
MITIGATED
NEGATIVE DECLARATION / INITIAL STUDY
AND
MITIGATION MONITORING AND REPORTING PROGRAM

PREPARED FOR:

SONOMA COUNTY
DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS

**FREESTONE FLAT ROAD BRIDGE
REPLACEMENT PROJECT**

August 2020



Sonoma County Department of Transportation & Public Works
2300 County Center Drive, Suite B-100
Santa Rosa, California 95403



Mitigated Negative Declaration
Sonoma County Department of Transportation & Public Works
 2300 County Center Drive, Suite B-100, Santa Rosa, CA 95403
 (707) 565-2231

Pursuant to Section 15071 of the State CEQA Guidelines, this proposed Mitigated Negative Declaration and the attached Initial Study constitute the environmental review conducted by the County of Sonoma as lead agency for the proposed project described below:

Project Title: Freestone Flat Road Bridge Replacement Project

Project Location: Freestone Flat Road Bridge over Salmon Creek, southwest portion of the County

Lead Agency: Sonoma County Department of Transportation and Public Works

Decision Making Body: County of Sonoma Board of Supervisors

Project Proponent: Sonoma County Department of Transportation and Public Works

Project Description: The Sonoma County Department of Transportation and Public Works (DTPW) proposes to replace the existing Freestone Flat Road Bridge, which is a two-span, steel-girder truss bridge over Salmon Creek, in the southwest portion of the County. The existing bridge would be replaced with a two-lane, cast-in-place prestressed concrete box-girder bridge supported on cast-in-drilled-hole piles at the abutments. The new bridge would be located parallel to and southeast of the existing bridge. The existing bridge would remain in service until the new bridge is complete, then disassembled and removed from the site.

Building the bridge on a new alignment requires the construction of new approaches on the east and west sides of the replacement bridge. Existing intersecting roads, including Scott Robin Road and a private driveway, would be modified to meet the new location of Freestone Flat Road as it approaches the bridge.

ENVIRONMENTAL DETERMINATION

On the basis of this initial evaluation:

I find that the project COULD NOT have a significant effect on the environmental, and a NEGATIVE DECLARATION has been prepared	<input type="checkbox"/>
I find that although the project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION has been prepared.	<input checked="" type="checkbox"/>
I find that the project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required	<input type="checkbox"/>
I find that the project MAY have a “potentially significant impact” or “potentially significant impact unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier	<input type="checkbox"/>

analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.	<input type="checkbox"/>

Nader M. S. Dahu

07.24.2020

Nader M. Dahu, PE
 Engineering Division Manager
 Sonoma County Department of
 Transportation & Public Works
 2300 County Center Drive, Suite B-100
 Santa Rosa, CA 95403

Date

MITIGATION MEASURES

Mitigation measures have been identified to reduce potentially significant impacts of the project. Implementation of identified mitigation measures would result in avoiding the impact or reducing it to a less than significant level. The mitigation measures are listed below.

Mitigation Measure AIR-1: Dust and Engine Emissions Control Measures

The County or their contractor shall implement the following dust and engine emissions control measures during construction:

1. Water or dust palliatives shall be applied to all exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) and other surfaces that could give rise to airborne dust as needed to control dust.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers or other effective method as necessary to control project-related dust on public roads. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
6. Construction equipment will be properly maintained by a certified mechanic.
7. Post a publicly visible sign at work areas where grading activities occur near public and residential areas with the telephone number and person to contact at the County regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure BIO-1: Worker Environmental Awareness Program (WEAP)

A Service-approved biologist will conduct employee education training for employees working on earthmoving and/or construction activities. Personnel will be required to attend the presentation, which will describe the Federal and State statutes protecting threatened, endangered, and special-status species that may be encountered on site; minimization and conservation measures; legal protection of species; and other related issues. All attendees will sign an attendance sheet along with their printed name, company or agency, email address, and telephone number. The original sign-in sheet will be sent to the Service within seven (7) calendar days of the completion of the training.

Mitigation Measure BIO-2: Qualified Biologist

A biologist(s) approved by the United States Fish and Wildlife Service and CDFW will be on-site during ground disturbance activities (e.g., grading and vegetation removal) that may result in take of state or federally threatened and endangered species. The qualified biologist must have experience with identifying all federal and state-listed species, as well as special-status species, with potential to occur as determined in Table 7 of this IS/MND. The biologist shall have specific experience identifying western yellow-billed cuckoo and California red-legged frog during all distinct life stages and experience with implementing conservation and other avoidance and minimization measures for these species and interacting with contractors and construction workers to ensure these measures are enforced. The qualifications of the biologist(s) will be submitted to the Service for review and written approval at least thirty (30) calendar days prior to the date earthmoving is initiated at the project site.

Mitigation Measure BIO-3: California Red-Legged Frog Avoidance, Pre-Construction Survey and Biological Monitoring

The County and their contractor shall implement the following measures to reduce or avoid impacts to California red-legged frog:

- **Pre-Construction Survey.** No more than twenty-four (24) hours prior to the date of initial ground disturbance, a pre-construction survey for the California red-legged frog will be conducted by a Service-approved biologist at the project site. The survey will consist of walking the project limits and within the project site to ascertain the possible presence of the species. The Service-approved biologist will investigate all potential areas that could be used by the California red-legged frog for feeding, breeding, sheltering, movement, and other essential behaviors. This includes an adequate examination of mammal burrows, such as California ground squirrels or gophers. If any adults, sub-adults, juveniles, tadpoles, or eggs are found, the Service-approved biologist will contact the Service to determine if moving any of the individuals is appropriate. In making this determination the Service will consider if an appropriate relocation site exists. If the Service approves moving animals, the County will ensure the Service-approved biologist is given sufficient time to move the animals from the work site before ground disturbance is initiated. Relocation would be completed in accordance with the procedures defined in this mitigation measure, below. Only Service-approved biologists will capture, handle, and monitor the California red-legged frog.
- **Construction Timing.** To the extent practicable, initial ground-disturbing activities will be avoided between November 1 and March 31 because that is the time period

when California red-legged frogs are most likely to be moving through upland areas. When ground-disturbing activities must take place between November 1 and March 31, Sonoma County will ensure that daily monitoring by the Service-approved biologist is completed for the California red-legged frog.

To the maximum extent practicable, no construction activities will occur during rain events or within 24-hours following a rain event (with greater than 0.1 inch of rainfall). Prior to construction activities resuming after a rain event non-work period, a Service-approved biologist will inspect the action area and all equipment/materials for the presence of California red-legged frogs. Any California red-legged frog encountered will be allowed to move away from the project site of their own volition or moved only by the Service-approved biologist in accordance with the procedures for California red-legged frog relocation defined below.

- **California Red-Legged Frog Relocation.** Each encounter with the California red-legged frog will be treated on a case-by-case basis in coordination with the Service, but the general procedure is as follows: (1) the animal will not be disturbed if it is not in danger; or (2) the animal will be moved to a secure location if it is in any danger. These procedures are further described below:

- a. When a California red-legged frog is encountered in the action area, all activities which have the potential to result in the harassment, injury, or death of the individual will be immediately halted. The Service-approved biologist will then assess the situation in order to select a course of action that will avoid or minimize adverse effects to the animal. To the maximum extent possible, contact with the frog will be avoided and the applicant will allow it to move out of the potentially hazardous situation to a secure location on its own volition. This procedure applies to situations where a California red-legged frog is encountered while it is moving to another location. It does not apply to animals that are uncovered or otherwise exposed or in areas where there is not sufficient adjacent habitat to support the species should the individual move away from the hazardous location.
- b. California red-legged frogs that are in danger will be relocated and released by the Service- approved biologist outside the construction area within the same riparian area or watershed. If relocation of the frog outside the fence is not feasible (i.e., there are too many individuals observed per day), the biologist will relocate the animals to a Service pre- approved location. Prior to the initial ground disturbance, Sonoma County will obtain approval of the relocation protocol from the Service in the event that a California red- legged frog is encountered and needs to be moved away from the project site. Under no circumstances will a California red-legged frog be released on a site unless the written permission of the landowner has been obtained by Sonoma County.

The Service-approved biologist will limit the duration of the handling and captivity of the California red-legged frog to the minimum amount of time necessary to complete the task. If the animal must be held in captivity, it will be kept in a cool, dark, moist, aerated environment, such as a clean and disinfected bucket or plastic container with a damp sponge. The container used for holding or transporting the individual will not contain any standing water.

- c. Sonoma County will immediately notify the Service once the California red-legged frog and the site is secure. The contact for this situation is the Coast Bay Division Chief of the Endangered Species Program by email and at telephone (916) 414-6623.

- **Avoid Entrapment**

- Plastic monofilament netting (erosion control matting), loosely woven netting, or similar material in any form will not be used at the project site because California red-legged frogs can become entangled and trapped in them. Any such material found on site will be immediately removed by the Service-approved biologist, construction personnel, or the applicant. Materials utilizing fixed weaves (strands cannot move), polypropylene, polymer or other synthetic materials will not be used.
- Loss of soil from run-off or erosion will be prevented with straw bales, straw wattles, or similar means provided they do not entangle, block escape or dispersal routes of California red-legged frog.
- Trenches or pits one (1) foot or deeper that are going to be left unfilled for more than forty-eight (48) hours will be securely covered with boards or other material to prevent the California red-legged frog from falling into them. If this is not possible, Sonoma County and their contractor will ensure wooden ramps or other structures of suitable surface that provide adequate footing for the California red-legged frog are placed in the trench or pit to allow for their unaided escape. Auger holes or fence post holes that are greater than 0.10 inch in diameter will be immediately filled or securely covered so they do not become pitfall traps for the California red-legged frog. The Service-approved biologist will inspect the trenches, pits, or holes prior to their being filled to ensure there are no California red-legged frogs in them. The trench, pit, or hole also will be examined by the Service-approved biologist each workday morning at least one hour prior to initiation of work and in the late afternoon no more than one hour after work has ceased to ascertain whether any individuals have become trapped. If the escape ramps fail to allow the animal to escape, the Service-approved biologist will remove and transport it to a safe location, or contact the Service for guidance.

Mitigation Measure BIO-4: Exclusion Fencing

Temporary exclusion fencing shall be installed around the limits of work areas and access routes to avoid disturbance in unauthorized areas and ensure California red-legged frog or western pond turtle cannot enter the work area after construction commences. Installation of exclusion fencing shall occur under the supervision of the qualified biologist and immediately following a clearance survey of the area. The exclusion fencing shall have a minimum aboveground height of 30 inches, and the bottom of the fence shall be keyed in at least 4 inches deep and backfilled with soil to prevent wildlife from passing under the fencing. Exclusion fencing shall be installed to prevent species entry into active work areas and to mark the limits of construction disturbance at equipment staging areas, site access routes, construction equipment and personnel parking areas, debris storage areas, and any other areas that may be disturbed. The exclusion fencing shall specifically exclude any areas within the limits of the Salmon Creek ordinary high-water mark.

Mitigation Measure BIO-5: Pre-Construction Survey and Biological Monitoring for

Western Pond Turtle

The County and their contractor shall implement the following measures to reduce or avoid impacts to western pond turtle:

- A preconstruction survey for western pond turtle shall occur within 48 hours prior to the start of construction activities within the riparian and aquatic habitat in the BSA.
- A qualified biologist will be present during grubbing and clearing activities in the riparian and aquatic habitat in the BSA to monitor for western pond turtle.
- If a western pond turtle is observed in areas of active construction, construction will cease and a qualified biologist will be notified. Construction may resume when the biologist has either relocated the western pond turtle to nearby suitable habitat outside the limits of project construction, or, after thorough inspection, determined that the western pond turtle has moved away from the area of active construction.

Mitigation Measure BIO-6: Nesting Bird Season Avoidance, Pre-Construction Surveys, and Monitoring

The County and their contractor shall implement the following measures to reduce or avoid impacts to nesting birds during construction:

- **Avoid Tree Removal during Nesting Season.** Tree removal and trimming activities shall avoid the bird nesting season (typically February 15 through August 31). Trees that have been identified for removal shall be removed prior to the bird nesting season to avoid impacts to nesting birds. Trees shall be cut at ground level and removed from the site. The stump shall remain in place until after the end of the rainy season (April 15). Tree stumps within the roadway prism or in conflict with new bridge foundations may be completely removed during road and bridge construction.
- **Activities During Nesting Season.** If construction commences during the nesting season, the following shall be implemented:
 - A preconstruction survey for nesting birds shall be conducted within 7 days prior to construction within 500 feet of work areas to ensure that no nest shall be disturbed during construction.
 - If active nests of migratory bird species (listed in the MBTA) are found within the project site, or in areas subject to disturbance from construction activities, an avoidance buffer to avoid nest disturbance shall be constructed. The buffer size shall be determined by a qualified biologist and shall be based on the nest location, topography, cover and species' tolerance to disturbance.
 - If an avoidance buffer is not achievable, a qualified biologist shall monitor the nest(s) to document that no take of the nest (nest failure) has occurred. Active nests shall not be taken or destroyed under the MBTA and, for raptors, under the CDFW Code. If it is determined that construction activity is resulting in nest disturbance, work shall cease immediately and the County shall consult with the qualified biologist and appropriate regulatory agencies.
 - If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further action is required. Trees and shrubs within the construction footprint that have been determined to be unoccupied

by special-status birds or that are located outside the avoidance buffer for active nests may be removed. Nests initiated during construction (while significant disturbance from construction activities persist) may be presumed to be unaffected, and only a minimal buffer, determined by a qualified biologist, would be necessary.

Mitigation Measure BIO-7: Discourage Bird Nesting on Bridge

To discourage bird nesting on the existing bridge during construction, existing inactive bird nests on the Freestone Flat Road Bridge shall be removed prior to the onset of construction, between September 1 and February 14 (outside of the nesting season). Following removal of inactive nests, nest deterrent measures shall be installed on the existing bridge to prevent establishment of new nests. Techniques to prevent nest establishment include using exclusion devices (see below), removing and disposing of partially constructed and unoccupied nests of migratory or nongame birds on a regular basis to prevent their occupation, or performing any combination of these techniques.

- *Exclusion Device:* Install bird netting from the bridge prior to start of nesting season (i.e. before February 15). If this technique is used, netting shall be in place from mid-February until the bridge is removed. If a nesting deterrent is used, the deterrent shall be monitored for integrity and effectiveness until the bridge is removed.
- *Nest Removal.* Starting before the nesting season (i.e., prior to February 15), the County or its contractor shall visit the site weekly and remove partially completed nests on the bridge using either hand tools or high pressure water. Disturbance or removal of active nests (i.e., nests containing eggs or young) shall not be conducted without the appropriate authorization(s) from the Service and/or the CDFW.

If nests cannot be removed prior to the nesting season (i.e., before February 15), a qualified biologist shall determine if nests are inactive and can be removed before construction begins without disturbing nesting activity. If active nests are identified, construction in the vicinity of the bridge may need to be postponed until nests are determined by a qualified biologist to be inactive or the Service and/or CDFW authorizes the removal of active nests. An effective deterrent to bird nesting shall be installed on the bridge once the nests are removed.

Mitigation Measure BIO-8: Pre-Construction Surveys and Construction Monitoring for Western Yellow-Billed Cuckoo

Preconstruction surveys for western yellow-billed cuckoo and construction monitoring shall be conducted by a qualified biologist (see Measure BIO-2) in all project areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that western yellow-billed cuckoo(s) are detected within the work area (the area of active equipment uses), all construction activities in the area shall halt and Caltrans and the Service and CDFW shall be notified by no later than noon of the next business day. Project activities in the area may not proceed until the cuckoo(s) have left the work area. Where cuckoo(s) are detected within 500 feet of the construction area, project activities in the area may proceed with caution under the direction of the qualified biologist who is monitoring the activity of the western yellow-billed cuckoo in the area and has the ability to halt work.

Mitigation Measure BIO-9: Riparian Mitigation and Monitoring Plan

- The County shall enhance or restore 0.021 acre of riparian habitat. The County shall prepare a Riparian Mitigation and Monitoring Plan that addresses mitigation and monitoring for riparian habitat that shall be impacted by the project. The Riparian

Mitigation and Monitoring Plan will be provided to CDFW for review and approval and will also address mitigation requirements contained in the CDFW Streambed Alteration Agreement. The plan shall include, at a minimum: The location of the mitigation site;

- A schematic depicting the mitigation area including initial site photographs;
- The species to be seeded and planted and the ratio of seed mix and/or plantings for each species;
- A work schedule, including names, titles and companies for all individuals who are involved in preparing the plan and conducting activities;
- Specific success criteria;
- A maintenance and monitoring program for 5 years, unless success criteria are met prior to 5 years, in which case maintenance and monitoring would cease; and
- Contingency measures should the success criteria not be met.

Mitigation Measure BIO-10: Protection of Badgers

Prior to construction in badger denning habitat, which is characterized by herbaceous, shrub, and open stages of most habitats with dry, friable soils, a qualified wildlife biologist shall conduct a survey to identify any American badger burrows/dens. No less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities, a qualified biologist shall conduct a survey to determine if American badger den sites are present at the site. If dens are found, they will be monitored for badger activity. If the qualified biologist determines that dens may be active, the entrances of the dens will be blocked with soil, sticks, and debris for 3 to 5 days to discourage the use of these dens prior to project disturbance activities. The den entrances will be blocked to an incrementally greater degree over the 3- to 5-day period. After the qualified biologist determines that badgers have stopped using active dens, the dens will be hand-excavated with a shovel to prevent re-use during construction. No disturbance of active dens will take place when cubs may be present and dependent on parental care, as determined by a qualified biologist.

Mitigation Measure BIO-11: Roosting Bat Protection Plan

A qualified biologist shall conduct a pre-construction survey 14 days prior to tree removal and construction and demolition of the existing bridge. If any active bat roosts are observed within 50 feet of the construction area or on the existing bridge a Roosting Bat Protection Plan shall be prepared and implemented. If no active bat roosts are observed, no further measures would be required. The Roosting Bat Protection Plan will be prepared in accordance with guidance from the California Bat Mitigation Techniques Solutions, and Effectiveness (Johnston, Tatarian, & Pierson, 2004).

Mitigation Measure BIO-12: Special-Status Plants Pre-Construction Survey

A qualified botanist shall conduct a pre-construction survey for rare plants within all areas of project disturbance prior to project start. The qualified botanist shall either mark the species for avoidance and Environmental Sensitive Area (ESA) fencing shall be installed to protect the plant or if the plant cannot be avoided, the plant shall be transplanted under the direction of a qualified botanist. Transplanting would only occur if avoidance is not feasible and any transplanted special-status plants would be replanted within a suitable habitat area within the

project area under the direction of a qualified botanist.

Mitigation Measure BIO-13: Tree Replacement and Monitoring Plan

Prior to the start of construction, the County shall determine whether the trees identified for removal would fall under protection of the Tree Protection Ordinance. If any protected tree would be removed, the County shall adhere to the requirements of the Sonoma County Tree Protection Ordinance (Section 26-88-010(m)), including by implementing replacement plantings in accordance with the standards set forth therein. Protocols for the installation, monitoring, and successful establishment of replacement plantings shall be specified in a Tree Replacement and Monitoring Plan. The Tree Replacement and Monitoring Plan shall include protocols for replanting of trees removed prior to or during construction, and management and monitoring of the trees to ensure replanting success. Where it is infeasible to replant the total number of trees required on the project site due to size constraints or repeated failure to thrive, the County may replant a selected number of trees off-site or make in-lieu payment fees in accordance with the terms of the Ordinance.

Mitigation Measure CUL-1: Cultural Resources Sensitivity Training and Inadvertent Discovery

A professional archeologist shall provide sensitivity training to supervisory staff (County staff, biological monitor, and construction foreman) prior to initiation of site preparation and/or construction, to alert construction workers to the possibility of exposing significant historic and/or prehistoric archaeological resources within the project area. The training shall include a discussion of the types of prehistoric or historic objects that could be exposed and how to recognize them, the need to stop excavation at a discovery, and protection and notification. The archeologist shall coordinate with a Tribal Cultural Monitor to appropriately describe tribal cultural resources within the project area and the values to local tribes. An “Alert Sheet” shall be posted in staging areas, such as in construction trailers, to alert personnel to the procedures and protocols to follow for the discovery of a potentially significant historic and/or prehistoric archaeological resource.

In the event of an unanticipated discovery of archaeological and/or historical deposits during project implementation, the County shall ensure that construction crews shall stop all work within 100 feet of the discovery until a qualified archeologist can assess the previously unrecorded discovery and provide recommendations. A qualified cultural resource specialist/archaeologist shall inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts shall occur, the resource shall be documented on California State Department of Parks and Recreation cultural resource record forms and no further effort shall be required. If work must commence in the sensitive area, it can only be performed using hand tools or powered hand tools, cannot include ground disturbance below the topsoil layer, and can only be accessed on foot. Alternatively, the cultural resource specialist/archaeologist shall evaluate the resource and determine whether it is:

- Eligible for the CRHR (and a historical resource for purposes of CEQA), or
- A unique archaeological resource as defined by CEQA.

If the resource meets the criteria for either a historical resource or unique archaeological resource, work shall remain halted and the cultural resources specialist/archaeologist shall consult with the County staff regarding methods to ensure that no substantial adverse change would occur to the significance of the resource pursuant to CEQA Guidelines Section 15064.5(b).

Avoidance of the area, or avoidance of impacts on the resource, is the preferred method of mitigation for impacts on cultural resources and shall be required unless there are other equally effective methods. Other methods to be considered shall include evaluation, collection, recordation, and analysis of any significant cultural materials in accordance with a Cultural Resources Management Plan prepared by the qualified cultural resource specialist/archaeologist. The methods and results of evaluation or data recovery work at an archaeological find shall be documented in a professional level technical report to be filed with California Historical Resources Information System.

Work may commence upon completion of evaluation, collection, recordation, and analysis, as approved by the qualified archeologist.

Mitigation Measure CUL-2: Human Remains

In the event of an unanticipated discovery of human remains during project implementation, the County shall ensure that construction crews stop all work within 100 feet of the discovery. The County shall treat any human remains and associated or unassociated funerary objects discovered during soil-disturbing activities according to applicable State laws. Such treatment includes work stoppage and immediate notification of the Sonoma County Coroner, requisition of a qualified archaeologist, and in the event that the Coroner's determination that the human remains are Native American, notification of the Native American Heritage Commission (NAHC), according to the requirements in Public Resources Code (PRC) Section 5097.98. The NAHC would appoint a Most Likely Descendant (MLD). A qualified archaeologist, the County, and the MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5[d]). The agreement would take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, and final disposition of the human remains and associated or unassociated funerary objects. The PRC allows 48 hours to reach agreement on these matters. Work may recommence in the area of discovery following treatment of remains and any associated funerary objects.

Mitigation Measure GEO-1: Fill Material Testing and Standards

The fill material recommendations in the final geotechnical evaluation conducted for the project foundations shall be implemented. Fill material recommendations include but are not limited to the following:

- Soils excavated on the project site shall be tested prior to use as fill
- Fill soils used shall have a low expansion potential (expansion index of equal to or greater than 50; sand equivalent of equal to or less than 20), 100 percent passing 3-inch sieve, as approved by a soils engineer

Mitigation Measures GEO-2: Paleontological Resources Sensitivity Training and Inadvertent Discovery

A professional paleontologist shall provide sensitivity training to supervisory staff (County staff, biological monitor, and construction foreman) to alert construction workers to the possibility of exposing significant paleontological resources within the project area. The training shall be conducted to recognize fossil materials in the event that any are uncovered during construction.

In the event that a paleontological resource is uncovered during project implementation, all

ground-disturbing work within a 50-foot radius shall be halted. A qualified paleontologist shall inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts shall occur, no further effort shall be required. If the resource cannot be avoided and may be subject to further impact, a qualified paleontologist shall evaluate the resource and determine whether it is “unique” under CEQA, Appendix G, part V. If the resource is determined not to be unique, work may commence in the area. If the resource is determined to be a unique paleontological resource, work shall remain halted, and the paleontologist shall consult with County staff regarding methods to ensure that no substantial adverse change would occur to the significance of the resource pursuant to CEQA. Preservation-in-place (i.e., avoidance) is the preferred method of mitigation for impacts to paleontological resources. If preservation-in-place is not feasible and avoidance is not possible, the fossils shall be recovered, prepared, identified, catalogued, and analyzed according to current professional standards under the direction of a qualified paleontologist. All recovered fossils shall be curated at an accredited and permanent scientific institution according to Society of Vertebrate Paleontology (SVP) standard guidelines. Work may commence upon completion of treatment.

Mitigation Measure HAZ-1: Debris Collection and Containment Program

Sonoma County shall ensure that a Debris Collection and Containment Program is developed and implemented during project construction. The Program shall include a Lead Compliance Plan and shall ensure that painted bridge materials are treated as a hazardous material and handled in accordance with applicable provisions of Caltrans Standard Special Provisions (2018 or most recent) for the removal of lead paint, Provision 14-11.13, Disturbance of Existing Paint Systems on Bridges. The Program shall also require provisions to protect worker safety and health in compliance with Title 8 California Code of Regulations, including § 1532.1., and provisions for the proper handling and disposal of debris in accordance with all applicable Federal State and local hazardous waste laws.

The contractor shall be required to prepare and submit drawings to the County of the containment systems to be used. The containment system may include the following containment procedure or similar procedure that adequately prevents accidental release of lead paint into the environment:

- Local containment shall be installed prior to removing the bridge for the purpose of containing all paint flakes. Containment shall consist of using tarps to enclose the sides and bottoms of the existing trusses within 10 feet of the support locations and bridge pick-up points (i.e., locations that are used to connect equipment for the purpose of lifting the bridge).
- Where the existing paint is not flaking, the contractor shall have the option of applying a clear coat of paint instead of enclosing the trusses with tarps.
- Following installation of containment tarps and/or clear coat of paint, the existing bridge shall be lifted in one piece from its supports at the abutments and interior pier.
- Further truss disassembly, removal, transport and disposal shall be subject to existing laws and regulations.

Mitigation Measure HAZ-2: Contaminated Soil Disposal

If the County is responsible for removing and/or relocating existing utility poles during project construction, all soil that is excavated during the removal of existing utility poles shall be treated as hazardous materials and shall be transported and disposed of in compliance with

federal, state, and local regulations. Excavated holes shall be backfilled with certified clean fill material.

Mitigation Measure HAZ-3: Fire Prevention Procedures

Sonoma County and their contractor shall implement the following fire prevention procedures to reduce the potential risk of fire ignitions during construction:

- Prior to ground disturbing activities, all workers on the project site shall be trained regarding the proper handling and/or storage of materials posing a fire hazards, potential ignition sources (such as cigarettes or sparking equipment), and appropriate types and use of fire protection equipment.
- Fire suppression equipment, including fire extinguishers, water, and shovels, shall be available on-site at all times.
- All ignitions shall warrant a call to the fire department to ensure the ignition is fully extinguished.
- Vehicles shall not be parked in vegetated areas. If vegetated areas must be used for parking, vegetation shall be mowed to a height of less than 4 inches to avoid contact with the underside of vehicles.
- Smoking shall be allowed only inside fully-enclosed vehicles with closed windows. Cigarette butts shall be thoroughly extinguished, properly contained, and transported off-site for disposal.
- Hot work (welding, grinding, cutting, or any other activity that produces flame, sparks, or embers) shall be restricted during red flag warnings or potentially dangerous fire conditions, as determined by the County and communicated to the contractor.

Mitigation Measure NOI-1: Noise Reduction Techniques

Sonoma County and their contractor shall implement the following noise reduction measures to reduce construction noise at nearby receptors:

- The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities and distribute this plan to adjacent noise sensitive receptors.
- Noise generating construction activities shall be restricted to between hours of 7:00 am to 7:00 pm Monday through Friday, 9:00 am to 7:00 pm Saturday. The contractor shall request of the Engineer at least 48 hours in advance of the contractor's intent to work on Sundays or holidays. The contractor shall notify the County if work is necessary outside of these hours. The County shall require the contractor to implement a construction noise monitoring program and, if feasible, provide additional mitigation as necessary (in the form of noise control blankets or other temporary noise barriers, etc.) for affected receptors.
- Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines shall be strictly prohibited.
- Locate stationary noise generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- Utilize "quiet" air compressors and other "quiet" equipment where such technology exists.

Mitigation Measure TRA-1: Construction Traffic Control Measures

The contractor shall prepare and implement a Traffic Control Plan that includes the traffic safety measures listed below. The contractor shall submit the Traffic Control Plan to the County for review at least 14 days prior to construction.

- Traffic safety guidelines compatible with Section 12, “Temporary Traffic Control,” of the Caltrans *Standard Specifications*, and the *California Manual on Uniform Traffic Control Devices (California MUTCD)* shall be implemented during construction. Project plans and specifications shall require provision of adequate signage and other precautions for public safety during project construction.
- Prior to temporary closures or lengthy delays, signs shall be placed at all entrances to the project site and on major intersecting roads (e.g., Bohemian Highway and Freestone Flat Road) to notify motorists and bicyclists that traffic shall be subject to delay.
- Local emergency service providers (i.e., fire departments, police departments, ambulance, and paramedic services) shall be notified of the construction schedule and potential for delays prior to the start of construction.
- Emergency service providers and parcels along Freestone Flat Road and Scott Robin Road shall be notified of any temporary closures at least 5 days in advance of the closures. The contractor shall provide proof of the notification to the Sonoma County construction staff.
- The contractor shall allow passage of emergency vehicles through the project site at all times.
- The contractor shall maintain access to all driveways to parcels off the project site throughout project construction.

The contractor shall determine the construction schedule for local roadway improvement projects along the truck routes to and from the project site, particularly any lane and road closures. The contractor shall time large haul and material delivery truck trips to avoid traveling along routes where conflicts could occur due to ongoing roadway improvements.

Mitigation Measure TCR-1: Tribal Cultural Resources Inadvertent Discovery

The training and Alert Sheet identified under Mitigation Measure CUL-1 shall also encompass tribal cultural resources.

In the event that an archaeological resource is discovered, ground-disturbing work shall be halted within 100 feet of the find, and a qualified Tribal Cultural Monitor shall be brought to the site. The qualified Tribal Cultural Monitor shall evaluate the resource and determine whether it is of special importance to a California Native American Tribe. If the resource is determined to not be of importance to the tribe, work may commence in the area.

If the resource meets the criteria for an important tribal resource, work shall remain halted within 100 feet of the find, and the qualified Tribal Cultural Monitor shall evaluate the resource and determine whether it is an important resource to the local Native American Tribe. If the resource is important to the tribe, work shall remain halted within 100 feet of the area of the find and the qualified Tribal Cultural Monitor shall consult with County staff regarding methods to ensure that no substantial adverse change would occur to the significance of the tribal cultural resource pursuant to PRC section 21084.3. Methods may include the following:

- Preservation-in-place (i.e., avoidance) is the preferred method of mitigation for impacts on tribal cultural resources.
- Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

TABLE OF CONTENTS

TABLE OF CONTENTS

Mitigated Negative Declaration.....MND-1
Initial Study..... IS-1
Introduction IS-1
Project Information..... IS-1
Project Description.....IS_5
 BackgroundIS-5
 Need for the Project.....IS-5
 ObjectiveIS-5
 Project DesignIS-5
 Project ConstructionIS-11
 Other Construction ElementsIS-14
Other Public Agencies with Approval Authority IS-16
Evaluation of Environmental Impacts..... IS-17
 OverviewIS-17
 Environmental Factors Potentially AffectedIS-18
 Impacts AssessmentIS-19
 AestheticsIS-19
 Agriculture and Forest ResourcesIS-25
 Air Quality.....IS-27
 Biological ResourcesIS-30
 Cultural ResourcesIS-59
 EnergyIS-61
 Geology and SoilsIS-62
 Greenhouse Gas EmissionsIS-66
 Hazards and Hazardous MaterialsIS-68
 Hydrology and Water QualityIS-71
 Land Use and Planning.....IS-75
 Mineral Resources.....IS-76
 Noise.....IS-76
 Population and HousingIS-81
 Public ServicesIS-81
 Recreation.....IS-82
 TransportationIS-83

TABLE OF CONTENTS

Tribal Cultural Resources.....	IS-85
Utilities and Service Systems	IS-88
Wildfire	IS-91
Mandatory Findings of Significance	IS-93
Report Preparers	IS-96
Sonoma County	IS-96
Quincy Engineering, Inc.....	IS-96
Panorama Environmental, Inc.	IS-96
References	IS-97

Figures

Figure 1	Regional Location	IS-2
Figure 2	Zoning Designations.....	IS-3
Figure 3	Land Use Designations.....	IS-4
Figure 4	Project Site Photographs.....	IS-7
Figure 5	Project Components.....	IS-8
Figure 6	Box Girder Bridge	IS-10
Figure 7	View of Freestone Flat Road at Scott Robin Road Looking Southwest.....	IS-21
Figure 8	View of Freestone Flat Road Looking Northeast	IS-22
Figure 9	View of Freestone Flat Road at Scott Robin Road Looking North.....	IS-23
Figure 10	Vegetation Communities	IS-48
Figure 11	Sensitive Receptors in Project Vicinity	IS-78

Tables

Table 1	Project Footprint and Ground Disturbance Areas	IS-6
Table 2	Construction Schedule.....	IS-16
Table 3	Possible Required Permits and Approvals.....	IS-16
Table 4	Sonoma County Site Sensitivity Characteristics	IS-20
Table 5	Sonoma County Thresholds of Significance for Visual Impact Analysis	IS-24
Table 6	Unmitigated Construction Emissions	IS-29
Table 7	Potential for Special-Status Species to Occur in the BSA.....	IS-32
Table 8	Construction Vibration Damage Criteria.....	IS-77
Table 9	Noise Level by Construction Stage at Distance of Nearest.....	IS-79
Table 10	Summary of Tribal Consultation	IS-86

Appendices

Appendix A	Mitigation Monitoring and Reporting Program
Appendix B	Biological Resources Supporting Information
Appendix C	Construction Noise Assessment
Appendix D	Air Quality Calculations
Appendix E	Tree Removal Exhibit

TABLE OF CONTENTS

LIST OF ABBREVIATED TERMS

BAAQMD	Bay Area Air Quality Management District
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CARB	California Air Resources Board
CC	California Coast
CCC	Central California Coast
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CIDH	cast-in-drilled-hole
CNDDB	California Natural Diversity Database
CO	Carbon monoxide
CO _{2e}	carbon dioxide equivalent
CRHR	California Register of Historical Resources
dB	decibel
dBA	A-weighted sound level
DTPW	Sonoma County Department of Transportation and Public Works
DWR	Department of Water Resources
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administrations
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
GHG	greenhouse gas
HBP	Highway Bridge Program

TABLE OF CONTENTS

IS	Initial Study
L _{max}	maximum noise level
L _{eq}	average noise level
MLD	Most Likely Descendant
MMRP	Mitigation Monitoring and Reporting Plan
MRZ	Mineral Resource Zone
MT	metric ton
NAAQS	National Ambient Air Quality Standards
NMFS	National Marine Fisheries Service
NO _x	Nitrogen oxide
NAHC	Native American Heritage Commission
NPDES	National Pollutant Discharge Elimination System
OHWM	Ordinary high-water mark
OSHA	Occupational Safety and Health Administration
PM ₁₀	coarse particulate matter
PM _{2.5}	fine particulate matter
Project	Freestone Flat Road Bridge Replacement Project
PPV	peak particle velocity
RCNM	Roadway Construction Noise Model
ROG	Reactive Organic Gas
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
RRD	Resources & Rural Development
Scoping Plan	Climate Change Scoping Plan
SFBAAB	San Francisco Bay Area Air Basin
SO ₂	Sulfur dioxide
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board

TABLE OF CONTENTS

USACE	U.S. Army Corps of Engineers
USDOA	United States Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
WDRs	Waste Discharge Requirements
WEAP	Worker Environmental Awareness Program
WOS	Waters of State
WOUS	Waters of United States

TABLE OF CONTENTS

This page is intentionally left blank.

INITIAL STUDY



Initial Study
Sonoma County Department of Transportation & Public Works
2300 County Center Drive, Suite B-100, Santa Rosa, CA 95403
(707) 565-2231

INTRODUCTION

This Initial Study (IS) assesses the potential environmental impact of the Freestone Flat Road Bridge Replacement Project (project) proposed by the Sonoma County Department of Transportation and Public Works (DTPW) and has been prepared in accordance with the California Environmental Quality Act (CEQA) statutes and guidelines for which Sonoma County is the lead agency. Sonoma County has incorporated mitigation measure requirements for the project to mitigate the potentially significant impacts identified in this IS such that no significant impacts will occur. The mitigation measures are summarized in the Mitigation Monitoring and Reporting Plan (MMRP) in Appendix A.

PROJECT INFORMATION

1. Project Title:

Freestone Flat Road Bridge Replacement Project

2. Lead Agency Name and Address:

Sonoma County Department of Transportation and Public Works
2175 Airport Boulevard
Santa Rosa, CA 95403

3. Contact Person and Phone Number:

John C. Leong, Project Engineer
(707) 565-2231

4. Project Location:

The existing bridge is located on Freestone Flat Road where it crosses over Salmon Creek. The bridge is located in an unincorporated area of southwestern Sonoma County, approximately 0.6 mile northwest of the community of Freestone, and 5 miles west of the City of Sebastopol (Figure 1). East of the bridge, Freestone Flat Road has no outlet and serves rural residential areas. Approximately 0.2 mile west of the bridge, Freestone Flat Road ends at the intersection with Bohemian Highway. Scott Robin Road connects to Freestone Flat Road just east of the existing bridge with a single stop sign.

5. Project Sponsor's Name and Address:

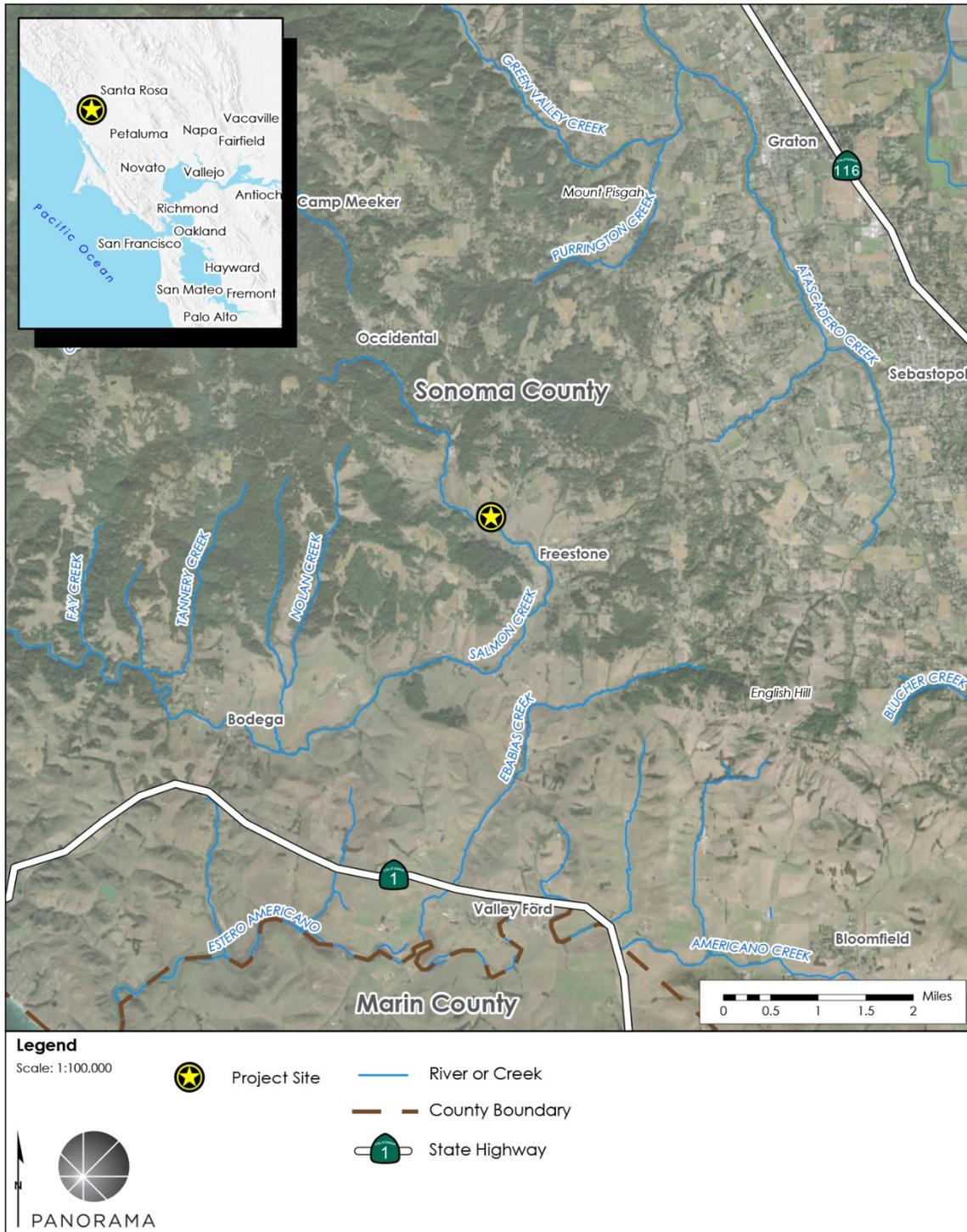
Sonoma County Department of Transportation and Public Works
2300 County Center Drive, Suite B-100
Santa Rosa, CA 95403

6. General Plan Designation and Zoning:

The land use designation of the project site is Resources & Rural Development (RRD 40) in the Sonoma County General Plan, as shown in Figure 2 (Sonoma County, 2008). The project site is zoned as Resources and Rural Development (RRD B6 40) with a Riparian Corridor Combining Zone (RC 200/50) overlaid on Salmon Creek within the project site (Sonoma County, 2019). The specific combining zone designation of RC 200/50 refers to a 200-foot-wide conservation area for development and a 50-foot-wide conservation area for agricultural cultivation. The zoning and land use designations for the project site and surrounding area are shown in Figure 2 and Figure 3, respectively.

INITIAL STUDY

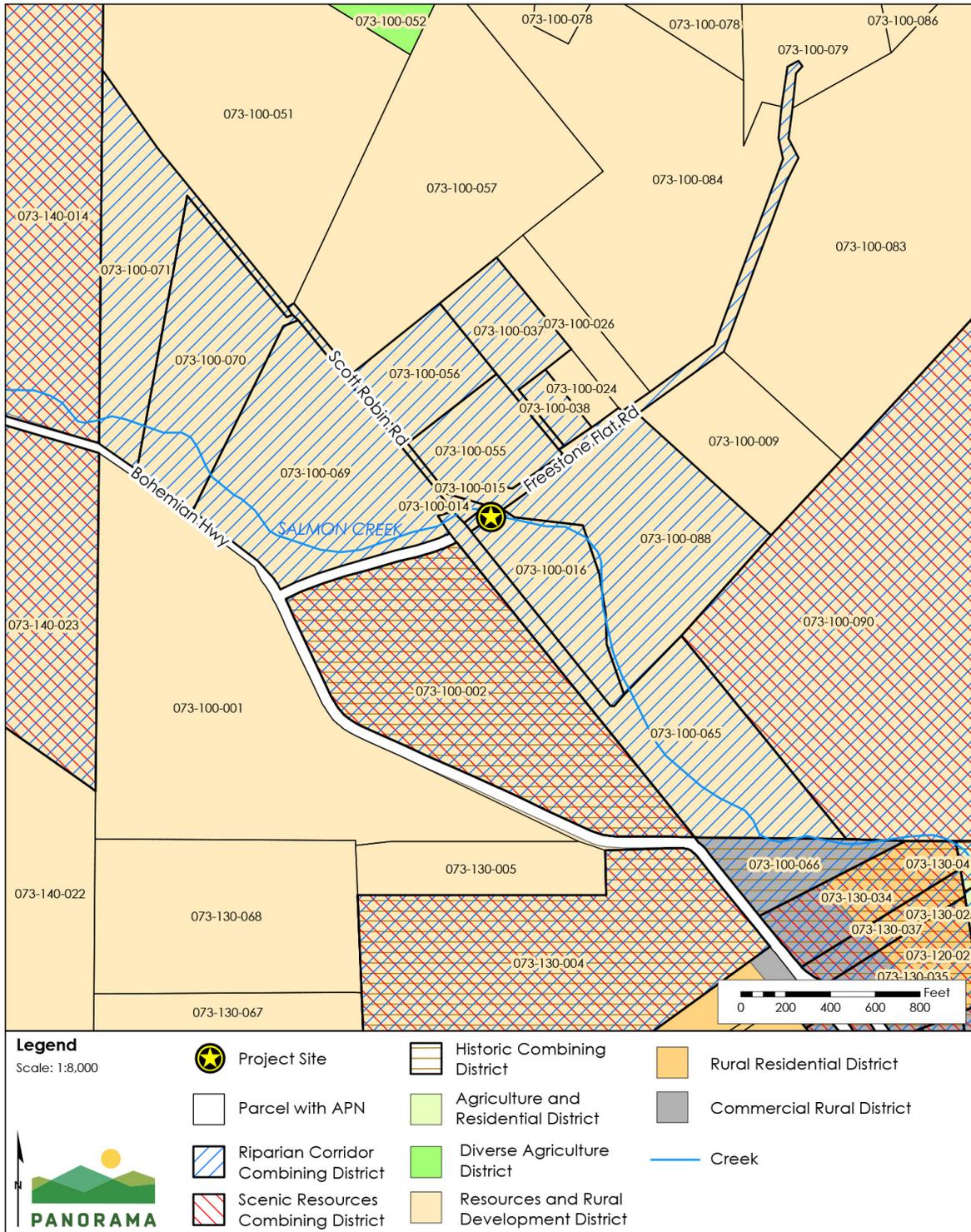
Figure 1 Regional Location



Sources: (US Geological Survey 2013, U.S. Geological Survey 2016, Tele Atlas North America, Inc. 2018, USGS 2016)

INITIAL STUDY

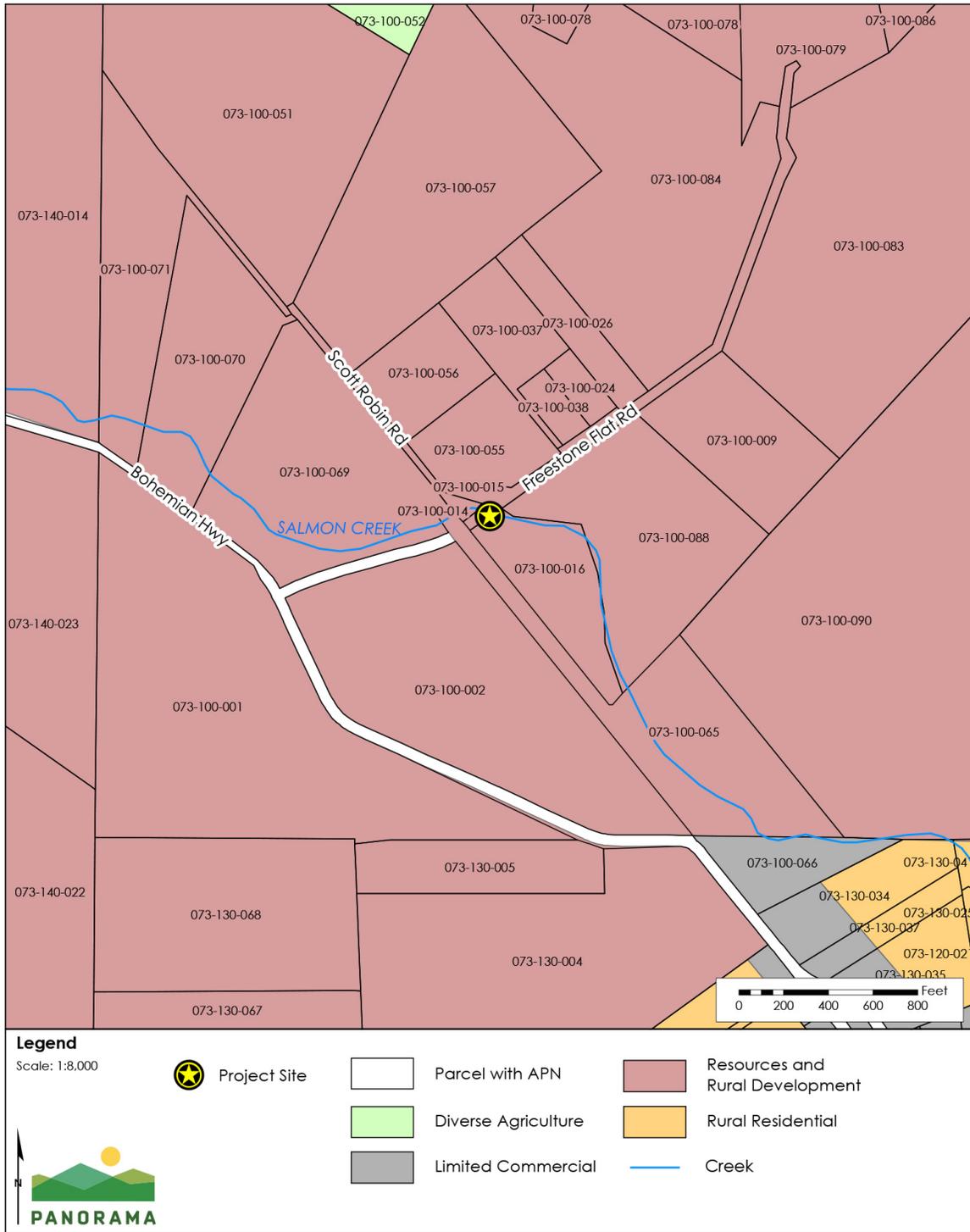
Figure 2 Zoning Designations



Sources: (County of Sonoma ISD GIS Central 2001, CDF, USGS, Sonoma Ecology Center: Compiled by County of Sonoma ISD GIS Central 2003, County of Sonoma GIS Central 2019, County of Sonoma, Permit and Resource Management Department (PRMD) 2012)

INITIAL STUDY

Figure 3 Land Use Designations



Sources: (County of Sonoma ISD GIS Central 2001, CDF, USGS, Sonoma Ecology Center: Compiled by County of Sonoma ISD GIS Central 2003, County of Sonoma GIS Central 2019, County of Sonoma, Permit and Resource Management Department (PRMD) 2012)

INITIAL STUDY

PROJECT DESCRIPTION

Background

The existing Freestone Flat Road Bridge (Bridge No. 20C0440) is a two-span, steel-girder/truss bridge constructed in 1955. The westerly span was constructed with steel girders and a concrete deck while the easterly span consists of welded steel army modular box trusses with a steel grate deck. The existing bridge is 103 feet long and one lane wide with a clear-roadway width¹ of 12 feet. In the 2011 Structure Inventory and Appraisal Report, the existing bridge was listed as structurally deficient, making it eligible at the time for Federal Highway Administrations (FHWA) Highway Bridge Program (HBP) replacement funding (Caltrans, 2011). Corrective measures were taken to strengthen the bowing diagonal truss members of the bridge, and the latest 2014 inspection report no longer lists the bridge as structurally deficient. Nonetheless, the current 2014 sufficiency rating for the existing bridge is 48.8,² still making it eligible for replacement.

Need for the Project

The purpose of the project is to meet current design and safety standards for bridges and roads while minimizing the impact to Salmon Creek and the surrounding rural property. The primary objective is to replace the existing bridge with a new, wider structure. Improvements to Freestone Flat Road are needed to meet current bridge design and safety standards and accommodate current and future average daily traffic demands.

Objective

The project objective is to replace the existing Freestone Flat Road Bridge with a new bridge southeast of the existing bridge and realign Freestone Flat Road on either side of the bridge to connect with the new bridge location.

Project Design

Overview

The project includes three primary components: roadway and utility realignment, construction of a new two-lane bridge, and demolition of the existing one-lane bridge. The project would involve construction of a new parallel two-lane bridge adjacent to and downstream of the existing bridge. The existing bridge would be left in place to maintain traffic flow and access during construction. Once the new bridge is constructed, traffic would be routed onto the new bridge and the existing bridge would be removed. Photos of the existing bridge and surroundings are shown in Figure 4. Figure 5 shows the project components, including the existing bridge (proposed for removal), proposed replacement bridge, new roadway approaches, and construction staging area within the project site. Table 1 lists the footprint and impact areas associated with each of the project components.

¹ The clear-roadway width is the structural width between curbs or rails.

² The maximum possible sufficiency rating for a bridge is 100, representing a perfect bridge that is entirely sufficient for its current use.

INITIAL STUDY

Table 1 Project Footprint and Ground Disturbance Areas

Project Components	Footprint (Acres)	Area of Ground Disturbance		
		Temporary (Acres)	Permanent (Acres)	Total (Acres)
Existing Facilities and Restoration Areas				
Removal of Existing Bridge Deck	0.029	0.0 ^a	0.0	0.0
Restoration of Existing Roads and Bridge Abutments	0.0	0.169	0.0	0.169
Restoration of Existing Private Driveways	0.0	0.022	0.0	0.022
Removal of Existing Utility Poles ^b	0.0	0.0001	0.0	0.0001
Replacement Facilities				
Construction of New Bridge Deck	0.067	0.0 ^a	0.0	0.0
New Bridge Abutments	0.009	0.0	0.009	0.009
Realignment of Freestone Flat Road	0.253	0.045	0.253	0.298
Realignment of Scott Robin Road	0.106	0.0	0.106	0.106
Relocation of Utility Poles ^b	0.0004	0.081	0.0004	0.0814
Temporary Workspaces				
Construction Staging Area ^c	0.248	0.248	0.0	0.248
Temporary Work Area ^{c,d}	0.4579	0.4579	0.0	0.4579
<i>Total</i>	<i>1.1699</i>	<i>1.023</i>	<i>0.368</i>	<i>1.3914</i>
Notes:				
<p>^{a.} The footprint of the bridge decks is limited to the area that spans the creek and is suspended in air; therefore, no temporary or permanent impacts are attributed to the decks. Temporary impact associated with access for bridge deck removal and construction is accounted for in the restoration of existing roads and abutments, and construction of new road alignments.</p> <p>^{b.} Assumes each pole has a radius of 1 foot.</p> <p>^{c.} No grading is proposed in the staging area and temporary work area; however, surface improvements, such as gravel, may be applied to the staging area and soils may be stockpiled in the staging area and temporary work area.</p> <p>^{d.} Includes area of temporary driveway realignment (refer to Freestone Flat Road realignment discussion on page 9).</p>				

INITIAL STUDY

Figure 4 Project Site Photographs



Freestone Flat Road at Salmon Creek – Looking Northeast.



Freestone Flat Road at Salmon Creek – Looking Southwest.



Downstream from Existing Bridge – Looking Northeast.

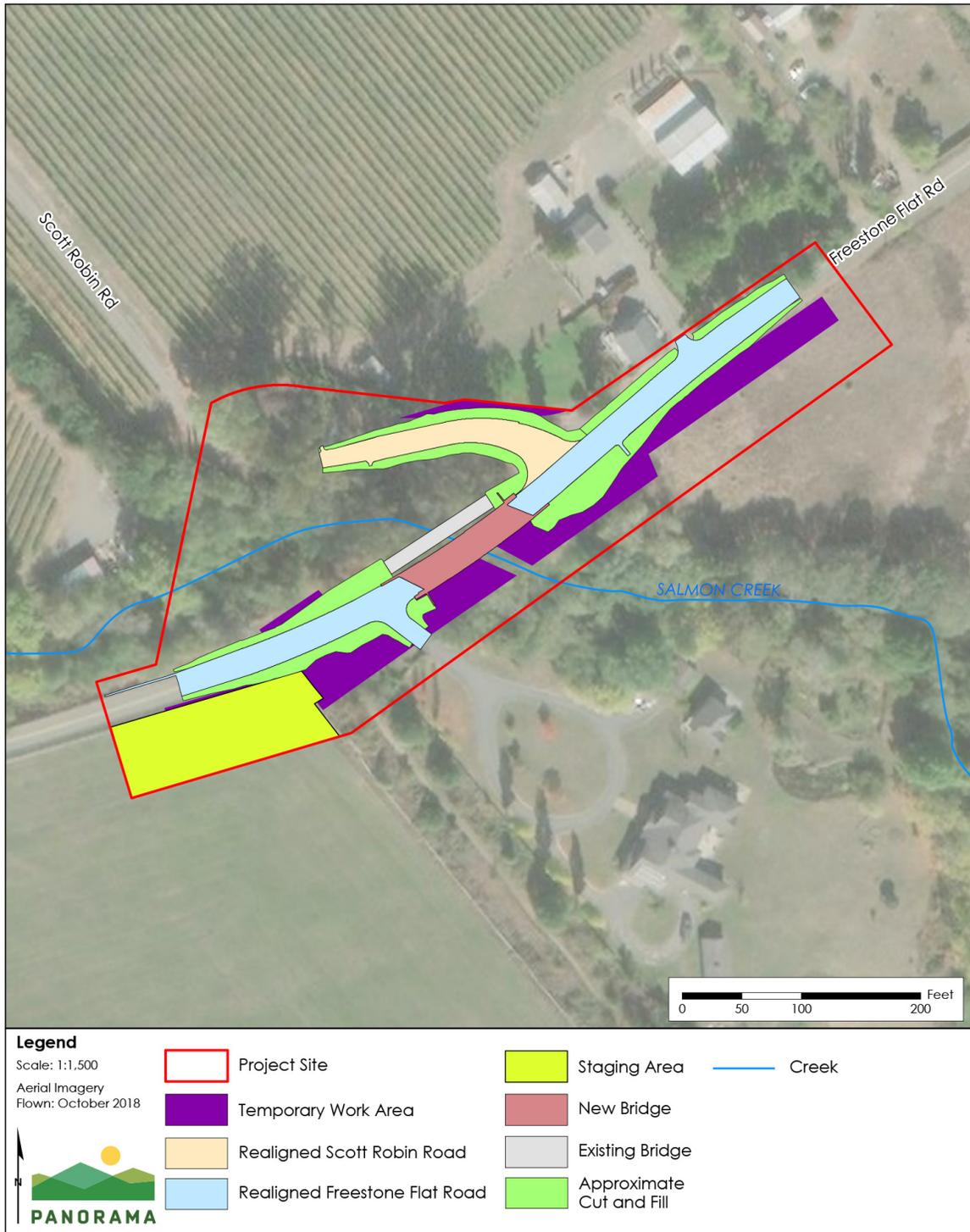


Along Proposed Roadway Alignment to Scott Robin Road Intersection – Looking North

Source: (Quincy Engineering , 2017)

INITIAL STUDY

Figure 5 Project Components



Sources: (County of Sonoma ISD GIS Central, 2001; CDF, USGS, Sonoma Ecology Center: Compiled by County of Sonoma ISD GIS Central, 2003; DigitalGlobe, 2018; County of Sonoma, 2020b)

INITIAL STUDY

Bridge Design

The project would involve construction of a new bridge approximately 24 feet south of the existing bridge. The new bridge would be a single-span, cast-in-place, prestressed concrete box-girder bridge, as shown in Figure 6. The new bridge would be approximately 106 feet long and would fully span the creek channel. The bridge would have a total width of approximately 26 feet, composed of two 9-foot-wide lanes and 2-foot-wide shoulders, and approximately 2-foot-wide concrete bridge barriers with rails on each side of the bridge. The bridge barriers would be constructed of concrete with a galvanized tubular metal handrail mounted on top. Concrete bridge abutments would be supported on cast-in-drilled-hole (CIDH) concrete piles, which would be approximately 24 inches in diameter, with approximately 8 piles per abutment. The piles are expected to be approximately 35 to 40 feet long.

The new bridge deck would be approximately 1 to 1.5 feet higher than the existing bridge deck to smooth out the roadway profile, which climbs a few feet going eastward across the creek channel. The right-of-way (ROW) required at the new bridge location is anticipated to have a width up to 75 feet along the length of the bridge.

Roadway Realignment

Freestone Flat Road and Scott Robin Road would be realigned to connect with the new bridge location. A description of the realignment of each road is provided below. Road segments that would be replaced by realigned roads would be removed and the footprint would be restored.

Freestone Flat Road

Two segments of Freestone Flat road would be realigned to meet the new bridge. Approximately 300 feet of roadway immediately east of the bridge and approximately 220 feet immediately west of the bridge would be realigned. The west end of the road realignment would introduce one 800-foot-long radius curve along Freestone Flat Road (the new bridge is set within this curve) and a second reversing radius curve 1,200 feet in length to conform to the existing roadway alignment at the east end. The vertical alignment at the bridge over Salmon Creek would be raised approximately 1.5 feet above the existing elevation to provide an improved roadway profile and conform for Freestone Flat Road. Fill slopes of up to 2:1 would be necessary on approach roads where they meet the new bridge. The private driveway to the west of the new bridge would be realigned and restored to meet the realigned Freestone Flat Road.

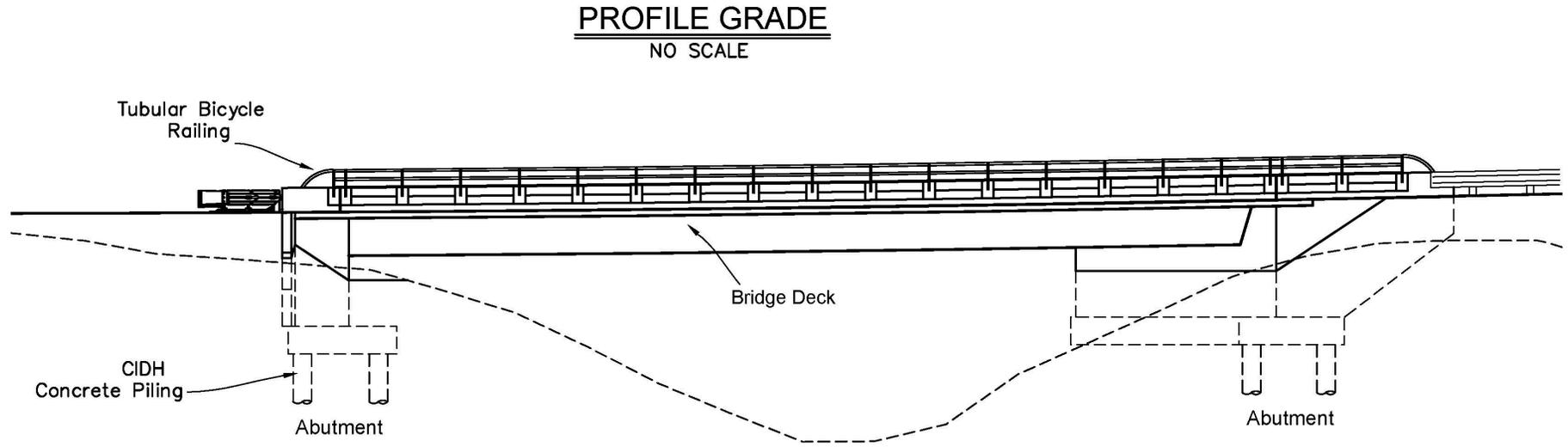
Scott Robin Road

Approximately 200 feet of Scott Robin Road would be improved, realigned, and elevated up to 1.5 feet to intersect with the new horizontal and vertical alignment of Freestone Flat Road. Sight distance triangles³ would be added as necessary to ensure appropriate visibility is provided at the intersection of Scott Robin Road and Freestone Flat Road. The existing drainage culvert conveying run-off from the road and adjacent vineyards under Scott Robin Road may be replaced, if needed, with high-density polyethylene or reinforced concrete pipe and the inlet end extended.

³ Intersection sight distance is typically defined as the distance a motorist can see approaching vehicles before their line of sight is blocked by an obstruction near the intersection. Sight distance triangles are unobstructed areas at an intersection that allow drivers to view approaching cross-traffic (FHWA, 2011).

INITIAL STUDY

Figure 6 Box Girder Bridge



Source: (Quincy Engineering, 2018)

TABLE OF CONTENTS

Project Construction

Overview

Freestone Flat Road is a dead-end road and the Freestone Flat Road Bridge provides the only access from State Route 116 for residents and agricultural operations located off of Freestone Flat Road, east of Scott Robin Road. The existing bridge and current roadway alignment would remain open during project construction. Following construction of the new bridge and road realignments, traffic would be redirected onto the new bridge allowing for the demolition of the existing bridge. Construction would occur in the following six stages, which are described in greater detail below:

1. Site Preparation and Utility Realignment
2. Bridge Construction
3. Roadway Approach Realignment
4. Approach Tie-Ins
5. Bridge Demolition and Installation of New Bridge Wingwall
6. Site Restoration

Site Preparation and Utility Realignment

Vegetation Removal

Approximately 40 trees would be removed from within the footprint of the new bridge, roadway realignments, and temporary construction workspaces (i.e., staging areas and work areas). It is anticipated that trees located within the footprint of these construction areas would be cut-off with a chainsaw at ground level and that stumps would remain in place. Tree stumps within the roadway prism or within proposed new bridge foundation locations would be completely removed after the end of the rainy season (typically October through April).

Utility Realignment

The existing overhead electricity distribution line and telephone line supported on wooden poles adjacent and parallel to the southside of Freestone Flat Road would be relocated to accommodate the wider, realigned roadway. Vegetation would be removed along the new utility line alignment to create a 30-foot-wide clear path prior to construction. The overhead utility lines would be shifted further south and would maintain a similar offset along the south side of the realigned roadway. Utility poles would be installed using a direct bury method, which involves auguring a hole, using a crane to insert the pole into the hole, and backfilling around the pole. The utility realignment would require the use of two temporary poles to support the overhead lines during construction and the permanent relocation of three poles to support the line after construction is completed. Some tree removal and tree trimming would be required within the new utility alignment to meet distribution power line safety regulations. Vegetation, including trees, within an approximately 15-foot radius around each pole would be removed. Ground-level vegetation would be allowed to re-establish following construction; however, trees would not be permitted within the 15-foot radius of permanent poles. The relocation of the overhead line would occur prior to bridge construction to allow for adequate space for contractor access and construction equipment.

There are no known underground utilities in the project area. The contractor would contact Underground Service Alert to verify locations of underground utilities prior to starting construction.

Bridge Construction

Bridge Abutments

An excavator and/or backhoe would be used to excavate the area for the new abutment foundations, working

INITIAL STUDY

from the top of the bank area behind the proposed abutment location. Excavated materials would be stored within the temporary work areas shown on Figure 5. A total of approximately 1,750 cubic yards would be excavated and 1,750 cubic yards of fill would be required. If excavated material satisfies backfill specifications it may be used for roadway embankment or structure backfill around the completed abutments. If the material does not satisfy backfill specifications it would be removed offsite and transported to a landfill permitted to accept the excavated material.

Drill equipment at the top of the creekbank would drill holes for the construction of cast-in-drilled-hole pilings. Excavated soils would be stored within temporary work areas. Working from the top of the creekbank, a crane would place steel reinforcing cages into the excavated holes. A concrete pump would be used to place concrete received from concrete mixer trucks parked behind the new west abutment. Baker tanks and drill slurry may be required if the CIDH piles encounter excessive water. Baker tanks, if necessary, would be placed within the temporary work area.

Footings could be formed or poured flush against the soil. Footing reinforcement would be necessary and could be installed by hand or using a prefabricated cage lowered into place using a crane. A crane may be used to facilitate erection of abutment and wingwall reinforcement and formwork. A concrete pump (possibly boom truck) could be used to pour abutment concrete.

Once the abutment concrete has cured and forms are removed, an excavator would be used to backfill native or imported soil around the abutment and wingwalls and complete the new approach embankment areas. The backfill would be compacted using rollers or hand compaction tools.

Temporary Falsework

Equipment access would be needed to reach each abutment or temporary falsework⁴ support locations outside the ordinary high-water mark below the abutments. Minor grading would be needed for this access; however, no equipment or construction materials would be staged or used below the ordinary high-water mark.

Bridge construction would require temporary falsework in the creek channel (above the ordinary high-water mark). Construction would occur during the dry season, when this portion of Salmon Creek experiences a very low flow or is completely dry. Falsework would span the ordinary high-water limits. The allowable time falsework would remain in the creek channel may be subject to resource agency requirements.

Only motorized equipment (e.g., excavator, dozer) would be expected to enter the west bank and may be used for minor grading for temporary falsework footing pads. The easterly portion of the bank is too steep for equipment access; therefore, cranes would lift falsework materials to this portion of the creek. All falsework material would be removed after construction and any temporarily graded areas would be restored to the existing contours and hydroseeded.

New Bridge Construction

The bridge superstructure⁵ would be constructed using two construction stages. First, the concrete girder stems would be formed and constructed, and once the concrete is cured, the concrete deck would be constructed. Concrete construction consists of erecting plywood formwork, placing reinforcing steel and casting the concrete. Cranes, generators, air compressors, and concrete pumps (boom trucks) would

⁴ Falsework is scaffolding or other temporary structures used to support bridge construction components until construction is sufficiently advanced to allow the bridge to support itself.

⁵ The part of the bridge structure that supports traffic, including the bridge deck and rails.

INITIAL STUDY

facilitate the concrete construction of the bridge. Concrete would be delivered to the west approach and would be achieved without roadway closures. Several construction operations may require brief roadway closures of 15 minutes or less, requiring signage and flagmen.

After the deck concrete has cured and reached the specified strength, the span would be prestressed with high strength steel cables. Equipment required for this work is typically suspended from the deck and contained within the areas adjacent to the bridge ends. Prestressing operations would not require road closures.

With the span released from the temporary falsework, the concrete bridge railing would be constructed directly onto the bridge. Rebar would be installed into the bridge deck, plywood/steel forms would be built, and the concrete barrier would be cast. The railing construction work would be completed using materials and equipment placed within the new roadway staging areas or on the new bridge deck. This work would not require any traffic closures.

Drainage

The existing drainage patterns along Freestone Flat Road and Scott Robin Road would be maintained. Currently drainage runoff sheet flows from the roadways into shallow and flat roadside ditches. An existing drainage pipe under Scott Robin Road relieves water from the north side and outfalls along the northern embankment of Salmon Creek. The project may include improvements (if necessary) to replace the existing drainage pipe (with high-density polyethylene or reinforced concrete pipe) and extend the inlet end while maintaining the existing outfall location. The gradient for drainage of roadway and bridge surfaces near Salmon Creek would be sufficient to maintain current patterns and flow away from the roadway and bridge along their natural course.

Roadway Approach Realignment

Freestone Flat Road and Scott Robin Road would be realigned to meet the new bridge location. Roadway grading and embankment fill in order to conform to the new abutments would be necessary. The roadway structural section would consist of aggregate base overtopped with asphalt concrete.

Metal beam guard rails and crash cushions would be installed and connect to the concrete bridge barriers near the wingwall locations.

A private driveway with an entrance gate, fencing, and stone pillars is located near the west end of the proposed bridge, near the staging area that would be used throughout construction of the project. Approximately 80 feet of driveway nearest to the roadway would be temporarily re-routed to create separation between the property owner access and construction operations at the new bridge location. The temporary driveway would be approximately 15 feet wide and constructed of aggregate base rock. The temporary driveway realignment is expected to be approximately 80 feet in length and would fall within the footprint of the future location of the realigned Freestone Flat Road.

Approach Tie-ins

Materials and equipment would be removed from the new bridge and approaches and the completed portions of the new roadway and southern portion of the new bridge deck would be temporarily delineated and prepared to receive one lane of traffic.

Signage, delineators, and temporary striping would be added in preparation of moving traffic onto the new alignment. Flagmen would be used as needed to close the existing approach roadways (for 15 minutes or less) and switch the one-lane traffic onto the new bridge. One-lane traffic control may be switched to the new bridge as the Scott Robin Road intersection is graded up to the new roadway profile.

INITIAL STUDY

The existing asphalt would be removed, and a new road base and asphalt surface would be placed on the remaining portions of the new roadway. Typical paving equipment would be used, including dump trucks, a paver, and compaction rollers. Signage and flagmen would be used to facilitate roadway closures. Traffic would still be in a one-lane, stop-controlled configuration for completion of this stage.

Bridge Demolition and Installation of New Bridge Wingwall

After traffic on Freestone Flat Road is switched onto the new bridge, the remaining portions of the existing approaches would be used as staging areas for demolition of the existing steel girder and steel truss bridge. A single large crane could be staged at the existing west approach or two smaller cranes could be used (one on the west and one on the east) for removal of the existing two spans. The truss would be disassembled and trucked away for disposal or salvage, along with all other portions of the existing bridge.

Generators, excavators, air compressors, and cranes could then be used to remove the existing pier columns, abutments, and remaining portions of metal wingwalls from within the existing approach roadways. Existing abutment piles may be cut off below grade and remain in place. The existing pier columns would be cut off at the ordinary high-water elevation in Salmon Creek and remain in place. Abutment piles that are above the ordinary high-water elevation would be removed entirely. Removal activities would not require access below the Salmon Creek ordinary high-water elevation. No traffic disruptions are anticipated for demolition operations. Disposal of the existing steel truss bridge would be coordinated with the County as the County may want to salvage portions of the existing bridge for maintenance of other bridges they own.

Once the existing bridge is removed, the new northeast wingwall and final abutment grading in the top bank portion of the channel can be completed. Some grading equipment would enter the upper creek bank area around the new northeast wingwall. No rock slope protection is anticipated for the abutments.

The small remaining portion of the east bridge wingwall would be constructed and remaining hardware (e.g., metal beam guardrails) would be installed. Final asphalt paving and striping would complete the heavy construction work. Signage and flagmen would be used to facilitate removal of temporary striping and traffic devices so the roadway can be converted to the final two-lane configuration.

Site Restoration

All construction equipment, materials, and debris would be removed from the project site once traffic is in the final two-lane configuration. Exposed slopes would be hydroseeded, and other plantings could be installed. Gates and mailboxes for private residences would be reinstalled as necessary.

Other Construction Elements

Dust Control

The project would temporarily disturb up to 1.023 acres (Table 1). Water would be used for dust control throughout construction. Up to 78,000 gallons of water may be needed throughout the construction period for dust-control purposes. Water would be acquired from an existing source and trucked to the project site.

Staging Areas

A staging area would be used to store project materials and equipment. The staging area would be approximately 12,600 square feet. The staging area footprint is shown in Figure 5. Perimeter fencing would be temporarily installed around the staging area and a large storage trailer may be installed on-site. Depending on contractor operations and access requirements, the contractor may require temporary gravel within the temporary work areas and staging areas. Following construction, the temporary work areas and

INITIAL STUDY

staging areas would be returned to pre-construction conditions.

Traffic Control

No detours to avoid the construction area are available on existing County roads; therefore, traffic through the site during construction would be maintained. The proposed bridge over Salmon Creek and road realignments would be constructed while traffic is maintained on the existing one-lane bridge. Temporary traffic lane shifts and one-lane traffic control with flagging would be implemented for approach roadway construction where the new roadway alignment overlaps with existing roadway.

Signage, intermittent flagmen, and temporary K-rails and crash cushions would be used to separate traffic on the existing roadway from the new alignment to the south during bridge construction operations. Temporary shoring, possibly drilled soldier piling, may be used to separate the existing roadway from the abutment excavation areas. If used, the soldier piles would extend through shallow soils at the east and west abutments and penetrate 1 to 2 feet into bedrock. The west abutment area may require deeper soldier piles drilled into soils for stability. The temporary shoring systems would be placed away from the creek bottom, located higher on the banks near the abutments. At both abutments, installation equipment would be located south of the existing approach roadways within the temporary work area and would avoid the creek channel. Signage, flagmen, and temporary K-rails would be used to maintain traffic during sheet pile-driving operations.

Construction Personnel, Equipment, and Schedule

The type of equipment required for the project would include, but not be limited to the following:

- Excavator or Backhoe
- Tractor Trailer
- Drilling Equipment
- Crane
- Concrete Pump/Boom Truck
- Loader
- Roller/Sheep's Foot
- Plate Tamper/Wacker/Ram
- Pick-Up Trucks
- Water Trucks
- Thermoplastic Applicator
- Tractor Trailer
- Dump Trucks
- Street Sweepers
- Generators
- Air Compressors
- Telescopic Forklift
- Cutting Torch
- Circular Saw
- Drill/Auger
- Grinder
- Dozer

A typical crew size of 6 to 8 workers would be required for the project. During pile and rebar installation, the crew size could be as high as 20. Crew members would most likely live in and commute from the local region.

Project construction would likely begin in the Spring of 2022. Project construction would occur over approximately 6 to 8 months. Work would typically occur during daylight hours, 5 days per week; however, longer shifts and 6-day weeks may be necessary to maintain schedule.

Ground-disturbing activities adjacent to Salmon Creek would be conducted between April 15 and October 31 when flow within the creek would be minimal. The anticipated construction schedule is provided in Table 2. The construction schedule is dependent on agency permits and approvals and may be modified based on agency permits and approvals for the project.

INITIAL STUDY

Table 2 Construction Schedule

Construction Phase	Average Number of Workers	Duration (Working Days)	Timing
Tree removal	4	15	January 2022
Site preparation and utility relocation	6	15	April 2022
Bridge construction, including bridge abutments, falsework and span	8	120	May to October 2022
Freestone Flat Road and Scott Robin Road realignment	6	32	October to November 2022
Demolition of existing bridge	4	10	October 2022
Site Restoration	2	10	October 2022

OTHER PUBLIC AGENCIES WITH APPROVAL AUTHORITY

The project may require permits and approvals prior to construction. Permits and approvals currently anticipated to be required for the project are listed in Table 3.

Table 3 Possible Required Permits and Approvals

Permit or Approval	Agency	Function
Section 1602 Streambed Alteration Agreement	California Department of Fish and Wildlife	Deposition or disposal of material into any river, stream, or lake
National Pollutant Discharge Elimination System Construction General Permit	Regional Water Quality Control Board	Discharge of stormwater or sediments from construction activities
Waste Discharge Requirements (WDRs) or Categorical Waiver of WDRs	Regional Water Quality Control Board	Discharge of sediment into waters of the state

INITIAL STUDY

EVALUATION OF ENVIRONMENTAL IMPACTS

Overview

This IS includes analyses of the environmental resource topics listed below and the mandatory findings of significance that would result from changes in baseline physical conditions as a consequence of the project. These issue areas incorporate the topics presented in CEQA's Environmental Checklist (identified in Appendix G of the CEQA Guidelines). Sonoma County will use the analysis in this section to identify any specific impact criteria.

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

The new bridge and associated roadway improvements would not increase use of or vehicles speeds on Freestone Flat Road, nor would the project result in vehicle access to locations previously inaccessible. Operation of the project would be consistent with pre-construction conditions and no impact would occur; therefore, the analyses below do not include a discussion of operation impacts. The analyses consider construction impacts of the entire action involved, including off-site as well as on-site, cumulative as well as project-level, and direct as well as indirect impacts. Impacts to each environmental resource topic are given one of the following determinations:

No Impact. The project would not have the impact described. The project may have a beneficial effect, but there is no potential for the project to create or add increment to the impact described.

Less Than Significant Impact. The project would have the impact described, but the impact would not be significant. Mitigation is not required, although the project applicant may choose to modify the project to avoid the impacts.

Less Than Significant with Mitigation. The project would have the impact described, and the impact could be significant. One or more mitigation measures have been identified that will reduce the impact to a less than significant level.

Significant and Unavoidable Impact. The project would have the impact described, and the impact could be significant. The impact cannot be reduced to a less-than-significant level by incorporating mitigation measures. An environmental impact report must be prepared for this project.

INITIAL STUDY

Each question on the checklist was answered by evaluating the project as proposed, that is, without considering the effect of any added mitigation measures. The checklist includes a discussion of the impacts and mitigation measures that have been identified.

The Sonoma County Department of Transportation and Public Works has agreed to accept all mitigation measures listed in this checklist as conditions of approval of the project and to obtain all necessary permits.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by the project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- | | | |
|---|--|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology and Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards and Hazardous Materials |
| <input checked="" type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Mineral Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

INITIAL STUDY

Impacts Assessment

Aesthetics

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
C) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? In urbanized areas, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A) Have a substantial adverse effect on a scenic vista?

No Impact. The project site is located within the 22,400-acre Salmon Creek Watershed. No designated scenic vistas that afford a view of the project site occur in the project vicinity. The project site is not located within a designated scenic vista. No impact would occur.

B) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. No existing or eligible state scenic highways that afford a view of the project site occur in the project vicinity. The project site is located approximately 5 miles from California State Route 116, which is the nearest state-designated scenic highway. The project would not damage scenic resources such as trees, rock outcroppings, and historic buildings within a state scenic highway. No impact would occur.

C) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? In urbanized areas, would the project conflict with applicable zoning and other regulations governing scenic quality?

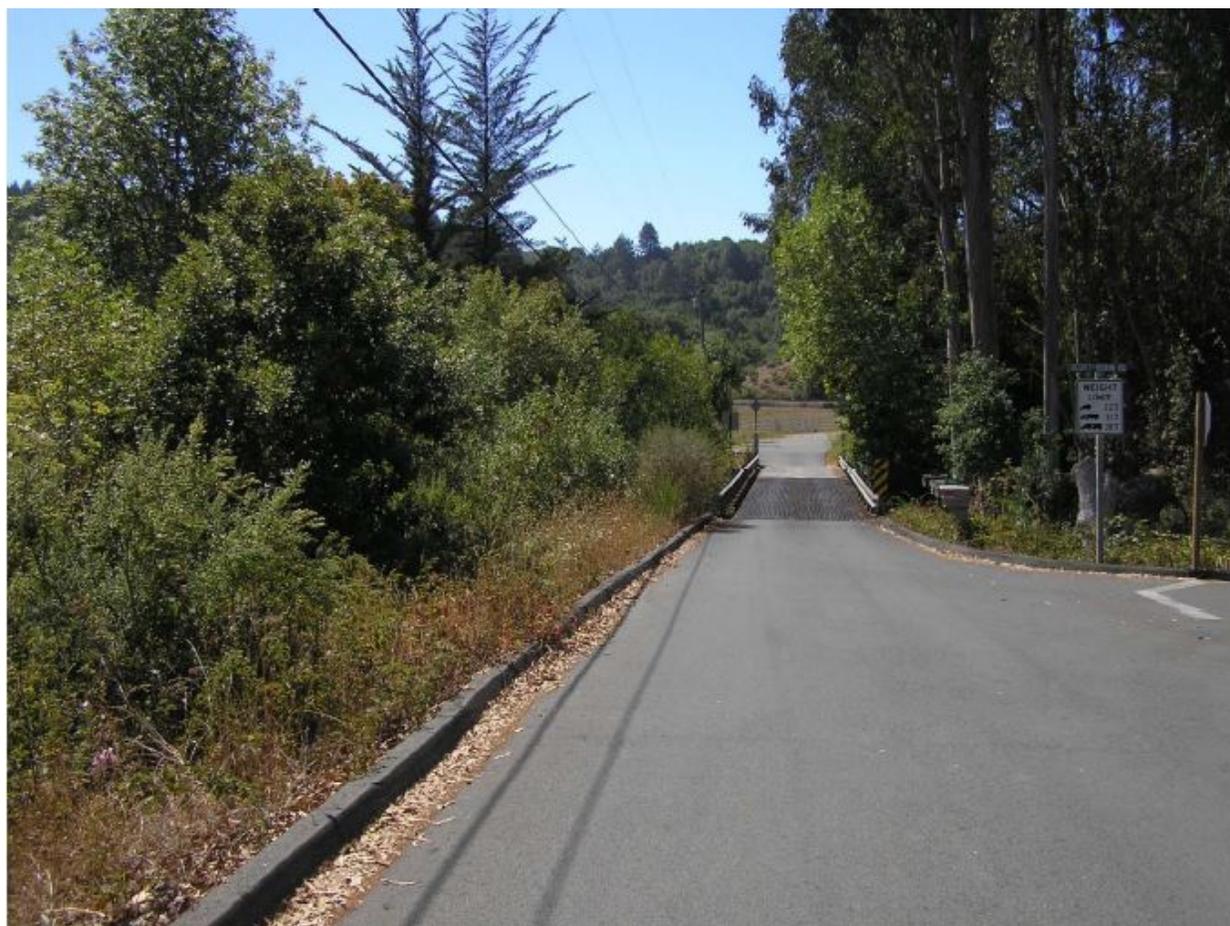
Less Than Significant Impact. Visual impacts were evaluated using the Sonoma County Visual Assessment Guidelines (VA Guidelines) (County of Sonoma, 2019). The visual sensitivity of the project site may be given a rating of low, moderate, high, or maximum using the criteria specified in the VA Guidelines. The visual dominance of the project is determined comparing the contrast of the VA

INITIAL STUDY

Sensitivity	Characteristics
Maximum	The site or any portion thereof is within a land use or zoning designation protecting scenic resources, such as General Plan designated scenic landscape units, coastal zone, community separators, or scenic corridors. The site vicinity is generally characterized by the natural setting and forms a scenic backdrop for a designated scenic corridor. This category includes building or construction sites within the scenic resource designation on or near prominent ridgelines, visible slopes greater than 40 percent or where there are significant natural features of aesthetic value that are visible from a designated scenic corridor.

Source: (County of Sonoma, 2019)

Figure 7 View of Freestone Flat Road at Scott Robin Road Looking Southwest



INITIAL STUDY

Figure 8 View of Freestone Flat Road Looking Northeast



INITIAL STUDY

Figure 9 View of Freestone Flat Road at Scott Robin Road Looking North



Visual Dominance

The visual dominance of the project is determined by comparing the contrast of the following elements or characteristics of the project with its surroundings and giving a rating of inevident, subordinate, co-dominant, or dominant:

- Form: shape, geometry, complexity.
- Line: the edge of the shape, boldness, complexity of silhouette, orientation.
- Color: reflectivity, hue (actual color), value (dark or light)
- Texture: surface characteristics, randomness, grain (fine or coarse)
- Night Lighting

Existing conditions within the project area are shown in see Figure 7, Figure 8, and Figure 9. Construction activities would result in short-term changes to the visual dominance in the project area. Construction is anticipated to take approximately 6 to 8 months, during which time following activities and equipment may be seen in the project vicinity during construction:

- Work crews accessing the project site
- Establishment and use of a staging area, which would include temporary perimeter fencing and a large temporary storage trailer
- Removal of vegetation from the proposed roadway realignment and work areas

INITIAL STUDY

- Large pieces of equipment used for moving earth; trenching ditches; transporting, lifting, and placing equipment; hauling concrete; spraying water to control dust; and other construction activities
- Grading activities related to construction of the proposed road alignment
- Formwork associated with construction of bridge abutments
- Disassembling and removal of the existing bridge
- Reclamation of the existing Freestone Flat Road, Scott Robin Road, and areas of temporary disturbance

The existing Freestone Flat Road Bridge is a part of the visual character of the area. After construction of the new bridge is complete, the existing bridge would be disassembled, and only the new bridge would remain in the area.

The new bridge would be prominent among the visual landscape following construction. The new bridge would change the character of the area by replacing the existing wood and steel truss bridge with the new concrete bridge; however, the form, line, color and texture of the new bridge would be compatible with the surrounding infrastructure. Consistent with existing conditions, no lighting would be installed along the new bridge. The new bridge would appear more prominent due to the absence of vegetation within the construction impact area and footprint of the existing bridge. Approximately 40 trees would be removed from the new bridge location and realigned roadway. Bare ground and sparse vegetation would be visible in the footprint of the removed road segments and old bridge location, causing a contrast with nearby dense vegetation. Bare ground would be revegetated via hydroseeding using a native seed mix and the majority of cut trees would be expected to re-grow from the stumps, which would be left in place. It is possible that disturbed areas would not revegetate to pre-construction conditions, particularly in areas that were previously within the footprint of the existing bridge footings and road segments. If the site does not revegetate to pre-construction conditions, the visual dominance of the project would be *co-dominant*, meaning the new bridge and surrounding area is prominent within the setting but attract attention equally with other landscape features. Table 5 identifies the Sonoma County impact thresholds of significance and determines that a visually co-dominant project in an area of moderate sensitivity would have a less than significant impact. No mitigation is necessary.

Table 5 Sonoma County Thresholds of Significance for Visual Impact Analysis

Sensitivity	Dominant	Co Dominant	Subordinate	Subordinate
Maximum	Significant	Significant	Significant	Less than Significant
High	Significant	Significant	Less than Significant	Less than Significant
Moderate	Significant	Less than Significant	Less than Significant	Less than Significant
Low	Less than Significant	Less than Significant	Less than Significant	Less than Significant

Source: (County of Sonoma, 2019)

INITIAL STUDY

D) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

No Impact. Construction would occur during daylight hours. Artificial lighting would not be used during construction. Post-construction conditions within the project area would be the same as existing conditions. No streetlights or other artificial lighting would occur. The new bridge would be constructed of non-reflective material. Handrails would be constructed using galvanized steel, which does not produce glare. The project would not result in substantial light or glare

Agriculture and Forest Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resource Code section 4526), or timberland zoned Timberland Production (as defined in Government Code section 51104 (g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

INITIAL STUDY

A) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

Less than Significant Impact. A staging area would temporarily convert 0.25 acre of prime farmland during construction activities. Staging activities would not affect the future agricultural use of the area and the staging area would be returned to pre-construction conditions following construction.

Construction of the realigned Freestone Flat Road would permanently convert approximately 0.042 acre of prime farmland. The converted land is adjacent to the existing road and not currently used for agricultural or farming purposes. In 2012, the California Department of Conservation, Division of Land and Resource Protection mapped approximately 29,882 acres of prime farmland within Sonoma County (California Department of Conservation, 2015). The conversion of approximately 0.042 acre of designated prime farmland would be negligible and the impact would be less than significant.

B) Conflict with existing zoning for agricultural use or a Williamson Act contract?

Less than Significant Impact. There are no Williamson Act contracts within the project area. The nearest Williamson Act contract land is located approximately 983 feet north of the project site (CDC, 2013). No construction would occur on Williamson Act contract land and the project would have no impact.

The Sonoma County General Plan indicates the area is zoned as Resources and Rural Development with a Riparian Corridor Combining Zone overlay (refer to Figure 2). The Riparian Corridor Combining Zone applies to land that borders Salmon Creek and restricts agricultural activities within 25 feet of the upper creek bank. Agricultural uses are permitted within land zoned as Resources and Rural Development. Construction of the new bridge and realigned roadway would not conflict with the Resources and Rural Development zoning and the project would have no impact.

C) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resource Code section 4526), or timberland zoned Timberland Production (as defined in Government Code section 51104 (g))?

No Impact. Neither the project site nor the immediately adjacent lands are zoned for forest land as defined by Public Resources Code Section 12220(g), timberland as defined by Public Resources Code Section 4526, or Timberland Production as defined by Government Code Section 51104(g) (Sonoma County, 2008). The project would not conflict with zoning for forest land, timberland, or Timberland Production. No impact would occur.

D) Result in the loss of forest land or conversion of forest land to non-forest use?

Less Than Significant. Forest land is defined in the Public Resources Code as, “land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.” The project would impact a total of 0.206 acre (0.185 acre temporary impact and 0.021 acre permanent impact) of riparian habitat that meets the definition of forestland. Permanent impacts of the new bridge and road footprint would total 0.021 acre and would not be a substantial loss of forest land when compared to the abundance of riparian forest that occurs adjacent to the project site. The impact is less than significant.

E) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use?

No Impact. The project would replace the existing Freestone Flat Road Bridge over Salmon Creek. The

INITIAL STUDY

project would impact farmland as discussed in Impact A) and forest land as discussed in Impact D) above; however, the project does not involve any land use changes and would not change the designated land use of the project area or surrounding areas. The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

Air Quality

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D) Result in substantial emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

A) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. The 2017 Clean Air Plan (2017 CAP) is the only applicable air quality plan that applies to the project area. Pursuant to CEQA Guidelines, the project would conflict with or obstruct the 2017 CAP if (1) the project were inconsistent with the control measures defined in the CAP, and/or (2) implementation of the project would generate criteria pollutants or toxic air contaminants that exceed the numerical thresholds defined by the Bay Area Air Quality Management District (BAAQMD) to attain the goals and objectives of the 2017 CAP.

The 2017 CAP includes 85 control measures categorized into nine economic sectors including transportation, energy, agriculture, and natural and working lands (BAAQMD, 2017). Several transportation control measures pertain to construction activities including heavy equipment use, such as providing incentives to promote ridesharing (TR8) and purchasing new trucks that exceed nitrogen oxide (NOx) emission standards, hybrid trucks, or zero-emission trucks (TR19).

The pertinent transportation control measures are voluntary incentive measures that do not require vehicle upgrades or retrofits. The project would not require purchase of any vehicles or equipment. The project use of construction vehicles and equipment would not conflict with these programs and would not conflict with or obstruct implementation of the control measures identified to achieve the goals of the 2017 CAP. No conflict with the 2017 CAP transportation control measures would occur.

INITIAL STUDY

Estimated combustion emissions during construction of the project would not exceed the numerical significance thresholds prepared by BAAQMD, as further discussed under Impact B). The impact would be less than significant.

B) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard?

Less Than Significant with Mitigation. The project site is located in the San Francisco Bay Area Air Basin (SFBAAB) under the jurisdiction of the BAAQMD. The SFBAAB is designated as a nonattainment area for ozone and fine particulate matter (PM_{2.5}) under both National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). The SFBAAB is also designated as nonattainment for coarse particulate matter (PM₁₀) under CAAQS, but not NAAQS. The project could have a cumulatively considerable impact on air quality if it either (1) resulted in emissions above the significance thresholds or (2) violated any action in an attainment plan.

BAAQMD prepared the 2001 Ozone Attainment Plan to reduce ozone-forming emissions in the SFBAAB to achieve attainment of NAAQS and CAAQS ozone standards (BAAQMD, 2001). BAAQMD thresholds for ozone precursor pollutants (ROGs and NO_x) and particulate matter (PM₁₀ and PM_{2.5}) are the thresholds at which a project would be considered to have a cumulatively considerable net increase of any criteria pollutant for which the region is nonattainment.

Operation of vehicles and equipment during project construction would emit diesel particulate matter and other criteria air pollutants. Construction would occur over approximately 6 to 8 months and is assumed to start in January 2022. Construction emissions for the project were calculated using CalEEMod⁶ version 2016.3.2 based on the estimated construction schedule and anticipated equipment use for project construction. The air quality model emissions calculations are provided in Appendix D. Table 6 shows the estimated unmitigated average daily emissions for construction. The emissions generated during the construction would not exceed the BAAQMD significance thresholds for particulate matter (PM₁₀ and PM_{2.5}) and ROGs or NO_x or other ozone precursors. BAAQMD does not set numerical thresholds for fugitive dust generated during construction; however, BAAQMD requires implementation of Best Management Practices (BMPs) to control fugitive dust. Fugitive dust emissions generated during construction have the potential to contribute to an existing air quality violation and result in a significant impact. Mitigation Measure AIR-1 requires implementation of fugitive dust control measures to minimize fugitive dust generation during construction. The impact from violation of an air quality standard or contribution to an existing air quality violation would be less than significant with mitigation.

⁶ The California Emissions Estimator Model (CalEEMod) is a statewide land use emissions computer model used to quantify potential criteria pollutant and greenhouse gas emissions associated with both construction and operations from a variety of land use projects.

INITIAL STUDY

Table 6 Unmitigated Construction Emissions

Year	Estimated Average Daily Pollutant Emissions (pounds/day)					
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NOx)	Carbon Monoxide (CO)	Sulfur Dioxide (SO ₂)	Fine Particulate Matter (PM ₁₀)	Coarse Particulate Matter (PM _{2.5})
2022	1.6	15.5	15.9	0.0	0.7	0.7
BAAQMD Emissions Threshold	54	54	--	--	82 (exhaust only)	54 (exhaust only)
Threshold Exceeded?	No	No	--	--	No	No

Mitigation Measure AIR-1: Dust and Engine Emissions Control Measures

The County or their contractor shall implement the following dust and engine emissions control measures during construction:

8. Water or dust palliatives shall be applied to all exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) and other surfaces that could give rise to airborne dust as needed to control dust.
9. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
10. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers or other effective method as necessary to control project-related dust on public roads. The use of dry power sweeping is prohibited.
11. All vehicle speeds on unpaved roads shall be limited to 15 mph.
12. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
13. Construction equipment will be properly maintained by a certified mechanic.
14. Post a publicly visible sign at work areas where grading activities occur near public and residential areas with the telephone number and person to contact at the County regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

C) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Sensitive receptors are typically defined as the segment of the population most susceptible to air quality effects including children, the elderly, and the sick, as well as land uses such as schools, hospitals, parks, and residential communities. Five residences are located with 1,000 feet from the project site. The nearest sensitive receptor to the project site is approximately 20 feet away from the closest proposed construction along Freestone Flat Road and 220 feet from the center of the existing bridge. During project construction, localized air emissions of criteria constituents would be generated from construction vehicles and equipment powered by internal combustion engines as well as from earth moving activities. Operation of diesel-powered equipment would generate diesel exhaust emissions, a toxic air contaminant.

INITIAL STUDY

While sensitive receptors near the project site may be exposed to contaminants, construction activities would occur for up to 8 months, which is substantially lower than the 30- or 90-year exposure period typically associated with chronic cancer health risks (OEHHA, 2015). In addition, particulate matter emissions decrease dramatically as a function of distance from the source. Although receptors are located close to the project site, most of the construction activities would involve the bridge and would occur at least 150 feet away from any one receptors. Project-related construction activities and associated emissions would be short-term and relatively minor. Exhaust emissions would disperse rapidly from the project site and would not substantially impact the nearest sensitive receptors. As such, the project would not expose sensitive receptors to substantial pollutant concentrations and the impact would be less than significant.

D) Result in substantial emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. Diesel equipment used during project construction may emit objectionable odors associated with combustion of diesel fuel. Diesel emissions, however, would dissipate rapidly and would be temporary and intermittent in nature. Odor impacts associated with diesel combustion during construction activities would be less than significant.

Biological Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

INITIAL STUDY

D) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

Special-Status Species

Definition

Special-status species include:

- Species listed as endangered, threatened, rare, or proposed for listing by USFWS and CDFW,
- Species with a California Native Plant Society (CNPS) California Rare Plant Rank of 1 or 2, and
- Migratory and nesting birds protected under the Migratory Bird Treaty Act and California Fish and Game Code.

Literature Review

The following plant and wildlife agency databases were reviewed to determine the potential for special-status plant and wildlife species to occur in the Biological Study Area (BSA):

- USFWS Information for Planning and Consultation (USFWS, 2019)
- National Marine Fisheries Service (NMFS) November 2016 occurrence records for the Camp Meeker California USGS 7.5-minute topographic quadrangle (NMFS, 2016)
- CNDDDB occurrence records for list of special-status species known to occur within 5 miles of the project site (CDFW, 2019)
- CNPS database of California Rare Plant Rank (CRPR) 1 and 2 species with potential to occur within the Camp Meeker California USGS 7.5-minute topographic quadrangle (CNPS, 2019)

Special-status species identified from the database review are listed in Table 7. Species were determined to have potential to occur if suitable habitat is present in the BSA.

TABLE OF CONTENTS

Table 7 Potential for Special-Status Species to Occur in the BSA

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
INSECTS					
Myrtle's Silverspot Butterfly	<i>Speyeria zerene myrleae</i>	FE	Myrtle's silverspot butterflies are typically found in coastal dunes, prairies and scrublands up to 1000 feet above sea level and as far as 3 miles inland.	A	None. No suitable habitat in the BSA.
San Bruno Elfin Butterfly	<i>Callophrys mossii bayensis</i>	FE	San Bruno Elfin butterflies inhabit rocky outcrops and cliffs in coastal shrub on the San Francisco Peninsula.	A	None. No suitable habitat in the BSA.
CRUSTACEANS					
California Freshwater Shrimp	<i>Syncaris pacifica</i>	FE, SE	Found in low elevation, low gradient streams with moderate to heavy riparian cover, in shallow pools away from main stream-flow. California freshwater shrimp can be found in under-cut banks with exposed roots during winter, and can be found in leafy branches touching water during summer.	HP	Moderately likely to occur. Most of the BSA lacks vegetation near the water, but there are some undercut banks within the BSA that could provide suitable habitat for California freshwater shrimp. The shrimp is known to occur in Salmon Creek downstream of the BSA.
FISHES					
CCC Coho Salmon	<i>Oncorhynchus kisutch</i>	FE, SE	Federal endangered listing includes all naturally spawned populations of Coho salmon from the Punta Gorda in Northern California south to the San Lorenzo River in Central California. Require beds of loose, silt-free,	CH, HP	Moderately likely to occur. Coho are known to use Salmon Creek.

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
			<p>coarse gravel for spawning and need cover, cool water and ample dissolved oxygen.</p> <p>Critical habitat designation includes all accessible river reaches in Sonoma County. Salmon Creek in the BSA is accessible and is therefore critical habitat.</p>		<p>Salmon Creek is designated critical habitat for this species. Salmon Creek is a migration corridor and could potentially be a nursery or spawning site.</p>
California Coast Chinook	<i>Oncorhynchus tshawytscha</i>	FT	<p>Naturally spawned Chinook salmon originating from rivers and streams south of the Klamath River to and including the Russian River.</p> <p>Critical habitat designated to include all river reaches and estuarine areas accessible to listed chinook salmon from Redwood Creek (Humboldt County, California) to the Russian River (Sonoma County, California). Salmon Creek in the BSA is not accessible and does not meet the criteria for critical habitat; therefore, the project site is not within a mapped critical habitat for California Coast Chinook.</p>	A	<p>None. Salmon Creek is not known to support CC Chinook salmon. The species was not observed in Salmon Creek during field surveys</p>
CCC Steelhead	<i>Oncorhynchus mykiss (irideus)</i>	FT	<p>Federal threatened listing includes all naturally spawned anadromous steelhead below natural and manmade impassable barriers in coastal basins from Russian River in Sonoma County to Soquel Creek in Santa Cruz County.</p>	CH, HP, P	<p>Present. Coastal steelhead are known to use Salmon Creek for migration and spawning.</p>

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
			Critical habitat is designated to include all river reaches and estuarine areas accessible to listed steelhead in costal river basins from the Russian River to Aptos Creek, California, and the drainages of San Francisco and San Pablo Bays. Salmon Creek in BSA is accessible.		The project area is within designated critical habitat – Bodega Hydrologic Unit. The species was observed by County biologists during field surveys.
Tidewater Goby	<i>Eucyclogobius newberryi</i>	FE	Found primarily in waters of coastal lagoons, estuaries, and marshes. Tidewater gobies live only in California, and historically ranged from Tillas Slough (mouth of the Smith River, Del Norte County) to Agua Hedionda Lagoon (northern San Diego County).	A	None. No suitable habitat in the BSA.
AMPHIBIANS AND REPTILES					
California Red-Legged Frog	<i>Rana draytonii</i>	FT	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Must have access to estivation habitat.	HP	Moderately likely to occur. Wetted channel may provide marginal summer holding habitat and serve as a migratory corridor. Upland areas within the BSA could be used for estivation, no breeding habitat is present in the BSA due to lack of deep water and emergent vegetation.
California Giant Salamander	<i>Dicamptodon ensatus</i>	SSC	Occur primarily in humid coastal forests, especially in Douglas fir, redwood, red fir, and montane and valley-foothill riparian habitats.	A	None. No suitable habitat in the BSA.

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
Foothill Yellow-Legged Frog	<i>Rana boylei</i>	FC	Found in or near rocky streams and rivers. Adults often bask on exposed rock surfaces near streams, and when disturbed will dive into the water and take refuge under submerged rocks or sediments. The species is rarely encountered far from a permanent water source.	HP	Low likelihood to occur. The abundant pools and shallow riffles with coarse rock and small boulders found within the BSA provide suitable habitat for this species; however, Salmon Creek is not a permanent water source and the nearest occurrence of foothill yellow-legged frog is 3 miles from the project area.
Green Sea Turtle	<i>Chelonia mydas</i>	FT	Found near the coastline and around islands and live in bays and protected shores, especially in areas with seagrass beds.	A	None. No suitable habitat in the BSA.
Western Pond Turtle	<i>Actinemys marmorata</i>	FC	This species lives in streams, ponds, lakes, and permanent and ephemeral wetlands.	HP	Moderately likely to occur. The BSA provides suitable habitat for the species. Observations of western pond turtle have been reported in a small farm pond along Salmon Creek 0.6 mile away from the Town of Bodega, approximately 5 miles southwest of the project site.

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
BIRDS					
Burrowing Owl	<i>Athene cunicularia</i>	BCC	Burrowing owls live in open, treeless areas with low, sparse vegetation, usually on gently sloping terrain. They can be found in grasslands, deserts, and steppe environments; on pastures, agricultural fields, and road embankments.	A	None. The BSA includes dense vegetative cover along the creek banks and Freestone Flat Road, non-native grassland, and developed land; therefore, there is no suitable habitat in the BSA.
Marbled Murrelet	<i>Brachyramphus marmoratus</i>	FT	Generally found in calm protected waters near coast, as in bays, inlets, among islands. Sometimes found on lakes near coast. Breeds inland on mountains near coast.	A	None. No suitable habitat in the BSA.
Northern Spotted Owl	<i>Strix occidentalis caurina</i>	FT	Live in forests characterized by dense canopy closure of mature and old-growth trees, abundant logs, standing snags, and live trees with broken tops.	A	None. No suitable habitat in the BSA.
Tricolored Blackbird	<i>Agelaius tricolor</i>	BCC, ST	Found in cattail or tule marshes; forages in fields, farms. Breeds in large freshwater marshes, in dense stands of cattails or bulrushes. At all seasons, including when breeding, does most of its foraging in open habitats such as farm fields, pastures, cattle pens, large lawns.	A	None. No suitable habitat in the BSA.
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	FT	Live mainly among the canopies of deciduous trees. In the West, this species is rare and restricted to the cottonwood-dominated forests	A	None. No suitable habitat in the BSA.

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
			that line larger rivers running through arid country.		
Western Yellow-Billed Cuckoo	<i>Coccyzus americanus occidentalis</i>	FT, SE, BCC	Riparian forest nester found along the broad, lower flood-bottoms of larger river systems. Nests in riparian thickets of willows, often mixed with cottonwoods, with understory of blackberry, nettles, or wild grape.	HP	Moderately likely to occur. Nearest occurrence is approximately 3 miles to north near Occidental. Riparian habitat in the BSA and project disturbance area contains willow trees that provides suitable habitat for the species. No designated critical habitat is present in the project area.
MAMMALS					
American Badger	<i>Taxidea taxus</i>	SSC	Drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Generally associated with treeless regions, prairies, park lands and cold desert areas	HP	Moderately likely to occur. Suitable habitat is present in non-native grassland and coyote brush. Nearest documented occurrence is approximately 1 mile to the south. Not observed during 2019 surveys.
Pallid Bat	<i>Antrozous pallidus</i>	SSC	Locally common bat species at low elevations in California. Uses a wide variety of habitats including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in	HP	Moderately likely to occur. Suitable habitat is present in the BSA. Nearest documented occurrence is approximately 3 miles to the

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
			open, dry habitats with rocky areas for roosting.		northwest. Not observed during 2019 surveys.
Sonoma Tree Vole	<i>Arborimus pomo</i>	SSC	Occurs in old-growth and other forests, mainly Douglas-fir, redwood, and montane hardwood-conifer habitats.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
PLANTS					
Baker's Goldfields	<i>Lasthenia californica</i> ssp. <i>bakeri</i>	CRPR 1B.2	Closed-cone coniferous forest (openings); coastal scrub; meadows and seeps; marshes and swamps.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Baker's Larkspur	<i>Delphinium bakeri</i>	FE, SE, CRPR 1B.1	Grows in decomposed shale in mixed woodland plant communities of Marin County.	A	None. No suitable habitat in the BSA. Only two occurrences of this species were reported to CNDDDB, both in Marin County. Not observed during 2019 surveys.
Baker's Manzanita	<i>Arctostaphylos bakeri</i> ssp. <i>bakeri</i>	SR, CRPR 1B.1	Grows on serpentine and peridotite outcrops, in addition to roadside, chaparral, and open areas.	A	None. No suitable habitat in the BSA. Not observed.
Baker's Navarretia	<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	CRPR 1B.1	Mesic habitats in: <ul style="list-style-type: none"> • Cismontane woodland • Lower montane coniferous forest • Meadows and seeps • Valley and foothill grassland • Vernal pools 	HP	Low likelihood to occur. Potential suitable habitat is present. Not observed during 2019 surveys, which were conducted during the blooming season.

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
Brownish Beaked-Rush	<i>Rhynchospora capitellata</i>	CRPR 2B.2	Mesic habitats including lower montane coniferous forest; meadows and seeps; marshes and swamps; and upper montane coniferous forest.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Burke's Goldfields	<i>Lasthenia burkei</i>	FE, SE, CRPR 1B.1	Occurs in mesic meadows and seeps, and vernal pools.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
California Beaked-Rush	<i>Rhynchospora californica</i>	CRPR 1B.1	Bogs and fens; lower montane coniferous forest; meadows and seeps; freshwater marshes and swamps.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Congested-headed Hayfield Tarplant	<i>Hemizonia congesta</i> ssp. <i>congesta</i>	CRPR 1B.2	Occurs in valley and foothill grassland. Sometimes occurs on roadsides.	HP	Low likelihood to occur. Nearest documented occurrence is approximately 4 miles south of the project site. Not observed during 2019 surveys.
Contra Costa Goldfields	<i>Lasthenia conjugens</i>	FE, SR CRPR 1B.1	Grows in vernal pools, swales, and other depressions in open grassland and woodland communities, often in alkaline soils.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Dark-eyed Gilia	<i>Gilia millefoliata</i>	CRPR 1B.2	Native to the coastline of Oregon and northern California, where it grows in sand dune habitat.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Dwarf Downingia	<i>Downingia pusilla</i>	CRPR 2B.2	Occurs in mesic valley and foothill grassland and vernal pools.	HP	Low likelihood to occur. Potential suitable habitat is present. Not observed during 2019 surveys.

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
Fragrant Fritillary	<i>Fritillaria liliacea</i>	CRPR 1B.2	Often occurs in serpentinite. Occurs in cismontane woodland; coastal prairie; coastal scrub; and valley and foothill grassland	HP	Low likelihood to occur. Nearest documented occurrence is approximately 4 miles northwest of the project site. Not observed during 2019 surveys.
Golden Larkspur	<i>Delphinium luteum</i>	FE, SR, CRPR 1B.1	Occurs in rocky habitats including chaparral; coastal prairie; coastal scrub.	HP	Low likelihood to occur. Nearest documented occurrence is approximately 4 miles northwest of the project site. Not observed during 2019 surveys.
Greene's Narrow-Leaved Daisy	<i>Erigeron greenei</i>	CRPR 1B.2	Occurs in chaparral in serpentinite or volcanic soils.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Many-Flowered Navarretia	<i>Navarretia leucocephala</i> <i>ssp. plieantha</i>	FE, SE, CRPR 1B.2	Occurs in vernal pools.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Marsh Microseris	<i>Microseris paludosa</i>	CRPR 1B.2	<ul style="list-style-type: none"> • Closed-cone coniferous forest • Cismontane woodland • Coastal scrub • Valley and foothill grassland 	HP	Low likelihood to occur. Potential suitable habitat is present. Not observed during 2019 surveys.
Napa False Indigo	<i>Amorpha californica</i> <i>var. napensis</i>	CRPR 1B.2	Inhabits broadleafed upland forest (openings); chaparral; cismontane woodland.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
North Coast Semaphore Grass	<i>Pleuropogon hooverianus</i>	ST, CRPR 1B.1	This species occurs in wetlands, and occasionally non-wetlands. North Coast Semaphore Grass grows in the mixed evergreen forest, north coastal coniferous forest, freshwater wetlands, and wetland-riparian vegetation communities.	HP	Low likelihood to occur. Nearest occurrence was along Bohemian Highway north of Freestone in 1981. Not observed during 2019 surveys.
Oval-Leaved Viburnum	<i>Viburnum ellipticum</i>	CRPR 2B.3	Occurs in chaparral; cismontane woodland; lower montane coniferous forest	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Pappose Tarplant	<i>Centromadia parryi</i> ssp. <i>parryi</i>	CRPR 1B.2	Often occurs in alkaline soils in: <ul style="list-style-type: none"> • Chaparral • Coastal prairie • Meadows and seeps • Marshes and swamps (coastal salt) • Valley and foothill grassland (vernally mesic) 	HP	Low likelihood to occur. Potential suitable habitat is present. Not observed during 2019 surveys.
Pennell's Bird's-Beak	<i>Cordylanthus tenuis</i> ssp. <i>capillaris</i>	FE, SR 1B.2	Closed cone coniferous forest, chaparral. In open or disturbed areas on serpentine within forest or chaparral. 45-305 m. Blooms June-Sept.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Pitkin Marsh Lily	<i>Lilium pardalinum</i> ssp. <i>pitkinense</i>	FE, SE, CRPR 1B.1	Found only in freshwater marshes and wet meadows in western Sonoma County.	A	None. Only three known colonies of Pitkin Marsh lily exist and are found near State Route 116 between Sebastopol and Forestville, 5 miles from the BSA. Not observed during 2019 surveys.

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
Point Reyes Checkerbloom	<i>Sidalcea calycosa</i> <i>ssp. rhizomata</i>	CRPR 1B.2	Marshes and swamps (freshwater, near coast).	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Round-Headed Beaked-Rush	<i>Rhynchospora globularis</i>	CRPR 2B.1	Marshes and swamps (freshwater).	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Saline Clover	<i>Trifolium hydrophilum</i>	CRPR 1B.2	Marshes and swamps; valley and foothill grassland (mesic, alkaline); vernal pools.	HP	Low likelihood to occur. Nearest documented occurrence is approximately 3 miles northwest of the project site. Not observed during 2019 surveys.
Sebastopol Meadowfoam	<i>Limnanthes vinculans</i>	FE, SE, CRPR 1B.1	Found only in the Laguna de Santa Rosa in Sonoma County (approximately 10 miles northeast of the project site) and an area slightly to the south in the Americano Creek and Washoe Creek watersheds.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Serpentine Daisy	<i>Erigeron serpentinus</i>	CRPR 1B.3	Occurs in chaparral in serpentinite and seeps.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Sonoma Alopecurus	<i>Alopecurus aequalis</i> <i>var. sonomensis</i>	FE, CRPR 1B.1	Freshwater marshes and swamps, riparian scrub. Wet areas, marshes, and riparian banks with other wetland species. 5-365 meters. Blooms May-July.	A	None. The only known extant population in Sonoma County is located at Annadel State Park, 16 miles from the BSA. Not observed during 2019 surveys during the blooming season.

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
Sonoma Spineflower	<i>Chorizanthe valida</i>	FE, SE, CRPR 1B.1	Sonoma spineflower was thought to be extinct for 77 years until a population was rediscovered in Abbot's Lagoon at the Point Reyes National Seashore in 1980.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Sonoma Sunshine	<i>Blennosperma bakeri</i>	FE, SE, CRPR 1B.1	Valley and foothill grassland (mesic); vernal pools.	HP	Low likelihood to occur. Potential suitable habitat is present. Not observed during 2019 surveys.
Swamp Harebell	<i>Campanula californica</i>	CRPR 1B.2	Occurs in mesic habitats including bogs and fens; closed-cone coniferous forest; coastal prairie; meadows and seeps; marshes and swamps (freshwater); North Coast coniferous forest.	HP	Low likelihood to occur. Nearest documented occurrence is approximately 5 miles northeast of the project site. Not observed during 2019 surveys.
Thin-Lobed Horkelia	<i>Horkelia tenuiloba</i>	CRPR 1B.2	Occurs in sandy mesic openings in broadleaved upland forest; chaparral; valley and foothill grassland.	HP	Low likelihood to occur. Nearest documented occurrence is approximately 5 miles northeast of the project site. Not observed during 2019 surveys.
Two-Fork Clover/Showy Indian Clover	<i>Trifolium amoenum</i>	FE, CRPR 1B.1	Coastal bluff scrub and valley and foothill grassland (sometimes serpentinite). Bloom period April to June	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Vine Hill Ceanothus	<i>Ceanothus foliosus</i> var. <i>vineatus</i>	CRPR 1B.1	Occurs in chaparral between 45 and 305 meters. Nearly extirpated in Sonoma County.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
Western Leatherwood	<i>Dirca occidentalis</i>	CRPR 1B.2	Occurs in mesic habitats including: <ul style="list-style-type: none"> • Broadleafed upland forest • Closed-cone coniferous forest • Chaparral • Cismontane woodland • North Coast coniferous forest • Riparian forest • Riparian woodland 	HP	Low likelihood to occur. Nearest documented occurrence is over 5 miles west of the project site near Salmon Creek Road. Not observed during 2019 surveys.
Woolly-headed spineflower	<i>Chorizanthe cuspidata</i> var. <i>villosa</i>	CRPR 1B.2	Sandy habitats including coastal dunes, coastal prairies, and coastal scrub between 3 and 50 meters.	A	None. No suitable habitat in the BSA. Not observed during 2019 surveys.
Yellow/Golden Larkspur	<i>Delphinium luteum</i>	FE, SR, CRPR 1B.1	Occur on rocky areas within coastal scrub at elevations up to 100 meters.	A	None. No suitable habitat in the BSA and the elevation of the BSA is outside the range of the species. Now only found in two locations, both on private land.
<p><u>Status Key</u> BCC – USFWS Birds of Conservation Concern CRPR – California Rare Plant Rank: 1B – Rare, threatened, or endangered in California and elsewhere 2B – Rare, threatened, or endangered in California but common elsewhere 4 – Watch list species of limited distribution in California</p> <p><u>Threat Categories</u></p>					

INITIAL STUDY

Common Name	Scientific Name	Status	General Habitat	Habitat Present?	Potential to Occur and Rationale
<p>.1 – Seriously endangered in California .2 – Fairly endangered in California .3 – Not very endangered in California FC – Federal Candidate FE – Federal Endangered FT – Federal Threatened SCT – State Candidate Threatened SE – State Endangered ST – State Threatened SR – State Rare SSC – State Species of Special Concern</p> <p><u>Habitat Key</u> A – Absent: No habitat present and no further work needed. HP – Habitat Present: Habitat is, or may be, present. The species may be present. P – Present: The species is present. CH – Critical Habitat: The project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.</p>					

TABLE OF CONTENTS

Field Survey

On June 11, 2018 and September 10, 2019, Richard Stabler, Sonoma County Senior Environmental Specialist conducted biological resources surveys of the project disturbance areas. During the surveys he conducted a water and wetlands evaluation and an on-site habitat and natural community assessment of the survey area in accordance with the protocol described in *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW, 2018). All plants observed within the survey area were recorded, and plant species were identified using the Jepson eFlora and Sonoma County Flora to the taxonomic level necessary to determine rarity and listing status. Botanical nomenclature follows Jepson eFlora. Vegetation communities within the BSA were mapped to reflect the plant species documented on the site. Additional biological supporting information from the California Natural Diversity Database (CNDDB) and U.S. Fish and Wildlife Service (Service) is included in Appendix B.

Mr. Stabler documented wildlife that were observed during his surveys of the project area. Surveys did not include focused surveys for special-status wildlife or plant species. Biologists observed baseline habitat conditions and biological resources within the project area to further evaluate the potential for listed species and/ or their habitats to occur within the BSA. All wildlife species observed during project surveys and field visits were identified to the lowest taxonomic level for accurate identification and reporting.

Natural Communities and Sensitive Biological Communities

Natural communities are recurring assemblages of plants and animals found in particular physical environments. Three characteristics distinguish natural communities: 1) plant species composition, 2) vegetation structure (e.g., forest, shrubland, or marsh), and 3) a specific combination of physical conditions (e.g., water, light, nutrient levels, and climate). Natural communities within the project area have been mapped by the County (County of Sonoma ISD GIS Central, 2001). Four natural communities were identified in the BSA. The natural communities are described in Table 8 and are shown in Figure 10.

Sensitive natural communities are ranked by the California Department of Fish and Wildlife (CDFW) and given special protection under CEQA. One natural community in the BSA, riparian forest, is considered a sensitive natural community⁷.

Critical and Essential Fish Habitat

The project site is located within critical habitat for Central California Coast (CCC) steelhead and CCC Coho salmon (NOAA, 2005; NOAA, 1997). The project site is within designated Essential Fish Habitat for CCC Coho salmon (NOAA, 2014a) and CC Chinook salmon (NOAA, 2014b).

⁷ The riparian forest in the project area is dominated by California bay (*Umbellularia californica*) and white alder (*Alnus rhombifolia*), and corresponds to the *Manual of California Vegetation* alliance California Bay Forest (California Native Plant Society, 2019). This alliance is ranked S3 and considered a sensitive natural community.

INITIAL STUDY

Wetlands

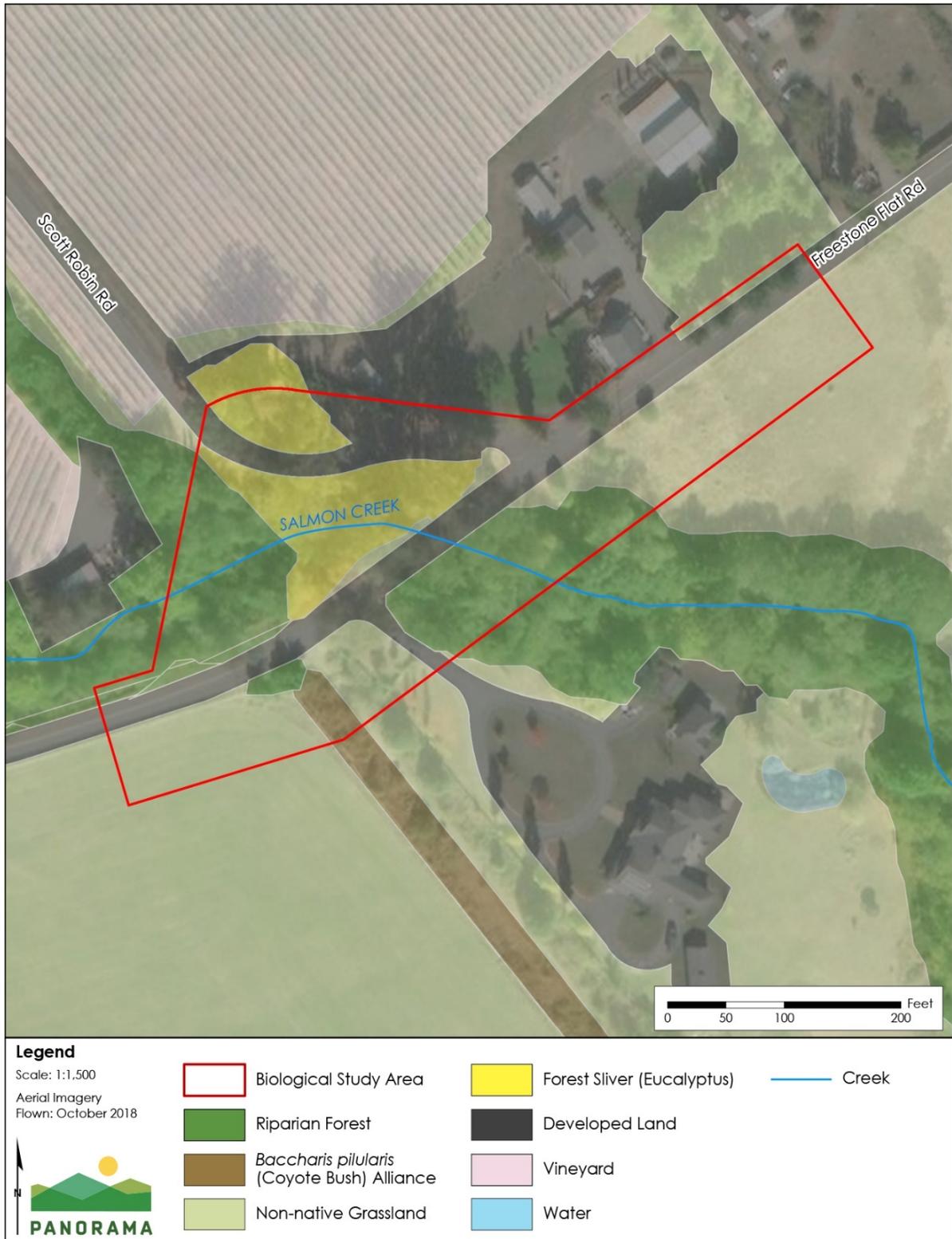
Deborah Waller, Sonoma County Senior Environmental Specialist conducted an evaluation for potential presence of federal and state waters and wetlands on May 16, 2018 on a portion of the northeast bank of Salmon Creek. No wetlands occur in the BSA.

Table 8 Natural Vegetation Communities within the Survey Area

Vegetation Community	Description
Coyote Brush Scrub	Coyote brush scrub is a shrubland that is dominated by coyote brush (<i>Baccharis pilularis</i>). Coyote brush scrub is characterized by coyote brush and a somewhat indistinct assemblage of shrub, sub-shrub, and herbaceous understory associates. The alliance is very common and widespread in northern, coastal, and central California occurring at river mouths, stream sides, terraces, stabilized dunes of coastal bars, spits along the coastline, coastal bluffs, open slopes, and ridges. Soil requirements are variable, ranging from sandy to relatively heavy clay (CNPS, 2019).
Non-Native Grassland	Dominant plants in the non-native grassland include wild oats (<i>Avena barbata</i>), field mustard (<i>Brassica rapa</i>) and wild geranium (<i>Geranium dissectum</i>).
Forest Sliver	The forest sliver in the BSA consists primarily of a eucalyptus grove dominated by blue gum eucalyptus (<i>Eucalyptus globulus</i>).
Riparian Forest	The riparian forest includes trees along the creek banks and terraces, which are dominated by California bay (<i>Umbellularia californica</i>), white alder (<i>Alnus rhombifolia</i>), and willows (<i>Salix spp.</i>). The community also includes bigleaf maple (<i>Acer macrophyllum</i>), box elder (<i>Acer negundo</i>), Oregon ash (<i>Fraxinus latifolia</i>) and plums (<i>Prunus spp.</i>). Shrubs, vines, and herbaceous plant layers are dominated by Himalayan blackberry (<i>Rubus armeniacus</i>), poison oak (<i>Toxicodendron diversilobium</i>), spicebush (<i>Calcanthus occidentalis</i>), creek dogwood (<i>Cornus sericea</i>), Pacific ninebark (<i>Physocarpus capitatus</i>), stinging nettle (<i>Urtica dioica ssp. Gracilis</i>) and mugwort (<i>Artemisia douglasiana</i>).

INITIAL STUDY

Figure 10 **Vegetation Communities**



Sources: (County of Sonoma ISD GIS Central, 2001; CDF, USGS, Sonoma Ecology Center: Compiled by County of Sonoma ISD GIS Central, 2003; DigitalGlobe, 2018; Sonoma County Water Agency, Sonoma County Agricultural Preservation and Open Space District, Sonoma County Vegetation Mapping and LiDAR Program, 2017)

INITIAL STUDY

Environmental Impacts

A) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Less than Significant with Mitigation.

Crustaceans and Fishes

CCC Coho salmon, CCC steelhead, and California freshwater shrimp may occur in Salmon Creek, which traverses the project site. The project would not involve any construction within the wetted portion of Salmon Creek. All work along the creek banks would occur during periods of no or low flow and work would be conducted above the ordinary high-water mark and outside of suitable habitat for CCC Coho salmon, CCC steelhead and California freshwater shrimp.

The project includes removal of approximately 40 trees along the streambank. Tree removal along Salmon Creek could temporarily result in decreased shaded stream habitat, which would cause a reduction in habitat quality for California freshwater shrimp in the immediate area. The majority of removed trees that currently shade Salmon Creek occur within or adjacent to the footprint of the new bridge (refer to Appendix E); therefore, construction of the new bridge is expected to provide equivalent shade to replace the shade lost during tree removal. The current bridge does not provide a substantial amount of shade due to the steel grate deck, which allows sunlight to pass through the deck to the creek below. The project would have a less than significant impact on habitat for special-status fish and shrimp.

Construction equipment, particularly pile drivers, generate vibration and noise. Construction equipment noise and vibration could affect special-status fish if special-status fish were to occur in Salmon Creek at the time of construction. Construction noise and vibration would be temporary and would be isolated to the work area (less than 75 linear feet of Salmon Creek). Furthermore, construction is scheduled to occur during low or no flows when salmonids would not be expected to occur in the area. Construction noise and vibration would, therefore, have a less than significant impact on special-status fish.

The project involves disturbance of 1.303 acres during construction. The ground disturbance could increase sedimentation to Salmon Creek as a result of unstabilized soil conditions or improper storage of fill materials (refer to Hydrology and Water Quality Impact A) for a water quality analysis). Construction equipment could leak or improper handling of hazardous materials could result in spills into Salmon Creek if not properly contained. The County would be required to implement a (SWPPP), which includes implementation of sediment control, spill prevention and cleanup BMPs to protect water quality in Salmon Creek. The impact on special-status fish from sedimentation and other water quality impacts to Salmon Creek would be less than significant. No mitigation is required.

Amphibians and Reptiles

California Red-Legged Frog. The wetted channel of Salmon Creek within the project site contains suitable habitat for California red-legged frog. California red-legged frog use upland habitat for estivation and will hibernate through the dry summer months in moist small mammal burrows, under logs, or under leaf litter. The project would not impact the wetted channel of Salmon Creek, which is potential dispersal habitat for California red-legged frog or breeding habitat in small pools. California red-legged frog could hibernate in upland burrows where grading, vegetation removal, excavation, or equipment access may occur. If California red-legged frog were to occur within the construction area, there is potential for project activities to harm or kill individuals. Construction activities could crush or collapse a burrow containing individual California red-legged frog. The impact on California red-legged frog from construction activities is

INITIAL STUDY

potentially significant. Mitigation Measure BIO-1 requires worker training to aid construction workers in identification and avoidance of California red-legged frog. Mitigation Measure BIO-2 identifies the requirements for the qualified biologist who will implement Mitigation Measures BIO-3 and 4, which require pre-construction surveys, biological monitoring, and exclusion fencing to avoid California red-legged frog. Impacts to California red-legged frog would be less than significant with mitigation.

Construction activities would disturb 1.303 acre and could cause erosion and sedimentation of Salmon Creek, decreasing water quality (refer to Hydrology and Water Quality Impact A) for a water quality analysis). The County is required to implement sediment and erosion control and water quality protection BMPs in accordance with the SWPPP, which would reduce water quality impacts to Salmon Creek. The impact on California red-legged frog from sedimentation, erosion, or other water quality impacts would be less than significant.

Western Pond Turtle. Salmon Creek within the project site provides suitable breeding and dispersal habitat to the western pond turtle. Western pond turtle are known to occur within 300 feet for streams and habitat areas. Construction activities have the potential to impact individual turtles if one were to enter the active construction area. Impacts on western pond turtle are potentially significant. Mitigation Measures BIO-1 requires worker training to aid construction workers in identification and avoidance of western pond turtle. Mitigation Measures BIO-4 and 5 require exclusion fencing, pre-construction surveys, and biological monitoring for western pond turtles to avoid a western pond turtle from entering the project site at the time of construction. Impacts to western pond turtle would be less than significant with mitigation.

Increased sedimentation and turbidity of Salmon Creek caused by construction could affect habitat quality for western pond turtle. The County is required to implement sediment and erosion control and water quality protection BMPs in accordance with the SWPPP, which would reduce water quality impacts to Salmon Creek. The impact on western pond turtle from sedimentation, erosion, or other water quality impacts would be less than significant.

Birds

Western Yellow-Billed Cuckoo. The project would involve tree removal and heavy equipment use within riparian forest where there is a moderate potential for encountering western yellow-billed cuckoo. If western yellow-billed cuckoo individuals or a nest were to occur within the project area during construction, tree removal and use of heavy equipment within riparian forest could inadvertently harass, harm, or kill the birds or disturb or destroy the nest. Nest mortality or abandonment as a result of nearby project activities could adversely affect western yellow-billed cuckoo. Removal of willow trees would impact suitable riparian habitat for western yellow-billed cuckoo, which would reduce opportunities for future nesting and foraging in the area. Impacts on suitable riparian habitat for western yellow-billed cuckoo could indirectly affect the species by removing areas for nesting. The project impacts on western yellow-billed cuckoo are potentially significant. Mitigation Measures BIO-1 requires worker training to aid construction workers in identification and avoidance of nests. Mitigation Measure BIO-2 identifies the requirements for the qualified biologist who will implement Mitigation Measure BIO-8, which requires pre-construction surveys for western yellow-billed cuckoo and the cessation of all nearby project activities whenever an individual is observed on site. Mitigation Measure BIO-6 requires all tree removal to occur outside the nesting season. Mitigation Measure BIO-9 requires revegetation and monitoring of riparian habitat to avoid habitat loss. The direct and indirect impacts from construction activities on the western yellow-billed cuckoo would be less than significant with mitigation.

Mammals

American Badger. Badgers could occur in a den in the project area or pass through the project site during construction. Due to the species' size and mobility, individuals can move away from construction activities,

INITIAL STUDY

such as human presence and the presence of mechanical equipment. Badger dens are typically located from 2 to 7 feet below the ground surface in relatively dry, often sandy, soil. Heavy equipment could potentially crush a badger den, resulting in death or injury of a badger or young. Impacts on American badger are potentially significant. Mitigation Measures BIO-1 requires worker training to aid construction workers in identification and avoidance of badgers. Mitigation Measure BIO-10 requires pre-construction surveys for badger dens, passive relocation of non-breeding badgers, and avoidance of dens occupied by badger cubs. The impact on American badgers from construction activities would be less than significant with mitigation.

Pallid Bat. Pallid bats are colonial bats that roost in crevices and deep fissures in the wood or bark of a tree. Construction activities, including tree removal and demolition of the existing bridge could directly harm or kill roosting bats and result in the loss of roosting sites. A total 40 trees would be removed and of those, six oak trees and two conifers have a diameter⁸ of 10 inches or larger and have potential to provide bat roosting habitat (refer to Appendix E). Removal of oaks and conifers with a diameter of 10 inches or greater would result in an insignificant loss of roost opportunities on the project site, given the densely wooded area surrounding the project site. Loud, mechanical equipment used during construction could force bats roosting in proximity to the project area to leave a roost. The impacts on pallid bat are potentially significant. Mitigation Measures BIO-1 requires worker training to aid construction workers in identification and avoidance of bats. Mitigation Measure BIO-11 requires pre-construction surveys of potential roosting areas and implementation of a Roosting Bat Protection Plan. The impacts on pallid bats from construction activities would be less than significant with mitigation.

Special-Status Plants

The project site provides potential suitable habitat for special-status plant species as shown in Table 7. While no special-status plant species were identified during biological surveys conducted in 2019, several species still have a low potential to occur in proposed work areas at the time of construction. Construction activities could directly impact special-status plants by removing or crushing the plants if they occurred in work areas at the time of construction. Removal of special-status plants through grading would be a significant impact. Mitigation Measure BIO-1 requires worker training to aid construction workers in identification and avoidance of special-status plant species. Mitigation Measure BIO-12 requires pre-construction surveys prior to construction and fencing off any areas of special-status plants for avoidance or transplanting of any special-status plants that cannot be avoided. The impact on special-status plants would be less than significant with mitigation.

Mitigation Measure BIO-1: Worker Environmental Awareness Program (WEAP)

A Service-approved biologist will conduct employee education training for employees working on earthmoving and/or construction activities. Personnel will be required to attend the presentation, which will describe the Federal and State statutes protecting threatened, endangered, and special-status species that may be encountered on site; minimization and conservation measures; legal protection of species; and other related issues. All attendees will sign an attendance sheet along with their printed name, company or agency, email address, and telephone number. The original sign-in sheet will be sent to the Service within seven (7) calendar days of the completion of the training.

Mitigation Measure BIO-2: Qualified Biologist

A biologist(s) approved by the United States Fish and Wildlife Service and CDFW will be on-site during ground disturbance activities (e.g., grading and vegetation removal) that may result in take of

⁸ Diameter at breast height (dbh)

INITIAL STUDY

state or federally threatened and endangered species. The qualified biologist must have experience with identifying all federal and state-listed species, as well as special-status species, with potential to occur as determined in Table 7 of this IS/MND. The biologist shall have specific experience identifying western yellow-billed cuckoo and California red-legged frog during all distinct life stages and experience with implementing conservation and other avoidance and minimization measures for these species and interacting with contractors and construction workers to ensure these measures are enforced. The qualifications of the biologist(s) will be submitted to the Service for review and written approval at least thirty (30) calendar days prior to the date earthmoving is initiated at the project site.

Mitigation Measure BIO-3: California Red-Legged Frog Avoidance, Pre-Construction Survey and Biological Monitoring

The County and their contractor shall implement the following measures to reduce or avoid impacts to California red-legged frog:

- **Pre-Construction Survey.** No more than twenty-four (24) hours prior to the date of initial ground disturbance, a pre-construction survey for the California red-legged frog will be conducted by a Service-approved biologist at the project site. The survey will consist of walking the project limits and within the project site to ascertain the possible presence of the species. The Service-approved biologist will investigate all potential areas that could be used by the California red-legged frog for feeding, breeding, sheltering, movement, and other essential behaviors. This includes an adequate examination of mammal burrows, such as California ground squirrels or gophers. If any adults, sub-adults, juveniles, tadpoles, or eggs are found, the Service-approved biologist will contact the Service to determine if moving any of the individuals is appropriate. In making this determination the Service will consider if an appropriate relocation site exists. If the Service approves moving animals, the County will ensure the Service-approved biologist is given sufficient time to move the animals from the work site before ground disturbance is initiated. Relocation would be completed in accordance with the procedures defined in this mitigation measure, below. Only Service-approved biologists will capture, handle, and monitor the California red-legged frog.
- **Construction Timing.** To the extent practicable, initial ground-disturbing activities will be avoided between November 1 and March 31 because that is the time period when California red-legged frogs are most likely to be moving through upland areas. When ground-disturbing activities must take place between November 1 and March 31, Sonoma County will ensure that daily monitoring by the Service-approved biologist is completed for the California red-legged frog.

To the maximum extent practicable, no construction activities will occur during rain events or within 24-hours following a rain event (with greater than 0.1 inch of rainfall). Prior to construction activities resuming after a rain event non-work period, a Service-approved biologist will inspect the action area and all equipment/materials for the presence of California red-legged frogs. Any California red-legged frog encountered will be allowed to move away from the project site of their own volition or moved only by the Service-approved biologist in accordance with the procedures for California red-legged frog relocation defined below.

- **California Red-Legged Frog Relocation.** Each encounter with the California red-legged frog will be treated on a case-by-case basis in coordination with the Service, but the general procedure is as follows: (1) the animal will not be disturbed if it is not in danger; or (2) the animal will be moved to a secure location if it is in any danger. These procedures are further described below:

INITIAL STUDY

- d. When a California red-legged frog is encountered in the action area, all activities which have the potential to result in the harassment, injury, or death of the individual will be immediately halted. The Service-approved biologist will then assess the situation in order to select a course of action that will avoid or minimize adverse effects to the animal. To the maximum extent possible, contact with the frog will be avoided and the applicant will allow it to move out of the potentially hazardous situation to a secure location on its own volition. This procedure applies to situations where a California red-legged frog is encountered while it is moving to another location. It does not apply to animals that are uncovered or otherwise exposed or in areas where there is not sufficient adjacent habitat to support the species should the individual move away from the hazardous location.
- e. California red-legged frogs that are in danger will be relocated and released by the Service- approved biologist outside the construction area within the same riparian area or watershed. If relocation of the frog outside the fence is not feasible (i.e., there are too many individuals observed per day), the biologist will relocate the animals to a Service pre- approved location. Prior to the initial ground disturbance, Sonoma County will obtain approval of the relocation protocol from the Service in the event that a California red- legged frog is encountered and needs to be moved away from the project site. Under no circumstances will a California red-legged frog be released on a site unless the written permission of the landowner has been obtained by Sonoma County.

The Service-approved biologist will limit the duration of the handling and captivity of the California red-legged frog to the minimum amount of time necessary to complete the task. If the animal must be held in captivity, it will be kept in a cool, dark, moist, aerated environment, such as a clean and disinfected bucket or plastic container with a damp sponge. The container used for holding or transporting the individual will not contain any standing water.

- f. Sonoma County will immediately notify the Service once the California red-legged frog and the site is secure. The contact for this situation is the Coast Bay Division Chief of the Endangered Species Program by email and at telephone (916) 414-6623.

- **Avoid Entrapment**

- Plastic monofilament netting (erosion control matting), loosely woven netting, or similar material in any form will not be used at the project site because California red-legged frogs can become entangled and trapped in them. Any such material found on site will be immediately removed by the Service-approved biologist, construction personnel, or the applicant. Materials utilizing fixed weaves (strands cannot move), polypropylene, polymer or other synthetic materials will not be used.
- Loss of soil from run-off or erosion will be prevented with straw bales, straw wattles, or similar means provided they do not entangle, block escape or dispersal routes of California red-legged frog.
- Trenches or pits one (1) foot or deeper that are going to be left unfilled for more than forty- eight (48) hours will be securely covered with boards or other material to prevent the California red-legged frog from falling into them. If this is not possible, Sonoma County and their contractor will ensure wooden ramps or other structures of suitable surface that provide adequate footing for the California red-legged frog are placed in the trench or pit to allow for their unaided escape. Auger holes or fence post holes that are greater than 0.10 inch in diameter will be immediately filled or securely covered so they do not become pitfall traps for the California red-legged frog. The Service-approved biologist will inspect the trenches, pits, or holes prior to their being filled to ensure there

INITIAL STUDY

are no California red-legged frogs in them. The trench, pit, or hole also will be examined by the Service-approved biologist each workday morning at least one hour prior to initiation of work and in the late afternoon no more than one hour after work has ceased to ascertain whether any individuals have become trapped. If the escape ramps fail to allow the animal to escape, the Service-approved biologist will remove and transport it to a safe location, or contact the Service for guidance.

Mitigation Measure BIO-4: Exclusion Fencing

Temporary exclusion fencing shall be installed around the limits of work areas and access routes to avoid disturbance in unauthorized areas and ensure California red-legged frog or western pond turtle cannot enter the work area after construction commences. Installation of exclusion fencing shall occur under the supervision of the qualified biologist and immediately following a clearance survey of the area. The exclusion fencing shall have a minimum aboveground height of 30 inches, and the bottom of the fence shall be keyed in at least 4 inches deep and backfilled with soil to prevent wildlife from passing under the fencing. Exclusion fencing shall be installed to prevent species entry into active work areas and to mark the limits of construction disturbance at equipment staging areas, site access routes, construction equipment and personnel parking areas, debris storage areas, and any other areas that may be disturbed. The exclusion fencing shall specifically exclude any areas within the limits of the Salmon Creek ordinary high-water mark.

Mitigation Measure BIO-5: Pre-Construction Survey and Biological Monitoring for Western Pond Turtle

The County and their contractor shall implement the following measures to reduce or avoid impacts to western pond turtle:

- A preconstruction survey for western pond turtle shall occur within 48 hours prior to the start of construction activities within the riparian and aquatic habitat in the BSA.
- A qualified biologist will be present during grubbing and clearing activities in the riparian and aquatic habitat in the BSA to monitor for western pond turtle.
- If a western pond turtle is observed in areas of active construction, construction will cease and a qualified biologist will be notified. Construction may resume when the biologist has either relocated the western pond turtle to nearby suitable habitat outside the limits of project construction, or, after thorough inspection, determined that the western pond turtle has moved away from the area of active construction.

Mitigation Measure BIO-6: Nesting Bird Season Avoidance, Pre-Construction Surveys, and Monitoring

The County and their contractor shall implement the following measures to reduce or avoid impacts to nesting birds during construction:

- **Avoid Tree Removal during Nesting Season.** Tree removal and trimming activities shall avoid the bird nesting season (typically February 15 through August 31). Trees that have been identified for removal shall be removed prior to the bird nesting season to avoid impacts to nesting birds. Trees shall be cut at ground level and removed from the site. The stump shall remain in place until after the end of the rainy season (April 15). Tree stumps within the

INITIAL STUDY

roadway prism or in conflict with new bridge foundations may be completely removed during road and bridge construction.

- **Activities During Nesting Season.** If construction commences during the nesting season, the following shall be implemented:
 - A preconstruction survey for nesting birds shall be conducted within 7 days prior to construction within 500 feet of work areas to ensure that no nest shall be disturbed during construction.
 - If active nests of migratory bird species (listed in the MBTA) are found within the project site, or in areas subject to disturbance from construction activities, an avoidance buffer to avoid nest disturbance shall be constructed. The buffer size shall be determined by a qualified biologist and shall be based on the nest location, topography, cover and species' tolerance to disturbance.
 - If an avoidance buffer is not achievable, a qualified biologist shall monitor the nest(s) to document that no take of the nest (nest failure) has occurred. Active nests shall not be taken or destroyed under the MBTA and, for raptors, under the CDFW Code. If it is determined that construction activity is resulting in nest disturbance, work shall cease immediately and the County shall consult with the qualified biologist and appropriate regulatory agencies.
 - If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further action is required. Trees and shrubs within the construction footprint that have been determined to be unoccupied by special-status birds or that are located outside the avoidance buffer for active nests may be removed. Nests initiated during construction (while significant disturbance from construction activities persist) may be presumed to be unaffected, and only a minimal buffer, determined by a qualified biologist, would be necessary.

Mitigation Measure BIO-7: Discourage Bird Nesting on Bridge

To discourage bird nesting on the existing bridge during construction, existing inactive bird nests on the Freestone Flat Road Bridge shall be removed prior to the onset of construction, between September 1 and February 14 (outside of the nesting season). Following removal of inactive nests, nest deterrent measures shall be installed on the existing bridge to prevent establishment of new nests. Techniques to prevent nest establishment include using exclusion devices (see below), removing and disposing of partially constructed and unoccupied nests of migratory or nongame birds on a regular basis to prevent their occupation, or performing any combination of these techniques.

- *Exclusion Device:* Install bird netting from the bridge prior to start of nesting season (i.e. before February 15). If this technique is used, netting shall be in place from mid-February until the bridge is removed. If a nesting deterrent is used, the deterrent shall be monitored for integrity and effectiveness until the bridge is removed.
- *Nest Removal.* Starting before the nesting season (i.e., prior to February 15), the County or its contractor shall visit the site weekly and remove partially completed nests on the bridge using either hand tools or high pressure water. Disturbance or removal of active nests (i.e., nests containing eggs or young) shall not be conducted without the appropriate authorization(s) from the Service and/or the CDFW.

If nests cannot be removed prior to the nesting season (i.e., before February 15), a qualified biologist shall determine if nests are inactive and can be removed before construction begins without disturbing nesting activity. If active nests are identified, construction in the vicinity of the bridge may need to be postponed until nests are determined by a qualified biologist to be inactive or the Service and/or CDFW authorizes the removal of active nests. An effective deterrent to bird nesting shall be installed on the bridge once the nests are removed.

INITIAL STUDY

Mitigation Measure BIO-8: Pre-Construction Surveys and Construction Monitoring for Western Yellow-Billed Cuckoo

Preconstruction surveys for western yellow-billed cuckoo and construction monitoring shall be conducted by a qualified biologist (see Measure BIO-2) in all project areas within suitable habitat and a 500-foot buffer from suitable habitat. In the event that western yellow-billed cuckoo(s) are detected within the work area (the area of active equipment uses), all construction activities in the area shall halt and Caltrans and the Service and CDFW shall be notified by no later than noon of the next business day. Project activities in the area may not proceed until the cuckoo(s) have left the work area. Where cuckoo(s) are detected within 500 feet of the construction area, project activities in the area may proceed with caution under the direction of the qualified biologist who is monitoring the activity of the western yellow-billed cuckoo in the area and has the ability to halt work.

Mitigation Measure BIO-9: Riparian Mitigation and Monitoring Plan

- The County shall enhance or restore 0.021 acre of riparian habitat. The County shall prepare a Riparian Mitigation and Monitoring Plan that addresses mitigation and monitoring for riparian habitat that shall be impacted by the project. The Riparian Mitigation and Monitoring Plan will be provided to CDFW for review and approval and will also address mitigation requirements contained in the CDFW Streambed Alteration Agreement. The plan shall include, at a minimum:
The location of the mitigation site;
- A schematic depicting the mitigation area including initial site photographs;
- The species to be seeded and planted and the ratio of seed mix and/or plantings for each species;
- A work schedule, including names, titles and companies for all individuals who are involved in preparing the plan and conducting activities;
- Specific success criteria;
- A maintenance and monitoring program for 5 years, unless success criteria are met prior to 5 years, in which case maintenance and monitoring would cease; and
- Contingency measures should the success criteria not be met.

Mitigation Measure BIO-10: Protection of Badgers

Prior to construction in badger denning habitat, which is characterized by herbaceous, shrub, and open stages of most habitats with dry, friable soils, a qualified wildlife biologist shall conduct a survey to identify any American badger burrows/dens. No less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities, a qualified biologist shall conduct a survey to determine if American badger den sites are present at the site. If dens are found, they will be monitored for badger activity. If the qualified biologist determines that dens may be active, the entrances of the dens will be blocked with soil, sticks, and debris for 3 to 5 days to discourage the use of these dens prior to project disturbance activities. The den entrances will be blocked to an incrementally greater degree over the 3- to 5-day period. After the qualified biologist determines that badgers have stopped using active dens, the dens will be hand-excavated with a shovel to prevent re-use during construction. No disturbance of active dens will take place when cubs may be present and dependent on parental care, as determined by a qualified biologist.

Mitigation Measure BIO-11: Roosting Bat Protection Plan

A qualified biologist shall conduct a pre-construction survey 14 days prior to tree removal and construction and demolition of the existing bridge. If any active bat roosts are observed within 50 feet

INITIAL STUDY

of the construction area or on the existing bridge a Roosting Bat Protection Plan shall be prepared and implemented. If no active bat roosts are observed, no further measures would be required. The Roosting Bat Protection Plan will be prepared in accordance with guidance from the California Bat Mitigation Techniques Solutions, and Effectiveness (Johnston, Tatarian, & Pierson, 2004).

Mitigation Measure BIO-12: Special-Status Plants Pre-Construction Survey

A qualified botanist shall conduct a pre-construction survey for rare plants within all areas of project disturbance prior to project start. The qualified botanist shall either mark the species for avoidance and Environmental Sensitive Area (ESA) fencing shall be installed to protect the plant or if the plant cannot be avoided, the plant shall be transplanted under the direction of a qualified botanist. Transplanting would only occur if avoidance is not feasible and any transplanted special-status plants would be replanted within a suitable habitat area within the project area under the direction of a qualified botanist.

B) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Less than Significant with Mitigation. Riparian forest is a sensitive natural community found within the project area. Construction would involve vegetation removal and grading in the riparian forest. Willow trees within riparian habitat would be cut, leaving the stumps to regenerate following construction. Only trees that would conflict with the new bridge or realigned roadway would be completely removed. Implementation of the project would result in permanent loss of 0.021 acre of riparian forest and temporary loss 0.185 acre of riparian forest habitat. The permanent loss of riparian habitat would be a significant impact. Impacts to riparian forest habitats would be partially minimized during construction through the implementation of Mitigation Measure BIO-4, which involves the installation of exclusion fencing. Exclusion fencing would delineate the project work areas and keep equipment and personnel from impacting areas outside the exclusion fencing. Mitigation Measure-BIO-9 requires the County to prepare and implement a Riparian Mitigation and Monitoring Plan, which requires compensatory mitigation of riparian habitat. Impacts to the riparian forest sensitive vegetation community would be less than significant with implementation of mitigation.

C) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. No wetlands were identified within the project area (Sonoma County , 2019). The project would not impact any state or federally protected wetlands.

D) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact with Mitigation. Salmon Creek is a migratory corridor for CCC Coho salmon and CCC steelhead, and could potentially serve as a nursery or spawning site for CCC Coho salmon. California red-legged frog could deposit egg masses in Salmon Creek. The project does not include any structures within Salmon Creek and would not create a barrier to fish migration.

Birds could nest and bats could roost in trees within the project area and under the existing bridge. No other native wildlife nursery sites are found on the project site or in the vicinity. Use of noise-generating equipment could disturb roosting birds and bats, impeding use of nursery sites. The impact bat nursery sites is discussed further under impact A) above and is potentially significant.

INITIAL STUDY

The project would involve tree removal and heavy equipment use within riparian forest where there is a high potential for encountering nesting birds protected under California Fish and Game Code. Tree removal could result in nest destruction or mortality of young if the trees were removed during the nesting season, which is typically February through September, and an active nest is present. Tree removal is planned to occur prior to the nesting season; however, impacts on nests could occur if construction were delayed and trees were removed during the nesting season. Bird nests may occur on the existing bridge and could be damaged during removal of the bridge. Use of heavy equipment and the increase in human activity associated with the project could also cause nest abandonment if construction were to occur near an active nest during the nesting season. Loss of an active nest, whether directly through tree or bridge removal, or indirectly due to adjacent noise and activity, would violate Fish and Game Code and the migratory bird treaty act and result in a significant impact. Mitigation Measure BIO-6 requires tree removal to occur outside the nesting season and implementation of specific nest-avoidance procedures during the bird nesting season, including conducting pre-construction nesting bird surveys and establishing buffers around any active nests. Mitigation Measure BIO-7 requires implementation of nest deterrents on the existing bridge to avoid nest establishment prior to bridge removal. The impact on nesting birds would be less than significant with mitigation.

Mitigation Measure BIO-6 requires all tree removal to occur outside the nesting season and for specific procedures to be implemented during the bird nesting season, including conducting pre-construction nesting bird surveys and buffers around any active nests. Mitigation Measure BIO-12 requires pre-construction surveys of potential roosting areas and implementation of a Roosting Bat Protection Plan. The impact on bird and bat nursery sites would be less than significant with mitigation.

The project would not increase traffic along the road or substantially widen the road prohibiting wildlife crossing. The project would not create a new barrier to wildlife movement and the impact on wildlife migration would be less than significant.

E) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant with Mitigation. The Sonoma County Tree Protection Ordinance (Sonoma County Code of Ordinances, Chapter 26, Article 88, Sec. 26-88-010 [m]) establishes policies for protected tree species in Sonoma County. Several species are defined as protected trees (Chapter 26, Article 02, Sec. 26-02-140). Big leaf maple, coast live oak, and California bay are among the tree species designated as protected by the County that were observed within the project area during surveys (Sonoma County, 2019). The County has prepared a Tree Removal Exhibit (Appendix E) for the project. Removal of any protected tree would constitute a significant impact. Mitigation Measure BIO-13 requires replacement of trees and monitoring to ensure success. The impact from construction of the project on protected trees would be less than significant with mitigation.

Mitigation Measure BIO-13: Tree Replacement and Monitoring Plan

Prior to the start of construction, the County shall determine whether the trees identified for removal would fall under protection of the Tree Protection Ordinance. If any protected tree would be removed, the County shall adhere to the requirements of the Sonoma County Tree Protection Ordinance (Section 26-88-010(m)), including by implementing replacement plantings in accordance with the standards set forth therein. Protocols for the installation, monitoring, and successful establishment of replacement plantings shall be specified in a Tree Replacement and Monitoring Plan. The Tree Replacement and Monitoring Plan shall include protocols for replanting of trees removed prior to or during construction, and management and monitoring of the trees to ensure replanting success. Where it is infeasible to replant the total number of trees required on the project site due to size constraints or repeated failure to thrive, the County may replant a selected number of trees off-site or make in-lieu payment fees in

INITIAL STUDY

accordance with the terms of the Ordinance.

F) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The project site is not located within the boundaries of a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The project would not conflict with any adopted or approved conservation plan. No impact would occur.

Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B) Cause a substantial adverse change in the significance of an archaeological resource as defined in § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5? and B) Cause a substantial adverse change in the significance of an archaeological resource as defined in § 15064.5?

Less Than Significant with Mitigation. Archival research was conducted to identify previously recorded historical or archaeological resources within 0.5 mile of the area of potential effect (APE) for the project. The APE included the area of direct impact (project footprint), existing and proposed right-of-way, temporary work areas, and staging areas. Archival research included:

- a records search at the Northwest Information Center, Sonoma State University (NWIC File Nos. 15-0599 and 17-2513),
- an examination of available County records, maps, and aerial photographs,
- consultation with the Native American Heritage Commission, and
- field inspection of the project location.

Research found that the existing bridge was determined to be not eligible for the California Register of Historical Resources (CRHR) during the 1987 Caltrans bridge survey, and its status was reconfirmed in the 2004 update of that study (Caltrans, 2019b). There were no other recorded resources within the APE. A section of the North Pacific Coast Railroad grade is recorded adjacent to the APE, north of Freestone Flat Road (Caltrans, 2019b). The railroad section is outside the APE and would not be affected by the project.

Two properties within the project vicinity are older than 50 years and, thus, potentially eligible for listing

INITIAL STUDY

on the CRHR. Additional research was completed for the two properties to evaluate their historical importance. Neither building would be directly impacted by the project and both buildings were found not eligible for the CRHR.

The archival research and field inspection resulted in no previously recorded archaeological resources within the APE. Five resources were identified within 0.5 mile of the APE, including three prehistoric sites, one historical site, and part of a historic district. No known historical or archaeological resources occur in the APE. Construction of the project would require ground-disturbing work during grading of new road segments, excavation for bridge abutments, and demolition of existing roadways. Due to environmental characteristics of the APE, such as soil types, slope, and proximity to water, the potential for encountering archaeological and historic resources in the project area is considered to be high (Caltrans, 2019a) and the possibility of encountering previously undiscovered historic resources cannot be completely eliminated. Previously undiscovered historic or archaeological resources that are eligible for listing on CRHR could be uncovered during ground disturbing work. Impacts to any previously undiscovered historic or archaeological resources that are eligible for listing on CRHR would be potentially significant. Mitigation Measure CUL-1 requires a professional archaeologist to conduct cultural resources sensitivity training and cessation of work within a 100-foot radius in the event of a cultural resource discovery. Work would not continue until a qualified archaeologist or cultural resources specialist has evaluated the resource and either determined the resource is not CRHR-eligible or completed treatment of a resource that is CRHR-eligible. With implementation of this mitigation measure, the project would not cause a substantial adverse change in the significance of a historical or archaeological resource. Impacts would be less than significant with mitigation.

Mitigation Measure CUL-1: Cultural Resources Sensitivity Training and Inadvertent Discovery

A professional archeologist shall provide sensitivity training to supervisory staff (County staff, biological monitor, and construction foreman) prior to initiation of site preparation and/or construction, to alert construction workers to the possibility of exposing significant historic and/or prehistoric archaeological resources within the project area. The training shall include a discussion of the types of prehistoric or historic objects that could be exposed and how to recognize them, the need to stop excavation at a discovery protection and notification. An "Alert Sheet" shall be posted in staging areas, such as in construction trailers, to alert personnel to the procedures and protocols to follow for the discovery of a potentially significant historic and/or prehistoric archaeological resources.

In the event of an unanticipated discovery of archaeological and/or historical deposits during project implementation, the County shall ensure that construction crews shall stop all work within 100 feet of the discovery until a qualified archaeologist can assess the previously unrecorded discovery and provide recommendations. A qualified cultural resource specialist/archaeologist shall inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts shall occur, the resource shall be documented on California State Department of Parks and Recreation cultural resource record forms and no further effort shall be required. If work must commence in the sensitive area, it can only be performed using hand tools or powered hand tools, cannot include ground disturbance below the topsoil layer, and can only be accessed on foot. Alternatively, the cultural resource specialist/archaeologist shall evaluate the resource and determine whether it is:

- Eligible for the CRHR (and a historical resource for purposes of CEQA), or
- A unique archaeological resource as defined by CEQA.

If the resource meets the criteria for either a historical resource or unique archaeological resource, work shall remain halted and the cultural resources specialist/archaeologist shall consult with the County staff regarding methods to ensure that no substantial adverse change would occur to the significance of

INITIAL STUDY

the resource pursuant to CEQA Guidelines Section 15064.5(b).

Avoidance of the area, or avoidance of impacts on the resource, is the preferred method of mitigation for impacts on cultural resources and shall be required unless there are other equally effective methods. Other methods to be considered shall include evaluation, collection, recordation, and analysis of any significant cultural materials in accordance with a Cultural Resources Management Plan prepared by the qualified cultural resource specialist/archaeologist. The methods and results of evaluation or data recovery work at an archaeological find shall be documented in a professional level technical report to be filed with California Historical Resources Information System.

Work may commence upon completion of evaluation, collection, recordation, and analysis, as approved by the qualified archeologist.

C) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant with Mitigation. No evidence of human remains was identified within the project area during the records search or pedestrian survey; however, the potential for the presence of human remains cannot be eliminated entirely. Disturbance of previously undiscovered human remains during construction would result in a potentially significant impact. In the event human remains are discovered, Mitigation Measure CUL-2 requires cessation of ground-disturbing work and adherence to appropriate excavation, removal, recordation, analysis, custodianship, and final disposition protocols, which would ensure that impacts remain less than significant. Therefore, this potential impact on human remains would be less than significant with mitigation.

Mitigation Measure CUL-2: Human Remains

In the event of an unanticipated discovery of human remains during project implementation, the County shall ensure that construction crews stop all work within 100 feet of the discovery. The County shall treat any human remains and associated or unassociated funerary objects discovered during soil-disturbing activities according to applicable State laws. Such treatment includes work stoppage and immediate notification of the Sonoma County Coroner, requisition of a qualified archaeologist, and in the event that the Coroner’s determination that the human remains are Native American, notification of the Native American Heritage Commission (NAHC), according to the requirements in Public Resources Code (PRC) Section 5097.98. The NAHC would appoint a Most Likely Descendant (MLD). A qualified archaeologist, the County, and the MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5[d]). The agreement would take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, and final disposition of the human remains and associated or unassociated funerary objects. The PRC allows 48 hours to reach agreement on these matters. Work may recommence in the area of discovery following treatment of remains and any associated funerary objects.

Energy

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Result in a potentially significant environmental impact due to wasteful, inefficient, or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

INITIAL STUDY

unnecessary consumption of energy resources, during project construction or operation?				
B) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

No Impact. The construction vehicles and equipment that would be used during construction of the project would consume energy through the combustion of petroleum products, including gas, diesel, and motor oil. Consumption of energy during construction would be temporary, lasting 6 to 8 months, and would cease after the project is completed.

Fuel use would be consistent with typical construction and manufacturing practices and would not require excessive or wasteful use of energy. Construction activities would not reduce or interrupt existing fuel or electricity delivery systems due to insufficient supply. The construction of the project would not result in environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. No impact would occur.

B) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. The Sonoma County Open Space & Resource Conservation Element includes several goals, objectives, and policies designed to promote energy conservation and reduce energy demand. The goals identified do not apply to bridge replacement projects. The project involves construction activities related to bridge installation, roadway approaches realignment, and bridge demolition. The construction activities and operation of the proposed bridge would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. No impact would occur.

Geology and Soils

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

INITIAL STUDY

ii) Strong seismic ground-shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
F) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

No Impact. The project site is not within an Alquist-Priolo Fault Zone or traversed by a fault. The project site is 7.6 miles from the San Andreas fault, the nearest Alquist-Priolo Fault Zone (Taber Consultants,

INITIAL STUDY

2018). The proposed roadway approaches and replacement bridge would be designed to meet current California seismic structure codes and Caltrans seismic standards according to projected ground shaking. The users would not be subject to additional adverse effects cause by the rupture of a known earthquake zone. No impact from fault rupture would occur.

ii) Strong seismic ground shaking?

Less Than Significant Impact. Severe ground shaking has the potential to cause injury to construction workers during construction; however, no active fault zones underline the project site. The nearest faults are approximately 0.7 mile away (Taber Consultants, 2018). The potential for strong seismic shaking during the short (6 to 8 months) construction window is very low. Precautionary measures including adherence to state-mandated safety standards, including federal Occupational Safety and Health Administration (OSHA) regulations (29 Code of Federal Regulations [CFR] 1910.120) and Cal/OSHA regulations (8 CCR Title 8, Section 5192) during construction would minimize hazards to construction workers associated with strong seismic ground shaking. The probability of harm to workers would be minimal.

The proposed roadway approaches and replacement bridge would be designed to meet current California seismic structure codes and Caltrans seismic standards according to projected ground shaking (Seismic Design Criteria v.1.7 April 2013). The new structure would withstand most seismic shaking and would be substantially safer during a seismic event than the existing bridge. The impact from seismic shaking would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Loose and semi-compact granular soil susceptible to liquefaction are present underlying the project site. Groundwater was not observed beneath the project site during test borings (lowest depth 206 feet elevation; top of borings was 242 to 249 feet elevation). Groundwater levels and saturation of the creek bed are expected to fluctuate seasonally and could be encountered in deep foundation excavations (Taber Consultants, 2018).

The proposed roadway approaches and replacement bridge would be designed to meet current California seismic structure codes. The potential for detrimental liquefaction to affect the proposed bridge would be low (Taber Consultants, 2018). The new bridge would be substantially safer during a liquefaction event than the existing bridge. The proposed bridge has been designed to incorporate all necessary geotechnical recommendations, including appropriately sized and located piles, to ensure that liquefaction does not impact the bridge structure. The proposed roadway approaches and replacement bridge would also be designed to meet current California seismic structure codes and Caltrans seismic standards according to projected ground shaking. The impact would be less than significant.

iv) Landslides?

No Impact. The existing creek banks are steep, but the potential for seismic slope instability of the creek banks on the project site is low (Taber Consultants, 2018). Due to slope stability, construction of the project is not anticipated to increase landslide potential. No impact would occur.

B) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Construction of the project would involve grading and earthmoving activities, which would expose soils at the site and could result in soil erosion. Soils underlying the project site are primarily Blucher clay loam and Goldridge fine sandy loam. The erosion hazard varies from slight for Blucher clay loam to slight to moderate for Goldridge fine sandy loam (USDOA, 1972). The areas where soils would be temporarily exposed would be small. The project would involve up to 1.303 acre of surface disturbance through grading or soil stockpiling over the entire construction period. Soil erosion and

INITIAL STUDY

topsoil loss would be limited by implementing standard construction practices and BMPs for erosion and sediment control, consistent with the Sonoma County General Plan Policy OSRC-11b, which requires erosion control measures for any discretionary project involving construction or grading near waterways. Required erosion control measures include protecting exposed slopes, installation of straw wattles, and protection of drainage inlets. The County would be required to enroll in coverage under the Construction General Permit, which requires preparation of a SWPPP for the project due to ground disturbance of greater than 1 acre. The SWPPP would contain soil stabilization and sediment control BMPs required to be implemented during construction. With implementation of these required measures, the impact from erosion would be less than significant.

C) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact with Mitigation. The project site is underlain by the Wilson Grove Formation and the west of the Great Valley complex. As analyzed in Impact A), soils susceptible to liquefaction occur beneath the project site, but the design of the proposed bridge incorporates all necessary geotechnical recommendations to minimize risk. New abutment foundations would be installed and the existing abutments removed, which could destabilize slopes due to excavation and use of heavy equipment. Up to 1,750 cubic yards of material could be needed for fill. Use of inadequate fill soils during construction could also lead to slope destabilization. Construction of the project could destabilize soils resulting in a significant impact. Mitigation Measure GEO-1 requires testing and use of fill material that meets appropriate standards to minimize potential for construction activities to result in slope destabilization. The impact would be less than significant with mitigation.

Mitigation Measure GEO-1: Fill Material Testing and Standards

The fill material recommendations in the final geotechnical evaluation conducted for the project foundations shall be implemented. Fill material recommendations include but are not limited to the following:

- Soils excavated on the project site shall be tested prior to use as fill
- Fill soils used shall have a low expansion potential (expansion index of equal to or greater than 50; sand equivalent of equal to or less than 20), 100 percent passing 3-inch sieve, as approved by a soils engineer

D) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact with Mitigation. Expansive soils generally occur when clay minerals expand during saturation and shrink in volume when dry. Blucher clay loam found in the project area has a high shrink-swell potential, but the Goldridge fine sandy loam has a low shrink-swell potential (USDOA, 1972). The soils tested from the borings did not qualify as expansive, but not all soils proposed for excavation and potential use as fill were tested. Expansive soils, whether imported or native on the project site, have the potential to damage the new bridge, resulting in a significant impact. Mitigation Measure GEO-1 requires implementation of recommended design measures to ensure that fill soils are not expansive. The impact from expansive soil would be less than significant with mitigation.

INITIAL STUDY

E) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. No septic tanks or alternative wastewater disposal systems would be constructed as part of the project. No impact would occur.

F) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant with Mitigation. Fossils could occur in the geologic units underlying the project site. Wilson Grove Formation have been found to contain beds of mollusk and gastropodshell hash. Fossils from the Wilson Grove Formation range in age from late Miocene to late Pliocene, and fossils from the Great Valley complex are from the early Cretaceous (USGS, 2002). Paleontological resources could be unearthed during construction and damaged, resulting in a significant impact. Mitigation Measure GEO-2 requires implementation of training and cessation of work if a resource is uncovered. The project would have less than significant impact with mitigation.

Mitigation Measures GEO-2: Paleontological Resources Sensitivity Training and Inadvertent Discovery

A professional paleontologist shall provide sensitivity training to supervisory staff (County staff, biological monitor, and construction foreman) to alert construction workers to the possibility of exposing significant paleontological resources within the project area. The training shall be conducted to recognize fossil materials in the event that any are uncovered during construction.

In the event that a paleontological resource is uncovered during project implementation, all ground-disturbing work within a 50-foot radius shall be halted. A qualified paleontologist shall inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts shall occur, no further effort shall be required. If the resource cannot be avoided and may be subject to further impact, a qualified paleontologist shall evaluate the resource and determine whether it is “unique” under CEQA, Appendix G, part V. If the resource is determined not to be unique, work may commence in the area. If the resource is determined to be a unique paleontological resource, work shall remain halted, and the paleontologist shall consult with County staff regarding methods to ensure that no substantial adverse change would occur to the significance of the resource pursuant to CEQA. Preservation-in-place (i.e., avoidance) is the preferred method of mitigation for impacts to paleontological resources. If preservation-in-place is not feasible and avoidance is not possible, the fossils shall be recovered, prepared, identified, catalogued, and analyzed according to current professional standards under the direction of a qualified paleontologist. All recovered fossils shall be curated at an accredited and permanent scientific institution according to Society of Vertebrate Paleontology (SVP) standard guidelines. Work may commence upon completion of treatment.

Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

INITIAL STUDY

B) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	-------------------------------------

A) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. The greenhouse gas (GHG) emissions analysis considers both short-term construction and long-term operational impacts associated with a project. BAAQMD has adopted thresholds of significance that were designed to establish the level at which GHG emissions would cause significant environmental impacts under CEQA. The thresholds are included in the 2017 CEQA Air Quality Guidelines (updated May 2017) (BAAQMD, 2017).

As previously discussed, vehicle trips through the project site would not increase following completion of construction and no operational activities are proposed. The project would generate GHG emissions from temporary construction-related activities, including from heavy equipment, truck and worker trips, site preparation, and grading. Greenhouse gas emissions for project construction were calculated using CalEEMod 2016.3.2 based on the estimated construction schedule and anticipated equipment use for project construction. Construction activities would generate a total of 240 metric tons (MT) carbon dioxide equivalent (CO₂e) during 2020. BAAQMD does not have an adopted threshold of significance for construction-related greenhouse gas emissions; however, the threshold for operational impacts is 1,100 MT CO₂e per year. The 30-year amortized⁹ construction GHG emissions would be 8 MT CO₂e, which would be less than the BAAQMD operational threshold of 1,100 MT CO₂e per year. The impact would be less than significant.

B) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases?

No Impact. The California Air Resources Board (CARB) prepared the Climate Change Scoping Plan (Scoping Plan) as directed by the Global Warming Solutions Act (Assembly Bill 32). The GHG reduction goals for California are to achieve 1990 levels by 2020 and 80 percent below 1990 levels by 2050. The Scoping Plan identifies actions for each sector (e.g., transportation, water, waste management) that California should take to meet its climate change goals. CARB prepared the Mobile Source Strategy, which identifies programs that the State and federal government have or will adopt to further the goals of the Scoping Plan.

The vehicles used during construction are required to comply with the applicable GHG reduction programs for mobile sources in accordance with the Scoping Plan to achieve the State's GHG reduction targets. The project would conform with relevant programs and recommended actions detailed in the Scoping Plan and Mobile Source Strategy. The project would not conflict with regulations adopted to achieve the goals of the Scoping Plan.

The Regional Climate Action Plan (CAP), Climate Action 2020 and Beyond was prepared by the Regional Climate Protection Authority in collaboration with Sonoma County and local cities in July 2016. The CAP was developed to combine with state and regional actions to reduce community GHG emissions to 25 percent below 1990 levels by 2020 and make substantial progress towards reductions beyond 2020. The CAP identifies goals and implementation measures to address GHG emissions associated with the following sources: building energy; transportation, land use, and off-road equipment; solid waste; water and

⁹ The 30-year amortization of construction emissions is consistent with industry standard practice.

INITIAL STUDY

wastewater; and livestock and fertilizer (RCPA, 2016). Sonoma County adopted the goals and implementation measures identified in the CAP in May 2018 (County of Sonoma, 2018). The project would be designed and constructed in accordance with current Sonoma County codes and requirements, ensuring compliance with any GHG reduction measures. Construction of the project would not conflict with any existing GHG laws, plans, policies, or regulations. The impact would be less than significant.

Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
D) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
E) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project corridor?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
F) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

INITIAL STUDY

G) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	-------------------------------------	--------------------------	--------------------------

A) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact. Construction equipment and vehicles would use a minimal amount of hazardous materials. Hazardous materials present during project construction may include gasoline, diesel fuel, hydraulic oils, equipment coolants, and any generated wastes that may include these materials. Gasoline and diesel fuel would be stored in small quantities at the staging areas during construction and fueling of some equipment and vehicles would be performed on-site. Although very few residences are located in the area, a hazard to the public or the environment could occur through the transport and use of hazardous materials on the project site. The County would be required to prepare a project-specific Stormwater Pollution Prevention Plan (SWPPP), which would include spill response and control measures. Given the minimal amount of hazardous materials used during construction and requirement of compliance with the spill control and response measures in the SWPPP, the risk to the public and environment from the routine transport, use, or disposal of hazardous materials would be less than significant.

B) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact with Mitigation. The existing bridge is painted and the existing paint has the potential to contain lead (LeCureaux, 2019). Lead-based paint could be released into the environment, including into Salmon Creek, during the disassembly and removal of the bridge. Deposition of lead contaminants into Salmon Creek and the surrounding environment would be a significant impact.

Mitigation Measure HAZ-1 requires the development and implementation of a Debris Collection and Containment Program, including a Lead Compliance Plan, which would prevent the accidental release of lead into the environment. The impact would be less than significant with implementation of mitigation.

Three existing wooden utility poles would be removed and replaced with new poles in a new location. Existing wood poles proposed for removal may have been chemically treated with creosote, pentachlorophenol, or other wood preservatives that require proper handling and disposal. Assembly Bill 1353 requires that treated wood waste be disposed of in a hazardous waste landfill or in a composite-lined portion of a RWQCB-approved solid waste landfill. Compliance with this state regulation would ensure proper disposal of wood poles. Nonetheless, soil around the existing poles may have been contaminated by leached chemicals from the poles and improper disposal of hazardous soils would be a significant impact. Mitigation Measure HAZ-2 requires the County to treat all soil excavated from existing utility pole holes as though it is contaminated and to dispose of soils at a properly permitted landfill in accordance with federal, state, and local regulations for contaminated soils. The impact would be less than significant with mitigation.

Construction equipment and vehicles would use small amounts of hazardous materials including diesel fuel, gasoline, oil, and lubricants. Although a spill or leak of such materials is unlikely, because of the project's location adjacent to Salmon Creek, a spill or leak has the potential to contaminate the waterway. As stated under Impact A), spill response and control would be addressed in the SWPPP. Compliance with the spill control and response measures in the SWPPP would reduce the impacts from hazardous spills to less-than-significant level.

Mitigation Measure HAZ-1: Debris Collection and Containment Program

INITIAL STUDY

Sonoma County shall ensure that a Debris Collection and Containment Program is developed and implemented during project construction. The Program shall include a Lead Compliance Plan and shall ensure that painted bridge materials are treated as a hazardous material and handled in accordance with applicable provisions of Caltrans Standard Special Provisions (2018 or most recent) for the removal of lead paint, Provision 14-11.13, Disturbance of Existing Paint Systems on Bridges. The Program shall also require provisions to protect worker safety and health in compliance with Title 8 California Code of Regulations, including § 1532.1., and provisions for the proper handling and disposal of debris in accordance with all applicable Federal State and local hazardous waste laws.

The contractor shall be required to prepare and submit drawings to the County of the containment systems to be used. The containment system may include the following containment procedure or similar procedure that adequately prevents accidental release of lead paint into the environment:

- Local containment shall be installed prior to removing the bridge for the purpose of containing all paint flakes. Containment shall consist of using tarps to enclose the sides and bottoms of the existing trusses within 10 feet of the support locations and bridge pick-up points (i.e., locations that are used to connect equipment for the purpose of lifting the bridge).
- Where the existing paint is not flaking, the contractor shall have the option of applying a clear coat of paint instead of enclosing the trusses with tarps.
- Following installation of containment tarps and/or clear coat of paint, the existing bridge shall be lifted in one piece from its supports at the abutments and interior pier.
- Further truss disassembly, removal, transport and disposal shall be subject to existing laws and regulations.

Mitigation Measure HAZ-2: Contaminated Soil Disposal

If the County is responsible for removing and/or relocating existing utility poles during project construction, all soil that is excavated during the removal of existing utility poles shall be treated as hazardous materials and shall be transported and disposed of in compliance with federal, state, and local regulations. Excavated holes shall be backfilled with certified clean fill material.

C) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

No Impact. No schools are located within 0.25 mile of the project site. The nearest school is Salmon Creek Middle School located approximately 0.8 mile to the north of the project site. The project would not pose a hazard to schools.

D) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment?

No Impact. The project site is not located on a site included on a list of hazardous materials sites. The project would not result in impacts associated with emissions from hazardous materials site.

E) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project corridor?

No Impact. The project site is not located within an airport use plan or within 2 miles of a public airport or public use airport. The project would have no impact associated with airport hazards.

INITIAL STUDY

F) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. No adopted emergency response plan or emergency evacuation plan applies to the project area. The project would not impair or interfere with any adopted plan.

Refer to Transportation Impact D) for an analysis of impacts on emergency access.

G) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Less than Significant with Mitigation. The project site is located in a State Responsibility Area (SRA) and spans the “moderate” and “high” fire severity zones (CAL FIRE, 2007). Construction equipment could create sparks and ignite a fire. Other potential fire hazards could include worker behavior such as smoking and disposal of cigarettes as well as parking or driving vehicles and equipment on dry vegetation. Mitigation Measure HAZ-3 requires proper fire hazards training and handling of potential ignition sources including vehicles and cigarettes. The impact from fire hazards would be less than significant with implementation of mitigation.

Mitigation Measure HAZ-3: Fire Prevention Procedures

Sonoma County and their contractor shall implement the following fire prevention procedures to reduce the potential risk of fire ignitions during construction:

- Prior to ground disturbing activities, all workers on the project site shall be trained regarding the proper handling and/or storage of materials posing a fire hazards, potential ignition sources (such as cigarettes or sparking equipment), and appropriate types and use of fire protection equipment.
- Fire suppression equipment, including fire extinguishers, water, and shovels, shall be available on-site at all times.
- All ignitions shall warrant a call to the fire department to ensure the ignition is fully extinguished.
- Vehicles shall not be parked in vegetated areas. If vegetated areas must be used for parking, vegetation shall be mowed to a height of less than 4 inches to avoid contact with the underside of vehicles.
- Smoking shall be allowed only inside fully-enclosed vehicles with closed windows. Cigarette butts shall be thoroughly extinguished, properly contained, and transported off-site for disposal.
- Hot work (welding, grinding, cutting, or any other activity that produces flame, sparks, or embers) shall be restricted during red flag warnings or potentially dangerous fire conditions, as determined by the County and communicated to the contractor.

Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

INITIAL STUDY

B) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
E) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

A) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less Than Significant Impact. The project site is bisected by Salmon Creek and is located within the Salmon Creek Watershed (Gold Ridge Resource Conservation District, 2007). In 2012, the North Coast Regional Water Quality Control Board (RWQCB) evaluated turbidity in Salmon Creek for listing on the 303(d) list and concluded that Salmon Creek should not be placed on the section 303(d) list because of insufficient information on background turbidity levels within the water body (North Coast RWQCB, 2012). Salmon Creek and its tributaries are not currently listed on the 303(d) list of impaired waterbodies (SWRCB, 2018).

Construction activities would occur during the dry season when flows in Salmon Creek are low or not

INITIAL STUDY

present. Construction of the project would require grading and other earth-disturbing activities. Excavated or imported materials could be stored on the project site. Gasoline and diesel fuel used in the equipment and vehicles could leak or spill. Pouring of concrete and demolition activities above and directly adjacent to the creek have the potential to generate waste and debris that could impact water quality. Dewatering may be required during excavation for the abutments. Dewatering discharge could impact water quality of the creek. Dewatering and construction activities could occur when low flows are present in Salmon Creek or during spring rain events, resulting in stormwater runoff releasing chemicals or sediments from the project site waterbodies in the vicinity.

Erosion and sedimentation would be limited by implementing standard construction practices and BMPs for erosion and sediment control, consistent with the Sonoma County General Plan Policy OSRC-11b, which requires erosion control measures for any discretionary project involving construction or grading near waterways, and Policy WR-1b, which requires bridges to be designed, constructed, and maintained to minimize sediment and other pollutants in stormwater flows. Required erosion control measures include protecting exposed slopes, installation of straw wattles, and protection of drainage inlets. The required SWPPP would stipulate BMPs to address dewatering discharge, sedimentation, concrete pouring, curing, and washout to impact water quality in the creek. The impact to water quality from construction, demolition, and dewatering activities would be minimized with implementation of temporary construction BMPs. The impact from violation of any water quality standard would be less than significant.

B) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than Significant Impact. The project site is underlain by the Wilson Grove Formation Highlands groundwater basin. The basin underlying the project area is designated as Class 3, which is a “Marginal Groundwater Availability Area”. The basin is not designated as a priority groundwater basin (Sonoma County, 2017). Water needed for dust suppression during construction would be obtained from an existing water source. Groundwater may comprise a portion or all of the water used for dust suppression; however, the quantity of water required would be limited to only what is needed to suppress fugitive dust during up to 8 months of construction. The maximum quantity of water required would be up to 78,000 gallons throughout the construction period.

The project would increase impervious surfaces by 0.19 acre. This incremental increase would be negligible compared to the 64,000-acre groundwater basin and the basin is very low priority (DWR, 2019). Groundwater supplies and groundwater recharge would not be substantially impacted by the project. The impact would be less than significant.

C) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on- or off-site;

Less Than Significant Impact. The existing pier columns would be cut off at or above the ordinary high-water elevation and remain in place in Salmon Creek. The removal of this portion of the pier columns would not alter the drainage of the creek. The installation of new abutments and removal of the existing abutments would occur outside of the ordinary high-water mark and would not substantially alter the drainage of Salmon Creek. The existing piles and abutments would be removed and other activities would occur during construction, which could result in a temporary increase in siltation. The drainage patterns along Freestone Flat Road and Scott Robin Road would remain the same as existing conditions.

The potential for construction activities along the banks of Salmon Creek to result in erosion and siltation of Salmon Creek is analyzed under Impact A). The project would not alter drainage patterns in a manner that could result in substantial erosion and siltation. The impact would be less than significant.

INITIAL STUDY

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; and iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Less Than Significant Impact. The drainage patterns along Freestone Flat Road and Scott Robin Road would remain the same as existing conditions. Drainage from the proposed bridge would sheet flow into Salmon Creek, similar to existing conditions. The project would increase impermeable surfaces by 0.19 acre as a result of the paved roadway approaches and proposed bridge. The increase in impervious surfaces would be negligible compared to the 5 square-mile subwatershed and the 35 square-mile Salmon Creek watershed. The peak 100-year flow at the project site would not increase significantly due to the increase in impervious surfaces (WRECO, 2018).

The potential removal of the existing pier columns and increase in impervious surfaces would not substantially change drainage patterns in a manner that could result in flooding. The impact would be less than significant.

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Less Than Significant Impact. Similar to existing conditions, project runoff would drain directly into Salmon Creek from the new bridge and into outlets into the creek from the roadway approaches. Improvements to the existing roadway drainage infrastructure would be made if necessary. No existing or planned stormwater drainage systems would be impacted by the project. The project would increase impervious surfaces by 0.19 acre; however, the small increase would not contribute additional substantial sources of polluted runoff. The potential for construction activities to result impact water quality, including from polluted runoff, is analyzed under Impact A). The impact would be less than significant.

iv) impede or redirect flood flows?

Less Than Significant Impact. The project site is located within Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) number 06097C0695E, effective December 2, 2008 (FEMA, 2008). The FIRM indicates that the project site is located in an area classified by FEMA as unshaded Zone X, which represents areas that have a minimal flood hazard and are above the 500-year-flood level. No designated flood plains surround Salmon Creek within the project area. The existing pier columns would be cut to the height of the ordinary high-water mark and the pier columns above the ordinary high-water mark would be removed during construction, which would remove this existing barrier to water flow. The change in 100-year water surface elevation was modeled for the existing bridge compared to the proposed bridge. The proposed bridge would result in a maximum decrease in water surface elevation of 0.1 foot upstream compared to the existing bridge, assuming substantial alteration of the pier columns (WRECO, 2018). Because the existing pier columns would be cut off at the ordinary high-water elevation and would remain in place, the water surface elevation is not anticipated to change following completion of the project. The project would not impede or redirect flood flows. The impact would be less than significant.

D) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. As discussed under Impact C, iv), the project site is located in an area classified as a minimal flood hazard (FEMA, 2008). No large water bodies occur in the project area and flooding would not inundate the project site. No impact would occur.

E) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The Water Quality Control Plan for the North Coastal Region (Basin Plan)

INITIAL STUDY

identifies beneficial water uses, water quality objectives to protect the designated beneficial water uses, and strategies and time schedules to achieve water quality objectives. Water quality objectives for surface waters encompass features such as bacteria levels, sediment, pH, and temperature. Strategies include *Total Maximum Daily Loads* required by the Clean Water Act for waterbodies where water quality standards are not currently met.

A project could interfere with the Basin Plan by degrading water quality in such a way that water quality objectives or strategies are not met, and beneficial uses are adversely affected or not achieved. Salmon Creek, which is not listed as an impaired waterbody, is located within the Bodega Hydrologic Unit, which is included in the North Coastal Region Basin. The Basin Plan identifies beneficial uses for Salmon Creek and the downstream Bodega Bay. The potential for construction activities along the banks of Salmon Creek to result in erosion and siltation of Salmon Creek is analyzed under Impact A). Release of sediment and chemicals from the project site could conflict with the beneficial uses identified for Salmon Creek and ultimately Bodega Bay in the Basin Plan. Implementation of the erosion control measures required by Sonoma County and identified in the required SWPPP would minimize temporary impacts. The impact from conflict with the Basin Plan would be less than significant.

Land Use and Planning

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A) Physically divide an established community?

No Impact. The existing roads and bridge would remain open during construction of the proposed bridge, with minimal short-term delays. The proposed bridge would provide the same access as the existing bridge for residents in the area. No impact to established communities would occur.

B) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The project would not change the zoning and land use designations, nor would the replacement of the existing bridge conflict with existing zoning and land uses. The project would not conflict with Sonoma County Zoning Regulations and would not impact applicable land use plans and policies.

INITIAL STUDY

Mineral Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? and B) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. Sonoma County contains areas classified as Mineral Resource Zone (MRZ)-1, MRZ-2a, MRZ-2b, MRZ-3a, MRZ-3b, and MRZ-4 (CGS, 2005). Mining activities in Sonoma County are currently almost exclusively for extraction and processing of aggregate materials such as rock, sand and earth products for use in construction and landscaping. No known mineral resource sites are located on the project site. The project site is not located in mineral resource zone (CGS, 2005). A mercury site is located in approximately 1.3 miles northeast of the project site (USGS, 2019). The project would not result in the loss of available known mineral resource or mineral resource recovery site. No impact would occur.

Noise

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B) Result in generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C) Expose people residing or working in the project area to excessive noise levels, for a project located within the vicinity of a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

INITIAL STUDY

private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport?				
--	--	--	--	--

Sonoma County prepared a Construction Noise Assessment to assess noise impacts generated by construction activities for the project. The Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) was used to calculate the maximum and average noise levels anticipated during each stage of construction. This noise impact analysis is based on the findings of the Construction Noise Assessment, which is included in Appendix C of this IS.

Existing Noise Environment

Background noise levels in the project vicinity are generally low and are mostly natural noises punctuated by occasional manmade noises. Noise sources include vehicles on Freestone Flat Road and Scott Robin Road. The ambient noise level on the project site is assumed to be typical of a quiet, rural region, between 30 and 50 dBA.

CEQA does not specify a numerical threshold for “substantial increases” in noise, and no federal regulations that limit overall environmental noise levels are established; however, federal guidance documents address environmental noise and regulations for specific sources.

The Environmental Protection Agency (EPA) published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety in 1974. This document provides information for state and local governments to use in developing their own ambient noise standards. The EPA determined that a day-night sound level of 55 dBA protects the public from indoor and outdoor activity interference.

The EPA, the FHWA, and the U.S. Department of Transportation (USDOT) have developed guidelines for noise. Under the authority of the Noise Control Act of 1972, the EPA established noise emission criteria and testing methods, published at 40 CFR Part 204, which apply to some construction and transportation equipment (portable air compressors and medium- and heavy-duty trucks). These regulations apply to trucks that would transport equipment to the project site.

Sonoma County has not established quantitative threshold for construction noise.

Groundborne Vibrations

Vibrating objects in contact with the ground radiate energy through the ground. Vibratory motion is commonly described by identifying the peak particle velocity (PPV). PPV is generally accepted as the most appropriate descriptor for evaluating the potential for building damage (Caltrans, 2004). Table 9 provides the vibratory thresholds for damage to structures, depending on the type of construction.

Background vibration levels on the project site are low. Sources include vehicles traveling on Freestone Flat Road and Scott Robin Road. These sources create negligible levels of vibration.

Table 9 Construction Vibration Damage Criteria

Building Category	PPV (inch per second [in/sec])
Reinforced-concrete, steel or timber (no plaster)	0.5
Engineered concrete and masonry (no plaster)	0.3

INITIAL STUDY

Non-engineered timber and masonry buildings	0.2
Buildings extremely susceptible to vibration damage	0.12

Source: (FTA, 2006)

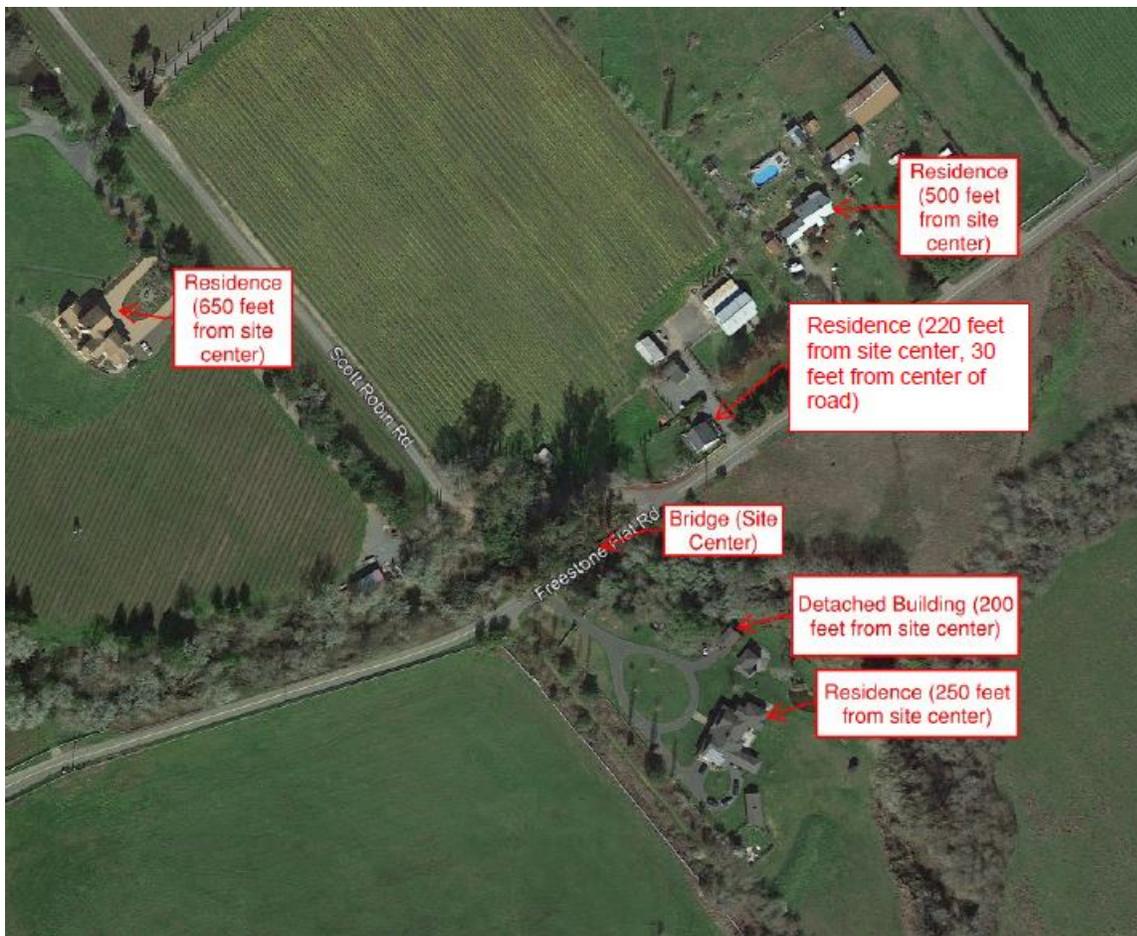
Caltrans recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards, 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and conservative limit of 0.08 in/sec PPV for old buildings or buildings that are documented to be structurally weakened (Caltrans, 2013).

Sonoma County does not have established quantitative vibration limits to regulate construction-related vibration.

Sensitive Noise Receptors

Sensitive receptors are generally defined as land uses that are the most sensitive to noise intrusion. Sensitive receptors typically include hospitals, schools, libraries, and residences. As shown in Figure 11, the nearest sensitive receptor in the project vicinity is a residence approximately 220 feet from the center of the project site. Five residences are located within 1,000 feet of the project (Illingworth & Rodkin, Inc., 2019).

Figure 11 Sensitive Receptors in Project Vicinity



INITIAL STUDY

Environmental Impacts

A) Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?

Less Than Significant with Mitigation. Construction activities would generate a considerable amount of noise in the immediate project vicinity. Noise from vehicles, earth-moving operations, and heavy equipment would result in elevated ambient and intermittent noise levels. Noise impacts from construction depend on various factors, such as:

- the noise generated by various pieces of equipment,
- timing and duration of noise generating activities,
- the distance between construction noise sources and noise-sensitive receptors, and
- the noise environment in which the project would be constructed.

Noise generated during the construction period would vary on a day-to-day basis, depending on the specific activities being undertaken at any given time.

Heavy construction equipment would be used during construction of the project and may generate maximum noise levels up to approximately 88 dBA at a distance of 30 feet (Illingworth & Rodkin, Inc., 2019). Noise levels attenuate at a rate of approximately 6 dBA per doubling of distance from the noise source. The nearest sensitive receptor is approximately 220 feet from the project site center. The loudest hourly noise levels (Leq) at the nearest sensitive receptor is expected to reach up to 74 dBA during construction of the realigned roadway, and reach up to 76 dBA during bridge demolition and wingwall construction (Illingworth & Rodkin, Inc., 2019). Temporary noise increases could negatively impact nearby residents if they were not informed of construction noise levels prior to construction. Implementation of Mitigation Measure NOI-1 requires notification of residents regarding anticipated noise levels and implementation of noise-reduction techniques. Implementation of Mitigation Measure NOI-1 would reduce the construction noise impacts to a less-than-significant level.

Table 10 Noise Level by Construction Stage at Distance of Nearest

Construction Stage	Maximum Noise Level (Lmax, dBA)				Hourly Average Noise Level (Leq[h], dBA)			
	30 ft.	220 ft.	250 ft.	500 ft.	30 ft.	220 ft.	250 ft.	500 ft.
Site Preparation	N/A	71	70	64	N/A	74	74	68
Roadway Approach Realignment	88	71	70	64	91	74	73	67
Approach Tie-ins	88	71	70	64	92	74	73	67
Bridge Demolition and New Bridge Wingwall	N/A	76	75	69	N/A	76	75	69
Site Restoration	N/A	71	70	64	N/A	72	71	65

Source: (Illingworth & Rodkin, Inc., 2019)

Mitigation Measure NOI-1: Noise Reduction Techniques

INITIAL STUDY

Sonoma County and their contractor shall implement the following noise reduction measures to reduce construction noise at nearby receptors:

- The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities and distribute this plan to adjacent noise sensitive receptors.
- Noise generating construction activities shall be restricted to between hours of 7:00 am to 7:00 pm Monday through Friday, 9:00 am to 7:00 pm Saturday. The contractor shall request of the Engineer at least 48 hours in advance of the contractor's intent to work on Sundays or holidays. The contractor shall notify the County if work is necessary outside of these hours. The County shall require the contractor to implement a construction noise monitoring program and, if feasible, provide additional mitigation as necessary (in the form of noise control blankets or other temporary noise barriers, etc.) for affected receptors.
- Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines shall be strictly prohibited.
- Locate stationary noise generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- Utilize "quiet" air compressors and other "quiet" equipment where such technology exists.

B) Result in generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Project construction would generate perceptible vibration in the immediate vicinity of the project site when heavy equipment or impact tools are used. Vibration levels would vary depending on soil conditions, construction methods, and equipment used. The potential for the highest vibration levels would occur during construction at the northern approach road when these activities occur at the nearest point to the residential structure located approximately 220 feet to the north of the bridge site center and 30 feet from the center of Freestone Flat Road. At 30 feet, vibratory rolling¹⁰ would typically produce vibration levels of 0.17 in/sec PPV, below the 0.3 in/sec PPV threshold. Clam-shovel drops as close as 30 feet away from the nearest northern residence would also be expected to result in vibration levels of 0.17 in/sec PPV, below the 0.3 in/sec PPV threshold. Vibration levels from all other sources of vibration, including large bulldozers, would be well below the 0.3 in/sec PPV impact threshold for sound structures. Vibratory impacts to structures would be less than significant.

The level at which humans begin to perceive vibration is 0.015 in/sec. Vibrations at 0.2 in/sec are considered bothersome to most people, while continuous exposure to long-term PPV is considered unacceptable at 0.12 in/sec. At a distance of 30 feet from the center of Freestone Flat Road, the closest receptor may experience bothersome perceived vibration during short-term road work construction activities. At a distance of 220 feet from the site center, vibration levels at the closest receptor would typically be 0.02 in/sec PPV. Although vibration may be perceptible to the closest receptor at times, because of the short duration and relative infrequency of events the impact would be less than significant.

C) Expose people residing or working in the project area to excessive noise levels, for a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport?

No Impact. The project site is not located within 2 miles of a public airport or within an existing or projected

¹⁰ A vibratory roller is a piece of equipment used to compact soil, asphalt or other materials through the application of combined weight and vibrations to increase the load-bearing capacity of the surface.

INITIAL STUDY

airport land use plan. No impact would occur.

Population and Housing

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?

No Impact. The project would not directly or indirectly induce growth in the area. The project involves replacement of an existing bridge. The new bridge and roadway would not provide an extension to new destinations beyond the current extent of the existing road. Construction is expected to last up to 6 to 8 months and would utilize a construction crew of up to 20 workers. The construction workers are anticipated to be local and would not require new or additional housing. No impact would occur.

B) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The project involves replacement of an existing bridge and would not displace any housing or people. No impact would occur.

Public Services

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

INITIAL STUDY

v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-----------------------------	--------------------------	--------------------------	--------------------------	-------------------------------------

A) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services, such as fire protection, police protection, schools, parks, or public facilities?

No Impact. Fire and emergency response would be provided by the Occidental Volunteer Fire Department about 3 miles north of the project site. The nearest police station is location in Sebastopol, approximately 7 miles away from the project site. The nearest school to the project site is located in the community of Occidental, approximately 0.8 mile to the north. No parks or other public facilities are located on the project site or in the vicinity of the project.

The project would not result in substantial direct or indirect population growth during construction; therefore, a project-related increase in demand for public services related to population growth would not occur. Incidents requiring law enforcement, fire protection, or emergency medical services could occur during construction. Any incremental increase in demand for these services during construction would be temporary and would not require construction of new or physically altered facilities to maintain service ratios. No impact to governmental facilities would occur.

Recreation

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. Freestone Flat Road ends at the intersection with Bohemian Highway at approximately 0.2 mile west of the bridge, and it has no outlet east of bridge. Freestone Flat Road serves rural residential areas in the project vicinity and does not provide access to any recreational facilities. Construction of the proposed project would not induce population growth nor increase the use of the existing parks or other recreational facilities such that physical deterioration of the facilities would occur or be accelerated. No impact would

INITIAL STUDY

occur to recreational facilities.

B) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

No Impact. The project would not construct or necessitate the construction of any recreational facilities. No impact would occur.

Transportation

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Conflict with a program, plan, ordinance or policy addressing the circulations system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than Significant Impact. Freestone Flat Road east of the project site has no outlet and serves rural residential areas. The estimated average daily traffic at the bridge is 121 vehicles, making it classified as a low-volume Rural Local Road (Sonoma County, 2019). Scott Robin Road connects to Freestone Flat Road just east of the existing bridge with a single stop sign. Approximately 0.2 mile west of the bridge, Freestone Flat Road ends at the intersection with Bohemian Highway. Bohemian Highway is a major collector and designated as a Class III bikeway¹¹. Freestone Flat Road and Scott Robin Road are local roads (Sonoma County, 2019). The local roadways are County-owned and operate at level of service (LOS) C or better during the weekday PM peak hour (Sonoma County, 2008). No pedestrian facilities, bus routes, or other transit options are located along Bohemian Highway, Freestone Flat Road, or Scott Robin Road.

During construction, workers vehicles and trucks traveling to and from the project site would temporarily

¹¹ Provides shared use with pedestrians or motor vehicles.

INITIAL STUDY

increase traffic. Equipment would be staged on site, minimizing the need for daily transport of equipment. Trucks would haul materials to the site and waste off the site. Water trucks would travel to the site periodically. Local roadways would experience an increase of 4 to 32 one-way trips per day during the up to 8-month construction period, depending on the phase. Peak-hour vehicle trips are anticipated to be up to 14 one-way vehicle trips and construction traffic would travel on County-owned roadways that are not known to operate at LOS D or worse. As such, construction traffic is not anticipated to degrade the operations of any local roadway intersections to LOS E or worse, or roadway segments to LOS D or worse (County of Sonoma, 2016). The temporary, minimal increase in traffic would not conflict with County standards for roadways. Construction activities would not inhibit use of the Bohemian Highway by bicyclists. The project would not conflict with County circulation plans. The impact would be less than significant.

B) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than Significant Impact. In accordance with the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, Section 21099 of the Public Resources Code states that the criteria for determining the significance of transportation impacts must promote: (1) reduction of GHG emissions; (2) development of multimodal transportation networks; and (3) a diversity of land uses. The Office of Planning and Research identifies a screening threshold for small, land use projects as a project that generates or attracts fewer than 110 trips per day. Projects that generate fewer than this threshold may be assumed to cause a less-than-significant transportation impact (OPR, 2017).

Construction activities would generate a maximum of 32 one-way trips per day throughout the active construction period. The daily number of vehicle trips associated with the project would not exceed 110 trips per day, the Office of Planning and Research's screening threshold for conducting a vehicle miles traveled analysis.

The project would involve replacement of an existing bridge to serve the local traffic. Freestone Flat Road is a dead-end road and provides the only access for local residents and agricultural operations in the area. The bridge replacement would not induce vehicle travel or increases in vehicle miles traveled. The impact would be less than significant.

C) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant Impact. Traffic along Freestone Flat Road would generally be maintained throughout construction. Several construction activities may require brief roadway closures of 15 minutes or less, requiring signage and flagmen.

Significant construction activity would occur adjacent to an existing private driveway near the west end of the proposed bridge. The driveway would be temporarily realigned to ensure access for the resident is maintained during construction.

Excavation for the proposed abutments as well as the presence of construction equipment, workers, and vehicles in proximity to traffic may confuse or pose a distraction for drivers and would pose a hazard if a vehicle entered the active work area. Temporary traffic lane shifts, one-lane traffic control with flagging, signage, and temporary K-rails and crash cushions would be implemented during construction to separate traffic on the existing roadway from the new alignment and various construction activities to the south.

The impact on driver safety would be less than significant.

INITIAL STUDY

D) Result in inadequate emergency access?

Less Than Significant Impact with Mitigation. Freestone Flat Road provides the only means of ingress and egress for residences and commercial operations to the east of the existing bridge. The existing Freestone Flat Road Bridge would generally remain open during construction. Traffic delays and temporary closures (up to 15 minutes) could occur intermittently during certain construction activities, which could hinder emergency response. The impact from impeding emergency response could be significant. Mitigation Measure TRA-1 requires advanced notification of any temporary closures be provided to emergency service providers and ensures passage for emergency vehicles be maintained at all times through the project site. The impact to emergency access during project construction would be less than significant with mitigation.

Mitigation Measure TRA-1: Construction Traffic Control Measures

The contractor shall prepare and implement a Traffic Control Plan that includes the traffic safety measures listed below. The contractor shall submit the Traffic Control Plan to the County for review at least 14 days prior to construction.

- Traffic safety guidelines compatible with Section 12, “Temporary Traffic Control,” of the Caltrans *Standard Specifications*, and the *California Manual on Uniform Traffic Control Devices (California MUTCD)* shall be implemented during construction. Project plans and specifications shall require provision of adequate signage and other precautions for public safety during project construction.
- Prior to temporary closures or lengthy delays, signs shall be placed at all entrances to the project site and on major intersecting roads (e.g., Bohemian Highway and Freestone Flat Road) to notify motorists and bicyclists that traffic shall be subject to delay.
- Local emergency service providers (i.e., fire departments, police departments, ambulance, and paramedic services) shall be notified of the construction schedule and potential for delays prior to the start of construction.
- Emergency service providers and parcels along Freestone Flat Road and Scott Robin Road shall be notified of any temporary closures at least 5 days in advance of the closures. The contractor shall provide proof of the notification to the Sonoma County construction staff.
- The contractor shall allow passage of emergency vehicles through the project site at all times.
- The contractor shall maintain access to all driveways to parcels off the project site throughout project construction.

The contractor shall determine the construction schedule for local roadway improvement projects along the truck routes to and from the project site, particularly any lane and road closures. The contractor shall time large haul and material delivery truck trips to avoid traveling along routes where conflicts could occur due to ongoing roadway improvements.

Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Cause a substantial adverse change in the significance of a tribal cultural resource, define in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically				

INITIAL STUDY

defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A) Cause a substantial adverse change in the significance of a tribal cultural resource, define in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant with Mitigation. No CRHR-eligible or listed resources are located within the project site, as discussed under Cultural Resources Impacts A) and B). Pursuant to Assembly Bill (AB) 52, formal notification letters were sent to representatives of nine Native American tribes with traditional or cultural affiliation to the project area. Table 11 summarizes the consultation efforts conducted for the project.

Table 11 Summary of Tribal Consultation

Tribe	Date County Sent Notification	Date Response Received	Nature of Correspondence
Cloverdale Rancheria Band of Pomo Indians	December 11, 2019	No Response	---
Dry Creek Rancheria Band of Pomo Indians	December 11, 2019	No Response	---

INITIAL STUDY

Tribe	Date County Sent Notification	Date Response Received	Nature of Correspondence
Federated Indians of Graton Rancheria	November 19, 2019	December 5, 2019	Initial correspondence was made via phone on November 14, 2019. Buffy McQuillen requested a copy of the Archaeological Survey Report via phone on November 14, 2019. Request for formal AB 52 consultation was received on December 5, 2019. The County transmitted the Archaeological Survey Report via email on January 3, 2020.
Guidiville Indian Rancheria	December 12, 2019	No Response	---
Lytton Band of Pomo Indians	November 20, 2019	No Response	---
Middletown Rancheria Band of Pomo Indians	December 11, 2019	No Response	---
Mishewal Wappo Tribe of Alexander Valley	December 11, 2019	No Response	---
Stewarts Point Rancheria Kashia Band of Pomo Indians	November 20, 2019	November 27, 2019	Stewarts Point Rancheria Kashia Band of Pomo Indians responded on November 27, 2019, that the tribe does not have any concerns or comments regarding the proposed project.
Torres Martinez Desert Cahuilla Indians	December 11, 2019	No Response	---

Two tribes have responded to the AB 52 notification letters as of the date of publication of this Initial Study. Stewarts Point Rancheria Kashia Band of Pomo Indians received the notification letter on November 21, 2019 and responded that the tribe had no concerns or comments regarding the project. The Federated Indians of Graton Rancheria received the notification letter on November 19, 2019 and requested formal AB 52 consultation on December 5, 2019. The County provided a copy of the Archaeological Survey Report to the Federated Indians of Graton Rancheria on January 3, 2020. The County provided the text of Mitigation Measure TCR-1 for review and comment by the Federated Indians of Graton Rancheria on April 30, 2020, May 14, May 21, May 28, and June 22, 2020. On June 23, 2020 the Federated Indians of Graton Rancheria provided comments on the text of Mitigation Measure TCR-1. All comments were incorporated into the mitigation measure.

The project would not impact a known listed or eligible tribal cultural resource. Previously undiscovered tribal cultural resources could be discovered during excavation and ground-disturbing activities. The impact would be potentially significant. Mitigation Measure TCR-1 requires a professional archaeologist to conduct cultural resources sensitivity training and cessation of work within a 50-foot radius in the event of

INITIAL STUDY

a cultural resource discovery. The impact to undiscovered eligible tribal cultural resources would be less than significant with mitigation.

Mitigation Measure TCR-1: Tribal Cultural Resources Inadvertent Discovery

The training and Alert Sheet identified under Mitigation Measure CUL-1 shall also encompass tribal cultural resources. A Tribal Cultural Monitor shall attend the cultural sensitivity training to alert construction workers of potential tribal cultural resources that may occur in the project area.

In the event that an archaeological resource is discovered, ground-disturbing work shall be halted within 100 feet of the find, and a qualified Tribal Cultural Monitor shall be brought to the site. The qualified Tribal Cultural Monitor shall evaluate the resource and determine whether it is of special importance to a California Native American Tribe. If the resource is determined to not be of importance to the tribe, work may commence in the area.

If the resource meets the criteria for an important tribal resource, work shall remain halted within 100 feet of the find, and the qualified Tribal Cultural Monitor shall evaluate the resource and determine whether it is an important resource to the local Native American Tribe. If the resource is important to the tribe, work shall remain halted within 100 feet of the area of the find and the qualified Tribal Cultural Monitor shall consult with County staff regarding methods to ensure that no substantial adverse change would occur to the significance of the tribal cultural resource pursuant to PRC section 21084.3. Methods may include the following:

- Preservation-in-place (i.e., avoidance) is the preferred method of mitigation for impacts on tribal cultural resources.
- Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - Protecting the cultural character and integrity of the resource
 - Protecting the traditional use of the resource
 - Protecting the confidentiality of the resource
- Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- Protecting the resource.

Work in the area may commence upon completion of treatment, as approved by the County.

Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

INITIAL STUDY

could cause significant environmental effects?				
B) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Impacts

A) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact with Mitigation. Water and electric power would be required for construction activities. Water for construction activities would be obtained from a local source and trucked to the project site. Electric power for construction activities would be provided by generators. The project would increase the impervious surfaces by approximately 0.19 acre. Surface runoff from the impervious surfaces would flow to the roadside ditches. The surface runoff would not change the existing drainage patterns. During construction, portable toilets would be transported to the project site for use by construction workers. The portable toilet waste generated during the construction period would be trucked to an appropriate wastewater treatment facility. The wastewater treatment facility would be able to accommodate this small quantity of waste and would not need to be expanded.

Three existing utility poles conveying distribution electricity and telephone utilities would be permanently

INITIAL STUDY

replaced and relocated to accommodate the realignment of Freestone Flat Road. To accommodate the realignment of these utilities, two temporary poles would be installed during construction and removed after the three permanent utility poles are erected. Improvements to the existing roadway drainage infrastructure would be made if necessary. The relocation of and improvements to utilities associated with implementation of the project are analyzed throughout the IS/MND. Relocation of the utility poles would require some tree removal and tree trimming. As analyzed under Biological Resources, Mitigation Measure BIO-6 (Nesting Bird Season Avoidance, Pre-Construction Surveys, and Monitoring) and Mitigation Measure BIO-13 (Tree Replacement and Monitoring Plan) would minimize any impacts related to relocation of the utility poles on biological resources. Implementation of the erosion control measures required by Sonoma County and identified in the required SWPPP would minimize temporary erosion and sedimentation impacts. The impact would be less than significant with mitigation.

B) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less Than Significant Impact. Construction of the project would require up to 78,000 gallons of water over the entire construction period (6 to 8 months). The total volume of water translates to up to 650 gallons of water per day, which is not a substantial amount of water. Water would be obtained from an existing source and trucked to the site daily. Potable water for on-site use would also be obtained from an existing source. Adequate water supplies are available under existing and future conditions due to the minimal volume of water that is required for the short duration of construction and the short-term water use. The project would have less than significant impact on available water supplies.

C) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. Refer to the analysis under Impact A) above for a discussion of the need for portable toilets during construction. Construction of the project is expected to require a maximum of 20 workers per day for up to 8 months. Given the relatively small workforce and the short-term duration of construction, the project would not exceed wastewater treatment provider capacity and the impact would be less than significant.

D) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less Than Significant Impact. Grading activities during construction of the project could result in disposal of up to 1,750 cubic yards of cut soil and materials. Demolition activities would generate paint striping, concrete, wood, and metal waste. Materials would be disposed of at the Central Disposal Site, a Class III landfill that only accepts nonhazardous wastes. This landfill has approximately 9 million cubic yards of capacity remaining (CalRecycle, 2019a). Hazardous waste would be disposed at a Class I or Class II landfill (SWRCB, 2019). Hazardous construction waste from the project is anticipated to be disposed of at the Altamont Landfill & Resource Recovery (Class II and III landfill). The Altamont Landfill & Resource Recovery has approximately 65 million cubic yards of capacity remaining (CalRecycle, 2019b). Adequate capacity is available to accommodate the disposal of materials associated with the project. The impact on landfills would be less than significant.

E) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact with Mitigation. The waste material generated during construction would be transported to an appropriate disposal location in accordance with federal, state, and local statutes and regulations related to solid waste. As analyzed under Hazards and Hazardous Materials, some materials and

INITIAL STUDY

cut soil may be contaminated. Improper disposal of contaminated materials would conflict with regulations pertaining to solid waste, resulting in a significant impact. Mitigation Measure HAZ-1 (Debris Collection and Containment Program) and Mitigation Measure HAZ-2 (Contaminated Soil Disposal) would ensure that any contaminated soils and materials would be handled and disposed of at a properly permitted landfill. The impact would be less than significant with mitigation.

Wildfire

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
A) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project site is located within an area designated as “moderate” and “high” fire hazard severity zones in the state responsibility area (CAL FIRE, 2007). The nearest very high fire hazard severity zone is 16 miles away from the project site.

INITIAL STUDY

A) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. As analyzed under Hazards and Hazardous Materials Impact F), no adopted emergency response plan or emergency evacuation plan applies to the project area. The project would not impair an adopted emergency response or evacuation plans. Freestone Flat Road and bridge provide sole access for residences and commercial operations to the east of the existing bridge. The purpose of the bridge replacement project is to ensure that adequate access for emergency response and evacuation are maintained. The road and bridge would remain open at all times during construction of the proposed bridge. Emergency access or evacuation procedures would not be impaired as a result of the project. No impact would occur.

B) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less than Significant Impact with Mitigation. As analyzed under Hazards and Hazardous Materials Impact G), there would be a small, temporary increase in on-site fire risk during construction due to the presence of construction workers and equipment. This temporary increase of wildfire risk could expose construction workers and residents to smoke or harm from a wildfire if one were ignited, resulting in a significant impact. Mitigation Measure HAZ-3 (Fire Prevention Procedures) requires proper fire hazards training and handling of potential ignition sources including vehicles and cigarettes, as well as restriction of construction during red flag warnings. Mitigation Measures HAZ-3 would minimize the risk of wildfire and subsequent exposure to wildfire-related harm. The impact would be less than significant with mitigation.

C) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less than Significant Impact with Mitigation. Three existing utility poles conveying distribution electricity would be relocated to accommodate the realignment of Freestone Flat Road. Power lines have the potential to arc to vegetation or equipment used during construction and cause a fire. A 15-foot radius would be cleared of vegetation around each pole. Ground-level vegetation would be allowed to reestablish following construction; however, trees would be trimmed to maintain a 15-foot radius around each pole to reduce fire risk potential for the relocated distribution line. Construction workers would follow OSHA standards for work around power lines, including maintaining a safe distance between equipment and power lines, to reduce potential for bodily harm and fire ignition potential. Construction activities associated with installation of the new bridge and relocation of the power lines could temporarily increase risk of wildfire ignition, as analyzed under Hazards and Hazardous Materials Impact G). Mitigation Measure HAZ-3 (Fire Prevention Procedures) would minimize the risk of wildfire. The impact from installation and relocation of infrastructure on fire risk and the environment would be less than significant with mitigation.

D) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less than Significant Impact. Refer to Hydrology and Water Quality Impacts C), iii), and C), iv) for an analysis of impacts related to runoff and flooding. The project would not expose people or structures to significant risks associated with downstream flooding. The impact would be less than significant.

INITIAL STUDY

Mandatory Findings of Significance

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
A) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Impacts

A) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant with Mitigation. Several common and special-status wildlife species are known to occur in Salmon Creek and the project area. The vegetation and wildlife communities that occur or could

INITIAL STUDY

occur within the project site also occur throughout the region. The replacement bridge would not restrict the range of any species.

Potential impacts to the habitat of wildlife species include sedimentation of the creek and removal of riparian and upland vegetation. Implementation of the erosion control measures as part of the SWPPP, along with implementation of Mitigation Measure BIO-9 (Riparian Mitigation and Monitoring Plan) and Mitigation Measure BIO-13 (Tree Replacement and Monitoring Plan), would minimize effects on wildlife habitat and communities. The impact would be less than significant with mitigation.

Construction of the project has the potential to result in significant impacts to special-status species as well as migratory birds. The range and distribution of the common and special-status fish and wildlife species that could occur on the project site is quite large relative to the size of the project site. Construction activities would occur when the flows in Salmon Creek are very low or the creek is dry, minimizing effects on in-water species. As such, the project would not cause a common fish or wildlife population to drop below self-sustaining levels. The impact would be less than significant.

No archaeological resources are recorded or were observed during a field survey within the APE (Caltrans, 2019a). No CRHR-eligible historic resources were found within the APE (Caltrans, 2019b). No impact to known important examples of California history or prehistory would occur. The possibility of encountering previously undiscovered archaeological or historic resources during construction cannot be eliminated and discovered resources may be eligible for listing on the CRHR. Implementation of Mitigation Measure CUL-1 (Cultural Resources Sensitivity Training and Inadvertent Discovery) would ensure that impacts would be less than significant.

B) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).

Less Than Significant with Mitigation. Two cumulative projects within the vicinity of the project site are currently proposed by Sonoma County and are expected to occur in 2020. Both cumulative projects would involve road paving and are part of the Pavement Preservation Program that aims to maintain and improve road conditions in Sonoma County (County of Sonoma, 2019). One project would involve repaving Bohemian Highway from Bodega Highway to Bittner Road, approximately 830 feet west of the project site at the closest point, and the second project would involve repaving Barnett Valley Road from Burnside Road to Bodega Highway, approximately 1.3 miles east of the project site.

Potential impacts associated with the cumulative projects are primarily short-term (construction-related). Construction activities associated with the Bohemian Highway improvements could temporarily emit air pollutants and generate noise that could combine with the project at the receptor off Freestone Flat Road, west of the existing bridge. Improvements along Bohemian Highway would occur in a linear manner and only be located within 1,000 feet of this receptor for a short duration, limiting the potential for cumulative impacts.

Temporary impacts related to delays from lane closures, and construction equipment working along Bohemian Highway could occur. Large haul and material delivery trucks traveling to and from the project site could contribute to increased traffic hazards and delays along Bohemian Highway. The cumulative impact could be significant. Mitigation Measure TRA-1 requires the contractor to coordinate to ensure that large trucks traveling to the project site would not travel along routes when lane or road closures are proposed that could increase delays or hazards. The project’s incremental contribution to cumulative traffic conditions during construction would be reduced to less than cumulatively considerable with mitigation.

INITIAL STUDY

C) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact with Mitigation. This Initial Study identifies potentially significant impacts related to: Agriculture and Forest Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Noise, Transportation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire. Mitigation measures have been identified in the resource impact discussions of this Initial Study to reduce all potentially significant impacts to a less-than-significant level. Impact determinations of “no impact” or “less-than-significant impact” were made for the following environmental issues: Aesthetics, Energy, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, and Recreation. Therefore, with implementation of the mitigation measures specified this Initial Study, the proposed project would not result in substantial adverse effects, direct or indirect, on human beings.

INITIAL STUDY

REPORT PREPARERS

Sonoma County

John Leong, Department of Transportation & Public Works

Quincy Engineering, Inc.

Greg Young, Senior Engineer

Panorama Environmental, Inc.

Angie Alexander, Senior Manager

Rita Wilke, Project Manager

Caitlin Gilleran, Senior Environmental Planner

Yingying Cai, Environmental Planner

Sean Pagnon, Environmental Scientist

INITIAL STUDY

REFERENCES

- BAAQMD. (2001, October 24). *Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard*. Retrieved June 6, 2016, from San Francisco Bay Area Air Quality Management Plans: <http://www.arb.ca.gov/planning/sip/planarea/bayareasip.htm>
- BAAQMD. (2017, May). CEQA Air Quality Guidelines.
- CAL FIRE. (2007, November 7). Sonoma County Fire Hazard Severity Zones in SRA.
- California Department of Conservation. (2015). 2015 Farmland Conversion Report. Retrieved from https://www.conservation.ca.gov/dlrp/fmmp/Pages/FMMP_2010-2012_FCR.aspx
- CalRecycle. (2019a, November 22). *SWIS Facility Detail - Central Disposal Site* . Retrieved from <https://www2.calrecycle.ca.gov/swfacilities/Directory/49-AA-0001/>
- CalRecycle. (2019b, November 22). *SWIS Facility Detail - Altamont Landfill & Resource Recovery* . Retrieved from <https://www2.calrecycle.ca.gov/swfacilities/Directory/01-AA-0009/>
- Caltrans. (2004, June). *Transportation- and Construction-Induced Birbration Guidance Manual* . Retrieved from <https://dot.ca.gov/programs/environmental-analysis>
- Caltrans. (2019a, July). Archaeological Survey Report. *Freestone Flat Road Bridge at Salmon Creek, Bridge Replacement Project*.
- Caltrans. (2019b, July). Historic Resources Evaluation Report. *Freestone Flat Road Bridge at Salmon Creek Bridge Replacement Project*.
- CDC. (2013). Sonoma County Williamson Act FY 2013/2014.
- CDF, USGS, Sonoma Ecology Center: Compiled by County of Sonoma ISD GIS Central. (2003). Stream Polyline GIS dataset. *SCGISDB2_BASE_HYD_USGSSTRM*.
- CDFW. (2018, March 20). Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities .
- CDFW. (2019). *CNDDDB Rarefind 5*. Retrieved from <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>
- CGS. (2005). Mineral Land Classification of Aggregate Materials in Sonoma County, California .
- CNPS. (2019). *Rare Plant Program*. Retrieved from Inventory of Rare and Endangered Plants of California, online edition, v8-03 0.39: <http://www.rareplants.cnps.org>
- County of Sonoma. (2016, May). Guidelines for Traffic Impact Studies.
- County of Sonoma. (2018, May 8). Resolution #18-1066 of the Board of Supervisors of the County of Sonoma, State of California.
- County of Sonoma. (2019). Pavement Plans & Construction District 5.
- County of Sonoma. (2019, January). Visual Assessment Guidelines. Retrieved November 24, 2019, from <https://sonomacounty.ca.gov/PRMD/Regulations/Environmental-Review-Guidelines/Visual-Assessment-Guidelines/>

INITIAL STUDY

- County of Sonoma GIS Central. (2019, June 16). Parcels GIS dataset. Santa Rosa, California.
- County of Sonoma ISD GIS Central. (2001). Sonoma County Centerline GIS dataset. *GIS_MAIN.BASE.TRA_STREETS*.
- County of Sonoma, Permit and Resource Management Department (PRMD). (2012). Sonoma County Zoning Regulations GIS dataset. *Zoning by Aera*.
- DigitalGlobe. (2018, October 24). Aerial Imagery.
- DWR. (2019, April). Sustainable Groundwater Management Act 2019 Basin Prioritization.
- FEMA. (2008, December 2). Flood Insurance Rate Map: Sonoma County, California and Incorporated Areas. *Panel 695 of 1150*.
- FTA. (2006, May). *Transit Noise and Vibration Impact Assessment*. Retrieved from https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf
- Gold Ridge Resource Conservation District. (2007, April 16). The Draft Salmon Creek Watershed Assessment and Restoration Plan.
- Illingworth & Rodkin, Inc. (2019, August 8). Freestone Flat Road Bridge Replacement Project Construction Noise and Vibration Assessment.
- Johnston, D., Tatarian, G., & Pierson, E. (2004, December 29). California Bat Mitigation Techniques Solutions, and Effectiveness . Caltrans.
- LeCureaux, J. (2019, August 13). Freestone Flat Road Bridge Replacement, Federal Project Number BRLO 5920 (127). *Technical Memorandum: Hazardous Materials*.
- NMFS. (2016). *Species List - Intersection of USGS Topographic Quadrangles with NOAA Fisheries ESA Listed Species, Critical Habitat, Essential Fish Habitat, and MMPA Species Data*.
- NOAA. (1997, November 25). Designated Critical Habitat; Central California Coast and Southern Oregon/Northern California Coast Coho Salmon. *Federal Register Vol. 62, No. 227*.
- NOAA. (2005, September 2). Critical Habitat Central California Coast Steelhead.
- NOAA. (2014a). Coho Salmond West Coast States Essential Fish Habitat.
- NOAA. (2014b). Chinook Salmon West Coast States Essential Fish Habitat .
- North Coast RWQCB. (2012). *Final California 2012 Integrated Report(303(d) List/305(b) Report)*. Retrieved from https://www.waterboards.ca.gov/water_issues/programs/tmdl/2012state_ir_reports/00647.shtml
- OEHHA. (2015, February). Air Toxics Hot Spots Program. Risk Assessment Guidelines.
- Quincy Engineering . (2017, March). Project Report Freestone Flat Road over Salmon Creek Bridge Replacement Project .
- Quincy Engineering. (2018, January 31). Freestone Flat Road Bridge Replacment 65% Design Plan.
- RCPA. (2016, July). Climate Action 2020 and Beyond. *Sonoma County Regional Climate Action Plan*.

INITIAL STUDY

- Sonoma County . (2019, September 12). Draft Freestone Flat Road Bridge (20C-0440) Replacement Over Salmon Creek Plant and Wetland Surveys and Wildlife Habitat Assessment .
- Sonoma County. (2008, September 23). Figure CT-3 Level of Service (LOS) Objectives. *Sonoma County General Plan 2020 Circulation and Transit Element*.
- Sonoma County. (2008). Sonoma County General Plan 2020 Land Use Element.
- Sonoma County. (2017, February 23). Procedures for Groundwater Analysis and Hydrogeologic Reports.
- Sonoma County. (2019). Functional Classification GIS Map.
- Sonoma County. (2019, November 14). *Riparian Corridor (RC) Combining Zone*. Retrieved from Sonoma County RPMD Regulation: <https://sonomacounty.ca.gov/PRMD/Regulations/Riparian-Corridors/>
- Sonoma County Water Agency, Sonoma County Agricultural Preservation and Open Space District, Sonoma County Vegetation Mapping and LiDAR Program. (2017, May 19). Sonoma County Vegetation Survey GIS dataset. *SonomaVegMap_5_1_Delivered*. Santa Rosa: Sonoma County Agricultural Preservation & Open Space District.
- SWRCB. (2018, April 6). *2014 and 2016 California Integrated Report*. Retrieved from Clean Water Act Section 303(d) List/ 305(b) Report: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml
- SWRCB. (2019, November 22). *Land Disposal Program - Wastes Allowed for Discharge at Disposal Facilities*. Retrieved from https://www.waterboards.ca.gov/water_issues/programs/land_disposal/walist.html
- Taber Consultants. (2018, January 17). Draft Foundation Report Freestone Flat Road Bridge at Salmon Creek.
- Tele Atlas North America, Inc. (2018). U.S. and Canada Detailed Streets GIS dataset. *ESRI® Data & Maps: StreetMap™*. ESRI.
- U.S. Geological Survey. (2016). National Hydrography Dataset Waterbodies GIS dataset.
- US Geological Survey. (2013). USGS NED 1/3 Arc Second DEM Raster dataset.
- USDOA. (1972, May). Soil Survey Sonoma County, California.
- USFWS. (2019). *Official Species List; Consultation Code 08ESMF00-2019-SLI-2616*.
- USGS. (2002). Geologic Map and Map Database of Western Sonoma, Northernmost Marin, and Southernmost Mendocino Counties, California.
- USGS. (2016). US National Atlas Federal Land Areas.
- USGS. (2019, August 12). *Mineral Resources Data System* . Retrieved from <https://mrdata.usgs.gov/mrds/map-us.html>
- WRECO. (2018, June). Draft Location Hydraulic Study Report. *Freestone Flat Road at Salmon Creek Bridge Replacement Project*.

INITIAL STUDY

This page is intentionally left blank.