
7.0 CALTRANS MITIGATION MONITORING PROGRAM

To ensure that all mitigation measures identified in this document are executed at the appropriate times, the following program will be implemented.

The program will follow a three-phase sequence: design of the project, construction, and post-construction/ maintenance activities. During design and preparation of the contract plans, there will be periodic environmental review to ensure that mitigation measures and other commitments are incorporated into the final project plans, specifications and cost estimates. A check will be made to determine that Caltrans has received all necessary permits, and that any additional actions or conditions specified by these permits are also included in the contract plans.

Before construction starts, field engineers and contract staff will hold meetings with Caltrans environmental specialists, who will identify environmental commitments and explain their background and importance. A preliminary environmental monitoring plan and schedule of field reviews by environmental staff for the duration of construction will be developed. The resident field engineer will keep a list of names of specialists who have expertise for the various environmental concerns which may arise during construction. The contractor's Storm Water Pollution Prevention Plan will also be reviewed periodically during construction. Proposed changes to the original contract plans will be reviewed by environmental staff to determine if environmental obligations or commitments to other agencies are affected, or if new impacts may result, to ensure that compliance with these obligations is fulfilled. Project files will be maintained by the Caltrans environmental branch to document field reviews, monitoring reports, and actions taken to address changes in the construction contract.

After construction is completed, the executed mitigation measures will be maintained. Their effectiveness will be determined through timely monitoring by Caltrans environmental and landscape specialists, and Caltrans' environmental engineering coordinator. Highway maintenance personnel will check that all drainage facilities, erosion control devices, irrigation systems, and other installations related to environmental commitments, are functioning as intended. Plantings will undergo an appropriate period of maintenance to ensure establishment, and plant materials will be replaced as necessary. The project environmental analyst will have a continuing coordination role during final design and construction monitoring. A monitoring form, the Mitigation Monitoring and Reporting Record (MMRR), will be used as a checklist to track each measure or task, and ensure completion of all commitments during the future phases of the project. The proposed MMRR appears on the following pages. The MMRR identifies the appropriate staff/ Caltrans branch who are responsible for ensuring each mitigation measure is done. The columns Action Taken, Task Completed, Remarks, and Environmental Compliance are therefore blank at this stage; these columns would be filled out in the future as each measure is implemented.

Task and Brief Description	Responsible Branch / Staff	Timing / Phase	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
				Initial	Date		Initial	Date
Design Kick-off	Project Manager	Beginning of 1 phase						
Pre-Log-In Review	Design	80% Plans						
Environmental PS&E Review	Environmental Coordinator	District PS&E Circulation						
In-House Preconstruction Meeting	Project Manager	Contract Award						
Transfer Resident Engineer Book	Project Engineer	Preconst Meeting						
Prejob Meeting with Contractor	Construction	Beginning of Construction						
Environmental Compliance Review	Construction	Safety Review						
Design Features Memorandum	Construction / Design	Post Construction						
Noise								
At this time, barriers are not proposed but they will be reconsidered as part of the FEIS.	Project Engineer/ Construction	Construction first order of work						
Water Quality								
For short term construction impacts, a National Pollutant Discharge Elimination System permit would be required from the State Regional Water Quality Control Board (RWQCB). These controls would substantially reduce or eliminate excavation and grading impacts, the potential for minor spills and leaks associated with equipment maintenance and operations and materials storage.	Project Engineer/ Construction							
Appropriate dewatering permits from the RWQCB and perform any necessary monitoring for temporary, short-term dewatering required during construction.	Project Engineer/ Construction							
Implementation of Caltrans standard operations and regular facility maintenance procedures and practices would reduce long-term impacts to water quality and beneficial uses of surface waters to a minimal level. Typical activities include regular facility monitoring, litter control, pavement management, and proper management of herbicide and fertilizer applications.	Project Engineer/ Construction							
Construct retention and/or detention basins to receive pavement stormwater runoff.	Project Engineer/ Construction							

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Air Quality								
Water all active construction areas at least twice daily (using nonpotable water where feasible).	Design/ Construction							
Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least .6 m/2 ft of freeboard (the minimum required space between the top of the load and the top of the trailer).	Design/ Construction							
Pave, apply water three times daily, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.	Design/ Construction							
Sweep daily (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites.	Design/ Construction							
Sweep street daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets.	Design/ Construction							
Hydroseed or apply (nontoxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).	Design/ Construction							
Enclose, cover, water twice daily, or apply (nontoxic) soil binders to exposed stockpiles (dirt, sand, etc.).	Design/ Construction							
Limit traffic speeds on unpaved roads to 15 mph.	Design/ Construction							
Install sandbags or other erosion control measures to prevent silt runoff to public roads.	Design/ Construction							
Replant vegetation in disturbed areas as quickly as possible.	Design/ Construction							
Measures to minimize harm during facility operation: 1) outside shoulders would be paved and have a minimum width of 2.4 m/8 ft; 2) the median would be constructed with paved shoulders having a minimum width of four feet adjacent to the traffic lanes unless the median are solidly paved, or the median is landscaped and maintained with grass or other vegetative ground cover (San Joaquin Valley Unified Air Pollution Control District, 1996).	Design/ Construction							

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Construction contractor shall follow all mandatory and applicable dust control programs contained in Regulation VIII of the Imperial County Air Pollution Control District (APCD). Reasonably available dust control measures (RACM) shall be utilized during construction and grading; RE will monitor to ensure compliance with County APCD Regulation VIII.	Design/ Construction							
Wetland								
Wetland impacts will be mitigated by creating wetlands at a 2:1 ratio and impacts to salt cedar woodland will be mitigated by enhancement at a 1:1 ratio. Enhancement will include removing salt cedar and other exotics and planting and seeding native plants suitable for saline soils of the New River floodplain.	Environmental Resource Studies / Design / Construction							
Streambed alteration agreements with the California Department of Fish and Game pursuant to Section 1601 et seq. of the State Fish and Game Code, and a permit for placement of fill in waters of the United States from the U.S. Army Corps of Engineers pursuant to Section 404 of the federal Clean Water Act, with possible formal consultation with the U.S. Fish and Wildlife Service, pursuant to Section 7 of the Endangered Species Act.	Environmental Resource Studies / Design / Construction							
Barriers or fences to protect sensitive areas, employing best management practices to control erosion and runoff.	Environmental Resource Studies / Design / Construction							
Physical disturbance of the 100 year floodplain may be minimized by constructing sections of the bridges off site, transporting them to site, and placing them, rather than by building forms and falsework, casting sections, and removing forms on-site.	Environmental Resource Studies / Design / Construction							
Reseed area around drainage outlets.	Environmental Resource Studies							
Wildlife								
Qualified biologist will survey for, and excavate, owl borrows within the project limits prior to February 1 in the year of construction, according to the methods established by the California Burrowing Owl Consortium. No construction work permitted within 75 m/250 ft of owl nests within the owl breeding season, February 1 through August 31. Construction engineer to provide biologist 2 weeks notice prior to start of construction. Biologist will insure installation of artificial burrows to replace burrowing owl burrows removed.	Environmental Resource Studies							

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For the 16 date palm impacted by the Fredricks Alternative, plant native California fan palms at a 2:1 ratio with permanent irrigation if available.	Environmental Resource Studies							
All canals and drains that run parallel to the proposed road will not be directly impacted. These areas will be designated as Environmentally Sensitive Areas.	Environmental Resource Studies							
All vegetation within the construction zone will be cleared outside of the breeding season (February 1 to July 31) to avoid impacts to migratory birds and raptors nesting within the project area. If this is not possible, a pre-construction survey is required to assure that birds are not nesting in any of the vegetation to be cleared. If birds are nesting, the nest and tree must be designated an Environmentally Sensitive Area and no construction shall occur within a radius of 50 m (164 ft) until nesting is complete.	Environmental Resource Studies							
Mitigation for impacts to wildlife movement will include the installation of 2 m (6 ft) chain-link fencing in areas of habitat in the New River floodplain. The fencing will be positioned to prevent animals from accessing the highway and to direct them to pass under the bridges. For all alternatives, the proposed bridges allow for upland areas adjacent to the New River. In addition, enhancement and creation of wetlands should occur in areas near the bridges.	Environmental Resource Studies							
The mitigation for ACOE wetlands, and CDFG regulated areas will be designed to encourage foraging by southwestern willow flycatchers. Included in the design will be dense planting of willows, cottonwoods and other shrubs and medium-sized trees in close proximity of water.	Environmental Resource Studies							
For the eight mature eucalyptus trees removed on the Fredricks Alternative, plant 15 gallon native trees at a 7:1 ratio.	Environmental Resource Studies							

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Visual								
A screen of tree plantings will be located close to residences (receptor sites 6 & 14) and, if feasible, on private or public property.	Landscape Architecture							
An additional screen of tree plantings will be located where the proposed project comes within view from the Del Rio Country Club golf course.	Landscape Architecture							
If the Fredricks alternative is constructed, the southern portion of the golf course will receive the tree plantings. If this is not feasible screen planting will be installed in Caltrans right-of-way	Landscape Architecture							
If the Del Rio alternative is constructed the northern portion of the golf course will receive the tree plantings. If this is not feasible screen planting will be installed in Caltrans right of way	Landscape Architecture							
Trees with adequate height, such as palms or eucalyptus, will be used near intersections (Figure 4-6) and also at the intersections of SR78/86, SR 111, Kalin Road, Brandt Road, Hoveley Road and Best Road.	Landscape Architecture							
Highway appurtenances such as traffic barriers, signage, and lighting will be compatible with the rural character of the region.	Landscape Architecture							
Metal beam guardrails will be used instead of concrete barriers wherever possible	Landscape Architecture							
Railroad abutment slopes with 1:1.5 gradients will be treated with colored concrete slope paving.	Landscape Architecture							
New River Crossing Bridge abutment slopes will be treated with rock slope protection.	Landscape Architecture							
Concrete slope paving will be architecturally enhanced with either texture, patterns and/or art relief.	Landscape Architecture							
Railroad and bridge overcrossing fill slopes will have a gradient of 1:1.5 or flatter. These slopes should be planted with seed to control erosion.	Landscape Architecture							

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Wherever right-of-way and resource conflicts do not occur slope gradients of 1:3 will be constructed. Approved techniques by the District Landscape Architect will be used for appropriate erosion control seeding between the months of November and February.	Landscape Architecture							
If proposed, off site walls will be architecturally enhanced and compatible with adjacent residences. They will be designed in consultation with the District 11 Landscape Architect. Landscape screening will be included.	Landscape Architecture							
Community								
Provide signage for business route.	Design/Resource Studies							
Provide a City of Brawley Sign.	Design/Resource Studies							
Maintain access for farms, businesses, and homes.	Design/Resource Studies							
Construction Noise								
Minimize nighttime and weekend work.	Project Management/							
Use of portable noise screens to provide shielding for jack hammering or other similar type activities when work is close to noise-sensitive areas.	Project Management/ Construction							
Compliance with Standard Specifications 7-1.011 (January 1988) "Sound Control Requirements."	Project Management/ Construction							
Haul roads, maintenance yards, and other construction related operations will be located in areas that are least disruptive to the community.	Project Management/ Construction							
Public information meetings explaining the construction schedule and noise control measures will be held prior to initiation of construction.	Project Management/ Construction							
Permits								
U.S. Army Corps, Section 404	Stewardship							
National Pollutant Discharge Elimination System permit	Stewardship							
Section 401 and 402 certification from the RWQCB	Stewardship							
CA Department of Fish and Game (2080.1)	Stewardship							
CDFG Section 1601 Streambed Alteration Agreement	Stewardship, Environmental Resource Studies							

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U.S. Fish and Wildlife, Section 7 Consultation	Environmental Resource Studies							
Farmland	Environmental Branch "A"							
Investigate the feasibility of purchasing farmland conservation easements equal to the amount of farmland area converted by the project.	Environmental Resource Studies / Right-of-Way							
Relocation								
Provide relocation assistance to eligible persons in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970.	Right-of-Way							
Replace necessary agricultural infrastructure or pay fair damages to property owner.	Right-of-Way							