Mitigation Monitoring and Reporting Plan

The following Mitigation Monitoring and Reporting Program (MMRP) identifies the Mitigation Measures that will be implemented as part of the Marsh Creek Road Bridge Replacement 143 and 145 Project. The Contra Costa County Public Works Department (CCCPWD) or its Contractors under the supervision of CCCPWD will be responsible for implementing the following measures are implemented.

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
IV. BIOLOGICAL					
BIO-1:	MITIGATION MEASURE BIO-1: Biological Resources Protecti		_	1	T
Disturbance	The following HCP/NCCP general construction requirements will	Prior to and	CCCPWD;	CCCPWD	
special-status	be used within the Biological Study Area and Project vicinity:	during	Construction		
species and their	1) Equipment storage, fueling, and staging areas will be sited on	construction	Contractor;		
species and their habitats	disturbed areas or on ruderal or non-sensitive annual grassland land cover types, when these sites are available, to minimize risk of direct discharge into riparian areas or other sensitive land cover types. 2) No erodible materials will be deposited into watercourses. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks. 3) All no-take species will be avoided. 4) Construction activities will comply with the MBTA and will consider seasonal requirements for birds and migratory non-resident species, including covered species. 5) Temporary creek diversions, if required, will employ sand bags or other approved methods that will minimize in-stream impacts and effects on wildlife. 6) Silt fencing or other sediment trapping methods will be installed down gradient from construction activities, to minimize the transport of sediment off-site. 7) Barriers will be constructed to keep wildlife out of construction sites, as appropriate. 8) On-site monitoring will be conducted throughout the construction phase, to ensure that disturbance limits, BMPs, and Plan restrictions are being implemented properly. 9) Active construction areas will be watered regularly, to minimize the impact of dust on adjacent vegetation and	construction	Contractor; Qualified Biologist		
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Marsh Creek Road Bridge Replacement 143 and 145 Project

Contra Costa County Dept. of Public Works

Project No.: 0662-6R4083

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-1: Disturbance special-status species and their habitats	and under and near bridges, to ensure that entryways remain open and visible to wildlife, and the passage through the culvert or under the bridge remains clear. 11) Cut-and-fill slopes will be revegetated with native, non-invasive nonnative, or non-reproductive (i.e., sterile hybrids) plants, suitable for the altered soil conditions.	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	
	 Follow HCP/NCCP measures will be used to protect Marsh Creek and other hydrologic features in the vicinity: Prior to the start of construction, all portions of Marsh Creek to be avoided by the Project will be temporarily staked in the field by a qualified biologist. Before conducting construction activities, all construction personnel will attend environmental awareness training. At a minimum, the training will include a description of special-status species with the potential to occur on site; an explanation of the status of these species and protection under the Federal Endangered Species Act; the measures to be implemented to conserve listed species and their habitats as they relate to construction sites; and boundaries within which construction may occur. On completion of this training, each person will sign a form, confirming attendance and their understanding of all the avoidance and minimization measures. To eliminate attracting predators of protected species, all food-related trash items (e.g., wrappers, cans, bottles, and food scraps) will be disposed in solid, closed containers (trash cans) and removed from the BSA at the end of each working period. No construction or maintenance vehicles will be refueled within 200 feet of the streams unless a bermed and lined refueling area is constructed and hazardous material absorbent pads are available in the event of a spill. Appropriate erosion-control measures (e.g., fiber rolls, filter fences) will be used on site to reduce siltation and runoff of contaminants into the stream. Filter fences and mesh will be of material that will not entrap reptiles and amphibians. Erosion 	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-1: Disturbance special-status species and their habitats	control blankets will be used as a last resort because of their tendency to biodegrade slowly and to trap reptiles and amphibians. 6) Fiber rolls used for erosion control will be certified as free of noxious weed seed and not contain plastics of any type. 7) Seed mixtures applied for erosion control will not contain invasive nonnative species, and will be composed of native species or sterile nonnative species. 8) Herbicide will not be applied within 100 feet of wetlands, ponds, streams, or riparian woodland/scrub; however, where appropriate to control serious invasive plants, herbicides that have been approved for use by EPA in or adjacent to aquatic habitats may be used as long as label instructions are followed and applications avoid or minimize impacts on covered species and their habitats. In seasonal or intermittent stream or wetland environments, appropriate herbicides may be applied during the dry season to control nonnative invasive species (e.g., yellow star-thistle). Herbicide drift should be minimized by applying the herbicide as close to the target area as possible.	Prior to and during construction	CCCPWD; Construction Contractor	CCCPWD	
	The following general construction requirements will be used to protect Marsh Creek from bridge demolition activities: 1) Flowing water will be protected from demolition and construction activities by diverting the stream into pipes/culverts through the active construction zone. Downstream flow will be maintained at all times. 2) Temporary coffer dams used to redirect flow will consist of sheet piles, gravel bags, water-filled bladder dams, or another agency-approved material. Any water pumped from the work area will be allowed to settle to reduce turbidity prior to being released back into the creek. Temporary coffer dams and diversion pipes will be removed from the creek prior to the winter rainy season. The contractor will be required to prepare and submit a water diversion plan for review and approval by CCCPWD as well as other regulatory agencies as required by the environmental permits. 3) During removal of the existing bridge, a tarp or other approved	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	April 2020

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-1: Disturbance special-status species and their habitats	method will be used below the bridge to prevent debris from falling into Walnut Creek. The tarp will be left in place until the bridge is removed. The contractor will be required to prepare and submit a demolition plan for review and approval by CCCPWD as well as other regulatory agencies as required by the environmental permits. Best management practices will be implemented to control dust which will minimize impacts to biological resources.	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	
BIO-2:	MITIGATION MEASURE BIO-2: California Tiger Salamander	Protective Measure	S		
Disturbance to California Tiger Salamander	Written notification to USFWS, CDFW, and the Implementing Entity, including photos and breeding habitat assessment, is required prior to disturbance of any suitable breeding habitat. The Project proponent will also notify these parties of the approximate date of removal of the breeding habitat at least 30 days prior to this removal to allow USFWS or CDFW staff to translocate individuals, if requested. USFWS or CDFW must notify the Project proponent of their intent to translocate California tiger salamanders within 14 days of receiving notice from the Project proponent. The applicant must allow USFWS or CDFW access to the site prior to construction if they request it.	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	
	There are no restrictions under the HCP/NCCP on the nature of the disturbance or the date of the disturbance unless CDFW or USFWS notify the Project proponent of their intent to translocate individuals within the required time period. In this case, the Project proponent must coordinate the timing of disturbance of the breeding habitat to allow USFWS or CDFW to translocate the individuals. USFWS and CDFW shall be allowed 45 days to translocate individuals from the date the first written notification was submitted by the Project proponent (or a longer period agreed to by the Project proponent, USFWS, and CDFW).				
BIO-3:	MITIGATION MEASURE BIO-3: California Red-Legged Frog	Protective Measures			
Disturbance to California Red- Legged Frog	Written notification to USFWS, CDFW, and the Implementing Entity, including photos and habitat assessment, is required prior to disturbance of any suitable breeding habitat. The Project proponent will also notify these parties of the approximate date of removal of the breeding habitat at least 30 days prior to this removal to allow USFWS or CDFW staff to translocate individuals, if requested.	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-3: Disturbance to California Red- Legged Frog	USFWS or CDFW must notify the Project proponent of their intent to translocate California red-legged frog within 14 days of receiving notice from the Project proponent. The applicant must allow USFWS or CDFW access to the site prior to construction if they request it.	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	
	There are no restrictions under the HCP/NCCP on the nature of the disturbance or the date of the disturbance unless CDFW or USFWS notify the Project proponent of their intent to translocate individuals within the required time period. In this case, the Project proponent must coordinate the timing of disturbance of the breeding habitat to allow USFWS or CDFW to translocate the individuals. USFWS and CDFW shall be allowed 45 days to translocate individuals from the date the first written notification was submitted by the Project proponent (or a longer period agreed to by the Project proponent, USFWS, and CDFW).				
BIO-4: Disturbance to	MITIGATION MEASURE BIO-4: Western Burrowing Owl Prof Prior to any ground disturbance related to covered activities, a	Prior to and	CCCPWD;	CCCPWD	
Western	USFWS/CDFW- approved biologist will conduct a preconstruction	during	Construction	CCCI WD	
Burrowing Owl	survey in areas identified in the planning surveys as having potential burrowing owl habitat. The surveys will establish the presence or absence of western burrowing owl and/or habitat features and evaluate use by owls in accordance with CDFW survey guidelines.	construction	Contractor; Qualified Biologist		
	On the parcel where the activity is proposed, the biologist will survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership will not be surveyed. Surveys should take place near sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls will be identified and mapped. Surveys will take place no more than 30 days prior to construction. During the breeding season (February 1– August 31), surveys will document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1–January 31), surveys will document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results will be				

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-4: Disturbance to Western Burrowing Owl	valid only for the season (breeding or nonbreeding) during which the survey is conducted. If burrowing owls are found during the breeding season (February 1 – August 31), the Project proponent will avoid all nest sites that could be disturbed by Project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance will include establishment of a non-disturbance buffer zone (described below). Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1 – January 31), the Project proponent should avoid the owls and the burrows they are using, if possible. Avoidance will include the establishment of a buffer zone (described below). During the breeding season, buffer zones of at least 250 feet in which no construction activities can occur will be established around each occupied burrow (nest site). Buffer zones of 160 feet will be established around each burrow being used during the nonbreeding season. The buffers will be delineated by highly visible, temporary construction fencing. If occupied burrows for burrowing owls are not avoided, passive relocation will be implemented. Owls should be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors should be in place for 48 hours prior to excavation. The Project area should be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation. Plastic tubing or a similar structure should be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-5:	MITIGATION MEASURE BIO-5: Golden Eagle Protective Measure	sures			
Disturbance to Golden Eagle	Prior to construction, a qualified biologist will conduct a preconstruction survey to establish whether nests of golden eagles are occupied. If nests are occupied, minimization requirements and construction monitoring will be required.	Prior to and during construction	CCCPWD; Construction Contractor; Qualified	CCCPWD	
	Covered activities will be prohibited within 0.5 mile of active nests. Nests can be built and active at almost any time of the year, although mating and egg incubation occurs late January through August, with peak activity in March through July. If site-specific conditions or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller buffer could be appropriate or that a larger buffer should be implemented, the Habitat Conservancy will coordinate with CDFW/USFWS to determine the appropriate buffer size.		Biologist		
	activities occur within the buffer zone established around an active nest. Although no known golden eagle nest sites occur within or near the ULL, covered activities inside and outside of the Preserve System have the potential to disturb golden eagle nest sites.				
BIO-6:	MITIGATION MEASURE BIO-6: Swainson's Hawk Protective			~~~~~	Т
Disturbance to Swainson's Hawk	Prior to any ground disturbance related to covered activities that occurs during the nesting season (March 15–September 15), a qualified biologist will conduct a preconstruction survey no more than 1 month prior to construction to establish whether Swainson's hawk nests within 1,000 feet of the Project Site are occupied. If potentially occupied nests within 1,000 feet are off the Project Site, then their occupancy will be determined by observation from public roads or by observations of Swainson's hawk activity (e.g., foraging) near the Project Site. If nests are occupied, minimization measures and construction monitoring are required (see below). During the nesting season (March 15–September 15), covered activities within 1,000 feet of occupied nests or nests under construction will be prohibited to prevent nest abandonment. If site-specific conditions or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	

County CEQA No.: (CP# 15-41)

Contra Costa County Dept. of Public Works Project No.: 0662-6R4083

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-6:	coordinate with CDFW/USFWS to determine the appropriate	Prior to and	CCCPWD;	CCCPWD	
Disturbance to	buffer size.	during	Construction		
Swainson's Hawk	If young fledge prior to September 15, covered activities can	construction	Contractor;		
	proceed normally. If the active nest site is shielded from view and		Qualified		
	noise from the Project Site by other development, topography, or		Biologist		
	other features, the Project applicant can apply to the Habitat				
	Conservancy for a waiver of this avoidance measure. Any waiver				
	must also be approved by USFWS and CDFW. While the nest is				
	occupied, activities outside the buffer can take place.				
	All active nest trees will be preserved on site, if feasible. Nest trees,				
	including non-native trees, lost to covered activities will be				
	mitigated by the Project proponent according to the requirements				
	stated in the Initial Study Mitigated Negative Declaration.				
BIO-7:	MITIGATION MEASURE BIO-7: Townsend's Big-Eared Bat Pi			~~~~~	
Disturbance to	If the Project does not avoid impacts to suitable habitat for	Prior to and	CCCPWD;	CCCPWD	
Townsend's Big-	Townsend's big-eared bat, a preconstruction survey is required to	during	Construction		
Eared Bat	determine whether the sites are occupied immediately prior to	construction	Contractor;		
	construction or whether they show signs of recent previous		Qualified		
	occupation. Preconstruction surveys are used to determine what		Biologist		
	avoidance and minimization requirements are triggered before				
	construction and whether construction monitoring is necessary.				
	If the species is discovered or if evidence of recent prior occupation				
	is established, construction will be scheduled such that it minimizes				
	impacts on Townsend's big-eared bat. Hibernation sites with				
	evidence of prior occupation will be sealed before the hibernation				
	season (November–March), and nursery sites will be sealed before				
	the nursery season (April–August). If the site is occupied, then the				
	action will occur either prior to or after the hibernation season for				
	hibernacula and after August 15 for nursery colonies. Construction				
	will not take place as long as the site is occupied.				
	The locations of all suitable or occupied microhabitat within the				
	inventory area are not known due to survey and mapping				
	limitations. Hibernacula or nursery sites may be located during				
	planning or preconstruction surveys. Avoiding impacts on occupied				
	sites during sensitive periods will minimize disturbance or direct				
	mortality as a result of covered activities, and sealing sites prior to				
	construction will allow bats to reestablish elsewhere.				

Project No.: 0662-6R4083

County CEQA No.: (CP# 15-41)

A-8

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-8:	MITIGATION MEASURE BIO-8: American Badger Protective	Measures			
Disturbance to American Badger	 If grading or construction begins during the breeding season (March–August), a qualified biologist will conduct a survey of the grassland habitat to identify any badger burrows on site. The survey will be conducted no sooner than 2 weeks before the start of construction. Impacts on active badger dens will be avoided by establishing exclusion zones around all active dens, within which construction-related activities will be prohibited until denning is complete or the den is abandoned. A qualified biologist will monitor each active den once per week, to track its status and inform the PWD of when a den 	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	
	area is cleared for construction.				
BIO-9:	MITIGATION MEASURE BIO-9: San Joaquin Kit Fox Protecti		1		
Disturbance to San Joaquin Kit Fox	Prior to any ground disturbance related to covered activities, a USFWS/CDFW- approved biologist will conduct a preconstruction survey in areas identified in the planning surveys as supporting suitable breeding or denning habitat for San Joaquin kit fox. The surveys will establish the presence or absence of kit foxes and/or suitable dens and evaluate use by kit foxes in accordance with USFWS survey guidelines.	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	
	Preconstruction surveys will be conducted within 30 days of ground disturbance. On the parcel where the activity is proposed, biologist will survey the proposed disturbance footprint and a 250-ft radius from the perimeter of the proposed footprint to identify kit foxes and/or suitable dens. Adjacent parcels under different land ownership will not be surveyed. The status of all dens will be determined and mapped. Written results of preconstruction surveys will be submitted to USFWS within 5 working days after survey completion and before start of ground disturbance. Concurrence is not required prior to initiation of covered activities. If San Joaquin kit foxes and/or suitable dens are identified in the survey area, the measures described below will be implemented:				
	If a San Joaquin kit fox den is discovered in the proposed development footprint, the den will be monitored for 3 days by a USFWS/CDFW– approved biologist using a tracking 8C-0442) over Walnut Creek Replacement Project				

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
BIO-9: Disturbance to San Joaquin Kit Fox	 medium or an infrared beam camera to determine if the den is currently being used. Unoccupied dens should be destroyed immediately to prevent subsequent use. If a natal or pupping den is found, USFWS and CDFW will be notified immediately. The den will not be destroyed until the pups and adults have vacated and then only after further consultation with USFWS and CDFW. If kit fox activity is observed at the den during the initial monitoring period, the den will be monitored for an additional 5 consecutive days from the time of the first observation to allow any resident animals to move to another den while den use is actively discouraged. For dens other than natal or pupping dens, use of the den can be discouraged by partially plugging the entrance with soil such that any resident animal can easily escape. Once the den is determined to be unoccupied it may be excavated under the direction of the biologist. Alternatively, if the animal is still present after 5 or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant (i.e., during the animal's normal foraging activities). If dens are identified in the survey area outside the proposed disturbance footprint, exclusion zones around each den entrance or cluster of entrances will be demarcated. The configuration of exclusion zones should be circular, with a radius measured outward from the den entrance(s). No covered activities will occur within the exclusion zones. Exclusion zone radii for potential dens will be at least 50-ft and will be demarcated with four to five flagged stakes. Exclusion zone radii for known dens will be at least 100-ft and will be demarcated with staking and flagging that encircles each den or cluster of dens but does not prevent access to the den by kit fox. 	Prior to and during construction	CCCPWD; Construction Contractor; Qualified Biologist	CCCPWD	

BIO-10: Disturbance to Nesting Birds Migratory birds and raptors may nest or roost in the BSA. Occupied nests and eggs of most birds are protected by CDFW Code Sections 3503 and 3503.5, and the federal Migratory Bird Treaty Act. To the extent feasible, vegetation removal activities will not occur during the breeding season (February 1 through August 31). If vegetation removal must occur during the breeding season, all sites will be surveyed by a qualified biologist to verify the presence or absence of nesting birds, as follows: If construction activities occur during the nesting season (February 1-August 31), a qualified biologist will survey for nesting birds, including raptors, no more than 15 days before the start of construction. An additional survey is recommended immediately prior to construction. The survey areas will include the Project area and an area 250 feet beyond the Project boundaries. If active nests are detected in the survey area, work within 0.5 mile of golden eagle nests, 1,000 feet of Swainson's hawk nests, 300 feet of other raptor nests, and 50 feet of passerine nests will be avoided until a qualified biologist determines that nesting activity has been completed. If it is not feasible to implement this avoidance buffer, a site-specific plan will be developed by a qualified biologist in coordination with the appropriate agencies to determine if a reduced avoidance buffer is appropriate based upon 1) the type and duration of construction activities being conducted, 2) sensitivity or acclimation to disturbance, 3) the topography surrounding the nest site, and/or 4) the implementation of additional protective measures.	Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Disturbance to Nesting Birds Migratory birds and raptors may nest or roost in the BSA. Occupied nests and eggs of most birds are protected by CDFW Code Sections 3503 and 3503.5, and the federal Migratory Bird Treaty Act. To the extent feasible, vegetation removal activities will not occur during the breeding season (February 1 through August 31). If vegetation removal must occur during the breeding season, all sites will be surveyed by a qualified biologist to verify the presence or absence of nesting birds, aincluding raptors, no more than 15 days before the start of construction. An additional survey is recommended immediately prior to construction. The survey areas will include the Project area and an area 250 feet beyond the Project boundaries. If active nests are detected in the survey area, work within 0.5 mile of golden eagle nests, 1,000 feet of Swainson's hawk nests, 300 feet of other raptor nests, and 50 feet of passerine nests will be avoided until a qualified biologist determines that nesting activity has been completed. If it is not feasible to implement this avoidance buffer, a site-specific plan will be developed by a qualified biologist in coordination with the appropriate agencies to determine if a reduced avoidance buffer is appropriate based upon 1) the type and duration of construction activities being conducted, 2) sensitivity or acclimation to disturbance, 3) the topography surrounding the nest site, and/or 4) the implementation of additional protective		MITIGATION MEASURE BIO-10: Nesting Bird Protective Mea	sures		·	
	BIO-10: Disturbance to	MITIGATION MEASURE BIO-10: Nesting Bird Protective Mea Migratory birds and raptors may nest or roost in the BSA. Occupied nests and eggs of most birds are protected by CDFW Code Sections 3503 and 3503.5, and the federal Migratory Bird Treaty Act. To the extent feasible, vegetation removal activities will not occur during the breeding season (February 1 through August 31). If vegetation removal must occur during the breeding season, all sites will be surveyed by a qualified biologist to verify the presence or absence of nesting birds, as follows: If construction activities occur during the nesting season (February 1-August 31), a qualified biologist will survey for nesting birds, including raptors, no more than 15 days before the start of construction. An additional survey is recommended immediately prior to construction. The survey areas will include the Project area and an area 250 feet beyond the Project boundaries. If active nests are detected in the survey area, work within 0.5 mile of golden eagle nests, 1,000 feet of Swainson's hawk nests, 300 feet of other raptor nests, and 50 feet of passerine nests will be avoided until a qualified biologist determines that nesting activity has been completed. If it is not feasible to implement this avoidance buffer, a site-specific plan will be developed by a qualified biologist in coordination with the appropriate agencies to determine if a reduced avoidance buffer is appropriate based upon 1) the type and duration of construction activities being conducted, 2) sensitivity or acclimation to disturbance, 3) the topography surrounding the nest site, and/or 4) the implementation of additional protective	sures Prior to and during	CCCPWD; Construction Contractor; Qualified	·	Date

April 2020

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
V. CULTURAL RE		g	responsibility	1100 p 01101011101	2 400
CUL-1:	Mitigation Measure CUL-1: BMPs				
Disturbance to	The following Best Management Practices will be implemented	Prior to and	CCCPWD;	CCCPWD	
unidentified	during Project construction to protect unanticipated historic or pre-	during	Construction		
historical	historic, archaeological, or paleontological resources.	construction	Contractor;		
resources	 Contractor will be notified of the possibility of encountering historic, archaeological, or paleontological materials during ground-disturbing activities and will be educated on the types of historic materials that may be encountered. If an inadvertent discovery is made, the Contractor will cease all ground-disturbing activities in the area of discovery. The Contractor will immediately notify the CCCPWD Resident Engineer who will then request a qualified archaeologist to evaluate the finding(s). If the finding(s) is determined to be potentially significant, the archaeologist in consultation with the appropriate Native American tribal representative or historical society will develop a research design and treatment plan outlining management of the resource, analysis, and reporting of the find. Given the high archaeological sensitivity at Bridge #28C-0145, an archaeological monitoring plan will be prepared prior to any ground disturbance. The report will outline the procedures for discoveries during construction; the chain of command and responsible parties; and special procedures should human remains be encountered. Archaeological monitoring by a qualified archaeologist will be conducted during all ground disturbing activities that yield visible spoils occurring between 5 feet below current ground surface and 20 feet below current ground surface at Bridge #28C-0145. A daily archaeological monitoring log will be completed by the monitor and submitted weekly to CCCPWD for review. Should archaeological resources or human remains be encountered the procedures outlined in the monitoring plan will be implemented. 		Qualified Archaeologist		

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
CUL-2:	If human remains are encountered, work within 25 feet of the	During	CCCPWD;	CCCPWD	
Disturbance to	discovery shall be redirected and the Contra Costa County Coroner	construction	Construction		
previously	notified immediately. At the same time, an archaeologist shall be		Contractor;		
undiscovered	contacted to assess the situation. If the human remains are of Native		Qualified		
human remains	American origin, the Coroner must notify the Native American		Archaeologist		
	Heritage Commission within 24 hours of this identification. The				
	Native American Heritage Commission will identify a Most Likely				
	Descendant (MLD) to inspect the site and provide				
	recommendations for the proper treatment of the remains and				
	associated grave goods. Upon completion of the assessment, the				
	archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the				
	human remains and any associated cultural materials, as				
	appropriate and in coordination with the recommendations of the				
	MLD. The report shall be submitted to CCCPWD and the				
	Northwest Information Center.				
VII. GEOLOGY A					
	viously undiscovered paleontological resource: Refer to CULT-1				
	D HAZARDOUS MATERIALS	0 4 TD - 1			
HAZ-1:	Mitigation Measure HAZ-1: Waste Management and Worker Sal		GGGDYYD	aganyın	
Mobilization of	1) The Bay Area Air Quality Management District will be	Prior to	CCCPWD;	CCCPWD	
Contaminants	notified through their Asbestos Notification System prior to	construction	Construction		
	bridge demolition in compliance with the National Emissions		Contractor;		
	Standards for Hazards Air Pollutants (NESHAP).				
	2) Prior to any construction activities, a pre-demolition survey				
	will be conducted at each bridge prior to construction pursuant				
	to federal National Emissions Standard for Hazardous Air				
	Pollutants regulations and Bay Area Air Quality Management				
	District regulations. CCCPWD will also prepare a lead-based				
	paint survey pursuant to California Department of Public				
	Health and California Occupation and Health Administration				
	regulations for lead in construction. The survey will identify				
	presence or absence of lead based paint or asbestos containing				
	materials and make recommendations for handling and				
	disposal. Recommendations may include but are not limited to				
	handling and storage of lead based paint or asbestos during				
	construction and health and safety plan for workers.				

Project No.: 0662-6R4083

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
HAZ-2: Wildfire	Mitigation Measure HAZ-2: Wildfire Safety Procedures				
Risk	During Project construction, staging and equipment/vehicle parking areas shall be cleared of dead vegetation that could serve as fuel for combustion. Prior to removal, a biologist shall survey the vegetation to avoid removal of ecologically sensitive vegetation. The clearing shall include vegetation trimming within a few inches of the ground. No grading shall take place as part of the vegetation clearing. Additionally, fire extinguishers will be kept on site. If work is to be performed during the dry season, workers shall be informed of wildland fire risk and measures to prevent it via brochures and worker awareness training.	Prior to and during construction	CCCPWD; Construction Contractor;	CCCPWD	
XIII. NOISE			•		
NOISE-1:	Mitigation Measure NOISE-1: Limit Ambient Noise				
Temporary Increase in Ambient Noise Levels	Construction activities shall be limited to non-sensitive hours for adjacent land uses (generally between 7:00 a.m. to 6:00 p.m.), consistent with the Contra Costa County General Plan Noise Element. If work is necessary outside of these hours, the CCCPWD shall both approve the extended work hours and the Project construction contractor/Resident Engineer will be available to address any noise concerns during construction. The Project contractor shall employ the following noise-reducing practices during Project construction:	Prior to and during construction Prior to and during	CCCPWD; Construction Contractor; CCCPWD; Construction	CCCPWD	
	 Require all construction equipment to conform to Section 14-8.02 Noise Control, of the latest Caltrans Standard Specifications. This requires all internal combustion engine driven equipment to be equipped with intake and exhaust mufflers in good condition and appropriate for the equipment. Utilize 'quiet' air compressors and other 'quiet' equipment where such technology exists. Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active Project site during all Project construction. Provide notification to adjacent noise-sensitive receptors including anticipated construction schedule and contact number for County representative who can address noise complaints. 	construction	Contractor;		

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date		
XVIII. TRIBAL CULTURAL RESOURCES							
Disturbance to previously undiscovered resources: Refer to CULT-1 and CULT-2							
XX. WILDFIRE							
Wildfire risk: Refer to HAZ-2							

Notes:

CCCPWD = Contra Costa County Public Works Department

HCP = Habitat Conservation Plan

USEPA = U.S. Environmental Protection Agency

BSA = Biological Study Area

CDFW = California Department of Fish and Wildlife NCCP = Natural Community Conservation Plan USFWS = U.S. Fish and Wildlife Service

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