



DOCKET 06-AFC-9	
DATE	OCT 12 2007
RECD.	OCT 15 2007

October 12, 2007

Dockets Unit
California Energy Commission
1516 Ninth Street, MS 4
Sacramento, CA 95814

RE: Colusa Generating Station (CGS) AFC
CEC Docket No. 06-AFC-9

On behalf of E&L Westcoast, LLC, (E&L) a limited liability company and the applicant for the above-referenced Colusa Generating Station, we are pleased to submit five paper copies and 5 CDs of the enclosed documents:

- Responses to Date Requests 130 through 136

Please note that this document was submitted electronically on October 12, 2007. Please include this document in the AFC record.

URS Corporation

Dale Shileikis
Vice President

Enclosure

Cc: Andy Welch, CPV, with enclosure
Jack Caswell, without enclosure

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Responses to Data Requests 130 Through 136

Application for Certification (06-AFC-9)

for

COLUSA GENERATING STATION Colusa County, California

October 12, 2007



Prepared for:

E&L Westcoast, LLC

Prepared by:

URS

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BIOLOGICAL RESOURCES

Technical Area: Biological Resources

Authors: Brian McCollough and Rick York

BACKGROUND [130 THROUGH 133]

The Proposed Modifications to the Glenn-Colusa Canal Bridge Design for the Colusa Generating Station (August 2007) does not contain information regarding consultation with state and federal agencies concerned with biological resources which will be required to address the change in bridge location and design. Energy Commission staff needs this information to complete the Final Staff Assessment.

DATA REQUEST

130. a. *Please provide contact information and a summary of your conversation(s) with the United State Army Corps of Engineer (Corps), focusing on any information that the Corps indicates will be necessary for the federal Clean Water Act Section 404 permit application to address the revised bridge location and design.*
- b. *Provide a discussion of the effect the proposed bridge location and design change may have on the wetlands delineation and the Corps permit schedule.*

RESPONSE

- a. Contact Information: Brian Vierria
Regulatory Branch
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922
phone: 916.557.7728
email: brian.e.vierria@usace.army.mil

Summary of conversations with U.S. Army Corps of Engineers (Corps) regarding revised Glenn-Colusa Canal Bridge alignment:

- August 16, 2007 – URS biologist Melissa Newman, verbally notified Brian Vierria (Corps) of the revised Glenn-Colusa Canal Bridge alignment.
- August 17, 2007 – Information regarding the change to the bridge design was transmitted by URS to the Corps, U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS), in the response to the CEC's Preliminary Staff Assessment (PSA) document.
- August 24, 2007 – URS submitted supplemental information in letter format to update the Corps 404 permit application to the Corps, USFWS, NMFS, and CEC.
- August 28, 2007 – URS submitted supplemental information in letter format to update the Biological Assessment to the Corps, USFWS, NMFS, and CEC.

- September 25, 2007 – An inter-agency meeting was held on the proposed project. Meeting attendees included USFWS (Michelle Tovar), the Corps (Brian Vierria), CEC staff, and URS and Applicant representatives. At this meeting, Brian Vierria indicated that no additional information specific to the revised bridge design would need to be submitted by the Applicant. Brian Vierria indicated that the information submitted by URS in August was sufficient for him to complete a draft Public Notice. Brian Vierria stated he intends to complete a draft Public Notice by mid-October (approximately October 19, 2007). Once the Public Notice is issued, there is a 30-day public comment period, with a possible 15-day public comment period extension.

Brian Vierria noted that NMFS has already responded to the June 13, 2007 Corps request for consultation, in a letter dated August 2, 2007. NMFS concurred with the Corps that the project may affect but is not likely to adversely affect listed fish species under NMFS jurisdiction. NMFS also confirmed that the project would not affect any Essential Fish Habitat. The NMFS concurrence letter is provided as Attachment 130-1.

At the meeting, Brian Vierria identified several information requests he needs to complete the issuance of the Corps Individual Permit, including a draft Section 404(b)(1) alternatives analysis, a copy of the Section 401 water quality certification application, a proposed mitigation plan, National Historic Preservation Act Section 106 compliance information and a draft project purpose and need statement. Table 130-1 lists action items relevant to Corps Data Request.

Description	Responsible Person(s)	Date Proposed to be Transmitted
National Historic Preservation Act Section 106 compliance documentation	URS – Mark Hale	10/19/2007
Draft Clean Water Action Section 404(b)(1) Alternatives Analysis Evaluation (includes project purpose and need)	URS – Steve Leach and Melissa Newman	10/26/2007
Regional Water Quality Control Board application for 401 water quality certification	URS – Steve Leach and Melissa Newman	10/26/2007
Draft Biological Resources Mitigation Implementation and Monitoring Plan	URS – Steve Leach and Melissa Newman	12/5/2007

- b. The revised bridge design and location does not affect any areas not already discussed and included in the Colusa Generating Station Wetland Delineation Report verified by the Corps on August 10, 2007. Specifically, the design and location of the revised bridge alignment falls within the Jurisdictional Delineation Study area of the Wetland Delineation Report. Revised permit application information was submitted to the Corps on August 24, 2007. No additional information has been requested by the Corps.

The revised Glenn-Colusa Bridge alignment is not expected to affect the Corps permit schedule summarized above. A tentative date of December 31, 2007 has been proposed for the Corps completion of a draft Individual Permit and January 14, 2008 for the Corps issuance of the Final Individual Permit.

Attachment 130-1

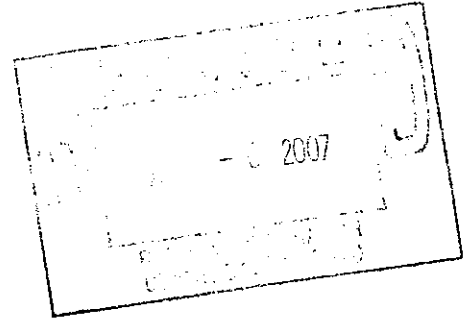
NMFS Concurrence Letter



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

August 2, 2007

In response refer to:
2007/04155



Tom Cavanaugh
Chief, Sacramento Valley Office
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814

Dear Mr. Cavanaugh:

This is in response to your letter of June 13, 2007, requesting concurrence under section 7 of the Endangered Species Act (ESA) from the NOAA's National Marine Fisheries Service (NMFS) for the proposed Colusa Power Generating Station project (U.S. Army Corps of Engineers (Corps) project # 200600897). The Corps has determined that the proposed project may affect Federally listed endangered Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*), threatened Central Valley spring-run Chinook salmon (*O. tshawytscha*), threatened Central Valley steelhead (*O. mykiss*), or their designated critical habitat.

The applicant, E&L Westcoast, LLC, is seeking a permit from the Corps under section 404 of the Clean Water Act to construct and commission a 660-megawatt combined cycle power plant on 31 acres adjacent to Delevan Road in Colusa County, California.

No Federally listed or proposed species (Evolutionarily Significant Units or Distinct Population Segments (DPS)) or designated critical habitat occurs in the action area.

ESA Section 7 Consultation

NMFS has reviewed the information provided in your letter. Based on this review and the best scientific and commercial information currently available, NMFS expects that adverse impacts to listed salmonids will be avoided due to listed salmonids and designated critical habitat not being present in the action area. Therefore, NMFS has determined that the proposed Colusa Power Generating Station project is not likely to adversely affect endangered Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*), threatened Central Valley spring-run Chinook salmon (*O. tshawytscha*), threatened Central Valley steelhead (*O. mykiss*), Southern DPS of North American green sturgeon, or their designated critical habitat.


This concludes informal consultation for the proposed action. Re-initiation of consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the action is subsequently modified in a manner that causes an effect to listed species or



critical habitat not considered; or (3) a new species is listed or critical habitat designated that may be affected by the action.

Please contact John Baker at (916) 930-3616, or via e-mail at john.baker@noaa.gov if you have any questions about this project or need additional information.

Sincerely,


for Rodney R. McInnis
Regional Administrator

cc: Copy to file – ARN 151422SWR2007SA00050
NMFS-PRD, Long Beach, CA

DATA REQUEST

131. a. ***Please provide contact information and a summary of your conversation(s) with the U.S. Fish and Wildlife Service (USFWS), focusing on any information they will need to address the revised bridge location and design.***
- b. ***Provide a discussion of how the proposed project will affect the project's Biological Assessment, when the revised Biological Assessment will be filed with the USFWS and Corps, when the revised Biological Assessment is likely to be deemed complete by the USFWS and the Corps, and the anticipated schedule or the federal Biological Opinion.***

RESPONSE

- a. Contact Information: Michelle Tovar
Fish and Wildlife Biologist
U.S. Fish & Wildlife Service
Endangered Species Division-Sacramento Valley Branch
2800 Cottage Way, Suite W2605
Sacramento, CA 95825-3901
office phone: 916.414.6646
fax: 916.414.6712
email: michelle_tovar@fws.gov

Summary of conversations with USFWS regarding the revised Glenn-Colusa Canal Bridge Design:

- August 17, 2007 – Information regarding the change to the bridge design was transmitted by URS to USFWS, the Corps, and NMFS, in the CEC Preliminary Staff Assessment (PSA) document.
- August 24, 2007 – URS submitted supplemental information in letter format to update the Corps 404 permit application to USFWS, the Corps, NMFS, and CEC.
- August 28, 2007 – URS submitted supplemental information in letter format to update the Biological Assessment to the USFWS, the Corps, NMFS, and CEC.
- September 25, 2007 – At the project's inter-agency meeting, Michelle Tovar (USFWS) reported that she has not been able to fully review all of the information that URS has submitted to her due to time constraints. (She is currently completing a court-mandated five-year status review that will continue to the end of October 2007.) Michelle Tovar did not have any data requests specific to the revised bridge design. She requested a map of potential impacts to listed species/habitats that summarizes permanent versus temporary impacts and duration of impacts (number of seasons) and a table that summarizes the work windows for each construction area. At the meeting it was agreed that a revised Biological Assessment would be prepared that would incorporate any additional information that has been gathered since the December 2006 Biological Assessment, and the additional data that was requested by Michelle Tovar at the meeting.

Table 13-1 lists action items relevant to USFWS Data Requests.

Table 131.1 Action Items Relevant to U.S. Fish and Wildlife Service Data Requests		
Description	Responsible Person(s)	Date Proposed to be Transmitted
Prepare Revised Biological Assessment that includes the following: <ul style="list-style-type: none"> - Updated project description - Supplemental information submitted via letter in August 2007 - Map of permanent versus temporary garter snake impacts, keyed to wetland or site ID - Tabular summary of work windows for each giant garter snake impact area (e.g., water crossings) - Clarification of temporary versus permanent impacts for giant garter snake (1 year or 2 years). Impacts should include cofferdams and wet season work - Requirement to fence alkali grassland at southwest corner of plant site during construction - Clarify limits of disturbance (i.e., 50-foot radius) for tower replacement - Requirement to fence limits of work area near towers - Indicate access route to transmission towers near vernal pools - Requirement to install straw wattles or other biodegradable, snake-friendly product to prevent indirect impacts to vernal pools adjacent to access road if road is paved upon completion of the project. 	URS – Steve Leach and Melissa Newman	10/19/2007

- b. Michelle Tovar (USFWS) was not able to commit to a schedule for completing the Biological Opinion due to her time constraints. URS has proposed a schedule for completion of the draft Biological Opinion by December 1, 2007 and issuance of the final Biological Opinion by December 14, 2007. The next coordination meeting with USFWS is scheduled for November 8, 2007.

DATA REQUEST

132. a. ***Please provide contact information and a summary of your conversation(s) with the California Department of Fish and Game (CDFG), focusing on any information that CDFG will need to address the revised bridge location and design.***
- b. ***Discuss any effect this project change may have on the schedule for the CDFG Streambed Alteration Agreement and the Incidental Take Permit.***

RESPONSE

- a. URS will transmit the Notification of Stream and Lakebed Alteration Agreement to Rosie Bjornsen at CDFG concurrent with the submittal of these responses to Data Requests. Rosie Bjornsen is responsible for assigning Agreement Applications to CDFG biologists for review. The proposed project has not yet been assigned to a CDFG biologist. URS will be contacting CDFG within the next week to determine the point of contact.
- b. URS will transmit the Notification of Stream and Lakebed Alteration Agreement to the CDFG concurrent with the submittal of these responses to data requests. The revised bridge design is not anticipated to affect the CDFG Incidental Take Permit for the proposed project. URS is currently preparing a letter to CDFG formally requesting concurrence on the USFWS biological opinion when it is released.

DATA REQUEST

- 133. Describe the habitat and potential sensitive biological resources for the 1.09-acre Temporary Construction Staging Area depicted in Figures 2 and 3 of the Proposed Modifications to Glenn-Colusa Canal Bridge Design (August 2007).**

RESPONSE

The 1.09-acre temporary construction staging area would be located on the east side of the Glenn-Colusa Canal Bridge in a cultivated rice field. Freshwater marsh, a jurisdictional water of the United States, is located west of the proposed staging area. Typical plant species in this wetland feature include broad-leaf cattail (*Typha latifolia*), bulrush (*Scirpus acutus*), and smartweed (*Polygonum* sp.). A 20-foot buffer would be located between the end of the freshwater marsh habitat and the start of the construction staging area. The limits of the construction staging area would be clearly marked with wooden or metal stakes connected by rope, flagging or by fencing.

Special-status species that may use cultivated rice fields include giant garter snake (*Thamnophis gigas*), tricolored blackbird (*Agelaius tricolor*), white-faced ibis (*Plegadis chihi*), and cliff swallow (*Hirundo pyrrhonota*). Mitigation measures BIO-1 through BIO-18, which were proposed in the November 2006 AFC, would be implemented to avoid and minimize potential impacts to special-status species and/or their sensitive habitats to a less-than-significant level. Potential unavoidable impacts to giant garter snake would be offset with compensatory mitigation.

CULTURAL RESOURCES

Technical Area: Cultural Resources

Author: Dorothy Torres

BACKGROUND [134]

Locations that were previously surveyed for archaeological resources are identified on Figure 8.3-1 in the AFC. The supplement to the AFC, "Proposed Modifications to Glenn-Colusa Canal Bridge Design" identifies a proposed 1.09-acre laydown area and portions of a 135-foot-long construction right-of-way that do not appear to have been surveyed for cultural resources.

DATA REQUEST

134.
 - a. *Please conduct an archaeological survey of the proposed laydown area and the 135-foot right-of-way described in the supplement.*
 - b. *Provide a discussion of the archaeological survey methods and archaeological survey boundaries, to include the findings of the survey.*
 - c. *Provide résumés of survey personnel to staff.*

RESPONSE

On October 6, 2007, URS archaeologist Mark Hale conducted an archaeological pedestrian reconnaissance of the entire 1.09-acre temporary construction laydown area and 135-foot right-of-way described in the supplement. Mark Hale's resume is provided as Attachment 134-1. The methods used and the results of these efforts, including an account of the field conditions at the time of survey, are described below.

Prefield Research. The existing record search and previously conducted Native American consultation efforts completed for this AFC were consulted prior to initiating field efforts.

The record search data and Native American responses did not identify either previously recorded archaeological resources or areas of concern to the local Native American community within these additions to the project's archaeological Area of Potential Effect (APE).

Field Methods. The archaeological field reconnaissance of the 1.09-acre temporary construction laydown area and 135-foot right-of-way expansion was completed on October 6, 2007. Specifically, these additions to the project APE were visually inspected using approximately 20-meter-wide parallel transects.

The ground surface within the proposed laydown area at the time of the archaeological survey was under rice cultivation and had been recently irrigated. As such, the overall ground visibility within the subject parcel can be described as poor. Given the limited surface visibility, small areas (20-cm by 20-cm) were cleared approximately every 10 meters to aid surface examination. To lessen disturbance to the unharvested crop, these clearings were carefully placed between the clusters of rice stalks.

Visibility of the ground surface within the 135-foot right-of-way expansion was mixed. The area west of the Glenn-Colusa Canal and north of Dirks Road, as well as the portion that bisects the proposed laydown area, were under rice cultivation. As such, ground visibility was poor and field methods identical to those described above were employed. The area west of the canal

and south of Dirks Road, however, had recently been plowed. Visibility in this area was unobstructed, eliminating the need to clear away surface vegetation. The remainder of the right-of-way was on road shoulders or canal banks, both of which had excellent surface visibility. No clearing was required in these disturbed areas.

Results. No archaeological resources or areas of concern to the local Native American community were identified during the completion of this supplemental archaeological field survey.

Attachment 134-1

Mark Hale Resume



Mark Hale

Archaeological/Cultural Resources

Overview

Mr. Hale is responsible for directing cultural resources projects throughout the western United States and Pacific Islands. His professional experience spans nearly 20 years and includes more than 100 surveying, testing, and data recovery projects conducted within various Pacific states and territories. Mr. Hale also has extensive experience conducting Section 106 and/or NEPA-related projects for private developments as well as for federal agencies, including the Federal Emergency Management Agency, National Park Service, Bureau of Land Management, Forest Service, U.S. Army Corps of Engineers, Department of Energy, Postal Service, and various branches of the Department of Defense.

Areas of Expertise

Archaeology
Cultural Resources

Education

M.A./Cultural Resources
Management/Sonoma State
University (Completed
coursework, exams, and research)
B.A./Anthropology/1983/University
of California, Berkeley

Registration/Certification

OSHA Hazardous Waste Operations
(40-Hour), Ecologics Training
Institute
OSHA Hazardous Waste Operations
Supervisor (8-Hour)
Introduction to Federal Projects and
Historic Preservation Law, the
Advisory Council on Historic
Preservation

Project-Specific Experience

Cultural Resources Task Leader, Elk Grove-Rancho Cordova-El Dorado Connector Phase I Environmental Study, Sacramento Area Council of Governments. Project entails planning, engineering, and environmental services for development of a connector that will link residential areas and employment centers and provide multi-modal options for travel within the corridor, including transit, bicycle, and pedestrian facilities. The connector will relieve congestion on the overcrowded existing two-lane roadway that currently serves the corridor. Responsibilities include preparation of the cultural resources section of the environmental document.

Project Archaeologist, Placer Parkway Corridor Preservation Tier 1 EIS/EIR, Placer County Transportation Planning Agency. Project entails preparation of environmental documentation for preservation of a new 17-mile-long parkway corridor linking Highway 65 in Placer County to SR 70/99 in Sutter County. Early phases of the project entail identification of alternatives to be studied in the EIS/EIR, compiling environmental surveys into a GIS database used to evaluate potential impacts, traffic engineering, and a robust public outreach program, including three advisory committees. Issues include coordination with various federal, state, and local regulatory agencies, planned Habitat Conservation Plans in both counties, and development pressures within the study area, which is notable for its vernal pool complexes and agricultural values. The project includes development of mitigation strategies for focused Tier 2 studies and a modified NEPA/404 process with the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers. Currently conducting record searches, Native American consultation, and fatal flaw analysis. Responsibilities include preparation of the archaeology section of the environmental document.

Project Archaeologist, Placer Ranch Specific Plan Processing and EIR, County of Placer. As a subcontractor, URS is assisting with the processing of a development application for a 2,200-acre mixed use



Mark Hale

Specific Plan. The project includes a Sacramento State University campus with a projected future enrollment of 25,000 students, as well as residential, commercial, and industrial components. Project responsibilities included a record search, Native American consultation, archaeology survey, and preparation of an Archaeology Survey Report.

Project Archaeologist, Bickford Ranch Specific Plan EIR, County of Placer. Project entailed the preparation of environmental documentation for a controversial residential and limited mixed-use development featuring 1,950 residential dwelling units and limited mixed-use development on 2,000 acres of relatively undisturbed property in the Sierra Foothills. As aspects of site development were considered, including community services such as schools and parks, on- and off-site roadway improvements; and off-site improvements needed for access to potable water, wastewater treatment, and electrical and gas providers. Key environmental issues included conversion of this rural area to a more suburban environment, significant loss of biological resources, groundwater quality, sewage, disposal, and visual quality in the affected area. Project responsibilities included preparation of the cultural resources section of the environmental document.

Project Archaeologist, Home Depot Dewitt Center EIR, County of Placer. Project entailed the preparation of environmental documentation for a very controversial Home Depot store on Placer county property next to the DeWitt Center Government Offices, and adjacent to the crowded SR 49 corridor. Issues included land use compatibility, use of government property for a “big box” development, traffic, health issues related to diesel trucks in proximity to sensitive receptors, and impacts on local businesses. Project responsibilities included a record search, Native American consultation, archaeological survey, and preparation of the archaeological section of the environmental document.

Project Archaeologist, Highland Reserve North Specific Plan EIR, City of Roseville. Project entailed the development of environmental documentation for an amendment to the North Central Roseville Specific Plan to provide project-level CEQA review of 615 acres that were designated as Urban Reserve in the Specific Plan, the only portion of the Plan that was not entitled. The actions included a General Plan Amendment; dwelling unit transfer; and rezone planned for residential, community, and regional commercial and public uses. Issues included air quality, noise during construction, biological resources, and the conversion of an urban reserve area to development. Project responsibilities included an assessment of archaeological resources in the project area and preparation of the cultural resources section of the environmental document.

Project Archaeologist, Atkinson Street Bridge Replacement Project PS&E and Environmental Assessment/Initial Study, City of Roseville. Project entailed the preparation of both the engineering plans and specifications and the environmental documents for replacement of the structurally deficient four-span, two-lane steel girder bridge over Dry



Mark Hale

Creek with a new five-lane bridge. The project also entailed widening and realignment of the 1.3-mile-long approach roadway. URS prepared an Environmental Assessment/Initial Study, in which three alternatives were analyzed, and technical studies including a Floodplain Encroachment Evaluation and Location Hydraulic Study, Water Quality Study, Natural Environment Study and Wetlands Study, Air Quality and Noise studies, an Archaeology Survey Report, an Historic Architectural Survey Report, and an Historic Properties Survey Report were prepared. The Historic Architectural Survey Report evaluated seven properties for eligibility in the National Register of Historic Places, one of which was determined to be eligible for listing. Responsibilities included a record search, an archaeological survey, and preparation of a technical report.

Archaeologist, Del Webb Specific Plan EIR, City of Roseville.

Project entailed the fast-track preparation of environmental documentation for a 1,200-acre mixed-use development. Issues included floodplains, wetlands, vernal pools, and resource preservation. The Del Webb project included 3,500 dwelling units, two community commercial centers, three golf courses, recreational centers, and public parks and a park preserve area in a previously undeveloped area in the City's Urban Reserve Area. The project required extension of City services, including water, wastewater and electricity, and new roadways. Project responsibilities included peer review of cultural resource reports prepared by the Applicant's consultant; impact assessment and preparation of mitigation plans; and preparation of the cultural resources section of the environmental document.

Project Archaeologist, Antonio Mountain Ranch Specific Plan EIR, County of Placer.

As a subconsultant, URS is assisting with the preparation of a specific plan that provides for the development of 800 acres within the 8,800-acre Sunset Industrial Area in southwestern Placer County. The Specific Plan calls for the development of 452 acres of land used for industrial purposes, including warehousing, distribution, manufacturing and processing, professional offices, and research and development. The Plan also calls for the preservation of 338 acres of open space. Because the proposed project area is located within the City of Lincoln's Sphere of Influence, and less than 1.5 miles from the cities of Roseville and Rocklin, significant land use compatibility issues had to be evaluated. In addition, as a consequence of the project area's location adjacent to productive agricultural areas and support of limited agricultural activities, the Williamson Act and the compatibility of the proposed industrial land uses were critical issues in development of the Plan. Project responsibilities included a record search, an archaeological survey, and preparation of the cultural resources section of the environmental document.

Project Archaeologist, Route 41 Adoption Tier I EIS/EIR and Tier II FONSI/Negative Declaration, Caltrans District 6.

Project entailed preparation of a joint EIS/EIR for adoption of an alignment for State Route 41 from El Paso Avenue in Fresno County to 1.6 kilometers north of State Route 145 in Madera County, a distance of 20 kilometers



Mark Hale

(12.4 miles). The purposes of the project were to identify and adopt a preferred transportation corridor for Route 41 in the project area; protect the preferred corridor from encroachment by incompatible land uses; and acquire right-of-way in the southern half of the preferred corridor. URS conducted all technical studies and prepared 18 technical reports in accordance with Caltrans and Federal Highway Administration guidelines. Project also entailed subsequent preparation of a FONSI/Negative Declaration for the first roadway project in the adopted corridor. Functioned as the field supervisor and report author for archaeological excavations at two sites in Coarsegold. Prepared archaeology portion of cultural resources section of EA/IS.

Project Archaeologist, Colusa Power Plant Application for Certification, Reliant Energy Corporation/Competitive Power Ventures. Reliant Energy proposed to construct a nominal 50 MW combined cycle gas fired power plant in rural Colusa County. The AFC is the California Energy Commission's CEQA-equivalent document requiring more stringent information regarding power plant efficiency, reliability, and related issues. The AFC was completed on time and on budget in 3½ months, and was deemed complete within 30 days. Significant issues included air quality, public health, biological resources, impacts on a rural community, and changes in land use. The project was withdrawn by Reliant in 2002, the day before the Preliminary Staff Report was to be published. Project responsibilities included a record search, an archaeological survey, and preparation of the technical section of the environmental document.

SOIL AND WATER RESOURCES

Technical Area: Soil and Water Resources

Author: Richard Latteri

BACKGROUND [135 AND 136]

On August 17, 2007, a new design for the Glenn-Colusa Canal Bridge was submitted to the California Energy Commission. The revised bridge design includes the removal of the existing bridge to include the existing piles installation of new piers in the Glenn-Colusa Canal. Construction of the new bridge will require the installation of cofferdams to allow for dewatering. Under this new proposal, the existing piers will be removed during low water conditions.

DATA REQUEST

135. Provide a more detailed description of the construction procedures and design of the cofferdams to include:

- **the volume of fill material required for the cofferdams**
- **the location of the borrow pit where the fill material is to come from**
- **preliminary construction drawing showing the height, width, and length of the cofferdams.**

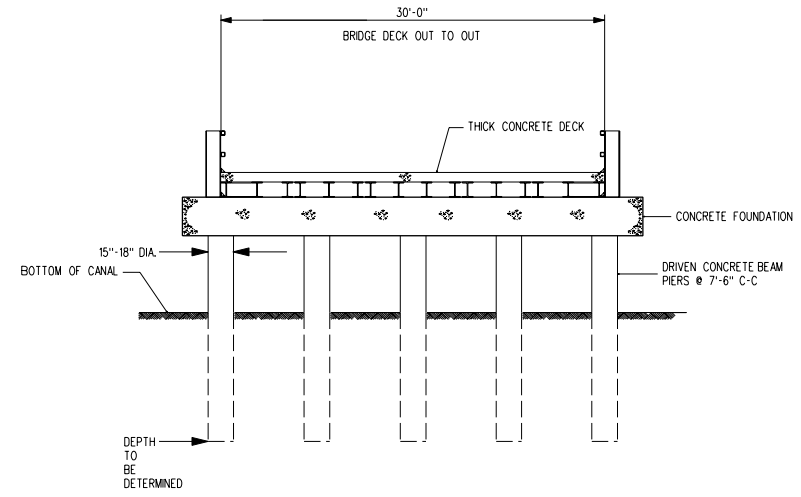
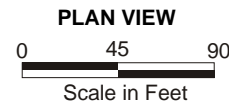
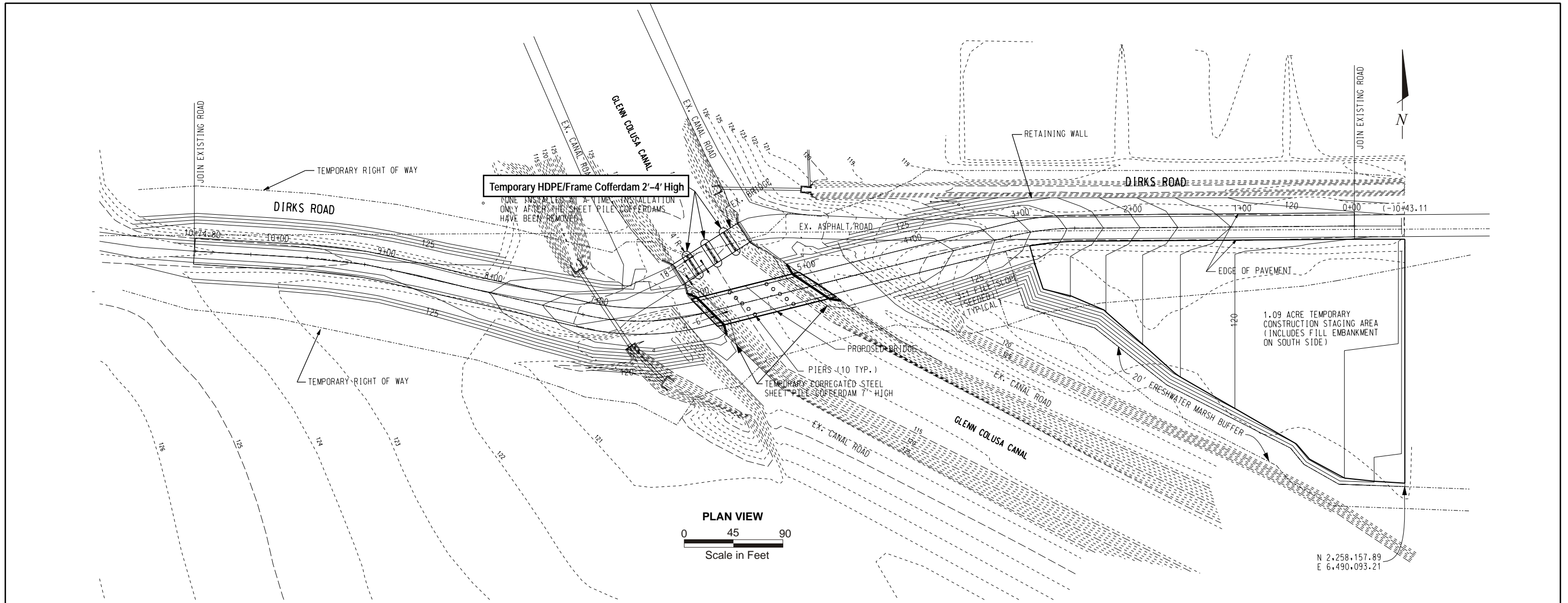
RESPONSE

The current proposal is to construct a replacement bridge to the south of the existing bridge rather than to the north. The east approach will be located approximately 75 feet south of the existing bridge, and the west approach will be located about 45 feet south. Similar to the previous proposal, the access road on both sides will be realigned to straighten and widen the approaches to allow for unimpeded two-way traffic, re-aligning with the current Dirks Road right-of-way as soon as practical. A retainer wall will be placed along the northern side of Dirks Road, on the east side of the replacement bridge, to enable the continued use of the current irrigation canal.

The replacement bridge will be approximately 100 feet long by 30 feet wide and will be a three-span bridge (rather than a free-span design as previously proposed). Two rows of five driven piers will be constructed in the canal to support the bridge. Corrugated steel sheet piles will be installed to construct a temporary cofferdam around each bridge abutment, as required by the depth of water, to construct the abutments in the dry. The cofferdams will be placed as close as possible to the abutment construction area to minimize the impact to the natural flow of the canal water. If need be, only one cofferdam will be installed at a time. The inside of the cofferdam will be dewatered using a pump or pumps, and the water will be released back into the canal downstream of the cofferdam. Figure 135-1 provides a representation of the cofferdams. The height of the cofferdam will be as needed to envelope the bridge abutment based on the depth of water. This will be determined prior to the start of construction based on the time of year and canal operations during the construction period.

The bridge piers will be driven pre-cast concrete or drilled cast-in-place concrete. They will be installed by equipment located on the canal embankment and can be installed even during high water levels without the use of cofferdams around the pier locations.

Under this proposal, the existing bridge will be removed (rather than left in place, as previously proposed). The concrete deck and the three sets of five piers associated with the existing bridge will be removed. The bridge will be removed after the replacement bridge is constructed to allow continued access over the Glenn-Colusa Canal. The piers will be cut off at the mud line and removed during low or empty water conditions, which will allow the work to be done without placing heavy equipment in the canal. A temporary 2- to 4-foot-high preformed plastic cofferdam will be placed around each set of five piers one set at a time, and will be anchored to the canal bed using stakes or other temporary attachment methods. Dewatering will be required; this water will be released back to the canal. Since this will be done during low or no water conditions, there will be no impact to canal operations.



CROSS SECTION OF PROPOSED BRIDGE

Source:
 Bechtel; Colusa Power Plant, Dirks Road Bridge,
 Dwg No. CKG-0200-00001, Rev. D (10/02/07)

CONSTRUCTION DRAWING – COFFERDAMS
 Colusa Generating Station
 E&L Westcoast, LLC
 October 2007
 Colusa County, California



FIGURE 135-1

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DATA REQUEST

- 136. Provide a discussion of the GCID permitting requirements for construction related activities within the Glenn-Colusa Canal to include the requirements for dewatering, temporary shut down of the canal, and whether approval of the Bureau of Reclamation is required.**

RESPONSE

Dewatering of the cofferdam areas will be required. The volume of water will depend on the water level and infiltration rate. The water will be released back to the canal. The construction methodology will not require closure of the canal, but will take advantage of the canal's low and empty water periods to perform work. No GCID permitting requirements are applicable to this work, and it will not be necessary to obtain approval from the Bureau of Reclamation to perform the necessary work.