Yosemite National Park

National Park Service
U.S. Department of the Interior

Reconstructing Critically Eroded Sections of El Portal Road

Finding of No Significant Impact,
Merced Wild and Scenic River Section 7 Determination,
Floodplain Statement of Findings,
Wetland Statement of Findings, and
Environmental Assessment Errata Sheets

July 2007

United States Department of the Interior

NATIONAL PARK SERVICE
Yosemite National Park
P.O. Box 577
Yosemite, California 95389

IN REPLY REFER TO:
A3823 (YOSE-PM)

JUL 2 7 2007

Dear Friends of Yosemite National Park:

We are pleased to provide you with a copy of the Finding of No Significant Impact for the Reconstructing Critically Eroded Sections of El Portal Road project. This document records the decision of the National Park Service to reconstruct 1,350 feet of El Portal Road, as described under Alternative 2 in the *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment.*

This packet also contains Errata Sheets for the *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment,* a Merced Wild and Scenic River Section 7 Determination, a Wetland Statement of Findings, and a Floodplain Statement of Findings.

The National Park Service has determined that implementation of the Reconstructing Critically Eroded Sections of El Portal Road project will not have a significant effect on the environment; therefore, an environmental impact statement will not be prepared.

We thank you for your comments regarding the project. Public participation is a key element in the environmental review process at Yosemite National Park. Your participation helps to ensure that the National Park Service fully understands and considers your values and concerns.

Sincerely,

for Michael J. Tollefson
Superintendent

Enclosure (1)

Yosemite National Park

National Park Service
U.S Department of the Interior

Reconstructing Critically Eroded Sections of El Portal Road

Finding of No Significant Impact

July 20, 2007

This page intentionally left blank

FINDING OF NO SIGNIFICANT IMPACT

RECONSTRUCTING CRITICALLY ERODED SECTIONS OF EL PORTAL ROAD

YOSEMITE NATIONAL PARK

JULY 2007

1. PURPOSE AND NEED

This Finding of No Significant Impact (FONSI) documents the decision of the National Park Service (NPS) to adopt a plan to reconstruct the critically eroded sections of El Portal Road—amounting to approximately 1,350 linear feet—and the determination that no significant impacts on the human environment are associated with that decision. The purpose of the Reconstructing Critically Eroded Sections of El Portal Road project is to repair those portions of the road and embankment that are at risk of failure as a result of the damage initially caused by highwater events of the Merced Wild and Scenic River, including the devastating flood of January 1997. By promptly reconstructing the failing portions of El Portal Road, park visitors will be protected from the hazard of a sudden road failure, access to Yosemite Valley will be maintained, and the Outstandingly Remarkable Values (ORVs) of the Merced Wild and Scenic River corridor will be protected.

Major repairs have not been undertaken on this portion of El Portal Road for many years. Since the 1997 flood, the roadway and embankment have been further undermined and weakened by the Merced River. Five emergency stabilization projects have been completed since 1997, but the risk of substantial road failure will remain until the road is reconstructed. This risk jeopardizes park visitors and staff and threatens to sever a critical point of access to Yosemite Valley. In addition, the primary sewer line that transfers wastewater from Yosemite Valley to the El Portal Wastewater Plant is embedded in the roadway; a substantial road failure could sever this sewer line, resulting in the disruption of wastewater services to Yosemite Valley and potentially resulting in a sewage spill into the Merced River. The roadway also contains a primary power line to Yosemite Valley; a sudden road failure could result in the disruption of electrical service to Yosemite Valley. The design for the reconstructed road would also meet the need for the road features to be updated consistent with up to date park requirements for safety, maintainability, and resource protection, thereby improving the overall driving conditions along the corridor. A complete description of the proposal and its environmental consequences are contained in the *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment*.

2. ALTERNATIVES ANALYZED

The NPS analyzed three alternatives in the *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment*. These were Alternative 1: No Action Alternative, Alternative 2: 11-foot travel lanes, and Alternative 3: 10-foot travel lanes. Based on this analysis, the NPS has identified Alternative 2 as the Environmentally Preferred Alternative and has selected this alternative for implementation.

2.1 Selected Alternative

The Selected Alternative will include 11-foot travel lanes, a 3-foot paved ditch with a 1-foot curb between the road and the steep slopes on the north side, and a 1-foot shoulder between the road and the guardwall on the south side. The Selected Alternative complies with the requirements of the Wild and Scenic Rivers Act (WSRA) and associated guidelines by not permanently altering the free-flowing condition of the Merced River and by protecting and enhancing river values. No modifications to the Selected Alternative were made as a result of comments received on the Environmental Assessment.

The Selected Alternative will remove 250 linear feet of historic guardwall, will reconstruct historic retaining walls in two locations, and requires the removal of 4 canyon live oak trees, 2 fir trees, and 1 other type of tree. Most of the existing vegetation would be retained. The existing impervious surface of the roadway is approximately 0.57 acre. After implementing the Selected Alternative, the impervious surface of the improved roadway would cover approximately 0.8 acre, an increase of 0.23 acre. The total roadway footprint, including all walls, pavement, ditches, and road cut, would increase from 1.17 acres to 1.24 acres, an increase of 0.07 acre. A total of 0.47 additional acres outside the permanent construction limits would be temporarily disturbed during roadway reconstruction, primarily to allow for reconstruction of retaining walls.

2.2 Alternative 1: No Action Alternative

The No Action Alternative would continue the existing operation, maintenance, and as-needed emergency repairs to sections of El Portal Road. The No Action Alternative provides a baseline from which to compare the action alternatives, to evaluate the magnitude of proposed changes, and to measure the environmental effects of those changes.

2.3 Alternative 3: 10 -Foot Travel Lanes

Alternative 3 (10-foot travel lanes) would include 10-foot travel lanes, a 3-foot paved ditch with a 1-foot curb between the road and the steep slopes on the north side, and a 1-foot shoulder between the road and the guardwall on the south side. Alternative 3 complies with the requirements of the Wild and Scenic Rivers Act (WSRA) and associated guidelines by not permanently altering the free-flowing condition of the Merced River and by protecting and enhancing river values.

Alternative 3 would remove 250 linear feet of historic guardwall, would reconstruct historic retaining walls in two locations, and would require the removal of 4 canyon live oak trees. Most of the existing vegetation would be retained. The existing impervious surface of the roadway is approximately 0.57 acre. After completion of Alternative 3, the impervious surface of the improved roadway would cover approximately 0.75 acre, an increase of 0.18 acre. The total roadway footprint, including all walls, pavement, ditches, and road cut, would decrease from 1.17 acres to 1.13 acres, a decrease of 0.04 acre. A total of 0.47 additional acres outside the permanent construction limits would be temporarily disturbed during roadway reconstruction, primarily to allow for reconstruction of retaining walls.

2.4 Decision Rationale

Action is warranted at this time because of the continued roadway deterioration in the project area since the January 1997 flood. Large cavities have formed beneath the road surface and in the retaining walls, road shoulders have continued to erode, and cracks have formed in surface pavement, evidence of instability in subsurface fill material. The NPS has completed five emergency repairs in order to temporarily stabilize the failing roadway. However, a complete reconstruction is necessary to permanently stabilize the roadway.

The design improvements associated with the Selected Alternative are anticipated to result in a substantial improvement to driver safety relative to the existing conditions. The 11-foot lane width, 3-foot paved ditch and 1-foot curb on the north side, and 1-foot shoulder between the travel lane and guardwall on the south side will act in concert to reduce the frequency of crashes. Also, the 11-foot travel lanes will more safely accommodate large vehicles such as tour buses (typically 8 to 8.5 feet in width not including mirrors), school buses, delivery trucks, and trash trucks. Maintenance will be easier and safer due to the additional room to maneuver maintenance vehicles, remove rock debris, and remove snow during winter months. The reconstructed roadway would maintain continuity of driver expectations from the 11-foot lane width in the previously reconstructed segments of El Portal Road to the west of the project area. And, the additional travel lane width would safely accommodate traffic in the construction zone during the construction period. While some road standards call for 12-foot travel lanes in combination with wider shoulders, the Selected Alternative strikes a balance between the size of the new road footprint and the need to provide for driver safety.

3. Alternatives Considered but Dismissed

The NPS also considered seven alternatives that were dismissed from further consideration. These actions were analyzed, considered, and dismissed because they did not fully satisfy the objectives of this planning effort. These actions were dismissed for one of the following reasons:

- The action does not satisfy the project's purpose and need.
- Less environmentally damaging options are available.
- The action would cause unacceptable safety, social, or visual impacts.
- The action presents unacceptable engineering risks or constraints with an associated increase in costs.
- The action conflicts with the requirements of the Wild and Scenic Rivers Act.

The following sections describe the dismissed alternatives.

3.1 National Park Service Standards Alternative

The NPS Park Road Standards is an agencywide guide for the planning, design, and construction of park roads throughout the nation. Based on El Portal Road's average daily

traffic volume (3,081 vehicles), the standards suggest two 11-foot travel lanes with two 3-foot shoulders and a 40 mph preferred design speed (30 mph minimum) (NPS 1984). The standards acknowledge that wide shoulders may be environmentally and aesthetically objectionable, or may encourage undesirable random stopping or parking.

The National Park Service Standards Alternative was dismissed because:

- The road footprint that would result by including two 3-foot shoulders would not be consistent with preserving the natural, cultural, scenic, and recreational values that characterize this section of roadway.

3.2 American Association of State Highway and Transportation Officials Standards Alternative

The American Association of State Highway and Transportation Officials (AASHTO) standards for design traffic volumes of El Portal Road are two 11-foot travel lanes and a minimum shoulder width of 4 feet (each side of pavement) (AASHTO, 1990).

This alternative was dismissed because:

- The road footprint that would result by including two 4-foot shoulders would not be consistent with preserving the natural, cultural, scenic and recreational values that characterize the park-like character of the roadway.

3.3 10-foot Lanes, No Paved Ditch, One-Foot Shoulders Alternative

This alternative would involve complete reconstruction of the 1,350-foot section of El Portal Road. It is similar to Alternative 3 since it has 10-foot travel lanes, but does not include a ditch.

This alternative was dismissed because:

- It would not provide the necessary drainage improvements.
- Traffic safety would not be substantially better than the current conditions.
- There would be ongoing difficulties accommodating large vehicles including buses, recreational vehicles, delivery trucks, and garbage trucks.
- Roadway consistency would not be substantially improved compared to the current condition.
- Pedestrian and bicycle safety would not be improved compared to current conditions.

3.4 10-Foot Lanes, No Paved Ditch and No Shoulder Alternative

This alternative consists of 10-foot travel lanes, no paved ditch on the north side and no shoulder on the south side of the road adjacent to the guardwall.

This alternative was dismissed because:

- It would perpetuate the existing conflicts between large vehicles, such as buses, recreational vehicles, delivery trucks, and garbage trucks. These vehicles are typically 8 to 8.5 feet wide not including side view mirrors.

- It would result in short-term impacts to park resources that are similar in scope and magnitude to the action alternatives, but would not provide the long-term safety, drainage, and maintenance benefits of the action alternatives.

3.5 No Cut Alternative

This alternative would avoid any cuts into the cutslope (the hill slope sloping up from the roadbed) for the entire 1,350 foot project length. Because of the narrow existing roadbed width (20 feet), the No Cut Alternative would require fill below the Ordinary High Water Mark (OHWM).

This alternative was dismissed because:

- The requirement to place new structures within the waterway below the OHWM is in conflict with the purpose and need for this project related to protecting the Merced River's free-flowing condition.

3.6 No Fill Alternative

This alternative would avoid any fills into the fill slope (the hill slope sloping down from the roadbed to the Merced River) for the entire 1,350-foot project length. Because of the narrow existing roadbed width (20 feet), the No Fill Alternative would require deep and high cuts into the steep rock embankment adjacent to and north of the eastbound travel lane.

This alternative was dismissed because:

- The falling rock from controlled rock scaling could cause collapse of the roadway.

- It may not be possible to maintain one open lane for traffic throughout the construction period. This is inconsistent with the purpose and need of maintaining visitor access.

3.7 All Cantilever Alternative

This alternative would involve construction of a cantilever structure along the entire 1,350-foot project length. Cantilever construction allows for overhanging road structures without external support.

This alternative was dismissed because:

- It would involve the longest construction period of all of the alternatives that have been considered.

- A cantilever is a new element and would significantly change the existing roadway character were it to be used along the entire length.

- Cantilevers are extremely costly to construct.

- Is unnecessary to implement along the entire project area since many areas can be reconstructed without use of this structure

4. Environmentally Preferable Alternative

The environmentally preferred alternative is determined by applying criteria identified in Section 101 of the National Environmental Policy Act (NEPA) to each alternative. In accordance with the NEPA, the environmentally preferred alternative would best: (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations; (2) assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings; (3) attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences; (4) preserve important historic, cultural and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice; (5) achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and (6) enhance the quality of renewable resources and approaching the maximum attainable recycling of depletable resources.

The NPS has considered all alternatives in this analysis in accordance with NEPA and Council on Environmental Quality regulations (Section 1505.2) and has determined that the Selected Alternative: 11-foot travel lanes with 3-foot paved ditch and 1-foot shoulder, is the Environmentally Preferable Alternative. After review of potential impacts, and developing mitigation measures, the preferred alternative achieves the greatest balance between (1) providing a high level of protection of natural and cultural resources while concurrently attaining the widest range of beneficial uses of the environment without degradation; (2) reducing risks to public health and safety; and (3) providing aesthetically pleasing surroundings. Alternative 3, 10-foot travel lanes with 3-foot paved ditch and 1-foot shoulder, would provide similar protection for natural and cultural resources and would also provide aesthetically pleasing surroundings, but would not reduce risks to public health and safety to the same extent as the Selected Alternative. The No Action Alternative would not provide a high level of protection for natural and cultural resources, would perpetuate risks to public health and safety, and would not provide aesthetically pleasing surroundings.

5. Why the Selected Alternative Will Not Have a Significant Effect on the Human Environment

The Selected Alternative would avoid encroachment into the OHWM, preserve the free flowing condition of the Merced River and minimize visual, cultural, and natural resource impacts to the Merced River Canyon Corridor while improving safety. Overall, there would be long-term negligible, beneficial impacts on soils, geologic resources, and scenic resources. There would be negligible to minor beneficial impacts related to wildlife, special status species, and visitor experiences and recreation.

Free-Flowing Condition of the Merced River

Selected Alternative does not encroach on the OHWM of the Merced River. Where existing structures are in contact with the OHWM, those are established as construction limits. In all other locations reconstructed elements of El Portal Road will remain out of the OHWM. Because no new structures are placed in the waterway, the free-flowing condition of the Merced River will not be altered by Selected Alternative.

Socioeconomics

During reconstruction, the Selected Alternative would result in a regional, short-term, moderate, adverse effect to socioeconomics due to construction delays, reduction in visitation, and decreases in spending. Once roadway reconstruction is complete, access to Yosemite Valley by way of El Portal Road would be restored, and the road would be safer. Overall, considering both social and economic impacts, the Selected Alternative is anticipated to have short-term, minor to moderate adverse impacts, due to moderate decreases in visitor spending, minor decreases in tax revenue, and minor disruption to school bussing and commuting patterns.

Wetlands

There would be no permanent, long-term impacts to wetlands; however there would be temporary, short-term construction related impacts to .47 acres of riverine upper palustrine wetlands (nonvegetated) as a result of the project. Reconstruction would result in local, short-term, minor adverse impacts to wetlands due to construction activities and long-term, minor to moderate, beneficial impacts to wetlands resulting from improved hydrologic flows. However, construction activities would occur in a controlled manner, with the application of mitigation, reducing the adverse effect to a negligible intensity.

Historic Properties

Construction activities under the preferred alternative would have adverse effects on some contributing elements to the Merced River Canyon Travel Corridor Historic District; thus Alternative 2 would have an adverse effect on historic properties. This adverse effect is resolved in accordance with the 1999 Programmatic Agreement through measures such as photo-documentation, interpretive efforts, and reusing some of the existing materials to retain the historic appearance, and salvaging and stockpiling unused historical materials for appropriate use in future park projects. . The Canyon Live Oak tree that is a contributing element to the historic district will be preserved by collecting acorns and/or taking cuttings for replanting in a more appropriate location along the corridor. The Historic District will also be reevaluated for its eligibility for listing on the National Register.

Cumulative Impacts

Significant cumulative impacts were not identified for any impact topic. Also, no highly uncertain or controversial impacts, unique or unknown risks, or elements of precedence have been identified. Implementing the selected alternative will not violate any federal, state, or local environmental laws.

6. NON-IMPAIRMENT OF PARK RESOURCES

Pursuant to the 1916 Organic Act, the NPS has a management responsibility “to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the

enjoyment of future generations." Therefore, the NPS cannot take an action that would "impair" park resources or values.

Based on the analysis provided in the *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment*, the NPS concludes that implementation of Selected Alternative would have no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Yosemite National Park; (2) key to the natural or cultural integrity of Yosemite National Park or to opportunities for enjoyment of the park; or (3) identified as a goal in the park's General Management Plan or other relevant NPS planning documents. Consequently, implementation of the Selected Alternative will not violate the NPS Organic Act.

7. MITIGATION

7.1 Mitigations to Resolve Adverse Effects to Historic Properties

The National Historic Preservation Act (NHPA) requires federal agencies to take into account the effect of undertakings on historic properties with a good faith effort to avoid, minimize or mitigate potential effects. NEPA and NHPA have similar provisions regarding resolution of potential adverse effects. An adverse effect can be resolved by modifying the undertaking; by imposing certain mitigation conditions such as photo-documentation; through rehabilitation in accordance with the Secretary's Standards; by requiring compensation for the effect such as restoring another property, or imposing financial reparation; or by accepting the effect is in the public interest.

In the case of the Reconstructing Critically Eroded Sections of El Portal Road project, the National Park Service acknowledges the unavoidable adverse effect to certain contributing elements of the Merced River Canyon Travel Corridor Historic District in the project area, and has developed mitigation measures, in consultation with the California State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP), to resolve this adverse effect. These measures are photo-documentation, salvage, interpretation, and National Register eligibility reevaluation.

In terms of salvage, materials from the historic dry-laid retaining walls will be reused as a facade to retain the historic appearance of the original dry-laid wall. Material salvaged from the historic guardwall will not be reincorporated on-site, because the guardwall will be replaced with a crash-tested, form-liner guardwall. However, the material will be salvaged from the historic guardwall and stockpiled for reuse in appropriate future projects. For interpretation, two displays entitled "A Route for All Seasons" and "Journey to Yosemite Valley" have already been placed within the Merced River Travel Corridor District, following the reconstruction of Segments A, B, and C. These displays provide a history of El Portal Road and a discussion of flood damage to the road, and are considered to partially resolve the adverse effects to certain contributing elements in the project area. The park has determined, in consultation with SHPO and ACHP, that additional displays would not enhance interpretation in the Historic District. Photo-documentation in accordance with Stipulation VIII.A.1 of the 1999 Programmatic Agreement Among the National Park Service at Yosemite, the California State Historic Preservation Officer, and the Advisory Council on

Historic Preservation (1999 PA), will also occur before the start of construction. National Register eligibility reevaluation will occur in accordance with the 1999 PA, which requires NPS to consult with SHPO regarding the property's continued eligibility for the National Register within 120 working days after the completion of work that would result in an adverse alteration, relocation, or demolition of a historic property. The Canyon Live Oak tree that is considered a contributing element to the cultural landscape will be propagated by collecting acorns and/or taking cuttings to regenerate the tree in a more appropriate location in the corridor.

7.2 Mitigation Matrix

The following mitigation measures (see Table 1) have been or will be incorporated into the project to avoid or reduce impacts to park resources.

Table 1: Impact/Mitigation Matrix

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
Prior to entry into the park, steam-clean heavy equipment to prevent importation of non-native plant species, tighten hydraulic fittings, ensure hydraulic hoses are in good condition and replace if damaged, and repair all petroleum leaks.	Construction Mitigation Measures	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Inspect the project to ensure that impacts stay within the parameters of the project area and do not escalate beyond the scope of the environmental assessment, as well as to ensure that the project conforms with all applicable permits or project conditions. Store all construction equipment within the delineated work limits. Confine work areas within creek channels to the smallest area necessary.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Implement compliance monitoring to ensure that the project remains within the parameters of NEPA and NHPA compliance documents, U.S. Army Corps of Engineers Section 404 permits, etc.		Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
Provide a project orientation for all construction workers to increase their understanding and sensitivity to the challenges of the special environment in which they will be working.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
If deemed necessary, demolition/construction work on weekends or federal government holidays may be authorized, with prior written approval of the Superintendent.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Remove all tools, equipment, barricades, signs, surplus materials, and rubbish from the project work limits upon project completion. Repair any asphalt surfaces that are damaged due to work on the project to original condition. Remove all debris from the project site, including all visible concrete, timber, and metal pieces.		Yosemite National Park, Project Manager; Contractor	Upon completion of project activities
The Construction Contractor shall prepare a Health and Safety Plan to address all aspects of Contractor health and safety issues compliant with OSHA standards and other relevant regulations. The Plan shall be submitted for park review and approval prior to construction.		Contractor	Prior to and concurrent with project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared by the Construction Contractor and implemented for construction activities to control surface run-off, reduce erosion, and prevent sedimentation from entering water bodies during construction. The SWPPP shall be submitted for park review and approval prior to construction.		Contractor	Prior to and concurrent with project activities
A construction work schedule shall be prepared by the Construction Contractor for the project that minimizes effects on wildlife in adjacent habitats, peaks in visitation, and noise levels near residential housing and visitor lodging areas. The work schedule shall be submitted for park review and approval prior to construction.		Contractor	Prior to and concurrent with project activities
Supervisory construction personnel shall attend an Environmental Protection briefing provided by the park prior to working on site. This briefing is designed to familiarize workers with statutory and contractual environmental requirements and the recognition of and protection measures for historic properties, sensitive habitats, water resources, and wildlife habitats.		Contractor	Prior to and concurrent with project activities
The park shall develop a Communications Strategy Plan to alert necessary park and Concessionaire employees, residents and visitors to pertinent elements of the construction work schedule.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Implement a revegetation plan that conforms to the requirements outlined in the park's *Vegetation Management Plan* and Executive Order 13122 – Invasive Species. Specific components of the plan will include, but not be limited to, the following: soil salvage/reuse, plant salvage, soil preparation, selection, use, and treatment of new soil; use of native plants of native genotypes; seeding mixtures/sources; use of fertilizers; noxious and invasive weed control; supplemental revegetation if initial revegetation fails; repair/replacement of damaged trees; and mulching.	Revegetation	Yosemite National Park, Project Manager; Contractor	Concurrent with and following project activities
Implement a noxious weed abatement program. Standard measures include the following elements: ensure construction-related equipment arrives on site free of mud or seed-bearing material, certify all seeds and straw material as weed-free, identify and treat areas of noxious weeds prior to construction, and revegetate with appropriate native species and monitor the restored site annually for three years to ensure absence of noxious weeds, successful revegetation, plant maintenance, and replacement of unsuccessful plant materials.	Vegetation	Yosemite National Park, Project Manager; Contractor	Prior to, concurrent with and following project activities
Install temporary barriers to protect natural surroundings (including trees, plants, and root zones) from damage. Avoid fastening ropes, cables, or fences to trees.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Install fencing to minimize use of highly sensitive sites such as creek edges and wetlands, and install signs as needed to direct use to more appropriate areas.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Use native seed mix or seed-free mulch to minimize surface erosion and the introduction of non-native plants.		Contractor	Concurrent with project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
If special-status plant species are identified within the construction disturbance zone, in particular within restoration and revegetation areas, avoid special-status plant populations to the extent feasible during construction activities.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
If it is not feasible for construction activities to avoid special-status plant species, species conservation measures will be developed in coordination with Yosemite National Park natural resources staff. Measures may include salvage of special-status plants for use in revegetating disturbed areas and transplantation of special-status plants wherever possible using methods and monitoring identified in the revegetation plan, monitoring to ensure successful revegetation, protection of plantings, and replacement of unsuccessful plant materials if practicable.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Store equipment and materials away from all waterways. No debris shall be deposited within 150 feet of the Merced River.		Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
Provide proper and timely maintenance for vehicles and equipment used during construction to reduce the potential for mechanical breakdowns. Conduct maintenance and fueling in an area at least 150 feet away from the Merced River.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Complete work activities in wetlands during periods of low flow.		Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
Obtain full compliance with all permit conditions contained in the Section 404 Clean Water Act permit from the U.S. Army Corps of Engineers and Section 401 water quality certification or waiver from the Regional Water Quality Control Board.		Yosemite National Park, Project Manager	Prior to project activities
Use silt fencing at the Merced River and drainages to prevent construction materials from escaping work areas.		Contractor	Concurrent with project activities
Make every effort to avoid adversely affecting wetlands during construction activities to the extent feasible. Use fencing to protect wetlands from damage caused by construction equipment, erosion, siltation, and other ground-disturbing activities.		Contractor	Prior to and concurrent with project activities
Conduct surveys of the project area to determine the type and number of vulnerable species that may be affected by construction activities; schedule construction activities with seasonal consideration of wildlife lifecycles to minimize impacts during sensitive periods (i.e., after bird nesting seasons, when bats are neither hibernating nor have young, etc).	Wildlife	Yosemite National Park, Project Manager	Prior to project activities
Limit the effects of light and noise on adjacent habitat through controls on construction equipment and through site design of facilities.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
Provide adequate education and enforcement to limit visitor and construction worker activities that are destructive to wildlife and habitats.		Yosemite National Park, Project Manager	Concurrent with and following project activities
Preserve, where possible, natural features with obvious high value to wildlife, such as tree snags.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Prior to tree management activities, qualified biologists will screen the area for bat roosts, nesting birds, and other features that are important wildlife habitat.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Tree removal will occur primarily during the period when neither maternity nor hibernation colonies are likely (generally April through May and August through October). If tree removal is slated to occur between November and March or between June and July, a qualified bat biologist will survey trees to be removed and other potential habitat for breeding or hibernating bats prior to any tree removal activities.		Yosemite National Park, Project Manager	Concurrent with project activities
If bats are detected during reproduction or hibernation periods, tree removal and disturbance of other potential habitat will be delayed until the bats can be excluded from the area in a manner that does not adversely affect their survival or that of their young.		Yosemite National Park, Project Manager, Contractor	Concurrent with project activities
If surveys conducted immediately prior to construction do not reveal any bat species present within the project area, then the action will begin within three days to prevent the destruction of any bats that could move into the area after the survey.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Preconstruction surveys shall be conducted by a qualified biologist to identify the number, type and location of special status bird, bat and aquatic species within the project area. Structures and habitats that provide hibernacula, nursery colonies, or roosting habitat are to remain and other protective measures shall be identified during surveys.	Special-Status Species of Invertebrates	Yosemite National Park, Project Manager	Prior to project activities
If surveys reveal the presence of special-status species of invertebrates in the vicinity of the project area, species conservation measures will be developed in coordination with Yosemite natural resources staff. Measures may include avoidance of occupied habitat and the implementation of dust abatement measures during construction adjacent to occupied habitat.		Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
The NPS will apply for and comply with all federal and state permits required for construction-related activities that will include, but not be limited to: U.S. Army Corps of Engineers permits for activities affecting wetlands and the Merced River; A technically conditioned certification issued by the California Regional Water Quality Control Board for monitoring construction-related activities affecting the Merced River; U.S. Fish and Wildlife Service permits for activities affecting species protected by the Endangered Species Act.	Federal and State Permit Requirements	Yosemite National Park, Project Manager	Prior to project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
Mitigation measures for historic properties include measures to avoid impacts, designing new development to be compatible with surrounding historic resources, and to resolve adverse effects by implementing Standard Mitigation Measures, as defined in the *1999 Programmatic Agreement Among the NPS at Yosemite, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation* (1999 PA), which include photo documentation, salvage, National Register re-evaluation, and interpretation (existing interpretation displays developed for Segments A, B and C have been determined adequate to satisfy the requirement and no new interpretive efforts are recommended.	Cultural Resources	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Although not expected, should previously unknown American Indian burial sites be discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act and its implementing regulations will be followed.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
In the unlikely event that previously unknown cultural resources are encountered during construction, temporarily suspend work in the immediate area to document discovered resources according to NPS standards.		Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
Precede removal of trees and vegetation with site-specific reconnaissance to protect and maintain the view corridors and avoid potential impacts to cultural landscape resources. Propagate Canyon Live Oak specimen tree by taking cuttings and/or collecting acorns for replanting in a more appropriate location.		Yosemite National Park, Project Manager	Prior to project activities
Cover and/or seal truck beds and stockpiles to minimize blowing dust or loss of debris.	Dust Abatement Measures	Contractor	Concurrent to project activities
Limit truck and related construction equipment speeds in active construction areas to a maximum of 15 miles per hour and strictly adhering to park regulations and posted speed limits in other areas while inside park boundaries.		Contractor	Concurrent to project activities
Maintain adequate dust suppression equipment and using clean water to control excess airborne particulates at staging areas, active construction zones, and unpaved roads leading to/from active construction areas.		Contractor	Concurrent with project activities
Develop an emergency notification plan that complies with park, federal, and state requirements and allows contractors to properly notify park, federal, and/or state personnel in the event of an emergency during construction activities. This plan will address notification requirements related to fire, personnel, and/or visitor injury, releases of spilled material, evacuation processes, etc. The emergency notification plan will be submitted to the park for review/approval prior to commencement of construction activities.	Emergency Notification Measures	Yosemite National Park, Project Manager	Prior to project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
Notify utilities prior to construction activities. Identify locations of existing utilities prior to removal activity to prevent damage to utilities. The Underground Services Alert and National Park Service maintenance staff will be informed 72 hours prior to any ground disturbance. Construction-related activities will not proceed until the process of locating existing utilities is completed (water, wastewater, electric, communications, and telephone lines). An emergency response plan will be required of the contractor.		Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Use approved siltation and sediment control devices in construction areas to reduce erosion and surface scouring.	Erosion Control Measures	Contractor	Concurrent with project activities
Use approved siltation and sediment control devices appropriate to the situation in grading areas to capture eroding soil before discharge to riparian channels.		Contractor	Concurrent with project activities
Use water bars in temporary access roads to control and reduce surface scouring.		Contractor	Concurrent with project activities
Conserve and salvage topsoil for reuse. Materials will be reused to the maximum extent possible.		Contractor	Concurrent with project activities
An Oil and Hazardous Materials Spill Prevention, Control, and Countermeasure Plan shall be prepared by the Construction Contractor for the project to address hazardous materials storage, spill prevention and response. The Plan shall be submitted for park review and approval prior to construction.	Hazardous Materials Measures	Contractor	Prior to and concurrent with project activities
Store and use all hazardous materials in compliance with federal regulations. All applicable Materials Safety Data Sheets will be kept on site for inspection.		Contractor	Concurrent with project activities
Hazardous or flammable chemicals shall be prohibited from storage in the staging area, except for those substances identified in the Oil and Hazardous Materials Spill Prevention, Control, and Countermeasure Plan. Hazardous waste materials shall be immediately removed from project site in approved containers.		Contractor	Concurrent with project activities
Comply with all applicable regulations and policies during the removal and remediation of asbestos, lead paint, and polychlorinated biphenyls.		Contractor	Concurrent with project activities
Ensure that all construction equipment has functional exhaust/muffler systems.	Noise Abatement Measures	Contractor	Concurrent with project activities
Submit a construction work plan/schedule that minimizes construction-related noise in noise-sensitive areas to the park for review/approval prior to commencement of construction activities.		Contractor	Prior to project activities
Use hydraulically or electrically powered construction equipment, when feasible.		Contractor	Concurrent with project activities
Locate stationary noise sources as far from sensitive receptors as possible.		Contractor	Concurrent with project activities
Limit the idling of motors except as necessary (e.g., concrete mixing trucks).		Contractor	Concurrent with project activities
To the extent possible, perform all on-site noisy work above 76 A-weighted decibels (dBA) (such as the operation of heavy equipment) between the		Contractor	Concurrent with project activities

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
hours of 8:30 a.m. and 5:00 p.m. to minimize disruption to nearby park users.			
Fence construction staging areas and construction activity areas to visually screen construction activity and materials.	Scenic Resources Protection Measures	Contractor	Concurrent with project activities
Consolidate construction equipment and materials to the staging areas at the end of each work day to limit the visual intrusion of construction equipment during non-work hours.		Contractor	Concurrent with project activities
Develop and implement a comprehensive spill prevention/response plan that complies with federal and state regulations and addresses all aspects of spill prevention, notification, emergency spill response strategies for spills occurring on land and water, reporting requirements, monitoring requirements, personnel responsibilities, response equipment type and location, and drills and training requirements. The spill prevention/response plan will be submitted to the park for review/approval prior to commencement of construction activities.	Spill Prevention/Response Measures	Contractor	Prior to project activities
To minimize the possibility of hazardous materials seeping into soil or water, check equipment frequently to identify and repair any leaks. Standard measures include hazardous materials storage and handling procedures; spill containment, cleanup, and reporting procedures; and limitation of refueling and other hazardous activities to upland/nonsensitive sites. Provide an adequate hydrocarbon spill containment system (e.g., absorption materials, etc.) on site, in case of unexpected spills in the project area. Ensure equipment is equipped with a hazardous spill containment kit. Ensure that personnel trained in the use of hazardous spill containment kits are on site at all times during construction activities.		Contractor	Concurrent with project activities
Develop and implement a comprehensive stormwater pollution prevention plan for construction activities that complies with federal and state regulations and addresses all aspects of stormwater pollution prevention. The stormwater pollution prevention plan will be submitted to the park for review/approval prior to construction activities.	Stormwater Pollution Prevention Measures	Contractor	Prior to and concurrent with project activities
The stormwater pollution prevention plan will include such measures as, but is not limited to the following: Take measures to control erosion, sedimentation, and compaction, and thereby reduce water pollution and adverse water quality effects on the Merced River. Use silt fences, sedimentation basins, etc. in construction areas to reduce erosion, surface scouring, and discharge to water bodies To the extent possible, schedule the use of mechanical equipment during periods of low precipitation to reduce the risk of accidental hydrocarbon leaks or spills. When mechanical equipment is necessary outside of low precipitation periods, use NPS– approved methods to protect soil and water from contaminants Dispose of volatile wastes and oils in approved containers for removal from construction sites to			

Mitigation Measure	Impact Topic	Responsibility	Critical Milestones
avoid contamination of soils, drainages, and watercourses Inspect equipment for hydraulic and oil leaks prior to use on construction sites, and implement inspection schedules to prevent contamination of soil and water Dispose of volatile wastes and oils in approved containers for removal from construction sites to avoid contamination of soils, drainages, and watercourses Keep absorbent pads, booms, and other materials on site during projects that use heavy equipment to contain oil, hydraulic fluid, solvents, and hazardous material spills			
Develop and implement a comprehensive traffic control and visitor protection plan for park review/approval that: Complies with Federal Highway Administration Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI-Traffic Control for Construction and Maintenance Operations, and California Department of Transportation Standard Specifications, Section 12 Provides procedures for submitting specific street closure, traffic control, and detour plans for each specific area of project construction not less than three weeks before the start of construction activities in each area Provides procedures for managing staging areas to restrict public access and maintain site safety Ensures that visitors are safely and efficiently routed around construction areas in the Valley Outlines measures to offset the potential for public exposure to noxious materials or contaminants that may be present during construction in the project area (i.e., by providing established and maintained walkways and bridges across the site, covering walking paths with clean soil and asphalt, and providing barrier fencing along trails)	Traffic Control and Visitor Protection Measures	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Provide protective fencing enclosures around construction areas, including utility trenches, to protect public health and safety.		Contractor	Concurrent with project activities
Install appropriate traffic signs.	Transportation Measures	Yosemite National Park, Project Manager	Concurrent with and following project activities
Locate construction worker parking outside of Yosemite Valley, with the exception of key supervisory personnel (approximately four to seven individuals).		Yosemite National Park, Project Manager; Contractor	Concurrent with project activities

8. PUBLIC INVOLVEMENT

8.1 Public Scoping

The NPS conducted public scoping for the project from November 14 to December 29, 2006. A Scoping Notice was published in the Federal Register on November 14, 2006. The Scoping Notice was preceded by an announcement letter, which the NPS mailed to 6,899 organizational and individual recipients on November 13, 2006. This letter included project contact information, including the internet address where project information was subsequently posted, and the dates and locations of public scoping meetings. The NPS posted a project fact sheet and letter announcing public scoping for the Reconstructing Critically Eroded Sections of El Portal Road project on the park's website. An E-newsletter was also sent to an email list of approximately 7,150 persons and organizations, and a notice in the Daily Report was sent to approximately 260 persons in addition to all Yosemite National Park employees.

On November 29, 2006, the NPS hosted a walk through of the project area. This was followed by a Public Open House. Scoping Meetings were held in Groveland, California on November 28, 2006 and in Mariposa, California on November 30, 2006.

Scoping comments were received through December 29, 2006. As a result of the scoping effort, 32 public scoping comments letters were received. All comments were reviewed and analyzed to identify public concerns. In addition, the NPS posted a project fact sheet and project planning updates on the park's web site. Project planning updates have also been presented at ongoing Public Open House meetings and in the park's planning update newsletter.

Comments and issues provided by NPS staff, other consulting agencies, and in public scoping informed the alternatives development process and the analysis of potential project effects. Substantive issues raised during public scoping include:

- The need to mover forward with the project in order to protect natural and cultural resources.
- The need to clarify the use of terms "emergency", "repair", and "reconstruction" in the Environmental Assessment.
- The need to provide a complete range of alternatives.
- The need to consider whether road widening is justified by park accident data, policy, or the availability of alternative safety solutions.
- The need to integrate transportation requirements with ecological values.
- The need to avoid actions that narrow future management options.
- The need to consider the use of natural materials to support the road.
- The need to accommodate large vehicles in the new road design.
- The need to consider the impact to a large oak tree in the project area
- The need to minimize impacts on wildlife during project implementation.
- The need to protect the road's historic character as a winding, narrow, mountain road.
- The need to identify and protect the exiting ORVs of the Merced River.
- The need to protect public access to park areas.
- The need to keep the road opens during reconstruction.
- The need to for a long-term solution that meets the park's future needs

- The need to complete a Merced Wild and Scenic River Comprehensive Management plan in advance of road reconstruction
- The need to develop a new user capacity program in advance of road reconstruction

8.2 Public Comment

The *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment* was released for a 30-day public review period from June 4 to July 3, 2007. Advance notice for the project was provided in Planning Updates beginning in June 2006, including contact mail-back request for the Environmental Assessment and the park web address. Review period dates were published in an article in the Mariposa Gazette on May 31, 2007. The Yosemite National Park Daily Report also published the review dates and document request information beginning May 31. In addition, the NPS held regular Open Houses during 2007 to disseminate information and collect informal written comments on the Reconstructing Critically Eroded Sections of El Portal Road and other projects. On June 20, 2007 a public meeting was held in Mariposa, California, and Open House was held in Yosemite Valley on June 27.

The National Park Service distributed a total of 160 copies of the *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment* to individuals and organizations, including the California State Library, the City of San Francisco Public Library, the Salazar Library at Sonoma State University, the University of Minnesota Forestry Library, and the Columbia College Library. Also, the National Park Service published the Environmental Assessment to the park website on June 1, 2007. Comments received during the formal public comment period consisted of 12 letters and emails from 9 individuals and 4 organizations, with a total of 148 comments representing 60 concerns.

Issues focusing on the project purpose and need or planning context included the following:

- The need to reconsider the necessity of the reconstruction
- The need to take prompt action to repair eroded sections of El Portal Road
- The need to complete a Merced Wild and Scenic River Comprehensive Management plan in advance of road reconstruction
- The need to revise the General Management Plan and the Yosemite Valley Plan prior to reconstruction
- The need to develop a new user capacity program in advance of road reconstruction

Each of these issues was either discussed in the Environmental Assessment or is out of the scope of the current project.

Another class of issues related to perceived project impacts or desired protections:

- The need to provide sufficient oversight of contractors during construction
- The need to reevaluate the timing of reconstruction to lessen socioeconomic impacts
- The need to minimize disruption to visitors and park operations
- The need to preserve a specimen oak tree by building the retaining wall further north
- The need to avoid blasting on the rock cliff to the north of the road
- The need to consider the cumulative impacts of future El Portal Road projects
- The need to protect historical elements of El Portal Road

- The need to clarify the impacts on the Merced River
- The need to evaluate the safety impacts of the Selected Alternative
- The need to enforce a lower speed limit in the reconstructed area

Each of these issues was either discussed in the Environmental Assessment, is included in the Selected Alternative, is not feasible, or is out of the scope of the current project.

A number of issues focused on the range of alternatives, expressed a preference for an alternative, or suggested changes to the Selected Alternative:

- The need to evaluate an alternative that does not involve widening the road
- The opinion that the NPS should not proceed with the Selected Alternative
- The opinion that the NPS should proceed with the Selected Alternative
- The need to further evaluate some of the alternatives that were considered but dismissed
- The need to consider an alternative with two 2-foot shoulders that would better accommodate cyclists
- The need to consider an alternative with 10-foot driving lanes and 1-foot paved shoulders
- The need to evaluate an alternative that includes 11-foot travel lanes
- The need to reconstruct areas of grouted rip-rap using a more aesthetic treatment
- The need to use natural materials to rebuild retaining walls rather than sculpted concrete

Each of these alternatives was either discussed in the Environmental Assessment, is included in the Selected Alternative, is not a reasonable alternative, or expresses a personal opinion.

Other issues included:
- The NPS should reconsider the accuracy of the OHWM that was delineated in the project area
- The need to incorporate floodplain protection in the project
- The need to provide technical data and expert opinion to identify the road failure hazard
- The need to consult with federally recognized Native American tribes

Each of these issues was either discussed in the Environmental Assessment, is included in the Selected Alternative, is not a reasonable alternative, or is an unsupported personal opinion.

None of the comments received introduced substantive new information or raised any substantive issues not fully considered in the *Reconstructing Critically Eroded Sections of El Portal Road Project Environmental Assessment*. No modifications to the Selected Alternative were made as a result of comments. A complete Summary of Public Comment and Response Report will be available at www.nps.gov/yose/planning.

9. COORDINATION

9.1 U.S. Army Corps of Engineers

The NPS has ongoing consultation with the U.S. Army Corps of Engineers (ACOE). To determine whether the project meets the conditions of Nationwide Permits 13, 14, and 33, a Preconstruction Notification package, including impact calculation and a copy of the

Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment, was submitted to the ACOE on June 26, 2007. The park expects that the reconstruction will meet the criteria of the Nationwide Permit program and that ACOE will authorize implementation of the relevant reconstruction activities under Nationwide Permits 13, 14, and 33.

9.2 Central Valley Regional Water Quality Control Board

The NPS is currently coordinating with the Central Valley Regional Water Quality Control Board (RWQCB) to obtain a Water Quality Certification (WQC) for Reconstructing Critically Eroded Sections of El Portal Road. A WQC stipulates requirements for water quality protection during reconstruction activities, such as compliance with Best Management Practices during construction including proper storage of materials in staging areas to avoid erosion during storm events. One June 7, 2007 the NPS submitted a Clean Water Act Section 401 Water Quality Certification (WQC) application, and a copy of the *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment* to the RWQCB. The NPS will prepare and submit a Storm Water Pollution Prevention Plan to the RWQCB prior to construction.

9.3 State Water Resources Control Board

The NPS has coordinated with the California State Water Resources Control Board (SWRCB) to obtain a National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activities associated with the Reconstructing Critically Eroded Sections of El Portal Road project. On June 7, 2007 the NPS submitted an application for the NPDES permit. This permit was approved on June 19, 2007, and was received by the NPS on June 28, 2007. A Storm Water Pollution Prevention Plan will be prepared and provided to the SWRCB prior to construction.

9.4 U.S. Fish and Wildlife Service

Yosemite National Park is located within the jurisdiction of the Sacramento Fish and Wildlife Office and consults with this office to obtain lists of federally listed endangered and threatened species that may be present in the project area. A species list for Reconstructing Critically Eroded Sections of El Portal Road was obtained on September 8, 2006. This list was used as the basis for the special status species analysis in this Environmental Assessment. A follow-up conversation with the USFWS biologist on July 3, 2007, completed the informal consultation for this project. Because this project will have no effect on any special status species, a letter of concurrence is not required.

9.5 California State Historic Preservation Officer/Advisory Council on Historic Preservation

Guidance for coordinating Section 106 and NEPA processes is provided by 36 CFR 800.8 of Section 106. This guidance addresses common principles in NEPA and NHPA compliance, and standards for developing environmental documents to comply with Section 106. Common principles include the need to address potential effects on historic properties in NEPA documents, the need for early coordination and consultation with state and federal agencies (SHPO & ACHP) and Tribal governments on historic properties issues, and the need for public

involvement. Standards for developing environmental documents to comply with Section 106 include the requirement that the issuing agency provide an opportunity for review and comment on the environmental document by the SHPO or other interested agencies.

Consultation with the California SHPO and ACHP is governed by the 1999 Programmatic Agreement among the NPS at Yosemite, the California SHPO, and the ACHP regarding Planning, Design, Construction, Operations and Maintenance(1999 PA)(NPS 1999) The 1999 PA was developed in consultation with American Indian tribes having cultural association with Yosemite National Park lands.

The El Portal Road and its associated features are considered to be contributing elements of the Merced Canyon Travel Corridor Historic District, which was determined to be eligible for listing on the National Register of Historic Places in a Determination of Eligibility (DOE 1997). In accordance with Stipulation VII.B of the 1999 PA, consultation with SHPO and ACHP was initiated on April 20, 2007, with formal correspondence requesting review and assistance with developing appropriate measures to minimize and mitigate effects, determinations of effect, and to identify interested parties. On May 22, 2007, the CA SHPO and staff made a site visit to discuss the project and the proposed mitigation measures. On June 27, 2007, a formal transmittal letter and attached Environmental Assessment that contains the proposed mitigation measures and determination of adverse effect were provided to SHPO and ACHP. On July 13, 2007, the park received concurrence from SHPO and ACHP with the proposed mitigation measures and adverse effect determination outlined in the Environmental Assessment and this FONSI.

9.6 American Indian Consultation

Yosemite National Park is consulting with American Indian tribes having cultural association with Yosemite National park on the Reconstructing Critically Eroded Sections of El Portal Road project. Consultation was initiated in May, 2007, with the Mono Lake Kutzadikaa Tribe, the Bishop Paiute Tribe, the Tuolumne Band of the Me-Wuk Indians, and American Indian Council of Mariposa County. Site visits were made with the Tuolumne Band of Me-Wuk, the American Indian Council of Mariposa County, Inc. and the Bishop Paiute Tribe. In June these four tribes received a copy of the *Reconstructing Critically Eroded Section of the El Portal Road Environmental Assessment*. Consultation and partnering will continue with the American Indian tribes throughout the planning and implementation of the Reconstructing Critically Eroded Sections of El Portal Road project.

10. CONCLUSION

Based on information contained in *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment* as summarized above, the nature of comments received from affected agencies and the public, and the incorporation of the mitigation measures to avoid or reduce potential direct, indirect, and cumulative impacts, it is the determination of the NPS that the Selected Alternative is not a major federal action that would significantly affect the quality of the human environment. No long-term adverse impacts to floodplains or wetlands would occur from the Selected Alternative and the NPS finds the Selected Alternative to be acceptable under Executive Order 11988 for the protection of floodplains and Executive Order 11990 for the protection of wetlands. Therefore, in accordance with the National Environmental Policy Act of 1969 and regulations of the Council on Environmental Quality (40 CFR 1508.9), an environmental impact statement will not be prepared. The Selected Alternative as detailed in *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment* may be implemented as soon as practicable.

Recommended:

R. Kevin Carr

Superintendent, Yosemite National Park
Acting

7-17-07
Date

Approved:

Jonathan B. Jarvis

Regional Director Pacific West Region
National Park Service

7/20/07
Date

Yosemite National Park

National Park Service
U.S Department of the Interior

Reconstructing Critically Eroded Sections of El Portal Road

Wild and Scenic River Section 7 Determination

July 20, 2007

This page intentionally left blank

MERCED WILD AND SCENIC RIVER SECTION 7 DETERMINATION

RECONSTRUCTING CRITICALLY ERODED SECTIONS OF EL PORTAL ROAD

YOSEMITE NATIONAL PARK

JULY 2007

INTRODUCTION

PURPOSE OF THIS DETERMINATION

The purpose of this determination is to evaluate the impact of the Reconstructing Critically Eroded Sections of El Portal Road project on the free-flowing condition and the Outstandingly Remarkable Values (ORVs) for which the Merced River was designated Wild and Scenic.

AUTHORITY

The authority for this determination is found in Section 7(a) of the Wild and Scenic Rivers Act (Public Law 90-542, as amended, 16 United States Code [USC] 271-1278). Section 7 states:

> *…no department or agency of the United States shall assist by loan, grant, license or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration.*

While the Wild and Scenic Rivers Act (WSRA) does not prohibit development along a river corridor, it does specify guidelines for the determination of appropriate actions within the bed and banks of a Wild and Scenic River. As the designated river manager for the Merced River segments located within the boundaries of Yosemite National Park and the El Portal Administrative Site, the National Park Service (NPS) must carry out a Section 7 Determination on all proposed water resources projects[1] to ensure they do not directly and adversely impact the free-flowing condition or the values for which the river was designated (IWSRCC 1999).

WILD AND SCENIC RIVER DESIGNATION

In 1987, the United States Congress designated the Merced River a "Wild and Scenic River" to protect the river's free-flowing condition and to protect and enhance its unique values for the benefit and enjoyment of present and future generations (16 USC 1271). This designation gives the Merced River special protection under the WSRA.

The passage of Public Law 100-149 on November 2, 1987 and Public Law 102-432 on October 23, 1992, placed 122 miles of the main stem and South Fork of the Merced River, including the forks of Red Peak, Merced Peak, Triple Peak, and Lyell, into the Wild and

[1] A water resources project is any dam, water conduit, powerhouse, transmission line, or other works project under the Federal Power Act, or other developments, that would affect the free-flowing character of a wild and scenic or congressionally authorized study river. In addition to projects licensed by the Federal Energy Regulatory Commission, water resources project may include: dams, water diversions, fisheries habitat and watershed restoration, bridges and other roadway construction/reconstruction projects, bank stabilization projects, channelization projects, levee construction, boat ramps, fishing piers, and activities that require a Section 404 permit from the U.S. Army Corps of Engineers (Interagency Wild and Scenic Rivers Coordinating Council 1999.)

Scenic River System. The NPS manages 81 miles of the Merced Wild and Scenic River, encompassing both the main stem and the South Fork in Yosemite National Park and the El Portal Administrative Site. The United States Forest Service and the Bureau of Land Management administer the remaining 41 miles of designated river.

METHODOLOGY

WILD AND SCENIC RIVERS ACT SECTION 7 DETERMINATION

The Section 7 Determination for the project is based on guidance provided in the Wild and Scenic Rivers Act: Section 7 Technical Report, Appendix C, Evaluation Procedure under "Direct and Adverse" (IWCC 1999.) The direct and adverse evaluation procedure is carried out for water resources projects licensed by the Federal Energy Regulatory Commission or other federally assisted water resources projects within the Wild and Scenic River boundary of the designated river. The proposed project would take place within the bed and banks of the Merced River. All project activities would take place within the Wild and Scenic boundary of the designated river.

PROTECTION AND ENHANCEMENT OF OUTSTANDINGLY REMARKABLE VALUES

Section 7 of the WSRA requires river managing agencies to determine whether water resources projects would adversely affect free flow or directly and adversely impact ORVs. In addition, Section 10(a) of the act requires that rivers be administered to protect and enhance ORVs. ORVs are the river-related values that make the river segment unique and worthy of special protection. Uses that are consistent with this provision and that do not substantially interfere with public use and enjoyment of these values should not be limited (16 United States Code 1281[a]). ORVs located outside the Wild and Scenic River corridor boundary must also be protected (NPS 2005a).

The Merced Wild and Scenic River segment applicable to the project is Segment 3 (Gorge). The focus of the analysis is on long-term effects (i.e., effects that would last 10 years or more or would be permanent). Short-term effects are not addressed in this analysis unless they are of sufficient magnitude (having a substantial, highly noticeable influence) to warrant consideration.

Analysis of ORVs is focused on segment-wide effects, rather than site-specific or localized effects. Exceptions to the segment-wide guideline include site-specific activities that could have substantial effects on ORVs, such as degradation of habitat of a river-related special status species (a biological ORV) that is endemic to that location. For the Reconstructing Critically Eroded Sections of El Portal Road project, ORVs are evaluated based on effects to such values within the Gorge segment of the Merced Wild and Scenic River.

In terms of evaluating potential effects, actions that could degrade ORVs on a segment-wide basis include actions with effects that would be discernible throughout the majority of the river segment, or would be of sufficient magnitude to affect adjacent segments. For the purposes of this analysis under Section 7 and Section 10 of the act, the following assumptions for each ORV were made:

Scientific (refers to the entire river). The river, including the adjacent land area, is a significant scientific resource; it is a watershed entirely within wilderness or Yosemite National Park, invaluable for baseline scientific studies.

Scenic. The analysis considers the specific features that are listed in the scenic ORV for the Gorge segments and potential effects to views from the river or its banks. This analysis also considers potential effects on the scenic interface of river, rock, meadow, and forest throughout the segment (Gorge segment).

Geologic Processes/Conditions. The analysis gives primary consideration to designated processes and those processes that have been responsible for creating the river's geologic landscape. Effects related to natural meandering of the Merced River are addressed in the hydrologic processes ORV (all segments).

Recreation. The analysis considers whether opportunities to experience a spectrum of river-related recreational activities would be affected (Gorge segment).

Biological. The analysis focuses on effects to riparian areas, wetlands, and other riverine areas that provide rich habitat for a diversity of river-related species (all segments).

Cultural. The analysis considers effects to river-related cultural resources that are not intended to divert the free flow of the river and are either eligible for or listed on the National Register of Historic Places, including archeological sites, which provide evidence of thousands of years of human occupation, and current traditional use sites. The analysis also considers effects on nationally significant historic resources, such as designated landscapes and developed areas, historic buildings, and circulation systems (trails, roads, and bridges) that provide visitor access to sublime views of natural features that are culturally valuable (Gorge segment).

Hydrologic Processes. Consideration is primarily given to designated processes, such as river meandering, world-renowned waterfalls, an active flood regime, oxbows, and fluvial processes. Effects on wetlands are addressed in the biological ORV (Gorge segment).

It is possible for ORVs to be in conflict with each other, or for an action to have beneficial impacts with regard to one ORV and adverse impacts with regard to other ORVs. Previous planning efforts for the Merced Wild and Scenic River have recognized this possibility and have stated:

> *Actions must protect all Outstandingly Remarkable Values, regardless of where they are located. When Outstandingly Remarkable Values lie within the boundary of the Wild and Scenic River, the value must be protected and enhanced. When values are in conflict with each other, the net effect to Outstandingly Remarkable Values must be beneficial.*

The Wild and Scenic Rivers Act stipulates that agencies are given discretion to manage a river system with "varying degrees of intensity for its protection and development, based on the special attributes of the area." For example, there may be conflicts between enhancing recreational values and biological values, as when recreational facilities are moved away from the riverbank to restore meadow areas.

COMPATIBILITY WITH CLASSIFICATIONS

The segment of the Merced River that flows through the Merced River Canyon is designated as Scenic. The Scenic classification refers to "those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads." Implementation of Reconstructing Critically

Eroded Sections of El Portal Road would help minimize impacts to the Merced Wild and Scenic River that would result from an unplanned road failure. No additional impoundments, shoreline development, or access by road would result from the proposed reconstruction. Therefore, the proposed action is compatible with the existing classifications.

RECONSTRUCTING CRITICALLY ERODED SECTIONS OF EL PORTAL ROAD PROJECT WILD AND SCENIC RIVERS ACT SECTION 7 DETERMINATION

Table 1 presents the Section 7 evaluation for the project.

Table 1. Section 7 Evaluation for the Reconstructing Critically Eroded Sections of El Portal Road Project

Evaluation Criteria	Project Data
DEFINE THE PROPOSED ACTIVITY	
Project proponents	National Park Service, Yosemite National Park; Federal Highway Administration, Central Federal Lands Division.
Purpose and need for the project	The purpose of this project is to reconstruct those portions of El Portal Road that are critically eroded and are in risk of imminent failure in order to maintain access to Yosemite Valley. A *planned* reconstruction effort of the roadway will maximize the NPS's ability to the protect natural, cultural and scenic resources of the Merced Wild and Scenic River, provide for the highest level of convenience to park visitors and staff during reconstruction efforts, and control and protect the main sewer and electrical lines that lie beneath the roadway that serve the critical infrastructure needs of Yosemite Valley. The need for this project is evidenced by the fact that since January 1997, the NPS has completed five major emergency repairs to portions of El Portal Road in response to the undermining of the roadway caused by scouring of the Merced River. Until the roadway is reconstructed, the risk of substantial roadway failure will continue to jeopardize the safety of park visitors and staff and threaten the main sewer and electric lines embedded within the roadway. Reconstructing this roadway in a manner that aims to meet modern requirements for safety, maintainability, and resource protection will improve the overall driving conditions and functioning of this critical access road to Yosemite Valley.
Geographic location of the project	The project is 1,350 feet of El Portal Road located to the east of the intersection of Big Oak Flat Road and west of Pohono Bridge, Yosemite Valley, Yosemite National Park, California. This section of roadway, known as "The Narrows," is recognized as being constrained by steep granite rock slopes to the north and the Merced Wild and Scenic River to the south.
Project description	The El Portal Road project proposes to reconstruct portions of El Portal Road that are critically eroded. The types of reconstruction activities contemplated in this EA include improvements to drainage, stabilization of roadway through construction of retaining walls and guardwalls, lane widening to meet existing lane and shoulder widths of all the other segments of El Portal Road, rock scaling, use of a cantilever, pulverizing existing pavement and placing up to four inches of new asphalt along the entire length of the project area. Culverts would be replaced with properly sized pipes and added in certain locations. Existing stone masonry at culvert headwalls and outlets will be retained.
Duration of the proposed activities	Early October 2007 to June 2008.
Magnitude and/or extent of the proposed activities	The following provide a general description of the magnitude and/or extent of proposed activities associated with the Reconstructing Critically Eroded Segments of El Portal Road. ▪ Improvements to drainage, specifically the existing ditch line along the north side of the road through raising the road grade and installation of more cross culverts. ▪ Replacement of failing retaining walls and stabilization of the roadway. ▪ Reconstruction of the guardwall in a manner similar to the existing walls on El Portal Segments A, B, and C in size and appearance through use of simulated rock or stone veneer, while also meeting current safety standards for a barrier wall. ▪ Removal of trees encroaching on the roadway. ▪ Construction of a soil nail wall with a simulated rock face to blend in with adjacent rock textures on the northern hillside containing the new cut slope. ▪ There will be no new fill placed below the Ordinary High Water Mark (OHWM). ▪ A major excavation that begins at the road surface and ends at the OHWM. ▪ The existing road and subgrade would be removed and re-surfaced to a standard paved

Evaluation Criteria	Project Data
	width of 26 feet. This includes a 3-foot-wide paved ditch plus a 1-foot curb to be constructed on the north side of the roadway. ▪ Any guardwall removed will be replaced by a form liner guardwall. ▪ The reconstructed road will stay as close as possible to the existing center lane to retain the existing curvilinear alignment. ▪ The reconstructed road will reincorporate historic retaining wall elements. ▪ Surface treatment of new walls will compliment historic features by using the same character, but not duplicating. ▪ The existing power line and sewer line will be replaced or repaired if necessary.
Mitigation	Mitigation (e.g., best management practices and resource-specific measures) is incorporated into the proposed action. Refer to the Reconstructing Critically Eroded Sections of El Portal Road project, Appendix E, for mitigation measures incorporated into the proposed action.
Relationship to past and future management activities	The actions associated with the project are site-specific, routine maintenance activities therefore considered on an *implementation plan* level. Although these reconstruction activities are within the Merced Wild and Scenic River boundary, they are not implementing actions called for in the Comprehensive Management Plan (CMP) or the park's general management plan. The *El Portal Road Improvements Environmental Assessment* was completed in 1997 and covered environmental compliance for Segment D, but the condition of this segment has worsened, requiring different design and reconstruction activities to correct the imminent roadway failure. Planning processes for the Merced Wild and Scenic River have provided guidance for protection and enhancement of river values within the project area, and additional scientific data is available. For these reasons, the NPS determined that a new EA was appropriate for the project. Following the acceptance of a CMP for the Merced Wild and Scenic River by the U.S. District Court, additional environmental compliance will be completed for the remaining portions of Segment D, not covered in this EA.
DESCRIBE WHETHER THE PROPOSED ACTIVITY WILL DIRECTLY ALTER WITHIN-CHANNEL CONDITIONS	
The position of the proposed activity relative to the streambed and streambanks	All elements of the Reconstructing Critically Eroded Sections of El Portal Road project have avoided the Merced River streambed and streambanks as determined by the OHWM.
ANY LIKELY RESULTING CHANGES IN:	
Active channel location	No.
Channel geometry (cross-sectional shape, width, depth characteristics)	No.
Channel slope (rate or nature of vertical drop)	No.
Channel form (straight, meandering, or braided)	No.
Relevant water quality parameters (turbidity, temperature, nutrient availability)	During construction, turbidity impacts to the river would likely be minor and would be mitigated through application of best management practices.
DESCRIBE WHETHER THE PROPOSED ACTIVITY WILL DIRECTLY ALTER WITHIN- CHANNEL CONDITIONS	
Navigation of the river	River navigation as defined by the U.S. Army Corps of Engineers is not applicable to this section of the river. Only 20 miles of the Merced River, from its confluence with the San Joaquin River, is designated as navigable by the U.S. Army Corps of Engineers.
DESCRIBE WHETHER THE PROPOSED ACTIVITY WILL DIRECTLY ALTER RIPARIAN AND/OR FLOODPLAIN CONDITIONS	
The position of the proposed activity relative to the riparian area and floodplain	Portions of the project area are within the natural floodplain and associated riparian areas of the Merced River. Proposed actions would help to enhance and protect these areas by: ▪ Improving roadside drainage. ▪ Improving natural hydrologic processes due to the addition of new culverts and the resizing of others. ▪ The removal and/or reduction in size of some road and road associated structures currently located within the 100-year floodplain.

Evaluation Criteria	Project Data
Vegetation composition, age structure, quantity, or vigor	The entire project area has been previously disturbed by transportation facilities and other development activities. As such, impacts to vegetation communities would be relatively minor and limited to areas adjacent to the existing road prism as described below: ▪ Improvements to culverts would allow for the restoration of more natural surface and near-surface hydrologic processes, enhancing riparian, wetland, and aquatic habitats. ▪ Placement of roadside barrier stones would help to protect vegetation communities adjacent to the roadway that is potentially encroached upon by visitor use. ▪ Removal of select trees and brush clearing of smaller woody vegetation along segments of the roadway would be necessary to accommodate repaving, and improvements to culverts. This would have a negligible effect on vegetation on a segment-wide basis.
Relevant soil properties such as compaction or percent bare ground	The proposed action would affect soils outside of the existing road prism through alteration of soil structure involved with excavation. Total impacts including the risk of soil compaction during construction are estimated to cover 20,500 sq. ft. (0.47 acre) outside of the existing edge of pavement. The increase in total roadway width will necessitate the removal of 1,760 cubic yards (CY) of soil and rock from the cut slope. On the fill side of the roadway, existing dry-laid walls and soil and rock totaling 2,043 CY will be removed in order to stabilize the roadbed prior to reconstruction of the supporting walls. This would have a negligible effect on soils on a segment-wide basis.
Relevant floodplain properties such as width, roughness, bank stability, or susceptibility to erosion	Roadway improvements will involve the removal of approximately 270 linear feet of roadway from the existing floodplain. The improvements consist of a slight grade raise of the roadway profile with a 2.5-foot high continuous guardwall along the south side of the roadway. Approximately 150 feet of this section will also have a retaining wall along the south side of the roadway to minimize impacts to the floodplain. A shorter section immediately to the west (approximately 100 feet) would require a fill slope encroachment into the floodplain. This grading would require approximately 50 cubic yards of fill to be placed within the floodplain, over an area of approximately 540 square feet. However, this fill slope would not encroach into the OHWM of the Merced River. These actions will remove this 100-foot section of the roadway from the 100-year floodplain. The proposed project would cause a maximum increase to the 100-year water surface elevation of only 0.01-foot, which would occur approximately 100 feet upstream from the eastern terminus of the project. The proposed water surface elevation matches the existing water surface elevation within 200 feet of the upstream end of the project. The area removed from the floodplain would be approximately 13,550 square feet (0.31 acre). This would have a negligible effect on floodplain values on a segment-wide basis.
Relevant floodplain properties such as width, roughness, bank stability, or susceptibility to erosion (cont'd.)	This change in water surface elevation is due to the relative amount of flow area and floodplain width being impacted by the project. The existing floodplain within the impacted area is approximately 430 feet wide, while the width that would be impacted by the proposed action is only approximately 45 feet wide. The increase in water surface elevation upstream of the proposed improvements would not cause any additional locations of El Portal Road to be inundated by the 100-year floodplain. Other actions that would help to enhance and protect areas adjacent to the project area by: ▪ Improving roadside drainage ▪ Improving natural hydrologic processes due to the addition of new culverts and the resizing of others.
DESCRIBE WHETHER THE PROPOSED ACTIVITY WILL DIRECTLY ALTER UPLAND CONDITIONS	
The position of the proposed activity relative to the uplands	The project will alter localized upland areas outside of the existing road prism through the removal of 1,760 cubic yards of soil from the cut slope on the north side of the roadway.
ANY LIKELY RESULTING CHANGES IN:	
Vegetation composition, age structure, quantity, or vigor	There will be selective brush clearing at some locations along the roadway (up to 20 feet off road prism) to accommodate reconstruction efforts including the removal of seven larger diameter trees. This would have a negligible effect on vegetation on a segment-wide basis.
Relevant soil properties such as compaction or percent bare ground	The proposed action would affect soil through compaction or alteration of the soil structure on an area of approximately 26,000 square feet of ground and increase the amount of impermeable surface by 10,021 square feet. This would have a negligible effect on soils on a segment-wide basis.

Evaluation Criteria	Project Data
DESCRIBE WHETHER THE PROPOSED ACTIVITY WILL DIRECTLY ALTER UPLAND CONDITIONS	
Relevant hydrologic properties such as drainage patterns or the character of surface and subsurface flows	Proposed actions would help to enhance and protect these hydrologic properties by: ▪ Improving roadside drainage. ▪ Improving natural hydrologic processes due to the addition of new culverts and the resizing of others.
Potential changes in upland conditions that would influence archeological, cultural, or other identified significant resource values	Construction activities would be performed in accordance with stipulations in the parkwide 1999 Programmatic Agreement (1999 PA) and the 1986 Memorandum of Agreement. The proposed action would not influence archeological, cultural, or other identified significant resource values in uplands of the Merced River that qualify as ORVs for this segment, including archeological sites, which provide evidence of thousands of years of human occupation, current traditional use sites, designated landscapes and developed areas, or historic buildings. Adverse effects on historic properties are resolved through standard mitigation measures according to the 1999 PA.
EVALUATE AND DESCRIBE WHETHER CHANGES IN ON-SITE CONDITIONS CAN OR WILL ALTER EXISTING HYDROLOGIC OR BIOLOGIC PROCESSES	
The ability of the channel to change course, re-occupy former segments, or inundate its floodplain	Roadway improvements include change to approximately 270 feet of the existing 100-year floodplain consisting of a slight grade raise of the roadway profile. Approximately 150 feet of this section will have a retaining wall along the south side of the roadway. A shorter section immediately to the west (approximately 100 feet) would require a fill slope encroachment into the 100-year floodplain. This grading would require approximately 50 cubic yards of fill to be placed within the 100-year floodplain, over an area of approximately 540 square feet. This combination will remove this section of the roadway from the 100-year floodplain. The proposed project would cause a maximum increase to the 100-year water surface elevation of only 0.01 feet, which would occur approximately 100 feet upstream from the eastern terminus of the project. The proposed water surface elevation matches the existing water surface elevation within 200 feet of the upstream end of the project. The area removed from the floodplain would be approximately 13,550 square feet (0.31 acre). This change in water surface elevation is due to the relative amount of flow area and floodplain width being impacted by the project. The existing floodplain within the impacted area is approximately 430 feet wide, while the width that would be impacted by the proposed action is only approximately 45 feet wide. The increase in water surface elevation upstream of the proposed improvements would not cause any additional locations of El Portal Road to be inundated by the 100-year floodplain This would have a negligible effect on floodplain values on a segment-wide basis.
Streambank erosion potential, sediment routing and deposition, or debris loading	The project would not have any affect on river bank erosion, embankments, or natural sediment routing and deposition or debris loading. Road reconstruction would occur within a delineated work area, during low-flow conditions, and with the application of best management practices. This will prevent measurable amounts of sediment generated during reconstruction from reaching the river. The riverbed and banks are largely composed of boulders and cobbles, ranging in size from a few inches to several yards in diameter. These materials would not be subject to erosion due to project activities.
EVALUATE AND DESCRIBE WHETHER CHANGES IN ON-SITE CONDITIONS CAN OR WILL ALTER EXISTING HYDROLOGIC OR BIOLOGIC PROCESSES (cont'd.)	
The amount or timing of flow in the channel	The proposed project would not affect the amount or timing of flow in the Merced River. Temporary activities will take place during low-flow conditions, and no changes would occur within the OHWM that would alter within channel conditions.
Existing flow patterns	The proposed project would not affect existing flow patterns in the Merced River. Temporary activities will take place during low-flow conditions, and no changes would occur within the OHWM that would alter within channel conditions.
Surface and subsurface flow characteristics	The proposed project will improve surface flow by repairing and resizing existing culverts, installing new ones, and improving roadside drainages.
Flood storage (detention storage)	The proposed project would cause a maximum increase to the 100-year water surface elevation of only 0.01 feet, which would occur approximately 100 feet upstream from the eastern terminus of the project. The proposed water surface elevation matches the existing water surface elevation within 200 feet of the upstream end of the project.
Aggregation and or degradation of the channel	The proposed action is not expected to have a measurable effect on aggregation and/or degradation of the river's natural channel properties.

Evaluation Criteria	Project Data
BIOLOGICAL PROCESSES SUCH AS:	
Reproduction, vigor, growth, and/or succession of streamside vegetation	There will be selective brush clearing at some locations along the roadway (up to 20 feet off road prism) to accommodate culvert placement and rehabilitation. The project also involves the removal of seven larger diameter trees. Nothing is proposed that would reduce streamside vegetation.
Nutrient cycling	Nutrient cycling is the passage of a nutrient or element through an ecosystem, including its assimilation and release by organisms and its transformation into various organic or inorganic chemical forms. Because the project is not anticipated to result in a change to the frequency or distribution of in-channel or upland organisms, no measurable effect on natural nutrient cycling processes is expected.
Fish spawning and/or rearing success	The proposed project is will not result in any in-channel modification, have any effect on fish habitat or spawning grounds, or fish spawning and/or rearing success.
Riparian-dependent avian species needs	The proposed project will not result in any modification to riparian vegetation, riparian-dependent avian species habitat, or any measurable effect on riparian-dependent avian species needs.
EVALUATE AND DESCRIBE WHETHER CHANGES IN ON-SITE CONDITIONS CAN OR WILL ALTER EXISTING HYDROLOGIC OR BIOLOGIC PROCESSES	
Amphibian/mollusk needs	The proposed project will not result in any modification to the in-channel conditions, amphibian/mollusk species habitat, or any measurable effect on riparian-dependent avian species needs.
Species composition (diversity)	The proposed project will not alter in-channel of upland wildlife habitat, or result in any direct mortality to wildlife species. Therefore, proposed project is not expected to have any measurable effect on species composition or diversity.
ESTIMATE THE MAGNITUDE AND SPATIAL EXTENT OF POTENTIAL OFF-SITE CHANGES. CONSIDER AND DOCUMENT:	
Changes that influence other parts of the river system	There is nothing proposed as part of this project that is expected to change or influence other parts of the river system.
The range of circumstances under which off-site changes might occur (for example, as may be related to flow frequency)	Implementation of the project is not expected to create circumstances under which off-site changes would result in impairment of natural river flow frequencies or volumes.
The likelihood that predicted changes will be realized	No off-site changes are predicted.
Specify processes involved, such as water and sediment, and the movement of nutrients	Natural hydrologic processes would be enhanced due to improvements made to culverts and roadside drainages.
DEFINE THE TIME SCALE OVER WHICH STEPS 3-6 ARE LIKELY TO OCCUR	
Review steps 3-6, looking independently at the element of time. Define and document the time scale over which the effects will occur.	Construction is expected to be implemented beginning in early fall of 2007 and ending in the spring 2008. All effects to ORVs are expected to be temporary. Effects to cultural resources are determined to be adverse and as such are permanent; however, adverse effects to Cultural Resources will be resolved.

OUTSTANDINGLY REMARKABLE VALUES

ORVs are the river-related values that make the river segment unique and worthy of special protection. They form the basis for the river's designation as a Wild and Scenic River. ORVs for the Main Stem Gorge segment include:

- Scientific
- Scenic
- Geologic Processes/Conditions
- Recreation

- Biological
- Cultural
- Hydrologic Processes

EFFECTS OF THE PROPOSED ACTION ON OUTSTANDINGLY REMARKABLE VALUES

The proposed action would help restore natural hydrologic processes and near-surface flow along the roadway as a result of improved drainage. Improved hydrologic flow is expected to improve the overall condition of adjacent riparian and wetland areas, enhancing the Scenic and Biological ORVs. The rehabilitation of culverts and retaining walls that are contributing elements to the Merced Canyon Travel Corridor would enhance the Cultural ORV. The project also avoids sudden road failure, thereby preserving access to Yosemite Valley recreation river segments and portions of the wild river segment that are accessed from Yosemite Valley. This serves to protect the Recreation ORV in those river segments. An assessment of the proposed action's effects on ORVs is provided in Table 2.

Table 2. Effects of the Proposed Action on Outstandingly Remarkable Values in the Gorge Segment of the Merced Wild and Scenic River Corridor

Outstandingly Remarkable Value	Effects of the Proposed Action
Scientific (entire river)—The river, including the adjacent land area, is a significant scientific resource; it is a watershed entirely within wilderness or Yosemite National Park, invaluable for baseline scientific studies.	The construction activities associated with this project will not interfere with any current or future research or monitoring opportunities, or alter the value of the river for the purpose of baseline scientific studies. The proposed action would have no effect on the Scientific ORV.
Scenic—This segment provides views from the river and its banks of the Cascades, spectacular rapids among giant boulders, Wildcat Fall, Tamarack Creek Fall, the Rostrum, and Elephant Rock.	Although there may be short-term scenic impacts during construction, the proposed action would in the long-term have a beneficial affect on the Scenic ORV on a segment-wide basis as a result of avoiding the risk of massive roadway failure.
Geologic Processes/Conditions—This segment is characterized by a classic V-shaped river gorge with a continuous steep gradient.	The construction activities associated with this project will not alter the V-shaped character of the river gorge, or the river's steep gradient. Therefore, the proposed action would have no effect on the Geologic Process ORV.
Recreation – This segment provides a spectrum of river-related recreational opportunities, such as picnicking, fishing, photography, and sightseeing.	Although there may be short-term recreational impacts during construction, the proposed action would in the long-term have a beneficial effect on the Recreation ORV on a segment-wide basis as a result of avoiding the risk of massive roadway failure, and therefore preserving the river-related recreation opportunities identified in the Recreation ORV.
Biological—This segment is characterized by diverse riparian areas and associated special status species that are largely intact and almost entirely undisturbed by humans.	Improved hydrologic flow as a result of implementing the proposed action is expected to improve the overall health of the riparian and wetland areas. This would have a beneficial effect on the biological ORV for the Gorge segment of the river.
Cultural—This segment contains cultural resources, including prehistoric sites and historic sites and structures such as those relating to historic engineering projects.	The retention of culverts and headwalls that have stonework that is considered to be a contributing element to the Merced Canyon Travel Corridor as well as context sensitive design features would protect the Cultural ORV. Potential impacts to cultural resources associated with construction activities will be mitigated through measures identified in the 1999 Programmatic Agreement, including National Register reevaluation, salvage, photo-documentation, and interpretation. These measures in part resolve adverse impacts to certain contributing historic elements.
Hydrologic Processes— This segment is characterized by exceptionally steep gradients (2,000-foot elevation drop in approximately 6 miles).	Proposed actions would help to enhance and protect these properties by: ▪ Improving roadside drainage ▪ Improving natural hydrologic processes due to the addition of new culverts and the resizing of others The overall effect of this would be enhancements to riparian and wetland areas to help restore the natural fluvial and floodplain processes, which would enhance the hydrological ORV for the Gorge segment.

SECTION 7 DETERMINATION

The Selected Alternative would protect the natural hydrologic flow by eliminating the potential for an unplanned road failure into the Merced River, including the potential for a sewage spill. The project would provide bank stabilization and restoration to the failing area, and would preserve certain historic resources and resolve adverse impacts to other contributing elements. Culverts would be replaced with properly sized pipes and added in certain locations, as well as inclusion of a 3-foot paved ditch on the north side of the roadway. Mitigation measures have been developed to address unavoidable impacts to natural and cultural resources. Also, no new structures would be placed below the Merced River's Ordinary High Water Mark (OHWM); therefore, the project would not alter the free-flowing condition of the Merced River.

As previously discussed, improved hydrologic flow is expected to improve the overall health of adjacent riparian and wetland areas, enhancing both the Scenic and Biological ORVs. The rehabilitation of culverts and retaining walls that are contributing elements to the Merced Canyon Travel Corridor would enhance the Cultural ORV. As a result of the direct and indirect beneficial effects to these ORVs, the NPS concludes that the Selected Alternative would not adversely affect the river's free flow and would not cause segment-wide direct and adverse impacts to the ORVs for which the river was designated Wild and Scenic.

Recommended:

R. Kent Cameron
Superintendent, Yosemite National Park

7-17-07
Date

Approved:

Jonathan B. Jarvis
Regional Director Pacific West Region
National Park Service

7/20/07
Date

Yosemite National Park

National Park Service
U.S Department of the Interior

Reconstructing Critically Eroded Sections of El Portal Road

Floodplain Statement of Findings

July 20, 2007

This page intentionally left blank

FLOODPLAIN STATEMENT OF FINDINGS

RECONSTRUCTING CRITICALLY ERODED SECTIONS OF EL PORTAL ROAD

YOSEMITE NATIONAL PARK

JULY 2007

Executive Order 11988, Floodplain Management, requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities." Executive Order 11988 states that when it is not “practicable to locate or relocate development or inappropriate human activities to a site outside and not affecting the floodplain”, the Nation Park Service will:

- Prepare and approve a Statement of Findings (SOF), in accordance with procedures described in Procedural Manual 77-2: Floodplain Management.
- Take all reasonable actions to minimize the impact to the natural resources of floodplains.
- Use non-structural measures as much as practicable to reduce hazards to human life and property.
- Ensure that structures and facilities are designed to be consistent with the intent of the standards and criteria of the National Flood Insurance Program (44 CFR Part 60).

The base floodplain (100-year flood) is the regulatory standard used by federal agencies to administer floodplain management programs. As described in the 23 CFR 650, Subpart A, floodplains provide natural and beneficial values serving as areas for fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, forestry, natural flood moderation, water quality maintenance, and groundwater recharge.

INTRODUCTION

DESCRIPTION OF THE PROPOSED ACTION

This project involves reconstructing critically eroded sections of the existing El Portal Road, beginning at the Big Oak Flat Road intersection to the west and extending east approximately 1,350 linear feet. This section of road links three park entrances to Yosemite Valley, and provides a conduit for sewer and electrical lines that service Yosemite Valley. This project has several purposes, including:

- To protect visitor health and safety by reconstructing the failing portions of the road with a safer structure.
- To protect park infrastructure from road collapse, specifically the sewer line and high-voltage electrical line conduit that are buried beneath the road surface.
- To prevent the difficult and potentially dangerous removal of road debris from the river that would result if the road embankment and/or retaining walls failed.

- To protect park resources from localized flooding that could result from uncontrolled road collapse and resultant disruption to flows during a high-flow period.

- To protect and enhance the Merced Wild and Scenic River Outstandingly Remarkable Values by preserving the free-flowing condition of the river, i.e., by building no new features below the ordinary high water mark (OHWM), or beyond the limits of the existing structures where historic built features are now in the river channel below the OHWM.

Three alternatives are analyzed in the environmental assessment prepared for the Reconstructing Critically Eroded Sections of El Portal Road. Alternative 1 (No Action) describes the impacts that would result if the existing road were not replaced, resulting in an unplanned road failure in the future. Alternative 2: 11-Foot Travel Lanes (Preferred Alternative) would reconstruct the existing road with a combination of road cuts and retaining wall reconstruction, and a cantilever section in the narrowest portion of the roadway. The proposed road would involve 11-foot travel lanes, a 3-foot paved ditch on the inboard side, plus curbs, and a crash impact rated guardwall on the outboard side of the road. During road reconstruction, traffic impacts would be minimized by providing one lane of traffic, alternating between eastbound and westbound travel on a fifteen minute basis during daytime hours. Alternative 3: 10-Foot Travel Lanes would reconstruct the existing road with the same combination of road cuts, retaining walls reconstruction, and cantilever section, but would involve 10-foot travel lanes combined with a 3-foot paved ditch, curbs, and a crash impact rated guardwall. Traffic management would be identical to Alternative 2.

Site Description

The project area is immediately adjacent to, and roughly parallel to, the Merced River, near the point of transition from the flat-bottomed Yosemite Valley to the V-shaped river gorge. The Merced River gorge begins below the Big Oak Flat Road intersection and continues downstream to the western park boundary at El Portal. Within this area, the Merced River has a much steeper gradient than in Yosemite Valley and consists mostly of continuous rapids. As the river exits Yosemite Valley, it cascades at an average gradient of approximately 70 feet per mile through the narrow, steep-sided Merced River gorge. The riverbed and banks are largely composed of boulders and cobbles, ranging in size from a few inches to several yards in diameter.

The steeper river gradient in this area prevents the river from meandering as extensively as in Yosemite Valley. Additionally, riverbank areas in many locations have been developed and hardened for road and facility protection. Because of the steep gradient and development, the shifting of the river channel in El Portal usually occurs only during periods of large floods.

The reach of the Merced River between the project area and Powerhouse, about 6,000 feet downstream, descends at a gradient of approximately 0.06 feet per foot and then levels to a gradient of about 0.009 feet per foot at the Cascades Picnic Area. The depositional regime of the river changes significantly as the river gradient is reduced. In the steeper reaches just downstream of the project area, the river bed is composed of large boulders; in the flatter reaches, where the reduced flow allows finer material to settle out, the streambed is composed of cobbles, sand, and silts. The majority of the fine-grained material that the river carries past the project area is deposited in the flatter, lower-energy river conditions that currently exist near the Cascades Picnic Area. Upstream, the river gradient is approximately 0.01 feet per foot.

General Characterization of the Nature of Flooding in the Area

Information for the 100-year floodplain within the study area was obtained from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) and Flood

Insurance Study (FIS) (FEMA 1990a, 1990b). The limits of the detailed FEMA study for the Merced River within Mariposa County are approximately from Foresta Road to the Yosemite National Park boundary, and do not cover the project area. The existing floodplain within the study reach is designated as Zone A, which means that the floodplain delineation in this area is approximate, with no base flood elevations determined. There is no regulatory floodway within this reach. The FIRM does indicate that portions of El Portal Road are inundated by the 100-year flood; however at the effective map scale (1"=2000'), precise limits and extents of the inundation are difficult to determine.

A hydrologic analysis for the project was done using two different hydrologic methodologies, yielding very similar results. The first method used was the analysis of stream gage data. There is a USGS flow gage on the Merced River at Pohono Bridge, approximately one mile upstream from the study reach. Recorded discharge data at this site dates back to 1917. A statistical analysis of this historic data using a Log Pearson Type III distribution was performed. The results of this analysis show the 100-year flow to be 27,360 cfs (774.7 cms).

The second method used was a regression analysis. The USGS also uses statewide regression equations to estimate flood magnitude and frequency on gauged or ungauged watersheds. California is divided into six hydrologic regions, each with their own regression equations. The project area is within the Sierra Region. Variables used in the equations are basin area, mean annual precipitation, and altitude index. USGS topographical mapping (7.5 minute quadrant maps) was used to delineate the drainage basin. The computed area at Pohono Bridge was 321.8 square miles, which matched the data from the USGS flow gage. For comparison, an area was also delineated at the downstream end of the project. The drainage basin area at the Big Oak Flat Road intersection was 323.9 square miles, a relatively insignificant difference. For this method, the 100-year flow was computed to be 27,600 cfs (781.5 cms).

The Army Corps of Engineers HEC-RAS program was then used for the hydraulic modeling. Recent LiDAR mapping provided by the National Park Service was used to generate a topographical map of the project area, with a 1-meter contour interval. A 100-year water surface profile was generated through the project reach for a flow of 782 cms.

The results from this analysis confirm that portions of El Portal Road are inundated by the 100-year floodplain. Within the study reach, approximately the easternmost 270 feet of the roadway are within the floodplain (from approximate Stations 368+80 to 371+50), with an average depth of flow over the roadway of approximately 0.9 feet. The limits of the existing floodplain within the study area are shown on Figure C-1.

JUSTIFICATION FOR USE OF THE FLOODPLAIN

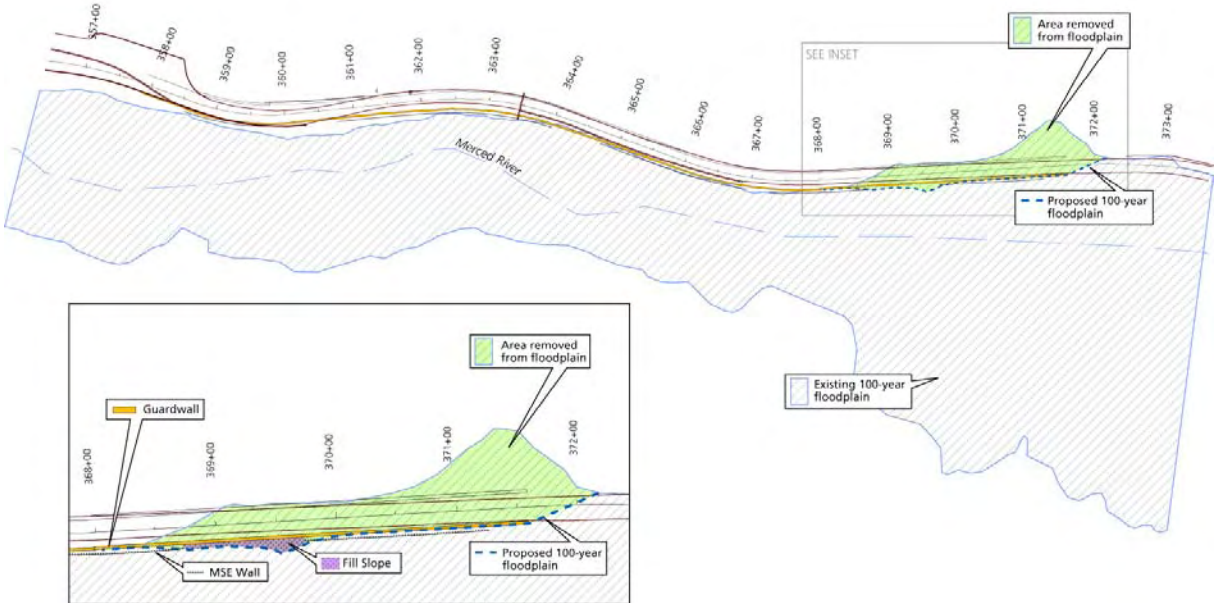
Why the Proposed Action Must be Located in the Floodplain

This section of El Portal Road provides access to Yosemite Valley from three park entrances: Arch Rock Entrance, which lies on El Portal Road in the Merced River Canyon west of the project area; Big Oak Flat Entrance, which lies north and west along Big Oak Flat Road; and Tioga Entrance, which lies at the eastern park boundary and joins Big Oak Flat Road at Crane Flat. These three entrances serve visitors originating from all points east of the Sierra Nevada crest, and from the San Francisco Bay Area, Central California, and Northern California. In addition, several local communities—including Lee Vining, California, Mariposa, California, and Groveland, California—are economically dependent on Yosemite visitors that use these travel routes. It is therefore essential that Yosemite National Park maintains this section of road.

The upper reach of the Merced River Canyon offers the only feasible point of access into Yosemite Valley, which is otherwise guarded by towering cliffs and steep, boulder-strewn slopes.

In some portions of the Merced River Canyon El Portal Road traverses along the northern canyon wall far above the 100-year floodplain. However, in the project area, vertical cliffs prevent a high traverse and confine the travel route to the canyon bottom where a narrow bench carries the road between river and cliff.

Figure 1. Floodplain



Source: Jacobs Civil, Inc. (2007)Investigation of Alternative Sites

For the reasons discussed above, no other practicable alternative sites exist for El Portal Road. Therefore, alternative sites were not investigated.

SITE SPECIFIC FLOOD RISK

No-Action Alternative

The No-Action Alternative would result in no new encroachment on the 100-year floodplain. The easternmost section of roadway described above would continue to be inundated by the 100-year flood.

Recurrence Interval of Flooding at the Site

The El Portal Road, as a paved highway, officially opened in 1926. Since that time, El Portal Road has sustained significant damage caused by flood events in 1937, 1950, 1955, 1964, 1969, 1983, and most recently, in 1997. This damage has occurred at a variety of locations on the El Portal Road, including the current project area.

Hydraulics of Flooding at the Site

Each of the two proposed build alternatives would construct roadway improvements within the existing floodplain, resulting in longitudinal encroachment of approximately 270 feet, as described above. For this section of the roadway within the existing floodplain, the two build alternatives are essentially identical. Proposed improvements would consist of a slight grade raise of the roadway

profile (0.5 to 1.0 feet) with a 2.5-foot high continuous guardwall along the south side of the roadway. The majority of this section (approximately 150 feet, from Stations 369+75 to 371+25) will also have an MSE retaining wall along the south side of the roadway to minimize impacts to the floodplain. A shorter section immediately to the west (approximately 100 feet, from Stations 368+75 to 369+75) entails a fill slope encroachment into the floodplain, placed within the northern channel bank from behind the guardwall to match the existing grade. This grading would require approximately 50 cubic yards of fill to be placed within the floodplain, over an area of approximately 540 square feet. However, this fill slope would not encroach into the ordinary high water mark (OHWM) of the Merced River.

The combination of the grade raise, fill slope, MSE wall, and guardwall would remove this section of the roadway from the 100-year floodplain. The proposed project would cause a maximum increase to the 100-year water surface elevation of only 0.01 feet, which would occur approximately 100 feet upstream from the eastern terminus of the project. The proposed water surface elevation matches the existing water surface elevation within 200 feet of the upstream end of the project (it likely matches in a shorter distance; the hydraulics model has cross sections every 100 feet). The area removed from the floodplain would be approximately 13,550 square feet (0.31 acres).

The reason for this insignificant change in water surface is the relative amount of flow area and floodplain width being impacted by the proposed project. The existing floodplain within the impacted area is approximately 430 feet wide, while the width that is impacted by the proposed action is only approximately 45 feet wide. The total cross-sectional flow area during the 100-year event is approximately 4,030 square feet, while the flow area being encroached upon is approximately 114 square feet (2.8percent of the flow area). The floodplain impact resulting from the proposed action has therefore been determined to be negligible.

The increase in water surface elevation upstream of the proposed improvements would not cause any additional locations of El Portal Road to be inundated by the 100-year floodplain. It should be noted that the floodplain analysis does indicate that there are other locations of El Portal Road further to the east (outside of the proposed project area) which are currently inundated by the 100-year floodplain. The proposed project would not cause any additional inundation of these areas.

The proposed floodplain limits are also shown on Figure C-1. Since the maximum surcharge on the floodplain elevation is less than 1 foot and flooding risks upstream are not increased, the proposed project is in compliance with FEMA regulations and criteria. The floodplain hydraulics will not be appreciably modified by the proposed action. Other than the proposed improvements to the roadway, there is no other proposed development within the floodplain. Since approximately 270 feet of the roadway would be removed from the floodplain with negligible impacts, the proposed action represents a net benefit from a floodplain management standpoint.

Time Required For Flooding to Occur

The National Park Service maintains detailed records of annual snow depths collected on survey coursed at Ostrander Lake, Gin Flat, Peregoy Meadows, and Snow Flat. Combined with weather forecasts, the National Park Service is able to predict high water events resulting from rain-on-snow. In addition, stream gages allow the National Park Service to closely monitor rising floodwaters in the Merced River Canyon. Experience with past flood events suggests that the National Park Service would have between 24 and 72 hours of advance warning before a flood event occurs.

Opportunity for Evacuation of Site in the Event of Flooding

The opportunity for evacuation of the site during a flood is excellent. As discussed above, The National Park Service would have ample time to initiate an evacuation before flooding commenced. The evacuation would be accomplished by closing sections of El Portal Road and Big Oak Flat Road and escorting all vehicles and pedestrians from site.

Geomorphic Considerations

Each action alternative would result in a temporary negative effect to floodplain quality due to increased potential for sediment runoff and deposition during construction. These effects would be minimized by immediately implementing the revegetation of disturbed areas and by implementation of both temporary and permanent Best Management Practices (BMPs). Also, each action alternative would result in a permanent positive effect to floodplain quality due to containment of the floodplain within the channel and removal of the floodplain from the roadway.

MITIGATION MEASURES

Mitigation measures will be required to minimize impacts to the Merced River floodplain. The design of all roadway, drainage, and structural features on El Portal Road will be in accordance with FHWA criteria. BMPs would be followed to reduce temporary and permanent impacts to the Merced River floodplain. Specific BMPs to be used in the study area will not be determined until final design. Mitigation measures also would include:

- Measures will be taken to avoid excess application and introduction of chemicals into the aquatic ecosystem. Temporary fills during construction will utilize fill that avoids an increase in suspended solids or pollution.
- Construction staging areas will be located outside of the adjacent stream/riparian/ wetland area to avoid disturbance to existing vegetation, avoid point source discharges, and to prevent spills from entering the aquatic ecosystem (including concrete washout).
- Use of standard erosion and sediment control and revegetation techniques to minimize impacts to the floodplain, streambanks and shoulders. All disturbed areas would be appropriately revegetated.
- Adherence to FHWA hydraulic design criteria for major and minor storm drainage.
- Adherence to all FEMA requirements and conformance of all hydraulic designs to the requirements of 23 CFR 650.

SUMMARY

The NPS concludes that the selected alternative would result in negligible reduction to potentially hazardous conditions associated with flooding by removing 270 linear feet of road from the floodplain in the Merced River Canyon. Mitigation and compliance with regulations and policies to prevent impacts to water quality, floodplain values, and loss of property or human life would be strictly adhered to during and after construction. Individual permits with other federal and cooperating state and local agencies will be obtained prior to construction activities. No long-term adverse impacts to water quality, hydrology, or floodplain values would result from the selected actions. Therefore, the NPS finds implementation would be acceptable under Executive Order 11988 for protection of floodplains.

Recommended:

R. Kenneth [signature] — 6/26/07

Superintendent, Yosemite National Park — Date

Certification of Technical Adequacy and Servicewide Consistency:

William P. Jackson [signature] — 7-6-07

Chief, Water Resources Division or Professional Hydrologist, National Park Service — Date

Concurrence:

Larry Nolen [signature] — 7-13-07

Regional Safety Officer — Date

Approved:

Jonathan B. Jarvis [signature] — 7-20-07

Regional Director Pacific West Region National Park Service — Date

This page intentionally left blank

Yosemite National Park

National Park Service
U.S Department of the Interior

Reconstructing Critically Eroded Sections of El Portal Road

Wetland Statement of Findings

July 20, 2007

This page intentionally left blank

WETLAND STATEMENT OF FINDINGS

RECONSTRUCTING CRITICALLY ERODED SECTIONS OF EL PORTAL ROAD

YOSEMITE NATIONAL PARK

JULY 2007

PURPOSE OF THIS STATEMENT OF FINDINGS

The purpose of this Wetland Statement of Findings is to review the Reconstructing Critically Eroded Sections of El Portal Road project in sufficient detail to:

- Avoid, to the extent possible, the short-and long-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.
- Describe the effects on wetland values associated with the selected alternative.
- Provide a thorough description and evaluation of mitigation measures developed to achieve compliance with Executive Order 11990 (Protection of Wetlands) and National Park Service (NPS) Procedural Manual 77-1: Wetland Protection.
- Ensure "no net loss" of wetland functions or values.

AFFECTED WETLANDS

The Merced River within the project area has a narrow, steep riparian area constricted by El Portal Road, with only a narrow band suitable for supporting plant species. The dominant willow species within the riparian zone is red willow (*Salix laevigata*), with sandbar willow (*Salix interior*), and arroyo willow (*Salix lasiolepis*) intermixed. Black cottonwood (*Populus balsamifera*) and white alder (*Alnus rhombifolia*) are minor components in this area.

Wetlands[1] and deepwater habitats within the project area are comprised of the riverine habitat of the Merced River. There are no long-term, permanent impacts to wetlands resulting from implementation of the Selected Alternative. However, a total of 0.142 acre (6,196 sq feet) of construction-related, temporary, short-term impacts is anticipated to riverine wetland habitat occurring within the project area. National Wetland Inventory Map and detailed wetland location maps for the project area can be found on pages 4-14 to 4-19.

WETLAND CHARACTERISTICS

Specific wetland classes identified within the project area are limited to riverine (rivers, creeks, and streams). Using the Cowardin classification system, specific wetland and deepwater classes within the project area are classified as:

- Riverine upper perennial—main channel of the Merced River

The size, connectivity, and integrity of wetlands in the project area have been directly compromised by El Portal Road, which constricts the floodplain of the Merced River by altering hydrologic flows. The wetland acreage in the project area is classified as riverine upper perennial

[1] Consistent with NPS Procedural Manual 77-1: Wetland Protection, wetlands herein are described using the Cowardin classification system.

and includes the open and flowing water of the Merced River, as well as a permanently flooded channel with little in-stream vegetation. In this section, the river is shallower and warmer, without the variety of riffles and deep pools needed to sustain aquatic life that is typical of a free-flowing river. Riverside vegetation overhanging the main channel is absent in many locations and contributes only minimal nutrients, organic matter, or shade to the riverine system. Reduction in the riparian band has increased bank erosion, resulting in a further loss of stabilized soils capable of supporting riparian species.

The riverine upper perennial wetland class of the Merced River provides a year-round water source for wildlife and habitat for fish and aquatic invertebrates. Because the unconsolidated shore habitats lack vegetation and usually lack water, they may not provide significant habitat or food sources for wildlife.

Wetland functions and values were assessed qualitatively based on incidental field observations and professional judgment. The following functions and values were evaluated based on those described in Procedural Manual #77-1:

Hydrologic Functions

The Merced River provides the functions of flood attenuation, streamflow maintenance, water supply, erosion controls, sediment retention (minor), water purification, and detrital export (including large wood debris) to downstream systems. Additionally, because of the coarse texture of the sediments that make up the channels, the riverine habitats could offer some degree of groundwater recharge function.

Cultural Values

Because Native Americans are known to have engaged in activities along streams, these habitats may provide some archeological value. Although the history and extent of cultural resources have not been researched in this delineation, a detailed description can be found in any formal cultural resource survey report for this area.

The perennial channel of the Merced River also provides aesthetic value. Visitors to the park enjoy viewing and photographing the river and engage in activities such as swimming and fishing.

Research/Scientific Values

The riverine habitat may provide opportunities for research in groundwater vegetation relationships and in the effectiveness of riparian habitat restoration techniques.

Economic Values

For the reasons listed above, some of the riverine habitats could provide significant economic value for flood protection, fisheries, and tourism.

Based on the fact that several perennial waterways are present within the park, the Riverine Upper Perennial wetland class present within the project area is considered as a common, abundant wetland within Yosemite National Park.

ENVIRONMENTAL CONSEQUENCES OF THE SELECTED ALTERNATIVE ON WETLANDS

The Reconstructing Critically Eroded Sections of El Portal Road project could have temporary, adverse effects on riverine upper perennial wetlands. Effects would be related to damage caused by heavy equipment and road improvement activities and could include: soil compaction, dust, vegetation removal, root damage, erosion, and introduction and spread of non-native species. The addition of silt, the resuspension of sediment, or the introduction of pollutants (e.g., fuels, lubricants) related to roadway improvements could degrade the quality of native wetland and aquatic habitat. The application of mitigation measures described below (e.g., best management practices) would reduce the potential impacts to wetland and aquatic habitats to a negligible intensity. Implementation of the Reconstructing Critically Eroded Sections of El Portal Road project would not have any long-term or permanent effects on wetland and aquatic habitat and will not permanently degrade the existing area. Refer to *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment*, Chapter III, Alternatives, or to the *Reconstructing Critically Eroded Section of El Portal Road Finding of No Significant Impact*, Section 7.2, for mitigation measures incorporated in the Selected Alternative.

Special status species potentially found in the project vicinity include Wawona riffle beetle, ten species of bats, harlequin duck, and California spotted owl. There could be a local, short-term, temporary impact on habitat for the Wawona riffle beetle and harlequin duck during construction times, and there could be a local, short-term, temporary impact on special status bat species and California spotted owl due to the decreased habitat associated with the removal of existing tree and riparian habitats along the Merced River bank. However, with the application of mitigation measures, impacts on special status species are expected to be negligible.

Bioengineered bank stabilization and revegetation would be designed to match upstream and downstream conditions. The revegetation would limit the introduction of weedy species, reduce the potential for erosion and sedimentation, and help stabilize channel shape and slopes. Tree species would add structural diversity to the floodplain, and eventually become a source of large, woody debris. Project activities would result in "no net loss" of wetland functions or values.

Cumulative Impacts. Cumulative effects to wetland and aquatic resources are based on analysis of past, present, and reasonably foreseeable future actions in the Merced River corridor in combination with the potential effects of this alternative. The projects identified below include those projects that have the potential to affect local wetland patterns (i.e., within the river corridor) as well as regional wetland patterns related to the Merced River.

Wetland and riparian systems of the Merced River corridor have been substantially altered by development and visitor activities. Past and ongoing activities include recreational use and installation of dams, diversion walls, bridges, roads, pipelines, riprap, buildings, campgrounds, and other recreational features. These changes have negatively influenced the size, form, and function of wetlands and riparian vegetation communities. Conversely, various past and future projects have and will continue to restore riverbanks, remove impoundments and bridges, limit visitor use in wetland and riparian zones, restore and improve riverflow and riparian habitats, and reduce bank erosion.

Implementation of the *Yosemite Valley Plan* (Record of Decision in 2000) is an example of an approved plan that could affect wetlands in the project area. Full implementation of the *Yosemite Valley Plan* would restore 141 acres of river-associated wetlands in Yosemite Valley—a long-term, major, beneficial effect. Other wetland related habitat improvement activities under the *Yosemite Valley Plan* include removal of the Sugar Pine Bridge, which constrains flows of the Merced River, restoration to natural conditions of campgrounds located within the floodplain, and removal of

facilities from the 100-year floodplain. However, *Yosemite Valley Plan* projects that involve construction of additional lodging, campsites, and other facilities could result in adverse impacts. Overall, the *Yosemite Valley Plan* would have a beneficial effect on wetland resources.

Other past, present, and future projects include the *Parkwide Invasive Plant Management Plan*, *Happy Isles Fen Habitat Restoration Project,* and *Visitor Use and Floodplain Restoration in East Yosemite Valley*. Cumulatively, these projects are anticipated to have a beneficial impact on wetland resources.

While some of the past, present, and future projects in the Merced River watershed would ultimately improve areas of existing wetlands, enhance riparian habitat zones, rehabilitate eroded streambanks, and reduce degradation of stream characteristics in the Merced River, others would result in adverse water quality impacts , riparian habitat impacts, and aquatic habitat degradation through construction related activities, such as the Curry Village Employee Housing, Lower Yosemite Fall, and Yosemite Lodge Area Redevelopment projects. Overall, the cumulative projects would result in a local, long-term, minor, beneficial impact to wetland resources.

Although the *Yosemite Valley Plan* and other cumulative projects could have short-term adverse affects during implementation, full implementation of cumulative projects planned or approved within the watershed would have long-term, moderate, beneficial cumulative effects to wetland resources by enhancing wetland connectivity, size, and structure within Yosemite Valley and throughout the Merced River corridor. Therefore, past, present, and reasonably foreseeable future actions in combination with Alternative 1 (No Action) could have a net long-term, moderate, beneficial effect on wetland resources within the corridor of the Merced River.

Although Alternative 2 and Alternative 3 would contribute to improved roadside drainage and natural hydrologic flow in the vicinity of culverts, overall past, present and reasonably foreseeable cumulative actions would be generally the same as those described for Alternative 1. These would represent a net long-term, minor to moderate, beneficial impact to wetlands in the Merced River Corridor.

Conclusions. Under Alternative 1, the No Action Alternative, El Portal Road would receive no major improvements; however, the NPS would continue to make minor repairs and maintenance to the existing roadway. Actions proposed in Alternative 2 (preferred) and Alternative 3 (10 foot lanes) could take place in riparian zones and wetlands, resulting in minor, temporary impacts on wetlands.

ALTERNATIVES CONSIDERED

Alternatives considered in the Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment (Chapter III, Alternatives) include Alternative 1: No Action Alternative, Alternative 2 (Selected): 11-foot lane with 3-foot paved ditch and a 1-foot shoulder, and Alternative 3, 10-foot lane with 3-foot paved ditch and a 1-foot shoulder.

ALTERNATIVE 1: NO ACTION

Under Alternative 1, no planned reconstruction would occur in the project area. However, the NPS would continue to make minor repairs and maintenance to the existing roadway. The road would continue to deteriorate and eventually fail, likely during high-flow conditions. Road failure would result in a short-term (immediate) accumulation of rubble, fill, and sediment depositions into the Merced River waters, floodplain, and riparian zones. Sediment deposition would have adverse affects, but could result in some beneficial effects to downstream wetland resources. For

instance, suspended sediments would temporarily reduce dissolved oxygen levels, and sediment and debris deposition would bury riparian species, resulting in individual death. This latter effect would also be temporary, because natural revegetation would occur. Conversely, sediment deposition could result in sandbar formations capable of supporting riparian vegetation—a beneficial effect. Depending on the flows at the time of road failure, road debris and rubble could restrict and divert flows, leading to bank erosion or riverbank scour. Bank erosion and retrieval of debris could result in local, short-term, negligible to moderate, adverse impacts for wetland resources.

Loss of riverside vegetation from ruined road materials in the riparian zones and overhanging the main channel would contribute to a lack of nutrients, organic matter, and shade for the wetland system. Reductions in the riparian zones could result in bank erosion, resulting in a further loss of stabilized soils capable of supporting wetland and riparian species. Natural stabilization of the community would occur over time, although restoration would not be complete for 10 or more years. Overall, Alternative 1 would result in a local, long-term, moderate to major, adverse effect on wetland habitats.

Alternative 2

Alternative 2, the Selected Alternative, proposes two 11-foot travel lanes, 3-foot paved ditch with a 1-foot curb, and 1-foot paved shoulder adjacent to the guardwall. No major road alignment changes would be made. The travel lanes, shoulders, and paved ditches would be reconstructed to a uniform width. Old retaining walls would be removed and replaced, and new retaining walls would be constructed.

There would be no long-term, permanent impact to wetlands resulting from implementation of any action or roadway component included with the Selected Alternative. There would be short-term, temporary impacts to wetlands associated with construction activities. Temporary impacts and from short-term construction activities could come from increased dust and sediment entering into wetlands and temporary fill. These temporary impacts would occur as a result of the need to dewater an area nearest to the roadway in order to reconstruct the roadway. These effects would be short-term. The road reconstruction would occur within a delineated work area, during low-flow conditions, and with the application of best management practices. Impacts to wetlands are shown on Figures 4, 5, and 6 and are anticipated at the following specific Station locations:

- Approximately Station 364 – 0.063 acres of impact (2, 753 sq. ft.)
- Approximately Station 367 and Station 370 to 371– 0.079 acres of impact (3,443 sq. ft.)

However, implementation of the Selected Alternative could have positive impacts on wetland communities including:

- Improvements to culverts would allow for the restoration of more natural surface and near-surface hydrologic processes, enhancing wetland and aquatic habitats along the roadway.
- Installation of a permeable subgrade beneath the roadway would contribute to improved hydrological processes and enhancement of wetland communities adjacent to the roadway in these areas.
- Placement of roadside guardrail would help to protect wetland communities adjacent to the roadway that is potentially encroached upon by visitor use.

No permanent, long term impacts are anticipated from the roadway expansion or construction of roadside ditches/curbs in the Selected Alternative. The proposed improvements to El Portal Road drainage facilities included in the Selected Alternative are expected to have long-term beneficial effects on wetland through restoration of more natural subsurface water flows throughout wetlands areas and between wetlands and the river. Thus, although construction activities are expected to result in localized, temporary impacts to wetlands along the roadway, overall local, long-term, minor to moderate, beneficial impacts are expected to wetland in these areas.

Alternative 3

Alternative 3 is only slightly different from the Selected Alternative in that the travel lanes for Alternative 3 would be slightly narrower at 10-foot lane width versus the 11-foot lane width in the Selected Alternative. The construction process impacts are exactly the same as those for the Selected Alternative. No additional wetlands would be impacted in the long-term for either the Selected Alternative or Alternative 3; therefore wetland impacts for both Alternatives are the same.

DESIGN OR MODIFICATIONS TO MINIMIZE HARM TO WETLANDS

Best Management Practices and Resource-Specific Mitigation Measures

Best management practices and resource-specific mitigation measures would be implemented prior to, during, and/or after roadway improvement activities, as appropriate.

Best Management Practices

The NPS and its contractors shall implement the following best management practices, as appropriate, prior to, during, and/or after roadway improvement activities. Specific tasks would include, but are not limited to, the following:

- Inspect the project to ensure that impacts stay within the parameters of the project and do not escalate beyond the scope of the environmental assessment.
- Implement compliance monitoring to ensure the project remains within the parameters of National Environmental Policy Act and National Historic Preservation Act compliance documents, U.S. Army Corps of Engineers Section 404 permits, etc. Compliance monitoring would ensure adherence to mitigation measures and would include reporting protocols.
- Implement natural resource protection measures. Standard measures include demolition scheduling, biological monitoring, erosion and sediment control, use of fencing or other means to protect sensitive resources adjacent to the work area, and revegetation. The measures include specific monitoring by resource specialists as well as treatment and reporting procedures.
- Confine work areas within the river channel, such as workpads to support demolition equipment, to the smallest area necessary.
- Limit the amount of rock and sediment required for the river-right bank bioengineereed bank stabilization to the minimum required to stabilize and protect the slope from erosion. Amount shall be determined in consultation with NPS resources management staff during final project design.

- Steam-clean heavy equipment prior to its entry into the park to prevent importation of non-native plant species, and repair all petroleum leaks prior to work near the Merced River. Tighten hydraulic hoses and ensure they are in good condition.

- To minimize the possibility of hazardous materials seeping into soil or water, check equipment frequently to identify and repair any leaks, as directed in the spill prevention and countermeasure plan. Standard measures include hazardous materials storage and handling procedures; spill containment, cleanup, and reporting procedures; and limitation of refueling and other hazardous activities to upland/nonsensitive sites. Provide an adequate hydrocarbon spill containment system (e.g., floatable absorption boom, absorption materials, etc.) on site, in case of unexpected spills in the project area. Ensure equipment allowed within the river channel is equipped with a hazardous spill containment kit.

- Store all construction equipment within the delineated work limits.

- Ensure an emergency notification program is in place. Standard measures include notification of utilities and emergency response units prior to demolition activities. Identify locations of existing utilities prior to removal activity to prevent damage, particularly to the wastewater lines that pass under El Portal Road within the project area. The Underground Services Alert and NPS maintenance staff shall be informed 72 hours prior to any ground disturbance. Demolition shall not proceed until the process of locating existing utilities is completed (wastewater, electric, and telephone lines). An emergency response plan shall be required of the contractor for measures that will be taken during all high-water events during dam removal, such as evacuation of personnel, equipment, and materials from the river, etc.

- Avoid damage to natural surroundings in and around the work limits. Provide temporary barriers to protect existing trees, plants, and root zones, if necessary, as determined by vegetation management staff. Trees and other vegetation shall not be removed, injured, or destroyed without prior written approval. Ropes, cables, or fencing shall not be fastened to trees. All existing resource protection fencing (post and rope) shall be left in place and protected from heavy equipment.

- Remove all tools, equipment, barricades, signs, surplus materials, and rubbish from the project work limits upon project completion. Repair any asphalt surfaces that are damaged due to work on the project to original condition. Remove all debris from the project site, including all visible concrete, timber, and metal pieces. Grade disturbed areas and rake them smooth to eliminate tire tracks and tripping hazards.

- Locate, contain, and stabilize excavated and stored materials within the upland staging areas and prevent re-entry into the river.

- Use silt fences, sedimentation basins, etc. in work areas to reduce erosion, surface scouring, and discharge to water bodies, as defined in the erosion control plan prepared for this project.

Resource-Specific Measures

Hydrology, Floodplains, and Water Quality

- Prepare an erosion control plan specifying measures to prevent erosion/sedimentation problems during project construction. Include a map of the project site delineating where erosion control measures will be applied. Include the following minimum criteria, as listed in the *Guidelines for Protection of Water Quality During Construction and Operation of Small Hydro Projects* (CVRWQCB 1983):

- Construction equipment shall not be operated in flowing water, except as may be necessary to construct crossings or barriers.

- Where working areas are adjacent to or encroach on live streams, barriers shall be constructed that are adequate to prevent the discharge of turbid water in excess of specified limits.

- Material from construction work shall not be deposited where it could be eroded and carried to the stream by surface runoff or high stream flows.

- All permanent roads shall be surfaced with materials sufficient to maintain a stable road surface.

- All disturbed soil and fill slopes shall be stabilized in an appropriate manner.

- Surface drainage facilities shall be designed to transport runoff in a non-erosive manner.

- Riparian vegetation shall be removed only when absolutely necessary.

- There shall be no discharge of petroleum products, cement washings, or other construction materials.

- Erosion control measures shall be in place prior to dam removal and in good repair by October 15 of each year.

- Stream diversion structures shall be designed to preclude accumulation of sediment. If this is not feasible, an operation plan shall be developed to prevent adverse downstream effects from sediment discharges.

- Erosion control measures shall be inspected daily during project activities and monthly as required.

- Waters shall be free of changes in turbidity that cause a nuisance or adversely affect beneficial uses. Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits, as described in *The Water Quality Control Plan* for the Central Valley Regional Water Quality Control Board (CVRWQCB 1998). In determining compliance with the limits below, appropriate averaging periods may be applied, provided that beneficial uses will be fully protected:

  - Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.

  - Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent.

  - Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.

  - Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.

  - Implement stormwater management measures to reduce nonpoint-source pollution discharge. This could include measures such as oil/sediment containment or street sweeping.

– Remove hazardous waste materials generated during implementation of the project from the project site immediately.

– Dispose of volatile wastes and oils in approved containers for removal from the project site to avoid contamination of soils, drainages, and watercourses. Keep absorbent pads, booms, and other materials onsite during projects that use heavy equipment to contain oil, hydraulic fluid, solvents, and hazardous materials spills.

Vegetation

- Implement a noxious weed abatement program. Standard measures include, as appropriate, the following elements: ensure that vehicles and equipment arrive onsite free of mud or seed-bearing material, certify all seeds and straw material as weed-free, identify areas of noxious weeds before project activities, treat noxious weeds or noxious weed topsoil prior to work (e.g., topsoil segregation and removal), and revegetate with appropriate native species.
- Cover exposed soil with a combination of locally acquired native duff and forest litter from adjacent riparian sites to provide immediate groundcover and facilitate natural revegetation.
- Implement the planting prescriptions prepared for this project.
- Develop and implement a monitoring plan to ensure successful revegetation, maintain plantings, and replace unsuccessful plantings.
- Use native or seed-free mulch to minimize surface erosion and introduction of non-native plants.
- Confine all construction operations to specified project work limits. Install temporary barriers to protect natural surroundings (including trees, plants, and root zones) from damage. Avoid fastening ropes, cables, or fences to trees.
- As much as possible, removed plants and materials (cuttings) shall be salvaged and stored on site for revegetation following completion of project activities.

Refer to the *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment* (Chapter III, Alternatives) for a complete list of best management practices and resource-specific mitigation measures applicable to the selected alternative.

The Selected Alternative has been designed to mitigate harmful effects to wetlands. After the roadway is improved, the floodplain and riparian area along the Merced River may require minor revegetation measures in areas that were cleared for project activities. Newly restored floodplain would be revegetated and stabilized consistent with the project's U.S. Army Corps of Engineers Section 404 Nationwide Permits. Refer to *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment* (Chapter III, Alternatives) for additional detail. The Reconstructing Critically Eroded Sections of El Portal Road project does not include any elements that would require preparation of a subsequent statement of findings.

Site Restoration

The last phase of the project is site restoration. Once the roadway improvements have been installed and completed the adjacent Merced River Floodplain, wetlands, and riparian area will have been slightly altered. Areas of vegetation may have been cleared and portions of the river

bed and floodplain may have received minor de-watering to divert flow during construction activities.

Exposed soil would be covered with a combination of locally acquired native duff and forest litter from adjacent riparian sites to provide immediate groundcover and facilitate natural revegetation of the site. On the bank, a bioengineered slope protection system would be installed to protect the riverbank from erosion. The bioengineered slope protection would be constructed of native vegetation and boulders designed to match the natural conditions of upstream and downstream riverbanks to the extent possible.

The bioengineered bank stabilization system would be constructed using standard techniques, including brush layering incorporated into a boulder structure. Other materials could be incorporated, including logs and root wads. Boulders would not be grouted into place. Equipment used to perform restoration activities could include excavators, bulldozers, loaders, cranes, dump trucks, pumps, and water trucks. Restoration would be consistent with the project's U.S. Army Corps of Engineers Protocol.

The project area would be contoured and finished with sediments to facilitate both natural and assisted revegetation by native species growing in the site-specific conditions that characterize the project area. Appropriate planting prescriptions for revegetation have been developed, including appropriate plant species and their placement in relation to Merced River water levels. Species suitable to be planted adjacent to the water would include native herbaceous wetland species intermixed with willows (including sandbar willow, red willow, and arroyo willow). Other species planted in this area may include horsetail (*Equisetum spp.*), dogbane (*Apocynum spp.*), and goldenrod (*Solidago spp*). Native grasses would be planted throughout the floodplain. Herbaceous species would be re-established through hand-application of locally acquired mulch from adjacent sites supporting these species and hand-application of seeds, minimizing the potential for introduction of non-native species. Species such as white alder seedlings would be planted within the bioengineered slope at the bankfull mark. Black cottonwood and bigleaf maple (*Acer macrophyllum*) cuttings would be planted near the upper limits of the riparian zone to match adjacent riparian vegetation patterns.

The site would be monitored in July (when maximum biomass is present, and to ensure the correct identification of herbaceous species) for five years to determine the success of the revegetation. Based on monitoring results, additional planting or stabilization could be required, including mulching, seeding, and planting of seedlings and cuttings. Any non-native plant species would be removed as discovered. Successful revegetation would establish a self-sustaining cover of native species that stabilize soil, trap sediment, provide wildlife habitat, and fulfill other basic functions of riparian ecosystems. The natural regeneration of vegetation would be deemed successful if, after five years, the herbaceous species composition and cover is within 90 percent of the composition and cover of adjacent native riparian areas, and if the stem density of shrubs and trees is within 90 percent of natural stem densities of adjacent areas. In addition, river channel morphology and bank conditions would continue to be monitored. Water quality (turbidity) monitoring would continue.

Following revegetation and bank stabilization, all removal-related materials and equipment would be removed from the site.

Proposed Compensation

There would be no long-term, permanent impact to wetlands resulting from implementation of any action or roadway component included with the selected alternative. There would be short-

term, temporary impacts to wetlands associated with construction activities. Temporary impacts and from short-term construction activities could come from increased dust and sediment entering into wetlands and temporary fill. These temporary impacts would occur as a result of the need to dewater an area nearest to the roadway in order to reconstruct the roadway. These effects would be short-term. The road reconstruction would occur within a delineated work area, during low-flow conditions, and with the application of best management practices. Temporary impacts to wetlands are shown on Figures 4,5 and 6.

No off-site compensation is required. The selected alternative is designed to restore natural fluvial processes and wetland characteristics of the Merced River and would result in a no net loss of wetland extent, function, and value in the vicinity of the project area.

NEW DEVELOPMENT

No new development, aside from the roadway reconstruction, is proposed by the Reconstructing Critically Eroded Sections of El Portal Road project. No new facilities or development would be located within wetland or deepwater habitats or additional impacts to existing wetland resources.

EXISTING DEVELOPMENT

There would be no long-term, permanent impact to wetlands resulting from implementation of any action or roadway component included with the selected alternative, however there would be short-term, temporary impacts to wetlands associated with construction activities. Temporary impacts and from short-term construction activities could come from increased dust and sediment entering into wetlands and from temporary fill.

No new impacts on wetlands would result from existing development.

REDEVELOPMENT

No redevelopment is proposed by the Reconstructing Critically Eroded Sections of El Portal Road.

CONCLUSION

The Selected Alternative would substantially reduce potentially hazardous conditions associated with the existing narrow road lanes and result in enhanced driver safety with decreased annual vehicular collisions.

The Reconstructing Critically Eroded Sections of El Portal Road project could have short-term, adverse effects on wetland and aquatic habitat. Effects would be related to heavy equipment and road improvement activities and could include soil compaction, dust, vegetation removal, root damage, erosion, and introduction and spread of non-native species. However, in the long term, implementation of the Reconstructing Critically Eroded Sections of El Portal Road project would not have any permanent affects on wetland and aquatic habitat, and would not degrade the existing areas. The application of mitigation measures and best management practices would reduce the potential impacts to wetland and aquatic habitats to a negligible intensity. Mitigation and compliance with regulations and policies to prevent impacts to water quality, wetland function and values, and loss of property or human life would be strictly adhered to during and after removal.

Individual permits with other federal and cooperating state and local agencies would be obtained or updated as appropriate prior to removal activities. No long-term adverse impacts to wetlands would occur from the selected alternative. Therefore, the NPS finds the selected alternative to be acceptable under Executive Order 11990 for the protection of wetlands.

Recommended:

Superintendent, Yosemite National Park — Date: 6-26-07

Certification of Technical Adequacy and Servicewide Consistency:

Chief, Water Resources Division
or Professional Hydrologist,
National Park Service — Date: 7-6-07

Approved:

Regional Director Pacific West Region
National Park Service — Date: 7/20/07

Figure 1. Existing USFWS National Wetlands Inventory Map of the project area

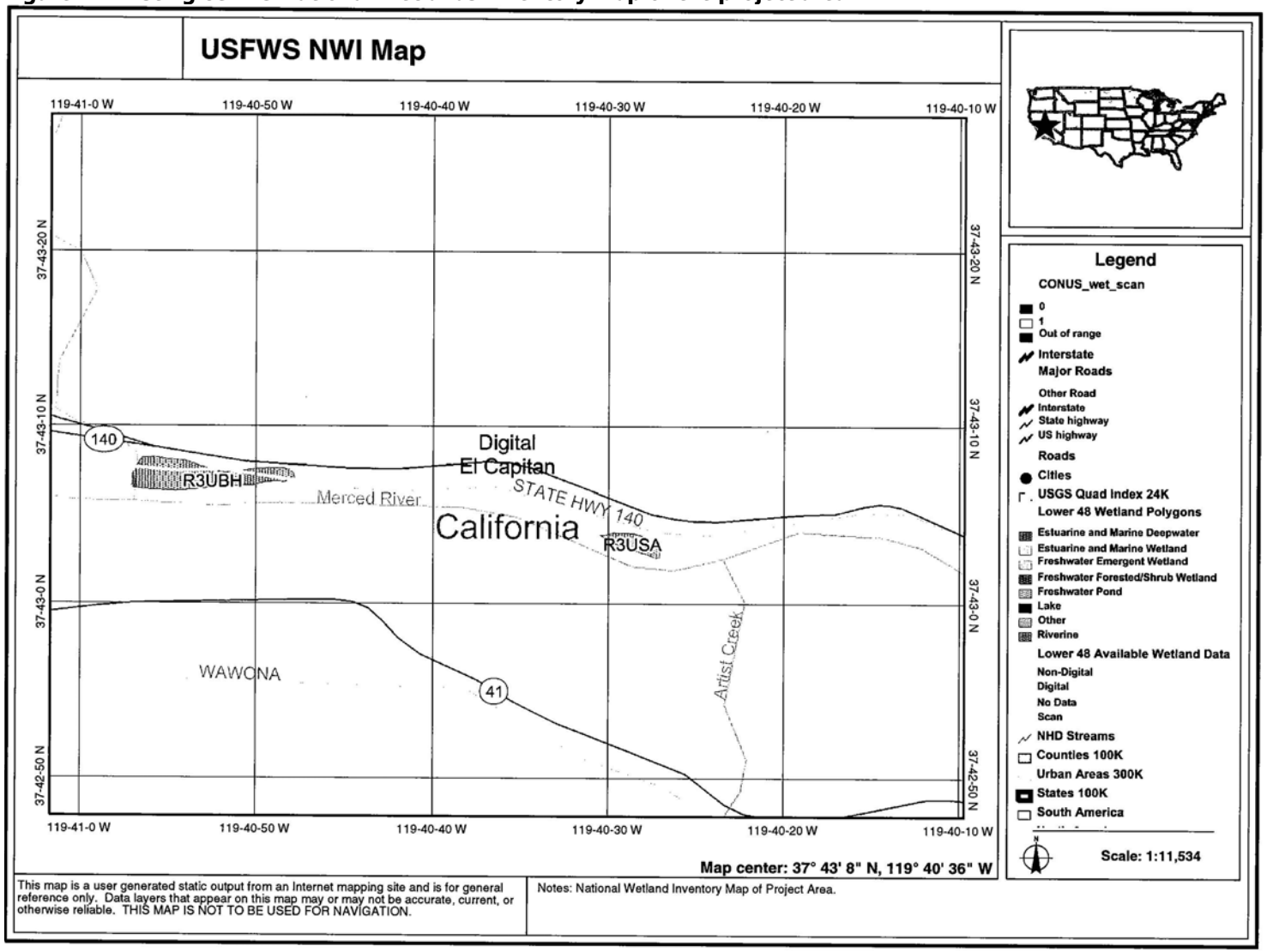


Figure 2. Wetland Location Area Vicinity Map

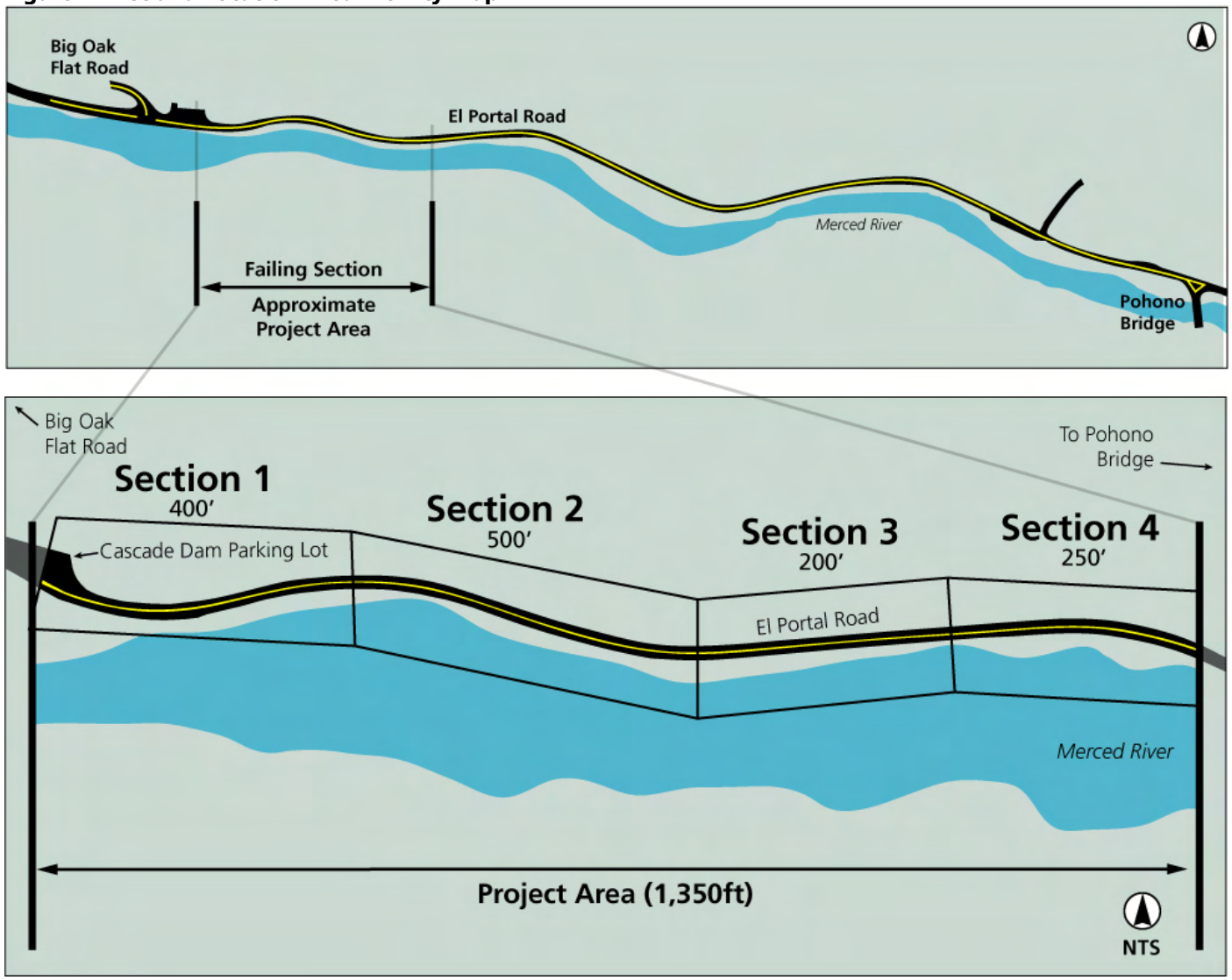


Figure 3. Detailed View of Section 1

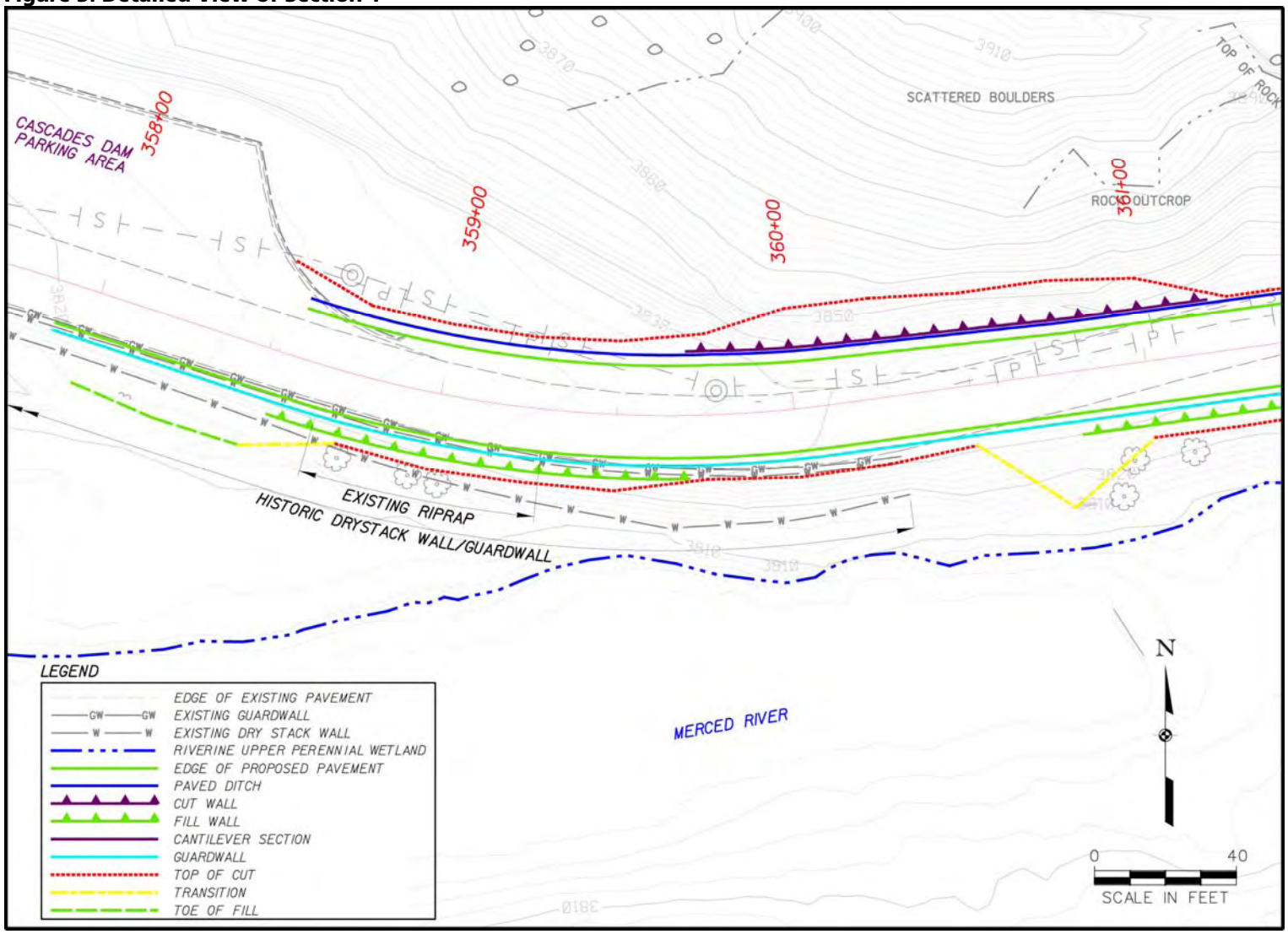


Figure 4. Detailed View of Section 2

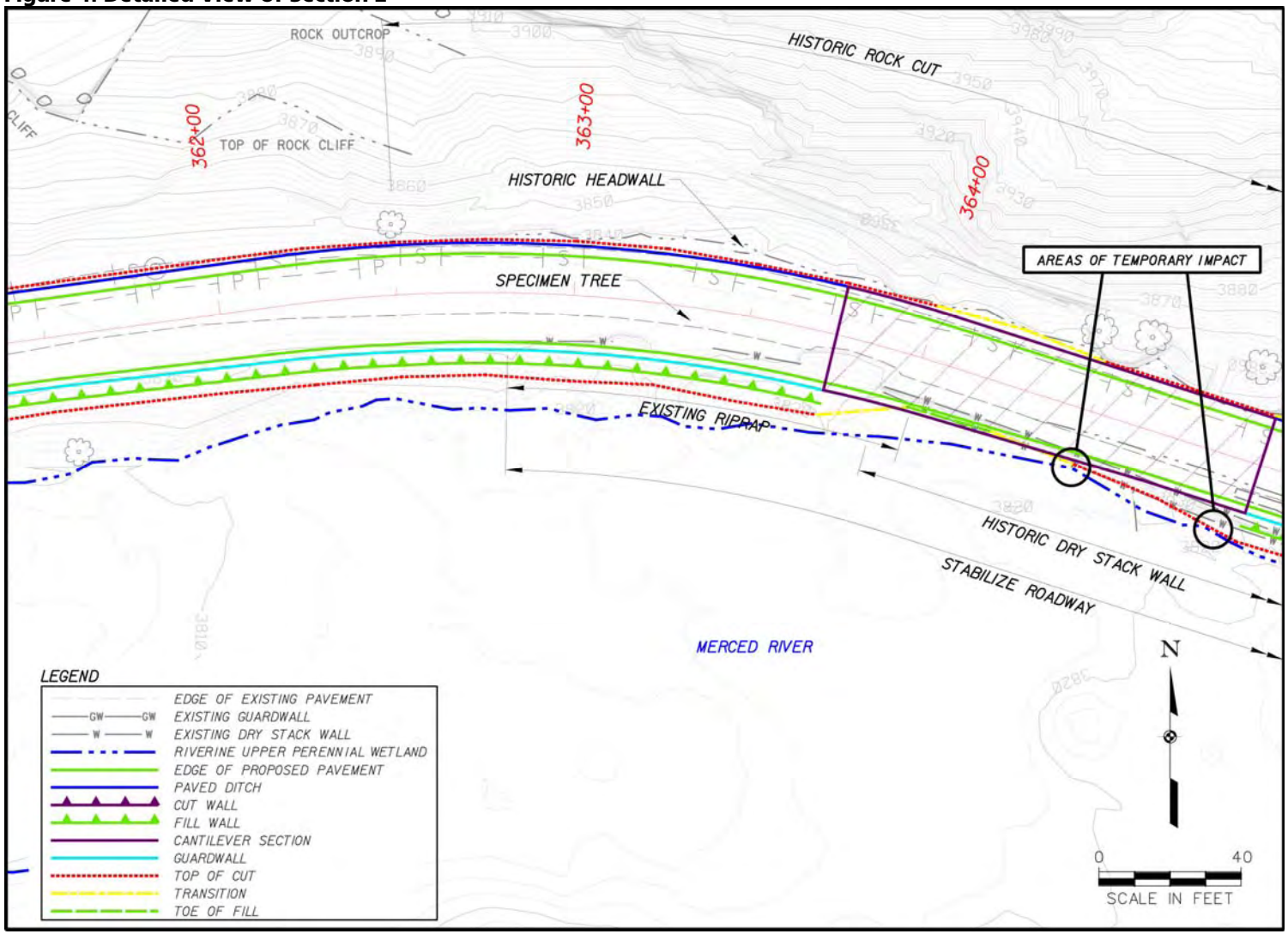


Figure 5. Detailed View of Section 3

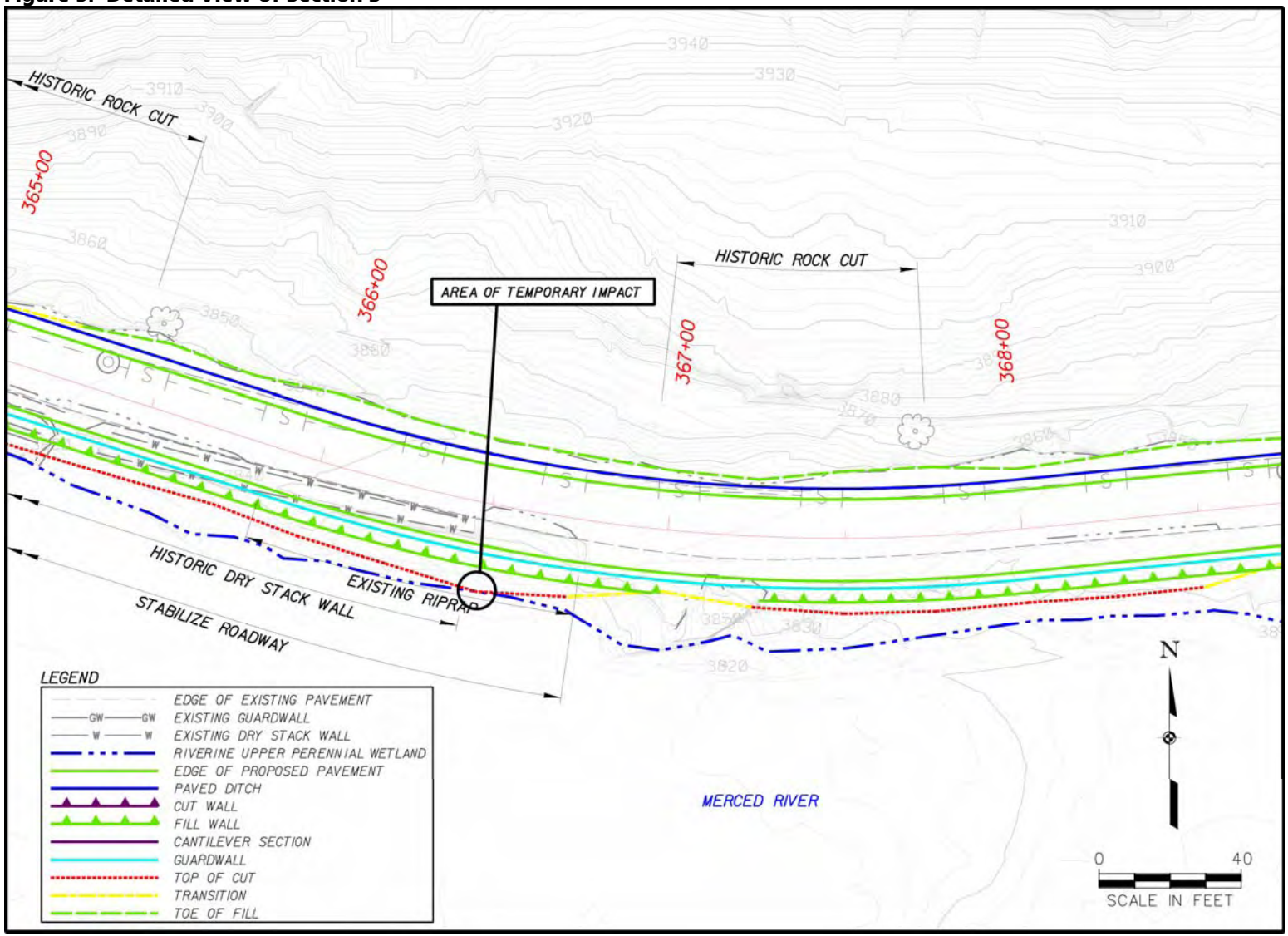
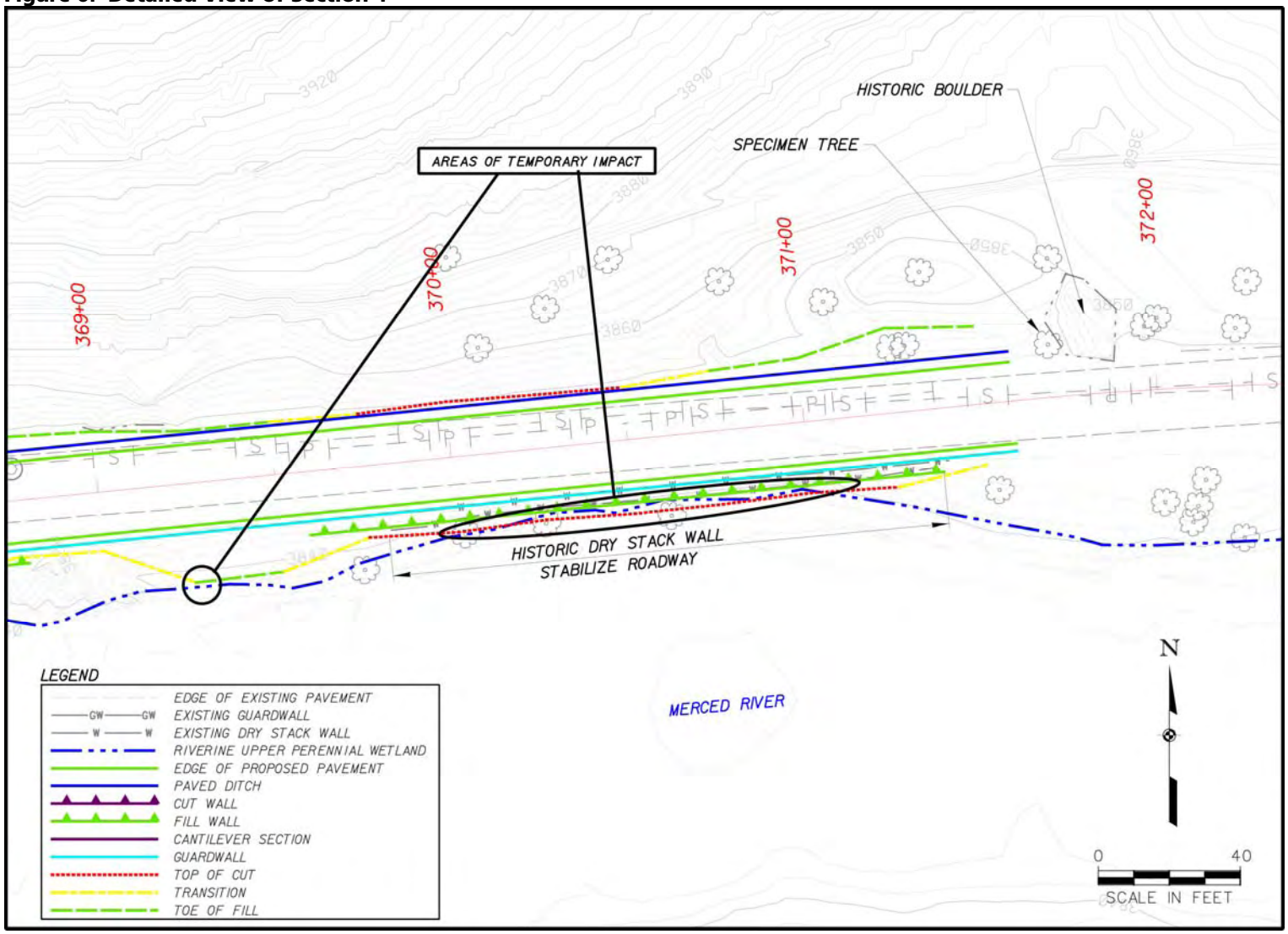


Figure 6. Detailed View of Section 4



Yosemite National Park

National Park Service
U.S Department of the Interior

Reconstructing Critically Eroded Sections of El Portal Road

Errata for the *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment*

July 20, 2007

This page intentionally left blank

ERRATA FOR THE *RECONSTRUCTING CRITICALLY ERODED SECTIONS OF EL PORTAL ROAD ENVIRONMENTAL ASSESSMENT*

YOSEMITE NATIONAL PARK

JULY 2007

This section provides a catalog of the corrections and changes made to the *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment* since its original release for comment. Revised or new language is underlined. Deleted text is marked by strikethrough.

Where a change is made as part of a response to a comment on the *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment*, the comment number is noted in brackets at the end of the text change, see the Summary of Public Comment and Response Report (NPS 2007).

1. In the Abstract, paragraph 3, several words were omitted, leaving blank spaces in front of the words "*General Management Plan* (NPS 1980)" Paragraph 3 should read as follows:

Alternative 1, the No Action Alternative, represents the continuation of the current management practices. This includes temporary emergency repairs to repair damage from erosion by the Merced River, but would involve no permanent, planned reconstruction solution. This alternative provides the basis for comparison of each action alternative. The action alternatives (Alternatives 2 and 3) are based on the purpose of and need for the project and conform with, but are not tiered <u>to the goals of Yosemite National Park's</u> *General Management Plan* (NPS 1980).

2. Page 2-11, Table 2-1 has been revised to reflect the difference between the linear feet of the fill wall under Alternative 2 and Alternative 3. The in column 4, row 12, containing the text "Fill Wall: 05 linear feet", should read "<u>Fill Wall: 105 feet</u>".

3. Page 2-13, paragraph 4, should be revised as follows:

As shown on Table 2-1, Alternative 3 removes 250 linear feet of guardwall, and requires the removal of 4 oak trees. Most of the existing vegetation would be retained. The existing impervious surface of the roadway is approximately 0.57 acre. After completion of the Preferred Alternative, the impervious surface of the improved roadway would cover approximately 0.75 acre, an increase of ~~0.05 acre~~ <u>0.18 acre</u>. The total roadway footprint, including all walls, pavement, ditches, and road cut, would decrease from 1.17 acres to 1.13 acres, a decrease of 0.04 acre. A total of 0.47 additional acres outside the permanent construction limits would be temporarily disturbed during roadway reconstruction, primarily to allow for reconstruction of retaining walls. As part of this project, the temporarily disturbed 0.47 acres would be revegetated with native plant species indigenous to the Merced River gorge.

4. One commenter noted that the *Reconstructing Critically Eroded Sections of El Portal Road Environmental Assessment* did not contain a list of organizations that received the Environment al Assessment (Comment 28). While this is not required a required part of an environmental assessment, Yosemite National Park has included this list in some past environmental assessments. Therefore, the following list should be included in Chapter 5, after section 5.3 Future Information, as follows:

5.4 List of Agencies and Organizations that Received the Reconstructing Critically Eroded Section of El Portal Road Environmental Assessment

American Alpine Club
Bureau of Land Management
California Department of Fish & Game
California Highway Patrol
California State Water Resources Control Board
Central Sierra Environmental Resource Center
Delaware North Corporation
El Portal Town Planning Advisory Committee
Friends of Yosemite Valley
Groveland Ranger District
Hayward Area Recreation and Park District
House Subcommittee on National Parks & Public Lands
KCRA TV
Mammoth Mountain Ski Area
Mariposa County Planning Department
Mariposa Public Utility District
Mariposa County Visitors Bureau
National Parks Conservation Association
National Parks Foundation
NPS Pacific West Region
Office of Assemblyman Dave Cogdill
San Francisco City Public Library
San Francisco /Hetch Hetchy Water & Power
Senate Subcommittee on Interior Appropriations
Sequoia & Kings Canyon National Parks
Sierra Club, Sacramento Field Office
Sierra Club, Yosemite Committee
Tuolumne County Board of Supervisors
Tuolumne River Preservation Trust
University of Minnesota Forestry Library
US EPA / Region IX
USGS Publications Dept
Yosemite West Real Estate
Automobile Club of Southern California
California Air Resources Board
California Department of Transportation
California State Library
Caltrans Central Region Environmental Analysis Office
Columbia College Library
Earth Design, Inc.
Federal Highway Administration
George Radanovich, Representative
Groveland Community Services Dist
House Subcommittee on Interior Appropriations
Humboldt-Toiyabe National Forest
Madera County Board of Supervisors
Mariposa County Dept of Public Works
Mariposa County Chamber of Commerce
Mariposa County Environmental Health Dept
Merced County Assn of Governments
NPS- Air Resources Division
NPS- Denver Service Center
NPS-Water Resources Div
Pacific-Ultrapower Chinese Station
Salazar Library, Sonoma State U
San Francisco Planning Department
San Joaquin Valley Air Pollution Control District
Senator Dianne Feinstein
SFPUC Communications
Stanislaus Council of Government
Tuolumne County Visitor Bureau
United States Attorney's Office
US Army Corp of Engineers
USDOI Office of Env Policy & Compliance
Wawona Area Property Owners Association

Yosemite National Park
P.O. Box 577
Yosemite, CA 95389

www.nps.gov/yose/planning/

EXPERIENCE YOUR AMERICA

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public land and natural resources. This includes fostering sound use of out land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is on the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

July 2007

Printed on recycled paper