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**W 20b****STAFF REPORT AND RECOMMENDATION****ON CONSISTENCY CERTIFICATION**

Consistency Certification No.	CC-074-05
File Date:	6/7/2005
3 Months:	9/7/2005
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Staff:	LJS-SF
Commission Meeting:	11/16/2005

APPLICANT: California Department of Transportation**PROJECT LOCATION: State Highway 1 crossing of Ten Mile River, ten miles north of Ft. Bragg, Mendocino County (Exhibits 1-4)****PROJECT DESCRIPTION: Construct new Ten Mile River Bridge seismic replacement project and demolish existing bridge****EXECUTIVE SUMMARY**

The California Department of Transportation (Caltrans) has submitted a consistency certification for the proposed Ten Mile River bridge seismic replacement project, ten miles north of Fort Bragg in Mendocino County. The existing 1,360-foot-long, 26-foot-wide bridge was built in 1954, and includes two 12-foot lanes, 1-foot shoulders, and narrow raised curbs. The existing bridge does not meet current state and federal seismic guidelines for highway structures and must be replaced. The project area includes the 1,410-foot-long southern approach along Hwy. 1, the proposed 1,488-foot-long bridge, a 650-foot-long northern approach along Hwy. 1, and access ways and construction zones on both sides of Hwy. 1 and on both sides of Ten Mile River. The 43-foot-wide new bridge would be constructed on a parallel, curved alignment east of the

existing curved bridge, and would support two 12-foot-wide lanes, 8-foot-wide shoulders, and Type ST-20 guardrails. A maintenance parking turnout on the west side of Hwy.1 approximately 330 feet south of the new bridge would replace the existing turnout at the south end of the bridge. Access would remain available from the new turnout to an existing informal trail at the south end of the bridge which leads to Ten Mile River and the shoreline at MacKerricher State Park.

Primary access to the bridge construction zone will use an existing dirt road on the south side of the river. A new access road and trestle (to allow movement across wetlands and the river) will be constructed north from the haul road east of the new bridge alignment. This will provide access for construction of the four landside bents, three in-water piers, upland and in-water cofferdams, northern abutment, and falsework for the bridge superstructure. A second access road and trestle will be constructed north from the haul road on an alignment west of the existing bridge; this will provide access for construction of ground-level and above-ground debris containment structures required for bridge demolition. Earthwork and construction of an engineered fill slope is required at the south bluff to extend the realigned Hwy. 1 roadway to the bluff edge and construct the south abutment of the new bridge. Construction is scheduled to start in early 2006 and last for approximately three years.

Public Access and Recreation. The project will protect an existing informal public accessway to the shoreline located at the south end of the bridge, and with the provision of eight-foot-wide shoulders will improve the safety of pedestrians and bicyclists crossing the river on this segment of State Highway 1. The project will generate adverse but not significant impacts on public access due to Highway 1 construction delays and the temporary closure of the aforementioned informal accessway during demolition of the existing bridge. However, the replacement of the Ten Mile River bridge with a new bridge that meets current seismic safety standards will ensure the long-term protection of public access and recreation provided by Highway 1 on this section of the Mendocino coast. The proposed project is consistent with the public access and recreation policies of the California Coastal Management Program (Coastal Act Sections 30210-14, 30220-21, and 30223).

Marine Resources. Construction and demolition activities for the project will occur in the river and within and adjacent to freshwater and brackish water wetlands found along the south bank of the river. The project includes new fill of coastal waters and is an allowable use under the "incidental public service" provision of Section 30233(a)(5) as the project is a limited expansion of an existing transportation facility necessary to maintain existing capacity. The project will not alter or affect the functional capacity of the Ten Mile River estuary and can be considered a "very minor incidental public facility" based on previous Commission reviews of development in Section 30233(c) "priority wetlands."

The proposed project is the least environmentally damaging feasible alternative, in terms of its river crossing location, design features to minimize intrusions into wetland habitat, and construction methods and scheduling. Mitigation for permanent wetland impacts will occur on-site at a ratio of 3:1. The project will also generate temporary impacts on wetlands and eelgrass due to pilings, excavation, fill, ground mats, and shading. Mitigation for temporary impacts

includes removal of all construction and demolition materials, implementation of revegetation and eelgrass mitigation plans, and restoration of all disturbed areas to pre-project conditions. Final success criteria for wetland and eelgrass restoration will not be met until a minimum three-year period with no remedial actions is achieved.

Temporary project impacts on coho and chinook salmon, northern California steelhead, and tidewater goby present in the Ten Mile River arise primarily from noise generated by pile driving for the new bridge piers, trestles, and framework. To minimize adverse effects on these species, the project includes seasonal restrictions and work windows for in-water pile-driving, requirements for use of cofferdams and double-walled isolation casings, monitoring of noise levels during pile driving, and implementation of an off-site coho salmon passage enhancement project. The proposed project is consistent with the wetlands and marine resources protection policies of the CCMP (Coastal Act Sections 30230 and 30233).

Water Quality. The proposed project contains design features to minimize water quality impacts from the completed project, and will include an up-to-date package of construction-related best management practices to ensure that the multi-year construction and demolition activities will not degrade water quality in the Ten Mile River. The project is consistent with the water policy of the CCMP (Section 30231 of the Coastal Act).

Environmentally Sensitive Habitat. The proposed project is designed to minimize significant adverse effects on environmentally sensitive habitat. No construction work or disturbance will occur in areas where federal- and state-endangered plant species occur, and nesting for migratory birds will be protected during bridge construction and demolition activities. The project revegetation plan includes provisions for replanting and restoring all disturbed areas to native vegetative cover, restoring all roadbed areas outside the new alignment of Hwy.1, and monitoring and remediation measures to ensure that environmentally sensitive habitats are restored to optimum, pre-project conditions in a timely manner. The project will protect environmentally sensitive habitat and is consistent with the environmentally sensitive habitat protection policy of the CCMP (Section 30240 of the Coastal Act).

Visual Resources. The proposed Ten Mile River bridge replacement project is located in a highly scenic coastal area and involves construction on a rural, two-lane section of Highway 1. The replacement bridge will be located immediately east of the existing bridge and is designed to mimic its height above the river, span length, and geometry. Visual design improvements include haunch girders to soften the more rectangular look of the existing bridge superstructure, and fewer bridge piers within the river and its south bank. The visual resource impacts from temporary relocation of transmission lines, cut and fill earthwork, and revegetation are adverse in the short-term but are not significant in the long term due to the restoration of disturbed areas that is incorporated into the project.

The wider bridge deck will make it more difficult to gaze directly down onto the Ten Mile River but the views that dominate the traveler's eyesight while crossing the bridge are primarily those in the middle ground and in the distance: the upper Ten Mile River Valley, the lower Ten Mile River and its estuary, the sand dunes of MacKerricher State Park, and the distant Pacific Ocean.

Any adverse impact on visual resources from this perspective due to the wider bridge deck will be insignificant. The widening of paved shoulders along the Hwy.1 approaches to the proposed Ten Mile River bridge does not require significant landform alteration, massive vegetation removal, fill of wetlands, or construction in environmentally sensitive habitat. The visual appearance of the new roadway corridor will be different from that which exists today, but because the existing roadway is not physically constrained by the landscape through which it passes, any adverse effect from this new corridor would not be significant to the traveler. The proposed ST-20 see-through bridge railing is designed to provide safety for vehicles, bicyclists, and pedestrians and is suitable for the multi-use Hwy.1 crossing of the Ten Mile River. The proposed project is consistent with the scenic and visual resource policies of the CCMP (Coastal Act Sections 30251 and 30254).

Cultural Resources. The proposed project would occur primarily in a previously developed area along the Highway 1 corridor. With the results of cultural resources surveys conducted by Caltrans, Native American consultation, and Caltrans' commitment to stop work and undertake additional consultation should cultural resources be discovered during construction, the project does not hold the potential to adversely affect cultural resources. The project is consistent with the cultural and archaeological resource policy of the CCMP (Coastal Act Section 30244).

Agricultural Lands. The proposed project requires an expansion of Caltrans' right of way north and south of Ten Mile River in order to accommodate the eastward shift of Highway 1 as it aligns with the new Ten Mile River Bridge. To that end, Caltrans has initiated the process of purchasing the required strips of land from adjacent property owners. One property south of Ten Mile River encompasses coastal agricultural resources that are protected by a deed restriction from non-agricultural development. Due to the narrow strip of land to be obtained by Caltrans, its location immediately adjacent to Hwy.1, and the public service purpose of the project, the proposed conversion of approximately three acres of land from agricultural use to Hwy. 1 right-of-way would not significantly affect the agricultural viability of the remaining lands currently deed-restricted for agricultural uses. The project is consistent with the agricultural land protection policies of the CCMP (Coastal Act Sections 30241 and 30242).

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STAFF NOTE/PROCEDURES:

The Commission is reviewing a consistency certification from the California Department of Transportation (Caltrans) for the proposed Ten Mile River bridge seismic replacement project, ten miles north of Fort Bragg in Mendocino County. At a later date the Commission will review a coastal development permit application from Caltrans for that portion of the project located in the Commission's original permit jurisdiction (the bridge span crossing the Ten Mile River; **Exhibit 5**). In the future the Commission may also hear an appeal (should one be filed) of a Caltrans coastal development permit application decision made by the County of Mendocino. The Commission may also review at a later date an application from Caltrans to amend a coastal development permit application (A-1-MEN-98-17-A) for the purposes of modifying an agricultural deed restriction on property Caltrans intends to purchase along the east side of Hwy.1 needed for construction of the proposed bridge replacement project.

The basis for the subject consistency certification is two-fold. First, the project includes fill of wetlands under the jurisdiction of the U.S. Army Corps of Engineers, and therefore Caltrans will need to obtain a permit from the Corps pursuant to Section 404 of the federal Clean Water Act. As a result of that permit requirement, the Commission has the authority under the federal Coastal Zone Management Act to review the project for consistency with the California Coastal Management Program (CCMP). (Note: A consistency certification does not eliminate the requirement for an individual or agency to obtain a coastal development permit. While a Commission-issued coastal development permit serves as federal consistency review, a coastal development permit issued by a local government does not, and a consistency certification may be required, depending on the circumstances of the proposed development.)

Second, the project is located within the coastal development permit jurisdictions of both the Coastal Commission and the County of Mendocino. Until recently, the project also fell under the provisions of state seismic retrofit legislation and the requirement that a state or local permitting agency act on a seismic retrofit project within 15 working days of receiving an application for that project (Streets and Highways Code section 180 et.seq. However, the statutory requirement for a 15 working-day review of a seismic retrofit project application expired on June 30, 2005. In addition, the Commission's review of a federal consistency

certification was not subject to the 15 working-day review requirement, as consistency review is performed pursuant to federal law). Earlier in 2005 it appeared that the Ten Mile River bridge replacement project coastal permit applications would be submitted to the Commission and the County such that both agencies would be acting on their permit applications prior to June 30, 2005. Therefore, Commission and Caltrans staff agreed in February 2005 that Caltrans would submit a consistency certification for the entire project (i.e., within Commission and County coastal permit jurisdictions) to the Commission, with the objectives being to successfully resolve all Coastal Act issues associated with the project (including, if necessary, modifying project elements) and to obtain Commission concurrence with the consistency certification.

A successful resolution of the federal consistency process would then lead to Caltrans submitting individual coastal development permit applications to the Commission and the County which mirrored the entire project concurred with by the Commission under federal consistency. The submittal of a permit application to the Commission was to be timed such that the Commission would be able to act on the application within 15 working-days of its formal submittal. In addition, Caltrans originally anticipated that submittal of the permit application to the County could be timed such that: (1) the County would act within the 15 working-day period; and (2) any appeal of that permit (for elements of the project in the appeal jurisdiction area) to the Commission could be heard at the same time as Caltrans' permit application to the Commission.

Caltrans was not able to submit a complete consistency certification for the Ten Mile River bridge replacement project to the Commission until June 7, and as a result the consistency and permit review scenario discussed above could not be followed. Nevertheless, Commission staff and Caltrans staff agreed that it remained essential to bring the consistency certification to the Commission as soon as possible (given Caltrans' mandate to expedite replacement of the seismically-unsafe Ten Mile River bridge) in order for Caltrans to receive either: (1) a concurrence and the ability to quickly move forward on its subsequent coastal development permit applications; or (2) an objection and the statutorily-mandated guidance on how to bring the project into consistency with the CCMP, which would then provide guidance on the contents of the coastal development permit application.

Finally, consistency certifications for highway projects in the coastal zone are occasionally submitted to the Commission as the first phase in a phased review of a project that will ultimately require a Commission-issued coastal development permit (e.g., CC-051-03, Pacific Street Bridge Replacement, City of Oceanside). In instances where federal funding is involved, the Federal Highway Administration (FHWA) typically requires an indication as to whether a highway project is at least conceptually consistent with the CCMP. In that case, a consistency certification provides that indication to FHWA and also identifies any Coastal Act issues that must be addressed during the subsequent coastal development permit phase. In other instances, a consistency certification provides a useful means for a highway project sponsor – in this case, Caltrans – to receive formal Commission guidance on a project prior to submittal of the required coastal development permit application.

STAFF SUMMARY AND RECOMMENDATION:

I. Project Description. The California Department of Transportation (Caltrans) is proposing to construct a replacement bridge for the State Highway 1 crossing of the Ten Mile River, ten miles north of Fort Bragg in Mendocino County (**Exhibits 1-4**). The existing Ten Mile River Bridge is located approximately 1,600 feet from the Pacific Ocean. The reinforced concrete bridge was built in 1954 and is approximately 1,360 feet long and 26 feet wide, with two 12-foot lanes, 1-foot shoulders, and narrow raised curbs. The bridge superstructure consists of slab T-beam girder spans, with box girder spans over the river. The bridge is supported almost entirely on timber pile and spread footing foundations (two abutments and 20 bents and/or piers). It is the only bridge that provides access across Ten Mile River. State Hwy. 1 in the project area consists of one 12-foot lane in each direction with shoulder widths varying between 0.75 and 4.75 feet.

The proposed project arises from the need to provide a new earthquake-resistant bridge at this location and the determination by Caltrans that retrofitting the existing bridge was infeasible due to the calculated vulnerability of a retrofitted bridge to collapse during a large flood event on Ten Mile River. Caltrans' *Project Report* for the Ten Mile River Bridge seismic replacement project states that:

The controlling fault for this project site is the San Andreas Fault located approximately 17.4 kilometers [10.8 miles] west of the project site and is capable of generating a maximum credible earthquake of moment magnitude 8.0. The site is located within a peak bedrock acceleration zone of 0.4g. The underlying soils at the Ten Mile River Bridge are prone to liquefaction during moderate-to-strong ground shaking.

... The Office of Structure Design determined that the timber pile foundations are the controlling failure mechanism during a seismic event and that under liquefying conditions, the existing timber pile foundations cannot support the structure, making the bridge susceptible to collapse.

The risk of collapse is considered high, and there is no interim retrofit work that can be done to reduce structural deficiencies of the existing structure.

The Ten Mile River Bridge does not meet current state and federal seismic guidelines for highway structures.

Caltrans states in its *Project Report* that it sponsored public meetings and provided opportunities for local organizations to participate in the development of the proposed project:

- June 1996: Public open house on the original bridge retrofit design (this project alternative was abandoned in June 1998 due to flood hydraulic concerns).
- July 2002: Public information workshop to present bridge replacement alternatives A, B, C, 1, and 2.

- September 2004: Public information workshop to present Alternative C (the current project alternative).
- Friends of the Ten Mile River participated in the development of the 1999 *Project Study Report* and the *Project Report* for the proposed alternative. Their Chief Environmental Officer was a member of the Project Development Team.
- The Ten Mile Coastal Trail Foundation attended the January 1999 Project Development Team meeting and the July 2002 public workshop.
- The Northern California Trails Council participated in Project Development Team meetings in January 1999 and October 2002.

The proposed Ten Mile River Bridge replacement project includes the following components (**Exhibits 6-9** illustrate the project plan, **Exhibits 10-11** illustrate typical roadway cross-sections, and **Exhibits 12-14** illustrate the location of trestles and falsework):

1. The project limits encompass a 1,410-foot-long southern approach along Hwy. 1, the proposed 1,488-foot-long bridge, a 650-foot-long northern approach along Hwy. 1, and access ways and construction zones on both sides of Hwy. 1 and on both sides of Ten Mile River. The construction zone across the river will extend from approximately 50 feet beyond the western edge of the existing bridge to 80 feet beyond the eastern edge of the new bridge.
2. The new bridge would be constructed on an approximately parallel, curved alignment east of the existing curved bridge at a variable offset of 50 to 63 feet. The proposed cast-in-place/prestressed concrete box girder bridge would have an eight-span superstructure (the bridge roadway) supported by three piers (the middle supports in the river), four bents (the middle supports on land), and two abutments (the bridge end supports). Each pier and bent would consist of two, six-foot-diameter cast-in-drilled-hole and/or cast-in-place-steel-shell pile columns approximately 132 feet in length. The height of the bridge roadway above the river would vary between 36 feet at mid-span and 39 feet at bridge ends, due to the sag vertical curve design of the bridge. The bridge would be approximately 1,488 feet long and 43 feet wide, with two 12-foot-wide lanes and 8-foot-wide shoulders. Type ST-20 guardrails would be installed on the new bridge due to their 68% "see-through" capability. The ST-20 railing is 54 inches high and includes the four main rails and a bicycle rail. Metal beam guardrails will be installed at the approaches to and exits from the bridge.
3. The bridge shoulders would transition from 8 feet to 4 feet off the bridge along the new approaches, and would ultimately transition back down to the existing Hwy.1 shoulder widths (which range between 0.72 and 4.72 feet). In particular, the proposed shoulder widths on Hwy.1 (off the bridge) in each of the four geographical quadrants of the project are as follows:

- i. NW quadrant: 63-foot-long 8-foot shoulder with guardrail; 40-foot-long transition from 8-foot to 4-foot shoulder; 375-foot-long 4-foot shoulder; 100-foot-long transition from 4-foot to 2-foot shoulder; 66-foot-long transition from 2-foot to existing 0.75-foot shoulder.
- ii. NE quadrant: 25-foot-long 8-foot shoulder with guardrail; 269-foot-long transition from 8-foot to 4-foot shoulder; 195-foot-long 4-foot shoulder; 100-foot-long transition from 4-foot to 2-foot shoulder; 66-foot-long transition from 2-foot to existing 0.72-foot shoulder.
- iii. SW quadrant: 25-foot-long 8-foot shoulder with guardrail; 195-foot-long transition from 8-foot to 4-foot shoulder; 1,125-foot-long 4-foot shoulder; 66-foot-long transition to existing 4.72-foot shoulder.
- iv. SE quadrant: 63-foot-long 8-foot shoulder with a 280-foot-long guardrail (due to adjacent slope); 40-foot-long transition from 8-foot to 4-foot shoulder; 1,243-foot-long 4-foot shoulder; 66-foot-long transition to existing 4.39-foot shoulder.

Caltrans states that providing 8-foot shoulders on the new bridge will improve safety for bicyclists and pedestrians crossing the 1,488-foot-long bridge and provide space for disabled vehicles to pull out of the traffic lane. The shoulders will also provide adequate space for Caltrans maintenance vehicles to operate without the need to implement one-way traffic control on the bridge.

4. A maintenance parking turnout on the west side of Hwy.1 approximately 330 feet south of the new bridge would be constructed to accommodate Caltrans maintenance vehicles and the general public. This feature would replace an existing maintenance turnout located immediately adjacent to the south end of the existing bridge on the west side of Hwy.1. Access from the proposed turnout to an existing informal trail at the south end of the existing bridge which leads to Ten Mile River and the shoreline at MacKerricher State Park would follow the old Hwy. 1 roadbed (pavement will be removed and the corridor re-vegetated).
5. Primary access to the bridge construction zone will use an existing dirt access road on the south side of the river; this former logging haul road exits the east side of Hwy.1 one-half mile south of the bridge and eventually passes under the bridge on its westward route towards the Pacific shoreline.
6. A new access road and trestle (to allow movement across wetlands and the river) will be constructed north from the haul road east of the new bridge alignment and will provide access for construction of the four landside bents, three in-water piers, upland and in-water cofferdams, northern abutment, and falsework for the bridge superstructure. Construction of the access road will include the use of landing mats and/or fill on geo-

fabric placed over wetland habitat. The main trestle across the river will also have trestle extensions to and around the bent and pier locations, will sit 3.3 feet above the 100-year flood elevation of the river, and will rest on approximately 90 H-piles. The falsework will be supported by approximately 145 timber H-piles.

7. A second access road and trestle will be constructed north from the haul road on an alignment west of the existing bridge to provide access for construction of ground-level and above-ground debris containment structures required for bridge demolition. The trestle will rest on approximately 64 H-piles, and a containment platform under the portion of the bridge over the river will be constructed using approximately 34 H-piles. Piers supporting the existing bridge would be removed to a minimum depth of 2 feet below final grade of the riverbed.
8. Piers and bents for the new bridge will be constructed by driving steel shells deep into the earth until competent material is reached. Shells will be drilled out, fitted with reinforcing steel bars, filled with concrete, and capped. Concrete columns will be constructed upwards from the caps and connected to the bridge decking, consisting of steel-reinforced concrete and tensioning tendons supported by falsework.
9. Approximately 4,000 cu.yds. of material will be drilled out for the new piers and transferred to an offsite disposal location on private property in the coastal zone, approximately four miles south of the project site and 1.5 miles east of the hamlet of Cleone (Exhibit 15). Fill material will be placed and compacted on the site, erosion control measures will be implemented, and the site will be seeded with California native grasses. Prior to commencement of disposal, Caltrans will obtain a coastal development permit from Mendocino County for this activity in the non-appealable area of the coastal zone.
10. Barges and small boats (with drafts not to exceed 14 inches) may be used to transport construction materials and personnel between the construction site and a single river access point on the south bank of the river, approximately one-quarter mile east of the bridge and adjacent to the existing haul road near its intersection with Hwy.1.
11. An existing private gravel road located north of the Ten Mile River Bridge along the east side of Highway 1 will be realigned outside Caltrans' proposed eastward right-of-way expansion.
12. Overhead SBC telecommunication lines which cross the Ten Mile River immediately east of the existing bridge will be relocated into a conduit within the new bridge superstructure. In addition, the existing overhead SBC lines on the east side of Hwy.1 (extending 1,300 feet south of the existing bridge) will be placed underneath the relocated segments of Hwy.1 north and south of the new bridge. During project construction, the existing overhead SBC line will be temporarily re-routed to the west side of Hwy.1 at a location 1,300 feet south of the existing bridge. The aerial line will be strung along five temporary poles and three tree attachments until just south of the existing bridge. At this

point the line will be placed in a gray plastic conduit and attached to the west side of the existing bridge using a series of metal brackets. North of the bridge, the temporary line will be buried along with a new permanent PGE power line on the west side of existing Hwy.1 for approximately 700 feet, whereupon the underground lines will cross under Hwy.1 to a new SBC cabinet at the northeast corner of the intersection of Hwy. 1 and Camp 2 Ten Mile Road.

13. Approximately 9,000 cu.yds. of cut and 9,000 cu.yds. of fill are required to construct the realigned Hwy. 1 approaches, new abutments, and the private roadway realignment. Earthwork and construction of an engineered fill slope is required at the south bluff to extend the realigned roadway to the bluff edge and construct the south abutment of the new bridge. Cut and fill slopes will be constructed with 2:1 slopes to minimize landfill alteration and will avoid environmentally sensitive habitats, including wetlands. Any excess cut material will be disposed at the aforementioned off-site disposal area. Concrete and steel debris from the demolition of the existing bridge will be taken by the construction contractor to an approved disposal site for these materials (and possibly recycled).
14. Right-of-way acquisition of approximately 3.3 acres of private property along the east side of Hwy.1 north and south of the river is required. Caltrans will retain ownership of the abandoned Hwy.1 roadbeds north and south of the bridge and the existing bridge right-of-way. Caltrans will obtain temporary construction access easements on private property.
15. Construction staging and materials storage will occur within an existing one-quarter-mile-long highway turn-out (known as the "mixing table") within Caltrans right-of-way on the west side of Hwy.1 approximately one-third mile south of the bridge. The northern 130 feet of the turn-out will be reserved and maintained for public parking during the construction period; the balance of the turn-out may be fenced for security. Additional staging and materials storage may occur within the construction site.
16. Construction is scheduled to start in early 2006. In-water work (i.e., pile driving for temporary trestles, falsework, and cofferdams) is limited in general to the period June 15 to October 31 of the first year of construction, and to the period September 15 to October 31 of subsequent years, as needed. Installation of permanent piles would occur year-round within the dewatered cofferdams. Once cofferdams and pilings are driven, bridge construction can occur year-round. Once the bridge deck is completed, the roadway will be re-aligned at the north and south approaches and demolition of the existing bridge will commence. Construction, demolition, and clean-up activities are currently scheduled for completion by the end of 2008; however, unforeseen circumstances could delay construction start and completion dates.

II. Applicant's Consistency Certification. Caltrans has certified that the proposed activity complies with California's approved coastal management program and will be conducted in a manner consistent with such program.

III. Staff Recommendation on Consistency Certification:

The staff recommends that the Commission adopt the following motion:

Motion: I move that the Commission **concur** with Caltrans' consistency certification CC-074-05 that the project described therein is consistent with the enforceable policies of the California Coastal Management Program.

Staff Recommendation:

The staff recommends a **YES** vote on this motion. Passage of this motion will result in a concurrence with the certification and adoption of the following resolution and findings. An affirmative vote of the majority of the Commissioners present is required to pass the motion.

Resolution to Concur with Consistency Certification

The Commission hereby **concurs** with the consistency certification made by Caltrans for the proposed project, finding that the project described therein is consistent with the enforceable policies of the California Coastal Management Program.

IV. Findings and Declarations.

The Commission finds and declares as follows:

A. Public Access and Recreation. The Coastal Act provides the following:

Section 30210. In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211. Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212.

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:

- (1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources,*

(2) Adequate access exists nearby, or,

(c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution.

Section 30213. Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred

Section 30214.

(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:

- (1) Topographic and geologic site characteristics.*
- (2) The capacity of the site to sustain use and at what level of intensity.*
- (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.*
- (4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.*

(b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article X of the California Constitution . . .

Section 30220. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Section 30221. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Section 30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

1. Introduction. The primary coastal access and recreation issues raised by the proposed project are: (1) protection of existing parking and coastal access opportunities at the south end of the bridge; (2) improved safety for pedestrians and bicyclists on the new bridge and along its northern and southern approaches; and (3) potential construction impacts on coastal access.

Caltrans' consistency certification provides the following analysis of public access and recreation at the project site and potential project effects on those resources:

Coastal zone access within the project limits exists at two locations: Access Point 1, an approximate 22-meter (72-foot) long area at the immediate southern end of the existing bridge (west side), and Access Point 2, an approximate 400-meter (1,320-foot) long area located approximately 0.5 km (0.3 mile) south of the existing bridge (west side). Both parking areas are maintenance parking areas, but are often used by visitors to access the coast

Access Point (1):

Access Point 1 consists of a dirt Caltrans maintenance turnout and trail. The maintenance turnout is within Caltrans' right-of-way, and the trail passes through private property. Caltrans does not own or maintain the coastal access trail(s) within the project limits. Neither the turnout nor the trail(s) are identified as "official" coastal access points.

The current maintenance parking area and trail(s) would remain unchanged during construction. After the new bridge is complete, the current maintenance parking area would no longer be available for public use. There would, however, be a new area available for maintenance parking located approximately 115 meters (380 feet) south of the existing maintenance parking area, and would be 42 meters (138 feet) long and about 9 meters (30 feet) wide. The new maintenance parking area is within easy access to the "unofficial" coastal access trails.

Removal of the existing bridge would occur after the new bridge is complete, and would take approximately 6 months. During the removal, the trail(s) at Access Point 1 would not be available from Caltrans' right-of-way.

Access Point (2):

Access Point 2 consists of an approximately 400-m (1,320-foot) long dirt area used by Caltrans' maintenance personnel. The public often parks in this area and crosses Caltrans' right-of-way to unmarked trails on State Park land. Neither the parking area nor the trails are identified as "official" coastal access points.

During construction, a portion of this area would continue to be used by Caltrans' maintenance and as a construction equipment staging area. A 40-meter (132-foot) long section at the north end of this area would be available for public parking during the entire

construction process. The remaining area may be fenced, temporarily, for safety and security. When the project is complete, the fence would be removed and the area would provide the same access opportunities as currently present.

2. Parking and Shoreline Access. Caltrans' *Project Report* for the Ten Mile River Bridge replacement project in part addresses coastal access issues and states that:

In the 1995 Department of Parks and Recreation (DPR) General Plan for MacKerricher State Park, DPR would like to formalize access into the Ten Mile River area to prevent erosion, wetland trampling, disruption of wildlife, and trespassing that now occurs. When possible, DPR would acquire an interest either by purchase or through an easement from a willing landowner south of the Ten Mile River Bridge for use of sufficient land to park 30 vehicles, including spaces for horse trailers and for visitors with disabilities. DPR will respect the wishes of the Department of Fish and Game not to provide formal boat access to the river; as that agency's intent is eventually to acquire the wetlands, including those on the south shore of the river, if the sellers are willing.

The U.S. Fish and Wildlife Service is concerned about public access to the northern portion of MacKerricher State Park land due to the presence of listed birds and plant species.

Mendocino County's LCP Policy 4.2-19 states the DPR shall develop a trail system, and in conjunction with Caltrans and property owners addressing access in the north end of MacKerricher State Park. The policy also states that a parking area shall be signed and improved by DPR utilizing the existing widened Caltrans right of way located on the west side of Highway 1 several hundred feet south of the Ten Mile River Bridge. A trail system shall be developed by DPR, in conjunction with Caltrans and private property owners, to connect this parking area via an existing trail entrance which is located at the southwest corner of the bridge.

Abutting the western edge of the existing Hwy.1 right-of-way are several parcels of private property and the northern reach of MacKerricher State Park, which encompasses nine miles of sandy beach, dunes, and rocky headlands between the Ten Mile River and Pudding Creek, at the north end of Fort Bragg. No formal public coastal accessways connect Hwy.1 and the shoreline in the project vicinity. The nearest public accessway to the shoreline is Seaside Creek Beach, 0.75 miles north of Ten Mile River. To the south, the nearest public access to the shoreline is at the main entrance to MacKerricher State Park, approximately five miles south of Ten Mile River. From this point, shoreline trails in the State Park follow an old logging haul road south to Pudding Creek and north to Ten Mile River.

However, as Caltrans notes in its consistency certification, an informal trail exists that leaves the north end of the existing unpaved maintenance turnout at the south end of the bridge, crosses over onto private property while dropping down the south bluff of Ten Mile River, and meets the old logging haul road (**Exhibits 7 and 8**). From this point, trail users follow the haul road out to

the shoreline at MacKerricher State Park, follow the haul road upriver, or follow informal paths that lead to the south bank of Ten Mile River; the latter two locations are on private property. There are no signs on Hwy.1 approaching the turnout, or anywhere at the turnout, indicating the availability of shoreline access from this location.

Nevertheless, staff from the Commission, Caltrans, and California Department of Parks and Recreation (DPR) all confirmed that members of the public have long used the maintenance turnout at the south end of the bridge as a parking area and access point to reach the shoreline at the northern end of MacKerricher State Park. In addition, staff from these agencies confirm that members of the public also park at the much larger maintenance turnout one-third mile south of the existing bridge, walk up the highway shoulder to the smaller turnout at the bridge, and follow the aforementioned informal trails to the shoreline and Ten Mile River. Staff from DPR, U.S. Fish and Wildlife Service, and Caltrans also confirmed the sensitivity of natural resources at the northern end of MacKerricher State Park (including sand dunes, wetlands, endangered plants species, and endangered Western snowy plover habitat) and the potential conflicts between resource protection and public access that could arise from providing new formal access routes at this time between Hwy.1 and the shoreline in the area south of Ten Mile River.

As noted above, Caltrans proposes to eliminate the maintenance turnout at the south end of the existing bridge in concert with demolition of that bridge, which will occur after construction and opening of the replacement bridge. In conjunction with the realignment of the Hwy.1 approach to the south end of the new bridge, Caltrans will also construct a new unpaved maintenance turnout approximately 330 feet south of the existing turnout. In a July 8, 2005, letter to the Commission, Caltrans modified the subject consistency certification by stating that the new turnout would be the approximate size of the existing turnout, would accommodate the same number of vehicles, and is located as close to the new bridge as possible given the need to achieve sight distance safety requirements. In addition, Caltrans made the following commitments:

- The existing maintenance turnout would be landscaped and treated with erosion control measures, and would be kept open for walking/maintenance access.
- The proposed maintenance turnout would be used as maintenance parking/staging (long-term material storage would not occur).
- The area between the two maintenance turnouts (i.e., the abandoned Hwy.1 roadbed) would be landscaped (e.g., trees, contour grading, rocks, berms, wood fencing, etc.) to allow foot traffic only.
- There potential exists to expand the proposed maintenance turnout in the future to provide additional coastal access and/or provide additional maintenance material storage locations. Caltrans would coordinate with Coastal staff and other appropriate resource agencies prior to modifying or expanding either turnout.

Caltrans has also committed that no fencing, signage, or landscaping elements will be installed to block or discourage members of the public from parking at this new turnout, walking up the abandoned highway corridor to the site of the existing turnout, and taking the informal trail leading down to the shoreline and Ten Mile River. (As noted previously in the Project Description section of this report, Caltrans will retain ownership of the abandoned highway corridor and the existing bridge right-of-way.) At the same time, no signage would be provided to either identify or encourage public use of the informal accessway up the vacated and revegetated highway corridor and down to the shoreline. The goals are to maintain the existing provision of public access to the shoreline at the southern end of the bridge, to not encourage an increase in the volume of access that could in turn adversely affect environmentally sensitive habitat in this area, and to not prejudice ongoing coastal access planning efforts by DPR by formalizing any existing informal accessways. As noted above, Caltrans has committed to coordinating with Commission staff and other appropriate resource agencies prior to any modification to or expansion of the new or existing turnout, including maintenance material storage or coastal access improvements. Lastly, in the April 2005 *Project Report* and in a meeting with Commission staff on August 15, 2005, Caltrans committed that it would cooperate with DPR and the Commission in future planning efforts for improving public access from Hwy.1 to the shoreline at the northern end of MacKerricher State Park.

3. Pedestrian and Bicycle Access/Bridge and Highway Shoulder Widths. Caltrans' *Project Report* for the Ten Mile River Bridge replacement project in part addresses provisions for pedestrian and bicycle access improvements along Hwy.1 and states that:

Route 1 is heavily traveled by recreationists and tourists during the summer months and has been designated by the Legislature as part of the Pacific Coast Bike Route. The entire route has seasonally high bicycle traffic volumes during the summer months.

...

On October 2, 2002, Senate Bill 908 was signed into law by Governor Davis. The bill requires the Coastal Conservancy (CC) in conjunction with various State agencies to develop and provide to the Legislature by January 31, 2003, a plan for a coastal trail from Oregon to Mexico to afford visitors views of some of the most majestic vistas in California. The bill requires the trail to be completed by January 31, 2008, providing budgeted funding materializes. Reconstruction and rehabilitation strategies involving Route 1 are to incorporate provisions for accommodating the coastal trail where feasible.

... Caltrans has evaluated segments of the Pacific Coast Bike Route to prioritize improvement locations. The project will provide 1.2-m (4-foot) paved shoulders, improving safety for bicyclists and pedestrians.

On January 31, 2003, the State Coastal Conservancy published *Completing the California Coastal Trail*, which provides a strategic blueprint for implementing the California Coastal Trail. While the Highway 1 bridge across the Ten Mile River is the only bridged crossing of the river for bicyclists and pedestrians following the Coastal Trail, the mouth of the river can occasionally

be waded across during the summer. For all practical purposes, however, the proposed replacement Hwy.1 bridge will continue to serve as the sole crossing of Ten Mile River for users of the Coastal Trail.

The Mendocino County LCP provides in Sections 3.6-20 and 3.8-6 (and on page 108 of the LCP) that paved four-foot-wide shoulders should be provided by Caltrans along Hwy.1 wherever construction is feasible without unacceptable environmental effects.¹

As noted previously in this report, the existing paved shoulder widths on Hwy.1 within the project limit vary between 0.72 and 4.72 feet; the existing Ten Mile River bridge has one-foot-wide shoulders. Caltrans is proposing 8-foot shoulders on the new bridge, shoulders ranging between 8 and 4 feet along Hwy.1 south of the bridge, and shoulders ranging between 8 and 0.7 feet along Hwy.1 north of the bridge. Caltrans states that these shoulder widths will allow for pedestrians and bicyclists to more safely traverse the Hwy.1 crossing of Ten Mile River as compared to current conditions and will serve as an improved link in the Coastal Trail.

The proposed bridge and highway shoulder widths in the project area have generated extensive discussions between Caltrans and the Commission staff over how to best balance the public access and visual resources policies of the Coastal Act (including comments sent to the Commission staff by the public via mail (**Exhibits 16 and 17**) and telephone calls). Currently, the Ten Mile River bridge includes one-foot-wide shoulders and the shoulders along the north and south approaches to the bridge in the project area vary between 0.7 and 4.7 feet. Caltrans initially proposed the following shoulder widths and lengths: (1) extending the eight-foot-wide bridge shoulders approximately 100 feet to the north and south of the bridge; (2) next constructing approximately 190-foot-long transitions from eight- to four-foot wide shoulders north and south of the bridge; (3) next constructing four-foot-wide shoulders for 200 feet north of the bridge and 980 feet south of the bridge; and (4) constructing 195-foot-long (north) and 66-foot-long (south) transitions from four-foot-wide shoulders to existing shoulder widths.

Caltrans stated that these shoulder dimensions were necessary at Ten Mile River bridge and along the north and south approaches on Hwy.1 due to existing vehicle traffic levels, current highway and bridge safety design guidelines, the need to improve safety for bicyclists and pedestrians crossing the 1,488-foot-long bridge, the need to provide safe space out of traffic

¹ While the Mendocino County LCP is not the standard of review for consistency certifications (rather, it is the California Coastal Management Program (CCMP) and, in particular, the Chapter 3 policies of the Coastal Act), because the LCP has been certified by the Commission and incorporated into the CCMP it can provide guidance to the Commission in its consideration of the consistency certification. It is reasonable to conclude that components of the proposed project with paved shoulders ranging between 0.7 and 4.0 feet in width can be found consistent with these LCP policies. It is also reasonable to conclude that the project's paved shoulders in excess of four feet, and constructed where they would not create unacceptable environmental effects, may also be consistent with these policies if such policies are interpreted as establishing minimum shoulder widths as opposed to maximum shoulder widths. Alternatively, to the extent that an argument can be made that shoulder widths greater than four feet are not consistent with these LCP policies, such an argument would not be binding on the Commission in that the standard of review for the proposed project in this consistency review is the Chapter 3 policies of the Coastal Act and not the Mendocino County LCP.

lanes for disabled vehicles, and the need to provide adequate space for Caltrans maintenance vehicles to park and/or operate without the need to implement one-way traffic control on the bridge. The Commission staff noted that the introduction of such wide shoulders along this stretch of rural Hwy.1 did not appear to be supported by the below-average accident and collision data for this Hwy.1 segment and the adjacent Hwy.1/Camp 2 Ten Mile Road intersection just north of the bridge. However, the Commission staff acknowledged that the essential lack of shoulders on the existing bridge does create a significant safety hazard for bicyclists and pedestrians crossing the bridge, does not provide a safe pullover area for disabled vehicles, emergency vehicles, or Caltrans maintenance vehicles, and that eight-foot-wide shoulders were reasonable on the proposed bridge due to the length of the bridge and the improved level of safety they would provide for vehicles, bicyclists, and pedestrians.

Notwithstanding these potential benefits on the bridge itself, the Commission staff continued to question the need for the proposed lengths of eight-foot-wide shoulders and of the transition lengths between eight- and four-foot-wide shoulders along Hwy.1 north and south of the bridge. While Caltrans continued to argue for the proposed shoulder widths and lengths based on design guidelines, the Commission staff argued that the supposed public access benefits that would arise from the introduction of paved shoulders in excess of four feet in width into a stretch of Hwy.1 where existing shoulder widths rarely reach four feet (and in most areas are significantly less than four feet) would be inconsequential, but that potential visual resource impacts from these shoulders could be significant (see Section E of this report). As a result, Caltrans agreed to modify the proposed project by reducing the lengths of the eight-foot-wide shoulders off the bridge and the lengths of shoulder transitions between eight and four feet on the bridge approaches, as follows:

<u>Hwy.1 North of Bridge</u>	<u>Original Length</u>	<u>Proposed Length</u>	
		<u>NE Exit</u>	<u>NW Approach</u>
8-foot-wide shoulder	96 ft.	25 ft	63 ft
8- to 4-foot-wide transition shoulder	185 ft	195 ft	40 ft

<u>Hwy.1 South of Bridge</u>	<u>Original Length</u>	<u>Proposed Length</u>	
		<u>SW Exit</u>	<u>SE Approach</u>
8-foot-wide shoulder	100 ft	25 ft	63 ft
8- to 4-foot-wide transition shoulder	194 ft	195 ft	40 ft

The Commission notes the significant reductions agreed to by Caltrans (and incorporated into its consistency certification) in the length of eight-foot shoulders off the bridge in all four quadrants,

and in the length of the eight- to four-foot transition shoulders on the bridge approaches (SE and NW quadrants, above). Caltrans justified the need to maintain longer eight-foot-wide shoulders and eight-to-four-foot-wide shoulder transitions coming off the bridge in both directions due to the overall narrowing of the improved right-of-way as one exits the bridge (as compared to the widening of the paved right-of-way when entering the bridge) and the rising left hand curves as vehicles exit the bridge in north and southbound directions. The proposed project as modified will continue to provide significant improvements (e.g., wider paved shoulders on the new bridge for bicyclists and pedestrians) to public access along this stretch of Hwy.1 and at the same time will reduce the potential for adverse effects on visual resources from the widening of the paved roadway on both approaches to the new Ten Mile River bridge.

The Commission staff also inquired about feasible alternatives for traffic lane/shoulder separation markers that could be placed on the bridge as a means to alert vehicle drivers of the lane/shoulder boundary. Caltrans will install an extra-thick layer of white thermoplastic paint, thick enough to let drivers know when they are crossing over it into the shoulder yet not too thick as to be a road hazard to vehicles or bicycles. The well known "bots dots" lane dividers are not preferred by bicyclists and require extra maintenance activity, and "rumble strips" (parallel grooves cut into the roadbed that trigger strong and loud vibrations when vehicle tires roll over them) are only feasible on asphalt surfaces and not on concrete bridge decks such as that proposed for the Ten Mile River bridge.

During its evaluation of the proposed project, the Commission staff inquired of Caltrans about the feasibility of providing a separated pedestrian pathway on the new bridge in order to further improve public access at the Coastal Trail crossing of Ten Mile River. Such a feature was included on the Noyo River bridge replacement project in Fort Bragg (CDP 1-98-100), and was referenced in communications from the public to the Commission staff during its analysis of the subject Ten Mile River bridge consistency certification. Caltrans responded that the Noyo River bridge is located in a more urban and developed location with a significant volume of historic, current, and expected future pedestrian and bicycle traffic that justified the inclusion of a separated pedestrian pathway. Caltrans stated that at the rural location of Ten Mile River bridge there is presently "an insufficient level of pedestrian and bicycle traffic at this location to justify construction of a separated pedestrian and bicycle pathway on the bridge." Caltrans cited a finding from the *Pacific Coast Bike Route Study* (Redwood Community Action Agency, March 2003) which:

... included counts taken at various locations, including Seaside Beach – which is approximately one mile north of Ten Mile Bridge. The 12 hour count was taken during Labor Day weekend, resulting in a count of eight bicyclists and zero pedestrians.

Caltrans also noted the below-average vehicle accident rate at Ten Mile River bridge and that no significant adverse safety conflicts between vehicles and pedestrians/bicyclists currently exist at the bridge or along its approaches.

While the Commission staff acknowledged Caltrans' characterization of present conditions at Ten Mile River bridge, the staff nevertheless believed that potential future increases in vehicle,

bicycle, and pedestrian traffic along this stretch of Hwy.1 and the Coastal Trail justified the incorporation by Caltrans of the potential future need for pedestrian and/or bicycle safety improvements into the Ten Mile River bridge replacement project. Caltrans subsequently agreed to add the following language to its consistency certification:

Ten Mile Bridge Replacement Project: Bicycle and Pedestrian Use Language

The proposed project includes paved, eight-foot-wide shoulders on the bridge, a substantial improvement to the one foot wide shoulders that currently exist on the bridge. The new shoulder widths will provide room for disabled automobiles, Caltrans maintenance vehicles, and an expanded margin of safety for bicyclists and pedestrians to cross the Ten Mile River; the shoulder will also serve as the river crossing route of the California Coastal Trail.

The Pacific Coast Bike Route Study (March, 2003—Redwood Community Action Agency) included counts taken at various locations, including Seaside Beach—which is approximately one mile north of Ten Mile Bridge. The 12 hour count was taken during Labor Day weekend, resulting in a count of eight bicyclists and zero pedestrians.

Presently, there is an insufficient level of pedestrian and bicycle traffic at this location to justify the construction of a separated pedestrian and bicycle pathway on the bridge. The paved shoulder on and adjacent to the bridge will have a painted symbol showing the shoulder can be used for bicycle travel. The shoulder will also be separated by a painted, raised thermoplastic white stripe, alerting drivers if they stray from the traffic lanes. A pedestrian/bicycle advisory sign and a California Coastal Trail sign will be placed at the north and southbound approaches of the new bridge. The sign text, location, size, and color will be consistent with Caltrans' statewide standards, and subject to review and approval by the Coastal Commission's Executive Director.

No later than ten years after the new bridge is completed, Caltrans will conduct a pedestrian and bicycle count, and interview appropriate user groups (including Coastwalk) to receive input on the pedestrian and bicycle use of the bridge. Caltrans will then provide a written analysis to the Commission's Executive Director on the results of these efforts. The analysis will include a comparison of pre- and post-bridge construction pedestrian and bicycle count data, as well as post construction user experiences, and a discussion of the potential need for pedestrian and/or bicycle bridge safety improvements. Data from the 2003 Pacific Coast Bike Route Study would serve as the baseline data for future counts.

If the level of pedestrian and/or bicycle traffic increases substantially, or if a substantiated pedestrian and/or bicycle safety concern arises on the bridge, Caltrans will complete an analysis within six months of Caltrans being informed of the substantiated concern. Depending on the concerns identified, the analysis will discuss options for improvements to better address safety issues and protect public access. The analysis will assess a range of appropriate and feasible pedestrian and bicycle improvement alternatives, and may include a separate or cantilevered pedestrian and/or bicycle pathway.

In the event, as described above, an immediate analysis is required, Caltrans will coordinate with Commission staff to ensure safe pedestrian and bicycle access on the new bridge is maintained. This coordination will also help to identify whether changes or amendments to this consistency certification and/or future coastal development permits may be necessary.

The Commission staff also discussed with Caltrans the potential for the Ten Mile River bridge replacement project – in particular, the eight foot shoulders on and off the bridge – to be viewed as a precedent for future Caltrans Hwy.1 improvement projects in the coastal zone. The proposed Ten Mile River bridge replacement project is based on a unique set of site-specific environmental and infrastructure characteristics, and the Commission is evaluating the project elements for consistency with the policies of the Coastal Act. For instance, the topographic relief, distribution of vegetation types, and views to the shoreline at the Ten Mile River bridge project area are notably different from those present along Hwy.1 crossings of Noyo River and Greenwood Creek to the south. Separated pedestrian pathways, eight-foot-wide shoulders, and four lanes of vehicle traffic are appropriate at the urban location of Noyo Creek bridge. The expansive and rolling landscape at the rural location of Ten Mile River bridge requires minimal grading and landscape alteration to construct the proposed replacement bridge with widened shoulders, but its relatively isolated location does not presently justify separated pedestrian pathways on the bridge. In contrast, bridge construction at the Hwy.1 crossing of Greenwood Creek is complicated in part by more severe topography, the presence of different vegetation and wetland types, different viewshed characteristics, and its close proximity to the village of Elk. Replacement bridge project elements appropriate and consistent with the Coastal Act at one location on Hwy.1 in Mendocino County may be inconsistent with coastal protection policies at other locations. As a result, the Commission will continue to examine each Hwy.1 improvement project on a case-by-case basis, using a project's site-specific characteristics, to determine whether proposed Hwy.1 improvements are consistent with the Coastal Act. At a meeting between Caltrans and Commission staff on August 15, 2005, Caltrans acknowledged this Commission process and committed that Commission action on the Ten Mile River bridge replacement project would not be cited or used by Caltrans as a precedent for future Hwy.1 projects in the coastal zone.

4. Construction Impacts. Caltrans' *Project Report* for the Ten Mile River Bridge replacement project in part addresses Hwy.1 traffic management during the three-year-long construction period and states that:

Standard traffic control features (flaggers, COZEEP [Construction Zone Enforcement Enhancement Program, a statewide master agreement between Caltrans and the California Highway Patrol, whereby Caltrans pays the CHP for furnishing officers and cars for use in construction zones], etc.), lane-closure requirements, changeable message signs, and public awareness measures have been incorporated in the project cost estimate.

It is anticipated that temporary traffic signals will not be needed and the work can be accomplished with one-way reversible traffic control conforming to Caltrans Standard Plan

T-13. Traffic may need to be stopped for periods not to exceed 30 minutes. Bicyclists and pedestrians shall be accommodated through the work zone.

Access to side roads and residences would be maintained at all times.

Where available, a minimum of one 3.6-m (12-foot) lane and 1.2-m (4-foot) shoulder would remain open to traffic at all times. Otherwise, a minimum of one 3.0-m (10-foot) and 0.6-m (2-foot) shoulder shall be provided.

Caltrans estimates that due to the size and complexity of the bridge construction and demolition work, and the environmental work window restrictions due to the presence of endangered species in Ten Mile River, the project is expected to take approximately 758 working days (or 1,100 calendar days) to complete, without accounting for weather and other unexpected construction delays. Caltrans expects that field construction would start in early 2006 and be completed by the end of 2008, but that delays could extend project completion into 2009. As a result, construction activities will occur year-round for several years at Ten Mile River and will generate some level of adverse effect on vehicle, bicyclist, and pedestrian access on this stretch of Hwy. 1, primarily in the form of traffic delays when construction work requires the closure of a lane of traffic.

There are no alternative crossings of the Ten Mile River that would allow the public to avoid the construction zone, and there are no reasonable construction/demolition scheduling alternatives that avoid the peak summer recreation season. The potential adverse impacts on public access and recreation along this section of the Mendocino County coast should the existing bridge collapse or be closed due to earthquake damage are far more significant than the temporary effects (albeit over a three-year time period) due to construction and demolition delays. In addition, the closure of the informal accessway from the southern end of the existing bridge down to the shoreline during the demolition of the existing bridge is unavoidable in order to protect public safety. However, demolition and trail closure will occur between October and February due to environmental restrictions and as a result, significant adverse effects on public access during the peak summertime recreational use period will be avoided.

5. Conclusion. The Commission finds that the proposed Ten Mile River bridge replacement project will protect an existing informal public accessway to the shoreline located at the south end of the bridge, and with the provision of eight-foot-wide shoulders will improve the safety of pedestrians and bicyclists crossing the river on this segment of State Highway 1. The project will also generate adverse but not significant impacts on public access due to Highway 1 construction delays and the temporary closure of the aforementioned informal accessway during demolition of the existing bridge. However, the replacement of the Ten Mile River bridge with a new bridge that meets current seismic safety standards will ensure the long-term protection of public access and recreation provided by Highway 1 on this section of the Mendocino coast. Therefore, the Commission finds that the proposed project is consistent with the public access and recreation policies of the CCMP (Coastal Act Sections 30210-14, 30220-21, and 30223).

B. Marine Resources. The Coastal Act provides the following:

Section 30230. Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30233.

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

*...
(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines . . .*

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division

The proposed Ten Mile River bridge replacement project requires construction within the Ten Mile River, in eelgrass beds in the river, and within adjacent wetlands on the south bank of the river. The project will generate permanent and temporary impacts on wetlands and marine resources, including the federally endangered tidewater goby and federally threatened coho salmon, chinook salmon, and northern California steelhead. This section of the report will examine the wetland and marine resources present, describe project impacts on those resources, determine project consistency with the allowable use and alternatives policies of the Coastal Act, and review the marine resources mitigation plans.

1. Wetland Resources. Caltrans' *Wetland Delineation and Assessment* (April 2005) for the proposed project describes the wetland resources in the project area:

Below the north embankment of the GP haul road, the project extends into the adjacent wetlands along the south bank of the Ten Mile River. These wetlands are dominated by habitat transitioning from Freshwater Marsh (52400) to Coastal Brackish Marsh (52200).

*Within the freshwater marsh, the dominant plant types found are willow (*Salix hookeriana*), wax myrtle (*Myrica californica*), scrub with an understory of slough sedge (*Carex obnupta*) and water hemlock. Closer to the river the adjacent wetland is dominated by wetland grasses and Pacific silverweed (*Potentilla anseriana*). The banks of the river are vegetated with a mix of salt rush (*Juncus lesueurii*), salt grass (*Distichalis spicata*), *Scirpus maritimus*, Pacific silverweed, and pickleweed (*Salicornia virginica*).*

...

*The estuary has extensive aquatic areas vegetated with eelgrass (*Zostera marina*), interspersed with non-vegetated mud in both shallow and deep-water channels.*

...

The boundary between wetland and non-wetland areas was determined by following the margin between the dominant wetland vegetation and upland vegetation. Often this differentiation corresponded with a change in elevation or soil type.

Corps jurisdictional wetlands within the study area are delineated in Figure 2. There are 1.12 ha (2.77 ac) of Corps jurisdictional wetlands within the study area.

"Other waters" which are subject to Corps regulation were also delineated within the study area. These consist of the river below the ordinary high water level. This area also includes the eelgrass flats, which are designated by EPA as a "special aquatic site." There are 1.44 ha (3.55 ac) of "other waters" including eelgrass flats with a total length of 110 m (360 ft) within the study area.

For the purpose of the delineation of Coastal Zone jurisdictional wetlands, all of the Corps wetlands and "other waters" constitute Coastal Zone jurisdiction as wetlands . . . There are 2.84 ha (7.02 ac) of Coastal Zone jurisdictional wetlands within the study area . . .

The Commission staff reviewed the *Wetland Delineation* report and requested that Caltrans provide a more thorough analysis of wetland data points to confirm the determination of wetland boundaries in the project area. The additional information was provided in *Wetland Delineation Supplemental Information* (August 11, 2005) and this report confirmed the initial wetland boundaries (**Exhibit 18**).

Caltrans also submitted its final *Eelgrass Mitigation and Monitoring Plan* (August 15, 2005) which documents eelgrass distribution in the project area (**Exhibit 19**):

*The Ten Mile estuary has extensive aquatic areas vegetated with eelgrass (*Zostera marina*), interspersed with non-vegetated mud in both shallow and deep-water channels. All of this area is classified as wetlands for the California coastal zone. In addition, the eelgrass and mud flats are "special aquatic sites", and the deep-water channels are "other waters" for the purpose of Army Corps of Engineers jurisdiction.*

The *Wetland Delineation Supplemental Information* (August 11, 2005) also provided additional information on eelgrass in the project area:

The eelgrass was delineated within the estuary, both upstream and downstream of the bridge, by examining the bottom of the river at low tide for the presence of eelgrass. The water in the river was very clear and the bottom at depths of over 6 feet was visible. Observations and photographs were taken from the bridge deck every 5 meters between the riverbanks, both upstream and downstream of the bridge. The results were sketched onto the wetland delineation sheet. The density of eelgrass was highly variable (as observed) but was not measured.

Caltrans examined the presence in the project area of the federally endangered tidewater goby in its *Biological Assessment* (September 2004) submitted to the U.S. Fish and Wildlife Service. The tidewater goby is a small fish, rarely exceeding two inches in length, generally restricted to waters with low salinity in California's coastal wetlands. All tidewater goby life stages are located in lagoons and estuaries, and in northern California the tidewater goby likely breeds both in the spring and fall. Based on surveys conducted between 1994 and 2003, tidewater goby populations are presumed to exist in the Ten Mile River estuary; the river in the vicinity of the existing Hwy.1 bridge provides suitable habitat for the tidewater goby.

The Ten Mile River supports populations of coho salmon, chinook salmon, and steelhead. Caltrans' *Biological Assessment* (September 2004) submitted to NOAA Fisheries examines the current state of these populations in the project area:

Both adult and juvenile coho are expected to be in the river system during different phases of the construction although neither life stage would probably be spending extended periods of time in the vicinity of the bridge. Adults would be moving much further upstream to spawning areas and juveniles would likely be rearing upstream of the bridge where oxygen levels are higher, and water temperatures would be cooler with little or no salinity. Although coho would be using the estuary where the bridge is located only as a migratory corridor, the possibility that individuals could be near the bridge can not be entirely ruled out therefore, the project may affect the species.

... there is evidence that chinook juveniles may spend time rearing for short periods of time in estuaries prior to swimming out to the ocean. Of the three listed salmonid species, it is more likely that only juveniles of chinook would be spending time rearing near the bridge since their downstream migration period begins in late winter when water temperatures throughout the system would be cooler. Both adult and juvenile chinook may be traveling upstream and downstream respectively during the pile driving in late fall and winter and therefore may be affected by the project.

As with other salmonid species, steelhead presumably use the river in the vicinity of the project primarily as a migratory corridor. Steelhead should be absent from the bridge area during construction of the trestle, falsework, and cofferdams. However, both upstream and

downstream peak migrations of adult steelhead would be occurring beginning November when pile driving is slated to occur.

2. Project Impacts. Caltrans' April 2005 *Wetland Delineation and Assessment* contained information on expected impacts to wetlands from construction and demolition activities. However, the Commission staff requested more precise analysis of potential temporary impacts to wetland resources, including a breakdown of the type of impacts, duration of impacts, and the likely wetland effects. To address those effects, Caltrans submitted its aforementioned *Wetland Delineation Supplemental Information* report in August 2005.

The proposed bridge has a total of seven piers, with each pier comprised of two concrete columns (each column covers an area of 28.3 sq.ft. and each pier therefore covers an area of 56.6 sq.ft.). Two piers will be located in an upland area and three piers will be placed in the river. Two of the piers will be constructed in the wetlands on the south bank of the river and will permanently impact 113 sq.ft. of wetland habitat. It should be noted that the seven piers for the replacement bridge will occupy a total footprint of 396 sq.ft., and that five of these piers (occupying 283 sq.ft.) would be within the river and wetland habitat. The piers and columns in the river and wetland habitat associated with the existing bridge to be removed occupy a total footprint of 450 sq.ft. Therefore, the bridge replacement project will ultimately provide for a *net decrease* in the amount of river and wetland fill. Temporary impacts to wetlands will arise from placement of pilings to support trestles and falsework for new bridge construction and old bridge demolition, cofferdam excavation to support new pier construction and old pier removal, fill for construction of an access road to the old bridge demolition site, ground mats to catch demolition debris, and shading from trestles and falsework. The following table summarizes the expected temporary effects to wetlands:

<u>Temporary Wetland Impacts</u>		
	sq.ft.	duration
Shading (trestle/falsework)		
new bridge	58,265	21 mos.
old bridge	20,165	6 mos.
Pilings		
new bridge	404	21 mos.
old bridge	119	6 mos.
Cofferdams		
new bridge	7,639	14 mos.
old bridge	5,886	2 mos.
Road Fill		
old bridge	10,071	6 mos.
Ground Mat		
old bridge	13,450	3 mos.

As noted previously, three of the piers for the new bridge will be constructed in the channel of Ten Mile River; these structures will result in the permanent loss of 170 sq.ft. of eelgrass beds in the river. Temporary impacts to eelgrass beds in the river are summarized in the following table:

<u>Temporary Eelgrass Impacts</u>		
	sq.ft.	duration
Shading (trestle/falsework)		
new bridge	20,982	19 mos.
old bridge	10,825	6 mos.
Pilings		
new bridge	144	19 mos.
old bridge	84	6 mos.
Cofferdams		
new bridge	1,829	14 mos.
old bridge	753	2 mos.

The bridge replacement project may adversely affect the federally endangered tidewater goby. Caltrans' September 2004 *Biological Assessment* delivered to the U.S. Fish and Wildlife Service summarized the potential impacts:

Impacts to the substrate will be temporary and localized. There is the chance that vibrations from pile driving could collapse burrows resulting in mortality of individuals and missed reproductive efforts. Pile driving may also alter the goby's behavior or in extreme cases, result in mortality. Fish rescues, if required during installation of the attenuation and containment systems for the new and old bridges respectively, may also result in mortality of stranded juvenile fish. Therefore, the project may affect and is likely to adversely affect the tidewater goby.

The bridge replacement project may also adversely affect federally threatened populations of coho salmon, chinook salmon, and steelhead in the Ten Mile River. Caltrans' September 2004 *Biological Assessment* delivered to NOAA Fisheries summarized the potential impacts:

First year chinook juveniles and second year coho salmon and steelhead may be out-migrating during the time the trestles, falsework, and attenuation systems for the new and existing bridges are constructed. Also, there is a low probability that first year juvenile coho and steelhead could be rearing in the project area during this portion of the in-river work. Although unlikely, these project components may alter fish behavior and in extreme cases, although even more unlikely, result in mortality.

Fish rescue during construction of the attenuation and containment systems for the construction of the new bridge and demolition of the existing bridge respectively, may adversely affect juvenile fish and may result in mortality of some individuals.

Although doubtful, noise effects from driving permanent piles may affect and could likely adversely affect adults of all three salmonid species. Although changes in behavior may occur due to noise, the chance of mortality is low.

The proposed project is not likely to result in adverse modification of designated critical habitat for coho salmon.

3. Allowable Use. As described above, the proposed project includes permanent fill in estuarine waters and wetlands as defined under the Coastal Act, and therefore triggers the three-part test under Section 30233(a): allowable use, alternatives, and mitigation. The Ten Mile River estuary is one of the 19 listed coastal wetlands referred to in Section 30233(c), and the proposed project must be consistent with the allowable use provision of this section as well. In addition, the Mendocino County LCP provides in Section 3.1-6 that in the wetland portions of Ten Mile River development shall be limited to wetland restoration, nature study, and salmon restoration projects.²

Under the first of the Section 30233(a) tests, a project must qualify as one of the eight stated uses allowed under Section 30233(a). Since the other allowable uses clearly do not apply, the Commission must determine whether the proposed project can be permitted under Section 30233(a)(5), which authorizes fill for:

Incidental public service purposes, including but not limited to, burying cables, pipes or inspection of piers and maintenance of existing intake and outfall lines.

In order for an "incidental public service purpose" a proposed fill must satisfy two tests: (1) the project must have a "public service purpose"; and (2) the purpose must be "incidental" within the meaning of that term as it is used in Section 30233(a)(5). Because the project will be constructed by a public agency (Caltrans) for the purpose of replacing the seismically unsafe Hwy.1 bridge crossing the Ten Mile River, the fill is for a public service purpose. Thus, the project satisfies the first test under Section 30233(a)(5).

With respect to the second test, in 1981 the Commission adopted the "Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas" (hereinafter, the "Guidelines"). The *Guidelines* analyze the allowable uses in wetlands under Section 30233 including the provision regarding "incidental public service purposes." The *Guidelines* state that fill is allowed for:

² It is reasonable to conclude that this policy applies to proposed projects that generate adverse impacts on wetlands beyond the existing baseline level of impact in the Ten Mile River. The proposed bridge replacement project will result in a net *reduction* in the amount of wetland fill in the river. Alternatively, to the extent that an argument can be made that the proposed fill is not consistent with this policy, such an argument would not be binding on the Commission in that the standard of review for the proposed project in this consistency review is the Chapter 3 policies of the Coastal Act and not the Mendocino County LCP.

Incidental public service purposes which temporarily impact the resources of the area, which include, but are not limited to, burying cables and pipes, inspection of piers, and maintenance of existing intake and outfall lines (roads do not qualify).

A footnote (no. 3) to the above-quoted passage further states that:

When no other alternative exists, and when consistent with the other provisions of this section, limited expansion of roadbeds and bridges necessary to maintain existing traffic capacity may be permitted.

The Court of Appeal has recognized the Commission's interpretation in the *Guidelines* of the term "incidental public service purposes" as a permissible one. In the case of *Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County* (1999) 71 Cal.App.4th 493, 517, the Court found that:

... we accept Commission's interpretation of sections 30233 and 30240 . . . In particular we note that under Commission's interpretation, incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions. Roadway expansions are permitted only when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.

In past cases the Commission has considered the circumstances under which fill associated with the expansion of an existing "roadbed or bridge" might be allowed under Section 30233(a)(5). In such cases the Commission has determined that, consistent with the analysis in the *Guidelines*, the expansion of an existing road or bridge may constitute an "incidental public service purpose" when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.

The Commission previously granted to the Cities of Seal Beach and Long Beach a coastal development permit (5-00-321) for the construction of bridge abutments and concrete piles for the Marina Drive Bridge located on the San Gabriel River. The Commission found that the project involved the fill of open coastal waters for an incidental public service purpose because the fill was being undertaken by a public agency in pursuit of its public mission, and because it maintained existing road capacity.

The Commission also determined in conjunction with a project (El Rancho Road Bridge) proposed by the U.S. Air Force at Vandenberg AFB that permanent impacts to wetlands are allowable under Section 30233(a)(5) of the Coastal Act as an incidental public service because the Air Force was undertaking the fill in pursuit of a public service mission and because the "permanent fill [was] associated with a bridge replacement project [that] would not result in an increase in traffic capacity of the road." (CD-070-92, and reiterated in CD-106-01).

The Commission recently concurred with a consistency determination submitted by the Bureau of Land Management (CD-084-04) for a roadway repair project on the South Spit of Humboldt Bay that required fill of open coastal waters to prevent the erosion and undermining of South

Jetty Road by tidal and wave action. The repair project did not increase road capacity and was necessary in part to protect public access to and along the bay and ocean shoreline.

Thus, based on past interpretations, fill for the expansion of existing roadways and bridges may be considered to be an "incidental public service purpose" if: (1) there is no less damaging feasible alternative; (2) the fill is undertaken by a public agency in pursuit of its public mission; and (3) the expansion is necessary to maintain existing traffic capacity. The Ten Mile River bridge replacement project will not increase the existing capacity of Highway 1 in this region of Mendocino County. Rather, the project is necessary in order to ensure that this segment of Highway 1 is not severed by an earthquake and to prevent the significant disruption to residents, tourists, and the regional economy that a bridge collapse would generate.

Furthermore, while Ten Mile River estuary is one of the "priority wetlands" afforded additional protection under Section 30233(c), which was not at issue in the above-referenced cases, the Commission finds that: (1) the project will not alter or affect the functional capacity of the Ten Mile River estuary; and (2) even if it considered the project to alter the estuary, the project can be considered a "very minor incidental public facility" based on the same rationale discussed above and in the Commission's wetlands guidelines³ and several past Commission permit reviews.⁴ These reviews and guidelines apply the same test for a project that the Commission has determined is necessary to maintain existing capacity to constitute an allowable use under Section 30233, regardless of whether it is being viewed as an "incidental public service" under Section 30233(a), or a "very minor incidental public facility" under Section 30233(c). Thus, the Commission has determined that a limited expansion of an existing transportation facility that is necessary to maintain existing capacity is an allowable use as an incidental public service under either Section 30233(a)(5) and Section 30233(c). Moreover, because it will result in a net decrease of fill in the estuary, the project will not adversely affect the functional capacity of the Ten Mile River estuary, a secondary test of Section 30233(c). Therefore, the Commission finds that the Ten Mile River bridge replacement project is an allowable use as an incidental public service and a very minor incidental public facility under Sections 30233(a) and 30233(c) of the Coastal Act, respectively.

4. Alternatives. Caltrans examined a number of alternatives to the proposed project and these alternatives are examined in the April 2005 *Project Report*:

The project began as a seismic retrofit of the existing bridge to meet current seismic standards. During the course of project development, a hydraulic study concluded that the consultant's pier footing design would cause the bridge to become "scour critical" and, therefore, vulnerable to collapse during a large flood event. A decision was made by

³ The Commission's wetland guidelines include a footnote for "incidental public services," which states: [Footnote 3:] "When no other alternative exist, and when consistent with the other provisions of this section, limited expansion of roadbeds and bridges necessary to maintain existing traffic capacity may be permitted." The footnote for "very minor incidental public facilities" states: "(see footnote #3)."

⁴ Including Coastal Development Permit 6-97-11, City of Carlsbad, Cannon Rd./Kelly Ranch.

Caltrans management to replace the existing bridge with a new bridge which would address both scour and seismic concerns.

The specific details of the proposed project alternative were described previously in Section I of this report. The replacement and retrofit alternatives considered by Caltrans in the *Project Report* are as follows:

- No-Build. This alternative would not correct the seismic deficiencies of the existing bridge, would risk public safety, and would not meet the goals of the seismic safety program mandated by the State Legislature.
- Alternative A. Construct a bridge 60 to 150 feet upstream of the existing bridge. This alternative generated a longer bridge and greater wetland impacts.
- Alternative B. Construct a bridge 33 to 108 feet west of the existing bridge. This alternative generated a shorter bridge and fewer impacts to wetlands, but greater impacts to listed plants and to MacKerricher State Park.
- Alternative 1. Retrofit the bridge with outrigger bents and encasing the existing columns. This alternative generated greater impacts to the river channel, eelgrass, and visual resources, and would only extend the life of the bridge for 20 years.
- Alternative 2. Retrofit the existing bridge with enlarged foundations, additional pilings, and encasing the existing columns. This alternative generated greater impacts to the river channel, wetlands, and listed salmonids, would be difficult to mitigate impacts, and would only extend the life of the bridge for 20 years.
- Other Rejected Alternatives. (a) construct new bridge on existing alignment; rejected due to the need to construct a temporary bridge prior to demolition and construction of new bridge, and the resultant greater environmental impacts; (b) install seismic-activated traffic gates at both ends of the existing bridge to prevent vehicles from entering bridge at the start of an earthquake; rejected because it did not meet the project purpose or state seismic safety mandate.

As noted previously in this report, the existing Ten Mile River bridge does not meet current state seismic safety standards, would likely suffer significant damage from or would collapse during a major earthquake, and must be replaced by Caltrans. While the proposed bridge replacement project will create adverse effects on marine resources: (1) alternatives to the proposed project would generate greater adverse effects on the river channel, eelgrass beds, wetlands, federally endangered and threatened fish species, listed plant species, visual resources, and/or public access and recreation; (2) the proposed project includes a construction alternative designed to minimize adverse marine resource impacts, the use of temporary trestles to support new bridge construction and existing bridge demolition; and (3) as will be discussed in the following section, adverse impacts will be mitigated. While these structures require the driving of approximately 650 temporary pilings to support the trestles, this amounts to only 63 sq.ft. of direct habitat loss

in the river, wetlands, and upland areas. The alternative to using pile-supported trestles was to construct temporary, but nevertheless substantial earthen fills across wetlands and across the river channel to support construction and demolition falsework. These land and river fills would clearly generate tremendously significant impacts to wetlands and the biological resources of Ten Mile River and were rejected in favor of the pile-supported trestles. The Commission agrees with Caltrans' determination that the proposed replacement bridge is the least environmentally damaging feasible alternative and that the project meets the alternatives test of Section 30233(a)(5) of the Coastal Act.

5. Mitigation. Caltrans is proposing a wide range of avoidance, minimization, and mitigation measures to ensure that the proposed project meets the Section 30233(a) requirement that "feasible mitigation measures have been provided to minimize adverse environmental effects." This section of the report will address mitigation measures provided for impacts to wetlands, eelgrass, and salmonids and tidewater gobies. Caltrans submitted to the Commission staff a wetland delineation report, eelgrass mitigation and monitoring plan, revegetation plan, documents and memos regarding pile-driving noise effects on fish, and biological assessments that described Caltrans' wetlands and marine resources restoration and mitigation plans.

(a) Wetlands. The August 2005 *Wetland Delineation Supplemental Information* document describes Caltrans' proposed wetland restoration measures. This report states in part that:

Restoration of these [shading effects] areas range from just the removal of the temporary impact and allow unassisted regeneration of the vegetation, to replanting areas that are unlikely to revegetate without intervention.

Total disturbance of the habitat is likely to occur from the placement of temporary pilings and temporary fills for access roads. The areas impacted by the placement of pilings are relatively small and dispersed, and would be expected to revegetate naturally after the pilings are removed. After the fill placed for the temporary road is removed for off-site disposal, that area will be replanted to facilitate re-establishment of native vegetation.

Total disturbance of the various habitats will result from the installation, excavation, and removal of cofferdams used to construct new bridge footings and to remove the old bridge footings. These excavations will be restored by filling the cofferdam area with native soil to match the adjacent topography followed by replanting with appropriate native vegetation.

A moderate level of disturbance is likely to occur from the temporary debris cover used to catch and retain debris for off-site disposal during the demolition of the old bridge. The placement of the debris cover will shade the ground and crush all vegetation. However, the debris cover will be used under the old bridge where the bridge shadow already limits natural vegetation. The duration of the debris cover is very short and occurs in the late fall when most plants are dormant. After the bridge rubble and debris cover are removed, the area impacted is expected to recover naturally within the first season by natural regeneration. Other than the placement of permanent erosion control in areas of exposed soil, no further treatment of these areas is likely to be needed.

The September 2005 *Revegetation Plan* provides additional information on wetland restoration plans, including planting plans, monitoring requirements, success criteria, remedial actions, contingency measures, and maintenance of restored areas (**Exhibit 20**).

The Commission staff reviewed the proposed wetland restoration and revegetation plans and requested that additional measures be included to ensure successful restoration. Caltrans agreed to add the following measures to the proposed project:

- The replacement bridge at Ten Mile River will lead to the permanent loss of 113 sq.ft. of wetland habitat due to the placement of two bridge piers on the south bank of the river. Given the Commission's numerous prior actions requiring that mitigation for permanent wetland fill is to be restoration of wetland habitat at a 3:1 mitigation ratio, 339 sq.ft. of on-site wetland restoration is required for this project. As a part of the demolition of the existing bridge, the existing bridge columns that currently occupy 200 sq.ft. of wetland habitat on the south bank of the river will be removed. Caltrans will plant and restore these bridge column footprints with wetland vegetation. Therefore, Caltrans' net mitigation requirement for permanent wetland impacts is 139 sq.ft. of additional on-site wetland restoration. Caltrans will implement this planting and restoration work at a site on the south bank of the river adjacent to the existing bridge.
- For temporary impacts to wetland habitat, Caltrans will: (1) implement the various restoration actions (e.g., stockpile all excavated materials, soil backfill, benthic sediment backfill, plantings, monitoring) identified in the aforementioned restoration plans upon completion of project construction; (2) survey the temporary impact areas one year after completion of project construction; (3) based on the survey results, implement further restoration actions (e.g., soil/sediment backfill, plantings) for those temporary impact areas that did not return to pre-project conditions; and (4) continue this survey/restoration work until all temporary impact areas are returned to pre-project conditions.

(b) Eelgrass. The August 15, 2005, Eelgrass Mitigation and Monitoring Plan provides details on project impacts to eelgrass, goals and objectives of the mitigation plan, pre- and post-construction survey details, mitigation techniques, and the monitoring and reporting program. The document states that the project includes 170 sq.ft. of new fill (from new bridge piers) of eelgrass beds in the river and the removal of 250 sq.ft. of existing fill (from existing bridge piers) of eelgrass beds. Caltrans concluded that since the project will result in a net gain of eelgrass habitat, no additional mitigation is required. After reviewing the *Plan*, the Commission staff reported to Caltrans that the "net gain" conclusion rests on the assumption that eelgrass will naturally recover in those areas where existing bridge piers are removed. If it does not, the project could generate a net loss of eelgrass habitat. Therefore, Caltrans agreed to add the following measure to the proposed project:

- If the 250 sq.ft. area of existing bridge piers and columns has not naturally recovered with eelgrass one year after the completion of project construction, Caltrans will plant those areas with eelgrass. All materials excavated within cofferdams in the river (for

construction of new piers and removal of existing piers) will be stockpiled for replacement to ensure an adequate substrate for eelgrass revegetation.

In addition, Caltrans agreed to modify its mitigation plan for temporary impacts to eelgrass in a manner similar to temporary wetland impacts:

- For temporary impacts to eelgrass, Caltrans will: (1) implement the various restoration actions (e.g., stockpile all excavated materials, soil backfill, benthic sediment backfill, plantings, monitoring) identified in the aforementioned eelgrass plan upon completion of project construction; (2) survey the temporary impact areas one year after completion of project construction; (3) based on the survey results, implement further restoration actions (e.g., soil/sediment backfill, plantings) for those temporary impact areas that did not return to pre-project conditions; and (4) continue this survey/restoration work until all temporary impact areas are returned to pre-project conditions.

Caltrans submitted a project-wide *Revegetation Plan* on July 8, 2005. The Commission staff reviewed and submitted comments on this plan and requested that Caltrans submit a revised plan. The staff received the revised *Revegetation Plan* on September 20, 2005. The *Plan* includes a description of the project area, restoration goals, implementation schedule, information on site preparation, a planting plan and plant palette, information on success criteria, monitoring plans, maintenance and remedial actions, and reporting requirements. Revegetation of all disturbed areas will use native plant stock from the project work site and/or materials grown from propagules originating within a range from the Russian River northwards to Humboldt Bay and within an inland extent of ten miles from the coast.

The *Plan* states that two sets of criteria were established to evaluate the success of revegetation efforts:

1. An intermediate set of criteria that will be used to determine whether the replanted habitat is developing on a course that will meet the revegetation plan goals, and
2. Final criteria that will determine whether the revegetation plan goals have been actually achieved. Failure to meet this criteria will require re-evaluation of the site conditions followed by corrective measures. The final success criteria will not be considered to have been met until a minimum three-year period with no remedial actions is achieved (excluding invasive plant abatement activities).

Planted areas will be monitored twice annually at the beginning (approx. January) and end (approx. August) of the growing season for a period of five years, and annual reports will be provided to the Coastal Commission by December 31.

(c) Salmonids and Tidewater Gobies. Caltrans has consulted and negotiated with the U.S. Fish and Wildlife Service, NOAA Fisheries, and California Department of Fish and Game (CDFG) to develop mitigation measures to reduce the potential for significant adverse project impacts on listed fish species. The agreed-upon measures include in-water construction work windows, construction materials and techniques, monitoring, and fish habitat enhancement. The details

are provided in the consistency certification, *Project Report, Biological Assessments, Ten Mile River Bridge Replacement Project – Hydroacoustic Report*, and letters from Caltrans to the CDFG (dated August 24, 2005, and September 19, 2005). The September 19, 2005, letter states that the proposed work windows were designed to minimize effects to both the tidewater goby and the listed salmonid species (coho and Chinook salmon and steelhead). The goby's breeding periods as well as the use of the project location area by salmonids primarily as a corridor during migrating stages were considered while formulating the following construction windows:

- **Temporary Piles:** Pile driving for temporary trestles, falsework, and cofferdams would be permitted for the new bridge's first year of construction between June 15 and October 31. Additional work windows for pile driving for temporary trestles, falsework, and cofferdams in subsequent years would occur between September 15 and October 31, for both new bridge construction and existing bridge demolition.
- **Permanent Piles:** Installation of permanent piles would occur year round within dewatered cofferdams. The cofferdams for the permanent piles would be installed between June 15 and October 31 the first season, and between September 15 and October 31 the following two seasons.

Caltrans references the September 2005 *Hydroacoustic Report* and states that the best noise attenuation method for permanent pile driving (i.e., to reduce peak sound pressure levels to 190 decibels (dB)) is to pile drive within dewatered cofferdams. To that end, Caltrans states that it is:

... committed to dewatered cofferdams during permanent pile driving as a noise attenuation measure. For this project, water would be lowered within each cofferdam (eight total required – three for the proposed new bridge, and five for the existing bridge pier) by pumping to allow trapped fish to be rescued. After the fish rescue is completed, the water level inside the cofferdam would be kept at or below the existing river mudline. Maintaining the water at this level achieves the highest level of noise attenuation for permanent pile driving.

While originally not a part of the project, after discussion with the aforementioned resource agencies, Caltrans reports that it now proposes to drive the temporary pilings within Double-Walled Isolation Casings:

Dewatered Isolation Casing creates an "air" space between the temporary H pile and the surrounding river. This system was utilized on the Humboldt Bay Bridges Seismic retrofit project and was found to provide about 9 dB of attenuation. The driving of temporary H piles through a Dewatered Isolation Casing should not cause peak pressure levels over 190 db at 10 meters, and is described in the attached Hydroacoustic Report.

Caltrans further states in its September 19, 2005, letter that the type and size of temporary and permanent piles has changed:

The attached Hydroacoustic Report indicates temporary steel piles create higher dB levels than temporary H piles. In order to attenuate noise, during project development Caltrans changed the project to include H piles instead of steel piles. Early analysis also indicated that larger diameter cast in steel shell (CISS) permanent piles create higher dB levels than smaller diameter piles. To reduce potential peak noise levels, Caltrans changed foundation type and reduced the diameter of the cast in steel shell (CISS) piles from eight foot to 30 inch.

The *Hydroacoustic Report* also includes a description of the methodology to be used for monitoring noise levels during pile driving operations in the Ten Mile River. Caltrans has committed to contacting CDFG and NOAA Fisheries if noise levels exceed (at ten meters from the source) 190 dB sound pressure level during monitoring (excluding errant measurements). Caltrans has also committed to submitting a copy of the noise monitoring plan to be implemented at the Ten Mile River project site to the Commission's Executive Director for review and approval prior to the start of in-water construction activities.

U.S. Fish and Wildlife Service staff reported to the Commission in September 2005 that while the proposed project in-water pile driving construction windows, sound attenuation devices, and the 190 dB level would likely lead to adverse effects on tidewater gobies during one breeding season, other mitigation alternatives would lead to a longer cumulative construction period and greater adverse impacts on the goby. The USFWS determined that the proposed project schedule and mitigation measures represent the best and least damaging feasible way to protect the goby and construct the replacement bridge.

The consistency certification states that a fisheries biologist would be onsite during the installation of the cofferdams and the pumping process to capture and move trapped gobies and salmonids, along with any other fish, to suitable habitat upstream of the work area. The project does not include any night work and, as a result, the use of lights will not be required during construction.

In addition to the above measures, Caltrans has committed to implement a fish enhancement project to further mitigate impacts to coho salmon that may occur during project construction. Caltrans initially identified the culvert at Digger Creek/Hwy. 1 (near Fort Bragg) as a suitable location for a coho salmon passage enhancement project. However, in its September 19, 2005, letter to CDFG, Caltrans found that:

... although coho may have historically been in Digger Creek the rainbow trout farm downstream of Caltrans' Digger Creek culvert most likely extirpated the coho from the system. Based on this information, we will be selecting a different location in order to fulfill our mitigation requirements.

As of this date, no final decision has been reached by Caltrans and the resource agencies for the location of the fish habitat enhancement project. However, Caltrans has committed to submit to the Executive Director, prior to the start of project construction, additional details (e.g., location, scope of work, objectives, cooperating partners) on the proposed fish enhancement project.

(d) Conclusion. Construction and demolition activities for the Ten Mile River bridge replacement project will occur in and adjacent to freshwater and brackish water wetlands found along the south bank of the river. Other activities will take place directly in the river, which is home to the endangered tidewater goby, serves as a migration corridor for threatened coho and chinook salmon and northern California steelhead, and supports healthy and extensive beds of eelgrass. The project will ultimately result in a net decrease in the amount of permanent fill in wetlands and eelgrass beds, due to a reduction from 450 sq.ft. to 283 sq.ft. in the footprint of piers and columns which support the existing and replacement bridges, respectively. However, the project does include new fill of coastal waters. The proposed fill is an allowable use under the "incidental public service" provision of Section 30233(a)(5) as the project is a limited expansion of an existing transportation facility necessary to maintain existing capacity. The project will not alter or affect the functional capacity of the Ten Mile River estuary and can be considered a "very minor incidental public facility" based on previous Commission reviews of development in Section 30233(c) "priority wetlands."

The proposed project is the least environmentally damaging feasible alternative, in terms of its river crossing location, design features to minimize intrusions into wetland habitat, and construction methods and scheduling. Mitigation (at a ratio of 3:1) for the permanent wetland impacts includes creation of 139 sq.ft. of additional on-site wetland restoration. The project will also generate temporary impacts (ranging between three to twenty-one months) on wetlands and eelgrass due to pilings, excavation, fill, ground mats, and shading. Mitigation includes removal of all construction and demolition materials, implementation of revegetation and eelgrass mitigation plans, and restoration of all disturbed areas to pre-project conditions. The project revegetation plan includes planting plans, monitoring requirements, success criteria, remedial measures, and maintenance of restored areas. Final success criteria for wetland and eelgrass restoration will not be met until a minimum three-year period with no remedial actions is achieved.

Temporary project impacts on listed species of fish present in the Ten Mile River in and adjacent to the project area arise primarily from noise generated by pile driving for the new bridge piers, and for the trestles and framework needed to construct the new bridge and demolish the existing bridge. To minimize adverse effects on these species, the project includes seasonal restrictions and work windows for in-water pile-driving, requirements that permanent pilings be driven within dewatered cofferdams and temporary pilings be driven within double-walled isolation casings, the use of H piles rather than steel piles for the temporary pilings, monitoring of noise levels during pile driving, capture and relocation of trapped fish from the cofferdams to suitable habitat upstream from the work area, and implementation of an off-site coho salmon passage enhancement project.

As a result, the Commission concludes that the proposed project is an allowable use and is the least environmentally damaging feasible alternative for replacing the Ten Mile River bridge. The Commission also concludes that the project is designed to minimize permanent and temporary impacts within wetland and eelgrass habitat, and includes adequate measures to mitigate unavoidable permanent and temporary adverse impacts to those habitats. The

Commission concludes that the proposed project is consistent with the wetlands and marine resources protection policies of the CCMP (Coastal Act Sections 30230 and 30233).

C. Water Quality. Section 30231 of the Coastal Act provides that:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The Ten Mile River bridge replacement project is located 0.4 miles upstream from the mouth of the river at the Pacific Ocean. The 120 sq.mi. watershed consists of hilly mountainous terrain predominately forested with Coastal redwood, Douglas Fir, and Tanoak. Roadway drainage in the project area is currently conveyed within drainage swales adjacent to both sides of Hwy.1, where it is then conveyed through culverts to slopes that drain down to Ten Mile River. The proposed project holds the potential to adversely impact water quality in the Ten Mile River and its estuary due to construction-related activities and runoff from completed project features (e.g., the bridge deck, highway approaches, cut and fill slopes, and areas undergoing revegetation). The Ten Mile River is currently on the State Water Quality Control Board's 303(d) list of impaired water bodies due to sediment levels; the river's total maximum daily load (TMDL) was established by the U.S. EPA in December 2000. The North Coast Regional Water Quality Control Board (NCRWQCB) is developing a *Sediment Waste Discharge Prohibitions and Action Plan for the Control of Sediment Waste Discharges* for the Ten Mile River to address man-made sources of sediment waste discharges from new projects and existing sources.

The consistency certification, and in particular the July 2004 *Storm Water Date Report*, addresses the project's Design Pollution Prevention BMPs, measures incorporated into the project at the early design phase to minimize adverse water quality effects from the completed project:

Proposed and improved cut and embankment slopes are 1:2 or flatter on the east side and 1:4 or flatter on the west side. The impervious surface (paved shoulder) area added (cumulative) to the project is less than 0.1 ha (0.25 acres), and is offset by the flatter cut slopes, thus resulting in an insignificant hydraulic difference in flow volumes or rates.

Cut and fill slopes will require temporary and permanent measures be taken to provide protection from erosion. Erosion control planting will be recommended by the District Landscape Architect.

Two existing RCP culverts (one north and one south of the bridge) will either be extended to move the outlets from the clear recovery zone or replaced along the new alignment. Downdrains will be added at the bridge abutments.

Preservation of existing vegetation has been maximized on the project.

The consistency certification next examines the control of potential construction-related water quality impacts, primarily from vegetation removal, grading, and stockpiling of excavated materials for later use as backfill. The October 2004 *Biological Assessment* for the project states that:

Since the project will result in the soil disturbance of greater than one acre, construction activities will be regulated under Caltrans' Statewide General National Pollutant Discharge Elimination System (NPDES) Permit. NPDES permits for storm water discharges must meet all applicable provisions of section 301 and 402 of the Clean Water Act (CWA) . . . Caltrans has a revised Storm Water Management Plan (SWMP, May 2003) that includes new and revised best management practices (BMPs) categories, including:

- 1. Design Pollution Prevention BMPs - Preservation of existing vegetation, concentrated flow conveyance systems, slope/surface protection, etc;*
- 2. Treatment BMPs - Infiltration and detention basins, traction sand traps, biofiltration, etc.;*
- 3. Construction Site BMPs - Temporary soil stabilization and sediment control, non-storm water management, and waste management; and*
- 4. Maintenance BMPs - Litter pickup, materials handling, waste management, street sweeping, etc.*

In addition, the July 2004 *Storm Water Data Report* prepared for the Ten Mile River bridge replacement project states that the total disturbed area for the project is 10.85 acres, and because this disturbed area is greater than 1.0 acres, a Storm Water Pollution Prevention Plan (SWPPP) must be prepared for this project during the final design phase.

Caltrans reports that while the final list of specific construction BMPs for the Ten Mile River bridge replacement project is not yet developed, the following classes of BMPs are considered minimum requirements (unless later demonstrated to not be appropriate for a particular project):

- Temporary Soil Stabilization: preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextiles, plastic covers, erosion control blankets/mats.
- Temporary Sediment Control: silt fence, fiber rolls, street sweeping and vacuuming, storm drain inlet protection.
- Non-Storm Water Management: illicit connection/illegal discharge detection and reporting, vehicle equipment and cleaning, vehicle equipment and fueling, vehicle and equipment maintenance.

- Waste Management and Material Pollution Control: material delivery and storage, material use, stockpile management, spill prevention and control, solid waste management, sanitary/septic waste management.

The final list of construction BMPs will be incorporated into the project contract during the final design phase, depending on various site-specific factors and expected phases of project construction. Caltrans has committed to submitting the SWPPP and final list of construction BMPs to the Executive Director for his review and concurrence prior to the start of construction at Ten Mile River.

The consistency certification next addresses runoff from the proposed new bridge:

Due to the natural topography of the project vicinity, the bridge needed to be designed with a vertical sag, resulting in storm water draining towards the center of the bridge. Given the necessity of this design, the California Regional Water Quality Control Board (CRWQCB) submitted a letter to Caltrans (see attached letter) approving the drainage of storm water falling on the bridge directly into Ten Mile River [through vertical deck drains and/or scupper drains]. The CRWQCB is requiring that water that falls on the bridge approaches must be diverted to a biofiltration source. . . . [Exhibit 21]

A June 2, 2005, memo from Caltrans' North Region Office of Environmental Engineering provided background information on the selection of this drainage alternative for the bridge:

Caltrans investigated the potential for incorporating drop inlet inserts into the bridge deck drain inlet. However, there are no drop inlet inserts currently available on the market that are designed for use in bridge deck drains.

Caltrans investigated whether storm water could be collected from the bridge deck to discharge locations outside of the stream channel for treatment on land. An engineering study concluded that this alternative would require a complex set of pipe networks but that due to bridge geometry the collected storm water could not reach the upland discharge points.

Caltrans next investigated seeking approval from the RWQCB to allow storm water discharge off the bridge deck into the river. In August 2003, the RWQCB concurred that collection of storm water from the bridge deck would not be feasible without a significant vertical realignment of the bridge structure. The NCRWQCB conditioned its concurrence with the requirement that storm water falling on bridge approaches be treated with biofiltration.

To that end, Caltrans has proposed the installation of biofiltration strips at three sites adjacent to the western edge of Hwy.1 to treat storm water runoff:

For biofiltration strips, we chose available areas that will provide a broad vegetated surface that receives and discharges runoff as sheet flow. Caltrans has no minimum or maximum slope criteria for biofiltration strips but hydraulic sheet flow criteria indicates that the maximum length in the direction of flow is approximately 300 feet and may be much less due

to flowline grades and surface roughness. Up to this limit biofiltration strips should be as long in the flow direction as site conditions allow. Other considerations are having design side slopes as long and as flat as ROW and maintenance requirements allow. The east side is not wide enough to incorporate bio-strips. The bio-strips [on the west side of Hwy.1] south of the bridge are 361 and 354 sq.yds., and the bio-strip north of the bridge is 1683 sq.yds.

The proposed Ten Mile River bridge replacement project contains design features to minimize water quality impacts, and will include an up-to-date package of construction-related best management practices to ensure that the multi-year construction and demolition activities will not degrade water quality in the Ten Mile River. The Commission's water quality staff reviewed the project's water quality protection measures – including the technical information supporting the proposed bridge drains and biofiltration strips – and concluded that the project will not lead to adverse water quality effects to the Ten Mile River and the biological resources of its estuary. Caltrans has committed to submitting the project's SWPPP and final list of construction BMPs to the Executive Director prior to the start of construction at Ten Mile River. This will allow the Commission staff an additional opportunity to review and comment on the adequacy of the final water quality protection measures. Therefore, the Commission finds that the Ten Mile River bridge replacement project is consistent with the water policy of the CCMP (Section 30231 of the Coastal Act).

D. Environmentally Sensitive Habitat. The Coastal Act provides the following:

Section 30240.

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

In addition to the wetland and other marine resources examined in Section B above, additional environmentally sensitive resources are present in or adjacent to the project area uplands south of Ten Mile River which could be affected by construction activity (the north bank of the river rises sharply and is minimally vegetated). As reported in Caltrans' October 2004 *Biological Assessment* prepared for the California Department of Fish and Game (CDFG), the federal and state endangered Menzies' wallflower (*Erysimum menziesii*) is a low-growing, succulent, biennial to short-lived perennial herb that occurs near the south side of the logging haul road on the south bank of Ten Mile River. The federally endangered and state threatened Howell's spineflower (*Chorizanthe howellii*) is a flowering, annual herb in the buckwheat family, and is discontinuously distributed within the dunes south of Ten Mile River. Both these plant species are endemic to coastal dune habitats of central and northern California. In Caltrans' August 24, 2005, memo to CDFG, it was reported that two additional sensitive plant species were observed

in the general project vicinity. Lyngbye's sedge (*Carex lyngbyei*) was observed along both banks of the river, primarily upstream of the bridge. Round-headed Chinese houses (*Collinsia coymbosa*) was observed south of the river and over 400 feet downstream of the existing bridge and will not be affected by the project. The consistency certification reports that migratory birds, including cliff swallows and purple martins, nest and breed on the existing bridge. Sand dune habitat extends from near the southern end of the existing bridge westward to the ocean shoreline in MacKerricher State Park, and in locations provides nesting habitat for the endangered Western snowy plover.

Construction of the proposed project could adversely affect the aforementioned upland sensitive resources, due primarily to grading for realignment of the Hwy.1 to the new bridge, clearing of vegetation in the realignment corridor, and construction of trestles, falsework, and access roads to support new bridge construction and existing bridge demolition. However, the consistency certification and Caltrans' August 24, 2005, memo to CDFG documents provide the following documentation that the project will avoid sensitive habitat areas:

Howell's spineflower. The project had originally proposed to use an area near the existing population of Howell's spineflower to access the existing bridge during the demolition phase of the project. It has now been determined that the previously discussed access road leading from the haul road will not be used. In addition, construction access for demolition of the existing bridge is now confined to 48 feet west of the existing bridge. This western boundary of the work area avoids all of the existing spineflower as well as the area where the species could expand its distribution (in the "open" area between the existing bridge and the plant's current population).

Menzies' wallflower. As discussed above, construction access for demolition of the existing bridge will be confined to 48 feet west of the existing bridge. The western boundary of the work area avoids all of the existing wallflower as well as the area where the species could expand its distribution (in the "open" area between the existing bridge and the plant's current population).

Lyngbye's sedge. The plant may be temporarily affected by the placement of trestle piles. Any impacts to the species will be minor and temporary. It is anticipated that any depressions left in the substrate subsequent to removal of temporary piles will quickly fill in during high flows along the river's banks and be repopulated with the adjacent species, including Lyngbye's sedge.

In addition, the populations of Menzies' wallflower and Howell's spineflower will be fenced off to prevent personnel, equipment, or materials from entering these areas throughout the construction and demolition period. As discussed in Section B above, all wetland habitat disturbed during project construction will be restored to pre-project conditions, either through natural re-vegetation or planting by Caltrans. Populations of Lyngbye's sedge adversely affected by construction would be included in these wetland restoration efforts.

Nesting for migratory and resident birds will be protected during construction and demolition activities (**Exhibits 22 and 23**). Caltrans provides that:

- Migratory birds are protected under the Federal Migratory Bird Treaty Act. The Ten Mile River bridge supports a large colony of cliff swallows that nest primarily under the overhang of the existing bridge. The new bridge would have a ledge (i.e. overhang) that would allow swallows to nest as they currently do on the existing bridge. In addition, the new bridge would have holes underneath the bridge deck similar to those found under the existing bridge. These holes would be available for nesting by purple martins and other cavity nesting birds.
- In order to protect bridge nesting birds during demolition of the existing bridge, the construction and removal of temporary falsework and/or temporary platform to catch the bridge pieces as well as the removal of the superstructure itself, would be restricted to August 1-March 31 of any year of construction. The falsework and platform are confined to this work window (when cliff swallows are not present) given that they could provide angles for the birds to construct a nest.
- Bridge demolition may extend beyond March 31 if birds have not begun nesting yet and depending on the type of work to be done and the time required to finish it. Additionally, if nesting is shown to be complete (fledglings are not detected), prior to August 1, demolition of the bridge may begin earlier than August 1.
- Riparian vegetation on the project site also supports nesting migratory bird species as well as resident bird species. Riparian vegetation that would be affected during the construction project would be cleared between September 1 and February 28 of the first year of construction to avoid affecting any nesting activity.

The *Ten Mile River Bridge Revegetation Plan* (September 2005) includes measures that will ensure that environmentally sensitive habitats adjacent to construction areas will continue to be protected against adverse effects from ground disturbance:

- Restoration of self-sustaining native vegetative cover, appropriate to the habitat type, across the approximately 1.8 acres of upland habitat impacted by grading and construction, and including restoration of the existing maintenance turnout at the south end of the bridge and all existing roadbed areas outside of the new alignment of Hwy. 1 north and south of the bridge.
- Where the project results in cut and/or fill areas, the top six inches of native topsoil will be removed and stockpiled. Salvaged topsoil will then be placed at a minimum two inch depth on all new fill slopes and in areas where existing roadway is to be abandoned and obliterated (asphalt paving and base removed, roadbed then ripped to a depth of ten inches). Replacement of native topsoil will prepare the area for planting.

- Adjacent to the roadway, revegetation will consist solely of erosion control effort and hydroseeding. In these upland areas the seed mix will be comprised of grass and wildflower species native to the project site.

In conclusion, the proposed bridge replacement project is designed to minimize significant adverse effects on environmentally sensitive habitat within and adjacent to the project zone. No construction work or disturbance will occur in areas where federal- and state-endangered plant species occur; fencing will be installed prior to the start of construction to prohibit any entry into these mapped areas throughout the multi-year construction period. Nesting for migratory birds will be protected during bridge construction and demolition activities. The proposed bridge includes design elements that will allow cliff swallows to nest as they do on the existing bridge. Demolition of the existing bridge will occur between August 1 and March 31 when cliff swallows are not present. Clearing and removal of vegetation and riparian habitat will occur between September 1 and February 28 of the first year of construction to avoid adversely affecting nesting birds in the project area. The project revegetation plan includes provisions for replanting and restoring all disturbed areas to native vegetative cover, restoring all roadbed areas outside the new alignment of Hwy.1, and monitoring and remediation measures to ensure that environmentally sensitive habitats are restored to optimum, pre-project conditions in a timely manner. Therefore, the Commission finds that the Ten Mile River bridge replacement project will protect environmentally sensitive habitat and is consistent with the environmentally sensitive habitat protection policy of the CCMP (Section 30240 of the Coastal Act).

E. Scenic/Visual Resources. The Coastal Act provides the following:

Section 30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Section 30254. New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road

1. **Background.** The Ten Mile River – along with its estuary and adjacent coastal dunes and uplands that are viewed by travelers along Highway 1– is an outstanding example of the type of scenic area where new development should be subordinate to the setting (**Exhibit 4**). The expansive and rolling landscape, the backdrop of the Coastal Range and the distant Pacific Ocean, and the minimal level of residential development at the Hwy. 1 crossing of Ten Mile River is the type of setting for a stretch of rural two-lane Hwy. 1 that the Coastal Act was designed to protect.

The proposed bridge replacement project could adversely affect visual resources – both temporarily and permanently – at and adjacent to the project site due to temporary construction activities (e.g., access roads, staging areas, vegetation removal, grading, trestles, falsework, equipment, demolition activity, aerial transmission lines, cut and fill slopes undergoing revegetation) and design features of the new bridge (e.g., wider bridge deck, wider paved shoulders on the Hwy.1 approaches to the bridge). However, the project also includes elements that will improve visual resources at and adjacent to the project area (e.g., removal of overhead transmission lines that cross the river just east of the existing bridge, reduced number of piers supporting the bridge, a haunched girder design, improved see-through characteristics of the bridge railing).

The consistency certification states that the bridge replacement project was designed to avoid and minimize potential effects on visual resources:

This included an analysis of bridge alignment, bridge abutment slope angles, and bridge railing types, resulting in a design that would minimize tree impacts, and provide a low profile and unobtrusive structure as possible. Trees, shrubs, and wetland vegetation removal would be required. Four cypress trees and one willow would be removed south of the bridge on the east side of the highway, and one pine would be removed north of the bridge on the east side of the highway.

Replanting of native trees and vegetation (including in the temporarily affected and newly created wetland areas) would occur

The potential visual resource impacts associated with the Ten Mile River bridge replacement project were analyzed further by Caltrans in its June 2005 *Ten Mile River Bridge Visual Assessment*. This document provides a summary of present conditions in the project area:

. . . The overall visual quality of this area is extremely high; generally speaking the viewshed of the Ten Mile River is intact as far as development is concerned . . . In its current condition, the Ten Mile River Bridge seems to fit in well with the surrounding landscape. The existing bridge is a simple structure and allows highway travelers a variety of views as they approach and travel across the bridge. Highway travelers get a unique perspective when approaching the bridge from the south as they approach the bridge at a higher elevation, and at such an angle the bridge profile is seen with the river outlet and the coast as a backdrop

The project also borders MacKerricher State Park . . . [There] are areas within the boundaries of the State Park that have views of the project area.

2. Impacts and Mitigation. The *Visual Assessment* notes that the new bridge would be located just east of the existing structure and would generally mimic the profile of the existing bridge, although the new bridge would be several feet higher at the southern end and several feet lower at the northern abutment. The Hwy. 1 southern approach will be realigned to the east by

approximately 65 feet in order to connect with the new bridge. As a result, the roadway must be extended 340 feet northward on a new fill slope built across a portion of the bluff that slopes down to the haul road parallel to and south of Ten Mile River.

The *Visual Assessment* reports that the proposed bridge will include a "haunch girder" type design rather than the typical "box girder" design (**Exhibits 24 and 25**):

The design of the structure is very important to the visual impacts any bridge would pose. The Caltrans standard is a box type girder with round piers . . . A haunch girder system with rectangular piers were used in all simulations and is recommended in this situation. The haunch girders make the structure seem less massive through the tapered girders and chamfered corners. This type of design seems to be more organic, and makes the bridge lines softer. A subtle design is best suited given the tranquil and undeveloped setting that makes this location unique.

The *Visual Assessment* next describes the approach used to assess the potential visual resource impacts generated by the proposed project:

The project area was analyzed by assessing the different viewer groups, determining where their views of the project occur, and to what extent those views will be affected. Viewpoints and viewers were identified and described. Photo simulations were done for selected views to show existing compared to proposed conditions in order to illustrate impacts both visually and descriptively.

Two of the viewer groups are comprised of residents living in close proximity to the bridge on the north bank of the river and users of private roads and lands south of the river. The remaining three groups are: (1) all recreational users of the Ten Mile River corridor (i.e., anglers, boaters, nature enthusiasts, etc.); (2) users and viewers from MacKerricher State Park, as there are several places within the park with views of the project area; and (3) north and south bound travelers on Highway 1, including those in vehicles and on bicycles.

Based on the design of the replacement bridge and the eastward realignment of the Hwy. 1 southern approach to the new bridge, the *Visual Assessment* states that the main visual resource impacts to the three aforementioned viewer groups from public lands, waters, and roads are caused by the fill slope at the south approach and the wider bridge deck:

Impacts to [the recreational users of the river] will vary depending on the vantage point of the particular user. In general, this alternative would introduce a longer bridge and a north-facing fill slope to the east of the existing bridge. The fill would be noticeable to viewers in the river corridor and would displace mature vegetation. The longer and thicker structure may be more visibly more intrusive than the existing bridge, but the new structure would have fewer supports in the river and longer spans

There are areas within the MacKerricher State Park with views of the Ten Mile River corridor including the Ten Mile River Bridge. The majority of these views are from the top

of a sand dune to the southwest of the bridge, although the bridge also can be seen from the beach and the park directly west of the bridge. The Ten Mile River Bridge can also be seen from the Old Haul Road which now serves as a trail in and out of the State Park. The alignment of Alternative C would move the bridge further away from the State Park and would not impact the views from the park users. Although the profile is at a higher elevation it mimics the profile of the existing and would not be a negative impact from this distance. The fill slope may be less visible from this side of the bridge.

Views for the travelers of State Route 1 would be changed significantly. As the bridge is now, highway travelers have fairly clear views of the Pacific Ocean and MacKerricher State Park to the west, as well as the Ten Mile River corridor to the east. The proposed replacement bridge, due to wider shoulders, will reduce views to the east and west of the bridge

The *Visual Assessment* recommends – and Caltrans has incorporated into the project – the following mitigation measures to minimize visual resource impacts:

The introduction of the fill slope on the south bluff would pose a mitigable visual impact. Much of the mature vegetation that currently occupies this slope would be removed, along with the mound that now serves to buffer views to the highway from viewers from the north of the river corridor. The slope would extend to the south side of the Old Haul Road.

All earthwork should be done in a manner to help it blend into the surrounding landscape through slope rounding and contour grading. Replanting of the slope would help restore the slope to a similar state and improve the view of the slope. The North Region Landscape Architect has recommended the use of 2:1 (H:V) or flatter on all slopes. This is suggested to maximize the ability for new plants to get established. Revegetation shall be part of this project, in order to restore what vegetation has been lost and to stabilize disturbed areas.

3. Bridge Railing. The replacement bridge will include installation of the Type ST-20 “see-through” bridge railing. The *Visual Assessment* states that:

[Caltrans] North Region Office of Landscape Architecture recommends the Type ST-20 for use on the Ten Mile River Bridge due to its optimal “see-through” capability of 68%. Use of the ST-20 bridge rail will improve views of the Ten Mile River and the middle and background compared to the current bridge rail used on the existing bridge structure. The Type-80 is acceptable for use since there is an opportunity for concrete surface treatment which helps the structure blend into the surrounding visual environment. Both railing types accommodate bicycle traffic which is required due to State Route 1 being part of the Coastal Bike Trail. . . . [Exhibit 26]

The *Visual Assessment* also includes a June 3, 2005, revised memo prepared by the Caltrans North Region Landscape Architect, which further addresses the proposed bridge ST-20 railing and states in part that:

Views to the east from the [new] bridge will include Ten Mile River in the foreground, the coastal plain in the middle ground, and the Coast Range in the background. To the west, Ten Mile River, sand dunes and the beach are visible in the foreground and the Pacific Ocean is visible in the middle and background. Quality of the foreground views towards the west will depend on the level of transparency of the bridge railing selected.

The ST-20 bridge railing type was approved for use in 2004. This railing type provides for optimum visibility of the surrounding landscape. The ST-20 is designed for use on bicycle and pedestrian corridors. The overall structure height including the bicycle railing is 54 inches. The main railing height is 46.7 [inches] with four 3 to 4 inch thick horizontal rails and a 2 inch thick bicycle rail above the main rail structure. The bicycle rail is attached to the vertical posts. The concrete foundation is 5.9 inches high. The mostly see through vertical posts are 11 inches thick and are spaced at approximately 9.8 feet. There is a total of 32.2 inch high window between the posts, rails, and foundation. When viewed from the highway, the ST-20 has 68% window area and 32% solid surface.

The aforementioned June 3, 2005, Caltrans memo also examined potential alternative railings for Ten Mile Bridge:

- *The Type-80 is 31.8 inches high with a 11.8 inch horizontal concrete rail and a 9 inch high concrete foundation. The 15 inch thick posts are concrete and spaced at 10 feet and there is an 11 inch window between the railing and the foundation. When viewed from the highway, Type-80 has 35% window area and 65% solid surface. A 23.2 inch high bicycle railing will be attached to the top horizontal rail which is a requirement on designated bicycle routes.*
- *The ST-10 rail is 32.6 inches high with two 4 inch high horizontal steel rails and a six inch high concrete foundation. The steel posts are spaced at 10 feet and there is a 18.7 inch window between the posts, rail and foundation. When viewed from the highway, the ST-10 has 57% window area and 43% solid surface. Although this railing provides for the best views of the surrounding landscape, the design does not allow for the construction of a bicycle safety railing . . . The ST-10 rail is designed for vehicular traffic only and is not suitable for pedestrian or bicycle use. (On the Noyo River Bridge, the ST-10 rail separates vehicle traffic lanes from a pedestrian pathway on the bridge and a taller picket railing fence is installed on the outer edges of the bridge deck for pedestrian safety.)*

The Commission also received a comment letter (**Exhibit 16**) opposing use of the ST-20 railing on the replacement Ten Mile River bridge. The letter includes an attachment specific to Caltrans' proposed Greenwood Creek bridge further south in Mendocino County, but the author states in his letter that, "All of the information, citations, and argument that I make in it are equally relevant to the 10 Mile Bridge." The commenter – while not supporting combination auto-bicycle rails on Hwy.1 rural bridges – states that where such a rail makes sense, a more transparent and lower railing (48 rather than 54 inches) should be designed. Regarding the replacement Ten Mile River bridge, the commenter recommends reducing shoulder widths to

four feet, installing a sidewalk on the bridge, installing the ST-10 railing to separate vehicle traffic and pedestrians, installing a newly-designed pedestrian rail incorporating curved and arched elements found on historic Hwy.1 bridges, and incorporating into the project the Commission's 2001 comments to Caltrans on the design of rails for use in scenic coastal areas (Exhibit 27).

4. Conclusion. The proposed Ten Mile River bridge replacement project is located in a highly scenic coastal area and involves construction on a rural, two-lane section of Highway 1. As a result, the project elements must be designed, constructed, and operated in a manner that avoids creating significant adverse effects on public views of the Ten Mile River, its immediate environs, and the distant Pacific Ocean. The replacement bridge will be located immediately east of the existing bridge and is designed to mimic its height above the river, its horizontal and vertical geometric curves, and the length of the river crossing. Visual design improvements include haunch girders to soften the more rectangular look of the existing bridge superstructure, and fewer bridge piers within the river and its south bank. The bridge itself will not introduce any new, significant, adverse impacts on visual resources.

The aerial transmission lines that cross the river immediately east of the existing bridge will be removed and placed inside a conduit that will run within the new bridge superstructure, thereby improving the views up the valley of the Ten Mile River. Cut and fill earthwork and vegetation removal is required for the realignment of the Hwy. 1 approaches to the new bridge, including a fill slope to extend the southern approach beyond the existing edge-of-slope. However, the project requires no significant landform alteration or retaining walls to support realigned sections of Hwy.1, and cut and fill slopes will be constructed at 2:1 ratio (horizontal: vertical) to reduce the footprint of ground disturbance and to support the revegetation work that will occur on all disturbed areas. The new fill slope at the south approach will create a temporary visual impact, primarily from the north and from the river upstream of the new bridge, until native vegetation becomes established on this slope. The visual resource impacts from these project elements are adverse in the short-term but are not significant in the long term due to the restoration of disturbed areas that is incorporated into the project.

The project includes eight-foot-wide shoulders on the replacement bridge and shoulder widths off the bridge in the project area that range between eight feet and less than one foot (See Section A.3 for additional details on project shoulders). The potential impacts on visual resources from the widened shoulders arise from two geographical perspectives: (1) views down to the river from vehicles crossing the bridge could be affected by the wider bridge deck; and (2) views of the Hwy. 1 corridor in the project area from those traveling on Hwy. 1 could be affected by the wider paved right-of-way. While the wider bridge deck will make it more difficult to gaze directly down onto the Ten Mile River, the views that grab ones attention while crossing the Ten Mile River bridge are primarily those in the middle ground and in the distance: the upper Ten Mile River Valley backed by the Coast Range, the lower Ten Mile River and its estuary, the sand dunes of MacKerricher State Park, and the distant Pacific Ocean. Any adverse impact on visual resources from this perspective due to the wider bridge deck will be insignificant.

The more challenging question from the Coastal Act perspective is whether the widened shoulders will significantly and adversely affect scenic views of the Hwy.1 corridor itself for those traveling north or south on the roadway, be they in a vehicle, on a bicycle, or on foot. The existing bridge is 26 feet wide; the proposed bridge would be 43 feet wide, a sixty-five percent increase in width. (The wider bridge will provide shoulders for bicyclists, pedestrians, disabled vehicles, and Caltrans maintenance vehicles.) Existing shoulders off the bridge in the project area range in width between 0.7 and 4.7 feet. The proposed project will increase the upper end of that range to eight feet in order to match the connection with the new bridge. However, as discussed previously in this report (Section A.3), Caltrans agreed to a Commission staff request to significantly reduce the length of eight-foot shoulders off the bridge in all four quadrants, and in the length of the eight- to four-foot transition shoulders on the bridge approaches. This reduction in the extent of proposed paved right-of-way reduces the footprint of the project – and the potential visual impact – while still providing the public access improvements of a wider shoulder for bicyclists and pedestrians and the safety features noted above.

As discussed previously, the widening of paved shoulders along the Hwy.1 approaches to the proposed Ten Mile River bridge does not require significant landform alteration or massive vegetation removal, and does not involve fill of wetlands or construction in environmentally sensitive habitat. The visual appearance of the new roadway corridor will be different from that which exists today, but because the existing roadway is not physically constrained by the landscape through which it passes (unlike many stretches of rural, coastal Hwy.1 that are squeezed by steep cliffs or rugged topography, more tightly curved in their geometry, or hemmed in by the shoreline or sensitive habitat), any adverse effect of this new corridor would not be significant. The landscape at this location is a widening river valley where Hwy.1 drops down to the bridge from the north and south, and where the scenic coastal views that capture a traveler's attention are focused not on the roadway but away from the road. Hwy.1 at and approaching the crossing of Ten Mile River would remain a scenic two-lane road, albeit wider on the new quarter-mile-long bridge and gradually wider on the approaches to the bridge.

The proposed ST-20 bridge railing is designed to provide safety for vehicles, bicyclists, and pedestrians and is suitable for the multi-use Hwy.1 crossing of the Ten Mile River. When viewed from the highway, this rail has a 68% window area and 32% solid surface and will not adversely affect views up-valley or west towards the Ten Mile River estuary, the dunes of MacKerricher State Park, or the Pacific Ocean. Lastly, construction and demolition activities that will occur over a three-year time period will affect scenic views in the project corridor. While these effects may be adverse at times, they are unavoidable and temporary in nature. Therefore, the Commission determines that the Ten Mile River bridge replacement project is designed to minimize permanent and temporary adverse impacts on public views along this section of Highway 1, to be compatible with the character of the surrounding area, to minimize landform alteration, and includes adequate measures to mitigate unavoidable impacts. The Commission concludes that the proposed project is consistent with the scenic and visual resource policies of the CCMP (Coastal Act Sections 30251 and 30254).

F. Cultural Resources. Section 30244 of the Coastal Act provides that:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

The *Statutory Exemption Determination Form* prepared by Caltrans for the proposed project addresses in part the potential for cultural resources in the project area:

The Area of Potential Effect (APE) for this project has been identified, and includes all construction access routes, temporary construction easements, disposal site, existing and proposed right of way and staging areas for the proposed project. The review of Caltrans cultural resource records indicated that no cultural resources have been previously recorded within the APE. During field surveys by the Caltrans District Archaeologist, no cultural resources were observed within the APE, and no known historic properties or historical resources would be affected by the project. Native American consultation also determined no resources of concern within the APE.

An Historic Property Survey Report (HPSR) with findings of No Historic Properties, and Properties Not Eligible For Inclusion In The National Register, has been prepared and signed by the appropriate Caltrans Professionally Qualified Staff, the Environmental Branch Chief, and the Project Manager. The HPSR includes a Historic Resources Evaluation Report and an Archaeological Survey Report supporting the HPSR Findings. The State Historic Preservation Officer has submitted a letter concurring with these findings. The proposed project, therefore, would not involve any significant impacts or adverse effects to any historic, architectural, or archaeological properties.

Further archaeological study may be necessary if the proposed area of work, or work plan, is altered. Additionally, in the event that archaeological materials are encountered during construction activities, Caltrans' policy requires that work be immediately halted in the area of the find until it can be evaluated by a qualified archaeologist.

The proposed Ten Mile River bridge replacement project would occur primarily in a previously developed area along the Highway 1 corridor. The bridge and highway approaches would be realigned to the east approximately 65 feet, a private driveway east of Highway 1 and north of the river would be relocated further to the east, and new pilings would be driven to support the new bridge. All of these activities hold the potential to disturb previously unidentified cultural resources. However, given the cultural resources surveys conducted by Caltrans, Native American consultation, State Historic Preservation Officer concurrence, and Caltrans' commitment to stop work and undertake additional consultation should cultural resources be discovered during construction, the project does not hold the potential to adversely affect cultural resources. Therefore, the Commission finds that the Ten Mile River bridge replacement project is consistent with the cultural and archaeological resource policy of the CCMP (Coastal Act Section 30244).

G. Agricultural Lands. The Coastal Act provides the following:

Section 30241. The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

(a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.

(b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.

(c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.

(d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.

(e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.

(f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.

Section 30242. All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Section 30250(a). New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area

have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

The proposed Ten Mile River Bridge replacement project requires an expansion of Caltrans' right of way north and south of Ten Mile River in order to accommodate the eastward shift of Highway 1 as it aligns with the new Ten Mile River Bridge. To that end, Caltrans has initiated (and in some instances completed) the process of purchasing the required strips of land from the property owners. However, the subject property south of Ten Mile River encompasses coastal agricultural resources that are protected from non-agricultural development. On May 12, 1998, the Commission approved a coastal development permit (A-1-MEN-98-17) for a 20-unit inn on a four-acre building envelope within a 389-acre parcel that borders Highway 1 to the east and Ten Mile River to the south. The permitted development (which has yet to be constructed) would occur immediately adjacent to Highway 1 and approximately one-half mile south of the Ten Mile River bridge. One condition of permit approval was the requirement that the applicant dedicate an agricultural easement across the remaining 385 acres of the subject property for the purpose of preservation of coastal agriculture. On September 9, 1998, the Commission approved a permit amendment (A-1-MEN-98-17-A) to revise the special condition that required the agricultural easement to instead require a deed restriction limiting the remainder of the parcel to agricultural uses only. On September 14, 1999, the Agricultural Deed restriction was recorded on County of Mendocino Assessor's Parcel Number 069-010-22.

Caltrans has acknowledged in the consistency certification that it will need to submit an application to the Commission to amend coastal development permit A-1-MEN-98-17-A in order to delete the agricultural deed restriction on the strip of property it will purchase for the Highway 1 right of way expansion south of Ten Mile River. The Coastal Act includes provisions to protect prime agricultural lands and agricultural viability from disruptions due to conversion and/or division of agricultural lands to non-agricultural uses. The issue before the Commission in this consistency certification is whether the conversion of land designated for agricultural uses, and deed restricted to preserve such uses, will adversely affect prime agricultural lands or the viability and/or productivity of agricultural operations on the balance of the subject property or on surrounding lands in agricultural use. The Commission previously found in A-1-MEN-98-17 that the 385-acre property east of Highway 1 was not prime agricultural land. The proposed eastward shift of Hwy.1 would occur in the extreme northwest corner of the subject property, a location that currently does not support agricultural operations. This is due to the man-made and natural constraints found on this narrow, rectangular section of the property: the paved Hwy.1 right-of-way, the old Georgia-Pacific logging haul road, a second dirt roadway, Ten Mile River, steep slopes, and brush and tree cover.

In analyzing the proposed project's consistency with the policies of Section 30241, the Commission finds that while roads and highways are a form of developed land use, a highway in and of itself does not define adjacent or surrounding lands as an urbanized area. As discussed throughout this report, the proposed bridge replacement project is located on a segment of Hwy.1 that passes through a rural region of the Mendocino County coast. Therefore, the proposed conversion of approximately three acres of land from agricultural use to Hwy.1 right-of-way is

consistent with Section 30241 in that the proposed conversion does not involve prime agricultural lands and would not create conflicts between agricultural and urban land uses.

The proposed project alternative consists of a replacement bridge immediately upstream from the existing bridge and an associated slight eastward realignment of the Hwy.1 southern approach to the bridge. As a result of this design alternative, and consistent with the development policies of Section 30250 of the Coastal Act, the proposed project minimizes the width of the strip of land to be converted from agricultural use to highway right-of-way, and concentrates new highway development contiguous with and in close proximity to the existing Hwy. 1 paved right-of-way. Due to the narrow strip of land to be obtained by Caltrans, its location immediately adjacent to Hwy.1 (rather than bisecting a parcel of land where such an action could adversely affect its agricultural viability), and the public service purpose of the project, the proposed conversion of approximately three acres of land from agricultural use to Hwy. 1 right-of-way would concentrate existing and proposed roadway development, and would not adversely affect the agricultural viability of the remaining lands on the subject property currently supporting (and deed-restricted for) agricultural uses. Therefore, the Commission finds that the Ten Mile River bridge replacement project is consistent with the agricultural land protection policies of the CCMP (Coastal Act Sections 30241, 30242, and 30250).

SUBSTANTIVE FILE DOCUMENTS:

CD-070-92 (El Rancho Road bridge, Vandenberg AFB), U.S. Air Force.

CD-106-01 (El Rancho Road bridge, Vandenberg AFB), U.S. Air Force.

CC-051-03 (Pacific Street Bridge Replacement), City of Oceanside

CD-084-04 (South Jetty Road repair, Humboldt County), U.S. Bureau of Land Management.

CDP 6-97-11 (Cannon Road/Kelly Ranch), City of Carlsbad.

A-1-MEN-98-17 (Construction of visitor-serving facility on Highway 1 south of Ten Mile River, Mendocino County), Perry and Smith.

A-1-MEN-98-17-A (Substitute a deed restriction for an offer to dedicate an easement to protect agricultural resources, Highway 1 south of Ten Mile River, Mendocino County), Perry and Smith.

CDP 1-98-100 (Highway 1 Noyo River Bridge, Fort Bragg, Mendocino County), California Department of Transportation.

CDP 1-98-100-A3 (Highway 1 Noyo River Bridge railing change, Fort Bragg, Mendocino County), California Department of Transportation.

CDP 5-00-321 (Marina Drive Bridge over the San Gabriel River), Cities of Seal Beach and Long Beach.

Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas, 1981, California Coastal Commission.

County of Mendocino *Local Coastal Program*.

Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County (1999) 71 Cal.App.4th 493, 517

Completing the California Coastal Trail, January 2003, State Coastal Conservancy.

Pacific Coast Bike Route Study, March 2003, Redwood Community Action Agency.

Documents submitted by the California Department of Transportation with consistency certification CC-074-05 on June 7, 2005:

Letter from North Coast Region California Regional Water Quality Control Board to California Department of Transportation, regarding Ten Mile River Bridge Seismic Replacement Project Storm Water Controls, August 21, 2003.

Storm Water Data Report, Ten Mile Bridge Replacement Project, July 9, 2004, California Department of Transportation.

Biological Assessment to NOAA Fisheries, September 2004, California Department of Transportation.

Biological Assessment to U.S. Fish and Wildlife Service, September 2004, California Department of Transportation.

Biological Assessment to California Department of Fish and Game, October 2004, California Department of Transportation.

Project Report, April 27, 2005, California Department of Transportation.

Wetland Delineation and Assessment for the Proposed Ten Mile River Bridge Replacement Project, April 28, 2005, California Department of Transportation.

Eelgrass Mitigation and Monitoring Plan, Ten Mile River Bridge Seismic Retrofit Project, May 2, 2005, California Department of Transportation.

Visual Assessment for Ten Mile River Bridge, Revised June 2005, California Department of Transportation.

Construction Scenario for Ten Mile River Bridge Project, June 2, 2005, California Department of Transportation.

Response to Request for Additional Information on Storm Water Management Program, Ten Mile River Bridge Replacement Project, June 2, 2005, California Department of Transportation.

Eelgrass Mitigation and Monitoring Plan, Ten Mile River Bridge Seismic Retrofit Project, June 6, 2005, California Department of Transportation.

Documents submitted by the California Department of Transportation for consistency certification CC-074-05 after June 7, 2005:

Ten Mile Bridge Revegetation Plan, July 2005, California Department of Transportation.

Memo from California Department of Fish and Game Central Coast Region to Caltrans Office of Environmental Services North, dated July 21, 2005, regarding environmental review and endangered species consultation for Ten Mile River Bridge Replacement Project.

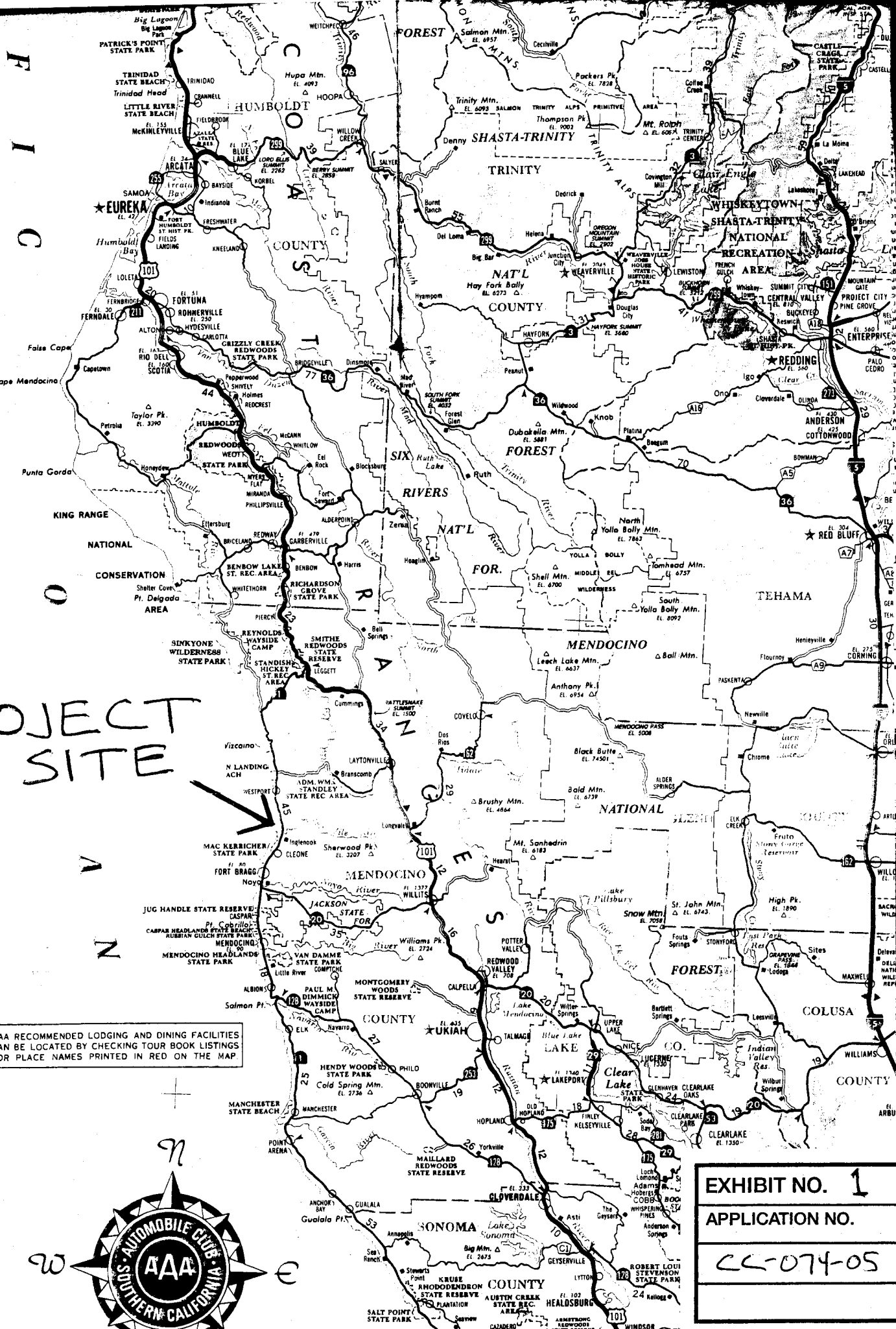
Wetland Delineation Supplemental Information, Ten Mile River Bridge Replacement, August 11, 2005, California Department of Transportation.

Eelgrass Mitigation and Monitoring Plan, Ten Mile River Bridge Seismic Retrofit Project, August 15, 2005, California Department of Transportation.

Memos from Caltrans Office of Environmental Services North to California Department of Fish and Game Central Coast Region, dated August 24, 2005, and September 19, 2005, regarding endangered species consultation for Ten Mile River Bridge Replacement Project.

Ten Mile River Bridge Revegetation Plan, September 2005, California Department of Transportation.

Ten Mile River Bridge Replacement Project – Hydroacoustic Report, Illingworth & Rodkin, Inc. September 16, 2005.

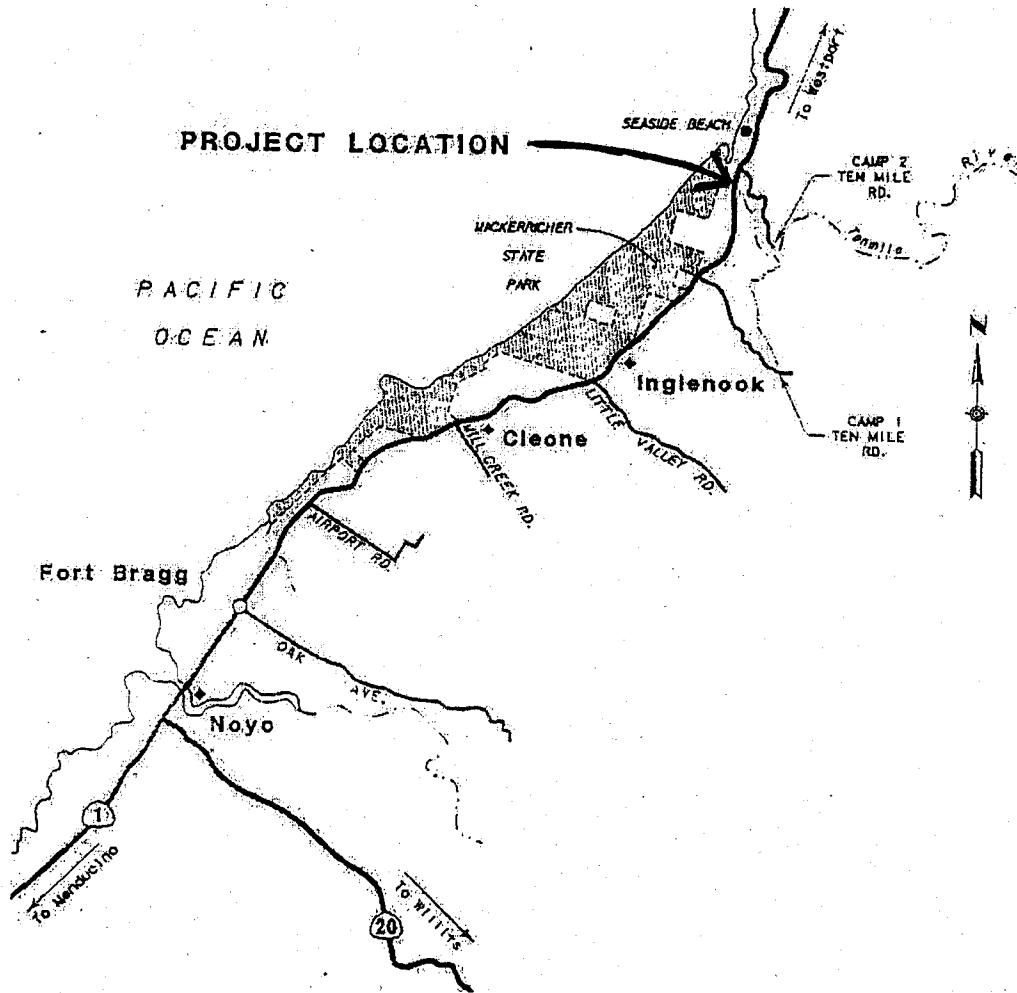


PROJECT SITE

AAA RECOMMENDED LODGING AND DINING FACILITIES CAN BE LOCATED BY CHECKING TOUR BOOK LISTINGS FOR PLACE NAMES PRINTED IN RED ON THE MAP



EXHIBIT NO. 1
 APPLICATION NO.
 CC-074-05



VICINITY MAP
 01-Men-1
 KP 111.7/112.9 (RM 69.4)
 TEN MILE RIVER BR 10.0
 03227 - 385700

EXHIBIT NO. 2
APPLICATION NO.
CC-074-05

INDEX OF SHEETS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY**
 IN MENDOCINO COUNTY
 FROM 9.7 km NORTH OF FORT BRAGG
 TO 10.4 km NORTH OF FORT BRAGG
 AT TEN MILE RIVER BRIDGE

To be supplemented by Standard Plans dated July, 2004

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1	111.7/112.8	1	1



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 Caltrans now has a web site. To get to the web site, go to <http://www.dot.ca.gov>



MacKerricher State Park

PACIFIC OCEAN

Exit TEN MILE RIVER BRIDGE
 Br No. 10-0161

COASTAL TRAIL
 River
 Ten Mile
 CAMP 2 TEN MILE ROAD

To Westport

End Work
 Sta "C" 129+30

BEGIN CONSTRUCTION
 STA "C" 112+40 KP 111.66
 PM 69.38

Begin Work
 Sta "C" 107+40

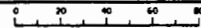
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 PM 70.07

PROPOSED TEN MILE RIVER BRIDGE
 Br No. 10-0274

NO SCALE

shall possess the Class (or Classes) of license
 the "Notice to Contractors".

RELATIVE BORDER SCALE
 IS IN MILLIMETERS



PROJECT NO. 01-38570
 SHEET NO. 1 OF 1

CU 03 227

EA 38570

Contract No. 01-385704



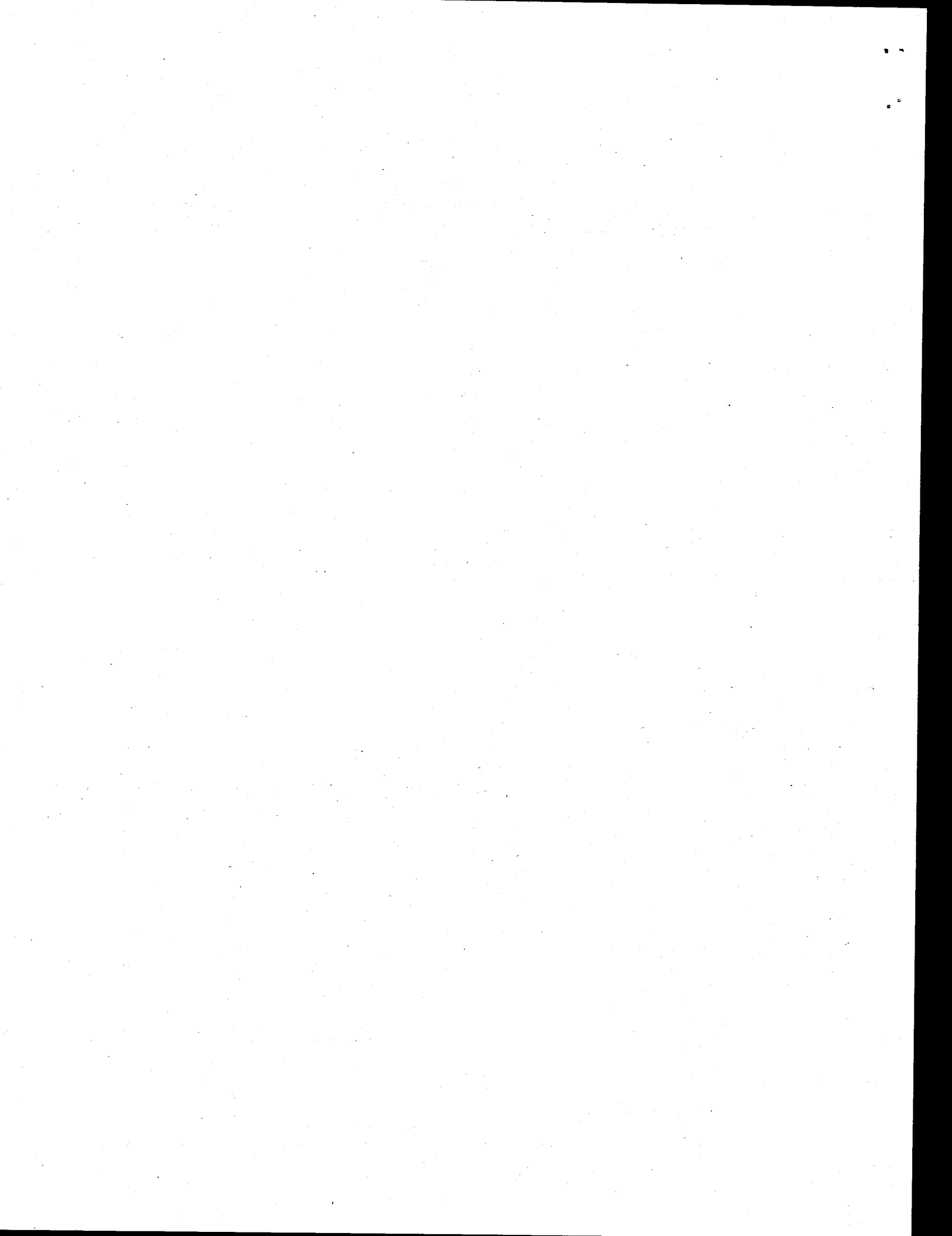
Project Engineer Date
 Registered Civil Engineer

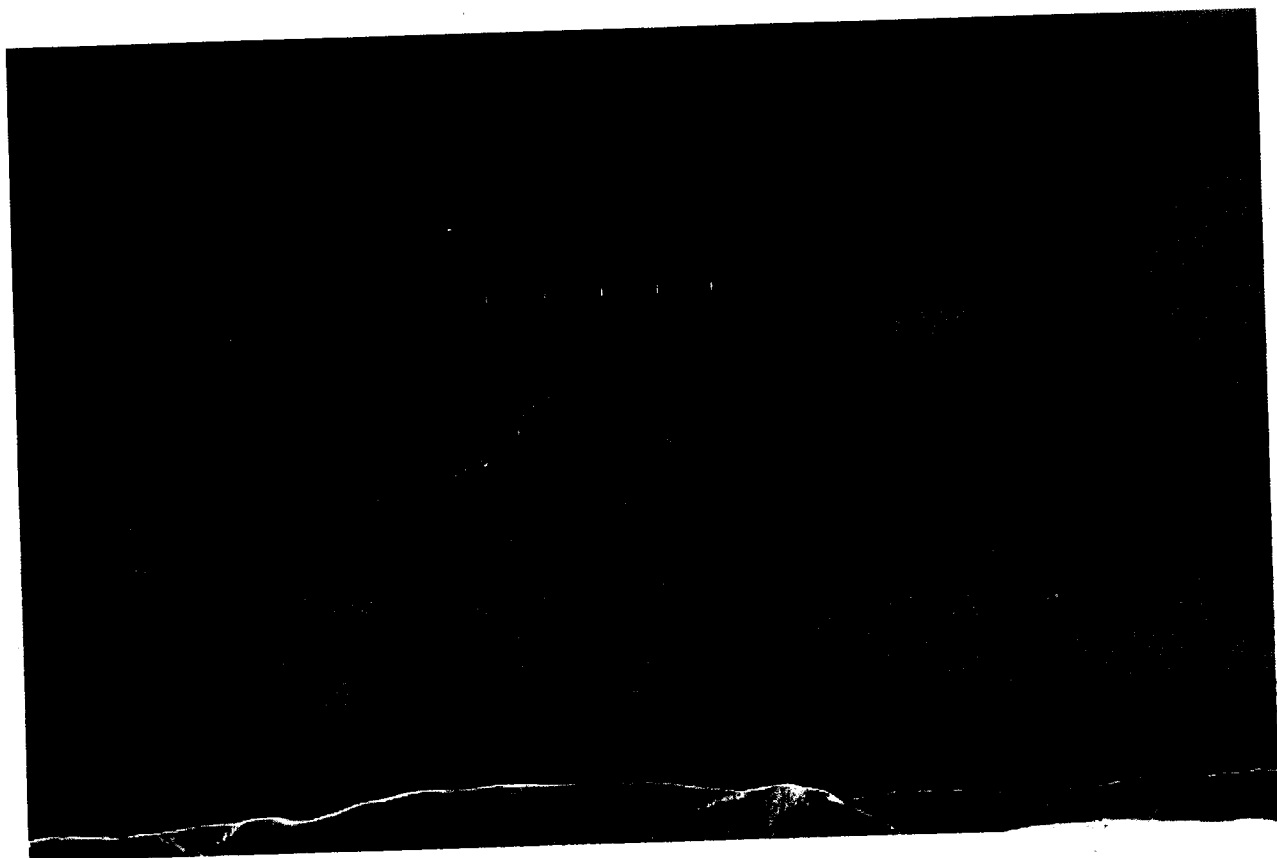
Plan Approval Date

EXHIBIT NO. 3
 APPLICATION NO.

CC-074-05

DATE PLOTTED: 03/11/05 11:52:00 AM
 09-08-04





Aerial view east to Ten Mile River Bridge

Image No. 11339. Copyright © 2002 Kenneth & Gabrielle Adelman.

Exhibit 4
CC-074-05



300' from bluff

100' from stream

First Public Rd.

Pursuant to the Ca. Code of Regulations, Title 14, Section 13577(1)(2), the appeal jurisdiction in this area is the first row of parcels or 300 feet from the mean high tide line whichever is the greater distance.

First Public Rd.



Permit Jurisdiction

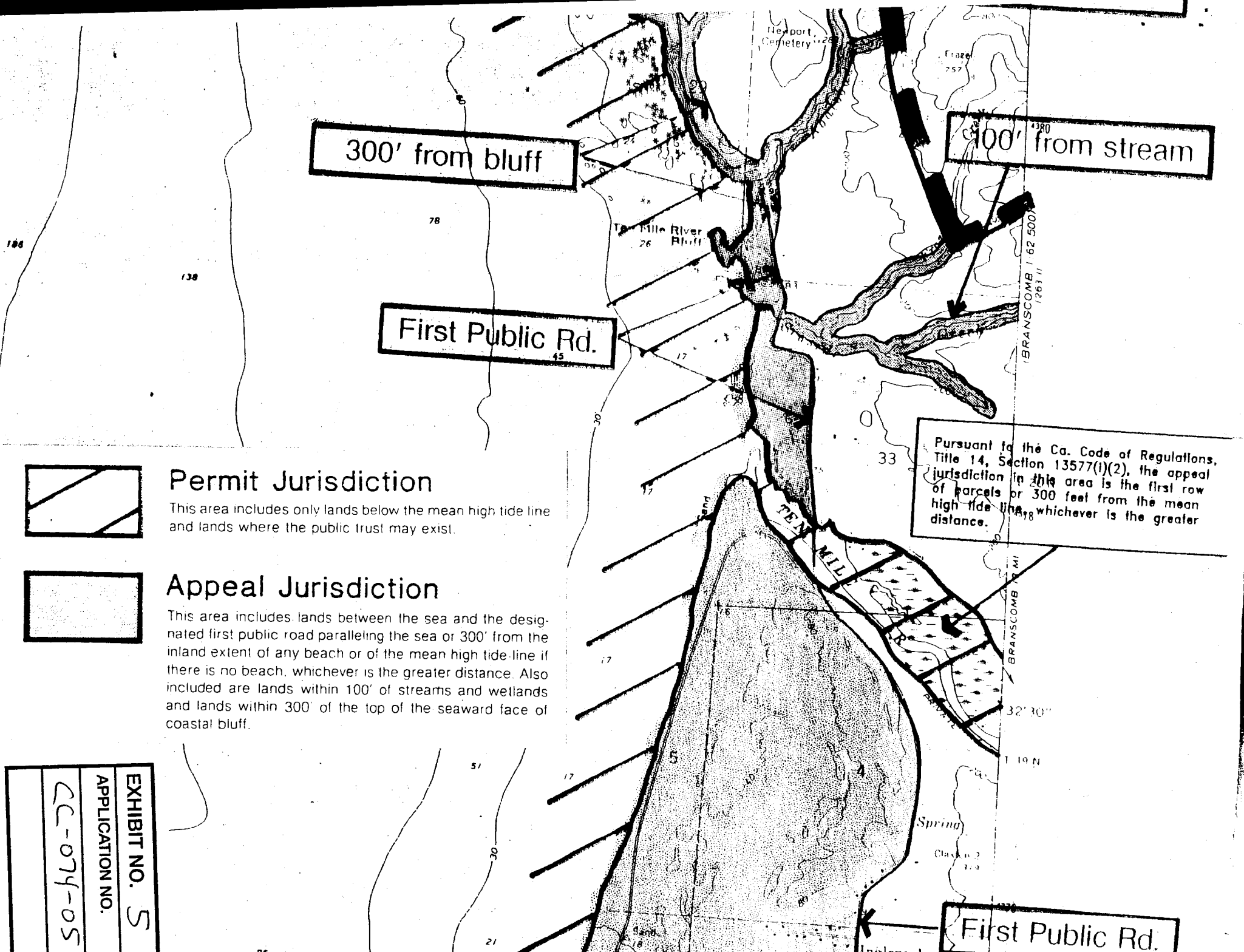
This area includes only lands below the mean high tide line and lands where the public trust may exist.



Appeal Jurisdiction

This area includes lands between the sea and the designated first public road paralleling the sea or 300' from the inland extent of any beach or of the mean high tide line if there is no beach, whichever is the greater distance. Also included are lands within 100' of streams and wellands and lands within 300' of the top of the seaward face of coastal bluff.

EXHIBIT NO. S
APPLICATION NO.
CC-074-05



DATE	REVISED BY	DATE	REVISION
DATE	DESIGNED BY	DATE	CHECKED BY
DATE	PROJECT ENGINEER	DATE	CHECKED BY
	M. A. PANCHENSON		
DATE	DEVELOPMENT	DATE	CHECKED BY

LEGEND

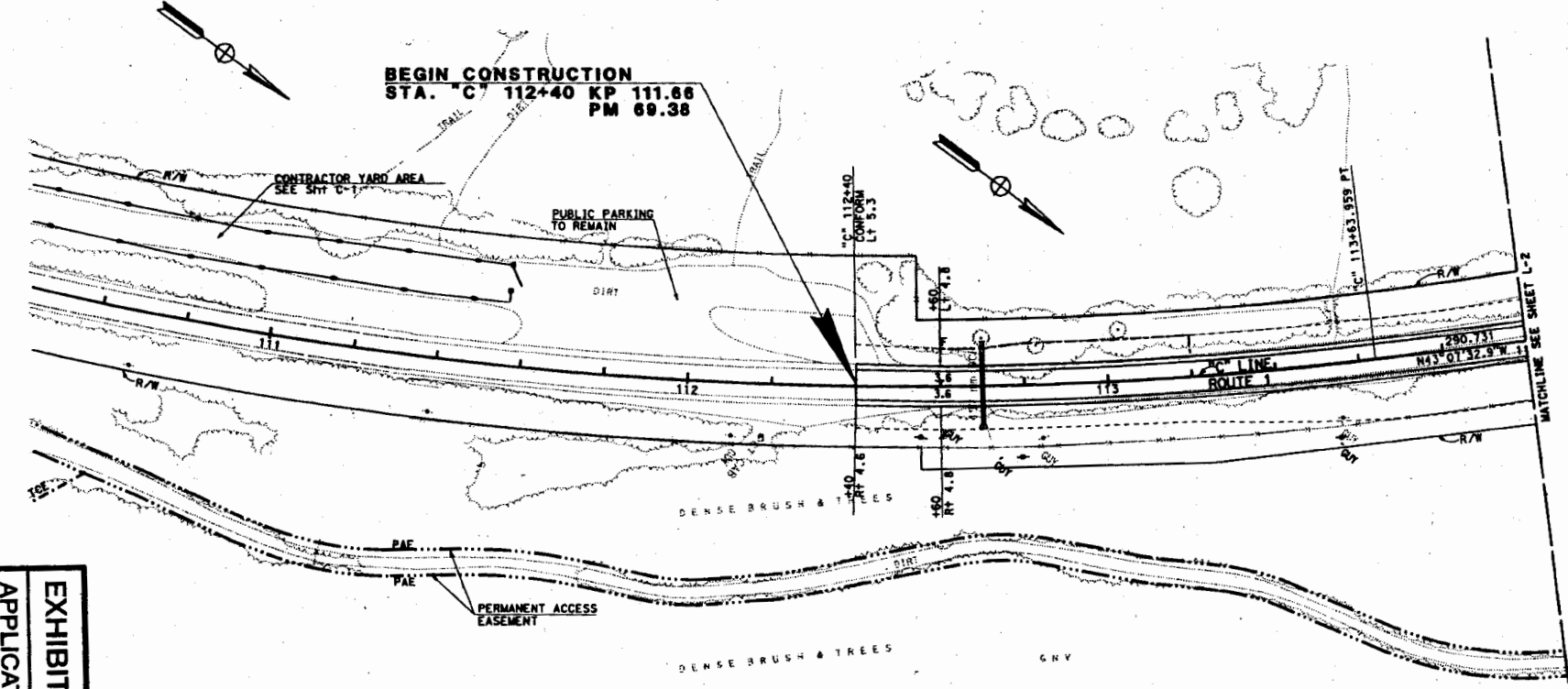
- BIOFILTRATION STRIP AREA
- TCE TEMPORARY CONSTRUCTION EASEMENT
- ESA ENVIRONMENTALLY SENSITIVE AREA FENCE
- PAE PERMANENT ACCESS EASEMENT
- TEMPORARY CHAIN LINK FENCE
- OBLITERATE SURFACING

ABBREVIATIONS

- TW - TRAVELED WAY
- SL - SAWCUT LINE
- TCE - TEMPORARY CONSTRUCTION EASEMENT
- OSD - OVSIDE DRAIN
- PAE - PERMANENT ACCESS EASEMENT
- ESA - ENVIRONMENTALLY SENSITIVE AREA
- WCM - WEED CONTROL MAT (FIBER)
- WCM - WEED CONTROL MAT (FIBER)
- AFTS - ALTERNATIVE FLARED TERMINAL SYSTEM
- TAA - TERMINAL ANCHOR ASSEMBLY (TYPE SFT)



DIST	COUNTY	ROUTE	SECTION	POST MILE	SHEET NO.	TOTAL SHEETS
01	Mon	1	111.7/112.8	6	6	6
REGISTERED						
PLANS APPROVAL DATE						
M.A. PANCHENSON 4425 Exp. 6-30-07 CIVIL STATE OF CALIFORNIA						



BEGIN CONSTRUCTION
STA. "C" 112+40 KP 111.68
PM 69.38

ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN
LAYOUT
SCALE 1:500

L-1

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS



DATE 03/25/04

CU 03 227

EA 385701

EXHIBIT NO. 6
APPLICATION NO.
CC-074-05

DATE PLOTTED: 04/05/04 10:11:11

DATE REVISIONS

NO.	DATE	REVISIONS

CHECKED BY
DESIGNED BY
PROJECT ENGINEER
M.A. PANCHESSON

DATE REVISIONS

NO.	DATE	REVISIONS

PROJECT ENGINEER
DESIGNED BY
CALCULATED/

PROJECT ENGINEER
DESIGNED BY
CALCULATED/

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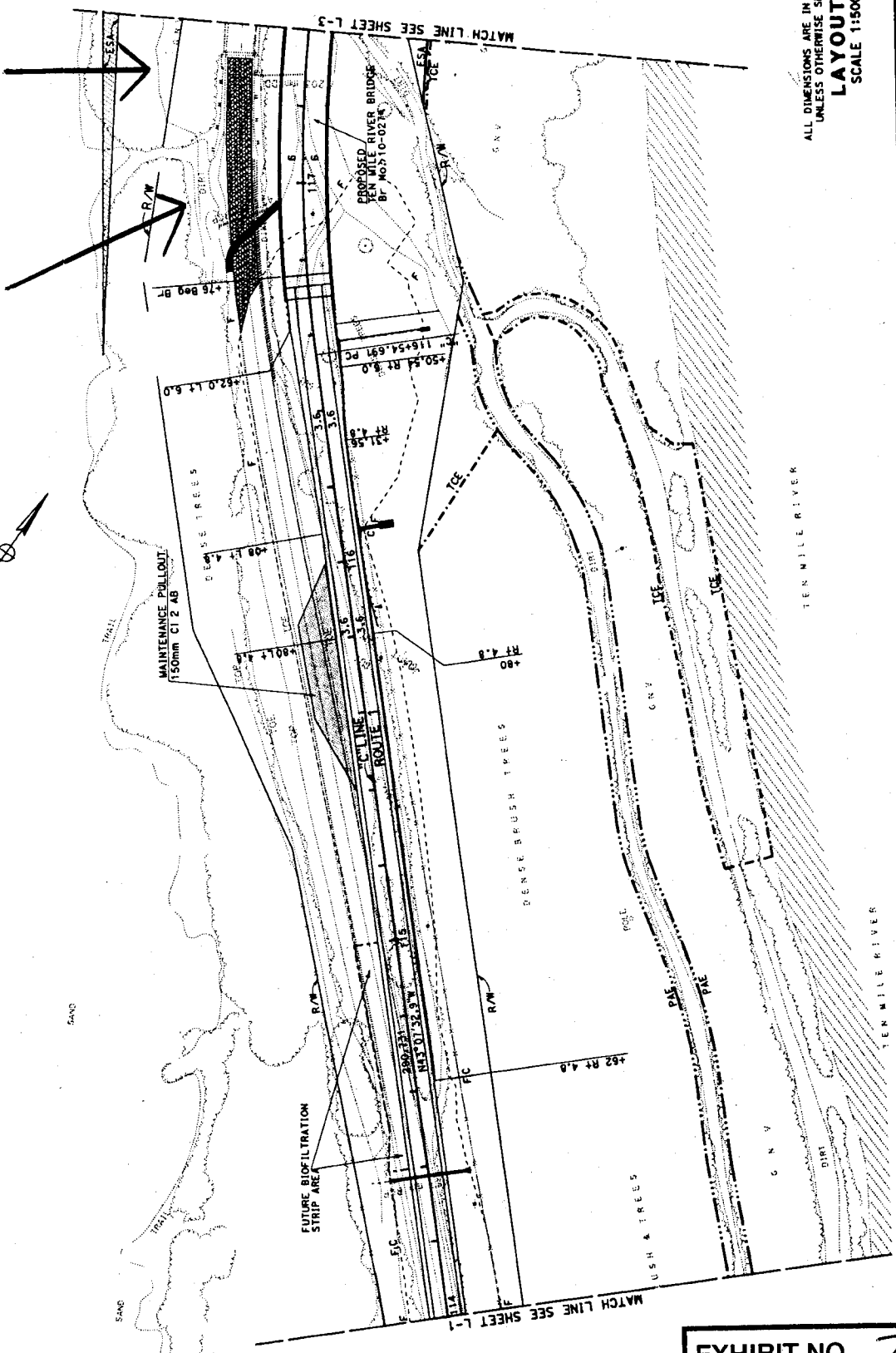
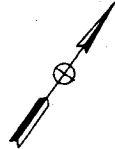
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CALCULATED/

EXISTING
TURNOUT & TRAIL



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UNLESS OTHERWISE SHOWN
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SCALE 1:500

L-2

EXHIBIT NO. 7
APPLICATION NO.

CC-074-05

NO.	DATE	REVISIONS

PROJECT ENGINEER
DESIGNED BY
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PROJECT ENGINEER
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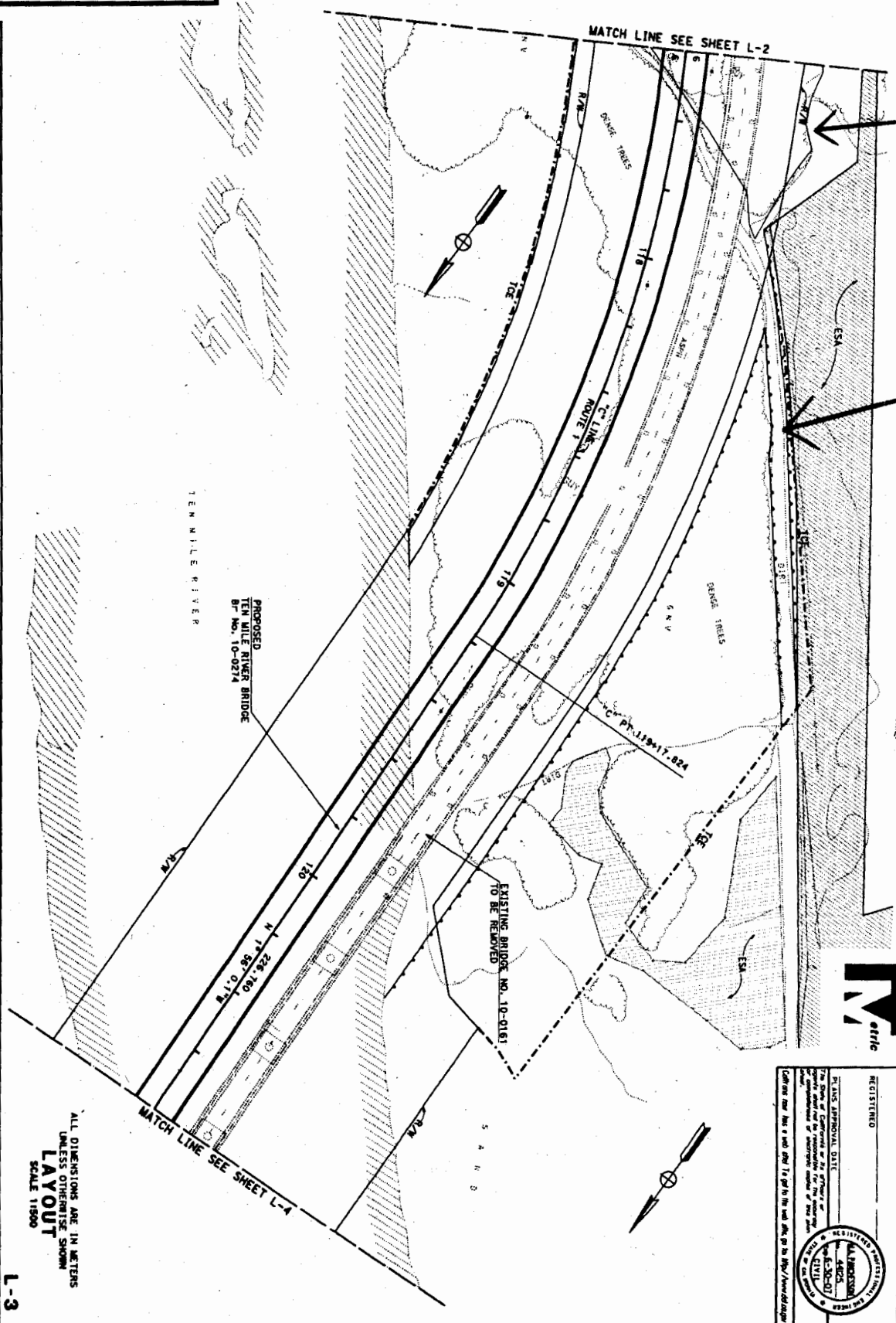
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DESIGNED BY
CALCULATED/

PROJECT ENGINEER
DESIGNED BY
CALCULATED/

EXHIBIT NO. 8
 APPLICATION NO.
 CC-074-05

TRANSPORTATION DEVELOPMENT	PROJECT ENGINEER M.A. PANCHESSON	CALCULATED/DESIGNED BY CHECKED BY	DATE REVISED BY DATE REVISED
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EXISTING TRAIL
 HAUL ROAD



SCALE 1:1500
 0 10 20 30 40 50 60 70 80 90 100

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 UNLESS OTHERWISE SHOWN
 LAYOUT
 SCALE 1:1500



DIST	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
01	Men	1	111.7/112.8	8	8

REGISTERED
 REGISTERED DATE
 IN THIS JURISDICTION
 M.A. PANCHESSON
 LICENSE NO. 11177
 EXPIRES 12/31/2011

CU 03 227
 EA 385701

L-3

DATE REVISED BY
 DATE REVISION
 CALCULATED/DESIGNED BY
 CHECKED BY
 PROJECT ENGINEER
 M. A. PANCHESSON
 DEVELOPMENT

NOTES:

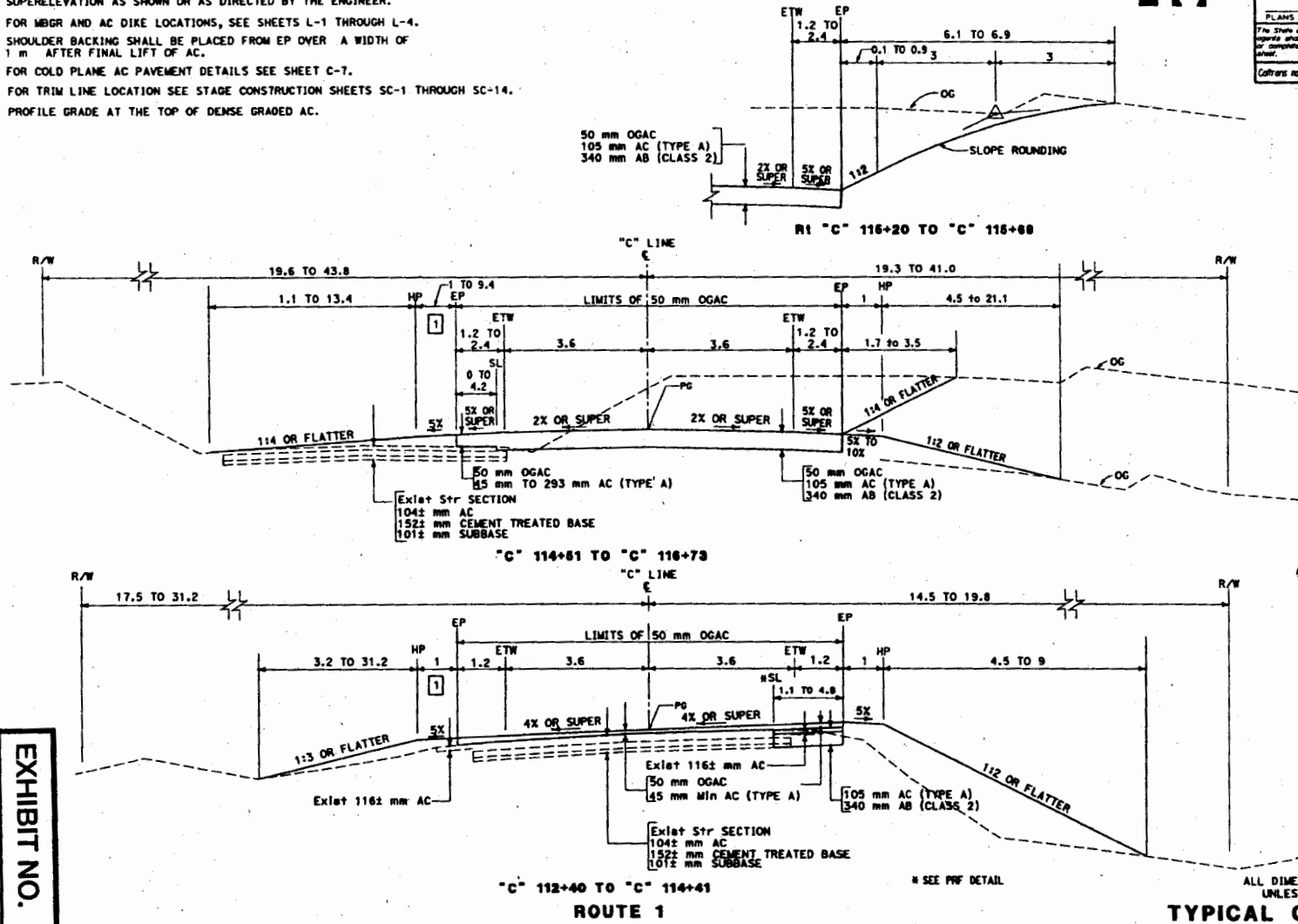
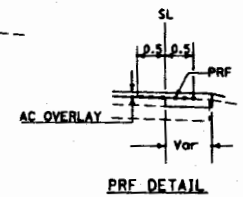
1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. FOR MBGR AND AC DIKE LOCATIONS, SEE SHEETS L-1 THROUGH L-4.
4. SHOULDER BACKING SHALL BE PLACED FROM EP OVER A WIDTH OF 1 m AFTER FINAL LIFT OF AC.
5. FOR COLD PLANE AC PAVEMENT DETAILS SEE SHEET C-7.
6. FOR TRIM LINE LOCATION SEE STAGE CONSTRUCTION SHEETS SC-1 THROUGH SC-14.
7. PROFILE GRADE AT THE TOP OF DENSE GRADED AC.



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
01	Men	1	111.7/112.8	2	
REGISTERED					
PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small> <small>Contractors shall have a web site to get to the web site, go to: http://www.dgs.ca.gov</small>					

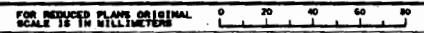
LEGEND
 1 IMPORTED MATERIAL (Shld BACKING)

ABBREVIATIONS
 Str - STRUCTURAL
 SL - SAWCUT LINE



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN
TYPICAL CROSS SECTIONS
 NO SCALE

X-1



CU 03 227 EA 385701

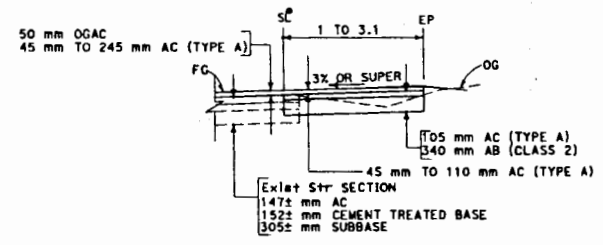
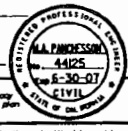
EXHIBIT NO. 10
 APPLICATION NO.
 CC-074-05

REVISOR: _____ DATE: _____
 CHECKED BY: _____
 PROJECT ENGINEER: M.A. PANCHESSON
 TRANSPORTATION DEVELOPMENT

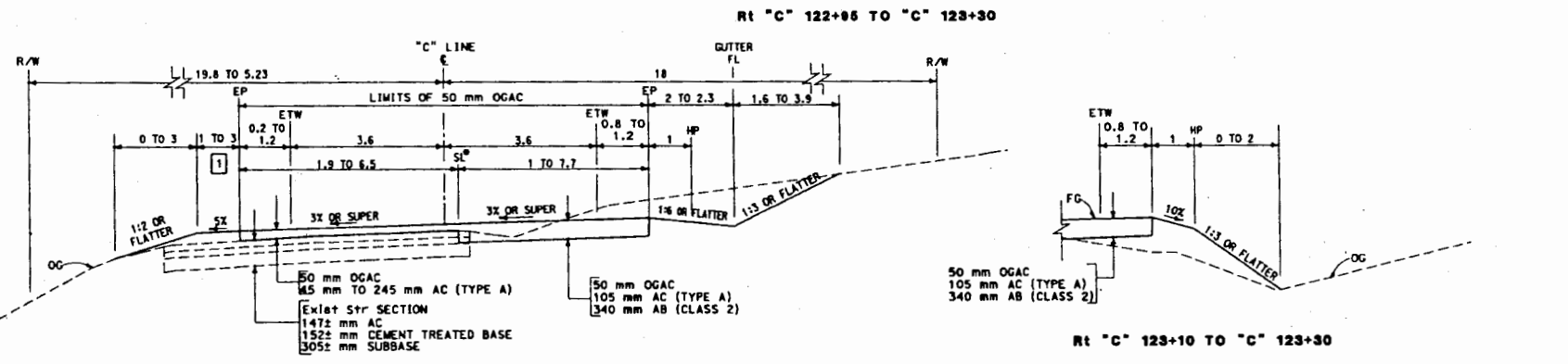


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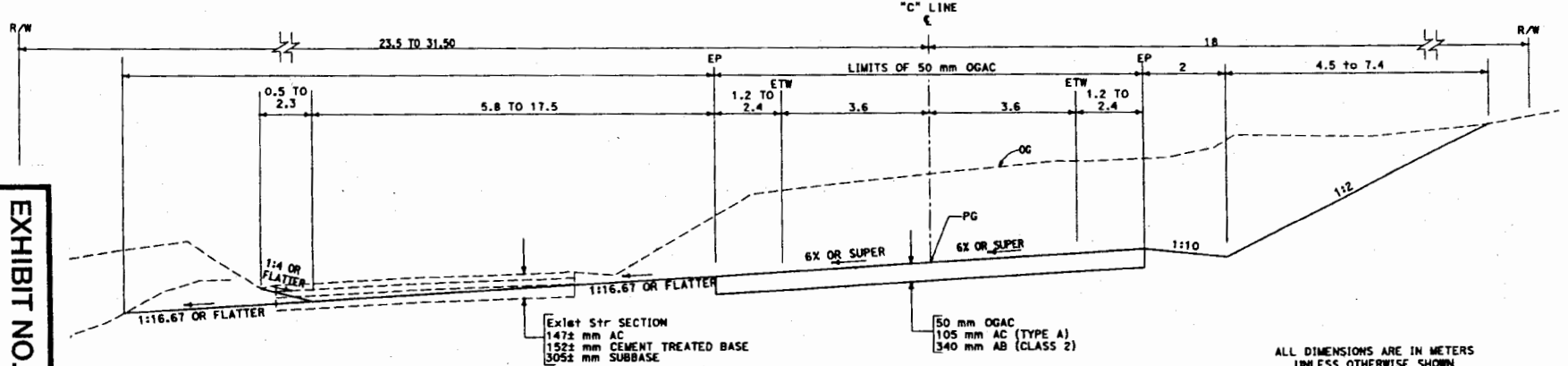
REGISTERED
 PLANS APPROVAL DATE: _____
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* SEE PRF DETAIL Sht X-1



"C" 122+80.758 TO "C" 123+30



"C" 121+30 TO "C" 122+40
ROUTE 1

ALL DIMENSIONS ARE IN METERS
 UNLESS OTHERWISE SHOWN
TYPICAL CROSS SECTIONS
 NO SCALE

X-2

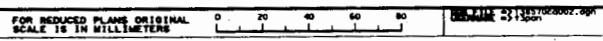


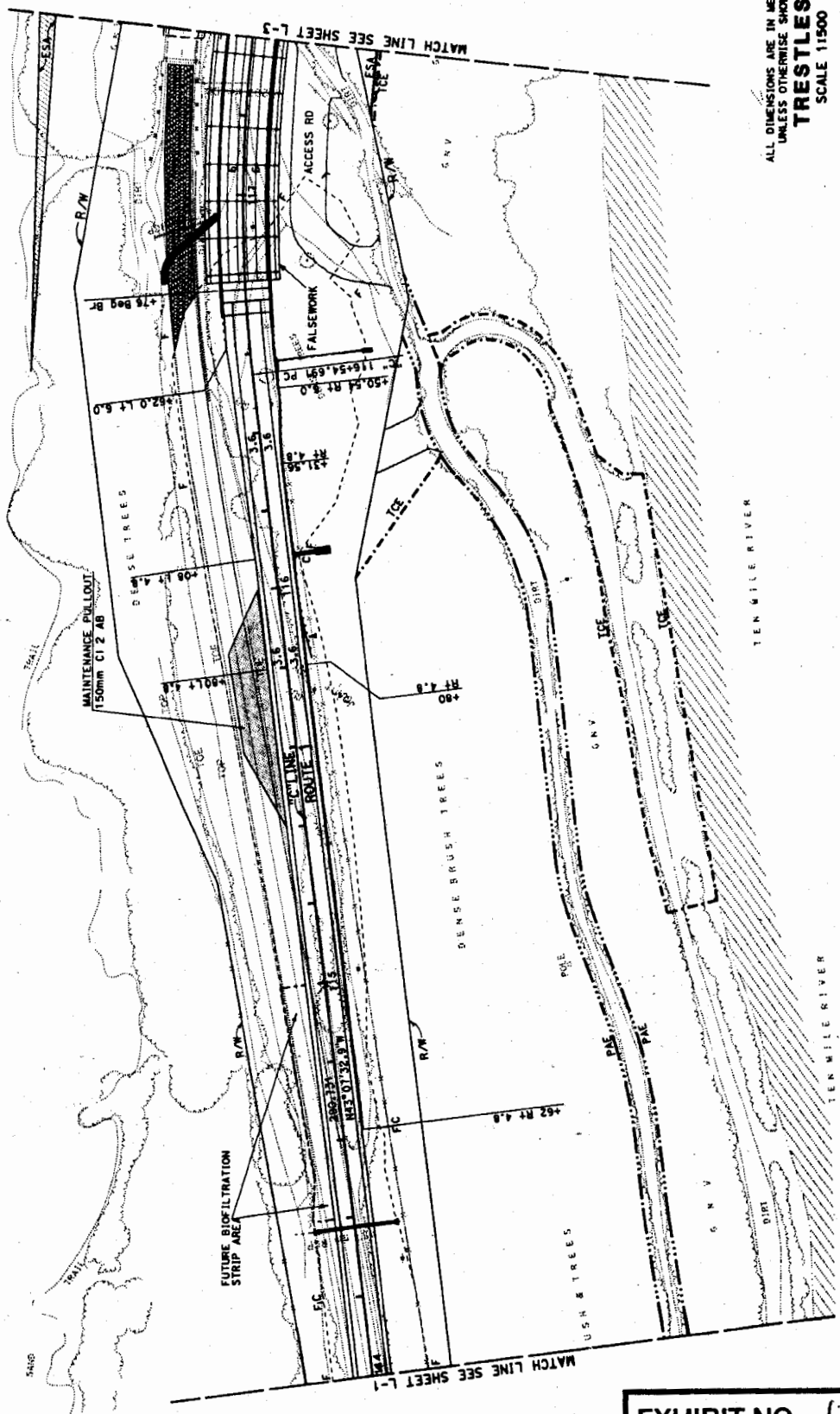
EXHIBIT NO. 11
 APPLICATION NO. CC-074-05

DIST	COUNTY	ROUTE	STATIONING	PROJECT NO.	SHEET NO.
01	Men	1	111.7/112.8	7	7



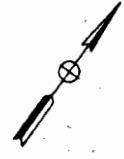
Rows of Falsework and Trestle piles shown are generally spaced at 9 meters longitudinally and spaced 2.4 meters transversely.

Falsework and Trestles shown are possible designs. They are shown with smaller or larger diameter piles which will affect the pile spacing, span lengths (stringers and girders) and ultimate footprint.



ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN
TRESTLES
SCALE 1:1500

T-1



FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

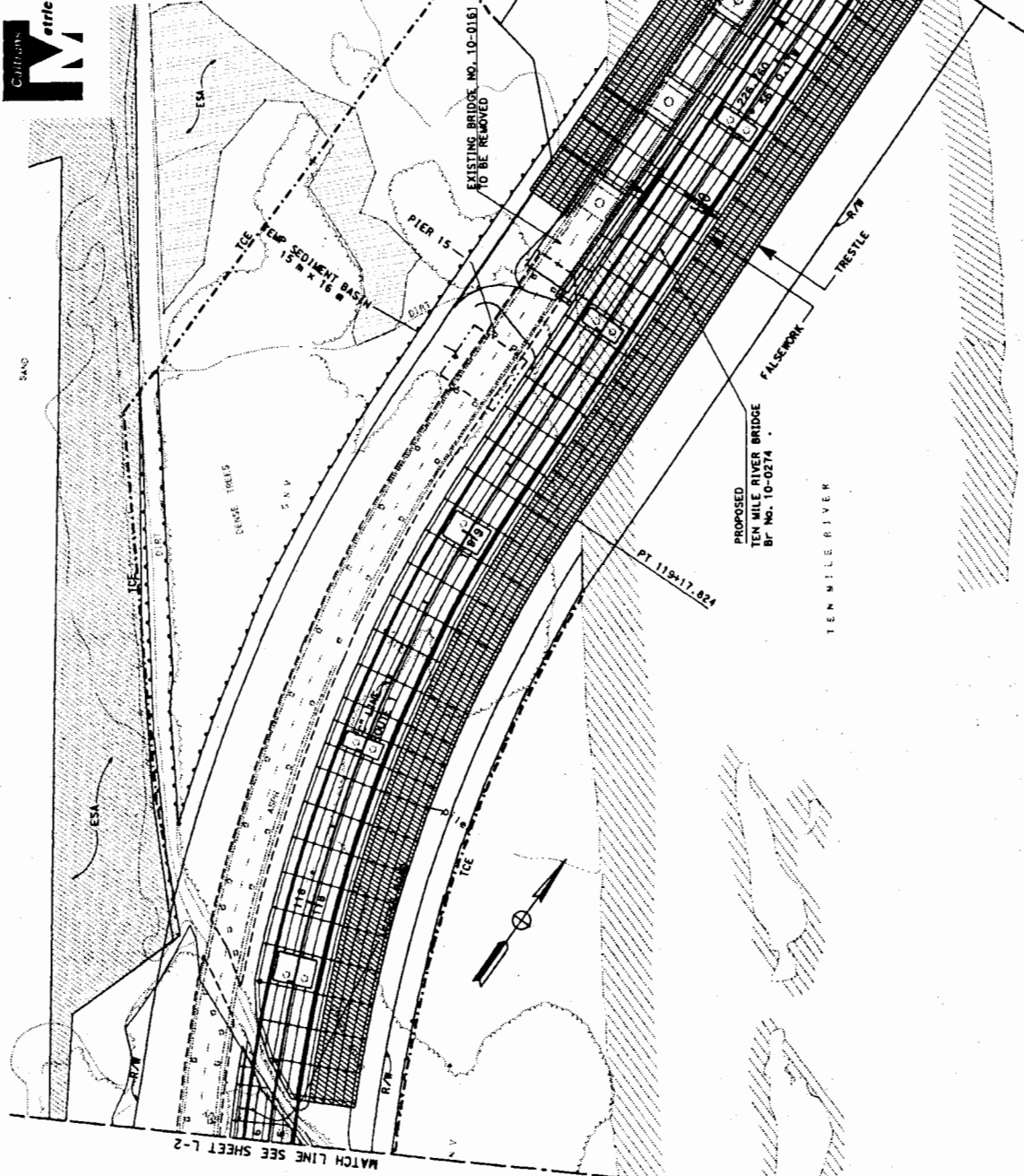
CU 03 227

EA 345701

EXHIBIT NO. 12
APPLICATION NO.
CC-074-05

DATE	REVISD BY	DATE	REVISD BY
DEVELOPMENT	DESIGNED BY	CHECKED BY	DATE REVISD BY
PROJECT ENGINEER	M.A. PANCHESSON		

DIST	COUNTY	ROUTE	SECTION	POST MILE	SHEET NO.	TOTAL SHEETS
01	Metn			111.7/112.8	8	
REGISTERED						
PLANUS APPROVAL DATE The State of California, or the officers or employees thereof, are not responsible for the accuracy or completeness of information contained in this plan.						
Contact the user's local office for information on this office's website.						



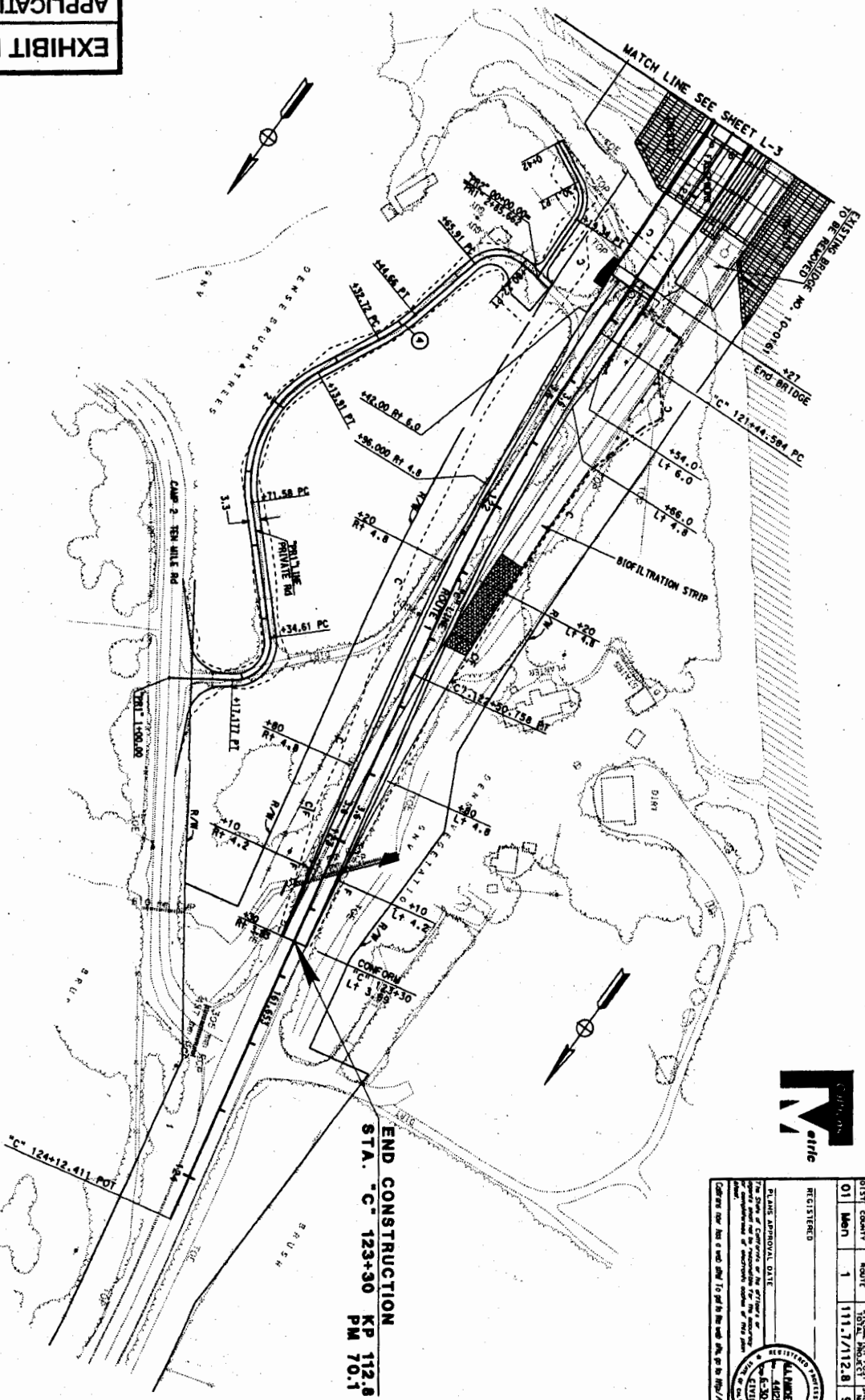
ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN
TRESTLES
SCALE 1:1500

DATE	REVISD BY	DATE	REVISD BY
DESIGNED BY		CHECKED BY	
PROJECT ENGINEER		M.A. PANCHESSON	
DEVELOPMENT			
OF TRANSPORTATION			

EXHIBIT NO. 13
APPLICATION NO.
CC-074-05

CC-074-05
 APPLICATION NO.
 EXHIBIT NO. 14

TRANSPORTATION DEVELOPMENT	PROJECT ENGINEER M.A. PANCHESSON	CALCULATED/DESIGNED BY	DATE	REVISED BY
		CHECKED BY		DATE REVISED



SCALE 1:500
 0 10 20 30 40 50 60 70 80 90 100

ALL DIMENSIONS ARE IN METERS
 UNLESS OTHERWISE SHOWN
TRESTLES
 SCALE 1:500

END CONSTRUCTION
 STA. C° 123+30 KP 112.8
 PM 70.1



01ST COUNTY	ROUTE	1102M 100.00 FT	SHEET NO.	100.00
01 Mon	1	111.7/112.8	9	

REGISTERED

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER

EX-30-01

1111 5000 1111 5000 1111 5000 1111 5000

CU 03 227
 EA 395701

T-3

ATTACHMENT #2: Fort Bragg Quadrangle Map (39123-D7-TF-024)

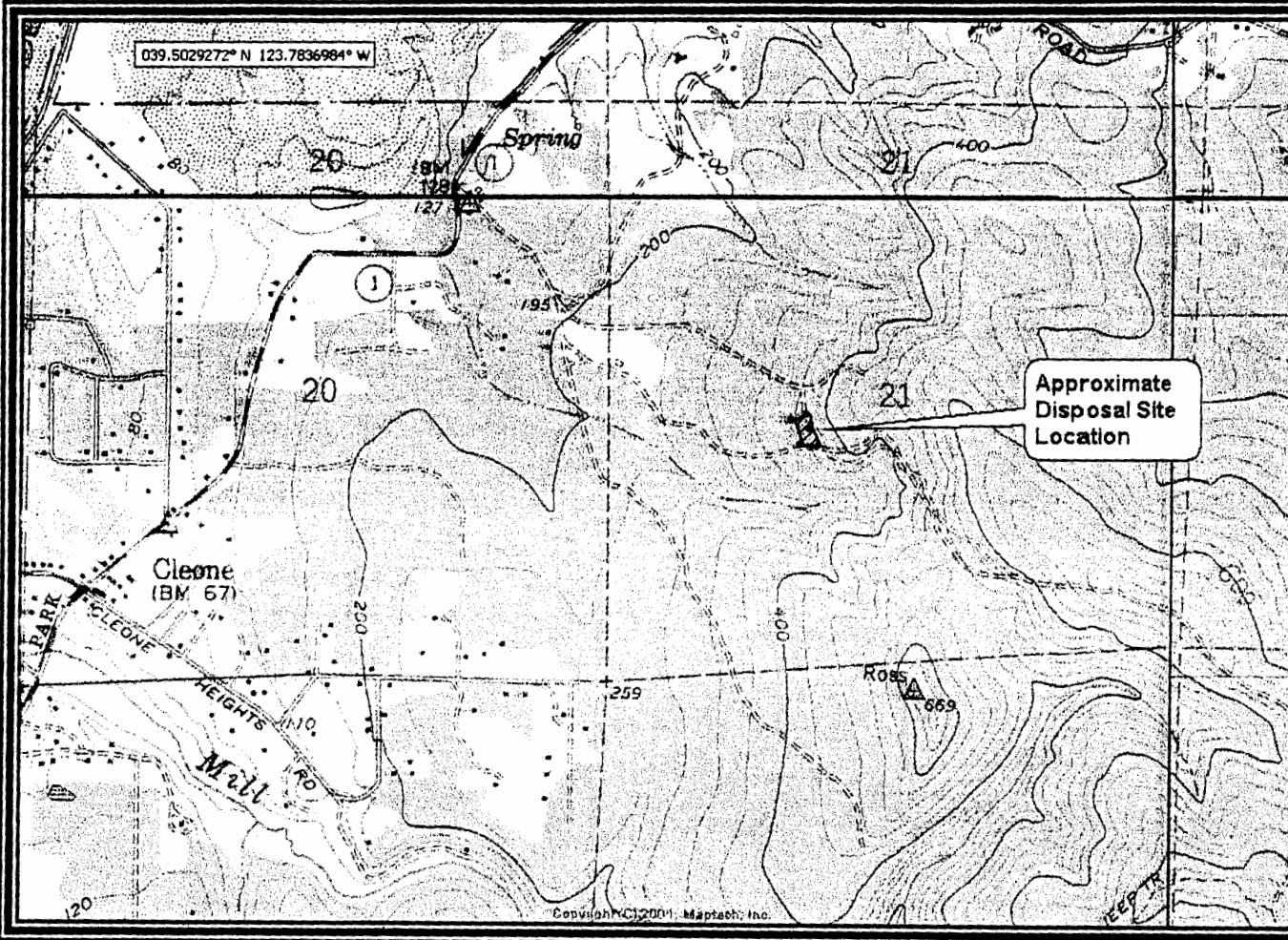


EXHIBIT NO. 15
APPLICATION NO.
CC-074-05

Larry Simon

From: Vince Taylor [vtaylor@mcn.org]
Sent: Tuesday, September 06, 2005 4:38 PM
To: Larry Simon
Subject: Re: Bridge Railings and 10-Mile Bridge

Dear Larry,

Attached is testimony that I prepared for the Greenwood Bridge permit hearing in Eureka. All of the information, citations, and argument that I make in it are equally relevant to the 10 Mile Bridge.

I hope that the Commission in Eureka will support my recommendations and set a precedent that would apply to the 10 Mile Bridge.

Welcome your comments.

I have avoided commenting directly on the ST-20 railing, because I hope it will not be used. As you will see in my testimony, I argue for a different railing approach entirely. Where a combination auto-bicycle rail makes sense (not on Hwy 1 rural bridges, in my view), a much more elegant and transparent railing could be designed. A starting place would be to reduce the height to a more reasonable figure.

For you who are interested in bicycle railings and the "required" 54" height for California bicycle railings, below are two links to a very interesting analysis that was published as a report of the NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP). The NCHRP is the technical source for most of the policies adopted by AASHTO -- the body that set the current standard adhered to by Caltrans. The study reviews the history of the standard and finds that the 54" height was set without any scientific basis.

The report recommends that the standard height for bicycle protection should be 48", with exceptions for certain dangerous situations. The 48" height would significantly improve views and aesthetics for bicyclists and pedestrians near the railings. It would also improve the prospect of designing an aesthetically pleasing combination auto-pedestrian-bicycle barrier. The 54" ST-20 looks a lot like a cattle-guard gate, with 5 horizontal rails -- not what I would want to see on my bicycle route!

[http://cms.transportation.org/sites/design/docs/Bike%20Rail%20Height,%20NCHRP%2020-7\(168\)%20Final%20Report.pdf](http://cms.transportation.org/sites/design/docs/Bike%20Rail%20Height,%20NCHRP%2020-7(168)%20Final%20Report.pdf)

[http://cms.transportation.org/sites/design/docs/Bike%20Rail%20Height,%20NCHRP%2020-7\(168\)%20Final%20Report.pdf](http://cms.transportation.org/sites/design/docs/Bike%20Rail%20Height,%20NCHRP%2020-7(168)%20Final%20Report.pdf)

st,

ice

EXHIBIT NO. 16

APPLICATION NO.

CC-074-05



Dharma Cloud Foundation

PO Box 1066
Mendocino, CA 95460

September 6, 2005

Items 13c and 14a,
September 15, 2005:
Propose Amendments

California Coastal Commission
Att.: Melanie Faust
710 E Street, Suite 200
Eureka, California 95501

**Re.: Coastal permit application for the replacement of the Greenwood Bridge,
Mendocino County, # 1-05-036 and A-1-MEN-04-036**

Dear Commissioners:

The proposal by Caltrans to construct the replacement for the Greenwood Bridge with 1) no sidewalk, 2), the ST-20 railing 3) and 8' shoulders should be amended.

Recommendations

The Commission should:

1. Require that a sidewalk be installed on the bridge;
2. Require that pedestrians be protected from the traffic by placing the ST-10 railing used on the Noyo Bridge on the traffic side of the sidewalk;
3. Require use of a newly designed pedestrian railing incorporating curved and arched elements found in the historic bridges of Hwy 1, as officially recommended by the Commission to Caltrans in 2001; and
4. Require that the shoulder width be narrowed from 8' to 4'.

Reasons and Documentation

Why a sidewalk?

The lack of sidewalks goes against the commission's support for the California coastal trail. This bridge will be part of coastal trail and should provide for safe pedestrian use.

The Greenwood Bridge is near the town of Elk and is used by local citizens. Lack of a sidewalk endangers pedestrians.

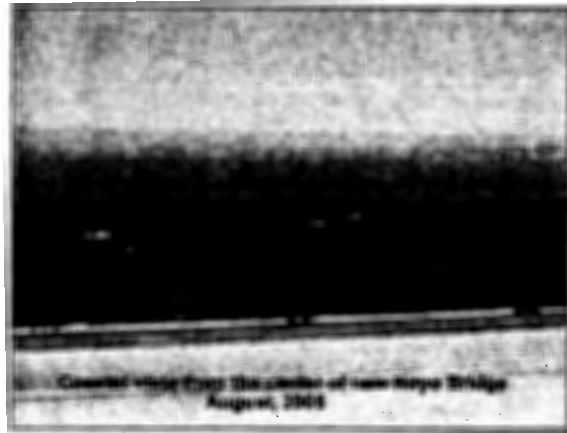
Why a two-rail system with the ST-10?

1. National safety standards (the "AASHTO" standards) subscribed to by California say that pedestrians on bridges shall be protected from vehicles when the highway is designed for high speeds (50 MPH or greater). This protection requires a traffic barrier on the traffic side of the sidewalk.

The Greenwood bridge, with its 11-degree banking slope, is designed for vehicle transit greater than 50 MPH.

Because the bridge will be occupied by pedestrians, the proposed use of a combination vehicle-pedestrian-bicycle rail, the ST-20, on the Greenwood Bridge is contrary to AASHTO standards. The AASHTO standards limit use of a combination vehicle-pedestrian rail placed on the outer edge of a bridge, "to roads designated for 45 MPH or less."¹ Another ASHTO document says, "For speeds of 50 MPH or greater, pedestrians should be protected by a separation traffic barrier."²

2. The AASHTO standards for pedestrian protection can be met by using the two-rail system so successfully employed on the new Noyo Bridge. The inner rail is an ST-10, which has a low height and good visual transparency.
3. The use of an inner rail, together with a 4' shoulder to be used by bicycles, will allow the outer rail to be a pedestrian railing. This will greatly improve scenic viewing and bridge aesthetics.



Why a newly designed railing?

1. A new pedestrian railing needs to be designed for coastal bridges. **The ST-20 railing proposed by Caltrans fails to embody the recommendations the Commission made to Caltrans in June, 2001.³ The ST-20 railing need not and should not be used on any bridges in the coastal zone.**



The 2001 recommendations of the commission were based on the work and advice of the commission's "Railing Subcommittee," established in

December 1999. The subcommittee met numerous times with Caltrans and received advice from the public. Two of the key commission recommendations were:

- **Curved and arched elements should be explored, in order to make the rail design as graceful and attractive as possible.**
- **Because of the loss of many historic and attractive bridges throughout California, a new rail design should seek to incorporate elements of historic bridges where consistent with modern safety standards.⁴**

A pedestrian railing could easily incorporate curved arches that would reflect the arches that were incorporated into railings of the historic arched, concrete

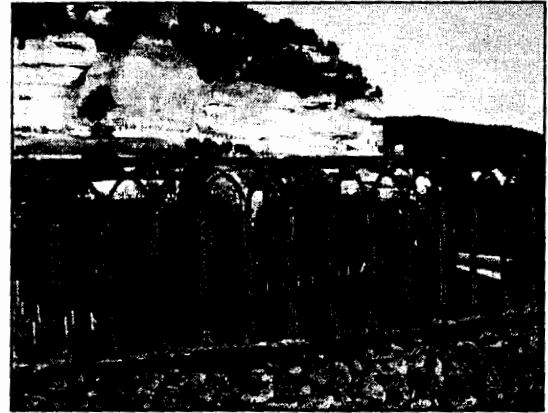
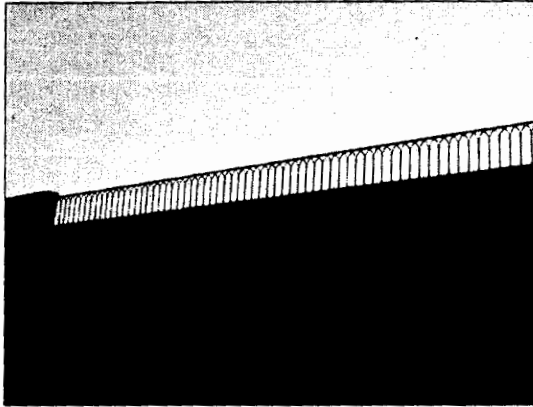
¹ AASHTO LRFD Bridge Design Specifications, Chapter 13, Section C13.7.1.1, p. 13-6, American Association of State Highway and Transportation Officials, 1998

² A Policy on Geometric Design of Highways and Streets, AASTO (1990), cited in *ibid*, p. 13-6.

³ Letter to Caltrans Director Jeff Morales from Sara Wan, Commission Chair, June 29, 2001.

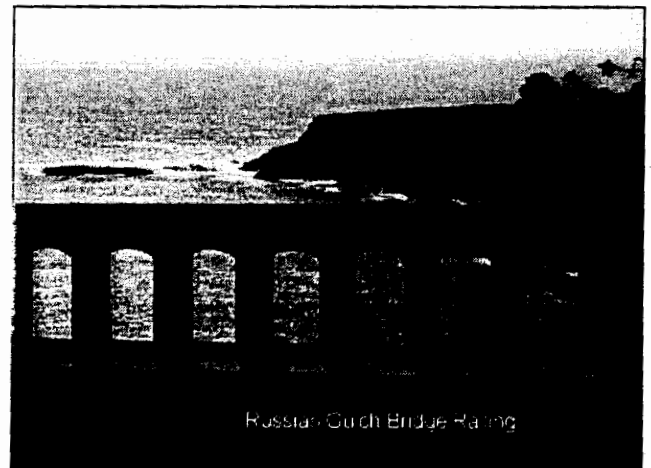
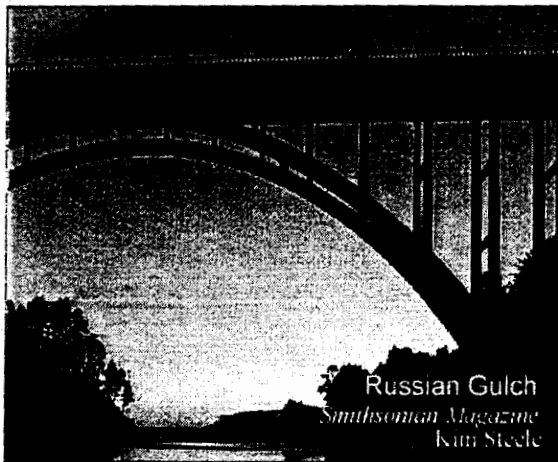
⁴ *Ibid*.

bridges of Highway 1. They would provide a link to the historic past. They would provide a feeling of tradition, as well as aesthetic beauty. Examples of such railings are shown below.



These railings are on bridges in France and are of cast iron. Alternative materials could be used, although cast iron would be structurally adequate for pedestrian railings.

The original Hwy 1 bridges have arched designs and arches in the railings, as shown in the photos below of the Russian Gulch Bridge in Mendocino.



Why narrow the shoulder width?

1. The 8' shoulders proposed for the bridge are contrary to the Coastal Zone Act of 1976, which requires that "...Route 1 in the rural areas of the Coastal Zone remain a scenic two lane road."⁵
2. Eight-foot shoulders would make the bridge width exceed the maximum highway width specified in the Coastal Act and the Local Coastal Plan of Mendocino County. Caltrans *Route Concept Report Route 1 Corridor* in

⁵ 1976 Coastal Zone Act, Section 30254.

Mendocino County states: "Widening Route 1 to beyond 9.6 meters (32'), in rural areas would be inconsistent with the Coastal Act and the Local Coastal Plan of Mendocino County."⁶ The bridge as proposed would be 40'.

Reducing the shoulders to 4' would put the bridge at the width limit of the Coastal Act and the Mendocino Local Coastal Plan.

3. Narrowing the shoulder would provide room for a sidewalk without widening the bridge beyond the proposed width. The sidewalk with an inner barrier would provide safe pedestrian use.
4. A narrower shoulder would help slow down traffic on its approach to the village of Elk, a rural community that has Hwy 1 as its only main thoroughfare.
5. The proposed shoulders would be 60 percent as wide as the traffic lanes. They would make the bridge more like a high-speed expressway than a "scenic two lane road."
6. A narrower shoulder would still be wide enough to provide safe bridge transit for bicyclists.
7. A narrower shoulder would better match the almost non-existent shoulders on most of Hwy 1.
8. Eight-foot shoulders are suited to high-speed urban roads. They are completely inappropriate for rural sections of historic Hwy 1. They are out of character with the Hwy 1's rural, scenic character.
9. The widening of the shoulders for the bridge approach contradicts another Caltrans policy: avoiding variations in highway width – a policy cited by Caltrans in justifying 8' shoulders on the Noyo Bridge.
10. Eight-foot shoulders on the bridge would be inconsistent with the remainder of Hwy 1. Hwy 1 has almost non-existent shoulders throughout most of Mendocino County. The shoulders will be as wide as they are on the bridge approach only because Caltrans plans to widen the approaches for this small section.
11. Given the overall dangers of driving on Hwy 1, the incremental improvement in safety from a few hundred feet of 8' rather than 4' shoulders would be insignificant.

Why ignore Caltrans safety arguments?

Caltrans will argue that 8' shoulders are its design standard, based on safety considerations. The commission should not accept this argument.

1. **There are no "absolute safety standards" that must be met, regardless of other considerations.** National and state design standards give Caltrans wide latitude to accommodate special situations. Preserving scenic values is widely recognized as an important reason to use this flexibility. In passing the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, Congress emphasized, in addition to safety, the importance of transportation design that is

⁶ *Route Concept Report Route 1 Corridor*, Caltrans District 1, September 2003. In support of the 32' limit, this quotation cites: *Mendocino County General Plan*, Coastal Element, adopted August 17, 1983, p.107, section 3.8-6.

sensitive to its surrounding environment, especially in historic and scenic areas.⁷

Caltrans has total authority to make exceptions to any of its design standards when the project is not part of the interstate highway system.

Caltrans recognizes that design standards will not always be met. It devotes an entire chapter of its *Project Development Procedures Manual* to exceptions, and a section to "Exceptions to Mandatory Design Standards."⁸

Obtaining an exception on a project is straightforward. The reasons for exceptions must be documented, and the request must be approved by the Project Manager and the Design and Local Programs Program (DLPP) office. The DLLP authority has been delegated to local district coordinators, who provide the highest level of approval for design exceptions.⁹

2. **Caltrans has made an exception to its current design standard of 8' bridge shoulders on at least one other project.** Highway 150 in District 5 had two bridges replaced recently. The bridges were designed originally with 8' shoulders, but after Santa Barbara agencies opposed the width, Caltrans narrowed the shoulder width on these bridges to 4'. These bridges have now been built (on an emergency basis) with the narrower shoulders.
3. **Caltrans has recently changed its standards with respect to bridge railing design, demonstrating its flexibility in design standards.** When the Commission was considering the Noyo Bridge railing, Caltrans design standards required less than 4" spacing between rails less than 32" from the surface. In response to public desires for more visually transparent railings, Caltrans has changed the required spacing to less than 6".¹⁰ The ST-20 railing has the new 6" spacing.
4. **There are no national design standards that mandate 8' shoulders for bridges.**

To the contrary, the AASHTO design standards specify, "The roadway width [of a bridge] shall generally equal the width of the approach roadway section including shoulders."¹¹ Note that this is not a rigid requirement and only a "general" guideline.

For a structure somewhat like a bridge, a highway underpass, AASHTO standards require only minimum 2' shoulders.¹²

5. Caltrans disregards national standards when it suits its purposes. The approach to the proposed Greenwood Bridge will have one 8' shoulder (on the east side) and a

⁷ *Flexibility in Highway Design*, Federal Highway Administration, Publication Number FHWA-PD-97-062.

⁸ *Project Development Procedures Manual*, CHAPTER 21 - Exceptions to Design Standards SECTION 1 - Exceptions to Mandatory Design Standards, Caltrans website: www.dot.ca.gov, 2001.

⁹ *Ibid.*

¹⁰ Roberto LaCalle, AASHTO Engineering Services Coordinator, California Department of Transportation, telephone communication, September 6, 2005.

¹¹ *Ibid.*, Chapter 2, "General Features of Design," Section 2.3.1, p. 8.

¹² *Ibid.*, Section 2.4.1.

4' shoulder on the west side. AASHTO design standards specify, "**The roadway width [of a bridge] shall generally equal the width of the approach roadway section including shoulders.**" However, on the west side, the width of the bridge shoulder will be twice that of the approach shoulder.

6. A safety argument is not supported by Caltrans shoulder treatment in other, far more dangerous situations. Numerous 8+-lane freeway segments do not have an inner shoulder. I recall when Caltrans converted the inner shoulder to a traffic lane on congested high-speed L.A. freeways.

Conclusion

The Greenwood Bridge will set a precedent for future bridges to be constructed by Caltrans on Hwy 1.

The commission should set standards that reflect previously expressed commission concerns and recommendations. The commission should:

- Require a sidewalk to protect pedestrians and further the coastal trail.
- Require use of a two-rail system to protect pedestrians and to provide for optimal railing aesthetics and motorist views.
- Require use of a newly designed scenic pedestrian rail acceptable to the commission. The two-rail system with an outer pedestrian rail will provide wide latitude for designing a rail incorporating curves, arches, and historical elements.

Sincerely,

Vince Taylor, Ph.D.
Executive Director

Larry Simon

From: Judith Vidaver [indigoa@mcn.org]
Sent: Thursday, August 11, 2005 12:57 PM
To: pdouglas@coastal.ca.gov; Steven Croteau; ndevall@mcn.org; indigoa@mcn.org
Cc: mfaust@coastal.ca.gov; lsimon@coastal.ca.gov
Subject: Ten Mile Bridge

FRIENDS OF THE TEN MILE COMMENTS RE CALTRANS/COASTAL COMMISSION DISCUSSION
RE TEN MILE BRIDGE submitted by Judith Vidaver

We (FOTTM) would like to weigh in on the current discussion re width of shoulders and overall width of bridge.

We are in favor of any reduction in width as 40 ft. does seem excessive and out of character with the highly scenic designation.

8' shoulders are inconsistent w/ the LCP-- we can't find anywhere that 4' shoulders are a minimum--if that were the case almost all of HWY 1 in Mendocino would be in violation.

Re safety of 8' shoulders we are concerned that they would be used as passing lanes--as they are almost everywhere in this area--increasing risk of collisions.

Reducing overall width would off-set negative visual impact of bigger bridge, shorten construction time, reduce cost. As well as possibly avoid negative impacts to rare Horkelia marenensis recently found w/in 50' of project on NE side.

If there is to be no reduction in width we question if a pedestrian walkway is worth holding up construction given escalating costs--except for the issue of 8' shoulders being used for passing.

RE OVER-ALL DESIGN

While we are happy the new bridge will follow the existing bridge alignment, none of our members are completely thrilled w/ the design. Most complaints have to do with its massiveness, followed by concerns re visibility through the proposed rails and the 52' high bike barrier. I personally hate the 'haunch' design, but am resigned to it since CalTrans explained it reduces the thickness

Re PUBLIC ACCESS

While the LCP does encourage development of public access to the river via the CalTrans 'mixing table', CalTrans has opted not to provide access at that point. Besides things have changed since the LCP was adopted, specifically:

The establishment of the Natural Dune Preserve precludes extensive public use. When DPR tried to get approval for a parking lot, trail-head and improved coastal trail, they were denied by USFWS because of negative impacts to the protected species.

DPR has yet to come up with a management plan for the Preserve and recommending increased public access at this time is premature.

When the time comes for this discussion FOTTM will also want to see visual analyses of the impacts--including glare--on the highly scenic area of numbers of cars parked on the west side of the bridge.

Additionally, given that the road dips down at the south end of the bridge--compromising visibility-- the safety of a parking lot there must

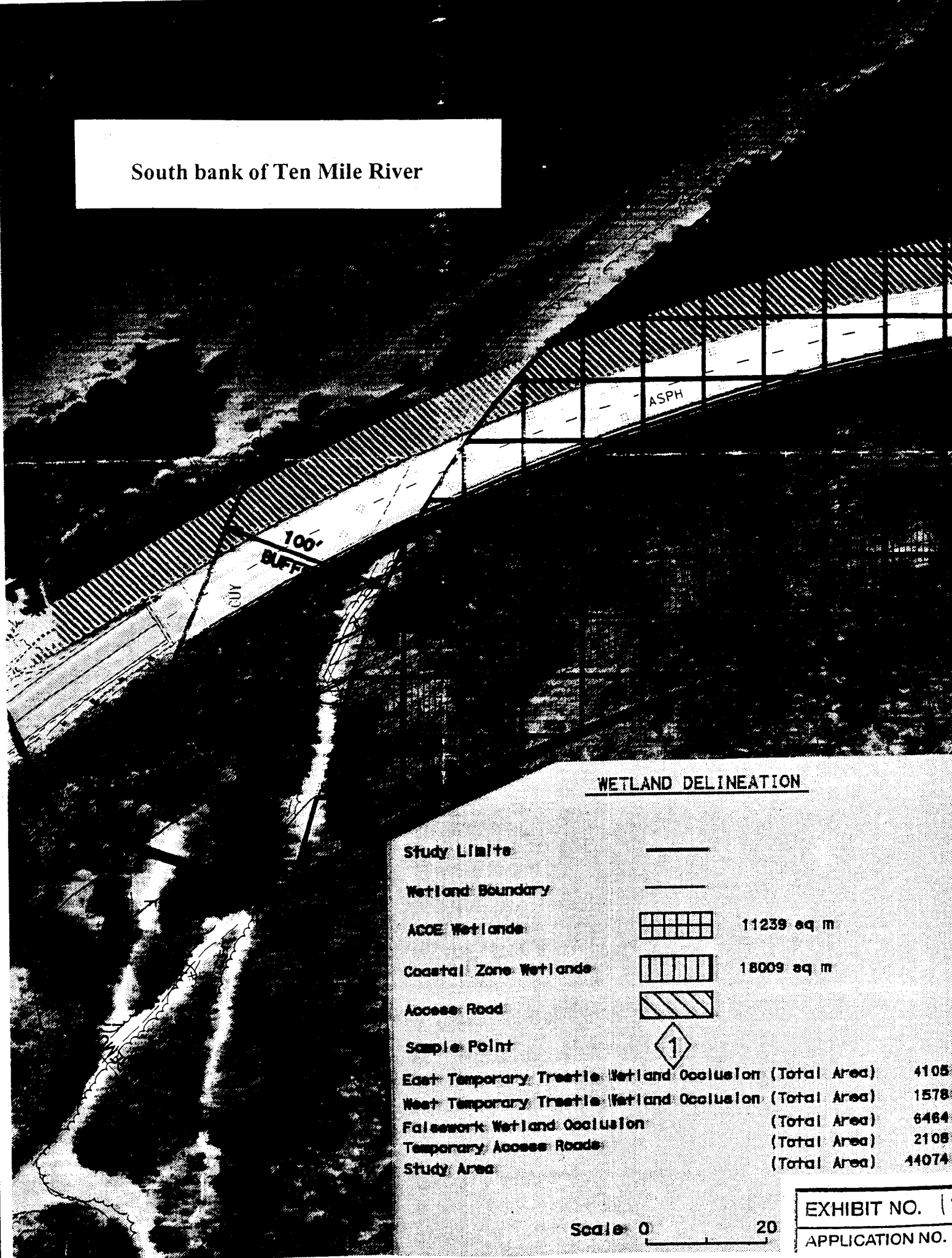
EXHIBIT NO. 17
APPLICATION NO.
CC-074-05

be carefully evaluated.







For all of these reasons and because resolving the controversial public access issue could delay approval of the project, we were told by CalTrans at the public meeting before last that public access would not arise until after the bridge was completed. Given this project has dragged on for so long already and that biological constraints limit work time and construction costs are mounting daily, FOTTM does not believe further delay to be productive--unless it would reduce the over-all size of the project.

FOTTM further would oppose any effort to limit or circumvent public and agency review of this project.

South bank of Ten Mile River



WETLAND DELINEATION

Study Limits		
Wetland Boundary		
ACOE Wetlands		11239 sq m
Coastal Zone Wetlands		18009 sq m
Access Road		
Sample Point		
East Temporary Treatise Wetland Occlusion (Total Area)		4105
West Temporary Treatise Wetland Occlusion (Total Area)		1578
Falswork Wetland Occlusion (Total Area)		6464
Temporary Access Roads (Total Area)		2108
Study Area (Total Area)		44074

Scale 0 20

EXHIBIT NO. ()
APPLICATION NO.

UPLAND

South Bank and Ten Mile River



WETLAND DELINEATION

Study Limits



Wetland Boundary



ACOE Wetlands



11239 sq m

Coastal Zone Wetlands



18009 sq m

Access Road



Sample Point



East Temporary Treefall Wetland Occlusion (Total Area) 4105 sq m

West Temporary Treefall Wetland Occlusion (Total Area) 1578 sq m

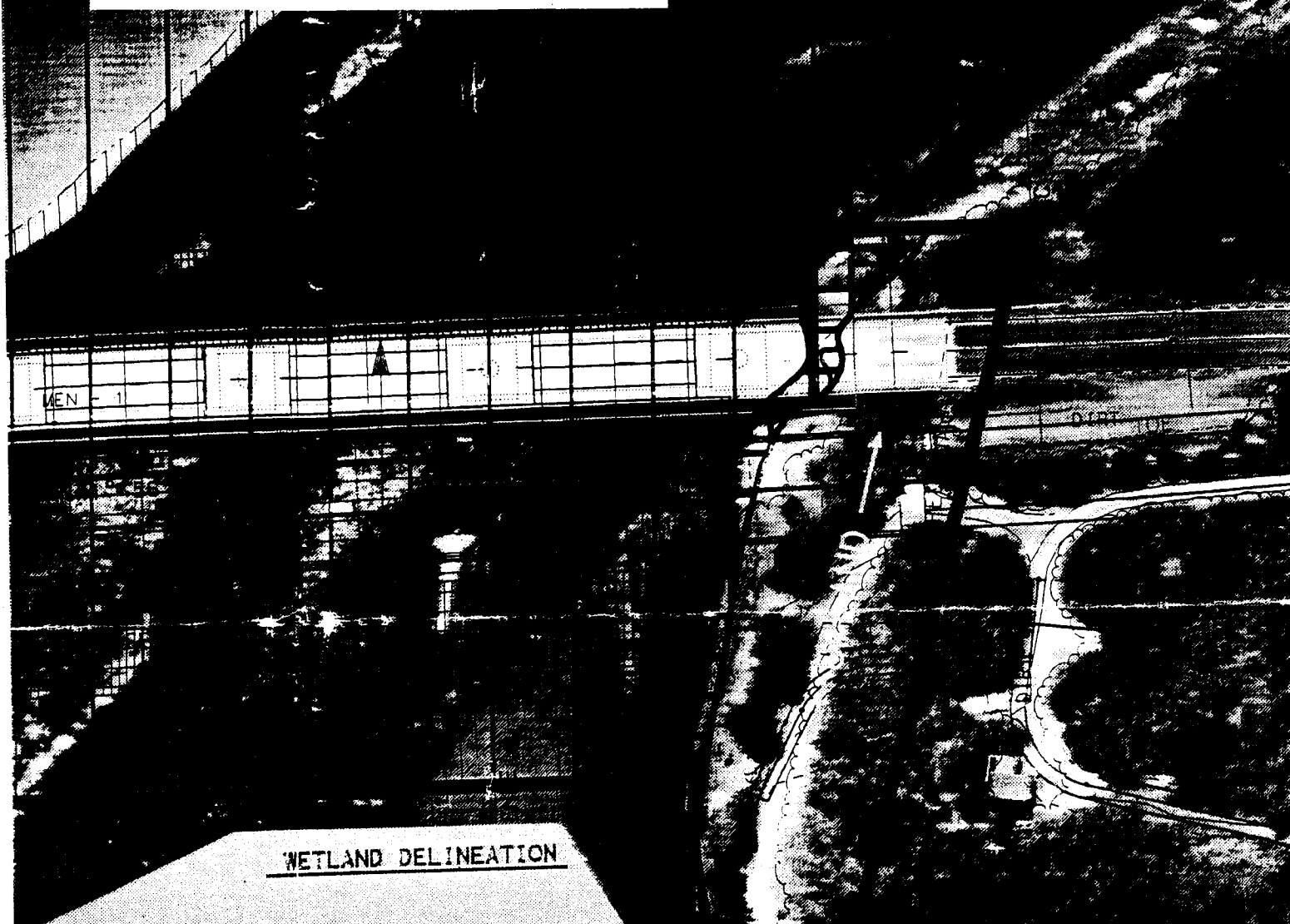
Falsework Wetland Occlusion (Total Area) 6464 sq m

Temporary Access Roads (Total Area) 2108 sq m

Study Area (Total Area) 44074 sq m

EX-13, CONT.

Ten Mile River and North Bank



WETLAND DELINEATION

Study Limits



Wetland Boundary



ACOE Wetlands



11239 sq m

Coastal Zone Wetlands



18009 sq m

Access Road



Sample Point



East Temporary Treatise Wetland Occlusion (Total Area) 4105 sq m

West Temporary Treatise Wetland Occlusion (Total Area) 1578 sq m

Falsework Wetland Occlusion (Total Area) 6464 sq m

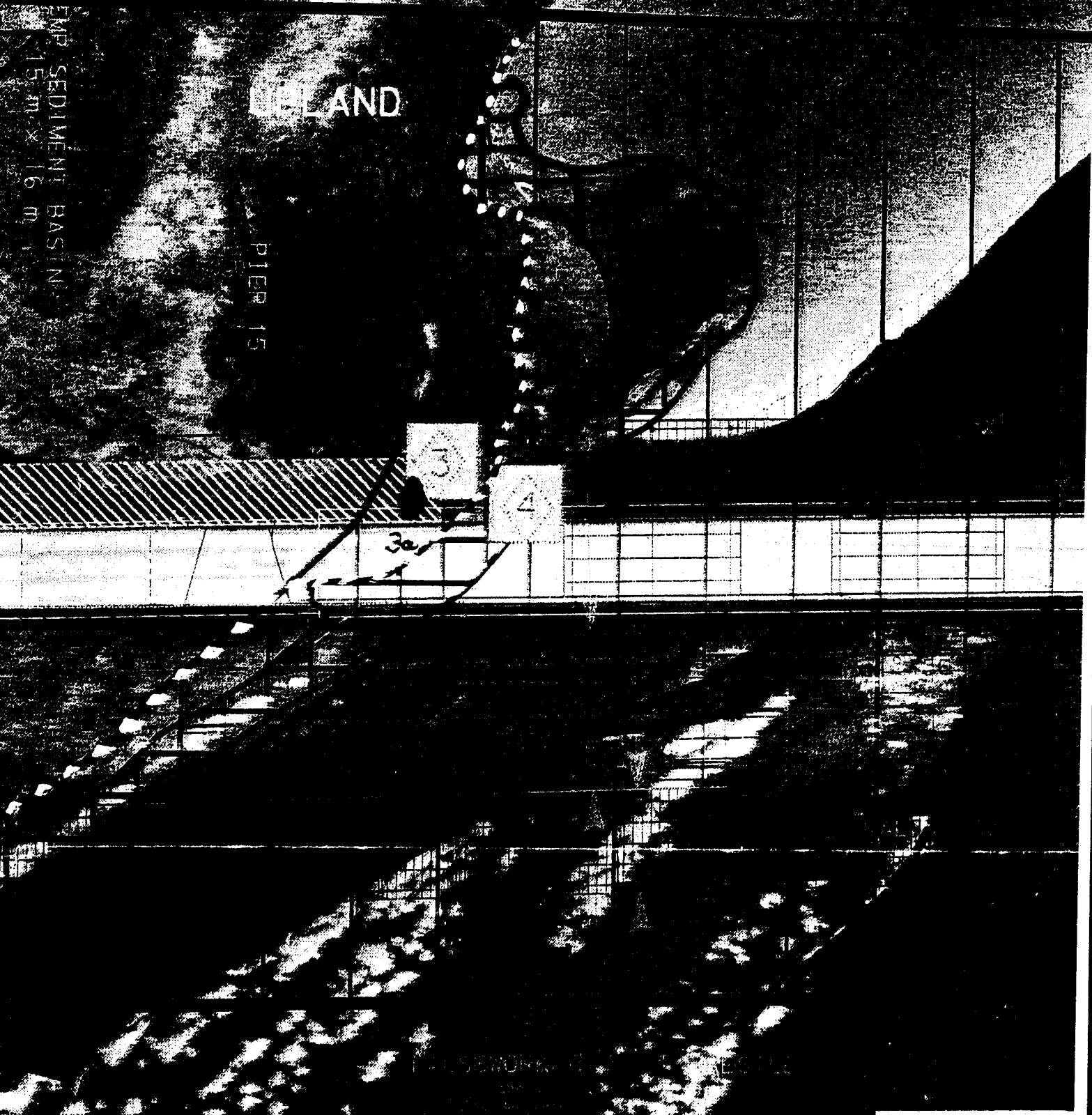
Temporary Access Roads (Total Area) 2108 sq m

Study Area (Total Area) 14074 sq m

Scale 0 20

EX-18 CONT

Eelgrass Beds along South Bank of Ten Mile River



DELINEATION

ACOE Section 10 Water

Eelgrass



EXHIBIT NO. 19

APPLICATION NO.

CC-074-05

Eelgrass beds along North Bank of Ten Mile River

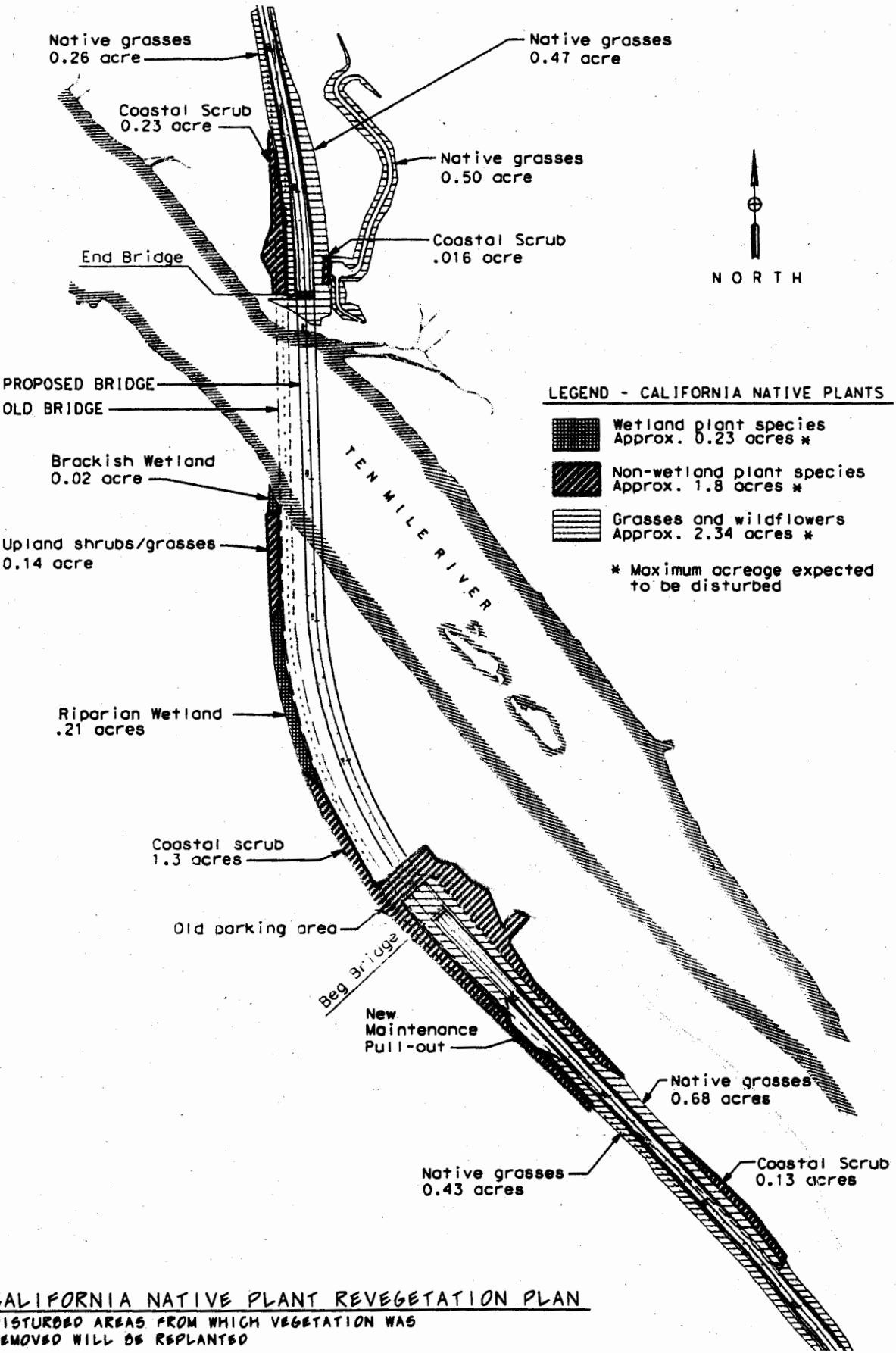


Eelgrass



EX-19 CONT.

PACIFIC OCEAN



CALIFORNIA NATIVE PLANT REVEGETATION PLAN

DISTURBED AREAS FROM WHICH VEGETATION WAS REMOVED WILL BE REPLANTED

TEN MILE RIVER BRIDGE SEISMIC RETROFIT PROJECT

NO SCALE

SEPTEMBER 14, 2005



EXHIBIT NO. 20
APPLICATION NO.
CC-074-05

**PLANT PALETTE FOR NATIVE REVEGETATION
CALIFORNIA NATIVE PLANTS**

Brackish Wetland plant species						
<u>Botanical Name</u>	<u>Common name</u>	<u>No. of plants to install</u>	<u>Spacing</u>	<u>Suppliers</u>	<u>Pot sizes available</u>	
Carex lyngbyei	Lyngbye'sSedge	60	3'-0" o.c.	on site	transplant plugs	
Juncus leusueurii	Salt Rush	75	3'-0" o.c.	FF,NC	BR,SC,Lch	

Riparian Wetland plant species						
<u>Botanical Name</u>	<u>Common name</u>	<u>No. of plants to install</u>	<u>Spacing</u>	<u>Suppliers</u>	<u>Pot sizes available</u>	
Artemisia douglasiana	Mugwort	95	3'-0" o.c.	FF,NC	4",1g	
Carex obnupta	Slough Sedge	105	3'-0" o.c.	FF	BR,SC,1g	
Juncus balticus	Baltic Rush	115	3'-0" o.c.	FF,NC	BR,SC,Lch	
Lonicera involucrata	Twinberry	26	4'-0" o.c.	FF,NC	RP,DP,1g,3"	
Salix hookeri	Coastal Willow	150	3'-0" o.c.	on site	cuttings	
Scirpus microcarpus	Panicled Bullrush	85	3'-0" o.c.	FF	BR,DP,1g	

Upland shrub/grass plant species						
<u>Botanical name</u>	<u>Common name</u>	<u>No. of plants to install</u>	<u>Spacing</u>	<u>Suppliers</u>	<u>Pot sizes available</u>	
Artemisia pycnocephala	Beach sagewort	70	3'-0" o.c.	FF	RP,1g	
Baccharis pilularis	Coyote Bush	45	3'-0" o.c.	FF,NC,CF,CR	RP,TP,2",Lch,Band,Dee,1g	
Bromus carinatus	California Brome	240	1'-6" o.c.	on site	seed	
Calamagrostis koelerioides	Reed Grass	82	3'-0" o.c.	on site	seed	

Coastal Scrub plant species						
<u>Botanical name</u>	<u>Common name</u>	<u>No. of plants to install</u>	<u>Spacing</u>	<u>Suppliers</u>	<u>Pot sizes available</u>	
Baccharis pilularis	Coyote Bush	285	3'-0" o.c.	FF,NC,CF,CR	RP,TP,2",Lch,Band,Dee,1g	
Garrya elliptica	Coast Silk Tassle	60	6'-0" o.c.	FF,CF	TP,1g	
Gaultheria salal	Sala!	215	3'-0" o.c.	FF,NC	RP,1g,3"	
Heracleum lanatum	Cow Parsnip	155	4'-0" o.c.	CF	1g	
Heteromeles arbutifolia	Toyon	145	6'-0" o.c.	FF,NC	2",RP,SC,DP,1g	
Lonicera involucrata	Twinberry	315	4'-0" o.c.	FF,NC	RP,DP,1g,3"	
Mimulus aurentiaucus	Bush Monkey Flower	165	4'-0" o.c.	FF,NC,CR	RP,DP,Lch,1g,SC	
Myrica californica	California Wax Myrtle	85	8'-0" o.c.	FF,NC,CR	RP,SC,DP,1g	
Rhamnus californica	Coffeeberry	175	6'-0" o.c.	CF,CR	SC,DP,1g	
Rosa californica	Wild Rose	120	6'-0" o.c.	NC,CR	Lch,Dee,1g,SC	
Rubus parviflorus	Thimbleberry	130	4'-0" o.c.	FF,NC,CF	RP,DP,1g,Lch	
Vaccinium ovatum	Huckleberry	270	3'-0" o.c.	FF	RP,1g	

Grasses and wildflowers, hydroseeded			<u>Comments</u>
<u>Botanical Name</u>	<u>Common name</u>		
Achillea millefolium	Yarrow		
Bromus carinatus 'Maritimus'	Maritime Brome		
Eriogonum fasciculatum	California Buckwheat		
Festuca rubra 'Molate'	Molate Red Fescue		
Hordeum brachyantherum 'Salt'	Meadow Salt Barley		
Lupinus nanus	Sky Lupine		
Triticum x Agropyron	Re-green		sterile seed cover crop

POT SIZES:

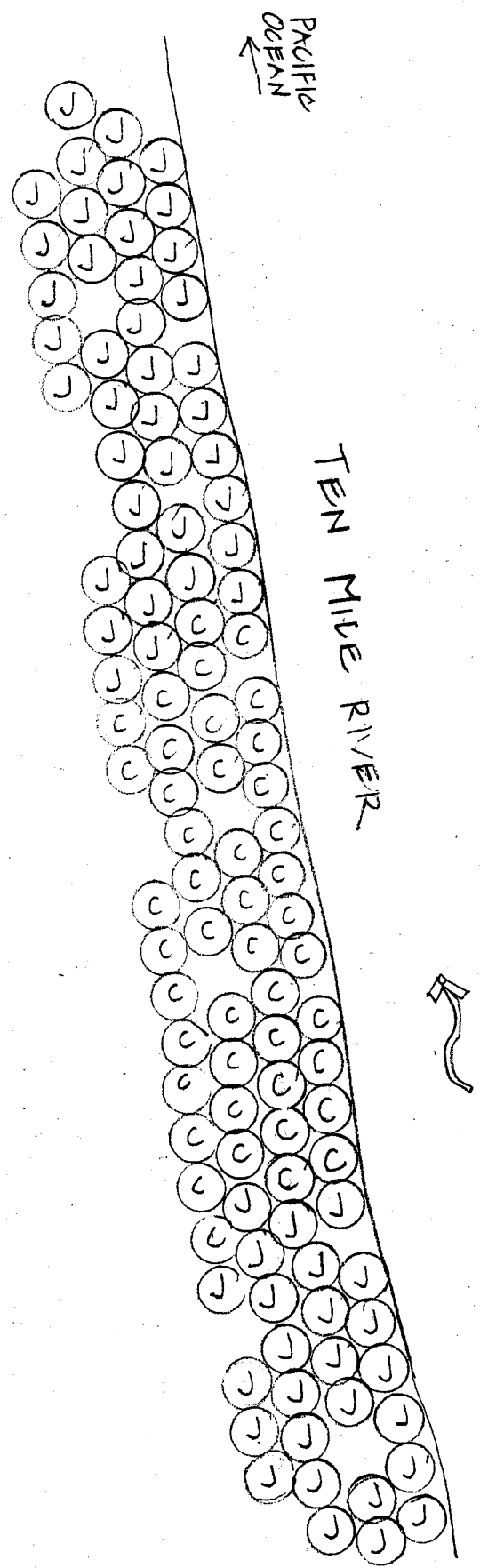
RP=Rose Pot=2.5"sq.x 2.5" deep
 SC=supercell=1.25"x 8" deep
 DP=Deepot=1.75"dia x 5" deep
 TP=Treepot=3"sq.x14" deep

2"=2"Liner=2"sq.x 2" deep
 Lch=Leach tube=1.5"dia x 6-8" deep
 Band=Open bottom=2.5"sq.x 6" deep
 Dee=Deepot=1.75"dia x 5" deep
 BR=Bare root

Symbol	Suppliers name	phone number
CF	California Flora Nursery, Fulton	707-528-8813
CR	Circuit Rider Productions, Windsor	707-838-6641
FF	Freshwater Farms, Eureka	707-444-8261 800-200-8969
NC	North Coast Native Nursery, Petaluma	707-769-1213

This list of suppliers is to help facilitate locating the varieties selected for native revegetation. The varieties selected correspond with natives from the project site which were found to be commercially available. These nurseries are located in northwest California.

ex lyngbyei Lyngbye's Sedge - transplant only
ncus leusueurii Salt Rush



Brackish Wetland Prototype

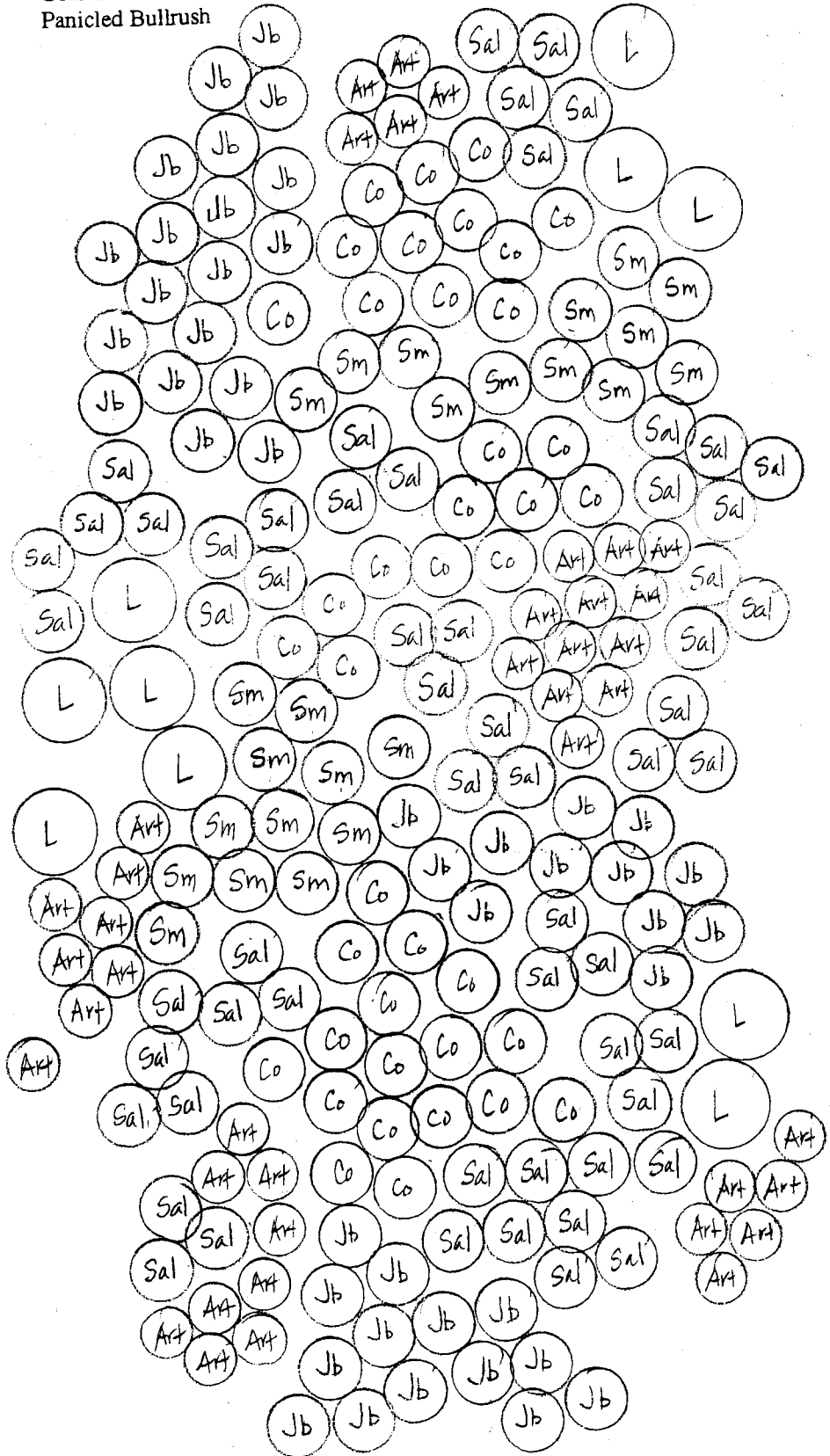
SCALE:
1/8" = 1'-0"

EX-20 CONT.

Art
Co
Jb
L
Sal
Sm

Artemisia douglasiana
Carex obnupta
Juncus balticus
Lonicera involucrata
Salix hookeri
Scirpus microcarpus

Mugwort
Slough Sedge
Baltic Rush
Twinberry
Coastal Willow
Panicked Bullrush

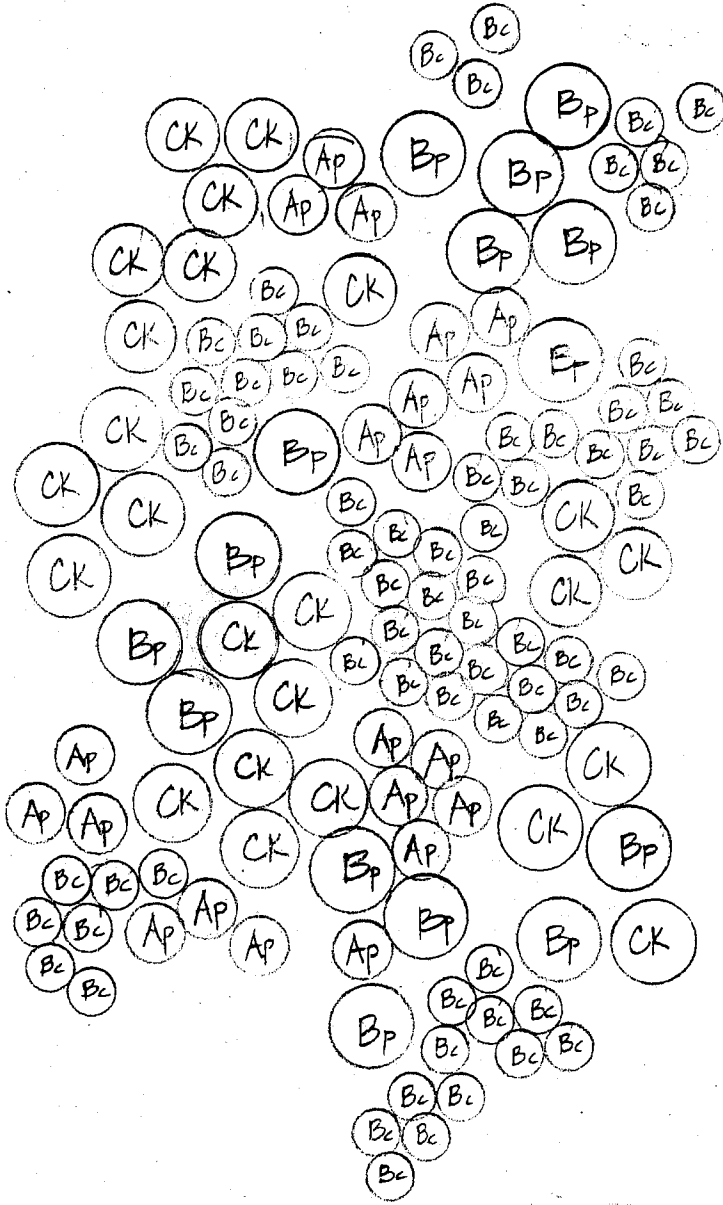


Riparian Wetland Prototype

SCALE:
1/8" = 1'-0"

Ap
Bc
Ck

- Artemisia pinocephala Beach Sagewort
- Baccharis pilularis Coyote Bush
- Bromus carinatus California Brome
- Calamagrostis koeleroides Reed Grass



Upland Shrubs/ Grasses Prototype

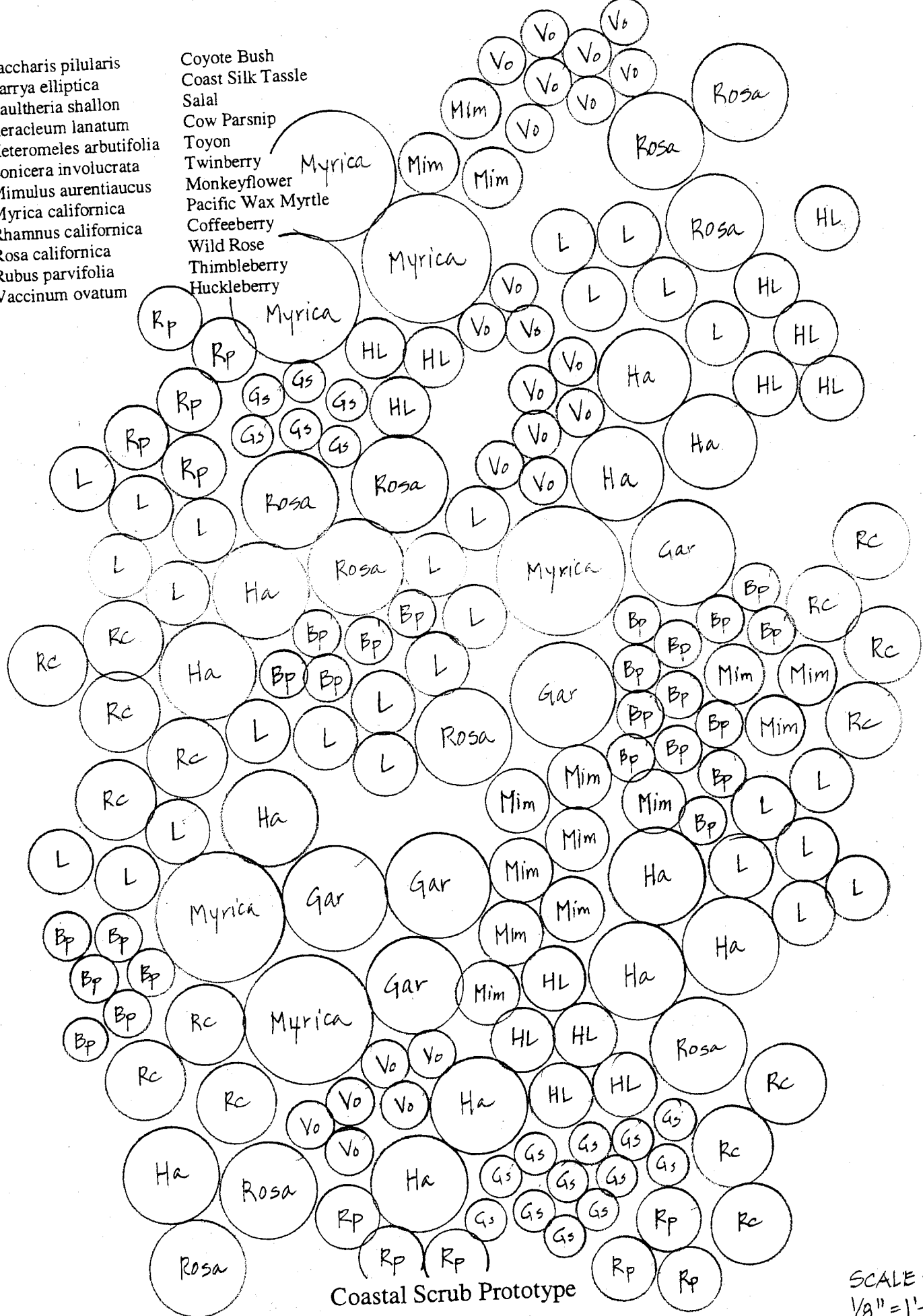
SCALE:
1/8" = 1'-0"

EX-20 CONT.

- B
- Gar
- Gs
- HL
- Ha
- L
- Mim
- Myrica
- Rc
- Rosa
- Rp
- Vo

- Baccharis pilularis
- Garrya elliptica
- Gaultheria shallon
- Heracleum lanatum
- Heteromeles arbutifolia
- Lonicera involucrata
- Mimulus aurentiaucus
- Myrica californica
- Rhamnus californica
- Rosa californica
- Rubus parvifolia
- Vaccinium ovatum

- Coyote Bush
- Coast Silk Tassle
- Salal
- Cow Parsnip
- Toyon
- Twinberry
- Monkeyflower
- Pacific Wax Myrtle
- Coffeeberry
- Wild Rose
- Thimbleberry
- Huckleberry



Coastal Scrub Prototype

SCALE:
1/8" = 1'



California Regional Water Quality Control Board

North Coast Region



Gray Davis
Governor

William R. Massey, Chairman

Don H. Hickox
Secretary for
Environmental
Protection

Internet Address: <http://www.swrcb.ca.gov/rwqcb1/>
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone: 1 (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135

August 21, 2003

Mr. David Melendrez
California Department of Transportation
P.O. Box 3700
Eureka, CA 95501

Dear Mr. Melendrez:

Subject: Ten Mile River Bridge Seismic Bridge Replacement Project Storm Water Controls.

File: California Department of Transportation, Ten Mile River Bridge Seismic Bridge Replacement Project, Highway 1 PM 69.4/70.1.

I understand the storm water control proposal for this project to include diverting the storm water from the bridge approaches to the sides of the bridge with post-construction Best Management Practices (BMPs), including biofiltration, and to discharge the water that falls on the bridge through scupper drains.

With this proposal, I am concerned that no water other than the water that falls on the bridge deck be allowed to discharge through the scupper drains. The water that falls on the bridge approaches must be diverted through appropriately sized and designed biofiltration structures. After discussing the planned storm water controls for this project and receiving your letter dated May 17, 2003, I agree with this proposal.

If you have any questions or comments, please contact me at (707) 570-3761.

Sincerely,

Mona Dougherty

Mona S. Dougherty
Water Resource Control Engineer

MSD:tenmilebridgestormwater.doc

California Environmental Protection Agency



"The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy costs. Simple ways you can reduce demand and cut your energy costs, see our Web-site at: <http://www.swrcb>

EXHIBIT NO. 21
APPLICATION NO.
CC-074-05

COPY



MENDOCINO COAST AUDUBON SOCIETY

POST OFFICE BOX 2297
FORT BRAGG, CA 95437
707-964-6362

4 March 2005

Warren Wade
President

David Jensen
Vice-President

Tanya Smart
Secretary

Judy Steele
Treasurer

Board Members

Andarin Arvola

Jeanne Coleman

Charlene McAllister

Art Morley

Virginia Wade

Tim Ash, Chief of Environmental Management Branch E-2
District 1, Eureka
California Department of Transportation
P.O. Box 3700
Eureka, CA 95502

Dear Chief Ash:

We are writing again to express our continuing concern about the fate of the large colony of Cliff Swallows, which nest on the 10-Mile River Bridge. It is our strong desire that you stipulate in the agreement with the contractors who build the new bridge, that the old bridge should not be demolished during nesting season, from mid-March through the end of August.

We understand that you may have considerable reservations about the practicality, effectiveness, and safety (for the swallows) of netting and/or nest destruction as means of preventing nesting on the old bridge. Unfortunately, these reservations do not seem to have led to the decision to **require** that demolition be done when the swallows are not present.

We remind you that the Migratory Bird Treaty protects this large colony of Cliff Swallows from harm. We trust that you will honor the treaty by insuring that the old bridge is demolished before or after the swallow nesting season.

Sincerely yours,

Mendocino Coast Audubon Society,
Warren F. Wade, President

Cc: Mark Delaplaine, California Coastal Commission
Ray Bosch, U.S. Fish and Wildlife Service
Corinne Gray, California Department of Fish and Game
Lisa Embree, California Department of Transp
Guy Preston, California Department of Transp

RECEIVED

MAR 08 2005

CALIFORNIA
COASTAL COMMISSION

EXHIBIT NO. 22
APPLICATION NO.
CC-074-05



*Flex your power!
Be energy efficient!*

RECEIVED

JUN 01 2005

CALIFORNIA
COASTAL COMMISSION

May 23, 2005

01-MEN-1-69.4/70.1
385700
Bridge Replacement
Ten Mile River Bridge

Warren F. Wade
Mendocino Coast Audubon Society
P. O. Box 2297
Fort Bragg, CA 95437

Dear Mr. Wade:

Subject: Response to Mendocino Coast Audubon Society's Letter

We are in receipt of your March 4, 2005 letter in which you discuss your continued concern regarding how cliff swallows that nest on the bridge will be protected during the demolition of the existing Ten Mile River Bridge. Caltrans, along with the U. S. Federal Highway Administration, are committed to ensuring this project, which is one of the last projects to be constructed within the Statewide Seismic Safety Program, is completed as expeditiously as possible while protecting resources that are under the purview of numerous regulatory agencies to the greatest extent that is feasible. We have been consulting with these agencies for several years in hopes of designing and ultimately constructing a project that results in a safe structure for the travelling public and also minimizes effects to sensitive resources.

As you're probably aware, the presence of both salmonid species and tide-water goby in the river increases the complexity of timing of the project due the species' seasonal variation in their use of the project site. The resource agencies regulating these threatened or endangered species have agreed upon work windows that influence the timing of various project components.

Based in part on conversations Lisa Embree of the Environmental staff recently had with Dorothy (Toby) Tobkins, the demolition of the existing bridge will occur as follows: The piles in the river that will be used to support temporary structures during demolition of the bridge will be driven June 15-October 31 during the first year of construction and September 15-October 31 of subsequent years to minimize effects to the tide-water goby and salmonids. Piles on the land can be driven year-round. All of the temporary piles can be removed year-round.

"Caltrans improves mobility across California"

EXHIBIT NO. 23

APPLICATION NO.

CC-074-05

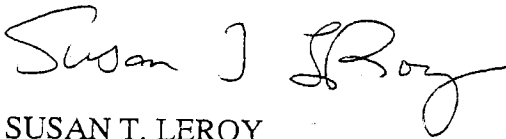
Mr. Wade
Page 2
May 23, 2005

The construction and removal of the temporary falsework and/or temporary platform to catch the bridge pieces as well as the removal of the superstructure itself, will be restricted to August 1-March 31 of any year of construction. The falsework and platform are confined to this work window given that they could provide angles for the birds to construct a nest. Since it is believed that swallows would not construct nests on structures just a few feet or so above the ground or water, there will be no work window for the access trestles or other low lying structures used during demolition of the existing bridge.

Bridge demolition may extend beyond March 31 if birds have not begun nesting yet and depending on both the type of work to be done and the time required to finish it. Additionally, if nesting is shown to be complete (fledglings are not detected), prior to August 1, demolition of the bridge may begin earlier than August 1.

We apologize for our late response to your March 4th letter. We wanted to finalize the demolition plans prior to forwarding you our reply. If you have any questions or comments regarding the contents of this letter, please contact Lisa Embree of my staff at (707) 441-5722.

Sincerely,



SUSAN T. LEROY
Acting Chief, Environmental Management Branch E-2

c: Mark Delaplaine, California Coastal Commission
Ray, Bosch, U. F. Fish and Wildlife Service
Corinne Gray, California Department of Fish and Game
Guy Preston, California Department of Transportation

Structural Recommendations

The design of the structure is very important to the visual impacts any bridge would pose. The Caltrans standard is a box type girder with round piers (shown below). A haunch girder system with rectangular piers were used in all simulations and is recommended in this situation. The haunch girders make the structure seem less massive through the tapered girders and chamfered corners. This type of design seems to be more organic, and makes the bridge lines much softer. A subtle design is best suited given the tranquil and undeveloped setting that makes this location unique.

Comparison of Bridge Types

The simulation below illustrates the difference between haunch and box girders, and gives an idea of what each one may look like if built. This simulation was done using the criteria of Alternative C.



Existing

This is the existing bridge and was the standard nearly a half century ago when it was constructed.



Standard Box Girder

This simulation uses a box girder bridge along the alignment of Alternative C.



Haunch Girder

Using the same alignment this simulation shows a haunch girder bridge.

EXHIBIT NO. 24

APPLICATION NO.

CC-074-05

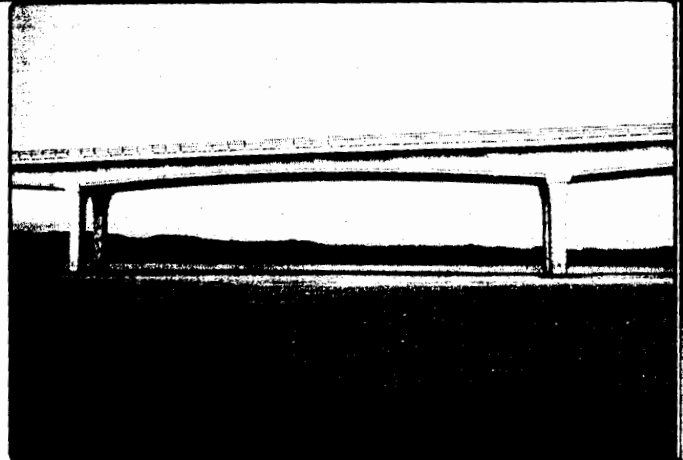
Viewer Group Two represents the recreational users of the Ten Mile River Basin. Impacts to this group will vary depending on the vantage point of the particular user. In general, this alternative would introduce a longer bridge and a cut to the north-facing slope, and a fill at the abutment to the east of the existing bridge. The longer and thicker structure will be more visibly intrusive than the existing bridge, but the new structure would have fewer supports in the river and longer spans. This alternative would provide for fewer vertical breaks to a viewer looking from a point of view below the bridge as seen in the simulation of the elevation of the proposed bridge.

Elevation Simulation

Done to simulate the view of a recreational user of the river corridor, and a resident to the east of the Ten Mile River Bridge.

Visual Quality Evaluation

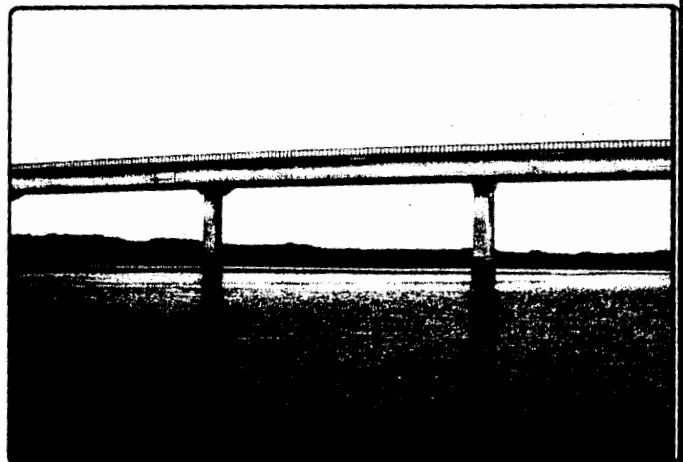
Alternative	A, B, C	
	Visual Quality Difference 0	
	Existing	Proposed
<u>Vividness</u>		
Landform	6	6
Vegetative cover	6	6
Development	4	4
Water	6	6
Vividness Score--	5.5	5.5



Existing View

Photo taken just to the east of the existing bridge.

<u>Intactness</u>		
Visual Encroachments	4	4
Introduced Elements	3	3
Intactness Score--	3.5	3.5
<u>Unity</u>		
Man-made	3	3
Natural	6	6
Unity Score--	4.5	4.5



Proposed View

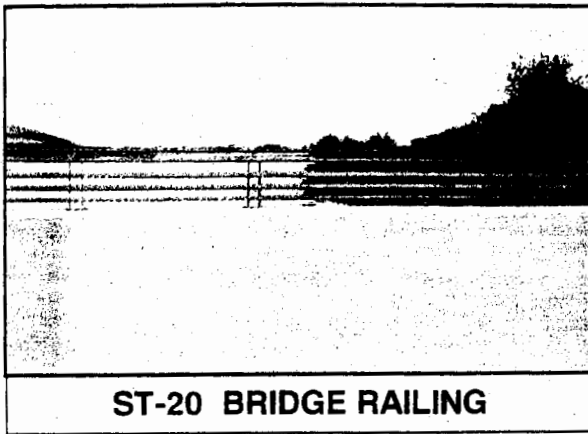
Simulation of the proposed deck and railing.

	Existing	Proposed
Visual Quality Score	4.5	4.5
Visual Quality Difference	0	

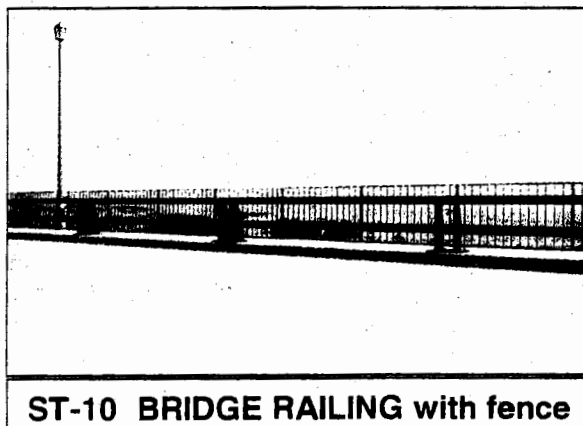
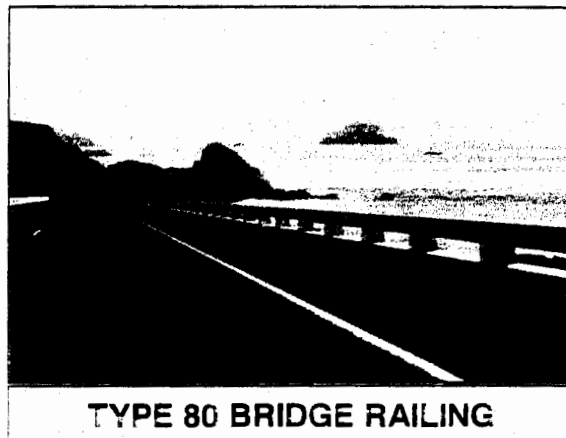
The Proposed bridge is thicker than the existing, with the haunch girders the proposed deck doesn't appear to be significantly more massive. The longer spans of the proposed bridge allow for fewer piers in the river and are less visually intrusive than those used on the existing. There appears to be no loss in visual quality from this perspective.

There are areas within the MacKerricher State Park with views of the Ten Mile River corridor including the Ten Mile River Bridge. The majority of these views are from the top of dunes to the southwest of the bridge, although the bridge also can be seen from the beach and the Park directly west of the bridge. The Ten Mile River Bridge can also be seen from the Old Haul Road which now serves as a trail in and out of the State Park. The alignment of Alternative A would move the bridge further away from the

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 APPLICATION NO.
 CC-074-05



Railing proposed for Ten Mile River Bridge



Railing installed on Noyo River Bridge (CDP 1-98-100-A3)

EXHIBIT NO. 26
APPLICATION NO.
CC-074-05

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
 SAN FRANCISCO, CA 94105-2219
 VOICE AND TDD (415) 904-5200
 FAX (415) 904-5400



June 29, 2001

Jeff Morales, Director
 California Department of Transportation
 P.O. Box 942873
 Sacramento, CA 94273-0001

EXHIBIT NO. 9
APPLICATION NO. 1-98-100-A3 & A-1-FTB-99-006-A3 CORRESPONDENCE (1 of 3)

Subject: Design of bridge rails in scenic coastal areas

Dear Mr. Morales:

I wrote to you in August 2000 to express the concern of the Coastal Commission about the use by the Department of Transportation of view-blocking rails on bridges in scenic coastal areas in California. Since that time, staff of your department has briefed the Coastal Commission on several alternative rail designs that are or might be available. I am writing now to offer the Commission's comments concerning alternatives, including rails that are available now as well as those that might be available in the future.

By way of background, the Coastal Commission has become increasingly concerned with the design of bridges and railings in scenic coastal areas in California. Whereas the safety and durability of bridge structures, including railings, have increased over the years, improvement of the visual characteristics of railings has not kept pace. In fact, today's sturdy bridge railings typically impede most of the view available to travelers on newly constructed bridges in California's coastal zone.

The Commission has been presented on numerous occasions in recent years with coastal permit applications for new or replaced coastal bridges or other facilities involving rails that offer little or no views of scenic areas to travelers. As a result, I appointed a subcommittee of the Commission to address this issue and provide recommendations to the full Commission. The subcommittee met on several occasions with members of your staff, including Richard Land of the Division of Engineering Services and others, to identify improved bridge rails that could be used now as well as a potential all-new rail for future use. The Commission has endorsed the subcommittee's recommendations, which are presented below.

Alternative rails for interim use

First, the Commission has reviewed the four rail designs (Type 80 and the so-called Alaska, Wyoming, and Minnesota rails) that have been crash-tested and approved for use in California. The Commission concluded that the Minnesota rail would not be useful in the coastal zone, due to the limited visibility it would provide for bridge users. Of the remaining three alternatives, the

EXHIBIT NO. 27
APPLICATION NO. CC-074-05

Alaska rail is superior overall, based on the relatively large openings between rails and supports that it offers.

The Wyoming rail provides slightly less see-through characteristics than the Alaska rail, although in some settings, the flat-plate supports used in the Wyoming rail may present advantages over the Alaska rail, which has thick I-beam supports and has a more "industrial" appearance. For instance, where public views of the bridge itself from a nearby view overlook are as important as the views from the bridge, the Wyoming rail may be useful, because the back of the Wyoming rail is somewhat more graceful than that of the Alaska rail. Finally, the Type 80 rail may be useful in settings where immediate views of the coast from the bridge are not a primary concern and where the rail's concrete elements can be used to good advantage from an aesthetic perspective in the particular setting. For instance, in contrast to the Alaska and Wyoming rails which are primarily galvanized steel, the concrete Type 80 rail can be stamped to create textural effects and stained a wood-tone or other color, in order to blend better with the immediate environment. The Subcommittee recognized that the Department of Transportation will consider additional treatment of the Alaska and Wyoming rails, such as earth tone paint, to enhance the rails' blending in with the surroundings.

In sum:

- ◆ The Alaska rail is likely to be most useful overall, because it presents the least visual obstruction for travelers on bridges;
- ◆ In settings where views from the bridge itself are not the primary objective, the Wyoming and Type 80 rails may be preferred;
- ◆ The Minnesota rail is not a preferred choice in the coastal zone.

New rail design

The Commission reviewed the California Type ST-10 rail that was presented for discussion purposes. The ST-10 rail includes some of the better elements of the other rail alternatives, with the goal of presenting the relatively narrow rails and supports and relatively wide viewing windows. At the same time, the ST-10 rail, as a steel rail made up of standard components, has a relatively "industrial" appearance. The ST-10 may be useful for discussion purposes, but the Commission concluded that it is important to take this opportunity that is presented by the development of an all-new rail to address a wide range of factors, including some that are not addressed by the existing four "interim" rails.

Consequently, the Commission offers the following comments about the elements that should be addressed in the design of an all-new rail for use in scenic coastal areas:

- ◆ The most important factor is **visibility** for users of the bridge. The goal should be to develop a rail that is as close to "invisible" as possible.
- ◆ To that end, use of rail elements that are as thin as possible is important. An example is the possible use of plate supports, rather than I-beams or other blocky forms.

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EX. 27 CONT.

Jeff Morales
June 18, 2001
p. 3

- ◆ Use of color and texture is appropriate to make rails blend better with their surroundings. Although concrete can be more easily stamped and colored than steel, color and texture treatments for steel rails should also be explored.
- ◆ Curved and arched elements should be explored, in order to make the rail design as graceful and attractive as possible.
- ◆ Because of the loss of many historic and attractive bridges throughout California, a new rail design should seek to incorporate elements of historic bridges where consistent with modern safety standards. For instance, scale, materials, and other factors that evoke traditional bridge forms in California should be explored.
- ◆ A unified design for the rail is desirable, including whatever elements are necessary for pedestrian and bicycle safety, as opposed to simply tacking pedestrian or bicycle elements on top of vehicle rails. In settings where pedestrian and bicyclist safety elements are not necessary, a "pared-down" rail could then be used that simply meets vehicle safety requirements.
- ◆ A new rail should be developed as soon as possible, preferably in less than a year, in order to be available as an option for bridges that will come before the Coastal Commission for review and approval in coming months.

I would like to take this opportunity to commend the staff of the Department of Transportation for their cooperation on this issue. We appreciate your efforts to provide improved options for bridge rails in California's highly scenic coastal areas. Please do not hesitate to let me know if you have any questions.

Truly yours,

Sara Wan
Chairperson

Cc: Coastal Commissioners
Richard Land
Stefan Galvez

3 of 3

EX. 27 CONT.

