michel Jeremias, City of Palo Alto
Cc: Palo Alto City Council, Transportation Staff, Planning and Transportation Commission

Re: DEIR for the Newell Road Bridge

Dear Palo Alto and CalTrans Staff,

We find the DEIR for the Newell Road Bridge grossly inadequate for choosing design options, because it does not address the bicycling suitability and comfort level for cyclists travelling from Newell Road in Palo Alto to Newell Road in East Palo Alto. While the DEIR shows that the bridge and intersection may indeed have sharrows, it does not analyze the impact of traffic congestion and intersection design. This bridge will serve bicyclists and pedestrians connecting between Palo Alto to East Palo Alto for the next 100 years, and, in conjunction with the new bike/ped bridge over Highway 101, will be the best, most direct, and most comfortable connection, so it is essential to consider bicycle circulation in more detail.

1

We recognize that the original scoping of the EIR only required a vehicular traffic analysis, but, in the time since this process started, the standards for multi-modal design, and the local conditions have changed to the point that this omission of bicycle and pedestrian specific analysis should be rectified before making final design choices.

Planners should do a Level of Traffic Stress (LTS) analysis as this project proceeds through the DEIR acceptance stage, even though it is not required by the original EIR scope. We must make sure that this bridge will be a great fit for the next 50 years, for all modes.

An excellent bike route should have low “traffic stress”. The “traffic stress” analysis method has been developed relatively recently, after the creation of Palo Alto’s 2012 Bike/Pedestrian Traffic Plan, but it was used in developing goals for local bike network improvements since 2015. A useful reference is here: <http://www.northeastern.edu/peter.furth/research/level-of-traffic-stress/> One example of a low traffic stress route is an off-street path, like the Bol Park Path, where there are no automobiles. Another low stress environment is the Bryant Bike Boulevard, where bicycles and autos share the lane, but the speed and volume of automobile traffic is very low. On busier streets, low traffic stress can be achieved by implementing bicycle lanes, such as on Park Blvd, from California Avenue to Latham. Depending on the volume and speed of traffic, enhanced bike lanes, with separation or physical barriers can be used to reduce stress, such as on Middlefield near North California. With lower traffic stress levels along an entire route, a larger percentage of potential cyclists will consider using a route, while a single high stress segment can deter many potential users.

2

In the case of the complete connection from Clarke Ave, in East Palo Alto, across 101 on the new bike/ped bridge, and across the creek on the new bridge to Newell Road in Palo Alto, all segments can be considered for traffic stress, and this EIR should make that analysis with regard to the design alternatives.

The new bridge over 101 has only bicycle and pedestrian traffic so it is low traffic stress (LTS-1: Suitable for children.). A quick analysis of Newell Road in EPA, based on this traffic study and a street survey, shows shared lanes, no centerline, 25 mph speed limit, and Average Daily Volume (ADT) of 1805 -- within the guidelines for LTS-1 if traffic obeys the speed limit. On the Palo Alto side, Newell road has 25 MPH speed limits, a centerline, much higher traffic volumes (3600-3900 ADT) and bike lanes. Depending on the width of the bike lanes this could be rated LTS-1, or LTS-2 (suitable for most adult bicyclists).

This kind of analysis is necessary for evaluating the bridge, and an additional evaluation must be made for the mixed traffic flow through the proposed offset intersection at Newell and Woodland, especially considering the distinct flows of bicycle and automobile traffic. Will the preferred alternative create a high traffic stress bridge crossing and high traffic stress intersection? With the rush hour traffic densities, the current design may be as poor as LTS-3, a level of stress discouraging to most potential users. The choice of intersection design in options 2-4 probably makes a difference as well. What about other, more creative alternatives?, like reducing lane widths to slow traffic, and adding minimal bike lanes, creating separation? Should planners consider a larger change, to add 4 feet of width to the bridge to enable full bike lanes without compromising auto lane width? I am sure that adding bicycle lanes to the bridge will reduce bicycle/automobile conflicts, and reduce the Level of Traffic Stress.

Without analysis, this is all conjecture.

Note that adding sharrow markings to the road, the only design feature proposed for bicyclists in the bridge plans, does not change the level of traffic stress, and makes no significant difference. It is functionally equivalent to adding a "Bike Route" sign. In fact the wider lanes of the new bridge will probably tend to increase traffic speed, and increase the LTS level versus the current design.

As we stated at the beginning, this kind of analysis is missing from this EIR, and it is critically important. This bridge is on the best bicycle/pedestrian route from East Palo Alto to Palo Alto, and we must evaluate design options with knowledge of the impact of the design choices. I hope we can make certain that this brand new bridge will be part of the complete low stress connection, and not have the single worst Level of Traffic Stress along the entire route.

Robert Neff William Robinson Paul Goldstein
 Art Liberman Eric Nordman Penny Ellson Elizabeth Greenfield
 Palo Alto members Palo Alto Ped/Bike Advisory Committee (PABAC), Palo Alto PTA, or SVBC.

Letter O-3. Palo Alto Pedestrian and Bicycle Advisory Committee, 6/18/19

Response to Comment O-3.1

Please see Master Response 2. The Draft EIR/EA indicated that Build Alternatives 2, 3, and 4 would have 14-foot-wide lanes for shared bicycle and vehicle use (sharrows); however, the project plans show that these build alternatives would include 10-foot wide lanes (sharrows) with 4-foot-wide shoulders for bicyclists. Section 1.4.1, *Common Design Features of the Build Alternatives*, of the Final EIR/EA has been updated for clarity and consistency with the project plans. A second option has also been discussed with Caltrans, which would place two 9-foot-wide raised, mixed-use paths on either side of the bridge, allowing the curb to act as a barrier for cars from both pedestrian and bicycle traffic. In both options, the vehicular traffic lane width would be 10 feet wide in each direction. The text for Section 1.4.1, *Common Design Features of the Build Alternatives*, has been updated.

Response to Comment O-3.2

Please see Master Response 2.



Newell Road/San Francisquito Creek Bridge Replacement Project Comment Card

Thank you for your interest in the Newell Road/San Francisquito Creek Bridge Replacement Project. Your input and participation are encouraged and appreciated. You may use the space below to write your comments.

(Please print your name and comment clearly. Your address and contact information are optional)

Name: Eileen Altman Date: 6-18-19

Address: 105 Mission Drive
E Palo Alto 94303
City State ZIP-Code

Home Phone: _____ E-mail: revdr.altman@gmail.com

Organization/Affiliation: _____

Comment: I am happy w/ the preferred Alternative 2 & would like us to move forward w/ construction asap. | 1

You may hand in your completed comment card to a project representative at the scoping meeting, or you may mail it to the City of Palo Alto, Public Works Department. Please fold this form in half, seal with tape or staple, and add postage before mailing. Feel free to send in additional sheets as needed. All comments must be received by **5:00 PM on Tuesday, July 30, 2019.**

City of Palo Alto
Public Works Engineering Services
250 Hamilton Avenue
Palo Alto, CA 94301
Attention: Michel Jeremias, Senior Engineer

Letter I-1. Eileen Altman, 6/18/19

Response to Comment I-1.1

The commenter's support for Build Alternative 2 is noted. In addition, the commenter's concern that the Project proceed as soon as possible is noted. The Project is proceeding as quickly as possible.

From: [Ben Ball](#)
To: [Hodgkins, Claire](#); [Jeremias, Michel](#)
Cc: citymgr@paloalto.org
Subject: Meeting Last Night regarding Newell Bridge
Date: Wednesday, June 19, 2019 9:28:52 AM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Michel and Claire,

Claire it was nice to put a face with the name on the couple of email exchanges we've had recently and Michel I'm sorry I didn't have a chance to introduce myself to you after the meeting. Michel please let me apologize for my questions last night that came across as antagonistic as that was disrespectful and not effective.

I'm still sifting through all of the data in the draft EIR and I will submit those comments formally once I've synthesized all of my comments. For now I thought I'd share my perspective on the process and how we arrived where we are from a resident perspective.

Back in 2012 many residents felt that PA city staff was not looking out for our interests. Joe T, the city project manager, wanted to build a huge bridge fully aligned with Newell Road in EPA. He never understood the traffic concerns that impact many of us who live close to the bridge and have children who use, or have used, Newell Road to get to Duvneck and Jordan/Green. As such there was a decent level of distrust that the neighbors and I felt for what PA staff "was pushing". I mention this now as I've learned how influential PA staff is with the city council and the ultimate decision that will be made regarding the bridge. As such, the words used to express staff's views and opinions need to accurately describe the data and the process staff relies on in making its recommendation to the city council.

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Two examples to illustrate this point. Many residents attended multiple meetings from 2012-2015 and each time signed up to receive email notifications on the bridge project. All of this lists were paper-based and most ended up in the trash given that very few residents received an email update regarding last night's meeting. This did not sit well with many neighbors and risks creating more fear that PA staff has an agenda and is pushing something that PA residents close to the bridge don't understand. The second point stems from my issue with the word "the least" which was used to describe PA staff recommended Alternative regarding the impact on trees. The comment on the slide stated that building a two-lane car bridge had "the least" impact on trees yet the DEIR states that this option will impact 24 trees and remove 12 of them while the single-lane car bridge alternative would impact 23 trees while removing 10 of them (DEIR page S-10). I interpreted this data to mean that Alternative 1 had the least impact on trees so took issue with the statement that was presented during the meeting.

2

You are well aware that flood control and traffic are the two major concerns in the community. However, you may not appreciate that the Crescent Park Neighborhood Association does NOT represent the views of the residents who live close to the Newell Bridge. Norm Beamer, head of the CPNA, lives very close to the Pope/Chaucer bridge and is only concerned about flood control. My interactions with him from 2012-2015 all demonstrated that he has no desire to understand the traffic impacts a two lane bridge will have in our neighborhood and if anything he wants as big a bridge built as possible as he believes it will divert traffic away from University Ave (his neighborhood) and push it into my

3

neighborhood. I mention all of this to help you appreciate that IF you communicate directly with CPNA you will not reach or hear the same concerns from those of us who live close to the Newell bridge.

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I also believe that all of us would be better served IF PA staff is more transparent around the cost of the bridge and who is paying for the preliminary work and who will ultimately pay for the construction. I was disturbed last night after the meeting when i overheard a comment from someone I believe is on the PA staff but I honestly don't know. The comment was something to the effect that "can you imagine if PA had to pay Caltrans back for all the work they've done on the DEIR IF Alternative 1 is adopted." This statement implies that PA staff is potentially more influenced by who is paying for the work rather than finding the best solution for the residents impacted by this decision. IF this view is in fact held by anyone on PA or EPA staff then there should be far more disclosure around how the funding aspect have/will impact PA staff's ultimate recommendation.

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As I stated last night I want a solution that solves the flooding issue as outlined by the JPCA's most recent objectives BUT that also preserves the traffic at levels similar to what would result from keeping the current bridge. Please don't mis-interpret this last comment. I do NOT want to keep the existing bridge. I simply place as much urgency on mitigating traffic impacts as i do on mitigating flooding.

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Thanks,

Ben Ball
1425 Edgewood Dr.
Palo Alto

Letter I-2. Ben Ball, 6/19/19

Response to Comment I-2.1

The commenter's concerns about the earlier phase of public outreach for the Project are acknowledged. The Project has complied with the CEQA Guidelines, the City of Palo Alto Municipal Code, and NEPA provisions, in terms of proper noticing for the Project. Noticing for public meetings associated with public review of the Draft EIR/EA was done in a variety of ways. All entities on the distribution list (Chapter 5 of the Draft EIR/EA) received the Notice of Availability (NOA) of the Draft EIR/EA, hard copies or CDs of the Draft EIR/EA, or an email with the NOA and links to the Draft EIR/EA. A notice was posted in the *Palo Alto Daily*, which is typically where the City of Palo Alto advertises release of a Draft EIR. The City has maintained an email list of everyone who has signed up at past public meetings, and a notice was emailed to this list. Per City of Palo Alto Municipal Code Chapter 18.77 of Title 18, notices were also mailed to all addresses within a 600-foot radius of the Project. The City and Caltrans considered input received during the earlier phase of the Project and proposed a revised bridge design to address specific concerns raised by the public, such as a concern that the proposed bridge width was too wide.

Response to Comment I-2.2

The City of Palo Alto and Caltrans regret the error on the slide which stated that Build Alternative 2 would have the "least" impact on trees. Please see Table 2.3-3 of the Draft EIR/EA for tree impacts, summarizing number of trees affected and number of trees removed under each build alternative.

Response to Comment I-2.3

The City of Palo Alto and Caltrans acknowledge the commenter's concerns regarding the Crescent Park Neighborhood Association. The comment does not raise a specific issue on the substance of the Draft EIR/EA.

Response to Comment I-2.4

In Section 1.1, *Introduction*, the document discusses the funding for the Project with specific state and local percentage obligations. CEQA, Article 9, Section 15126.6, *Consideration and Discussion of Alternatives to the Proposed Project*, states "(b) Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." NEPA also requires consideration of a reasonable range of alternatives that can accomplish the purpose and need of the proposed action, regardless of cost. Therefore, comparative costs estimates were not prepared and are not considered as part of the evaluation of build alternatives in the Draft EIR/EA.

Response to Comment I-2.5

The commenter's support for the flood protection aspect of the Project is noted. Please see Master Response 1, which responds to the commenter's concerns regarding increased traffic under Build Alternative 2.

Ben Ball
1425 Edgewood Dr.
Palo Alto, CA 94301

July 24, 2019

Michel Jeremias
Project Manager
City of Palo Alto
250 Hamilton Ave, 6th Floor
Palo Alto, CA 94301

RE: Comments on Draft EIR ("DEIR") for the Newell Road Bridge Replacement Project

Ms. Jeremias,

I'm writing to comment on the DEIR report for the Newell Road Bridge replacement project and express my support for "Build Alternative 1" as defined in the DEIR. This is the only alternative that solves the flood mitigation objectives AND ensures that vehicular traffic flows across the bridge are held at a similar level to what they theoretically would be IF the current bridge were not replaced.

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Specific Comments of the DEIR:

- **The DEIR does not contain any data or analysis on bike and pedestrian traffic over the bridge.**
The proposed alternative by PA city staff argues a need to accommodate bike and pedestrian traffic yet no data is presented to quantify how great a need this is. The Chairman of the Palo Alto Planning and Transportation Commission called this out during the PTC meeting regarding the replacement bridge alternatives. This data should be included so people can properly assess what accommodations, if any, should be made for bicycle and pedestrian traffic. Additionally, during a monthly JPA meeting and during the July 18th Architectural Review Board Meeting, PA staff indicated that the bike lanes in Build Alternative 2 would likely be wider than what is represented in the DEIR yet no bike data has been presented to justify such an action. The DEIR must be redone and properly evaluate bike and pedestrian traffic.
- **The traffic analysis presented in the DEIR is dated and flawed.**
 - The City of Palo Alto has retained TJKM to conduct three different reports concerning traffic related to the Newell Road Bridge. The first was published on September 17, 2012, the second on February 21, 2014 and the third on January 29, 2019. The traffic data collected in these reports comes from 2012 and 2016. The traffic data in the DEIR is old and doesn't account for any of the current known development projects presented by Stanford and endorsed by the city of Palo Alto. Additionally, the traffic analysis doesn't account for how WAZE, Google Maps and other traffic route guidance applications will impact traffic in the Crescent park neighborhood. The DEIR must factor these known impacts into the analysis.
 - TIRE analysis relied on by PA staff is not appropriate for this situation. The TIRE analysis implies very little impact on the neighborhood due to traffic. However; traffic over the

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bridge over the last seven years has had a strong negative impact on me and my Edgewood Drive neighbors. Figure 1 in the TJKM September 17, 2012 report states that 163 cars per hour crossed the Newell Road Bridge from EPA into PA during the peak morning traffic in 2012. Figure 10 – intersection #1 in the TJKM January 29, 2019 report which presents data collected from February and March 2016 shows 225 cars per hour crossed the Newell Road Bridge from EPA into PA during peak morning traffic. **This is a 38% increase in traffic in only four years.** The peak afternoon traffic presented in these reports is even more alarming. Figure 1 – Intersection #1, data in the February 21, 2014 TJKM collected during August 2012 shows 180 cars traveled across the bridge from PA into EPA during peak hourly afternoon traffic. The data in Figure 1 – Intersection #1, from the January 29, 2019 TJKM report shows that 323 cars traveled across the bridge from PA into EPA during peak afternoon hourly traffic. **This represents a 79% increase in peak afternoon hourly traffic over the bridge in four years.** This is a significant increase in traffic by any measure and the fact that the TIRE analysis asserts that there is “no meaningful impact due to traffic” can only imply the TIRE analysis is NOT appropriate for the Newell Road Bridge situation.

- The forecasted 2020 and 2040 traffic at various intersections around the bridge do not account for current traffic levels, known real estate development in Palo Alto/Stanford or for how WAZE, Google Maps and other mobile route guidance applications will impact traffic. The January 29, 2019 TJKM report forecasts traffic around the bridge to increase 4% from 2016 to 2020 and by 27% from 2016 to 2040. The analysis didn’t account for any of the above-mentioned impacts and therefore understates the traffic impact in the Palo Alto neighborhoods adjacent to the bridge. Additionally, these forecasts appear highly suspect given the actual reported 38% increase in peak morning hourly traffic and 79% increase in peak hourly afternoon traffic experienced from 2012 to 2016. PA staff has indicated that its preferred option is Build Alternative 2. This alternative will significantly increase the size of the bridge and create incremental traffic on the Palo Alto streets adjacent to the bridge according to the TJKM traffic analysis. As previously mentioned, the forecasted analysis doesn’t account for known real-estate development and the impact of mobile route guidance applications which will push additional incremental traffic into Crescent Park and Crescent Park Addition. This impact is counter to the objectives outlined on page S-2 of the DEIR.
- Build Alternative 1 is overly complicated relative to what’s actually required, and the traffic analysis should be redone using simpler more realistic assumptions. The current bridge structure functions as a single lane car bridge so Build Alternative 1 should mirror what happens today. The analysis for Build Alternative 1 called for multiple different traffic lights when only two, on both entrances to the bridge, are required. Vehicles safely navigate the bridge today waiting for any traffic to clear prior to entering the bridge. Lights placed on both entrances are all that is required, and such a configuration would maintain the current traffic patterns and make this build alternative look far more attractive. It should be noted that the only reported area where Build Alternative 1 is less attractive than Build Alternative 2 is in regard to traffic delays hence why reworking this analysis is critical. Build Alternative 1 is superior to Build Alternative 2 on

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every other evaluated criterion. (i.e. reduced impact on environment, reduced traffic on Newell Road, etc)

- **Build Alternative 2 creates a significant negative impact on the environment.** According to the DEIR Build Alternative 2 will require removing 12 mature trees and affect 12 additional trees. Such an impact should not be acceptable, and the scope of the project should be downsized to protect the environment.
- **The DEIR should provide data to support its assertions in multiple places that,** “The Project would provide operational benefits in terms of vehicular safety, as well as the larger community benefit of providing safe pedestrian and bicycle access.” (page S-7). There have been no reported vehicular, bike or pedestrian accidents reported in any of the TJKM traffic reports and I’ve lived on Edgewood Drive since 1996 and I don’t know of any accidents occurring on the Newell Bridge. From my vantage point the current structure of the Newell Road Bridge is arguably the safest bridge in Palo Alto today. The DEIR should provide evidence to support these assertions.

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I look forward to receiving answers to my comments on the DEIR.

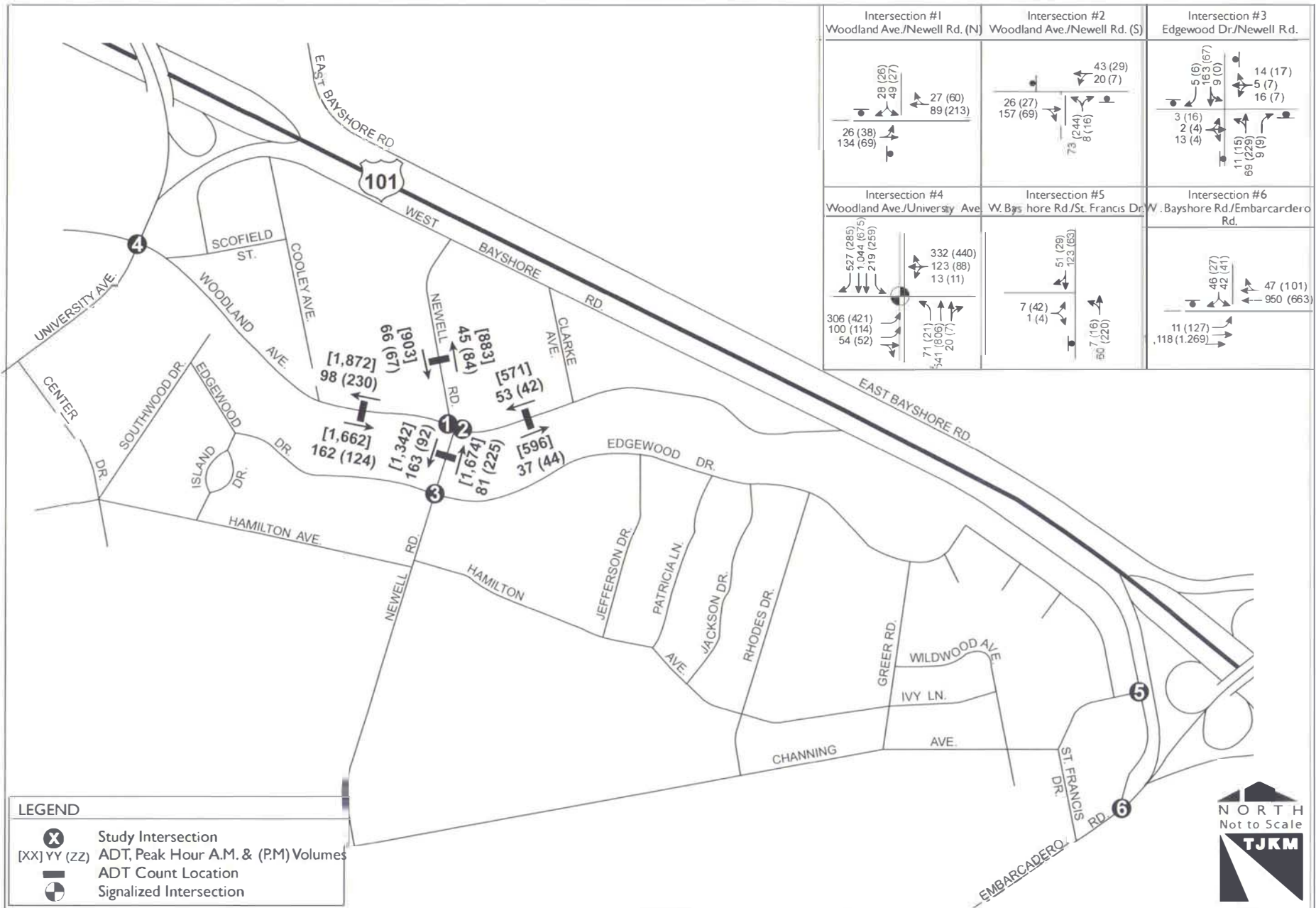
Sincerely,



Ben Ball

City of Palo Alto - Traffic Evaluation of the Newell Bridge Replacement Project
Existing Peak Hour Volumes, Lane Configurations, and ADT

Figure 1



Letter I-3. Ben Ball, 7/24/19

Response to Comment I-3.1

The commenter's support for the Project and the commenter's preference for Build Alternative 1 are noted. Please see Master Response 1 in response to the commenter's concerns about vehicular traffic flows across the bridge.

Response to Comment I-3.2

Please see Master Response 2.

Response to Comment I-3.3

Please see Master Response 1.

Response to Comment I-3.4

Please see Master Response 1.

Response to Comment I-3.5

Please see Master Response 1.

Response to Comment I-3.6

The traffic light configuration incorporated for Build Alternative 1 is required to meet American Association of State Highway and Transportation Officials (AASHTO) standards. Utilizing signals only at the entrances to the bridge would continue the unsafe condition present today with stopped vehicles blocking the Woodland Avenue intersection without safe harbor.

Response to Comment I-3.7

The Draft EIR/EA identifies tree removal as an impact in Section 2.3.1, *Natural Communities*, and in Section 3.2.4, *Biological Resources*. Removal of trees in Palo Alto is allowed in accordance with City of Palo Alto Municipal Code Section 8.10.050(d)(1). As outlined in the code, replacement for these trees is required in accordance with the *Tree Technical Manual*, which includes a formula for replacement based on the measured size of the canopy lost. Compliance with the City of Palo Alto Municipal Code and the *Tree Technical Manual*, which is incorporated by reference as part of the City of Palo Alto's Municipal Code, would help to ensure that impacts associated with removal of the protected and regulated trees within the City of Palo Alto would be reduced. In addition, the City of East Palo Alto requires replacement of trees approved for removal in accordance with the East Palo Alto Municipal Code Section 18.28.040(I). Compliance with the City of East Palo Alto's Municipal Code, including replacement of the canopy, ensures that impacts in the City of East Palo Alto would also be reduced. In addition, Mitigation Measure MM-BIO-2 will be required for the replacement of any trees offsite, which would ensure that if trees cannot be replaced onsite, suitable locations will be found offsite. This would ensure that impacts associated with removal of the protected and regulated trees would be less than significant with mitigation incorporated under CEQA.

Response to Comment I-3.8

As noted in Chapter 1, *Proposed Project*, the bridge is classified as Functionally Obsolete and has a sufficiency rating of 40.9. The bridge was deemed functionally obsolete because it does not conform to AASHTO standard lane and shoulder widths, nor does it provide AASHTO standard pedestrian features. In addition, the current geometry does not satisfy AASHTO's sight distance standards.

From: [Steve Bisset](#)
 To: [Jeremias Michel](#)
 Cc: comments@sfcjpa.org; [Xenia Hammer](#); [TC Rindfleisch](#); [Norm Beamer](#); [Stephen Monismith](#)
 Subject: In support of Build Alternative 2 (LPA), Newell Road Bridge DRAFT EIR/EA
 Date: Friday, July 12, 2019 5:33:41 PM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

(emailed to comments@sfcjpa.org on June 3, 2009)

To: Michel.Jeremias@CityofPaloAlto.org

Dear Michel,

I am a Palo Alto homeowner, address 1051 Fife Avenue, in the flood zone artificially created by the Pope-Chaucer bridge. Our home sustained minor damage during the 1998 flood. Many of our neighbors fared far worse.

I STRONGLY SUPPORT Build Alternative 2, the Locally-Preferred Alternative (LPA) for the Newell Road Bridge Replacement Project.

Please expedite approval of the EIR and completion of this essential project as soon as possible.

Comments on the alternatives:

No Build Alternative: Unacceptable. Prevents increasing the flow capacity at Pope-Chaucer bridge, leaving future flooding a certainty.

Build Alternative 1: Unacceptable. This alternative is in response to a tiny but vocal minority of Palo Alto residents who seek to use the Newell Road bridge flood mitigation project to create a gated community. The proposed one-lane bridge, where there are now two, will create an unnecessary safety hazard by restricting emergency access. It will do precisely nothing to reduce the legitimate parking issues, which must be dealt with by other means. It will unfairly push additional traffic onto the University Avenue and Embarcadero corridors, burdening a larger set of Palo Alto residents for the benefit of a few.

Build Alternative 2 (the LPA): Strongly support. This alternative has been well thought out and planned by the SFCJPA and the various other agencies involved. It provides an essential next step in the bay-to-mountains comprehensive approach to flood mitigation, while minimizing the costs. It generates no significant negative impacts (after construction) to nearby PA and EPA residents. It improves traffic safety and especially pedestrian safety, without increasing traffic flow.

Build Alternatives 3 & 4: Oppose. While these address the flooding issue, they introduce an unnecessary encouragement to increased traffic flow across the bridge. This serves a need that does not

exist. It also activates opposition from nearby residents, unnecessarily. Such opposition must not be allowed to impede completion of the bridge project, but there is no purpose served by stimulating such opposition.

1 cont'd

I have read the entire Draft EIR. I am familiar with the hydrology models of the creek and the economic issues. I commend the SFCJPA on its thorough work and on its sensible moderate conclusions regarding the future steps for the Pope-Chaucer bridge and upstream retention at the Searsville Dam.

2

Sincerely,
Steve Bisset
Fife Avenue, Palo Alto
650-269-0494

Letter I-4. Steve Bisset, 7/12/19

Response to Comment I-4.1

The commenter's support for Build Alternative 2 is noted. The summary of the No Build Alternative and the four build alternatives is noted, including the commenter's summary of effects under each build alternative.

Response to Comment I-4.2

The San Francisquito Creek Joint Powers Authority (SFCJPA) Upstream of Highway 101 Project is separate from the Project discussed in the Draft EIR/EA. However, the two projects are related, and the City of Palo Alto is a member of the SFCJPA sponsoring the related flood protection projects along San Francisquito Creek.

Comments on the Draft EIR for the Newell Road Bridge Replacement Project,
 Claire Elliott, 271 Chestnut Ave., Palo Alto clairee44@gmail.com
 Submitted 7/18/2019

I support the need for a replacement to prevent flooding but am concerned with the impacts on the natural environment and a need for additional mitigation of these impacts. For example, significant disturbance of creek bank vegetation needs to be addressed adequately. Replacing an ancient buckeye with even three newly planted trees will not provide similar canopy and habitat value for decades.

3.2.1 Aesthetics Section of the EIR states that there would not be substantial damage to scenic resources (and includes trees as resources) because there are none visible--because the trees block the view! See the photo of the buckeye on the bank of the Palo Alto side of the creek in full bloom in the spring. That is an aesthetic and ecological resource and it would do substantial damage to this site to remove this tree.



From the picture above, it appears that the sidewalk for a new bridge with the same alignment could be placed on the right side of the tree, extending the existing sidewalk (possibly over the needed retaining wall?) Then it could join the bridge on the north side of the tree.

Section 1.4.1.5 Channel Stabilization: The specification of 50 feet of hardscaping for slope protection both up and downstream of the bridge seems arbitrary. I would like the city to ensure

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Comments on the Draft EIR for the Newell Road Bridge Replacement Project,
Claire Elliott, 271 Chestnut Ave., Palo Alto clairee44@gmail.com
Submitted 7/18/2019

the design minimizes hardscaping to the extent possible and include some bio-stabilization techniques as well in the design.

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cont'd

Section 2.3.6 I am glad the EIR addresses avoiding invasive plant introduction because heavy equipment and imported soil are likely to introduce weeds, and disturbance of the existing vegetation makes it more likely that weeds will establish. In addition to avoidance measures, I would like the EIR to also make provisions to monitor and eliminate weeds in the project area for some years following completion.

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I would also like to see the list of invasive species for the project site to include the eucalyptus trees (several spp. Including blue gum eucalyptus are on the CalIPC list referenced in the EIR).

Section 3.2.2 Agriculture and Forest Resources of the EIR states that there would be no loss of forest land, but what about loss of trees in the riparian forest? I was glad to see the plan to plant locally-specific native riparian species (I assume they mean understory species?) to replace those disturbed in construction. I applaud the plan to replace the non-native trees with native trees, and hope that those chosen are locally specific as well.

4

Water Quality Sampling Station: I am sorry that the monitoring station at the bridge has been abandoned and am glad that the power and fiber that serve the water sampling station would be maintained—wouldn't it be useful to at least have a flow gauge or at a minimum electronic depth gauge at this location?

5

The EIR lists elements of Palo Alto's Comprehensive Plan—but none of the natural environment elements. Consider adding these to the final version of the EIR:

Policy N-2.3 Enhance the ecological resilience of the urban forest by increasing and diversifying native species in the public right-of-way, protecting the health of soils and understory vegetation, encouraging property owners to do the same and discouraging the planting of invasive species.

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Policy N-3.5 Preserve the ecological value of creek corridors by preserving native plants and replacing invasive, non-native plants with native plants.

Policy N-3.6 Discourage bank instability, erosion, downstream sedimentation, and flooding by minimizing site disturbance and nearby native vegetation removal on or near creeks and by reviewing grading and drainage plans for development near creeks and elsewhere in their watersheds.

Section 3.2.2 Agriculture and Forest Resources states no loss of forest land but what about the loss of trees in the riparian forest?

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Letter I-5. Claire Elliot, 7/18/19

Response to Comment I-5.1

Please see Response to Comment I-3.7. Trees are considered a scenic resource if they are within a state scenic highway. As described in Section 3.2.1, *Aesthetics*, there are no state scenic highways within the vicinity of the Project. The mature trees around the Project site, in addition to the surrounding terrain, development, and sound walls, block views of any scenic vistas. Project engineers studied whether the design of the build alternatives could be adjusted to preserve the buckeye tree in place. It was determined that this is not possible due to demolition of the bridge and the need to raise the roadway approaches in order to meet sight distance and safety requirements.

The California buckeye that would be removed as part of the Project is located within the public right-of-way and is, therefore, considered a regulated tree under the City of Palo Alto's Municipal Code. As required in accordance with the City of Palo Alto Municipal Code and Mitigation Measure MM-BIO-2, outlined in Section 2.3, *Biological Environment*, of the Draft EIR/EA, the City would follow the methodology identified in the City's *Tree Technical Manual* to calculate and replace the canopy of the California buckeye.

Response to Comment I-5.2

The Draft EIR/EA analyzed the worst-case scenario (in terms of impacts) for bank stabilization techniques, rock slope protection, or soil nail wall. Additional analysis has since been performed to verify that soil nail walls will not be required for the Project. It is currently anticipated that the required creek flows can be accommodated using sloped creek bank for a more natural setting and channel. However, the specific bank stabilization measures will be determined during the design phase of the Project and in consultation with the permitting agencies, such as the San Francisco Regional Water Quality Control Board. Bio-stabilization techniques will be considered at that time. The 50 feet of upstream and downstream channel stabilization improvements are necessary in order to allow the contractor sufficient space to construct the Project and are a worst-case scenario.

Response to Comment I-5.3

The Santa Clara Valley Water District is the agency responsible for maintaining the creek. Through its Stream Maintenance Program, work crews remove sediment, manage vegetation, clear trash and debris, and stabilize banks that have been eroded. This work includes invasive plant removal to improve the ecological habitat. Eucalyptus trees are not listed as invasive species because the California Department of Fish and Wildlife identifies eucalyptus trees as habitat for nesting birds, such as owls and raptors.

Response to Comment I-5.4

Riparian habitat is a biological resource; it is not considered forest land under CEQA. *Forest land* is defined under CEQA as native tree cover of greater than 10 percent that allows for management of timber, aesthetics, fish and wildlife, recreation, and other public benefits (California Public Resources Code Section 12220(g)). The riparian habitat in the study area does not meet this definition of forest land. Section 2.3.1, and Section 3.2.4, *Biological Resources*, of the Draft EIR/EA discuss impacts on California Department of Fish and Wildlife-protected communities, which includes valley foothill riparian habitat. The Draft EIR/EA concluded that the Project would adversely affect and have a significant impact under CEQA on valley foothill riparian habitat.

Mitigation Measure MM-BIO-1 would be required under all build alternatives to reduce this impact to less than significant under CEQA. The project plans submitted for the planning entitlement application include specific types of native riparian species to be planted as part of Mitigation Measure MM-BIO-1, such as Coast live oak and California buckeye. Further details on final landscaping plans will be determined during the permitting and final design phases of the Project in coordination with wildlife agencies.

Response to Comment I-5.5

The comment does not address an issue on the substance of the Draft EIR/EA. The City of Palo Alto continues to coordinate with responsible agencies regarding the monitoring station.

Response to Comment I-5.6

The natural environment policies suggested by the commenter have been added to Table 2.1.1-2.

Response to Comment I-5.7

Please see Response to Comment I-5.4.

From: [Angie Evans](#)
To: [Jeremias Michel](#)
Subject: Newell Road Bridge Replacement
Date: Thursday, June 06, 2019 11:00:09 PM

Hi Michel,

I'd like to comment on this because I use it everyday to get to and from work but I have some questions. How long will each of the construction options take? Will there be additional work connected to fix the left turn onto Woodland?

1

Thanks so much,
Angie

Letter I-6. Angie Evans, 6/6/19

Response to Comment I-6.1

Construction of the bridge is generally expected to begin in 2020 and take approximately a year and a half under all build alternatives. The exact timing of construction start will be dependent on receipt of all required permits. Some construction activities may occur prior to bridge closure or following the re-opening of the bridge; therefore the exact duration of bridge closure within the expected construction period is not yet known. The Project would provide a wider road with better line-of-sight at the intersection of Newell Road and Woodland Avenue. This would improve the intersection, particularly with respect to visibility, for vehicles and bicycles turning left onto Woodland Avenue.

From: [Star-Lack, Sylvia](#)
To: [Jeremias, Michel](#)
Subject: FW: Newell Bridge: One lane new bridge
Date: Monday, June 24, 2019 4:52:29 PM
Attachments: [image001.jpg](#)

Hi Michel,

How would you like me to handle these comments? Can you reply to these folks with a “Thank you for your comments note,” or do you want me to?

Thanks!

-Sylvia



Sylvia Star-Lack | Transportation Manager
 Office of Transportation | City of Palo Alto
 250 Hamilton Avenue | Palo Alto, CA 94301
T: 650.329.2546 | **E:** Sylvia.star-lack@cityofpaloalto.org

Please think of the environment before printing this email – Thank you!

Use Palo Alto 311 to report items you’d like the City to fix!! Download the [app](#) or click [here](#) to make a service request.

From: Janie Farn <janie.farn@gmail.com>
Sent: Monday, June 24, 2019 3:18 PM
To: Eggleston, Brad <Brad.Eggleston@CityofPaloAlto.org>; Star-Lack, Sylvia <Sylvia.Star-Lack@CityofPaloAlto.org>
Cc: Michael Farn <MFarn@fenwick.com>; Jeff & Linda Reese <jeffreeseemd@gmail.com>; Linda Waters <lmwatersmd@gmail.com>; Vanessa Belland <vanessabelland@hotmail.com>; Jim Lewis <JimLewis@aol.com>
Subject: Newell Bridge: One lane new bridge

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Hi Brad and Sylvia,

Thank you for hosting the community meeting on 6/18. I attended the meeting and was surprised the attendance is so low...I think there are a lot more interested neighbors in the community would like to attend, but didn't get any notice. With this neighborhood we have only one voice to express, our choice of bridge is **Alternative One: One lane new bridge!** We want to improve the flood flow but keeping the minimum traffic, and preserve our quiet residential streets.

On 6/18 meeting, I shared the same sentiment as the last speaker on Tuesday night. A wider bridge will change our neighborhood forever, with more traffic cutting into our residential streets and potentially a popular route to divert the traffic on University. Not to mention the high density housing will be developed by EPA Woodland property developer in the near future! Has EPA disclose any future projects in the Woodland/EPA neighborhood? It's inevitable the developer will develop a 900 unit apartments considering the expensive housing in the BayArea. It was brought up in a 2017 community meeting.

City of PA has the duty to preserve our neighborhood and quiet streets. We have invested so much into this neighborhood where we call home! We Do Not want to endure any invasion similar to the parking invasion in 2014 from EPA. Any research and study doesn't prevent any future traffic disaster once a wider bridge has built. Please think hard before you push through a two lane bridge proposal. Is it what we the residence want? We are the one who live here and will endure the consequences that city staff make.

Thank you, and we are counting on you to do a sensible decision!

Janie and Mike Farn
580 Newell Road

**1
cont'd**

Letter I-7. Janie and Mike Farn, 6/24/19

Response to Comment I-7.1

The commenter's concerns about public outreach for the Project are acknowledged. All public hearings and outreach meetings that occurred as part of the Draft EIR/EA process have been noticed in accordance with the City of Palo Alto Municipal Code as well as CEQA Guidelines and NEPA provisions. Please see Master Response 1 in response to comments regarding traffic.

From: [Yitzchok Feldman](#)
To: [Jeremias Michel](#)
Subject: Newell bridge Eruv poles
Date: Wednesday, June 12, 2019 10:01:04 AM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Michel,

I hope this finds you well. I saw that the project to replace the Newell Rd. bridge is moving forward. I remember that we conferred about this before we discussed the re-doing of the Creek itself possibly from Chaucer to the 101. (I assume the two projects are separate.)

Do you have a timetable for the bridge replacement? And do you have an outline of the plan so that I can see what will happen to the Eruv poles in the vicinity?

All the best,

R' Feldman

--

Rabbi Yitzchok Feldman
Cong. Emek Beracha
4102 El Camino Real
(Mail: 3790 El Camino Real -- Box 2015)
Palo Alto, CA 94306
(650) 857-1800/(650) 857-0601 Fax

rabbi@emekberacha.org / www.emekberacha.org

Letter I-8. Rabbi Yitzchok Feldman, 6/12/19

Response to Comment I-8.1

Construction of the bridge is expected to begin in 2020 and take approximately 1.5 years. The plans do not currently show where the eruv poles would be relocated. Avoidance and Minimization Measure AMM-COM-2 states that the contractor will maintain ongoing coordination with the Orthodox Jewish Community during pre-construction and construction of the Project. In the event that the poles supporting the eruv over Newell Road require moving during any period of construction when the bridge structure is in place and accessible to pedestrians, the contractor will install temporary conduits across the creek bank between Friday evening and Saturday night during the construction period (Section 2.1.2.1, *Avoidance, Minimization, and/or Mitigation Measures*) to avoid any potential impact on the local Jewish community's religious practices, beliefs, and traditions.

From: [pwecips](#)
 To: [Jeremias, Michel](#)
 Cc: [Thai, Vicki](#); [pwecips](#); [Hada, Rajeev](#)
 Subject: FW: Newell Bridge Replacement
 Date: Monday, June 24, 2019 9:30:07 AM

Hi Michel,

Please see the email below.

Thank you,
 Andrew

From: Peter Forgie [mailto:pforgie@gmail.com]
Sent: Saturday, June 22, 2019 11:25 AM
To: pwecips <pwecips@CityofPaloAlto.org>
Subject: Newell Bridge Replacement

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

To Whom it May Concern:,

I live on Edgewood Drive, near the corner of Newell. I have lived on Edgewood, in one house or another, since 1991.

The existing bridge works well to slow traffic down, particularly the rather frenzied afternoon commuter traffic. The bridge, although somewhat narrow for 2 cars to pass simultaneously, has a **very low accident or incident rate**, simply because it has the effect of slowing people down. I strongly oppose the proposed massive widening of the bridge.

I am aware and concede that you have to do something to help with flooding issues upstream. But I am strongly opposed to the creation of a two-lane bridge with bike and pedestrian lanes. I believe a single lane bridge for cars, with bike and pedestrian lanes would not only satisfy the flooding concerns, but it would also help keep Newell from becoming a high speed traffic corridor. Please consider the numbers of cars which nightly are attempting to access University Ave from the Crescent Park area. If the bridge is widened as proposed it will cause virtually all of that traffic to come down Newell, causing significantly greater problems on the East Palo Alto side of the bridge.

There are too many residents, many of them children and elderly people, walking in the neighborhood for a huge bridge and a constant flow of traffic to be a good idea. In addition, our neighborhood, which used to be a nice one, suffers from so much degradation in quality of life due to, primarily, all the airplane noise from both jets and little planes going to PA Airport. In addition, housing policies on the other side of the bridge have led to non residents parking all along our street, blocking our driveways,

leaving their trash, etc. .

A huge bridge that virtually invites increased traffic would only exacerbate the decline of the area. Newell would become a freeway and I'm sure most of us nearby would have to move. People already drive too fast and don't stop at the intersection of Newell and Edgewood. How would making the road wider improve this? It would effectively constitute an attractive nuisance.

1
cont'd

Finally, the proposed removal of the tall and old eucalyptus trees alongside Newell is horrifying. Those trees act as nests for the local hawks, and other birds. Removing such ancient spectacular trees is shameful, and unnecessary.

2

Please take the concerns of the Palo Alto neighbors into consideration.

Peter Forgie



Letter I-9. Peter Forgie, 6/22/19

Response to Comment I-9.1

Please see Master Response 1.

Response to Comment I-9.2

Please see Response to Comment I-3.7. Project engineers studied if the design of the build alternatives could be adjusted to preserve the trees in place. It was determined that this is not possible for the trees adjacent to the bridge due to demolition of the bridge and raising the roadway approaches to meet sight distance and safety requirements. The work associated with the Project may compromise the tree roots and thus the structural stability of these trees.



THE LAW OFFICES OF PAUL L. GUMINA, P.C.

560 W. MAIN ST., SUITE 205 ALHAMBRA, CA 91801 TELEPHONE: (866) 894-8863 FACSIMILE: (866) 894-8867 E-MAIL: PAUL@WESTCOASTBIZLAW.COM

PAUL L. GUMINA, ESQ. ROBERT ARTHUR, ESQ. OF COUNSEL

OFFICES IN SANJOSE AND LOS ANGELES COUNTY, CALIFORNIA

Via U.S. Mail and Email

July 30, 2019

City of Palo Alto Att.: Michel Jeremias 250 Hamilton Ave, 6th Fl Palo Alto, CA 94301 Email: Michel.Jeremias@cityofpaloalto.org

Re: Newell Road Bridge Replacement Project Draft Environmental Impact Report/Environmental Assessment

District 4- SCL/SM-Newell Road BRLS 5100(017) Comments submitted by Shen Yang, 1499 Edgewood Drive, Palo Alto CA 94301

Dear Mr. Jeremias:

My office represents Yang Shen, owner of a single family home located at 1499 Edgewood Drive, Palo Alto, CA 94301 ("the Shen Property"). The Shen family lives in the home. For the reasons discussed below, the Draft EIR fails to adequately address the severe, negative environmental and health impacts that will be imposed, directly, on the Shen Property and its residents.

As will be discussed below, the Shen Property is located in a unique position with respect to the project, and my clients will suffer the greatest negative environmental and health impacts during the construction phases because the City of Palo Alto and CalTrans propose to stage construction activities within about 30 to 200 feet from their home. The Shen Property is immediately adjacent to the intersection of Newell Road and Woodland Avenue, where the bridge will be torn down, flood control work on the banks of the creek will occur, and the new, two-lane bridge will be rebuilt. San Francisquito Creek runs along the northern property line.

Attached hereto are the following exhibits:

- Exhibit A: Letter dated May 2, 2019 from Michael Jeremias, Project Manager, City of Palo Alto Public Works Department to Yang Shen
Exhibit B: Tract Map - Crescent Park, Page 2 (Block 121 Lot 14)
Exhibit C: Assessor's Parcel Map, Crescent Park, Page 2 (Book 3, Page 11, Parcel 20)
Exhibit D: Site Plan, The Shen Property
Exhibit E: Detail from Site Plan, The Shen Property
Exhibit F: Encroachment Permit in favor of The Shen Property, dated 3-30-1998
Exhibit G: Aerial Photo of the Shen Property from Google Earth

Two aspects of the Shen Property's connection with the project site are also unique. First, the Shen Property is subject to a flood control easement adjacent to San Francisquito Creek along its northern boundary line. (Exhibit C) Second, the northeastern portion of the Shen Property is

Michel Jeremias
July 30, 2019
Page Two

actually not owned by Mr. Shen, but is owned by the City of Palo Alto. In May 1998, The City of Palo Alto granted a written Encroachment Permit for an indefinite term to the prior owner, and that permit has been in effect as to each subsequent owner of the Shen Property. **(Exhibit F)** The Shen Property occupies and encroaches on the City's property as depicted in the site plan for the Shen Property **(Exhibit D)** and the detail of the site plan showing the City-owned portion adjacent to the Shen Property **(Exhibit E)**. The purpose of the encroachment was to permit the former owner to build a fence along the eastern-most side of the City's boundary line adjacent to the sidewalk along the west edge of Newell Road. An aerial photo showing the current condition of back yard of the Shen Property along the encroachment is attached hereto as **Exhibit G**. There are several very tall trees growing within the encroachment area, and the encroachment area has been professionally landscaped by the prior and current owners of the Shen Property.

1
cont'd

The encroachment permit is subject to revocation by the City on 30-day's notice, at the City's sole discretion. After the encroachment permit was issued, since 1998, the owners of the Shen Property constructed the current six-foot tall wooden fence along the west edge of the City's property line, and now this fence separates the sidewalk and street along Newell Road from the Shen Property and provides privacy and relief from street noise. The City has threatened to cancel the Encroachment Permit unless Mr. Shen agrees to allow the City to enter the encroachment area and use it during the project. **(Exhibit A)**

In a meeting with the City of Palo Alto planning staff that took place on May 13, 2019 at the Shen Property, Mr. Shen and I were informed that the City and CalTrans planned to re-occupy the encroached area for use as a staging area for the project and to perform the following work: 1) remove the existing boundary-line fences that were installed pursuant to the 1998 encroachment permit; 2) build a temporary fence along the actual western boundary line of the Shen Property; 3) cut down at least three very tall eucalyptus trees and remove all landscaping that has been professionally maintained for many years within the encroachment area; 4) position unspecified construction equipment, materials and supplies in a staging area that will comprise not only the encroached area, but also the area behind the Shen Property adjacent to both the northern and southern banks of San Francisquito Creek. The planning staff members did not describe what equipment and materials would be stored where, or what daily activities would take place in the staging area. Generally, the planning staff mentioned that delivery trucks would be unloading materials and construction equipment into the staging area, and workers would perform work within the staging area such as cutting stone and concrete, and mixing concrete and/or road paving materials. The planning staff did not mention whether mobile generators would be running, or whether asphalt paving materials would be stored, loaded, and/or mixed in the staging areas. The planning staff did not indicate with any specificity how often delivery trucks would be unloading materials and equipment in the staging area; on which days and during which hours would deliveries be made; in what types of vehicles; during what hours; what equipment would be staged and stored in the staging area; and what work would be performed using any particular equipment and materials in the staging area.

2

Based on prior experience, the Shen family can expect that the delivery trucks picking up and dropping off in the staging area adjacent to their home will generate an unknown but significant amount of noise, dust, soot and exhaust will be a daily occurrence during an unknown number of hours per day. This alone presents a serious and unmitigated health hazard to the occupants of the Shen Property. The same is true with the noise and exhaust of fork lifts and other material

3

Michel Jeremias
July 30, 2019
Page Three

handling equipment that are expected to operate in the staging areas. It is unknown whether the City and CalTrans will operate portable generators in the staging area, and during which hours. Such generators can be anticipated to create significant noise, soot and exhaust. If concrete will be mixed in the staging area, the concrete mixers will generate a significant amount of noise, concrete dust, soot and exhaust. If asphalt or asphalt compounds are used in the project, the Shen family can expect that trucks carrying the asphalt mixes will deliver to the paving machines in or adjacent to the staging areas. If concrete saws will be used in the staging area, great noise, particulate concrete dust, exhaust and soot can be expected to impact the Shen Property. The process of delivering hot asphalt mixes to paving equipment in or near the staging area adjacent to the Shen Property can be expected to create substantial noxious odors, noise, exhaust and soot. The City staff did not mention whether portable toilets for workers would be set up and used in the staging area, but if so, the noxious odors and possible sewage spills can be expected.

3
cont'd

It is well known that thefts from unguarded construction sites are commonplace. The City has not advised what security will be required to prevent the staging area from becoming an attractive nuisance to children, and a target for thieves. Although the DEIR mentions that construction lighting will not be needed in the staging area because CalTrans and the City expect to do all work during daytime hours, the staging area will need to be lighted 24 hours a day to provide security and deter theft. The light would be expected to disturb the Shen family and interfere with their ability to get a good night's sleep. The City and CalTrans should anticipate that the staging area should be secured 24 hours a day by security guards as well. The project should also mitigate the possibility that trespassers could gain access to the staging area, and simply hop the fence to enter the Shen Property without being observed from the street.

4

The DEIR failed to address or consider any of these negative environmental and health effects as to the staging areas proposed to exist immediately adjacent to the Shen Property. No meaningful mitigation steps relevant to these specific, foreseeable negative impacts have been proposed in the DEIR. For this reason, the City should reject this DEIR and require revisions and effective mitigation steps to address the concerns that I have outlined, above. Specifically, the DEIR, on Page S-5, Section S.4.5.1 [Construction Staging Areas] admits that the DEIR failed to adequately address the serious, foreseeable environmental and health impacts caused by activities in the proposed staging areas on the persons living immediately adjacent to them, as follows:

"The final location of staging/laydown areas would be determined during the design phase and will require additional analysis if there are any changes that result in impacts that are not described in this Draft EIR/EA or addressed by standard measures included in the project description."

5

This statement admits that the DEIR failed to analyze, consider, or propose mitigation to the foreseeable negative environmental and health impacts, even though the City planning staff I met on May 13th were very certain of the location of the staging area adjacent to the Shen Property, and how they planned to use the staging area. They stated, as a matter of fact, the City's intention to re-occupy the encroachment area next to the Shen property, and described in general terms what would occur there over an approximately two-year period. Given this certainty, the failure to address these anticipated negative impacts in the DEIR is inexcusable, and the DEIR should be rejected in its current form.

Michel Jeremias
July 30, 2019
Page Four

Keep in mind that the construction and related activity in the staging area will occur between 30 feet to 200 feet from my client's home, and last for approximately two years.

The burden created by the expected activity will, without question,

have a negative impact on the environment next to my client's home, and on the health and safety of his family. That fact is not mentioned or analyzed whatsoever in the DEIR. The DEIR should have addressed all negative environmental and health impacts that can be expected to be suffered by residents living within 200 feet from the construction staging areas, including the residents of the Shen Property. The discussion in DEIR, Section 2.6.6 [Air Quality] fails to address, specifically, the kind of activities that are anticipated to generate significant air pollution and contamination from airborne exhaust, dust, concrete dust, and soot that will emanate from the staging area immediately adjacent to the Shen Property, within 30 to 200 feet of the home, for a two year period.

5
cont'd

My clients have no objection to the flood control aspects of the project, and it is apparent that removing the Newell Road bridge over San Francisquito Creek will be beneficial. The bridge should come down, and if that is the only work approved, the time during which the staging areas will be needed is a matter of weeks, not years. Shortening the time that construction will take place from 2 years to several weeks can help mitigate the negative impacts of activities within the staging areas themselves.

The only dispute my clients have is whether the bridge should be rebuilt, and whether it is in the best interest of the neighborhood and its residents to permanently close Newell Road to through traffic south of Woodland Avenue. My client further objects to the adequacy of the DEIR as to its goal to provide traffic relief by installing a new bridge on Newell Road to cross the San Francisquito Creek. The justification for the project, from the point of view of CalTrans, is to provide relief to drivers seeking to use neighborhood streets to bypass traffic congestion on the main roads (University Avenue and Embarcadero Road) leading to Highway 101. The City staff mentioned to me during our May 13th meeting that GPS services such as Waze, Google Maps, Lyft and Uber have been directing drivers to use Newell Road to bypass congestion en-route to Highway 101. However, overburdening local streets that were never intended to be thoroughfares or carry cross-town traffic is a poor, ineffective solution to a problem that should be addressed by other, more creative means that are less burdensome to neighbors, including the Shen family.

6

Newell Road will be closed to through traffic for about two years, as the bridge is torn down and re-built. Drivers, the City, and CalTrans will need to find better alternatives during the time Newell Road is closed to through traffic before construction begins. Those alternatives should be permanent ones, which would mitigate, entirely, the heavy traffic burden that CalTrans and the City seeks to impose on the residents immediately adjacent to Newell Road south of Woodland Avenue once the bridge is rebuilt.

In conclusion, the DEIR failed, almost completely, to follow the standards set by the California Supreme Court in the case, Sierra Club v. County of Fresno (2018) 6 Cal.5th 502. The California Supreme Court held that courts reviewing claims that an EIR inadequately discusses environmental impacts must determine whether the EIR "includes sufficient detail" to support


7

Michel Jeremias
July 30, 2019
Page Five

informed decision-making and public participation. The Supreme Court also held an EIR must make “a reasonable effort to substantively connect a project’s air quality impacts to likely health consequences.” The Sierra Club decision makes clear that EIRs must contain clear and detailed discussion of impact significance determinations, and in particular must explain the nature and magnitude of significant impacts. With respect to the effects of a project on air quality and

health, the Supreme Court held that the EIR at issue failed to adequately inform the public about the health effects of the project’s significant air pollution impacts. The Court noted that the EIR determined the project’s emissions of several pollutants would be a significant and unavoidable environmental impact, and that the EIR also contained a discussion, “general in nature,” about the health effects associated with various project-related pollutants. However, because the EIR’s discussion of health effects failed to “indicate the concentrations at which such pollutants would trigger the identified symptoms,” the Court found the EIR’s discussion inadequate, and held that “a sufficient discussion of impacts requires not merely a determination of whether an impact is significant, but some effort to explain the nature and magnitude of the impact.” The Court found the EIR’s discussion omitted material necessary for informed decision-making and to enable the public to understand and meaningfully consider the impacts of the project. The DEIR in this case would not survive a challenge under the holding of the Sierra Club v. County of Fresno case. Therefore, the DEIR must be rejected.

7
cont'd



Paul L. Gumina

Exhibit A



CITY OF
**PALO
ALTO**

PUBLIC WORKS
Engineering Services Division

250 Hamilton Avenue, 6th Floor
Palo Alto, CA 94301
650.329.2295

May 2, 2019

Shen Yang
1499 Edgewood Drive
Palo Alto, CA 94301

Re: 1499 Edgewood Drive - Newell Road Bridge Replacement Project

Dear Shen

I'm sorry you and your daughter were not able to attend our meeting on Monday, April 22, 2019, as we had arranged. The purpose of the meeting was to discuss the upcoming release of the Draft Environmental Impact Report for the Newell Road bridge replacement project and impacts to the adjacent properties. We anticipate releasing the DEIR at the end of May 2019. Your property at 1499 Edgewood Drive, is adjacent to where the work will occur. We met with the previous owner several years ago to discuss the bridge project. One of the impacts to your parcel, is potentially revoking Encroachment Permit E-2281, see attachment. This encroachment permit is for the wooden fence along Newell Road, was issued by Palo Alto in May 1998 to the previous owner. The fence was built within public road right-of-way.

For construction purpose we may have to remove the existing fence and built a new fence at the property line. Prior to construction we will be asking you for a temporary construction access easement to access private property behind the fence. We will also need to inspect the current backyard to determine the existing conditions. We will replace any private landscape that is inadvertently damaged as part of construction, in kind. We are open to receiving your comments regarding the project and the work within or near your private property.

Please give me a call to schedule another meeting with you at your convenience

Sincerely,

Michel Jeremias, PE
Project Manager
Engineering Services Division

cc: shenyan6191@126.com
Holly Boyd
File

Assistant Director of Public Works
PE-12011

Exhibit B

CRESCENT PARK

MAP NO. 2 CITY OF PALO ALTO

SANTA CLARA COUNTY, CALIFORNIA

Sheet 2 of 2 sheets

Fiber Submission

WOODLAND PLACE
COOLEY AVE.

SAN MATEO COUNTY
COUNTY BOUNDARY

WOODLAND AVE.
Creek
SAN FRANCISCO

NEWELL AVE.
GREEN PARTITION

CITY LIMITS
UNSUBDIVIDED PROPERTY OF SHAREHOLDERS
14, 14.25
WOODLAND PLACE

TRAC. NO. 121447
SHT. 1 OF 1 SHTS.
FILE NO. 27-0572-001

Note: All strips of land labeled "unsubdivided" have been subdivided by Res. 1982 dated Feb. 24, 1982 and recorded Apr. 5, 1982 in Book 2, 209 at p. 11.

PARK BLOCK
DRIVE

SOUTHWOOD
CRESCENT
CENTER ST.

HAMILTON AVENUE
DANA STREET
PITMAN PARTITION

PALO ALTO CITY SCHOOL DISTRICT

Scale: 100 ft. to 1 in.

Legend:
- - - - - are original project lines
- - - - - are street and property lines as shown, established.
- - - - - are original project boundaries.
- - - - - are original project boundaries.
- - - - - are original project boundaries.
- - - - - are original project boundaries.

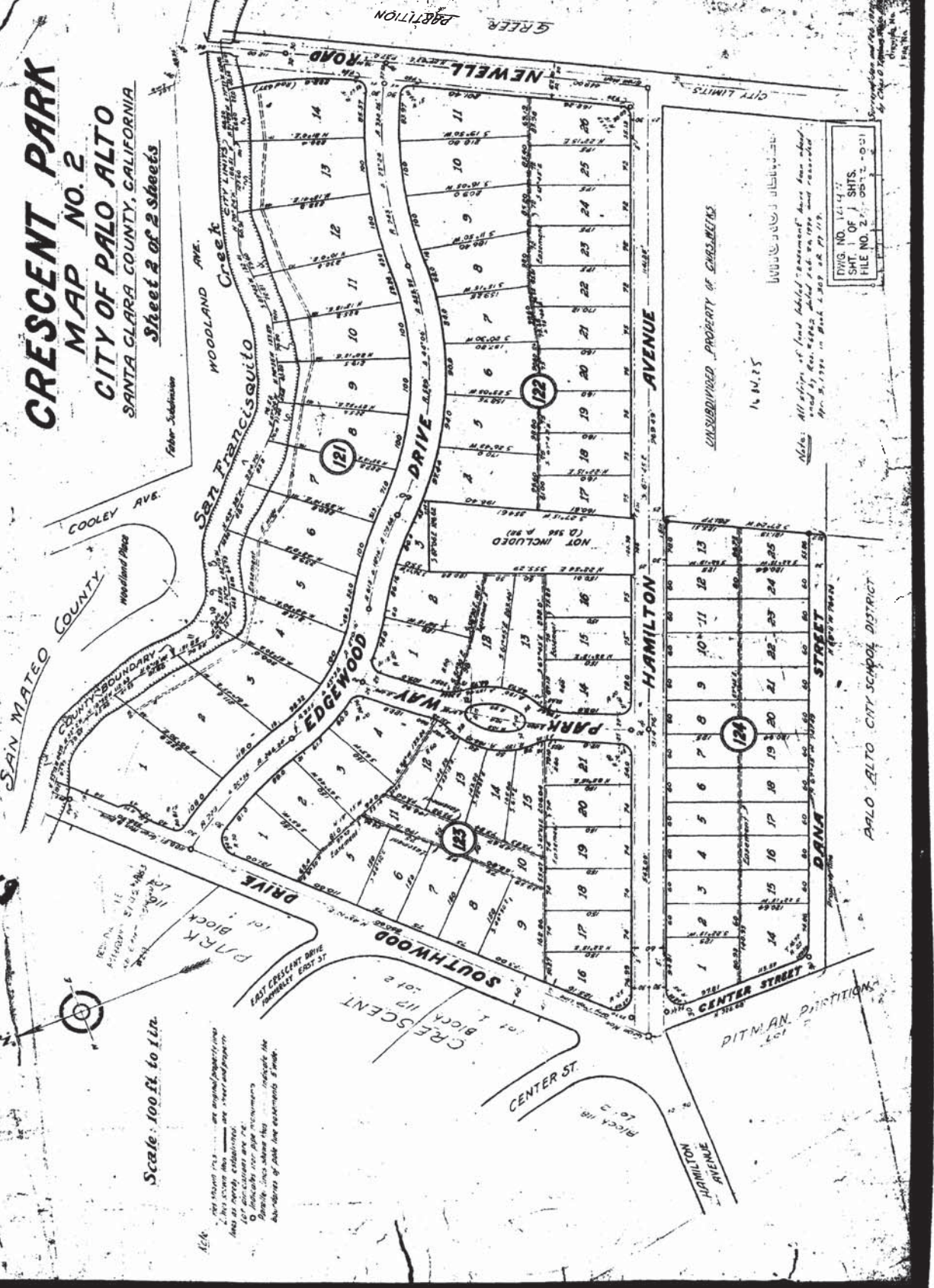
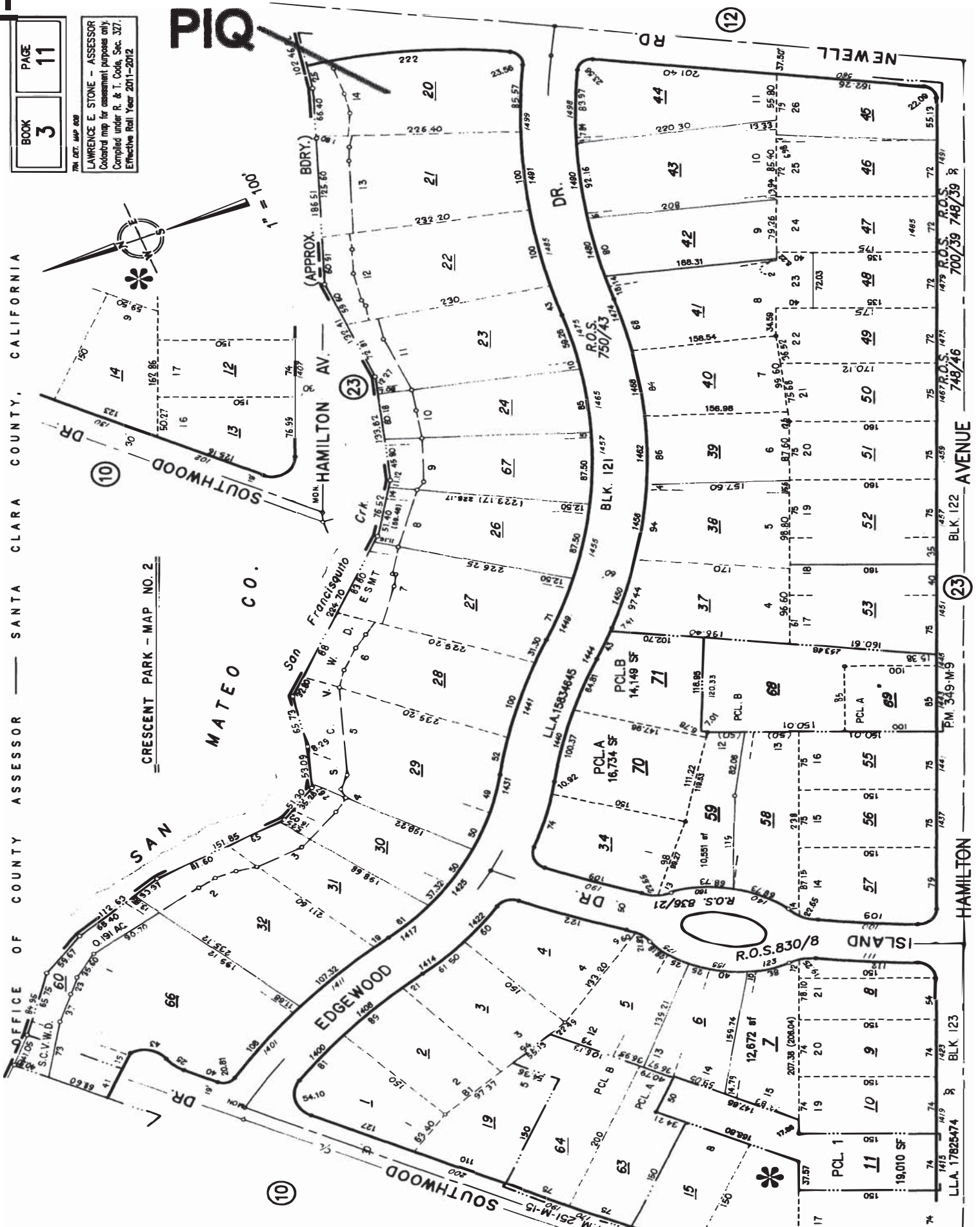


Exhibit C

LAWRENCE E. STONE - ASSESSOR
Ordinary map for assessment purposes only
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2011-2012

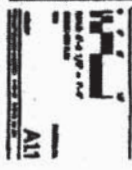
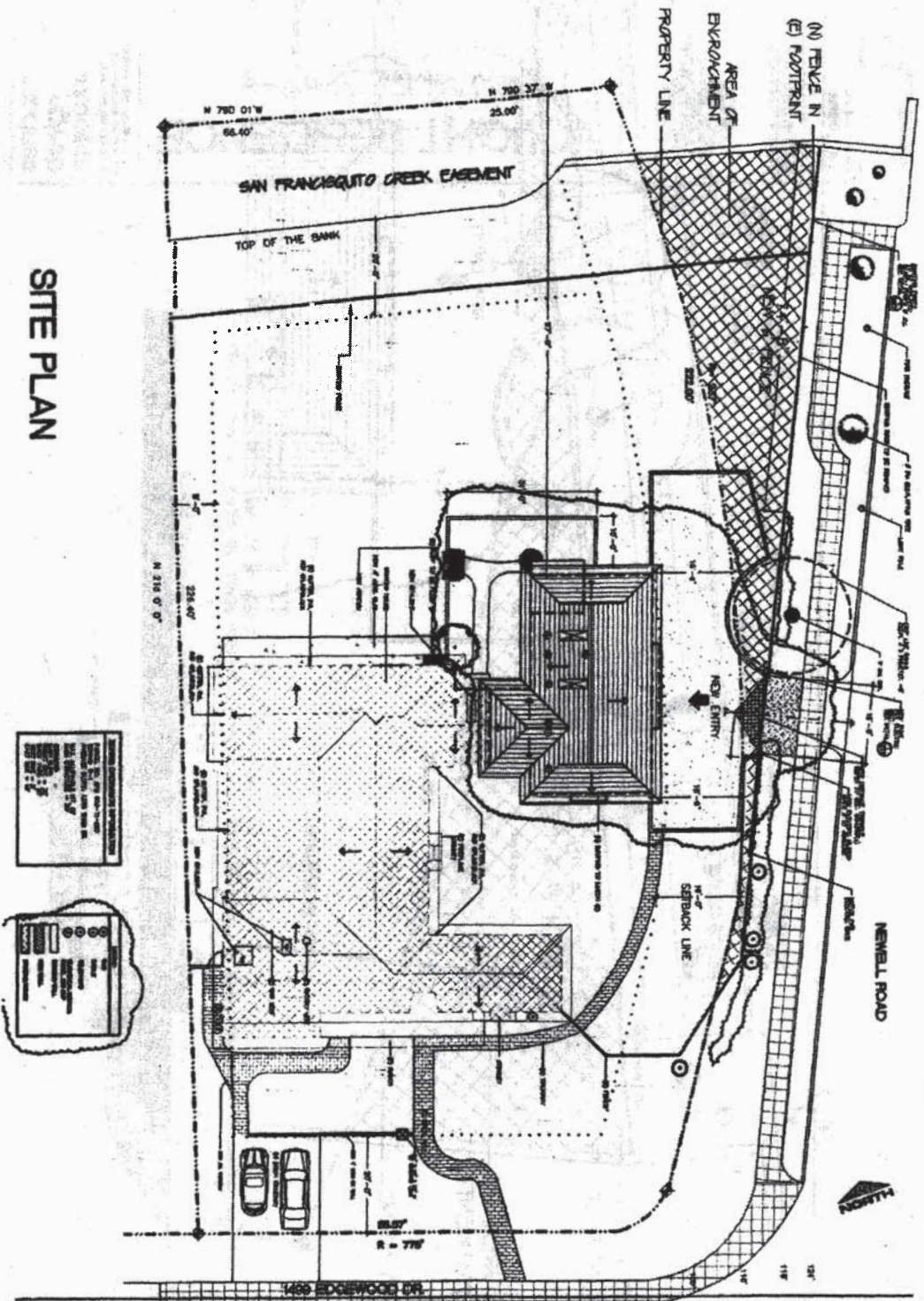
PIQ



This map/plat is being furnished as an aid in locating the herein described Land in relation to adjoining streets, natural boundaries and other land. Except to the extent a policy of title insurance is expressly modified by endorsement, if any, the Company does not insure dimensions, distances or acreage shown thereon.

Exhibit D

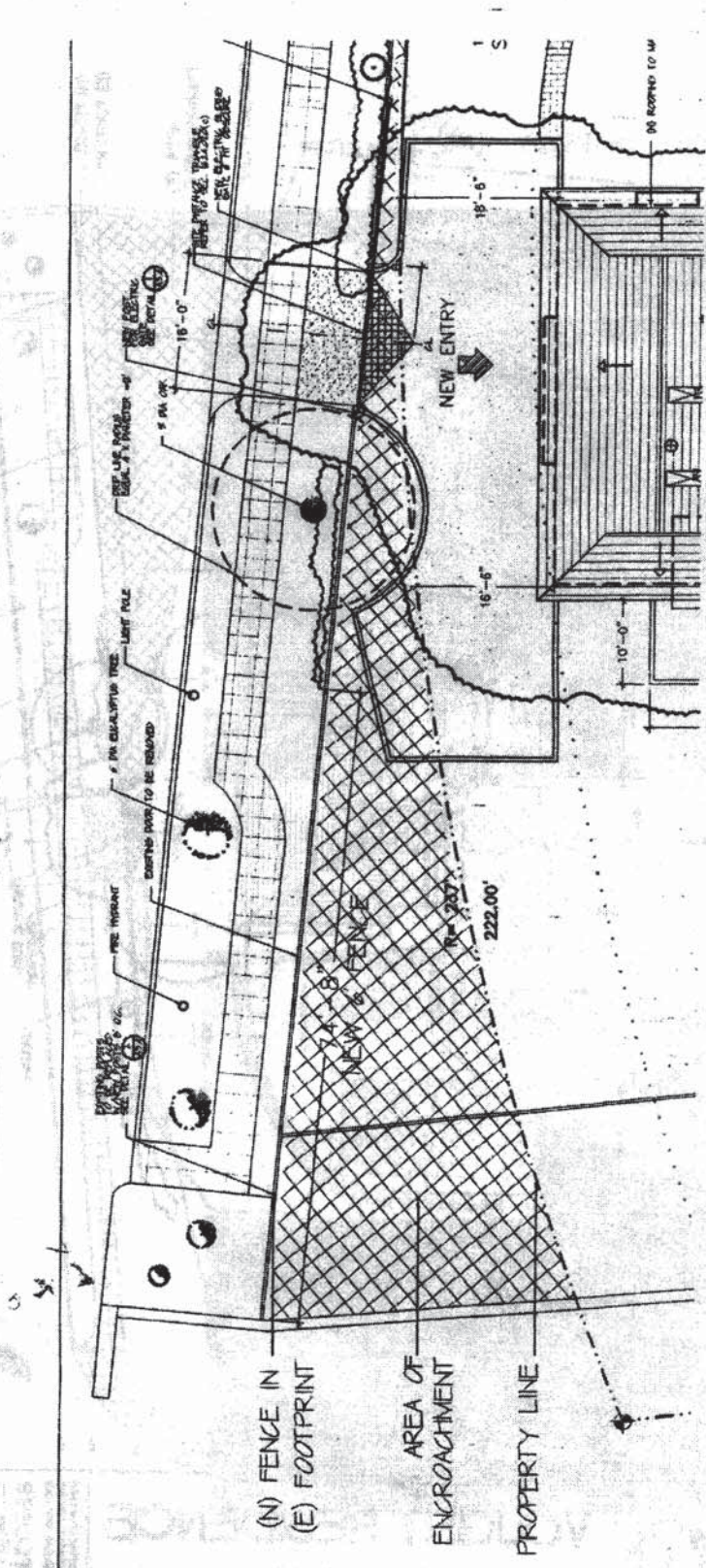
SITE PLAN



VOUGHT RESIDENCE
SITE PLAN

sanborn
design
assoc inc

Exhibit E



(N) FENCE IN
(E) FOOTPRINT
AREA OF
ENCROACHMENT
PROPERTY LINE

Exhibit F



[Signature]
City of Palo Alto

Public Works Engineering
Phone: (415)329-2151 FAX: (415)329-2299
PW Inspection Phone: (415)496-6929

ENCROACHMENT PERMIT & TEMPORARY LEASE

- ENCROACHMENT PERMIT (Right-of-way or public utilities easement encroachments)
- TEMPORARY LEASE (Encroachments on City-owned property)

PERMITTEE NAME AND ADDRESS: LOCATION OF ENCROACHMENT/LEASE: DURATION:

Name: ANDREW VOUGHT Temporary (Days)
1499 EDGEWOOD DR 1499 EDGEWOOD DR Indefinite
CA 94303 CA 94303 START DATE: 5/98

Phone: 415 1328-8640

ENCROACHMENT PERMIT TYPE:

Residential

- Standard: Architectural, structural, decks, spas, etc. in a Public Utilities Easement (PUE) or City right-of-way (ROW).
- Minor: Irrigation lines, small storm drain lines, curb outlets, etc. in a PUE or ROW (no insurance certificate is required).
- Fence: Placement of a fence in a PUE or ROW (no insurance certificate is required)

Non-Residential

- Standard: Awnings, tables & chairs on sidewalk, sidewalk closures, pedestrian protection utility structures, structural or architectural features, private structures, other long term encroachments, etc.
- Short-Term: Sidewalk/street/alley encroachments, unloading of materials, etc. lasting 5 or less days.
- Dumpster: Placement of dumpster within downtown districts (additional fee for parking space rental, if applicable).

Pursuant to the provisions of Sec 12.12 & 2.30.040* of the Palo Alto Municipal Code, permission is hereby requested to construct and maintain an encroachment, or to use City-owned property, at the above location and in the manner described below:

NATURE OF ENCROACHMENT OR USE: BUILDING OF A NEW FENCE ON THE EXISTING FOOTPRINT.

REASON FOR ENCROACHMENT/LEASE: THE FENCE IS EXISTING AND ENDS INTO AN ODD CORNER LOT.

—PW STAFF USE ONLY—

APPLICATION DATE: 3/19/98

FEES:

Fixed \$ 70.00

By Value \$

Waived

Payment Date: 3/19/98

Receipt #: 7502

INS CERT #: I-N/R

REVIEWED AND RECOMMENDED FOR APPROVAL BY:

Transportation

ET Bldg Inspection

PD Planning

Real Estate

Light & Power

KE WGW

JP PUE

Permittee shall, at Permittee expense, remove said encroachment or any improvements constructed by tenant and this permit/lease shall terminate within thirty (30) days after written notice from the City Engineer/Real Property Manager*. Permittee agrees that in the event of failure to remove such encroachment/improvement* within the time specified, the same may be removed, and the City's property or easement restored, by the City, and the cost thereof made a lien upon/against* Permittee/Lessee, pursuant to the provisions of Sec 12.12 of the Palo Alto Municipal Code.

Permittee, in consideration of the issuance of this permit/lease, agrees to maintain required evidence of liability insurance, for the life of the encroachment, that indemnifies and holds harmless the City of Palo Alto, its officers, agents, and employees from any liability of any nature whatsoever caused in whole or in part by reason of or in any manner connected with any and all operations, structures or conditions authorized or permitted by this permit/lease. The Permittee agrees and understands that this permit vests no estate.

Permittee shall be responsible for obtaining any and all permits which may be required by an Agency having jurisdiction over the property and/or proposed use. Notwithstanding the above, nothing contained herein shall obligate City to issue any permits or approvals required for construction.

Permittee hereby accepts this permit/lease* subject to all conditions set forth herein, and the attached Special Provisions and conditions, and agrees that all of said conditions and provisions shall be binding on Permittee, co-owners, heirs, assigns, transferees and successors in interest of every nature. This permit/lease* shall expire if work on the encroachment described within does not commence within sixty (60) days of the date of approval, or by the anticipated start date as indicated above, whichever is later.

Indietro 3/24/98 [Signature] 3/30/98

Permittee Authorized Representative Date APPROVED BY Date

PUE/EC 1-3/19/98

Permit No. E-2281

Reason: Dove of Fence

Date: 10/18/98

Closed by: [Signature]

File Copy



City of Palo Alto

Public Works Engineering
Phone: (415)329-2151 FAX: (415)329-2299
PW Inspection Phone: (415)496-6929

ENCROACHMENT PERMIT
& TEMPORARY LEASE

- ENCROACHMENT PERMIT (Right-of-way or public utilities easement encroachments)
- TEMPORARY LEASE (Encroachments on City-owned property)

Permit No. E-2281

PERMITTEE NAME AND ADDRESS: ANDREW VOUGHT LOCATION OF ENCROACHMENT/LEASE: 1499 EDGEWOOD DR DURATION: Temporary (Days)
1499 EDGEWOOD DR 1499 EDGEWOOD DR Indefinite
CA 94303 CA 94303 START DATE: 5/98
 Phone: 415 / 328 - 8640

ENCROACHMENT PERMIT TYPE:

Residential

- Standard: Architectural, structural, decks, spas, etc. in a Public Utilities Easement (PUE) or City right-of-way (ROW).
- Minor: Irrigation lines, small storm drain lines, curb outlets, etc. in a PUE or ROW (no insurance certificate is required).
- Fence: Placement of a fence in a PUE or ROW (no insurance certificate is required)

Non-Residential

- Standard: Awnings, tables & chairs on sidewalk, sidewalk closures, pedestrian protection utility structures, structural or architectural features, private structures, other long term encroachments, etc.
- Short-Term: Sidewalk/street/alley encroachments, unloading of materials, etc. lasting 5 or less days.
- Dumpster: Placement of dumpster within downtown districts (additional fee for parking space rental, if applicable).

Pursuant to the provisions of Sec 12.12 & 2.30.040* of the Palo Alto Municipal Code, permission is hereby requested to construct and maintain an encroachment, or to use City-owned property, at the above location and in the manner described below:

NATURE OF ENCROACHMENT OR USE: BUILDING OF A NEW FENCE ON THE EXISTING FOOTPRINT.

REASON FOR ENCROACHMENT/LEASE: THE FENCE IS EXISTING AND ENDS INTO AN ODD CORNER LOT.

-PW STAFF USE ONLY-

APPLICATION DATE: 3/19/98

FEES:

Fixed \$ 70.00

By Value \$

Waived

Payment Date: 3/19/98

Receipt #: 7692

INS CERT # 1: N/R

REVIEWED AND RECOMMENDED FOR APPROVAL BY:

Transportation
 Bldg Inspection
 Planning
 Real Estate
 Light & Power
 RWGW
 JRPUE

Permittee shall, at Permittee expense, remove said encroachment or any improvements constructed by tenant and this permit/lease shall terminate within thirty (30) days after written notice from the City Engineer/Real Property Manager*. Permittee agrees that in the event of failure to remove such encroachment/improvement* within the time specified, the same may be removed, and the City's property or easement restored, by the City, and the cost thereof made a lien upon/against* Permittee/Lessee, pursuant to the provisions of Sec 12.12 of the Palo Alto Municipal Code.

Permittee, in consideration of the issuance of this permit/lease, agrees to maintain required evidence of liability insurance, for the life of the encroachment, that indemnifies and holds harmless the City of Palo Alto, its officers, agents, and employees from any liability of any nature whatsoever caused in whole or in part by reason of or in any manner connected with any and all operations, structures or conditions authorized or permitted by this permit/lease. The Permittee agrees and understands that this permit vests no estate.

Permittee shall be responsible for obtaining any and all permits which may be required by an Agency having jurisdiction over the property and/or proposed use. Notwithstanding the above, nothing contained herein shall obligate City to issue any permits or approvals required for construction.

Permittee hereby accepts this permit/lease* subject to all conditions set forth herein, and the attached Special Provisions and conditions, and agrees that all of said conditions and provisions shall be binding on Permittee, co-owners, heirs, assigns, transferees and successors in interest of every nature. This permit/lease* shall expire if work on the encroachment described within does not commence within sixty (60) days of the date of approval, or by the anticipated start date as indicated above, whichever is later.

X Indec Teto Vought 2.24.98
Permittee Authorized Representative Date

J.G. Carl 3/30/98
APPROVED BY Date

PWE/led - 3/19/98

Reason

Date

Closed by

---PW Staff Use Only---

SPECIAL PROVISIONS

WR

1. Permittee shall provide the City evidence of Personal Injury and Property Damage insurance in a form acceptable to the CPA Risk Manager, in the minimum amounts of \$500,000 each for personal injury and property damage or else as indicated below. Said insurance shall name the City of Palo Alto, its officers and employees as an additional insured and shall be primary insurance with any City insurance being excess only. Said insurance shall be maintained so long as this permit/lease* remains in force, and evidence of said current insurance and subsequent renewals shall be submitted to the City of Palo Alto, Public Works Engineering Division.

___ ALTERNATE COVERAGE REQUIRED: \$ _____,000 personal injury and \$ _____,000 property damage

- 2. Encroachment, construction or use shall not extend beyond the area identified and specified as part of this permit/lease.
- 3. Encroachment shall not restrict visibility to any traffic control devices or signs.
- 4. No encroachment is permitted in exclusive bike lanes (where parking is not permitted); bus stops, or "no parking zones" unless specifically authorized within this permit.
- 5. Encroachment shall not block or cover access to any utility pole, manhole, vault, cleanout, valve, junction or meter box.
- 6. Permittee shall maintain encroaching or constructed facility and/or the property in a good and safe condition. Construction shall be in conformance with plans approved by the City.
- 7. Whenever construction, reconstruction or maintenance work to City facilities requires relocation or modification of the encroachment, construction or use, such relocation or modification work shall be done by Permittee at Permittee's sole expense.
- 8. Permittee shall assure adequate visibility of encroachment, construction or use during daytime and nighttime hours.
- 9. Permittee shall conform to all requirements of the Palo Alto Traffic Control Manual, as applicable.
- 10. The Permittee is required to maintain any underground facilities listed with Underground Service Alert (USA). When requested, the Permittee is responsible to mark out appropriately all underground facilities described in this permit.
- 11. Any public and/or private improvements damaged by the encroaching activities must be repaired or replaced in-kind to the satisfaction of the improvement owner and at Permittee expense.
- 12. All dumpsters used in this permitted encroachment are required to be ordered through the Palo Alto Sanitation Company who has an exclusive contract in Palo Alto for waste disposal services.
- 13. In addition to this permit, Permittee shall obtain the following permits:
 - ___ "Permit for Construction in the Public Street" also from Public Works Engineering (associated S-Permit # S-_____).
 - ___ Parking Permit from CPA Transportation Division.
 - ___ Fence Permit from CPA Building Inspection Division.
 - ___ Building Permit from CPA Building Inspection Division.
 - ___ Other special permit: _____
- 14. See Attachment *A* for additional permit conditions.
- 15. OTHER: _____

**CITY OF PALO ALTO
RECEIVED
MAR 19 1998
PUBLIC WORKS ENGINEERING**

City of Palo Alto
Public Works Engineering

Permit E- 2281

Attachment A
Page 1 of 1

GENERAL PERMIT CONDITIONS

The following conditions are made a part of the Encroachment Permit/Temporary Lease, as applicable:

I. GENERAL

1. Call Public Works Inspector* at least 24 hours (one working day) in advance of starting encroachment activity.
2. Permittee is responsible for obtaining any other permits required by the City of Palo Alto or any other governmental or quasi-governmental agency.

NOTE: Permittee must obtain parking permits from City's Transportation Division when any activities will be conducted in a manner precluding public access to any designated parking space in time-limited revenue or California Avenue Parking Assessment Districts, or time-limited parking areas in the Stanford Hospital area.

3. Permittee shall maintain liability insurance meeting City requirements for the lifetime of the encroaching activities or structures. The Permittee shall provide Public Works Engineering with annual insurance certificate renewals**. Failure to keep a current insurance certificate on file will result in the revocation of this permit/lease.
4. If box to left is checked, an approved City of Palo Alto Permit for Construction in a Public Street is necessary prior to the commencement of the work described in this permit.

II. DURING ACTIVITIES

1. Construction activities and standards during the installation of this encroachment shall conform to requirements established in the associated Permit for Construction in a Public Street (if applicable).
2. Any existing improvements or utilities damaged during the encroachment shall be restored in kind or replaced to the satisfaction of the City of Palo Alto Public Works Inspector* at Permittee expense.

III. AT COMPLETION OF ACTIVITIES

1. Permittee is responsible for repair, restoration, or replacement of any and all property damaged as a result of this encroachment. Such repair, restoration or replacement shall be in kind or if City-owned property, in accordance with the City of Palo Alto Standard Specifications and/or any other requirements imposed by this permit. Permittee to contact the City of Palo Alto Public Works Inspector* 24 hours prior to commencing restoration activities. It may be necessary for permittee to obtain new or additional permits for restoration work.
2. Permittee shall obtain an inspection by City of Palo Alto Public Works Inspector* for closure of this permit. Note: Encroachment removal activities may require the permittee to obtain additional City permits.

IV. OTHER CONDITIONS AND ADVISORIES

1. If box to left is checked, the Permittee shall, no later than date below, provide CPA Public Works Engineering Department** with as-built drawings showing in reasonable detail the configuration of any installation performed and showing location of the installation to scale and dimensioned to show location from existing features such as curbs, corners, property lines, etc. Failure to provide satisfactory as-builts may cause revocation of this Permit/Lease and will encumber approval of future permits by the Owner.

Required Submission Date: _____

*Public Works Inspector (415)496-6929

**Refer to above Encroachment Permit/Temporary Lease number on submitted document.

**sanborn
designs
incorporated**

CITY PALO ALTO
RECEIVED

MAR 18 1998

PUBLIC WORKS ENGINEERING

To,
The Public Works,
Palo Alto City Department,
Palo Alto.

Subj: Regarding the fence encroachment at 1499, Edgewood Dr. Palo Alto, Ca.

Dear Sir,

Enclosed is a set of drawings which show the property line, the fence and the enclosed encroached area. We would like to replace a part of the (E) fence with a (N) fence in the existing footprint. One of the conditions of the fence variance approval was getting the encroachment permit and hence this submittal. We are not changing the existing conditions with regards to the encroached area.

Our client's property is bounded by a creek on the rear and heavy traffic pattern on the side. The existing fence currently encloses a part of the city land. There is a high potential of this area turning into a garbage area if this area is not fenced off by the owners of this property.

Also, a new 6' high fence will allow the owners to enjoy the enclosed view and prevent ~~unreasonable property loss and unnecessary hardship~~. The fence will keep the property secure and private.


The new fence will be built on the footprint of the existing fence. Hence, it will not be detrimental or injurious to property or improvements to the public health, safety, general welfare or convenience.

Only a part of the existing fence will be replaced with a new fence since the rest of the fence is covered with plants and trees.

The new gate will be constructed on the existing posts. The fence area within the drip area of the oak tree will not be touched.

Thank you

Reena Mehta

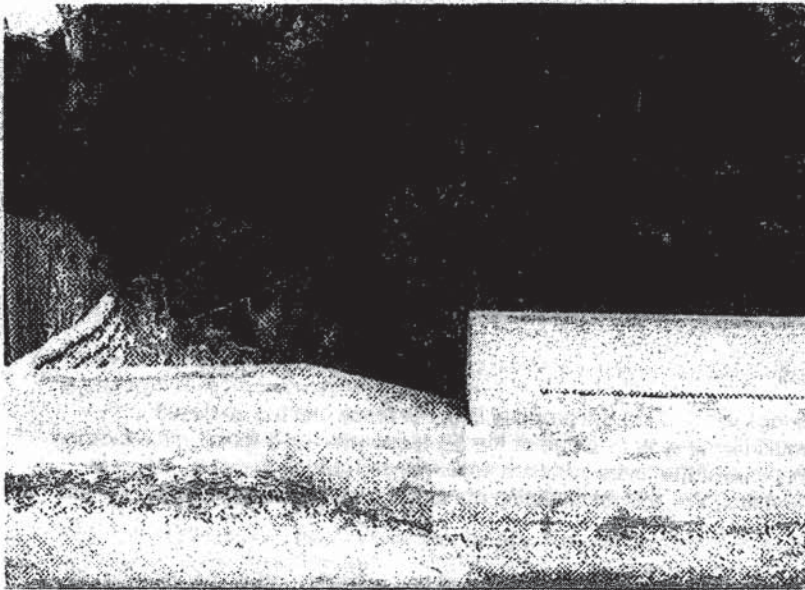


Sanborn Designs Inc.,

CITY OF PALO ALTO
RECEIVED

MAR 19 1998

PUBLIC WORKS ENGINEERING



A LOOKING TOWARDS THE CREEK



B LOOKING TOWARDS THE FENCE

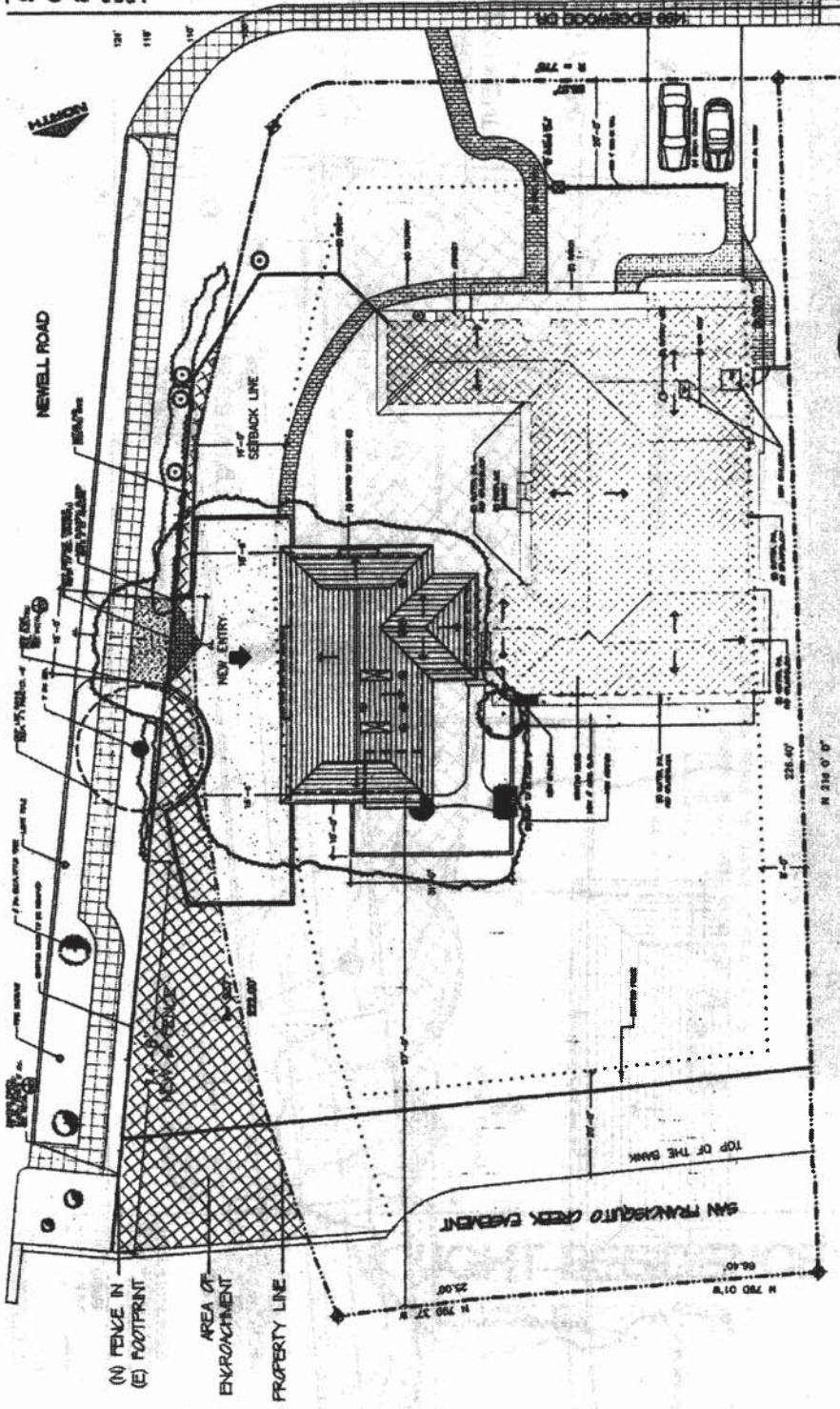
sanborn
design
assoc. inc
200 N. 1st Street, Suite 200
San Jose, CA 95113
408-937-1111 Fax: 408-937-1112

VOUGHT RESIDENCE SITE PLAN

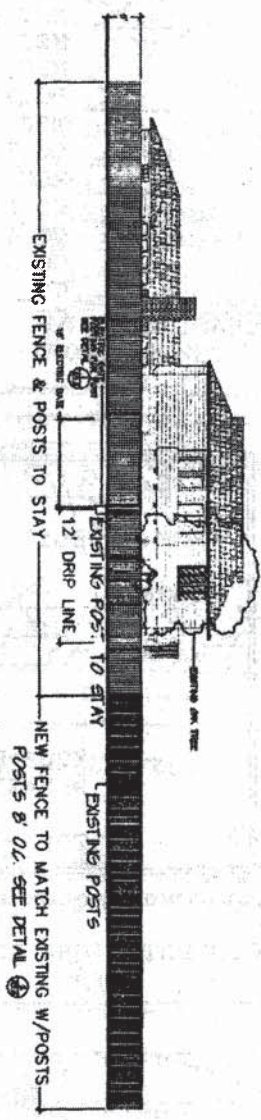


DATE: 10/15/03
DRAWN BY: [Name]
CHECKED BY: [Name]

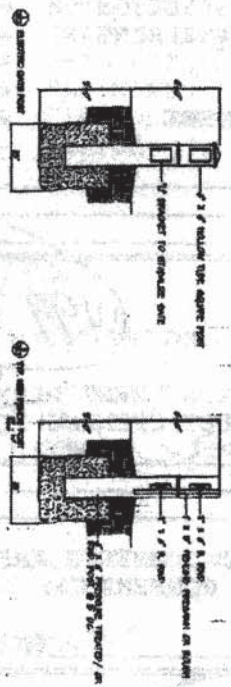
ALL
[Scale bar and other technical details]



SITE PLAN



FENCE ELEVATION



FENCE DETAILS

sarborn
 design
 assoc,inc
 200 N. SAN ANTONIO ROAD
 SAN ANTONIO, TEXAS 78204
 TEL: 512-343-1111 FAX: 512-343-1112

VOUGHT RESIDENCE
FENCE ELEVATION



PROJECT NO. 2004-001
 DATE: 04/20/04
 SHEET NO. A34



City of Palo Alto
Public Works Engineering

MAR 24 1998

INTERDEPARTMENTAL
REVIEW

PUBLIC WORKS ENGINEERING
CITY OF PALO ALTO
RECEIVED
MAR 26 1998

- TO:
- MSC PARKS - DON PIANA
 - MSC PUBLIC WORKS INSPECTION - JAY FEMLEY
 - MSC PUBLIC WORKS OPERATIONS - MIKE JACKSON
 - MSC PUBLIC WORKS OPS (TREES) - DAVE SANDAGE
 - CC 3 WGW ENGINEERING - ROLAND EKSTRAND
 - MSC WGW OPERATIONS - RODGER JENSEN
 - CC 3 LIGHT AND POWER - T. FATTAH/G. JAGANNATH
 - MSC LIGHT AND POWER - JERRY SANTORO
 - CC 5 BUILDING INSPECTION - FRED HERMAN
 - CC 6 TRAFFIC ENGINEERING - A. AGGARWAL/C. THNAY
 - CC A REAL ESTATE - BILL FELLMAN
 - CC 5 PLANNING - Phil Woods
 - CC 6 FIRE DEPARTMENT - NICK MARINARO
 - CC POLICE - DON HARTNETT

DATE: 3/19/98

FROM: PUBLIC WORKS ENGINEERING 1499 Elgwood

SUBJECT: REVIEW: ENCROACHMENT PERMIT No. E- 2281
 REVIEW: STREET OPENING PERMIT No. S-
 OTHER fence encroachment

YOUR EVALUATION AND COMMENTS ARE REQUESTED.
PLEASE RETURN YOUR COMMENTS

TO: kur EXT 2251 BY 3/26/98

Approval recommended? Yes No Yes per comments

COMMENTS (USE REVERSE IF NECESSARY):

7-18

3

13/34 8210

REVIEWED BY Phil Woods

DATE 3/25/98



City of Palo Alto
Public Works Engineering

INTERDEPARTMENTAL
REVIEW

- TO:
- MSC PARKS - DON PIANA
 - MSC PUBLIC WORKS INSPECTION - JAY PEMLEY
 - MSC PUBLIC WORKS OPERATIONS - MIKE JACKSON
 - MSC PUBLIC WORKS OPS (TREES) - DAVE SANDAGE
 - CC 3 WGW ENGINEERING - ROLAND EKSTRAND
 - MSC WGW OPERATIONS - RODGER JENSEN
 - CC 3 LIGHT AND POWER - T. FATTAH/G. JAGANNATH
 - MISC LIGHT AND POWER - JERRY SANTORO
 - CC 5 BUILDING INSPECTION - FRED HERMAN
 - CC 6 TRAFFIC ENGINEERING - A. AGGARWAL/C. THNAY
 - CC A REAL ESTATE - BILL FELLMAN
 - CC 5 PLANNING - *Phil Woods*
 - CC 6 FIRE DEPARTMENT - NICK MARINARO
 - CC POLICE - DON HARTNETT

DATE: 3/19/98

FROM: PUBLIC WORKS ENGINEERING

SUBJECT: REVIEW: ENCROACHMENT PERMIT No. E- 2281
 REVIEW: STREET OPENING PERMIT No. S- _____
 OTHER fence encroachment

YOUR EVALUATION AND COMMENTS ARE REQUESTED.
PLEASE RETURN YOUR COMMENTS

TO: lvz EXT 2251 BY 3/26/98

Approval recommended? Yes No Yes per comments

COMMENTS (USE REVERSE IF NECESSARY):

CONDITION # 2 OF VARIANCE (97-V-19)

REVIEWED BY PJ Dascote DATE 3/24/98



City of Palo Alto
Public Works Engineering

INTERDEPARTMENTAL
REVIEW

- TO:
- MSC PARKS - DON PIANA
 - MSC PUBLIC WORKS INSPECTION - JAY REMLEY
 - MSC PUBLIC WORKS OPERATIONS - MIKE JACKSON
 - MSC PUBLIC WORKS OPS (TREES) - DAVE SANDAGE
 - CC 3 WGW ENGINEERING - ROLAND EKSTRAND
 - MSC WGW OPERATIONS - RODGER JENSEN
 - CC 3 LIGHT AND POWER - T. FATTAH/G. JAGANNATH
 - MSC LIGHT AND POWER - JERRY SANTO.R.O
 - CC 5 BUILDING INSPECTION - FRED HERMAN
 - CC 6 TRAFFIC ENGINEERING - A. AGGARWAL/C. THNAY
 - CC A REAL ESTATE - BILL FELLMAN
 - CC 5 PLANNING - Phil Woods
 - CC 6 FIRE DEPARTMENT - NICK MARINARO
 - CC POLICE - DON HARTNETT

DATE: 3/19/98

FROM: PUBLIC WORKS ENGINEERING

SUBJECT: REVIEW: ENCROACHMENT PERMIT No. E- 2281
 REVIEW: STREET OPENING PERMIT No. S- _____
 OTHER fence encroachment

YOUR EVALUATION AND COMMENTS ARE REQUESTED.
PLEASE RETURN YOUR COMMENTS

TO: lwz EXT 2281 BY 3/26/98

Approval recommended? Yes No Yes per comments

COMMENTS (USE REVERSE IF NECESSARY):

REVIEWED BY J Remley DATE 3/23/98



City of Palo Alto
Public Works Engineering

INTERDEPARTMENTAL
REVIEW

TO:

<input type="checkbox"/>	MSC	PARKS	-	DON PIANA
<input checked="" type="checkbox"/>	MSC	PUBLIC WORKS INSPECTION	-	JAY REMLEY
<input type="checkbox"/>	MSC	PUBLIC WORKS OPERATIONS	-	MIKE JACKSON
<input type="checkbox"/>	MSC	PUBLIC WORKS OPS (TREES)	-	DAVE SANDAGE
<input checked="" type="checkbox"/>	CC 3	WGW ENGINEERING	-	ROLAND EKSTRAND
<input type="checkbox"/>	MSC	WGW OPERATIONS	-	RODGER JENSEN
<input checked="" type="checkbox"/>	CC 3	LIGHT AND POWER	-	T. FATTAH/G. JAGANNATH
<input type="checkbox"/>	MSC	LIGHT AND POWER	-	JERRY SANTORO
<input checked="" type="checkbox"/>	CC 5	BUILDING INSPECTION	-	FRED HERMAN
<input type="checkbox"/>	CC 6	TRAFFIC ENGINEERING	-	A. AGGARWAL/C. THNAY
<input type="checkbox"/>	CC A	REAL ESTATE	-	BILL FELLMAN
<input checked="" type="checkbox"/>	CC 5	PLANNING	-	Phil Woods
<input type="checkbox"/>	CC 6	FIRE DEPARTMENT	-	MARINARO
<input type="checkbox"/>	CC	POLICE	-	HARTNETT

CITY PALO ALTO
RECEIVED

MAR 23 1998

DATE: 3/19/98 PUBLIC WORKS ENGINEERING

FROM: PUBLIC WORKS ENGINEERING

SUBJECT: REVIEW: ENCROACHMENT PERMIT No. E- 2281
 REVIEW: STREET OPENING PERMIT No. S-
 OTHER fence encroachment

YOUR EVALUATION AND COMMENTS ARE REQUESTED.
PLEASE RETURN YOUR COMMENTS

TO: lur EXT 225 BY 3/26/98

Approval recommended? Yes No Yes per comments

COMMENTS (USE REVERSE IF NECESSARY):

REVIEWED BY [Signature]

DATE 3/23/98



City of Palo Alto
Public Works Engineering
250 Hamilton Avenue, Palo Alto CA 94301
Phone: 415/329-2151 FAX: 415/329-2299

FAX

DATE: 3/31/98
TIME: _____

TO

NAME: Reena Mehta TITLE: _____
COMPANY: _____
LOCATION: _____
FAX: () 941-4960
PHONE: () _____
SUBJECT: Enc. Permit, P-2281

TOTAL PAGES (INCLUDING THIS PAGE): 6

FROM

NAME: Luz A. Cortes TITLE: _____
DEPARTMENT: PUBLIC WORKS ENGINEERING
OTHER: _____
FAX: (415) 329-2299
OTHER: () _____
PHONE: (650) 329-2209

MESSAG E: your copy of the approved fence
encroachment



City of Palo Alto
Public Works Engineering

CITY PALO ALTO
RECEIVED

APR 14 1998

PUBLIC WORKS ENGINEERING

INTERDEPARTMENTAL
REVIEW

- TO:
- MSC PARKS - DON PIANA
 - MSC PUBLIC WORKS INSPECTION - JAY REMLEY
 - MSC PUBLIC WORKS OPERATIONS - MIKE JACKSON
 - MSC PUBLIC WORKS OPS (TREES) - DAVE SANDAGE
 - CC 3 WGW ENGINEERING - ROLAND EKSTRAND
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 - CC 3 LIGHT AND POWER - T. FATTAH/G. JAGANNATH
 - MSC LIGHT AND POWER - JERRY SANTORO
 - CC 5 BUILDING INSPECTION - FRED HERMAN
 - CC 6 TRAFFIC ENGINEERING - A. AGGARWAL/C. THNAY
 - CC A REAL ESTATE - BILL FELLMAN
 - CC 5 PLANNING - Phil Woods
 - CC 6 FIRE DEPARTMENT - NICK MARINARO
 - CC POLICE - DON HARTNETT

100 24 000

1499 Edgewood

DATE: 3/19/98

FROM: PUBLIC WORKS ENGINEERING

SUBJECT: REVIEW: ENCROACHMENT PERMIT No. E- 2281
 REVIEW: STREET OPENING PERMIT No. S-
 OTHER fence encroachment

YOUR EVALUATION AND COMMENTS ARE REQUESTED,
PLEASE RETURN YOUR COMMENTS

TO: lvz EXT 2251 BY 3/26/98

Approval recommended? Yes No Yes per comments

COMMENTS (USE REVERSE IF NECESSARY):

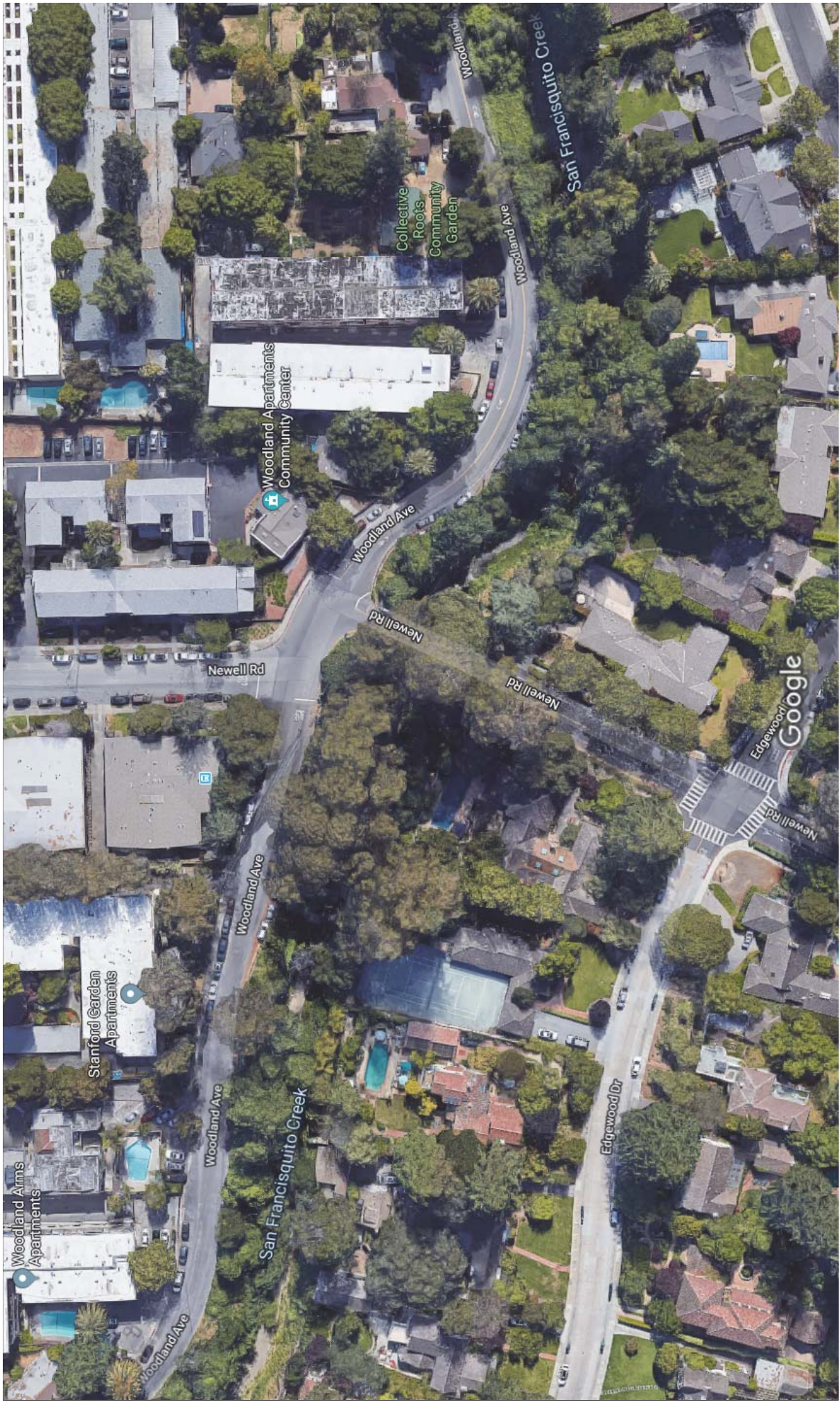
OK TO INSTALL THE FENCE. HOWEVER, NO PERMANENT STRUCTURE SHALL BE CONSTRUCTED/BUILT ON P.U.E OR ON PUBLIC RIGHTS OF WAY WITHOUT OBTAINING APPROVAL FROM UTILITY ENGINEERING.

REVIEWED BY [Signature] 3/29/98

DATE _____

DM# 18

Exhibit G



Letter I-10. Paul Gumina (on behalf of Shen Yang), 7/30/19

Response to Comment I-10.1

The comment does not raise a specific issue on the substance of the Draft EIR/EA. In accordance with the terms of the encroachment permit issued to the property owner at 1499 Edgewood in 1998, the City has met with the property owner to discuss the Project and the work involved at the site and the issued encroachment permit that was issued to the previous property owner. In addition, City of Palo Alto staff provided a written notice, letter dated May 2, 2019, indicating that the City may need to revoke the encroachment permit in order to utilize this City-owned property to facilitate construction of the bridge. The City has expressed its willingness to replace the fence following construction, allowing for continued encroachment on City of Palo Alto property. The City of Palo Alto will continue to work with property owners during design and right-of-way phases.

Response to Comment I-10.2

The temporary construction easement (TCE) referenced by the commenter would be used for equipment staging. Equipment delivery would occur within the TCE, and equipment to lay down and pick up equipment would be used within the TCE. No additional work is proposed specifically within this TCE, but other work would occur adjacent to it and could encroach into it, such as tree removal and reconstruction of the roadway approach. The fence would be retained for as long as possible, but removal may be required, and the City has expressed its willingness to replace the fence following construction, allowing for continued encroachment on City of Palo Alto property. The Draft EIR/EA includes an equipment list in Section 1.4.1.6, *Construction*, and did include an analysis of truck trips in the air quality analysis in Section 2.2.6, *Air Quality*. Section 3.2.3, *Air Quality*, explained that air quality impacts would be reduced to less than significant under CEQA with implementation of Mitigation Measure MM-AQ-1 and Standard Measures SM-AQ-1 and SM-AQ-2.

Response to Comment I-10.3

Please see Section 2.2.6.3, *Environmental Consequences*, and Section 3.2.3, *Air Quality*, for a description of air quality impacts during construction. Construction activities are subject to requirements found in Standardized Measure SM-AQ-1, the *Standard Specifications* (California Department of Transportation 2015), Section 14-9.02. This includes specifications relating to air pollution control by complying with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the contract, including air pollution control rules, regulations, ordinances, and statutes provided in Government Code Section 11017 (Public Contract Code Section 10231) while standard specification Section 10-5 addresses dust control, soil stabilization, and palliative requirements. Additionally, the Bay Area Air Quality Management District considers dust impacts to be less than significant under CEQA through the application of best management practices and recommends that construction contractors implement all basic construction mitigation measures as listed in the Air Quality Guidelines to reduce construction emissions from dust (Standardized Measure SM-AQ-2). Implementation of Caltrans Standardized Measure to control dust during construction (SM-AQ-2), and Mitigation Measure MM-AQ-1 to utilize clean diesel-powered equipment during construction to control construction-related nitrous oxide emissions, would minimize air quality impacts from construction activities and mitigate them to less-than-significant levels under CEQA as further described in Section 2.2.6.4, *Avoidance, Minimization, and/or Mitigation Measures* and Section 3.2.2, *Air Quality*.

Please see Section 2.2.7.3, *Environmental Consequences*, and Section 3.2.12, *Noise*, for a description of noise impacts during construction. Noise from Project construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction noise is controlled by Caltrans Standard Specifications Section 14-8.02, *Noise Control and Local Noise Standards* (see Standardized Measures SM-NOI-1, SM-NOI-2, and SM-NOI-3 in Section 2.2.7.4, *Avoidance, Minimization, and/or Mitigation Measures*). With adherence to Standardized Measures SM-NOI-1, SM-NOI-2, and SM-NOI-3, these potential impacts would be reduced. The potential impacts would be further minimized through implementation of Mitigation Measures MM-NOI-1, MM-NOI-2, and MM-NOI-3, which would ensure that construction noise does not cause excessive increases in ambient noise levels at any noise-sensitive land uses. These mitigation measures would provide advance notice to nearby residences, designate a disturbance coordinator to handle resident complaints, and install noise barriers to further attenuate noise. This would minimize noise levels and the resulting noise level after implementation of these mitigation measures would be less than significant under CEQA.

In addition, implementation of Mitigation Measure MM-NOI-4 would reduce groundborne vibration impacts to a less-than-significant level under CEQA by ensuring, through vibration monitoring, that vibration levels are below the applicable thresholds and that any vibration-related complaints are addressed. Mitigation Measure MM-NOI-1 would also involve a survey of the existing residences to determine if these structures could be damaged by pile driving activities. If it is determined that structures would be damaged by pile driving, an alternative method of construction would be required.

These air quality and noise measures would be effective in reducing the potential impacts during construction on sensitive receptors, including the commenter's property.

Response to Comment I-10.4

As discussed in Section 2.1.5.3, *Environmental Consequences*, in the Draft EIR/EA, work is anticipated to occur during daylight hours in accordance with City requirements. Therefore, high-intensity lighting for illuminating construction activities would not be needed. The comment regarding site security and the potential for trespassers does not raise a specific issue on the substance of the Draft EIR/EA. Per the Caltrans Standard Specifications, site security is generally the responsibility of the contractor. Project-specific criteria is added through the special provisions to accommodate local concerns.

Response to Comment I-10.5

Please see Response to Comment I-10.3. Potential Project impacts and avoidance, minimization, and mitigation measures for construction in staging areas is identified in the various sections of the Draft EIR/EA identified in Response to Comment I-10.3. The statement in Section S.4.5.1, *Construction Staging Areas*, means that the exact locations of the staging areas within the Project study area will be finalized during the final design phase of the Project, and that if there are any changes to the construction method that could result in new impacts not already identified in the Draft EIR/EA, then additional analysis would be required.

Response to Comment I-10.6

As discussed in Section 1.4.5, *Alternatives Considered but Eliminated from Further Discussion Prior to Draft Environmental Impact Report/Environmental Assessment*, removing the Newell Road Bridge

without replacing it was considered in the Alternatives Screening Analysis Report (ASAR) but dropped from further consideration. This alternative was dropped from further consideration because it did not meet the criteria identified in the purpose statement and would not satisfy the Project's basic purpose and needs, in particular the objective of maintaining vehicular transportation across San Francisquito Creek at Newell Road. In addition, it was determined in the ASAR that this alternative would permanently result in greater delays at other intersections within the vicinity. This alternative also performed poorly when evaluated against accommodating multi-modal traffic, including vehicles, bicycles, and pedestrians. For these reasons, this alternative was eliminated from further consideration.

The Project's purpose and need are discussed in Section 1.2, *Purpose and Need*, of the Draft EIR/EA. Providing traffic relief on Newell Road in comparison to existing conditions is not a stated purpose or need of the Project. Please see Master Response 1 with respect to comments regarding traffic.

Response to Comment I-10.7

Please see Response to Comment I-10.3. Potential air quality impacts and avoidance, minimization, and mitigation measures are discussed in the various sections of the Draft EIR/EA identified in Response to Comment I-10.3. These sections discuss construction period impacts, including a summary of construction criteria pollutants, Bay Area Air Quality Management District (BAAQMD) thresholds, and how to reduce emissions to reduce adverse health effects. Long-term (operational) carbon monoxide concentrations and criteria pollutants are also discussed and compared to BAAQMD thresholds, and it is noted that the Project would not result in substantial impacts on air quality during operations given the minor increases in emissions from vehicle traffic. Therefore, the Draft EIR/EA is compliant with the *Sierra Club v. County of Fresno* case.

From: [Xenia Hammer](#)
To: [Jeremias, Michel](#)
Subject: Re: FW: Newell Road Bridge Draft EIR / EA
Date: Friday, June 14, 2019 5:31:51 PM
Attachments: [image001.jpg](#)

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Dear Michel,

Thank you so much for all your work on this. I hope you have a nice weekend -- this email can wait till Monday!

I would like to clarify the dimensions of the proposed Build Alternative 2. These dimensions will be discussed in a lively manner at the community meeting, and i'd like to be clear on this. Also, comparison with the current bridge will come up, and again, i'd like to have these numbers at the ready. A case in point: the headline in Palo Alto Online says that the width of the bridge will double -- i think it's a bit of an exaggeration and want to verify the numbers.

Total width:
5 foot sidewalks
14 foot lane in each direction
That's a total of $14+14+10 = 38$ feet, correct?
Is there anything else to add for the width of the bridge?

Sidewalks:
DEIR says different things about the width of the sidewalks:
Sec 1.4.2.2 page 1-21 says 4 foot sidewalks
Sec 1.4.12 page 1-15 says 5 foot sidewalks
At the meeting on wed, it was 5 foot sidewalks.
Please confirm the proposed width of the sidewalks.

Thank you,

Xenia

On Fri, May 31, 2019 at 9:40 AM Jeremias, Michel <Michel.Jeremias@cityofpaloalto.org> wrote:

Good Morning,

This email is to advise interested parties and public agencies that the City of Palo Alto and the California Department of Transportation (Caltrans) have completed the Draft Environmental Impact Report/Environmental Assessment (DRAFT EIR/EA) for the Newell Road Bridge Replacement project. Attached is the Notice of Availability. The Draft EIR/EA, Appendices and Technical Studies are now available on project page https://www.cityofpaloalto.org/gov/city_information/projects/newell_road_bridge_replacement_project.asp a direct link to the Draft EIR/EA is available here [Draft EIR](#)

The document is also available for viewing during normal business hours at

1. Caltrans District 4, Office of Local Assistance 12th Floor, 111 Grand Avenue, Oakland CA 94612
2. Planning Department Office, 5th floor, 250 Hamilton Avenue, Palo Alto, CA 94301
3. Palo Alto Downtown Library, 270 Forest Avenue, Palo Alto, CA 94301
4. Rinconada Library, 1213 Newell Road, Palo Alto CA 94303

The 60 day public comment period will begin on May 31, 2019 and end on July 30, 2019. Comments may be submitted in writing by 5:00 pm on July 30 by email to Michel.Jeremias@cityofpaloalto.org or by mail to Michel Jeremias, City of Palo Alto, 250 Hamilton Avenue, 6th Floor, Palo Alto, CA 94301. You may also provide comments in person

at the following scheduled meetings:

Wednesday, June 12 at 6:00 PM

Palo Alto City Council Chambers

250 Hamilton Avenue

Palo Alto, CA 94301

Tuesday, June 18 at 7:00 PM

Palo Alto Art Center Auditorium

1313 Newell Road

Palo Alto, CA 94301

Wednesday, June 19 at 7:30 PM

City Council Chambers, East Palo Alto

2415 University Avenue

East Palo Alto, CA 94303

Caltrans Public Hearing

Thursday, July 18 at 8:30 AM

City Council Chambers, Palo Alto

250 Hamilton Avenue

Palo Alto, CA 94301

Sincerely,



Michel Jeremias PE | Senior Engineer

Public Works Department
250 Hamilton Avenue | Palo Alto, CA 94301

D: (650) 329-2129 E: Michel.Jeremias@cityofpaloalto.org

Please think of the environment before printing this email – Thank you

Letter I-11. Xenia Hammer, 6/14/19

Response to Comment I-11.1

The width of the bridge under proposed Build Alternative 2 would be 38 feet. The correct proposed width of the sidewalks on the new Newell Road Bridge is 5 feet in each direction. The Draft EIR/EA indicated that Build Alternatives 2, 3, and 4 would have 14-foot-wide lanes for shared bicycle and vehicle use (sharrows); however, the project plans show that these build alternatives would include 10-foot wide lanes (sharrows) with 4-foot-wide shoulders for bicyclists. Section 1.4.1, *Common Design Features of the Build Alternatives*, of the Final EIR/EA has been updated for clarity and consistency with the project plans. A second option has also been discussed with Caltrans, which would place two 9-foot-wide raised, mixed-use paths on either side of the bridge, allowing the curb to act as a barrier for cars from both pedestrian and bicycle traffic. In both options, the vehicular traffic lane width would be 10 feet wide in each direction. The text for Section 1.4.1, *Common Design Features of the Build Alternatives*, has been updated.

From: [Xenia Hammer](#)
To: [Eggleston, Brad](#); [Jeremias, Michel](#)
Cc: [Len Materman](#); [TC Rindfleisch](#)
Subject: SF Creek - FEMA flood zones
Date: Thursday, June 20, 2019 8:21:42 PM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Dear Brad and Michel,

Thanks for all your work and meetings this week on SF Creek and Newell Rd Bridge.

I wanted to clarify a question that was asked at the meeting in Palo Alto on Tuesday.

The question was whether these projects will get people out of having to pay flood insurance.

It is my understanding that when there are significant changes to the creek, such as replacing both Pope Chaucer and Newell Rd bridges, FEMA may redraw the flood zone maps. Whether any given property remains or is out of the flood zone depends on that particular location. Flood insurance rates for some people may go down since the rates depend on expected flood elevation and the floor level of each house.

Currently, Pope Chaucer would overflow around 5,800 cfs. With the proposed projects, the capacity would increase to 7,500 cfs. So, of course the flood zones and expected flood elevations would change.

I think it is important to communicate the benefits of these projects to the community.

Thank you,

Xenia

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Letter I-12. Xenia Hammer, 6/20/19

Response to Comment I-12.1

Flood insurance is not a CEQA or NEPA issue, but instead is under jurisdiction of the Federal Emergency Management Agency (FEMA).

However, because the Project now proposes 70-year flood protection rather than the original 100-year flood protection, it is likely that there will be no immediate changes in flood insurance requirements. In the future, if upstream detention is constructed, 100-year flood protection may be possible, in which case there may be changes to FEMA mapping and associated requirements for local landowners to purchase flood insurance. Increasing the capacity of the creek will reduce the flooding risk to the residents.

Response to Comment I-12.2

The commenter's support of the Project's flood protection benefits is noted. The City of Palo Alto and Caltrans are following the City of Palo Alto Municipal Code concerning public outreach for projects. The benefits of the Project have been communicated through the Draft EIR/EA and through the presentations given at the public meetings.

From: [Xenia Hammer](#)
 To: [Jeremias, Michel](#)
 Subject: comments on DRAFT EIR/EA for the Newell Road Bridge Replacement project
 Date: Monday, July 22, 2019 3:20:23 PM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Dear Ms. Jeremias,

Here are my comments as part of public input on Draft EIR for the Newell Road Bridge Replacement Project.

1. Urgency to replace Newell Road Bridge.

Replacement of Newell Road Bridge is a key part of flood control efforts for San Francisquito Creek. It has been over 21 years since the 1998 flood and over 7 years since discussions on Newell Road Bridge replacement began. According to San Francisquito Creek Joint Powers Authority, Pope Chaucer Bridge cannot be replaced until Newell Road Bridge has been replaced. So, it is vital to proceed with the Newell Road Bridge project as quickly as possible.

The proposed Newell Road Bridge project would increase flow capacity from the current 6,600 cfs (cubic feet per second) to 7,500 cfs. This is the natural capacity of the creek channel and is equal to the creek capacity that will be achieved with the proposed Pope Chaucer project. It is also about equal to the capacity of Middlefield Bridge. Together, the Newell Road Bridge project and the Pope Chaucer Bridge project will increase capacity of the creek to 7,500 cfs, restoring the natural capacity of the creek on the stretch from Middlefield to 101. These projects will also enable 100 year flood protection in combination with future upstream detection measures.

The Newell Road Bridge project is sensible, cost-effective, necessary and urgent for flood control on San Francisquito creek.

2. Support for Locally Preferred Alternative - Build Alternative 2

Locally Preferred Alternative (Build Alternative 2) is the smallest possible project that provides one lane of traffic in each direction and a 5 foot sidewalk in each direction. It is the smallest possible project that will be acceptable to East Palo Alto (based on comments of EPA public officials in the several meetings that i attended). This project incorporates public input to the project proposed in 2012-13 in important ways: it is narrower, lower and shorter than the originally proposed project and keeps the current street alignment.

It would be good to have a way to monitor traffic speeds and safety after the bridge is replaced and add additional traffic calming measures if needed.

3. Build Alternative 1 - One lane of traffic with direction controlled by a traffic light with 2 sidewalks.

Regardless of anyone's personal opinions, this alternative will not be funded by Caltrans as it does not meet minimum standards. Moreover, this alternative is not acceptable to East Palo Alto, per EPA officials' comments. East Palo Alto neighborhood between University, 101 and the creek only has 3 points of egress/ingress, so the Newell Road Bridge is a vital point of access in case of emergency.

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4. Build Alternatives 3 and 4 - two lanes with partial or full realignment. These alternatives will amplify opposition from folks concerned about any increase in traffic or traffic speeds.

In summary, Locally Preferred Alternative - Build Alternative 2 meets the flood control objectives and represents an excellent compromise. I strongly support this project and ask that you move forward with it with urgency.

Thank you for all your work on this!

Xenia Hammer
861 Sharon Court
Palo Alto, CA 94301

Letter I-13. Xenia Hammer, 7/22/19

Response to Comment I-13.1

The City of Palo Alto and Caltrans acknowledge the commenter's statement that replacing the Newell Road Bridge is a crucial component of overall flood control efforts for San Francisquito Creek, which also includes replacement of Pope-Chaucer Bridge and changes to channel capacity. The commenter's support for the Project is noted.

Response to Comment I-13.2

The City of Palo Alto and Caltrans acknowledges the commenter's statement reiterating the Project description for Build Alternative 2 and how it has been revised to address earlier public input.

The City of Palo Alto will continue its current practice of monitoring traffic city-wide. There is currently no plan for site-specific traffic monitoring for the proposed new Newell Road Bridge. If future traffic monitoring determines that additional traffic calming measures are needed, the City of Palo Alto will consider options available at that time.

Response to Comment I-13.3

The City of Palo Alto and Caltrans acknowledge the commenter's summary of concerns about Build Alternatives 1, 3, and 4. The commenter's support for Build Alternative 2, the Locally Preferred Alternative, is noted.

**Comments to the Draft Environmental Impact Report for the
Newell Road Bridge Replacement Project**

Thank you for the opportunity to comment on this projects.

Overall Comment

I am in favor of the Locally Preferred Alternative for a number of reasons:

- It provides the necessary vehicle accessibility with modest impacts on the local natural and human communities
- It provides for adequate and safe pedestrian and bicycle use
- It provides adequate capacity to carry the expected future flows of the creek
- It has a minimum increase to impervious surfaces
- It maintains the connectivity between the neighborhood cites of East Palo Alto and Palo Alto and thereby serves as a means of uniting these two interdependent communities rather than separating them.
- It provides opportunities to enhance the quality of the surrounding habitat
- It will most likely be easier to permit than the other build alternatives

1

Specific Comments

Why does the summary precede the table of contents in which it is included? That is confusing to me.

2

In S-2, it describes “transportation improvements”. The Pad D New Municipal Water Well and San Francisquito Creek Flood Protection don’t fit under that category.

3

In S-3, bullet # 5, I would confine the description to the flow rate rather than the 50-year storm event. Those descriptors have a way of changing, but the flow measures do not.

4

In S-4.5, channel stabilization measures such as rock slope protection and soil nail wall are mentioned. I would like to see some more-natural stabilization measures, such as the use of root wads or vegetated slopes also be included as options. These treatments have been implemented upstream to great effect under similar circumstances. These may also help simplify the permitting process with some of the agencies.

5

Table S-1 “Natural Communities”. No non-native riparian trees should be planted to mitigate the removal of existing ones. Some of us have spent the last 30 years working to revegetate the banks of the creek with native riparian species in order to enhance the natural habitats and the connections among the related organisms. This is a golden opportunity to contribute to that effort.

6

In 2.2.1.2 under Floodplain Description, the first sentence of the second paragraph is inaccurate, as the creek below 101 is capable of carrying the 100-year flow, as is stated in the following sentence. This is confusing and needs altering to be accurate. Again, I think it is better to use just the cfs numbers to describe the flows. Also, I think it is more accurate, and inclusive, to say that the SFCJPA completed the downstream project rather than limiting the effort to the SCVWD. Though Valley Water oversaw the construction, all the agencies played major roles in making the project happen. Later the term “base flood” is interjected with no indication of what that means. This is quite a confusing paragraph, even for those of us who are involved in these efforts.

7

MM-BIO-1: Again, there is no need to replace non-native species when there are plenty of native species that provide the same positive functions and habitat values as the non-natives. Every reference to tree mitigation should state that non-native trees will be replace with native species that provide the same habitat benefits and functionality as those removed.

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Table 2.4.1 The 7th projected listed (Upstream of 101) notes in the final sentence under “Proposed Uses” the constraint on construction that exists due to the SF Bay

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to Highway 101 project. Since that constraint has been removed, this statement is not applicable and should be removed or modified to indicate that this constraint no longer exists due to the project having been completed.

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cont'd

6.1.7. The individual, Claire Elliott, is listed as being an employee of the Acterra Stewardship Program. That program no longer is in existence. Instead, Claire is the Senior Ecologist at Grassroots Ecology, the successor organization.

10

These are the specific comments I was able to make in the time available to me. I am sure that there are more areas that could use my attention, but I won't be able to address them in the given time frame.

Jerry Hearn

hearnbo@redshift.com

Letter I-14. Jerry Hearn, 6/11/19

Response to Comment I-14.1

The commenter's support for Build Alternative 2, the Locally Preferred Alternative, is acknowledged.

Response to Comment I-14.2

The summary precedes the table of contents because it allows a reader to find the summary section faster.

Response to Comment I-14.3

The text in Section S.2, *Overview of the Project Area*, has been revised.

Response to Comment I-14.4

The commenter's suggestion is noted. Flow rates, along with storm event year, have been retained because it is part of the Project's purpose statement. However, 7,500 cubic feet per second (cfs) is the 70-year storm event, and this has been updated from the 50-year storm event globally throughout the Final EIR/EA.

Response to Comment I-14.5

The Draft EIR/EA assumed the worst-case scenario (in terms of impacts) for bank stabilization measures. Additional analysis has since been performed to verify that soil nail walls will not be required for the Project. The specific channel stabilization measures will be determined in consultation with the permitting agencies as the Project progresses through the permitting and final design phases of the Project. More natural stabilization measures will be evaluated in coordination with permitting agencies and used when feasible.

Response to Comment I-14.6

Please see Section 2.3.1.3, *Avoidance, Minimization, and/or Mitigation Measures*. Mitigation Measure MM-BIO-1 identifies the replacement of valley foothill riparian. Only native species would be replanted.

Response to Comment I-14.7

The first sentence of the noted paragraph is discussing the creek between the Caltrain Bridge/El Camino Real Bridge to the San Francisco Bay, while the second sentence is only discussing a subset of this area, East Bayshore Road to the San Francisco Bay. The first sentence of this paragraph has been clarified to only discuss the Caltrain Bridge/El Camino Real Bridge to East Bayshore Road. Flow rates, along with storm event year, have been retained because it is part of the Project's purpose statement. The second sentence has been revised to "SFCJPA" per the commenter's suggestion. Additionally, the fourth sentence of the paragraph has replaced "base flood" with "100-year flow."

Response to Comment I-14.8

Please see Response to Comment I-14.6.

Response to Comment I-14.9

The last sentence in the San Francisquito Creek Flood Protection, Ecosystem Restoration, and Recreation Project: Upstream of U.S. 101 Project in Tables 2.1.1-1 and 2.4-1 has been revised to note that the Upstream of U.S. 101 Project cannot be constructed until the Newell Road Bridge Project has been completed to accommodate larger flows.

Response to Comment I-14.10

Section 6.1.7, *Individuals*, has been revised to note that Claire Elliot is a Senior Ecologist at Grassroots Ecology.

From: [Hamilton Hitchings](#)
To: [Jeremias Michel](#)
Cc: [Len Materman](#); [Eggleston, Brad](#)
Subject: Newell Road Bridge EIR Public Comments from Hamilton Hitchings
Date: Sunday, June 16, 2019 5:18:25 PM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Below are my comments on the Newell Road Bridge EIR:

Having reviewed the Newell Road Bridge EIR, I strongly support the joint recommend by Palo Alto and East Palo Alto for Alternative 2, which is the two lane bridge plus side walks that maintains its current alignment, preventing significant increased car speeds. This alternative dramatically increases pedestrian, bicycle and vehicle safety. It also will result in increased flood protection for thousands of houses in Palo Alto. Without this project, the upstream Pope Chaucer Street bridge replacement is not feasible, which is crucial to improve flood protection. Lastly this alternative is the smallest alternative that allows most of the funding to come from Caltrains, reducing the burden on local taxpayers. These reasons are why Alternative 2 is clearly the best overall tradeoff. Please proceed with haste before another flood like the 1998 significantly damages hundreds of homes in Palo Alto. Thank you again.

Hamilton Hitchings
212 Heather Lane
Palo Alto, CA 94303

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Letter I-15. Hamilton Hitchings, 6/16/19

Response to Comment I-15.1

See Response to Comment I-1.1. In addition, the City of Palo Alto and Caltrans acknowledge the commenter's summary of the benefits of Build Alternative 2, the Locally Preferred Alternative.

From: [Pitch Johnson](#)
To: [Jeremias Michel](#)
Subject: Newell Bridge
Date: Tuesday, July 30, 2019 4:06:54 PM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Dear Mr. Jeremias,

As a resident of 1411 Edgewood Drive, near the Newell Bridge, I would like to express my firm support for the letter written to you by Ben Ball, my neighbor.

The bridge does need alteration to assure that water can flow under it in heavy water times but it should not be increased in capacity to increase the traffic flow in the area.

There is essentially no safety issue and I have not heard of an accident caused by the bridge in recent years, and as my memory serves me, no safety problems, back to 1941 when as a teen-ager I lived on Dana.

Increased traffic flow would make neighborhood streets less more crowded and less safe.

Specifically, Build Alternative 1 is by far the better of the choices presented, although the amount of bike and pedestrian traffic needs more study.

Sincerely,

Franklin Pitcher Johnson

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Letter I-16. Franklin Pitcher Johnson, 7/30/19

Response to Comment I-16.1

Please see Response to Comment I-2.5.

Response to Comment I-16.2

Please see Master Response 1 with respect to comments on traffic flow. The commenter's statement that the existing bridge does not present a safety issue is noted. Section 1.2.2.2, *Roadway Deficiencies*, of the Draft EIR/EA identifies the deficiencies of the existing bridge, particularly with respect to compliance with current safety standards.

Response to Comment I-16.3

The commenter's support for Build Alternative 1 is noted. Master Response 2 responds to the commenter's concern that pedestrian and bicycle traffic needs further study.

From: [pwecips](#)
To: [Jeremias Michel](#)
Cc: [pwecips](#)
Subject: FW: Newell Bridge Replacement
Date: Friday, June 21, 2019 1:34:19 PM

Hi Michel,

Please see email below.

Thank you,
Vanessa

Vanessa Silva | Public Works Engineering Services
Phone: 650.329.2519 | Email: vanessa.silva@cityofpaloalto.org

From: MEGAN MCCASLIN [mailto:meganmccaslin@gmail.com]
Sent: Friday, June 21, 2019 12:13 PM
To: pwecips
Cc: Ben Ball; Megan McCaslin
Subject: Newell Bridge Replacement

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Hello,

I live three houses on the creek side of Edgewood Drive, from the corner of Newell. I have lived on Edgewood, in one house or another, since 1991.

I have grave reservations about the replacement of the Newell Road/San Francisquito Bridge. It has worked so well for so long as a traffic calmer. As more and more people use not only Newell but also Edgewood to make a beeline to the freeway, our neighborhood has seen traffic, and with it noise and dirt and disrespectful behavior, increase exponentially. I would hate this to become even worse.

I realize you have to do something to help with flooding issues upstream. But I am strongly opposed to the creation of a two-lane bridge with bike and pedestrian lanes. I believe a single lane bridge for cars, with bike and pedestrian lanes would not only satisfy the flooding concerns, but it would also help keep Newell from becoming a high speed traffic corridor.

I'm happy that the recommendation isn't to change the orientation, that's great. But there are too many residents, many of them children and elderly people, walking in the neighborhood for a huge bridge and a constant flow of traffic to be a good idea. In addition, our neighborhood, which used to be a nice one, suffers from so much degradation in quality of life due to, primarily, all the airplane noise from both jets and little planes going to PA Airport. In addition, housing policies on the other side of the bridge have led to non residents parking all along our street, blocking our driveways, leaving their trash, etc. So for you to consider adding an additional insult to the quality of life here terrifies me.

A huge bridge that virtually invites increased traffic would only exacerbate the decline of the

area. Newell would become a freeway and I'm sure most of us nearby would have to move. People already drive too fast and don't stop at the intersection of Newell and Edgewood. How would making the road wider improve this? It wouldn't?

Finally, I hate the idea of taking out so many eucalyptus trees. I know they are not native, but there have been hawks' nests in them for as long as I have lived here, almost 30 years. Trees are a gift to a neighborhood, so I am hoping the final bridge design will be small enough that not all the trees have to go.

Please take the concerns of the Palo Alto neighbors into consideration.

Megan McCaslin

MEGAN MCCASLIN
1485 Edgewood Drive
Palo Alto, CA 94301
meganmccaslin@gmail.com

Letter I-17. Megan McCaslin, 6/21/19

Response to Comment I-17.1

As noted in Chapter 1, *Proposed Project*, the bridge is classified as Functionally Obsolete and has a sufficiency rating of 40.9. The bridge was deemed functionally obsolete because it does not conform to American Association of State Highway and Transportation Officials (AASHTO) standard lane and shoulder widths, nor does it provide AASHTO standard pedestrian features. In addition, the current geometry does not satisfy AASHTO's sight distance standards. Master Response 1 responds to comments on operational traffic resulting from implementation of the Project. The City of Palo Alto acknowledges the commenter's concerns regarding airport noise and previous housing policies. These comments do not raise a specific issue on the substance of the Draft EIR/EA.

Response to Comment I-17.2

Please see Response to Comment I-3.7 as well as Section 2.3, *Biological Resources*, and Section 3.2.4, *Biological Resources*, of the Draft EIR/EA. The tree removal identified in the Draft EIR/EA represents the worst-case scenario. Trees would be preserved in place if feasible. If trees must be removed, Mitigation Measure MM-BIO-1 requires replacement for valley foothill riparian woodland habitat, and Mitigation Measure MM BIO-2 requires replacement protected and regulated trees.

From: [Rius, Rafael](#)
To: [Jeremias, Michel](#); [Hodgkins, Claire](#)
Subject: FW: Newell Bridge
Date: Friday, June 21, 2019 7:47:10 AM
Attachments: [image001.png](#)

FYI

From: Transportation
Sent: Thursday, June 20, 2019 6:08 PM
To: Rius, Rafael
Subject: FW: Newell Bridge

Hi Rafael,

The person below requests to consider bicycle circulation on the Newell bridge as he didn't find this element in the DEIR.

Thanks much,

Madina



Madina Klicheva
Administrative Associate III | Planning & Development
250 Hamilton Avenue, Palo Alto, CA 94301
T: 650.329.2144 | **E:** Madina.Klicheva@CityofPaloAlto.org

Use Palo Alto 311 to report items you'd like the City to fix.
Download the [app](#) or click [here](#) to make a service request.

From: Bill Michel <bmichel@alum.pomona.edu>
Sent: Thursday, June 20, 2019 3:45 AM
To: Transportation <Transportation@CityofPaloAlto.org>
Subject: Newell Bridge

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

To Whom it May Concern,

It's come to my attention that the DEIR for the Newell Bridge does not include any specific focus on bicycle circulation. This is a *considerable* oversight.

There are few enough good bike routes in Palo Alto, and the Bridge is a far superior option to Middlefield.



I've used the Bridge for *decades*, and turning left as you cross it, Northbound has always been awkward. I think a traffic circle might help with this.

Whatever *specific elements* of the Design, bicycle circulation is an essential consideration, and should be included.

Yours truly,

Bill Michel
337 Lowell St.
Redwood City

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cont'd

Letter I-18. Bill Michel, 6/20/19

Response to Comment I-18.1

Please see Master Response 2.

From: mitfamily@juno.com
To: comments@sfcjpa.org; [Jeremias, Michel](#)
Subject: San Francisquito Creek Flood Control Projects, Draft EIR/EA
Date: Wednesday, June 19, 2019 4:49:18 PM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

To: Michel Jeremias, San Francisquito Creek JPS, City of PA, and all concerned

When San Francisquito Creek flooded in 1998, my older daughter was one of the few children on our street who didn't need therapy or counseling after waking up to a flooded home and neighborhood. She hadn't yet turned two and was still sleeping well off the ground in her crib. When we carried her around more than usual and had her spend a ridiculously long time playing in the (clean) bathtub, she was little enough not to understand the true implications (not so when we had to move out of our house for two months during repairs later on, but that's another story).

What amazes me most today is that my daughter has now graduated from college, but our community still isn't protecting other kids and families from the loss and trauma of such a flood. We all need to work together to get the job done. All of San Francisquito Creek should have capacity for at least 7500 cfs, ideally with further alternatives available based on upstream detection. This is beyond urgent. This should have been dealt with years ago.

The people quibbling over Newell Street Bridge have failed to provide a better comprehensive option than the Draft EIR Build Alternative 2. They've had over twenty years, and there are a multitude of additional options for controlling traffic, if that is some people's real concern. Any person or organization contributing to further delay at this point should be ready to accept responsibility for further damage or trauma caused by another flood.

As someone who actually lives in a house that flooded throughout every square inch of living space--with many neighbors who still experience flood related anxiety during El Nino years and every major storm--I know that the impact of flooding lasts far beyond financial losses and rebuilding. All of our risks for flooding and other extreme weather events are only increasing with each passing year. We have to bring Newell Street Bridge up to 7500 cfs capacity in order to do the same for Pope-Chaucer. There are good plans available now, including the draft EIR/EA Build Alternative 2. Further delay will only cost us more, both financially and in further trauma, because it's only a matter of time until that creek floods again.

Sincerely,
Susan Mittmann
2377 St. Francis Dr.
Palo Alto, CA 94303

Sad News For Meghan Markle And Prince Harry
track.volutr.com
<http://thirdpartyoffers.juno.com/TGL3131/5d0ac99e67780499e6d5ast04vuc>

Letter I-19. Susan Mittmann, 6/19/19

Response to Comment I-19.1

Please see Response to Comment I-1.1.

From: [Trish Mulvey](#)
To: [Jeremias, Michel](#)
Cc: [Hodgkins, Claire](#); len@sfcjpa.org; [Murray, Kevin](#); [Tess Byler](#)
Subject: RE: RESEND: newell inquiry
Date: Tuesday, June 25, 2019 3:33:27 PM

Hugs & thanks, that's what I needed. Somehow I had the idea that both bridges would be able to pass the 100 year event (at least as it is defined for this decadal period but maybe not too much longer after that...) but the decisions about floodwalls and FEMA-freeboard would depend on community desires in the future as well as availability of funding. trish

From: Jeremias, Michel [<mailto:Michel.Jeremias@CityofPaloAlto.org>]
Sent: Tuesday, June 25, 2019 1:16 PM
To: Mulvey, Trish
Cc: Hodgkins, Claire
Subject: RE: RESEND: newell inquiry

Hi Trish,

Not lost on cyberspace, I'm working on a number of tasks associated with Newell and trying to keep up with other projects. I forwarded your email to Len and have not heard back. However from what I've heard and seen they are designing the bridge to allow 7,500 CFS to pass. This is not equivalent to the 100-year storm event. Newell Road will allow 7,500 CFS to pass but it can't be raised to meet the 100 year flow without raising the bridge, roads, floodwalls and increasing wall height on neighboring properties.

Michel

From: Trish Mulvey <mulvey@ix.netcom.com>
Sent: Tuesday, June 25, 2019 12:52 PM
To: Jeremias, Michel <Michel.Jeremias@CityofPaloAlto.org>
Subject: RESEND: newell inquiry

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Wondering if this got lost in cyberspace??? trish

From: Trish Mulvey [<mailto:mulvey@ix.netcom.com>]
Sent: Thursday, June 20, 2019 1:16 PM
To: Jeremias, Michel (Michel.Jeremias@CityofPaloAlto.org)
Subject: newell inquiry

Hugs, I didn't stay for all the Q&A at the Art Center..., so I wanted to ask if Brad might have misspoken about the capacity of the proposed Newell bridge replacement. Will it have the same capacity as the preferred alternative at Pope/Chaucer?

| 1

As I understand it, even after the bottlenecks are removed, the channel cannot convey a 100-year event, but Pope /Chaucer is being designed with (at least) that 100-year capacity in case at some

| 2

point in the future the community decides it wants to fund 100-year protection AND sufficient freeboard to also satisfy FEMA in order to get out of paying for flood insurance. I'd appreciate your thoughts. trish

Letter I-20. Trish Mulvey, 6/20/19

Response to Comment I-20.1

The Project, under any of the build alternatives, would have a capacity of 7,500 cubic feet per second (cfs), which is the same capacity as the preferred alternative for the Pope–Chaucer Bridge Replacement component of the Upstream of U.S. 101 Project.

Response to Comment I-20.2

Both the Project, under any of the build alternatives, and the Upstream of U.S. 101 Project are being designed with a capacity of 7,500 cfs, which is equivalent to approximately the 70-year storm event. Similar to the Pope–Chaucer Bridge Replacement, the Project will allow the 100-year storm event to pass under pressurized conditions (see Section 2.2.1, *Hydrology and Floodplain*). Any future projects within the creek to accommodate the 100-year flow or allow sufficient freeboard to satisfy the Federal Emergency Management Agency were not included as part of this Draft EIR/EA. However, the Project would not preclude San Francisquito Creek Joint Powers Authority’s implementation of these proposed future improvements to accommodate the 100-year flow in the vicinity of Newell Road Bridge.

From: [Eric Nordman](#)
To: [pwecips](#); [Jeremias, Michel](#)
Subject: Newell Road Bridge Replacement Project Comment on EIR
Date: Monday, July 22, 2019 9:02:40 PM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

To all:

The Newell Road bridge replacement project is leaning towards 14' lanes. There currently are bike lanes all the way down Newell Road to the bridge. The new bike/pedestrian bridge over 101 makes this route an attractive bike route to/from East Palo Alto. It would be good to continue the bike lanes across the new bridge. Normally a bike lane requires 5' and traffic lanes are typically 9.5' or more. This doesn't work with 14' lanes but if the bridge doesn't have a gutter pan than a bike lane can be as small as 4'. Please consider designs that don't have a gutter pan and would allow the inclusion of bike lanes on the bridge.

1

Sincerely,
Eric Nordman
Palo Alto resident for ~50 years

Letter I-21. Eric Nordman, 7/22/19

Response to Comment I-21.1

The City of Palo Alto is considering various options for accommodating bicycle traffic on the replaced bridge. The Draft EIR/EA indicated that Build Alternatives 2, 3, and 4 would have 14-foot-wide lanes for shared bicycle and vehicle use (sharrows); however, the project plans show that these build alternatives would include 10-foot-wide lanes (sharrows) with 4-foot-wide shoulders for bicyclists. Section 1.4.1, *Common Design Features of the Build Alternatives*, of the Final EIR/EA has been updated for clarity and consistency with the project plans. A second option has also been discussed with Caltrans, which would place two 9-foot-wide raised, mixed-use paths on either side of the bridge, allowing the curb to act as a barrier for cars from both pedestrian and bicycle traffic. In both options, the vehicular traffic lane width would be 10 feet wide in each direction. The text for Section 1.4.1, *Common Design Features of the Build Alternatives*, has been updated. The final design will improve conditions for the multiple users (vehicular, bicycle, pedestrian) of the crossing.

From: norm.picker@yahoo.com
To: [Jeremias Michel](#)
Subject: EIR Newell Bridge Replacement
Date: Friday, July 26, 2019 2:21:20 PM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Build Alternative 2 (LPA) is good. I support that. Keeping the current alignment will be a traffic calming measure and less impact to adjacent properties. The familiarity is nice too.

| 1

Try not to destroy too much vegetation but please do meet the water flow requirements and improving the flood control.

| 2

Thank you.

Marked sharrows on the pavement are great. Also, include a sign on either side that says "Share the Road with Bicycles" or whatever the standard language is.

| 3

If the city of PA staff had not presented such a shocking proposal way back when, but instead had presented a solution such as this, we likely could have avoided this expensive and time delaying environmental impact study. In my opinion, city of PA staff is way out of step with the majority of the residents at times.

|

4

But thank you for spearheading the effort and all the other flood improvement efforts completed so far. And planned. And thank you for caring so much about EPA residents in the process and not simply bowing to Crescent Park (some residents not all!) demands for quick solutions that help them and hurt others.

Regards,

Norm Picker
458 Bell St.
East Palo Alto, CA 94303

Note: 35 year EPA resident (east of 101); Close relatives have lived in neighborhood on Palo Alto side since the 1950s. Have driven across the bridge on car and bike thousands of times.

Letter I-22. Norm Picker, 7/26/19

Response to Comment I-22.1

The commenter's support for Build Alternative 2, the Locally Preferred Alternative, is noted.

Response to Comment I-22.2

The City of Palo Alto and Caltrans acknowledge the commenter's concern for loss of vegetation during Project construction. Section 2.3, *Biological Resources*, of the Draft EIR/EA discusses effects on biological resources. Section 2.3.1, *Natural Communities*, discusses effects on natural communities, and concludes that with implementation of avoidance and minimization measures and mitigation measures, Project impacts on valley foothill riparian and intermittent stream communities would be minimized. While protected trees would be removed, local jurisdiction ordinances and mitigation would minimize effects on protected trees. Section 2.3.3, *Plant Species*, discusses effects on special-status plant species, and concludes that because no special-status plant species are present in the study area, there would be no effect on special-status plants.

Response to Comment I-22.3

The City of Palo Alto is considering various options for accommodating bicycle traffic on the replaced bridge. The final design will improve conditions for the multiple users (vehicular, bicycle, pedestrian) of the crossing. Appropriate signage is planned for the alternatives and will be included in the final design.

Response to Comment I-22.4

The commenter's concerns about earlier design considerations as well as the commenter's appreciation for the City of Palo Alto and Caltrans' work on the Project are acknowledged.

Jamie Rapperport and Elspeth Farmer
1440 Edgewood Drive
Palo Alto, CA 94301

Michel Jeremias
Project Manager, City of Palo Alto
250 Hamilton Avenue, 6th Floor
Palo Alto, CA 94301

Re: Comments on the draft EIR (DEIR) for the Newell Road Replacement Project

Dear Ms. Jeremias,

We are writing you regarding the Newell Bridge Project. We all share an interest in having the bridge upgraded. I would suggest that there are several objectives we all have for this upgrade, specifically:

1. Flood abatement
2. Safety, especially for children biking to school on Newell
3. Maintenance of current levels of traffic through the neighborhood
4. Minimization of cost to the city of Palo Alto

Different members of the community likely each have different views on the relative priority of these objectives. Our view is that the first three are paramount. In addition, we see objectives #2 and #3 as strongly correlated, with both being driven by traffic estimates.

The city is currently advocating that the new bridge have two car lanes, as well as additional bike and pedestrian lanes. This bridge would have the same alignment as the current bridge and would be 45 feet wide and 80 feet long (twice as long and more than twice as wide as the current 18x40 bridge). We believe the objectives listed above – flood abatement, safety, maintenance of current traffic levels, and minimization of cost – would be better served with a single lane bridge, aligned with the current bridge.

The TJKM 2019 traffic report asserts that the 2-lane bridge would only increase traffic 2% over that of a single-lane bridge. It seems inconceivable to us that this could be the case, especially given the traffic increases we’re already seeing with the old bridge still in place.

We hope you find this perspective helpful as you think through the best approach.

Thank you,

Jamie Rapperport and Elspeth Farmer

1

2

3

Letter I-23. Jamie Rapperport and Elspeth Farmer, 7/30/19

Response to Comment I-23.1

The City of Palo Alto and Caltrans acknowledge the commenter's lists of objectives. The Project's purpose and need are discussed in Section 1.2, *Purpose and Need*, of the Draft EIR/EA. The commenter's list of objectives and the Project purpose and need coincide on several points—maintaining connections for multiple modes of transportation across San Francisquito Creek at Newell Road while avoiding a substantial increase in traffic on Newell Road, improving safety for all modes of transportation across San Francisquito Creek at Newell Road, and reducing flood risk. The Project does not include the objective of minimizing costs to the City of Palo Alto.

Response to Comment I-23.2

The City of Palo Alto and Caltrans acknowledge the commenter's preference for a single-lane bridge with the current alignment, which corresponds to Build Alternative 1, for the reasons of meeting the commenter's summary of Project objectives as described in Response to Comment I-23.1. The commenter states that the Project would replace an existing 18 foot by 40 foot bridge with a bridge that is 45 feet wide. Build Alternative 2 proposes a 38-foot-wide bridge (including two 10-foot vehicle lanes and 9 feet of dedicated pedestrian and bicycle travel in each direction). The length of the proposed bridge is approximately the same as the existing bridge (80 feet).

Response to Comment I-23.3

Please see Master Response 1.



Newell Road/San Francisquito Creek Bridge Replacement Project Comment Card

Thank you for your interest in the Newell Road/San Francisquito Creek Bridge Replacement Project. Your input and participation are encouraged and appreciated. You may use the space below to write your comments.

(Please print your name and comment clearly. Your address and contact information are optional)

Name: _____ Date: _____

Address: Jeff Reese & Linda Waters
565 Newell Rd.
Palo Alto, CA 94303

City State ZIP-Code

Home Phone: 326-3128 E-mail: wrovmc@ix.netcom.com

Organization/Affiliation: —

Comment: I am concerned that the "option 2" which would widen the roadway would increase traffic and increase the speed of cars traveling down Newell Rd. There has already been a substantial increase of both since I moved in in 1996. The City has no plans to mitigate traffic volume or speed with option 2. I would like to see option 1 reconsidered.

Jeff Reese

Also: This decision affects people outside the 600 ft radius. You need to do a better job of posting the meetings.

You may hand in your completed comment card to a project representative at the scoping meeting, or you may mail it to the City of Palo Alto, Public Works Department. Please fold this form in half, seal with tape or staple, and add postage before mailing. Feel free to send in additional sheets as needed. All comments must be received by 5:00 PM on Tuesday, July 30, 2019.

City of Palo Alto
Public Works Engineering Services
250 Hamilton Avenue
Palo Alto, CA 94301
Attention: Michel Jeremias, Senior Engineer

Letter I-24. Jeff Reese and Linda Waters

Response to Comment I-24.1

Please see Master Response 1.

Response to Comment I-24.2

The traffic analysis conducted for the Project did not show a perceptible increase in vehicle volumes or speeds along Newell Road Bridge under any of the build alternatives. Therefore, mitigation for vehicle volumes and speed is not warranted at this time. However, as is standard practice in the City of Palo Alto, the City will continue to monitor all roadways throughout the city. If, in the future, there is a perceptible increase in vehicle volumes or speeds along Newell Road Bridge, the City may consider additional traffic calming measures at that time.

Response to Comment I-24.3

The commenter's support for Build Alternative 1 is acknowledged.

Response to Comment I-24.4

The comment does not raise a specific issue on the substance of the Draft EIR/EA. The comment is acknowledged. The City of Palo Alto followed CEQA guidelines, City ordinances, and NEPA provisions, for noticing.

From: [Andrew Rich](#)
To: [Jeremias, Michel](#)
Cc: [Jennifer Rich](#)
Subject: Traffic impacts of Newell Road Bridge project
Date: Wednesday, June 19, 2019 12:51:20 PM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Dear Mr. Jeremias,

I was not able to attend the public meeting last night at the Palo Alto Art Center regarding the Newell Road Bridge project. While I am enthusiastically in favor of the project as a whole, as a resident/homeowner in the Woodland Park area of East Palo Alto, I'm highly concerned about the traffic impacts during the project construction period on the University Ave/Woodland Ave intersection.

As you are aware, this is a difficult intersection at best, especially during commute hours. The EIR in several places projects severe impact on this intersection as a result of the bridge closure during the project construction period. I believe the report and the project plan do not take this problem seriously enough.

I would like to suggest and request that for the duration of the project construction period, uniformed traffic control officers be posted at this intersection during morning and evening commute hours. This will greatly improve traffic flow, specifically reducing the "blocking the box" behavior which can be easily observed in the course of most signal cycles.

Thank you for reading.

-- Andrew Rich
116 Mission Drive
East Palo Alto, CA 94303
650-270-5863
andrew.rich@gmail.com

--



Andrew Rich
projectinsomnia.com

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Letter I-25. Andrew Rich, 6/19/19

Response to Comment I-25.1

Table 2.1.4-2 in Section 2.1.4.3, *Environmental Consequences*, shows the anticipated delay at the University Avenue/Woodland Avenue intersection during construction. At this intersection, the Level of Service (LOS) would remain at LOS D under bridge closure conditions, which is the same LOS as existing conditions. Delay would worsen by approximately 3 seconds in the a.m. peak period and 5 seconds in the p.m. peak period. Because the LOS would remain the same during bridge closure conditions, no substantial impact at this intersection would result.

Response to Comment I-25.2

Please see Response to Comment I-25.1. The commenter's suggestion is noted. Uniformed traffic control officers are not warranted at this intersection because the LOS would remain at LOS D under bridge closure conditions, which is the same LOS as existing conditions.

From: [Jeff Shore](#)
To: [Jeremias Michel](#)
Subject: Newell Road Bridge Replacement Project
Date: Thursday, June 20, 2019 3:05:27 PM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

Michel,

On page 1-5 of the Newell Road Bridge DEIR, there is a reference to the "October 2016 Caltrans Structure Maintenance & Investigations Report [which] indicates that the bridge is considered FO with a sufficiency rating of 47.5 (California Department of Transportation 2016)." I have not been able to find this report. I would appreciate if you would point me to it.

1

Regards,

Jeff

Letter I-26. Jeff Shore, 6/20/19

Response to Comment I-26.1

The *Caltrans Structure Maintenance & Investigations Report* can be requested through Caltrans or the City of Palo Alto. It is not currently online due to new American with Disabilities Act Compliance regulations (Assembly Bill 434). The commenter was provided with a copy of this report on June 21, 2019.

Jeffrey Shore
1905 Edgewood Drive
Palo Alto, CA 94303

July 30, 2019

City of Palo Alto
Attn: Michel Jeremias
250 Hamilton Avenue, 6th Floor
Palo Alto, CA 94301

Via Electronic Mail: Michel.Jeremias@CityofPaloAlto.org

Re: Comment on Draft Environmental Impact Report – Newell Road Bridge Replacement Project (SCH Number 2015082026) (“DEIR”)

Dear Ms. Jeremias:

According to the DEIR, the purpose of the Newell Road Bridge Replacement Project (“**Project**”) is to improve vehicle, bicycle and pedestrian access to and safety on the Newell Road Bridge across San Francisquito Creek, while accommodating increased creek flows. However, in assessing the proposed build alternatives, the DEIR only takes into account vehicular Level of Service (“**LOS**”) impacts. Absent bicycle and pedestrian LOS impact analyses, the DEIR’s evaluation of build alternatives is deprived of foundational data. In other words, the DEIR does not correctly identify the full scope of the potential impacts of the proposed Project, properly mitigate its impacts or fully inform the public about the Project’s potential environmental effects. Therefore, the DEIR is fundamentally flawed and grossly inadequate.

1

Respectfully,

Jeffrey Shore

email: jeff.shore@comcast.net

Letter I-27. Jeff Shore, 7/30/19

Response to Comment I-27.1

Please see Master Response 2.

From: comments@sfcjpa.org
To: [Aaron Carter](#)
Cc: [Jeremias Michel](#)
Subject: [FWD: San Francisquito Creek Flood Control Projects]
Date: Monday, June 24, 2019 10:18:41 AM

CAUTION: This email originated from outside of the organization. Be cautious of opening attachments and clicking on links.

This comments is for both bridges so copying Michel

----- Original Message -----

Subject: San Francisquito Creek Flood Control Projects

From: jay whaley <whaley_jay@hotmail.com>

Date: Wed, June 19, 2019 7:09 pm

To: "comments@sfcjpa.org" <comments@sfcjpa.org>

Dear Joint Powers Authority,

We have read the details of the published planned project for continuing the upstream efforts to mitigate flooding, such as occurred in our neighborhood in 1998. The proposed plan to replace and widen the Newell Road bridge is very reasonable and totally acceptable. We urge you to move ahead with some urgency to implement the Newell Road bridge replacement, so that the widening of the creek and the replacement of the Chaucer bridge can follow.

Further delays only compounds the likelihood of disastrous floods again occurring in our neighborhood.

Sincerely,

Jay Whaley

Sallie Whaley

24 Crescent Drive

Palo Alto

Letter I-28. Jay and Sallie Whaley, 6/19/19

Response to Comment I-28.1

Please see Response to Comment I-1.1.



Planning & Transportation Commission

Action Agenda: June 12, 2019

Council Chambers
250 Hamilton Avenue
6:00 PM

Call to Order / Roll Call

6:08pm

Commissioner Roohparvar arrived 6:15pm

Chair Riggs: Alright if I can call us to order. This is a regular meeting of the Planning and Transportation Commission City of Palo Alto. The time is 6:08 pm on June 12th, 2019. May we have a roll call vote or roll call? Alright and I do believe that Commissioner Roohparvar may be joining us a little later.

Oral Communications

The public may speak to any item not on the agenda. Three (3) minutes per speaker.^{1,2}

Chair Riggs: Ok Mr. Director, any oral communications that we have of things, not on the agenda.

Mr. Jonathan Lait, Director of Planning: Do we have any speakers for oral communications? Ok.

Agenda Changes, Additions, and Deletions

The Chair or Commission majority may modify the agenda order to improve meeting management.

Mr. Jonathan Lait, Director of Planning: No changes to the agenda.

-
1. Spokespersons that are representing a group of five or more people who are identified as present at the meeting at the time of the spokesperson's presentation will be allowed up to fifteen (15) minutes at the discretion of the Chair, provided that the non-speaking members agree not to speak individually.
 2. The Chair may limit Oral Communications to 30 minutes for all combined speakers.
 3. The Chair may reduce the allowed time to speak to three minutes to accommodate a larger number of speakers.

1 Mr. Lait: Oh, thank you, yeah. Just... this is just a communication, a report that was prepared by
2 our Office of Transportation providing information to the Planning Commission. It's not
3 intended to be a discussion item. If the Commission felt that there was a need to discuss it, we
4 would agendize that for a future discussion but otherwise, it's just a transmittal.

5
6 Chair Riggs: And I would suggest that we... I did have an opportunity from my fellow
7 Commissioners to speak with the Interim Transportation Director and we are going to see some
8 updates from the Transportation Division later on in the summer. Any comments from the
9 Commissioners about that update? Ok, seeing none.

10

11 **Study Session**

12 Public Comment is Permitted. Five (5) minutes per speaker.1,3
13 There are no Study Session items.

14

15 **Action Items**

16 Public Comment is Permitted. Applicants/Appellant Teams: Fifteen (15) minutes, plus three (3) minutes rebuttal.
17 All others: Five (5) minutes per speaker.1,3

18

19 3. PUBLIC HEARING. Newell Road Bridge Replacement Project [19PLN-00130]: Review
20 the Environmental Impact Report, and Make a Recommendation to City Council on
21 Preferred Alternative, for Demolition of an Existing Two-Way Bridge On Newell Road
22 Between Woodland Avenue in East Palo Alto and Edgewood Drive in Palo Alto and
23 Construction of a New Bridge Along the Same Alignment. An Environmental Impact
24 Report (EIR)/Environmental Assessment (EA) was Circulated on May 31, 2019, for a
25 60 Day Comment Period That Will End on July 30, 2019, in Accordance With the
26 California Environmental Quality Act (CEQA) and National Environmental Policy Act
27 (NEPA). Zoning District: Not Applicable (Public right-of-Way) adjacent Single-Family
28 Residential (R-1[10,000]). For More Information Contact the Project Planner Claire
29 Hodgkins at Claire.Hodgkins@cityofpaloalto.org

30

1. Spokespersons that are representing a group of five or more people who are identified as present at the meeting at the time of the spokesperson's presentation will be allowed up to fifteen (15) minutes at the discretion of the Chair, provided that the non-speaking members agree not to speak individually.
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1 Chair Riggs: Ok, let's enter our study session [note – action item], so we will have an
2 opportunity for public comment but I believe Claire you have a presentation to start us off.

3
4 Ms. Claire Hodgkins, Project Planner: Good evening Commissioners, I'm Claire Hodgkins, and
5 I'm the project planner on behalf of Planning for this project. The project before you today is
6 the Newell Road Bridge replacement project.

7
8 So, before I go over the brief summary of the project, I just want to identify the background of
9 when this project started and some of the key milestones that we have hit to date. So, it
10 actually started in April 2011, Caltrans deemed the existing bridge functionally obsolete
11 meaning that it did not meet certain Caltrans's standards. So, the City worked with Caltrans and
12 the Santa Clara Valley Water District to secure funding for replacement throughout 2011 and
13 2012. We had quite a few community outreach meetings to obtain community input for early
14 collaboration on potential alternatives that we should explore and this occurred between 2012
15 and 2015. And in 2015 we released the notice of... we determined that the EIR should be
16 prepared and released the notice of preparation and began the scoping process for the
17 environmental analysis. There were numerous technical reports that had to be prepared and
18 reviewed and approved in coordination with Caltrans before we could move forward on
19 preparing the environmental analysis. So once all the technical reports were finalized, we

-
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1 prepared the draft EIR and EA and finally, we were able to release the draft EIR environmental
2 assessment on May 31st of this year.

3

4 A brief summary of kind of where the location we're looking at, so this is crossing San
5 Francisquito Creek between Edgewood Drive and Palo Alto and Woodland Avenue in East Palo
6 Alto. So, half of the bridge is in Palo Alto and half of the bridge is in East Palo Alto. So Public
7 Works will provide some more detailed information about the purpose and need and objectives
8 as well as alternatives that were considered, but for the purposes of CEQA, we had to identify
9 the proposed project and the Environmental Superior Alternative. So, the City coordinated with
10 East Palo Alto in identifying a Locally Preferred Alternative as the proposed project and
11 Alternative #2 in the analysis was selected. It's actually also identified as the Environmental
12 Superior Alternative, so I'd like to provide a brief overview of what we're moving forward as the
13 proposed project. So, that includes replacement of the existing two-lane bridge which is 22-feet
14 wide with a two-lane bridge that is 42-feet wide along the same alignment. The new lanes
15 would be wide enough to meet Caltrans's standards for sharrows which are shared bicycle
16 lanes and also include sidewalks on each side of the bridge and it raises the existing bridge to
17 allow better flow capacity beneath the bridge. It also raises a portion of Woodland Avenue and
18 Newell Road to match that new grade at the bridge and includes some retaining walls in a few
19 locations to support that road. And this is just a brief visual of from Newell Road looking... in
20 Palo Alto looking over the bridge over San Francisquito Creek and this would be the simulation

-
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1 for the view from East Palo Alto. Just going back really quickly I want to just note that right now
2 the simulations don't show any landscaping other than grass in these areas. We do anticipate
3 that landscaping is going to be proposed. We are just in the process of designing that
4 landscaping so we're expecting that trees would be installed in these areas.

5
6 So just going over the environmental review process, I just want to identify our role in this
7 project. So, the City is the lead agency under CEQA for this project and Caltrans is the lead
8 agency for NEPA for this project. And I believe there's a representative here from Caltrans. Yes,
9 and there is a representative here from Caltrans so if there are any questions that come up
10 about the analysis as they relate to NEPA, they are available to respond to any questions
11 related to that. And I just want to also note that the City of East Palo Alto is a responsible
12 agency, I believe we need a Street Work Permit from East Palo Alto.

13
14 I also just want to note our... the PTC's Role with respect to this project. Your scope is not only
15 limited to what's in Palo Alto jurisdiction. We're looking at the project as a whole here and so
16 any comments you have should or thoughts you have can relate to the project as a whole.
17 Including the portion in East Palo Alto and the portion in Palo Alto.

18
19 Just in terms of schedule we are here with the draft EIR was released, we'll be doing scoping
20 meetings for the next couple months, and we anticipate starting construction or we anticipate

-
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1 releasing the final EIR in August of 2019. And then Public Works Engineering is going to go a
2 little bit more into the other next steps that will follow that.

3
4 So tonight, we're requesting you provide comments on the draft EIR, EA, and recommend a
5 Preferred Alternative to Council. And we have Staff and consultants here that are prepared to
6 answer questions about the analysis should you have any. And in addition, as noted previously,
7 to the extent that the comments relate to NEPA, Caltrans is here to answer questions as a lead
8 agency for NEPA and with that, I'll turn it back to you. And we do have a representative here
9 from Public Works Engineering that's prepared to provide a brief summary of the project as
10 well.

11
12 Chair Riggs: Any questions from the Commissioners? Alright, seeing none, let's move to the
13 hearing portion and then we can... we'll come back to the Commission if that's ok? Do you have
14 something else to add?

15
16 Mr. Jonathan Lait, Director of Planning: So, we have a little bit more detail about the project
17 itself if you're interested in hearing that now.

18
19 Chair Riggs: Sure.

20

-
1. Spokespersons that are representing a group of five or more people who are identified as present at the meeting at the time of the spokesperson's presentation will be allowed up to fifteen (15) minutes at the discretion of the Chair, provided that the non-speaking members agree not to speak individually.
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1 Mr. Lait: Sure, ok.

2

3 Ms. Michel Jeremias, Public Works Department: Good afternoon. My name is Michel Jeremias,
4 I'm with Public Works Engineering, I'm here to present to you the Newell Road Bridge Project. I
5 wanted to give you or provide you with the background regarding the environmental
6 document.

7

8 How this project was developed, the existing bridge was built in 1911. As Claire indicated the
9 bridge was classified as functionally obsolete by Caltrans. It does not accommodate two-way
10 vehicle traffic or access for pedestrian and cyclists. In addition, the distance the driver can see
11 oncoming traffic is obscured by the trees and the vertical road profile on the approach. Another
12 and distinct component to this project is the creek conveyance. The current bridge abutments
13 are located within the creek channel and constrain the flows of the creek. As a result, the
14 reduced flow is... as a result, the bridge has a capacity to convey only 6,600-cubic feet per
15 second and this is less than the actual capacity of the creek.

16

17 The reduced flow is a concern from a broader flood protection perspective and there's a... for
18 the benefit of all present I want to elaborate a little bit in detail as far as what that entails. So,
19 you'll see on the map in front of you San Francisquito Creek beginning on the left bottom half
20 of the page and draining towards the right northern components. El Camino Real, the bridge

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1 overcrossing, is shown on the bottom right... bottom left and Middlefield, Pope/Chaucer St.,
2 then University, and Newell Road, West Bayshore.

3
4 In 1998, there was a significant storm event that flooded Palo Alto. The rain runoff exceeded
5 the capacity of the creek, as a result, several public agencies came together to develop a
6 strategy to implement projects that could reduce flooding risks. From a hydraulic engineering
7 perspective, we have to design and improve downstream first before we make improvements
8 upstream. Several projects have been completed with the initiation of San Francisquito Creek
9 pump station that was done in 2007. Most recently the downstream project Highway...
10 downstream Highway 101 Project was completed in 2018. With these projects in place, we are
11 now in a place to actually make the improvements upstream. The advancing of this project will
12 also allow another upstream project to proceed. It will replace Pope/Chaucer as well as
13 widening specific areas along the creek to allow the convenience ultimately of 7,500-cubic feet.

14
15 Based on the project need and we also described and identified a number of objectives. The
16 first was to provide a bridge that maintains connectivity for all modes of access while not
17 diverting vehicles to adjacent streets or creating an increase in a number of vehicles that use
18 Newell Road and increase in the average vehicle speeds. Other project objectives where
19 included which improve the pedestrian and bicycle access across San Francisquito Creek,

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1 improve the safety for all modes of transportation, upgrading the channel beneath the bridge
2 to allow the convenience of a 50-year storm event.

3
4 Once we had identified the project objectives, we set about how to identify how we would best
5 meet that. Since then we've had several numbers of community meetings. Some of the earlier
6 meetings were to discuss the project and subsequently were to develop a process to help us
7 narrow down the alternatives to advance. By the fall of 2014, we had narrowed it down to eight
8 alternatives. The... we incorporated these alternatives through a screening criteria. The
9 screening criteria shown above on the table with concerns. Identifying... first was the concern
10 was that project... meet the 100-year storm event. It also did not create an impact to the Level
11 of Service and that the project does not create an impact to the Traffic Infusion of Residential
12 Environment; in other words, TIRE. What that means is that analysis... the impact would not
13 increase... would not deteriorate the safety or the comfort to the residents that use the street
14 for either walking, playing or simply exiting their driveways. Three of [unintelligible] not shown
15 in bold... you will see the alternatives, the remove the existing bridge, bicycle-pedestrian bridge
16 or bicycle-pedestrian bridge with emergency were not advanced. We could only consider the
17 four alternatives shown highlighted in this area.

18

19 [Note – male speaking off mic:] Could you go back to that slide, please?

20

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1 Ms. Jeremias: Yes.

2

3 [note - many Commissioners talked amongst themselves off mic]

4

5 Ms. Jeremias: So, the alternatives that we considered for the EIR was the no-build alternative.

6 This alternative was considered all EIRs. Alternative Number One is a bridge with a bi-directions
7 one-lane. This bridge would be controlled with traffic signals. Alternative Number Two, the two-
8 lane bridge with bicycle and pedestrian access, sidewalks as Claire has shown, and this would
9 be located in the current alignment. Alternative Number Three is a two-lane bridge similar with
10 access in partial realignment. Newell Road travel way would be partially aligned between East
11 Palo Alto and Palo Alto. Alternative Number Four is a full realignment of Newell Road. Similar to
12 the visual simulations shown... shared with you earlier, here's a visual simulation for Alternative
13 One. Please note the location of traffic signals that were proposed. One of them would be
14 designated for the driveway that approached... that leads out of Newell onto Newell Road on
15 Palo Alto side. Alternative Number Two, this is the one that we've seen already. A two-lane
16 bridge with a stop-controlled. Alternative Number Three shows the partial realignment and
17 again similar to what was said earlier we will be placing trees along the planter strips in these
18 areas. That will be developed at a later date once we move forward with the project.
19 Alternative Number Four, it shows the full realignment of Newell Road.

20

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1 So current schedule, so one of the things that I wanted to identify is the project is now shown
2 on this but meant to include is that there are three additional community meetings that are
3 occurring. Tonight's the first, there will be another one on Tuesday next week and Wednesday
4 next week in Public Works Transportation in East Palo Alto as well as a following one in July for
5 the ARB. The process that we follow from here would be is once circulation and EIR comments
6 are received we can proceed with the NEPA process as well. There's a federal regulation that
7 they need to comply in order to release the FONZ [note- sounds like] and also approve the
8 NEPA EA. Then we will continue with permitting for regulatory agencies. We schedule currently
9 best case around fall or winter 2019. Once that occurs, we can also proceed concurrently with
10 the preparation of the construction documents and apply for the construction funding.
11 Beginning construction... assuming we can begin construction based on permits based on the
12 bids and funds, its as early as next year summer. And there are several items that we have to be
13 mindful of and these are the constraints. These are... we're limited to work in the creek
14 between June 15 and October 15, upcoming rainy seasons, and coordination with the upstream
15 project.

16

17 This concludes my presentation of the project if you have any questions.

18

19 Chair Riggs: Any questions from the Commission? Commissioner Waldfogel.

20

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1 Commissioner Waldfogel: Yeah, thank you, great presentation. What is the designed flow rate
2 for this bridge?

3

4 Ms. Jeremias: Excuse me, can you repeat that?

5

6 Commissioner Waldfogel: What is the flow rate that this bridge is designed too? Is it designed
7 to 7... 7,500-cubic feet per second?

8

9 Ms. Jeremias: Yes, the flow rate is 7,500- cubic feet per second and that is the same that is
10 what's being done for the upstream project.

11

12 Commissioner Waldfogel: Yeah and I think your table said 100-year and then your text said 7...
13 50 and 70-year.

14

15 Ms. Jeremias: Right so I can clarify that, so originally when the project began in 2012, 100-year
16 storm event was higher. We were expecting a 9,200-CSF. Since then for the EIR analysis, we
17 proposed a 7,500-CSF which is what the actual creek can convey. The creek itself cannot convey
18 the capacity that we had originally assumed 9,200. Subsequent studies also, from a hydraulic
19 perspective, show that we're not actually 9,200, it's closer to 8,150. So, what we had designed

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1 when we proposed the EIR was a design for the 50-year storm event; as in fact, we're actually
2 meeting a 70-year storm.

3

4 Chair Riggs: Commissioner Summa.

5

6 Commissioner Summa: I just have a quick question about the visibility at the intersection in the
7 Preferred Alternative because currently the... going into East Palo Alto on Newell, on the bridge,
8 and going I guess it's mostly northbound on Woodland. The visibility is very poor and I think it's
9 largely due to vegetation. Will that be improved?

10

11 Ms. Hodgkins: Yes, it will be improved with this project so the project does two things. It
12 resolves the current issues of line of sight but it also...because it's raising the bridge, even more,
13 it would be more offset. So that's why Woodland Avenue and portions of Newell Avenue would
14 need to be raised slightly. It would fix the current issue that we have and also accommodate for
15 the fact that it's getting a little bit higher.

16

17 Commissioner Summa: Ok, thank you very much.

18

19 Chair Riggs: Commissioner Waldfoegel, you have another question?

20

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1 Commissioner Waldfogel: No.

2

3 Chair Riggs: Ok, I have a question. Do we have any estimation on bike/ped volume to
4 understand if the Class Three bikeway is appropriate?

1

5

6 Ms. Hodgkins: I think we'd have to look into that, I'm not sure if [unintelligible](interrupted)

7

8 Chair Riggs: So, I... did we look into any sub-alternatives that actually looked at a Class One
9 bikeway or a Class Two bikeway across any of the alternatives? So, these are all alternatives
10 that could have sub-alternatives so that's (interrupted)

1
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11

12 Ms. Hodgkins: Right so I'll start with the response and then either Public Works or maybe our
13 engineer can add to it if I miss anything but I know that we did look into different alternatives.
14 In early analysis, we even looked at potential options that were only bike and pedestrian
15 access. Those ended up being screened out because they didn't meet a lot of our other project
16 objectives. We did also talk about the idea of doing a full bike lane. The issue with this was that
17 everything has to be designed to meet Caltrans's standards; it's AASHTO standards but basically
18 Caltrans's standards. Meanwhile, we were also getting a lot of comments from the public to try
19 and reduce the width of the bridge as much as possible. So, to accommodate that we felt that
20 based on these... the length and span of the bridge that sharrows would be the best option to

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1 provide the narrowest bridge possible to address the public comments related to the width of
2 the bridge and trying to reduce our overall impact on the environment. Specifically like the
3 creek bank, while also still accommodating full bicycle access. So, we have to ask for an
4 Exception from Caltrans's standards. We were to (interrupted)

5

6 Chair Riggs: Yeah, I [unintelligible] (interrupted)

7

8 Ms. Hodgkins: Ok.

9

10 Chair Riggs: So, did we run an MNLOS model on this? Do we know [unintelligible]? Did we run a
11 multi-model Level of Service Model on this?

12

13 Ms. Hodgkins: Can I... I'll ask our engineer; I don't know if we did or not. I don't think we have,
14 thank you.

15

16 Mr. Lait: I'm hearing no.

17

18 Chair Riggs: Any other questions? Ok, seeing none, I'm going to open it up to public comment. I
19 have two speaker cards. If anyone else in the public would like to speak to this item if you could

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1 please hand me a card that would be great. So first off, I have Robert Neff. Hey, did I get your
2 last name right?

3

4 Mr. Robert Neff: Yes. I'm Robert Neff, I'm a resident, I've been on the Palo Alto Bicycle and
5 Pedestrian Advisory Commission since around 2010. I found the draft EIR for the Newell Bridge
6 grossly inadequate because it does not address the bicycle suitability and comfort level of
7 cyclists traveling from Newell Road in Palo Alto to the Clark and Newell Road in East Palo Alto. It
8 shows that the bridge and intersection may indeed have sharrows but it does not analyze the
9 impact of traffic congestion and intersection design. This bridge will serve bicyclists and
10 pedestrians connecting from Palo Alto to East Palo Alto for the next 100-years and will be the
11 best, most direct, and most comfortable connections. So, it is essential to consider bicycle
12 circulation in more detail.

2

13

14 An excellent bike route should have low traffic stress. The traffic stress analysis method has
15 been developed relatively recently after even the creation of our 2012 Bike Pedestrian Plan.
16 That was used in developing goals for the local bike network improvements since 2015. Ok, one
17 example of a low-stress route is Bryant Bike Boulevard where bicycles and autos share the lane
18 but the speed and volume of automobile traffic is very low. On busier streets, low traffic stress
19 can be achieved by implementing bicycle lanes such as on Park Boulevard from California to
20 Layton Avenue. In the case of complete connection... ok with lower traffic stress along the

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1 entire route a larger percentage of potential cyclists will consider using that route. In the case
2 of the complete connection from Clark Avenue in East Palo Alto, across 101 on the brand-new
3 bike-pedestrian bridge, and across the creek on this new bridge at Newell Road. All segments
4 can be considered for traffic stress and the EIR should make that analysis with regard to the
5 design alternatives.

6
7 The new bridge, of course, is low traffic stress, it's only bicycles and pedestrians so it's the best
8 case. Newell Road in East Palo Alto has shared lanes, no center line, 25 miles an hour speed
9 limit and an average daily volume of about 1,800 which is within the guidelines of low traffic...
10 lowest traffic stress streets. On the Palo Alto side, Newell Road has 25 miles hour speed limits, a
11 centerline, much higher traffic volumes but it also has bike lanes. So, depending on the width of
12 the bike lanes this could also be a lowest traffic stress or maybe a modest traffic stress suitable
13 for most adult bicyclists. This kind of analysis is... for traffic, stress is necessary for evaluating
14 the bridge and additional evaluation must be made for the mixed traffic flow through the
15 proposed offset intersection at Newell and Woodland. Especially considering the distinct flows
16 of bicycle and automobile traffic.

17
18 Will the Preferred Alternative create a high-stress bridge crossing and high-stress intersection?
19 I'm sure that adding bicycle lanes to the bridge and removing the offset from the intersection
20 will reduce bicycle/automobile conflicts and reduce the traffic... level of traffic stress. Note that

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1 adding sharrow markings to the road, the only design feature proposed for bicyclist in the
 2 bridge plans does not change the level of traffic stress. It makes no significant difference. In
 3 fact, the wider lanes of the new bridge will probably tend to increase traffic speed and
 4 decrease... and then increase the level of traffic stress versus the current design. So, this kind of
 5 analysis is completely missing from the EIR and I hope you'll search... you'll include this. Thank
 6 you.

7

8 Chair Riggs: Sorry, a little rusty at this. Xenia Hammer.

9

10 Mr. Neff: [speaking from the audience] Was there a light that was supposed to go off? I didn't
 11 see any lights because [unintelligible]?

12

13 Chair Riggs: Ms. Hammer.

14

15 Ms. Xenia Hammer: Hello, Xenia Hammer, I live on Sharron Court in Palo Alto close to the
 16 intersection on Channing and Newell. So, first of all, the timing of this project is urgent. As
 17 Michel mentioned it was started in 2011, 7-years. This project is on a critical path for other
 18 flood control projects in Palo Alto. Pope/Chaucer Street Bridge, which is a major flood hazard,
 19 cannot be replaced until Newell is replaced. So, I urge you to proceed as quickly as possible to
 20 approve this project and move forward with construction.

-
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Second of all the project itself, the proposed alternative represents a reasonable, good compromise given all the community input that was given 5-years ago. People wanted a narrower bridge, that’s why the bicycle lanes could not be accommodated fully. It presents a reasonable compromise with multiple constituencies involved and again it needs to move forward as quickly as possible.

4
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Mr. Waldfogel, you asked the question about flow capacity of the creek at Newell. What is really critical to consider is this, the capacity of Middlefield bridge, which is upstream from Newell, is 7,500-cubic feet per second. And so whatever passes under Middlefield, the Newell Road bridge will be able to accommodate which is not the case today. So... and we’re not changing the Middlefield bridge so that is a key consideration here.

5

Thank you so much and again I urge you to move as quickly as possible with this urgent project. It would be completely unacceptable if Newell Road bridge were to delay the rest of the flood control work on San Francisquito Creek. Thank you.

6

Chair Riggs: Thank you. Thomas Rindfleisch. Did I get your name right? Is that (interrupted)

Mr. Thomas Rindfleisch: [unintelligible – spoke from the audience]

-
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1 Chair Riggs: My apologies.

2

3 Mr. Rindfleisch: Thank you for the opportunity to speak to you tonight. I'm Tom Rindfleisch, I
4 live in Palo Alto Crescent Park, just near Eleanor Pardee Park, and in 1998 our house was
5 flooded and I'd like to reiterate what Xenia has said. There was \$28 million in damage done in
6 1998. It came largely because the Pope/Chaucer Bridge does not have the capacity to pass the
7 water the flows under Middlefield. It's the 70-year flood but it's the largest flood of record in
8 the creek and so it is a very reasonable goal to try to accommodate that 1998 flow.

9

10 My main concern about the Newell Road bridge is that it be raised to provide the natural
11 capacity of the creek. I live away from that intersection but it seems to me that the Option Two,
12 Alternative Two, as a Locally Preferred Alternative is a totally reasonable alternative. It provides
13 access for first responders, it provides a compromise between traffic and bicycle, pedestrians
14 and I believe it offers the opportunity to control traffic in various ways with those kinds of
15 interventions over time if that becomes necessary.

16

17 It is really critical that you approve and move forward with this replacement. We are 21-years
18 out from the 1998 flood. I run the neighborhood association website or email list for Crescent
19 Park and every winter there is an incredible fear of is the next rain storm going to be one that
20 overflows the creek and that's because of Pope/Chaucer. We cannot replace Pope/Chaucer

7

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1 until the Newell Road bridge is fixed so please do move forward as quickly as possible. Thank
2 you.

3

4 Chair Riggs: Alright that will conclude our hearing and so we'll bring it back to the Commission.

5 So, I don't see any lights but... so if there are any comments, I'll entertain them now. Anybody?

6 Commissioner Waldfogel?

7

8 Commissioner Waldfogel: [unintelligible – spoke off mic] Awe, turn the microphone on. Thanks
9 to Staff, to Michel and Claire, for bringing this forward tonight. This is a project that's taken a
10 long time to germinate; 21-years since the flood. And it's time to move forward so we need to
11 move this forward. When I got the DIR [note -draft EIR?] a couple weeks ago I was pretty happy
12 about where we are. There were just a couple areas that I was concerned about and maybe you
13 can comment on them. The biggest issues that I saw were just about construction impacts. I
14 mean this is heavy construction in the middle of... between residential neighborhoods on both
15 sides of the creek and I saw references in the DIR [note – draft EIR] to things like Caltrans
16 nighttime construction noise standards to pile driving for footings etc. And I was just wondering
17 if you could comment on any of that? On what mitigations are in place? What you anticipate
18 construction hours to be? I mean just some of these nuts and bolts practical questions.

19

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1 Ms. Hodgkins: Absolutely. So, in looking through the draft EIR I do want to clarify that I think
2 there was perhaps a little bit of unclarity about the night time construction because we were
3 referencing some of Caltrans's standards which in some cases allow for nighttime construction.
4 But we would always use the most restrictive which in this case would be Palo Alto standards so
5 we are expecting nighttime construction on this project.

6
7 And in terms of the construction noise levels, we are anticipating that there was a significant
8 impact without mitigation. However, we've identified mitigation measures to reduce the
9 construction noise levels. The noisiest equipment that was identified was pile driving. Pile
10 driving was anticipated to have I think it was 95 or 96 DBA. Mitigation measures were
11 identified, I think they are outlined in Mitigation Measure NOI-3, to reduce noise levels to a less
12 than significant level. The noise barriers and some other mitigation that was indented to reduce
13 noise levels by 25 DBA. So, the anticipated noise level would be around 70 DBA from
14 construction noise and is there anything else that I can maybe add to that or?

15
16 Commissioner Waldfogel: No, I think that's great and I think that just I'm not quite sure where
17 it fits in process but just reading the DIR [note -draft EIR?] I was a little scared of these impacts.
18 I mean I don't want to do anything that delays the project but to the extent that we can clarify
19 what our stans is on mitigation, I think that's great, and I think that's... I just wanted to get
20 some of that on the record.

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1
2 Ms. Hodgkins: I think we can certainly look through the EIR and in the final EIR we can provide a
3 little bit better clarity about what our expectations are in terms of maximum noise levels and
4 nighttime construction or lack thereof.

5
6 Commissioner Waldfogel: Great, I think that's helpful. I mean I think that you actually identify
7 mitigations that the private sector should copy in a whole bunch of areas and you know we can
8 discuss that separately. But I think you've set a pretty good model for it and wanted to thank
9 you for that.

10
11 Then just one other comment, it's way outside my purview Michel but Design Build is a good
12 tool. I mean you have a really tight schedule here and looking at your sequencing on when
13 you'll generate CDs versus when you're going to bid. I wish you the very best of luck on keeping
14 this thing moving forward.

15
16 Ms. Jeremias: Thank you. I think that's something that we can look into as we proceed with the
17 project and talking with our consultants to see whether or not and with Caltrans as well for
18 funding. We would consider it.

19
20 Commissioner Waldfogel: Yeah, way outside my purview but I just wanted to mention it.

-
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Commissioner Summa: Are we going down the line?

Chair Riggs: We can do that. Yeah, sure, Commissioner Summa.

Commissioner Summa: Ok so thank you to everyone, for the Staff. I thought it was a really good report, very informative, and easy to read and also to the members of the public who came out tonight. Sorry, my phone. In contemplating the alternatives, I do think the Preferred Alternative is a good compromise especially considering the complexities of having to deal with multiple Cities and different agencies. And I think it's important to get this going and not delay it as we get crazier and crazier weather. So, my concerns were construction, which we just addressed, impacts for nearby neighbors in both Cities and also a concern earlier about that one side of the intersection that currently has such bad visibility. And that was also addressed so I'd like to listen to the rest of my colleagues and that's it's for now. Thank you.

Chair Riggs: Commissioner Templeton, do you mind if I... I'm going to kind of just take Chair's prerogative here real fast because I wasn't intending to structure things that way.

Commissioner Summa: Oh, I'm sorry.

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1 Chair Riggs: I'm just going to read that this is going to maybe a pile full of honey on this project
 2 and I want to temper it with some comments because I think that my questions were pointed
 3 earlier and they didn't have an answer. And so, I just want to bring up the... a couple... I want to
 4 highlight a couple things for my fellow Commissioners that I think should give them pause
 5 about this as a Preferred Alternative; is that we don't know anything about bicycle level... we
 6 don't know anything about bicycle and pedestrian Level of Service here based on what I've
 7 been told by Staff. And we don't know how this meets bicycle and pedestrian Level of Service
 8 and so my question is, is this the... I think I would challenge you all to think about is this the
 9 right alternative given Goal Number... Goal TR-6, Goal T-19? Does it prop up climate goals at the
 10 same time and I question whether or not two-way traffic does that in this case. And I think that
 11 pitting LOS against multimodal benefits in your little ratings chart is an easy pass. I don't think
 12 this would hold... this little tables holds up to any level of scrutiny and so I would pause to just
 13 to think about whether or not this is the correct alternative. I think that Mr. Neff hit the nail on
 14 the head. This is a 50-year investment and if we really are thinking about transportation in the
 15 City a little differently in 30, 40-years, a bi-directional one-lane flow could be completely
 16 appropriate in this location. It actually may be preferred in terms of directionality as we think
 17 about future traffic. So (interrupted)

18

19 Commissioner Waldfogel: (off mic) Can you explain how this is inconsistent with that?

20

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10

1 Chair Riggs: How this is inconsistent with (interrupted)

2

3 Commissioner Waldfogel: (off mic) This option, you said bi-directional.

4

5 Chair Riggs: So... well so the preferred option here is bi-directional two-lane traffic as opposed

6 to bi-directional one-lane of traffic which is Option (interrupted)

7

8 Ms. Hodgkins: No, that's not (interrupted)

9

10 Chair Riggs: One. They believe that the Preferred Alternative being put forward is Option

11 Number Two if I'm not mistaken which... I mean, to be honest from a structural standpoint it's

12 pretty irrelevant. From a traffic standpoint... and I think there are design solutions that weren't

13 considered in this case. So, I mean if we can suspend a pedestrian path off of the Bay Bridge,

14 why couldn't we consider that from a structural standpoint here? I mean I think that... so I just

15 want to... before we kind of bless this project, I think it's important to step back a little bit and

16 ask some bigger questions. Particularly as we're seeing... in the life cycle of this bridge we're

17 going to see a different type of travel; yielding behavior for vehicles. We're going to see

18 different vehicular patterns; we're going to see different expectations in terms of Level of

19 Service. So, I think it's important to condition that given the life cycle of this structure. I'll stop

20 there.

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Commissioner Waldfogel: (off mic) I don't understand this because isn't that a signalization option? [unintelligible]

Vice-Chair Alcheck: One-lane.

Mr. Lait: So, I'm sorry, if we can... Commissioner Waldfogel can you turn on your microphone.

Chair Riggs: This is... that is (interrupted)

Mr. Lait: We don't have your question on the record.

Chair Riggs: So, you're... I believe the question was is this just a signalization option? Yes, it likely is paint and signaling but the likelihood that we... that Public Works would go out and change the signals and restripe and redo the curbs after this is installed is de minimis.

Ms. Hodgkins: So, I just want to... for clarity are you indicating that alternative (interrupted)

Chair Riggs: I don't know that I need a response. I don't know I need a response from that.

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1 Ms. Hodgkins: Ok, I'm just trying to understand if what you are proposing is... was analyzed
2 under Alternative One.

3

4 Chair Riggs: I don't know what was analyzed under Alternative One because you told me that
5 you didn't have any bike/ped volume and you couldn't rationalize why a Class Three was
6 appropriate in this location.

7

8 Ms. Hodgkins: Well what we analyzed in Alternative Number One was a bi-directional bridge
9 with one-lane traffic.

10

11 Chair Riggs: Yeah but you only analyzed vehicular Level of Service.

12

13 Ms. Hodgkins: Ok.

14

15 Chair Riggs: I just want the Commission to think about that. Commissioner Templeton.

16

17 Commissioner Templeton: Hi, thank you all for your work on this. I was also interested in the
18 decision to eliminate the bike and pedestrian-only bridge. And it sounded like because we have
19 to replace the whole bridge to get the flow, that we needed to include vehicles? Was my
20 understanding or can you correct that?

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Ms. Jeremias: Sorry for the confusion. The reason that those options were eliminated is because they created a Level of Service increase. Level of Services were increased in pm over on University and East Crescent so they had an impact, the Level of Service, at two intersections. In addition to that, they also had an increase into the impact of the TIRE; the Traffic Infusion in Residential Environment.

Commissioner Templeton: Right.

Ms. Jeremias: Eliminating the vehicular access through Newell would create an impact... would create an increase on adjacent streets and thus impacting those in a negative [unintelligible].

Commissioner Templeton: Thank you for clarifying that and also, to the speaker's point about the changes since the bridge over 101 has opened. Do we know anything about if our traffic has changes or would that be included the study that Chair Riggs's is proposing?

Ms. Hodgkins: Are you asking about vehicular traffic or pedestrian?

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1 Commissioner Templeton: All the traffic. I mean do we know if the use of that bridge has
2 changed? The public speaker has suggested that maybe more bike traffic would be going there
3 now because of the new bridge access across 101.

4
5 Ms. Hodgkins: Alright I don't think we have updated data on that.

6
7 Commissioner Templeton: It would be interesting to find out. I can imagine that there might be
8 more traffic there as well but to be crystal clear and I want to ask this again. The bridge, it's
9 functionally obsolete no matter how it's used. The current bridge, right?

10

11 Ms. Jeremias: That's correct.

12

13 Commissioner Templeton: Because of the flow issues and the other uses?

14

15 Ms. Jeremias: It's functionally obsolete because it does not provide adequate access for
16 multimodal access. So, it does not provide designated, two-directional lane or a designated
17 sidewalk for pedestrians.

18

19 Commissioner Templeton: Ok and... but we don't want to leave it there and change how it's
20 used because it doesn't allow enough water through.

-
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Ms. Jeremias: That's correct.

Commissioner Templeton: Ok, great, and then the last thing. I really appreciate your chart here about the timeframe. You talk about it would start in spring of 2020, when do you think it... how long of a commitment... how big of a project is this?

Ms. Jeremias: I believe the project would take about a year and a half to complete.

Commissioner Templeton: Yeah and a half to complete and at any point during that year and a half, would it be available for bike and pedestrian use before vehicle use or it would be completely shut down for that entire time?

Ms. Jeremias: We would look at... depending on the scope of the work and the schedule. It is in an area that maybe we can open portions of Newell on East Palo Alto side and Woodland but I don't think we could open portions of the bridge. I don't know, we'd have to look at the schedule but based on the time of the season of the year as well.

Commissioner Templeton: Ok, great, thank you.

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1 Chair Riggs: Commissioner Alcheck [note -Vice Chair Alcheck].

2

3 Vice-Chair Alcheck: Ok, thank you both for your presentations and for the work you've done on
4 the report. Also, I just want to acknowledge that I appreciate the feedback from the members
5 in the community. Particularly with respect to the focus on alternatives modes and as well as
6 the neighbors that are here because this has been an exceptionally long process and the
7 stamina it has taken is noteworthy.

8

9 I also want to suggest that I thought that the Packet Page 28. This has been... I think I'm... just
10 feedback quickly for Staff. This is, I think, one of the more effective ways that we've been able
11 to hear comments from the community sort of aggregate in a very efficient way. So, I found the
12 comments that began on Packet Page 28 to just be organized well and I'm really happy that
13 that was possible so thank you.

14

15 I'm really familiar with the project. I vividly remember when Joe Terissy [note – sounds like]
16 who was the Senior Engineer tasked with shepherding this project in 2011; introduced us to it
17 and walked us through almost these exact four options. I don't think Joe Terissy [note – sounds
18 like] works here anymore, I think he retired, he was a very nice man. Seven years later we are
19 again reviewing but are essentially the same options and I feel the same way I did back then

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1 when I sat on this Commission. I would recommend that Council determine that this bridge be
2 rebuilt and done so in a way to meet the current multimodal standards.

3
4 While I agree, continue to agree that realignment is unnecessary, I strongly agree... and this...
5 it's as if we spoke beforehand which we did not. I strongly believe that the traffic signal... that
6 this should be traffic signaled controlled. I also think that the provided 2-foot wide sidewalks
7 are woefully inadequate. It says on... it says in the Packet... I'll just pull you to it but maybe this
8 is a typo.

9
10 Ms. Hodgkins: They'd be 5-feet wide.

11
12 Ms. Jeremias: Five... yeah.

13
14 Vice-Chair Alcheck: Page 78 says built Alternative Two... last sentence of the first real
15 paragraph of built Alternative Two on Packet Page 78 says 2-foot wide sidewalks would also be
16 provided. Is that a typo?

17
18 Ms. Hodgkins: I think that must have been an error. They're supposed to be 5-foot wide; I
19 apologize for that.

20

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1 Vice-Chair Alcheck: Ok, well that's good so let's not focus on the sidewalk then. I'll just continue
2 with my comment about the signaling. The feedback clearly demonstrates that the bridge's
3 current substandard width has had a real impact on speed. Everyone in the community that has
4 encountered this bridge will tell you that they slow down because to not slow down would
5 likely cause an accident. So, its narrowness is, in fact, the speed bump.

6

7 Chair Riggs: It's called a chicane.

8

9 Vice-Chair Alcheck: And we don't just need to rely on feedback here because I know I
10 frequently say that I don't love anecdotal evidence but we constantly review projects that are
11 traffic mitigating bikes, creating sort of narrower pathways. Right, we introduced large planters
12 on Hamilton and some of the roads off of Middlefield from downtown in an effort to sort of
13 create a more narrower pass through and that causes drivers to somehow slow down
14 subconsciously. So, I think it's safe to agree with a lot of feedback you received that took the
15 position that widening the bridge will have the exact opposite effect. Just to say that it will
16 likely encourage faster passage over the bridge.

17

18 At the intersection of Newell and Channing, this is several blocks away, there's a traffic signal
19 which has clearly been designed to moderate the speed of traffic; which is critical right because
20 this is an intersection where there's a Safe Route To School path, it's the gateway to Elenore

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1 Pardee Park, you're minutes from the Lucie Stern. So, it seems to me that if you had those same
 2 concerns at this bridge location, that installing a traffic signal and essentially bringing traffic to a
 3 stop right before it crosses that bridge in a very controlled way would really be the right
 4 decision. I think if Palo Alto finally addresses this terribly... it is terribly substandard bridge, that
 5 the Council should approve the installation of a traffic signal.

13
cont'd

6
 7 And I don't share the view that this should be a one-lane bridge, I think that we can
 8 accommodate bi-directional traffic. One of my concerns about... I think one of the things that
 9 we have to appreciate here is that we have a very complicated site and one thing that happens
 10 at this particular site is that there are times of day when the traffic really is predominately in
 11 one direction. And so, having traffic that can only travel in one direction by a signal would
 12 potentially really disrupt the pattern and that's one of my concerns. At 5 o'clock every day, for
 13 example, there's a line of cars that are trying to cross that bridge for an hour and to some
 14 extent, the stop sign doesn't help. But if there was a traffic signal in both directions and traffic
 15 could pass in both directions, I think that would be a Preferred Alternative than just one way.

14

16
 17 I think one of the things we really need to do though is we need to ensure the safety of
 18 pedestrians and bicyclist. And if the conclusion is that to accomplish all of these goals, we have
 19 to use sharrows. If that really is sort of the best tactic than I would support that and I would
 20 encourage Council to support that. Especially if now we have 5-foot-wide sidewalks, that seems

15

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1 a lot more adequate. I was a little concerned about the 2-foot typo but there are a lot of
 2 children who ride bikes over this bridge, there are a lot of adults who ride bikes over this, there
 3 is a ton of pedestrians that cross this bridge. And if there are individuals in the community who
 4 oppose the traffic light because I'm guessing it's a bit too cumbersome, that's kind of the point.
 5 We need to slow down this bridge, it's a neighborhood, and so I would encourage the decision
 6 makers to visit that space at multiple times in a day.

7
 8 And then lastly, I'll mention this just because it came up a couple times with respect to
 9 construction and I say this with the utmost respect for the men and women in the trade
 10 industry who do the quality work that we often see in a professional, timely manner. I would
 11 encourage the City not to select the same construction management company which is
 12 currently undertaking... which is currently taking their sweet, sweet time at the fire station at
 13 the other end of Newell. And I'm trying to put things in perspective here, we've lost some
 14 credibility. When we start to talk about a project that has this level of priority and it's taken 7-
 15 years and we're basically at the same presentation that I saw at the end of 2012; it's a problem.
 16 I sort of winced when you said that the project would be finished in and you gave the specific
 17 date because in my mind that is... there's no credibility in that statement. I'll just give you sort
 18 of the guidelines why I feel that way. Construction began on the fire station on the other end of
 19 this same road in January of 2018, it was supposed to finish in March of 2019, it's now almost
 20 July of 2019, drive by the fire station and there's no end in sight. It doesn't even look close and

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1 what is... I mean it's basically a tall garage. I mean it's so significantly less complicated than
2 what this bridge will be. So, I think we need to learn from those mistakes, I think we need to
3 start earning some credibility back, we need to be really careful about what expectations we set
4 because the community is paying attention, and they're frustrated and millions of dollars were
5 lost as a result of flood control. And so, I think we need to really work on that and that's it.

6

7 Chair Riggs: Before we move on, I want to clarify. I'm trying to make sense of one of the things
8 your suggesting. Are you suggesting a Variance on the Locally Preferred Alternative because the
9 Locally Preferred Alternative has no signalization?

10

11 Vice-Chair Alcheck: Yeah, I think that two-way traffic with the 5-foot wide sidewalks and
12 sharrows would work. I think that's a very viable option. I think that the failure to signalize that
13 intersection is ignoring the feedback and the takeaways that we've been presented with; which
14 is that traffic is likely to speed up significantly and make that path a lot more [unintelligible]
15 (interrupted)

16

17 Chair Riggs: Ok, I just want to get clear... I mean I think we might want to (interrupted)

18

19 Vice-Chair Alcheck: So, I wouldn't recommend Build Two without signalization.

20

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1 Chair Riggs: So, it's not... that's not a consideration in the pack we have in the EIR we have
2 before us. I just want to highlight that (interrupted)

3

4 Vice-Chair Alcheck: Yeah, I know.

5

6 Chair Riggs: And I actually think we might want engineering Staff to respond to that because the
7 signal... the traffic volume may not warrant a signal. So, there are specific code guidelines about
8 what warrants signalizations. So, we might want Staff to respond to that suggestion with the
9 volume that would warrant a signal and sorry, I'm just suggesting that that might be a
10 consideration because it might be illegal for them to suggest (interrupted)

11

12 Vice-Chair Alcheck: Here's what I'm trying to say.

13

14 Chair Riggs: A signal.

15

16 Vice-Chair Alcheck: Here's what I'm trying to say, there are tools that... there's like various... I've
17 seen signals that operate almost like stop lights. They're essentially red all the time and you
18 drive up to them and they turn green and then the second you cross they're red again. And I'm
19 not as familiar as you with the various tools there are but what I can tell you is this is virtually a
20 blind intersection. There are a ton of pedestrians that cross it, widening it feels like you're going

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1 to make a freeway on this neighborhood street, and there's an intersection at Channing and
2 Newell that I suspect gets virtually the same amount of traffic and that's signaled.

3

4 Chair Riggs: So maybe... can we just frame that as maybe Staff if you could, maybe after we're
5 done here, I think the sentiment there is traffic calming needs to be... is that what you're
6 saying?

7

8 Vice-Chair Alcheck: Yeah, I mean arguably a stop sign is traffic calming. The problem is that
9 stops signs are often rolled through and in a blind intersection that can be really dangerous.
10 You're coming... they're talking about potentially increasing height or maintaining the height.
11 The height is significantly higher than the road so when you come off of that bridge and you
12 come down, there's this... and some of the commenters mentioned it in their feedback. You
13 sort of approach at an angle, when you get to the top and you come down you suddenly see
14 that there might be somebody coming across. And so... and the traffic on your left when you're
15 coming from Palo Alto to East Palo Alto is so far set back from that stop sign that you don't
16 know if he's left his stop sign as you come over. So, all I'm suggesting is that some coordinated
17 effort of signaling would maybe go a long way to addressing the concerns.

18

19 Chair Riggs: Well if we could... maybe I should suggest that we... I think they hear the traffic
20 calming and there may be other mitigations. So, we don't have to be engineers up here so there

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1 may be other mitigations that get at your concerns aside from a traffic light with the Locally
2 Preferred Alternative. So, I just... I don't want you to... my suggestion may be just I want to be
3 clear this... what's under consideration tonight is not what you're describing or what's being
4 recommended by Staff is not what you're describing.

5
6 Vice-Chair Alcheck: No but look, the call to action wasn't pick one of the four. The call to action
7 was to provide feedback that they can use as they continue to work on this draft EIR. And what
8 I would suggest to you is that the majority of comments that we received from the community
9 that suggested that widen was potentially not favorable border on the idea that the wider it
10 gets the likelihood of the traffic speed rising rapid so I'm trying to be responsive to that.

11
12 Chair Riggs: So maybe... I would... just let me clarify, I would like to get to a recommendation to
13 Council tonight within the next 30-minutes so Commissioner Roohparvar do you have anything?

14
15 Vice-Chair Alcheck: [unintelligible]? Is this a motion... are you looking for a motion tonight?

16
17 Chair Riggs: We are looking for a recommendation on the Preferred Alternative.

18
19 Mr. Lait: So, thank you for the comment, we'll certainly take it. I mean this is a document that's
20 open for public review and we want to hear all comments that people have on the document.

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1 So, we'll take that comment about the signal and the traffic calming and we'll analyze or
2 respond to it. But yeah, we are looking for the Commission's sort of feedback or direction and a
3 vote would be helpful on the scenario that we're looking to advance and I think it was
4 Alternative Two that we're promoting.

5
6 Vice-Chair Alcheck: I guess what I'm trying to say is that I don't think it's incompatible to
7 suggest that one... it wouldn't be unacceptable and this may not carry but to suggest that Build
8 Alternative Two is acceptable to the Commission. However, there are concerns about whether
9 signalization would improve that build alternative. That's sort of what I'm saying and while that
10 may be not on the table, it's not such a stretch, that's all I'm saying.

11
12 Chair Riggs: If we could hear from Commissioner Roohparvar if you have anything. Don't feel...
13 free if you do, if you're a fish out of water.

14
15 Commissioner Roohparvar: [unintelligible]. Yeah, thank you for your presentation, just two
16 quick comments. Signalization to me seems a bit cumbersome. Is it going to still be a blind
17 intersection after you remove the vegetation? Didn't you speak about removing the vegetation
18 to help the visibility? How blind is it going to be after?

19

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1 Ms. Jeremias: It should not be a blind intersection. We are removing the vegetation and to
2 your question earlier is we will be raising not only the bridge by about a foot and a half but
3 we're also raising Woodland intersection right now and Newell. Both of them will be raised
4 approximately... right close to the creek...close to the bridge about 4-feet so that would create
5 the traffic movement that we would be able to see oncoming traffic. Providing also the...
6 eliminating the concrete flood wall would also allow some visibility through the bridge itself. So,
7 that gives us... I don't foresee that should be an issue, a concern.

8

9 Commissioner Roohparvar: Ok. I don't have any other questions.

10

11 Chair Riggs: Excellent. Commissioner Lauing.

12

13 Commissioner Lauing: Yes, a few. First of all, we're getting this pretty earlier in the EIR process
14 and I know somebody asked to get it early but we're not benefiting for more than three very
15 helpful public speakers. So, I wish it was a little bit later in the process. Does it usually take 9-
16 years to go from functional obsolete to this stage? Is that typical?

17

18 Ms. Jeremias: No, so it has... what happened is Caltrain does routine inspections on this bridge
19 and we've had inspections on the bridge down I think as early as 2010. As a result of all the
20 works that are necessary to improve and prevent some of the flooding that occurs in San

-
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1 Francisquito Creek, we had to make improvements downstream first. So, we had to get the
2 funds to make the improvements on the levy and also to build the San Francisquito Creek pump
3 station.

4
5 Commissioner Lauing: Ok, great, which is we also got a new golf course with that upstream
6 work on floods. The thing I wanted to understand and I think I do but it's so crucial I want to
7 make sure I do. That is what you're saying is that the traffic during the proposed project is going
8 to actually require City Council to make findings of overwriting considerations. So, two
9 questions, one is do we not have to do that as well?

10
11 Ms. Hodgkins: I'll let Sandy kind of add to this but no, I don't believe you don't need too.

12
13 Commissioner Lauing: Ok and then the second Claire, do I understand this right when I go over
14 to Pages in the supplemental... Revised Final Supplemental Traffic Evaluation Report. Is the
15 bottom line that we're going to have this E and F during construction but after construction it's
16 going to go back to better, I'll say but not perfect? Because when I try to read Pages 25 and 31
17 it looks like University Avenue and Woodland and University Avenue and Crescent are getting
18 much worse when you out to 2040.

19
20 Ms. Hodgkins: I'm not seeing Page 25, hold on. Which... of the Packet Page 25?

-
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Commissioner Lauing: No, I mean the supplement on traffic.

Chair Riggs: (off mic) That's for a different item.

Commissioner Lauing: No, this is the traffic about... right?

Chair Riggs: He's referencing the Item Number Two which is... sorry, Commissioner Lauing that's... those are separate (interrupted)

Ms. Hodgkins: That's the one he's referencing. Do you know what Page of the Packet you're on? Yeah, but which Page of the Packet are you referencing?

Commissioner Lauing: My question... we can forget that.

Ms. Hodgkins: Oh.

Commissioner Lauing: My question is, is the only concern that we have for traffic around the construction because it's going to get bad around construction?

-
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1 Ms. Hodgkins: Yes.

2

3 Commissioner Lauing: That's why we need this and then after that, we're good to go, is that
4 basically what you're saying?

5

6 Ms. Hodgkins: Essentially, yeah. The traffic under Alternative Two really would not change
7 under operations and however, during construction, it would be a significant and unavoidable
8 impact. I just want to note too in... there've been a couple people who have raised some ideas
9 of either a... of doing like an only pedestrian-bicycle bridge. If there is no vehicular traffic across
10 those significant and unavoidable, impacts would be permanent impacts.

11

12 Commissioner Lauing: So, the E and F goes away after construction?

13

14 Ms. Hodgkins: Yes, and I do want to note under Alternative One I think was the only alternative
15 that was analyzed which was the alternative that Commissioner Riggs spoke to or Chair Riggs
16 spoke too. That was actually the only alternative that was analyzed that it didn't result in
17 significant impacts because the intersections that were affected were operating at a pretty
18 good level. But it was definitely a notable impact on those... on some of the intersections under
19 Alternative One with the... if there was one lane of traffic and bi-directional. If that makes
20 sense.

-
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1

2 Commissioner Lauing: Yep.

3

4 Chair Riggs: (off mic) Signalized bi-directional [unintelligible].

5

6 Commissioner Waldfogel: I'm sorry, did you question... can I speak?

7

8 Chair Riggs: Yeah.

9

10 Commissioner Waldfogel: Did your question get answered on what the threshold would be to
11 establish signaling because what I feel like is there's been this huge community process and the
12 community process has led to an answer. And I could support this idea of bi-directional
13 signalized flow but it seems like it would be consistent with building Option Two if there's a
14 process that we could subsequently go through. So, do we understand what that process would
15 be? Is there a feasible process to do that?

16

17 Chair Riggs: So, I'm... well, I'm speaking based on my own... I'm not the City engineer which is
18 why I would encourage us not to engineer this from the dais. But my... from my own
19 background in this field the volume here I don't think warrants... normally warrants a signal.

-
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1 And maybe the engineers can... so volume has to be... I don't know what level to warrant a
2 traffic signal.

3

4 Mr. Lait: So, can we just answer the question?

5

6 Chair Riggs: Sorry.

7

8 Mr. Lait: Can I just have somebody come up (interrupted)

9

10 Chair Riggs: Yes, thank you.

11

12 Mr. Lait: Thank you.

13

14 Chair Riggs: I think that there's another... there's an embedded assumption. Alternative One
15 has a signal because of the bi-directional nature of the flow. It has too.

16

17 Commissioner Summa: It has too.

18

19 Mr. Rafael Rius, Traffic Engineering Lead: Yes, there is typically a warrant analysis which
20 evaluates the main street traffic versus the side street traffic. Without knowing the numbers off

-
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1 the top of my head, I don't know if the side street traffic would be high enough to warrant a
2 signal. And also, I just would add traffic signals are generally not suppose to be installed for
3 traffic calming purposes and in fact, they're usually not as good at traffic calming as an all ways
4 stop sign. I know the example you used where they rest in red, that's currently happening over
5 here at Waverley and Channing and we mixed results with that and a lot of resident complaints
6 to remove it and such but that's kind of anecdotal.

7
8 Commissioner Waldfogel: I guess would it be an option? So, let's say we build two, would it be
9 an option to go back and restripe for this bi-directional flow and add the signal? Would that be
10 a feasible option downstream if we decided to do that?

11

12 Mr. Rius: If you have the one-lane, the two-way, one-lane (interrupted)

13

14 Commissioner Waldfogel: Yeah so, I'm just trying (interrupted)

15

16 Mr. Rius: I think the width (interrupted)

17

18 Commissioner Waldfogel: What I'm just seeing if we could sort of bridge these comments into
19 a way to move forward.

20

-
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1 Mr. Rius: I think a two-way, one-lane option would require a signal probably and meet other
2 warrants or engineering judgment. That (interrupted)

3
4 Commissioner Waldfogel: Right but what would that process look like? So, let's say we build
5 Option Two, what would the process look like to then restripe and signalize per this Option
6 One? Because what I don't want to do is get in the way of this bridge process and I'd like to
7 know if we can make this decision later.

8
9 Chair Riggs: Yeah, I think it'd be... I mean I think I agree. I mean I think it would be great just
10 build it without stripes and decide in the process the directionality because I don't think
11 (interrupted)

12
13 Commissioner Waldfogel: (off mic) Is it possible to do that?

14
15 Chair Riggs: I mean I think that's an interesting question but even then... I think the question is
16 could... what would be the process to rewind?

17
18 Mr. Rius: Sure, Option Two has enough width for the bi-directional traffic simultaneously and
19 keeping that as Commissioner Alcheck [note - Vice-Chair Alcheck] suggested then we would

-
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1 probably do a traffic signal warrant analysis which looked at volumes and a bunch of other
2 things also.

3

4 Chair Riggs: Yeah you could do pretty generous Class One or Class Two bikeways plus... in 40-
5 feet plus a one-lane of traffic plus pedestrian, correct? 12-feet plus (interrupted)

6

7 Mr. Rius: [unintelligible](interrupted)

8

9 Chair Riggs: Yeah, 12-feet plus 20... basically 24 so you'd have more than enough space.

10 Commissioner Alcheck [note – Vice-Chair Alcheck].

11

12 Vice-Chair Alcheck: Yeah, sorry just quickly. Is the signal at Newell and Channing similar in its
13 resting red?

14

15 Mr. Rius: I don't believe that one rests in red but I could be wrong. I'm trying... but I would
16 (interrupted)

17

18 Vice-Chair Alcheck: I just have bad luck with it. No, I'm kidding.

19

-
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1 Mr. Rius: You might be correct; you know we don't look at that one as quite as often but I
2 would say there's probably a lot more volumes if you add up Channing and Newell versus
3 Newell alone.

4
5 Vice-Chair Alcheck: Yeah, I can appreciate that. I think, look, I'm... let me say this to be clear to
6 the fellow Commissioners who may be preparing a motion. I won't stand in the way of making a
7 recommendation for Build Two. I don't share your enthusiasm for one-way traffic that's
8 signaled controlled. I think that the community's preference for two-directions of traffic
9 synonymously represents feedback based on significant use. And I think that I'm not sure that
10 they've ever... with my exposure to this project, I don't know that the community ever really
11 seriously considered one-way traffic that was signaled controlled. I think the debate largely
12 centered on whether realignment provided significant benefits and the challenges with
13 realignment were actually so complex that I think we sort of turned out back on... the
14 community sort of turned away from that option. So, I think that I withdraw my suggestion that
15 I can't recommend an un-signalized intersection here; I could.

16
17 I understand what you were saying about sort of raising the road to meet the intersection and
18 you're essentially moving the stop sign or the idea of design is that you'll move the stop sign to
19 the end of the bridge. So, you would essentially wait on the bridge and from that position when

-
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1 you look left you have an unobstructed view as a result of the new retaining walls and the
2 raised roadway.

3
4 I guess look, the biggest concern that I have is with traffic calming and if that can be mitigated
5 in a way, even after the fact, if it's determined that this Build Two Alternative is not achieving
6 the goal of creating enough safety and the traffic calming mitigation options are available that
7 are not signaling and that we don't use signaling in the City typically for traffic calming then I
8 feel comfortable with that. Those responses are informative for me and I appreciate them.

9
10 And I guess my only other ask is that if we do have a... if the Commission does suggest or
11 recommend Alternative One which although not new feels like a new direction. I would request
12 or recommend that the Staff put together some sort of model, like animation, that
13 demonstrates how this would work because I think this is a complicated execution. I can't think
14 of a single other intersection in all of Palo Alto that operates this way; maybe you're familiar
15 with one. And I think that we would be remised if we didn't figure out a way to at least help
16 people understand what we were recommending if that's actually the path we take.

17
18 Chair Riggs: Commissioner Templeton and them Commissioner Summa.

19
20 MOTION

-
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1

2 Commissioner Templeton: Briefly, I'm not sure about how well received a signal might be given
3 the housing that we can see in the vicinity. I know that's been a source of lengthy discussion in
4 neighboring Cities so I just want to throw that out there as a caution.

5

6 However, I would like to make a motion that we, the Planning and Transportation Commission,
7 recommend to City Council Alternative Two and with strong encouragement to Staff to include
8 a better, more current information about bike and pedestrian Level of Service if that's possible.

20

9

10 Chair Riggs: Is there a second?

11

12 SECOND

13

14 Commissioner Summa: I can second that. I wasn't going to add the additional bicycle
15 information but it certainly can't hurt. And I also want to point out just so everybody knows it,
16 the Supplemental Traffic Report numbers the alternatives differently. So, make sure they know
17 it's... yeah and I... just for a comment, I would not... I do think, as a seconder, that this is a very
18 good compromise for a project that involves multiple Cities and multiple agencies. And I want
19 to see it go forward as soon as possible and I, in no way, would find a signalized intersection to
20 be preferable in this location. Thank you.

-
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Chair Riggs: Ok we have a motion and a second. Any other comments or discussion?

Commissioner Lauing.

Commissioner Lauing: Just briefly, from what we presented and what the work that's been done, there is going to be a little bit of collateral damage to this relative to for example what the gentlemen raised here but we are on somewhat of a timeline. We'd like to speed up this 9-year process. That said with the comments that Chair Riggs made if that's something that's substantive, the only option at this point I think would be to sort of simultaneously investigate that which might also include not voting on this tonight and that's going to its downside as well. So, I think maybe registering that other alternative should get another squint but that we go ahead with Alternative Two might be the better path.

Chair Riggs: Any other questions or comments? Seeing none. All in favor of the recommendations?

Vice-Chair Alcheck: Can you repeat (interrupted)

Commissioner Roohparvar: Can you repeat (interrupted)

-
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1 Chair Riggs: Commissioner Templeton would you make that one? Can you repeat your
2 (interrupted)?

3

4 MOTION RESTATED

5

6 Commissioner Templeton: Yes. I move that the Planning and Transportation Commission
7 recommend to City Council Alternative Two with the caveat that if better bike and pedestrian
8 level service information is available, that it be included.

9

10 VOTE

11

12 Chair Riggs: Is that clear? Ok, all in favor? All opposed? Carries 6-1.

13

14 MOTION PASSED 6 (Lauing, Roohparvar, Alcheck, Templeton, Summa, Waldfogel)-1 (Riggs)

15

16 Chair Riggs: I did not vote for that and in speaking to that I think there are three reasons that I
17 would... I don't think its... I haven't seen the information that fully justifies that being the Locally
18 Preferred Alternative; particularly with regard to three points. I think the LOS gains are
19 marginally based on the data I've seen. So, I know this is important from a watershed
20 standpoint but I'm not sure that the artificial acceleration of the timeline justifies what could be

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1 a unique and more safe treatment from a multimodal travel standpoint. I think there's a limited
2 disadvantage from an automotive standpoint but I think there are extreme disadvantages going
3 from a Class Two bike path to a Class Three share the road situation and then back to a Class
4 Two bike path. That's a dangerous maneuver for cyclists and this will invite conflict in this
5 location.

6
7 And then in line with that, I think that this is not consistent with the Transportation Element
8 and in particular regards to T-6 and T-1.19. It does not prefer multimodal; it does not prefer
9 non-automotive transportation. So yes, I hear the rest of the Commission saying that this is a
10 unique treatment but this is a unique intersection and I don't think that a two-way, bi-
11 directional, one-lane bridge that fully supported bicyclist and pedestrians would be
12 inappropriate in this location. Moving on.

13

14 **Commission Action:** Motion made by Commissioner Templeton, seconded by Commissioner
15 Summa; motion passed 6-1, Commissioner Riggs against.

- 16 1. Support Alternative #2,
17 2. Request that if more bicycle and pedestrian traffic information is available, that it be
18 included.

19

20 **Approval of Minutes**

21 Public Comment is Permitted. Five (5) minutes per speaker.^{1,3}

- 22 4. May 8, 2019 Draft PTC Meeting Minutes

23

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Letter T-1. Transcript from Palo Alto Planning and Transportation Commission Meeting, 6/12/19

Response to Comment T-1.1

Please see Master Response 2.

Response to Comment T-1.2

Please see Master Response 2.

Response to Comment T-1.3

Please see Master Response 2.

Response to Comment T-1.4

The commenter's support for the Project and Build Alternative 2, the Locally Preferred Alternative, is acknowledged. The Project is proceeding as quickly as possible.

Response to Comment T-1.5

The Project, under all build alternatives, is being designed to accommodate 7,500 cubic feet per second, which is the same capacity as Middlefield Bridge and the proposed replacement of Pope-Chaucer Bridge under the Upstream of U.S. 101 Project.

Response to Comment T-1.6

Please see Response to Comment T-1.4.

Response to Comment T-1.7

Please see Response to Comments I.20-2 and T-1.4.

Response to Comment T-1.8

Construction noise impacts and mitigation measures are described in Section 2.2.7, *Noise*, and Section 3.2.12, *Noise*. As described in these sections, noise from Project construction activities may intermittently dominate the noise environment in the immediate area of construction. Equipment operations associated with demolition and building activities would be a source of noise. In addition, the operation of heavy equipment would generate localized groundborne vibration during construction of the Project. Standardized Measures SM-NOI-1, SM-NOI-2, and SM-NOI-3 and Mitigation Measures MM-NOI-1, MM-NOI-2, MM-NOI-3, and MM-NOI-4 will be implemented to reduce construction period noise and vibration impacts.

Construction noise is controlled by Caltrans Standard Specifications Section 14-8.02, *Noise Control*, and local noise standards (see Standardized Measures SM-NOI-1, SM-NOI-2, and SM-NOI-3 in Section 2.2.7.4, *Avoidance, Minimization, and/or Mitigation Measures*) and, with adherence to Standardized Measures SM-NOI-1, SM-NOI-2, and SM-NOI-3, these potential impacts would be reduced. This potential impact would be further minimized through implementation of Mitigation Measures MM-NOI-1, MM-NOI-2, and MM-NOI-3, which would ensure that construction noise does not cause excessive increases in ambient noise levels at any noise-sensitive land uses. These

mitigation measures would provide advance notice to nearby residences, designate a disturbance coordinator to handle resident complaints, and install noise barriers to further attenuate noise.

In addition, implementation of Mitigation Measure MM-NOI-4 would reduce groundborne vibration impacts to a less-than-significant level under CEQA by ensuring via vibration monitoring that vibration levels are below the applicable thresholds, and that any vibration-related complaints are addressed. Mitigation Measure MM-NOI-1 would also involve a survey of the existing residences to determine if these structures could be damaged by pile driving activities. If it is determined that structures would be damaged by pile driving, an alternative method of construction would be required.

As specified in Standardized Measure SM-NOI-3, local noise standards from the Cities of Palo Alto and East Palo Alto will be followed, including when determining construction hours. Nighttime construction would not occur.

Response to Comment T-1.9

Please see Master Response 2.

Response to Comment T-1.10

The commissioner's support for a bi-directional, one-lane bridge is acknowledged. Build Alternative 2 provides the most benefits in terms of vehicle, bicycle, and pedestrian circulation, while also minimizing environmental impacts and taking past public comments into consideration. The criteria used to evaluate the build alternatives in the alternatives analysis were developed in coordination with City of Palo Alto staff, Caltrans, and members of the public. The commissioner states that the Project may not be consistent with climate goals and may not be consistent with policies TR-6 and TR-19. It is not clear what policies the commissioner is referencing. Comprehensive Plan Goal T-6 of the City of Palo Alto Comprehensive Plan Transportation Element states "provide a safe environment for motorists, pedestrians, and bicyclists on Palo Alto streets." The Project would further this goal, as well as climate goals, by adding dedicated roadway width along the bridge for bicycle and pedestrian travel and improving visibility for all modes of transportation. The City of Palo Alto *Comprehensive Plan Transportation Element* Policy T-1.19 states "provide facilities that encourage and support bicycling and walking." The Project would replace an existing bridge that does not include dedicated bicycle and pedestrian travel lanes with a bridge that includes these features. Therefore, the Project is consistent with these goals and policies.

Response to Comment T-1.11

Please see Master Response 2.

Response to Comment T-1.12

The commissioner's preference to not realign the bridge is acknowledged. The commissioner's support for a traffic signal is also noted. Due to the low traffic volumes along Newell Road Bridge, a traffic signal for a two lane, bi-directional bridge (as exists today and as proposed under Build Alternative 2) is not warranted at this time. Traffic signals would be required for a single-lane, bi-directional bridge, as proposed under Build Alternative 1.

As clarified during the public hearing, the pedestrian sidewalk is proposed to be 5 feet wide on each side. A second option being presented to Caltrans would place raised mixed-use paths on either side

of the bridge, allowing the curb to act as a barrier for cars from both pedestrian and bicycle traffic. In both options, the vehicular traffic lane width would be 10 feet with 9 feet dedicated to pedestrian and bicycle traffic on each side of the bridge.

Response to Comment T-1.13

The intersection of Newell Road and Woodland Avenue immediately at the north end of the bridge is controlled by a four-way stop. With the reconstructed bridge, the stop sign would be visible approaching the bridge. Speeds cannot be high within feet of the stop sign. Please also refer to Master Response 1.

Response to Comment T-1.14

It is acknowledged that the commissioner does not support a one-lane bridge but does support a bi-directional, two-lane bridge with a traffic signal in each direction. Please see Response to Comment T-1.12.

Response to Comment T-1.15

The commissioner's support for sharrows is acknowledged. Please see Response to Comment T-1.12.

Response to Comment T-1.16

Please see Master Response 1 and Response to Comment T-1.12. The commissioner's support for a bi-directional, two-lane bridge with a traffic signal in each direction is noted. The intersection of Newell Road and Woodland Avenue is immediately at the north end of the bridge and controlled by a four-way stop. With the reconstructed bridge and roadway profiles on Newell Road and Woodland Avenue, the stop sign will be visible approaching the bridge, and there will no longer be the substantial drop in elevation between Newell Road and Woodland Avenue that creates visibility issues. Speeds cannot be high within feet of the stop sign. The use of signals as stop signs (permanent red) is not recommended.

Response to Comment T-1.17

It is noted that the commissioner would support Build Alternative 2, the Locally Preferred Alternative, without a signal.

Response to Comment T-1.18

The comment does not raise a specific issue on the substance of the Draft EIR/EA. City of Palo Alto staff will be responsible for maintaining future improvements if traffic situations warrant any further changes.

Response to Comment T-1.19

The commission recommended Build Alternative 2. Therefore, preparation of a model or animation showing how Build Alternative 1 would operate is not necessary.

Response to Comment T-1.20

Please see Master Response 2.



Newell Road Bridge

Community Meeting
June 18, 2019

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8 Mr. Brad Eggleston, Director of Public Works: Well, why don't we get underway now. Thanks,
9 everybody for coming to this meeting on the Newell Road Bridge Project. I'm Brad Eggleston.
10 I'm the Director of Public Works in Palo Alto. This is a project that's been many years in the
11 making and I see many faces here of people that I recall were involved back in 2012 when we
12 were first talking about this project. Due to community concerns about this project and
13 following those meetings in 2012, we made a commitment to do a full Environmental Impact
14 Report that would consider multiple alternatives for the project. Obviously, since we're in 2019
15 now, it's been a very long process, but we're pleased to now have a draft EIR that's been
16 released and that does a full analysis of a number of different alternatives for the project. I just
17 add that moving forward with the project now, is even more important than before because
18 we're at the point where the Downstream Flood Protection Project, the Highway 101 to the Bay
19 Project, has been completed and now the Newell Road bridge is the thing that could potentially
20 hold up the Pope/Chaucer bridge replacement from being completed. As I think some of you
21 know the Pope/Chaucer bridge is actually the most important choke point in the creek right
22 now in terms of potential flooding. So, Michel Jeremias is here from Public Works as well and
23 she'll give a presentation on the project and the draft EIR. Then following that we'll forward to
24 hearing your comments and I also wanted to mention that we have Claire Hodgkins from Palo
25 Alto Planning Department with us and also Chantal Cotton-Gaines and Sylvia Star-Lack from our
26 transportation group. So, with that, I'm going to turn it over to Michel for presentation. Thank
27 you.

28 Ms. Michel Jeremias, Public Work Engineering: Thank you. My name is Michel Jeremias as Brad
29 stated. I'm here to give you guys a big overview of the EIR that was put in front of you. The EIR
30 was released on May 29th, comments – we're talking comments through July 30th. Today's
31 presentation basically gives you a little overview of what we're proposing to present. As many
32 of you already know, Newell Road bridge is located over San Francisquito Creek, this is the
33 creek. For most of you who are very familiar with the project don't need this information but I'll
34 just state it for the fact for others who are new to the project, new to the area. What we're
35 looking at for Alternative Three and Four, they talk about the realignment of the bridge. It's in
36 relations to Newell Road here and Newell Road here in Palo Alto and this is East Palo Alto side.
37 So, the plans in the back of the room depicted the different versions for the realignments for
38 Alternatives Three and Four. So, purpose and need, why are we doing this? As stated, the
39 bridge is narrow, it does not accommodate two-way traffic or provide designated sidewalks for

1 pedestrians. There is limited visibility due to the existing trees and you can see those. I think
2 this has been discussed in the past, on the left-hand side you can't see the line of sight as you're
3 crossing into the Woodland Avenue intersection. The other purpose and need for this project is
4 the bridge reduces the flow, the capacity for San Francisquito Creek. Many of you guys were
5 present at our last meeting with the upstream project that discussed why all of these projects
6 are connected and what we've done. So, the photo on the left-hand side shows the flooding
7 that many of you are familiar with. The exhibit in the bottom right, I borrowed this from JPA
8 and it's an exhibit that you've all seen in the past. Construction of the Newell Road bridge
9 would increase the capacity underneath to 7,500. This is consistent with the upstream project
10 so the flows that would past between El Camino, as you see here, through Pope/Chaucer which
11 is currently rated at 5,800-cfs. to Newell. These two would increase to 7,500. Projective
12 objectives, so this is the items that we looked at. Why – what are we going to do with the
13 purpose and need and what are our goals? How do we measure the goals? How we build
14 something that accommodates everyone's goals? This was a product of our previous meetings
15 that we've been having since 2012. So, our goals were no significant number of vehicles in
16 adjacent streets and that would mean University Avenue, that would mean Embarcadero. So,
17 we want a bridge that doesn't increase traffic to adjacent streets. The bridge should also not
18 have a substantial number of added vehicles on Newell itself. So, what we looked at was an
19 analysis in the EIR that does not increase traffic onto Newell Road itself or increase the speeds
20 that pass over Newell. Project objectives, in looking at another aspect of the objectives besides
21 traffic is creating multi-modal access. So, the safety across – increase – improving safety across
22 the San Francisquito Creek on Newell Road. The alternative in front you, this is Alternative Two,
23 shows that the project will create not only sidewalks, two 5-foot sidewalks on both sides, but it
24 would also widen the travel lanes to 14-foot wide. I want to go into kind of a little bit of detail
25 on this slide. As we see in the back and I suggest this is maybe an opportunity later as you come
26 up with your comments, we can discuss these. I realize now as a matter of fact when we look at
27 this slide, there might be some confusion involved here. I think there might be concerns might
28 be related based on what project was presented to you in 2015 and the actual width of the
29 bridge then. You will see also the concerns with the striping that's shown on the slide. So, I
30 want to kind of overview, give you – previously when we had this project come through, we
31 were proposing two, 16-foot wide lanes and two, 5-foot sidewalks. We're now looking at a
32 reduction of 4-feet. We've gone from 16-foot wide to 14-foot and this is a result of the
33 comments. We heard your comments and we've addressed right – tried to address them. In
34 addition, when we created this visual simulation for your use, we tried to provide you with a
35 feel of what the roadway would entail. It's difficult to see here but if you can kind of gauge it
36 based on the buildings across on Woodland. We are proposing to raise the roads, all the roads;
37 Newell in Palo Alto; Woodland in East Palo Alto; and Newell the approach. This would be to
38 accommodate the higher flows and also to get rid of the vertical clearance. The profile on the
39 road that exists currently that creates that unsafe feel, nature, to it would be eliminated. We
40 would be raising the roads and making this accessible to everyone and you would be able to see
41 it. We also – what we don't have on this slide and forsake – and this will apply to all our
42 projects is landscaping. For the purpose of the slide, to depict the raising of the road which you
43 can see here based on the existing fence, it – we would provide some trees, some buffer but
44 that's something that we would look at, at a later point. We would consider putting in

1 alternatives based on accommodating our neighbor's needs. Making sure that we coordinated
2 with the adjacent neighbors. One of the big issues that we've heard based on a recent meeting
3 is the striping. I know the concerns about sharrows and the bike lanes eliminating. This kind of –
4 this doesn't give you guys a clear picture of what we're looking at. Currently, we're looking at
5 two possible options when it comes to striping. One option would be is using the lane line and
6 extending it over the bridge, providing a symbol or arrow with a bike symbol underneath that
7 would go across so that would create a bike lane. We would take the 4-foot wide lane and use
8 10-feet and then have a 4-foot shoulder basically. That would create the safe feel that you need
9 for cyclists. The other alternative in which we've also talked about is having sharrows. So, it's
10 this bike symbol but with a green background and the two arrows with additional signing that
11 we would need; share the road signs. Those are the two different options that we would
12 consider. What's in front of you may be confusing and I apologize if that's confusing but I'm
13 here to try to provide you with clarity, to answer any questions you may have, and to look at
14 what we have and how we make progress. So, project history, so many of you guys where here
15 from the very beginning. We started in 2012 when we began the community engagement and
16 that was the time that we proposed a wider bridge as you've indicated. That bridge was not
17 only 16-foot wide lanes but it was also – it was set to accommodate a 100-year storm event. It
18 would be raised higher than what we're proposing to do now. In addition to that, one of the
19 alternatives that we considered then was a full realignment. As I showed you in the earlier slide,
20 we would be matching the Newell Road between the Palo Alto and East Palo Alto but through
21 the process, the community engagement, we went – resolved through – wrong button. We
22 resolved to proceed with a full EIR analysis so we're following the process. It's a long process
23 and I realize it's taken us a long time to get here but we went through the EIR process in order
24 to identify alternatives that would be considered on the process. We identified eight
25 alternatives, on the slide I will show you the list of alternatives that were considered, and there
26 were only two of those alternatives that were considered based on a screening criterion. A list
27 of items that we identified in goals and objectives that we wanted to make sure we met for all
28 the alternatives. The screening analysis was determined, we have findings that were done in
29 February 27, 2014. I invite you guys to visit our Newell Road page – website where you might
30 be able to find access to all of this information. Lastly, in June 22nd, 2016 when we presented all
31 the project alternatives. So, here are all of the alternatives that were considered for the eight
32 projects. You will see the screening criteria appears in the very top row. Starting with the
33 column, 100-year storm event, at that time our objective was to make sure that all our projects
34 would they meet the 100-year storm event. So, they would all meet so all the projects were
35 advanced. The Level of Service, what is the Level of Service? Would it impact the Level of
36 Service? Would any of these alternatives have an impact and yes, we determined that removing
37 the bridge or having the bicycle and pedestrian bridge would create a Level of Service on
38 adjacent streets. So, this there would be an increase, this is a decline for us. Bicycle with
39 emergency access, the same. The one-lane bridge – so I want to give you – this is in asterisk.
40 This one, it does create an increase but it's not significant. We proceeded with the next two
41 alternatives and you note that there is no increase in the Level of Service for these alternatives.
42 So, if we were to build these – with either of these alternatives there were no increase. The
43 TIRE impact was our third criteria, I'm not sure if I need to state that but for the record, you
44 guys, this means Traffic Infusion on Residential Environment. So, how do the residents feel

1 based on what is the impact to the streets by – with any of these alternatives? Again, the first
2 three alternatives created an impact, the last four did not. Again, we proceeded with all these
3 alternatives and compared them and determined which ones we'd advance. On my next slide,
4 we'll talk about the ones that are moving forward. I want you to take a look at these slides and
5 these are basically depicted in the back of the room we have for each of these individuals are
6 shown. My next visual simulations where we describe each one. So Alternative One, there's a
7 lot of things happening in this alternative and I want to make sure that everybody sees all the
8 components to this. On this alternative we would have a 60-foot wide lane so it's bi-directions,
9 its traffic controlled, so we would have a total of nine traffic poles, a total of 15 traffic signals.
10 On East Palo Alto side, so this is Newell looking into Palo Alto side, we would have traffic signals
11 to direct traffic making sure that you knew when oncoming traffic was in movement.
12 Unfortunately, we don't have enough room on this screen to show you the additional traffic
13 signals that would be needed but this is one of the impacts. Alternative Two, again this is the
14 one you've seen before. The impact are similar to what we've discussed, we're raising the road
15 to accommodate additional flow and to also remove that vertical profile that's present. What's
16 not shown on this slide again, it goes back to the trees, and the signing and striping. So, again,
17 same thing would apply. Alternative Two is located on the same alignment, Alternative Two is
18 two 5-foot wide sidewalks and two 14-foot wide lanes. This is the same dimension that would
19 apply to Alternatives Three and Four. The only difference with Alternatives Three and Four is
20 the realignment of it. So, Alternative Three would look at – you see its Newell Road on the Palo
21 Alto side, it's shifted 30-feet to the north on Woodland. So, the intersection would align slightly
22 to the left on this but Alternative Three, one of the concerns would be as it's shifting, it's
23 getting closer to neighboring properties, and it's also shifting the raising of the road to the
24 intersection. So, the area that we would be working on would be slightly higher, the area of
25 impact in the creek would be slightly higher because we would be shifting away from the current
26 alignment. Alternative Four, so here you see the full realignment that we tried to depict for you
27 the full realignment of the road. Same dimensions as the previous exhibit with the only change
28 is that the alignment now shifts closer to Newell on the East Palo Alto side. So, this is what we
29 would look at traffic wise. We eliminate not only the line of sight because the trees are gone
30 but you could see full through traffic. All of these alternatives, Two, Three, and Four, are all
31 stop traffic signed controlled. So, we wouldn't have any traffic signals but all of them would
32 have the same stop control. So, why we chose Alternative Two and I think many people have
33 asked the question. I want to thank the people who have provided me with comments so far.
34 So, here's a number of reasons why we chose and these aren't all of the reasons but these are
35 several of the ones that we've identified. As I mentioned previously, there's least disturbance to
36 the number of trees and the creek impact on Alternative Two, least impacts to the residents. As
37 we're shifting the alignment closer to Newell on East Palo Alto side, we're also creating higher
38 retaining walls. So, part of that project is if we retain in its current alignment, the retaining walls
39 remain smaller and it's changed and that's a big impact in you're a neighbor and if you're a
40 resident adjacent to this project. One of the new operations in maintenance, so Alternative One
41 requires power. We would need to have fiber and power underneath the streets in order to
42 provide power for the traffic signals. We don't have Palo Alto Power in East Palo Alto so we
43 would have to obtain a meter from PG&E and placing it in East Palo Alto to control it. In
44 addition, Alternative Two is Palo Alto and East Palo Alto are all in agreement. This is a project

1 that has least amount of impact, it meets what are objectives that we described. Environmental
 2 Review Process, so this is a list and I also made copies of this presentations for anybody who
 3 wanted one, but this is a list of identified key players involved in this project. This isn't all the
 4 key players; we definitely have been involved with Santa Clara Water District and we've been
 5 working with the JPA directly. We will continue to do that but for the point being here is that
 6 Palo Alto is the lead agency when it comes to this CEQA component. We do have a process that
 7 we need to follow and that's through Caltrans for NEPA. So, that's something separate and
 8 that's something that we will still continue as part of our schedule. This depicts our current
 9 schedule. Currently, we're in this public draft comment period. We've gone through all these
 10 processes and what we're estimating, our best-case scenario based on what we've had and
 11 based on the information that's currently available is this is our objectives and we're hoping to
 12 start construction spring of 2020. I realize this is a best-case scenario, but we've been waiting
 13 long enough and I want to advance the project. I want to make sure that we complete the
 14 project. There's a lot of hurdles in front of us, but we need to get through them and we're going
 15 to work together to accomplish our goals and setting this plan in place so we can start
 16 construction. I know a couple of questions have come up in the past regarding coordination
 17 with JPA and we are in a process of coordinating it. There are ways that we can build both
 18 projects concurrently if need be; where we would build Newell Road bridge and they would
 19 build a creek widening improvements. So, with that, I'm bringing this up for comments and
 20 discussions and also to recognize that we do have another meeting coming. One's scheduled
 21 for tomorrow and another one is going to be in a month from now.

22 Mr. Eggleston: Thank you, Michel. So, we have the microphone set up here to hear your
 23 comments. You know we're welcome to answer – happy to answer questions, to hear your
 24 general feedback and thoughts about the project as well. One of the primary intentions of
 25 these meetings we're having though is that since we have this draft EIR released, to get
 26 comments specifically about things that pertain to the Environmental Analysis. So, that we can
 27 respond to them when the final EIR is eventually released. Trish. We're not going to ask Trish
 28 (inaudible)

29 Ms. Trish/Speaker 1: I appreciated it. My question is with the capacity planned under the bridge; will it
 30 include enough free (inaudible) to satisfy FEMA to get people out of needing to pay for flood
 31 insurance? **1**

32 Mr. Eggleston: I don't believe that it will have enough capacity at this time to get people of
 33 flood insurance because of the fact that we're no longer planning for 100-year flood protection
 34 in these projects; for both Pope/Chaucer and the Newell Road bridge. In our discussions with
 35 the Joint Powers Authority, I believe the objective is to build the Pope/Chaucer bridge with
 36 similar capacity and then hope to have other instances of upstream detention that would
 37 essentially reduce what the 100-year flow rate is. So, that then eventually, these bridges could
 38 be providing 100-year protection.

39

1 Ms. Trish /Speaker 1: Thank you.

2 Speaker 2: Hi, I didn't hear the finish date, could you tell me what the finish date is on this
3 bridge?

2

4 Mr. Eggleston: So, these are not hard dates as Michel mentioned. This is sort of a best-case
5 scenario; if everything went as smoothly as it possibly could and we were able to begin
6 construction in 2020. I believe we're saying about a year and a half for the construction. That
7 would essentially take us toward the end of 2021 and again, that's a best-case scenario.

8 Speaker 2: The reason I ask is because I live on the other side of the bridge and we've been boxed
9 in for the last 4-years. I was just wondering how much longer we're going to be because they
10 put the new creek in – the bridge for the new creek, then they put the overpass in on the other
11 side of the freeway. So, we've been boxed in quite a while so I was just wondering how much
12 longer we're going to be boxed in because I don't have a problem with the bridge? I just want
13 to know how long we're going to be boxed in?

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14 Mr. Eggleston: Can I ask that we have people come up to the microphone? It's not an issue for
15 Michel – any of us to take the microphone around but many of your questions are probably
16 ones that Michel will have the technical answers too.

17 Speaker 3: So, I'm a little confused. When did the objective for it not to be a 100-year floor
18 compliant happen?

3

19 Mr. Eggleston: It happened about 3-years ago when the Joint Powers Authority was planning
20 for the capacity for the upstream project.

21 Speaker 3: Ok, so if you go back, there's a slide in here where you talk about the 100-year
22 capacity. That. So, how come it says yes, all the way down in the first column when...

3
cont'd

23 Mr. Eggleston: I think there was a little nuance missing from our description of this slide. So,
24 we're trying to combine here – as Michel was describing, back in essentially the 2013-2014
25 timeframe, we went through an alternative screening process and several public meetings.

26 Speaker 3: I know that.

27 Mr. Eggleston: At the time, when we had the full list of eight, one of the criteria in which we're
28 using was that it would provide 100-year protection.

29 Speaker 3: So, what I recommend is you update that slide and put the current capacity because
30 what you're counting on is JPA building catchment up by El Camino and further upstream of
31 that; which may or may not happen. So, I think it's fair to the residents who do worry about the
32 flood to put the real answer on this which is get – if in 2021, when the bridge is supposable

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cont'd

1 completed, what will the actual reality be without knowing – without counting on the upstream
2 improvements, which may or may not happen right? I mean building those big catchment areas
3 takes money, it takes times, there’s a huge, I’m sure, EIR that they have to go through, the JPA
4 will have to go through. Please update this with the – kind of the crux. Can you go back to that
5 other slide?

3
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6 Mr. Eggleston: Can I add one bit of context there?

7 Speaker 3: Sure.

8 Mr. Eggleston: Which is just that if the 100 – if those improvements aren’t made upstream, the
9 100-year flow rate could never make it down to Newell Road bridge because the capacity in
10 other places won’t except the 100-year flow.

11 Speaker 3: I understand.

12 Mr. Eggleston: Ok.

13 Speaker 3: So, there’s a nuance. You could put an asterisk, then you could explain that, but this –
14 if I were looking at this, solely at this, I’d say oh, well that’s great because all of the alternatives
15 meet the 100-year storm protection. For those people who live near the bridge, that’s kind of
16 important. Unfortunately, the story is more nuanced but you need to explain that in some way
17 shape or form. You can’t just put yes and assume that we agree with it. The other one that I –
18 the LOS impact, again that was – what did the LOS stand for? Level of Service?

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cont'd

4

19 Mr. Eggleston: Intersection Level of Service.

20 Speaker 3: Ok, so when it has – when you say impact, yes, that means it degrades the Level of
21 Service?

4
cont'd

22 Mr. Eggleston: Correct.

23 Speaker 3: Ok, alright and then TIRE Impact, so TIRE stands for?

4
cont'd

24 Mr. Eggleston: Traffic Infusion on Residential Environment.

25 Speaker 3: So, who did you ask or because part of your – what you said was we surveyed
26 residents.

4
cont'd

27 Mr. Eggleston: No, I don’t think that’s what we said.

28 Speaker 3: Ok.

1 Mr. Eggleston: What the TIRE Impact – so there have been multiple traffic studies that were
2 done as part of this project where traffic engineers calculated that. What we were meaning to
3 say is that an increase in TIRE here is something that residences would notice in a negative way
4 in terms of an increase in traffic on their street. So, if there’s a yes under TIRE impact it means
5 to say that that’s going to cause a significant impact that residents would notice.

6 Speaker 3: But in some of these the traffic would decrease so I’m not sure how TIRE impact is a
7 yes for removing the existing bridge when there would be no more traffic.

4
cont'd

8 Mr. Eggleston: Because it reroutes the existing traffic onto other streets that would see a
9 significant increase in traffic.

10 Speaker 3: Ok, it reroutes it to Woodland and University, it reroutes it to Woodland and
11 Embarcadero.

4
cont'd

12 Mr. Eggleston: That’s all in the traffic studies.

13 Speaker 3: But so I think the challenge I have is again, TIRE impact is not well – you don’t describe
14 from whose perspective are you assuming TIRE impact because for the residents that live near
15 the bridge, removing it, yes there is a TIRE impact and there would be no traffic. So, you have to
16 I think clarifying what that means and to whom. So, who’s the constituent population that
17 would see the tire impact? I think the last question I have is by how much are you raising the
18 roadway of the bridge and by how much is the grade changing between the intersection at
19 Edgewood and Newell to the bridge?

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20 Ms. Jeremias: So, the increase in elevation on the bridge, we’re raising it by about a foot and a
21 half, the bridge itself. On the intersection of Woodland and Newell, closest to the approach,
22 about 4-feet. It’s a significant increase and it would increase – and it would shift depending on
23 the alternative that we choose. Some of the retaining walls as we move further away from the
24 bridge in either direction; 2-feet; 1-feet; insignificant.

25 Speaker 3: Now, my last question is probably more philosophical. If one of these alternatives
26 causes an increase in traffic, what is Plan B for that? Or if it causes increased vehicular speed,
27 what is the Plan B that the City would do for that? I don’t expect an answer; I want to see a plan
28 for that.

5

29 Mr. Eggleston: Thank you.

30 Speaker 4: The bridge looks nice and everything but my concern is it looks like from the pictures
31 in the back that most of the cars – there’s going to be no car – I can hold it. Most of the parking
32 on the East Palo Alto side is going to be removed. You already removed it on the Palo Alto side,
33 so you’re taking away the parking along Woodland close to the bridge, is that correct?

6

34 Ms. Jeremias: No, that’s not correct. Again, the visual simulations are intended to show all sorts
35 of things and I realize – depending on your concerns they depict different things. Ultimately,

1 when the bridge is built you will only lose one parking space on the East Palo Alto side on
2 Woodland. That is actually based on – we’ve measured the length of parking available on
3 Woodland and accounted for 24-foot parking spaces – 24-foot long parking spaces. Those
4 parking spaces are not marked so we’d be best guessing on how many cars are parked. Since
5 there’s no designated parking space, it’s really hard to say how many park there on a regular
6 basis but we would not – it would be decreasing with either – on any of these alternatives by
7 one parking space.

8 Speaker 4: Even with the widening of the bridge?

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| cont'd

9 Ms. Jeremias: Even with the widening of the bridge, yes. A decrease is also providing sidewalks,
10 providing means to get across the street for pedestrians.

11 Speaker 4: And where it increases, is that on the East Palo Alto side or the Palo Alto side? The
12 raising of the road.

7
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13 Ms. Jeremias: The bridge itself would be raised by a foot and a half. The rest, Woodland and
14 Newell – both Newells, East Palo Alto and Palo Alto, closer to the bridge is about 4-feet so both
15 sides.

16 Speaker 4: So, it’s not going to be – you’ll be able to see?

7
| cont'd

17 Ms. Jeremias: Yes.

18 Speaker: Because otherwise, that could cause a problem with all the bikes and things.

7
| cont'd

19 Ms. Jeremias: Definitely, we’re making improvements for the line of sight to allow for vehicles,
20 motorist drivers and cyclists to see each other.

21 Speaker 4: Alright, thank you.

22 Speaker 5: Hi, I have a question regarding drains, so we understand that the street will be raised,
23 and there will be retaining walls going – abutting the property that we saw. So, will there be
24 additional drains that the City will build?

8
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25 Ms. Jeremias: If your concern is on private property, we can talk about this afterward.

26 Speaker 5: I mean on the street.

8
| cont'd

27 Ms. Jeremias: On the street, there is existing drains on the street so we would maintain existing
28 drains.

29 Speaker 5: Just existing, ok.

8
| cont'd

30 Ms. Jeremias: Correct.

1 Speaker 5: The second question we – you did say that the traffic light options aren't for Option
2 One and...

9

3 Ms. Jeremias: Correct.

4 Speaker 5: ...because we have to go through PG&E and a lot of stuff. Is that a cost prohibition or
5 is that just time prohibition? That's why it's not presented on the other options.

9
cont'd

6 Ms. Jeremias: It's an option that would be required to allow bi-directional traffic on a narrow
7 street so a traffic signal would be required. The cost that I tried to show or depict on this was
8 the operation maintenance; long term.

9
cont'd

9 Speaker 5: Long term, ok, thank you.

10 Speaker 6: Thank you, good evening. I have a few questions. My greatest concern is about the
11 retaining walls proposed for the East Palo Alto side. I assume that if the streets are raised 4-
12 feet, then said walls would be 4-feet high, is that correct?

10

13 Ms. Jeremias: Yes, the retaining walls would be to hold up the street.

14 Speaker 6: So, that means say, at the corner of Woodland and Newell, there would be a 4-foot
15 high wall and pedestrians would not be able to go from the sidewalk to the street there? How
16 would people walk from the sidewalk to the street?

10
cont'd

17 Ms. Jeremias: So, we would have an accessibility compliant path and that's something that we
18 have met with the neighboring property owners to discuss. I think we've got a couple of the
19 neighbors here present and we have made meetings with them to talk about impacts to their
20 properties.

21 Speaker 5: So, it might be stairs or ramps there?

10
cont'd

22 Ms. Jeremias: Accessibly compliant, we have to have ramps or if necessary -- if otherwise in
23 some cases we don't have stairs; there's no need for stairs, it's just a ramp.

24 Speaker 5: Ok and I didn't understand in the preferred alignment, your preferred alignment, is
25 the – was it decided the non-realignment meaning Newell Road would be in the same place or
26 was it the partial realignment is favored?

11

27 Ms. Jeremias: The locally preferred alternative keeps it in the existing alignment.

28 Speaker 5: Ok and what is the cost total of the project?

12

1 Ms. Jeremias: I believe we're currently looking at about an \$8 million cost for the construction
2 and this is very early stages of design.

3 Speaker 5: Ok, thank you very much. I have always, from the beginning of this project, been
4 confused why does the City of Palo Alto Staff so insistent on widening the roadway much wider
5 that it needs to be? Why does the Staff keep saying over and over again that that's safer? That's
6 just ridiculous. We know, in Palo Alto, that narrower streets are safer streets because people
7 drive slower and in the case of this bridge, we know that the fact that you have poor visibility
8 results in safety. You can't see around the corner so you have to drive really slowly and that's
9 safer. So, everything that the Staff has said about safety is completely opposite of the truth.
10 What's up with that? Why do you say false things? Why do you say safer – wider is safer?

13

11 Mr. Eggleston: I'm going to treat that as a rhetorical question.

12 Speaker 6: But I mean I think this is actually a question minus the rederick which is why is it – why
13 did you pick Alternative Two instead of Alternative One because Alternative Two is wider?
14 What is the safer advantage of having two lanes? I think that is a legit question. Can you
15 address that?

13
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16 Ms. Jeremias: Sure, so Alternative One, aside from the traffic signal, it does cause a delay. So,
17 cyclists would have to wait on for the traffic light to change before they were able to use the
18 bridge to get across. We picked Alternative Two because we're looking at overall of the impacts
19 it would cause. It's less impacts to the neighbors immediately adjacent, less impacts to the
20 creek, less impacts to neighbors that are using this to get across the bridge, it's a preferred
21 option because of the least amount of impact.

22 Speaker 5: Why would you say there's a least amount of impacts if the street is wider which
23 encourages people to drive safer? What...

13
cont'd

24 Mr. Eggleston: Our traffic engineers and traffic studies did not determine that this bridge, in the
25 configuration that we're talking about being a little bit wider, would cause people to drive
26 faster. We would...

27 Speaker: (inaudible-spoke from the audience)

28 Mr. Eggleston: As I said that before, we would want to address these things with traffic calming
29 measures if they became a – speeds on the bridge became a concern.

30 Speaker 5: So, the narrowness of – sorry, one more question, what's the width in Alternative One
31 of the roadway where you call it a one-lane?

13
cont'd

32 Ms. Jeremias: It's 26-feet wide so one, 16-foot wide lane; two, 5-foot wide sidewalks.

33 Speaker 5: So, cars to drive in two directions on a 16-foot wide lane you need traffic signals when
34 now it's the same width roughly?

13
cont'd

1 Ms. Jeremias: They would go in different directions so it’s got to be something that needs multi-
2 model access and it proves improved safety. So, the concern is allowing traffic to move in two
3 directions, we need traffic signals to allow traffic to move based on when they have a green and
4 to stop when they have a red.

5 Speaker 5: But traffic moves in two directions with an 18-wide roadway as it is with zero safety
6 problems for everybody.

13
cont'd

7 Mr. Eggleston: This was an alternative that was suggested. It came out of the community
8 meetings that we had in 2012 and 2013 and that’s why we studied it.

9 Speaker 5: My final comment is that two things make me very – three things make me very upset
10 about that. Retaining walls being built outside of my apartment so I can’t walk from the
11 sidewalk to the street. Number two, the bridge is wider, totally unnecessary. The narrowness of
12 the bridge is what makes it safe and that is universally understood by people all over the world.
13 Modern transportation experts everywhere understand that narrower streets are safe streets
14 because you have to drive slower in those streets and this is the thing really confounding about
15 this. The Staff has been saying for years, this isn’t true. The third thing is cutting down all the
16 beautiful trees there. That -- we have Eucalyptus trees and there’s a very old tree on the right
17 side of that image in the upper left which is in bloom right now and you’re going to kill that tree
18 so that you can have 28-foot wide roadway for no reason. It’s a beautiful tree, all the trees are
19 beautiful there, and I don’t like this picture of a wide-open sky with no shade. I walk or bike
20 across this street almost on a daily basis and I feel that the configuration of the bridge as it is, is
21 ideal, and would like to see a narrow bridge rebuilt narrow. Thank you.

14

15

16

22 Speaker 6: I think it’s great to raise specific concerns and I think people want to get a little bit of a
23 deep dive so maybe – with some of these questions including the last one. So, I’m actually
24 going to follow up to dig a little bit deeper. It helps if you go a little bit more technical and
25 maybe we need to get a traffic engineer in here, but I – well let me -- so I have a few questions
26 and I’ll make a little bit of commentary at the very end. East Palo Alto Staff and Council, would
27 they get behind Alternative One? Would they consider that an acceptable alternative?

17

28 Mr. Eggleston: We haven’t asked them that question. We...

29 Speaker 6: Because it says – yeah, go ahead.

30 Mr. Eggleston: We’ve met with East Palo Alto’s Staff and went over the impacts that have been
31 identified in the studies of the various alternatives. They agreed with us that Alternative Two
32 was preferred.

33 Speaker 6: Did they have any significant concerns about Alternative One?

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cont'd

34 Mr. Eggleston: We – I don’t remember them being voiced.

35 Speaker 6: Ok. That would be one of my concerns is that if we went with Alternative One, East
36 Palo Alto government might not get behind it and that it would just delay the project. My next

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1 question is when you go from one-lane which has to alternate going in one direction or the
2 other which is Alternative One, it's one of the options that's being studied, to Alternative Two
3 which is in each direction, you studied whether that would increase the speeds on Newell
4 Street in Palo Alto which is a Safe Route to School and also if it would increase the traffic flow.
5 Can you tell us what your engineers found when they did those studies? Can you summarize
6 that for us?

18

7 Ms. Jeremias: So, I don't have the traffic study with me but – and unfortunately, we don't have
8 our traffic engineers present today, but from what I recall, what the study shows there's no
9 significant increase.

10 Speaker 6: In traffic or speed?

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11 Ms. Jeremias: That's correct.

12 Speaker: Ok.

13 Ms. Jeremias: That was our original criteria when we looked at how to create a project, what
14 alternatives to consider, those were the items that we were looking at.

15 Speaker 6: Ok, thank you and then I had just a little commentary. I was – we – myself and my wife
16 bought our house in '97, a few months before the '98 flood. During the '98 flood, 400 houses in
17 Palo Alto had over the floor flooding. When you have over the floor flooding, you're looking at a
18 remodel, it's hundreds of thousands of dollars, you have to move out of your house for 9-
19 months, you lose a lot of the things that are really important like your photos and stuff like that.
20 A lot of the houses on the Palo Alto side are in the flood zone and at risk and we've had – we
21 had one instance where we almost overtopped since then. It was actually right – just about to
22 overtop on – so for a lot of us, the ability to get increased flood protection is really important.
23 So, we have an alternative that keeps the same – the exact same configuration, single-lane but
24 adds sidewalks, or the configuration that they have proposed still does have the same
25 alignment which is essentially a traffic calming because from East Palo Alto you have to turn a
26 corner and stop and stuff before you go. So, I would ask the people who are maybe against the
27 project or – just to consider that a lot of us, this flood control is really important to our house so
28 thank you.

19

29 Speaker 7: So, I have a couple of questions and they're mostly procedural, not substantive. I live
30 about 2-blocks away from the bridge and the information that I get is usually after the fact;
31 which means you guys hold these meetings, you generate documents, make decisions, and
32 then the community, in general, finds out about it after the fact. My first question just goes to
33 this particular meeting, how was notice sent out to the community about this meeting?

20

34 Ms. Jeremias: Do you want to talk about noticing? So, we have Claire Hodgkins, our project
35 planner, so we can talk about some of the noticing that went in advance of the EIR.

36 Speaker 7: So, do you guys all work for Palo Alto – the City of Palo Alto?

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cont'd

1 Ms. Jeremias: Yes.

2 Mr. Eggleston: Yes.

3 Speaker 7: You do too?

4 Mr. Eggleston: Yes.

5 Ms. Jeremias: Do you want to talk about the EIR noticing and I'll talk about this meeting?

6 Ms. Claire Hodgkin, Project Planner: Sure, yeah, so for the EIR noticing, we sent out email blasts
7 to everybody who had signed up and then noticing was sent for meetings at – once the EIR was
8 released. It was also noticed in the Palo Alto Weekly which is our standard that we – I'm sorry,
9 the Palo Alto Daily which is where we typically notice for release of a draft EIR. Noticing is being
10 sent out for each and every meeting that we're having individually.

11 Speaker 7: Ok, so we have never received notice of any of these things...

12 Ms. Jeremias: Are you...

13 Speaker 7: ... and we're literally 2-blocks away.

14 Speaker: (spoke from the audience off mic) Put your email on that.

15 Speaker 7: Yeah, we put it down...

16 Ms. Jeremias: Yeah, please give us your email because we have lists of emails that we received
17 from all the community meetings that we've had in the past. So, we did a mass e-blast to that
18 email address, it's been now a couple of times.

19 Speaker 7: For this meeting? For this meeting?

20 Ms. Jeremias: For this meeting we had one go out, I want to say on Friday of last week? We had
21 one go out Friday of last week.

22 Speaker 7: To who?

23 Ms. Jeremias: To everybody on that email...

24 Speaker 7: The reason I'm asking – let me preface my question, the reason I'm asking is because
25 I've spoken to some of my neighbors who have put their email on the list and they have not
26 received notice. I think just looking at the comments coming here, I mean communities are
27 going to agree and disagree. That's fine and we can debate that, but City Councils and City
28 Planning Commissions have a fiduciary duty to their members, to the community. A critical
29 component of that fiduciary duty is the duty to inform, to keep them aware of all of these
30 things. Do you think you've done that effectively?

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1 Ms. Jeremias: I apologize if you haven't received the email but we definitely send out notices,
2 I've been present on the last four upstream project presentations, and in each of those we
3 announced Newell EIR was released. We also...

20
cont'd

4 Speaker 7: To who?

5 Ms. Jeremias: To individuals present, to anyone who was watching or watched the video. We
6 also did noticing based on the list that we have. If your name is not on the list, please sir, put
7 your name on – there's a sign-up sheet in the very entrance of the door here.

8 Speaker 7: Were letters sent out?

9 [many people started speaking from the audience]

20
cont'd

10 Speaker 7: There were letters that were sent out?

11 [many people started speaking from the audience]

12 Speaker 7: Ok, so how did you decide who received these? We didn't receive that.

13 Ms. Hodgkins: I do want to clarify, if you are living in East Palo Alto it was...

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cont'd

14 Speaker 7: No, I...

15 Ms. Hodgkins: Are you in Palo Alto?

20
cont'd

16 Speaker 7: I'm in Palo Alto, yes.

17 Ms. Hodgkins: So, it was sent to a 600-foot radius which is the standard practice.

18 Speaker 7: Well, I understand that's the statute but the – but compliance with the statute
19 doesn't necessarily mean you're complying with your fiduciary duty to inform. You can't say
20 because we follow it, the law is clear on that. So, I mean what's frustrating is – and I, to be
21 honest with you, I don't really know the substance of this at all so I can't really ask questions
22 about that. But what is very clear is you guys are not informing the communities about these
23 meetings and these policies and things. Everybody hears about it after the fact and if procedure
24 is not followed properly, legally, then the whole thing breaks down. You can see it in front of
25 your eyes that it's breaking down. So, has the Commission had internal discussion about this?
26 I'm assuming they have. What's your duty to inform? Who do you need to inform? What does
27 the law require? All of these things, all of these meetings have to had occurred, correct?

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28 Mr. Eggleston: I'm sorry, I'm not sure I understand your question. Has the Commission had this
29 discussion?

30 Speaker 7: Whoever's job it is to make sure that the community is informed, I would like to know
31 when those discussions were made – happened, when the policies and the procedures were

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1 put in place, and what legal considerations were clarified in making those decisions? If you
2 haven't done that, you haven't even lived up to your fiduciary duty as City Council.

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3 Ms. Hodgkins: Well, I can say that all of our requirements are outlined in our Code and they're
4 also under the CEQA Guidelines, NEPA Guidelines, and so we have followed the practice that
5 we've been following for years and years and years of the standard 600-foot radius is what we
6 mailed too. We make every effort to reach out in other ways to community members through
7 Neighborhood Park Associations and...

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cont'd

8 Speaker 7: Ok but who made that decision? That's all I'm asking because...

9 Ms. Hodgkins: Our City Council -- at whatever point and time, our City Council made that
10 decision. Our Code is through ordinances through our City Council.

11 Speaker 7: So, is there a City Council meeting that happened that discussed ok, these are our
12 fiduciary and legal obligations in putting this whole plan together. We need to make sure that
13 we comply with statutes and rules and all of these things. I'm assuming that meeting occurred
14 and there are notes...

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15 Ms. Hodgkins: It did many, many, many years ago I'm sure. Our Code has been the same as long
16 as I've work for the City.

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cont'd

17 Speaker 7: But specific to this project.

18 Mr. Eggleston: No.

19 Ms. Hodgkins: No, we don't have hearings specific to a project and how we notice for a project,
20 it's outlined in our code how we notice for a project.

21 Speaker 7: So, who decides then the procedure that you're going to...

22 Speaker: (spoke from the audience off mic) (inaudible) special case, he wants more
23 communication (inaudible)

24 Speaker 7: Well no, I...

25 Speaker: (spoke from the audience off mic) For example, (inaudible) in the 600-feet, it has been
26 discussed at Council, at the Planning and Transportation Commission, they've been having
27 meetings for years on this. If you read Next Door, if you're on (inaudible)(crosstalk)

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28 Speaker 7: No, I agree, I'm just asking the question. I don't know the answer.

29 Speaker: (spoke from the audience off mic) (inaudible) you would have gotten notice. There's
30 been a bazillion emails (inaudible). It's just that you're not (inaudible) so stop, put your name
31 down and you'll (inaudible).

1 Mr. Eggleston: So, I think we understand your question, we'll take that back and discuss it.

2 Speaker 7: Fair enough.

3 Mr. Eggleston: I've asked Claire to describe it. I mean that has been the standard practice but I
4 totally understand if you feel like you and your neighbors are not getting the information you
5 need.

6 Speaker 7: We literally have no idea, to be honest with you and I – the only reason I found out
7 about this meeting is I got home from work at 5:45, my wife told me that one of our friends told
8 them about it or we would have had no idea.

9 Speaker 8: (spoke from the audience off mic) I think (inaudible) the first meeting at the
10 Community Center, it was very -- like the whole neighborhood that there...

11 [many people started talking at once from the audience]

12 Speaker 8: (spoke from the audience off mic) ...and everyone knows about it. (inaudible)

13 Speaker 7: I think there's a procedural problem here that you guys have to address. I'm not sure
14 how you address it but you're not keeping your community informed of this and that is a
15 requirement, that is a legal requirement so.

16 Speaker 8: So, I will say I did receive the notice of the meeting but I've lived on Newell Road since
17 1996 and one things I've noticed is that the traffic, both in quantity and in speed, has
18 dynamically increased. They did put a stop sign at the corner of Hamilton and Newell a few
19 years ago and I will tell you when I walk my dog in the morning a significant percentage of
20 people just blow through that stop sign. So, the concern from a lot of this, this configuration
21 like this is really going to increase both amount and traffic and speed of traffic. So, my question
22 to you is what are the factors that are being considered if that eventuality takes place and are
23 there going to be follow up studies even after this is built to address those concerns? Similar to
24 the gentlemen behind me who had brought it up.

25 Mr. Eggleston: That's a fair comment. I don't know that in the EIR right now there are plans for
26 future monitoring of traffic, but certainly – Chantel, did you want to weigh in?

27 Ms. Chantel Cotton-Gaines, Office of Transportation: Good evening. I'm Chantel Cotton-Gaines,
28 I'm with the Office of Transportation as well as the City Manager's Office, and in terms of the
29 ongoing monitoring, within our transportation office we are always looking at different things
30 happening throughout the City. So, if we are aware of issues or with newer projects, we are
31 doing monitoring; maybe 6-months or 12-months later in terms of trying to find out some of
32 the differences and if additional traffic calming is needed. So, when a project is finished that
33 doesn't necessarily mean that we won't consider future traffic calming. I think that answers
34 your question.

35 Speaker 9: No, not really.

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1 Ms. Cotton-Gaines: Oh, well, yeah, the ongoing monitoring I think was part of the question.

2 Speaker 10: (spoke from the audience off mic) I think what we'd like to hear is (inaudible)
3 absolutely part of the (inaudible) monitoring and we really should be – even a few times the
4 police department they'll tell you, its literally within minutes that a police officer is at the
5 corner of Edgewood (inaudible). So, I think it's real concerning that we don't have (inaudible).

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cont'd

6 Ms. Cotton-Gaines: Sylvia works with our Safe Routes to School team so she can also provide a
7 little more context.

8 Ms. Sylvia Star-Lack, Transportation Programs Manager: Hi. Sylvia Star-Lack, Transportation
9 Programs manager, I am surprised to hear about the speeding problem, and we currently have
10 a 311 system where you can call me and tell me that there's a speeding issue or a stop – non-
11 compliance issue. We are happy to go out and do an observation and do what we can. I mean
12 we can – we do traffic in calming in neighborhoods all – ongoing. It doesn't have to be after or
13 before a particular project. So, yes, I also oversee the Safe Routes to School Program so I'm
14 always looking out for the kids. So, I'll give you my card and we can have a conversation.

15 Speaker 11: (spoke from the audience off mic) So, I think it's fair to say that there are a few of us in
16 the community who are worried about the traffic impacts. So, it would be really helpful if the
17 City actually put a plan together for if there is a negative impact, what would you do? Not like
18 we might do this or we could do this but I think it would be really helpful to get us on board
19 with saying (crosstalk)...

22

20 Ms. Jeremias: I'm sorry, we're recording this and I'm not sure if our microphone is actually
21 picking it up. So, if you don't mind, please come to the microphone, and there is a gentleman
22 who's been waiting patiently for you so I want to make sure...

23 Speaker 11: No, no, please, let him and then I'll go.

24 Speaker 9: No problem.

25 Ms. Jeremias: Thank you.

26 Speaker 9: Could we go to the slide that has the preferred alternative and your rational around
27 that, please. This, so least disturbance to existing trees and creek bank. So, you're saying the
28 number of trees that are going to be removed under the alternative for the wider bridge
29 alternative than the single lane has less disruption from a tree/greenspace impact than the
30 single bridge?

23

31 Ms. Jeremias: Actually, the tree impact between the single lane and the Alternative Two is the
32 same.

33 Speaker 9: So, that's not an accurate statement then. It says least.

34 Ms. Jeremias: So least – yes, least impact compared to Alternative Three and Alternative Four.

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cont'd

1 Speaker 9: No, no...

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cont'd

2 Ms. Jeremias: Those...

3 Speaker 9: ... least means relative to all of the other alternatives and that's not a factually
4 accurate statement.

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5 Ms. Jeremias: Ok, so it has the same impact as Alternative One...

6 Speaker 9: Right...

7 Ms. Jeremias: ...and it has less of...

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8 Speaker 9: ...so it's not least.

9 Ms. Jeremias: ...an impact than Alternative Three and Four.

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10 Speaker 9: But definitionally it's not least, correct?

11 Ms. Jeremias: Ok.

12 Speaker 9: Ok and least impact on adjacent residents. So, your traffic study indicated that you're
13 alternative would reduce a tributary road onto University Ave. and East Crescent but increase
14 traffic on Edgewood and Newell. Yet, you seem to accept that alternative sort of shifting
15 current traffic into our neighborhood as a preferred alternative. Why is that?

24

16 Ms. Jeremias: We – so the impact to traffic is if we do not build a bridge...

17 Speaker 9: No, no, no, that's not my question. Your EIR traffic analysis states that under your
18 preferred alternative there would a reduction of traffic at the East Crescent and University
19 Avenue intersection and an increase at the Newell Road and Edgewood intersection. That's
20 unacceptable to me because this is, you're shifting traffic out of a current corridor into our
21 neighborhood which is not acceptable.

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22 Ms. Jeremias: Do you want to? Go ahead.

23 Ms. Cotton-Gaines: Hello and I'm messaging my traffic engineer as well just because he had a –
24 he's in another part of the community this evening...

25 Speaker 9: Sure.

26 Ms. Cotton-Gaines: ...so my apologizes that he's not here, but the information that I'm receiving
27 from him is that the difference between the travel time of taking Newell and going through the
28 Crescent Park neighborhood versus going University is pretty negligible for the average traveler
29 as long as University traffic is moving. In the cases where University traffic does back up, it's not
30 a significant savings of time for someone to take this Newell route and so the expectation
31 based off the traffic study is that it would not divert that University traffic to the Newell...

1 Speaker 9: But that’s not what your draft EIR traffic report states.

2 Ms. Cotton-Gaines: Ok.

3 Speaker 9: I’ve read it and that’s why my concerned about it.

4 Ms. Cotton-Gaines: Understandable, I will definitely pass that information along.

5 Speaker 9: And then under Alternative One, is the traffic LOS under an acceptable level to the City
6 of Palo Alto? The single-lane bridge to be clear, the LOS under that, is it an acceptable level to
7 the City of Palo Alto?

8 Ms. Jeremias: I think if we go back to the table.

9 Mr. Eggleston: Can I ask where you’re referring to the Level of Service?

10 Speaker 9: In your draft EIR report that has the Level of Service at ever intersection laid out in it,
11 my question is under all intersections impacted by this, under Alternative One so the single-
12 lane of vehicular traffic with pedestrian and bike lanes as well, is the LOS an acceptable level of
13 the City of Palo Alto?

14 Ms. Jeremias: So, looking at the table that we’ve identified, so looking at Alternative One, the
15 Level of Service, the impact did not meet the threshold for significances. So that answers...

16 Speaker 9: Right, so it is acceptable.

17 Ms. Jeremias: Yes, yes.

18 Speaker 9: So, then why isn’t that being advocated with a strong, strong view? You weren’t here
19 when all of this came done in 2012 and 2013 so we’ll give you a hall pass. Jim Keene, who we
20 spent a lot of time with, George Reese [phonetics] who we spent a lot of time with, everybody
21 has turned over under that time period, and so the people who understand the significance of
22 traffic in the neighborhood. All of these alternatives solve flooding and so I couldn’t agree more
23 with my neighbor, flooding needs to be solved. All of these alternatives solve flooding issues so
24 now we’re talking about the alternative causes and consequential impact which are significant
25 to those of us who live in the neighborhood. We want to preserve it as quiet and safe as it
26 possibly can be and building a two-lane super bridge into Palo Alto is not that. The only way to
27 do it is to maintain what is there today which is a single-lane because everybody has to stop.
28 You can’t see, it’s the safest bridge because people have to inch across it today. So, the only
29 way to maintain a traffic calming measure is to maintain a single lane of traffic in either
30 direction. By your own analysis, it is an acceptable level under the LOS, it’s acceptable under
31 your TIRE analysis, it’s acceptable under everything, and so I’m baffled as to why it’s not
32 something that you’re supporting.

33 Speaker 12: (spoke from the audience off mic) It doesn’t solve the flooding.

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1 Speaker 9: It does solve the flooding, it absolutely so, please...

2 Speaker 12: (spoke from the audience off mic) (inaudible)

3 Speaker 9: No, no, single-lane, Alternative One. They all solve the flooding.

4 Mr. Eggleston: So, I'd have to go back and look at the details of the different factors and
5 impacts we looked at. I understand what you're saying about the TIRE impacts and Level of
6 Service. There was a question earlier I think that Hamilton Hitchings's asked about what East
7 Palo Alto might have said about Alternative One. We didn't specifically discuss it with them
8 other than it being in the room at the table and looking at the impacts of the different
9 alternatives, but it is the case, just to remind you, that we ultimately do have to have the
10 agreement of both Palo Alto and East Palo Alto.

11 Speaker 9: Completely understand but East Palo Alto shouldn't be wanting to push more traffic
12 into our neighborhood either. So, there isn't anything objectable...

13 [Many people started speaking from the audience at once off mic]

14 Speaker 9: ...about the objectives that we're trying to accomplish. Pardon me?

15 Speaker 13: (spoke from the audience off mic) I said East Palo Alto has certainly take all the
16 Dumbarton Bridge, all the traffic has been pushed into there all along (inaudible). It's horrible.

17 Speaker 9: Understandably, it's horrible everywhere and that's what we're trying to preserve that
18 it doesn't get worse. When you start to build...

19 Mr. Eggleston: I'm just trying to...

20 Speaker 9: Sorry and a final comment is your traffic analysis, looking at it, the 24/40 impacts of
21 only a 2 to 5 percent increase of traffic is ridiculous. It doesn't contemplate – East Palo Alto did
22 not eliminate the option in their 30-year Plan of building an eight-story, multi-use complex in
23 that sliver of East Palo Alto between the creek and Highway 101. So, there's absolutely no
24 analysis relative to that. Their 5 percent increase is less of an increase than we've experienced
25 over the last 15-years in our neighborhood and so it's – your traffic analysis seems highly
26 specious given that. There's just a reality of what we experience day to day and the only thing
27 that we can control is the size of that bridge. So, the moment you increase it, as everybody
28 knows, speeds will increase, traffic flows will increase because it will always go to the least
29 common denominator, and if that's going to relieve stress then that's where it will come.
30 Maintaining a single-lane of vehicular traffic is critical.

31 Speaker 14: So, I just have actually a process question as well and I maybe fall on the category of
32 not having heard about these meetings previously, but I'm – without saying it's your fault, I just
33 haven't heard about them. Did you already talk – I don't want to have this be a repeat for
34 everyone in the audience if you already went through it. Actually, I sort of do what it to be a
35 repeat. Can you just say what the process – because it feels like there's a lot of strong feelings,

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1 I'm personally am for the single-lane alignment as it today and it feels like a lot of this comes
2 down to the hard job you have a weighing different objectives and hearing from a whole set of
3 people who might weight those different objectives differently. It feels, through this
4 conversation, that it is not sufficiently explicit how important one objective is versus another
5 objective. So, I would love to have a chance to engage on this more. Can you just talk through
6 and apologizes if you already did it once, but could you just talk through what the process is
7 from here on out and the opportunity we'll have to give input?

8 Mr. Eggleston: Sure, so this is a community meeting here in Palo Alto for anyone to attend.
9 Tomorrow night there's a meeting of the East Palo Alto Public Works and Transportation
10 Committee so we'll have another presentation, we'll hear more comments. As I mentioned
11 before, at all of these meetings we're taking comments on the draft EIR that will be going back
12 and reviewing the comments and making sure that we address in a Final EIR. Then the next
13 meeting after that, I – is it July 18th, Michel? There's a meeting of the Palo Alto Architectural
14 Review Board on July 18th and then theoretically, depending on how that meeting goes, the
15 next step could be to go to Palo Alto City Council for approval of a project and certification of
16 the EIR. (crosstalk)(inaudible) having worked on multiple projects, a lot of times projects go to
17 the Architectural Review Board multiple times.

18 Speaker 14: So, just – you guys have done lots of projects but based on sort of strong feelings,
19 again I am a fan of single-lane alignment as is and feel strongly about that. Given the strong
20 feelings here, it's slightly unclear to me as you walked through that will there be – yeah, how
21 will community input be incorporated at this point and if there's a fair number of people who
22 are looking for – I forget what you call it, but the new bridge single-lane. If there are a fair
23 number of people looking for that, how does that sort of get – how will those voices be heard
24 and how can that be incorporated in the process and is there still an opportunity to go to
25 single-lane instead of two-lanes?

26 Ms. Eggleston: Well, we've got a draft EIR that has the Alternative Two recommendation.
27 Ultimately, we'll be going to the City Council and describing to them all of the comments we've
28 heard and what our response is. So, there's certainly an opportunity – maybe Claire – I'll let
29 Claire from our Planning Department speak to this.

30 Ms. Hodgkins: I just wanted to add to that, so any alternative that is analyzed in the EIR can be
31 considered by our City Council and our City Council can certainly choose to implement
32 Alternative One instead of Alternative Two if they so choose. So, we will be hearing comments
33 through July 30th for this project and we actually provide a formal response to every single
34 comment that we receive in detail which is why we are recording this tonight. So, that we can
35 transcribe your comments and provide a formal response to why they were considered, why we
36 (inaudible) them but didn't move it forward in the analysis or anything along those lines. So,
37 and then moving forward from that, our Architectural Review Board, and our Council, as he
38 noted, will be reviewing the project. So, there will be opportunities for you to comment and
39 provide direct comments to our Architectural Review Board or to our Council on why you think
40 that a different alternative should be considered.

1 Speaker 14: Ok and so final decision is made by the City Council with a suggested preferred
2 approach put forward by your team, is that how it will work?

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cont'd

3 Ms. Hodgkins: Correct.

4 Speaker 14: Great, thank you.

5 Speaker 11: (spoke from the audience off mic) (inaudible)

6 Ms. Eggleston: With the added caveat that the City – our City Council could approve a Palo Alto
7 project and certify the EIR based on an alternative but ultimately, as I was saying, whatever
8 alternative we build have to be approved in both East Palo Alto and Palo Alto.

9 Speaker 15: (spoke from the audience off mic) I was curious about the date of the City Council
10 meeting will be?

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cont'd

11 Ms. Eggleston: I don't think we have that scheduled yet.

12 Speaker 15: (spoke from the audience off mic) Is there a certain way I can find out?

29
cont'd

13 Ms. Eggleston: By our email list.

14 Speaker 15: (spoke from the audience off mic) The email list (inaudible)...

15 Ms. Eggleston: Absolutely, yes.

16 Speaker 15: (spoke from the audience off mic) (inaudible)

17 Speaker 15: (spoke from the audience off mic) The agendas of City Council are also on the website
18 (inaudible)

29
cont'd

19 [many people started talking at once from the audience off mic]

20 Speaker 11: Ok, so my question is between Alternative One and Alternative Two, what is the
21 difference in cost roughly because it's just the traffic signals so?

30

22 Ms. Eggleston: We don't have cost estimates for the alternatives other than Alternative Two.

23 Speaker 11: Ok, so it would be higher because of the added traffic signals but unknown how much.

30
cont'd

24 Ms. Eggleston: It would be a narrower bridge so there might be lower costs in that regard, the
25 traffic signals would – yeah so.

26 Speaker 11: Ok, so we don't know. I think the – from my perspective, the community feedback – at
27 least my feedback is that there may or may not be a traffic impact. We may not agree with the
28 traffic engineer. There have been a number of traffic projects across Palo Alto, some have been
29 successful, some have not, and so I think that's it's wise for the City to consider what would –

31

1 what should happen if the traffic predictions don't pan out because that is a prime concern. It is
2 a prime route for kids on bikes and if we – if traffic increases or if compliance – and I apologize
3 but compliance with stop signs at Newell and Edgewood, you can say its probably 50 percent or
4 less and that's not going to change. That's human nature for that particular intersection. You're
5 coming off the bridge, oh there's a stop? I don't see anybody, blow right through it. So, I think
6 that it's fair to ask what the City should plan to do, a definitive plan not a wishy-washy one,
7 about traffic monitoring post construction.

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cont'd

8 Speaker 15: I am an East Palo Alto resident, so I head you say that the East Palo Alto City Council
9 will also need to go through an approval process of this? Is it sort of a similar thing like some
10 sort of set of Committee's that will go through...

32

11 Ms. Eggleston: It hasn't been fully defined yet for us, we're working with the Public Works Staff
12 in East Palo Alto to talk about that. If wouldn't be exactly the same because they wouldn't be
13 certifying an EIR since Palo Alto is the lead agency on the project.

14 Speaker 15: And then an additional question is have there been traffic studies about these
15 alternatives on the East Palo Alto side of the bridge and what was shown in terms of the impact
16 of this Alternative Two?

33

17 Ms. Jeremias: So, the traffic study identified I want to say a total of seven or eight different
18 locations; Newell and Woodland come to mind; Woodland and Embarcadero come to mind;
19 University and Woodland. So, it's included in the traffic study, yes.

20 Speaker 15: I'm sorry, I heard you say that earlier but what I want to know is do the studies show
21 increase in sort of flow or speed in this preferred alternative on the East Palo Alto side?

33
cont'd

22 Ms. Jeremias: The preferred alternative does not show an increase on those three
23 intersections, no.

24 Speaker 15: Ok, thank you.

25 Speaker 5: Thank you for answering all our questions and all the information. I see a lot of
26 support here for Alternative One and I also would support that given the alternatives
27 presented. But I'd like to know if a – if only exactly that can be chosen because only exactly that
28 has been included in the EIR or can that be modified in any way? So, could you have, for
29 example, an 18-foot wide roadway with no traffic signals as it is today?

34

35

30 Ms. Eggleston: I'll start to answer and Claire can come up if she thinks it needs more work. I
31 would say that things that are small changes to the alternatives that have been studied, that
32 wouldn't have been expected to change the impacts, can probably be things that can changes.
33 But if we're doing something that would affect the impacts that have been studied in our
34 technical studies, then that would take us back to have to redo or augment those studies.

35 Ms. Hodgkins: That's exactly right. If it would be covered under the environmental analysis and
36 small revisions could be made but I think you were specifically asking – it seemed like the

1 alternative you were just discussing of keeping that 18-foot wide bridge would essentially be
2 what is existing today which is what is analyzed under the no project alternative. So, that has
3 been fully analyzed in our Environmental Impact Report so.

4 Speaker 5: So, yes it could ahead legally without any problems?

35
cont'd

5 Ms. Hodgkins: So, the option of the no-build alternative could be the option that would move
6 forward.

7 Speaker 5: But I don't mean a no-build anything, I mean rebuilt it with the same width and no
8 traffic signals.

35
cont'd

9 Ms. Hodgkins: I don't believe that it could be rebuilt with the same width and the no traffic
10 signals because it wouldn't meet any of today's standards. If you're rebuilding, it would need to
11 be rebuilt to today's standards. I don't know that there would be any point in rebuilding if it's
12 not going to meet any different standards. The bridge is technically safe as is, it's just
13 functionally obsolete in that it doesn't meet standards. Does that make sense?

14 Speaker 5: Yes, it does. My thoughts about it are that I think that the traffic functions well today
15 because there are no traffic signals and it's safer because there are no traffic signals. When
16 there's a traffic signal well, then you have to stop and if you're riding a bicycle you have to think
17 about well, am I just going to run this or not? It prevents people from – the traffic is able to be
18 continuous slow flow right now which I think is a great feature of it. Thank you.

36

19 Speaker 6: One of the questions I had was will Caltrain – will the State of California fund the 85
20 percent if it's Alternative One and will they fund it if it's Alternative Two?

37

21 Ms. Eggleston: No and yes.

22 Speaker 6: Ok so of the \$8 million bucks they'll pay 85 percent of it if we do Alternative Two but
23 they won't give us money if we do Alternative One?

37
cont'd

24 Ms. Eggleston: That's correct.

25 Speaker 6: My next question was for Alternative One is there a reason – since we're not getting
26 the Caltrain money anyway and the reason we would do Alternative One, even if there's no
27 improvement in terms of traffic flow, is to get the flood control and it's also probably
28 seismically safer, but is there a reason why Alternative Two couldn't have narrow roads?
29 What's the – for example, let me rephrase it slightly differently. What's the minimum width in
30 each direction that would still qualify for the California funding? Is it 14-feet? Could it be 12-
31 feet? I mean you could have narrower lanes, could it be 10-feet?

38

32 Ms. Eggleston: It's 14-foot road surface from our discussions with Caltrans. As I think Michel
33 mentioned earlier, we have started dialog with them about whether it would be possible to
34 stripe that differently so that we might be able to provide a bicycle facility with a narrower lane.

1 Speaker 6: And could you put in – if you were to do the striping, could you actually put in any kind
2 of physical separator like things that make it so that the car wouldn't go across? Whenever you
3 constrain the width of the road it slows traffic. So, you know you've seen like in front of Jordan
4 they have those white things that stick out, right? Would any of that be possible?

38
cont'd

5 Ms. Eggleston: We don't know yet but that's something we plan to discuss with them.

6 Speaker 6: Also, for Alternative One, would it be possible to have a single-lane, maybe a little bit
7 narrower but with let's say bike lanes on either side and would that sort of derail the EIR? Well,
8 they're not going to pay for Alternative One no matter what.

39

9 Ms. Eggleston: It potentially could but we'd have to look back at that width and what the
10 resulting width of bike lanes would be. I would say on most of these things, subject to Caltrain's
11 constraints that there may be, the way we ultimately stripe it is somewhat more flexible.

12 Speaker 16: Good evening. First of all, I'm glad all of the options have sidewalks, that's going to be
13 a huge improvement so thank you for that. I dislike the stop light option, I dislike the fact that a
14 stop light will slow me down on a bicycle more than a stop sign will, and I dislike that the new
15 stop lights with pedestrians crossings have little beeps that go on 24-hours a day so that blind
16 people can find them I think. Then I sent you a note, I hope that you will look beyond just the
17 automobile traffic impacts and the automobile capacities and actually do some analysis of what
18 will it be like as a bicyclist across any of these options and what will it be like as a bicyclist going
19 through the intersection with – at Woodland. I'm not – I was out there this evening at 6:30 and
20 it's not – it's no problem at all and so I should go back at I think 5:00 pm and find out what the
21 real problem is like, but it would be interesting to know...

40

22 Speaker 17: (spoke from the audience off mic) (inaudible)

23 Speaker 16: Ok, so I hope you will take all these times and consider what it's like for a bicycle at
24 these times. Did I have a question? No, I don't think so.

40
cont'd

25 Speaker 7: So, I just have two really quick questions. My first question is over the past 2-years
26 how often has the Commission that set up this process and is defining this procedure spoken
27 with legal counsel either in East Palo Alto or Palo Alto to make sure that you're complying with
28 the codes, with the law, with the fiduciary duties of the decision makers, with the notice
29 requirements? How often have you spoken with attorneys in East Palo Alto or Palo Alto over
30 the past few years?

41

31 Ms. Eggleston: Specifically, about noticing requirements we have not...

32 Speaker 7: Anything. How often have you spoken with them?

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cont'd

33 Ms. Jeremias: So, in the past 2-years we've been preparing the technical studies that were
34 necessary for us; there are 17 total technical studies. I think they're all available on our EIR and
35 the website. Those studies were necessary, those were shared with Staff including attorneys, it
36 was shared with the City of East Palo Alto and their Staff. So, they have been reviewing them so

1 we have had Staff review technical studies and then also prior to releasing – and I know a
2 couple individuals in this room have been inquiring about the status of the release of this EIR.
3 We have – we (inaudible) a draft copy, Internal Administrative Copy with Staff, so we have been
4 looking at the EIR (inaudible) (crosstalk)

5 Speaker 7: I just want to make sure that I understand your answer. So, I’m not talking about Staff,
6 I’m talking about we want to make sure that the process is legal. My sense of things is that
7 there may be an issue there.

41
cont'd

8 Ms. Jeremias: No and so...

9 Speaker 7: I want to know when you spoke in the past 2-years and to who?

41
cont'd

10 Ms. Eggleston: So, I’m sorry, I’m just going to tell you that we have established processes for
11 establishing capital projects, City Council review of things like contract amendments,
12 (crosstalk)(inaudible)...

13 Speaker 7: Right and normally legal counsel is involved in those things...

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cont'd

14 Ms. Eggleston: (inaudible)(crosstalk)...

15 Speaker 7: ... like Palo Alto School District is constantly talking to legal counsel. I’m just want to
16 get a sense as to how much diligence you guys did to make sure that you met your fiduciary
17 duties, that you met you notice requirements, that you made sure that you’ve complied with
18 code? Simply saying we follow procedure doesn’t work, that’s not enough.

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cont'd

19 Speaker 18: (spoke from the audience off mic) (inaudible) compliance.

20 Speaker 7: How do you know?

21 Speaker 19: (spoke from the audience off mic) (inaudible)

22 Speaker 7: Trust you?

23 Speaker 20: (spoke from the audience off mic) (inaudible) They’re doing tons of projects
24 (inaudible)...

25 Ms. Eggleston: I’m sorry, I think I would probably have to speak to one of our attorneys to
26 (crosstalk)(id)

27 Speaker 7: Ok, if you’re telling me you are talking to them then that’s ok, fair enough.

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cont'd

28 Speaker 21: So, first of all, thank you so much for working so hard on this. This is a detailed effort
29 and it followed all of the environmental and EIR requirements and thank you for your hard,
30 good work. Second, we started this project in 2012, there’s been a significant amount of
31 community input at that point. The first proposal that came out, there was feedback that

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1 maybe a bridge that is not as tall, maybe a bridge that's not as wide, maybe a bridge that
 2 preserves the current alignment might be better. You have taken that input into account and
 3 that is what the second alternative is all about. It's time to move forward with this. This project
 4 is urgent, we started it in 2012, that's what 7-years ago, it's been 7-years. I know you worked
 5 very hard to put this together and get us to this point so thank you. At this point, we are at a
 6 point with this project of Newell Road bridge that any further delay on Newell Road risks
 7 delaying the replacement of Pope/Chaucer which is a San Francisquito Creek JPA project. That's
 8 just not acceptable, it's just not ok to risk endangering hundreds of homes in the community by
 9 delaying this project. So, Alternative Two represents a really good compromise and thank you
 10 for your good work and let's move forward with it as quickly as possible. Thank you.

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cont'd

11 Speaker 21: Thank you.

12 Speaker 9: So, I just want to comment, as my neighbor brought up the funding aspect of it, just
 13 for context. The City of Palo Alto and East Palo Alto spent \$12 million each, no federal funding,
 14 no state funding, to build a pedestrian and bicycle bridge from Newell Road in East Palo Alto
 15 over to Home Depot. So, spending \$8 million to solve flooding issues and traffic issues, no
 16 matter who funds it via federal dollars or City dollars, understanding the traffic impact is every
 17 bit as critical as the flooding impact. So, I think we have alternatives that address both hence
 18 wise, from my perspective I couldn't agree more, mainly in post haste, we need to get this done
 19 but we shouldn't be pushing traffic unnecessarily into Crescent Park and Crescent Park addition
 20 communities when there's a perfectly viable alternative that would ensure that traffic isn't
 21 coming needlessly into our community.

43

22 Speaker 22: I agree. I'm also a fan of the one-lane bridge. I think we should maintain the flow as
 23 we have it. I think I'd like to just look back and go back to the needs because – oh I guess –
 24 yeah, sure if you can find it. We mentioned or it is mentioned that the current bridge is
 25 functionally obsolete and I'm not sure if it's in the slide – yeah, does not accommodate two-
 26 way vehicular traffic. I don't think we'd all agree that that's a problem. So, I think if we're going
 27 to say that's a need and that's why we're starting this project, I think we might want to take
 28 that off because we're all in acceptance of one-lane traffic. Not – well, most of the people in
 29 the room.

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cont'd

30 Speaker 23: (spoke from the audience off mic) Most vocal.

31 Speaker 22: Ok, just the most vocal. Ok, well I think we should take it off if we're going to say it
 32 does not accommodate two-way traffic. The second thing that I want to bring up is about the
 33 increase in traffic that we're going to be experiencing in Palo Alto if Stanford gets to grow. So,
 34 there's going to be more cars coming into the neighborhood. They are going to be looking for a
 35 way out and if we don't solve it on University and Embarcadero and other ways, it's just going
 36 to sneak through here if we have a two-lane bridge. It's just going to make it easy so that's all I
 37 have to say. Thank you.

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cont'd

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38 Speaker 24: Good evening. A question I have for the City is I've been going to these meetings and I
 39 have seen the progress and there's been a lot of work and diligence. What I haven't heard is the

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1 decision criteria to make a decision so could you explain what the decision criteria is and the
2 process to draw the conclusions for – with that criteria to make a decision on the options here?

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3 Ms. Eggleston: Well, I talked a little bit about that before, that we’ve got a preferred alternative
4 currently in the draft EIR, and we’re going to go to the ARB and get their feedback. Then go to
5 the City Council and then ultimately, they’re the ones that will make the decision.

6 Speaker 24: I understand the process. What is the criteria for making the decision? So, let me kind
7 of preface this, right? So, we (inaudible) residents of Palo Alto, I think that we all want to – the
8 question – well, most people here, not – because we’re hosting it in Palo Alto. One of the
9 comments I had for Jim Keene several years ago when we had this meeting in Lucille Stern
10 building, what do you want Palo Alto to be? So, the question is, this is going to be a
11 generational decision, it will have an impact for the future of Palo Alto. So, we definitely need
12 to solve the flooding problem, we definitely need to do that, but this impact of the traffic will
13 change the complexion of a significant part of Palo Alto. We will create another artery which
14 will start to carve right through Crescent Park and start feeding down towards downtown and
15 everywhere else. So, we’re going to start to bisect a residential area that has been known to be
16 a very private, very calming, safe, and so forth. So, by doing this, it’s going to change the
17 complexion of the town. So, the question I have is, what is the criteria to make this decision and
18 what does that have on the impact of the future of Palo Alto?

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cont'd

19 Ms. Hodgkins: Oh.

20 Mr. Ed Shikada, City Manager: (spoke from the audience off mic) No, go ahead. I was just going
21 to say something (inaudible)

22 Ms. Hodgkins: Hoping I understand your question. So, in terms of the environmental analysis,
23 we looked at the – all of the objectives that are laid out and we analyze all of the different
24 environmental impacts that could occur under several different resource sections. So, biology,
25 paleontological resources, cultural resources, traffic, a very wide range of different resource
26 areas. We analyze all of those environmental impacts along with whether the basic purpose
27 and need has been addressed and the basic project objectives have been met for the project
28 and how many of them have been met. So, I don’t know if that’s what you mean in terms of the
29 criteria that we use in terms of the environmental analysis. Certainly, our Council is also
30 considering just input from the public in general as part of their criteria and making a
31 determination as well. Then – does that answer your question? Is that kind of what you’re
32 asking or?

33 Speaker 24: I understand you’re describing the process. What I’m trying to understand – let me
34 frame it a little bit more – if we want to build a community, we want to build a company, we
35 want to build something, we have a criterion on what we’re trying to build in the end. So, my
36 question is, what do we think that is and to get to that point, what are the criterion for us to
37 actually take strides to keep that? So, let me frame it for you, so if we were to preserve Palo
38 Alto and I think everyone has come to Palo Alto for many reasons and have invested heavily in
39 our homes and in our families here and our schools. Are we looking to continue to preserve

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1 that or are we looking to actually change that? I think the answer is that we want to preserve
2 that, that's why people are coming here, that's why you're seeing the real estate prices go up,
3 that's why you're seeing people invest in the community and school districts. So, fundamentally
4 by changing that, that's going to change the complexion of Palo Alto. So, my question is when
5 we look at what we're trying to build, what is the criteria that we're using to decide? I
6 understand we've got this (inaudible), make it safe so we've got the flood issue, we got that,
7 that makes sense. I'm not sure what we're trying to do with the traffic? I'm not sure I
8 understand what's – why a one-lane and preserving the one-lane traffic bridge would not be
9 acceptable? I mean some people... (crosstalk)

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10 Mr. Shikada: Alright, I'm going to stop you right there.

11 Speaker 24: ...would even argue that if you really want to preserve the state of Palo Alto you might
12 even remove it, but that's a separate subject. So, why don't we just maintain what we have to
13 preserve what we have?

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14 Mr. Shikada: I understand what your question is and unfortunately, I suspect you're not going
15 to get a satisfactory answer tonight. Let me introduce myself.

16 Speaker 24: But (inaudible), you understand what I'm getting at?

17 Mr. Shikada: I do.

18 Speaker 24: This is fundamental to make the decision. If we don't have that in mind when we're
19 suspect to making the wrong decision; which would have – and you're not going to change the
20 bridge after it's built. I'm not concerned – quite honestly, I'm not concerned about – I think the
21 City and the points that were made earlier about the cost of the bridge. I think that that's
22 secondary because we look at general – the long-term impact, that will be dwarfed by the tax
23 implications on the City, the tax implications on the City. You know what I'm saying? If property
24 values go down, tax base for the City goes down, and they will dwarf any funding that would be
25 required to build that bridge. Does that make sense?

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cont'd

26 Mr. Shikada: I'm just waiting till you're finished. First, let me introduce myself, you mentioned
27 Jim Keene, I'm Jim Keene's successor. My name is Ed Shikada, I'm the City Manager nowhere in
28 Palo Alto. I appreciate the comments that have made tonight. My apologies, I was at a Council
29 Committee meeting so I arrived about 45-minutes late but I have heard many of the comments
30 that have happened over the last hour. To your point, in terms of the criteria for decision,
31 ultimately as reflected in this chart it will be City Council. City Council will discuss this and I can
32 tell you, like any elected body, there's no specific criteria that they will use. This environmental
33 process, the Environmental Impact Report, is intended to provide them with good information,
34 the best information we can with the comments that we're hearing tonight feeding into that
35 body of information that ultimately will get to the City Council as a part of its decision-making
36 process. Ultimately, it comes down to seven people that will take this information into
37 consideration and then make a – take a vote as to what project to move forward. As our Staff
38 has pointed out it will also, in this particular case, need to reflect a balance or an understanding

1 of what the City of East Palo Alto is comfortable with. So, this is really a partnership that needs
2 to be worked through. Again, the process is one of gathering information, doing the analysis in
3 an objective fashion such as our Staff has done, get the input on the analysis, and that all feeds
4 to the Council. As was pointed out earlier, I think you and certainly, your neighbors are
5 welcome to speak to the Council directly as to your impressions of what project they should
6 proceed with, and the bases on which that decision would be made.

7 Speaker 24: I just urge that the Council consider the decision criteria...

8 Mr. Shikada: Great.

9 Speaker 24: ...and so I'm looking forward to seeing that.

10 Mr. Shikada: (inaudible)

11 Mr. Eggleston: Well, we've been at it for almost an hour and forty-five minutes. So, I don't see
12 any other speakers so I think we'll adjourn for the evening. Thank you all very much for coming
13 to the meeting and your comments.

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Letter T-2. Transcript from Community Meeting, 6/18/19

Response to Comment T-2.1

Please see Response to Comment I-12.1.

Response to Comment T-2.2

Construction is planned to begin in 2020 and take approximately a year and a half. It is likely that the Project would be completed at approximately the end of 2021.

Response to Comment T-2.3

Please see Response to Comment I-20.2. When the *Alternatives Screening Analysis Report* was prepared in 2014, the goal was to accommodate the 100-year flood. However, because upstream restrictions (e.g., Middlefield Road Bridge) restrict flow at the Project site to 7,500 cubic feet per second (cfs), the goal of the Project was revised to accommodate a capacity that could reach the Project. Revised hydraulic modeling determined that 7,500 cfs was approximately the 70-year flood. Therefore, the goal of the Project was revised to accommodate the 70-year storm event of 7,500 cfs. In addition, the Santa Clara Valley Water District's description of the anticipated capacity in a 100-year flood event has changed since 2014.

Response to Comment T-2.4

LOS stands for *Intersection Level of Service*. TIRE stands for *Traffic Infusion of Residential Environment*. TIRE represents the effect of traffic on the safety and comfort of human activities, such as walking, bicycling, and playing on or near a roadway, and on the freedom to maneuver personal autos in and out of residential driveways. The TIRE analysis looked at six residential roadway segments that had the potential to be impacted by project operations within both Palo Alto and East Palo Alto's jurisdictions, not only the two segments immediately adjacent to Newell Road Bridge. This analysis is provided in Section 2.1.4.3, *Environmental Consequences*, under *Traffic Infusion on Residential Environment*. The perspective is from residences around all six of the segments included in the analysis.

The bridge would be raised by approximately 1.5 feet, while the roadway approaches on both the Palo Alto and East Palo Alto sides would be raised by approximately 4 feet.

Response to Comment T-2.5

See Master Response 1. As discussed in Section 2.1.4.3, *Environmental Consequences*, and discussed in Master Response 1, although future development within the area would generally contribute to increased traffic in this area, the Project would not have an adverse effect or significantly contribute to traffic on the studied roadway segments and intersections under CEQA. Therefore, mitigation measures, such as future traffic studies, are not warranted to reduce an impact. The City of Palo Alto will continue its current practice of monitoring traffic city-wide. If future traffic monitoring in this area determines that additional traffic calming measures are needed, the City of Palo Alto will consider options available at that time.

Response to Comment T-2.6

After the bridge is replaced, there would be a net decrease of approximately one (unmarked) on-street parking space along Woodland Avenue in East Palo Alto. All other (unmarked) on-street parking spaces would remain, even after widening the bridge.

Response to Comment T-2.7

The bridge would be raised by 1.5 feet. The road would be raised approximately 4 feet on both sides of the bridge. The Project includes improving sight distance to accommodate motor, bicycle, and pedestrian traffic. Master Response 2 respond to traffic considerations for bicycle safety.

Response to Comment T-2.8

It is generally anticipated that any storm drains that would be demolished would be reconstructed in place and that all other existing storm drains would remain as is. However, during final design, the City of Palo Alto will carefully study the locations of the existing onsite storm drain inlets to address changes in site drainage in coordination with the City of East Palo Alto and adjacent property owners.

Response to Comment T-2.9

Only Build Alternative 1 includes traffic signals. They are proposed for Build Alternative 1 to allow for bi-directional traffic on a one-way bridge. The other build alternatives all allow bi-directional traffic on a two-lane bridge, making traffic signals unnecessary. The cost shown in the presentation represented long-term operational maintenance of the traffic signals.

Response to Comment T-2.10

Retaining walls in East Palo Alto would be approximately 1 to 4 feet high and would be necessary to hold up Woodland Avenue when the roadway is raised. These retaining walls would be constructed between the sidewalk and private property; they would not be placed between the street and the sidewalk. Americans with Disabilities Act (ADA)-compliant sidewalks and curbs would be reconstructed adjacent to the neighboring properties for pedestrian access between streets and sidewalks. In addition, ADA-compliant paths would be constructed on private properties, in coordination with private property owners, to ensure that proper access is maintained to all residences.

Response to Comment T-2.11

The Locally Preferred Alternative (Build Alternative 2) retains Newell Road along its existing alignment.

Response to Comment T-2.12

The preliminary cost of construction is approximately \$8 million.

Response to Comment T-2.13

The commenter's sentiment that the existing bridge does not present a safety concern is noted. Section 1.2.2.2, *Roadway Deficiencies*, of the Draft EIR/EA identifies the deficiencies of the existing bridge, particularly with respect to compliance with current safety standards. Under all build

alternatives the current bridge would be replaced with a bridge that allows for greater flow capacity beneath the bridge and that complies with safety requirements, particularly with respect to line-of-sight and lane width requirements. The proposed bridge would be wider, primarily to provide dedicated space for safe passage of pedestrians and cyclists in both directions.

Response to Comment T-2.14

Please see Response to Comment T-2.10.

Response to Comment T-2.15

Please see Master Response 1.

Response to Comment T-2.16

As discussed in Response to Comment I-3.7, compliance with the City of Palo Alto's and the City of East Palo Alto's Municipal Codes as well as Mitigation Measure MM-BIO-2, as identified in the Draft EIR/EA, will require replacement of tree canopy for any trees removed as part of the Project. Project engineers studied whether the design of the build alternatives could be adjusted to preserve the buckeye tree or eucalyptus trees in place. It was determined that this is not possible due to demolition of the bridge and the need to raise the roadway approaches in order to meet sight distance and safety requirements.

The commenter's preference for a narrow bridge is acknowledged. Under any of the build alternatives, the newly constructed bridge must be designed to meet current roadway safety standards. The lane width for vehicles would increase from the existing width of 18 feet to 20 feet (an increase of 1 foot for the vehicle lanes in each direction) in order to meet basic safety standards. The additional 18 feet in width that is proposed would accommodate sidewalks and a bicycle path on each side of the bridge to allow safer passage for pedestrians and cyclists.

Response to Comment T-2.17

The City of East Palo Alto has stated in its comment letter (see Comment Letter A-1) that it supports Build Alternative 2, the Locally Preferred Alternative. The City of East Palo Alto did not note any specific concerns about Build Alternative 1.

Response to Comment T-2.18

As discussed in Section 2.1.4.3, *Environmental Consequences*, and in Master Response 1, the Project would not have an adverse effect or significantly contribute to traffic on the studied roadway segments and intersections under any of the build alternatives under CEQA. Build Alternative 1 would replace a two-lane, bi-directional bridge with a one-lane, bi-directional bridge, requiring the construction of traffic signals. This build alternative would increase delays at some of the nearby intersections and traffic speeds would not be anticipated to increase in this scenario. Build Alternative 2 would replace an existing two-lane, bi-directional bridge with a two-lane, bi-directional bridge. The location of the stops signs would not change. Traffic speeds would not be anticipated to increase in this scenario.

Response to Comment T-2.19

The commenter's support for the Project due its flood protection goals is acknowledged. Flood protection is part of the Project's purpose statement.

Response to Comment T-2.20

The Project has complied with the CEQA Guidelines, the City of Palo Alto's Municipal Code, and NEPA provisions, in terms of proper noticing for the Project. Noticing for public meetings associated with public review of the Draft EIR/EA was done in a variety of ways. All entities on the distribution list (Chapter 5 of the Draft EIR/EA) received the Notice of Availability (NOA) of the Draft EIR/EA, hard copies or CDs of the Draft EIR/EA, or an email with the NOA and links to the Draft EIR/EA. A notice was posted in the Palo Alto Daily, which is typically where the City advertises release of a Draft EIR. The City has maintained an email list of everyone who has signed up at past public meetings, and a notice was emailed to this list as well. Per City of Palo Alto Municipal Code Chapter 18.77 of Title 18, notices were also mailed to all addresses within a 600-foot radius of the Project.

The City of Palo Alto Municipal Code Chapter 18.77 of Title 18 specifies the 600-foot radius for mailings and was approved by City Council in 2007. Individual project meetings to discuss noticing are not held by the City Council or other City commissions.

The commenter is encouraged to sign up for email updates if they have not done so already.

Response to Comment T-2.21

See Response to Comment T-2.5. Individual compliance with required traffic controls (e.g. stop signs) will continue to be enforced by the City of Palo Alto and East Palo Alto police departments within each of their respective jurisdictions.

Response to Comment T-2.22

See Response to Comment T-2.5.

Response to Comment T-2.23

Please see Table 2.3-3 in the Draft EIR/EA for the tree impacts for each build alternative. Build Alternative 1 would affect/require removal of the least number of trees, followed by Build Alternative 2, then Build Alternative 3, then Build Alternative 4. The referenced presentation did not include Build Alternative 1.

Response to Comment T-2.24

Please see Tables 2.1.4-3 and 2.1.4-4 in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*. Under year 2020 conditions, when comparing the No Build Alternative to Build Alternative 2, delay at the Newell Road/Edgewood Drive intersection would remain the same in the a.m. peak hour (8.2 seconds) and would worsen by 0.1 second in the p.m. peak hour (8.9 seconds versus 9.0 seconds). Under 2040 conditions, when comparing the No Build Alternative to Build Alternative 2, delay at the Newell Road/Edgewood Drive intersection would worsen by 0.1 second in the a.m. peak hour (8.6 seconds versus 8.7 seconds) and would worsen by 0.1 second in the p.m. peak hour (9.7 seconds versus 9.8 seconds). This is a very minor change that would not be perceptible to users of the intersection or local residents.

Under Build Alternative 1 under 2020 conditions, level of service (LOS) would be acceptable at all intersections except for the University Avenue/E. Crescent Drive intersection, which would operate at LOS F in the a.m. peak hour and E in the p.m. hour. Under Build Alternative 1 under 2040 conditions, LOS would be acceptable at all intersections except for the University Avenue/Woodland Avenue intersection, which would operate at LOS E in the a.m. and p.m. peak hours, and at the

University Avenue/E. Crescent Drive intersection, which would operate at LOS F in the a.m. and p.m. peak hours. The delay under Build Alternative 1 under both 2020 and 2040 conditions is also consistently worse than the other build alternatives. This was a factor in why Build Alternative 1 was not selected as the Locally Preferred Alternative.

Response to Comment T-2.25

The City of Palo Alto and Caltrans acknowledge the commenter's statement that flood control is a priority and that all build alternatives address flood control. As shown in Table 1-1 in Section 1.4.4, *Comparison of Alternatives*, of the Draft EIR/EA, all build alternatives address flood control.

Response to Comment T-2.26

Master Response 1 responds to statements that traffic changes would result from Build Alternative 2.

Response to Comment T-2.27

Please see Response to Comment T-2.25.

Response to Comment T-2.28

Please see Master Response 1.

Response to Comment T-2.29

The commenter's support for Build Alternative 1 is noted. Four public meetings were held for the Project during the public circulation period, which allowed members of the public to ask questions and provide public comments. Members of the public could also mail or email public comments to the City of Palo Alto. All public comments have a response in the Final EIR/EA, which also shows any text changes made between publication of the Draft EIR/EA and Final EIR/EA. The next step is for the Palo Alto City Council to approve the Project and certify the Final EIR and for Caltrans to conclude the NEPA process.

The Draft EIR/EA selected Build Alternative 2 as the Locally Preferred Alternative, but the Palo Alto City Council could select any of the build alternatives evaluated in the Draft EIR/EA to implement. A date for the City Council meeting for the Project has not been selected yet but information will be posted on the City's website, and those who have signed up for the City's email list for the Project will be notified.

Response to Comment T-2.30

CEQA, Article 9, Section 15126.6, *Consideration and Discussion of Alternatives to the Proposed Project*, states "(b) Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." NEPA also requires consideration of a reasonable range of alternatives that can accomplish the purpose and need of the proposed action, regardless of cost. Therefore, comparative costs estimates were not prepared.

Response to Comment T-2.31

See Master Response 1 and Response to Comments T-2.5 and T-2.22.

Response to Comment T-2.32

Table 1-2, *Permits and Approvals Needed*, in the Draft EIR/EA identifies all permits and approvals that are anticipated as part of the approval process. It is anticipated that the City of East Palo Alto, as a responsible agency, will issue a tree removal permit and encroachment permits to the City of Palo Alto following certification of the EIR. The East Palo Alto City Council would not formally certify the Final EIR because the City of Palo Alto is the lead agency.

Response to Comment T-2.33

Please see Tables 2.1.4-3 and 2.1.4-4 in Section 2.1.4, *Traffic and Transportation/Pedestrian and Bicycle Facilities*. The East Palo Alto intersections included in the analysis were Newell Road/Woodland Avenue and University Avenue/Woodland Avenue. For both of these intersections, the Level of Service (LOS) would remain the same under the No Build Alternative and Build Alternative 2 under 2020 and 2040 conditions. Delay would worsen under Build Alternative 2 by less than 0.2 second under most conditions. The greatest delay would be at the University Avenue/Woodland Avenue intersection under 2040 conditions, where delay in the p.m. peak hour would worsen by approximately 2 seconds. However, LOS would remain LOS E.

Response to Comment T-2.34

The commenter's support for Build Alternative 1 is noted.

Response to Comment T-2.35

Following the review of public comments, the engineering characteristics of the preferred alternative (Build Alternative 2), such as width and alignment, will not change from the proposed design analyzed in the Draft EIR/EA. However, other design characteristics, such as landscaping plans and striping, are not yet fully determined and can change before Project construction. The bridge could not be reconstructed in the same configuration (18 feet wide for two vehicle lanes) because it would not conform to current Caltrans Bridge Design standards for vehicles in terms of lane width and would not meet multi-modal and safety requirements.

Response to Comment T-2.36

The commenter's support for existing conditions is noted. Build Alternatives 2, 3, and 4 do not include a traffic signal, allowing traffic and bicycles to travel without stopping at a light. Build Alternative 2 keeps the alignment as is.

Response to Comment T-2.37

As responded to in the public meeting, Build Alternative 1 does not meet federal guidelines and, therefore, would not be eligible for Highway Bridge Program funding. Build Alternative 2 does meet federal guidelines and would, therefore, be eligible for funding.

Response to Comment T-2.38

The Draft EIR/EA indicated that Build Alternatives 2, 3, and 4 would have 14-foot-wide lanes for shared bicycle and vehicle use (sharrows); however, the project plans show that these build alternatives would include 10-foot-wide lanes (sharrows) with 4-foot-wide shoulders for bicyclists. Section 1.4.1, *Common Design Features of the Build Alternatives*, of the Final EIR/EA has been updated for clarity and consistency with the project plans. A second option has also been discussed with Caltrans, which would place two 9-foot-wide raised, mixed-use paths on either side of the bridge, allowing the curb to act as a barrier for cars from both pedestrian and bicycle traffic. In both options, the vehicular traffic lane width would be 10 feet wide in each direction. The text for Section 1.4.1, *Common Design Features of the Build Alternatives*, has been updated.

Response to Comment T-2.39

The overall width of the bridge cannot change without recirculating the Draft EIR/EA because a wider or narrower bridge would change the environmental impacts. However, the specific striping of the bridge can change as long as the environmental impacts do not become worse than what was analyzed in the Draft EIR/EA.

Response to Comment T-2.40

Please see Master Response 2.

Response to Comment T-2.41

The comment does not raise a specific issue on the substance of the Draft EIR/EA. The City of Palo Alto attorney's office is included in the internal reviews and process of City projects. See Response to Comment T-2.20 in response to comments on the noticing process.

Response to Comment T-2.42

Please see Response to Comment I-1.1.

Response to Comment T-2.43

The commenter's support for Build Alternative 1 is acknowledged. Please see Master Response 1. The traffic analysis in the Draft EIR/EA does not indicate that any build alternative would increase traffic in the neighborhoods around Newell Road Bridge. Additionally, many members of the public have voiced support for a two-lane bridge. Build Alternative 2 was selected as the Locally Preferred Alternative because it accomplishes all of the Project objectives while minimizing environmental impacts.

Response to Comment T-2.44

Please see Master Response 1.

Response to Comment T-2.45

The *City of Palo Alto Comprehensive Plan* and *East Palo Alto General Plan* guide development within the City of Palo Alto and City of East Palo Alto, respectively. The City of Palo Alto City Council considers a project's consistency with this adopted document and other adopted guiding documents, such as the *City of Palo Alto Bicycle and Pedestrian Transportation Plan*, when evaluating proposed

projects. As discussed in Sections 2.1.1.3, *Environmental Consequences*, and 3.2.10, *Land Use and Planning* of the Draft EIR/EA, the Project is consistent with these guiding documents. See also Master Response 1 regarding traffic.

**CITY OF EAST PALO ALTO
PUBLIC WORKS TRANSPORTATION COMMITTEE
Presentation of Newell Road Bridge Project
June 19, 2019**

Fallaha Again, I have my colleagues from Palo Alto. We have their Public Works Director over here, Brad Eggleston. Brad is the new Public Works Director in Palo Alto. We have Michel Jeremias. She's going to be doing the presentation. She's the project manager, if you have substantive questions. With that, I want to recognize the staff on Caltrans. I'm joined here with the City Engineer, Humza, and Shari, our senior engineer. After our presentation, we'll try to answer any questions and to go over the boards over there. If you have any questions, we'll be available after our presentation. With that, I will turn to Michel.

Jeremias: Good evening. My name's Michel Jeremias. I'm a senior engineer in Public Works. I'm here to provide you guys with a presentation of the EIR. The Draft Environmental Impact Report was released on May 29. We have a 60-day comment period. We're in the timeframe of that. The objective today is to obtain public comments. We'd like to hear any input you may have regarding our EIR. Thank you.

As you can see on the attached location map, Newell Road Bridge is located over San Francisquito Creek. For the purposes of everyone present, you can see Newell Road on the Palo Alto side and Newell Road on the East Palo Alto side. For the purposes of this meeting, we will also make references to Alternatives 3 and 4, which talk about the realignment of the bridge. The realignment entails adjoining this Newell Road with the Newell Road on this side. Alternative 3 brings it 30 feet closer. The full realignment aligns the two streets. I want to clarify that. Newell Road is located east of Edgewood Drive and west of Woodland Avenue. Currently, this project is a portion of an upstream project that we're also considering. There's an EIR that was also for the upstream project; the comments were due today.

The purpose and need. Why are we replacing this bridge? The bridge is narrow. It does not accommodate two-way traffic or provide access for pedestrians. There's also poor visibility due to the trees. You can see the trees on the left-hand side of the screen that prevent the clear line of sight. In addition to that, as drivers proceed heading into Woodland Avenue, there is a vertical profile that creates an uncomfortable condition for most drivers.

A site for access. As I mentioned before, this is a project that is a—replacement of the bridge is a necessary element of the comprehensive San Francisquito Creek flood protection strategy. Replacing the bridge would allow the conveyance of 7,500 cfs between El Camino here and West Bayshore here. Increasing capacity in the levee was a project, as you're well familiar, that was recently completed, last October. The project

upstream, which I believe you might have seen already, would replace Pope-Chaucer. We cannot proceed with replacing this bridge unless we replace Pope-Chaucer. Excuse me. They cannot proceed with replacing Pope-Chaucer unless we replace our bridge. If Pope-Chaucer is delayed, it would create the same flooding condition that exists presently, which is shown on the photo on the bottom of the screen. In addition to that, Newell Road Bridge would delay any work on any of the creek widening aspect of the project.

With our purpose and need defined, we also focused on project objectives. Why are we doing this? What are our goals? Our goals are to maintain vehicular, bicycle, and pedestrian access across San Francisquito Creek at Newell. As part of identifying objectives, we also talked about how do we monitor those objectives, what measures do we have, what criteria. The objective was not to increase a significant number of vehicles onto adjacent streets; not to increase the number of vehicles that would cross over Newell; or not to increase the average speed of vehicles as they traverse Newell. In addition to vehicle access, we also focused on access for cyclists and for pedestrians. Later on when we're done with this presentation, I'd invite you to take a look at some of the visual simulations in the back of the room. The attached visual simulation, I get it's a little bit confusing. I can try to walk you through it. One of the aspects, as far as improving the multimodal access, is providing two 5-foot-wide sidewalks. We would also be continuing—there are two options for consideration here. As shown, we show the class 2 bike lanes terminating right before the driveway on the Palo Alto side. One of the alternatives that we are currently processing and trying to work through with Caltrans is additionally extending the bike lane lines past the driveway, over the bridge. That would create a shoulder on the 14-foot-wide travel lane, which could be used for cyclists. That's one option. Option 2, similar to what you have currently installed at Newell Road on East Palo Alto, we would continue with the sharrows, the green background with the bicycle and the two arrows. We could place sharrows on top of that, and that would allow for cyclists and for vehicles to share the road. We're looking at two different options at this point, and we're discussing these with Caltrans. This would allow us to, one, improve multimodal access for cyclists by giving them two different ways of handling it. As I mentioned previously, this also is—the upgrade would improve the capacity of the creek. I just wanted to give you that little recap of how we got here. It's been a long process. Part of this project is a combination of other projects that have occurred prior to us.

This project began with community outreach back in 2012, seven years ago. As part of the community outreach, we tried to provide an alternative. The bridge that we considered back in 2012 was slightly wider. At that time, we were considering a bridge that was 16-foot-wide travel lanes as opposed to what we're looking at now, 14-foot-wide travel lanes. The two sidewalks would have been provided included. We received comments and feedback

from the public. As a result of the comments, we also decided to make a commitment to proceed with a full EIR. We were at the point in 2013 that we agreed to proceed with the EIR. Part of the EIR is identifying what alternatives to consider. We went through a list of alternatives. On my next slide, I will give you an overview of what the eight alternatives were. We also considered and compared those alternatives through using screening criteria. In February 2014, the screening analysis was distributed and discussed amongst staff and also with the residents, which allowed us then to narrow down to five alternatives, which I'll discuss in a minute.

This slide has been a little bit problematic. Some of the people present in this room have attended a couple of our other meetings. I know this slide has been an issue, the way it's presented, so I wanted to make clarification. This is the slide that we were looking at back in 2013, when the project objectives were identified, when we tried to identify the eight alternatives that we would advance. You'll notice that the alternatives shown in bold are the ones that are being compared on the EIR. The alternatives in gray are the ones that were eliminated, that were not advanced. The screening criteria at that time in 2013 was for a 100-year storm event. We were looking at the level of service impact, whether or not any of these alternatives would increase the level of service, would affect any of the adjacent streets, also looking at a TIRE impact, which is traffic infusion on residential environments, does it make you feel safe as you're backing out of your driveway, are you able to cross the street and not feel affected by the traffic. That's the TIRE impact. We also looked at providing multimodal. You'll notice the alternatives that were advanced are the ones that actually complied and met with field, the alternatives considered with the criteria.

Male: Say that again. TIRE is what?

Jeremias: TIRE is traffic infusion on residential environments. This shows us each of the alternatives that we did agree to carry forward. We agreed to carry a total of five alternatives. Typical that no-build alternative usually remains. The no-build alternative is leave the bridge as-is, no changes to this bridge would be done. In my next slides, I will discuss each of the different alternatives just so that you have an idea of what they would look like and reference to the impacts.

Alternative 1. Alternative 1 is a bidirectional, one-lane traffic signal control. The traffic lane would be 16 feet wide. The sidewalks will remain as 5-foot sidewalks. There would be a total of nine traffic poles and 15 signals. Seven of the poles would be located in East Palo Alto; two of them would be located on the Palo Alto side. The ones in Palo Alto are necessary because of the driveway that exists in this location. This alternative shows the poles that would be located on the East Palo Alto side. This alternative also creates the need for figuring out how do we sequence both traffic signals. It may be problematic in particular because they would be affecting

both of our cities, and we'd have to figure out the sequencing, the timing, the control, where the power (inaudible). One of the options of one of the items considered as far as the impacts in this was future operation and maintenance costs. That's something that should be accounted for in comparison to the alternatives that I'll discuss next.

Alternative 2. This is two 14-foot-wide travel lanes. The sidewalks similar at 5-foot wide. This exhibit, as I discussed previously, we're looking at two different options for the class 2 bicycle where we would extend the lane line across to create a shoulder, so it would feel like a bike lane while maintaining a 10-foot-wide travel lane for vehicles. The other issue that I want to make sure we clarify in this is when we created these exhibits, it was a purpose for the EIR. We were looking at trying to create exhibits that would be compared evenly. We also omitted putting in planting or landscaping or trees on these exhibits. Ultimately, when the project is moved forward, we will have plants along the planter strips on the Palo Alto side. Unfortunately, due to the line-of-sight issue constraints that we have, we would have to maintain this area with vegetation that's low coverage. We don't want to create the same feel, the eucalyptus trees that are now blocking the line of sight. We would try to provide as many trees within the vicinity of this bridge to mitigate the removal of the trees.

Alternative 3. As I discussed previously, Alternative 3 has a realignment. It's a minor realignment. It's 30 feet, shifting 30 feet north on Woodland. Again, similar to a previous alternative, it's two 14-foot-wide lanes with two 5-foot-wide sidewalks. Similar to Alternative 2, they'd be stop controlled. You can see not only—based on the image and the coloring, it's hard to tell on one side. We definitely have a stop control, all controlled on four sides.

Alternative 4. This is the alternative that closely resembles an alternative that was originally discussed in 2012 and was omitted. This alternative does a full realignment. This alternative, similar to the previous ones, are two 14-foot-wide, two 5-foot wide sidewalks. It also would have the same stop traffic at the stop signs and at the intersections. One of the impacts on this would be it would increase the area of disturbance. Since we are shifting the alignment to an area that has not been dug into in the past, we would have to increase the work area.

With that, I wanted to also identify how we got to identifying Alternative 2 as our locally preferred alternative. We discussed this last night, and the issue regarding the least disturbance to existing trees and creekbank came up in the conversation. The existing trees between Alternative 1 and Alternative 2, an additional two trees are being removed. It's minor, but it's definitely at this point hard to tell the number of trees, but they're similar. Again, the creekbank, it's a small area of change between the two alternatives, but some of the bigger issues that would be—as a matter, we talked with the neighbors in both cities—is impacts to residents. In the East Palo Alto side,

as we proceed with Alternative 4, the retaining walls to hold up the road would be taller. I'm sorry. I forgot to mention that earlier. Part of this project would require raising not only Newell Road and raising the bridge, but we would also be raising Woodland and Newell Road on East Palo Alto. The bridge in order to avoid and to eliminate that vertical profile concern that we have at this point would be raised by about 1 1/2 feet. Woodland Avenue and both Newells would be raised, as we get closer to the bridge, about 4 feet. We have to adjust both streets. As we move further away from this bridge, it would be reduced to maybe a foot or 2 feet. There is an adjustment that's going to take place in order to eliminate the vertical profile that exists. This would create a better line of site, and oncoming traffic would be able to see each other. Having said that, one of the benefits here is the retaining walls needed for the neighborhood, the private property owners, the walls on Alternative 2 are shorter since the hinge point would lie right at the edge of the intersection. Alternative 4 would create taller walls. In addition, this would maintain the existing distance that we have from our adjacent neighbors on all sides. This alternative, similar to what I talked about the traffic signals, does not require operation and maintenance costs. It's something that both our cities have an agreement on. We've discussed this with staff, and this is how we got to this alternative.

Environmental review process. As stated, the City of Palo Alto is the lead agency for CEQA. We've got Caltrans present here as well. They're here to answer any NEPA-related questions. They're the lead agency for NEPA. We've got a number of other agencies that I want to also recognize that are not listed on this slide. We've been working diligently with the Santa Clara Valley Water District and the SFCJPA trying to advance all these projects. They would all be part of the responsible, and we would obtain comments from both of them.

Lastly, the schedule. Where we are at this point is we have released the EIR. We're looking for comments through July 30. Following that, we've created a schedule based on best-case scenario. We believe the final release of the EIR will be the end of August, hopefully going through councils for approval and certification. We will then follow up with permitting concurrently as we advance the construction documents. Ultimately, hopefully best-case scenario is construction would begin in spring of 2020. Current estimate for construction is about a year and a half. Depending when we start, we would be ending the project either at the end of 2021 or beginning of 2022. With that, I want to open this up for any questions.

Male: All right. I'll entertain questions from my committee members.

Male: During the 18 months, it's going to (inaudible) from 2020 (inaudible). I presume that means that we know where it would cross (inaudible).

Jeremias: That is correct. We've done this in a lot of different projects where we have multi agencies. The project would extend—it would be the responsibility of the contractor to maintain this site safe. We wouldn't have the opportunity to create anything that would allow for either pedestrians or cyclists to use the bridge or what remains of the bridge during construction.

Huerta: I'm for Alternative 4, the realignment. I don't see pictures of what the bridge is going to look like, like if you're standing down in the creek, what the arch looks like or anything like that. Why would it take so long to build that? What happened to all the street lamps? The street lamps in Palo Alto are different. I don't know if you guys have the overheads; we do. Is there going to be lighting down there? I'm for a bicycle lane on both sides and keeping it wide enough. Who is deciding on this Number 2 alternative? Right now, who owns the bridge? It's both Palo Alto and East Palo Alto. I guess Caltrans will be paying for this. Will they own it? A bunch of questions. Thank you.

Eggleston: Brad Eggleston, Director of Public Works. As we've looked into this when we were first starting the project, we believe that the bridge is jointly owned by the Cities of Palo Alto and East Palo Alto. The dividing line actually runs down the center of the creek between the two cities and the two counties. In Caltrans' system, they list the City of Palo Alto as the agency that's responsible for the bridge. That's actually the reason why, for this particular project, it's not the Joint Powers Authority leading it. Early on, it was identified that this was an opportunity, because Caltrans had identified the bridge as functionally obsolete, to get funding from Caltrans for 88 percent of the project. Palo Alto applied for that funding. Because of that, we've done the lead on the project and the lead agency under the CEQA process. I think you were asking about how will it ultimately be determined. There's a City of Palo Alto process that involves us going through the Palo Alto boards and commissions, notably Palo Alto's Architectural Review Board, and then to the Palo Alto City Council who would approve the project and certify the EIR. What we've been discussing with East Palo Alto staff is, because the project is in both cities, ultimately it has to be a project that both cities agree on. We've been talking with Kamal about exactly how that would take place on the East Palo Alto side, whether it's via permitting or some other mechanism. This is something we describe in all the meetings we have, that it needs to be a solution that's acceptable to both communities.

Fallaha: We can start there, what Brad said. The bridge is maintained by Palo Alto. It's a (inaudible) like, for example, that new bridge that Caltrans just built on West Bayshore over the creek. It's an East Palo Alto bridge and so (inaudible). East Bayshore Bridge just across the freeway, that's a Palo Alto bridge even though half of it is in East Palo Alto and half of it in Palo Alto. That's how the ownership and maintenance is designated. We are responsible for West Bayshore, and Palo Alto is responsible for East

Bayshore. Newell Bridge is the responsibility in terms of maintenance by Palo Alto. (inaudible) Their process would be working with this Commission since 2012. (inaudible) for realignment, as Michel indicated. If you look at (inaudible) to have a straight shot on Newell between East Palo Alto and Palo Alto (inaudible) to have this (inaudible) connection. (inaudible) advocate for partial realignment, I will likely bring this (inaudible) so we can improve sight distance and not need a traffic signal. I don't like traffic signal. (inaudible) The difference between the existing alignment and the Palo Alto alignment is very small in terms of impact. If we're going to go with that (inaudible) we are here to hear the Committee and the comments so we can address the Committee (inaudible) what they prefer. We would like to see what's the best for East Palo Alto. From my perspective (inaudible) our community (inaudible) summarize our comments and send them to Palo Alto. (inaudible) that's why the process of the review and the community meetings. We would like to see if (inaudible) would they prefer (inaudible) more analysis about the sight distance. My concern is the two intersections are far apart, but maybe sight distance's not an issue. That's really more important (inaudible) what's being constructed is now (inaudible) the sight distance from here to the wall that we see over there, 4 or 5 feet walls which are just (inaudible) walls that are blocking the view. We can look at some (inaudible) based on the preferred alignment if that's what you (inaudible) with. Michel will be able to say this is what we see if we go with the preferred alternative.

Male: I have a couple of questions. That picture right there, that is going from Palo Alto to East Palo Alto, correct?

Jeremias: No. It's the opposite.

Male: That car is going—that stop sign is Palo Alto.

Female: Woodland.

Fallaha: The stop sign is on the East Palo Alto side.

Jeremias: The car is going from Palo Alto to East Palo Alto. The cyclist is moving the opposite.

Male: Is it going to pivot? You don't want a partial going over to the other side. Let's say, where that car is, the car will start there going over the bridge, but he'll end up possibly where that—you see where the right side of the bridge is, where the stop sign is?

Jeremias: Right.

Male: If you realign that bridge, that stop sign would be right where that oak tree is to the left? Something like that, right?

- Jeremias: To you question, yes. If Alternative 4 is looked at, is what you're considering, the car would start where it is currently and it would head to the left on this photo, to where that oak tree or tree is located.
- Male: Four is the complete drive-through.
- Jeremias: Right.
- Male: The partial, where would the partial begin?
- Jeremias: The partial would be 30 feet over. I think four is actually further. Four is out here. Three is probably closer to the tree.
- Eggleston: Right. The partial realignment moves it about 30 feet. If you imagine the stop sign moving about 30 feet to the left in this slide.
- Male: I heard something in the presentation about you're going to replace stop signs on Newell with lights. In other words, you're going to have lights from, let's say, the bridge all the way to Embarcadero?
- Jeremias: No. Alternative 1 is the one that would replace the stop signs with lights. Alternative 1 is shown here, where the traffic signals would be added. In this alternative, we're looking at a 16-foot-wide bridge, which does not accommodate two-way traffic at the same time. It would be all traffic-light controlled, allowing vehicles to move in one direction at a time.
- Male: Once you pass, let's say, that bridge, it's going to be stop signs all the way—or whatever the stop signs you have now—to Embarcadero?
- Jeremias: There would be traffic lights. This photo here is looking from the East Palo Alto side. There will be traffic signals on the East Palo Alto side as well all the way to Embarcadero. It's just one block.
- Male: There is going to be signals all the way to ...
- Eggleston: No, I don't think so. This is just an idea for—this alternative ...
- Male: That's Option 1.
- Eggleston: Yeah. This Option 1, in concept what it's trying to do is say what if we wanted to build something that was still a narrow bridge because there are people that are concerned about traffic and speed impacts of a wider bridge. If we wanted to build a new bridge that addressed the flood control concern but essentially maintained a narrow bridge with sidewalks, then to do that safely you would need to have these signals. The traffic signals would only be in the vicinity of the bridge, and the alternative doesn't look at anything on Newell as you head towards Embarcadero. Although, I believe Newell and Hamilton does already have a traffic signal.

- Male: On the creek itself, is the ravine going to be made wider? Because it is supposed to be for a 100-year flood, so that means either the bridge is going to be a little higher, but then is that creek going to be hauled down to make it wider? In other words, the span is going to be longer than what it is now. Is that correct?
- Jeremias: Exactly. As you saw in the first slide, there are constraints on that creek. The abutments for the existing bridge encroach into the creek. To your question, yes, the creek will be wider. Those abutments will be removed. To clarify one of the things we just said, we originally looked at providing measures to allow a 100-year flow to pass, but that's not feasible. This creek can only handle what is close to approximately 70-year storm improvements. We can't create a 100-year without doing significant improvements throughout the creek, and that's not something both projects are trying to move forward. We're trying to allow the pass of 7,500, which is one of the highest storms we've measured.
- Male: This would be (inaudible). This Alternative 1, when you say 16-foot-wide means a 16-foot total from one side of the road to the other side of the road.
- Jeremias: No. It's a 16-foot travel lane, so curb to curb. Outside of the curb, there's two 5-foot-wide sidewalks. So 26.
- Male: A curb-to-curb road?
- Jeremias: Right.
- Male: On Alternative 2, we have ...
- Jeremias: Two 14.
- Male: Two 14s. That's really 28 curb to curb plus 5-foot sidewalks.
- Jeremias: That's correct.
- Male: You use the word 16 on this one and use the word 14 on the other one. It can get confusing.
- Jeremias: Sorry.
- Male: I was thinking it was 7 feet and 7 feet for cars going back and forth, which seemed a little scary.
- Fallaha: This is one-way traffic, so 16 feet is going one way. That's why the signals are moved.
- Male: As they call it in Costa Rica, OMG bridge, Oh My God bridge.

Huerta: Originally, the Public Works and Transportation Division, years back, worked on this. We were for Alignment Number 4. You're saying your commission in Palo Alto wants Number 2, but we want Number 4. We want to get that straight, that we want Number 4. Again, I ask who's going to own it after all? If it's going to be 50 percent East Palo Alto, 50 percent Palo Alto or it's going to be Caltrans since they're paying for that. What happened to the street lamps and all that were originally designed with this?

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Jeremias: Let me answer a couple of those questions. As I mentioned, Mayor, I look at the logistics. Regardless of where the bridge is located, I'm looking at how we can compare, how can we quantify the changes. On Alternative 4, one of the logistics issues—one of the questions you asked earlier, why a year and a half, we're constrained with work within the creek to a five-month window, which means we've got to get into the creek, provide immersion control measures, protect the creek for anything that may leak or spill into the creek, do any tree removal within the creek, remove the abutments, remove the existing bridge, start building the foundation, and install the new span, all within the course of five months. We're going to be rushed to proceed with both. Ideally, doing this in one location, again I go back to looking at logistics and looking at quantitatively how is this going to benefit both of our cities. Looking from logistics, expanding the bridge in Alternative 4 would cause additional delays because we're not only removing in one area, we're building in the other area. We're limited to access. Timewise, there would be some delay with Alternative 4 or additional costs. Part of it is how can we move forward. Alternative 2 has the least amount of impacts in general compared to all the different alternatives in place. That's what I'm trying to portray.

As far as your question regarding lights, we are actually trying to do a photometric design. I'm working with staff in East Palo Alto; Kevin's providing me with the type of lights that you have within East Palo Alto along Newell. We're trying to install the same thing you currently have in place. For the benefit of future maintenance, it's good to account for what do you have available that you can restock. If you have to replace a cover head, can we replace the same cover head that East Palo Alto has to make it quicker as opposed to having to go out and find out what lights you guys installed. What I'm proposing to do is maintain existing standards for both of our different cities. We would install exactly what you have in place on East Palo Alto. This is how we're starting this.

Looking at the existing conditions, one of the issues at hand is the trees. The trees provide a lot of shade. When we looked at this project originally, I think we proposed putting streetlights within that bridge, but maybe the streetlights would not be needed if we omit the trees, if we remove the canopy. In addition to that, there may be a conflict by putting any streetlights on the bridge itself. I would advise possibly putting—for future maintenance of streetlights, it would be easier for either power, fiber, conduit that's being

installed within the bridge if we maintained the lights on either side. I am working with one of our vendors along with getting information from City of East Palo Alto to see if I can create a photometric plan. That's something we will look at later—it's currently not available—to determine whether or not streetlights are needed. We don't believe they would be needed simply because we are omitting the trees and the canopy that exists. If they are needed we can come back and place streetlights within each of our different streets and provide the type of light that we have either access to.

Huerta: This Commission went with the public. The public wanted Alternative 4. I'm still for that alternative. You still haven't told me who would own it. If Caltrans builds it, don't they own it? | 4

Fallaha: No, (inaudible) own that Palo Alto (inaudible).

Huerta: Isn't it half in Palo Alto right now? | 4 cont'd

Fallaha: Caltrans just built a bridge for East Palo Alto (crosstalk).

Huerta: No, but why would it end up in somebody else's hands totally? | 4 cont'd

Fallaha: It's going to still be Palo Alto's bridge (inaudible) maintained and there's got to be O&M (inaudible) and the City of Palo Alto. This is what (inaudible) is saying.

Huerta: Right now, the bridge is half East Palo Alto. Why would we give that up? | 4 cont'd

Fallaha: It's something you have, East Palo Alto. Again, let me (inaudible). Bridges can go across jurisdictions and have one owner on one of the two sides. I gave you an example of West Bayshore and East Bayshore. West Bayshore Bridge over the creek has one owner.

Huerta: I heard that.

Fallaha: That's East Palo Alto. (inaudible) if I I'm going to paint the curb red, I can do it on East Palo Alto side but not on Palo Alto side. The main thing is the responsibility is different than who funds it. Those funds (inaudible) by Caltrans, but it's down to us now for maintenance.

Huerta: What I'm saying, right now that bridge is half East Palo Alto property. Why doesn't the bridge in the future—why does it end up totally in Palo Alto's hands later? It should be half East Palo Alto's bridge. | 4 cont'd

Fallaha: It's not part of East Palo Alto's assets. If you look at (inaudible) construction of assets, it's not one of (crosstalk).

Male: Yeah, I'd like to see the (crosstalk).

Fallaha: On University Avenue, the bridge over the creek next to Woodland is East Palo Alto's bridge (inaudible). We are required to maintain it. In fact, we have a capital improvement to do some needed maintenance, just to give an example. Caltrans does the inspection on these bridges, and they provide us with biannual (inaudible) report. Each city has to follow up with how (inaudible) and the (inaudible) it's going to take to keep these bridges maintained.

Huerta: What I'm saying is Palo Alto gets to choose Alternative 2 because they're going to own the bridge. If we owned half the bridge, we would have something to say about Alternative 4.

Male: Commissioner Huerta, at the very beginning (inaudible) on the construction of the bridge, we have likely a year and a half to talk about the ownership. Right now, we're talking about what's going to happen with this bridge. One thing I just found out—it's a couple of things. I thought this was going to be a 100-year bridge; it's going to be a 70-year bridge. I thought the builder was the Army Corps of Engineers. Is that true or is it—now, it's Caltrans? It's Caltrans. Wasn't it the Army Corps of Engineers because they were going to do it free? That's all (crosstalk).

Eggleston: Early on in the Joint Powers Authority process, they were pursuing a Corps of Engineers project. The funding was not coming through for that, so ultimately they looked at other strategies for funding the projects. The downstream project that was completed was funded by a number of sources including State grants. The JPA's looking at funding sources for the upstream project that includes Pope-Chaucer. This particular bridge is being primarily funded through the Caltrans Highway Bridge program.

Male: This straight shot that Commissioner Huerta advocates ...

Huerta: Number 4, which is not (crosstalk).

Male: All right. That's the straight shot, which is Number 4.

Huerta: (inaudible) Number 1 is on the left. Number 2, 3, and 4 ...

Male: (inaudible)

Male: Isn't four the straight shot?

Eggleston: Correct.

Male: It seems to me ...

Huerta: (inaudible)

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Male: I'm going with the presentation. He just said Number 4 is the straight shot. In fact, we're going to take a break after my questions, and everybody's going to take a look at it. It seems that this is a straight shot, and you want traffic lights. That means if it's a straight shot, that's going to be another avenue for traffic to go through East Palo Alto on Woodland to get out of town. If we have it where it's not a straight shot and there's a slight jog, then the stop signs will stay, and that'll discourage people from trying to make this a cut through. I understand that. How about a ten-minute break?

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Male: Before we have a break, I want to (inaudible).

Male: Has everybody had a chance to look at it?

Fallaha: Commissioners have to make comments, and we have the public to hear from as well. (inaudible)

Male: It seems to me that—what was the year? We had eight options in 2012. Mr. Huerta says that we picked four. Apparently sometime between 2012 and today, Number 4 was an option that (inaudible). Upon further study, apparently, we discarded a number of options. We learned a lot as we went along with the study. Now, we have come to the conclusion that the option with the most benefits, least cost, least hassle, and most likely to get cooperation among the various entities, agencies, cities, etc., is Number 2. I think Number 2 deserves a serious scrutiny before we charge off and say, "Wait a minute. I thought we already decided on this other one."

Male: (inaudible) you, Commissioners, anybody have any questions? The public, anybody have any comments or questions? (inaudible) step over there to (inaudible) and come on up.

Female: We have two speakers. First speaker is Michelle Dare.

Dare: Good evening, Commissioners, Chair. Thank you for hearing my concerns and comments. I've been following this project since 2012. I want to emphasize that I've reviewed all alternatives. I want to see if perhaps we can get Item 3, the third option, up for review. That's not a very good view. My concern is that we prioritize—I agree with reducing the amount of vehicle speed and traffic and having that cut-through traffic coming through East Palo Alto. Again, that will happen if the full alignment is in place. The concern that I have is that we're not properly prioritizing. We should first prioritize safety, and next we should prioritize alternative modes of travel because obviously nobody wants cut-through traffic through their community. We have a brand-new pedestrian overcrossing that hits the Bay Trail. It's something that's a very accessible route for people to use alternative transportation. I want to emphasize that Alternative 3 is probably the most preferred alternative for either looking into the future and eliminating the motorized vehicle travel, which is something maybe you

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should be considering doing because obviously (inaudible) and we need to think about that for longevity. I know that in terms of construction (inaudible) of time, and I know that in terms of costs (inaudible) costs, but I think that now is the time to do that. I don't think that having a sharrow on the road is going to encourage people to bicycle. I think the only way to encourage that is to do it as safely as possible, which is a full bike lane. I don't believe that anything less than a full sidewalk is an option. I go to Palo Alto quite often, and I bike there, and it's not safe to do so right now, so I choose to drive there most of the time. If you build it, I will come. I think that's the case for most of community members. If it's (inaudible) and safe, we'll use it. That concludes my comments. Thank you.

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Female: Our next speaker, Gail Wilkerson.

Wilkerson: (inaudible) Woodland, where that bridge is. They say (crosstalk) heard one person speak, there's 600 people that feel the same way. I'm speaking for 600 people. Thanks to the GPS, a lot of people have found that bridge. Now, all of a sudden Palo Alto wants to widen it. I've been living here since 1985. All I've heard is close that bridge down. They didn't want it because East Palo Alto will wander through. They're not very neighborly, friendly-wise. They won't let people park on their street. I sort of understand that, but they've got parking permits to avoid the people parking on their street. They want the bridge where all this traffic is going to come through. What do we get out of it? The benefit we get out of it is more of their traffic, Teslas, BMWs, Volvos. I think they go to the Tesla spot over there to get recharged in the shopping center. We're like a backyard to Palo Alto. Aside from abusing East Palo Alto for all these years, I don't see why we should widen the bridge. They could put some wings on the side and have bicycles go through because that's what they're going to do anyway. They're going to come right down Newell and go over that bridge through their wilderness that they have. I think they filed a lawsuit about 27 years ago where they didn't want the traffic to come off of the Dumbarton Bridge around East Palo Alto down into Embarcadero. Why should we accommodate them because the right people have spoke up and said, "I almost got hit going around that curve and on that bridge"? That's not my problem. That's their problem. They want to avoid University Avenue. They want to come down Newell and create cut-through traffic. If you widen it, (inaudible) of us are going to start coming through. Watch. Thank you.

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Female: That concludes the speakers. We have one more. After Bernard ...

Male: Your name and address please.

Female: Hi. Esther Barrett, and I live at 127 Mission Drive. I've been in East Palo Alto since the early '80s. I think it's really important—the main priority is to have a bridge. I heard some Palo Alto people talking about they wanted to shut it down. I just think that's completely unrealistic because those of us

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living in that part of East Palo Alto would be completely locked in. We get stuck with traffic, lots of people commuting through and blocking traffic. I have to ride my bike. I can't even get my car (inaudible) sometimes. That's one thing. To maintain the bridge—I know destroying it isn't on the table right now. The other thing is the flood control. That's priority number one. It has to take care of its own flood issues and has to be safe. I totally agree with the last speaker about East Palo Alto being the butt-end of Palo Alto's business for a long time. I think we really need to make our voice heard loud and clear. I understand at the meeting in Palo Alto last night there was just so many people wanting to eliminate the bridge altogether. Thank you.

Male: I have another question. Wasn't that bridge supposed to be called the Friendship Bridge? I heard that a long time ago. Is that true?

Fallaha: I remember we had a committee meeting in Palo Alto, and my colleague, Brad, when they go through presenting, they said this would be a friendship bridge 2 because we have a friendship bridge near the (inaudible) station. This would be Friendship Bridge 2. I just want to comment about what was said over here. I totally agree. I understand East Palo Alto's frustration with the history of two neighboring cities for the past 80 years. This atmosphere has changed significantly. Just last year, we had half a million gallon of water from Palo Alto to East Palo Alto when we needed the water. We have collaboration on the flood protection project and others. If the history is bad, we must change it. We need to work together and find the best project for both committees, that fits the needs of both committees. The project is up to Palo Alto, yes. Maybe they will remove that bridge because it's obsolete. It's old. It was built for (inaudible) not cost. We said, "No. If we don't get East Palo Alto with"—the neighborhood is landlocked, freeway on one side, creek on the other side. Every other emergency exit to come and exit the neighborhood is very essential. I talked to the Fire Chief today, and he said, "Please do not let them remove that bridge. We need access in case of evacuation, flood, whatever it may be." The project, we've seen the needs and the purpose for the project is the flood issue. We want to take that neighborhood—if you see some pictures over there from the '98 flood, (inaudible) along that northern neighborhood. We should trade bad with good. If your bad was in the past, you must change this. We are working with them on all fronts now, and we need each other. I always say, "What's bad for East Palo Alto is bad for Palo Alto, and what's bad for Palo Alto is bad for East Palo Alto" and vice versa. We must work with issues to resolve (inaudible) transportation issue, cut-through traffic. We just went through a new project, the signal synchronization. It's all the way from downtown Palo Alto through Bayfront Expressway to the bridge. They had (inaudible). We supported it, and we get benefit from that. We are working on all front with Palo Alto. I would like to continue this cooperation on all fronts.

Male: Are there any other comments?

- Male: Two more things now. I want to make sure the levees or whatever walls on each side will be the same. Now, I do know this because it was brought up last month at one of our meetings. Now, that creek, they have people go through, and they cut down brush and everything and whatever stuff, but they don't remove it. They let the water remove it, let it run out to the Bay. If I'm not mistaken, doesn't that cause floods? If this bridge is supposed to be a 70-year bridge and not a 100-year bridge, that means we might have this again if they don't remove their brush and let a clear flow go out to the Bay. Am I wrong?
- Eggleston: You're right except that the rules that the Regional Water Board has for the brush removal, we're actually not allowed to remove it. What's done is the larger pieces are cut up into lengths that are short enough that they're not a threat for actually getting hung up on other things and causing flooding. We're pretty confident that that material—our agencies all work together every year before the rainy season to do this. We're confident that material easily floats out to the Bay without causing flooding.
- Male: Come on. Last year, how many truckloads of debris did we get on our side that was caught in the grill?
- Fallaha: (inaudible). That's the good news. That was needed during the construction of the new bridges over 101 and over East Bayshore and West Bayshore. On West Bayshore, we had that grill to catch most of the debris so they don't end up in (inaudible) and that construction bridge. The new alignments, the new one versus the old one, they're not in the same alignment. We can't access that bridge during the rainy season, so we had the grill catch all the logs and any debris coming from upstream, and we have (inaudible). Yes, we remove about 15 (inaudible) trucks, and each was (inaudible) yards or more. We had to close West Bayshore four or five times in that year. Now, that concern is no longer there. By the minimum requirements, as Brad mentioned, the Santa Clara Valley (inaudible) they're not allowed to do this. If there's a tree that fell, they will chop it into 2-foot pieces. The first rain will just bring it down to the Bay, very natural. That's what the environmental guidelines (inaudible) on us, and that's what we have to abide by.
- Male: As (inaudible) is saying, the origin of San Francisquito Creek is Stanford. Stuff can float from Stanford all the way down and go out into the Bay hopefully.
- Fallaha: We (inaudible) the creek all the way (inaudible) risk, and then remove the trees before the rainy season.
- Male: When you said record rain, was that a record—like the flood that was there, was that a record or was this rain more than the flood?

- Fallaha: Maybe there was record rain (inaudible). If you remember, we went through a flood. We had flood into April. Come two or three years, we had dropped. Then, we had 2015, 2016, but we had a lot of rain that year. The whole creek was flushed by (inaudible) when we had these storms back to back and we had this rain between them. We had so much rain. The flow is definitely from rain. We could have more rain but no flood because a storm—you have a day between them. It can drain naturally and relax before another storm comes in. If you have heavy rain over 24 hours, that's what happened in 2012. We had about 6,500—we have the numbers, but we had it at that time before the drain. The largest one was in 1998. That was 7,600. I think that was (inaudible). Now, we have design based on that (inaudible). The 70 percent that was referenced by Michel and Brad—this is our (inaudible) the JPA's looking at upstream (inaudible) at Stanford. How can we get them to store water in high demand and release it naturally? There are other alternatives that we are trying to meet at least the highest flow that is recorded along that creek. That bridge will accommodate it with this design.
- Male: Is the 100-year flood—is it really a 70-year flood? Is that a term you're talking about or are you talking about 70 percent of maximum flow?
- Fallaha: That EIR is still under review. We haven't (inaudible) anything on the 29th of May. They're looking at that (inaudible). That's the authority that we accommodate by widening the creek. We're basing the Newell Bridge to accommodate the highest recorded flow on record.
- Male: Which is about 7,600?
- Fallaha: Yes, that's approximate. Downstream from 101, the project just completed has more capacity. It makes sense your capacity higher downstream versus upstream. Downstream from 101, I think we have close to 8,000?
- Jeremias: Nine.
- Fallaha: 9,000, which is ...
- Male: Another kind of question. I had sat through a so-called EIR discussion last night. (inaudible) Were there any interesting issues that came up or are coming up in the EIR, this one? The Draft EIR (inaudible).
- Eggleston: There's a lot of different interesting areas of impacts that we assess. If you mean interesting like we discovered something new or unexpected, I don't think there was anything like that.
- Male: No, just the ones that are trickier than others to the committee, or did you find there's nothing you need to mitigate?

- Eggleston: There's definitely items that need mitigations. There's a whole table of different types of impacts and proposed mitigations in the EIR.
- Fallaha: That's Appendix D on the Draft EIR if you go to the website. It summarize all the mitigations that's required.
- Male: I'm going to suggest that all the members (inaudible) go to Appendix D and read the ... and be prepared to defend it against all the sundry questions (inaudible).
- Male: One more question now. The bridge is—when I first heard it, the bridge was being paid for by the Department of Army Engineers now. The bridge is still being paid for by somebody but not Palo Alto or East Palo Alto. Is that correct?
- Eggleston: The current funding strategy is under the Caltrans Highway Bridge program. They pay, I think, 88.5 percent of the cost. The Santa Clara Valley Water District has been putting in the local funds match, which is about 11.5 percent.
- Male: Any other questions?
- Male: East Palo Alto and Palo Alto are not putting any money into it?
- Eggleston: Not currently.
- Fallaha: Not East Palo Alto.
- Male: After listening to Michel's comments on Alternative 3, can we go back and hone in on the (inaudible) Alternative 3? Specifically, what is the difference in the bicycle capacity for one versus the other?
- Eggleston: I think in our analysis we didn't think there was any difference in the bicycle capacity as we were saying earlier. This is Alternative 3. Really the only difference between this and Alternative 2 is that, if you were at this stop sign going to turn left and then go onto the bridge, you would go about 30 feet further in that direction before being able to turn right onto the bridge from the East Palo Alto side there.
- Male: Alternative 3 is controlled by a stop light?
- Eggleston: Stop sign. Alternatives 2, 3, and 4 are all stop-sign intersections. It's only Alternative 1 that's controlled by traffic signals.
- Male: It's controlled by traffic lights because it's one way at a time.
- Eggleston: Correct. It's trying to keep traffic one direction at a time on essentially a one-lane roadway.

- Male: I told you that's an Oh My God bridge.
- Male: Let me ask you this question here now. With stop signs—looking at Alternative 3, wouldn't it be safer for the traffic to be regulated by lights than by stop signs? When you have commuters, they get impatient, and they start running through stop signs.
- Male: They run through stop lights too, you know.
- Male: Yeah. Is there anything with lights as opposed to stop signs as far as the safety aspect?
- Eggleston: I think the thought here was that the traffic volumes are not high enough to justify traffic signals.
- Male: One more question. Since Caltrans is paying most of this, will there also be one of those traffic cameras to monitor (inaudible) also added to their system?
- Eggleston: It's not something we've discussed with them to this point.
- Male: Will somebody find that out?
- Fallaha: Yeah. For low traffic, usually (inaudible) considering there are so many bridges now (inaudible) more than that traffic-wise, and they don't have cameras. If you're (inaudible) this will (inaudible) additional traffic smart (inaudible) 101 and the freeway's closed to traffic, we can use University Avenue or (inaudible), for example, to detour traffic (inaudible) and they can (inaudible). Obviously, the staff we have here makes (inaudible) we have access to these cameras, and we can control the timing of the signal to clear the traffic. There's a general agreement with MTC, C/CAG, and Caltrans and the City on the use of these cameras. There are mainly used just for traffic purposes, not city purposes.
- Male: Traffic counts, yeah. I thought they'd be—MTC and all their (inaudible) traffic counts. I thought they'd be putting a camera there.
- Male: There's all these different (inaudible) coming up. Putting a camera, that's (inaudible). That can be put in there. Any others? That finishes our talk on the Newell Bridge.
- Fallaha: Through the Chair, I encourage all residents, if there's anything, any comment, if you can put them in writing, send email to the city. You can send directly to Palo Alto or us. (inaudible) if you would like to give something in writing. (inaudible) draft for the city comments for the EIR. We will share it with you in the next meeting in July and then send it to Palo Alto before the deadline, which is July 30.

- Male: Is there any action we need to take on this?
- Fallaha: This afternoon, I learned that the City Manager would like to have Palo Alto and staff present this to the City Council at the July 2 City Council meeting as well. We'll get (inaudible) from the City Council on the alternatives and get more comments. That's an adjustment about (inaudible).
- Male: Another reason is the Public Works and Transportation Commission (inaudible) ours and then go to our second meeting in case somebody has questions.
- Male: I'd like to thank the City of Palo Alto Public Works for updating us because I've learned some things since the last thing. I remember I went to a meeting a couple of years ago at Lucie Stern or something, a long time ago. This is an update. Is the bridge going to be the same height? It's just going to be (inaudible), but it's going to be taller, right?
- Eggleston: Yes, it's going to be about 1 1/2 feet higher than the current bridge. Chair, can I make one more comment?
- Male: Sure.
- Eggleston: I just wanted to congratulate East Palo Alto on getting your bicycle/pedestrian overcrossing in place before we did, even though we started so much earlier. To let you know, I'm having to answer a lot of questions now to my boss and City Council about why we're not done yet.
- Fallaha: We had help. Thank you, Brad and Michel.
- Male: Let's have a ten-minute recess for everybody to take a look at all four plans, and then you'll be ready for the meeting at City Council.
- Male: I would like to join in our plans, but I can go over because when East Palo Alto did this years ago and went for Alternate 4, we went over a lot of elements along Woodland Creek that were also—we went through a lot of details through it. That's why I want to see it here. I just don't want to walk up through there and look at it once. That kind of stuff should be in the packet.
- Fallaha: I think that makes sense. (inaudible) they're in there because (inaudible). We'll go out and (inaudible) a nice presentation.

Letter T-3. Transcript from East Palo Alto Public Works and Transportation Commission Meeting, 6/19/19

Response to Comment T-3.1

The commenter's support for Build Alternative 4 is noted.

Response to Comment T-3.2

The City of Palo Alto will have ownership and, thus, responsibility for operations and maintenance of the new bridge.

Response to Comment T-3.3

As explained during the meeting, design will utilize each City's standards (Palo Alto's and East Palo Alto's) on either side of the bridge for the street lamps. The Project proposes to replace the street lights in kind. A photometric study is included as part of the architectural review plan set for the Project. At this time, it is not anticipated that street lamps will be placed on the bridge itself.

Response to Comment T-3.4

Please see Responses to Comments T-3.1 and T-3.2. With respect to the commenter's concern that the City of Palo Alto has responsibility for operations and maintenance of the new bridge, the City is the lead agency for the Project and, thus, has responsibility to carry out the Project.

Response to Comment T-3.5

Please see Master Response 1.

Response to Comment T-3.6

A distinct benefit of this bridge replacement project is substantially improved pedestrian and bicycle facilities compared to the lack of facilities for alternative modes present today. The City of Palo Alto is studying various options to narrow vehicular lanes and improve pedestrian and bicycle facilities. These options are being presenting to Caltrans. The City agrees with the need to accommodate all users for the future.

Response to Comment T-3.7

The commenter's preference to remove the bridge is noted. Please see Master Response 1 regarding cut-through traffic.

Response to Comment T-3.8

The commenter's support for the Project and concern for any option that would permanently close/remove the bridge is noted. The commenter's support for the flood protection aspect of the Project is noted.



ARCHITECTURAL REVIEW BOARD

DRAFT MINUTES: July 18, 2019

City Hall/City Council Chambers

250 Hamilton Avenue

8:30 AM

Call to Order/Roll Call

Present: Chair Wynne Furth, Vice Chair Baltay, Board Members Alexander Lew, David Hirsch and Osma Thompson.

Absent: None

Chair Furth: Good morning. Welcome to the regular meeting of the Architectural Review Board of the City of Palo Alto, for July 18, 2019. Would you please call the roll?

[Roll Call]

Oral Communications

Chair Furth: The first item on our agenda, as always, is oral communications. This is the time for anybody who wishes to do so to speak to the Board on a matter not on today's agenda. Do we have any speaker cards for this item? We have no speaker cards. Seeing no volunteers, we'll go on.

Agenda Changes, Additions and Deletions

3. PUBLIC HEARING/QUASI-JUDICIAL Newell Road Bridge Replacement Project [19PLN-00130]: Review the Environmental Impact Report, Allow for Public Comment, and Consider a Major Architectural Review Application to Allow for Demolition of an Existing Two-Way Bridge On Newell Road Between Woodland Avenue in East Palo Alto and Edgewood Drive in Palo Alto and Construction of a New Bridge Along the Same Alignment That Meets Caltrans Standards for MultiModal Access. Environmental Assessment: An Environmental Impact Report (EIR)/Environmental Assessment (EA) was Circulated on May 31, 2019 for a 60 Day Comment Period That Will End on July 30, 2019 in Accordance With the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). Zoning District: Not Applicable (Public Right-of-Way) Adjacent Single-Family Residential (R-1[10,000]). For More Information Contact the Project Planner Claire Hodgkins at Claire.Hodgkins@cityofpaloalto.org.

Chair Furth: Item #3, a public hearing on a Newell Road bridge replacement project. We are asked to review the environmental impact report, allow for public comment on that impact report, so, essentially, we're holding the public hearing for the environmental impact report on this project. And, consider a major architectural review application to allow for demolition of an existing two-way bridge on Newell Road between Woodland Avenue and Edgewood Drive, and construction of a new multimodal bridge on the same alignment that meets Caltrans standards for multimodal access. The public comment period on the environmental assessment – this is a combined federal and state environmental review document, incidentally, so everybody uses slightly different words. But the public review period ends on July 30, 2019, so those who wish to comment should do so before that. The adjacent property – in the city, at least – is R-1[10,000]. Could we hear from the project planner, please?

Claire Hodgkins, Project Planner: Good morning, Board members. Claire Hodgkins, Project Planner on this project. The project before you today, as you noted, is a Newell Road Bridge replacement project. Newell Road Bridge crosses San Francisquito Creek at Newell Road, between Edgewood Drive in Palo Alto and Woodland Avenue in East Palo Alto. To avoid repetition, I'm going to just give a brief overview of the project description, and then let Public Works Engineering speak to more detail about the purpose and objectives of the project. The City is required to identify a proposed project for the purposes of CEQA. After thorough review, Alternative 2 in the environmental analysis was selected as the proposed project. That was done in coordination with other responsible agencies for the project, as well. The plans before you today reflect that alternative, which includes replacement of an existing two-lane bridge with a two-lane bridge along the same alignment. The new lanes would be wide enough to meet Caltrans standards for "sharrows," which are shared bicycle and vehicle lanes. And also includes a sidewalk on each side of the bridge. The existing bridge is being razed to allow better flow capacity beneath the bridge. The project also raises a portion of Woodland Avenue and Newell Road Bridge, and it includes some retaining walls to support that road being razed. For informational purposes, we've also included a site plan in the plan set for the other three build alternatives, so if you look in your plan sets and you see Alternative 1, 3 and 4, those are the other potential alternatives being considered. Public Works Engineering is also going to provide a bit more information on each alternative that was evaluated in the draft EIR/EA [Environmental Impact Report/Environmental Assessment], and the staff report also provides a little bit more information on those alternatives as well. This is just a quick view of the bridge from Newell Road in Palo Alto. This is a view of the proposed bridge from East Palo Alto, on Newell Road, again, looking over Woodland Avenue. Part of the purpose of this meeting is to provide another opportunity for public comment on this project. As you noted, the circulation period for the draft EIR/EA is ongoing right now and ends on July 30th. This is the fourth and final public hearing during that review period. But we're also here to request that the ARB provide comments on the design of the proposed project. Any thoughts you guys have on the bridge, the railings, the retaining walls, the landscaping in particular, would be very helpful. And then, any comments you may have on the draft EIR/EA are also welcomed. I also want to note that to the extent that you have comments relating to the NEPA [National Environmental Policy Act], Caltrans is here today to answer any questions as the lead agency for NEPA. In terms of next steps, as noted, the draft EIR/EA comment period ends on July 30th, and then we'll prepare responses to all of those comments. We'll be returning to the ARB for a formal recommendation on the project, and then, going to the Council for Council decision. With that, I will turn it back to you, and recommend that you hear from Public Works.

Chair Furth: Thank you. I had one question. The other responsible agencies in this case are...?

Ms. Hodgkins: There are several other responsible agencies. City of East Palo Alto is a responsible agency. Santa Clara Valley Water District is a responsible agency. Regional Water Quality Control Board would be a responsible agency. There are a number of different responsible agencies involved.

Chair Furth: This is like landing on an aircraft carrier. Okay.

[crosstalk]

Chair Furth: And you said this is the fourth public hearing. What are the hearings on the environmental document, what have the other hearings been for?

Ms. Hodgkins: There was a Planning and Transportation Commission hearing on June 12th. And then, we had a community information meeting on June 18th. What was the next one? I'm sorry?

Michel Jeremias, Public Works Department: Hi, Michel Jeremias, City of Palo Alto, Department of Public Works. I'm a senior engineer, working on this project. A third meeting was scheduled for June 19th, and it was a Public Works Transportation Commission meeting in East Palo Alto. We also gave a brief presentation at the San Francisquito Creek Joint Powers Authority Board, and we've had a separate community meeting for the City Council of East Palo Alto that was done earlier in the week, on July 16th.

Chair Furth: Thank you. First, to my fellow Board members, has everybody seen the site?

Vice Chair Baltay: Yes.

Board Member Lew: Yes.

Board Member Hirsch: Yes.

Board Member Thompson: I have not. But I looked at it on [crosstalk].

Chair Furth: All right, everybody but Board Member Thompson has been able to be there in person. Does anybody have any conversations they wish to disclose before we hear from this...? No. Thank you. Would you like to go ahead with your report? And spell your name for the transcriber.

Ms. Jeremias: Thank you. My name is Michel Jeremias [spells name]. As we change our presentation here, bear with us a minute. Thank you.

Chair Furth: We run your clock from when you're ready to go.

Ms. Jeremias: All right, thank you. The purpose and need. The project has been inspected over time by Caltrans, and Caltrans has determined that the bridge is functionally obsolete, meaning it does not meet the current Caltrans standards for either the upper travel lanes, or provide access for pedestrians through sidewalks. It also, it's not providing any accommodations for cyclists crossing the bridge. In addition to that, the bridge has a couple of issues that are a concern. There is a stopping sight distance that's obscured by having – as you can see on this photo – by having the trees and landscaping block the line of site. In addition to that, there is a vertical profile as you approach the bridge, crossing into Woodland, and that increase slope creates a visibility issue with the intersection of Woodland and Newell on the East Palo Alto side. Primarily, one of the bigger concerns on this project and how this is tied to an upstream project is that the bridge has a limited capacity. It can only allow 6,600 cubic feet per second to flow underneath it. The Pope-Chaucer project, as some of you may know, had flooding issues in the past. In 1998, one of the storm events that occurred. Pope-Chaucer has only capacity to allow 5,400 CFS. Santa Clara Valley Water District, in conjunction with the JPA, are working on a project to replace that bridge. However, that project cannot commence until this project is replaced. Commencing that project would transfer the flooding issue downstream to any residence affected adjacent to Newell, so there is an urgent need to replace this project so that we can proceed with the upstream project. And, it would benefit the community by reducing the flooding risk that affects our neighborhoods. Project objectives. As we have described our need, we also tried to identify, what are the objectives? How do we identify which are the options to be considered for the EIR? Several items were considered. The first one primarily was vehicles maintaining a connection between both jurisdictions, allowing not only vehicles to pass through, but creating sidewalks and providing for multimodal. With those, there is, in line, looking into, let's not increase traffic in either direction, and let's not increase speeds. Those are items that were considered. The project before you is something that takes into account that should not increase speeds, or traffic, or divert traffic to other intersections. We also looked at increasing the capacity of this bridge. Increasing the capacity to something that is inline with the upstream project, and also, based on the largest storm of record, which is the 1998 storm. We're proposing to bring this up to 7,500 CFS. That's the capacity of the creek, as well. So, if you were to eliminate any constraints in the creek, that's how much flow could get carried just through this creek, from upstream all the way out to, now the Bay. Recent improvements also downstream have allowed us to increase these capacities. As you're aware of, there's a project that took place to widen the levies. With these purpose and needs, we also – excuse me, objectives – we were able to narrow down – and this is following several community meetings that have occurred in the last seven years – to identify five alternatives. The fifth alternative, not shown here, is to leave the bridge in place. But the alternatives that were considered was, the first was a – in my next slide, I will be able to show you a depiction of what these entail. But for the purposes of the public, the first alternative considered was a bidirectional one-lane bridge. The second was a two-lane bridge on the existing

alignment. The existing alignment maintains the center line. We would replace the bridge using the center line as a control line, so the bridge would widen from the current bridge dimensions. I think I forgot to mention earlier, the current existing bridge is 22 feet wide. That's from outside of the barrier to outside of the barrier. The travel lane is only 18 feet wide, so we would replace the existing bridge on the current alignment as Alternative 2. Alternative 3 looks at the same bridge, but a partial realignment, shifting the center line over 30 feet for closer alignment to the Newell Road and East Palo Alto. Alternative 4 is two-lane alignment with a full realignment, a 90-foot change. Alternative 1, a little bit more detail for you guys to look at. This depiction shows what Alternative 1 would include. Alternative 1 is a bidirectional bridge. It's only 60 feet wide; it provides five-foot-wide sidewalks that would accommodate the multimodal for pedestrians. But, in order to accommodate 16-foot, traffic in two directions, 16 feet wide, we need to install traffic signals. A total of 15 traffic signals would be needed. A majority of them would be located in East Palo Alto. The traffic signals would allow traffic to flow in one direction at a time. One traffic signal is needed on the Palo Alto side, and that's to accommodate this driveway approach right here. Vehicles would only be able to travel in one direction at a time. There would be long-term operation maintenance cost associated with this alternative for the fiber and for the power that's needed to run the traffic signals. The area of disturbance for purposes of comparison, it's 45,000 square feet. Alternative 2. Here is a site plan that shows Alternative 2 and where it's in relation to the existing bridge. It's really difficult to tell, but you can see, here are the foundations of the existing bridge. This is, again, two 14-foot-wide lanes, two five-foot-wide sidewalks. It would be stop controlled. The area of disturbance, again, is 45,000 square feet. This is similar to Alternative 1, but in this alternative, one of the items that I want to, as we proceed through the slide, I want to make note of. We were looking at the bike lane terminating at the end of the driveway approach here. We would then stripe within the 14 foot wide, four feet off from the curb. We would stripe a shoulder line. That would create a 10-foot travel lane. The shoulder lane would act as a bike lane. I know we've had a number of comments through the ongoing meetings that we received regarding adding measures, so this is a little bit of a change. We've added more information on these slides for your purposes, to show that the travel lanes in both directions still maintain at 14 feet wide, but four of those would be shoulders, and that could be used for cyclists. Another thing to make note of, as Claire stated, we are raising this bridge by 1 ½ feet, which also requires raising the approaches on both sides – on the Palo Alto side and the East Palo Alto side – by a total of four feet. That would reduce the vertical profile that currently creates a problem as people are driving over the bridge. Alternative 3. This is, again, two 14-foot-wide lanes, 5-foot sidewalks, partially realignment with 30 feet shifting. Again, stop-controlled, and the area of disturbance increases. As you can see on the site plan, you can see where the existing bridge is in relation to the proposed bridge. Alternative 4 is a full realignment. Similar to the previous alternatives, we're looking at two 14-foot-wide lanes, two 5-foot-wide sidewalks, with a full realignment. The area of disturbance is higher, 55,000 square feet, so as part of the EIR, analyze anything we have to mitigate at a later date. For the purpose of the meeting, we've added a few slides to kind of clarify the trees that are to be removed. On the slide, the items circled in red are the trees that are to be removed. Of those nine trees that are located within Palo Alto, I've identified the variety. We've got four eucalyptus trees that are right adjacent to these corners; a buckeye that I know a lot of people are in favor of; and of course, live oaks. These are the trees to be removed. Several trees to be removed also as part of this alignment would be located on the East Palo Alto side. The proposed project, again, this is showing you, we've made a few changes over the course of our presentation. We have an existing streetlight in place. That streetlight would need to be replaced because we are lifting the road. The proposed retaining walls that are needed would be located behind the sidewalk, so those retaining walls would not be visible from the public. But, for the most part, they would be visible on the East Palo Alto side by the residents of those areas. On our side, what we intend to do is also provide some screening. This area does not create the line of sight concerns. The concern with line of sight is located on Newell, on Woodland. That's the area we try to avoid to add more trees. We're proposing right now to provide a California buckeye, a blue oak, and Western redbud in this area. If you have opinions as far as what we would want to place, please provide us any comments and let us know. I thought there was a need of placing another buckeye, and

we're providing two buckeyes in this location. Proposed project, also we talked about the concrete retaining walls. As stated, the concrete retaining walls are located behind the sidewalk. This shows where the retaining walls are shown, in red. The retaining walls on the Palo Alto side would again be located behind the sidewalk, as we're raising the road. The location of the trees are shown in green in this proximity. And apologies; this isn't a landscape plan, this is an engineering plan that has been added with a few details to depict where the trees are to be located. We also would look at guardrails to be installed. Guardrails are required to be installed per the CBC [phonetic] where the separation between the adjacent grade is 30 inches or higher, so we would try to provide those. For the purposes of the project, I think we are assuming retaining walls would be needed along this stretch, about 100 linear feet of retaining walls. We probably wouldn't need guardrails the entire stretch. We'd probably only need, as we conform to the existing grade, the guardrails would be eliminated. A little more detail as far as the bridge itself. As you stated, this project is funded by Caltrans and they are reviewing it. We've got to comply with Caltrans' requirements. Their standards for the bridge barrier is a Type 80SW for the sidewalk width on this. This is an area of what the guardrail would look like. The full height is over three feet. There are openings in the middle of the guardrail which would allow also for vehicles to be seen as people are driving across from Woodland. This would allow us to improve the line of sight concerns that we have. Other areas we're looking at on the Palo Alto side, where the picture of the guardrails would be installed. The guardrail would be located in the retaining walls, any areas that are taller than 30 inches. That wraps up my presentation. Thank you.

Chair Furth: Thank you. Any questions of staff before we go on? Before we go on to the public? Yes?

Vice Chair Baltay: Two questions, please. As I understand it, you want to increase the flow of the creek under the bridge to 7,500 cubic feet per second. Is it possible to do that by somehow widening the channel, rather than raising the bridge?

Ms. Jeremias: Unfortunately, it is not. Widening the channel, we have to remove the two barricades, the foundations that support the existing bridge. We'd have to remove those foundations to do the widening of the creek. So, there is no way of us to widen the creek in that vicinity and allow the flow to pass.

Vice Chair Baltay: I'm sorry, you said if you remove the foundations of the existing bridge, then you could?

Ms. Jeremias: If we remove the foundations of the existing creek, that would increase the capacity, but we'd also have to raise the bridge to allow that 7,500...

Vice Chair Baltay: There's no way to not raise the bridge and increase the width.

Ms. Jeremias: No.

Vice Chair Baltay: Second question. Have you or anybody researched the actual statistics of traffic incidents, accidents, pedestrian, bicycle problems, at this bridge right now? I understand it's considered to be a dangerous intersection as you come over the bridge into East Palo Alto because it drops and you don't have good sight lines. Is there a record of actual accidents occurring there?

Ms. Jeremias: We do have a record. I want to say it was minimal, the number of accidents. I want to say it's negligible. I don't know offhand, though, but I think it was... We did not only information from the City of Palo Police Department, also East Palo Alto and Menlo Park, and I think we received, maybe a total of two or three, offhand.

Vice Chair Baltay: Two or three over...? The past year? Or total of recorded...?

Ms. Jeremias: For the period of the last couple of years.

Vice Chair Baltay: And is that a lot, is that many, or few accidents for this type of situation, location?

Ms. Jeremias: I think it was negligible.

Vice Chair Baltay: Okay, thank you.

Chair Furth: Board Member Thompson.

Board Member Thompson: I had a question on the concrete barrier detail section. There's a black square kind of underneath the big concrete box, and.... I'm on Alternative 2, Cross Section. I think we did see it in your presentation, as well.

Ms. Jeremias: Let me go back to that slide.

[Locating slide.]

Board Member Thompson: There you go. In the top right-hand corner, there's that little black box that's underneath...

Ms. Jeremias: Right.

Board Member Thompson: ... measured at three inches. I don't see that in the elevation. What is that?

Ms. Jeremias: That little block is another steel, it's still part of the bridge itself. The guardrail. It's a steel metal barrier that goes across the intersection. One of the things that we have to comply in this project [inaudible] there's a lot of difficulties involved, and a lot of things that need to be measured out. In this circumstance, we need to meet Caltrans' mash test, meaning that if there is an accident and anyone hits the guardrail, this will prevent the guardrail from falling. It has to comply. This is one of the guardrails that has passed that mash test, so we're installing a guardrail, a barrier, that meets Caltrans' standards. That small circle is part of their standard barrier. It's a small square. It's steel.

Board Member Thompson: It's the steel bar that goes across the whole thing, and it's not being shown on the elevation.

Ms. Jeremias: Right. I think it has been inadvertently omitted on the elevation right below.

Board Member Thompson: Got it. Thank you.

Chair Furth: Any other questions? I have a question. I'm looking at page 2.1.5-17 in the Environmental Assessment, which is a drawing, a photograph and photo simulations of the existing and future view from...

Female??: Two-point-what?

Chair Furth: Two-point-one-point-five-dash-seventeen. Key view #1, existing view and **build-out [phonetic]** submitted; #2, simulated conditions from Newell Road looking towards East Palo Alto? And one shows a heavily wooded, you know, big eucalyptus, dappled sunlight, as it keeps saying in the aesthetic section. And one shows a wide-open, no shade, new bridge. In the environmental discussion, it talks about there would be some additional greenery and landscape softening, and what-not. Is this picture down below the initial state, or is this what it looks like with the grown landscaping?

Ms. Hodgkins: This would be the initial state. At the time that this was prepared, we just didn't know the landscape design yet. In the visuals today, we were adding in some of the trees that would be added on the Palo Alto side. I will note also that there is going to be additional landscaping. A lot of the landscaping that we can do on the East Palo Alto side is on private properties, so we are working with the private property owners to resolve which trees are going to have to be removed, and how they want...

Chair Furth: This is not what the project is intended to look like when it's done.

Ms. Hodgkins: Correct.

Chair Furth: Thank you. All right, we have a number of people who wish to talk to us today, we'd like to hear from. The first one is Richard Yankwich, to be followed by Kevin Fisher.

Richard Yankwich: Of course, I would be the first one. I wanted to hear everybody else.

Chair Furth: We can put you in the back of the stack if you want.

Mr. Yankwich: No, that's okay. My name is Richard Yankwich [spells name]. I live at 1490 Edgewood, for the past 28 years. I'm about 150 feet away from the bridge. I'm the second house in.

Chair Furth: I'm sorry, I forgot to tell you, you have three minutes.

Mr. Yankwich: I understand. I understand this Newell Bridge must be replaced to improve water flows and flood control, but to limit and calm traffic, it should be as small as possible. On the line, narrow, and short. I'm not sure this project complies with that. I'm making this comment because the staff report and the EIR underestimate both the traffic impact of the designs and the extent to which East Palo Alto and Palo Alto have conflicting cross-purposes. I have been attending these meetings for the last seven or eight years and have gone through all the designs. I've also gone to East Palo Alto's 2035 EPA general plan meetings. The west side is intended to be the most densely populated part of East Palo Alto, and they are intending to add hundreds of units, commercial mixed use, and raise building heights up to 75 feet, while the city of Palo Alto notes in this report that Crescent Park is a low-density residential neighborhood. This bridge literally is what's between those conflicting views of the neighborhoods. High-density mixed use, low density residential. I think the bridge needs to be realistic about what's really going to happen over the next hundred years, because that's how long the last bridge was in place. The Palo Alto staff report does not acknowledge any possibility of a traffic increase. I would just direct your attention to where it says, "However, the improvement would be so marginal, it is not anticipated to cause an increase in traffic through the area." No change in the TIR. That is incomprehensible to me, that you can look at what is planned by both cities and think that there will be no change in the traffic. The size of the bridge is going from 18 feet wide to 45 feet wide. What I'm most concerned about is that right now, you can do sharrows and sidewalks and plan it so that people will use it in a nice, low-volume way, but when you've nearly tripled the size of the bridge, the pressure that's going to be on that bridge in the future, to do away with the sidewalks, to increase traffic, do whatever we can to increase flow, because it's one of only three points where that whole neighborhood in East Palo Alto has access, to Stanford, to the hospitals, to Palo Alto, to shopping centers. That's what East Palo Alto talks about all the time. And on the Palo Alto side, we act as if it's just going to be a bucolic residential, low-density community. My concern is that the traffic has not been taken seriously. And I don't disagree that it isn't the best alternative, but maybe one lane with a traffic signal would be better. Because I don't know how to analyze this traffic, but I'm pretty sure that the EIR and the staff report really have not done so. Thank you.

Chair Furth: Thank you. Kevin Fisher, please, to be followed by **Clare Elliot**.

Kevin Fisher: Good morning, folks. My name is Kevin Fisher. I live at 728 Alester Avenue. I've been in Palo Alto for 35 years now, 34. Twenty years ago, my family was a victim of a manmade disaster, which is the floods of February 2-3 of 1998. I evacuated my small children in the middle of the night, carrying them through thigh-deep, poison oak-laden waters. It's really a miracle there was no loss of life in that timeframe. It's truly a miracle. I could go on and on, but I don't need to. My children are now in their 20's, and finally we are on the cusp of a solution that will reduce the chance of flooding. 101 to the Bay has been largely solved, and Pope-Chaucer Bridge replacement is on the fast track. The main thing standing in the way is completion of a solution for the Newell Road Bridge. This Newell Road project has been bumping along for the better part of a decade. It was ahead; now it's behind. And I'm very frustrated by our City's inability to get something done. Now is the time to act. Pick a project. I don't care which one. Other people have opinions about the particular project. I want a project. So, this manmade obstruction will be removed, and the risk of flooding will be diminished. If my City cannot find a

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consensus and get a solution to this, literally the water will be on your hands. Not you personally, but the City overall. I realize you're just one part of this larger complex project, but please, find a solution. Thank you.

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Chair Furth: **Clare Elliott**, to be followed by Hamilton Hitchings.

Clare Elliott: Hello. My name is **Clare Elliott**, and I'm a resident of the Ventura neighborhood, but I have ridden my bicycle over this bridge, and driven over it. I also was a past City employee who helped get the permits for the water quality monitoring station that was underneath it, and would love to see at least a slow gauge at that location, if not continued water quality monitoring. I'm currently a senior ecologist with Grassroots Ecology, and for over 20 years we've been involved in stewarding San Francisquito Creek and various entities, like Peninsula Conservation Center, Bay Area Action, [inaudible] stewardship, and now, we're Grassroots Ecology. My primary concerns are about the natural resources element. I have commented in the past about concerns about the hardening of the creek banks, and that we minimize the amount of hardening that we do, and find ecologically-friendly ways to protect the creek from erosion. My other concerns are related to the natural resources in the form of the vegetation. Unfortunately, I haven't seen the design. I've looked on the City website but didn't find a preferred design, so I'm just going on what it said in the EIR as far as possibilities and what the mitigation would be. But I hear from Michel that the buckeye tree is slated for removal, and that tree has been one that I have had my eye on for years and have wished to have nominated for Heritage Tree status. I brought a picture that I took in the spring a few years ago. I see an earlier picture that Michel had up was of the tree, and below, it's got an amazing canopy. In the spring, the scent of those flowers, it's like you're in Hawaii. And it's a venerable old tree that's been there, I guess for over 100 years. I discovered that of our eight heritage trees in Palo Alto, only three of them are native trees, two redwoods and one oak. This tree is not only aesthetically amazing... And I was really concerned that the EIR said – and I quote – “Would the project substantially damage scenic resources, such as trees?” Well, that's paraphrased. The answer was no. Scenic resources aren't visible because the trees block the view. Again, I paraphrase, but that's what it said. You can't see the forest for the trees. So, the impact on the aesthetics. And it said there was no forest land damage. Well, this is a riparian forest. I'm glad to see that the EIR says that the native trees should be replaced 3-to-1 and the non-native trees should be replaced 1-to-1 with native trees, so that's a step in the right direction. The EIR lists invasive species but does not list eucalyptus as one, even though it's on the Cal-IPC list of invasive species. The blue gum. And I believe that people are not aware of the value of these native species in habitat. This is like taking out an apartment building and replacing it with three single-family homes for the amount of habitat it's providing. Or, like a roommate of mine who ran over a Stradivarius. Well, that's okay, we'll just buy three new Stradivarius. Stradivari-I? I really would like to see a design adjustment that allows us to maintain that bridge. In the past, Palo Alto has been very good about maintaining oaks, the old roads that go around trees...

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Chair Furth: I need to ask you to wind up.

Ms. Elliott: To sum up, yes. I'd love to see maybe a hybrid between 1 and 4, so that the bridge is narrower and realigned to be able to protect that tree species.

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Chair Furth: Thank you.

Ms. Elliott: I will also provide comments to the EIR in writing.

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Chair Furth: Thank you. I have a question for you. What's the view of your group on the Himalayan blackberry in there?

Ms. Elliott: We remove...

[crosstalk]

Chair Furth: ... good habitat.

Ms. Elliott: It is not good habitat because it replaces a lot of native species that are used more by our native wildlife, and it's very invasive.

Chair Furth: Thank you.

Ms. Elliott: We are removing it in a lot of places and replacing it with a native blackberry.

Chair Furth: Thank you.

Hamilton Hitchings: Good morning. I'm Hamilton Hitchings, I live in the Duveneck-St. Francis neighborhood, like Kevin. What Kevin didn't tell you is that after that night, he and his family, with his children, had to move out for nine months while they remodeled the house because his house was one of 400 that had over-the-floor flooding. In De Soto, a lot of people stepped out of their bed into over a foot of water, and in places it was six feet deep. There are thousands of houses in the flood zone, and when I woke up at three in the morning, Channing was a river. It's really hard for us to imagine, but it was a river, and it continued to rise, and by the morning, it was within an inch of coming in my front door. We really want this bridge. The average flood capacity is, on average, it will over-top the banks every 22 years. It's been about 21 years. Now, it doesn't mean that next year, it's going to happen. This is a one in every 22 years. But the flood capacity is fairly low, and the reason is because in the 1940s, a city engineer filled in the sides of under the Newell Bridge with concrete. That significantly reduced the capacity. Now, as they said, to get to 7,500, you have to actually replace the bridge and raise it. But a city engineer made it a lot worse. We really need this project to increase flood protection for our neighborhood, for Duveneck-St. Francis and Crescent Park. It's also dangerous to walk and bike across the bridge, which a lot of people do every day. And while Alternatives 1 through 4 all dramatically increase pedestrian, bicycle and vehicle safety over the bridge, 3 and 4 would realign it, so, in theory, it would increase speed and the amount of traffic. And it's also important to keep in mind that many school children use Newell Road for their safe routes to school, for the Greene Middle School. It's packed with kids on bikes in rush hour. For those reasons, I oppose options 3 and 4. In terms of funding, 85 percent of the \$8.5 million is covered by Caltrans for Alternatives 2 or greater. I heard they were in the room today. I'd like them to speak to whether they would support Option 1, or not, because I think that's an important decision criteria. It would be nice to not have to pay the 85 percent of the \$8.5 million. For these reasons, I believe that, based on what I know right now, the preferred Alternative #2, selected cooperatively by the City of Palo Alto and East Palo Alto, is clearly the best overall trade-off. Please proceed with haste before another flood like the 1998 flood significantly damages hundreds of homes in Palo Alto. Thank you again for your time, and also for the staff for doing a nice job on the EIR. Thank you.

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Chair Furth: Thank you. Thomas Rindfleisch, to be followed by Xenia Hammer.

Thomas Rindfleisch: Good morning. I'm Tom Rindfleisch. I live on Tevis Place, which is across from Eleanor Pardee Park. I had a foot and a half of water in my yard in 1998, and we're 21 years out from that date and have finally a plan for getting the creek up to a level that would handle the 1998 flood. Pope-Chaucer Bridge is basically the dam, but it can't be replaced until Newell Bridge is replaced. I believe that we absolutely have to move forward. There was \$28 million in damage in 1998 from that flood, and we cannot have another one. We've had three very near cause in the intervening years. I manage the Crescent Park Neighborhood Association email list. Every winter, during the rainy season, I get lots of messages about, should we sandbag, should we evacuate, what should we do? It is absolutely imperative that we move forward. I believe that Option 2 that has been proposed by the City is a middle-of-the-road, absolutely defensible option. The two extremes, and the arguments for the two extremes, have been going on now for nearly 10 years, and we've made no progress forward. I believe we need a compromise. I believe that Option 2 provides a way to satisfy Caltrans requirements. I believe it can also be modified as necessary to control traffic in terms of volume and speed. It accommodates pedestrians; it accommodates bicyclists. And as was mentioned, we are fortunate to have Caltrans supporting this replacement project, and if the funding that is available for that is something that facilitates what is going

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to be, probably a \$50 million project to increase the flow capacity of San Francisquito Creek. If that comes away, we have another problem of, how do we get the funding in place? And I think it's silly not to take advantage of the opportunity that Caltrans has afforded us. So, please, please, help us get this bridge replaced. I believe Alternative 2 is a perfectly good plan for doing it. Thank you.

Chair Furth: Thank you. Thank you. Xenia Hammer.

Xenia Hammer: Hello. I'm Xenia Hammer, and I live on Sharon Court in Palo Alto, and that's close to the intersection of Channing and Newell. A few of the earlier speakers spoke of the urgency of this project, and this project is truly urgent. The flood happened more than 20 years ago. This project has been in discussion for the past eight years. It's time to get it done. This project is necessary for flood control on San Francisquito Creek, as Ms. Jeremias and prior speakers talked about. In terms of the alternatives proposed, the four build alternatives would all meet the flood control criteria equally well. Alternative 2, build-out Alternative 2, which is the proposed alternative, when a few minutes ago you compared it to landing on aircraft carrier. Alternative 2 lands on the aircraft carrier. Both the City of Palo Alto and East Palo Alto have to agree to this project. Alternative 2 meets that criteria. Alternative 1, I've heard East Palo Alto officials saying that that would not be acceptable. Alternative 2 provides increased pedestrian and bicycle safety. It can incorporate traffic calming measures that would ensure traffic safety for all involved. Another thing to keep in mind in evaluating various public comments is that the folks on the Palo Alto side who live close to Newell Road Bridge are currently not in the flood zone. They are just fine with the status quo, and that's because of the specifics of this creek. The ground level next to the creek is actually higher than farther away from the creek, and because currently Pope-Chaucer Bridge would divert the water currently, the way it is right now. In evaluating those comments, it's important to realize that the folks on the Palo Alto side who live close to the Newell Road Bridge are just fine with the status quo. Thousands of folks in Palo Alto who are in the flood zone are not okay with the status quo. So, it is important to move forward with these projects as quickly as possible. I urge you to move forward with this project, and especially with the locally preferred alternative, build Alternative 2, because it lands on the aircraft carrier. Thank you.

Chair Furth: Thank you. And it does not look like it fell off the spaceship. Okay. We've been asked to do several things. There's nobody else. We have no further speaker cards. We've been asked to do several things. One of the things is that we had a question from a member, one of the commentators asked for a statement from Caltrans, and maybe you can answer this, about whether they would participate in funding of Alternative 1.

Ms. Jeremias: They will not participate. Staff is here from Caltrans today, is here to answer [inaudible] related questions.

Chair Furth: Go ahead, Claire.

Ms. Hodgkins: [inaudible]

Ms. Jeremias: I just wanted to clarify. The first person that spoke had a comment regarding the width of this bridge, 45 feet wide. It's not. It's actually 42 feet wide. It's also not...

Chair Furth: I'm sorry, if you could speak a little more slowly.

Ms. Jeremias: Also, the locally preferred alternative is not aligned, so just a point of reference.

Chair Furth: And that's Option 2.

Ms. Jeremias: That's Option 2.

Chair Furth: Which keeps the, sort of existing extreme traffic calming.

Ms. Jeremias: Exactly.

Ms. Hodgkins: If I could also add to that. I think a lot of people are kind of saying, well, it's double the size, and then, there's some concern that that would increase traffic. I want to clarify that it is wider; however, we're looking at a curb to curb width of 18 feet, and it's supposed to be a bidirectional bridge, so, that's about nine feet per lane, which is not really enough room for two cars to safely pass each other. With the new design, we'd be looking at 14-foot sharrows, but as we noted, the shoulder would be drawn at four feet. We're talking about 10-foot-wide vehicle lanes versus nine-foot-wide vehicle lanes. A four-foot area for bicyclists who could also share the road, and five feet on either side for pedestrians. Really, most of that width is coming from additional bicycle lane area and additional pedestrian area.

Chair Furth: I have one question. The 10 feet that's dedicated to pedestrian use, is that at a different elevation? Is that a raised sidewalk?

Ms. Hodgkins: It's slightly raised, yes.

Chair Furth: It's not intended to be an extra space for bicycles or...?

Ms. Jeremias: No, currently, it's not. The design ahead of us shows the shoulders adjacent to the travel lane. The sidewalk is raised by six inches, a typical standard sidewalk.

Chair Furth: Thank you. Anything else staff wants to add in your ten minutes? Any further questions of staff before we bring this back to us? We've been asked to do two things here. One is comment on the environmental assessment; the other one is, I guess, comment on the proposal, is comment on the proposal. That's the request of staff. Any comments on the environmental assessment, first? Peter?

Vice Chair Baltay: Yes, great, thank you. Overall, it's a very impressive impact report, at least as far as the ones I've seen. It seems to me, however, there's two things that it's lacking on addressing properly. I think that the project will raise to grade between one and four feet over a fairly significant amount of distance in the side roads, especially on the East Palo Alto side. And I don't see it addressing secondary things, like how much more dangerous does that make riding along the sidewalk? Or, if you have a traffic accident and you go over this four-foot embankment? Or, if you live just on the other side of this four-foot retaining wall? I think it's a significant impact, and I don't see that addressed in your report. The second thing I think one of the members of the public mentioned is that, I think it is likely that this new bridge will increase the traffic flow between East Palo Alto and Palo Alto. Let me rephrase that. I think the traffic across this bridge will increase between East Palo Alto and Palo Alto, maybe not because of the bridge, but traffic is going to increase, and I don't see much of a mention of what that does to the Palo Alto side, at least. The people who live along this road are going to be impacted. Traffic is going to increase, I think, because of development in East Palo Alto. The bridge perhaps facilitates that. In any case, all of that, I think, should be at least discussed in the impact report. Those are my two comments on that. Thank you.

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Chair Furth: Anybody else have comments on the impact report? In that case, I have one. This is an environmental assessment, right? It's not the federal equivalent of a negative dec; this is a full-blown environmental document, so you can find adverse impacts as long as you deal with them. You have more freedom of action here. I think it's a really sophisticated discussion of the aesthetics. It's a very thoughtful discussion of what's there, of how people perceive it, of how it will change. I don't think that this document makes the case for no impact, primarily with respect to the replacement of heavily wooded, rich, riparian habitat, even if it needs to have some trees and bushes removed. As opposed to what we see in the lower figure at 2.1.5-17. You may be able to make that case if you better explain to us how it's intended to work when you do that landscaping and that replacement planting, and you do the maximum tree conservation. But I don't think you've done it yet. I think it understates the value of the, that great, you know, overgrown bramble patch, which is quite lovely in its own way, and is quite important as riparian habitat, which is a rare commodity here. I think that section needs to be reworked and beefed up. And perhaps we acknowledge that there is a permanent loss. I don't know. But as it stands now, if I was reviewing this from the outside, I would think you haven't made your case that there

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is no adverse impact. And having done that, you fail to address how to make it better. I mean, if you have to do a statement of overriding considerations, so be it. All right. Any comments on the other area where Claire asked for comments, which was the proposed alternatives themselves? Particularly Alternative 2. Alex?

Board Member Lew: I'm fine with Alternative 2.

Chair Furth: Peter?

Vice Chair Baltay: I think Alternative 2 is the preferred solution. It's certainly okay with me. I have two design ideas, I guess, to throw out, and now seems to be the time to do that. One is that, be careful with your 30-inch grade separation requiring a railing. That's a code minimum, and it may be appropriate inside a residence or something like that, where people are very familiar with the project, but I think, on the side of a sidewalk, if you have a 30-foot drop-off, that's a dangerous situation. You should have guardrails to a much less grade change. Just consider not just a code requirement. Secondly, maybe it's a folly, but when I drive down El Camino and go over the bridge, over the same creek, between the two counties, there's a small cast in place memento, saying you're going from San Mateo into Santa Clara. This is a 100-year bridge. Why don't we leave our children with something on the bridge, cast into it somehow? Just a memento that says this is the county line, or this is the date it was built. It's an easy thing, it doesn't take much to do, but it would be nice to see some detail like that added to the project. Thank you.

Chair Furth: Osma.

Board Member Thompson: I'm also fine with Option 2. My only concerns, which I think have already been discussed, are the impact to the landscape, the foliage. I'm sure everyone is doing what they can to retain as much as possible. The replacement trees do seem a lot less than what's getting removed, so that's a concern. And then, the actual design of the barrier, the mash...? What was it called? Mash test-rated barrier. I don't have too much experience in what all the particular formations are with that. Not absolutely in love with the design chosen in terms of that, but again, we have to meet a criteria, and there aren't many designs that meet that. It just is what it is. But if you're asking for our comments on it, I think it could be better. But it is what it is.

Chair Furth: David?

Board Member Hirsch: I also agree that number 2 is the best solution. I also agree with my cohorts here who say that the landscape plan is very important. We see excellent engineering drawings here, but we don't really see the aesthetics of what you see in the environment above it completed yet, and I would hope that that would be added to this study. The shape of the bridge seems to be shape based on engineering, again, to prevent the car from destroying the perimeter there, but it isn't particularly aesthetic. But I think you could go along with protections, and it's very important, of course, crossing the bridge. I wouldn't look to anything too much different than this. It's sort of a functional situation. It doesn't really, and it isn't really a major crossing all the time, so I think it's okay to be functional rather than extremely aesthetic. But some delightful items could happen here as well with a little more creative thinking somehow. I'm really pleased, I happen to live on San Francisquito Creek, a little further up, and I'm glad the water will be flowing better down this way, and hoping for improvements to our area as well, which would follow, I'm assuming. I happen to be in a non-flood zone but feel a little sorry for my neighbors who aren't, and who, in fact, are lower than they ought to be relative to the creek. I'm wondering about the bicycle lane. Does it continue around...? I'm going south on Woodland, or where, but it seems to stop abruptly. Is it a continuation on Woodland?

Ms. Jeremias: On Woodland and on Newell on the East Palo Alto side, they have sharrows, so the bike lane would end at the return on, on the return of the bridge.

Board Member Hirsch: And I think that meeting the level changes relative to the height of the street seem to be trickier in the East Palo Alto area than they are in Palo Alto itself. But there is one property there, and that's going to be raised, their roadway is raised significantly to create access to the road? That's been negotiated with the owner of that property?

Ms. Jeremias: We have met with all the property owners, and the one property that you're referencing is 475 Newell, and we have been talking with them. They are aware of what's going to happen, and what we'll need in order to adjust their driveway approach.

Board Member Hirsch: Okay. I think that's pretty much it. I think the landscaping, it will be really nice to see a more advanced design drawing for the landscaping throughout.

Chair Furth: I arrived here in 1998, right after the flood, which is why the house I've lived in for the past 20 years is not in the flood zone. Being in the City Attorney's office, dealing with some of the flood aftermaths, and talking to traumatized new friends and co-workers was, it was quite the event. It was very hard on many people. It looks to me that the choice of Option 2 is a good one. I do think that... I do support Vice Chair Baltay's suggestion that, think about incorporating some element of commemoration and beauty here. It's true that our bridge into Menlo Park has interest of that kind, and our bridge into East Palo Alto should as well. What's on the other side of Chaucer Street? I forget. More Menlo Park?

Ms. Hodgkins: Yes.

Chair Furth: Thanks. A notorious phrase, at this point. I do remember spending lots of time, looking at those gauges, watching the water levels rise. It's nice to not do that. I do think that these creek banks are some of the most beautiful places in Palo Alto. This is a very rare creek, as we all know, one that still flows to the Bay, and I think the work has been careful in this environmental review, but I don't think it's been thorough enough in terms of that aspect of what's precious about this particular landscape. I think it undervalues it. Thank you for all your hard work. I think we have nothing further to say. You don't need any motion from us at this point, do you? All set?

MOTION

Board Member Lew: I think the staff report recommends continuing it. Right?

Chair Furth: Continue this to a date uncertain? Could I have a motion to that effect?

Board Member Thompson: I move to continue this to a date uncertain.

Chair Furth: Is there a second?

Board Member Lew: I will second.

Chair Furth: Motion by Thompson, second by Lew, to continue this to a date uncertain. All those in favor say aye. Opposed? None. Passes 5-0. Everybody present.

MOTION PASSES 5-0.

Chair Furth: Thank you so much for coming to speak to us. Thank you for your continued interest in the project. Thank you for your continued work on the project.

Ms. Jeremias: Thank you.

Letter T-4. Transcript from Palo Alto Architectural Review Board Meeting, 7/18/19

Response to Comment T-4.1

Please see Master Response 1. The traffic analysis did assume that future development from other projects within the area would result in increased traffic to the area in general under the year 2020 and year 2040 scenarios. However, these increases are expected to occur under both the No Build Alternative and all build alternatives. Build Alternative 2 proposes to replace a two-lane, bi-directional bridge where the lane widths are substandard (9 feet) with a two-lane bi-directional bridge where the lane widths are 10 feet. The new bridge would also accommodate bicycles and pedestrians (9 feet of dedicated width on either side of the bridge) for a total width of 38 feet. The Draft EIR/EA analyzes the No Build Alternative and four build alternatives presented in the analysis. If future changes are proposed to the design of the bridge, as noted by the commenter, such changes would require further evaluation and public review at that time.

Response to Comment T-4.2

The commenter's support for the Project is noted.

Response to Comment T-4.3

The comment does not address an issue on the substance of the Draft EIR/EA. The City of Palo Alto continues to coordinate with responsible agencies regarding the monitoring station.

Response to Comment T-4.4

See Response to comment I-5.2

Response to Comment T-4.5

Please see Response to Comments I.5-1 through I-5.4.

Response to Comment T-4.6

The commenter's support of the Project's flood protection benefits is noted.

Response to Comment T-4.7

Safety for alternative modes is a primary consideration throughout the Project: from appropriate planning through detailed final design. A distinct benefit of this bridge replacement project is substantially improved pedestrian and bicycle facilities compared to the lack of facilities for alternative modes present today. Build Alternatives 3 and 4 are not presented as the Locally Preferred Alternative in the Draft EIR/EA. Additional information can be found in Master Responses 1 and 2.

Response to Comment T-4.8

As responded to in the public meeting, Build Alternative 1 does not meet federal guidelines and, therefore, would not be eligible for Highway Bridge Program funding. Build Alternative 2 does meet federal guidelines and, therefore, would be eligible for funding.

Response to Comment T-4.9

Please see Response to Comment I-1.1.

Response to Comment T-4.10

Please see Response to Comment I-1.1.

Response to Comment T-4.11

Please see Response to Comment I-1.1.

Response to Comment T-4.12

The bridge would be raised by approximately 1.5 feet, while the roadway approaches would be raised by approximately 4 feet. The sidewalks would also be raised to match the new grade, avoiding any potential impacts on users of the sidewalk. Raising the bridge and the roadway approaches would improve sight distance, which would make travel over Newell Road Bridge safer for all modes of transportation. The retaining walls would also serve to protect private properties from traffic accidents and would also protect pedestrians from the proposed grade separation between the sidewalk and private properties. These design features of the Project would not cause any significant impacts under CEQA; instead, they would improve the safety of Newell Road Bridge.

Response to Comment T-4.13

Please see Master Response 1. The Draft EIR/EA analyzes the Project's impact on the environment. It does not analyze the impacts of other development projects on the environment, including how those projects may contribute to increases in traffic. As discussed in Section 2.1.4.3, *Environmental Consequences*, of the Draft EIR/EA and in Master Response 1, although traffic is generally anticipated to increase within the vicinity of the bridge over time, the Project itself would not affect traffic levels in the area.

Response to Comment T-4.14

The type of document is an environmental impact report/environmental assessment (EIR/EA). Under CEQA, an EIR means that a significant and unavoidable impact is allowed. Under the National Environmental Policy Act (NEPA), an EA determines whether or not a federal action has the potential to cause significant environmental effects; if it does, then an environmental impact statement (EIS) must be prepared. For NEPA purposes, it has been determined that the Project would not cause significant environmental effects on the environment. Caltrans will issue a finding of no significant impact (FONSI). Under CEQA, significant and unavoidable traffic impacts were found due to temporary bridge closure during construction.

The Draft EIR/EA acknowledges that there would be an impact on aesthetics and on the riparian habitat in Sections 2.1.5, *Visual/Aesthetics*; 2.3.1, *Natural Communities*; 3.2.1, *Aesthetics*; and 3.2.4, *Biological Resources*. Mitigation Measures MM-AES-4, MM-BIO-1, and MM-BIO-2 all specify requirements for replacement of trees, vegetation, and riparian habitat. With implementation of these mitigation measures, impacts under CEQA would be reduced to a less-than-significant level. This impact is not considered significant and unavoidable under CEQA or significant under NEPA because the mitigation measures would be effective at replanting the area with trees and native vegetation.

F.3 References Cited

TJKM. 2019a. Supplemental Traffic Evaluation Report. January 29.

TJKM. 2019b. Technical Memorandum – Comparison of Peak Hour Volumes at Newell Road / Woodland Avenue for Vehicles, Pedestrians, and Bikes. November 5.

Appendix G

List of Technical Studies

Many technical studies were used to analyze the impacts of the proposed build alternatives and the No Build Alternative. These studies include:

- Air Quality Technical Memorandum, November 2017
- Supplemental Air Quality Technical Memorandum, October 2018
- Alternatives Screening Analysis Report, February 2014
- Archaeological Survey Report, October 2017
- Bridge Hydraulics and Evaluation of Proposed Alternatives Technical Memorandum, August 2012
- Community Impact Assessment, September 2017
- Delineation of Waters of the United States for the Newell Road Bridge Replacement Project, Santa Clara and San Mateo Counties, California, April 2017
- Floristic Survey Technical Memorandum, April 2017
- Hazardous Materials Technical Memorandum Update, March 2017
- Historic Property Survey Report, October 2017
- Historical Resources Evaluation Report, September 2017
- Location Hydraulic Study, December 2017
- Natural Environment Study, September 2017
- Noise Study Report, August 2017
- Preliminary Geotechnical Information Memo, July 2012
- Site Assessment for California Red-Legged Frog, April 2017
- Supplemental Traffic Evaluation Report, January 2019
- Comparison of Peak Hour Volumes at Newell Road / Woodland Avenue for Vehicles, Pedestrians, and Bikes, November 2019
- Tree Survey Report, April 2017
- Visual Impact Assessment, April 2018
- Water Quality Assessment Report, July 2017

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