MITIGATION MONITORING AND REPORTING PROGRAM

This document is the Mitigation Monitoring and Reporting Program (MMRP) for the Monterey Bay Sanctuary Scenic Trail (MBSST) Network Master Plan, proposed in Santa Cruz County, California. Public Resources Code Section 21081.6(a) requires that a Lead Agency adopt an MMRP prior to approving a project in order to mitigate or avoid significant impacts that have been identified. The purpose of the MMRP is to ensure that the required mitigation measures identified are implemented as part of the overall project implementation. In addition to ensuring implementation of mitigation measures, the MMRP provides feedback to agency staff and decision-makers during project implementation, and identifies the need for enforcement action before irreversible environmental damage occurs.

The following table summarizes the mitigation measures for each issue area identified in the Environmental Impact Report (EIR) for the MBSST Network Master Plan. The table identifies each mitigation measure; the action required for the measure to be implemented; the time at which the monitoring is to occur; the monitoring frequency; and the agency or party responsible for ensuring that the monitoring is performed. In addition, the table includes columns for compliance verification.

The following table will be used as the checklist for the Santa Cruz County Regional Transportation Commission (RTC) to determine compliance with each required mitigation measure.

Mitigation Measure/Condition of Approval	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
AGRICULTURAL RESOURCES							
AG-1(a) Placement of Fencing: Placement of fencing shall be located in a manner which minimizes impacts related to accessibility to farmland and use of farming equipment (e.g., allowing turning radius area for farm equipment).	Review construction plans	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC			
AG-3(a) Notice of Agricultural Activities. The following information shall be added to the proposed notices on on-going agricultural activities: • Trail users are advised to stay on the trail and be alert to operating machinery and equipment near the trail. • Trail users are required to use restroom facilities in consideration of food hygiene issues on adjacent agricultural lands. • Where dogs are not prohibited, trail users are required to clean up after their dogs and prevent trespass by dogs on adjacent agricultural properties in consideration of food hygiene issues on adjacent agricultural lands. • The legal ramifications for trespassing on adjacent properties. • The legal ramification for trespassing or being on the trail after it is closed.	Install signs along trail	Prior to trail opening	Once for each segment	Implementing Entity and/or RTC			
AG-3(b) Landscaping Coordination. For segments adjacent to agricultural operations in the northern and Watsonville reaches, any ornamental plant material used along the trail shall be comprised of native and indigenous species. The selected plant palate shall be reviewed by the Agricultural Commissioner's office prior to approval of landscape plans. Any plant material which may host pests destructive to agriculture shall be prohibited.	Review landscaping plans	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC, Agricultural Commissioner			
AG-3(c) Chemical Spraying Impact Reduction Options. On a case-by-case basis, the RTC and/or implementing entity for segments adjacent to agricultural operations shall work with the Agricultural Commissioner's office and adjacent farmers to reduce impacts to trail users from agricultural spraying, including pesticides. Non-buffer options shall be considered, including the use of alternative methods of pest and weed control and/or an agreement that farmers notify the Agricultural Commissioner's office or Trail Manager in advance of proposed agricultural spraying within 100 feet of the trail. This would allow the Agricultural	Coordinate with Agricultural Commissioner's office and adjacent farmers to consider non-buffer spraying reduction options	As needed	As needed	Implementing Entity and/or RTC, Agricultural Commissioner			

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Commissioner's office, in accordance with existing requirements, to inform the RTC and/or implementing or managing entity of all spraying within 100 feet of the trail so that appropriate action can be taken (e.g., posting notices or closure of that segment of the trail).							
BIOLOGICAL RESOURCES							
B-1(a) Special Status Plant Species Surveys. Prior to any vegetation removal, grubbing, or other construction activity of each segment (including staging and mobilization), seasonally-timed special status plant surveys shall be conducted by a qualified biologist approved by the implementing entity no more than two years before initial ground disturbance. The purpose of these surveys is to document the location(s) and number(s) of sensitive plant species within construction and mitigation/restoration areas so that mitigation can be accomplished. The surveys shall coincide with the bloom periods for each species listed in Tables 4.4-6, 4.4-7 and 4.4-8 of the FEIR and all special status plant species identified on-site shall be mapped onto a site-specific aerial photograph and topographic map at a scale of no less than 1"=200'. Surveys shall be conducted in accordance with the County, CDFW, and USFWS protocols (California Department of Fish and Game 2009, United States Fish and Wildlife Service 2000). A report of the survey results shall be submitted to the RTC and/or implementing entity, and the CDFW for review and approval.	Review pre-construction survey report	During plans, specifications, and estimates for each segment	Prior to initiation of ground disturbance activities for each segment	Implementing Entity and/or RTC, County of Santa Cruz, CDFW, USFWS			
B-1(b) Special Status Plant Species Avoidance, Minimization, and Mitigation. If state listed, CRPR List 1B species, or naturally occurring stands of Monterey Pine are found during special status plant surveys [pursuant to mitigation measure B-1(a)], the implementing entity shall redesign the segment to avoid impacting these plant species. Rare plant occurrences that are not within the immediate disturbance footprint, but are located within 50 feet of disturbance limits shall have bright orange protective fencing installed at least 30 feet beyond their extent to protect them from harm. If avoidance is not feasible, seed shall be collected from on-site rare plants prior to removal, and/or from other local populations of plant species to be impacted. Seed shall be distributed in areas not proposed for development that have the appropriate habitat characteristics necessary to support the restoration. Seed collection shall be conducted by a qualified biologist holding a rare plant	Ensure impact avoidance, minimization, and mitigation measures are included on all grading and construction plans	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC, CDFW, USFWS			
	Review and implement restoration plan	Prior to construction, concurrent with or following construction for each segment	Once for plan review; five years for plan implementation	Implementing Entity and/or RTC, and CDFW			
	Inspect site for	During	At least	Implementing			

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collection voucher/permit. Topsoil may also be salvaged and distributed over temporarily disturbed areas following completion of construction activities provided it is free of non-native invasive species. For take of any plant species protected under CESA, an incidental take permit shall be obtained authorizing activities resulting in take. The total number and/or total acreage for each special status plant species that will be impacted shall be determined once the final design of the project is completed and prior to initiation of ground disturbance activities. Impacted species shall be restored on-site at a minimum of a 2:1 ratio (number of acres/individuals restored to number of acres/individuals impacted) for each species as a component of habitat restoration. Prior to start of construction activities, a restoration plan shall be prepared and submitted to the RTC and/or implementing entity and the CDFW for approval. The restoration plan shall include, at a minimum, the following components: • Description of the project/impact site (i.e., location, responsible parties, areas to be impacted by habitat type); • Goal(s) of the compensatory mitigation project [type(s) and area(s) of habitat to be established, restored, enhanced, and/or preserved; specific functions and values of habitat type(s) to be established, restored, enhanced, and/or preserved]; • Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values); • Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan); • Maintenance activities during the monitoring period, including weed removal as appropriate (activities, responsible parties, schedule); • Monitoring plan for the compensatory mitigation site, including no less than quarterly monitoring for the first year (performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports); • Success criteria based on the goals and measurable	compliance with restoration plan	operation of each segment	annually for a minimum of five years after construction of each segment	Entity and/or RTC			

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objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 30 percent relative cover by vegetation type; • An adaptive management program and remedial measures to address any shortcomings in meeting success criteria; • Notification of completion of compensatory mitigation and agency confirmation; and • Contingency measures (initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism). The restoration plan shall be implemented for a period of at least five years or until restoration has been deemed complete based on the established success criteria. All restoration/compensatory mitigation areas shall be permanently protected through a conservation easement or deed restriction.							
B-1(c) Santa Cruz Long-Toed Salamander Habitat Assessment and Protocol Surveys. Prior to start of construction of each segment, a CDFW- and USFWS-approved biologist shall conduct a habitat assessment to determine if suitable habitat is present within or adjacent to the project site. If suitable habitat is identified, protocol surveys shall be conducted in accordance with *Sampling Procedures for Determining Presence or Absence of the Santa Cruz Long-toed Salamander (Ambystoma macrodactylum croceum)* (1993) developed jointly by the CDFW and the USFWS. The protocol surveys shall be conducted for two consecutive rainy seasons prior to the start of construction. A report of the survey results shall be submitted to the Implementing Entity and/or RTC, CDFW, and the USFWS for review and approval.	Review habitat assessment and survey reports	Prior to issuance of grading permits for each segment	Once for each segment	Implementing Entity and/or RTC, CDFW, USFWS			
B-1(d) California Red-Legged Frog, Santa Cruz Long-toed Salamander and Foothill Yellow-Legged Frog, California Tiger Salamander Avoidance and Minimization. The following avoidance and minimization measures are adapted from the *Programmatic Formal Endangered Species Act Consultation on Issuance of Permits under Section 404 of the Clean Water Act or Authorizations under the Nationwide Permit Program for Projects that May Affect the California Red-legged Frog* issued on January 1999 by the USFWS. Consultation shall occur with the USFWS to determine that 1) the project is covered under the above programmatic formal consultation through issuance of USACE	Ensure impact avoidance and minimization measures are included on all grading and construction plans	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC, CDFW, USFWS			
	Retain a qualified biologist	Prior to start of construction of each segment	Once for each segment	Implementing Entity and/or RTC, CDFW, USFWS			

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permits under Section 404 of the Clean Water Act, or 2) that take of federally-protected species is not anticipated through implementation of the measures below as determined through informal consultation with the USFWS if no federal permits are pursued. Consultation shall also occur with the CDFW for state protected species to either obtain a state Incidental Take Permit or establish concurrence that take would not occur. • Within two weeks of the initiation of construction activities of each segment (including mobilization and staging), a CDFW/USFWS-approved biologist shall conduct a survey of the construction area for all life stages of CRLF, CTS, foothill yellow-legged frog, and Santa Cruz long-toed Salamander. All areas where these species occur shall be avoided until the approved biologist has determined that these species are no longer present. No life stages of these species shall be relocated without a take authorization from the USFWS and/or CDFW. If relocation is authorized, a suitable relocation site shall be identified prior to initiation of construction activities and shall be located within the same watershed/streamcourse greater than 500 feet from the project site. • Work activities in or adjacent to suitable habitat shall be completed between April 1 and November 1 to the greatest extent feasible. • A CDFW/USFWS-approved biologist shall be present on-site during all ground disturbing activities, including vegetation removal, grading, and exclusion fence installation and removal. Once these activities have been completed, the approved biologist shall conduct periodic inspections of the work site of not less than once per week when construction activities are occurring in/adjacent to suitable habitat. Additional site visits should occur during rain events when special status amphibians are likely to be mobile to ensure that they are not entering work areas. • The implementing entity shall designate a representative who will oversee implementation of all avoidance and minimization measures when the CDFW/USFWS-approved biologist is not present. This representative shall be trained by the CDFW/USFWS-approved biologist in the identification of special status amphibians and in the implementation of all avoidance and minimization measures. This representative	Inspect site for compliance with avoidance and minimization measures	Throughout construction of each segment	Periodically for each segment	Implementing Entity and/or RTC			

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shall not have the authority to handle special status species. • Both the implementing entity's representative and the CDFW/USFWS-approved biologist shall have the authority to halt any action which may result in the take of special status species. • Prior to start of construction, exclusion fencing shall be placed along the project boundaries in areas where suitable habitat is present. This fence shall consist of solid silt fencing placed at a minimum of 3 feet above grade and 2 feet below grade and shall be attached to wooden stakes placed at intervals of not more than 5 feet. The fence shall be inspected weekly and following rain events and high wind events and shall be maintained in good working condition until all construction activities are complete. • All vehicle maintenance/fueling/staging shall occur not less than 100 feet from any riparian habitat or water body. Suitable containment procedures shall be implemented to prevent spills. A minimum of one spill kit shall be available at each work location near riparian habitat or water bodies. • At the end of each work day, excavations shall be secured with cover or a ramp provided to prevent wildlife entrapment. • All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling. • The CDFW/USFWS-approved biologist shall remove invasive aquatic species such as bullfrogs and crayfish from suitable aquatic habitat whenever observed and shall dispatch them in a humane manner and dispose of properly. • If any federally and/or state protected species are harmed, the CDFW/USFWS-approved biologist shall document the circumstances that led to harm and shall determine if project activities should cease or be altered in an effort to avoid additional harm to these species. Dead or injured special status species shall be disposed of at the discretion of the CDFW and USFWS. All incidences of harm shall be reported to the CDFW and USFWS within 48 hours.							
B-1(e) Tidewater Goby, Steelhead and Coho Salmon Impact Avoidance and Minimization. If suitable habitat for tidewater goby, steelhead, and/or coho salmon cannot be avoided, any in-stream portions of each segment (where drainage crossings require	Ensure impact avoidance and minimization measures are	During plans, specifications, and estimates for each	Once for each segment	Implementing Entity and/or RTC, CDFW, USFWS			

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in-stream work) shall be dewatered/diverted. A dewatering/diversion plan shall be prepared and submitted to the NMFS, the USFWS and the CDFW for review and approval. All dewatering/diversion activities shall be monitored by a qualified fisheries biologist. The fisheries biologist shall be responsible for capture and relocation of fish species out of the work area during dewatering/diversion installation. A *Programmatic Consultation and Conference for Listed Coastal Species, Ventura, Santa Barbara, San Luis Obispo, Monterey, and Santa Cruz Counties, California (1-8-96-F-11)* was established on August 29, 1991 between the USFWS and the USACE. The following measures are <u>generally</u> adapted from that document. Consultation shall occur with the USFWS to determine that 1) the project is covered under the above programmatic consultation through issuance of USACE permits under Section 404 of the Clean Water Act, or 2) that take of CRLF is not anticipated through implementation of the measures below as determined through informal consultation with the USFWS if no federal permits are pursued. • The implementing entity shall designate a representative to monitor on-site compliance of all avoidance and minimization measures. This representative shall be trained by a qualified fisheries biologist in the identification of the target species and the assessment of the potential for take based on the proposed activities. The representative shall consult with the biologist as necessary to ensure compliance. The representative and the biologist shall have the authority to halt any action which may result in the take of listed species. • Only USFWS/NMFS/CDFW-approved biologists shall participate in the capture and handling of listed species. • No equipment shall be permitted to enter wetted portions of any affected drainage channel. • All equipment operating within streams shall be in good conditions and free of leaks. Spill containment shall be installed under all equipment staged within stream areas and extra spill containment and clean up materials shall be located in close proximity for easy access. • Work within and adjacent to streams shall not occur between November 1 and May 1. Unless otherwise approved by NMFS and	included on all grading and construction plans	segment					
	Retain a qualified biologist	Prior to start of construction of each segment	Once for each segment	Implementing Entity and/or RTC, CDFW, USFWS			
	Inspect site for compliance with avoidance and minimization measures	Throughout construction of each segment	Periodically for each segment	Implementing Entity and/or RTC			

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the CDFW. • If project activities could degrade water quality, water quality sampling shall be implemented to identify the pre-project baseline, and to monitor during construction for comparison to the baseline. • If water is to be pumped around work sites, intakes shall be completely screen with wire mesh not larger than five millimeters to prevent animals from entering the pump system. • If any tidewater goby, steelhead, or coho salmon are harmed during implementation of the project, the project biologist shall document the circumstances that led to harm and shall determine if project activities should cease or be altered in an effort to avoid further harm to CRLF. • Water turbidity shall be monitored by a qualified biologist or water quality specialist during all in-stream work. Water turbidity shall be tested daily at both an upstream location for baseline measurement and downstream to determine if project activities are altering water turbidity. Turbidity measures shall be taken within 50 feet of construction activities to rule out other outside influences. Additional turbidity testing shall occur if visual monitoring indicates an increased in turbidity downstream of the work area. If turbidity levels immediately downstream of the project rise to more than 20 NTUs (Nephelometric Turbidity Units) above the upstream (baseline) turbidity levels, all construction shall be halted and all erosion and sediment control devices shall be thoroughly inspected for proper function, or shall be replaced with new devices to prevent additional sediment discharge into streams.							
B-1(f) Black Legless Lizard Surveys. Not less than three months prior to the start of construction activities (including staging and mobilization) for each segment, a CDFW-approved biologist shall place coverboards in areas with suitable habitat for black legless lizard. The coverboards shall be at least four feet by four feet and constructed of untreated plywood placed flat on the ground. The coverboards shall be checked by the biologist once per week for each week after placement up until the start of vegetation removal. All black legless lizards found under the coverboards shall be captured and placed in five-gallon buckets for transportation to relocation sites. All relocation sites shall be approved by the RTC and/or implementing entity and shall consist of suitable habitat. Relocation sites shall be as close to the capture site as possible but far enough away to ensure the animal(s) is not harmed by construction of the project. Relocation shall occur on the same day as capture. CNDDB	Review survey reports	Prior to issuance of grading permits for each segment	Once for each segment	Implementing Entity and/or RTC, CDFW			

Mitigation Measure/Condition of Approval	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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Field Survey Forms shall be submitted to the CDFW for all special status animal species observed. During all initial ground vegetation removal activities for each segment, a qualified biologist shall be on-site to recover any black legless lizards that may be excavated/ unearthed. If the animals are in good health, they shall be immediately relocated to the designated release area. If they are injured, the animals shall be released to a CDFW approved specialist until they are in a condition to be released into the designated release area. A report of all preconstruction survey efforts and monitoring during initial ground vegetation removal of each segment shall be submitted to the implementing entity within 30 days of completion of the survey effort to document compliance. The report shall include the dates, times, weather conditions, and personnel involved in the surveys and monitoring. The report shall also include for each captured special status animal, the UTM coordinates and habitat descriptions of the capture and release site (in UTM coordinates), the length of time between capture and release, and the general health of the individual(s).							
B-1(g) FESA and CESA Consultation. To ensure compliance with FESA and CESA, the RTC and/or implementing entity shall obtain either Incidental Take Permits or written concurrence that implementation of the project will not result in take for CRLF, CLTS, CTS, steelhead, coho salmon, and tidewater goby.	Obtain either Incidental Take Permits or written concurrence	Prior to issuance of grading permits for each segment	Once for each segment	Implementing Entity and/or RTC, CDFW, USFWS			
B-1(h) Western Pond Turtle Survey, Capture, and Relocation. Not less than 14 days prior to the start of all construction activities for each segment (including staging and mobilization), an RTC and/or implementing entity approved biologist shall conduct surveys for western pond turtles within suitable habitat. The biologist shall also oversee installation of exclusion fencing where suitable habitat is present to prevent western pond turtles from entering active work areas. If western pond turtles are identified within the work area they shall be captured and relocated to suitable habitat within the same or nearest drainage. The relocation site shall include a pool surrounded by vegetation for escape cover. CNDDB Field Survey Forms shall be submitted to the CDFW for all special status animal species observed.	Review survey and monitoring reports	Prior to start of construction of each segment	Once for each segment	Implementing Entity and/or RTC, CDFW, USFWS			
	Retain a qualified biologist to inspect site	Prior to start of construction of each segment	Once	Implementing Entity and/or RTC			
	Inspect site for compliance with relocation requirements	Throughout construction of each segment	Periodically for each segment	Implementing Entity and/or RTC			

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During the rainy season (approximately November 1 to April 15), western pond turtles may actively move through upland habitats outside of drainages. If a turtle is observed by construction personnel within or adjacent to the project area, the turtle's location shall be communicated to the RTC and/or implementing entity-approved biologist. Only the RTC-approved biologist shall capture and relocate the turtle. Construction personnel are not permitted to handle animals. A report of all preconstruction survey efforts for each segment shall be submitted to the implementing entity within 30 days of completion of the survey effort to document compliance. The report shall include the dates, times, weather conditions, and personnel involved in the surveys and monitoring. The report shall also include for each captured special status animal, the UTM coordinates and habitat descriptions of the capture and release site (in UTM coordinates), the length of time between capture and release, and the general health of the individual(s).							
B-1(i) Special Status Bat Surveys and Impact Avoidance. An RTC and/or implementing entity-approved biologist shall conduct presence/absence surveys for special status bats where suitable roosting habitat is present. Bat surveys shall be conducted in consultation with the CDFW. Surveys shall be conducted using acoustic detectors and by searching tree cavities, crevices, and other areas where bats may roost. Surveys shall be conducted not less than 30 days prior to initiation of construction activities for each segment. Areas where special status bats are located shall be avoided where feasible. If impacts to bats cannot be avoided, exclusionary devices, such as netting, shall be installed by an RTC and/or implementing-entity approved biologist around the roost(s) after the bats have left the roost in the evening and shall be monitored for a minimum of three days to ensure that no bats return to the roost. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately. Exclusion of bats must commence prior to establishment of maternity colonies, which varies by species. If a maternity colony has become established, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed. Bat roosts shall be	Review survey and monitoring reports	Prior to issuance of grading permits for each segment	Once for each segment	Implementing Entity and/or RTC, CDFW			
	Retain a qualified biologist to inspect site	Prior to start of construction of each segment	Once for each segment	Implementing Entity and/or RTC			
	Inspect site for compliance with impact avoidance requirements	Throughout construction of each segment	Periodically for each segment	Implementing Entity and/or RTC			

Mitigation Measure/Condition of Approval	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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removed after the breeding season has ended but before the onset of winter when temperatures are too cold for bat movement. If a roost is determined by a qualified biologist to be used by a large number of bats (large hibernaculum), bat boxes near the impacted roost shall be installed to reduce the impact to the bat species present. Bat boxes shall be species-specific in dimensions and should mimic a tree hollow or crevice. Bat boxes shall be installed at a height that is appropriate for the bat species and anti-predator measures, such as small metal spikes on the top, shall be included to protect bats. A report of survey efforts shall be submitted to the implementing entity within 30 days of completion of the surveys for each segment to document compliance. The report shall include the dates, times, weather conditions, and personnel involved in the surveys. If exclusion devices and/or bat boxes are utilized, the report shall describe how these methods were employed.							
B-1(j) Monterey Dusky-Footed Woodrat Avoidance and Minimization. Within 14 days prior to start of construction activities, all suitable habitat within and adjacent to the construction disturbance limits shall be surveyed for woodrat middens by a qualified biologist approved by the RTC and/or the implementing entity. If middens are located within the disturbance area, the construction contractor shall under the guidance of the biologist remove the midden using an excavator. The midden shall first be "tapped" or shaken by the excavator bucket to encourage the woodrats to evacuate. The excavator shall then grasp portions of the midden with the bucket and relocate them to the same location outside of the disturbance area. All portions of the same midden shall be relocated to the same area; they shall not be distributed across the adjacent habitat. Once the biologist is satisfied that the midden has been removed, construction may commence. If a midden is located within 50 feet of the construction disturbance area, bright-orange construction fencing shall be installed along the perimeter of the disturbance area to protect the midden from harm impacts during construction.	Ensure impact avoidance and minimization measures are included on all grading and construction plans	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC			
	Retain a qualified biologist to inspect site	Prior to start of construction of each segment	Once for each segment	Implementing Entity and/or RTC			
	Inspect site for compliance with avoidance and minimization requirements	Throughout construction of each segment	Periodically for each segment	Implementing Entity and/or RTC			
B-1(k) Preconstruction Surveys for Nesting Birds. For construction activities occurring during the nesting season	Review survey and monitoring reports	During plans, specifications,	Once for each segment	Implementing Entity and/or			

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(generally February 1 to September 15), surveys for nesting birds covered by the CFGC and the MBTA (including, but not limited to, great blue heron, northern harrier, tricolored blackbird, and California black rail) shall be conducted by a qualified biologist no more than 14 days prior to initiation of construction activities for each segment, including construction staging and vegetation removal. The surveys shall include the entire segment disturbance area plus a 200 foot buffer around the site. If active nests are located, all construction work shall be conducted outside a buffer zone from the nest to be determined by the qualified biologist. The buffer shall be a minimum of 50 feet for non-raptor bird species and at least 150 feet for raptor species. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The biologist shall have full discretion for establishing a suitable buffer. The buffer area(s) shall be closed to all construction personnel and equipment until the adults and young are no longer reliant on the nest site. A qualified biologist shall confirm that breeding/nesting is completed and young have fledged the nest prior to removal of the buffer.		and estimates for each segment		RTC			
	Retain a qualified biologist to inspect site	Prior to start of construction of each segment	Once for each segment	Implementing Entity and/or RTC			
	Inspect site for compliance with buffer requirements	Throughout construction of each segment	Periodically for each segment	Implementing Entity and/or RTC			
B-1(l) Monarch Butterfly Avoidance and Minimization. Prior to completion of the final design, a biologist approved by the RTC and/or implementing entity shall review the project for potential to impact monarch butterflies. If known or potential winter roost sites will be impacted, the biologist shall make recommendations to avoid impacts including, but not limited to, relocation/redesign of project features to avoid roost sites, guidance regarding tree removal and trimming at roost sites, and recommendations regarding planting additional roost trees. Construction shall not occur within 100 feet of known or potential roost sites between November 1 and May 1 as feasible. If construction must occur during this period, the qualified biologist shall survey known and potential roost sites to confirm occupancy by monarch butterflies prior to start of construction within 100 feet. Multiple surveys may be necessary and the closest known roost sites shall be used as voucher sites to confirm the timing of butterfly arrival. If monarch butterflies are determined to be absent from a roost site, construction may commence. If monarch butterflies are found at a roost site, construction shall not occur within 100 feet of the roost site until the biologist has determined that the butterflies have left the area. The biologist shall visit the voucher sites to	Ensure impact avoidance and minimization measures are included on all grading and construction plans	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC			
	Retain a qualified biologist to inspect site	Prior to construction for each segment during roosting period	Once for each segment	Implementing Entity and/or RTC			
	Inspect site for compliance with avoidance and	Throughout construction of each segment	Periodically for each segment	Implementing Entity and/or RTC			

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confirm that butterflies have left the region.	minimization measures						
B-1(m) Worker Environmental Awareness Program (WEAP). Prior to initiation of construction activities for each segment (including staging and mobilization), all personnel associated with the segment construction shall attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the project area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and careful review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers, and other personnel involved with construction of the project. All employees shall sign a form documenting that they have attended the WEAP and understand the information presented to them. The form shall be submitted to the RTC and/or implementing entity to document compliance.	Ensure approved biologist conducts worker environmental awareness program for each segment	Prior to start of construction of each segment	Once for each segment	Implementing Entity and/or RTC			
B-1(n) San Francisco Garter Snake Avoidance and Minimization. The following measures shall be implemented in the Northern Reach in consultation with the CDFW and USFWS: • All portions of the proposed project within the range of the San Francisco garter snake shall be designed to avoid impacts to aquatic habitat and to avoid or minimize impacts to adjacent upland habitat. • Construction activities in the Northern Reach shall be avoided within 200 feet of suitable aquatic habitat to the greatest extent feasible. • Construction equipment, personnel, and materials shall be confined to roadways and existing disturbed areas so as to minimize habitat disturbance. If work must occur within 200 feet of suitable aquatic habitat, exclusion fencing shall be installed at the discretion of a qualified biologist to prevent San Francisco garter snakes from entering the work site. • Construction shall occur between May 1 and October 1 when San Francisco garter snake is most active and would be expected to move and avoid danger. If construction must occur between October 2 and April 30, the USFWS and CDFW shall	Ensure impact avoidance and minimization measures are included on all grading and construction plans	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC, CDFW, USFWS			
	Retain a qualified biologist	Prior to/during construction for each segment	Once for each segment	Implementing Entity and/or RTC, CDFW, USFWS			
	Inspect site for compliance with avoidance and minimization measures	Throughout construction of each segment	Periodically for each segment	Implementing Entity and/or RTC			

Mitigation Measure/Condition of Approval	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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be consulted to determine if additional minimization measures are necessary. • Impacts to suitable upland habitat shall be the minimum necessary to complete construction of the project. The limits of construction shall be delineated clearly with highly visible flagging or construction fencing. • Not more than 24 hours prior to initiation of construction activities at the project site, including mobilization and staging, a qualified biologist shall conduct a survey of suitable habitat for San Francisco garter snake. If a San Francisco garter snake is observed within the disturbance footprint, construction activities shall be postponed until the CDFW and USFWS has been consulted for guidance. • Trash shall be fully contained at all times and shall be removed from the site daily. • A qualified biologist shall be present during all construction activities occurring within and adjacent to suitable habitat to ensure avoidance and minimization measures are implemented and effective.							
B-2(a) Jurisdictional Delineation. Once the final design has been developed for each segment, but prior to the start of construction, a qualified biologist shall conduct a jurisdictional delineation of the entire segment disturbance area at those locations where construction activity could affect jurisdictional waters. The jurisdictional delineation shall determine if features are under the jurisdiction of the USACE, RWQCB, CDFW, and/or CCC. The result shall be a preliminary jurisdictional delineation report that shall be submitted to the RTC and/or implementing entity, USACE, RWQCG, CDFW, and CCC, as appropriate, for review and approval. Permits shall be obtained from each agency where applicable.	Review jurisdictional delineation for each segment with jurisdictional waters	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC, USACE, RWQCB, CDFW, and/or CCC			
B-2(b) Wetland and Riparian Habitat Restoration. Impacts to jurisdictional wetland and riparian habitat shall be mitigated at a ratio of 2:1 for each segment, and shall occur as close to the impacted habitat as possible. A Habitat Restoration Plan shall be developed by a biologist approved by the RTC and/or implementing entity in accordance with mitigation measure B-1(b) above and shall be implemented for no less than five years after construction of the segment, or until the RTC/implementing entity and/or the permitting authority (e.g., CDFW or USACE) has determined that restoration has been successful. All restoration/compensatory	Review Habitat Restoration Plan	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC, CDFW, USACE			
	Implement Habitat Restoration Plan	Concurrent or immediately following	Ongoing	Implementing Entity and/or RTC			

Mitigation Measure/Condition of Approval	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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mitigation areas shall be permanently protected through a conservation easement or deed restriction.		construction of each segment					
B-2(c) Landscaping Plan. If landscaping is proposed for a specific segment, a qualified biologist/landscape architect shall prepare a landscape plan for that segment. This plan shall indicate the locations and species of plants to be installed throughout the segment. Drought tolerant, locally native plant species shall be used. Noxious, invasive, and/or non-native plant species that are recognized on the Federal Noxious Weed List, California Noxious Weeds List, and/or California Invasive Plant Council Lists 1, 2, and 4 shall not be permitted. Species selected for planting shall be similar to those species found in adjacent native habitats.	Review landscaping plan for each segment where landscaping is proposed	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC			
	Inspect site for compliance with approved landscaping plans	After construction of each segment	Once for each segment	Implementing Entity and/or RTC			
B-2(d) Invasive Weed Prevention and Management Program. Prior to start of construction of each segment, an Invasive Weed Prevention and Management Program shall be developed by a qualified biologist approved by the RTC and/or implementing entity to prevent invasion areas adjacent native habitat by non-native plant species. A list of target species shall be included, along with measures for early detection and eradication before any species can gain a foothold and out-compete native plant species for resources. All disturbed areas shall be hydroseeded with a mix of locally native species upon completion of work in those areas. In areas where construction is ongoing, hydroseeding shall occur where no construction activities have occurred within six (6) weeks since ground disturbing activities ceased. If exotic species invade these areas prior to hydroseeding, weed removal shall occur in consultation with a qualified biologist and in accordance with the restoration plan. Herbicides may be used on a limited basis to control the growth and spread of invasive weeds. Aqua-Master herbicides containing a dye to show overspray or a similar herbicide approved by the CDFW shall be used, and shall be applied by a certified pesticide application specialist under the direction of a qualified biologist. Herbicide application shall be plant species-dependent and can include foliar treatment or cut surface treatments. Herbicide shall not be broadcast over a large area; instead specific plant species shall be targeted. The target plant species shall be removed and disposed of properly at a landfill once they are dead.	Review Invasive Weed Prevention and Management Program for each segment	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC			
	Implement Invasive Weed Prevention and Management Program for each segment	Ongoing for each segment	Ongoing for each segment	Trail Manager, Trail Ranger			
	Inspect site for compliance with Weed Prevention and Management Program	Ongoing for each segment	Ongoing for each segment	Implementing Entity and/or RTC			

Mitigation Measure/Condition of Approval	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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B-3(a) Fence Design. All project fencing shall be designed to facilitate wildlife movement through the proposed MBSST Network and shall include: • A minimum 16 inches between the ground and the bottom of the fence to provide clearance for small animals; • A minimum 12 inches between the top two wires, or top the fence with a wooden rail or mesh instead of wire to prevent animals from becoming entangled; and • If privacy fencing is required near open space areas, openings at the bottom of the fence measure at least 16 inches in diameter shall be installed at reasonable intervals to allow wildlife movement. The final fence design shall be submitted by each implementing entity to the RTC and shall be reviewed by a RTC-approved biologist for approval.	Review fence design for each segment	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC			
	Inspect fence installation for compliance with approved plans	Prior to operation	Once for each segment	Implementing Entity and/or RTC			
B-3(b) Construction Best Management Practices. The following construction Best Management Practices (BMPs) shall be incorporated into all grading and construction plans for each segment of the MBSST Network: • Designation of a 15 mile per hour speed limit in all construction areas. • All vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed areas, and clearing of vegetation for vehicle access shall be avoided to the greatest extent feasible. • The number of access routes, number and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the goal of the project. • Designation of equipment washout and fueling areas to be located within the limits of grading at a minimum of 100 feet from waters, wetlands, or other sensitive resources as identified by a qualified biologist. Washout areas shall be designed to fully contain polluted water and materials for subsequent removal from the site. • Daily construction work schedules shall be limited to daylight hours only [consistent with mitigation measure N-1(a) (Construction Hours) in Section 4.10, Noise]. • Mufflers shall be used on all construction equipment and	Review grading and construction plans for each segment	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC			
	Inspect implementation of BMPs	During grading and construction of each segment	Ongoing during construction of each segment	Implementing Entity and/or RTC			

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vehicles shall be in good operating condition. • Drip pans shall be placed under all stationary vehicles and mechanical equipment. • All trash shall be placed in sealed containers and shall be removed from the project site a minimum of once per week. • No pets are permitted on project site during construction.							
CULTURAL RESOURCES							
CR-1(a) Cultural Resources Records Search. Prior completion of final design for each trail segment, the RTC and/or implementing entity shall contract with a qualified archaeologist to perform a cultural resources records search. The cultural resources records search shall include both the Area of Direct Impact as well as a suitable buffer area encompassing an Area of Indirect Impact as determined by a qualified archaeologist. If a cultural resources survey has previously been adequately performed for the subject trail segment/impact area, and existing prehistoric or archaeological cultural resources were not identified, no further pre-construction mitigation would be required. If no previous survey has been performed for the subject trail segment/impact area, or if a previous survey has identified prehistoric or archaeological cultural resources, mitigation measure CR-1(b) shall be implemented.	Retain a qualified archaeologist to perform a cultural resources records search	Prior to completion of final design for each segment	Once for each segment	Implementing Entity and/or RTC			
CR-1(b) Pre-Construction Prehistoric and Archaeological Resources Survey. Prior to completion of final design for each segment that has not been previously graded and/or surveyed for prehistoric and archaeological cultural resources [as determined by mitigation measure CR-1(a)], the RTC and/or implementing entity shall contract with a qualified archaeologist to perform a Phase I cultural resources assessment. In the event that prehistoric or archaeological cultural resources are identified within the Area of Direct Impact during the Phase I assessment and avoidance of impacts to the resource by redesign are not feasible, the implementing agency shall implement a Phase II subsurface testing program to determine the resource boundaries within the trail corridor/impact area, assess the integrity of the resource, and evaluate the site's significance through a study of its features and artifacts. If the site is determined significant, the RTC and/or implementing entity may choose to cap the resource area using culturally sterile and chemically neutral fill material and shall include open space	Retain a qualified archaeologist to perform a Phase I cultural resources assessment, Phase II study, and a Phase II study, where appropriate	Prior to final design for each segment that has not been previously graded and/or surveyed for prehistoric and archaeological cultural resources	Once for each segment	Implementing Entity and/or RTC			
	Implement avoidance and minimization measures, where appropriate	Prior to construction of each segment for which prehistoric or	Once for each segment	Implementing Entity and/or RTC			

Mitigation Measure/Condition of Approval	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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accommodations and interpretive displays for the site to ensure its protection from development. A qualified archaeologist shall be retained to monitor the placement of fill upon the site and to make open space and interpretive recommendations. If a significant site will not be capped, the results and recommendations of the Phase II study shall determine the need for a Phase III data recovery program designed to record and remove significant prehistoric or archaeological cultural materials that could otherwise be tampered with. If the site is determined insignificant, no capping or further archaeological investigation shall be required, though archaeological monitoring may still be required. The results and recommendations of the Phase II and/or Phase III studies shall determine the need for construction monitoring. In the event that prehistoric or archaeological cultural resources are identified within the Area of Indirect Impact during the Phase 1 assessment, the implementing entity shall contract with a qualified archaeologist to determine whether avoidance or minimization measures are required to prevent looting and aggravation of existing resources. If required, these measures could include, but shall not be limited to: installation of signage prohibiting the public from accessing the site(s), installation of fencing around the identified sites, installation of protection landscape screening, and/or placement of cultural sterile and chemically neutral fill upon the site(s). Selection of feasible avoidance or minimization measures shall be in consultation with the appropriate resource agency, implementing entity, and/or RTC. Following implementation of feasible avoidance or minimization measures the RTC and/or implementing entity shall prepare a four year monitoring plan that includes annual review of sites within the Area of Indirect Impact to assess whether impacts are occurring, supplemental measures to address identified impacts and an annual report of findings which would be available for review by the relevant resources agencies. The plan shall be implemented for a minimum of four years, or until it is clear that resources are not being impacted by the project.		archaeological cultural resources are identified within the Area of Indirect Impact					
CR-1(c) Alteration of Potential Historical Bridges/Structures. Prior to issuing permits for development of trail segments that would result in alteration of existing rail bridges, trestle structures, or other structures greater than 50 years old (at the time development is anticipated to occur), a qualified architectural historian shall inventory and evaluate the significance of potentially	Collect inventory and evaluate the significance of potentially historical bridges and other structures located	Prior to issuing permits for each segment with a bridge	Once for each segment with a bridge	Implementing Entity and/or RTC			

Mitigation Measure/Condition of Approval	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
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historical bridges and other structures located along the proposed trail alignment. Preliminary investigations have not identified any historic bridges; however, the trestle over Soquel Creek in Capitola is located in a historic district. If a bridge or other structure located along the proposed trail alignment is determined to be historic, the following shall be conducted prior to any rehabilitation, changes, alterations, or additions: A report shall be prepared by a professional architectural historian and shall be accompanied by requisite sets of large format camera Historic American Engineering Record (HAER) Level II black-and-white 8-by-10 inch archival quality prints taken by a professional photographer. A minimum of twelve views shall be documented (two profiles, two centerline shots, four abutment shots, and four engineering details) and two sets of prints shall be sent to the California State Library in Sacramento. Measured drawings shall be prepared of the structure under the supervision of a qualified architectural historian. After this effort, any proposed rehabilitation, changes, alterations, and additions to historical structures shall comply with the Secretary of the Interior Standards for Rehabilitation. Alterations shall be similar to the surrounding historical landscape and consistent with the character-defining features of the bridge/structure, as determined by procedures implementing the National Historic Preservation Act. Adjacent property owners and local government shall be consulted about the design details of any alterations to existing historical resources. Alterations shall be consistent with applicable local historic preservation policies and guidelines.	along the proposed trail alignment						
	If a bridge or other structure is determined to be historic, review HAER documentation	Prior to project construction	Once	Implementing Entity and/or RTC			
CR-2(a) Archaeological Resource Construction Monitoring. Prior to the commencement of construction activities for each trail segment, an orientation meeting shall be conducted by an archaeologist, general contractor, subcontractor, and construction workers associated with earth disturbing activities. The orientation meeting shall describe the potential of exposing archaeological resources, the types of cultural materials may be encountered, and directions on the steps that shall be taken if such a find is encountered.	Ensure approved archaeologist conducts orientation meeting for each segment	Prior to start of construction of each segment	Once for each segment	Implementing Entity and/or RTC			
	Inspect site	Throughout construction and grading of each segment	Prior to any earth moving on each segment	Implementing Entity and/or RTC			

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A qualified archaeologist shall be present during all initial earth moving activities for each trail segment. In the event that unearthed prehistoric or archaeological cultural resources or human remains are encountered during project construction, mitigation measure CR-2(b) shall take effect.							
CR-2(b) Unearthed Prehistoric or Archaeological Cultural Remains. If prehistoric or archaeological cultural resource remains are encountered during construction or land modification activities, work shall stop and the RTC and appropriate City or County planning, building department (depending on the jurisdiction in which the discovery occurs) or implementing entity shall be notified at once to assess the nature, extent, and potential significance of any prehistoric or archaeological cultural remains. The implementing entity shall implement a Phase II subsurface testing program to determine the resource boundaries within the trail corridor/impact area, assess the integrity of the resource, and evaluate the site's significance through a study of its features and artifacts. If the site is determined significant, the RTC and/or implementing entity may choose to cap the resource area using culturally sterile and chemically neutral fill material and shall include open space accommodations and interpretive displays for the site to ensure its protection from development. A qualified archaeologist shall be retained to monitor the placement of fill upon the site and to make open space and interpretive recommendations. If a significant site will not be capped, the results and recommendations of the Phase II study shall determine the need for a Phase III data recovery program designed to record and remove significant prehistoric or archaeological cultural materials that could otherwise be tampered with. If the site is determined insignificant, no capping and or further archaeological investigation shall be required. The results and recommendations of the Phase II study shall determine the need for construction monitoring.	Inspect site	Throughout construction and grading of each segment	Periodically for each segment	Implementing Entity and/or RTC			
	If a site is determined to be significant, cap site or conduct Phase III data recovery program	Prior to operation of the segment in which a significant resource was unearthed	Once	Implementing Entity and/or RTC			
GEOLOGY AND SOILS							
GEO-3 Geotechnical Study. Prior to site development of each segment of the MBSST Network, a geotechnical study shall be prepared by a registered civil or geotechnical engineer and reviewed by the RTC and/or implementing entity. This report shall include an analysis of the liquefaction, subsidence, and settlement	Review geotechnical study for each segment	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC			

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potential of the underlying materials. If the segment under study is confirmed to be in an area prone to seismically-induced liquefaction, subsidence, or settlement, appropriate techniques to minimize hazards shall be prescribed and implemented. Suitable measures to reduce ground-failure impacts could include, but are not limited to, the following: • Specialized design of foundations by a structural engineer • Removal or treatment of liquefiable soils to reduce the potential for liquefaction • In-situ densification of soils • Replacement or recompaction of soils, or • Other alterations to the ground characteristics.	Implement recommendations of the geotechnical report for each segment	Prior to construction of each segment	Once for each segment	Implementing Entity and/or RTC			
GEO-4 Hillside Stability Evaluation. If any permanent structures (including structures, bridges, paved multi-use paths, and trail furnishings) within a segment are to be located within possible landslide hazard zones, then an evaluation of the adjacent hillside shall be performed by a registered engineering geologist or a registered professional civil or geotechnical engineer prior to approval of that segment. If a landslide potential is found to exist, then setbacks or retaining walls, where approved by a registered engineering geologist or registered professional civil or geotechnical engineer, shall be imposed. The setback distance or design of the retaining walls shall be determined by the results of the landslide evaluation study.	Review hillside stability evaluation for each segment near possible landslide hazard zones	During plans, specifications, and estimates for each segment	Once for each segment near possible landslide hazard zones	Implementing Entity and/or RTC			
	Implement recommendations of the hillside stability evaluation for each segment	Prior to or during construction of each segment	Once for each segment	Implementing Entity and/or RTC			
GEO-7 Study of Soil Expansion. The geotechnical study required in mitigation measure GEO-3 shall include an evaluation of the potential for soil expansion of the underlying materials. If the segment under study is identified as being subject to expansive soil hazards, appropriate techniques to minimize hazards shall be prescribed and implemented. Suitable measures to reduce expansive soil hazards could include, but not be limited to: design of foundations by a structural engineer and/or or the replacement of soils beneath the segment.	Review geotechnical study for each segment	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC			
	Implement recommendations of the geotechnical report for each segment	Prior to or during construction of each segment	Once for each segment	Implementing Entity and/or RTC			
HAZARDS AND HAZARDOUS MATERIALS							
HAZ-1(a) Soil Sampling and Remediation. Prior to construction of each trail segment, a soil assessment shall be completed for that segment under the supervision of a professional geologist or professional civil engineer to determine the presence or absence of	Review required reports	Prior to issuance of grading permits for	Once for each segment	Implementing Entity and/or RTC, Santa Cruz			

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contaminated soil along the proposed trail. If soil sampling indicates the presence of any contaminant in quantities not in compliance with applicable laws or regulations, the RTC and/or implementing entity shall coordinate with Santa Cruz County Environmental Health Services to develop and implement a program to remediate or manage the contaminated soil during construction. Disposal shall occur at an appropriate facility licensed to handle such contaminants and remedial excavation shall proceed under the supervision of an environmental consultant licensed to oversee such remediation. The remediation/disposal program shall be approved by Santa Cruz County Environmental Health Services. The RTC and/or implementing entity shall submit all correspondence to Santa Cruz County Environmental Health Services prior to issuance of grading permits. All proper waste handling and disposal procedures shall be followed. Upon completion of the remediation/disposal, a qualified environmental consultant shall prepare a report summarizing the project, the remediation/disposal approach implemented, and the analytical results after completion of the remediation, including all waste disposal or treatment manifests.		each segment		Environmental Health Services			
	Comply with recommended remediation, if necessary	Prior to issuance of grading permits for each segment	Once for each segment	Implementing Entity and/or RTC, Santa Cruz Environmental Health Services			
HAZ-1(b) Arsenic Management Plan. A management plan to address arsenic-containing soil during construction of individual segments along the MBSST Network corridor shall be prepared and implemented. This plan shall include soil excavation, stockpiling, disposal procedures (considering profiling of arsenic and other constituents), and construction monitoring guidelines.	Review arsenic management plan	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC			
	Confirm compliance with approved plan	During construction of each segment	Intermittently for each segment	Implementing Entity and/or RTC			
HAZ-1(c) Granite Construction Company Petroleum Remediation and Mitigation.[1] An analysis shall be conducted to determine whether petroleum present in the soil near the Granite Construction facility is impacting groundwater. If groundwater is determined to have been affected by on-site contamination, or if soil contamination is detected at depths of 30 feet below grade or	Review results of analysis	During plans, specifications, and estimates for segment 18	Once	Implementing Entity and/or RTC, Santa Cruz County Environmental Health			

[1] *Granite Construction has initiated the process of remediating petroleum contamination at the Granite Construction site (866 West Beach Street, Watsonville). A Human Health Risk Assessment (HHRA) has been prepared for the site and is currently under review by the Regional Water Quality Control Board and the Regional Transportation Commission. For access to documents related to this site, please visit: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000002086. At such time as segment 18 is being considered for implementation, the RTC and/or implementing entity shall contact Santa Cruz County Environmental Health Services to determine the status of clean-up. If the site has been remediated and the case closed, mitigation may not be required.*

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greater, then a groundwater sampling assessment shall be performed. If contaminants are detected in groundwater at levels that exceed maximum contaminant levels for those constituents in drinking water, then the results of the groundwater sampling shall be forwarded to the appropriate regulatory agency (Santa Cruz County Environmental Health Services, Central Coast Water Quality Control Board, or the State of California Environmental Protection Agency Department of Toxic Substances Control). The agency shall review the data and sign off on the property or determine if any additional investigation or remedial activities are deemed necessary. Contaminated soils near the Granite Construction Facility in Watsonville shall also be profiled for disposal at the appropriate facility licensed to handle such contaminants and remedial excavation shall proceed under the supervision of an environmental consultant licensed to oversee such remediation. The remediation/disposal program shall be approved by Santa Cruz County Environmental Health Services prior to issuance of grading permits for segment 18. All proper waste handling and disposal procedures shall be followed. Upon completion of the remediation/disposal, a qualified environmental consultant shall prepare a report summarizing the project, the remediation/disposal approach implemented, and the analytical results after completion of the remediation, including all waste disposal or treatment manifests.				Services, RWQCB, DTSC			
	Approve remediation/disposal program	During plans, specifications, and estimates for segment 18	Once	Santa Cruz County Environmental Health Services			
HAZ-3(a) Trail Closure. A communication system shall be established between the Santa Cruz County Agricultural Commissioner's office, the RTC and/or implementing and managing entities, to convey any notices of intent to spray chemicals in a timely manner. The Trail Ranger or its designee shall be responsible for closing trail segments during and following application of agricultural chemicals, and posting additional warning signs, as appropriate.	Establish communication system	Prior to construction of segments near agricultural operations	Once for each segment near agricultural operations	Implementing Entity and/or RTC, Agricultural Commissioner's Office			
HAZ-5(a) Utility Line Location and Consultation. Prior to construction of each segment, the implementing entity shall determine the presence and exact location of any underground utility lines that correspond to the trail alignment. In addition, the presence of any above-ground utility lines in close proximity to the proposed alignment shall be determined.	Locate underground utilities	Prior to construction of each segment	Once for each segment	Implementing Entity and/or RTC			
	Construct segments in compliance set	During Construction	Once for each segment	Implementing Entity, Utility			

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If any utility lines are found to be in proximity to the trail alignment, the implementing entity shall contact the utility line operator regarding any regulations for grading and construction activities near the lines. The trail alignment shall be constructed and designed in compliance with all regulations and policies set forth by the operating entity.	forth by operating entity	of segments where utility lines are located	where utility lines are located	Line Operator			
HYDROLOGY AND WATER QUALITY							
H-5(a) Bridge Design. The plans for proposed creek bridges shall be submitted to the planning and/or building department of the jurisdiction in which the segment is located for review and approval. Bridges shall be designed to ensure that pre-project flood flows are maintained, such that upstream flooding does not occur. All recommendations in bridge design made by reviewing bodies shall be considered for implementation. These may include, but would not be limited to: structural anchoring, increase in base-flood elevation, and flood proofing techniques, such as the use of paints, membranes or mortars to reduce seepage, reinforcement to resist water pressure, addition of mass or weight to structure to resist flotation.	Review and approve bridge designs	During plans, specifications, and estimates for segment 18	Once	Implementing Entity's Planning and/or Building Department, RTC			
H-5(b) Trail Inspection Program. Within 10 calendar days following flooding events, the trail shall be inspected by the Trail Manager or its designee to determine if damage has occurred or if debris has collected and constricted water flow around the bridges. If damage or debris is found, it shall be repaired or cleared immediately. If repair is required, temporary signage shall be posted to indicate the trail's closure until damage is repaired. Routine bridge inspections shall be conducted by the Trail Manager or its designee on an annual basis.	Inspect trail	Within 10 calendar days following flooding events	As needed after flood events	Implementing Entity and/or RTC			
NOISE							
N-1(a) Construction Hours. Hours of construction for all segments of the MBSST Network project shall be limited to the hours between 8:00 AM and 7:00 PM on weekdays and 9:00 AM to 4:00 PM on Saturdays.	Inspect site	Throughout construction of each segment	Periodically for each segment	Implementing Entity and/or RTC			
N-1(b) Acoustical Shelters. Air compressors and generators used for construction shall be surrounded by temporary acoustical shelters if within 1,500 feet of a sensitive receptor (including residential, institutional, and office land uses).	Inspect site	Throughout construction of each segment	Periodically for each segment	Implementing Entity and/or RTC			
N-1(c) Construction Equipment. Stationary construction equipment that generates noise that exceeds 60 dBA at the	Inspect site	Throughout construction of	Periodically for each segment	Implementing Entity and/or			

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boundaries of adjacent sensitive receptors shall be baffled to reduce noise and vibration levels. All construction equipment powered by internal combustion engines shall be properly muffled and maintained. Unnecessary idling of internal combustion engines shall be prohibited. Whenever feasible, electrical power shall be used to run air compressors and similar power tools.		each segment		RTC			
TRANSPORTATION/TRAFFIC							
T-3(a) Trail Crossing Warning Signs. In addition to the proposed lighted crosswalks, caution signs shall be installed along vehicular roadways preceding each crosswalk to warn motorists of trail users.	Install signs along trail	Prior to operation of each segment	Once for each segment	Implementing Entity and/or RTC			
T-3(b) Agricultural Access Safety. Informational signs shall be installed at the trail crossings of public roads along the northern and Watsonville reaches, warning trail users of the presence of agricultural vehicles. Signs shall also be installed where agricultural access points intersect with adjacent roadways, warning operators about the presence of pedestrians and bicyclists.	Install signs along trail	Prior to operation of each segment	Once for each segment	Implementing Entity and/or RTC			
T-3(c) Right-of-Way Priority. Right-of-way priority at all roadway crossings shall be determined by the RTC and/or implementing entity, in consultation with private property owners (where appropriate), during the design of individual trail segments. Where feasible, right-of-way preference shall be given to the facility with the higher volume of traffic (i.e., in locations where the roadway has a higher volume of vehicle traffic than pedestrian and bicycle traffic on the trail, right-of-way shall be given to the roadway; in cases where the trail is crossing a road or driveway that has a lower volume of traffic than the trail, right-of-way priority shall be given to the trail). Right-of-way shall be indicated with appropriate stop or yield sign given to the cross traffic.	Determine right-of-way priority at all roadway crossings	During plans, specifications, and estimates for each segment with a road crossing	Once for each segment with a road crossing	Implementing Entity and/or RTC, Private Property Owners			
T-5(a) Crosswalk Markings. The crosswalk marking used at all MBSST Network crossings of public roadways shall incorporate a distinctive crosswalk pattern to orient different types of trail users. The crosswalk markings may incorporate bike trail markings flanking the crosswalk (possibly green in color), separating pedestrians in the middle, with directional signs for bicyclists on either side.	Install crosswalk markings	Prior to operation of each segment	Once for each segment	Implementing Entity and/or RTC			
T-5(b) Line-of-Sight. Wherever feasible, the interface between the trail and intersecting roadway shall be designed so that the approaching driver and bicyclist or pedestrian have a view of each other within the appropriate stopping sight distance suggested by AASHTO Guidelines. This sight distance shall be provided through	Comply with line-of-sight suggestions wherever feasible	Prior to operation of each segment for structural measures, as	Once for structural measures along each segment, as	Implementing Entity and/or RTC			

Mitigation Measure/Condition of Approval	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
a combination of measures such as minor vegetation trimming and/or removal, sidewalk/shoulder curb extensions, roadway realignment or narrowing, etc. Roadway Design Speed (mph) / Stopping Sight Distance (feet) 25 / 155 30 / 200 35 / 250 40 / 305 45 / 360		needed during operation for vegetation maintenance	needed for vegetation maintenance				
T-6 Construction Activity. Prior to issuance of grading permits, the implementing entity for each trail segment shall prepare a traffic control plan based on Caltrans standards. The traffic control plan shall outline requirements for construction cone placements, temporary construction signage and flagger placement for conditions such as lane closures, shoulder closures, and/or lane narrowing.	Prepare traffic control plan	Prior to issuance of grading permits for each segment	Once for each segment	Implementing Entity and/or RTC			
T-7 Trail Access. Where applicable, the RTC and/or implementing entities shall consider including openings in trail fencing to allow for pedestrian and bicycle access in locations other than staging areas and roadway crossings. If such openings are located on the trail side of the railroad tracks, no additional measures would be required. However, if the openings are located opposite the trail, such that bicyclists and pedestrians would be required to cross the railroad tracks to access the trail, then appropriate crossing equipment acceptable to the CPUC shall be included. These may include pedestrian railroad crossing gates and signage similar to what is proposed on other planned trail crossings of the railroad.	Consider openings in trail fencing, where appropriate	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC, CPUC			
PUBLIC SAFETY AND SERVICES							
PS-1(a) Landscaping Irrigation. Where a segment is proposed in an area that may not have adequate water supplies or water treatment facilities, one or a combination of the following options shall be implemented: 1. Landscaping shall be excluded from the trail design; 2. Landscaping shall consist of native and drought-tolerant species that do not require long-term irrigation; or 3. Landscaping requiring long-term irrigation shall utilize recycled	Review landscaping plans	During plans, specifications, and estimates for each segment	Once for each segment	Implementing Entity and/or RTC, Water Purveyor			

Mitigation Measure/Condition of Approval	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
water supplies. Landscaping plans shall be reviewed and approved by the implementing entity, in consultation with the water purveyor, prior to approval of each segment.							
PS-1(b) Retrofitting Existing Facilities. Where a segment is proposed in an area that may not have adequate water, the RTC and/or implementing entity shall ensure that there is no net increase in water demand for the affected water service area as a result of increased use of existing restrooms or water fountains. This may occur through one of the following options, or a combination thereof: 1. Retrofit existing public restroom facilities at existing trail heads and staging areas (refer to Table 2-1 in Section 2.0, Project Description) to include low-flow toilets and other water saving devices; 2. Retrofit existing public restroom facilities at existing trail heads and staging areas to allow use of recycled water at existing facilities; and/or 3. Retrofit off-site public facilities (e.g. city or county offices, schools, etc.) that are within the same groundwater service area. The determination of the water demand that requires an offset, and the mechanisms for the offset, shall be determined by the implementing entity in consultation with the RTC and applicable water service provider(s).	Retrofit existing facilities, where appropriate	Prior to construction of segments where adequate water is not available	Once for each segment where adequate water is not available	Implementing Entity and/or RTC, Water Purveyor			
PS-1(c) New Bathroom in Watsonville Reach. Should the proposed new bathroom on the Watsonville Reach be sited in an area without adequate surplus water supplies to serve the facility, then one of the following options shall be implemented to ensure no net increase in water demand: 1. Retrofit off-site public facilities (e.g. city or county offices, schools, etc.) that are within the same groundwater service area. The determination of the water demand that requires an offset, and the mechanisms for the offset, shall be determined by the implementing entity in consultation with the RTC and applicable water service provider(s); 2. Install zero-water demand restroom facility (e.g. compost toilet); or 3. Omit development of the new restroom facility.	Ensure a no net increase in water demand due to the restroom, as appropriate	Prior to construction of segment along which the restroom would be located	Once	Implementing Entity and/or RTC, Water Purveyor			

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