

## **Attachment E**

### **Preliminary Environmental Analysis Report (PEAR)**



# PRELIMINARY ENVIRONMENTAL ANALYSIS REPORT

## 1. Project Information

District 04	County SON/SOL	Route SR 37	PM SON 3.5 / SOL R7.4	EA 04-1Q760K
Project Title: <i>Brief descriptive phrase, e.g., CAPM, Curve Re-alignment, Passing Lane, etc.</i> SR 37 Improvement Project				
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## 2. Project Description

### Purpose and Need

#### Interim Project

The purpose of the Interim Project is to improve traffic flow and peak travel times, and increase vehicle occupancy (the number of people moved per vehicle) within the travel corridor between Mare Island and Highway 121 (the Project limits).

The Interim Project is needed because the corridor already experiences severe traffic congestion that needs to be addressed in the near-term. The corridor experiences limited flooding and a more comprehensive Ultimate Project will be advanced in parallel through planning, environmental review, and design to address the complexities of sea level rise.

SR 37 is four lanes in each direction except where it merges to two lanes between the SR 37/SR 121 intersection and the Mare Island interchange. Weekday traffic congestion forms at these bottleneck locations and occurs for approximately 6 hours in the westbound direction while the eastbound congestion occurs for approximately 7 hours. On weekends, congestion occurs throughout most of the day.

- a) Based on MTC's regional travel demand model, traffic growth is estimated at 0.8% per year through 2040 and is expected to result in increased peak period congestion and longer travel times. Westbound AM peak hour travel time is expected to increase from 47 minutes to 58 minutes by 2022. Eastbound PM peak hour travel time is expected to increase from 100 minutes to 139 minutes by 2022.

- b) Options to promote car pooling and bus ridership, such as high-occupancy vehicle (HOV) lanes shuttle/bus services, are not operating in the corridor. These facilities and services can encourage mode shift from single occupant vehicles, thereby reducing traffic demand and decreasing corridor congestion while increasing person throughput.

## **Ultimate Project**

The purpose of the Ultimate Project is to address the following within the travel corridor between Mare Island and Highway 121:

- 1) Improve traffic flow and peak travel times, and increase vehicle occupancy (the number of people moved per vehicle);
- 2) Provide accommodation for multimodal use;
- 3) Improve resiliency of transportation infrastructure to sea level rise and flooding; and
- 4) Provide ecological and hydrologic enhancements to facilitate adaptation of the corridor landscape to sea level rise.

The Ultimate Project is needed because:

- 1) As described above, projected traffic growth is expected to further exacerbate congestion within the corridor, and the Interim Project is limited to use of the existing roadway to facilitate its near-term implementation.
- 2) There is minimal multi-modal and public access along the corridor. People can drive to access points along the corridor that allow for wildlife viewing and other shoreline recreation; however, public access is limited and fragmented, and there are no pedestrian or dedicated bicycle facilities to allow for safe travel between the access points. Lack of separation from motor vehicles, rumble strips and debris in the road shoulders cause most cyclists to avoid this route, even though it is the shortest route between Novato and Vallejo and is the access to recreational destinations in the vicinity.
- 3) Highway flooding occurs during winter rain and high tide events, causing delays and closures. Sea level rise is expected to increase the frequency of these events. At its lowest elevations at Mare Island and Tolay Creek, the existing road bed is below typical king tide elevations under current conditions, and the frequency and severity of temporary flooding will increase in the future with even low amounts of sea level rise. Based on recent California state sea level rise guidance (OPC 2018), San Francisco Bay sea levels are likely to rise by 1.6 to 3.4 feet by 2100 under a high emissions scenario, with a high-range projection of 6.9 feet (83 inches). Over time, the existing road could be eroded and eventually permanently inundated, resulting in loss of a key regional travel corridor. In addition, continual settling of the roadway occurs due to unstable soils and heavy truck traffic. The roadway settling is an annual maintenance issue which requires ongoing repairs. This settling could worsen with sea level rise as the road and supporting fill become more water-saturated, making the roadway very susceptible to seismic failure from liquefaction.

- 4) SR 37 serves as a hydrologic and ecological barrier between San Pablo Bay that limits the ability of corridor wetlands to serve as a buffer to flooding and increased sea levels. Wetlands absorb and slowly release surface water, rain, and flood waters. This combined water storage and braking action lowers flood heights and reduces shoreline erosion. The holding capacity of wetlands also helps prevent the saturation of agricultural and vinicultural lands from flooding. Therefore, the ability of the corridor wetlands to function properly is critical to protection of area land uses from the effects of flooding and sea level rise.

### **Project Objectives:**

In addressing the purpose and need, the Project aims to:

- Address sea level rise through 2100;
- Be consistent with the Baylands Ecosystem Habitat goals to the extent practicable;
- Be compatible with existing land uses and public access, and to the extent feasible, future land use, planned restoration activities, and adaptive management;
- Minimize impacts on disadvantaged communities; and

Maintain federally and state-important habitats and improve habitat connectivity.

### **Description of work**

*Write a brief summary of the proposed work that will be done. Include work required that is incidental to the project, such as: access roads, utility relocation, de-watering, etc.*

California State Route 37 (SR 37) is an important regional connection linking the north, east, and west San Francisco Bay Area sub-regions. It serves commute, freight, and recreational traffic on weekdays and weekends. The SR 37 corridor currently experiences severe traffic congestion with extended congestion and delays in the morning and evening rush hours. The corridor has experienced flooding during winter storms and the flooding frequency and severity are expected to rise with sea level rise, and environmental sensitivity.

The Metropolitan Transportation Commission (MTC), Caltrans and its four North Bay partners – the Solano Transportation Authority (STA), the Sonoma County Transportation Authority (SCTA), the Transportation Authority of Marin (TAM) and the Napa Valley Transportation Authority (NVTA) – undertook a high-level assessment of key current and anticipated issues on California State Route 37 (SR 37). SR 37 Transportation and Sea Level Rise Corridor Improvement Plan was completed in June 2018 and identified near-, mid-, and long-term improvements to help address such issues.

This Preliminary Environmental Analysis Report (PEAR) is prepared for a Project Study Report – Project Development Support (PSR-PDS) and covers proposed improvements on SR 37 from 0.25 miles west of SR 121 intersection (SON 3.5) to 0.25 miles east of Mare Island Interchange (SOL R7.4).



**Figure 1: Existing SR 37 Segments**

As documented in Caltrans Transportation Concept Report (TCR), the SR 37 corridor is divided into three segments reflecting a change in the number of lanes as well as in the designation of the facility. From US 101 to the signalized SR 121 intersection at Sears Point SR 37 is a four-lane expressway. Between the SR 37/SR 121 intersection and the Mare Island interchange, SR 37 is a two-lane conventional highway. SR 37 is a four-lane freeway starting at Mare Island and continuing eastward, mostly on elevated roadway and structures, 4.4 miles to its termination at I-80 in Solano County. This PSR-PDS addresses improvements to SR 37 between SR 121 and the Mare Island interchange. Within these Project limits, SR 37 is a two-lane conventional highway facility with a median barrier. This portion of SR 37 is 9.3 miles long with 2.3 miles in Sonoma County and 7.0 miles in Solano County. Within the Project limits, SR 37 varies in elevation from 8 to 13 feet, NAVD88. Between SR 121 and Sonoma Creek Bridge, SR 37 is protected by levees between Tolay Creek to Sonoma Creek. There is no bay-front levee protecting SR 37 west of Sonoma Creek to Mare Island.

This Project proposes near-term (Interim Project) and long-term (Ultimate Project) improvements between the SR 37/SR 121 intersection and the Mare Island interchange, and this PEAR analyzed these proposed improvements. The Interim Project would be an initial step in addressing traffic congestion. The Interim Project proposes limited improvements at existing roadway elevation and within the existing roadway footprint to provide additional capacity during peak periods to improve traffic flow while minimizing environmental impacts.

The Ultimate Project would serve to further improve traffic flow and provide multimodal use, resiliency of SR 37 to sea level rise and flooding, and ecologic and hydrologic enhancements to facilitate adaptation of the corridor landscape to sea level rise.

## **Alternatives**

*Identify all project alternatives (including no-build). If alternatives are no longer being considered, state why. Do not select or identify a preferred alternative. Describe each alternative still under consideration.*

Two build alternatives for the Interim Project, and two build alternatives for the Ultimate Project, plus the No Build Alternative, are under consideration to fulfill the purpose and need of the Project. All of the build alternatives include interchange/intersection reconfiguration at SR 37/SR 121 and SR 37/Mare Island, and multi-modal improvements.

### **Interim Project Alternatives**

Two build alternatives are presented for the Interim Project, which would reconfigure existing roadway to provide three or four lanes at current elevation and horizontal alignment to address existing traffic issues. The following alternatives for SR 37 were identified within the Project limits to reconfigure the roadway without major reconstruction and minimal environmental impacts. The Interim Project alternatives were developed at a preliminary level of design, for purposes of defining initial costs and requirements. Further refinement of the designs will be necessary.

#### *Alternative II*

This alternative proposes to use the existing highway and convert the existing two-lane roadway to a three-lane roadway with a Movable Median Barrier (MMB) separating the two directions of traffic. The MMB will provide for two lanes during peak period in the peak direction and a single lane in the non-peak direction. This alternative includes three 12-foot wide lanes divided by a 2-foot movable barrier with no inside shoulder and 8-foot wide outside shoulders that will provide for shared bicycle usage. The proposed total roadway width would be 54 feet. The existing roadway footprint is 50 feet, so it is anticipated that this alternative will require a 4-foot of widening along the corridor. This alternative proposes to widen the existing Tolay Creek Bridge to provide for a 54-foot wide roadway. The existing Sonoma Creek Bridge provides for a 50-foot clear opening. This alternative proposes a 3-lane section with narrower shoulder widths on the Sonoma Creek Bridge to avoid widening of the bridge. A design exception is requested for narrower shoulders. The moveable barrier would terminate immediately east of the Sonoma Marin Area Rail Transit (SMART) at-grade crossing to the west, and approximately 1,500 feet west of the Walnut Avenue Overcrossing structure to the east, for a total length of about 47,600 feet (9.02 miles).

The existing concrete median barrier will be removed, and the median shoulder will be reconstructed. The median barrier will be replaced with a movable barrier. It is proposed that the additional lanes be managed lanes and to encourage the use of carpools. The managed lanes system details will be studied during the PA&ED phase. All existing driveways along SR 37 within the Project limits will be maintained; however, turn movements at a few of these driveways will be limited to right-in, right-out only. During the PA&ED phase, allowing left turns from some of the driveways will be evaluated with respect to the feasibility of allowing a break in the movable median barrier, sight distances, and ability for vehicles to make this maneuver. All of the improvements proposed in this alternative would be entirely within existing state right-of-way. Other minor variations of the features of this alternative were considered, compared and will be further studied during the PA&ED phase. These include the construction

of a minor retaining wall system in lieu of fill slope to minimize construction disturbance and environmental impacts, consideration of an 11-foot inside lane or outside lanes to minimize impacts, and different shoulder/lane widths at the Sonoma Creek Bridge.

This alternative is considered to be viable because it relieves existing traffic congestion and delays by increasing the roadway capacity during the peak directions while minimizing environmental impacts. The existing lane drops that occur in eastbound and westbound directions at the SR 121 intersection and Mare Island respectively contribute to existing backups and delays. Adding a second lane during the peak directions by means of a movable barrier as proposed in this alternative eliminates these lane drops, and thus alleviates delays.

### *Alternative I2*

This alternative proposes to use the existing highway shoulders to provide a traffic lane during the peak periods in the peak direction. The proposed lane configuration for this alternative includes two 12-foot wide lanes, separated by a 2-foot median barrier with no inside shoulder and 12-foot wide outside shoulders for a total roadway width of 50 feet. The total length of the converted-shoulder travel lanes is approximately 47,200 feet (8.94 miles) in each direction. During peak hours in the peak direction, the outside shoulder is proposed to act as a converted-shoulder travel lane while in the non-peak direction, it will act as a shoulder. Intelligent Transportation Systems (ITS) are proposed as part of the Project to manage the converted-shoulder travel lanes. It is proposed that the existing median barrier be replaced with a new standard median barrier separating the two directions of traffic.

This alternative proposes approximately 5 feet of roadway widening and shoulder reconstruction in each direction between the Northwestern Pacific Railroad at-grade crossing and approximately 500 feet east of the Tolay Creek Bridge to allow vehicular traffic on shoulders. The remainder of the corridor would require existing shoulder reconstruction in each direction to allow vehicular traffic on the shoulders. The existing Tolay Creek Bridge (Bridge No. 20-0090) has a roadway width of 40 feet between bridge railings and will require widening of approximately 5 feet in each direction to accommodate the proposed roadway configuration. The existing Sonoma Creek Bridge is 50 feet wide (between bridge railings) and can accommodate the proposed lane configuration. It is proposed that the additional lanes be managed lanes to encourage the use of carpools. The existing SR 37 allows for shared shoulder bicycle usage and this alternative cannot accommodate bicyclists on the converted-shoulder travel lane in the peak direction. It is proposed to provide a bike shuttle service for bicyclists during the peak periods. All existing driveways along SR 37 within the Project limits will be maintained; however, turn movements at driveways will be limited to right-in, right-out only. Allowable turn movements from existing driveways will be evaluated during the PA&ED phase. All of the improvements proposed in this alternative would be entirely within existing state right-of-way.

This alternative is considered to be viable because it relieves existing traffic congestion and delay by increasing capacity during the peak direction while minimizing environmental impacts. The existing lane drops that occur in the eastbound and westbound directions at SR 121 intersection and Mare Island respectively contribute to existing backups and delays. Adding a second lane during the peak direction by means of converted-shoulder travel lanes, as proposed in this alternative, eliminates these lane drops, and thus alleviates delays.

The following Ultimate Project alternatives are proposed.

## Ultimate Project Alternatives

Two alternatives are presented for the Ultimate Project, which would be a new four-lane highway at an increased elevation to address future traffic congestion and sea level rise. Like the Interim Project, it is proposed that the additional lanes be managed lanes. Both Ultimate Project alternatives would include a Class 1 bike lane. The Ultimate Project would include reconstruction of the Mare Island and SR 121 interchanges.

During construction of the Ultimate Project, the Interim Project is expected to be in operation and would continue to operate until completion of the Ultimate Project.

### *Alternative U1*

This alternative, also known as the hybrid, would be a combination of an embankment<sup>1</sup> and elevated causeway<sup>2</sup> for a portion of Section B, and a full causeway for the remaining portion of Section B.

This alternative proposes to construct a raised roadway that is above the projected sea level rise elevation. The new raised roadway would have four 12-foot wide lanes, 12-foot wide median with a 2-foot median barrier and 10-foot wide outside shoulders with a 12-foot wide barrier-separated Class I path with a total roadway width of approximately 94 feet. The combined length of structure segments is approximately 4.7 miles and the combined length of embankment segments is approximately 4.8 miles.

Based on preliminary review of environmental, sea level rise and access factors, the proposed horizontal alignment would run parallel to and north of the existing SR 37 alignment between SR 121 and Skaggs Island Road intersection and south of existing SR 37 east of Skaggs Island Road to the eastern Project limits before conforming to the western approach of Napa River Bridge. The proposed alignment is intended to minimize construction impacts on traffic as it allows for the existing traffic to operate during construction. Based on preliminary sea level rise analysis completed as part of the UC Davis Stewardship Study<sup>3</sup> and the SR 37 Corridor plan,<sup>4</sup> the minimum design elevation was determined based on using 66 inches of sea level rise at year 2100 and includes freeboard and wave run-up. The minimum design elevation relates to the elevation at the edge of the roadway or the lowest element of the structure. Minimum design elevation would be further evaluated in the PA&ED phase in accordance with the 2018 State of California Sea Level Rise Guidance or latest sea level rise guidance.

It is proposed that the new bridges are constructed at Tolay Creek and Sonoma Creek with longer spans to allow for hydrologic and ecologic connectivity. The proposed embankment section at the driveways will allow for a wider roadway cross section to provide for safer intersection design. The proposed bridge sections will be designed to improve hydrologic and ecologic connectivity. The hybrid alternative alignment will be further evaluated to enhance environmental benefit during the PA&ED phase. It is proposed that the new roadway includes managed lanes to encourage the use of carpooling. The existing driveways to and from SR 37

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<sup>1</sup> The embankment is a level space, shelf, or raised barrier that would support SR 37.

<sup>2</sup> The causeway would be an elevated road, or bridge, constructed across a body of water or wetland.

<sup>3</sup> University of California, Davis, 2018. Integrated Traffic, Infrastructure and Sea Level Rise Analysis. Available: <http://hwy37.ucdavis.edu/>. Accessed on September 24, 2018.

<sup>4</sup> Kimley-Horn/AECOM, 2018. SR 37 Transportation and Sea Level Rise Corridor Improvement Plan.

will be maintained and will be further evaluated during the PA&ED phase. The ultimate disposition of the existing SR 37 will also be determined during the PA&ED phase.

Other improvements proposed as part of this alternative include reconstruction of the Mare Island interchange and reconstruction of the SR 121 intersection. The SR 121 intersection includes a grade separation with the SMART Rail Line. The intersection alternative for SR 121 will be evaluated in the PA&ED phase.

At the Mare Island interchange, the existing westbound off-ramp is proposed to be realigned as a loop off-ramp. The westbound on-ramp is proposed to follow a new alignment that meets the new SR 37 alignment as a diagonal on-ramp with standard geometry. In the eastbound direction, SR 37 at Mare Island is proposed to have a loop off-ramp and a diagonal on-ramp geometry.

This alternative is considered to be viable because it meets the purpose and need of the Project.

### *Alternative U2*

This alternative proposes to construct a raised causeway that is above the projected sea level rise elevation. The new raised causeway would provide four 12-foot wide lanes, a 12-foot wide median with a 2-foot median barrier and 10-foot outside shoulders with a 12-foot wide barrier separated Class I path. The total roadway width is approximately 94 feet (not including bridge railing).

The horizontal and vertical geometry along the corridor would be similar to Alternative U1. The combined length of structure segments is approximately 8.5 miles and the combined length of embankment segments is approximately 1.0 mile. The embankment segments are proposed along the existing driveways. These driveways and the need to maintain access will be further evaluated during the PA&ED phase. The ultimate disposition of the existing SR 37 will also be determined during the PA&ED phase.

It is proposed that the new roadway includes managed lanes to encourage the use of carpools. Based on preliminary sea level rise analysis completed as part of the UC Davis Study and the SR 37 Corridor Plan, the minimum design elevation was determined based on using 66 inches of sea level rise at year 2100 and includes freeboard and wave run-up. The minimum design elevation relates to the elevation at the edge of the roadway or the lowest element of the structure. The minimum design elevation will be further evaluated during the PA&ED phase in accordance with the 2018 State of California Sea Level Rise Guidance or latest sea level rise guidance.

Other improvements proposed as part of this alternative include reconstruction of the Mare Island interchange and the SR 121 intersection. The SR 121 intersection includes a grade separation with the SMART Rail Line. The intersection alternative for SR 121 will be evaluated during the PA&ED phase.

At the Mare Island interchange, the existing westbound off ramp is proposed to be realigned as a loop off-ramp. The westbound on-ramp is proposed to follow a new alignment that meets the new SR 37 alignment as a diagonal on-ramp with standard geometry. In the eastbound direction, SR 37 at Mare Island is proposed to have a loop off-ramp and a diagonal on-ramp geometry.

This alternative is considered to be viable because it relieves traffic congestion, has a smaller footprint, and addresses long term effects of sea level rise while considering and minimizing environmental impacts.

### **Other Project Features**

*Right-of-Way.* Right-of-way acquisitions or maintenance easements may be necessary for the Interim Project, and would be required for the Ultimate Project. Approximately 163 acres would be acquired under Alternative U1, and approximately 113 acres would be acquired for Alternative U2. This additional acreage would become part of the Caltrans rights-of-way. The locations of potential temporary construction easements (TCEs) are being determined and would be defined during the Project Approval and Environmental Document (PA&ED) phase.

*Utilities.* Utility relocations and easements may be needed to allow for road and bridge widening.

*Water Quality.* The Interim and Ultimate Projects are anticipated to result in over an acre of disturbed soil. The disturbed soil area includes the proposed total construction area and any soil that would be exposed through pavement removal.

A Storm Water Pollution Prevention Plan (SWPPP) would be prepared before Project construction, and SWPPP requirements would be inspected and maintained during construction. The SWPPP requires temporary best management practices (BMPs) for hazardous materials storage and soil stockpiles, inspections, maintenance, worker training, and release containment to prevent runoff into storm water collection systems or waterways. BMPs proposed for the Interim and Ultimate Projects include soil stabilization, sediment control, tracking control, non-storm water management, and storm water sampling and analysis.

The Project design would also include permanent BMPs to avoid the potential for Project-related storm water discharges to substantially alter drainage patterns, violate water quality standards, or substantially degrade water quality. Permanent BMPs proposed for the Interim and Ultimate Projects include design pollution prevention and treatment strategies such as drainage culvert end devices, biofiltration strips and swales, and detention basins. Drainage culvert end devices such as flared end sections, tees, and rock slope protection are placed at culvert outlets to dissipate and disperse runoff. Biofiltration is a pollution control technique using vegetation to capture sediment and pollutants from storm water runoff. Biofiltration strips are vegetated sections of land that capture sediment and pollutants as storm water passes over it in sheet flows. Biofiltration swales are vegetated ditches with a layer of imported biofiltration soil underneath and a layer of permeable material with an underdrain further below. Detention basins temporarily detain storm water, letting sediment in the storm water settle to the bottom of the basin before discharging the water through an outlet.

*Road Closures.* The Project may require temporary night time lane reductions or closures of SR 37 to provide the working zones for construction. The location of equipment staging would likely be within the right-of-way limits for the Interim Project. Construction would need to be staged and/or phased for the Ultimate Project, details of which would be defined at the PA&ED phase. Responsibility would have to be defined for maintenance and operations of the movable barrier, converted-shoulder travel lanes and managed lanes as proposed in the viable alternatives.

## No Build Alternative

The No-Build alternative assumes that no improvements would be constructed, and therefore traffic conditions within the Project limits would continue to deteriorate in the foreseeable future as traffic demand increases. Additionally, vulnerability to flooding would likely be more frequent with increased sea level rise. Potential impacts of sea level rise on highly sensitive environmental resources adjacent to the corridor would also be critical issues. The No-Build alternative provides a basis of comparison, but does not meet the established purpose and need of the Project.

### 3. Anticipated Environmental Approval

#### Interim Project

CEQA		NEPA	
<b>Environmental Determination</b>			
Statutory Exemption	<input type="checkbox"/>		
Categorical Exemption	<input type="checkbox"/>	Categorical Exclusion	<input type="checkbox"/>
<b>Environmental Document</b>			
Initial Study or Focused Initial Study with proposed Negative Declaration (ND) or Mitigated ND	<input checked="" type="checkbox"/>	Routine Environmental Assessment with proposed Finding of No Significant Impact	<input type="checkbox"/>
		Complex Environmental Assessment with proposed Finding of No Significant Impact	<input checked="" type="checkbox"/>
Environmental Impact Report	<input type="checkbox"/>	Environmental Impact Statement	<input type="checkbox"/>
CEQA Lead Agency (if determined):		Caltrans	
Estimated length of time (months) to obtain environmental approval:		36 months	
Estimated person hours to complete identified tasks:			

## Ultimate Project

CEQA		NEPA	
<b>Environmental Determination</b>			
Statutory Exemption	<input type="checkbox"/>		
Categorical Exemption	<input type="checkbox"/>	Categorical Exclusion	<input type="checkbox"/>
<b>Environmental Document</b>			
Initial Study or Focused Initial Study with proposed Negative Declaration (ND) or Mitigated ND	<input type="checkbox"/>	Routine Environmental Assessment with proposed Finding of No Significant Impact	<input type="checkbox"/>
		Complex Environmental Assessment with proposed Finding of No Significant Impact	<input type="checkbox"/>
Environmental Impact Report	<input checked="" type="checkbox"/>	Environmental Impact Statement	<input checked="" type="checkbox"/>
CEQA Lead Agency (if determined):	Caltrans		
Estimated length of time (months) to obtain environmental approval:	82 months		
Estimated person hours to complete identified tasks:			

### 4. Special Environmental Considerations

Important consultation and environmental requirements that may apply to environmental review includes the following.

**Section 7 Consultation.** Section 7 of the Federal Endangered Species Act requires all federal agencies to consult with the US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) if a project action may affect a listed endangered or threatened species. Consultation may be “informal” or “formal,” but formal consultation is necessary if a project is likely to adversely affect a listed species. A Biological Assessment is prepared, and helps determine if a Biological Opinion is necessary. This Project would require consultation.

**Coastal Zone Management Act (CZMA) Federal Consistency.** Under the federal consistency provisions of the CZMA, federal agency actions involving projects affecting the coastal zone need to be determined to be consistent with the state’s coastal zone management program and policies (16 United States Code § 1456). The consistency determination is made by the lead federal agency, and concurrence is sought from the CZMA managing agency, which has the ability to concur, condition the project to find consistency, or object to the project. For San Francisco Bay and the project area, the San Francisco Bay Conservation and Development Commission (BCDC) is the state’s coastal zone management agency responsible for issuing consistency determinations under the CZMA. Consistency determination requirements for the Interim and Ultimate Projects would be determined in coordination with BCDC.

**Section 4(f).** The Interim and Ultimate Projects are within the San Pablo Bay National Wildlife Refuge, which would be evaluated with respect to Section 4(f). There are also public viewing and access locations at the Sonoma Creek Bridge and at Cullinan Ranch that would have to be considered if they meet Section 4(f) criteria. A Section 4(f) evaluation would be needed. The

requirements of Section 4(f) would depend on the determination of potential “use” of the refuge area or publically maintained access or recreation locations, avoidance, and consideration of alternatives that minimize any defined use.

**NEPA and Clean Water Act Section 404 Integration Process.** A Memorandum of Understanding (MOU) applies to Federal aid surface transportation projects that have five or more acres of permanent impacts to waters of the U.S., and that require a NEPA EIS. The MOU process is designed to foster and achieve agreement at critical steps of the NEPA review process, such as defining the purpose and need, alternatives, and review of the drafts of the EIS. It has not been determined if this process would apply to this Project. Further evaluation of the potential impacts to waters of the U.S would help define this requirement.

**Assembly Bill No. 52 (AB 52).** Assembly Bill No. 52 (AB 52), resulted in modifications and amendments to the Public Resources Code (PRC), and creates a new category of environmental resources, which must be considered under CEQA: “tribal cultural resources.” The legislation imposes requirements for consultation regarding projects that may affect a tribal cultural resource and includes a broad definition of what may be considered to be a tribal cultural resource, it also includes a list of recommended mitigation measures.

AB 52 adds tribal cultural resources to the categories of cultural resources in CEQA, which had formerly been limited to historic, archaeological, and paleontological resources. “Tribal cultural resources” are defined as either:

- (1) “sites, features, places cultural landscapes, sacred places and objects with cultural value to a California Native American tribe” that are included in the state register of historical resources or a local register of historical resources, or that are determined to be eligible for inclusion in the state register; or
- (2) resources determined by the lead agency, in its discretion, to be significant based on the criteria for listing in the state register.

This requirement with respect to environmental review would be defined by Caltrans.

## **5. Anticipated Environmental Commitments**

The following environmental commitments may result from environmental review. This Preliminary Environmental Analysis Report (PEAR) is prepared for a Project Study Report-Project Development Support (PSR-PDS) and therefore no cost estimate for environmental permits or commitments was developed.

- Cultural resources awareness training to be conducted for personnel involved in ground disturbing activities;
- If previously undocumented cultural resources are encountered during construction, all destructive work in the vicinity of the find shall cease until a qualified archaeologist can assess the significance of the find and, if appropriate, provide recommendations for treatment;
- If a qualified archaeologist determines the cultural resource to be potentially significant, mitigation measures may include data recovery of archaeological materials and thorough documentation of historic structures;

- If human remains are found, the California Health and Safety Code requires that excavation be halted in the immediate area, and that the County coroner be notified to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (PRC Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (PRC 7050.5[c]).
- Temporary and permanent storm water runoff or run-on should be limited by implementing best management practices to be designed during the PA&ED phase.
- Design features for structures within the 100-year floodplain (e.g., the widening of the road and two bridges) would be considered to avoid increasing the base flood elevations or adversely impairing the existing flow.
- Work in waterways would be limited to the minimal extent necessary.
- Preconstruction surveys for special-status species and nesting birds would occur.
- Designate environmentally sensitive areas (ESAs) and protect those areas with fencing, signs, or other appropriate measures.
- Establish and conduct worker environmental awareness for Project construction.
- Avoid or minimize vegetation removal in or near sensitive areas. Cleared areas would be revegetated with native species post-construction.
- Avoid or prevent the introduction of invasive species during construction.

## **6. Permits and Approvals**

Due to the need for work in waterways, and the presence of sensitive biological resources, the Interim and Ultimate Projects could be subject to approvals and permits from regulatory agencies. The following summarizes anticipated consultation required for both the Interim and Ultimate Projects. These actions would be completed during the preparation of the draft and final environmental document (Project Approval and Environmental Document, or PA&ED, timeframe):

- **U.S. Fish and Wildlife Service (USFWS)/National Marine Fisheries Service (NMFS):** Formal consultation for threatened and endangered species under Section 7 of the Federal Endangered Species Act would be required. Informal consultation or a Biological Opinion would be needed prior to approval of the final environmental document.
- **Federal Highway Administration (FHWA):** Concurrence that the Project conforms to the State Implementation Plan (SIP) in accordance with 40 CFR 93 would be required.
- **Interagency Air Quality Conformity Task Force:** Concurrence that the Project is not a Project of Air Quality Concern as defined by 40 CFR 93.123(b)(1), and conforms at the regional level to the Clean Air Act would be required. Consultation must be completed prior to applying to FHWA for air quality conformity determination.
- **State Historic Preservation Officer (SHPO):** There is a potential for adverse effects to cultural resources, and design options would be pursued that can avoid such effects. The Section 106 Programmatic Agreement between the Advisory Council on Historic Preservation, the FHWA, and the State Historic Preservation Officer (SHPO) requires SHPO concurrence on determinations of eligibility and findings of effect.
- **AB 52 Tribal Consultation:** Caltrans will need to complete consultation with Tribes that have requested notification, per Assembly Bill 52 and CEQA requirements.

The following regulatory permits and approvals may be required, but would require confirmation and/or updating once alternatives are further refined. The preparation of the applications and permits can be initiated during PA&ED, but cannot be approved by the agencies until the Preliminary Plans, Specifications, and Estimates (PS&E) phase. These permits would be required prior to project construction.

- **U.S. Army Corps of Engineers (USACE):** The Project would require a Preliminary Jurisdictional Determination identifying wetlands and other Waters of the United States within the Project footprint under Clean Water Act Section 404 and Section 10 of the Rivers and Harbors Act of 1899. Any work within jurisdictional areas would require a Section 404 Permit, and any work in, under, or over a navigable waterway would require a Section 10 permit. The expected timeframe is 6-12 months.
- **Regional Water Quality Control Board (RWQCB):** The USACE permit would require RWQCB approval of a Section 401 Water Quality Certification or Waiver. The RWQCB certification or waiver is approved following, or contingent upon, receipt of all federal permits, including the USACE authorization and agreement on wetland mitigation. Time required is a minimum of 3 to 6 months following USACE permit approval and agreement on mitigation. The Project would also require a Notice of Construction and Storm Water Pollution Prevention Plan agreement with RWQCB, which is typically obtained during the construction phase.
- **California Department of Fish and Wildlife (CDFW):** The CDFW may require a 1602 Agreement for a Streambed Alteration Agreement. Their jurisdiction would apply to the banks of stream, creek, or waterway habitat affected by the Project. The definition of 'stream' does not generally include tidal sloughs or other tidally-influenced areas. They would require 6 months minimum following receipt of a complete application and agreement on mitigation. An Incidental Take Permit may be required.
- **San Francisco Bay Conservation and Development Commission (BCDC):** BCDC jurisdiction is located along the Bay shoreline, which occurs nearby to the south of the Project. Coordination with BCDC will also be necessary pursuant to Coastal Zone Management Act consistency requirements.
- **United States Coast Guard:** Bridge permit or approval that the existing Bridge Permit maintains vertical and horizontal clearances within the navigation channel.
- **California State Lands Commission:** A California Public Resources Code Division 6 Permit may be required.
- **Sonoma-Marín Area Rail Transit (SMART):** A railroad agreement may be required for at-grade or grade separated crossings.

## **7. Level of Effort: Risks and Assumptions**

*See Section 5.2 PEAR Handbook regarding important considerations that can affect the level of effort and resources needed not only for the environmental document but also for the PEAR scoping document.*

Project activities have the potential to affect known and/or unknown cultural resources. These activities primarily include subsurface work such as trenching, grading, paving, installation of signs requiring deep foundations, widening bridge structures, and widening of the highway pavement cross section. If unavoidable, one or more of the resources have the potential to delay the schedule or prevent some of the proposed ground-disturbing work within some areas. At a minimum, it is anticipated that Environmentally Sensitive Areas (ESAs) would be established for

the purpose of avoiding previously recorded sites. If a previously recorded cultural resource cannot be avoided due to the current design requirements, it may be necessary to redesign the Project to avoid those areas. Depending on the sensitivity of the area, archaeological testing may be necessary. The testing and subsequent evaluation and documentation have the potential to extend the schedule.

The availability of adequate biological mitigation to address impacts to endangered species or wetlands could also affect the Project schedule and cost. Timely identification and purchase of biological mitigation credits or development of other mitigation options would be necessary.

Per item 6, above, consultation with the resource agencies listed could affect the level of effort and resources needed for the environmental document.

## **8. PEAR Technical Summaries**

*Use brief paragraphs focused on topics that will need environmental review. Indicate the absence of issues to document that they were considered. Refer to the Environmental Studies Checklist when preparing the following summaries. Make a separate statement for each viable alternative. See the PEAR Handbook Exhibit 3 for examples. These paragraphs should be based upon the technical summary provided by each specialist to the generalist who is writing the PEAR.*

### **8.1 Land Use:**

Land uses within the Project limits include lands with extensive agriculture and resources & rural development in Sonoma County,<sup>5</sup> and marsh land to the north and south of SR 37 in Solano County.<sup>6</sup> The San Pablo Bay National Wildlife Refuge is adjacent to SR 37, and would be evaluated with respect to Section 4(f). The level of review and requirements for Section 4(f) depend on the potential for “use.” Minimal impacts, such as might be associated with the Interim Project, may potentially be addressed as *de minimis* impacts. Examples include minor changes in views or temporary construction impacts. Consultation with the refuge may be necessary. Acquisition of any portions of the refuge would likely require consideration of additional measures or alternatives that minimize or avoid impacts. Section 4(f) lands may also include publically owned and managed vista points or fishing access, such as at Sonoma Creek. A Community Impact Assessment would be prepared.

### **Interim Project**

The Interim Project would include minor widening of the SR 37 alignment, as well as widening Tolay Creek Bridge and Sonoma Creek Bridge. It is anticipated the widening could occur within the Caltrans right-of-way, but this require further evaluation. Even with minor widening of Tolay Creek Bridge, Sonoma Creek Bridge, and the roadway alignment, land use would remain

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<sup>5</sup> Sonoma (County of). 2003. Land Use Map: Petaluma and Environs, Sonoma County General Plan Land Use Element. Includes General Plan Land Use amendments as of October 23, 2012. Sonoma, CA.

<sup>6</sup> Solano (County of). 2008. Land Use Diagram: Figure LU-1. Solano County General Plan Land Use Element. Approved by the Board of Supervisors on August 5, 2008. Solano, CA.

consistent with the Sonoma County General Plan 2020 and the 2008 Solano County General Plan. In addition, because the Interim Project would not propose any additional uses other than transportation, the Interim Project would be consistent with other state, regional, and local plans. This would be discussed in the environmental document.

### **Ultimate Project**

Between 113 to 163 acres of new right-of-way would be acquired to construct the new alignment adjacent to the existing alignment. Land use after implementation of the Project would remain generally consistent with the Sonoma County General Plan 2020 and the 2008 Solano County General Plan. In addition, because the Ultimate Project would not propose any additional uses other than transportation, the Ultimate Project would be consistent with other state, regional, and local plans.

### 8.2 Growth:

#### **Interim Project and Ultimate Project**

Both Projects would provide improved traffic flow, throughput, and intermodal use along an existing transportation corridor. Neither Project would add any new access to lands that are not already accessible, and in general the lands traversed by SR 37 consist largely of refuge and protected resources. For this reason, growth along the corridor is not expected to change with or without the Project. Any change to the land use designations within the vicinity of the Project to a more intensive use would require a general plan amendment and rezoning and would be determined by counties on a project-by-project basis. To the extent the Projects would cause indirect growth away from the Project site due to increasing the capacity of SR 37, this assumption could be considered speculative, but would be analyzed in the Community Impact Assessment and environmental document.

### 8.3 Farmlands/Timberlands:

#### **Interim Project and Ultimate Project**

Williamson Act non-prime agricultural land<sup>7</sup> is adjacent to the north of SR 37 within Sonoma County between the intersection of SR 37/SR 121 and Sonoma Creek. In Solano County, non-enrolled land is adjacent to SR 37 within the Project limits. The Interim and Ultimate Projects would not convert Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance and would not change the use of any lands. This would be documented in the Community Impact Assessment.

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<sup>7</sup> Non-prime agricultural land is enrolled under California Land Conservation Act contract and does not meet any of the criteria for classification as Prime Agricultural Land. Non-Prime Land is defined as Open Space Land of Statewide Significance under the California Open Space Subvention Act.

## 8.4 Community Impacts:

### **Interim Project and Ultimate Project**

The Interim Project may require right-of-way, and the Ultimate Project would require right-of-way, however, neither Project would result in relocations, nor would they affect community character and cohesion. Community character and cohesion, relocations, as well as environmental justice would be addressed in the Community Impact Assessment and environmental document; no additional documentation is necessary.

## 8.5 Visual/Aesthetics:

SR 37 drops from 3 lanes west of SR 121 to a two-lane conventional highway with a median barrier as it crosses the Napa-Sonoma marshlands to Mare Island with 2.3 miles in Sonoma County and 7.0 miles in Solano County. The road elevation is relatively high (8 to 9 feet. NAVD88) and is protected by levees between Tolay Creek to Sonoma Creek. There is no bayfront levee protecting SR 37 west of Sonoma Creek to Mare Island and the road is constructed to an elevation of approximately 11 feet except near Mare Island where the road elevation is much lower.

The regional landscape is characterized by rolling hills at the intersection of SR 37/SR121, transitioning to flat marsh to the south side of SR 37, and a combination of flat marsh and grassland to the north. Overhead powerlines and electrical towers dominate the vertical landscape. The Project corridor is defined as the area of the land that is visible from, adjacent to, and outside the highway right-of-way, and is determined by topography, vegetation, and viewing distance.

Within the Project limits, SR 37 is listed as an Eligible State Scenic Highway (not officially designated) in Sonoma and Solano Counties. While existing vegetation and/or landscaping along the outside of the highway (but within the State right-of-way), median, and interchanges may require removal, this segment is not an officially designated State or County Scenic Highway.

### **Interim Project**

The Interim Project should include regionally appropriate, native revegetation for land portions of the project area, and the project estimate should include those costs. Views of rural lands, hills, marsh, and bay should not be impeded. The Caltrans Questionnaire to Determine Visual Impact Assessment (VIA) Level was completed for the Interim Project. The Interim Project received a score of 13, which indicates that negligible visual changes to the environment are proposed. A memorandum addressing visual issues would be prepared.

### **Ultimate Project**

Disturbed lands should be revegetated with regionally appropriate natives. Views of rural lands, hills, marsh, and bay should not be impeded. Treatments to improve visual quality should be included and priced in the estimate: barrier aesthetics (aesthetic forming and coloring of barriers); and bridge aesthetics, including color treatments for concrete and metals, and architectural detailing on bridges and railings. The Caltrans Questionnaire to Determine Visual Impact Assessment (VIA) Level was completed for the Ultimate Project. The Ultimate Project

received a score of 21, which indicates that Noticeable visual changes to the environment are proposed. A fully developed VIA would be prepared based on this score.

## 8.6 Cultural Resources:

Cultural resources staff conducted a records search of the study area, including a 0.5-mile buffer, at the Northwest Information Center (NWIC) to identify previously recorded resources in the area (NWIC File 17-3078). Cultural resource studies were not reviewed at this time, although a conservative estimate of previously surveyed area is between 25 and 50 percent. A total of five previously recorded resources were identified within the study area. Four of these resources (P-48-212/P-28-1324, P-48-569, P-570, and P-48-820 (The NAVELEX Computer Building within the Mare Island Naval Shipyard) have been previously evaluated and were recommended as not eligible for listing in the NRHP. The Tubbs Island Levee (P-49-4273) has not been formally evaluated for the NRHP/California Register of Historical Resources (CRHR). The built-environment resources—including building and structures, and/or linear features such as a levee more than 45 years old—would require formal inventory and evaluation for historical significance under current Caltrans guidelines, documented in a Historical Resources Evaluation Report. The Caltrans Historic Bridge Inventory was reviewed and it appears that none of the bridges along the route would need to be evaluated. No prehistoric resources have been previously recorded within the study area.

In addition, the Native American Heritage Commission (NAHC) was contacted on June 19, 2018, for a search of the Sacred Lands File and a list of Native American contacts for the study area, which at the time, included several other alignments. The NAHC replied that there were sacred sites identified in the study area and to contact the Mishewal-Wappo Tribe of Alexander Valley for more information. Since no other tribes were mentioned, it is possible that the sacred sites are located within or near a more northern alignment than the one being considered in this report. Discussion with a representative of the tribe would clarify the location of the sacred sites and tribal cultural resources. Consultation with Native American Tribe(s) should be completed as appropriate in accordance with Assembly Bill 52.

The State Lands Commission (SLC) maintains shipwreck information on their website, but the only locational data provided is the county in which the ships were wrecked. In addition, the SLC online list of shipwrecks does not include all the wrecks. Therefore, on June 19, 2018, a request was made of the SLC to search the Shipwreck Database for potential resources, including the study area. As of the writing of this document, no response from the SLC has been received.

### **Interim Project**

To complete the environmental documentation and be able to identify and analyze potential impacts, the following tasks would need to be completed for both alternatives within the Interim Project:

- Delineate an Area of Potential Effect (APE) to formally identify and evaluate resources.
  - Conduct a comprehensive survey of the Project area.
  - Complete inventory and evaluation of all cultural resources within the APE.
- Documentation of compliance for both alternatives would need to include preparation of a Historic Properties Survey Report (HPSR), an Archaeological Studies Report (ASR), and a Historical Resources Evaluation Report (HRER). The potential for unknown

subsurface resources would be addressed in the ASR based on a geoarchaeological review.

- Ensure compliance with Assembly Bill 52 (AB 52) and Native American consultation as previously described.

## Ultimate Project

To complete the environmental documentation and be able to identify and analyze potential impacts, the following tasks would need to be completed for both alternatives within the Ultimate Project:

- Delineate an APE in order to formally identify and evaluate resources.
- Conduct a comprehensive survey of the Project area.
- Complete inventory and evaluation of all cultural resources for properties within the APE. Documentation for both alternatives would need to include preparation of a HPSR, an ASR, and a HRER. The potential for unknown subsurface resources would be addressed in the ASR based on a geoarchaeological review. A Finding of Effect for the Mare Island Naval Shipyard National Historic District (P-48-1582/P-48-1584) would also need to be completed.
- The Mare Island Naval Shipyard National Historic District (P-48-1582/P-48-1584), a National Historic Landmark, would need to be determined if it falls within the APE. If within the APE, a Finding of Effect (FOE) for the historic district may be required, and additional consultation may be needed between Caltrans' Cultural Studies Office (CSO), the Secretary of the Interior (SOI), and the Advisory Council on Historic Preservation (ACHP).
- Ensure compliance with Assembly Bill 52 (AB 52) as described above.

### 8.7 Hydrology and Floodplain:

Within the Project limits, SR 37 is located within two undefined hydrologic subareas (206.50 and 206.40) of the Napa River and Sonoma Creek Hydrologic areas within the San Pablo hydrologic unit. The overall drainage pattern of the area is from the north to south. The receiving waterbodies for both Projects would be the same, and include the following waterbodies: Tolay Creek, Sonoma Creek, Napa Slough, Dutchman Slough, and Napa River.

Based on the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer Viewer,<sup>8</sup> the majority of SR 37 within the Project limits is in Zone AE, which is defined as an area where the base flood zone elevations have been determined, and is considered within the 100-year floodplain, and a minor portion is in Zone X, which is outside the 100-year floodplain.

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<sup>8</sup> Federal Emergency Management Agency (FEMA). 2018. FEMA's National Flood Hazard Layer (NFHL) Viewer. Available: <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>. Accessed September 20, 2018.

## **Interim Project**

Based on a preliminary Project footprint, the Interim Project would result in 28.2–28.4 acres of disturbed soil area depending on the alternative. The disturbed soil area calculation combines the proposed grading areas, added impervious areas, replaced impervious areas, removed impervious areas, and proposed staging areas. The Interim Project alternatives would also include 2.8 acres of net new impervious surface area for the Alternative I1 and 7.1 acres of net new impervious surface area for the Interim Project Alternative 2. Potential impacts to floodplains would be further evaluated. A Location Hydraulic Study, Summary of Floodplain Encroachment Report, and/or a Floodplain Evaluation Report would be required since the Project would encroach into a floodplain. A reference to encroachments on the base floodplain must be included in public notices, and any encroachments must be identified at public hearings. Design features for structures within the 100-year floodplain (e.g., the widening of the road and two bridges) would be considered to avoid increasing the base flood elevations or adversely impairing the existing flow.

## **Ultimate Project**

The Ultimate Project alternatives would result in 70.1 acres of disturbed soil area. The Ultimate Project Alternative 1 would also include 76.9 acres of net new impervious surface area, and the Ultimate Project Alternative 2 would include 74.5 acres of net new impervious surface area. Similar to the Interim Project, a Location Hydraulic Study, Summary of Floodplain Encroachment Report, and/or a Floodplain Evaluation Report would be required since the Project would encroach into a floodplain. A reference to encroachments on the base floodplain must be included in public notices, and any encroachments must be identified at public hearings. Design features for structures within the 100-year floodplain (e.g., the widening of the road and two bridges) would be considered to avoid increasing the base flood elevations or adversely impairing the existing flow.

### **8.8 Water Quality and Storm Water Runoff:**

As stated in section 8.7, Hydrology and Floodplain above, the receiving waterbodies for both Interim and Ultimate Projects and all alternatives are the same. These include: Tolay Creek, Sonoma Creek, Napa Slough, Dutchman Slough, and Napa River.

## **Interim Project and Ultimate Project**

The Interim and Ultimate Projects would increase the total area of impervious surface within the project area. The total net new impervious surface for the Interim Project would be between 2.8–7.1 acres, depending on which alternative is chosen, and between 74.5–76.9 acres for the Ultimate Project, depending on which alternative is chosen. The total runoff would be calculated during preliminary design.

Because the amount of new impervious surface would be greater than one acre for both Projects (the Interim Project would result in 28.2–28.4 acres of disturbed soil depending on the alternative chosen, and the Ultimate Project alternatives would result in 70.1 acres of disturbed soil), the Projects must comply with the Statewide Construction General Permit (GGP). In accordance with the GGP, Best Management Practices (BMPs) would be included in the construction of the Project. This process involves the determination of a “risk level,” and a Stormwater Pollution

Prevention Plan (SWPPP) would be developed by Caltrans or the construction contractor(s), as well as any required monitoring reporting requirements or plans. In addition, a Storm Water Data Report would be prepared and is included in this PID document.

Both Projects would include placing structures in Waters of the State or Waters of the United States. In particular, the potential widening of the bridges under the Interim Project alternatives and the construction of new structures in marsh land under the Ultimate Project alternatives would involve placing fill into jurisdictional waters. Therefore, a Section 401 Water Quality Certification from the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) and a Section 404 permit from the U.S. Army Corps of Engineers would be required.

#### 8.9 Geology, Soils, Seismic and Topography:

Within the Project limits, SR 37 is relatively flat due to the proximity of the San Pablo Bay, however, dikes and levees create topographic high points. The road elevation is 8–9 feet (NAVD88) and is protected by levees between Tolay Creek to Sonoma Creek. The road is constructed to an elevation of approximately 11 feet except near Mare Island where the road elevation is much lower.

According to the Natural Resources Conservation Service's Web Soil Survey,<sup>9</sup> soils within the Project area consist of Reyes silty clay (0% to 2% slopes), Reyes silty clay loam, Reyes silty clay loam (salt ponds), Reyes silty clay, Reyes silty clay loam (drained), made land, and Valdez silty clay loam (strongly saline, 0% to 2% slopes, MLRA 16). All soils within the Project limits are classified as Hydrologic Soil Group D, which means they produce high volumes of runoff and have low infiltration rates.

An Alquist-Priolo Earthquake Fault Zone, the Rodgers Creek Fault, is located east of the San Andreas Fault in Sonoma County, and runs through the west portion of the Project limits. The presence of this fault zone and the proximity to the San Andreas Fault to the east creates a high risk for strong ground shaking. This risk is magnified considering that the regional geologic mapping indicates the potential presence of fill and other consolidated and unconsolidated materials beneath the highway.

#### **Interim Project and Ultimate Project**

Both Projects would include work on existing structures or construct new structures in close proximity to an earthquake fault zone. Therefore, during the PA&ED phase, both Projects would require a Preliminary Geotechnical Report, including reconnaissance-level field review and literature review. The Preliminary Geotechnical Report would be prepared to document locations where monitoring or other measures should be implemented during construction. Any new structures under either Project would require evaluation in a Structures Foundation Report.

#### 8.10 Paleontology:

A review of the collections of the University of California, Museum of Paleontology indicates that no fossil specimens have been identified within the general vicinity of the study area.

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<sup>9</sup> United States Department of Agriculture. Natural Resources Conservation Science. Web Soil Survey. Available: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed August 7, 2018.

Geology of the study area appears to be Cenozoic sedimentary deposits overlain by more recent Bay Mud, which are known to contain fossiliferous strata.

### **Interim Project and Ultimate Project**

To complete the environmental documentation and be able to identify and analyze potential impacts, the following tasks would need to be completed for both alternatives within the Interim Project:

- Complete a Paleontological Identification Report.
- Paleontological Evaluation Report, as needed.

#### **8.11 Hazardous Waste/Materials:**

A review of the CA Department of Toxic Substances Control (DTSC) Envirostor database identified 1 record within 1,000 feet near the east end of the Project limits. The site was used for housing for the Mare Island Naval Shipyard during the early 1940s. By the 1960s, the housing structures had been removed. The site was evaluated for possible contaminated runoff and unknown disposal from the neighboring shipyard. A subsurface investigation was performed and no contaminants of concern were detected. DTSC issued a no further action determination November 10, 2005.

A review of the State Water Resources Control Board Geotracker database did not identify any records within 1,000 feet of the Project limits.

### **Interim Project and Ultimate Project**

An Initial Site Assessment (ISA) would be required for both Projects This would include a public-records search and review, site reconnaissance, reviews of previous or ongoing remediation activities at nearby sites, evaluations of the potential presence of asbestos containing materials and lead-containing paint on the road and bridge structures to be altered, and assessment of aerially deposited lead and naturally occurring asbestos in the Project area soils.

#### **8.12 Air Quality:**

### **Interim Project and Ultimate Project**

The Project is not exempt from air quality conformity review, and regional and project-level conformity would need to be demonstrated. An air quality conformity determination would be needed from the Federal Highway Administration (FHWA). For regional conformity, the Project would need to be included in an applicable and current Metropolitan Transportation Commission Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP). An Air Quality Study would be required to provide a quantitative analyses of construction-related emissions, mobile source air toxics, and operational and construction greenhouse gas emissions, and to demonstrate conformity with the assumptions in the RTP and the TIP. The Air Quality Study would address current federal non-attainment pollutants in the Bay Area.

Transportation conformity requirements no longer apply for the National Ambient Air Quality Standard for carbon monoxide;<sup>10</sup> therefore, a carbon monoxide hot spot analysis is not needed. The Project sponsors would need to consult with the Bay Area Air Quality Conformity Task Force regarding whether the Project is a Project of Air Quality Concern as defined in 40 Code of Federal Regulations 93.123(b)(1), which would require a quantitative hot spot analysis for particulate matter of 2.5 microns or less (PM<sub>2.5</sub>). Consultation must be completed prior to requesting a project-level air quality conformity determination from FHWA. Results of the studies must be included in the Draft Environmental Document for public review and comment. An air quality conformity checklist would also be required.

Projected 2022 daily traffic demand within the Project limits is 19,300 vehicles in the westbound direction and 19,900 vehicles in the eastbound direction. While both Projects would increase volumes on SR 37, there are no sensitive populations or land uses in the area that would be exposed to Mobile Source Air Toxics (MSAT). In addition, future average daily trips would be less than 140,000; therefore, both Projects would have low potential MSAT effects, per FHWA guidance. A qualitative MSAT report would be required to address diesel particulate matter and other potentially toxic emissions. This qualitative assessment would compare the expected effect of the Project on traffic volumes, vehicle mix, or routing of traffic, and the associated changes in MSATs for the Project alternatives, based on Vehicle Miles Traveled (VMT), vehicle mix, and speed.

#### 8.13 Noise and Vibration:

SR 37 is within the San Pablo Bay National Wildlife Refuge, which is an activity category C land use according to the 2011 Traffic Noise Analysis Protocol (TNAP). There are public access and wildlife viewing points along the route, including at the west side of the Napa river, on each side of the Sonoma Creek Bridge, at Cullinan Ranch Road, and Tubbs Island trailhead. There are no apparent residential uses along the corridor, except for a relatively isolated home near Tolay Creek south of the SR 37/121 intersection; the structure is approximately 1,000 feet from the highway.

#### **Interim Project and Ultimate Project**

The Interim Project and Ultimate Project's would add one or more through-traffic lanes to SR 37, therefore, the Projects are a Type I undertaking. Noise abatement is to be considered and a Noise Study is required in accordance with the TNAP. A Noise Abatement Decision Report would also be prepared to evaluate the feasibility and reasonableness of noise barriers under 2011 TNAP criteria.

The noise study would evaluate existing and future noise levels, with and without the Project, and evaluate noise abatement alternatives in accordance with the TNAP.

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<sup>10</sup> United States Environmental Protection Agency (EPA). 2018. Letter to Mohamed Aljabiry, Chief, Office of Federal Transportation Management Program, Caltrans, Sacramento, CA, from Elizabeth J. Adams, Acting Director, Air Division, EPA Region IX, San Francisco, CA. March 21.

## 8.14 Energy and Climate Change:

### *Energy*

An Energy study would be required for an EIR. It would be based on the traffic data, and compare the alternatives.

### *Greenhouse Gas*

A greenhouse gas emissions evaluation will be required at the PA&ED phase, as this Project would add capacity to the highway.

### *Sea Level Rise*

SR 37 relies on a complex interconnected system of levees along Tolay Creek, Sonoma Creek, the Napa River, and the San Francisco Bay for flood protection. According to the UC Davis Stewardship Study, SR 37 between SR 121 and the Mare Island interchange was identified as the most at risk to sea level rise impacts when considering consequence factors such as capital improvement costs, economic impacts on commuters and goods movement, impacts to public recreational activities and impacts to alternate routes.

The Caltrans Guidance on Incorporating Sea Level Rise<sup>11</sup> was consulted to determine whether an analysis of sea level rise should be included in the Project Initiation Document (PID). The three-part screening criteria are the following:

- 1) Is the project located on the coast or in an area vulnerable to sea level rise?
- 2) Will the project be impacted by the stated sea level rise?
- 3) Is the design life of the project beyond year 2030?

The SR 37 Transportation and Sea Level Rise Corridor Improvement Plan (Corridor Plan)<sup>12</sup> concluded that SR 37 from SR 121 to Sonoma Creek (area of Tubbs Island) would flood between the 25-year and 50-year storm surge events and would be permanently inundated around 2050 with roadway flooding depths up to 2-feet. The remainder of the Project limits would be permanently inundated around 2100 with the majority of roadway depths around 0.5-feet. Because the Project would be impacted by sea level rise and the design life of the Interim Project may extend beyond 2030, a sea level rise assessment for the Project was performed. Table 2 is based on factors relevant to considering sea level rise for this Project.

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<sup>11</sup> California Department of Transportation (Caltrans), 2011 (May). Guidance on Incorporating Sea Level Rise: For use in the planning and development of Project Initiation Documents. Prepared by the Caltrans Climate Change Workgroup, and the HQ Divisions of Transportation Planning, Design, and Environmental Analysis. Available:

[http://www.dot.ca.gov/hq/tpp/offices/orip/climate\\_change/documents/guide\\_incorp\\_slr.pdf#zoom=65](http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/documents/guide_incorp_slr.pdf#zoom=65).

<sup>12</sup> Kimley-Horn/AECOM, 2018. SR 37 Transportation and Sea Level Rise Corridor Improvement Plan.

**Table 2. Relevant Factors to Consider in Whether to Incorporate Sea Level Rise in Programming and Design**

<b>Relevant Factors to Consider in Whether to Incorporate Sea Level Rise in Programming and Design</b>	<b>Explanation</b>
1. Design life longer than 20+ years?	Interim and Ultimate Project improvements would have a design life of 20+ years.
2. Redundant/alternative routes available?	Inundation and closure of SR 37 would displace traffic to alternative routes I-80, I-580, US 101, SR 12, SR 116 and SR 121. Most of these roadways already experience severe traffic congestion, and the performance of these alternate routes is projected to deteriorate with the additional traffic displaced from SR 37 closure. This is not considered a viable option.
3. Anticipated travel delays (from inundation)	<p>Inundation of the Interim Project would cause significant travel delays as alternative routes already experience severe traffic congestion.</p> <p>The Ultimate Project is designed to avoid inundation by sea level rise and thus would not cause travel delays when inundation occurs.</p>
4. High priority route for goods movement/interstate commerce	SR-37 is important to regional transportation and local commerce. SR 37 provides a regional connection linking the north, east and west San Francisco Bay Area sub-regions. It connects job markets and housing within Marin, Sonoma, Napa, and Solano Counties, and serves commute and freight traffic on weekdays and weekends.
5. Evacuations/emergencies	SR 37 acts as a secondary and reliever route to the interstates and state highways it parallels and is a recovery route for the Richmond-San Rafael Bridge in the event of an emergency closure. The Interim Project would be subject to closure when inundation occurs; however, the Ultimate Project considers sea level rise in the design and therefore would be able to accommodate a substantial amount of sea level rise without being subject to inundation.

<b>Relevant Factors to Consider in Whether to Incorporate Sea Level Rise in Programming and Design</b>	<b>Explanation</b>
6. Traveler safety (delaying the project to incorporate sea level rise would lead to on-going/new safety concerns)	<p>The Interim Project is intended to relieve congestion, but is not being designed to be resilient to sea level rise. Inundation of the Interim Project would lead to traveler safety concerns and new safety concerns if travelers are unable to safely travel on SR 37.</p> <p>The Ultimate Project is being designed to be resilient to sea level rise and thus would not result in traveler safety concerns if inundated.</p>
7. Expenditure of public funds	<p>The Interim Project is similar in size to other road improvement projects.</p> <p>The Ultimate Project would represent a significant investment as a substantial portion of SR 37 would be reconstructed in a new alignment and the time required for implementation is expected to be over 20 years.</p>
8. Scope of project (“point” vs. “linear”)	Both the Interim and Ultimate Projects are linear projects. Incorporation of sea level rise measures in their design would make the roadway more resilient to sea level rise.
9. Effect of incorporating sea level rise on non-state highway (interconnectivity issues with local streets and roads)	<p>If sea level rise features were implemented as part of the Interim Project, there would be interconnectivity issues with local streets and roads. Intersections with SR 37 would likely need to be elevated to provide a connection with the Interim Project.</p> <p>The Ultimate Project is being designed to be resilient to sea level rise and, therefore, all interconnectivity issues would be addressed during PA&amp;ED.</p>
10. Environmental constraints	The proposed improvements would likely not be constrained by environmental factors, such as additional property acquisition or the removal of homes or businesses.

The majority of results in Table 2 support including sea level rise as a major design criterion. The Interim Project is proposed in order to relieve congestion along SR 37, while the Ultimate Project is proposed as a way to relieve congestion, and to improve the resiliency of SR 37 to sea level rise.

Climate change, including sea level rise, would be addressed in the environmental document following current Caltrans guidance. Per Caltrans guidance on estimating greenhouse gas emissions during the PID phase, when an Environmental Determination or Document other than the CE/CE is anticipated, the GHG analysis is deferred to future phases.

## 8.15 Biological Environment:

The Project corridor traverses a largely uninhabited region comprised of wetlands, baylands, and agricultural uplands. The Project corridor crosses through the USFWS' San Pablo Bay National Wildlife Refuge and wetlands managed by CDFW, and areas surrounding the right-of-way provide habitat for several special-status wildlife species and large numbers of migratory birds. Tolay Creek and Sonoma Creek cross the Project site from the north and drain toward the bay. Additional small drainages are present adjacent to and crossing the Project corridor. The San Pablo Bay is located within one mile to the south of the Project, the Napa River is located within one mile to the east, and numerous sloughs occur within one mile of the Project area.

Sensitive wildlife and plant species are documented within the Project vicinity, as shown in Figure 2. A total of eight sensitive wildlife species are documented at CNDDDB accuracy class 3<sup>13</sup> or above within or adjacent to the Project limits, and are presumed extant (CNDDDB 2018):

- California black rail (*Laterallus jamaicensis coturniculus*), state listed as threatened and a California fully protected species, USFWS bird of conservation concern, and a BLM sensitive species;
- California red-legged frog (*Rana draytonii*), federally listed as threatened and a CDFW species of special concern;
- California Ridgway's rail (*Rallus obsoletus obsoletus*), federally and state listed as endangered and a California fully protected species;
- Delta smelt (*Hypomesus transpacificus*), federally listed as threatened, state listed as endangered;
- Salt-marsh harvest mouse (*Reithrodontomys raviventris*), federally and state listed as endangered, CDFW fully protected;
- Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*), CDFW species of special concern;
- San Pablo song sparrow (*Melospiza melodia samuelis*), CDFW species of special concern, and
- Suisun shrew (*Sorex ornatus sinuosus*), CDFW species of special concern.

Critical habitat is present for two species in Sonoma Creek, the Napa River, and the San Pablo Bay (CNDDDB 2018):

- Steelhead (Central California Coast ESU; *Oncorhynchus mykiss*), federally listed as endangered and American Fisheries Society endangered;
- Salmon - Chinook (*Oncorhynchus tshawytscha*), federally-listed endangered (Sacramento River winter-run) and threatened (California coastal and Central Valley spring run); and

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<sup>13</sup>CNDDDB Accuracy Classes are defined as follows:

Accuracy Class 1 – specific bounded area with an 80 meter radius

Accuracy Class 2 – specific, non-circular bounded area

Accuracy Class 3 – non-specific bounded area

Accuracy Classes 4 to 10 – non-specific, circular feature with a radius of 150 meters to 8000 meters

- Green sturgeon (*Acipenser medirostris*), federally listed as threatened, American Fisheries Society vulnerable, and a CDFW species of special concern.

There are four additional special-status wildlife species that have been documented within a 1-mile buffer of the Project limits (CNDDDB 2018). These include:

- Burrowing owl (*Athene cunicularia*), a California fully protected species, USFWS bird of conservation concern, and BLM sensitive species;
- Longfin smelt (*Spirinchus thaleichthys*), state listed as threatened, a federal candidate species, and a CDFW species of special concern;
- Sacramento splittail (*Pogonichthys macrolepidotus*), American Fisheries Society vulnerable, and a CDFW species of special concern; and
- White-tailed kite (*Elanus leucurus*), CDFW fully protected and a BLM sensitive species.

In addition, two rare plants have been documented within a 1-mile buffer of the Project limits (CNDDDB 2018). These include:

- Soft salty bird's-beak (*Chloropyron molle* ssp. *molle*), federally listed as endangered and state listed as rare, California rare plant ranking (CRPR) 1B.2 (rare throughout its range, endemic to California; possibly extirpated); and
- Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), CRPR 1B.2.

### **Interim Project**

The Interim Project would occur largely within the SR 37 footprint and adjacent roadside ruderal habitat, however, there are resources directly adjacent to SR 37 that would require biological evaluation, including potential habitat for special-status species and wetlands. A wetland delineation and preliminary jurisdictional determination for wetlands and waters of the U.S. and State should be prepared to ensure avoidance and/or to quantify impacts to wetlands and waters of the U.S. and State for regulatory permitting purposes. A Natural Environmental Study (NES), including a field assessment and habitat mapping should be prepared documenting the existing biological resources and analyzing project effects on those resources. Formal Section 7 Consultation for listed species and a Biological Assessment would be required for NMFS and USFWS. A fish relocation plan with NMFS may be required for bridge widening. In addition, other surveys likely to be required are pre-construction surveys for nesting birds and seasonal botanical surveys for rare plants.

### **Ultimate Project**

The Ultimate Project would have a wider footprint that would encroach into wetland habitat and require additional bridge construction. The Ultimate Project would require all of the studies and surveys listed above for the Interim Project, including an NES. In addition, the Ultimate Project would likely require protocol-level surveys for special-status wildlife, including but not limited to Ridgway's rail, black rail, salt marsh harvest mouse, and California red-legged frog. Section 7 Consultation for listed species and a Biological Assessment for USFWS and NMFS would be required, along with a fish relocation plan.

## 8.16 Cumulative Impacts:

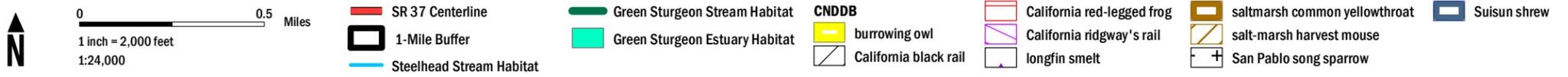
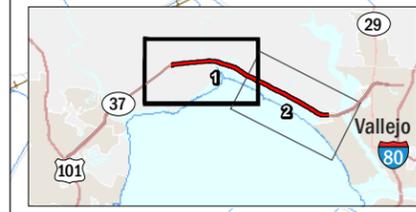
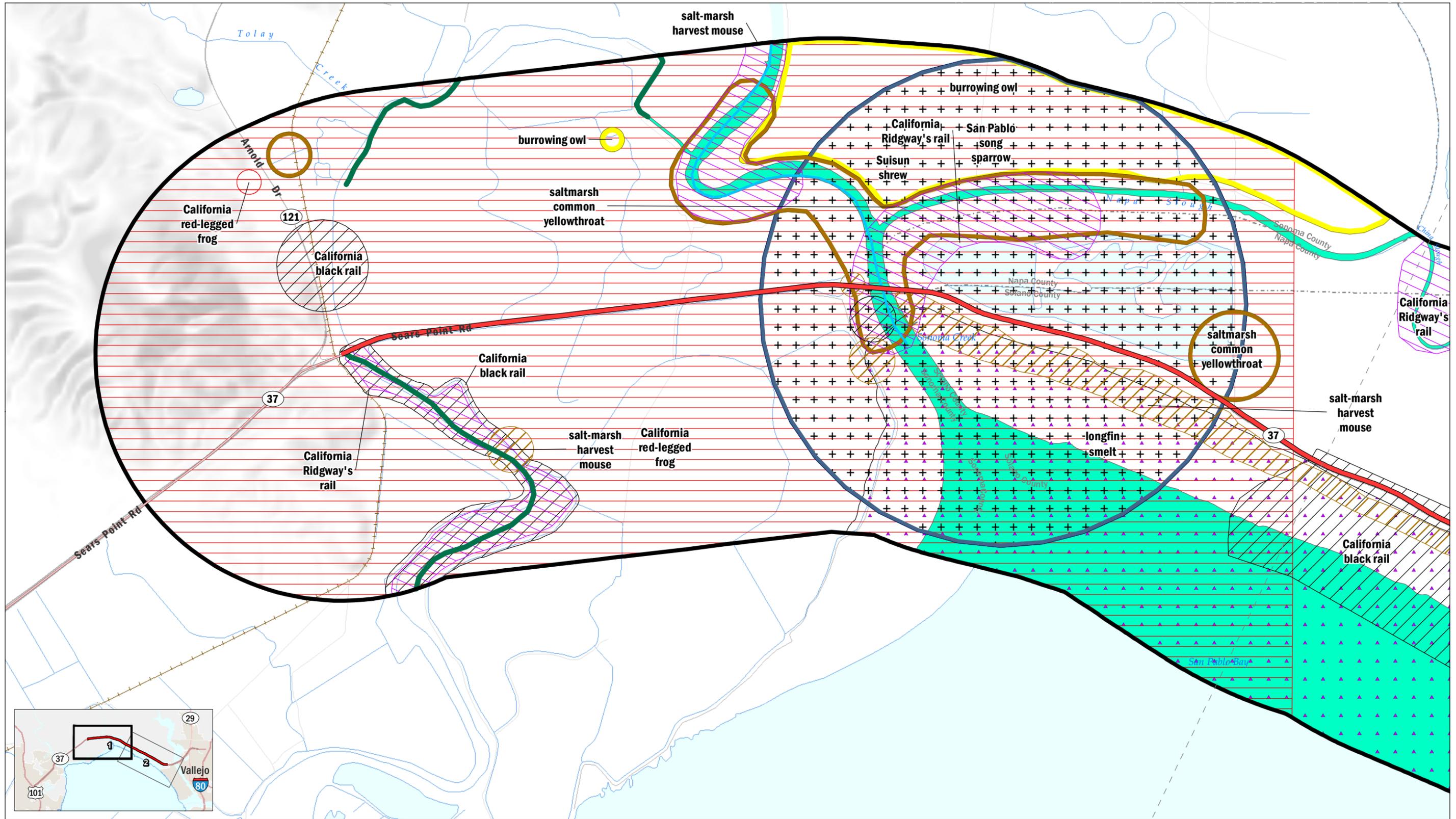
### **Interim Project and Ultimate Project**

Cumulative impacts associated with other past, present, or future planned projects would be considered during the preparation of the environmental document. The other segments of SR 37 (west and east of the Project limits) that are anticipated to be improved would be considered in the cumulative analysis, as well other past, present, or future planned transportation and non-transportation projects.

Based on preliminary analyses, cumulative impacts related to biological resources would be of most concern. The cumulative impact analysis would be similar for both Projects and all alternatives; although there is a substantially greater potential for the Ultimate Project alternatives to have cumulatively considerable effects.

## 8.17 Context Sensitive Solutions:

Caltrans applies Context Sensitive Solutions (CSS) to achieve transportation goals in harmony with community goals and natural environments. These solutions are reached through a collaborative interdisciplinary approach involving all stakeholders, and these efforts would be pursued during PA&ED.

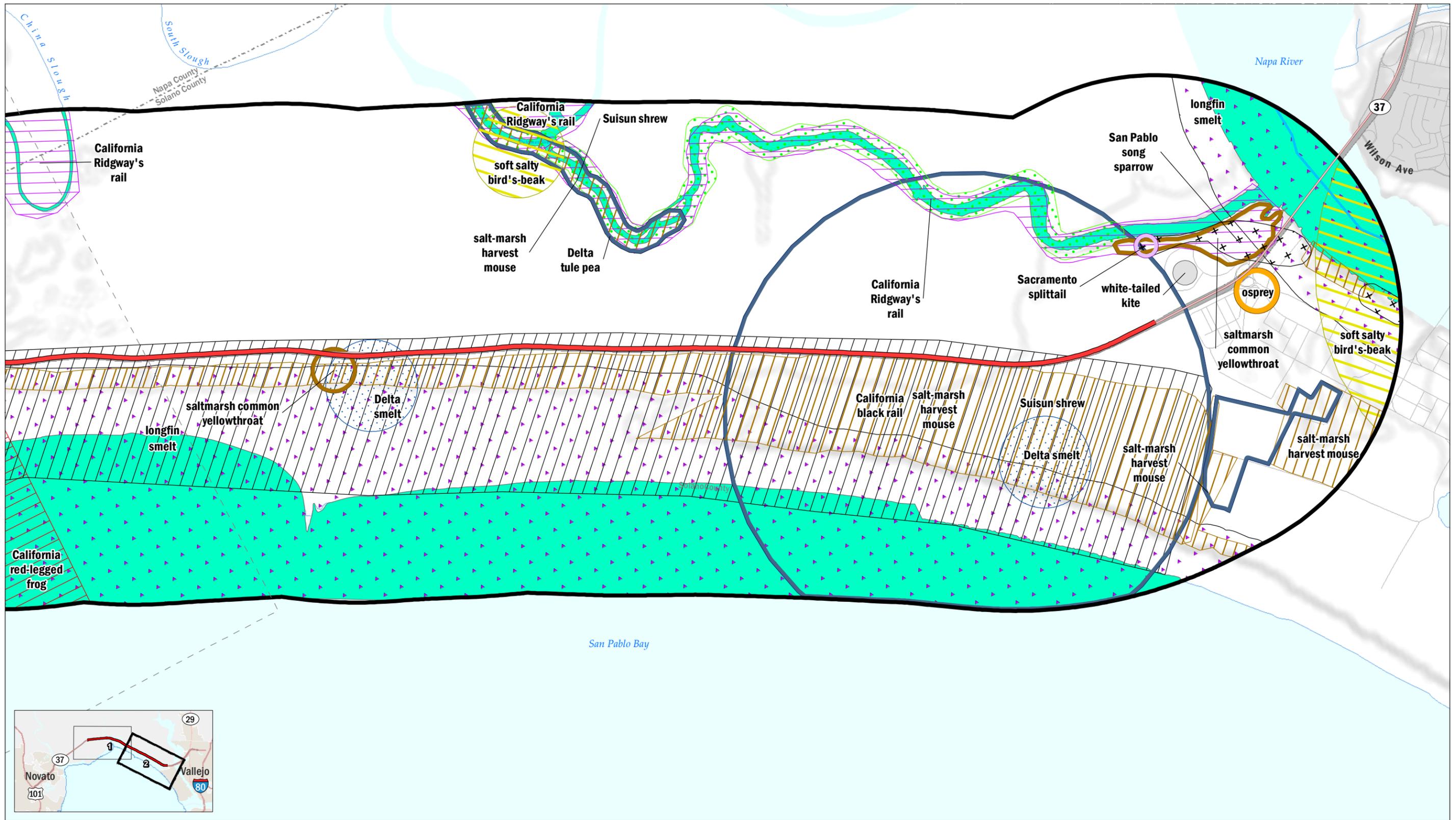


DATA SOURCE  
NCDDb, 09/2018; USFWS, 2017

PROJECTION  
NAD 1983 StatePlane  
California II FIPS 0402 Feet

MAP PREPARED BY:  
AECOM Alex Remar,  
10/1/2018

## CNDDB AND CRITICAL HABITAT DATA ALONG STATE ROUTE 37



0 0.5 Miles  
1 inch = 2,000 feet  
1:24,000

SR 37 Centerline  
1-Mile Buffer  
Steelhead Stream Habitat

Green Sturgeon Estuary Habitat  
CNDDB  
California black rail

California red-legged frog  
California ridgway's rail  
Delta smelt

Delta tule pea  
longfin smelt  
osprey

Sacramento splittail  
saltmarsh common yellowthroat  
salt-marsh harvest mouse

San Pablo song sparrow  
white-tailed kite

white-tailed kite

DATA SOURCE: NCDDDB, 09/2018; USFWS, 2017  
PROJECTION: NAD 1983 StatePlane, California II FIPS 0402 Feet  
MAP PREPARED BY: AECOM Alex Remar, 10/1/2018

## **9. Summary Statement for PSR or PSR-PDS**

The Project team conducted a preliminary environmental analysis to identify the potential environmental impacts of the Interim and Ultimate Projects. A summary of the preliminary environmental analysis for the Interim Project and Ultimate Project is provided below.

The Interim and Ultimate Projects are located in a relatively rural area, but within sensitive environmental habitat. Extensive coordination has been conducted during the planning of this Project with federal, state, regional, and local agencies as well as with stakeholder groups that have a strong interest in the protection and enhancement of the North Bay ecological environment. Consideration of climate change effects, especially sea level rise, is also an important factor in maintaining a long-term viable transportation route that will continue to serve this area. As a result of this preliminary work and consultation, the Interim and Ultimate Projects were defined as the most viable approach to addressing both short-term and long-term purpose and needs.

### **Interim Project**

The Interim Project is intended to generally stay within the existing footprint of SR 37, including roadway, shoulders, and disturbed areas. It would add up to approximately 8 feet of pavement widening along the highway and minimize disturbance to areas alongside the existing alignment. Retaining walls may be required to maintain the widened highway within a minimal footprint. However, the Tolay Creek Bridge would likely require widening, and the Sonoma Creek Bridge may or may not require widening depending on the alternative. Storage and maintenance needs for a movable barrier have not been fully defined but would require space alongside SR 37. Construction access needs would need to be defined alongside the highway, especially where bridges would require reconstruction. By maintaining construction alongside the existing highway, impacts to sensitive environmental resources can be minimized, but cannot be avoided. Mitigation will be required to offset impacts related to grading, and fill related to shoulder widening, placement of retaining walls, bridge abutments, piers, or other features. Because the Interim Project has been specifically defined to minimize impacts to adjacent sensitive resources, a CEQA Mitigated Negative Declaration/Initial Study (MND/IS) and NEPA Finding of No Significant Impact/Environmental Assessment (FONSI/EA) were identified as the appropriate environmental documentation. An option to elevate the CEQA document to an Environmental Impact Report can be considered if technical studies indicate the potential for significant impacts, or if public review identifies areas of controversy or concern related to environmental impacts or the alternatives considered.

### **Ultimate Project**

The Ultimate Project would be constructed in a new alignment adjacent to the existing highway and would require additional right-of-way acquisition.<sup>14</sup> The Ultimate Project would provide long-term benefits, by elevating the highway to accommodate future sea level rise and passage of floodwaters, while enhancing wildlife and habitat connectivity. It also represents a greater investment in transportation funding, therefore requiring a longer planning horizon. Widening

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<sup>14</sup> Alternatives for the Ultimate Project involving alternate alignments to the north and south of the existing SR 37 roadway were evaluated for environmental feasibility, constructability, maintenance and costs and were deemed not viable (refer to Section 7B of the PSR-PDS).

and bridge reconstruction would be more substantial. Fill would be necessary where the roadway is on elevated section, but new bridges would also allow existing sections of the at-grade highway to be removed, providing opportunities for restoration and enhancement. The elevated structure would also be more visible in comparison to the existing at-grade highway. An Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was identified as the appropriate environmental document because of these anticipated higher levels of resource disturbance and off-setting mitigation requirements, and because of the potential for the Ultimate Project, due to its scope, to result in one or more significant and unavoidable (i.e., unmitigable) impacts or present a significant impact on the environment (in terms of overall context and intensity). A longer time frame for environmental review will be necessary to establish agreements and approvals from regulatory agencies.

Important consultation and environmental requirements that may apply to environmental review for both the Interim and Ultimate projects includes the following:

**Section 7 Consultation.** Section 7 of the federal Endangered Species Act requires all federal agencies to consult with the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) if a project action may affect a listed endangered or threatened species. Consultation may be “informal” or “formal,” but formal consultation is necessary if a project is likely to adversely affect a listed species or its habitat. A Biological Assessment is prepared and helps determine if a Biological Opinion is necessary. The Interim and Ultimate Projects would require consultation.

**Coastal Zone Management Act (CZMA) Federal Consistency.** Under the federal consistency provisions of the CZMA, federal agency actions involving projects affecting the coastal zone need to be determined to be consistent with the state’s coastal zone management program and policies (16 United States Code § 1456). The consistency determination is made by the lead federal agency, and concurrence is sought from the CZMA managing agency, which has the ability to concur, condition the project to find consistency, or object to the project. For San Francisco Bay and the project area, the San Francisco Bay Conservation and Development Commission (BCDC) is the state’s coastal zone management agency responsible for issuing consistency determinations under the CZMA. Consistency determination requirements for the Interim and Ultimate Projects would be determined in coordination with BCDC.

**Section 4(f).** The Interim and Ultimate Projects are within the San Pablo Bay National Wildlife Refuge, which would be evaluated with respect to Section 4(f). There are also public viewing and access locations at the Sonoma Creek Bridge and at Cullinan Ranch that would have to be considered if they meet Section 4(f) criteria. A Section 4(f) evaluation would be needed. The requirements of Section 4(f) would depend on the determination of potential “use” of the refuge area or publically maintained access or recreation locations, avoidance, and consideration of alternatives that minimize any defined use.

**NEPA and Clean Water Act Section 404 Integration Process.** A Memorandum of Understanding (MOU) applies to federal aid surface transportation projects that have five or more acres of permanent impacts to waters of the U.S., and that require a NEPA EIS. The MOU process is designed to foster and achieve agreement at critical steps of the NEPA review process, such as defining the purpose and need, alternatives, and review of the drafts of the EIS. It has not been determined if this process would apply to this Project. Further evaluation of the potential impacts to waters of the U.S would help define this requirement.

**Assembly Bill No. 52 (AB 52).** Assembly Bill No. 52 (AB 52), resulted in modifications and amendments to the Public Resources Code (PRC), and creates a new category of environmental resources that must be considered under CEQA: “tribal cultural resources.” The legislation imposes requirements for consultation regarding projects that may affect a tribal cultural resource and includes a broad definition of what may be considered to be a tribal cultural resource; it also includes a list of recommended mitigation measures.

AB 52 adds tribal cultural resources to the categories of cultural resources in CEQA, which had formerly been limited to historic, archaeological, and paleontological resources. “Tribal cultural resources” are defined as either:

- (1) “sites, features, places cultural landscapes, sacred places and objects with cultural value to a California Native American tribe” that are included in the state register of historical resources or a local register of historical resources, or that are determined to be eligible for inclusion in the state register; or
- (2) resources determined by the lead agency, in its discretion, to be significant based on the criteria for listing in the state register.

This requirement with respect to environmental review would be defined by Caltrans.

### **Interim and Ultimate Studies**

The Project team conducted preliminary screening during the identification of alternatives. As part of that process, the following technical studies were preliminarily identified that would likely be needed during the PA&ED phase. These would need to be confirmed when that work is initiated:

- Community Impact Assessment
- Section 4(f) Evaluation
- Visual Impact Assessment
- Archaeological Survey Report
- Archaeological Evaluation Report
- Historic Resources Evaluation Report
- Historic Property Survey Report
- Location Hydraulic Study
- Summary Floodplain Encroachment Report and/or Floodplain Evaluation Report
- Water Quality Study
- Stormwater Data Report
- Preliminary Geotechnical Report
- Paleontology Evaluation Report
- Air Quality Technical Report
- Greenhouse Gas Emissions Evaluation
- Noise Study Report
- Initial Site Assessment

- Preliminary Site Investigation<sup>15</sup>
- Natural Environment Study
- Wetland Delineation Report
- Species Crossing Study
- Biological Assessment

### **Permits and Approvals**

Due to the need for work in waterways, and the presence of sensitive biological resources, the Interim and Ultimate Projects would be subject to approvals and permits from regulatory agencies. The following regulatory permits and approvals may be required, but would require confirmation and/or updating once alternatives are further refined. The preparation of the applications and permits can be initiated during PA&ED, but cannot be approved by the agencies until the Preliminary Plans, Specifications, and Estimates (PS&E) phase.

Both the Interim and Ultimate Projects would require similar permits because they would both involve work in waterways, sensitive habitats, and within the BCDC shoreline band. The permits and coordination required for both Projects is listed below. These permits would be required prior to project construction.

- **U.S. Fish and Wildlife Service (USFWS)/National Marine Fisheries Service (NMFS):** Formal consultation for threatened and endangered species under Section 7 of the Federal Endangered Species Act would be required. Informal consultation or a Biological Opinion would be needed prior to approval of the final environmental document.
- **Federal Highway Administration (FHWA):** Concurrence that the Project conforms to the State Implementation Plan (SIP) in accordance with 40 CFR 93 would be required.
- **Interagency Air Quality Conformity Task Force:** Concurrence that the Project is not a Project of Air Quality Concern, as defined by 40 CFR 93.123(b)(1), and conforms at the regional level to the Clean Air Act would be required. Consultation must be completed prior to applying to FHWA for air quality conformity determination.
- **State Historic Preservation Officer (SHPO):** There is a potential for adverse effects to cultural resources, and design options would be pursued that can avoid such effects. The Section 106 Programmatic Agreement between the Advisory Council on Historic Preservation, the FHWA, and the State Historic Preservation Officer (SHPO) requires SHPO concurrence on determinations of eligibility and findings of effect.
- **U.S. Army Corps of Engineers (USACE):** The Project would require a Preliminary Jurisdictional Determination identifying wetlands and other Waters of the United States within the Project footprint under Clean Water Act Section 404 and Section 10 of the Rivers and Harbors Act of 1899. Any work within jurisdictional areas would require a Section 404 Permit, and any work in, under, or over a navigable waterway would require a Section 10 permit. The expected timeframe is 6 to 12 months.
- **Regional Water Quality Control Board (RWQCB):** The USACE permit would require RWQCB approval of a Section 401 Water Quality Certification or Waiver. The RWQCB certification or waiver is approved following, or contingent upon, receipt of all federal permits, including the USACE authorization and agreement on wetland mitigation. Time required is a minimum of 3 to 6 months following USACE permit approval and agreement on mitigation. The Project would also require a Notice of Construction and Storm Water

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<sup>15</sup> If appropriate, the PSI can be delayed until the PS&E phase when design details are more developed.

Pollution Prevention Plan agreement with RWQCB, which is typically obtained during the construction phase.

- **California Department of Fish and Wildlife (CDFW):** The CDFW may require a 1602 Agreement for a Streambed Alteration Agreement. Their jurisdiction would apply to the banks of a creek or waterway habitat affected by the Project. The definition of ‘stream’ does not generally include tidal sloughs or other tidally-influenced areas. They would require 6 months minimum following receipt of a complete application and agreement on mitigation. An Incidental Take Permit may be required for impacts.
- **San Francisco Bay Conservation and Development Commission (BCDC):** BCDC jurisdiction is located along the Bay shoreline, which occurs nearby to the south of the Project. Coordination with BCDC will also be necessary pursuant to Coastal Zone Management Act consistency requirements.
- **United States Coast Guard:** Bridge permit or approval that the existing Bridge Permit maintains vertical and horizontal clearances within the navigation channel.
- **California State Lands Commission:** A California Public Resources Code Division 6 Permit may be required.
- **Sonoma-Marín Area Rail Transit (SMART):** A railroad agreement may be required for at-grade or grade separated crossings.

## 10. Disclaimer

This Preliminary Environmental Analysis Report (PEAR) provides information to support programming of the proposed Project. It is not an environmental determination or document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the Project description provided in the Project Study Report (PSR). The estimates and conclusions in the PEAR are approximate and are based on cursory analyses of probable effects. A reevaluation of the PEAR will be needed for changes in Project scope or alternatives, or in environmental laws, regulations, or guidelines.

## 11. List of Preparers

Cultural Resources specialist Karin Beck/Kathleen Kubal	Date: 12/28/18
Biologist Kristin Tremain	Date: 12/28/18
Community Impacts specialist Bridget Freitas	Date: 12/28/18
Noise and Vibration specialist Jeff Zimmerman	Date: 12/28/18
Air Quality specialist Jeff Zimmerman	Date: 12/28/18
Paleontology specialist/liaison Karin Beck/Kathleen Kubal	Date: 12/28/18
Water Quality specialist Elliott Schwimmer	Date: 12/28/18
Hydrology and Floodplain specialist Elliott Schwimmer	Date: 12/28/18

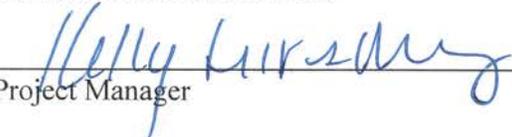
Hazardous Waste/Materials specialist Jeff Zimmerman	Date: 12/28/18
Visual/Aesthetics specialist Elliott Schwimmer	Date: 12/28/18
Energy and Climate Change specialist Jeff Zimmerman	Date: 12/28/18
Other: Senior Review Kelly Bayer	Date: 12/28/18
PEAR Preparer (Name and Title) Jeff Zimmerman	Date: 12/28/18

## 12. Review and Approval

I confirm that environmental cost, scope, and schedule have been satisfactorily completed and that the PEAR meets all Caltrans requirements. Also, if the project is scoped as a routine EA, complex EA, or EIS, I verify that the HQ DEA Coordinator has concurred in the Class of Action.

  
 \_\_\_\_\_  
 Environmental Branch Chief

Date: 12/28/2018

  
 \_\_\_\_\_  
 Project Manager

Date: 12/28/2018

### REQUIRED ATTACHMENTS:

**Attachment A: PEAR Environmental Studies Checklist**

**Attachment B: Estimated Resources by WBS Code**

**Attachment C: Schedule (Gantt Chart)**

## Attachment A: PEAR Environmental Studies Checklist (Interim Project)

Rev. 08/2018

<b>Environmental Studies for PA&amp;ED Checklist</b>					
	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
Land Use	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	Discussed in CIA
Wild and Scenic River Consistency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Coastal Management Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Growth	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	Discussed in CIA
Farmlands/Timberlands	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	Discussed in CIA
Community Impacts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	CIA to be prepared (memo only)
Community Character and Cohesion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Relocations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	Discussed in CIA
Environmental Justice	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	Discussed in CIA
Utilities/Emergency Services	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	Discussed in CIA
Visual/Aesthetics	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	VIA memo
Cultural Resources:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>M</u>	
Archaeological Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
Historic Resources Evaluation Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
Historic Property Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
Historic Resource Compliance Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Section 106 / PRC 5024 & 5024.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Native American Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Finding of Effect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Data Recovery Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Memorandum of Agreement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Hydrology and Floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
Water Quality and Stormwater Runoff	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Geology, Soils, Seismic and Topography	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Paleontology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
PER	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
PMP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Hazardous Waste/Materials:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>M</u>	
ISA (Additional)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
PSI	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	Can be deferred to PS&E
Other:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Air Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Noise and Vibration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Energy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	Addressed in ED
Climate Change and Sea Level Rise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Biological Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Fish Passage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Natural Environment Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
Biological Assessment Section 7:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Formal	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	

## Environmental Studies for PA&ED Checklist

	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
Informal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
No effect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Section 10	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
USFWS Consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
NMFS Consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Species of Concern (CNPS, USFS, BLM, S, F)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Wetlands & Other Waters/Delineation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
404(b)(1) Alternatives Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Invasive Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
HMMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
CDFW Consistency Determination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
2081	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Cumulative Impacts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	Addressed in ED
Context Sensitive Solutions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Section 4(f) Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
<b>Permits:</b>					
401 Certification Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
404 Permit Coordination, IP, NWP, or LOP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
1602 Agreement Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Local Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
State Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
NPDES Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
TRPA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
BCDC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	

## Attachment A: PEAR Environmental Studies Checklist (Ultimate Project)

Rev. 08/2018

<b>Environmental Studies for PA&amp;ED Checklist</b>					
	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
Land Use	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	Discussed in CIA
Wild and Scenic River Consistency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	
Coastal Management Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	
Growth	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	Discussed in CIA
Farmlands/Timberlands	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	Discussed in CIA
Community Impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>L</b>	CIA to be prepared
Community Character and Cohesion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	
Relocations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	Discussed in CIA
Environmental Justice	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	Discussed in CIA
Utilities/Emergency Services	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	Discussed in CIA
Visual/Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>H</b>	
Cultural Resources:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>M</b>	
Archaeological Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>H</b>	
Historic Resources Evaluation Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>H</b>	
Historic Property Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>H</b>	
Historic Resource Compliance Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	
Section 106 / PRC 5024 & 5024.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>M</b>	
Native American Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>L</b>	
Finding of Effect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>M</b>	
Data Recovery Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	
Memorandum of Agreement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	
Hydrology and Floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>H</b>	
Water Quality and Stormwater Runoff	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>H</b>	
Geology, Soils, Seismic and Topography	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>H</b>	
Paleontology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	
PER	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>L</b>	
PMP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>L</b>	
Hazardous Waste/Materials:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>M</b>	
ISA (Additional)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>M</b>	
PSI	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	Can be deferred to PS&E
Other:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	
Air Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>H</b>	
Noise and Vibration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>M</b>	
Energy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>L</b>	
Climate Change and Sea Level Rise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>L</b>	
Biological Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>L</b>	
Fish Passage	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>L</b>	
Natural Environment Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>H</b>	
Biological Assessment Section 7:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>L</b>	
Formal	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>H</b>	Mitigation

## Environmental Studies for PA&ED Checklist

	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
					requirements
Informal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
No effect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Section 10	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
USFWS Consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
NMFS Consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
Species of Concern (CNPS, USFS, BLM, S, F)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Wetlands & Other Waters/Delineation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	Mitigation requirements
404(b)(1) Alternatives Analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	If over 5 acres wetland impacts
Invasive Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
HMMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
CDFW Consistency Determination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
2081	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Cumulative Impacts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	Addressed in ED
Context Sensitive Solutions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Section 4(f) Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
<b>Permits:</b>					
401 Certification Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
404 Permit Coordination, IP, NWP, or LOP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
1602 Agreement Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Local Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
State Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
NPDES Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
TRPA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
BCDC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	

## ATTACHMENT B - Resources by WBS Code

EA:	04-1Q760K			
Description:	SR 37 Interim Improvement Project			
Assigned Unit			Senior	Generalist
<b>Perform Preliminary Engineering Studies and Prepare Draft Project Report</b>				
160.05 - Updated Project Information			20	60
160.15.20 – Draft Project Report			40	80
<b>Total Prelim Eng Studies</b>			<b>60</b>	<b>140</b>
<b>Perform Environmental Studies and Prepare Draft Environmental Document</b>				
165.05.05 – Project Information Review			60	80
165.05.10 – Pub & Agency Scoping			40	80
165.05.15 – Alts for Further Study			30	40
165.10.15 – CIA, Land Use & Growth			16	30
165.10.20 - Visual Impact Assessment and SRE			16	30
165.10.25 – Noise Study			16	30
165.10.30 – Air Quality Study			16	30
165.10.35 – Water Quality Studies			16	30
165.10.40 – Energy/Climate Change Studies			16	30
165.10.45 – Sum Geotech Report			8	20
165.10.60 – Location Hydraulic and Floodplain Study Reports			16	30
165.10.65 – Paleontology Study			8	20
165.10.75 – Envir Commitments Record			8	16
165.10.85 - Hazardous Waste Initial Site Investigations			16	30
165.15.05 – Biological Assessment			16	40
165.15.10 – Wetlands Study			16	40
165.15.15 – Resource Agency Coord			16	40
165.15.20 – NES Report			16	40
165.20.05 – Archaeology Survey				30
165.20.05.05 – APE Map			8	16
165.20.05.10 – NA Consultation			8	40
165.20.05.25 – ASR			20	40
<i>165.20.10 – Extended Phase I Archy Studies</i>				
165.20.10.05 – Native American Consultation			2	8
165.20.10.10 – Extended Phase I Proposal			16	30
165.20.10.15 – XP1 Field Investigation			8	16
165.20.10.25 – Extended Phase I Report			16	40
<i>165.20.20 – Hist &amp; Architectural Studies</i>				
165.20.20.05 – Prelim APE/Study Area Maps - Archl			4	8
165.20.20.10 – Hist Res Eval Rpt - Archy			8	20
165.20.20.15 – Hist Res Eval Rpt - Archl			8	20
<i>165.20.25 – Cultural Res Comp Docs</i>				
165.20.25.05 – Final APE Maps			2	4
165.20.25.15 – HPSR/HRCR			8	24
165.20.25.20 – Finding of Effect			2	8
165.25.05 – Draft ED Analysis			40	120
165.25.10 – 4(f) Evaluation			20	40
165.25.20 – Env Quality Control & Other Reviews			20	40
165.25.25 – Approval to Circ Resolution			10	24

Assigned Unit	Senior	Generalist
165.30 – NEPA Delegation	8	16
<b>Total Env Studies &amp; Prep DED</b>	<b>554</b>	<b>1200</b>
<b>Permits, Agreements, and Route Adoptions during PA&amp;ED Cmpnt</b>		
170.05 - Required Permits (list)		4
170.10.05 - US Army Corps 404 Permit	12	20
170.10.20 - DFG 1600 Agreement(s)	12	20
170.10.45 - US Fish & Wildlife Service Approval	12	20
170.10.50 - RWQCB 401 Permit	12	20
170.10.60 - Updated ECR	8	10
<b>Total Permits, Agreements &amp; Route Adoptions</b>	<b>56</b>	<b>94</b>
<b>Circulate Draft Environmental Document and Select Preferred Project Alternative</b>		
175.05.15 – DED Pub & Circulation	30	60
175.10.10 – Pub Hearing Logistics	16	20
175.10.15 – Displays for Pub Hearing	16	16
175.10.25 – Map Display & Hearing Plan	8	16
175.10.35 – Public Hearing	32	40
175.15 – Responses to Pub Hear Comments	30	60
175.20 – Project Preferred Alternative	20	30
175.25 – NEPA Delegation	4	10
<b>Total DED &amp; Preferred Alt</b>	<b>156</b>	<b>252</b>
<b>Prepare and Approve Project Report and Final Environmental Document</b>		
180.05.10 – Approved Project Rep	12	40
180.05.15 – Updated Stormwater Data Report	2	8
<i>180.10.05 – Approved FED</i>		
180.10.05.05 – Draft FED Review	24	60
180.10.05.10 – Revised Draft FED	16	30
180.10.05.15 – Section 4(f) Evaluation	16	24
180.10.05.45 – Section 7 Consultation	16	24
180.10.05.50 – Final Section 4(f) Statement	8	12
180.10.05.70 – Mitigation Measures	16	20
180.10.10 – Public Dist & Resp to Comments	10	20
180.15.20 – Env Commitments Record	10	16
180.20 – NEPA Delegation	8	12
<b>Total App PR &amp; FED</b>	<b>138</b>	<b>266</b>
<b>Total Project Hours</b>	<b>964</b>	<b>1952</b>

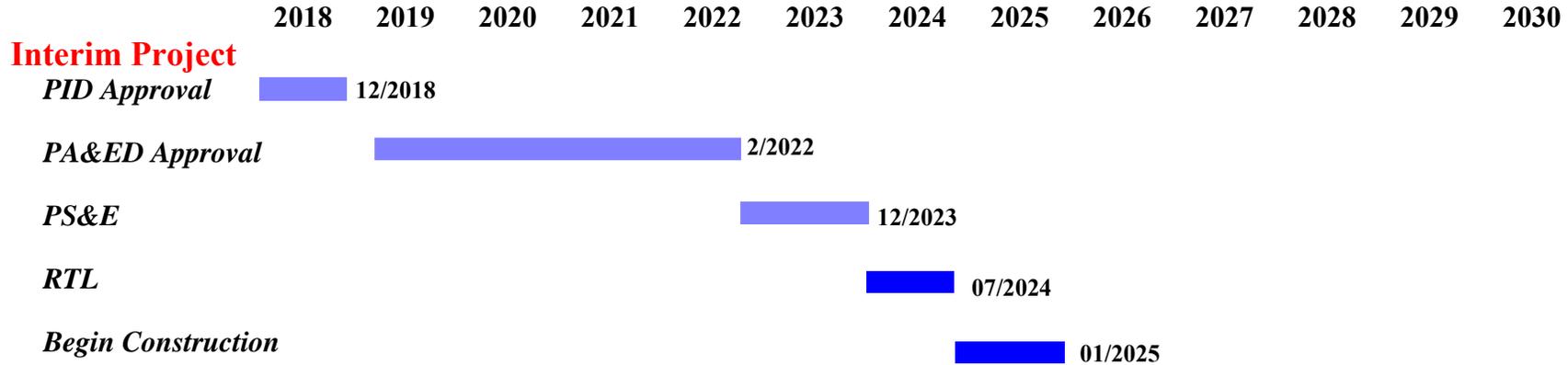
## ATTACHMENT B - Resources by WBS Code

EA:	04-1Q760K			
Description:	SR 37 Ultimate Improvement Project			
Assigned Unit			Senior	Generalist
<b>Perform Preliminary Engineering Studies and Prepare Draft Project Report</b>				
160.05 - Updated Project Information			40	100
160.15.20 – Draft Project Report			60	100
<b>Total Prelim Eng Studies</b>			<b>100</b>	<b>200</b>
<b>Perform Environmental Studies and Prepare Draft Environmental Document</b>				
165.05.05 – Project Information Review			80	100
165.05.10 – Pub & Agency Scoping			80	120
165.05.15 – Alts for Further Study			50	80
165.10.15 – CIA, Land Use & Growth			16	40
165.10.20 - Visual Impact Assessment and SRE			16	40
165.10.25 – Noise Study			16	40
165.10.30 – Air Quality Study			16	40
165.10.35 – Water Quality Studies			16	40
165.10.40 – Energy/Climate Change Studies			16	40
165.10.45 – Sum Geotech Report			8	30
165.10.60 – Location Hydraulic and Floodplain Study Reports			16	40
165.10.65 – Paleontology Study			8	30
165.10.75 – Envir Commitments Record			8	20
165.10.85 - Hazardous Waste Initial Site Investigations			16	40
165.15.05 – Biological Assessment			16	60
165.15.10 – Wetlands Study			16	60
165.15.15 – Resource Agency Coord			16	60
165.15.20 – NES Report			16	40
165.20.05 – Archaeology Survey				
165.20.05.05 – APE Map			8	16
165.20.05.10 – NA Consultation			8	40
165.20.05.25 – ASR			40	60
<i>165.20.10 – Extended Phase I Archy Studies</i>				
165.20.10.05 – Native American Consultation			2	8
165.20.10.10 – Extended Phase I Proposal			16	30
165.20.10.15 – XP1 Field Investigation			8	16
165.20.10.25 – Extended Phase I Report			16	40
<i>165.20.20 – Hist &amp; Architectural Studies</i>				
165.20.20.05 – Prelim APE/Study Area Maps - Archl			4	8
165.20.20.10 – Hist Res Eval Rpt - Archy			16	30
165.20.20.15 – Hist Res Eval Rpt - Archl			16	30
<i>165.20.25 – Cultural Res Comp Docs</i>				
165.20.25.05 – Final APE Maps			4	6
165.20.25.15 – HPSR/HRCR			16	30
165.20.25.20 – Finding of Effect			2	8
165.25.05 – Draft ED Analysis			80	200
165.25.10 – 4(f) Evaluation			40	80
165.25.20 – Env Quality Control & Other Reviews			20	40
165.25.25 – Approval to Circ Resolution			10	24

Assigned Unit	Senior	Generalist
165.30 – NEPA Delegation	8	16
<b>Total Env Studies &amp; Prep DED</b>	<b>740</b>	<b>1602</b>
<b>Permits, Agreements, and Route Adoptions during PA&amp;ED Cmpnt</b>		
170.05 - Required Permits (list)		4
170.10.05 - US Army Corps 404 Permit	24	40
170.10.20 - DFG 1600 Agreement(s)	24	40
170.10.45 - US Fish & Wildlife Service Approval	24	40
170.10.50 - RWQCB 401 Permit	24	40
170.10.60 - Updated ECR	10	10
<b>Total Permits, Agreements &amp; Route Adoptions</b>	<b>106</b>	<b>174</b>
<b>Circulate Draft Environmental Document and Select Preferred Project Alternative</b>		
175.05.15 – DED Pub & Circulation	50	120
175.10.10 – Pub Hearing Logistics	30	40
175.10.15 – Displays for Pub Hearing	24	30
175.10.25 – Map Display & Hearing Plan	8	24
175.10.35 – Public Hearing	40	60
175.15 – Responses to Pub Hear Comments	60	120
175.20 – Project Preferred Alternative	40	50
175.25 – NEPA Delegation	4	10
<b>Total DED &amp; Preferred Alt</b>	<b>256</b>	<b>454</b>
<b>Prepare and Approve Project Report and Final Environmental Document</b>		
180.05.10 – Approved Project Rep	12	40
180.05.15 – Updated Stormwater Data Report	2	8
<i>180.10.05 – Approved FED</i>		
180.10.05.05 – Draft FED Review	40	100
180.10.05.10 – Revised Draft FED	24	50
180.10.05.15 – Section 4(f) Evaluation	24	40
180.10.05.45 – Section 7 Consultation	30	50
180.10.05.50 – Final Section 4(f) Statement	12	20
180.10.05.70 – Mitigation Measures	30	40
180.10.10 – Public Dist & Resp to Comments	20	40
180.15.20 – Env Commitments Record	10	24
180.20 – NEPA Delegation	8	12
<b>Total App PR &amp; FED</b>	<b>212</b>	<b>424</b>
<b>Total Project Hours</b>	<b>1414</b>	<b>2854</b>

# Attachment C - State Route 37

## Proposed Overall Project Schedule (if all funding is available):



## Ultimate Project

