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 Commission Action:

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: **1-96-71**

APPLICANT: **CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 1**

PROJECT LOCATION: Highway One Pudding Creek Bridge within the City of Fort Bragg, Mendocino County.

PROJECT DESCRIPTION: Application of California Department of Transportation to retrofit for seismic safety purposes the Pudding Creek Bridge (Highway One) by: (1) installing 14 4-foot-diameter cast-in-steel shell (CISS) piles along the sides of the existing bridge supports, (2) installing expanded bent caps (an engineering term for the proposed new lateral bridge support beams) on each support, (3) constructing an approximately 8,200-square-foot temporary timber trestle for construction access, (4) removing temporary construction access improvements, (5) mitigating for the permanent loss of channel bottom by excavating approximately 100 square feet of creek bank to expand the channel.

LOCAL APPROVALS RECEIVED: No City Coastal Development Permit has been received.

OTHER APPROVALS REQUIRED: (1) State Lands Commission review, (2) Department of Fish & Game Streambed Alteration Agreement, (3) Regional Water Quality Control Board Waste Discharge Requirements, and (4) U.S. Army Corps of Engineers review.

SUMMARY OF STAFF RECOMMENDATION:

The major issues raised by the portion of the project within the Commission's jurisdiction are: (1) the temporary encroachment into environmentally sensitive creek habitat for the Federally listed endangered species of tidewater goby and threatened Coho salmon, as well as the steelhead population to create access facilities for construction equipment, and (2) the permanent

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displacement of approximately 100 sq. ft. of streambed by the new bridge piles. The applicant proposes to minimize damage to creek habitat by timing construction activities to avoid spawning periods and constructing a temporary trestle to provide equipment access, rather than placing fill material in the creek channel for this purpose. At the conclusion of construction, all temporary structures will be removed and appropriate areas will be revegetated with native species. New channel bottom area will be created at a 1 to 1 ratio to mitigate for the area displaced by the new piles. Proposed conditions require compliance with the measures agreed upon between Caltrans and other reviewing State and Federal agencies. Staff believes that as conditioned, the environmentally sensitive habitat will be adequately protected, and the project is consistent with the Coastal Act. Therefore, staff recommends approval with the proposed conditions.

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution;

I. Approval with Conditions.

The Commission hereby grants a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal act of 1976, is located between the sea and the first public road nearest the shoreline and is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions. See attached.

III. Special Conditions.

1. State Lands Commission Review.

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the applicant shall submit to the Executive Director a written determination from the State Lands Commission that:

- a. No State lands are involved in the development; or
- b. State lands are involved in the development and all permits required by the State Lands Commission have been obtained; or
- c. State lands may be involved in the development, but pending a final determination an agreement has been made with the State Lands Commission for the project to proceed without prejudice to that determination.

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2. California Dept. of Fish and Game Review.

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the applicant shall submit to the Executive Director evidence of an approved 1601 streambed alteration agreement for the project from the California Department of Fish and Game.

3. U.S. Army Corps of Engineers Review.

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the Applicant shall submit to the Executive Director evidence that the U.S. Army Corps of Engineers has granted permission for the project authorized herein.

4. Protection of Riparian and Wetland Habitat.

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the Applicant shall delineate on the ground at the site with flags, or other obvious markers, the perimeter of the construction areas which will be disturbed by the project as generally shown on the submitted site plans. The applicant shall maintain the markers in place during project construction. All construction operations shall be conducted in a manner that will minimize disturbance of any environmentally sensitive habitat that is adjacent to the project construction areas. All construction workers who will be working at the site shall be instructed of the need to minimize disturbance to environmentally sensitive habitat.

5. Measures to Minimize Impact on Tidewater Goby: Consistent with the "Terms and Conditions" specified in the US Department of Interior, Fish and Wildlife Service's Biological Opinion letter of August 7, 1996, and Caltrans' Focused Biological Assessment submitted as part of the Applicant's project application, the applicant shall fulfill the following requirements:

(a) PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, Tidewater goby population estimates of Pudding Creek shall be made by a qualified biologist approved by the U.S. Fish and Wildlife Service and transmitted to the Executive Director at least 30 days prior to the start of construction in the creek channel. If, during the course of the project, more than 1% of the local population of tidewater goby is incidentally taken, and the U.S. Fish and Wildlife Service recommends modification of the measures needed to protect the Tidewater goby population, the applicant shall immediately apply for a permit amendment to incorporate the U.S. Fish and Wildlife Service recommendations into the project.

(b) All Caltrans and contractor's construction personnel shall be advised by a qualified biologist as to the sensitivity of the Pudding Creek work location relative to the tidewater goby.

(c) All in-channel heavy equipment work at Pudding Creek shall be conducted from trestles rather than from fill material placed in-channel or equipment operating on the channel bottom.

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(d) All in-channel work associated with the seismic retrofit, including but not limited to installing piles, trestles, and removal of any of same, shall be limited to the period July 1 through April 1 of any year to avoid the primary breeding season of the tidewater goby.

(e) At all times during construction, sufficient openings in all trestles and between pilings shall be maintained to allow free circulation of estuarine waters, and unrestricted up and downstream movement of all fish and wildlife species.

(f) The open, bottom end of all cast-in steel shell piles placed in Pudding Creek shall be covered with visqueen or filter cloth prior to being initially driven into the substrate to prevent trapping tidewater goby within the piles.

(g) Following construction, all disturbed soils shall be fully treated for erosion control and all construction related trash and debris shall be removed from the channel and banks.

(h) All areas adjacent to the work zones at Pudding Creek subject to creek, river, or tidal influence shall be designated Environmentally Sensitive Areas (ESAs), both on the plans and in the field, and all Caltrans and contractor personnel advised as to their sensitivity. All construction equipment and personnel shall be prohibited from entering these areas over the life of the projects.

6. Mitigation for Permanent Impact to Pudding Creek Channel Bottom:

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, Caltrans shall submit, for the review and approval of the Executive Director, a channel bottom habitat restoration and mitigation plan that shall provide for creation of 100.5 sq. ft. of channel bottom to mitigate for the area of channel bottom taken up by the new piles on a 1:1 ratio. The mitigation area shall be created through excavation of a portion of the creek bank within the Caltrans right of way in the vicinity of the project area. The area to be excavated shall not contain dune or riparian vegetation or other environmentally sensitive habitat and shall be excavated down to at least the depth of the surrounding channel bottom. All excavated material shall be disposed of in a manner consistent with Special Condition No. 8. The excavation work shall be completed prior to the completion of the seismic retrofit work.

The mitigation plan shall include:

(a) a site plan of the mitigation area that shows right-of-way lines, existing dune and riparian vegetation and other environmentally sensitive habitat in the immediate vicinity, a delineation of the area to be excavated;

(b) a cross-section of the site showing existing and proposed ground profiles relative to the profile of the channel bottom;

(c) a narrative describing all of the procedures to be followed in creating the required new channel bottom habitat and disposing of the excavated material; and

(d) a schedule for performing the mitigation work.

7. Use of Wooden Trestle:

The temporary trestle system shall be constructed as described in the application and shall be completely removed upon project completion. All piles shall be pulled up and completely removed without digging them out.

8. Disposal of Construction Debris.

All construction debris shall be removed from the site upon completion of the project. Disposal of any of this material in the coastal zone at a location other than in a licensed landfill will require a coastal development permit.

9. Monitoring and Reporting.

As proposed by the applicant, during and following construction activities, the applicant shall field monitor the project for a period of 3 years. Annually after project completion, the various impact locations shall be reviewed to assess the success of project mitigation measures. Brief summary reports with photographs shall be forwarded to the State Coastal Commission by May 15th annually in 1998, 1999, and the final report in the year 2000.

IV. Findings and Declarations.

The Commission hereby finds and declares as follows:

1. Coastal Zone Jurisdiction.

The portion of the project authorized herein is located within the Coastal Commission's retained jurisdictional area at Pudding Creek. Therefore, the permit application is being processed by the Commission using the policies of Chapter 3 of the Coastal Act as the standard of review. Portions of the project, including the installation of a construction staging area and plank access road at the north end of the bridge in areas above at mean sea level are within the coastal development jurisdiction of the City of Fort Bragg.

2. Project and Site Description.

The development involves retrofitting the Highway One Pudding Creek Bridge in Fort Bragg to meet current seismic safety standards. The applicant has undertaken a major program to seismically upgrade the State's highway bridges. Many of these projects are in various stages of the planning and permitting process, and some have already been approved.

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The Pudding Creek Bridge is located at the northern end of the City of Fort Bragg in Mendocino County. In this area the coastal zone boundary is located along the easterly side of the Highway 1 right-of-way. See Exhibit 4.

The project area outside the Caltrans right-of-way is bounded on the south by a mix of visitor-serving and commercial development, on the northeast by the Vista Manor Motel, and on the west by lands owned by the California Department of Parks and Recreation associated with MacKerricher State Park.

The proposed seismic retrofit work include the following:

(1) installing 14 4-foot-diameter cast-in-steel shell (CISS) piles along the sides of the existing bridge supports, (2) installing expanded bent caps (an engineering term for the proposed new lateral bridge support beams) on each support, (3) constructing an approximately 8,200-square-foot temporary timber trestle and temporary access road that includes 3,600-square-feet of 20-foot-wide planking from the north end of the bridge to provide construction access, (4) installing a temporary staging area and an approximately 2,500-square-foot temporary sediment basin, (5) removing temporary construction access improvements and restoring dunes under plank access road by planting native dune grass, and (6) mitigating for permanent loss of channel bottom by excavating approximately 100 square feet of creek bank to expand the channel. The temporary plank access road, staging area, and sediment basin are located within the City of Fort Bragg's coastal development permit jurisdiction.

As shown on the site plan in Exhibit No. 3, four general areas areas will be subject to temporary disruption and construction activity. Construction areas "A" and "B" are located in the Pudding Creek channel. Area "C" consists in part of a sandy area with dune characteristics. Area "D" is a paved area adjacent to the highway.

At Location "A", a total of 8 new (4-foot diameter), bridge piles will be installed at bents 4, 5, 6, and 7 as shown in Exhibit 3. These piles will permanently impact 100.5 ft of un-vegetated, Pudding Creek channel bottom. Caltrans proposes to mitigate this loss by expanding the channel bottom by an equal size in the immediate project vicinity.

A total of 6 new (4-foot diameter) piles will be installed at bents #2, 3, and 8. This will permanently impact a total of 75 square feet of partially shaded, non-native, weedy vegetation consisting primarily of such species as radish, mustard, and dock. Caltrans will provide a weed-free straw mulch for erosion control, but no other mitigation is proposed at these locations.

At Location "B", approximately 8,200 square feet of temporary trestle will be constructed under the bridge to provide appropriate equipment access to install the new permanent bridge piles and beams. By conducting all in-channel heavy equipment work from this temporary trestle rather than from fill material placed in the channel or from the channel bottom, potential

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impacts to the creek, steelhead, threatened Coho salmon and endangered tidewater goby will be minimized.

Caltrans has agreed to specific measures to minimize harm to the tidewater goby as a result of the formal Section 7 consultation process between the United States Fish and Wildlife Service (USFWS) and the US Army Corps of Engineers, which has regulatory authority over the project. These measures are described in the August 7, 1996 consultation letter from the USFWS included as Exhibit 7. Caltrans also proposed to remove the temporary trestle. All temporary trestle piles will be completely removed by pulling them out and not digging them out, to avoid impacts to fisheries. In-channel retrofit work is limited to the period of July 1 through April 1 of all construction years to avoid the primary breeding season of the tidewater goby.

A forty-foot tall Monterey Cypress, *Cupressus macrocarpa*, located along the south bank of the creek will be removed to provide construction access. Caltrans proposes to mitigate for this visual impact by replanting a 5-gallon size Bishop pine, *Pinus muricata*, at this location (Exhibit 3).

At location "C" approximately 3,600 square feet of access road planking (20' x 180') will be installed within the existing Caltrans highway right of way to provide equipment access to the temporary trestle and bridge lateral supports with minimal vegetation impacts. This wooden access road planking along the northwest corner of the project area will be in place during the project. Plants in this area include the following species: white garden allysum, *Carpobrotus* sp., geranium, *Brassica* sp., American dune grass, *Elymus mollis*, and *Ammophila arenaria*. Several of the above mentioned plant species are non-native species designated noxious weeds which are targeted for eradication or containment by the USDA. Upon completion of the project, Caltrans proposes to remove the access road planking and plant plugs of native American dune grass on 3-foot centers at this location.

At location "D", (Staging & Sediment Basin Area), a temporary construction staging area will be established immediately adjacent to the existing highway (wholly within Caltrans right of way) in a paved area on the northwestern end of the project area as shown in the attached proposed construction map. In addition to equipment staging, this location may include a 50 ft. x 50 ft. temporary sediment basin (approximately 2500 square feet). The contractor will utilize the sediment basin to de-water the excess disposal material from the project. The temporary sediment basin will be assembled using straw bales and filter fabric. The basin will be located well above mean high water elevation (MHWE = 2.1'). The sediment basin will be removed when no longer needed for this project. No impacts are expected to be associated with this sediment basin. Both areas "C" and "D" are within the City of Fort Bragg's coastal jurisdiction, and the Commission's appeal zone.

A small, bushy Monterey cypress may need to have several limbs pruned to provide sufficient width for heavy equipment as they travel from the staging area to the temporary trestle location (Exhibit 3). Caltrans considers pruning the tree a minor temporary impact and no mitigation is proposed.

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Caltrans proposes to designate all areas adjacent to the work zones at Pudding Creek that are subject to creek, river, or tidal influence as Environmentally Sensitive Areas (ESAs). The ESAs will be flagged or fenced prior to the start of construction (see Exhibit 3). Caltrans and contractor personnel will be advised as to the sensitivity of these areas, and all construction equipment and personnel will be prohibited from entering ESAs during the seismic retrofit project. Appropriate erosion control measures consisting of the application of weed-free straw will be implemented in all areas of disturbed soil during wet weather periods and following project completion.

Monitoring requirements to minimize potential impacts to the tidewater goby are specified in the August 7, 1996, non-jeopardy, biological opinion letter from the USFWS (a formal Section 7 Consultation) (Exhibit 7). Caltrans proposes that during and following construction activities, Caltrans environmental staff will field monitor this project for a period of 3 years. Annually after project completion, the various impact locations will be reviewed to assess the success of project mitigation measures. The revegetation effort will be considered successful if vegetation is being reestablished to the previously existing condition at an acceptable rate. Brief summary reports with photographs are proposed to be forwarded to the State Coastal Commission by May 15th annually in 1998, 1999, and the final report in the year 2000.

4. Fill in Coastal Waters and Wetlands.

The Coastal Act defines fill as including "earth or any other substance or material ... placed in a submerged area." The proposed project involves installing new piles in the Pudding Creek channel bottom, permanently filling approximately 100.5 square feet of wetland area, and temporarily displacing 192 - 216 square feet of sandy creek bottom habitat area with piles for the trestle system.

Section 30233 of the Coastal Act provides as follows, in applicable part:

(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 [eight purposes, including...]

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

The above policy essentially sets forth a three part test for all projects involving the filling of coastal waters and wetlands. A proposed fill project must satisfy all three tests to be consistent with Section 30233. The three tests are:

1. that the project has no feasible less environmentally damaging alternative;
2. That the project is for one of the eight stated uses permissible under Section 30233; and
3. that adequate mitigation measures have been provided to minimize adverse environmental effects of the proposed project.

A. Alternative Analysis

With regard to the first test of Section 30233(a), there are no other feasible less environmentally damaging alternatives to the proposed project. A total of three possible alternatives have been identified which might result in less fill, including (1) the no project alternative, (2) retrofitting the bridge in a different manner, and (3) constructing a suspension bridge or a different kind of bridge in a manner that does not require placing bridge supports within the river. As explained below, each of these possible alternatives have problems that make them infeasible.

i. The No Project Alternative. This alternative would do nothing to enhance the seismic safety of the bridge. In enacting Senate Bill 805 into law, the state legislature declared that the seismic retrofitting of substandard bridges is necessary for the immediate preservation of public safety. As it is now a matter of State law to enhance the seismic safety of bridges such as the Pudding Creek Bridge, the Commission finds that the no project alternative is unacceptable.

ii. Retrofitting the Bridge in a Different Manner to Minimize Fill. This alternative would involve finding a different engineering solution to upgrade the bridge to current seismic safety standards but doing it in a manner that would result in less fill. The proposed project will result in a total of approximately 100 square feet of permanent fill in the wetlands. The total amount of permanent new fill is relatively small. Although there may be other engineering solutions that would provide an equal amount of safety for future bridge users involving the installation of additional supports, no engineering solution has been identified to date that would result in any less fill than that involved in the proposed project. Therefore, the Commission finds that this alternative is infeasible.

iii. Constructing a New Bridge Without New Piles Extending Into the Creek. Many existing bridges span a distance greater than the width of Pudding Creek without requiring supports placed mid-span. The existing bridge could be replaced with an entirely new bridge of such a design. However, given (1) the enormous cost differential between constructing an entirely new bridge and the cost of the proposed retrofit project, and (2) the tremendous number of bridges statewide that are in need of retrofitting to enhance seismic safety, the Commission finds that this alternative is infeasible.

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In conclusion, the Commission finds that there are no feasible less environmentally damaging alternatives to the proposed fill project.

B. Permissible Use for Fill

The proposed project satisfies the second test for approvable fill projects set forth by Section 30233 as the proposed fill is allowable for "incidental public service purposes" under Section 30233(a)(5). To provide further guidance in implementing Section 30233(a), the Commission has adopted Statewide Interpretive Guidelines on Wetlands (Wetlands and Other Wet Environmentally Sensitive Habitat Areas, adopted February 4, 1981 - Section IV(A)(5)). Specifically, the Guidelines explained "incidental" as:

Incidental public services purposes which temporarily impact the resources of the area, which include, but are not limited to, burying cables and pipes, inspection of piles, and maintenance of existing intake and outfall lines (roads do not qualify).³

The footnote (footnote 3) elaborating on the limited situations where the Commission would consider a road as an exception to this policy states:

When no other alternatives 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 allowing fill for limited expansions of bridges where necessary to maintain existing traffic capacity applies in this case. The proposed project is designed to accomplish the safety objective of increasing seismic safety and reduce the chances of the existing bridge collapsing in an earthquake. The project does not expand the vehicular capacity of the bridge, it only makes the bridge safer.

To determine if the proposed fill is an incidental public service, the Commission must determine that the proposed fill is both incidental and for a public service purpose. Since the bridge retrofit project will be constructed by a public agency to improve public safety, the project expressly serves a public service purpose under Section 30233(a)(5).

For a public service to be incidental, it must not be the primary part of the project or the impacts must have a temporary duration. The Commission finds the public safety purpose of the proposed bridge retrofit project is incidental to "something else as primary," the transportation service provided by the existing bridge. Therefore, the Commission finds that the proposed bridge retrofit project is an incidental public service, and thus is an allowable use pursuant to Section 30233(a)(5) of the Coastal Act.

C. Feasible Mitigation Measures.

The third test set forth under Section 30233 is whether feasible mitigation measures can be employed to minimize the proposed fill project's adverse

environmental effects. The proposed fill work has both real and potentially significant, adverse environmental effects on the estuarine environment, including: (1) potential impact on the endangered tidewater goby, (2) disturbance of migratory fish, and (3) loss of bottom habitat of wetlands. Feasible mitigation measures can be employed to minimize these potential adverse environmental effects below a level of significance.

i. Tidewater Goby. Construction in the river could adversely affect the federal listed endangered tidewater goby population known to exist in Pudding Creek. As discussed in the August 7, 1996 letter from the U.S. Fish and Wildlife Service, the project could result in (1) destruction of tidewater goby burrows due to vibration from pile driving activities, (2) entrapment of the tidewater goby in the shell piles to be installed, (3) disruption of breeding, and (4) sedimentation and pollution of tidewater goby habitat. The US Fish and Wildlife Service has addressed the potential impacts of the proposed project on this population, and has listed a series of feasible measures that would minimize these impacts. These measures include conducting construction work from a temporary trestle system that allows unrestricted movement of the tidewater goby, excluding activities from Environmentally Sensitive Areas, restricting in-channel work to the period of July 1 through April 1 to avoid the primary breeding season of the tidewater goby, and measures to avoid trapping and taking the tidewater goby (see Exhibit 7). To ensure these measures are carried out to minimize impacts to the tidewater goby, the Commission attaches Special Condition No. 5.

ii. Migratory Fish. The construction in the river channel during the period when anadromous fish are migrating up or down the river could adversely affect fisheries, including the threatened Coho salmon and the steelhead. Special Condition No. 7, provides feasible measures to minimize disturbance of the migratory fish by providing for a temporary trestle system to keep construction activities out of the stream channel while allowing for unrestricted upstream and downstream movement of fish. Special Condition No. 5 also prohibits in-channel work during the tidewater goby breeding period of April 1 to July 1. This prohibition will allow unobstructed downstream migration for both Coho salmon and steelhead populations. In addition, Special Condition No. 2 requires the applicant to submit to the Executive Director evidence of an approved streambed alteration agreement from the California Department of Fish and Game prior to construction of the project.

iii. Wetlands and River Bottom Habitat. A total of eight new permanent bridge piles will be installed in the Pudding Creek channel bottom, taking up 100.5 square feet of channel bottom area. In addition, approximately 300 temporary piles will be installed to support the trestle system. Of these, Caltrans estimates that 80-90% will be placed below the mean high water elevation (MHWE- see exhibit 3), displacing 192 - 216 sq. ft. of sandy creek bottom habitat area. This habitat area supports a variety of worms, mollusks, and other benthic organisms, as well as provide an anchor for aquatic vegetation. The temporary trestles will not have any long term adverse impacts on the habitat of the river bottom as they are proposed to be pulled up and removed in their entirety. Thus, the permanent impact of the project would be the loss of the 100.5 square feet of creek bottom habitat area.

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Special Condition No. 7 require the applicant to carry our this proposal to remove the trestle piles in their entirely without digging them out to minimize the temporary impact.

A feasible way to mitigate for the permanent impact associated with the bridge support piles would be to create such a habitat area at a 1 to 1 ratio in the vicinity of the bridge, and Caltrans has thus proposed to excavate a 100.5 square foot area at a suitable location along the creek bank for this purpose. Once the area is excavated, it is expected that benthic organisms will quickly colonize the site. Caltrans has not yet identified the specific site for this mitigation work, nor submitted a plan for the excavation. There is sufficient area along the channel banks and elsewhere within the Caltrans right-of-way where the mitigation work could be performed without affecting existing wetlands or other environmentally sensitive habitat areas. Therefore, the Commission attaches Special Condition No. 6 which requires the applicant to submit for the review and approval of the Executive Director, prior to construction of the project, a habitat restoration and mitigation plan that requires the applicant to provide mitigation for 100.5 square feet of open water and river bottom habitat.

D. Conclusion

In conclusion, the Commission finds that the proposed fill project, as conditioned, is consistent with Section 30233 of the Coastal Act in that: (1) the proposed fill is for "an incidental public service purpose," a permissible use for fill under subsection (5) of Section 30233(a); (2) no feasible less environmentally damaging alternatives have been identified; and (3) the project as conditioned will employ feasible mitigation measures to minimize adverse environmental effects.

5. Environmentally Sensitive Riparian Habitat Areas

Section 30240 requires in applicable part that: (1) Environmentally Sensitive Habitat Areas (ESHAs) be protected against any significant disruption of habitat values, (2) only uses dependent on those resources be allowed in those areas, (3) development in areas adjacent to ESHA's be sited and designed to prevent impacts which would significantly degrade those areas and, (4) such development be compatible with the continuance of those habitat areas.

Two kinds of environmentally sensitive habitat in the project vicinity on either side of the circle channel. On the north side, Area "C", as shown in Exhibit 3, consists in part of a sandy vegetated area that consists of environmentally sensitive habitat. The steep bluffs along the south side of the creek contains riparian vegetation. No other ESHA exists outside the channel. The areas on the creek banks (corresponding to the locations of "bents" #2, 3, and 8) between the dune and riparian areas and the channel consist of partially shaded, non-native, weedy vegetation made up primarily of such species as radish, mustard, and dock. Two Monterey cypress trees on the north and south banks that need to be either removed or have several limbs

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pruned to provide sufficient room for construction access are not environmentally sensitive species.

Although the seismic retrofit of the existing bridge will not result in any permanent impacts to the dune habitat area, the wooden plank access road aspect of the project will create temporary impacts. However, the applicant proposes to restore the temporarily impacted areas by removing the wooden plank access road at the completion of construction and replanting the affected area with native vegetation. The dune habitat area is located outside of the Commission's jurisdiction.

Some of the riparian vegetation along the south side of the creek does extend into the Commission's jurisdiction, near the project area. The applicant proposes to avoid disturbing such environmentally sensitive habitat areas by delineating the areas on the ground with flags or other markers to alert workers that the habitat areas should not be disturbed. The Commission attaches Special Condition No. 4 to ensure that this proposal is carried out and the nearby environmentally sensitive habitat is not disturbed. Therefore, the Commission finds that the proposed project is as conditioned, consistent with Section 30240 of the Coastal Act as no environmentally sensitive habitat within the Commission's jurisdiction will be adversely affected by the project.

6. Visual Resources.

Section 30251 of the Coastal Act provides in applicable part that the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall: (a) be sited and designed to protect views to and along the ocean and scenic coastal areas, and (b) be visually compatible with the character of surrounding areas.

The principal visual impacts of the project are its temporary effects on the visual character of the area. During construction, the temporary accessways and construction equipment and materials will all intrude into the scenic view of motorists who pass over the bridge. However, the temporary nature of this impact limits its significance. The project will only last for a maximum of two construction seasons, and all construction debris will be removed upon project completion. In addition, most the construction activity is taking place under the bridge and will not be readily noticeable by motorists who pass over the bridge. Furthermore, the permanent improvements associated with the project will not be readily noticeable. These impacts are typical of bridge improvements, and will be compatible with the character of the area, which includes the existing bridge. The Commission therefore finds that the proposed project will preserve the visual character of the area and will be consistent with Section 30251 of the Coastal Act.

7. Public Access.

Section 30212 of the Coastal Act requires that access from the nearest public roadway to the shoreline be provided in new development projects except where it is inconsistent with public safety, military security, or protection of

fragile coastal resources, or adequate access exists nearby. Section 30211 requires that development not interfere with the public's right to access gained by use or legislative authorization. In applying Section 30211 and 30212, the Commission is also limited by the need to show that any denial of a permit application based on this section, or any decision to grant a permit subject to special conditions requiring public access is necessary to avoid or offset a project's adverse impact on existing or potential access.

The proposed seismic retrofit of the existing bridge will have only minor, temporary impacts on public access during the proposed construction period. The primary coastal access along this portion of Pudding Creek is provided by road turnouts several hundred feet north of the project site. People often park along the turnouts and use the beach and shoreline downstream of the Pudding Creek Bridge. The area in the immediate vicinity of the bridge that will be closed off to accommodate construction, is reported to have little public use and is very small in size compared to the area that will remain available for public use. The restrictions on access necessary to allow construction will in any event be short term.

The temporary trestle system will allow most work to proceed without significantly impacting traffic. The project will involve approximately two weeks where work involving lane closure may occur, but this work will be scheduled at night to minimize traffic disruption. Since the bridge has two travel lanes, even though one lane may be closed during portions of the two week period, traffic will not have to detour around the area. In short, construction activity should only be a minor inconvenience to passing motorists.

Therefore, the Commission finds that the proposed project will have no significant adverse effect on public access use of the Pudding Creek area and the proposed project is consistent with the public access policies of the Coastal Act.

8. Geologic Stability

The Coastal Act contains policies to assure that new development does not create erosion, and to minimize risks to life and property. Section 30253 of the Coastal Act states in applicable part:

New development shall:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural land forms along bluffs and cliffs.

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The proposed seismic retrofit portion of the project is proposed as a safety project to reduce the risks to life and property associated with earthquakes. Given the purpose of the project, the Commission finds that the proposed project is fully consistent with Section 30253 of the Coastal Act.

9. State Waters.

Portions of the project site are in areas that are State-owned waters or were otherwise subject to the public trust.

Therefore, to ensure that the applicant has the legal authority to undertake all aspects of the project, the Commission attaches Special Condition No. 1, which requires that the project be reviewed by the State Lands Commission.

10. U.S. Army Corps of Engineers Review.

Pursuant to the Federal Coastal Zone Management Act, any permit issued by a federal agency for activities that affect the coastal zone must be consistent with the coastal zone management program for that state. Under agreements between the Coastal Commission and the U.S. Army Corps of Engineers, the Corps will not issue a permit until the Coastal Commission approves a federal consistency certification for the project or approves a permit.

The project has not yet been reviewed and approved by the U.S. Army Corps of Engineers. Therefore, the Commission attaches Special Condition No. 3 to ensure that the project is consistent with the coastal zone management program for the State of California. The addition requires the applicant to submit evidence of U.S. Army Corps of Engineers approval of the project prior to the commencement of construction.

11. California Environmental Quality Act (CEQA).

Section 13096 of the Commission's administrative regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(i) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment.

As discussed above, the project has been mitigated to avoid significant impacts on the endangered tidewater goby, anadromous fish, and channel bottom habitat. The project, as conditioned, will not have a significant adverse effect on the environment, within the meaning of CEQA.

For purposes of CEQA, the lead agency for the project is the California Department of Transportation (Caltrans), District 1. Caltrans has determined that the proposed project is categorically exempt from the need for an environmental impact report under Class 1 of the State CEQA Guidelines.

ATTACHMENT A

Standard Conditions

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

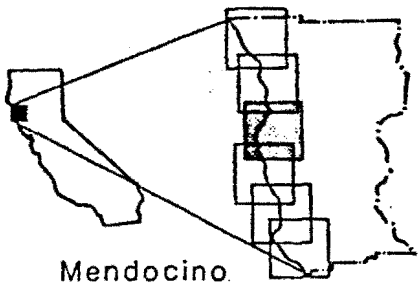

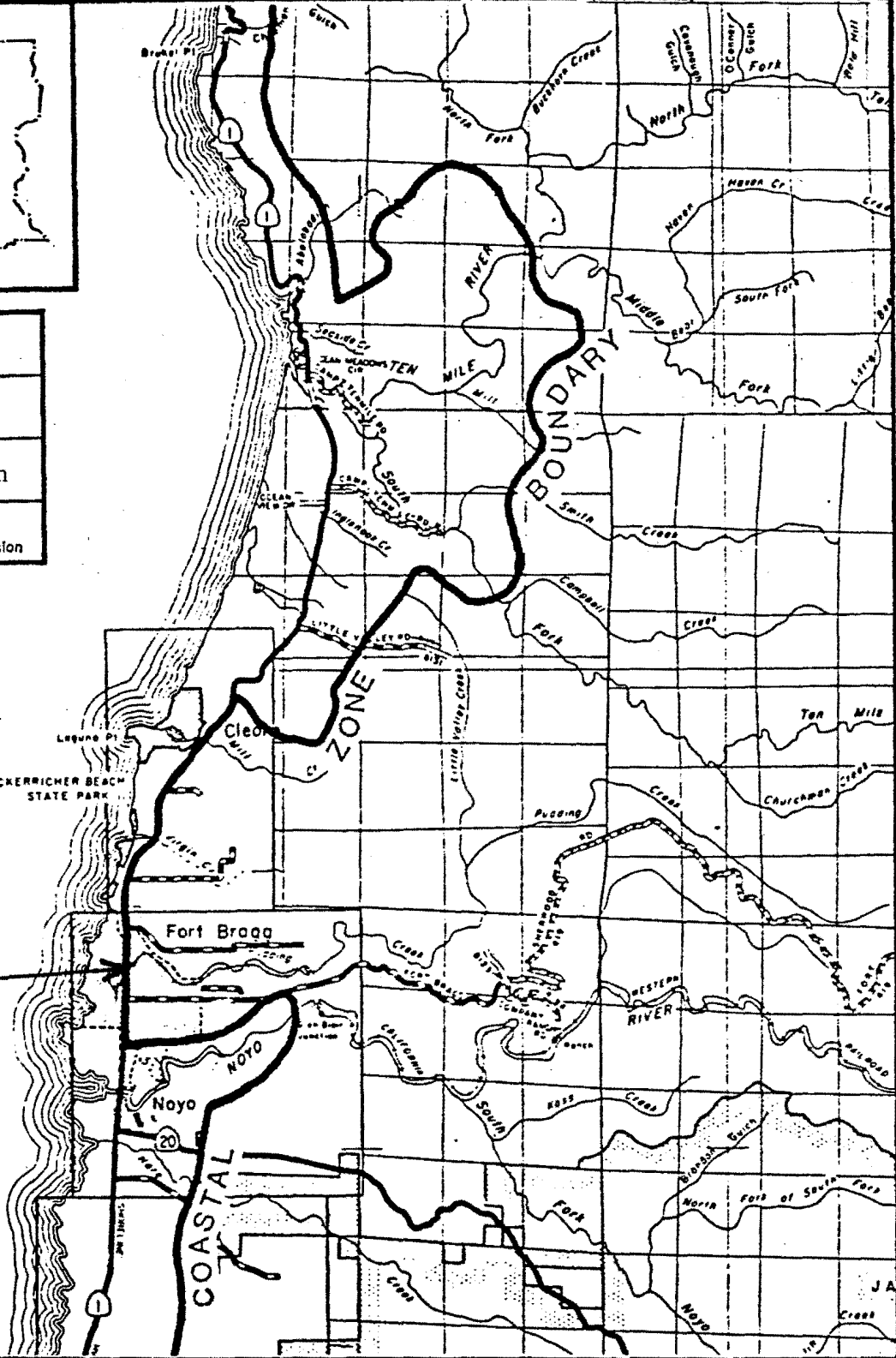


EXHIBIT NO. 1
APPLICATION NO.
 1 - 96 - 71

Regional Location



California Coastal Commission



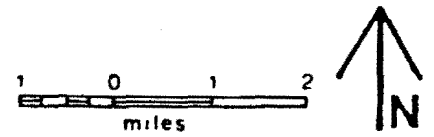
Approximate Project Site

PACIFIC



California Coastal Commission

LOCATION MAP



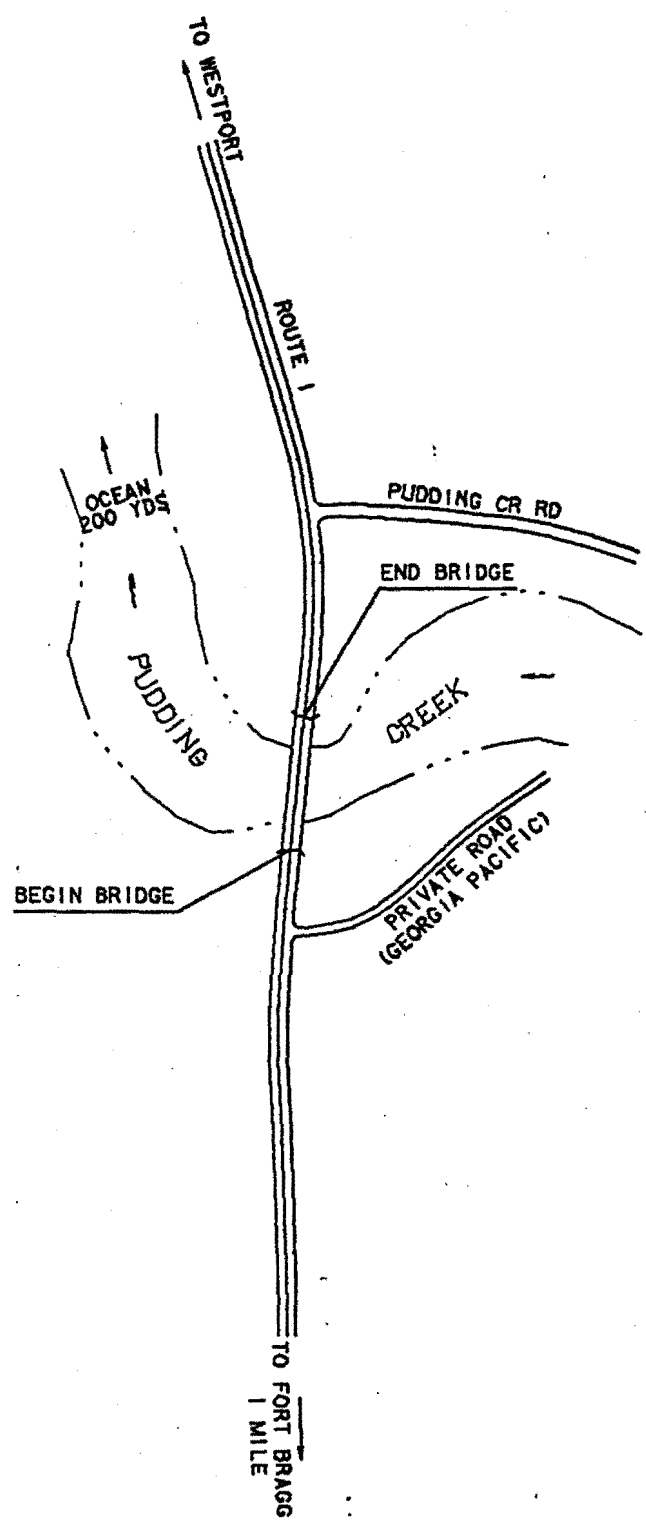


EXHIBIT NO. 2
APPLICATION NO.
1-96-71
Area Location



PURPOSE: TO REDUCE THE ONGOING SAFETY HAZARD CAUSED BY PROBABLE SEISMIC ACTIVITY BY INSTALLING CIDH PILES AT BENTS.

DATUM: 1929 USCS&GS (MSL)

ADJACENT PROPERTY OWNERS:

1. DEPT. OF PARKS & RECREATION
2. NORTH COAST INVESTORS
3. MICHAEL & JEANETTE BENNETT
4. DOMINIC & JOLIETIE AFFINITO



Application By Caltrans Dist. 1
Box 3700 Eureka Ca. 95502-3700

VICINITY MAP

IN: PUDDING CREEK
 AT: ROUTE 1, PM 62.12, FORT BRAGG
 COUNTY OF: MENDOCINO
 APPLICATION BY: CALTRANS

TYPICAL D...AIL MAP - For Coastal Perm... Application

Note: ESAs (Environmentally Sensitive Areas) will be established by flagging & fencing to prohibit access.

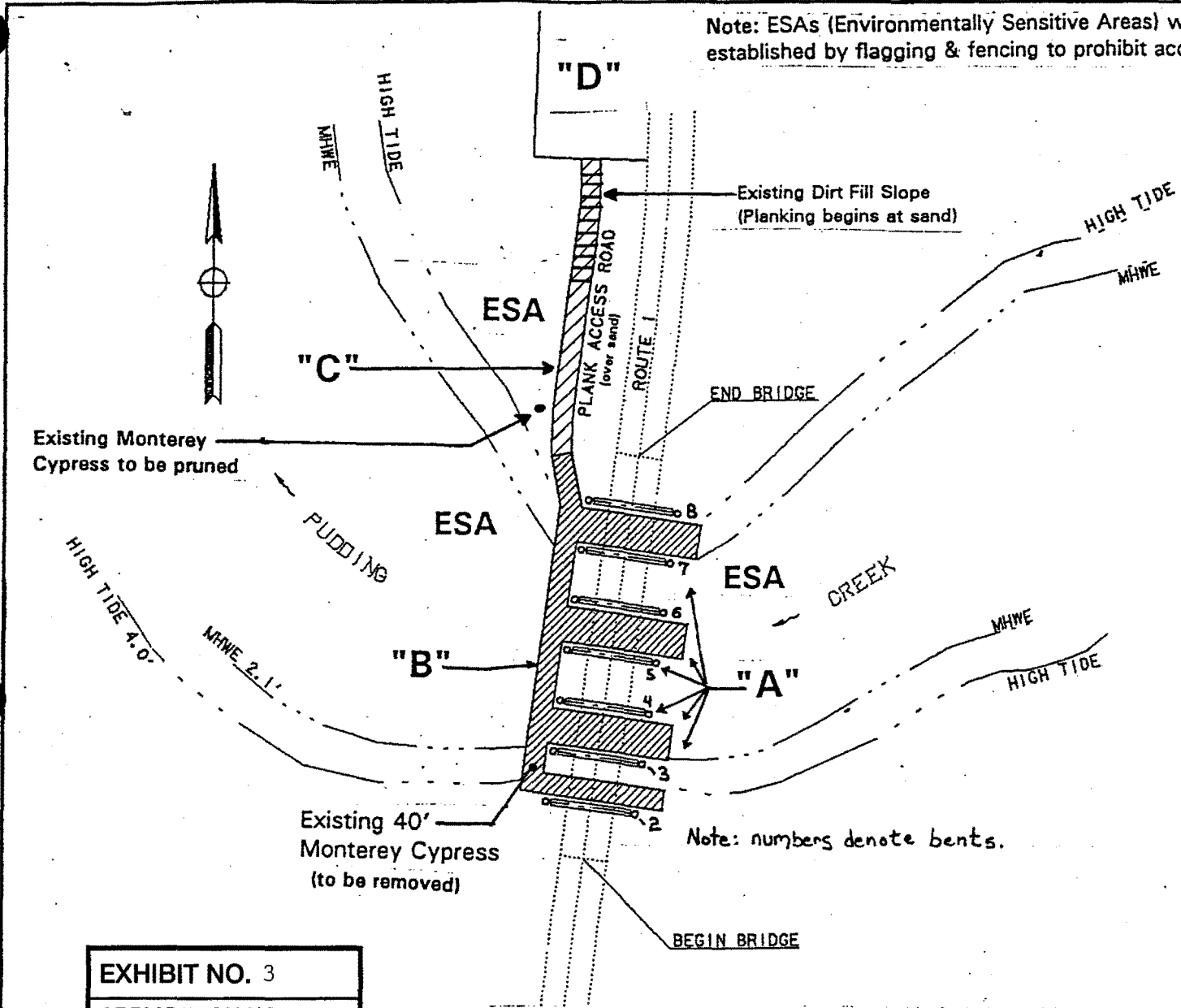


EXHIBIT NO. 3
APPLICATION NO.
1-96-71
Site Plan

Specific Project Locations are indicated by Letters:

- "A": Fourteen New Bridge Piles and Seven Expanded Bent Caps
- "B": Temporary Timber Trestle with Pilings
- "C": Temporary Plank Access Road
- "D": Temporary Staging & Sediment Basin Area

PURPOSE: TO REDUCE THE ONGOING SAFETY HAZARD CAUSED BY PROBABLE SEISMIC ACTIVITY BY INSTALLING CIDH PILES AT BENTS.

UM: 1929 USCS&GS (MSL)

ADJACENT PROPERTY OWNERS:

1. DEPT. OF PARKS & RECREATION
2. NORTH COAST INVESTORS
3. MICHAEL & JEANETTE BENNETT
4. DOMINIC & JOLIETIE AFFINITO

TYPICAL DETAIL



Application By Caltrans Dist. 1
Box 3700 Eureka Ca. 95502-3700

PROPOSED CONSTRUCTION

IN: PUDDING CREEK
 AT: ROUTE 1, PM 62.12, FORT BRAGG
 COUNTY OF: MENDOCINO
 APPLICATION BY: CALTRANS



PROPERTY OWNER:
DEPT. OF PARKS
& RECREATION

PROPERTY OWNER:
NORTH COAST INVESTORS
7700 SUNRISE BLVD. #1800
CITROS HEIGHTS CA. 95610

PROPERTY OWNER:
DOMINIC & JOLIETIE
AFFINITO
400 S. MAIN
FORT BRAGG CA. 95437

PROPERTY OWNER:
MICHAEL & JEANETTE
BENNETT
29475 SIMPSON LN.
FORT BRAGG CA. 95437

PUDDING

CREEK

FORT BRAGG CITY LIMITS

EXHIBIT NO. 4
APPLICATION NO.
1-96-71
Right-of-way

100 0 200
SCALE IN FEET

PURPOSE: TO REDUCE THE ONGOING SAFETY HAZARD CAUSED BY PROBABLE SEISMIC ACTIVITY BY INSTALLING CIDH PILES AT BENTS.

DATUM: 1929 USCS&GS (MSL)

ADJACENT PROPERTY OWNERS:

1. DEPT. OF PARKS & RECREATION
2. NORTH COAST INVESTORS
3. MICHAEL & JEANETTE BENNETT
4. DOMINIC & JOLIETIE AFFINITO

TYPICAL DETAIL



Application By Caltrans Dist. 1
Box 3700 Eureka Ca. 95502-3700

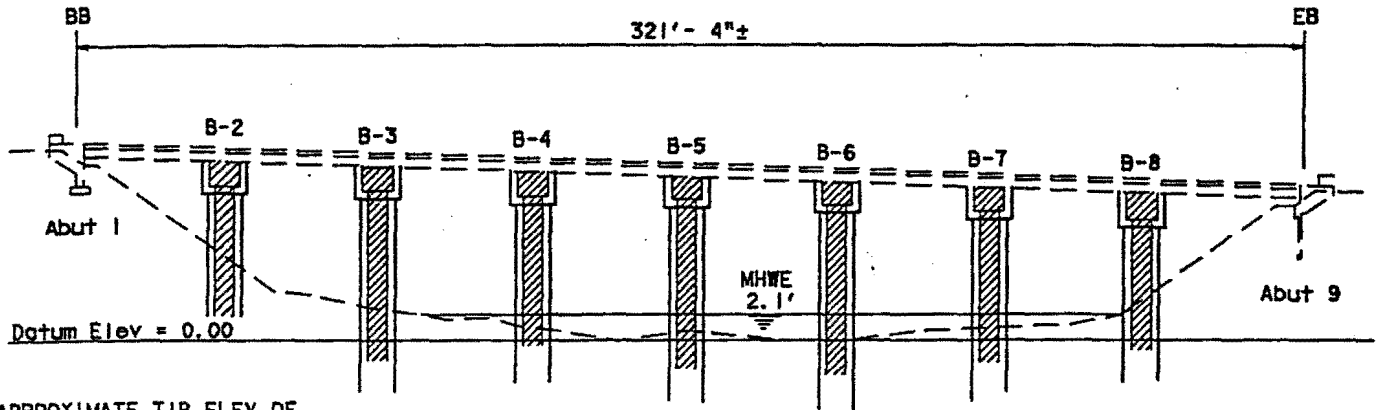
RIGHT-OF-WAY MAP

IN: PUDDING CREEK
 AT: ROUTE 1, PM 62.12, FORT BRAGG
 COUNTY OF: MENDOCINO
 APPLICATION BY: CALTRANS

Sheet 7 of 7 Oct. 15, 1996

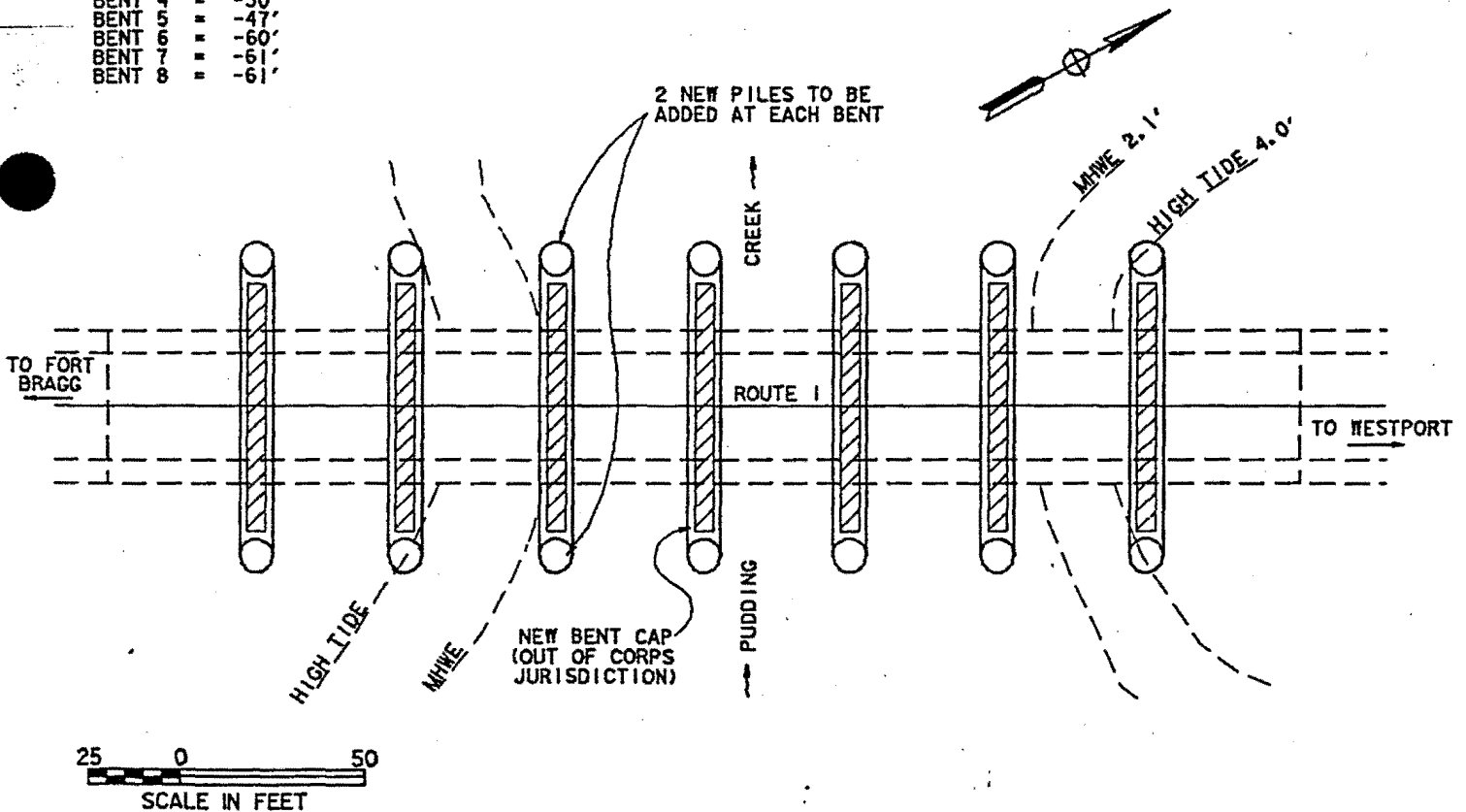
EXHIBIT NO. 5
APPLICATION NO.
 1-96-71
 Proposed Construction

EXISTING CONDITIONS
 LOOKING WEST AT FOOTINGS
 TO BE RETROFITTED



APPROXIMATE TIP ELEV OF EACH PAIR OF NEW PILES

BENT 2	=	-6'
BENT 3	=	-18'
BENT 4	=	-30'
BENT 5	=	-47'
BENT 6	=	-60'
BENT 7	=	-61'
BENT 8	=	-61'



PURPOSE: TO REDUCE THE ONGOING SAFETY HAZARD CAUSED BY PROBABLE SEISMIC ACTIVITY BY INSTALLING CIDH PILES AT BENTS.

UM: 1929 USCS&GS (MSL)

ADJACENT PROPERTY OWNERS:

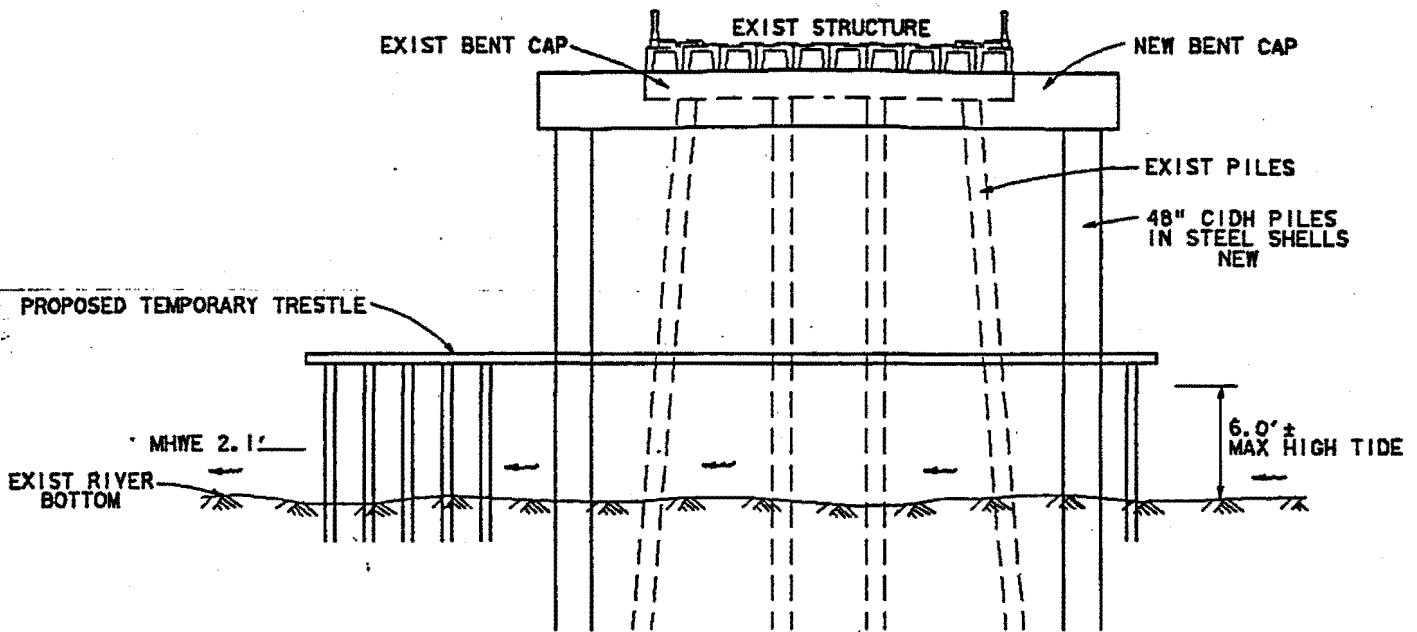
1. STATE OF CALIFORNIA
2. NORTH COAST INVESTORS
3. MICHAEL & JEANETTE BENNETT
4. DOMINIC & JOLIETIE AFFINITO



Application By Caltrans Dist. 1
 Box 3700 Eureka Ca. 95502-3700

PROPOSED CONSTRUCTION

IN: PUDDING CREEK
 AT: ROUTE 1, PM 62.12
 COUNTY OF: MENDOCINO
 APPLICATION BY: CALTRANS



EXCAVATION FOR (CAST IN DRILLED HOLE) PILES

BENTS 2, 3, 4, 5, 6, 7, 8

QUANTITIES BELOW OHNE

EXCAVATION: 870 CUBIC YARDS
 TO BE DISPOSED OF OUTSIDE
 CORPS JURISDICTION

CONCRETE BACKFILL: 960 CUBIC YARDS
 PLACED IN SEALED STEEL SHELLS

CHANNEL BOTTOM AREA
 OCCUPIED BY NEW PILES: 180± SQ FT

NO SCALE

EXHIBIT NO. 6

APPLICATION NO.

1-96-71

Typical Section

PURPOSE: TO REDUCE THE ONGOING
 SAFETY HAZARD CAUSED BY PROBABLE
 SEISMIC ACTIVITY BY INSTALLING
 CIDH PILES AT BENTS.

DATUM: 1929 USCS&GS (MSL)

ADJACENT PROPERTY OWNERS:

1. DEPT. OF PARKS & RECREATION
2. NORTH COAST INVESTORS
3. MICHAEL & JEANETTE BENNETT
4. DOMINIC & JOLIETTE AFFINITO



Caltrans

Application By Caltrans Dist. 1
 Box 3700 Eureka Ca. 95502-3700

TYPICAL SECTION

IN: PUDDING CREEK

AT: ROUTE 1, PM 62.12, FORT BRAGG

COUNTY OF: MENDOCINO

APPLICATION BY: CALTRANS

Sheet 5 of 7 Oct. 15, 1996



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Sacramento Field Office
3310 El Camino, Suite 130
Sacramento, California 95821-6340

EXHIBIT NO. 7
APPLICATION NO.
1-96-71 USFWS
LETTER (Page 1 of 8)

1-1-96-F-126

August 7, 1996

Mr. David H. Densmore
Division Administrator
U.S. Department of Transportation
Federal Highway Administration
Region Nine
California Division
980 Ninth Street, Suite 400
Sacramento, California 95814-2724

Subject: Initiation of Formal Consultation for the Seismic Retrofit of Two Bridges on Route 1, Mendocino County, California

This document transmits the biological opinion based on the Service's review of the proposed seismic retrofit of two bridges on Route 1 located near the City of Fort Bragg, Mendocino County, California and its effects on tidewater goby *Eucylogobius newberryi* in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). Your July 19, 1996 request for formal consultation was received on July 26, 1996.

This biological opinion is based on information provided in the July 19, 1996 biological assessment, telephone conversation of June 28, 1996 with CALTRANS biologist, Mark Moore, examination of aerial photographs, and other sources of information. A complete administrative record of this consultation is on file in this office.

I. BIOLOGICAL OPINION

Description of the Proposed Action

The purpose of the proposed action is to strengthen two bridges for earthquake safety located in Mendocino County near Fort Bragg (Figure 1). The structures to be retrofitted are two-lane concrete bridges with concrete piers in Pudding Creek (Figure 2) and Ten Mile River (Figure 3).

Pudding Creek bridge retrofit. The retrofit at Pudding Creek involves installation of seven five-foot diameter cast-in-steel shell piles along each side of the existing structure (Figure 4). An expanded bent cap will tie the new piles to the existing structure. Eight of the fourteen new piles installed will be placed in the channel of Pudding Creek. To install the new piles, a temporary timber trestle will be constructed. A crane equipped with a pile driving device and auger, dump trucks and/or front-end loaders to remove substrate within the steel pile shells, and other smaller equipment will be used.

Ten Mile River bridge retrofit. The retrofit at Ten Mile River involves footing expansion and steel jacket installation on 20 bridge columns of which five are located in the channel (Figure 5). Four of the five in-channel columns and their footings will be isolated by sheet pile coffer dams at each location, and undergo footing expansion, below river grade, and installation of steel column jackets, below and above river grade. A temporary timber trestle will be constructed across most of the width of the channel beneath the bridge to provide crane, dump truck, loader, and other equipment access to the first four piers from the south

bank. The northern most in-channel column will not require footing excavation. This existing column will receive a steel jacket and minor amount of concrete at the top of the existing above grade footing.

Footings having an elevation lower than the riverbed will be exposed by excavation within the dewatered coffer dams, and enlarged by driving a total of 24 two-foot diameter pipe piles around the perimeter of each exposed footing. Concrete will be poured into tightly sealed forms containing reinforcing steel to "tie" the pipe piles to each other and the existing footing. After footing expansion, steel jackets will be installed on columns, backfilled with concrete to fill any voids, and painted to blend with the surrounding environment.

After completion of the in-channel work, footings will be backfilled with riverbed material locally excavated and stockpiled, and then all sheet piling and trestle members completely removed from the channel. Work will then begin on out-of-channel column retrofit locations.

Appendix A gives proposed mitigation for the bridge retrofit work on Pudding Creek and Ten Mile River to minimize and avoid adverse affects to the tidewater goby.

Status of the Species

Please refer to Service (1994), Soltz (1984), and Swift *et al.* (1989) for additional information on the biology and ecology of tidewater goby. The tidewater goby is a member of the Gobiidae family and is the only species in the genus *Eucyclogobius*. It is a small fish, rarely exceeding 50 millimeters standard length (mm SL), and is characterized by large pectoral fins and a ventral sucker-like disk formed by the complete fusion of the pelvic fins.

The tidewater goby is endemic to California and is unique among Pacific coast fish in its restriction to brackish waters of coastal wetlands. Tidewater goby historically occurred in at least 87 California coastal lagoons (Swift *et al.* 1989). Since 1900, the tidewater goby has disappeared from approximately 50 percent of formerly occupied habitats. According to Swift *et al.* 1989, the only known tidewater goby occurrences in Mendocino County are (1) north of Fort Bragg at (a) Ten Mile River, (b) Virgin Creek, and (c) Pudding Creek, and (2) just north of Point Arena at two small un-named lagoons at the north end of Manchester State Beach.

Tidewater goby habitat is characterized by brackish shallow lagoons and lower stream reaches where water is fairly static but not stagnant (Miller and Lea 1972, Moyle 1976, Swift 1980, Wang 1982, Irwin and Soltz 1984). Tidewater goby have been documented in water with salinity levels from 0 to 40 parts per thousand, temperature from 8 to 23^o Centigrade, and water depths from 25 to 100 centimeters (Irwin and Soltz 1984, Swift *et al.* 1989).

Tidewater goby are permanent lagoon residents except during winter when they may move upstream and into backwater sloughs to seek refuge from high flows (Smith pers. comm.). Additionally, if lagoons are breached with resulting high flows, tidewater goby may be forcibly moved into the marine environment.

Small crustaceans, aquatic insects, and mollusks are primary dietary components of the tidewater goby (Swift 1980, Wang 1982, Irwin and Soltz 1984).

Tidewater goby seem to be an annual species although some variation has been observed (Swift 1980, Wang 1982, Irwin and Soltz 1984). Reproduction occurs year-round with distinct peaks in spawning occurring in April and May (Moyle *et al.* 1989). When breeding, males dig vertical burrows that are used by females for egg deposition (Swift *et al.* 1989). In nine to ten days, 5-7 mm SL larvae emerge (Moyle *et al.* 1989, 1995). The larvae live in vegetated areas within the

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lagoon until about 15 to 18 mm SL (Moyle et al. 1989).

Environmental Baseline

The decline of the tidewater goby can be attributed to upstream water diversions, pollution, siltation, and urban development on surrounding lands. These threats continue to affect the remaining populations of tidewater goby. Additionally, a lack of a marine life-history stage and the high level of fragmentation between existing populations has decreased the probability for genetic exchange between populations and reduced opportunities for colonization of suitable habitats.

pudding Creek bridge retrofit. Tidewater goby have been documented at Pudding Creek (Swift pers. comm.). Snorkel and net surveys by California Department of Fish and Game and College of the Redwoods in 1994 detected tidewater goby in spring and summer 1994 at Pudding and Virgin creeks (Kalvass pers. comm.). Tidewater goby were found along the south bank of Pudding Creek, approximately 50 to 100 meters above the Georgia Pacific road trestle near the mouth of the estuary. Therefore, Pudding Creek may have tidewater goby above and below the Route 1 bridge to be retrofitted.

Ten Mile River bridge retrofit. Tidewater goby have been documented in Ten Mile River (Swift et al. 1989). The spring and summer 1994 snorkel and net surveys referred to above did not detect tidewater goby in Ten Mile River. The survey location was from about one kilometer above the Highway 1 bridge downstream to just west of the bridge. Therefore, Ten Mile River tidewater goby are probably concentrated some distance upstream from the Route 1 bridge location where more brackish and freshwater habitat is present and tidal action less pronounced (Swift pers. comm.).

Effects of the proposed action

Pudding Creek bridge retrofit. Adverse effects to tidewater goby habitat at Pudding Creek resulting from retrofitting the bridge include the permanent loss of 14.6 square meters of benthic substrate due to the installation of the new piles in the channel. Temporary effects include potential destruction of burrows due to vibration from pile driving activities associated with trestle, cast-in-steel shell piles, cofferdam, and pipe pile installation. Shallow, fresh water habitat with low seasonal tidal influences will exacerbate these temporary effects in Pudding Creek.

Losses and harassment of tidewater goby in Pudding Creek may occur during trestle installation due to noise and vibration, cast-in-steel shell piles, and coffer dams. Killing of tidewater goby may occur due to entrapment in cast-in-steel shell piles and coffer dams, and harassment of tidewater goby may occur due to disruption of breeding. Additionally, if a wet concrete, petroleum, or other toxic substance spills into Pudding Creek, or construction activities increase turbidity to high levels, all life stages of tidewater goby may be adversely affected.

Ten Mile River bridge retrofit. No permanent habitat loss will occur as a result of the Ten Mile River bridge retrofit. However, similar to Pudding Creek, temporary effects include potential destruction of burrows due to vibration from pile driving activities associated with trestle, cast-in-steel shell piles, cofferdam, and pipe pile installation.

Losses and harassment of tidewater goby in Ten Mile River may occur during trestle installation due to noise and vibration, cast-in-steel shell piles, and coffer dams. Killing of tidewater goby may occur due to entrapment in cast-in-steel shell piles and coffer dams and harassment of tidewater goby may occur due to disruption of breeding. Additionally, if a wet concrete, petroleum, or other

toxic substance spills into Ten Mile River, or construction activities increase turbidity to high levels, all life stages of tidewater goby may be adversely affected.

Cumulative effects

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Cumulative effects for this action include all other in-channel creek and river activities, lagoon breaching, toxic spillage into coastal creeks, rivers, and lagoons, introductions of exotic species including yellowfin and Shimofuri goby that compete and prey on tidewater goby, and other activities likely to adversely affect tidewater goby. The extirpation of significant numbers of tidewater goby populations indicate the magnitude of these effects.

Conclusion

In conclusion, after reviewing the current status of the tidewater goby, the environmental baseline, the effects of the retrofitting of bridges at Pudding Creek and Ten Mile River, and the cumulative effects, it is the Service's biological opinion that the retrofitting of bridges at Pudding Creek and Ten Mile River are not likely to jeopardize the continued existence of the tidewater goby. Critical habitat has not been designated for the tidewater goby.

II. INCIDENTAL TAKE STATEMENT

Sections 9 of the Act, and Federal regulation pursuant to section 4(d) of the Act, prohibit the take of endangered and threatened species, respectively, without a special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the agency so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The Federal Highway Administration (FHA) has a continuing duty to regulate the activity covered by this incidental take statement. If the FHA (1) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

The Service anticipates incidental take of tidewater goby will be difficult to detect for the following reasons: (1) small size, (2) aquatic habitat, and (3)

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LETTER /

annual life-history that makes detection difficult. However, the following level of take of this species can be anticipated by loss of habitat and water quality because: tidewater goby are dependent on suitable substrates for making burrows and adequate water quality free of toxics and turbidity. All incidental take up to one percent of the assessed population for either Pudding Creek or Ten Mile River is authorized.

- o The opinion is not likely to result in jeopardy:

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species.

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the impact of take on the tidewater goby:

- (1) Minimize and avoid permanent habitat destruction and degradation on Pudding Creek.
- (2) Minimize and avoid temporary impacts to habitat on Pudding Creek and Ten Mile River.
- (3) Minimize and avoid killing and harassment of tidewater goby on Pudding Creek and Ten Mile River.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the FHA must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. With implementation of these measures the Service believes that no more than 1 percent of the local population of tidewater goby will be incidentally taken. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

- (1) The FHA shall minimize and avoid the permanent impacts to tidewater goby habitat through the following:
 - (a) All in-channel work using heavy equipment at Pudding Creek and Ten Mile River shall be conducted from trestles and not from fill material placed in-channel or operation on the channel bottom.
 - (b) All areas adjacent to the work zones at Pudding Creek and Ten Mile River subject to creek, river, or tidal influence shall be designated Environmentally Sensitive Areas (ESAs), both on the plans and in the field, and all CALTRANS and contractor personnel advised as to their sensitivity. All construction equipment and personnel shall be prohibited from entering these areas over the life of the projects. If backwater refugial areas are identified at any time

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prior to or during construction that contain any tidewater goby, these areas shall be flagged, designated as ESAs, and avoided by all construction personnel.

- (2) The FHA shall minimize and avoid temporary impacts to habitat in Pudding Creek and Ten Mile River through the following:
- (a) Prior to commencement of work, a qualified biologist shall instruct all construction personnel about: (1) the life-history of the tidewater goby; (2) sensitivity of the Pudding Creek and Ten Mile River work locations in regard to the tidewater goby; and, (3) terms and conditions of the biological opinion and other practical things that can be done to minimize and avoid adverse affects to the tidewater goby. This instruction shall be videotaped and a copy sent to the Sacramento Field Office within 24-hours prior to start of construction.
 - (b) On completion of all construction, disturbed soils adjacent to both locations shall be treated for erosion control, and construction related trash and debris shall be removed from the channel and banks.
- (3) The FHA shall minimize and avoid killing and harassing of tidewater goby in Pudding Creek and Ten Mile River through the following:
- (a) All in-channel retrofit work at Pudding Creek bridge including, but not limited to, installing and removal of piles and trestles, shall be limited to the period July 1 through April 1 of all years to avoid the primary breeding season of tidewater goby.
 - (b) Turbid coffer dam water at Ten Mile River shall be pumped to an approved sediment retention basin at an upland site. Turbidity limits for both Pudding Creek and Ten Mile River shall be set by the Regional Water Quality Control Board and coordinated with the Service.
 - (c) During construction, sufficient openings in all trestles and between pilings or coffer dams shall be maintained at all times to allow free circulation of channel water, and unrestricted up and downstream movement of tidewater goby.
 - (d) The open, bottom end of all cast-in-steel shell piles at Pudding Creek shall be covered with visqueen or filter cloth prior to initial driving into substrate to prevent trapping of tidewater goby inside the piles.
 - (e) Water pollution control plans developed by the contractor at each location shall be submitted to the Service for approval at least 30 days prior to the start of construction.
 - (f) Following installation, all coffer dams at Ten Mile River shall be inspected by a qualified biologist approved by the Sacramento Field Office to verify that no tidewater goby or other fish or wildlife species has become trapped within. Coffers shall be initially de-watered to a depth of no less than two feet using a pump with a screen mesh no greater than one-eighth inch diameter. The coffer dam interior shall be visually inspected and seined by the Service approved qualified biologist with the necessary collection permits, and all captured fish released at a pre-approved site where survival is assured. The proposed release site shall be submitted to the Sacramento Field Office for approval at least 30-days prior to start of construction.

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- (g) All coffer dams shall be made water-tight. Unavoidable leaks or weep sites allowing water to enter coffer dams shall be screened to prevent accidental capture of tidewater goby.
- (h) Tidewater goby population estimates shall be made by a qualified biologist approved by the Service for Pudding Creek and Ten Mile River and transmitted to the Sacramento Field Office for approval at least 30-days prior to start of construction.

Reporting Requirements

The FHA shall require all contractors and salvage personnel to report immediately any information about take or suspected take of tidewater goby. The FHA shall immediately notify the Service within one working day of any such information. Notification must include the date, time, and precise location of the incident and specimen, and any other pertinent information. The Service contact is the Assistant Field Supervisor for Endangered Species Division at (916) 979-2752. Any killed specimens that have been taken shall be properly preserved in accordance with the Natural History Museum of Los Angeles County policy of accessioning (10% formalin in quart jar or freezing). Information concerning: (1) how the fish was taken; (2) length of the interval between death and preservation; (3) the water temperature, (3) outflow and tide conditions; and (4) any other relevant information shall be written on 100% rag content paper and included in the container with the specimen. This preserved specimen shall be delivered to the Service's Division of Law Enforcement at 3310 El Camino, Sacramento, California 95821-6340 (telephone 916-979-2986).

III. CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

- (1) The Service recommends that FHA develop procedures that minimize the impacts on tidewater goby associated with seismic retrofitting of bridges.
- (2) The Service recommends that FHA develop procedures that minimize the impacts on tidewater goby of all other in-water construction activities.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

IV. CONCLUSION

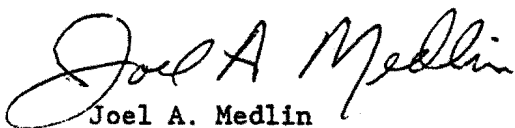
This concludes formal consultation on the actions outlined in the request for formal consultation. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any

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operations causing such take must cease pending reinitiation.

If you have any questions, please contact Robert Pine at (916) 979-2752.

Sincerely,



Joel A. Medlin
Field Supervisor

- cc: FWS, AES, Portland, OR
- Dale Sweetnam, DFG, Stockton, CA
- Gary Stern, NMFS, Santa Rosa, CA
- Jean Elder, Bay/Delta Federal Projects, FWS-SFO, Sacramento, CA

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