

FOR CONTRACT NO.: 01-364321

## INFORMATION HANDOUT

California Regional Water Control Board North Coast  
Region

Water Quality Certification

United States Army Corps Of Egnineers

California Coastal Commision North Coast District

California Department of Fish And Game



COUNTY OF MENDOCINO  
DEPARTMENT OF PLANNING AND BUILDING SERVICES  
860 NORTH BUSH STREET · UKIAH · CALIFORNIA · 95482  
120 WEST FIR STREET · FT. BRAGG · CALIFORNIA · 95437

Steve Dunicliff, Director  
Telephone 707-463-4281  
FAX 707-463-5709  
Ft. Bragg Phone 707-964-5379  
Ft. Bragg Fax 707-361-2427  
pbs@co.mendocino.ca.us  
www.co.mendocino.ca.us/planning

COASTAL DEVELOPMENT STANDARD PERMIT

**CASE#:** CDP #6-2008  
**APPLICANT:** CALIFORNIA DEPARTMENT OF TRANSPORTATION DISTRICT 1  
**AGENT:** ADELE POMMERENCK, ENVIRONMENTAL PLANNER  
**REQUEST:** Removal, replacement and rehabilitation of nine culverts along Highway 1.  
**APPEALABLE AREA:** Yes  
**LOCATION:** In the Coastal Zone, along Highway 1, at mile markers 4.11, ~~6.60~~, 8.09, 27.25, 29.27, 31.22, 35.04, 46.18 and 47.19 (Numerous APN's; see attached review sheet for list.)  
**PROJECT COORDINATOR:** FRED TARR

**ACTION:** Approved with Conditions.

**COASTAL PERMIT EFFECTIVE DATE:** January 18, 2013

**COASTAL PERMIT EXPIRATION DATE:** January 18, 2015

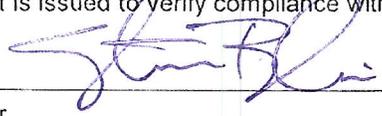
**CONDITIONS OF APPROVAL:** See Coastal Permit Administrator Action Sheet for conditions.

**Department of Planning and Building Services Statement:** I hereby certify that all conditions which must be met prior to use or occupancy of this permit have been met and that this permit is deemed by the Department of Planning and Building Services to be a valid permit subject to all conditions of approval.

  
\_\_\_\_\_  
Deputy Coastal Permit Administrator

1-22-13  
\_\_\_\_\_  
Date

**Owner's Statement:** I am the owner of the property subject to this permit (or his/her authorized agent) and I hereby certify that I have reviewed the conditions of approval and will establish and continue the use in compliance with the specified conditions and applicable sections of the Mendocino County Code. I further grant permission for County staff to enter upon the premises for which the permit is issued to verify compliance with the required conditions.

  
\_\_\_\_\_  
Owner

1-23-13  
\_\_\_\_\_  
Date



**COUNTY OF MENDOCINO**  
**DEPARTMENT OF PLANNING AND BUILDING SERVICES**  
860 NORTH BUSH STREET · UKIAH · CALIFORNIA · 95482  
120 WEST FIR STREET · FORT BRAGG · CALIFORNIA · 95437

STEVE DUNNICLIFF, DIRECTOR  
Telephone 707-463-4281  
FAX 707-463-5709  
FB PHONE: 707-964-5379  
FB FAX: 707-961-2427  
pbs@co.mendocino.ca.us  
www.co.mendocino.ca.us/planning

December 14, 2012

**FINAL FINDINGS AND CONDITIONS OF APPROVAL**  
**CASE # CDP 6-2008 – CALTRANS**  
**DECEMBER 13, 2012**

The Coastal Permit Administrator approves CDP 6-2008 per the findings and conditions of approval contained in the staff report, further finding;

**PROJECT FINDINGS AND CONDITIONS:** Pursuant to the provisions of Chapter 20.532 and Chapter 20.536 of the Mendocino County Code, the Coastal Permit Administrator approves the proposed project, and adopts the following findings and conditions.

**FINDINGS:**

1. The proposed development is in conformity with the certified Local Coastal Program; and
2. The proposed development will be provided with adequate utilities, access roads, drainage and other necessary facilities; and
3. The proposed development is consistent with the purpose and intent of the applicable zoning district, as well as all other provisions of Division II, and preserves the integrity of the zoning district; and
4. The proposed development, if constructed in compliance with the conditions of approval, will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act; and
5. The proposed development will not have any adverse impacts on any known archaeological or paleontological resource; and
6. Other public services, including but not limited to, solid waste and public roadway capacity have been considered and are adequate to serve the proposed development.
7. The proposed development is in conformity with the public access and public recreation policies of Chapter 3 of the California Coastal Act and Coastal Element of the General Plan.
8. Environmentally Sensitive Habitat Areas:
  - a. The resource as identified will not be significantly degraded by the proposed development.
  - b. There is no feasible less environmentally damaging alternative.
  - c. All feasible mitigation measures capable of reducing or eliminating project-related impacts have been adopted.

**STANDARD CONDITIONS OF APPROVAL:**

1. This action shall become final on the 11<sup>th</sup> day following the decision unless an appeal is filed pursuant to Section 20.544.015 of the Mendocino County Code. The permit shall become effective after the ten working day appeal period to the Coastal Commission has expired and no appeal has been filed with the Coastal Commission. The permit shall expire and become null and void at the expiration of two years after the effective date except where construction and use of the property in reliance on such permit has been initiated prior to its expiration.
2. The use and occupancy of the premises shall be established and maintained in conformance with the provisions of Division II of Title 20 of the Mendocino County Code.
3. The application, along with supplemental exhibits and related material, shall be considered elements of this permit, and that compliance therewith is mandatory, unless an amendment has been approved by the Coastal Permit Administrator.
4. This permit shall be subject to the securing of all necessary permits for the proposed development from County, State and Federal agencies having jurisdiction.
5. The applicant shall secure all required building permits for the proposed project as required by the Building Inspection Division of the Department of Planning and Building Services.
6. This permit shall be subject to revocation or modification upon a finding of any one or more of the following:
  - a. The permit was obtained or extended by fraud.
  - b. One or more of the conditions upon which the permit was granted have been violated.
  - c. The use for which the permit was granted is conducted so as to be detrimental to the public health, welfare or safety, or to be a nuisance.
  - d. A final judgment of a court of competent jurisdiction has declared one or more conditions to be void or ineffective, or has enjoined or otherwise prohibited the enforcement or operation of one or more such conditions.
7. This permit is issued without a legal determination having been made upon the number, size or shape of parcels encompassed within the permit described boundaries. Should, at any time, a legal determination be made that the number, size or shape of parcels within the permit described boundaries are different than that which is legally required by this permit, this permit shall become null and void.
8. If any archaeological sites or artifacts are discovered during site excavation or construction activities, the applicant shall cease and desist from all further excavation and disturbances within one hundred (100) feet of the discovery, and make notification of the discovery to the Director of the Department of Planning and Building Services. The Director will coordinate further actions for the protection of the archaeological resources in accordance with Section 22.12.090 of the Mendocino County Code.

**SPECIAL CONDITIONS OF APPROVAL:**

1. The proposed project shall comply with the all of the applicable avoidance and minimization measures contained in: the "Culvert Rehabilitation Project, State Routes 1, 20, 101 in Mendocino County-Initial Study with Negative Declaration" (Exhibit C), prepared by Caltrans, July, 2010, the

"Mitigation and Monitoring Proposal to Address Mitigation for Wetlands and other Waters of the U.S." (Exhibit D), prepared by Caltrans, March 2012, and the "ESHA Assessment/Reduced Buffer Analysis" (Exhibit E) prepared by Caltrans, February, 2012.

2. Caltrans shall remove all materials not in use from the subject project sites and their associated staging areas within 30 days after the work is conducted.
3. If North Gualala Water Company water main relocation is deemed necessary, the relocation cost will be the responsibility of Caltrans.
4. Prior to the project beginning, Caltrans shall notify all utility companies whose lines might be affected by the construction proposed under CDP 6-2008 (Update).  
*Dept. of Fish and Game "Lake or Stream bed alteration agreement (Notification No. 1600-i2012-0088-R1) Fred Torn Mendocino County Planner*
5. ~~The following measures are required to comply with recommendations by the California Department of Fish and Game: This condition was superseded by the attached Mendocino County Planner~~

~~**State Route 1, PM 35.04** – the final plans for the project shall include extending the rock slope protection to the lip of the receiving culvert's wing-wall or redirecting flow from the existing culvert outlet into the adjacent channel and line the channel with rock slope protection down to where it meets the wing wall.~~

~~**State Route 1 – PM 31.22** – the final plans for this project shall include extending the grouted rock slope protection downslope until it reaches the existing concrete apron that leads to the bank of Elk Creek.~~

~~**State Route 1 – PM 29.27** – Prior to commencing work at this site, amphibian surveys shall be completed and protective measures shall be implemented to the satisfaction of the US Fish and Wildlife Service for the protection of California red-legged frogs.~~

~~**State Route 1 – PM 8.09** – No comments specific to this culvert, however the culvert located at PM 8.08, located on the same watershed, warrants immediate attention as a large and evolving gully associated with this culvert is delivering sediment to this stream, which is likely a habitat area for fish and amphibians. Cumulative impacts potential warrants consideration at this location. Plans for the culvert at PM 8.08 shall include plans for arresting the head-cut, repairing the gully, and abating the ongoing erosion.~~

6. Any structures passing anadromous fish shall be properly sized to assure passage of all life stages of the fish species.
7. The recommendations outlined in the archaeological report *Historic Property Survey Report for a Culvert Replacement Project on Routes 1, 20, and 101, in Mendocino County, California*, for the subject project, prepared by Thad Van Bueren, dated January of 2003/2004 and the June 21, 2010 Supplemental Cultural Resources Review, prepared Timothy Keefe shall be strictly adhered to. The purpose of this condition is to assure that archaeological resources are adequately protected.
8. To assure compliance with Division of Environmental Health requirements, all excavations must maintain an eight foot setback to all existing or proposed leachfields, and a 25 foot setback to leachfields that are downgradient from the work; this increase to 50' in areas where soil depth to groundwater is less than five feet beneath the leaching trench.
9. Additional PAMB surveys will need to be conducted prior to the construction phase of the CDP 6-2008 (Update).

CALIFORNIA DEPARTMENT OF FISH AND GAME  
NORTHERN REGION  
601 LOCUST STREET  
REDDING, CALIFORNIA 96001

RECEIVED

OCT 31 2012



LAKE OR STREAMBED ALTERATION AGREEMENT  
NOTIFICATION No. 1600-2012-0088-R1  
Numerous Watersheds

D. F. G. - EUREKA

#### 46 Encroachments

Mr. Steven Blair representing the Dept. of Transportation (Caltrans)  
CULVERT REHABILITATION PROJECT; STATE HIGHWAYS 1, 20 AND 101;  
NUMEROUS WATERSHEDS, MENDOCINO COUNTY

This Lake or Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Game (DFG) and Mr. Steven Blair (Permittee), representing the California Department of Transportation (Caltrans).

#### RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified DFG on April 9, 2012 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1602, DFG has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

**PROJECT LOCATION**

Project locations vary over a large area on State Highways 1, 20 and 101 within numerous watersheds in Mendocino County. The table below includes Post Mile (PM) information. Locations 1 through 19 are on State Highway 1, locations 20 through 45 are on State Highway 20 and location 46 is on State Highway 101:

A. Project	
Location	Post Mile
1	3.87
2	3.9
3	4.11
4	5.33
5	5.38
6	5.48
7	6.5
8	8.09
9	24.43
10	27.75
11	29.27
12	29.68
13	30.18
14	31.22
15	34.74
16	35.04
17	41.19
18	46.18
19	47.19
20	13.76
21	17.05
22	18.12
23	18.23

A. Project	
Location	Post Mile
24	18.37
25	18.82
26	18.87
27	18.89
28	19.16
29	19.5
30	27.32
31	28.13
32	28.14
33	28.3
34	28.79
35	29.39
36	29.77
37	29.85
38	30.21
39	30.29
40	30.59
41	30.67
42	31
43	31.72
44	31.84
45	31.99
46	48.9

**PROJECT DESCRIPTION**

The project involves 46 encroachments: a culvert rehabilitation project that will replace and/or upgrade existing drainage culvert crossings on non-fish bearing streams most of which are ephemeral. Some vegetation will be removed as a result of this project.

**PROJECT IMPACTS**

Existing fish or wildlife resources the project could substantially adversely affect include: California red-legged frog (*Rana draytonii*), northern red-legged frog (*Rana aurora*), foothill yellow-legged frog (*Rana boylei*), downstream populations of steelhead (*Oncorhynchus mykiss*), coho salmon (*O. kisutch*) and other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include: direct and/or incidental take, impede up- and/or down-stream migration, damage to spawning and/or rearing habitat and potential cumulative impacts.

## **MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES**

### **1. Administrative Measures**

Permittee shall meet each administrative requirement described below.

- 1.1 Documentation at Project Site. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to DFG personnel, or personnel from another state, federal, or local agency upon request.
- 1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 Notification of Conflicting Provisions. Permittee shall notify DFG if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, DFG shall contact Permittee to resolve any conflict.
- 1.4 Project Site Entry. Permittee agrees that DFG personnel may enter the project site at any time to verify compliance with the Agreement.

### **2. Avoidance and Minimization Measures**

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

- 2.1 Except where otherwise stipulated in this Agreement, all work shall be in accordance with the forms, work plans, biological reports and maps submitted with Notification No. 1600-2012-0088, as modified or amended on April 9, 2012.
- 2.2 All work within the bed, bank and channel shall be confined to the period June 15 through October 15 of each year. Work may be conducted in or near the stream during the late season work period October 15 through November 1, provided adherence to all conditions in this Agreement and a) – c) below.

- a) The Permittee shall complete any unfinished encroachment work, including erosion control measures, within 24 hours of DFG directing the Permittee to do so.
  - b) Prior to any work at a site, the Permittee shall stock-pile erosion control materials at the site. All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance or repair or removal shall be treated for erosion immediately upon completion of work on the crossing, and prior to the onset of precipitation capable of generating runoff.
  - c) When a 7-day National Weather Service forecast of rain includes a minimum of 5 consecutive days with any chance of precipitation, 3 consecutive days with a 30% or greater chance of precipitation, or 2 consecutive days of 50% or greater chance of precipitation, the Permittee shall finish work underway at encroachment and refrain from starting any new work at encroachment prior to the rain event.
- 2.3 No fill material shall be placed within a stream except as specified in this Agreement.
  - 2.4 All heavy equipment (including parts e.g., buckets) that will be entering the stream channel shall be free of materials deleterious to aquatic life including oil, grease, hydraulic fluid, soil and other debris. Cleaning of equipment shall take place outside of the channel and prior to entering the water.
  - 2.5 Any equipment or vehicles driven and/or operated within or adjacent to the stream channel shall be checked and maintained in a manner which prevents materials that, if introduced to water, could be deleterious to aquatic life, wildlife, or riparian habitat.
  - 2.6 Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. The disturbed portions of any stream channel or lake margin within the high water mark of the stream or lake shall be restored to as near their original condition as possible. Restoration shall include re-vegetation of areas stripped or exposed by project activities. Slash pack, rock, or other erosion protection suitable to DFG shall be placed in areas where vegetation cannot reasonably be expected to become reestablished.
  - 2.7 Adequate and effective erosion and siltation control measures shall be used to prevent sediment or turbid or silt-laden water from entering streams. Where needed, the Permittee shall use native vegetation or other treatments including native slash, jute netting, straw wattles, and geotextiles to protect and stabilize soils. Geotextiles, fiber rolls, and other erosion control treatments shall not contain plastic mesh netting.
  - 2.8 All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance or repair, shall be treated for erosion prior to the

onset of precipitation capable of generating run-off or the end of the yearly work period, whichever comes first. Restoration shall include using native slash or seeding and mulching of all bare mineral soil exposed in conjunction with encroachment work. Erosion control shall consist of at least 2 to 4 inches of certified weed-free straw mulch and 100 lbs/acre equivalent barley seed for native mixes. No annual (Italian) ryegrass (*Lolium multiflorum*) shall be used.

- 2.9 Encroachments and associated structures, fills, and other exposed soils shall be armored as needed to protect fill, abutments, and the stream channel and banks from erosion.
- 2.10 All large woody debris (LWD) excavated during crossing construction or deconstruction shall be used on site or at other locations throughout the property for streambed and bank stabilization or erosion control. LWD shall be sufficiently anchored or keyed-in to resist movement during high flows and placed in a manner that prevents undercutting of streambanks.
- 2.11 The Permittee shall provide site maintenance including, but not limited to, re-applying erosion control to minimize surface erosion and ensuring drainage structures, streambeds and banks remain sufficiently armored and/or stable.
- 2.12 Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the ordinary high water mark before such flows occur or the end of the yearly work period, whichever comes first.
- 2.13 Refueling of equipment and vehicles and storing, adding or draining lubricants, coolants or hydraulic fluids shall not take place within or adjacent to any stream. All such fluids and containers shall be disposed of properly. Heavy equipment parked within or adjacent to the stream shall use drip pans or other devices (e.g., absorbent blankets, sheet barriers or other materials) as needed to prevent soil and water contamination.
- 2.14 All activities performed in the field which involve the use of petroleum or oil based substances shall employ absorbent material designated for spill containment and clean up activity on site for use in case of accidental spill. Clean-up of all spills shall begin immediately. The Permittee shall immediately notify the State Office of Emergency Services at 1-800-852-7550. DFG shall be notified by the Permittee and consulted regarding clean-up procedures.
- 2.15 No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from construction work, or associated activity of whatever nature shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into Waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. (Not applicable to material installed permanently or temporarily as part of the project activities).

- 2.16 Upon DFG determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation, shall be halted until effective Department approved control devices are installed, or abatement procedures are initiated.
- 2.17 Installation or modification of culverts shall be such that water flow is not impaired and upstream or downstream passage of all aquatic life-forms is assured at all times.
- 2.18 Equipment shall not operate in a live (flowing) stream or wetted channel except as may be necessary to construct and remove in-stream structures to catch and contain water (i.e., cofferdams) to divert stream flow and isolate the work site, or as otherwise specifically provided for in this Agreement.
- 2.19 To prevent the release of materials that may be toxic to fish and other aquatic species, poured concrete shall be isolated from stream flow and allowed to dry/cure for a minimum of 30 days. As an alternative, the Responsible Party shall monitor the pH of water that has come into contact with the poured concrete. If this water has a pH of 9.0 or greater, the water shall be pumped to tanker truck or to a lined off-channel basin and allowed to evaporate or be transported to an appropriate facility for disposal. During the pH monitoring period, all water that has come in contact with poured concrete shall be isolated and not allowed to flow downstream or otherwise come in contact with fish and other aquatic resources. The water shall be retested until pH values become less than 9.0. Once this has been determined, the area no longer needs to be isolated and water may be allowed to flow downstream. Results of pH monitoring shall be made available to DFG upon request.
- 2.20 Where flowing water is present during operations:
  - a) Biologist shall be on-site to identify and, if necessary, remove and relocate amphibians, reptiles or other aquatic species.
  - b) Cofferdams shall be installed to divert stream flow and isolate and dewater the work site, and to catch any sediment-laden water and minimize sediment transport downstream. Cofferdams shall be constructed of non-polluting materials including sand bags, rock, and/or plastic tarps. Mineral soil shall not be used in the construction of cofferdams.
  - c) Flowing water shall be cleanly bypassed and/or prevented from entering the work area through pumping or gravity flow, and cleanly returned to the stream below the work area. Flow diversions shall be done in a manner that shall prevent pollution and/or siltation and provides flows to downstream reaches.
  - d) The Responsible Party shall remove any turbid water and sediment present in the work area prior to restoring water flow through the project site, and place them in a location where they cannot enter the Waters of the State.

SITE-SPECIFIC MEASURES:

State Highway 1 Projects:

- 2.21 At Location 1 (PM 3.87) on Highway 1, biologists shall conduct pre-construction surveys for California red-legged frog. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins.
- 2.22 At Location 3 (PM 4.11), the notification received on April 9, 2012 proposes installation of a 20-inch plastic pipe liner. Due to the apparent collapse of the existing 24-inch CMP, a complete replacement may be necessary. This Agreement does not authorize a complete replacement at this location. An amendment will be required if replacement is necessary. The amendment notification shall include an update on projected impacts. Biologists shall conduct pre-construction surveys for California red-legged frog. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins.
- 2.23 At Location 4 (PM 5.33) on Highway 1, biologists shall inspect an existing bird nest on a California bay tree near the existing culvert outlet. If the nest is active, biologists shall consult with DFG staff to determine appropriate protective measures before construction begins.
- 2.24 At Location 7 (PM 6.60) on Highway 1, biologists shall conduct pre-construction surveys for California red-legged. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins. An unauthorized water diversion exists near the existing culvert outlet. This water diversion is not presently permitted by DFG. Remove all existing pipe and other water diversion structures that currently exist within Caltrans' ownership.
- 2.25 At location 8 (PM 8.09) on Highway 1, work was completed under an emergency declaration by Caltrans. Completed and on-going work varied significantly from what was disclosed in the April 9, 2012 notification. To address impacts at this site, a survey and mitigation/monitoring plan shall be completed that enumerates the number and species of trees removed and replaces these trees at a minimum 3:1 ratio. Planted trees shall be monitored for a minimum of 5 years and all dead or dying planted trees shall be replaced during this period.
- 2.26 At Location 10 (PM 27.75) on Highway 1, biologists shall conduct pre-construction surveys for California red-legged frog. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins. In addition, biologists shall inspect ivy-covered areas near the existing culvert outlet for active bird nests. If active nest(s) are identified, biologists shall consult with DFG staff to determine appropriate protective measures before construction begins.

- 2.27 At Location 11 (PM 29.27) on Highway 1, biologists shall conduct pre-construction surveys near the existing culvert outlet for California red-legged. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins.
- 2.28 At Location 14 (PM 31.22) on Highway 1, install environmental sensitive area (ESA) barrier fencing near the existing culvert outlet to protect sensitive species within the Elk Creek riparian corridor. Instruct workers to avoid entering stream bank and channel area of Elk Creek.
- 2.29 At Location 16 (PM 35.04) on Highway 1, biologists shall conduct pre-construction surveys near the existing culvert outlet for California red-legged frog. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins.

State Highway 20 Projects:

- 2.30 At Location 20 (PM 13.76) on Highway 20, an unauthorized water diversion exists in the vicinity of this crossing including water conveyance pipes that extend through the existing culvert. This water diversion is not presently permitted by DFG. Remove all existing pipe and other water diversion structures that currently exist within Caltrans' ownership. During construction, water may have to be diverted around work site (see Measure 2.20).
- 2.31 At Location 24 (PM 18.37) on Highway 20, protect the redwood tree clump that exists immediately below the culvert outlet.
- 2.32 At Location 25 (PM 18.82) on Highway 20, protect the 16-inch diameter redwood tree that exists immediately below the culvert outlet.
- 2.33 At Location 30 (PM 27.32) on Highway 20, pull back and stabilize perched fill near culvert outlet in conjunction with plans for installing rock slope protection.
- 2.34 At Location 31 (PM 28.13) on Highway 20, remove graded dirt berm on road prism near culvert outlet to address road-induced gully that exists immediately east of the culvert outlet.
- 2.35 At Location 33 (PM 28.30) on Highway 20, an unauthorized water diversion exists in the vicinity of this crossing including a 1/2 -inch metal water conveyance pipe that extends through the existing 8-inch perforated corrugated metal pipe that is set under the highway. This water diversion is not presently permitted by DFG. Remove all existing pipe and other water diversion structures that currently exist within Caltrans' ownership. During construction, water may have to be diverted around work site (see Measure 2.20). Protect the existing clump of bigleaf maple and Douglas-fir trees that are near the inlet

- 2.36 At Location 34 (PM 28.79) on Highway 20, pull back and stabilize over-steepened banks along gully at culvert outlet. Reach as far down slope of outlet as feasible to stabilize gully and remove perched fill.
- 2.37 At Location 36 (PM 29.77) on Highway 20, protect multi-stemmed bigleaf maple tree near the existing culvert outlet.
- 2.38 At Location 37 (PM 29.85) on Highway 20, install ESA barrier fencing near the existing culvert outlet to protect sensitive species within the channel and riparian zone of Broaddus Creek. Instruct workers to avoid entering stream bank and channel area of Broaddus Creek.
- 2.39 At Location 39 (PM 30.29) on Highway 20, protect bigleaf maple tree clump near outlet. To address on-going sediment delivery to Broaddus Creek, stabilize existing gully using rock slope protection or other measures designed to arrest head-cut, reduce erosion and stop sediment delivery.
- 2.40 At Location 42 (PM 31.0) on Highway 20, minimize limb removal of the over-hanging California bay tree that exists near the culvert outlet. If possible, avoid removing the entire tree. Protect existing bigleaf maple samplings near the culvert outlet.
- 2.41 At Location 43 (PM 31.72) on Highway 20, an unauthorized water diversion exists in the vicinity of this crossing including a ¾-inch black plastic pipe that is visible near the culvert outlet. This water diversion is not presently permitted by DFG. Remove all existing pipe and other water diversion structures that currently exist within Caltrans' ownership.
- 2.42 At Location 44 (PM 31.84) on Highway 20, minimize vegetation removal and protect the existing 16-inch valley oak tree near the culvert inlet.

State Highway 101 Project:

No specific measures

**3. Reporting Measures**

Permittee shall meet each reporting requirement described below.

- 3.1 Permittee shall notify the Department, in writing, at least five (5) days prior to initiation of construction (project) activities and at least five (5) days prior to completion of construction (project) activities. Notification shall be faxed to the Department at (707) 441-2021, Attn: Rick Macedo, Staff Environmental Scientist, or via e-mail at [rmacedo@dfg.ca.gov](mailto:rmacedo@dfg.ca.gov).

**CONTACT INFORMATION**

Any communication that Permittee or DFG submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or DFG specifies by written notice to the other.

To Permittee:

Mr. Steven Blair  
Caltrans  
1656 Union Street  
Eureka, California 95501  
Office Phone: 707-441-5899  
E-Mail: [Steven\\_Blair@dot.ca.gov](mailto:Steven_Blair@dot.ca.gov)

To DFG:

Department of Fish and Game  
Region 1  
619 Second Street  
Eureka, California 95501  
Attn: Lake and Streambed Alteration Program – Laurie Harnsberger  
Notification #1600-2012-0088-R1  
Fax: 441-2021  
Email: [lharnsberger@dfg.ca.gov](mailto:lharnsberger@dfg.ca.gov)

## **LIABILITY**

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute DFG's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

## **SUSPENSION AND REVOCATION**

DFG may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before DFG suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before DFG suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused DFG to issue the notice.

## **ENFORCEMENT**

Nothing in the Agreement precludes DFG from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects DFG's enforcement authority or that of its enforcement personnel.

## **OTHER LEGAL OBLIGATIONS**

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 et seq. (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse

disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

#### **AMENDMENT**

DFG may amend the Agreement at any time during its term if DFG determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by DFG and Permittee. To request an amendment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

#### **TRANSFER AND ASSIGNMENT**

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter DFG approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

#### **EXTENSIONS**

In accordance with FGC section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to DFG a completed DFG "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). DFG shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (Fish & G. Code, § 1605, subd. (f)).

## **EFFECTIVE DATE**

The Agreement becomes effective on the date of DFG's signature, which shall be: 1) after Permittee's signature; 2) after DFG complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at [http://www.dfg.ca.gov/habcon/ceqa/ceqa\\_changes.html](http://www.dfg.ca.gov/habcon/ceqa/ceqa_changes.html).

## **TERM**

This Agreement shall expire five years after the date the Agreement is fully executed, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

## **EXHIBITS**

None

## **AUTHORITY**

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

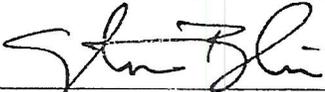
**AUTHORIZATION**

This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify DFG in accordance with FGC section 1602.

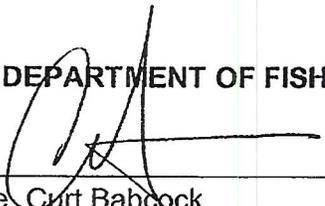
**CONCURRENCE**

The undersigned accepts and agrees to comply with all provisions contained herein.

**FOR DEPARTMENT OF TRANSPORTATION**

  
\_\_\_\_\_  
Name Steven Blair Date 10-31-12  
Title PROJECT MANAGER

**FOR DEPARTMENT OF FISH AND GAME**

  
\_\_\_\_\_  
Name Curt Babcock Date 10/31/12  
Environmental Program Manager  
*T-CASANOVA*

*for*

Prepared by: Rick Macedo  
Staff Environmental Scientist  
7-3-12

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North Coast Regional Water Quality Control Board

November 06, 2012

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In the Matter of  
**Water Quality Certification**  
for the  
**California Department of Transportation  
Highway 20 and 1 - Culvert Rehabilitation Project  
WDID No. 1B12032WNME**

APPLICANT: California Department of Transportation  
RECEIVING WATER: Streams and Wetlands  
HYDROLOGIC AREA: Mendocino Coast Hydrologic Unit No. 113.00  
COUNTY: Mendocino  
FILE NAME: CDOT - Hwy 20 and 1, Culvert Rehabilitation Project  
WDID No. 1B12032WNME

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BY THE EXECUTIVE OFFICER:

1. On May 3, 2012, the North Coast Regional Water Quality Control Board (Regional Water Board) received an application from the California Department of Transportation (Caltrans), requesting Federal Clean Water Act (CWA), section 401, Water Quality Certification for activities related to the proposed Highway 20 and 1 - Culvert Rehabilitation Project (project). The proposed project will cause disturbances to waters of the United States (U.S.) and waters of the State associated with the Mendocino Coast Hydrologic Unit No. 113.00. The Regional Water Board provided public notice of the application pursuant to title 23, California Code of Regulations, section 3858 on September 24, 2012, and posted information describing the project on the Regional Water Board's website. No comments were received.
2. The proposed project is located on Highway 20 from post mile (PM) 13.76 to PM 27.32 and Highway 1 from PM 3.87 to PM 47.19, in Mendocino County. The purpose of the project is to repair and upgrade failing and substandard culverts to prevent future failures and loss of active roadway. The scope of work includes removal of existing culverts, replacement of culverts, installation of culvert liners, replacement and or/ installation of culverts headwalls, installation of down-drains, drain-inlets, rock slope protection (RSP), and erosion and sediment controls.
3. Caltrans has determined that the proposed project will result in 0.014 acres (653 feet<sup>2</sup>) of permanent impacts to intermittent and ephemeral streams and 0.001 acres (43 feet<sup>2</sup>) of wetlands identified as waters of the U.S. In addition, 0.013 acres (566 feet<sup>2</sup>) of riparian areas identified as waters of the State will be permanently impacted. The

DAVID M. NOREN, CHAIR | MATTHIAS ST. JOHN, EXECUTIVE OFFICER

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temporary impacts associated with construction total 0.060 acres (2,613 feet<sup>2</sup>) to waters of the U.S. (streams and wetlands) and 0.081 acres (3,538 feet<sup>2</sup>) to waters of the State (riparian areas). Caltrans proposes to reestablish wetlands and riparian vegetation in-kind and on-site after the completion of the project.

4. The majority of the proposed project will be conducted in summer months during low flow conditions between May 15<sup>th</sup> and October 15<sup>th</sup>; however, work may be conducted outside these work windows if the stream channels are dry. The project will result in less than one acre of disturbed soil area. Caltrans will utilize Best Management Practices (BMPs) to provide erosion control and pollution prevention throughout the project area during construction. All graded areas within the project affected by the construction activities will be appropriately stabilized and/or replanted with appropriate native vegetation.
5. Caltrans has received authorization from the U.S. Army Corps of Engineers to perform the project under a regional general permit for culvert maintenance pursuant to Clean Water Act, section 404. Caltrans has also applied for a California Department of Fish and Game 1602 Streambed Alteration Agreement. Caltrans has also obtained Biological Opinions from the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. In July, 2010, Caltrans, acting as lead agency, certified a Negative Declaration for the proposed project in order to comply with the California Environmental Quality Act (CEQA) (State Clearing House No. 2010022020). The Regional Water Board has considered the environmental documentation, including any proposed changes, and incorporates any avoidance, minimization, and mitigation measures into the project as a condition of approval to avoid significant affects to the environment.
6. Pursuant to Regional Water Board Resolution R1-2012-0013, *Implementation of the Water Quality Objective for Temperature in the North Coast Region* (Temperature Implementation Policy), Regional Water Board staff are directed to address factors that contribute to elevated water temperatures when issuing 401 certifications or WDRs (permits) for individual projects. Any permit should be consistent with the assumptions and requirements of temperature shade load allocations in areas subject to existing temperature TMDLs, including EPA-established temperature TMDLs, as appropriate. If applicable, any permit or order should implement similar shade controls in areas listed as impaired for temperature but lacking a TMDL and region-wide as appropriate and necessary to prevent future impairments and to comply with the intrastate temperature objective.
7. The federal antidegradation policy requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. This Order is consistent with applicable federal and State antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes of treated wastewater, and does not otherwise authorize degradation of the waters affected by this project.

8. To ensure compliance with Water Quality Objectives within the Basin Plan, adequate wetland and riparian protection and stringent requirements to avoid, minimize, and mitigate the sediment and temperature impacts associated with the proposed project will be incorporated as enforceable conditions in this Water Quality Certification. In addition, Caltrans will be required to conduct surface water monitoring, sampling, and analysis in accordance with the conditions of the Water Quality Certification. The surface water data collected will be utilized to assess the adequacy of BMPs during construction as well as site specific mitigation measures proposed to minimize impacts to the environment, including sediment and temperature impacts.
9. This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification," which requires compliance with all conditions of this certification.

Receiving Waters:           Streams and Wetlands  
                                  Mendocino Coast Hydrologic Unit No.113.00

Filled and/or  
Excavated Areas:           Permanent – streams (Waters of U.S.): 0.014 acres (653 feet<sup>2</sup>)  
                                  Permanent – wetlands (Waters of U.S.): 0.001 acres (43 feet<sup>2</sup>)  
                                  Permanent – riparian (Waters of State): 0.013 acres (566 feet<sup>2</sup>)  
  
                                  Temporary – streams (Waters of U.S.): 0.035 acres (1,525 feet<sup>2</sup>)  
                                  Temporary – wetlands (Waters of U.S.): 0.025 acres (1,090 feet<sup>2</sup>)  
                                  Temporary – riparian (Waters of State): 0.081 acres (3,538 feet<sup>2</sup>)

Total Linear Impacts:    Permanent – streams (Waters of U.S.): 149 linear feet  
  
                                  Temporary – streams (Waters of U.S.): 680 linear feet

Dredge Volume :           None

Fill Volume :              157 cubic yards

Mitigation proposed:    On-site: wetland – establishment of 0.03 acres (1,306 feet<sup>2</sup>),  
                                  restoration of 0.025 acres (1,089 feet<sup>2</sup>) / riparian – establishment  
                                  of 0.04 acres (1,742 feet<sup>2</sup>), restoration of 0.077 acres (3,354 feet<sup>2</sup>)

Latitude/Longitude:     Locations 1-19 38.8029 N / 123.57772 W to 39.2749 N to  
                                  123.7907 W; Locations 20-30 29.4194 N / 123.8046 W to 39.4056  
                                  N to 123.3641

Accordingly, based on its independent review of the record, the Regional Water Board certifies that the Caltrans – Highway 20 and 1 Culvert Rehabilitation Project (WDID No. 1B12032WNME), as described in the application will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided that the Caltrans complies with the following terms and conditions:

**All conditions of this order apply to Caltrans (and all its employees) and all contractors (and their employees), sub-contractors (and their employees), and any**

**other entity or agency that performs activities or work on the project (including the off-site mitigation lands) as related to this Water Quality Certification.**

1. This certification action is subject to modification or revocation upon administrative or judicial review; including review and amendment pursuant to Water Code section 13330 and title 23, California Code of Regulations, section 3867.
2. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to title 23, California Code of Regulations, section 3855, subdivision (b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. The validity this certification is conditioned upon total payment of any fee required under title 23, California Code of Regulations, section 3833, and owed by the applicant.
4. All conditions required by this Order shall be included in the Plans and Specifications prepared by Caltrans for the Contractor. In addition, Caltrans shall require compliance with all conditions included in this Order in the bid contract for this project.
5. Caltrans shall provide a copy of this order and State Water Resources Control Board (SWRCB) Order No. 2003-0017-DWQ (web link referenced below) to the contractor and all subcontractors conducting the work, and require that copies remain in their possession at the work site. Caltrans shall be responsible for work conducted by its contractor or subcontractors.
6. The Regional Water Board shall be notified in writing each year at least five working days (working days are Monday - Friday) prior to the commencement of ground disturbing activities, water diversion activities or construction activities with details regarding the construction schedule, in order to allow Regional Water Board staff to be present on-site during installation and removal activities, and to answer any public inquiries that may arise regarding the project. Caltrans shall provide Regional Water Board staff access to the project site to document compliance with this order.
7. The Resident Engineer (or appropriately authorized agent) shall hold on-site water quality permit compliance meetings (similar to tailgate safety meetings) to discuss permit compliance, including instructions on how to avoid violations and procedures for reporting violations. The meetings shall be held at least every other week, before forecasted storm events, and when a new contractor or subcontractor arrives to begin work at the site. The contractors, subcontractors and their employees, as well as any inspectors or monitors assigned to the project, shall be present at the meetings. Caltrans shall maintain dated sign-in sheets for attendees at these meetings, and shall make them available to the Regional Water Board on request.
8. All activities and best management practices (BMPs) shall be implemented according to the submitted application and the conditions in this certification. BMPs for erosion, sediment, turbidity and pollutant control shall be implemented and in place at commencement of, during, and after any ground clearing activities, construction activities, or any other project activities that could result in erosion, sediment, or other pollutant discharges to waters of the State. The BMPs shall be implemented in

accordance with the Caltrans Construction Site Best Management Practice Manual (CCSBMPM) and all contractors and subcontractors shall comply with the CCSBMPM. In addition, BMPs for erosion and sediment control shall be utilized year round, regardless of season or time of year. Caltrans shall stage erosion and sediment control materials at the work site. All BMPs shall be installed properly and in accordance with the manufacturer's specifications. If the project Resident Engineer elects to install alternative BMPs for use on the project, Caltrans shall submit a proposal to Regional Water Board staff for review and concurrence.

9. Caltrans shall prioritize the use of wildlife-friendly biodegradable (not photo-degradable) erosion control products wherever feasible. Caltrans shall not use or allow the use of erosion control products that contain synthetic netting for permanent erosion control (i.e. erosion control materials to be left in place for two years or after the completion date of the project). If Caltrans finds that erosion control netting or products have entrapped or harmed wildlife, personnel shall remove the netting or product and replace it with wildlife-friendly biodegradable products. Caltrans shall not use or allow the use of erosion control products that contain synthetic materials within waters of the United States or waters of the State at any time. Caltrans shall request approval from the Regional Water Board if an exception from this requirement is needed for a specific location.
10. Work in flowing or standing surface waters, unless otherwise proposed in the project description and approved by the Regional Water Board, is prohibited. If construction dewatering of groundwater is found to be necessary, Caltrans shall use a method of water disposal other than disposal to surface waters (such as land disposal) or Caltrans shall apply for coverage under the Low Threat Discharge Permit or an individual National Pollutant Discharge Elimination System (NPDES) Permit and receive notification of coverage to discharge to surface waters, prior to the discharge.
11. Caltrans is prohibited from discharging waste to waters of the State, unless explicitly authorized by this Order. For example, no debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or concrete washings, welding slag, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, other than that authorized by this Order, shall be allowed to enter into waters of the State. In addition, none of the materials listed above shall be placed within 150 linear feet of waters of the State or where the materials may be washed by rainfall into waters of the State.
12. Caltrans shall submit, subject to review and concurrence by the Regional Water Board staff, a dewatering and/or diversion plan that appropriately describe the dewatered or diverted areas and how those areas will be handled during construction. The diversion/dewatering plans shall be submitted no later than 30 days prior to conducting the proposed activity. Information submitted shall include the area or work to be diverted or dewatered and method of the proposed activity. All diversion or dewatering activities shall be designed to minimize the impact to waters of the State and maintain natural flows upstream and downstream. All dewatering or diversion structures shall be installed in a manner that does not cause sedimentation, siltation or erosion upstream or downstream. All dewatering or diversion structures shall be removed immediately upon completion of project activities. This Order does not authorize Caltrans to draft surface waters.

13. The in-channel work will only be conducted between May 15 and October 15. Work may be conducted outside these work windows if the stream channels are dry and work is authorized by Regional Water Board staff. Construction at the following culvert locations shall occur between May 15 and October 15 of any construction season in order to minimize runoff during construction and to allow adequate time to restore and revegetate the sites following construction and prior to onset of winter precipitation: Highway 1 PM 31.22 (Elk Creek), and Highway 20 PMs 17.05, 18.37, 18.82, 18.87, 18.89, 19.16, and 19.50 (North Fork of the Big River). Construction at the following culvert locations shall occur between August 1 and October 15 and shall not commence until the streambeds below these culverts are dry of any construction season: Highway 20 PMs 29.77, 29.85, 30.12, 30.10, 30.14, 30.21, 30.29, 30.59, 30.67, and 31.0 (Broaddus Creek).
14. A qualified biologist shall conduct Worker Environmental Awareness Training for the construction workers prior to the start of construction activities. The awareness training shall include a brief review of the biology of the California red-legged frog and guidelines that must be followed by all construction personnel to avoid take of California red-legged frogs and to minimize potential effects on all sensitive biological resources during the construction period. The qualified biologist may appoint a biological monitor (such as the crew foreman) who would be responsible for ensuring that all crewmembers comply with the guidelines. Worker Environmental Awareness Training would be conducted for new personnel before they join construction activities. The qualified biologist shall ensure through the Caltrans Construction Resident Engineer that work is stopped and the U.S. Fish and Wildlife Service (USFWS) and CDFG are contacted, if a California red-legged frog at any life stage is encountered.
15. A qualified biologist shall be on-site to monitor all initial ground-disturbing construction activities. The biologist's duties shall include surveying the project area for all life stages of California red-legged frog immediately prior to ground-disturbing activities. If a California red-legged frog is encountered during any project activities, construction activities shall cease in the area and the USFWS and CDFG shall be notified to determine how to proceed.
16. Water pumps shall be screened with wire mesh screens no larger than 0.2 inch to prevent California red-legged frog larvae, juveniles, and adults from entering the pump system. All food-related trash shall be disposed of in closed containers and removed from the project area at least twice per week during the construction period. All vegetation removal activities shall be done with the use of hand tools only (including chainsaws).
17. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall be outside of waters of the U.S. and the State. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall not result in a discharge or a threatened discharge to any waters of the State or the U.S. At no time shall Caltrans use any vehicle or equipment which leaks any substance that may impact water quality.
18. If, at any time, an unauthorized discharge to surface water (including wetlands, rivers or streams) occurs, or any water quality problem arises, the associated project activities shall cease immediately until adequate BMPs are implemented. The Regional Water Board shall be notified promptly and in no case more than 24 hours after the unauthorized discharge or water quality problem arises.

19. Caltrans and their contractor are not authorized to discharge wastewater (e.g., water that has contacted uncured concrete or cement, or asphalt) to surface waters, ground waters, or land. Wastewater may only be disposed of to a sanitary waste water collection system/facility (with authorization from the facility's owner or operator) or a properly-licensed disposal or reuse facility. If Caltrans or their contractor proposes an alternate disposal method, Caltrans or their contractor shall request authorization from the Regional Water Board. Plans to reuse or recycle wastewater require written approval from Regional Water Board staff.
20. Caltrans shall provide analysis and verification that placing non-hazardous waste or inert materials (which may include discarded product or recycled materials) will not result in degradation of water quality, human health, or the environment. All project-generated waste shall be handled, transported, and disposed in strict compliance with all applicable State and Federal laws and regulations. When operations are complete, any excess material or debris shall be removed from the work area and disposed of properly and in accordance with the Special Provisions for the project and/or Standard Specification 7-1.13, Disposal of Material Outside the Highway Right of Way. Within 30 days of disposing of materials off-site Caltrans shall submit to the Regional Water Board the satisfactory evidence provided to the Caltrans Engineer by the Contractor referenced in Standard Specification 7-1.13. In accordance with State and Federal laws and regulations, Caltrans is liable and responsible for the proper disposal of waste generated by their project.
21. All imported fill material shall be clean and free of pollutants. All fill material shall be imported from a source that has the appropriate environmental clearances and permits. The reuse of low-level contaminated solids as fill on-site shall be performed in accordance with all State and Federal policies and established guidelines and must be submitted to the Regional Water Board for review and concurrence.
22. Only clean washed spawning gravel (0.25" – 6") with a cleanliness value of at least 85, using the Cleanness Value Test Method for California Test No. 227 will be placed in the streams. Gravel bag fabric shall be nonwoven polypropylene geotextile (or comparable polymer) and shall conform to the following requirements:
  - Mass per unit area, grams per square meter, min ASTM Designation: D 5261 – 270
  - Grab tensile strength (25-mm grip), kilonewtons, min. ASTM Designation: D4632\* 0.89
  - Ultraviolet stability, percent tensile strength retained after 500 hours, ASTM Designation: D4355, xenon arc lamp method 70 or appropriate test method for specific polymer
  - Gravel bags shall be between 600 mm and 800 mm in length, and between 400 mm and 500 mm in width.
  - Yarn used in construction of the gravel bags shall be as recommended by the manufacturer or bag supplier and shall be of a contrasting color. Gravel shall be clean and free from clay balls, organic matter, and other deleterious materials. The opening of gravel-filled bags shall be secured to prevent gravel from escaping. Gravel-filled bags shall be between 13 kg and 22 kg in mass.
  - Caltrans shall request approval from the Regional Water Board if an exception from this requirement is needed for a specific location.
23. In order to demonstrate compliance with receiving water limitations and water quality objectives surface water monitoring shall be conducted. When conducting surface

water monitoring Caltrans shall establish discharge, upstream (background) and downstream monitoring locations to demonstrate compliance with applicable water quality objectives. The downstream location shall be no more than 100 feet from the discharge location.

- A. Surface water monitoring shall be conducted whenever a project activity is conducted within waters of the State (e.g. including but not limited to the installation, use or removal of stream diversions, pile installations, and cofferdams). Measurements and observations shall be collected from each sampling location four times daily.
- B. Surface water monitoring shall be conducted immediately when any project activity has mobilized sediment or other pollutants resulting in a discharge and/or has the potential to alter background conditions within waters of the State (including but not limited to storm water runoff, concrete discharges, leaks, and spills.). The continuing frequency is contingent upon results of field measurements and applicable water quality objectives.

Surface water monitoring field measurements shall be taken for pH and turbidity. In addition, visual observations of each location shall be documented daily for each established monitoring location and monitoring event and include the estimate of flow, appearance of the discharge including color, floating or suspended matter or debris, appearance of the receiving water at the point of discharge (occurrence of erosion and scouring, turbidity, solids deposition, unusual aquatic growth, etc), and observations about the receiving water, such as the presence of aquatic life. If a project activity has reached a steady state and is stable, then Caltrans may request a temporary reprieve from this condition from the Regional Water Board until an activity or discharge triggers the monitoring again.

- 24. Whenever, as a result of project activities (in-stream work or a discharge to receiving waters), downstream measurements exceed any water quality objective 100 feet downstream of the source(s) all necessary steps shall be taken to install, repair, and/or modify BMPs to control the source(s). The frequency of surface water monitoring shall increase to hourly and shall continue until measurements demonstrate compliance with water quality objectives for each parameter listed below and measured levels are no longer increasing as a result of project activities. In addition, the overall distance from the source(s) to the downstream extent of the exceedence of water quality objectives shall be measured.

Monitoring results shall be reported to appropriate Regional Water Board staff person by telephone within 24 hours of taking any measurements that exceed the limits detailed below (only report turbidity if it is higher than 20 NTU).

pH	<6.5 or >8.5 (any changes >0.5 units)
turbidity	20% above natural background

Monitoring results and upstream and downstream pictures within the working and/or disturbed area and discharge location shall be taken and submitted to the appropriate Regional Water Board staff within 24 hours of the incident. All other monitoring data documenting compliance with water quality objectives shall be reported on a monthly basis and is due to the Regional Water Board by the 15<sup>th</sup> of the following month.

25. Post Storm Event Reports:

- Once the project has begun ground-disturbing activities, and subsequent to a qualifying rain event that exceeds 0.5-inches of precipitation, Caltrans shall inspect the project within 24 hours and take photos of all discharge locations, and disturbed areas, including all excess materials disposal areas, in order to demonstrate that erosion control and revegetation measures are present and have been installed appropriately and are functioning effectively. A brief report containing these photos, corrective actions (if necessary), and any surface water monitoring results collected pursuant to this Order or the Construction General Permit (SWRCB Order 2009-009 DWQ) shall be submitted to the Regional Water Board within 10 days after the end of the qualifying rain event. Inspections are required daily during extended rain events. Once the project site is stable, in a steady state (channel- ground- or vegetation-disturbing activities have ceased), and has demonstrated sufficient and effective erosion and sediment control, Caltrans may request a reprieve from this condition from the Regional Water Board. At least one post-construction inspection is required to demonstrate sufficient and effective erosion and sediment control and compliance with the Basin Plan.
  - Rain events are periods of precipitation that that are separated by more than 48-hours of dry weather. Rainfall amounts may be taken from on-site rain gauges, from the nearest California Data Exchange Center station (<http://cdec.water.ca.gov>), or by a custom method or station approved by Regional Water Board staff.
26. Mitigation actions shall be conducted in accordance with the Caltrans-prepared *Mitigation and Monitoring Proposal to Address Mitigation for Wetland and Other Waters of the U.S.*, dated March 2012. Mitigation actions include wetland establishment of 0.03 acres (1,306 feet<sup>2</sup>), wetland restoration of 0.025 acres (1,089 feet<sup>2</sup>), riparian establishment of 0.04 acres (1,742 feet<sup>2</sup>), and riparian restoration of 0.077 acres (3,354 feet<sup>2</sup>). Planting and enhancement actions shall be completed in the fall or early winter of 2015. As built reports for the mitigation actions are due to the Regional Water Board on January 31, 2016. Mitigation monitoring shall be submitted annually to the Regional Water Board on December 31<sup>st</sup>, with the first report due in 2016.
27. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Order. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this Order to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In response to any violation of the conditions of this Order, the Regional Water Board may add to or modify the conditions of this Order as appropriate to ensure compliance.

28. The Regional Water Board may add to or modify the conditions of this Order, as appropriate, to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.
29. This Order is not transferable. In the event of any change in control of ownership of land presently owned or controlled by the Applicant, the Applicant shall notify the successor-in-interest of the existence of this Order by letter and shall forward a copy of the letter to the Regional Water Board. The successor-in-interest must send to the Regional Water Board Executive Officer a written request for transfer of this Order to discharge dredged or fill material under this Order. The request must contain the following:
  - a. requesting entity's full legal name
  - b. the state of incorporation, if a corporation
  - c. address and phone number of contact person
  - d. description of any changes to the project or confirmation that the successor-in-interest intends to implement the project as described in this Order.
30. Except as may be modified by any preceding conditions, all certification actions are contingent on: a) the discharge being limited, and all proposed revegetation, avoidance, minimization, and mitigation measures being completed, in strict compliance with Caltrans' project description and CEQA documentation, as approved herein, b) Caltrans shall construct the project in accordance with the project described in the application and the findings above, and c) compliance with all applicable water quality requirements and water quality control plans including the requirements of the Water Quality Control Plan for the North Coast Region (Basin Plan), and amendments thereto. Any change in the design or implementation of the project that would have a significant or material effect on the findings, conclusions, or conditions of this Order must be submitted to the Executive Officer of the Regional Water Board for prior review, consideration, and written concurrence. If the Regional Water Board is not notified of a significant alteration to the project, it will be considered a violation of this Order, and Caltrans may be subject to Regional Water Board enforcement actions.
31. The authorization of this certification for any dredge and fill activities expires on November 06, 2017. Conditions and monitoring requirements outlined in this Order are not subject to the expiration date outlined above, and remain in full effect and are enforceable.
32. Please contact our staff Environmental Specialist / Caltrans Liaison Jeremiah Puget at (707) 576-2835 or [jeremiah.puget@waterboards.ca.gov](mailto:jeremiah.puget@waterboards.ca.gov) if you have any questions.

  
for Matthias St. John  
Executive Officer

Web link: State Water Resources Control Board Order No. 2003-0017 -DWQ,  
General Waste Discharge Requirements for Dredge and Fill  
Discharges That Have Received State Water Quality Certification can  
be found at:  
[http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/water\\_quality/2003/wqo/wqo2003-0017.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0017.pdf)

Original to: Ms. Jennifer Olah, Caltrans – North Region Environmental, P.O. Box  
911, Marysville CA 95901

Copies to: Mr. Sandra Rosas, Caltrans – North Region Environmental, P.O. Box  
911, Marysville CA 95901

Electronic  
Copies to: U.S. Army Corps of Engineers, Regulatory Functions - San Francisco  
District

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**North Coast Regional Water Quality Control Board**

November 29, 2012

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In the Matter of

**Water Quality Certification**

for the

**California Department of Transportation  
Highway 20 and 101 – Culvert Rehabilitation Project  
WDID No. 1B12045WNME**

APPLICANT: California Department of Transportation  
RECEIVING WATER: Streams and Wetlands  
HYDROLOGIC AREA: Eel River Hydrologic Unit No. 111.00  
COUNTY: Mendocino  
FILE NAME: CDOT – Hwy 20 and 101, Culvert Rehabilitation Project  
WDID No. 1B12045WNME

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**BY THE EXECUTIVE OFFICER:**

1. On May 3, 2012, the North Coast Regional Water Quality Control Board (Regional Water Board) received an application from the California Department of Transportation (Caltrans), requesting Federal Clean Water Act (CWA), section 401, Water Quality Certification for activities related to the proposed Highway 20 and 101 – Culvert Rehabilitation Project (project). The proposed project will cause disturbances to waters of the United States (U.S.) and waters of the State associated with the Eel River Hydrologic Unit No. 111.00 (Outlet Creek Hydrologic Sub-Area No. 111.61). The Regional Water Board provided public notice of the application pursuant to title 23, California Code of Regulations, section 3858 on September 24, 2012, and posted information describing the project on the Regional Water Board's website. No comments were received.
2. The proposed project is located on Highway 20 from post mile (PM) 28.13 to PM 31.99 and Highway 101 at PM 48.90, in Mendocino County. The purpose of the project is to repair and upgrade failing and substandard culverts to prevent future failures and loss of active roadway. The scope of work includes removal of existing culverts,

replacement of culverts, installation of culvert liners, replacement and/or installation of culverts headwalls, installation of down-drains, drain-inlets, rock slope protection (RSP), and erosion and sediment controls.

3. Caltrans has determined that the proposed project will result in 0.007 acres (304 feet<sup>2</sup>) of permanent impacts to intermittent and ephemeral streams and 0.001 acres (43 feet<sup>2</sup>) of wetlands identified as waters of the U.S. In addition, 0.001 acres (43 feet<sup>2</sup>) of riparian areas identified as waters of the State will be permanently impacted. The temporary impacts associated with construction total 0.065 acres (2,831 feet<sup>2</sup>) to waters of the U.S. (streams and wetlands) and 0.035 acres (1,524 feet<sup>2</sup>) to waters of the State (riparian areas). Caltrans proposes to reestablish wetlands and riparian vegetation in-kind and on-site after the completion of the project.
4. The majority of the proposed project will be conducted in summer months during low flow conditions between May 15<sup>th</sup> and October 15<sup>th</sup>; however, work may be conducted outside these work windows if the stream channels are dry. The project will result in less than one acre disturbed soil area. Caltrans will utilize Best Management Practices (BMPs) to provide erosion control and pollution prevention throughout the project area during construction. All graded areas within the project affected by the construction activities will be appropriately stabilized and/or replanted with appropriate native vegetation.
5. Caltrans has received authorization from the U.S. Army Corps of Engineers to perform the project under a regional general permit for culvert maintenance pursuant to Clean Water Act, section 404. Caltrans has also applied for a California Department of Fish and Game 1602 Streambed Alteration Agreement. Caltrans has also obtained Biological Opinions from the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. In July, 2010, Caltrans, acting as lead agency, certified a Negative Declaration for the proposed project in order to comply with the California Environmental Quality Act (CEQA) (State Clearing House No. 2010022020). The Regional Water Board has considered the environmental documentation, including any proposed changes, and incorporates any avoidance, minimization, and mitigation measures into the project as a condition of approval to avoid significant affects to the environment.
6. The Eel River watershed is listed on the Clean Water Act section 303(d) list as impaired for sediment and temperature. In 2004, the U.S. EPA established sediment TMDLs for the Upper Main Eel River and tributaries (including Tomki Creek, Outlet Creek and Lake Pillsbury). Roads are a significant source of sediment in the watershed (directly, from surface erosion, and, indirectly, by triggering landslides). In addition, activities that impact the riparian zone and reduce riparian vegetation are identified as sources contributing to increased stream temperatures. A focus on measures to reduce sediment discharges to surface waters from roads in the watershed, and measures to avoid, minimize, and mitigate impacts on riparian zones is essential for achieving TMDL, Basin Plan, and CEQA compliance.

7. Pursuant to Regional Water Board Resolution R1-2004-0087, *Total Maximum Daily Load Implementation Policy Statement for Sediment-Impaired Receiving Waters within the North Coast Region* (Sediment TMDL Implementation Policy), the Executive Officer is directed to “rely on the use of all available authorities, including existing regulatory standards, and permitting and enforcement tools to more effectively and efficaciously pursue compliance with sediment-related standards by all dischargers of sediment waste.”
8. Pursuant to Regional Water Board Resolution R1-2012-0013, *Implementation of the Water Quality Objective for Temperature in the North Coast Region* (Temperature Implementation Policy), Regional Water Board staff is directed to address factors that contribute to elevated water temperatures when issuing 401 certifications or WDRs (permits) for individual projects. Any permit should be consistent with the assumptions and requirements of temperature shade load allocations in areas subject to existing temperature TMDLs, including EPA- established temperature TMDLs, as appropriate. If applicable, any permit or order should implement similar shade controls in areas listed as impaired for temperature but lacking a TMDL and region-wide as appropriate and necessary to prevent future impairments and to comply with the intrastate temperature objective.
9. The federal antidegradation policy requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California’s antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board’s Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. This Order is consistent with applicable federal and State antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes of treated wastewater, and does not otherwise authorize degradation of the waters affected by this project.
10. To ensure compliance with Water Quality Objectives within the Basin Plan, adequate wetland and riparian protection and stringent requirements to avoid, minimize, and mitigate the sediment and temperature impacts associated with the proposed project will be incorporated as enforceable conditions in this Water Quality Certification. In addition, Caltrans will be required to conduct surface water monitoring, sampling, and analysis in accordance with the conditions of the Water Quality Certification. The surface water data collected will be utilized to assess the adequacy of BMPs during construction as well as site specific mitigation measures proposed to minimize impacts to the environment, including sediment and temperature impacts.

11. The South Fork Eel River from the middle of Section 29, T23N, R16W (approximately one-half mile upstream of Rattlesnake Creek confluence) to the confluence with the Eel River is designated as a recreational reach under both federal and California Wild and Scenic Rivers Acts. These acts require preservation of the river's free-flowing condition; anadromous and resident fisheries; and outstanding geologic, wildlife, flora and fauna, historic and cultural, visual, recreational, and water quality values. Recreational segments are generally developed, with parallel roads, bridges, and structures. All activities normally associated with public lands are permitted subject to the protection of free flowing conditions and outstanding values. Implementation of the Project would not affect the free-flowing condition of the South Fork Eel River and would not affect the extraordinary values for which the segment was listed. The project will have minor effects on the tributaries to the Eel River; however, there will be no modifications or structures placed within the Eel River itself.
12. This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification," which requires compliance with all conditions of this certification.

Receiving Waters:           Streams and Wetlands  
                                  Eel River Hydrologic Unit No.111.00

Filled and/or  
Excavated Areas:           Permanent – streams (Waters of U.S.): 0.007 acres (304 feet<sup>2</sup>)  
                                  Permanent – wetlands (Waters of U.S.): 0.001 acres (43 feet<sup>2</sup>)  
                                  Permanent – riparian (Waters of State): 0.001 acres (43 feet<sup>2</sup>)  
  
                                  Temporary – streams (Waters of U.S.): 0.061 acres (2,657 feet<sup>2</sup>)  
                                  Temporary – wetlands (Waters of U.S.): 0.004 acres (174 feet<sup>2</sup>)  
                                  Temporary – riparian (Waters of State): 0.035 acres (1,524 feet<sup>2</sup>)

Total Linear Impacts:    Permanent – streams (Waters of U.S.): 104 linear feet  
  
                                  Temporary – streams (Waters of U.S.): 954 linear feet

Dredge Volume :           None

Fill Volume :              87.31 cubic yards

Mitigation proposed:    On-site: wetland – establishment of 0.03 acres (1,306 feet<sup>2</sup>),  
                                  restoration of 0.025 acres (1,089 feet<sup>2</sup>) / riparian – establishment  
                                  of 0.04 acres (1,742 feet<sup>2</sup>), restoration of 0.077 acres (3,354 feet<sup>2</sup>)

Latitude/Longitude:      Locations 31-45 - 39.3900 N / 123.4080 W to 39.4054 N to  
123.3643 W; Location 46 - 39.4564 N / 123.3489

Accordingly, based on its independent review of the record, the Regional Water Board certifies that the Caltrans – Highway 20 and 101 Culvert Rehabilitation Project (WDID No. 1B12045WNME), as described in the application will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided that the Caltrans complies with the following terms and conditions:

**All conditions of this order apply to Caltrans (and all its employees) and all contractors (and their employees), sub-contractors (and their employees), and any other entity or agency that performs activities or work on the project (including the off-site mitigation lands) as related to this Water Quality Certification.**

1. This certification action is subject to modification or revocation upon administrative or judicial review; including review and amendment pursuant to Water Code section 13330 and title 23, California Code of Regulations, section 3867.
2. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to title 23, California Code of Regulations, section 3855, subdivision (b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. The validity this certification is conditioned upon total payment of any fee required under title 23, California Code of Regulations, section 3833, and owed by the applicant.
4. All conditions required by this Order shall be included in the Plans and Specifications prepared by Caltrans for the Contractor. In addition, Caltrans shall require compliance with all conditions included in this Order in the bid contract for this project.
5. Caltrans shall provide a copy of this order and State Water Resources Control Board (SWRCB) Order No. 2003-0017-DWQ (web link referenced below) to the contractor and all subcontractors conducting the work, and require that copies remain in their possession at the work site. Caltrans shall be responsible for work conducted by its contractor or subcontractors.
6. The Regional Water Board shall be notified in writing each year at least five working days (working days are Monday – Friday) prior to the commencement of ground disturbing activities, water diversion activities or construction activities with details regarding the construction schedule, in order to allow Regional Water Board staff to be

present on-site during installation and removal activities, and to answer any public inquiries that may arise regarding the project. Caltrans shall provide Regional Water Board staff access to the project site to document compliance with this order.

7. The Resident Engineer (or appropriately authorized agent) shall hold on-site water quality permit compliance meetings (similar to tailgate safety meetings) to discuss permit compliance, including instructions on how to avoid violations and procedures for reporting violations. The meetings shall be held at least every other week, before forecasted storm events, and when a new contractor or subcontractor arrives to begin work at the site. The contractors, subcontractors and their employees, as well as any inspectors or monitors assigned to the project, shall be present at the meetings. Caltrans shall maintain dated sign-in sheets for attendees at these meetings, and shall make them available to the Regional Water Board on request.
8. All activities and best management practices (BMPs) shall be implemented according to the submitted application and the conditions in this certification. BMPs for erosion, sediment, turbidity and pollutant control shall be implemented and in place at commencement of, during, and after any ground clearing activities, construction activities, or any other project activities that could result in erosion, sediment, or other pollutant discharges to waters of the State. The BMPs shall be implemented in accordance with the Caltrans Construction Site Best Management Practice Manual (CCSBMPM) and all contractors and subcontractors shall comply with the CCSBMPM. In addition, BMPs for erosion and sediment control shall be utilized year round, regardless of season or time of year. Caltrans shall stage erosion and sediment control materials at the work site. All BMPs shall be installed properly and in accordance with the manufacturer's specifications. If the project Resident Engineer elects to install alternative BMPs for use on the project, Caltrans shall submit a proposal to Regional Water Board staff for review and concurrence.
9. Caltrans shall prioritize the use of wildlife-friendly biodegradable (not photo-degradable) erosion control products wherever feasible. Caltrans shall not use or allow the use of erosion control products that contain synthetic netting for permanent erosion control (i.e. erosion control materials to be left in place for two years or after the completion date of the project). If Caltrans finds that erosion control netting or products have entrapped or harmed wildlife, personnel shall remove the netting or product and replace it with wildlife-friendly biodegradable products. Caltrans shall not use or allow the use of erosion control products that contain synthetic materials within waters of the United States or waters of the State at any time. Caltrans shall request approval from the Regional Water Board if an exception from this requirement is needed for a specific location.
10. Work in flowing or standing surface waters, unless otherwise proposed in the project description and approved by the Regional Water Board, is prohibited. If construction dewatering of groundwater is found to be necessary, Caltrans shall use a method of

water disposal other than disposal to surface waters (such as land disposal) or Caltrans shall apply for coverage under the Low Threat Discharge Permit or an individual National Pollutant Discharge Elimination System (NPDES) Permit and receive notification of coverage to discharge to surface waters, prior to the discharge.

11. Caltrans is prohibited from discharging waste to waters of the State, unless explicitly authorized by this Order. For example, no debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or concrete washings, welding slag, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, other than that authorized by this Order, shall be allowed to enter into waters of the State. In addition, none of the materials listed above shall be placed within 150 linear feet of waters of the State or where the materials may be washed by rainfall into waters of the State.
12. Caltrans shall submit, subject to review and concurrence by the Regional Water Board staff, a dewatering and/or diversion plan that appropriately describe the dewatered or diverted areas and how those areas will be handled during construction. The diversion/dewatering plans shall be submitted no later than 30 days prior to conducting the proposed activity. Information submitted shall include the area or work to be diverted or dewatered and method of the proposed activity. All diversion or dewatering activities shall be designed to minimize the impact to waters of the State and maintain natural flows upstream and downstream. All dewatering or diversion structures shall be installed in a manner that does not cause sedimentation, siltation or erosion upstream or downstream. All dewatering or diversion structures shall be removed immediately upon completion of project activities. This Order does not authorize Caltrans to draft surface waters.
13. The in-channel work will only be conducted between May 15 and October 15. Work may be conducted outside these work windows if the stream channels are dry and work is authorized by Regional Water Board staff. Construction at the following culvert locations shall occur between May 15 and October 15 of any construction season in order to minimize runoff during construction and to allow adequate time to restore and revegetate the sites following construction and prior to onset of winter precipitation: Highway 1 PM 31.22 (Elk Creek), and Highway 20 PMs 17.05, 18.37, 18.82, 18.87, 18.89, 19.16, and 19.50 (North Fork of the Big River). Construction at the following culvert locations shall occur between August 1 and October 15 and shall not commence until the streambeds below these culverts are dry of any construction season: Highway 20 PMs 29.77, 29.85, 30.12, 30.10, 30.14, 30.21, 30.29, 30.59, 30.67, and 31.0 (Broaddus Creek).
14. A qualified biologist shall conduct Worker Environmental Awareness Training for the construction workers prior to the start of construction activities. The awareness training shall include a brief review of the biology of the California red-legged frog and guidelines that must be followed by all construction personnel to avoid take of

California red-legged frogs and to minimize potential effects on all sensitive biological resources during the construction period. The qualified biologist may appoint a biological monitor (such as the crew foreman) who would be responsible for ensuring that all crewmembers comply with the guidelines. Worker Environmental Awareness Training would be conducted for new personnel before they join construction activities. The qualified biologist shall ensure through the Caltrans Construction Resident Engineer that work is stopped and the U.S. Fish and Wildlife Service (USFWS) and CDFG are contacted, if a California red-legged frog at any life stage is encountered.

15. A qualified biologist shall be on-site to monitor all initial ground disturbing construction activities. The biologist's duties shall include surveying the project area for all life stages of California red-legged frog immediately prior to ground disturbing activities. If a California red-legged frog is encountered during any project activities, construction activities shall cease in the area and the USFWS and CDFG shall be notified to determine how to proceed.
16. Water pumps shall be screened with wire mesh screens no larger than 0.2 inch to prevent California red-legged frog larvae, juveniles, and adults from entering the pump system. All food-related trash shall be disposed of in closed containers and removed from the project area at least twice per week during the construction period. All vegetation removal activities shall be done with the use of hand tools only (including chainsaws).
17. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall be outside of waters of the U.S. and the State. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall not result in a discharge or a threatened discharge to any waters of the State or the U.S. At no time shall Caltrans use any vehicle or equipment which leaks any substance that may impact water quality.
18. If, at any time, an unauthorized discharge to surface water (including wetlands, rivers or streams) occurs, or any water quality problem arises, the associated project activities shall cease immediately until adequate BMPs are implemented. The Regional Water Board shall be notified promptly and in no case more than 24 hours after the unauthorized discharge or water quality problem arises.
19. Caltrans and their contractor are not authorized to discharge wastewater (e.g., water that has contacted uncured concrete or cement, or asphalt) to surface waters, ground waters, or land. Wastewater may only be disposed of to a sanitary waste water collection system/facility (with authorization from the facility's owner or operator) or a properly-licensed disposal or reuse facility. If Caltrans or their contractor proposes an alternate disposal method, Caltrans or their contractor shall request authorization from the Regional Water Board. Plans to reuse or recycle wastewater require written approval from Regional Water Board staff.

20. Caltrans shall provide analysis and verification that placing non-hazardous waste or inert materials (which may include discarded product or recycled materials) will not result in degradation of water quality, human health, or the environment. All project-generated waste shall be handled, transported, and disposed in strict compliance with all applicable State and Federal laws and regulations. When operations are complete, any excess material or debris shall be removed from the work area and disposed of properly and in accordance with the Special Provisions for the project and/or Standard Specification 7-1.13, Disposal of Material Outside the Highway Right of Way. Within 30 days of disposing of materials off-site, Caltrans shall submit to the Regional Water Board the satisfactory evidence provided to the Caltrans Engineer by the Contractor referenced in Standard Specification 7-1.13. In accordance with State and Federal laws and regulations, Caltrans is liable and responsible for the proper disposal of waste generated by their project.
21. All imported fill material shall be clean and free of pollutants. All fill material shall be imported from a source that has the appropriate environmental clearances and permits. The reuse of low-level contaminated solids as fill on-site shall be performed in accordance with all State and Federal policies and established guidelines and must be submitted to the Regional Water Board for review and concurrence.
22. Only clean washed spawning gravel (0.25" – 6") with a cleanliness value of at least 85, using the Cleanness Value Test Method for California Test No. 227 will be placed in the streams. Gravel bag fabric shall be nonwoven polypropylene geotextile (or comparable polymer) and shall conform to the following requirements:
  - Mass per unit area, grams per square meter, min ASTM Designation: D 5261 – 270
  - Grab tensile strength (25-mm grip), kilonewtons, min. ASTM Designation: D4632\* 0.89
  - Ultraviolet stability, percent tensile strength retained after 500 hours, ASTM Designation: D4355, xenon arc lamp method 70 or appropriate test method for specific polymer
  - Gravel bags shall be between 600 mm and 800 mm in length, and between 400 mm and 500 mm in width.
  - Yarn used in construction of the gravel bags shall be as recommended by the manufacturer or bag supplier and shall be of a contrasting color. Gravel shall be clean and free from clay balls, organic matter, and other deleterious materials. The opening of gravel-filled bags shall be secured to prevent gravel from escaping. Gravel-filled bags shall be between 13 kg and 22 kg in mass.
  - Caltrans shall request approval from the Regional Water Board if an exception from this requirement is needed for a specific location.
23. In order to demonstrate compliance with receiving water limitations and water quality objectives, surface water monitoring shall be conducted. When conducting surface water monitoring, Caltrans shall establish discharge, upstream (background) and

downstream monitoring locations to demonstrate compliance with applicable water quality objectives. The downstream location shall be no more than 100 feet from the discharge location.

- A. Surface water monitoring shall be conducted whenever a project activity is conducted within waters of the State (e.g. including but not limited to the installation, use or removal of stream diversions, pile installations, and cofferdams). Measurements and observations shall be collected from each sampling location four times daily.
- B. Surface water monitoring shall be conducted immediately when any project activity has mobilized sediment or other pollutants resulting in a discharge and/or has the potential to alter background conditions within waters of the State (including but not limited to storm water runoff, concrete discharges, leaks, and spills.). The continuing frequency is contingent upon results of field measurements and applicable water quality objectives.

Surface water monitoring field measurements shall be taken for pH and turbidity. In addition, visual observations of each location shall be documented daily for each established monitoring location and monitoring event and include the estimate of flow, appearance of the discharge including color, floating or suspended matter or debris, appearance of the receiving water at the point of discharge (occurrence of erosion and scouring, turbidity, solids deposition, unusual aquatic growth, etc), and observations about the receiving water, such as the presence of aquatic life. If a project activity has reached a steady state and is stable then Caltrans may request a temporary reprieve from this condition from the Regional Water Board until an activity or discharge triggers the monitoring again.

- 24. Whenever, as a result of project activities (in-stream work or a discharge to receiving waters), downstream measurements exceed any water quality objective 100 feet downstream of the source(s) all necessary steps shall be taken to install, repair, and/or modify BMPs to control the source(s). The frequency of surface water monitoring shall increase to hourly and shall continue until measurements demonstrate compliance with water quality objectives for each parameter listed below and measured levels are no longer increasing as a result of project activities. In addition, the overall distance from the source(s) to the downstream extent of the exceedence of water quality objectives shall be measured.

Monitoring results shall be reported to appropriate Regional Water Board staff person by telephone within 24 hours of taking any measurements that exceed the limits detailed below (only report turbidity if it is higher than 20 NTU).

pH	<6.5 or >8.5 (any changes >0.5 units)
turbidity	20% above natural background

Monitoring results and upstream and downstream pictures within the working and/or disturbed area and discharge location shall be taken and submitted to the appropriate Regional Water Board staff within 24 hours of the incident. All other monitoring data documenting compliance with water quality objectives shall be reported on a monthly basis and is due to the Regional Water Board by the 15<sup>th</sup> of the following month.

25. Post Storm Event Reports:

- Once the project has begun ground-disturbing activities, and subsequent to a qualifying rain event that exceeds 0.5-inches of precipitation, Caltrans shall inspect the project within 24 hours and take photos of all discharge locations, and disturbed areas, including all excess materials disposal areas, in order to demonstrate that erosion control and revegetation measures are present and have been installed appropriately and are functioning effectively. A brief report containing these photos, corrective actions (if necessary), and any surface water monitoring results collected pursuant to this Order or the Construction General Permit (SWRCB Order 2009-009 DWQ) shall be submitted to the Regional Water Board within 10 days after the end of the qualifying rain event. Inspections are required daily during extended rain events. Once the project site is stable, in a steady state (channel- ground- or vegetation-disturbing activities have ceased), and has demonstrated sufficient and effective erosion and sediment control, Caltrans may request a reprieve from this condition from the Regional Water Board. At least one post-construction inspection is required to demonstrate sufficient and effective erosion and sediment control and compliance with the Basin Plan.
- Rain events are periods of precipitation that that are separated by more than 48-hours of dry weather. Rainfall amounts may be taken from on-site rain gauges, from the nearest California Data Exchange Center station (<http://cdec.water.ca.gov>), or by a custom method or station approved by Regional Water Board staff.

26. Mitigation actions shall be conducted in accordance with the Caltrans-prepared *Mitigation and Monitoring Proposal to Address Mitigation for Wetland and Other Waters of the U.S.*, dated March 2012. Mitigation actions include wetland establishment of 0.03 acres (1,306 feet<sup>2</sup>), wetland restoration of 0.025 acres (1,089 feet<sup>2</sup>), riparian establishment of 0.04 acres (1,742 feet<sup>2</sup>), and riparian restoration of 0.077 acres (3,354 feet<sup>2</sup>). Planting and enhancement actions shall be completed in the fall or early winter of 2015. As built reports for the mitigation actions are due to the Regional Water Board on January 31, 2016. Mitigation monitoring shall be submitted annually to the Regional Water Board on December 31<sup>st</sup>, with the first report due in 2016.

27. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Order. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this Order to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In response to any violation of the conditions of this Order, the Regional Water Board may add to or modify the conditions of this Order as appropriate to ensure compliance.
28. The Regional Water Board may add to or modify the conditions of this Order, as appropriate, to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.
29. This Order is not transferable. In the event of any change in control of ownership of land presently owned or controlled by the Applicant, the Applicant shall notify the successor-in-interest of the existence of this Order by letter and shall forward a copy of the letter to the Regional Water Board. The successor-in-interest must send to the Regional Water Board Executive Officer a written request for transfer of this Order to discharge dredged or fill material under this Order. The request must contain the following:
  - a. requesting entity's full legal name
  - b. the state of incorporation, if a corporation
  - c. address and phone number of contact person
  - d. description of any changes to the project or confirmation that the successor-in-interest intends to implement the project as described in this Order.
30. Except as may be modified by any preceding conditions, all certification actions are contingent on: a) the discharge being limited, and all proposed revegetation, avoidance, minimization, and mitigation measures being completed, in strict compliance with Caltrans' project description and CEQA documentation, as approved herein, b) Caltrans shall construct the project in accordance with the project described in the application and the findings above, and c) compliance with all applicable water quality requirements and water quality control plans including the requirements of the Water Quality Control Plan for the North Coast Region (Basin Plan), and amendments

thereto. Any change in the design or implementation of the project that would have a significant or material effect on the findings, conclusions, or conditions of this Order must be submitted to the Executive Officer of the Regional Water Board for prior review, consideration, and written concurrence. If the Regional Water Board is not notified of a significant alteration to the project, it will be considered a violation of this Order, and Caltrans may be subject to Regional Water Board enforcement actions.

31. The authorization of this certification for any dredge and fill activities expires on November 29, 2017. Conditions and monitoring requirements outlined in this Order are not subject to the expiration date outlined above, and remain in full effect and are enforceable.
32. Please contact our staff Environmental Specialist / Caltrans Liaison Jeremiah Puget at (707) 576-2835 or [jeremiah.puget@waterboards.ca.gov](mailto:jeremiah.puget@waterboards.ca.gov) if you have any questions.



Matthias St. John  
Executive Officer

121129\_JJP\_ef\_CDOT\_Hwy 20\_1Culvert Rehab\_401Cert.docx

Web link: State Water Resources Control Board Order No. 2003-0017 -DWQ, General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification can be found at:  
[http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/water\\_quality/2003/wqo/wqo2003-0017.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0017.pdf)

Original to: Ms. Jennifer Olah, Caltrans – North Region Environmental, P.O. Box 911, Marysville CA 95901

Copies to: Mr. Sandra Rosas, Caltrans – North Region Environmental, P.O. Box 911, Marysville CA 95901

Electronic Copies to: U.S. Army Corps of Engineers, Regulatory Functions - San Francisco District



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
1455 MARKET STREET  
SAN FRANCISCO, CALIFORNIA 94103-1398

NOV - 6 2012

Regulatory Division

SUBJECT: File Number 2009-00447N

Ms. Sharon Stacey  
California Department of Transportation (Caltrans), District 1  
North Region Environmental Planning  
1031 Butte Street, MS 30  
Redding, California 96001

Dear Ms. Stacey:

This letter is written in response to your submittal of April 6, 2012 concerning Department of the Army authorization to replace 45 culverts located along State Route (SR) 1 between Post Mile (PM) 3.87 near the town of Anchor Bay and PM 47.10 near the town of Little River; SR 20 between PM 13.76 near Fort Bragg and PM 31.99 west of Willits; and U.S. Highway 101 at PM 48.90 North of Willits, in Mendocino County, California.

Based on a review of the information you submitted, your project qualifies for authorization under Department of the Army Regional Permit (RGP) No. #16 for Rehabilitation or Replacement of Culverts in Mendocino County pursuant to Section 404 of the Clean Water Act, 33 U.S.C. Section 1344 (enclosure 1). All work shall be completed in accordance with the plans and drawings titled "*USACE File #2009-00447, October 18, 2012, Figures 1 to 45*" provided as enclosure 2. A Preliminary JD has been completed for each culvert location. Preliminary JDs are written indications that there may be waters of the U.S. on a parcel or indications of the approximate location(s) of waters of the U.S. on a parcel. Preliminary JDs are advisory in nature and may not be appealed.

Special Condition 3 of RGP #16 requires that compensatory mitigation for unavoidable impacts to wetlands and Waters of the U.S. shall occur through creation, restoration, riparian planting, or enhancement of the appropriate tributaries and/or wetlands within the watershed where impacts are proposed to occur. Compensatory mitigation will be achieved through implementation of the Mitigation and Monitoring Plan titled "*Mitigation and Monitoring Proposal to Address Mitigation for Wetlands and Other Waters of the U.S.*" dated March 2012. A 5-year management and monitoring program will be implemented as outlined in the above mentioned plan. Annual monitoring reports shall be submitted to the Corps by December 31, of each year.

Special Condition 5 of RGP #16 stipulates that project authorization under a NWP does not allow for the incidental take of any federally-listed species in the absence of a biological opinion

with incidental take provisions. As the principal federal lead agency for this project, Caltrans initiated consultation with the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) to address project related impacts to list species, pursuant to Section 7(a) of the Endangered Species Act of 1973, as amended, 16 U.S.C. Section 1531 *et seq.* By letter of April 19, 2010 the NMFS (enclosures 2) and letters of January 22, 2003 and May 24, 2010 (enclosures 3 and 4) the USFWS, concurred with the determination that the project was not likely to adversely affect northern California steelhead, Central California coast coho salmon, Southern Oregon/Northern California coast coho salmon, California Coastal Chinook salmon, Point Arena Mountain beaver, and California red-legged frog and designated critical habitat for these species. This concurrence was premised, in part, on project work restrictions outlined in enclosures 3, 4, and 5. These work restrictions should be implemented to the fullest extent to ensure unauthorized incidental take of species and loss of critical habitat does not occur.

The project must be in compliance with the all conditions cited in RGP #16 for the authorization to remain valid. Non-compliance with any condition could result in the suspension, modification or revocation of the authorization for your project, thereby requiring you to obtain a Nationwide or Individual Permit from the Corps.

This authorization will not be effective until you have obtained a Section 401 water quality certification from the North Coast Regional Water Quality Control Board (RWQCB). If the RWQCB fails to act on a valid request for certification within two months after receipt of a complete application, the Corps will presume a waiver of water quality certification has been obtained. You shall submit a copy of the certification to the Corps prior to the commencement of work.

This authorization will not be effective until you have obtained a concurrence from the California Coastal Commission that your project will comply with California's Coastal Zone Management Act. If the Commission fails to act on a valid request for concurrence with your certification within six months after receipt, the Corps will presume a concurrence has been obtained. You shall submit a copy of the concurrence to the Corps prior to the commencement of work.

Should you have any questions regarding this matter, please call Paula Gill of our Regulatory Division at 415-503-6776. Please address all correspondence to the Regulatory Division and refer to the File Number at the head of this letter. If you would like to provide comments on our permit review process, please complete the Customer Survey Form available online at <http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,



 Jane Hicks,  
Chief, Regulatory Division

Enclosures

Copies furnished:

US EPA, San Francisco, CA  
US FWS, Arcata, CA  
US NMFS, Arcata, CA  
CA CC, Eureka, CA  
CD DFG, Redding, CA  
CA RWQCB, Santa Rosa, CA

DEPARTMENT OF THE ARMY REGIONAL GENERAL PERMIT 16  
FOR THE REHABILITATION OR REPLACEMENT OF CULVERTS  
IN MENDOCINO COUNTY

PERMITTEE: Ms. Sharon Stacey, California Department of Transportation (Caltrans)

PERMIT NO.: 2009-00447N

ISSUING OFFICE: San Francisco District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate District or Division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below:

**PROJECT DESCRIPTION:**

This Regional General Permit (RGP) authorizes the rehabilitation and/or replacement of deteriorated culverts and installation of standard drainage inlet and outlet structures located in Mendocino County. Culvert sizes will range from 18" to 6' by 12' box culverts. Some drainage work will be completed at inlets and outlets, and minor vegetation removal may be performed to improve water flow. Minor grading may also be performed at various locations when deemed necessary to prevent water buildup at inlets and/or outlets. Either half-width construction or jacking construction methods will be utilized. Some specific designs may call for modifying the ends of the culvert with a headwall, a flared end section, an inlet structure, or a downdrain. Rock slope protection, rock energy dissipaters, and rock weirs may also be commonly required. Temporary flow diversions on perennial streams would also be required. Authorization also includes off-pavement work pads for construction at inlets and outlets that cannot be reached with equipment from the road. Typically, work shall be completed in accordance with the plans and drawings titled, "USACE File #2009-00447N, State Routes 128 and 253 Culvert Replacement, March 28, 2012, Figures 1 to 4."

Impacts to wetlands and waters of the U.S. associated with each culvert replacement will vary depending on specific site conditions associated with each culvert replacement. The maximum authorized discharge of fill material into wetlands and waters of the U.S. is 0.05 acre or 50 linear feet of permanent fill (i.e. placement of hardscape material beyond the existing culvert) for an individual culvert replacement. Over the 5-year authorization period, no more than 1.0 acre of permanent impact to wetlands and waters of the U.S. associated with culvert replacements will be authorized. Activities required for culvert replacement that would not constitute placement of fill or a permanent impact (e.g. dewatering, culvert replacement) will be limited to 300 linear feet of work within a water of the U.S., this includes the length of the culvert and additional upstream and downstream associated work.

PROJECT LOCATION: Mendocino County, California

**PERMIT CONDITIONS:**

**GENERAL CONDITIONS:**

1. The time limit for completing the work authorized ends on June 15, 2017.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.
6. You understand and agree that, if future operations by the United States require the removal, relocation or other alteration of the structure or work authorized herein, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, you will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

**SPECIAL CONDITIONS:**

1. Two annual reports are required. The first annual report (advanced notice) will contain a work plan for the coming year. This report shall be submitted prior to April 15 of each year. Along with other information this advanced notice will include work locations, any proposed off-pavement work pad locations and size, estimates of impact to jurisdictional wetlands and/or to other Waters of the U.S. (in mapped format), construction methods, and proposed work timeframes. Specific project drawings for each culvert replacement including any required rock slope protection, any culvert modifications, or grading plans shall be provided. Additionally, a Wetland Delineation Report prepared in accordance with the Corps of Engineers' 1987 Wetland Delineation Manual and the appropriate Regional Supplement for the project study area for proposed culvert repair locations shall be provided. The proposed compensatory mitigation plan for impacts associated with the upcoming year shall be provided with the advanced notice completed in accordance with "*Compensatory Mitigation for Losses of Aquatic Resources; Final Rule*," 33 C.F.R. pt. 332, published on April 10, 2008.

Included with the advanced notice, Caltrans shall demonstrate compliance with Section 7 of the Endangered Species Act (ESA) of 1973 as amended, 16 U.S.C. §§ 1531-1544, and Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation, Management Act (EFH), 16 U.S.C. § 1855(b)(4)(B), and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, 16 U.S.C. §§ 470-470. Caltrans shall provide all relevant documentation summarizing any previous consultation efforts, as it pertains to the Corps Regulatory permit area (for Section 7 and EFH compliance) and the Corps Regulatory area of potential effect (for Section 106 compliance). Additionally, copy of the Regional Water Quality Control Board (RWQCB) 401 Certification and the California Coastal Commission (CCC) Consistency Determination for the proposed culvert replacements shall also be provided, if available.

The second annual report would summarize work completed in the previous year and will provide a running summary of mitigation efforts, including post-construction monitoring outlined in special condition 13. The second annual report shall be submitted prior to December 1 of each year.

2. After review of the Advanced Notice the Corps will provide specific written authorization of rehabilitation and/or replacement of deteriorated culverts. Within this written authorization the Corps will also approve the proposed compensatory mitigation plan. Approval of the Advanced Notice shall be contingent on appropriately proposed compensation for anticipated impacts, demonstration of successful implementation and reporting in accordance with any previously approved mitigation plan, and compliance with all federal and state regulatory requirements (ESA, EFH, NHPA, RWQCB, and CCC).

3. Compensatory mitigation for unavoidable impacts to wetlands and Waters of the U.S. shall occur through creation, restoration, riparian planting, or enhancement of the appropriate tributaries and/or wetlands within the watershed where impacts are proposed to occur. Compensatory mitigation may also be provided through the purchase of credits at a Corps approved mitigation bank. Your responsibility to complete the required compensatory mitigation upon approval of Advanced Notice and associated compensatory mitigation plans will not be considered fulfilled until you have demonstrated mitigation success and have received written verification from the U.S. Army Corps of Engineers.
4. You shall not begin work on any individual culvert replacement until specific written authorization is provided by USACE upon review of the advanced notice.
5. No activity is authorized under this RGP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any RGP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed. The Corps will review the documentation provided demonstrating compliance with the Section 7 consultation and determine whether it is sufficient to address ESA compliance for the RGP activity, or whether additional ESA consultation is necessary. Authorization of an activity by this RGP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., a Biological Opinion with "incidental take" provisions, etc.) from the United States Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS). Upon approval of the advanced notice Caltrans shall comply with the mandatory terms and conditions associated with incidental take. Failure to comply with the terms and conditions for incidental take, where a 'take' of a federally-listed species occurs, would constitute an unauthorized take and non-compliance with the RGP authorization. The USFWS and or NMFS are, however, the authoritative federal agency for determining compliance with the incidental take statement and for initiating appropriate enforcement actions or penalties under the ESA.
6. If the USFWS and/or NMFS concurred with the determination that the project was not likely to adversely affect listed species and designated critical premised on project work restrictions then these work restrictions shall be implemented to ensure unauthorized incidental take of species and loss of critical habitat does not occur.
7. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or Study River (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).
8. Work will be conducted during the dry season (June 15 to October 15) to minimize potential impacts to any wet or running watercourses, when feasible. If work is occurring in a perennial creek or outside of the dry season then the waterway shall be de-watered.
9. Off-pavement work pads shall also be located outside of USACE jurisdictional wetlands and waters of the U.S.
10. Prior to any culvert rehabilitation a Section 401 water quality certification from the North Coast, Regional Water Quality Control Board shall be provided specifically authorizing the proposed culvert replacement.
11. Prior to any work on a culvert located within the jurisdiction of the California Coastal Commission, concurrence that the work will comply with California's Coastal Zone Management Act must be provided.
12. No fill shall be placed below the ordinary high water mark of the Navarro River, Rancheria Creek, Big River, Eel River, Gualala River including South Fork Gualala River, Mattole River, Russian River to ensure these rivers on the Nationwide Rivers Inventory are not adversely affected by project implementation.

13. The area immediately upstream and downstream of each culvert replacement shall be monitored post-construction at years 1, 3, and 5 to qualitatively assess channel conditions surrounding the work area. Photographs and a brief summary of conditions shall be provided with the annual summary of completed work. Any finding of channel instability (e.g. migrating headcuts, RSP failure, or bank erosion) shall be documented and remediation measures shall be proposed and submitted to USACE for review. After receiving approval from USACE, the proposed measures shall be implemented.
14. Application of compost blankets for erosion control will be implemented concurrently with project construction. All other revegetation activities will begin the fall after completion of culvert construction. If areas do not revegetate by the first year of post-construction monitoring (described in special condition 11 above), the Corps may require further monitoring, re-vegetation, and/or off-site mitigation.

**FURTHER INFORMATION:**

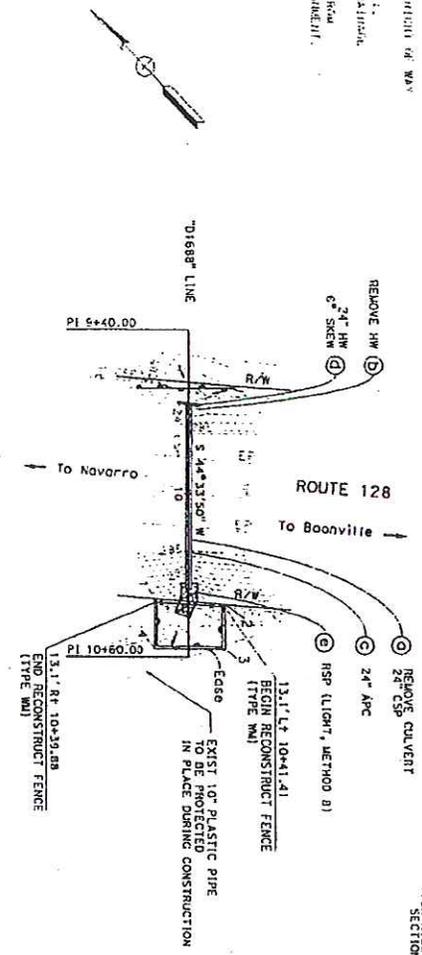
1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
  - ( x ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. Section 403).
  - ( x ) Section 404 of the Clean Water Act (33 U.S.C. Section 1344).
  - ( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. Section 1413).
2. Limits of this authorization:
  - a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.
  - b. This permit does not grant any property rights or exclusive privileges.
  - c. This permit does not authorize any injury to the property or rights of others.
  - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability: In issuing this permit, the Federal Government does not assume any liability for the following:
  - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
  - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
  - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
  - d. Design or construction deficiencies associated with the permitted work.
  - e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:





1. The drainage system shown on this sheet is a typical replacement of the existing drainage system on the right of way of the proposed project. It is not intended to be a final design and is subject to change without notice. The contractor shall be responsible for the final design and construction of the drainage system.

**DRAINAGE SYSTEM 12**  
 ROUTE 128  
 PM 16.88  
 SCALE: 1" = 20'



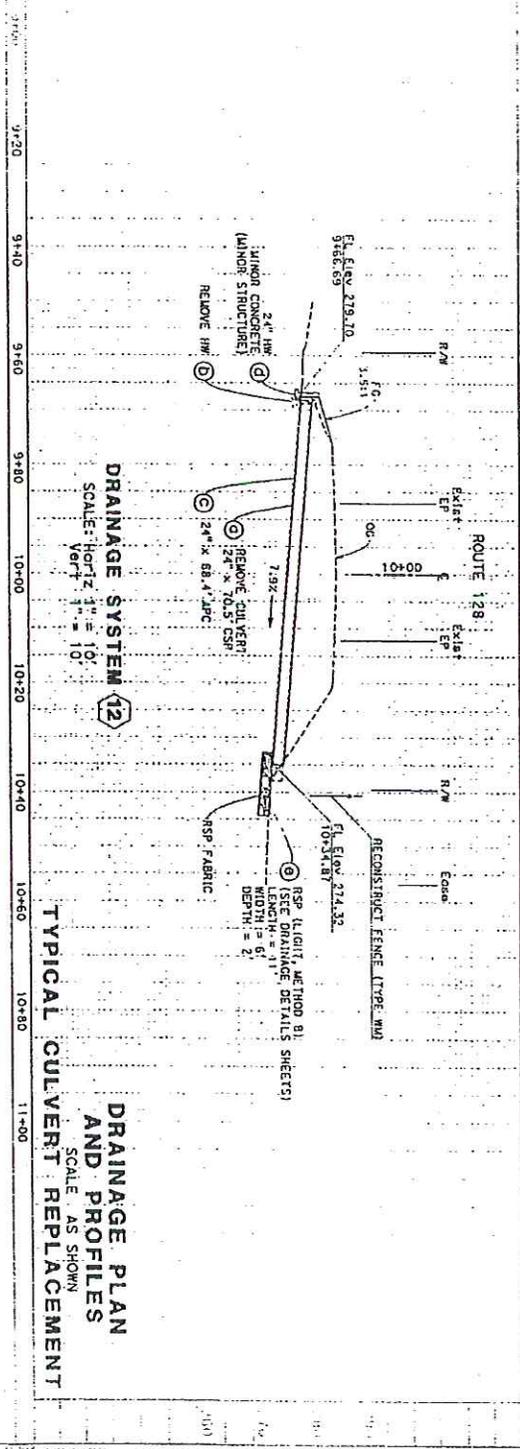
POINT	STATION	OFFSET
1	10+38.48	13.12' RT
2	10+40.54	13.12' LT
3	10+56.84	13.12' LT
4	10+56.84	13.12' RT

15R R154 M0904  
 SECTION 23

DATE: 11/11/11  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]

REGISTERED CIVIL ENGINEER

**DRAINAGE SYSTEM 12**  
 SCALE: Horiz. 1" = 10'  
 Vert. 1" = 10'



**DRAINAGE PLAN AND PROFILES**  
 SCALE AS SHOWN  
**TYPICAL CULVERT REPLACEMENT**

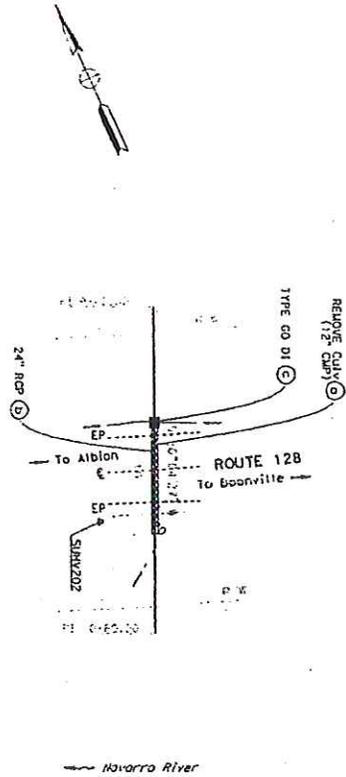
RELATIVE ELEVATION SCALE



U.S. Army Corps of Engineers  
 San Francisco District  
 Regulatory Division

USACE File # 2009-00447N  
 State Routes 128 and 253  
 Culvert Replacement  
 March 28, 2012  
 Figure 2 of 4

Dist	County	Route	Sheet No.	Project No.	Scale
01	San Francisco	128	128	128	1" = 20'
REGISTERED CIVIL ENGINEER JAMES J. HARRIS No. 11115 State of California License No. 11115 Date of Issue: 1/1/68 Date of Renewal: 1/1/73					
PLANT APPROVAL DATE: _____ REGISTERED CIVIL ENGINEER JAMES J. HARRIS No. 11115 State of California License No. 11115 Date of Issue: 1/1/68 Date of Renewal: 1/1/73					

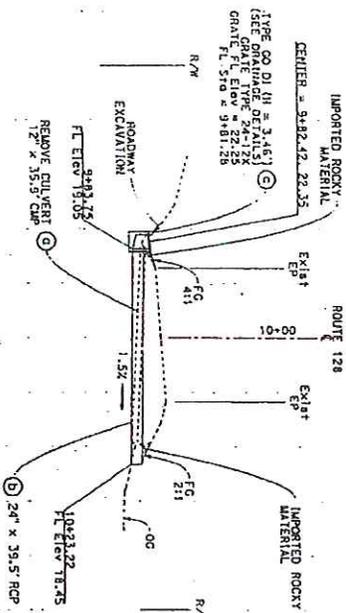


**DRAINAGE SYSTEM NO. 5**

ROUTE 128  
PM 00.59

**PLAN**

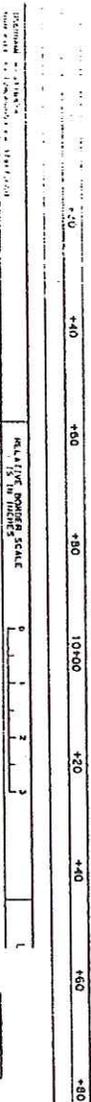
SCALE: 1" = 20'



**PROFILE**

SCALE: 1" = 10'

**TYPICAL CULVERT REPLACEMENT  
DRAINAGE PLAN  
AND PROFILE**  
SCALE AS SHOWN



U.S. Army Corps  
of Engineers  
San Francisco District  
Regulatory Division

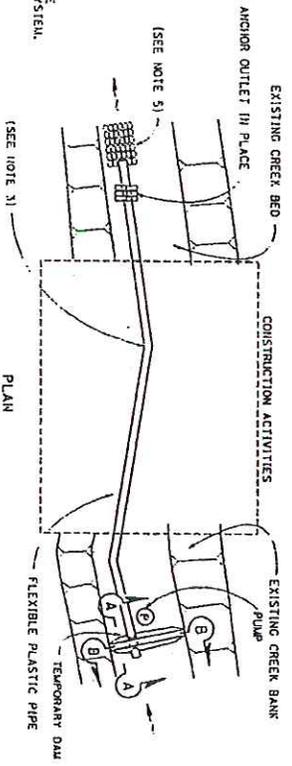
ISACIE File # 2007070447N  
State Routes 128 and 253  
Culvert Replacement  
March 28, 2012  
Figure 3 of 4

... construction of the plastic pipe to be performed in the same manner as the construction of the plastic pipe at intermediate points. The pipe shall be installed in the channel in the same manner as the construction of the plastic pipe at intermediate points. The pipe shall be installed in the channel in the same manner as the construction of the plastic pipe at intermediate points.

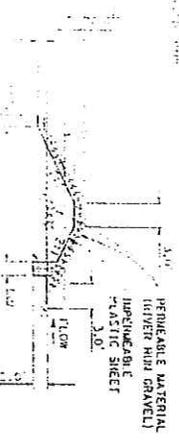
**HYDROLOGIC SUMMARY**

EXISTING DRAINAGE SYSTEM No.	LOCATION	PL
23	20.15	
31	27.24	
44	36.63	
48	39.88	

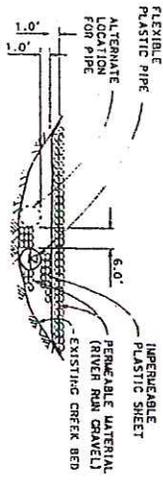
**TEMPORARY CREEK DIVERSION SYSTEM PLAN**



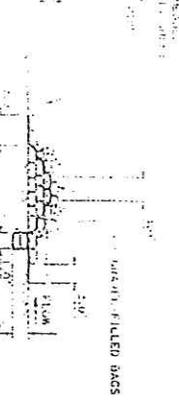
EXISTING DRAINAGE SYSTEM No.	LOCATION	PL
23	20.15	
31	27.24	
44	36.63	
48	39.88	



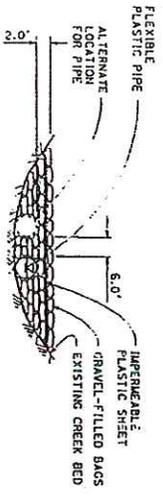
**TEMPORARY DAM (TYPE 1)**  
SECTION A-A



**TEMPORARY DAM (TYPE 1)**  
SECTION B-B

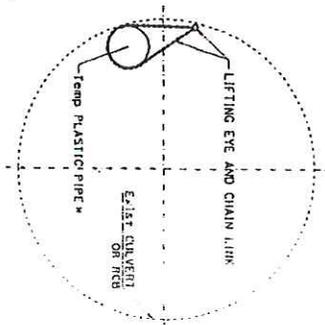


**TEMPORARY DAM (TYPE 2)**  
SECTION A-A



**TEMPORARY DAM (TYPE 2)**  
SECTION B-B

THIS PLAN ACCURATE FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY



**Temp PLASTIC PIPE INSTALLED IN CSP/RCB**  
TYPICAL SECTION

LOCATION	DRAINAGE SYSTEM No.	PL
23	20.15	
31	27.24	
44	36.63	
48	39.88	

**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY CREEK DIVERSION SYSTEM)**  
TYPICAL STREAM DIVERSION  
NO SCALE



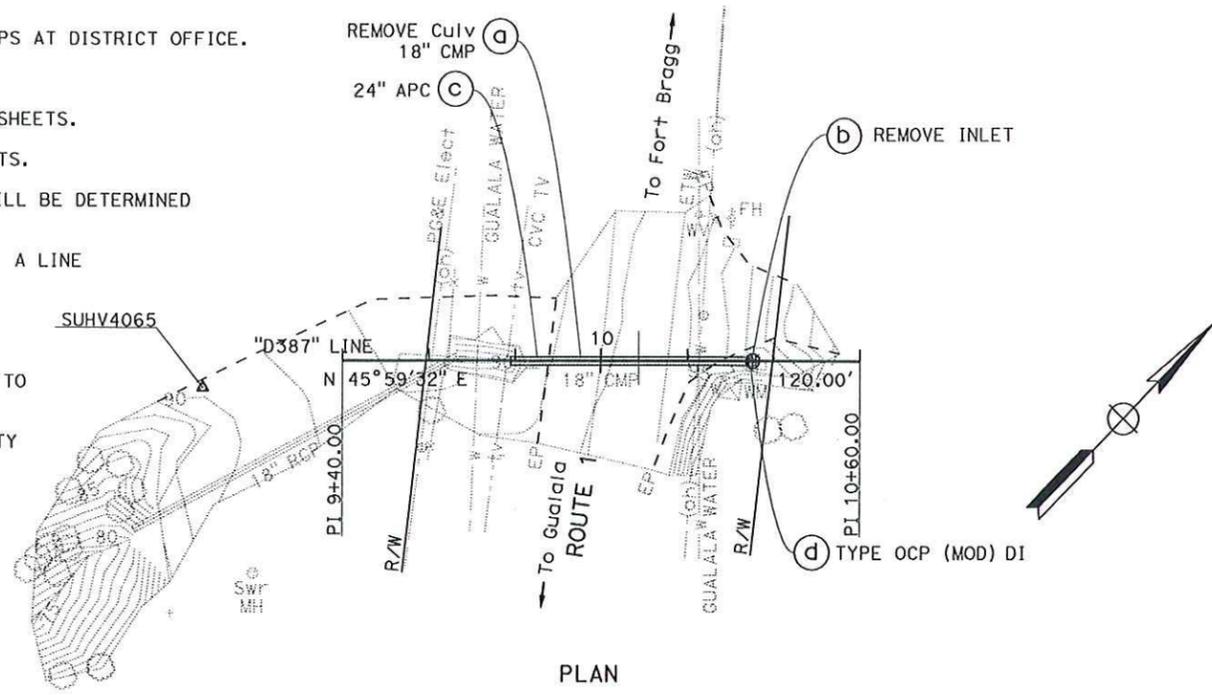
USACE File #2009-40447N  
State Routes 128 and 253  
Culvert Replacement  
March 28, 2012  
U.S. Army Corps of Engineers  
San Francisco District  
Regulatory Division  
Figure 4 of 4

Sheet Count: 138 of 138  
Sheet No.: 138  
Project No.: 2009-40447N  
Date: 03/28/12  
Scale: AS SHOWN  
Title: TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY CREEK DIVERSION SYSTEM)  
TYPICAL STREAM DIVERSION  
NO SCALE  
REGISTERED CIVIL ENGINEER  
PLANS APPROVAL DATE: 03/28/12  
NO SIGN OR SEAL SHALL BE VALID UNLESS ACCOMPANIED BY A REGISTERED CIVIL ENGINEER'S SIGNATURE AND EXPIRES ON THE DATE OF HIS/HER DEATH.

T11N R15W MDB&M SECTION 17

**NOTES:**

- FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
- FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.
- FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
- THE ANGLE OF EACH ELBOW IS APPROXIMATE. THE EXACT ANGLE WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- INLET AND/OR OUTLET STRUCTURE SKEW ANGLE IS MEASURED FROM A LINE PERPENDICULAR TO THE CULVERT ALIGNMENT.
- FOR PLASTIC PIPE LINER DETAILS SEE DRAINAGE DETAIL SHEETS.
- LOCATIONS OF UTILITY FACILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ALL UTILITY ELEVATIONS SHOWN REFER TO THE TOP OF THE UTILITY CONDUIT UNLESS OTHERWISE INDICATED.
- UTILITY OWNERSHIP ON THIS PROJECT:  
 ELECTRICAL - PACIFIC GAS & ELECTRIC (PG & E Elect)  
 GAS - PACIFIC GAS & ELECTRIC (PG&E GAS)  
 SEREW - CITY OF WILLITS (WILLITS Swr)  
 TELEPHONE - AMERICAN TELEPHONE & TELEGRAPH (AT&T Tel)  
 TELEVISION - CENTRAL VALLEY CABLE TELEVISION (CVC TV)  
 WATER - ELK COUNTY WATER DISTRICT (ELK Co WATER)  
 NORTH GUALALA WATER COMPANY (GUALALA WATER)  
 CITY OF WILLITS WATER DEPARTMENT (WILLITS WATER)
- CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEVISION LINE. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.



**DRAINAGE SYSTEM No. 1**

ROUTE 1  
PM 3.87

SCALE: 1" = 20'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

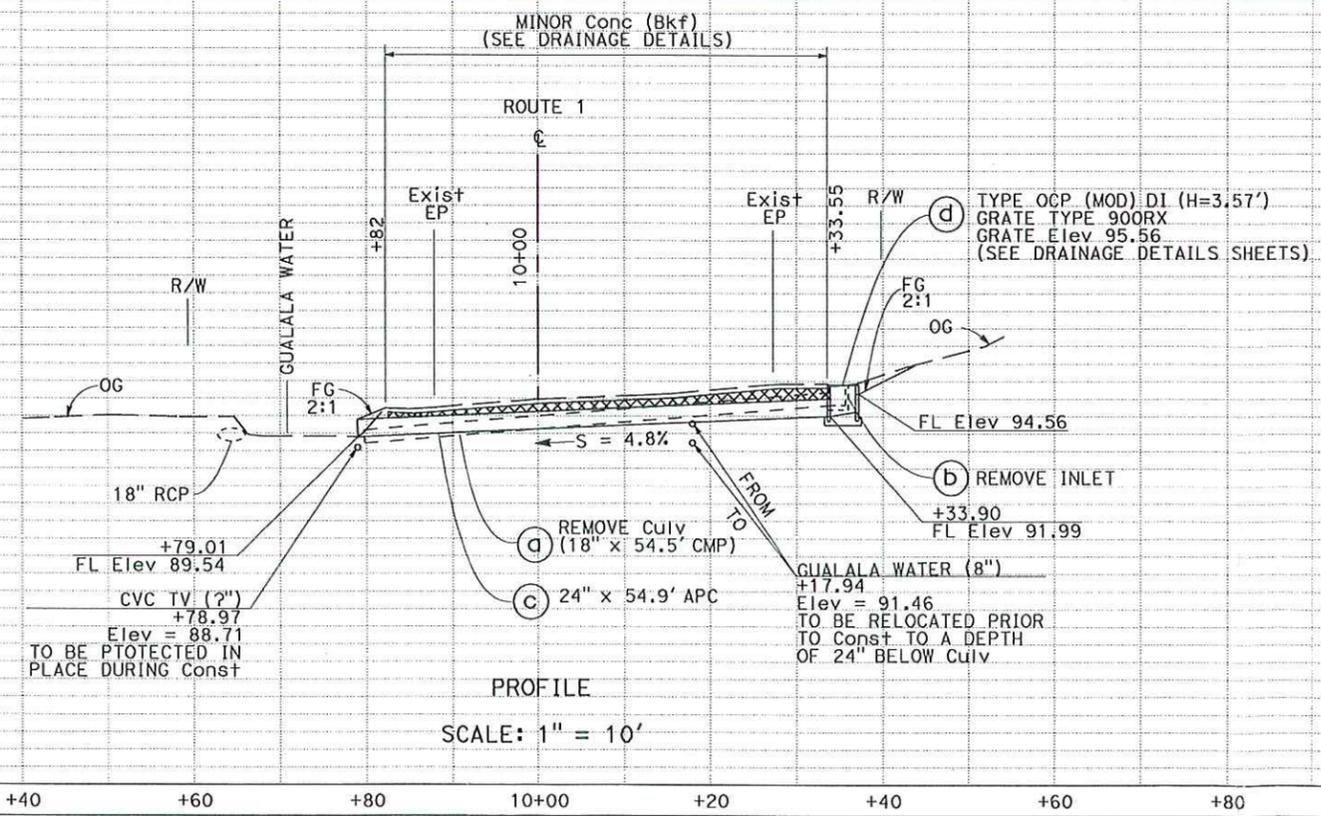
**LEGEND:**

- DRAINAGE SYSTEM No.
- DRAINAGE UNIT
- ROCK SLOPE PROTECTION
- Temp FENCE (TYPE ESA)
- FR FIBER ROLL
- MINOR Conc (Bkf)
- TCE Temp Const Ease

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**03-DESIGN**  
 FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR  
 DESIGNED BY: SARJU D. PATEL  
 CHECKED BY: W. KEITH MACK



USACE File #2009-00447N  
 Culvert Rehabilitation  
 State Routes 1 and 20  
 October 18, 2012  
 Figures 01 of 45

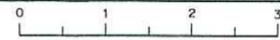


**PROFILE**

SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN

**D-1**



DATE PLOTTED => 09-AUG-2011  
 TIME PLOTTED => 09:41

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.
4. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEVISION AND WATER LINES. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.
5. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO RELOCATE THE UNDERGROUND WATER LINE DURING CONSTRUCTION. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 3 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.

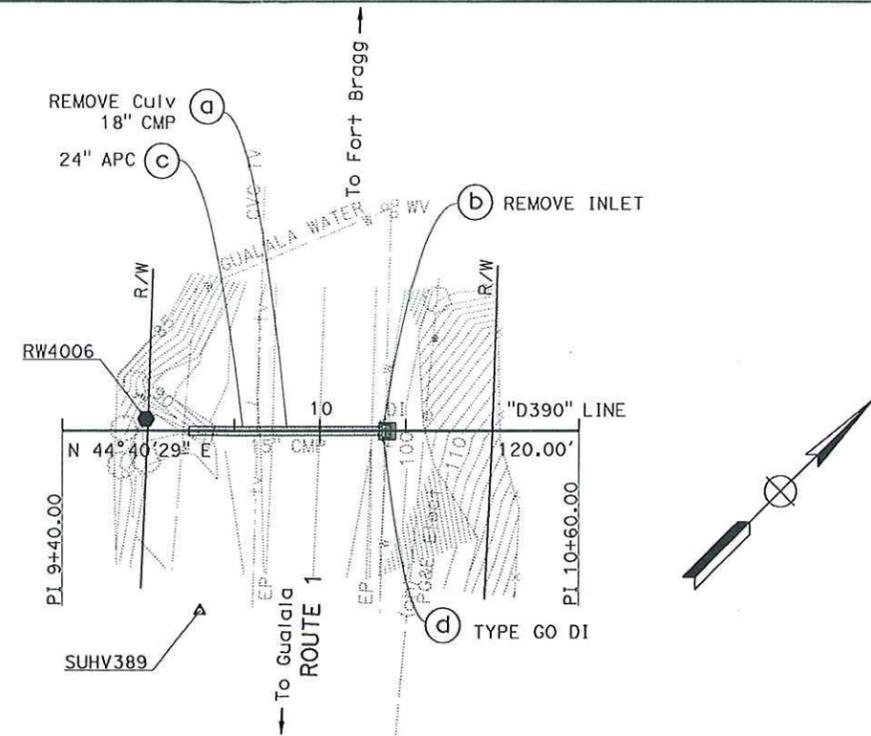
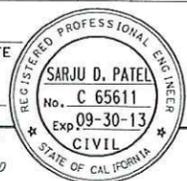
T11N R15W MDB&M  
SECTION 17

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

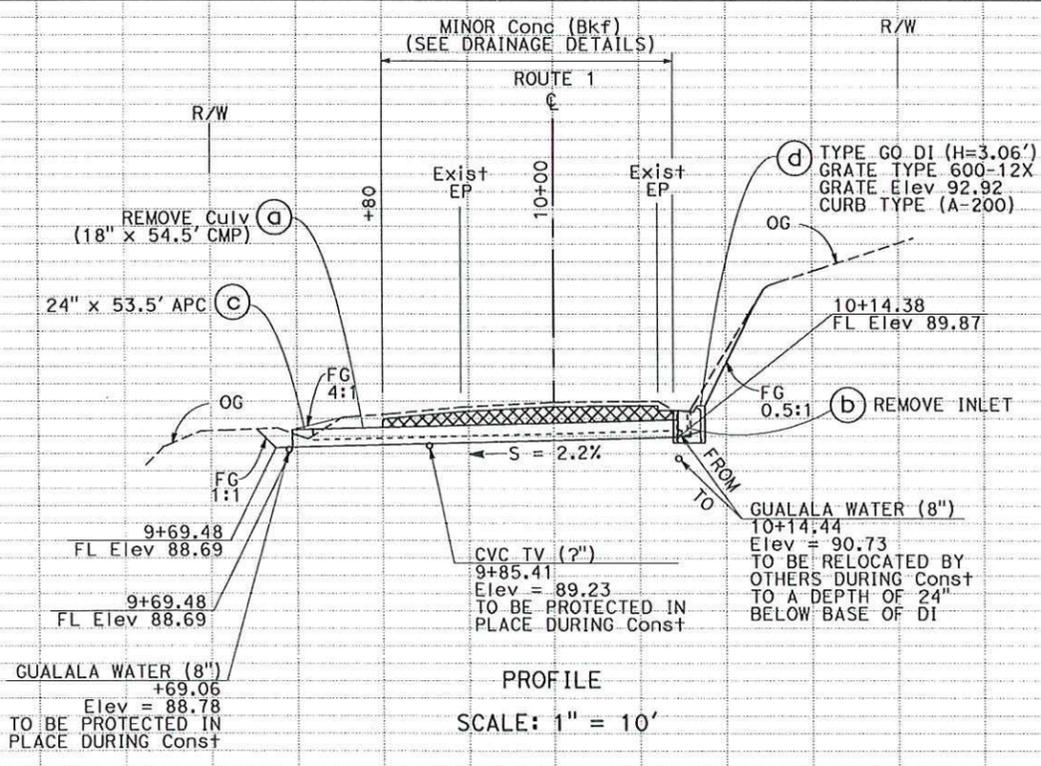
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



PLAN  
**DRAINAGE SYSTEM No. 2**  
ROUTE 1  
PM 3.90  
SCALE: 1" = 20'



PROFILE  
SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-2**



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figures 02 of 45

DESIGNED BY	SARJU D. PATEL
CHECKED BY	W. KEITH MACK
FUNCTIONAL SUPERVISOR	ROBERT E. POLGAR
DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING
STATE OF CALIFORNIA	

STATION	Exc	Emb	TOTAL
9+00			
+20			
+40			
+60			
+80			
10+00			
+20			
+40			
+60			
+80			
TOTAL			

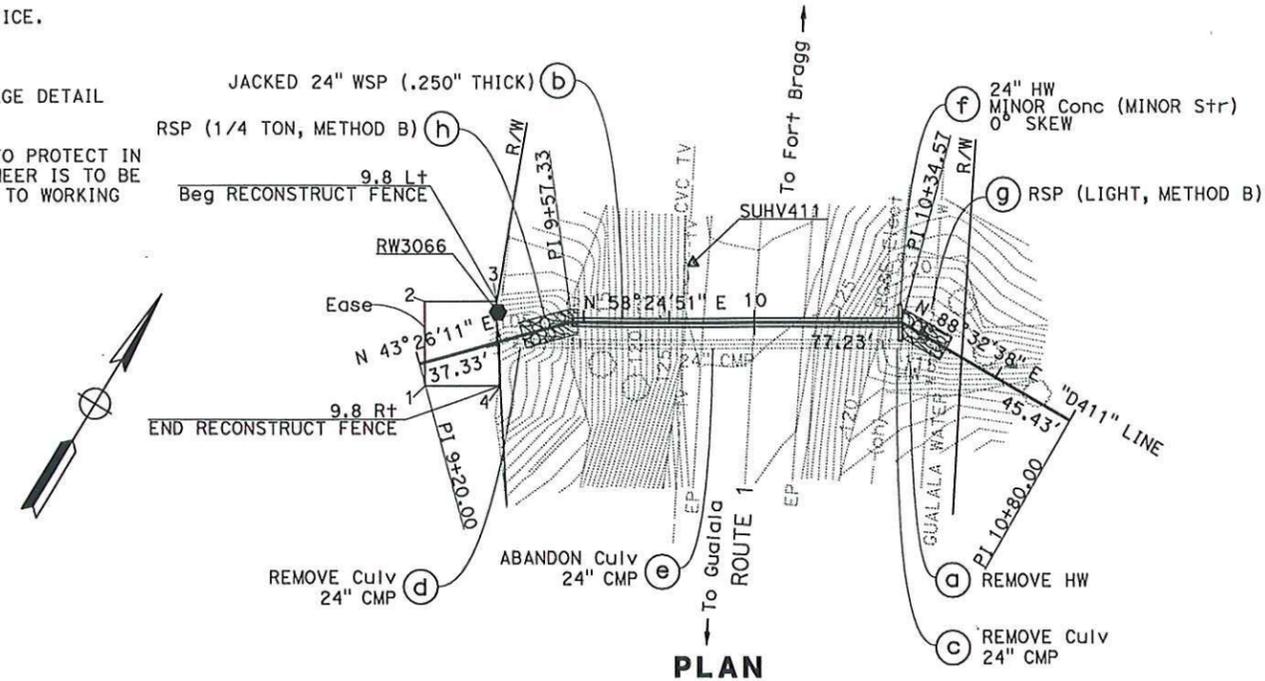
DATE PLOTTED => 09-AUG-2011 TIME PLOTTED => 09:41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		
REGISTERED CIVIL ENGINEER			11-1-11	DATE	
SARJU D. PATEL			No. C 65611		
PLANS APPROVAL DATE			Exp 09-30-13		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					

T11N R15W MDB&M SECTION 18

**NOTES:**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
- FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
- CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE ABOVEGROUND WATER LINE. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.



**EASEMENT**

POINT	STATION	OFFSET
1	9+22.84	9.85 R+
2	9+22.85	9.83 L+
3	9+40.01	9.83 L+
4	9+40.71	9.86 R+

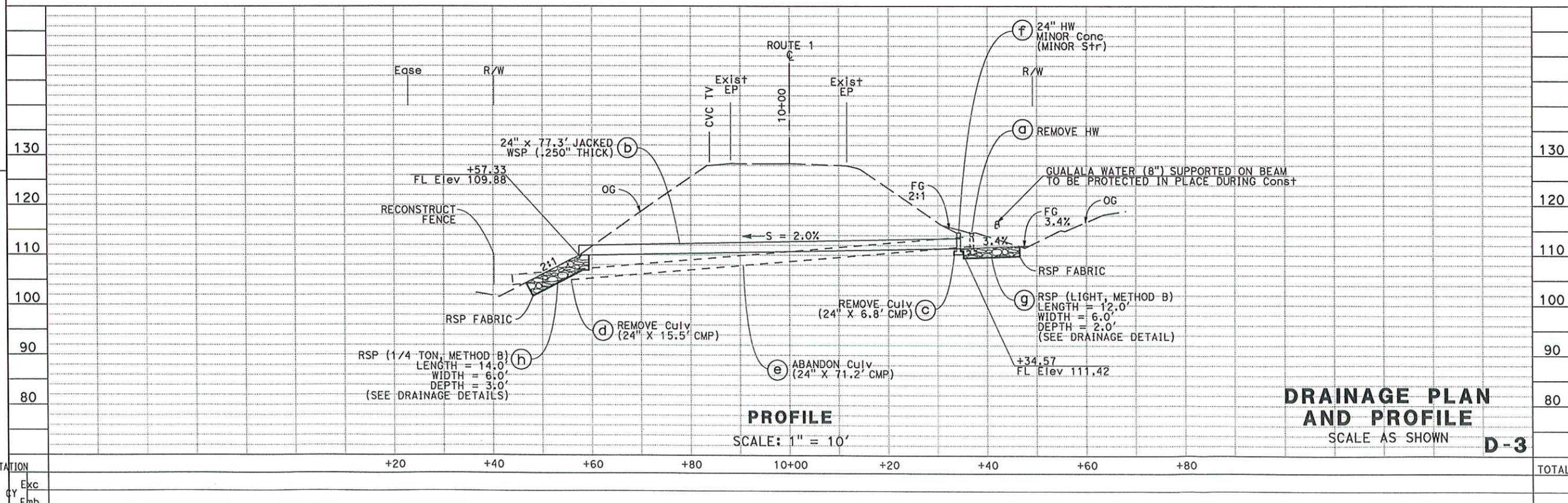
**DRAINAGE SYSTEM No. 3**

ROUTE 1  
PM 4.11  
SCALE: 1" = 20'



U.S. Army Corps of Engineers  
San Francisco District  
Regulatory Division

USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 03 of 45



**PROFILE**  
SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
03-DESIGN  
FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR  
DESIGNED BY: SARJU D. PATEL  
CHECKED BY: W. KEITH MACK

BORDER LAST REVISED 7/2/2010

USERNAME => s128180  
DGN FILE => 01000001251a003.dgn

RELATIVE BORDER SCALE IS IN INCHES

UNIT 0306

PROJECT NUMBER & PHASE

01000001251

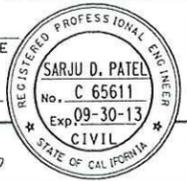
DATE PLOTTED => 10-JUL-2012  
TIME PLOTTED => 12:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

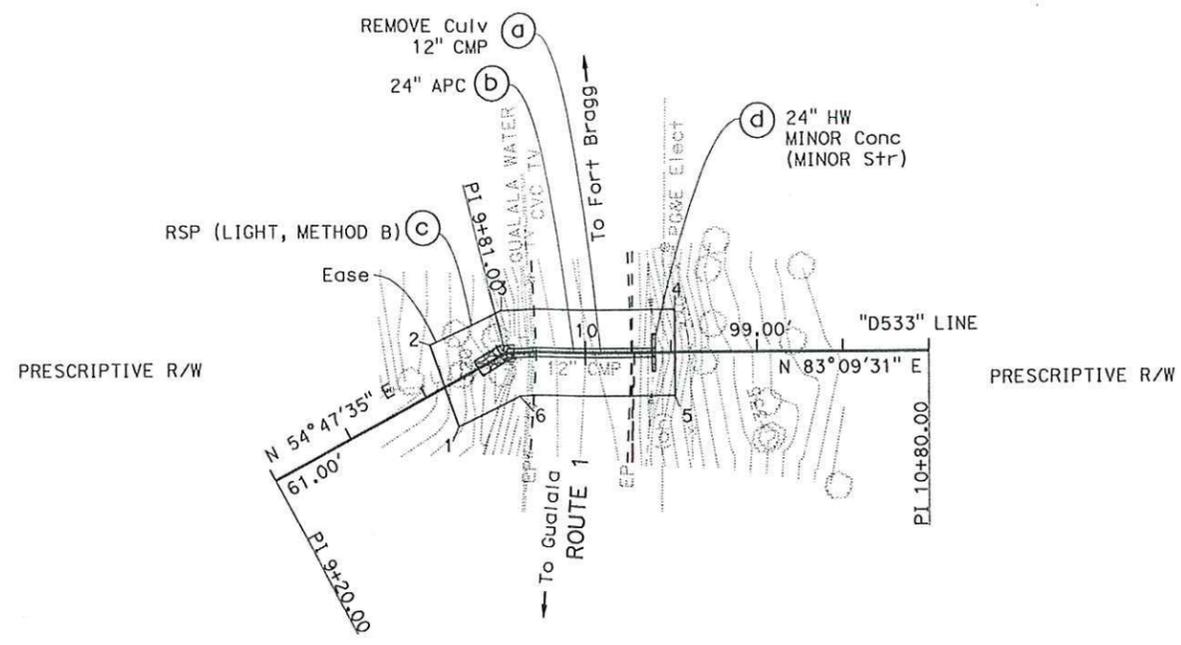
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



T11N R15W MDB&M SECTION 18

**NOTES:**

- FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
- FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.
- FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.



**EASEMENT**

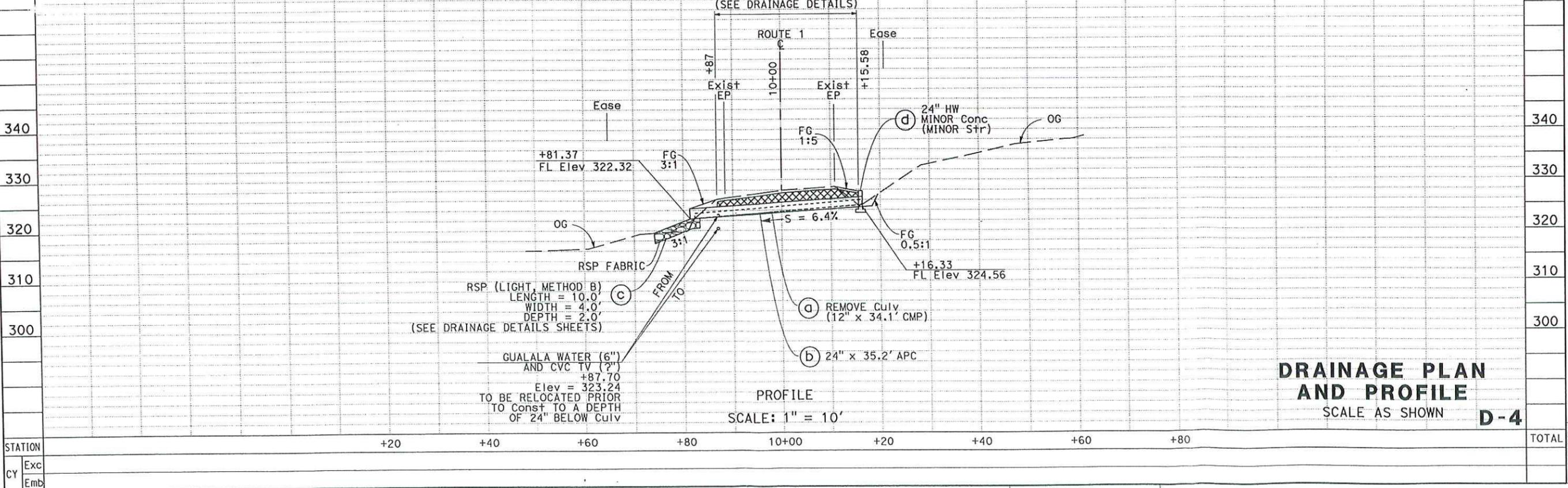
POINT	STATION	OFFSET
1	9+63.512	9.427 Rt
2	9+66.480	10.122 Lt
3	9+81.000	*9.883 Lt
4	10+20.882	9.853 Lt
5	10+20.887	9.832 Rt
6	9+84.493	9.841 Rt

\*GIVEN OFFSET IS AT A BEARING OF N 12°04'35.351"W FROM STATION



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figures 04 of 45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
03-DESIGN  
Et-Galtrans



**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN D-4

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.
4. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEVISION AND WATER LINES. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.



T11N R15W MDB&M  
SECTION 18

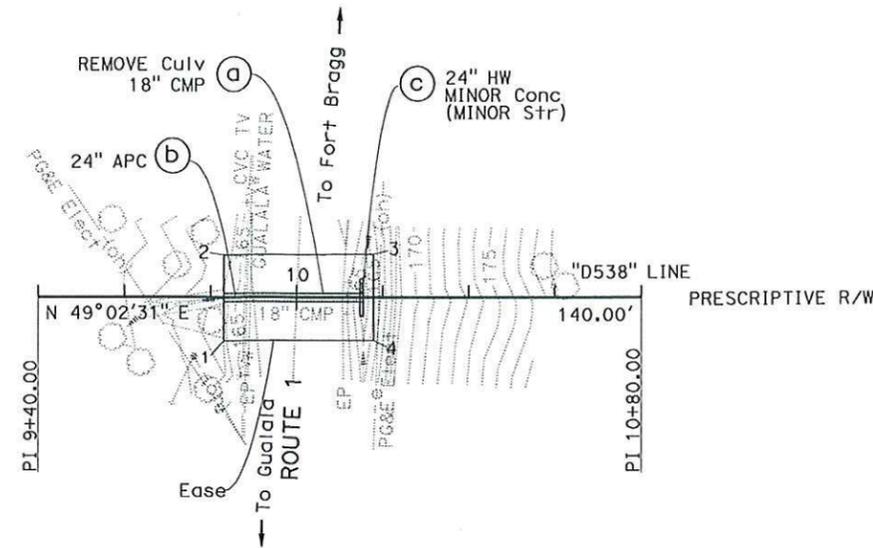
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
SARJU D. PATEL  
No. C 65611  
Exp. 09-30-13  
CIVIL  
STATE OF CALIFORNIA



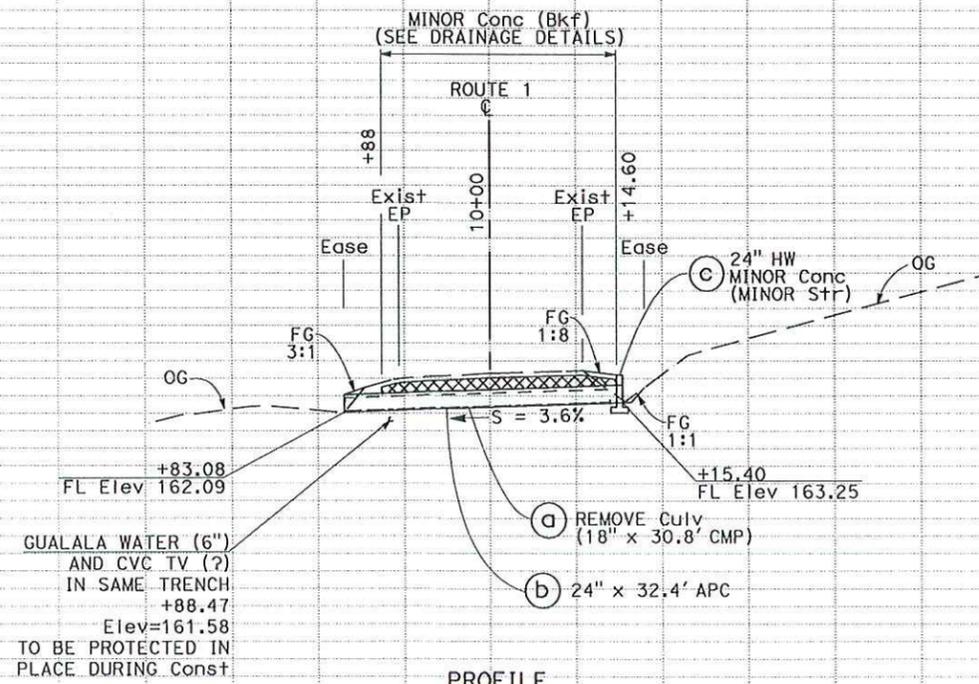
**DRAINAGE SYSTEM No. 5**

ROUTE 1  
PM 5.38

SCALE: 1" = 20'

**EASEMENT**

POINT	STATION	OFFSET
1	9+83.084	9.916 Rt
2	9+83.084	9.704 Lt
3	10+17.847	9.864 Lt
4	10+17.938	9.820 Rt



PROFILE  
SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-5**

REVISOR	DATE	REVISION
SARJU D. PATEL		
W. KEITH MACK		
CALCULATED-DESIGNED BY	CHECKED BY	
ROBERT E. POLGAR		
FUNCTIONAL SUPERVISOR		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		
<b>03-DESIGN</b>		
STATION		
Exc		
Emb		



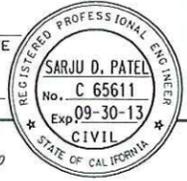
USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figures 05 of 45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

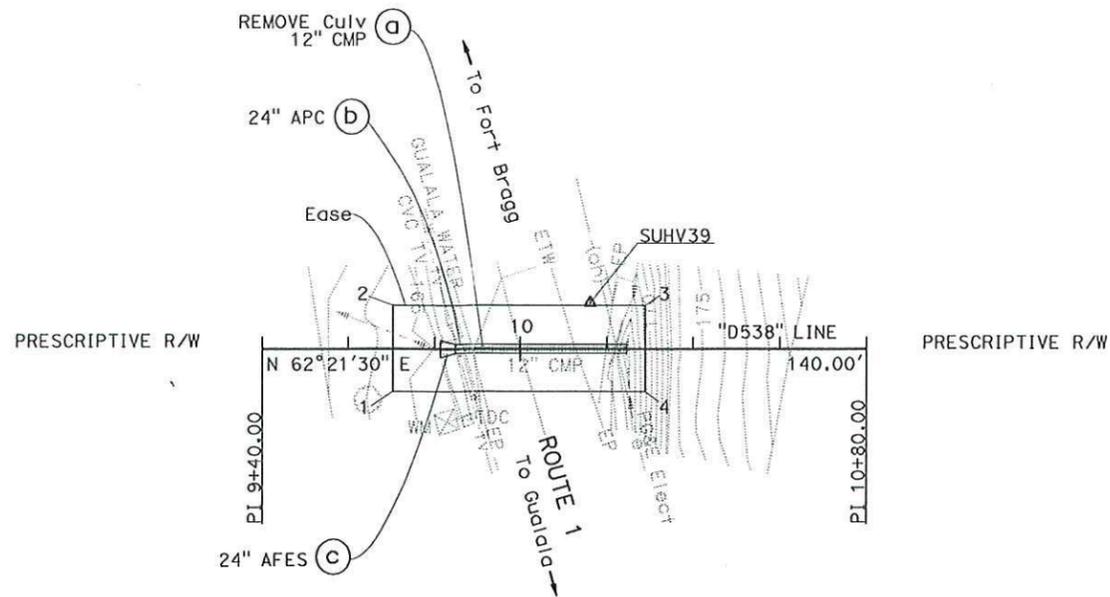
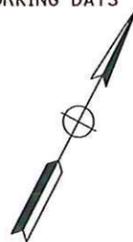
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



T11N R15W MDB&M SECTION 18

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.
4. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEVISION AND WATER LINES. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.



PLAN

**DRAINAGE SYSTEM No. 6**

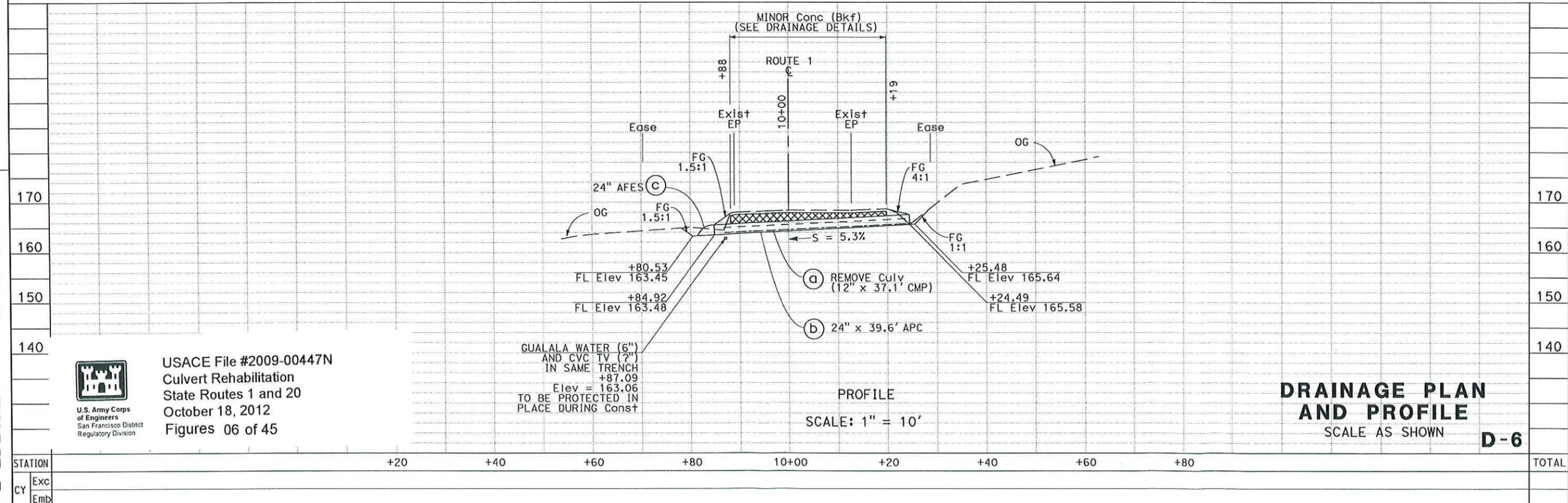
ROUTE 1  
PM 5.48

SCALE: 1" = 20'

**EASEMENT**

POINT	STATION	OFFSET
1	9+70.386	9.714 Rt
2	9+70.392	9.971 Lt
3	10+28.843	9.953 Lt
4	10+28.837	9.732 Rt

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Et-Cultrans**  
03-DESIGN  
FUNCTIONAL SUPERVISOR  
ROBERT E. POLGAR  
REVISOR  
SARJU D. PATEL  
W. KEITH MACK  
CALCULATED-DESIGNED BY  
CHECKED BY



PROFILE

SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN  
**D-6**



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figures 06 of 45

GUALALA WATER (6") AND CVC TV (?) IN SAME TRENCH  
+87.09 Elev = 163.06  
TO BE PROTECTED IN PLACE DURING Const



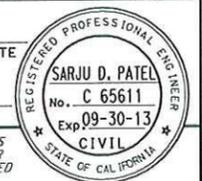
DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:41

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

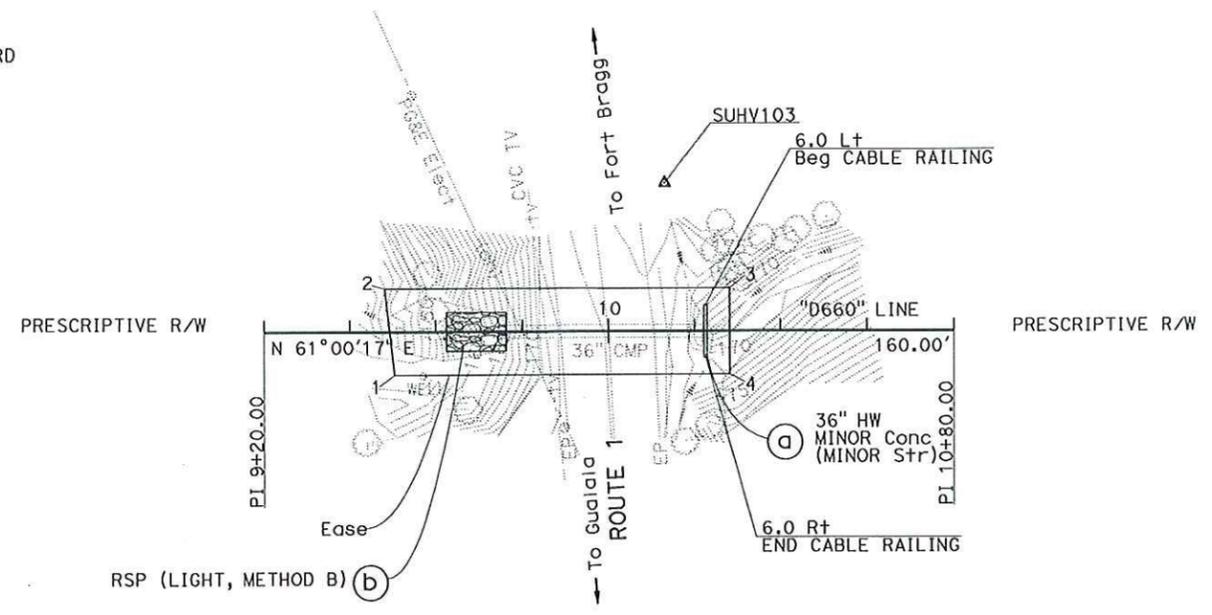
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



T11N R16W MDB&M SECTION 12

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.



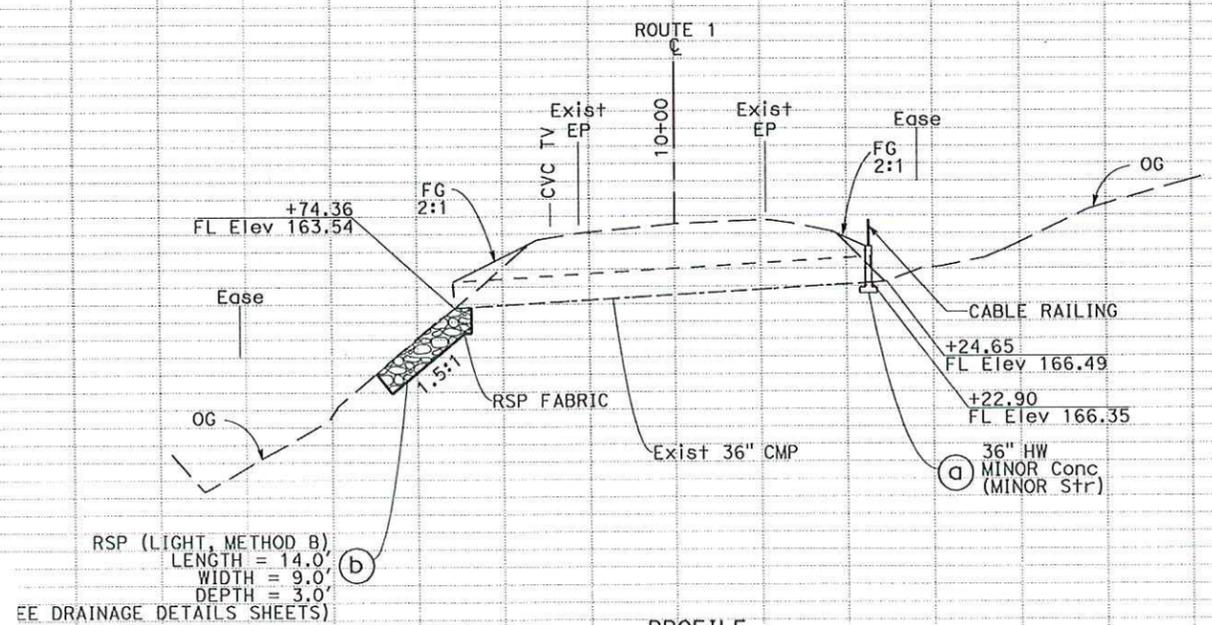
**EASEMENT**

POINT	STATION	OFFSET
1	9+50.476	9.833 Rt
2	9+48.130	9.854 Lt
3	10+28.257	9.821 Lt
4	10+28.249	9.864 Rt

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 03-DESIGN  
 FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR  
 REVISIONS: SARJU D. PATEL, W. KEITH MACK, DATE, REVISED BY, DATE



USACE File #2009-00447N  
 Culvert Rehabilitation  
 State Routes 1 and 20  
 October 18, 2012  
 Figures 07 of 45



**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN

**D-7**

STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										

DATE PLOTTED => 09-AUG-2011  
 TIME PLOTTED => 09:41

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

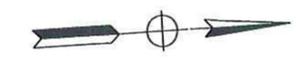
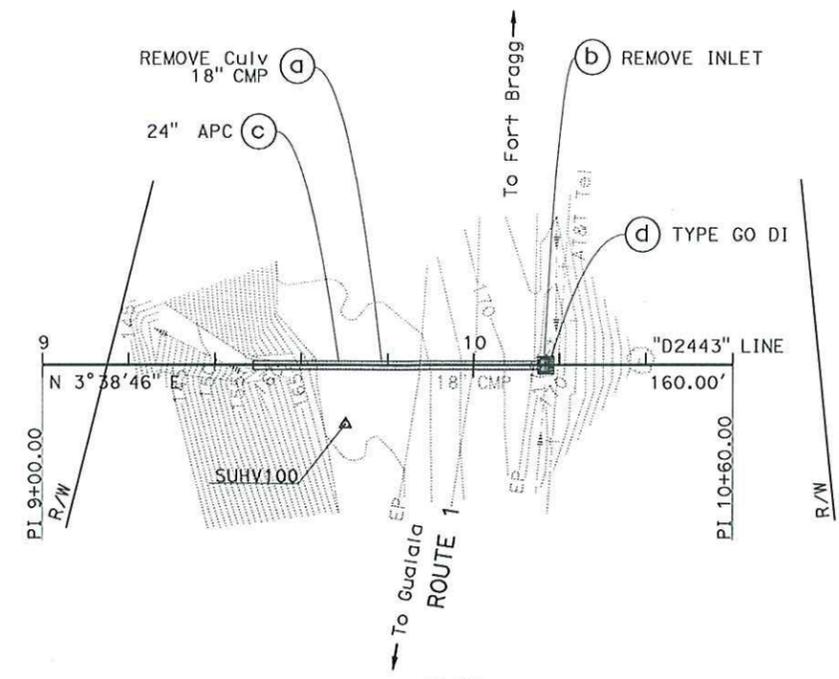
  

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>	

T13N R16W MDB&M SECTION 6

**NOTES:**

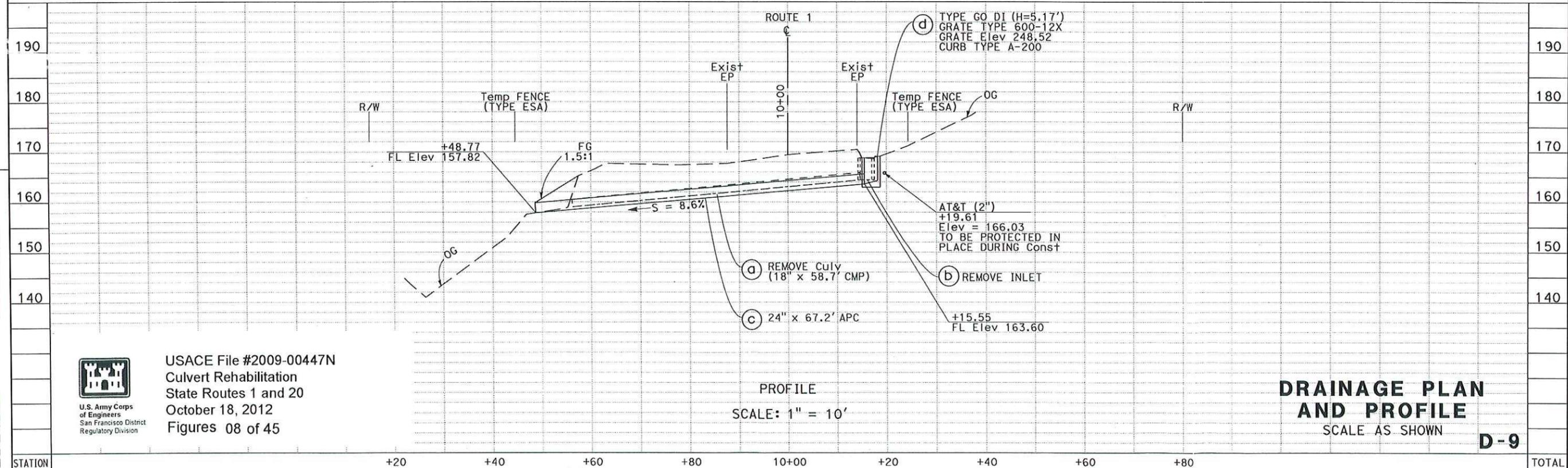
1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEPHONE LINE. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.



**DRAINAGE SYSTEM No. 9**

ROUTE 1  
PM 24.43

SCALE: 1" = 20'



PROFILE  
SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN  
**D-9**



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figures 08 of 45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR
<b>Et-Galtrans</b>	ROBERT E. POLGAR	SARJU D. PATEL	W. KEITH MACK
03-DESIGN	CHECKED BY	DATE REVISED	
STATION			
Exc			
Emb			

DATE PLOTTED => 08-AUG-2011  
TIME PLOTTED => 09:41

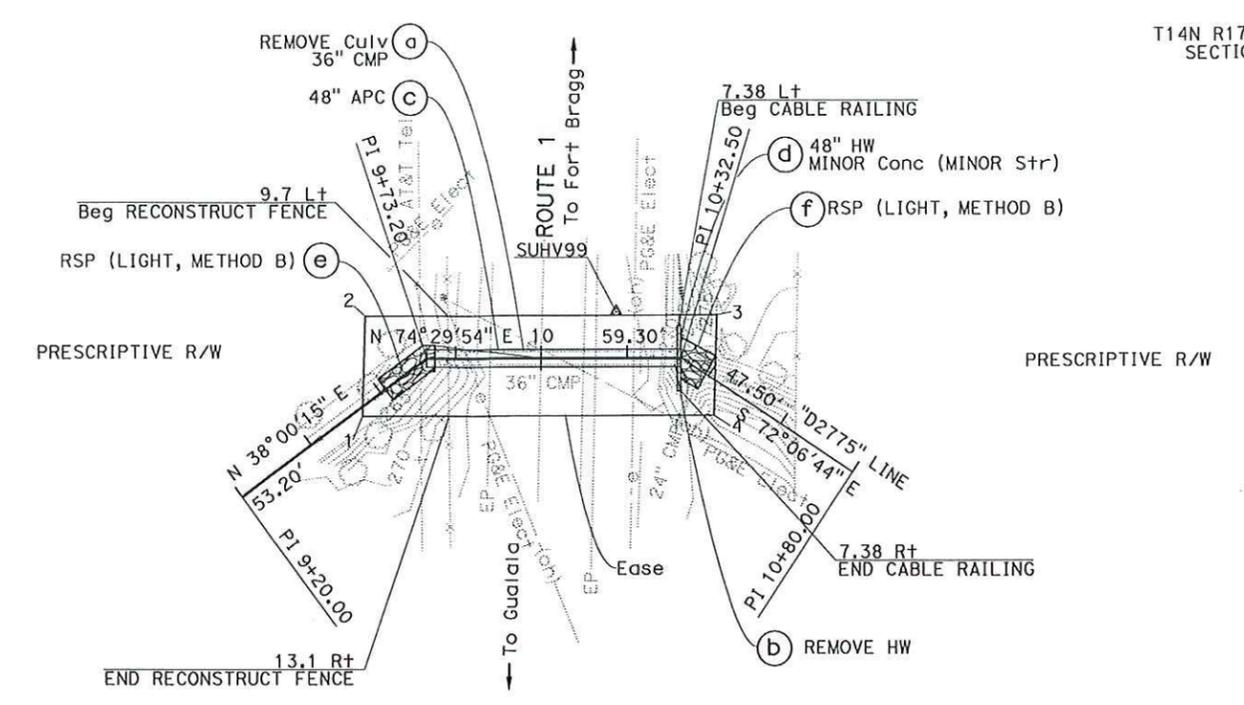
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

- NOTES:**
- FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
  - THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
  - FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.

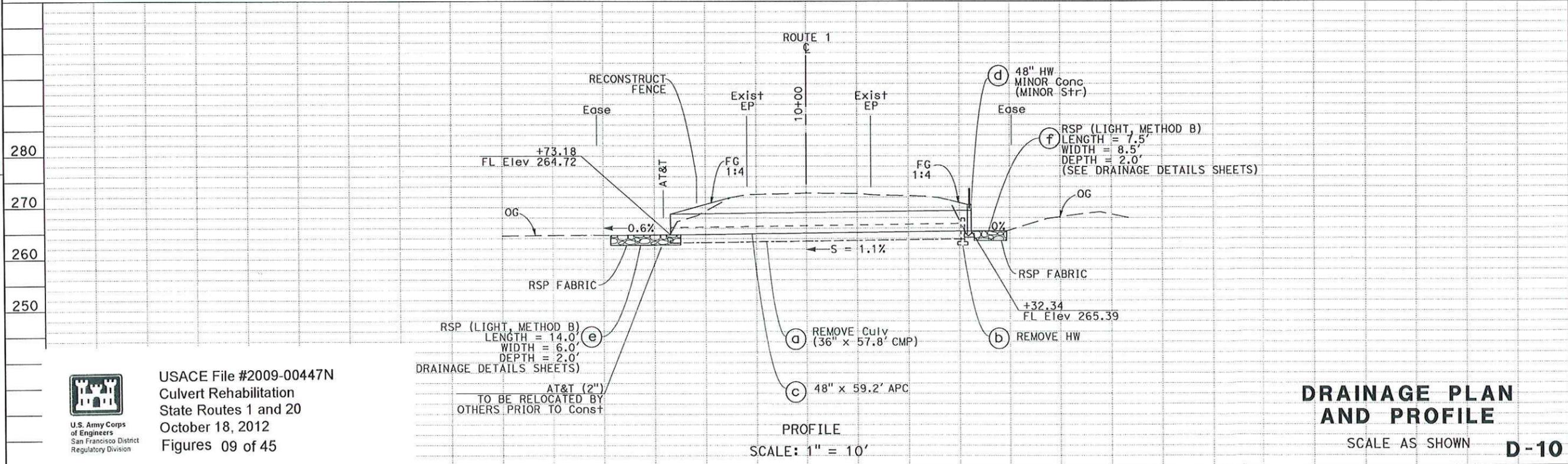


**PLAN**  
**DRAINAGE SYSTEM No. 10**  
 ROUTE 1  
 PM 27.75  
 SCALE: 1" = 20'

**EASEMENT**

POINT	STATION	OFFSET
1	9+53.388	1.794 Rt
2	9+67.570	16.283 Lt
3	10+33.915	12.735 Lt
4	10+46.012	6.799 Rt

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**03-DESIGN**  
 FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR  
 REVISIONS: SARJU D. PATEL, W. KEITH MACK, DATE REVISIED, REVISIED BY, DATE REVISIED



**PROFILE**  
 SCALE: 1" = 10'

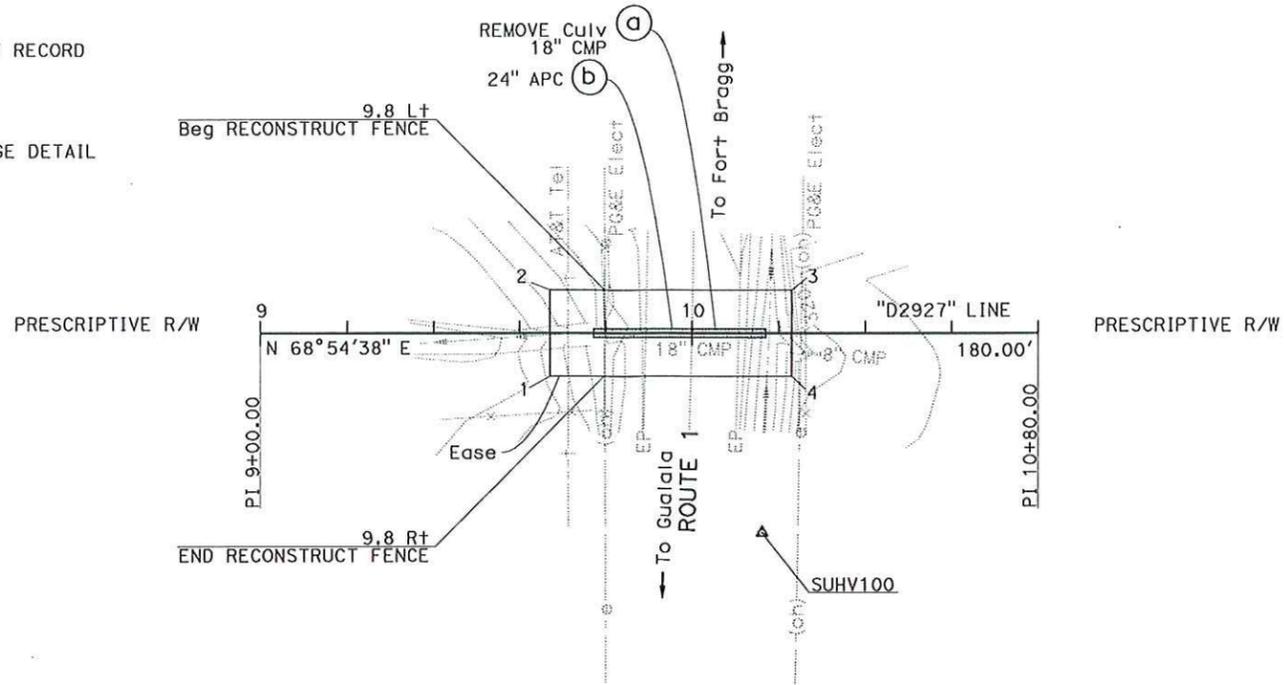
**DRAINAGE PLAN AND PROFILE**  
 SCALE AS SHOWN **D-10**

STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										

DATE PLOTTED => 09-AUG-2011  
 TIME PLOTTED => 09:41

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.



PLAN  
**DRAINAGE SYSTEM No. 11**  
 ROUTE 1  
 PM 29.27  
 SCALE: 1" = 20'

T14N R17W MDB&M  
 SECTION 13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

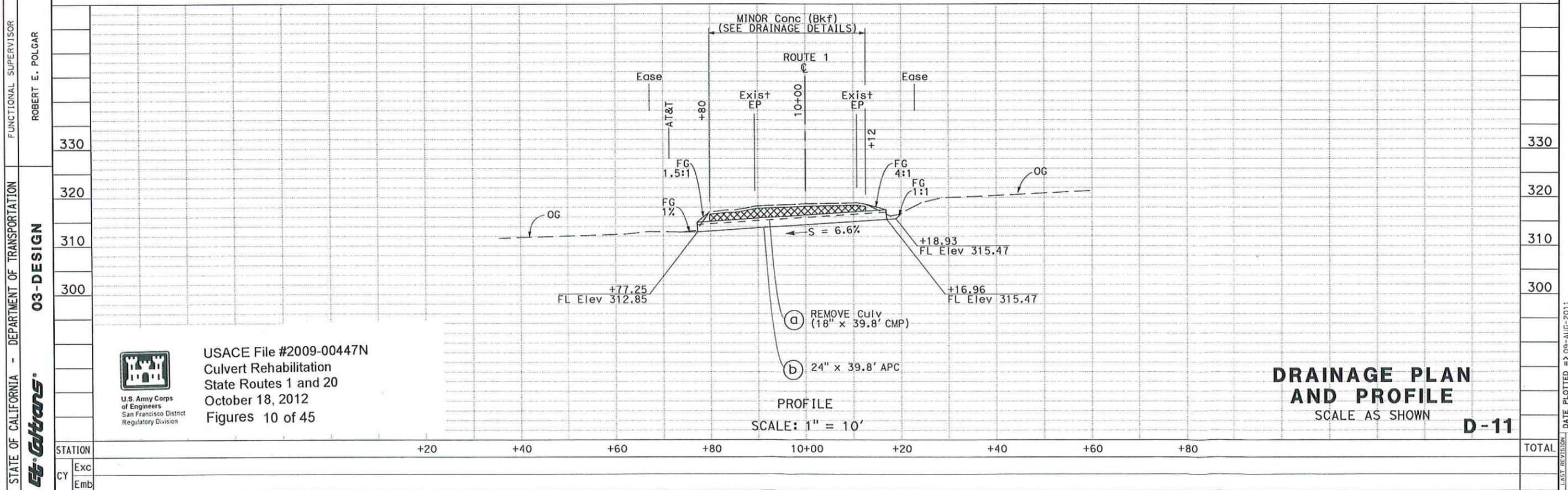
REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_  
 PLANS APPROVAL DATE \_\_\_\_\_

**SARJU D. PATEL**  
 No. C 65611  
 Exp 09-30-13  
 CIVIL  
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**EASEMENT**

POINT	STATION	OFFSET
1	9+67.132	9.859 Rt
2	9+67.121	9.826 Lt
3	10+22.895	9.856 Lt
4	10+22.905	9.829 Rt



PROFILE  
 SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
 SCALE AS SHOWN  
**D-11**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**03-DESIGN**  
 FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR  
 CALCULATED-DESIGNED BY: SARJU D. PATEL  
 CHECKED BY: W. KEITH MACK  
 REVISED BY: \_\_\_\_\_  
 DATE REVISED: \_\_\_\_\_



USACE File #2009-00447N  
 Culvert Rehabilitation  
 State Routes 1 and 20  
 October 18, 2012  
 Figures 10 of 45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

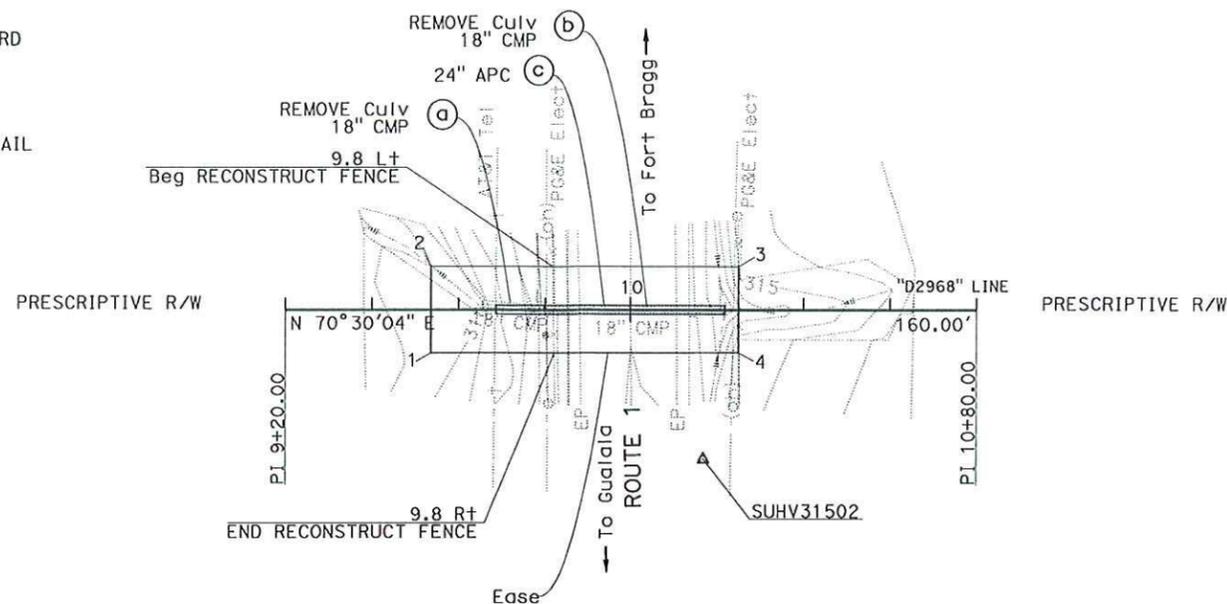
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

T14N R17W MDB&M SECTION 12

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.



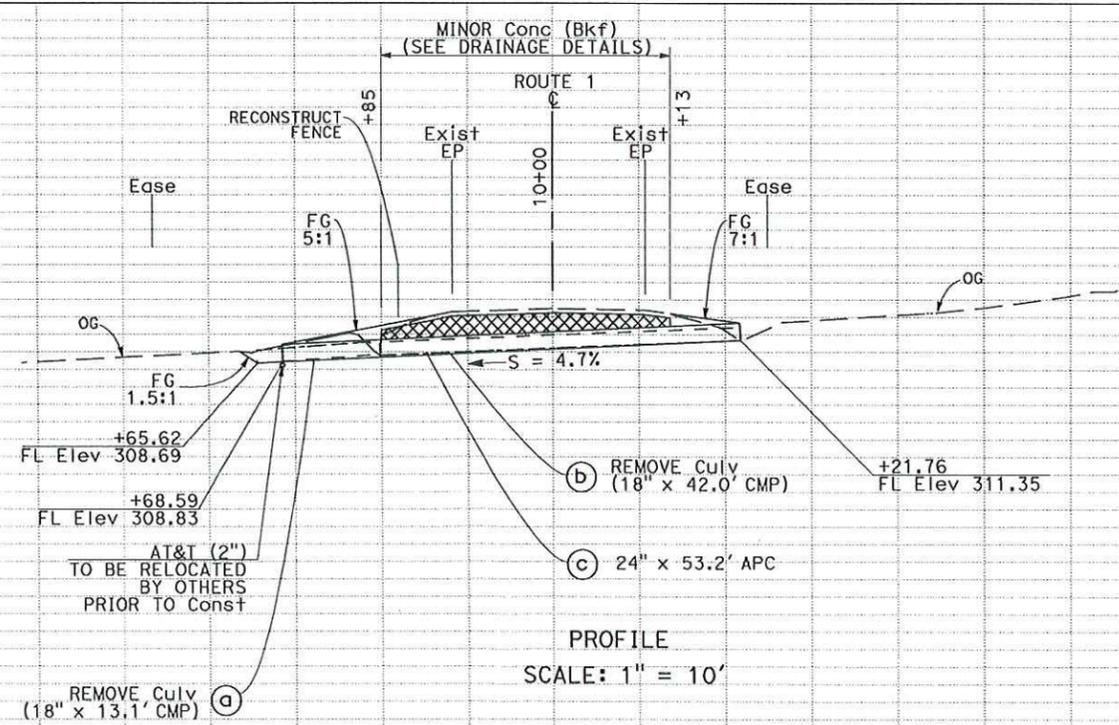
**EASEMENT**

POINT	STATION	OFFSET
1	9+53.447	9.844 Rt
2	9+53.443	9.841 Lt
3	10+24.933	9.855 Lt
4	10+24.936	9.830 Rt

**PLAN  
DRAINAGE SYSTEM No. 12**

ROUTE 1  
PM 29.68

SCALE: 1" = 20'



**PROFILE  
SCALE: 1" = 10'**

**DRAINAGE PLAN  
AND PROFILE  
SCALE AS SHOWN  
D-12**

USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figures 11 of 45

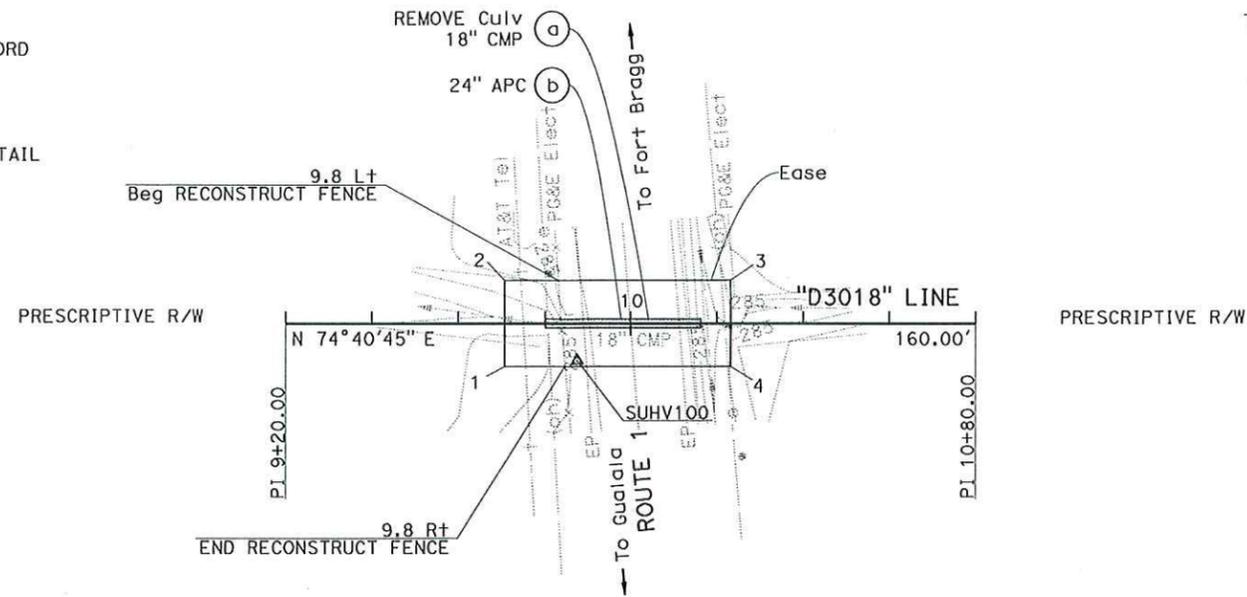


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
03-DESIGN  
SARJU D. PATEL  
W. KEITH MACK  
ROBERT E. POLGAR

DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:41

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.



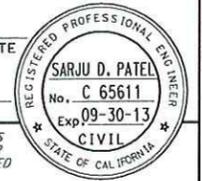
T14N R17W MDB&M  
SECTION 12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**EASEMENT**

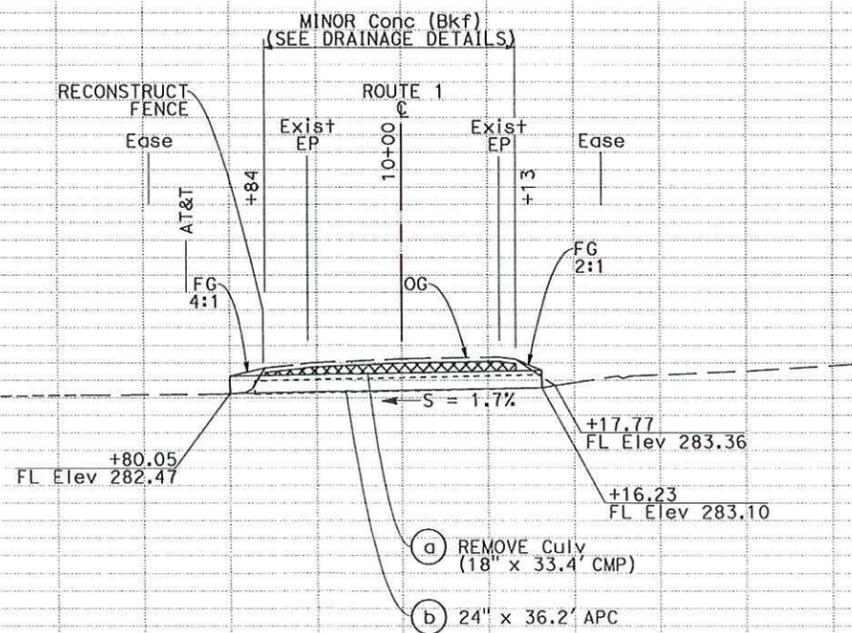
POINT	STATION	OFFSET
1	9+70.695	9.874 Rt
2	9+70.674	9.811 Lt
3	10+23.168	9.866 Lt
4	10+23.188	9.820 Rt

**DRAINAGE SYSTEM No. 13**

ROUTE 1  
PM 30.18

**PLAN**

SCALE: 1" = 20'



**PROFILE**

SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**

SCALE AS SHOWN

**D-13**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
03-DESIGN  
Et-Gilman®

FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR  
DESIGNED BY: ARJU D. PATEL  
CHECKED BY: W. KEITH MACK

REVISIONS: REVISED BY: DATE REVISED

STATION: +20, +40, +60, +80, 10+00, +20, +40, +60, +80



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 12 of 45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

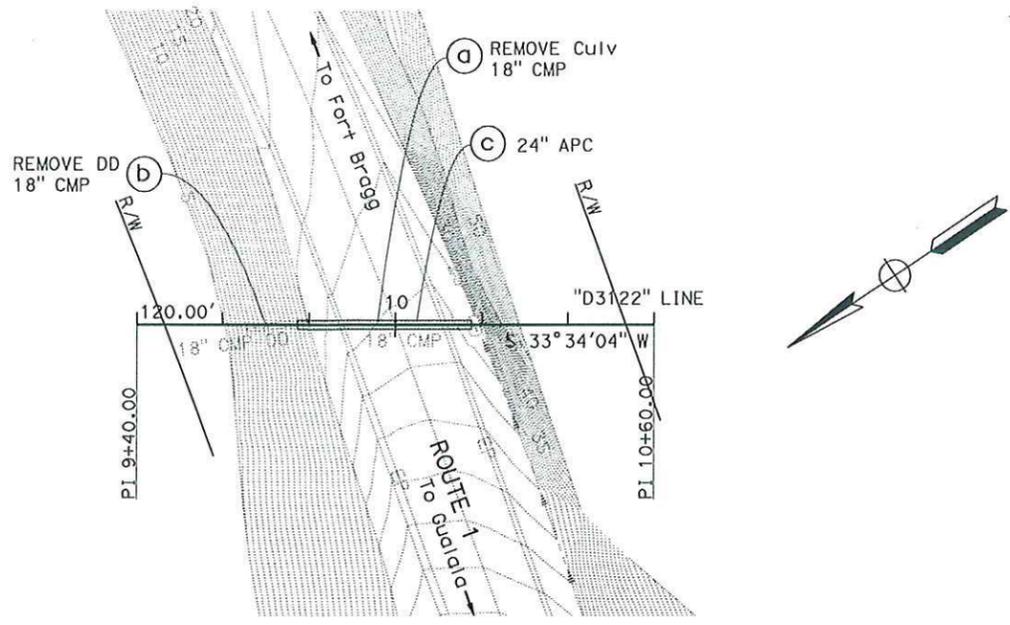
  

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>	

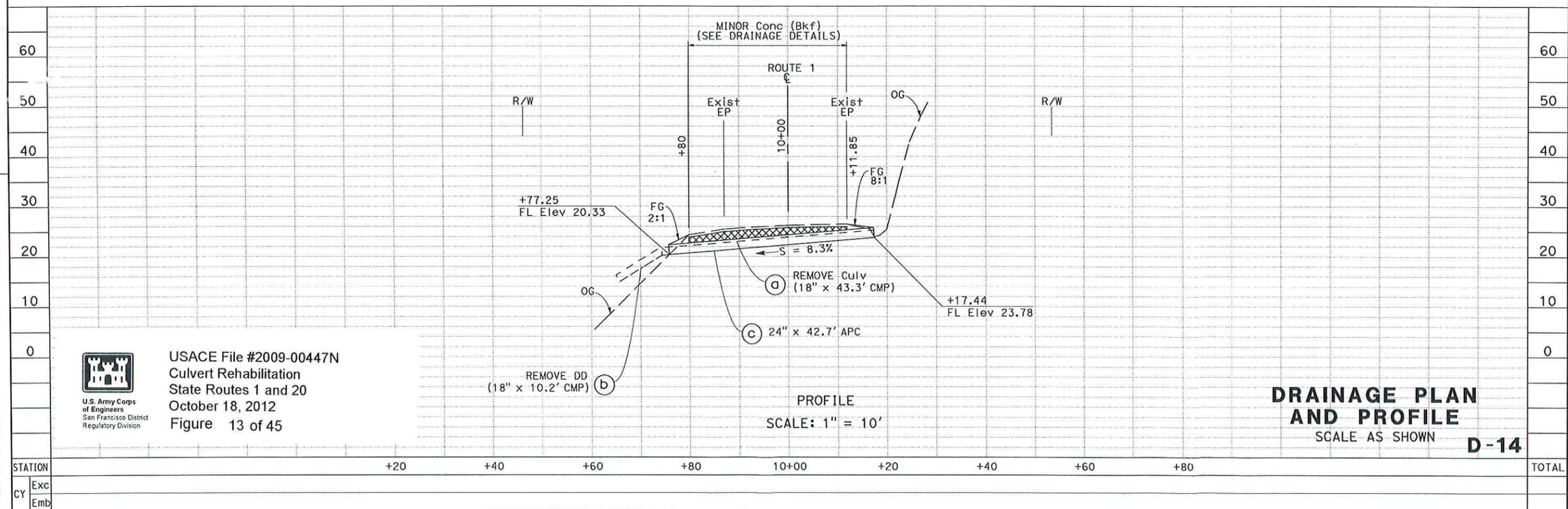
T14N R17W MDB&M SECTION 1

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.



PLAN  
**DRAINAGE SYSTEM No. 14**  
 ROUTE 1  
 PM 31.22  
 SCALE: 1" = 20'



**DRAINAGE PLAN AND PROFILE**  
 SCALE AS SHOWN  
**D-14**



USACE File #2009-00447N  
 Culvert Rehabilitation  
 State Routes 1 and 20  
 October 18, 2012  
 Figure 13 of 45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTION	SUPERVISOR	DESIGNED BY	CHECKED BY	REVISOR	DATE
<b>Caltrans</b>	03-DESIGN	ROBERT E. POLGAR	SARJU D. PATEL	W. KEITH MACK		

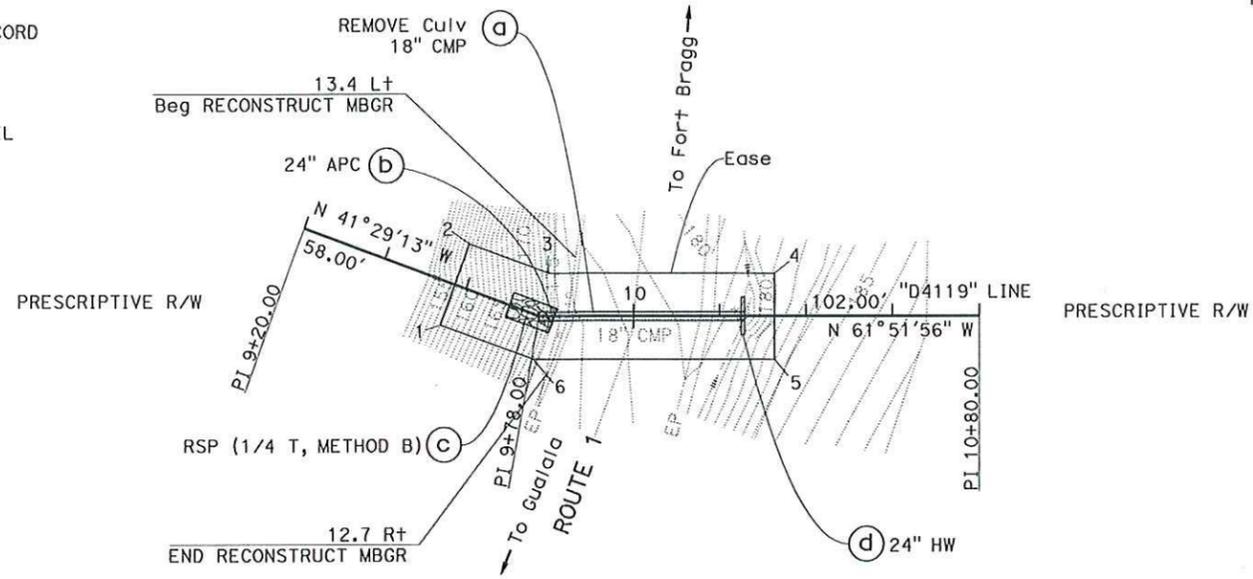
LAST REVISION    DATE PLOTTED => 09-AUG-2011    TIME PLOTTED => 09:41





**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.



**PLAN**  
**DRAINAGE SYSTEM No. 17**

ROUTE 1  
 PM 41.19

SCALE: 1" = 20'

T15N R17W MDB&M  
 SECTION 5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

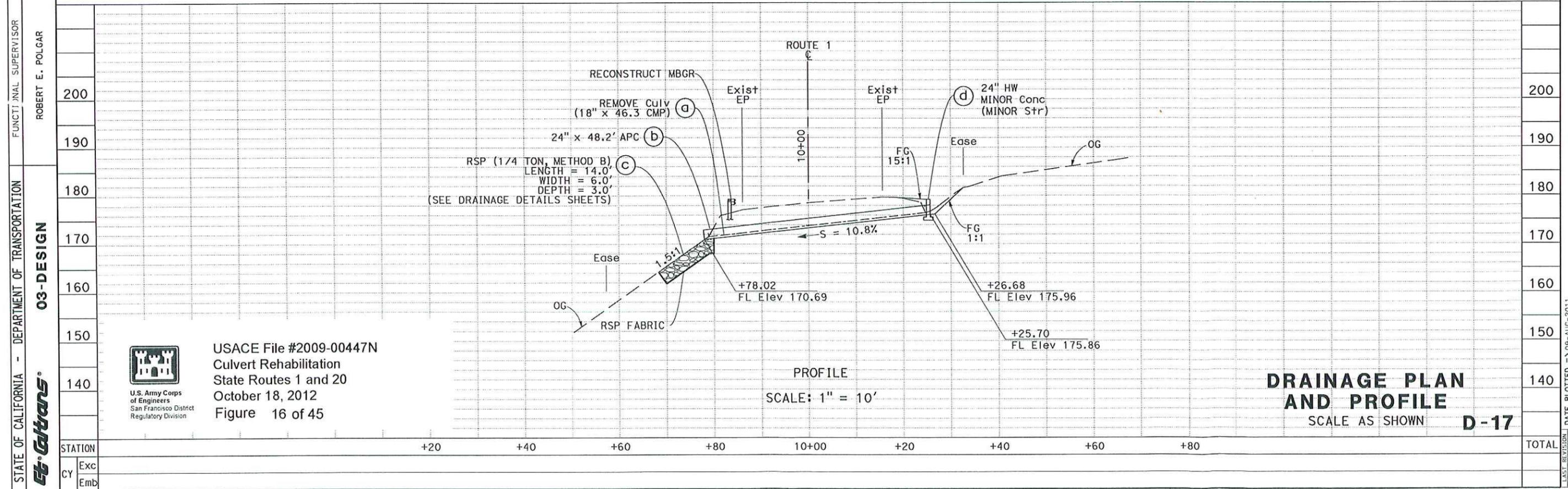
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 SARJU D. PATEL  
 No. C 65611  
 Exp 09-30-13  
 CIVIL  
 STATE OF CALIFORNIA

**EASEMENT**

POINT	STATION	OFFSET
1	9+57.258	9.810 Rt
2	9+57.161	9.875 Lt
3	9+80.131	9.842 Lt
4	10+32.699	9.812 Lt
5	10+32.687	9.873 Rt
6	9+9.780	*9.935 Rt

\*GIVEN OFFSET IS AT A BEARING OF N 36°02'03.887"E FROM STATION



**PROFILE**  
 SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
 SCALE AS SHOWN **D-17**

USACE File #2009-00447N  
 Culvert Rehabilitation  
 State Routes 1 and 20  
 October 18, 2012  
 Figure 16 of 45



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
<b>Et-Gilman</b>	ROBERT E. POLGAR	SARJU D. PATEL	
		W. KEITH MACK	
	CHECKED BY	CALCULATED-DESIGNED BY	

STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										

DATE PLOTTED => 09-AUG-2011  
 TIME PLOTTED => 09:41

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

T16N R17W MDB&M SECTION 17

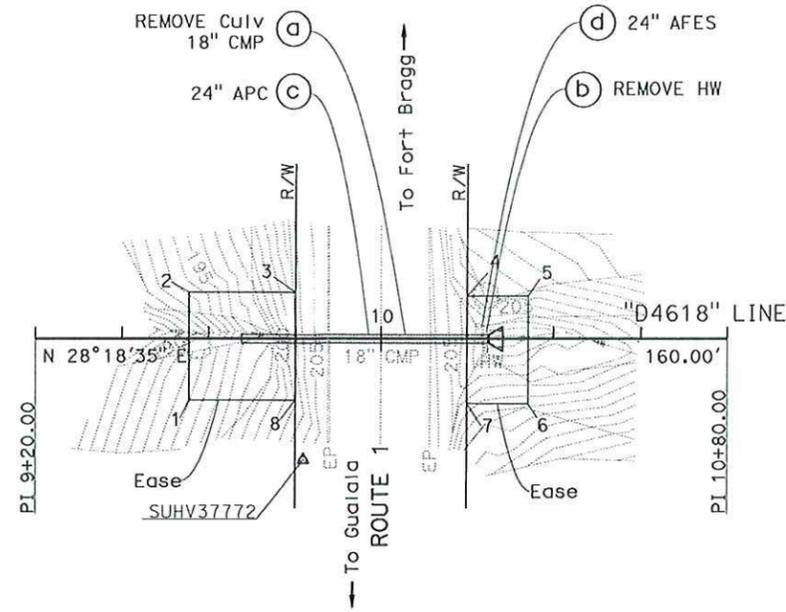
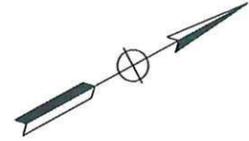
REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**

- FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.



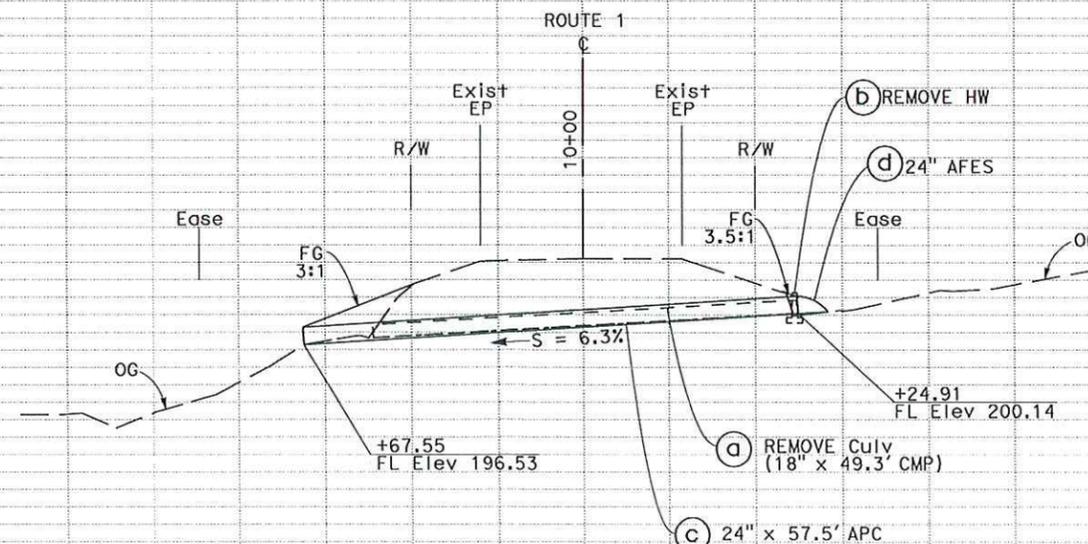
**DRAINAGE SYSTEM No. 18**

ROUTE 1  
PM 46.18

SCALE: 1" = 20'

**EASEMENT**

POINT	STATION	OFFSET
1	9+55.413	13.988 Rt
2	9+55.421	10.619 Lt
3	9+80.041	10.611 Lt
4	10+20.039	9.817 Lt
5	10+34.136	9.812 Lt
6	10+34.139	14.794 Rt
7	10+19.974	14.790 Rt
8	9+79.976	13.995 Rt



SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-18**



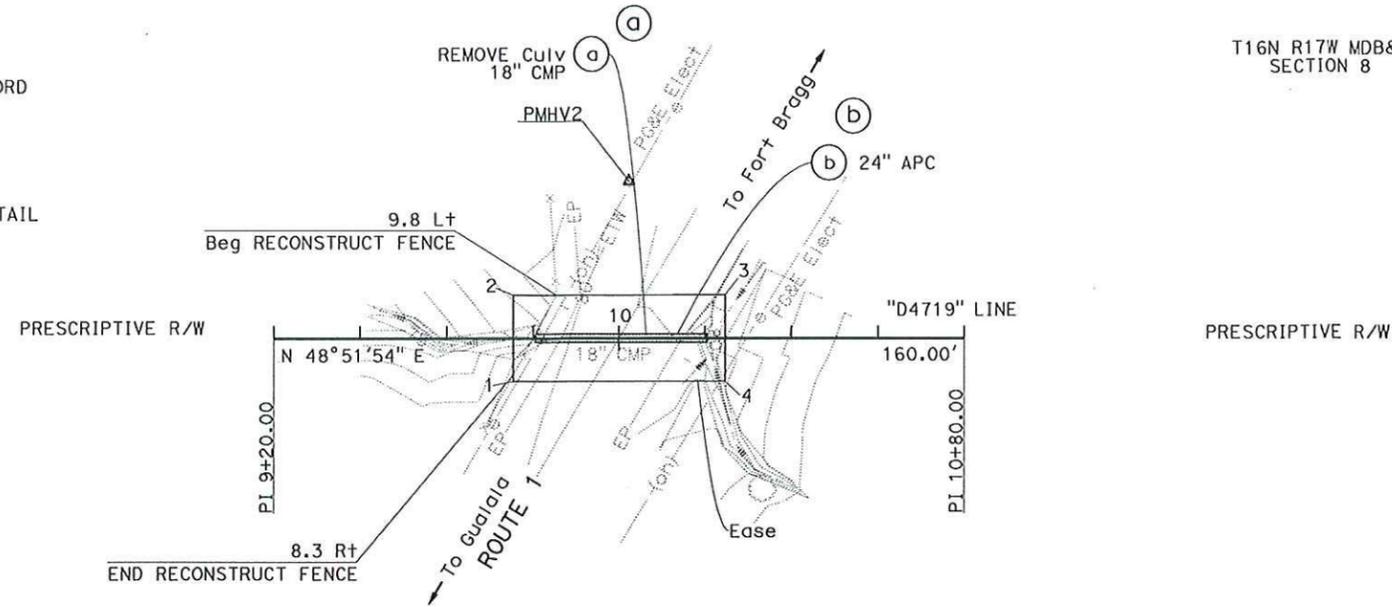
USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 17 of 45

STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										

DATE PLOTTED => 09-AUG-2011 TIME PLOTTED => 09:41

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.



**DRAINAGE SYSTEM No. 19**

ROUTE 1  
PM 47.19

SCALE: 1" = 20'

T16N R17W MDB&M  
SECTION 8

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**EASEMENT**

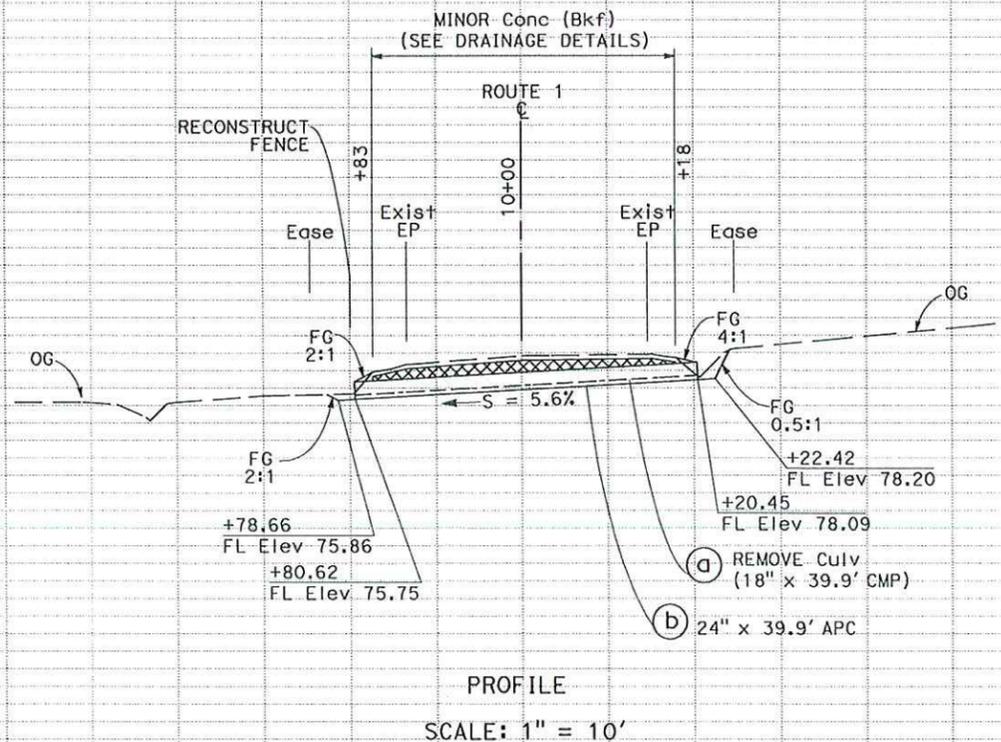
POINT	STATION	OFFSET
1	9+75.422	9.851 Rt
2	9+75.417	9.833 Lt
3	10+24.629	9.847 Lt
4	10+24.635	9.838 Rt

REVISOR: SARJU D. PATEL, W. KEITH MACK, ROBERT E. POLGAR

FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR

DEPARTMENT OF TRANSPORTATION: 03-DESIGN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



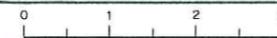
PROFILE  
SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-19**



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 18 of 45

STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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**SARJU D. PATEL**  
No. C 65611  
Exp 09-30-13  
CIVIL  
STATE OF CALIFORNIA

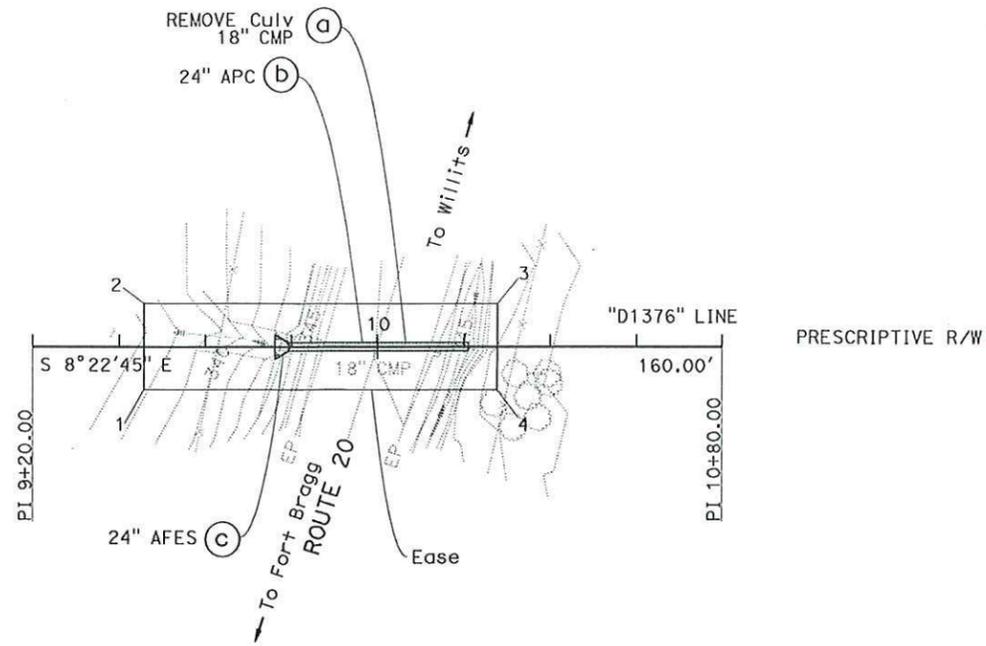
T17N R16W MDB&M SECTION 11

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.



PRESCRIPTIVE R/W



PLAN

**DRAINAGE SYSTEM No. 20**

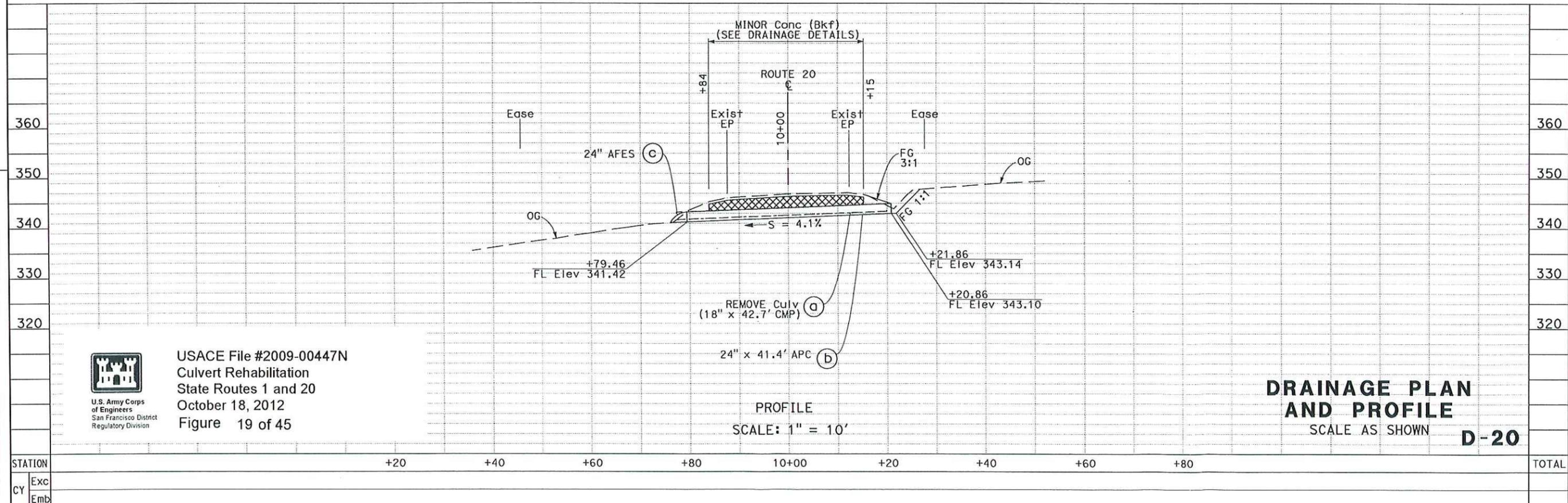
ROUTE 20  
PM 13.76

SCALE: 1" = 20'

**EASEMENT**

POINT	STATION	OFFSET
1	9+45.619	9.815 Rt
2	9+45.637	9.870 Lt
3	10+27.657	9.799 Lt
4	10+27.640	9.886 Rt

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Galtrans**  
FUNCTIONAL SUPERVISOR  
ROBERT E. POLGAR  
DESIGNED BY  
SARJU D. PATEL  
CHECKED BY  
W. KEITH MACK



PROFILE  
SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN  
**D-20**



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 19 of 45

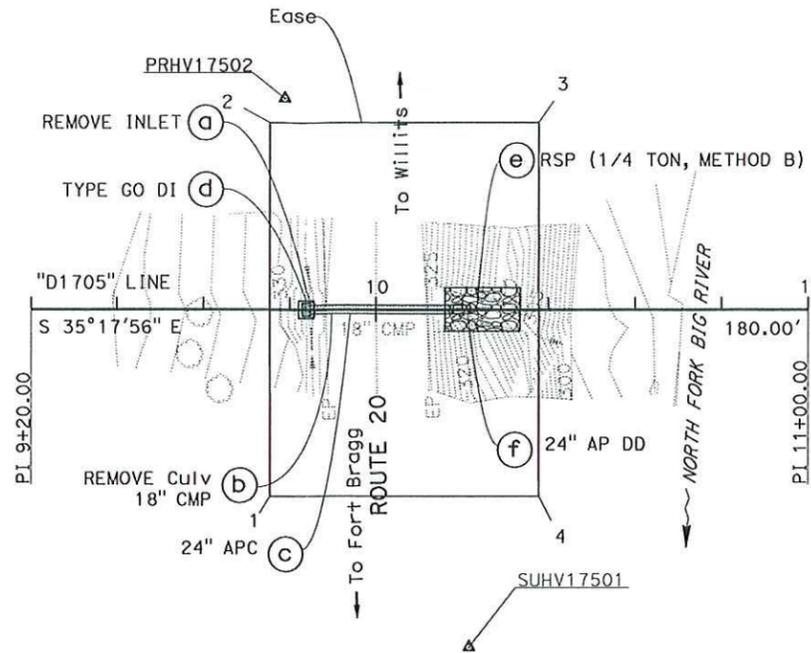
DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:41

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
4. THE ANGLE OF EACH ELBOW IS APPROXIMATE. THE EXACT ANGLE WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.



PRESCRIPTIVE R/W  
(JACKSON STATE FOREST)



PLAN

**DRAINAGE SYSTEM No. 21**

ROUTE 20  
PM 17.05

SCALE: 1" = 20'

T17N R15W MDB&M  
SECTION 5

PRESCRIPTIVE R/W  
(JACKSON STATE FOREST)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

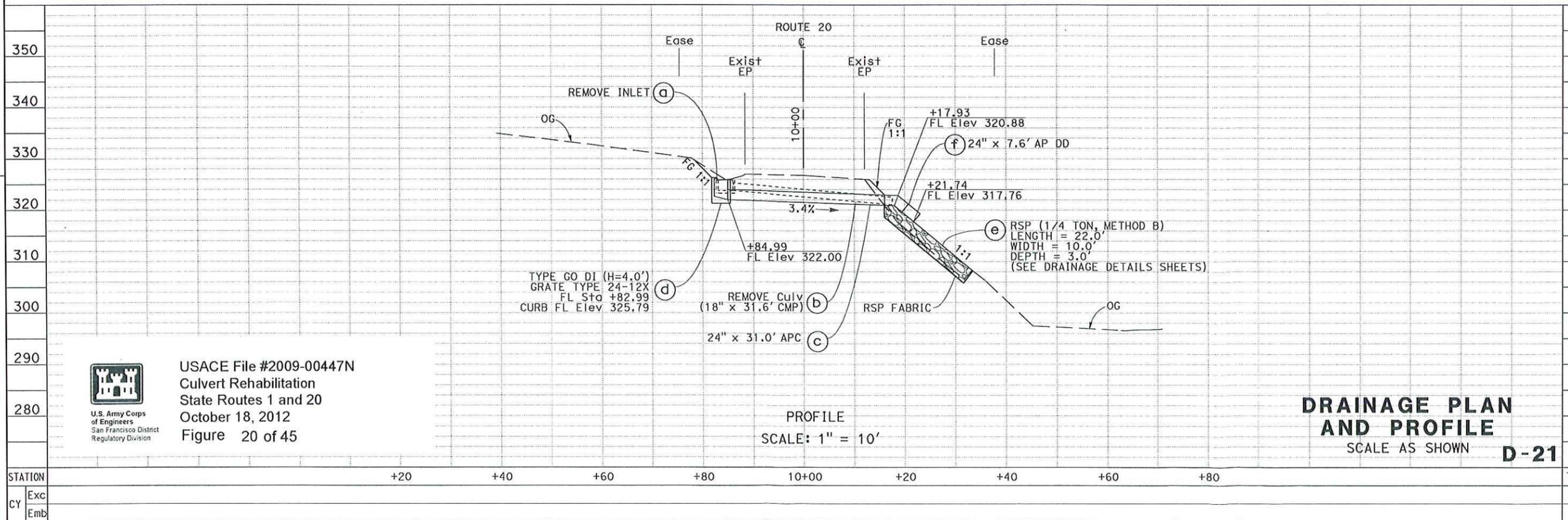
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**SARJU D. PATEL**  
No. C 65611  
Exp 09-30-13  
CIVIL

**EASEMENT**

POINT	STATION	OFFSET
1	9+75.511	42.695 Rt
2	9+75.379	42.607 Lt
3	10+37.714	42.703 Lt
4	10+37.847	42.598 Rt

REVISOR: SARJU D. PATEL, W. KEITH MACK  
DESIGNER: ROBERT E. POLGAR  
FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR  
DEPARTMENT OF TRANSPORTATION: 03-DESIGN  
STATE OF CALIFORNIA - Galtbans®



PROFILE  
SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-21**

USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 20 of 45

U.S. Army Corps of Engineers  
San Francisco District  
Regulatory Division

STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										

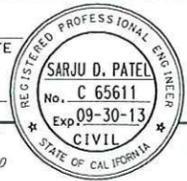
DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:41

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

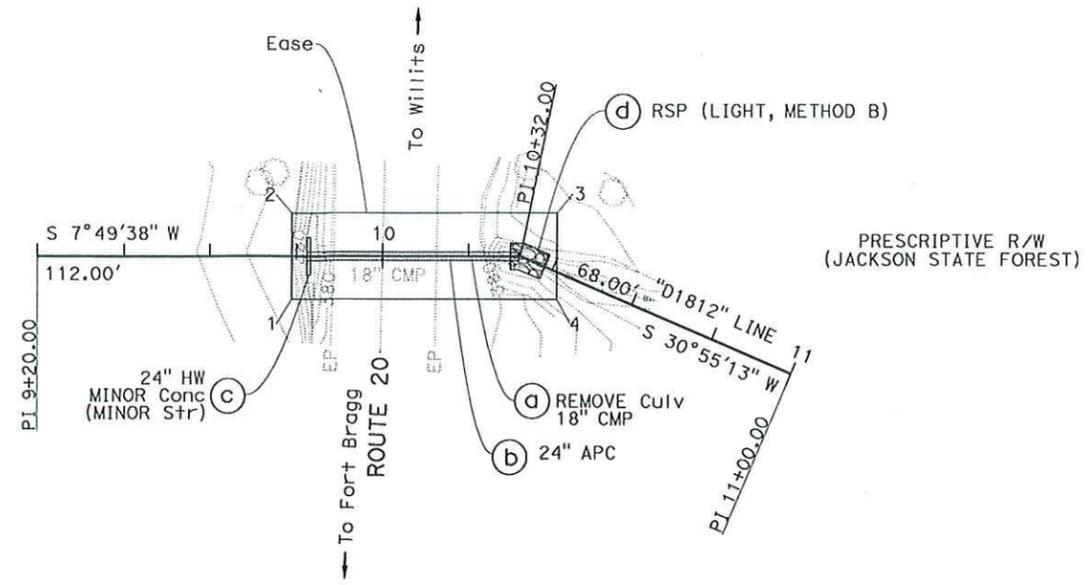


T17N R15W MDB&M SECTION 5

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
4. THE ANGLE OF EACH ELBOW IS APPROXIMATE. THE EXACT ANGLE WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

PRESCRIPTIVE R/W (JACKSON STATE FOREST)



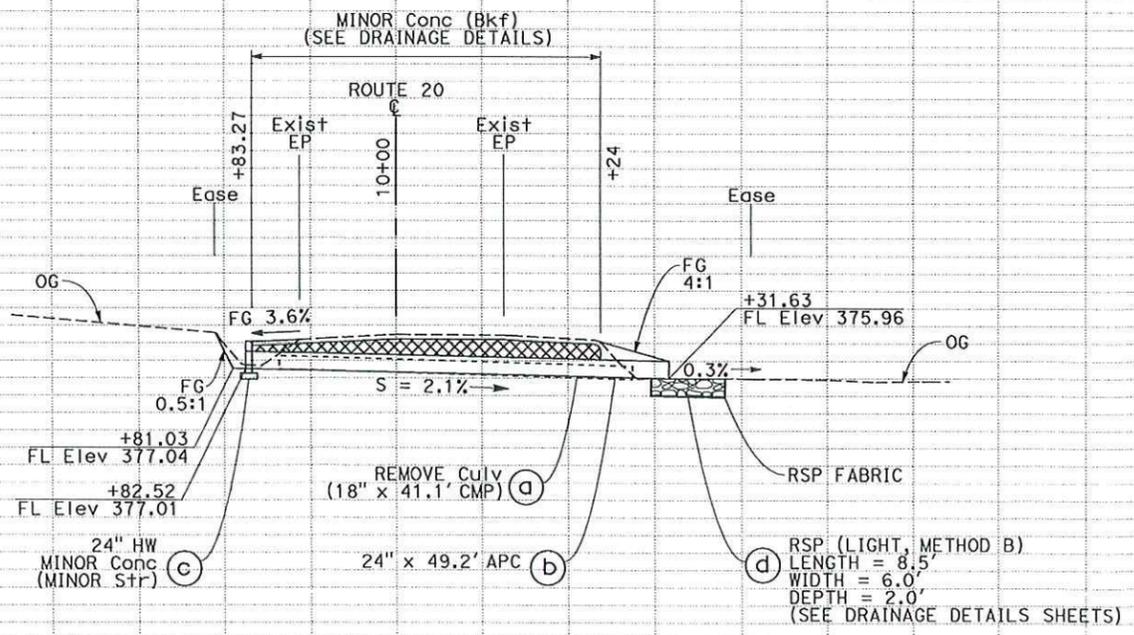
**DRAINAGE SYSTEM No. 22**

ROUTE 20  
PM 18.12

SCALE: 1" = 20'

**EASEMENT**

POINT	STATION	OFFSET
1	9+78.908	9.830 Rt
2	9+78.899	9.855 Lt
3	10+35.867	12.394 Lt
4	10+43.597	5.710 Rt



SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-22**



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 21 of 45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
03-DESIGN	ROBERT E. POLGAR	SARJU D. PATEL	W. KEITH MACK
	CHECKED BY	DESIGNED BY	CALCULATED BY

STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										

DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:41

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.
4. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.

T17N R15W MDB&M SECTION 9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

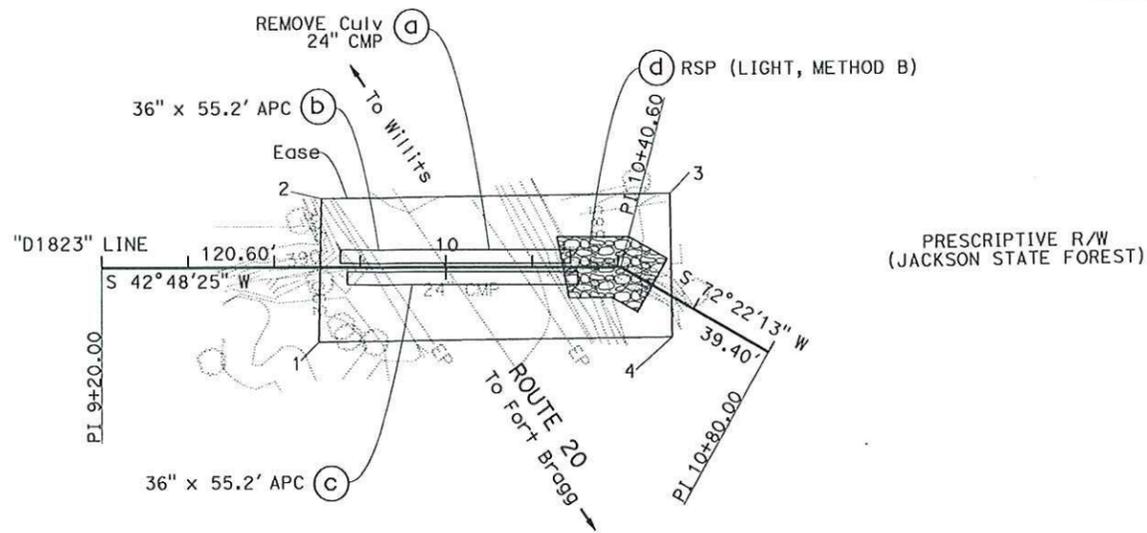
REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

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**SARJU D. PATEL**  
No. C 65611  
Exp. 09-30-13  
CIVIL  
STATE OF CALIFORNIA

PRESCRIPTIVE R/W (JACKSON STATE FOREST)



PRESCRIPTIVE R/W (JACKSON STATE FOREST)

**EASEMENT**

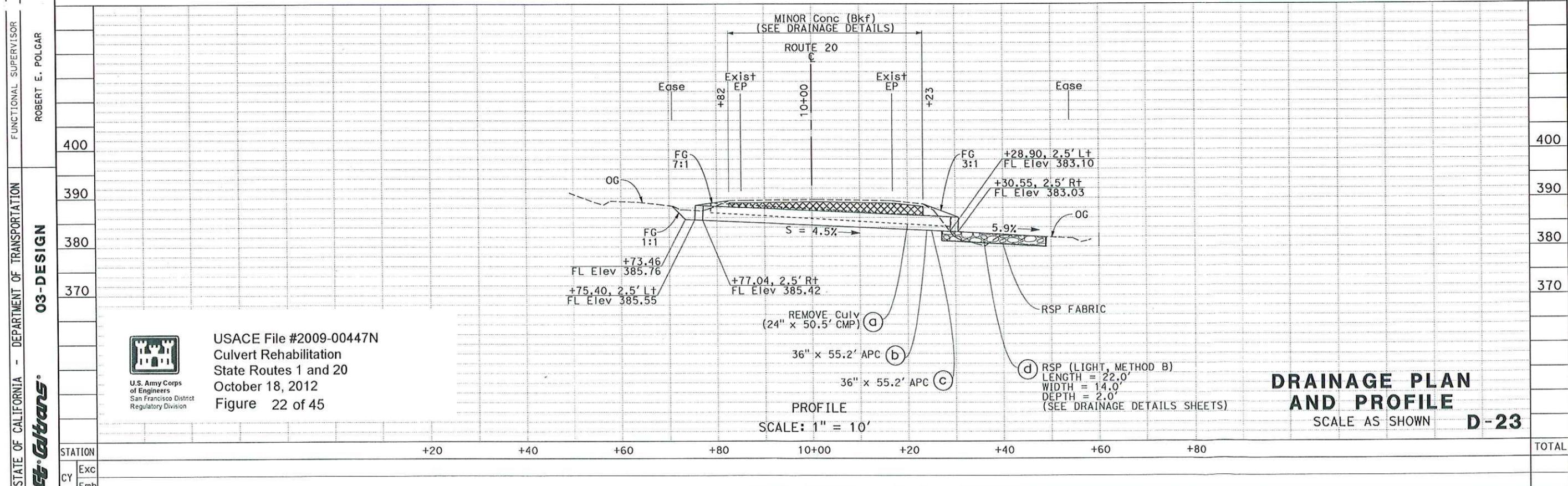
POINT	STATION	OFFSET
1	9+70.378	17.066 Rt
2	9+71.010	15.732 Lt
3	10+42.204	20.300 Lt
4	10+58.787	8.010 Rt

PLAN

**DRAINAGE SYSTEM No. 23**

ROUTE 20  
PM 18.23

SCALE: 1" = 20'



PROFILE

SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**

SCALE AS SHOWN **D-23**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR  
03-DESIGN



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 22 of 45

STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										

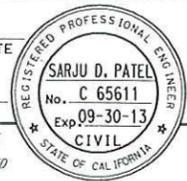
DATE PLOTTED => 09-AUG-2011 TIME PLOTTED => 09:41

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



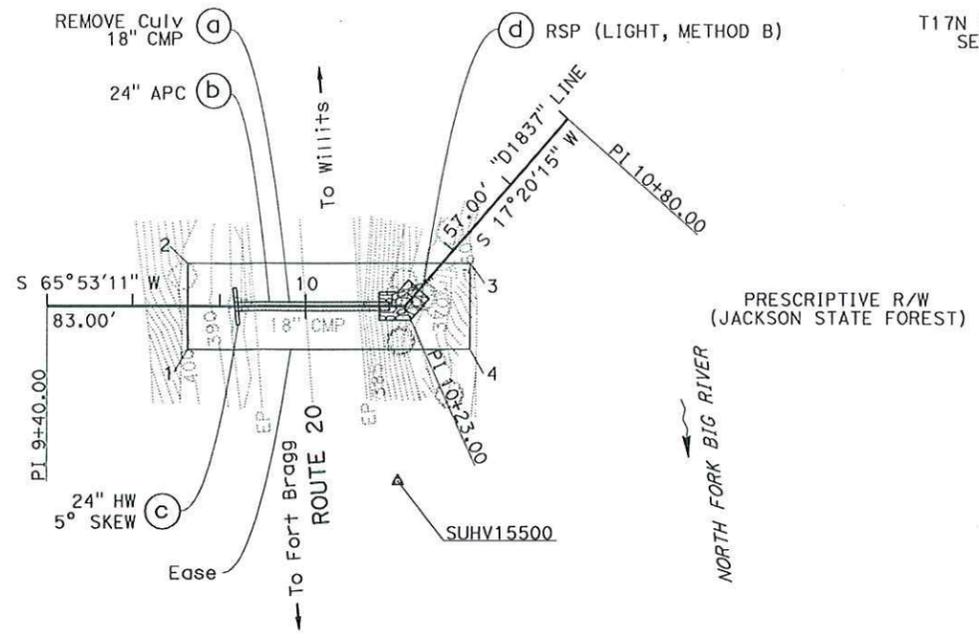
T17N R15W MDB&M SECTION 9

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.
4. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.



PRESCRIPTIVE R/W (JACKSON STATE FOREST)

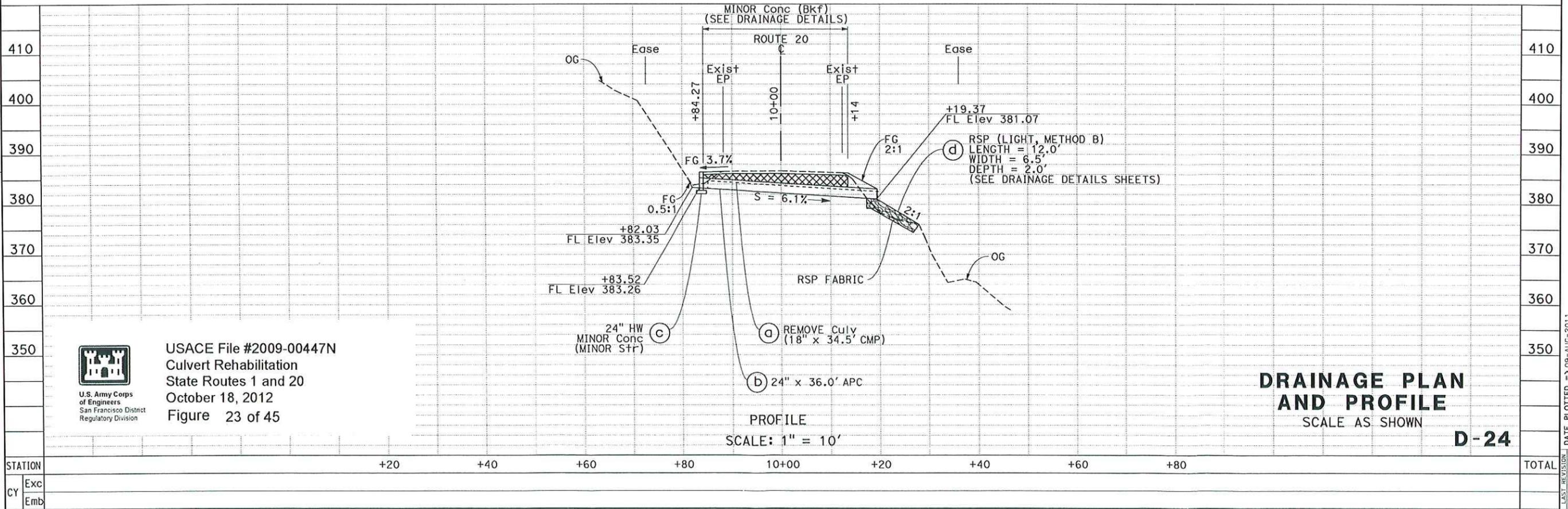


**EASEMENT**

POINT	STATION	OFFSET
1	9+72.530	9.918 Rt
2	9+72.510	9.767 Lt
3	10+40.384	4.829 Rt
4	10+25.642	17.874 Rt

**DRAINAGE SYSTEM No. 24**  
 ROUTE 20  
 PM 18.37

SCALE: 1" = 20'



**DRAINAGE PLAN AND PROFILE**  
 SCALE AS SHOWN  
**D-24**



USACE File #2009-00447N  
 Culvert Rehabilitation  
 State Routes 1 and 20  
 October 18, 2012  
 Figure 23 of 45

REVISOR	DATE	REVISION
SARJU D. PATEL		
W. KEITH MACK		
CALCULATED-DESIGNED BY	CHECKED BY	
ROBERT E. POLGAR		
FUNCTIONAL SUPERVISOR		
DEPARTMENT OF TRANSPORTATION		
03-DESIGN		
STATE OF CALIFORNIA -		
Caltrans		

STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										

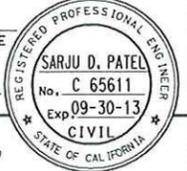
DATE PLOTTED => 09-AUG-2011 TIME PLOTTED => 09:41

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

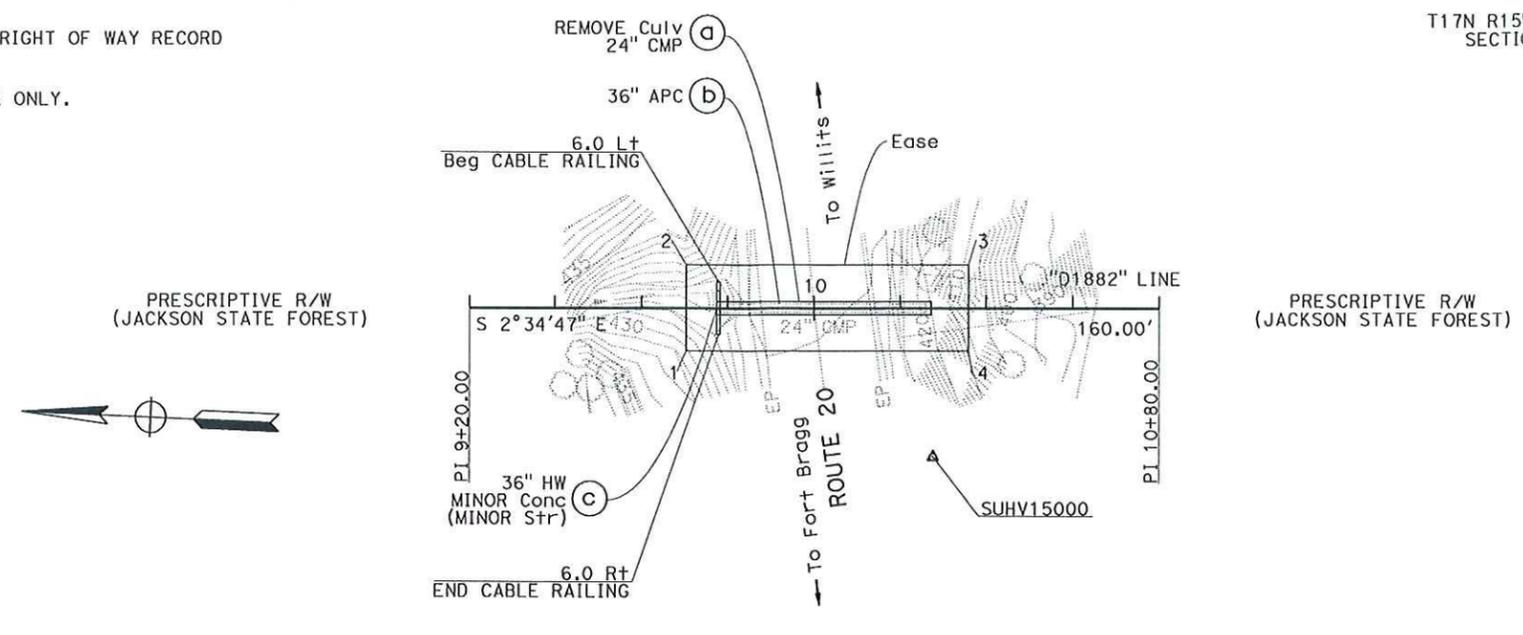
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**NOTES:**

- FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.

T17N R15W MDB&M SECTION 9

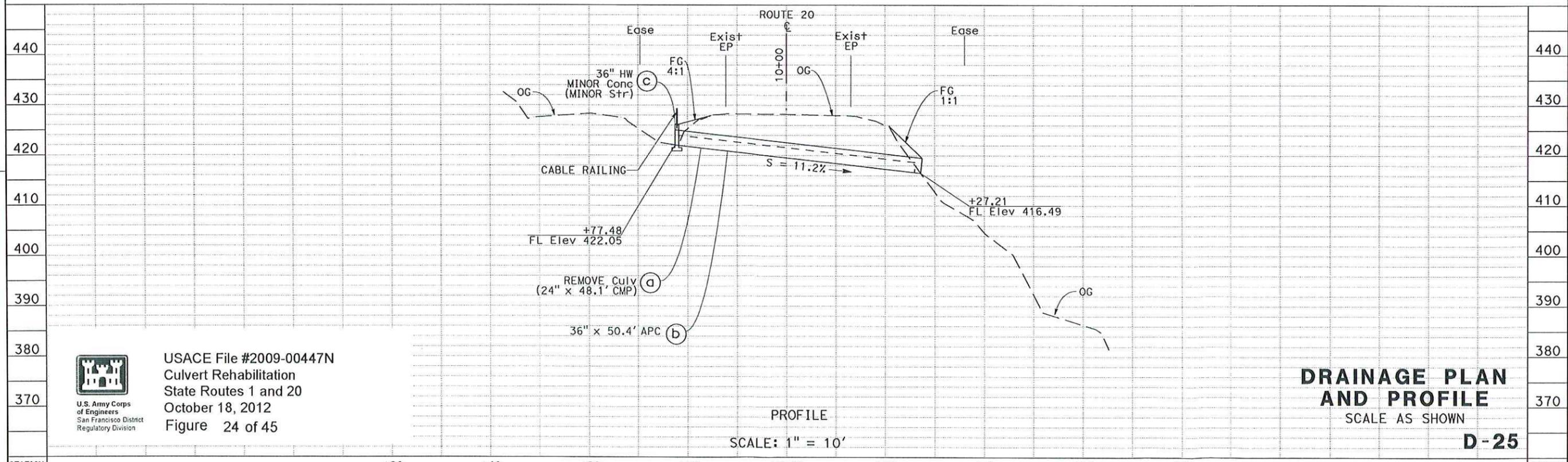


**EASEMENT**

POINT	STATION	OFFSET
1	9+70.400	9.767 Rt
2	9+70.410	9.918 Lt
3	10+36.026	9.886 Lt
4	10+36.017	9.799 Rt

PLAN  
**DRAINAGE SYSTEM No. 25**  
ROUTE 20  
PM 18.82

SCALE: 1" = 20'



PROFILE  
SCALE: 1" = 10'

440	440
430	430
420	420
410	410
400	400
390	390
380	380
370	370
STATION	TOTAL
Exc	
Emb	

STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
03-DESIGN	ROBERT E. POLGAR	SARJU D. PATEL	
		W. KEITH MACK	
	CHECKED BY	DESIGNED BY	

DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:41

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.
4. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
5. THE ANGLE OF EACH ELBOW IS APPROXIMATE. THE EXACT ANGLE WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

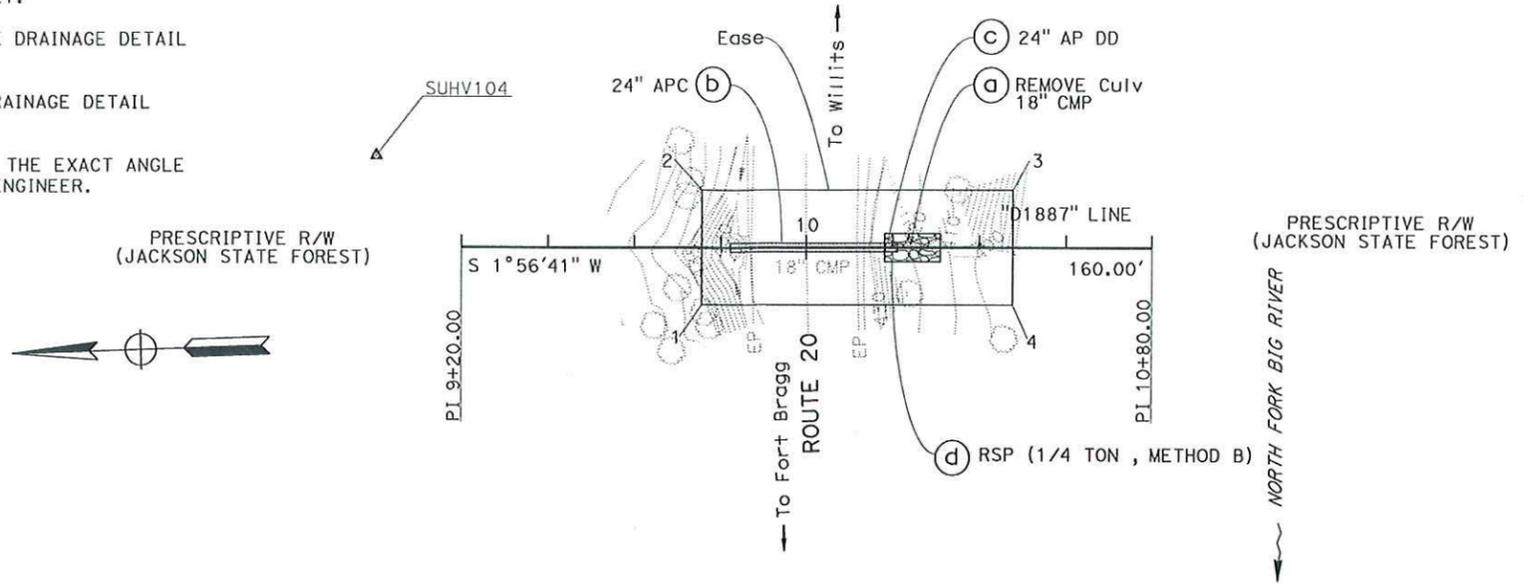
T17N R15W MDB&M  
SECTION 10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_  
PLANS APPROVAL DATE \_\_\_\_\_

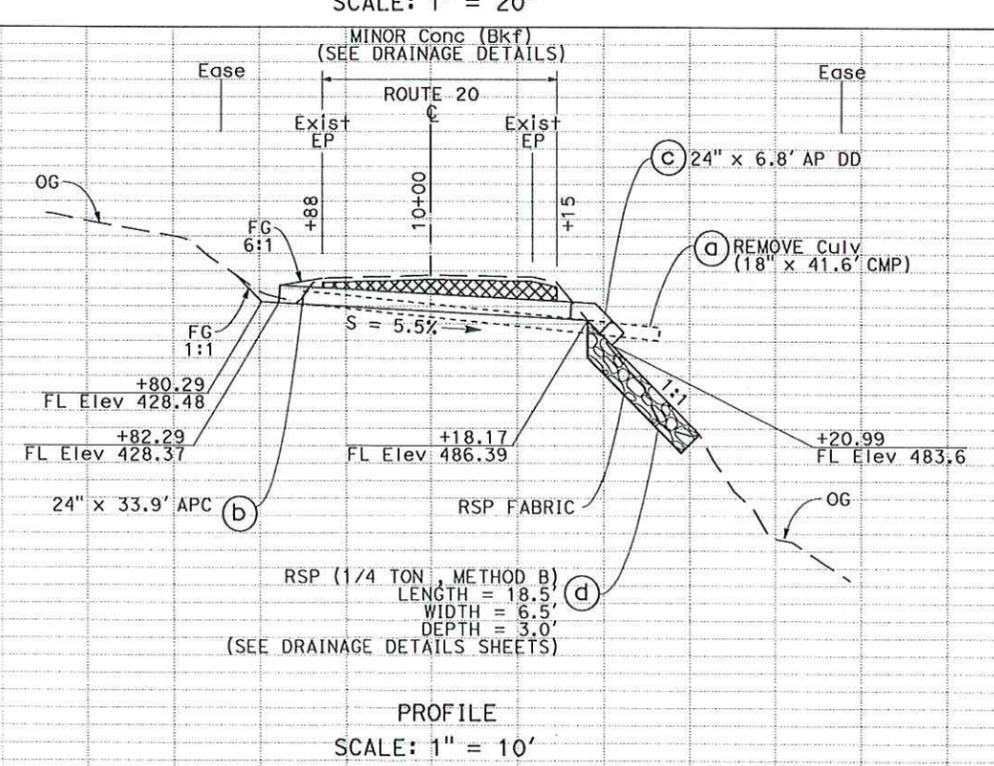
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**REGISTERED PROFESSIONAL ENGINEER**  
SARJU D. PATEL  
No. C 65611  
Exp. 09-30-13  
CIVIL  
STATE OF CALIFORNIA



**EASEMENT**

POINT	STATION	OFFSET
1	9+75.529	13.087 Rt
2	9+75.538	13.160 Lt
3	10+47.717	13.134 Lt
4	10+47.707	13.112 Rt



**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN  
**D-26**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**EtG** 03-DESIGN  
FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR  
DESIGNED BY: SARJU D. PATEL  
CHECKED BY: W. KEITH MACK  
REVISOR: REVISOR BY: DATE REVISOR BY: DATE

USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 25 of 45

U.S. Army Corps of Engineers  
San Francisco District  
Regulatory Division

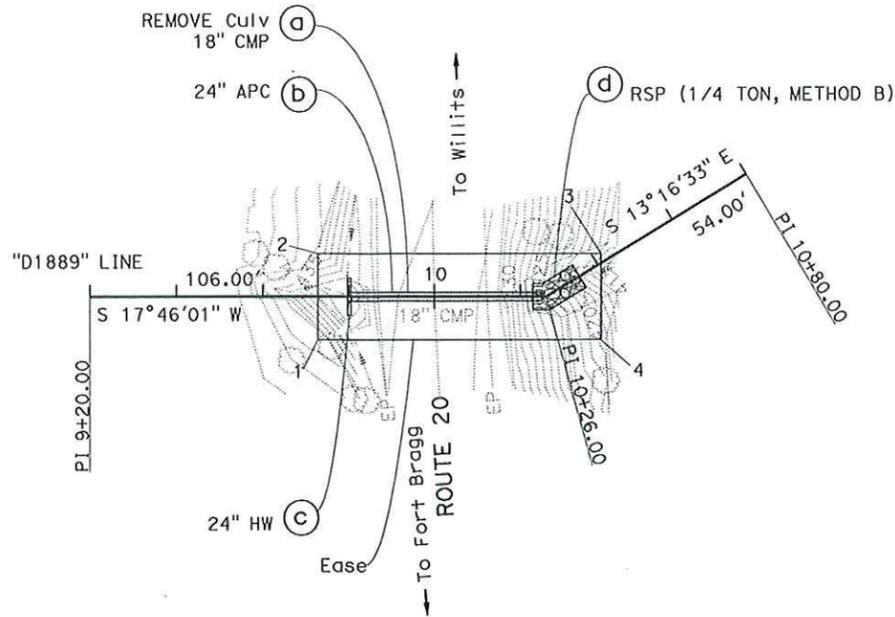
DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:41

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.

T14N R17W MDB&M  
SECTION 1

PRESCRIPTIVE R/W  
(JACKSON STATE FOREST)



PRESCRIPTIVE R/W  
(JACKSON STATE FOREST)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

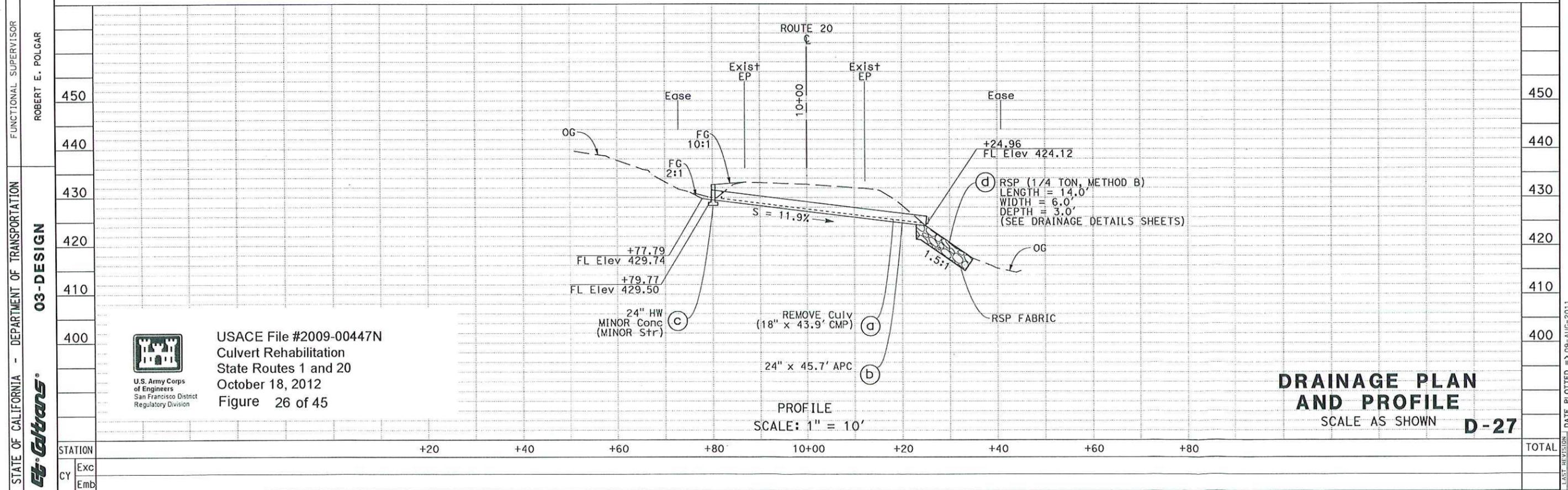
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**EASEMENT**

POINT	STATION	OFFSET
1	9+72.804	9.870 Rt
2	9+72.795	9.815 Lt
3	10+41.965	1.822 Lt
4	10+31.667	14.698 Rt

**DRAINAGE SYSTEM No. 27**

SCALE: 1" = 20'



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 26 of 45

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-27**

**NOTES:**

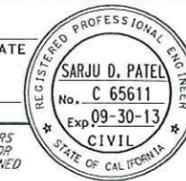
1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.
4. THE ANGLE OF EACH ELBOW IS APPROXIMATE. THE EXACT ANGLE WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

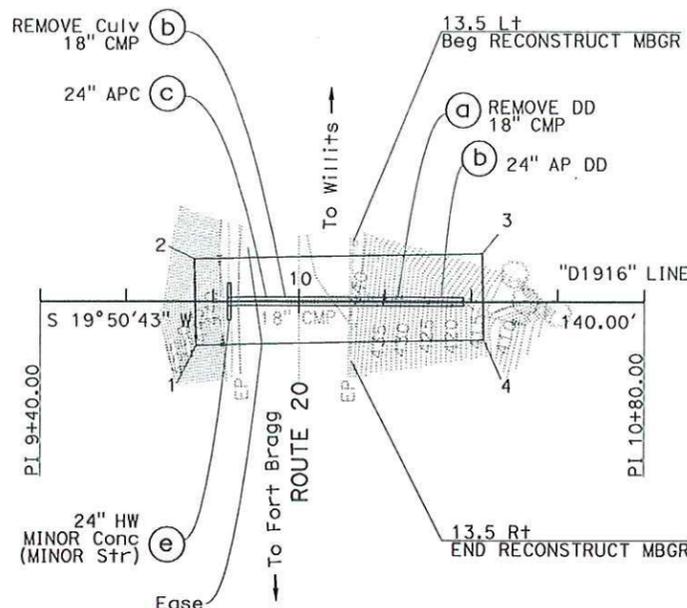
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T17N R15W MDB&M SECTION 10

PRESCRIPTIVE R/W (JACKSON STATE FOREST)

PRESCRIPTIVE R/W (JACKSON STATE FOREST)



**EASEMENT**

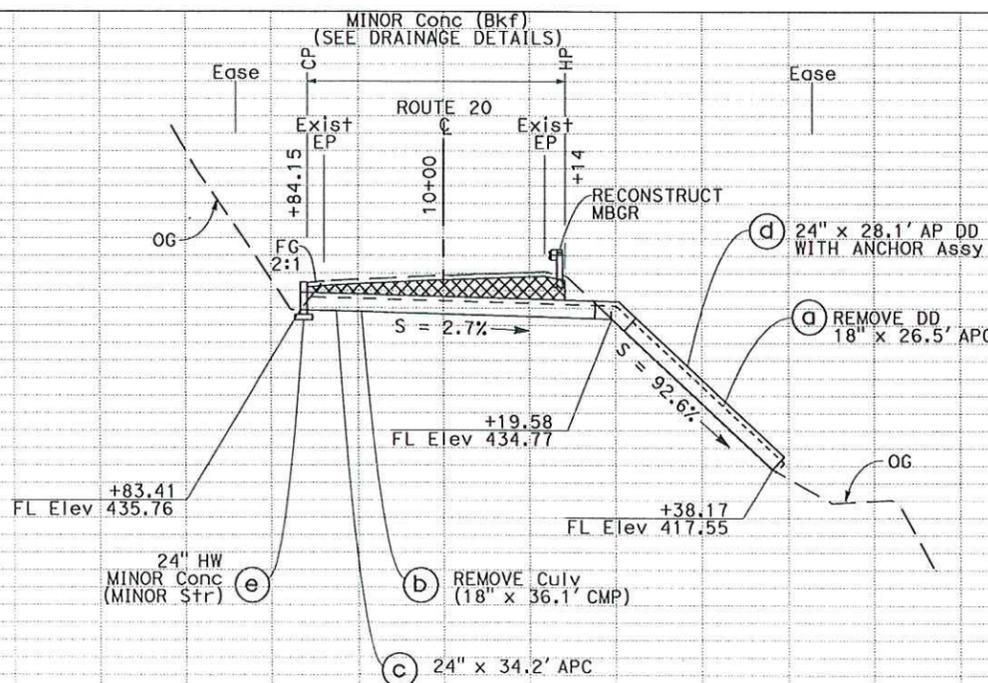
POINT	STATION	OFFSET
1	9+76.019	9.968 Rt
2	9+75.641	9.714 Lt
3	10+42.563	10.998 Lt
4	10+42.941	8.683 Rt

PLAN

**DRAINAGE SYSTEM No. 28**

ROUTE 20  
PM 19.16

SCALE: 1" = 20'



PROFILE

SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**

SCALE AS SHOWN **D-28**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
03-DESIGN  
U.S. Army Corps of Engineers  
San Francisco District  
Regulatory Division



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 27 of 45

FUNCTIONAL SUPERVISOR  
ROBERT E. POLGAR

REVISOR BY  
SARJU D. PATEL

DATE REVISOR  
W. KEITH MACK

CALCULATED-DESIGNED BY  
SARJU D. PATEL

CHECKED BY  
W. KEITH MACK

STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.

T17N R15W MDB&M SECTION 10

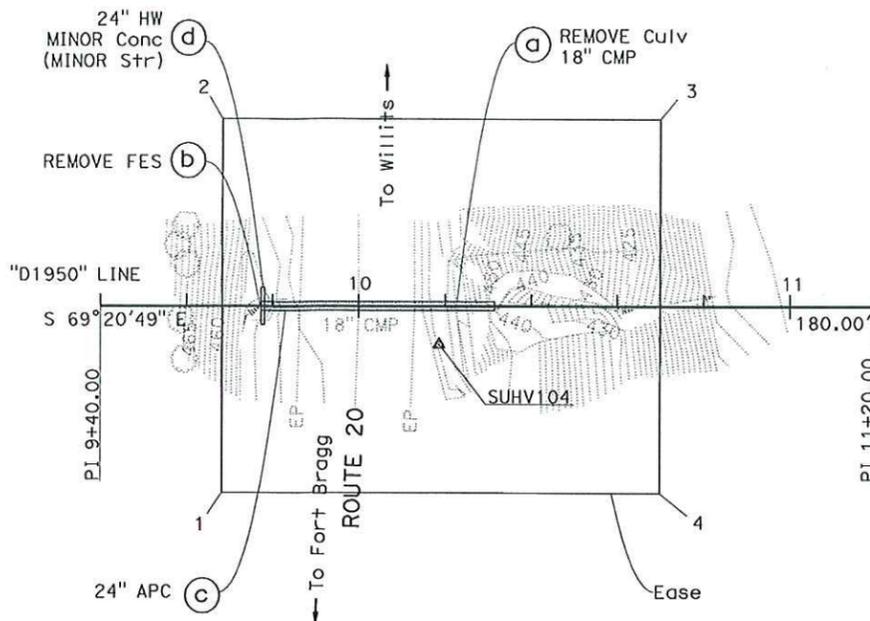
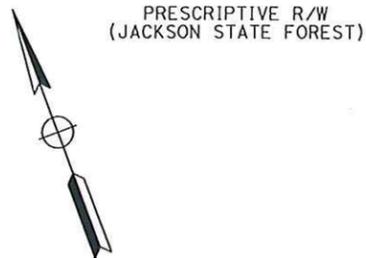
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**SARJU D. PATEL**  
No. C 65611  
Exp 09-30-13  
CIVIL



PRESCRIPTIVE R/W (JACKSON STATE FOREST)

**EASEMENT**

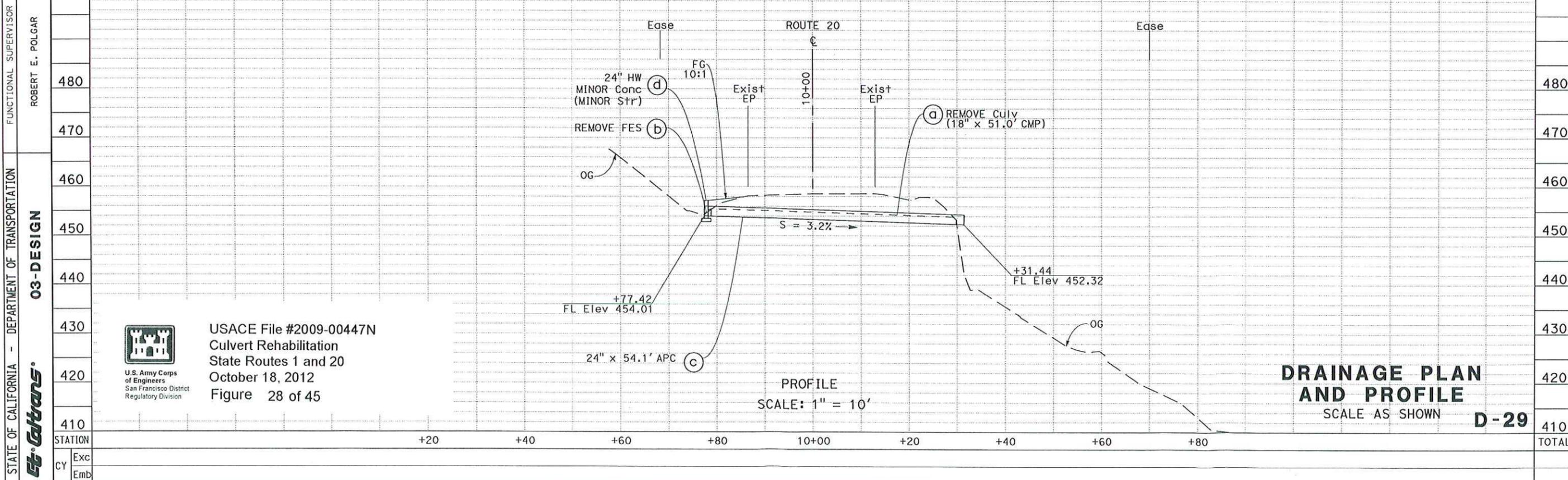
POINT	STATION	OFFSET
1	9+68.271	42.598 Rt
2	9+68.344	42.703 Lt
3	10+70.050	42.616 Lt
4	10+69.977	42.686 Rt

PLAN

**DRAINAGE SYSTEM No. 29**

ROUTE 20  
PM 19.50

SCALE: 1" = 20'



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 28 of 45

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-29**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

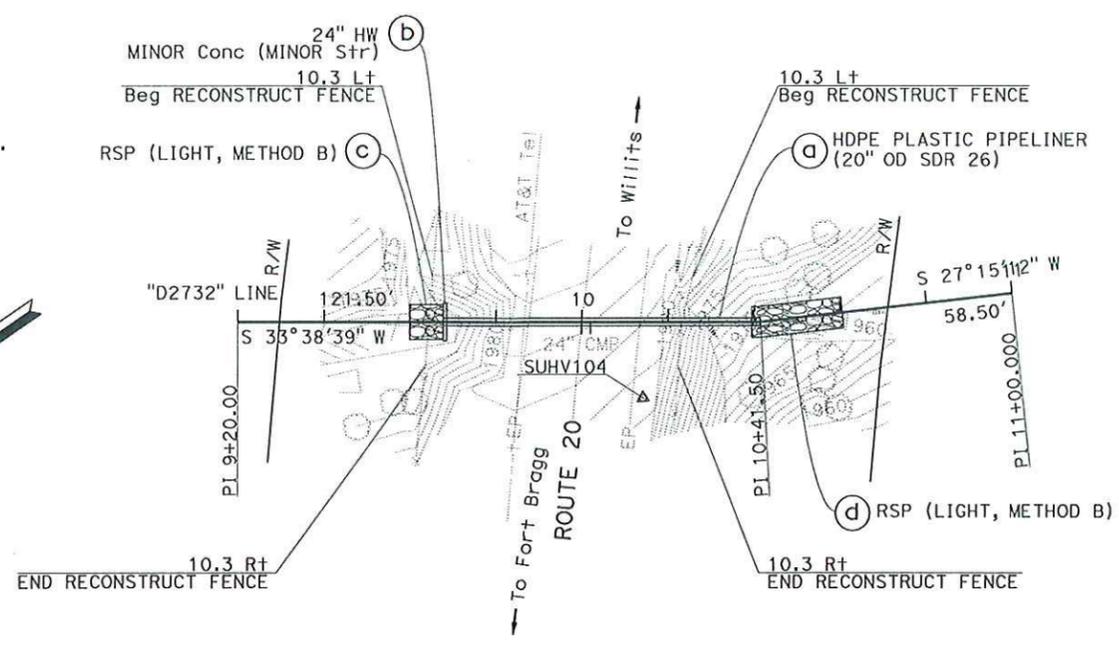
REGISTERED CIVIL ENGINEER	DATE
SARJU D. PATEL	
No. C 65611	
Exp. 09-30-13	
CIVIL	

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

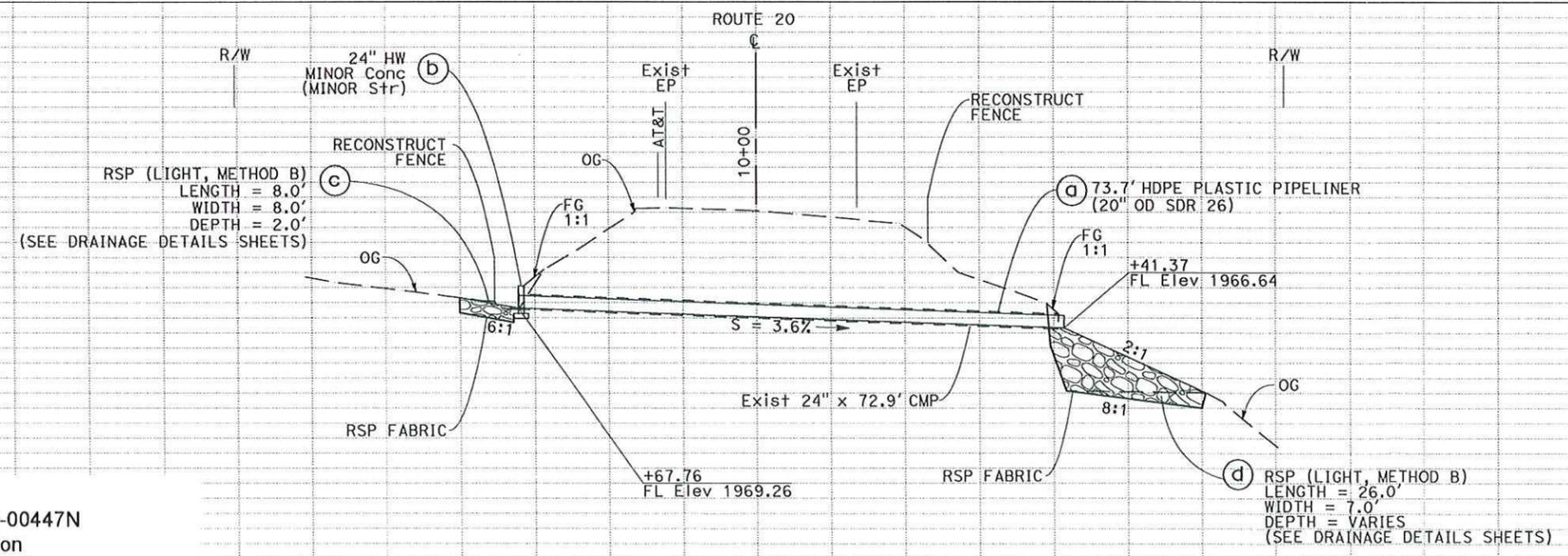
T18N R14W MDB&M SECTION 29

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR PLASTIC PIPE LINER DETAILS SEE DRAINAGE DETAIL SHEETS.
4. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.



PLAN  
**DRAINAGE SYSTEM No. 30**  
 ROUTE 20  
 PM 27.32  
 SCALE: 1" = 20'



PROFILE  
 SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
 SCALE AS SHOWN  
**D-30**



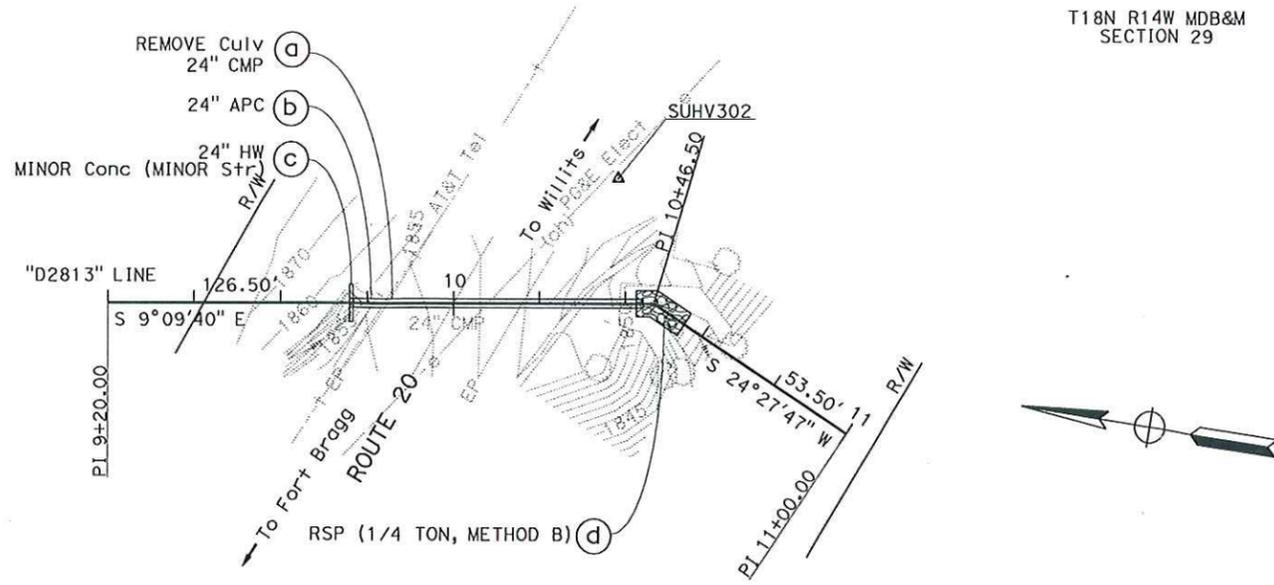
USACE File #2009-00447N  
 Culvert Rehabilitation  
 State Routes 1 and 20  
 October 18, 2012  
 Figure 29 of 45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans	ROBERT E. POLGAR	SARJU D. PATEL	
	03-DESIGN	W. KEITH MACK	
STATION	Exc	CALCULATED/DESIGNED BY	CHECKED BY
	Emb		

DATE PLOTTED => 09-AUG-2011  
 TIME PLOTTED => 09:42

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
4. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEPHONE LINE. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.



T18N R14W MDB&M SECTION 29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

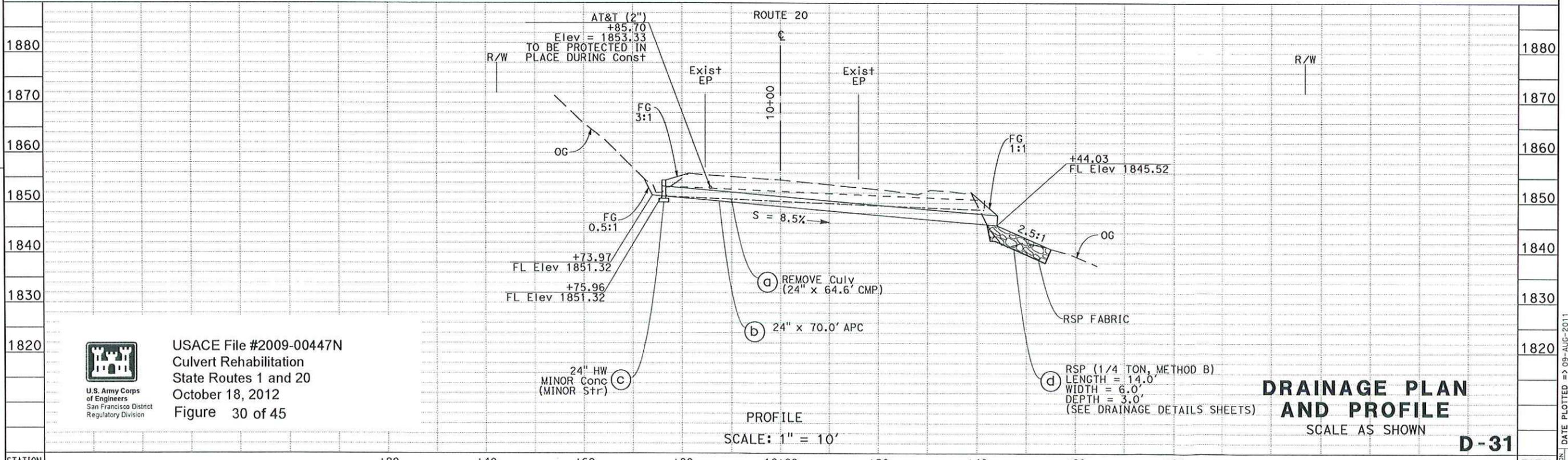
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**SARJU D. PATEL**  
 No. C 65611  
 Exp 09-30-13  
 CIVIL  
 STATE OF CALIFORNIA

PLAN  
**DRAINAGE SYSTEM No. 31**

ROUTE 20  
 PM 28.13  
 SCALE: 1" = 20'



USACE File #2009-00447N  
 Culvert Rehabilitation  
 State Routes 1 and 20  
 October 18, 2012  
 Figure 30 of 45

**DRAINAGE PLAN AND PROFILE**  
 SCALE AS SHOWN  
**D-31**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR
<b>Caltrans</b>	ROBERT E. POLGAR	SARJU D. PATEL
03-DESIGN	CHECKED BY	DATE REVISED
		W. KEITH MACK
	CALCULATED-DESIGNED BY	

STATION	Exc	Emb	TOTAL
+20			
+40			
+60			
+80			
10+00			
+20			
+40			
+60			
+80			

DATE PLOTTED => 09-AUG-2011  
 TIME PLOTTED => 09:42

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

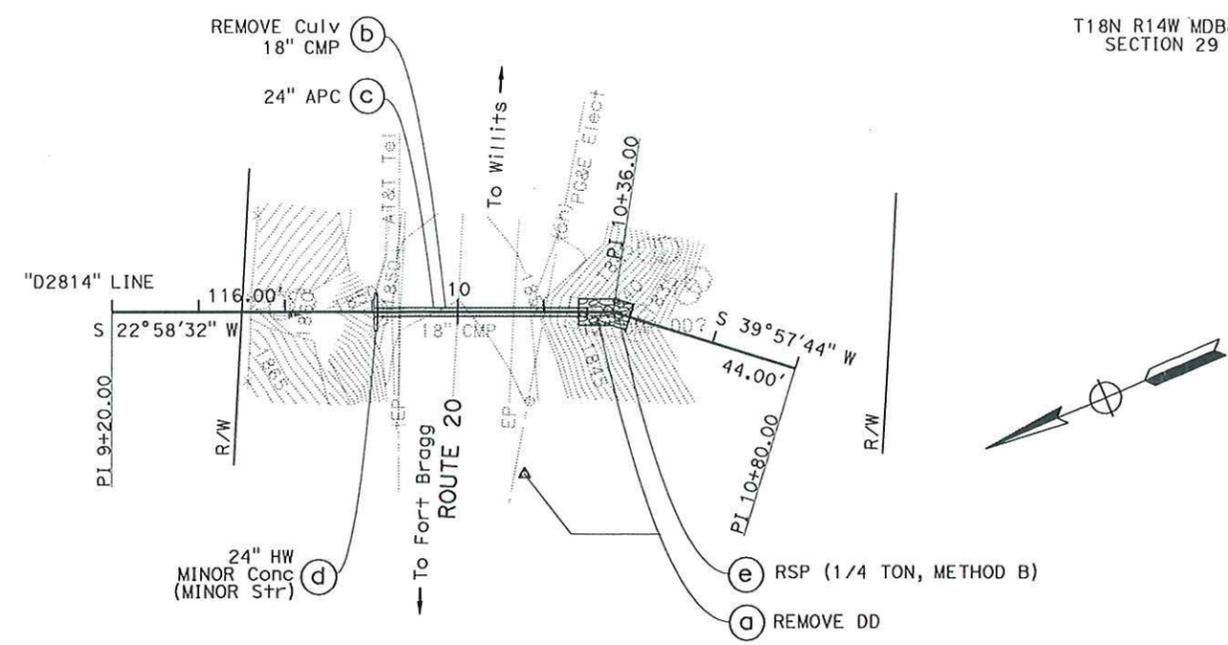
  

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>	

T18N R14W MDB&M SECTION 29

**NOTES:**

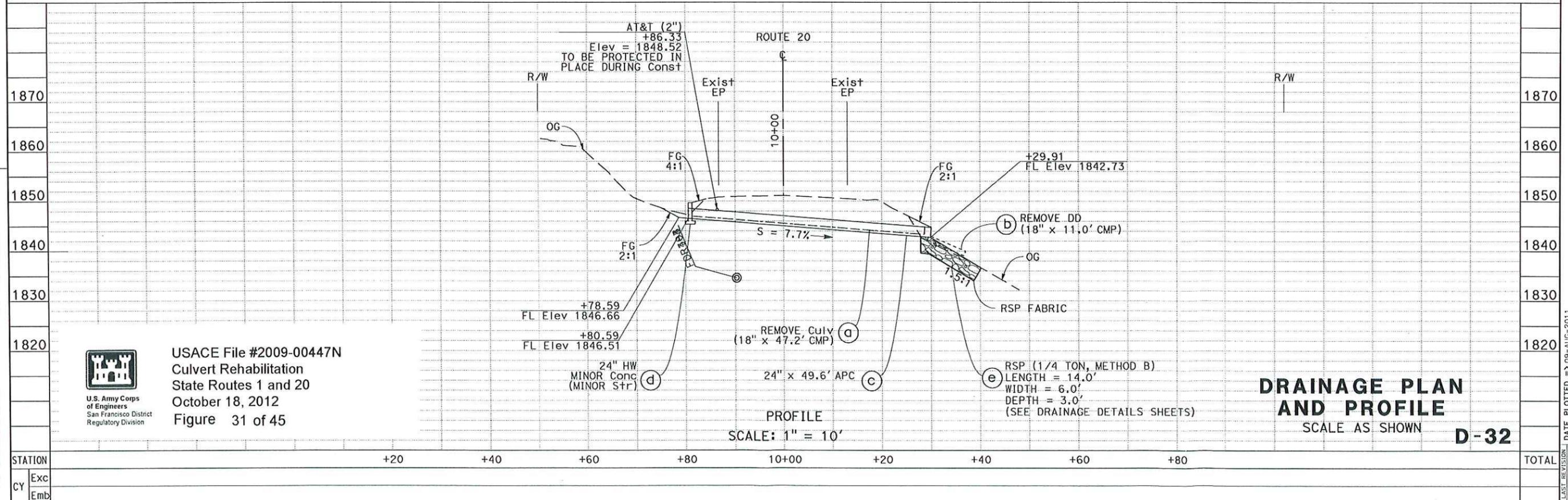
1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
4. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEPHONE LINE. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.



PLAN  
**DRAINAGE SYSTEM No. 32**

ROUTE 20  
PM 28.14

SCALE: 1" = 20'



PROFILE  
SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN  
**D-32**



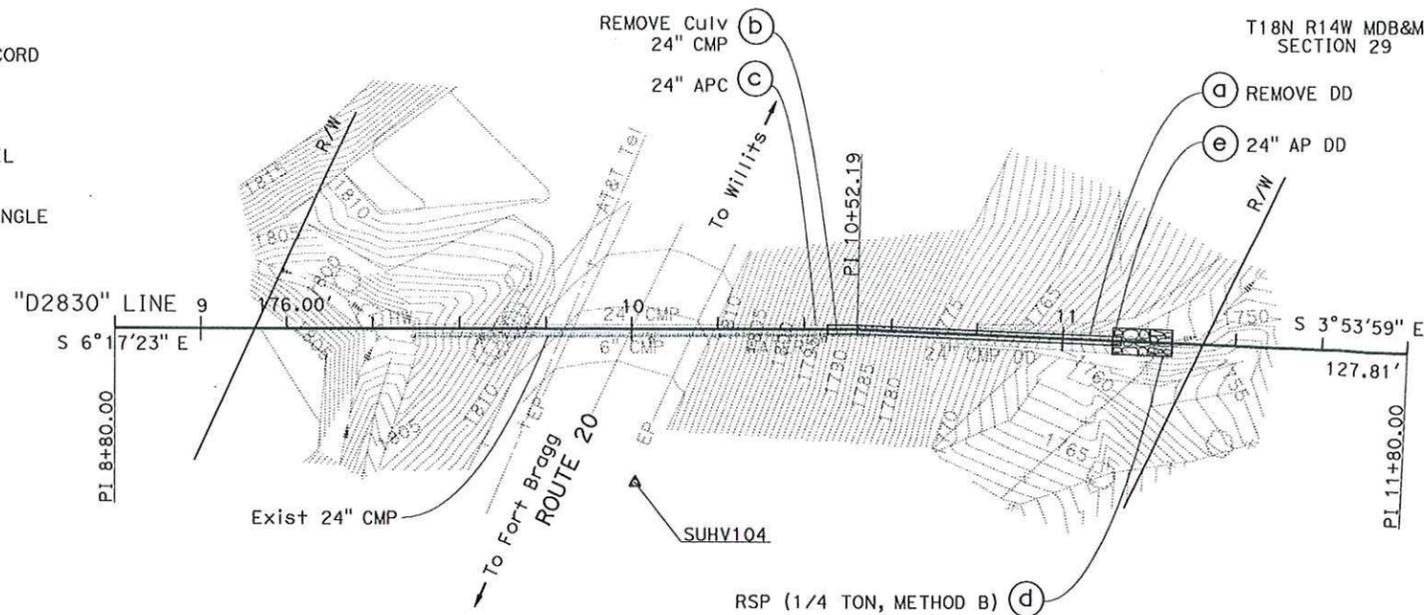
USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 31 of 45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
<b>Caltrans</b>	ROBERT E. POLGAR	SARJU D. PATEL	
	03-DESIGN	W. KEITH MACK	
STATION		CALCULATED-DESIGNED BY	CHECKED BY
Exc			
Emb			

DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:42

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
4. THE ANGLE OF EACH ELBOW IS APPROXIMATE. THE EXACT ANGLE WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.



PLAN  
**DRAINAGE SYSTEM No. 33**

ROUTE 20  
PM 28.30

SCALE: 1" = 20'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

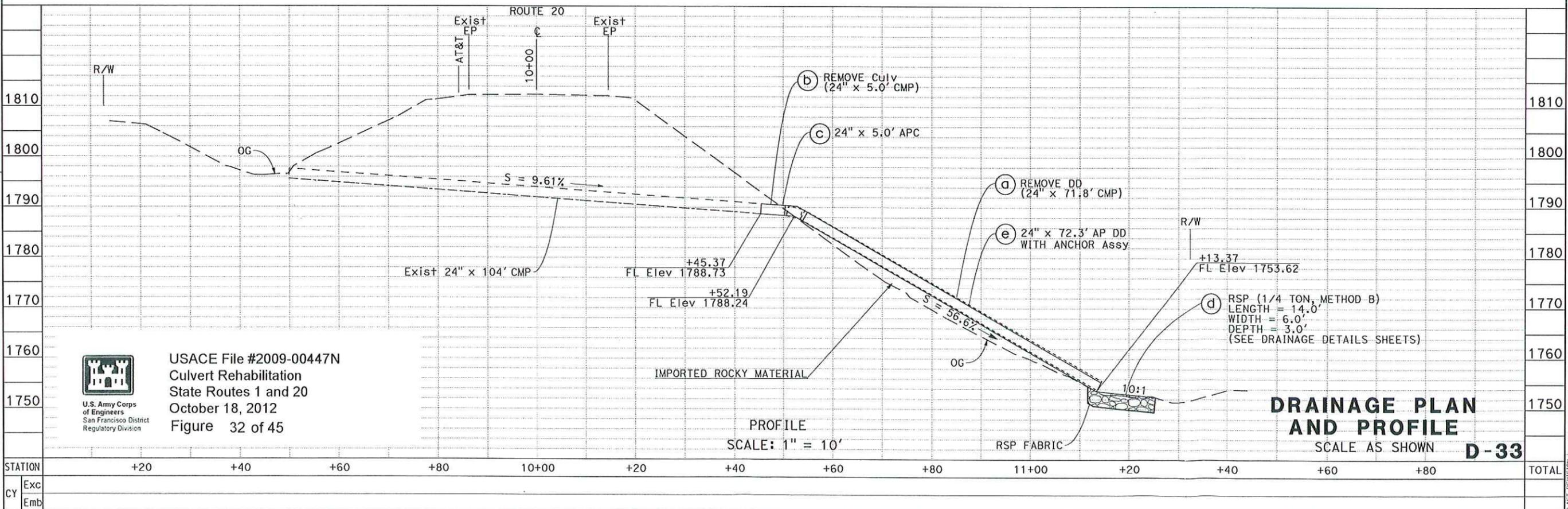
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
SARJU D. PATEL  
No. C 65611  
Exp. 09-30-13  
CIVIL  
STATE OF CALIFORNIA



REVISOR	REVISION
SARJU D. PATEL	
W. KEITH MACK	
ROBERT E. POLGAR	



**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-33**

USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 32 of 45

U.S. Army Corps of Engineers  
San Francisco District  
Regulatory Division

DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:42

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER	DATE
SARJU D. PATEL	
No. C 65611	
Exp. 09-30-13	
CIVIL	

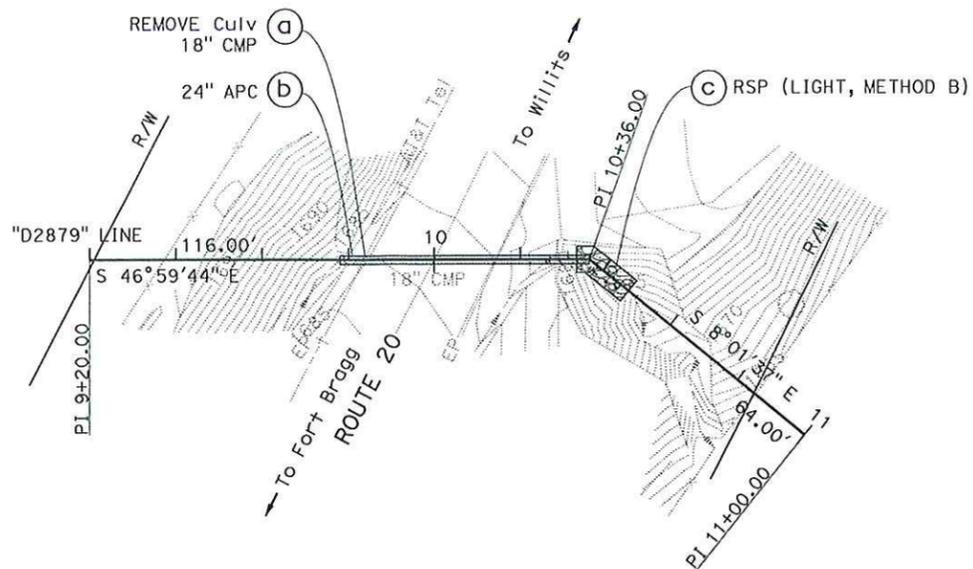
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

T18N R14W MDB&M SECTION 28

**NOTES:**

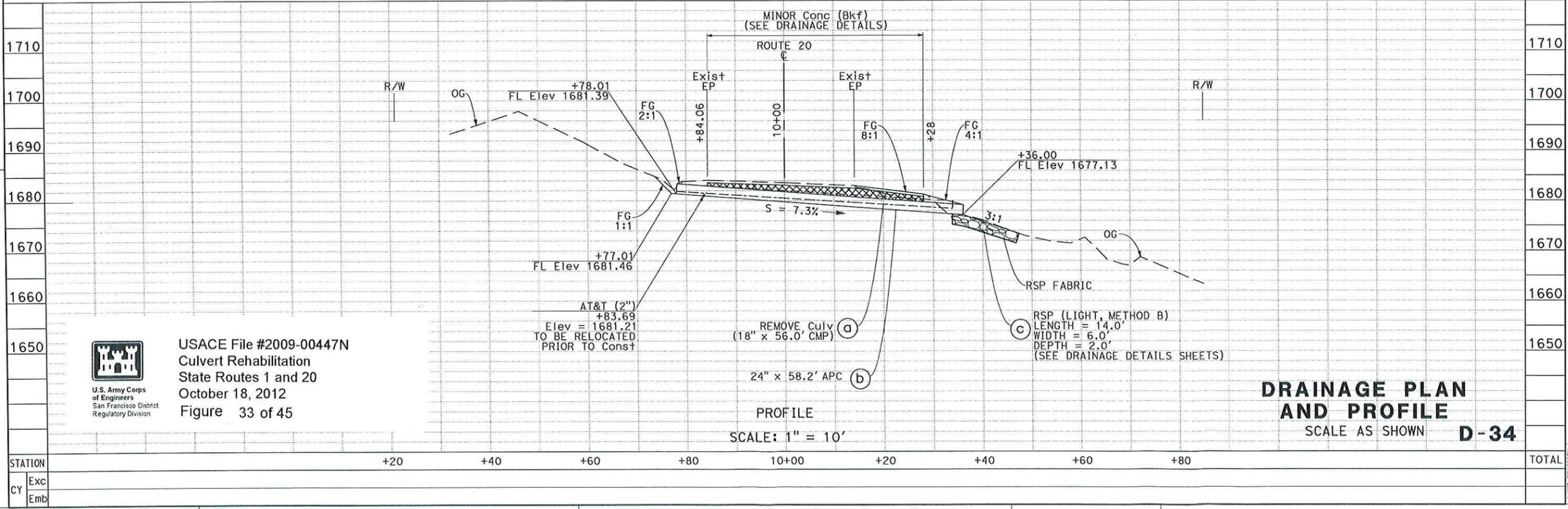
1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.
4. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.



PLAN  
**DRAINAGE SYSTEM No. 34**

ROUTE 20  
PM 28.79

SCALE: 1" = 20'



**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-34**



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 33 of 45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**03-DESIGN**  
FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR  
DESIGNED BY: SARJU D. PATEL  
CHECKED BY: W. KEITH MACK

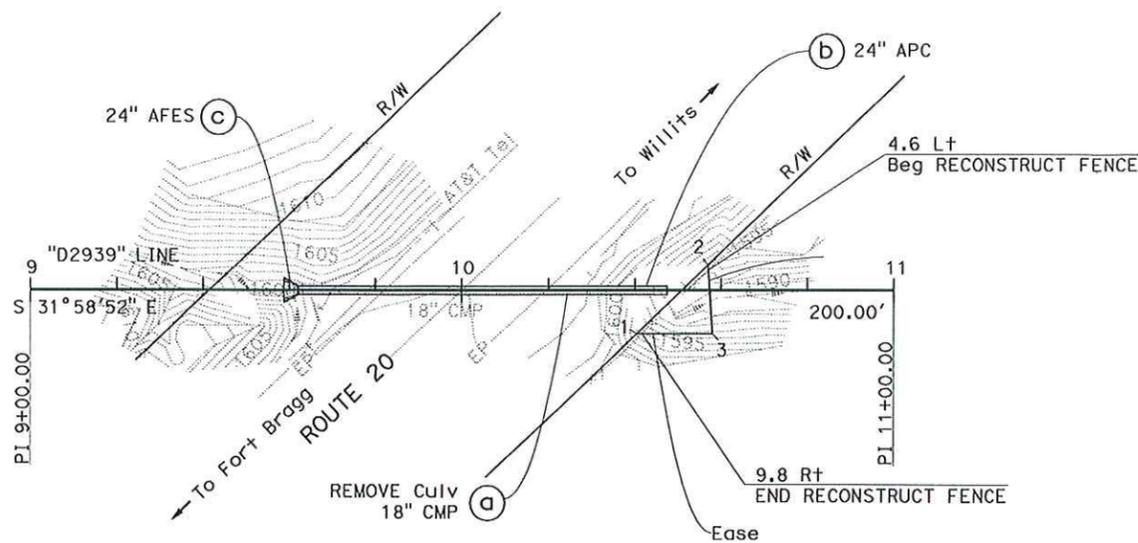
REVISION	DATE	BY

DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:42

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEPHONE LINE. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.

T18N R14W MDB&M SECTION 28



PLAN  
**DRAINAGE SYSTEM No. 35**

ROUTE 20  
PM 29.39

SCALE: 1" = 20'

**EASEMENT**

POINT	STATION	OFFSET
1	10+40.499	9.878 Rt
2	10+56.937	5.739 Lt
3	10+57.979	9.886 Rt

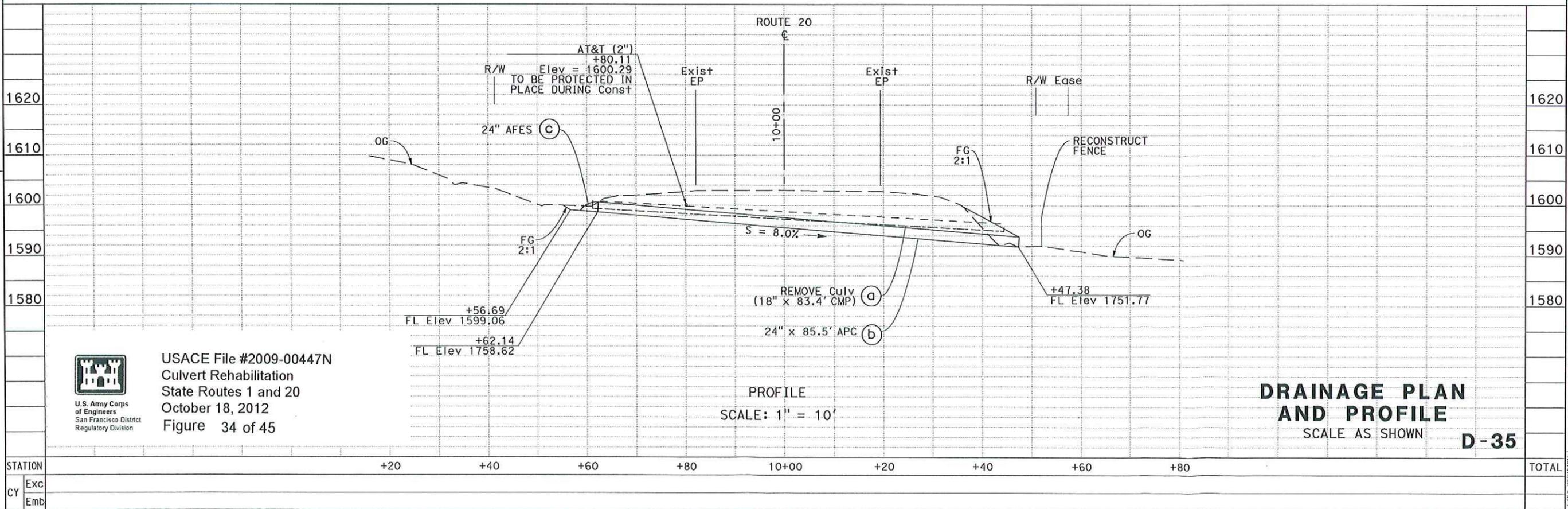
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**03-DESIGN**  
U.S. Army Corps of Engineers  
San Francisco District  
Regulatory Division



PROFILE  
SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN  
**D-35**

USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 34 of 45

DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:42

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

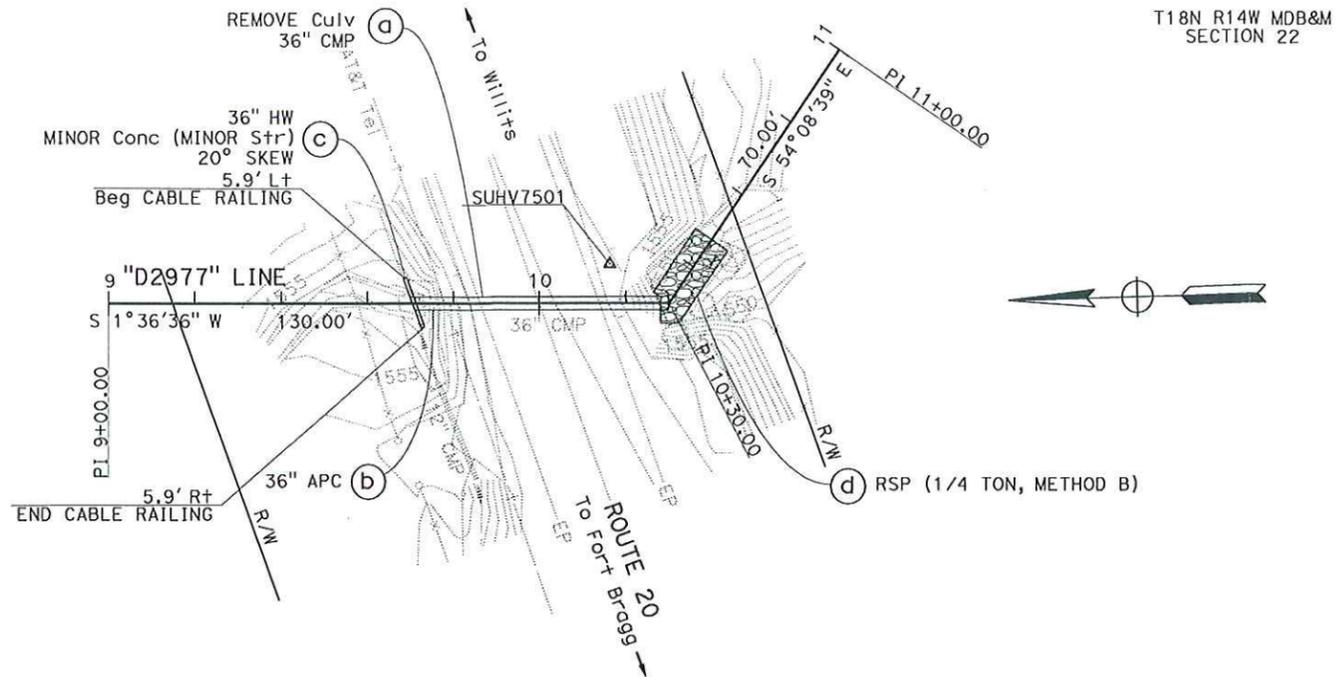
  

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**NOTES:**

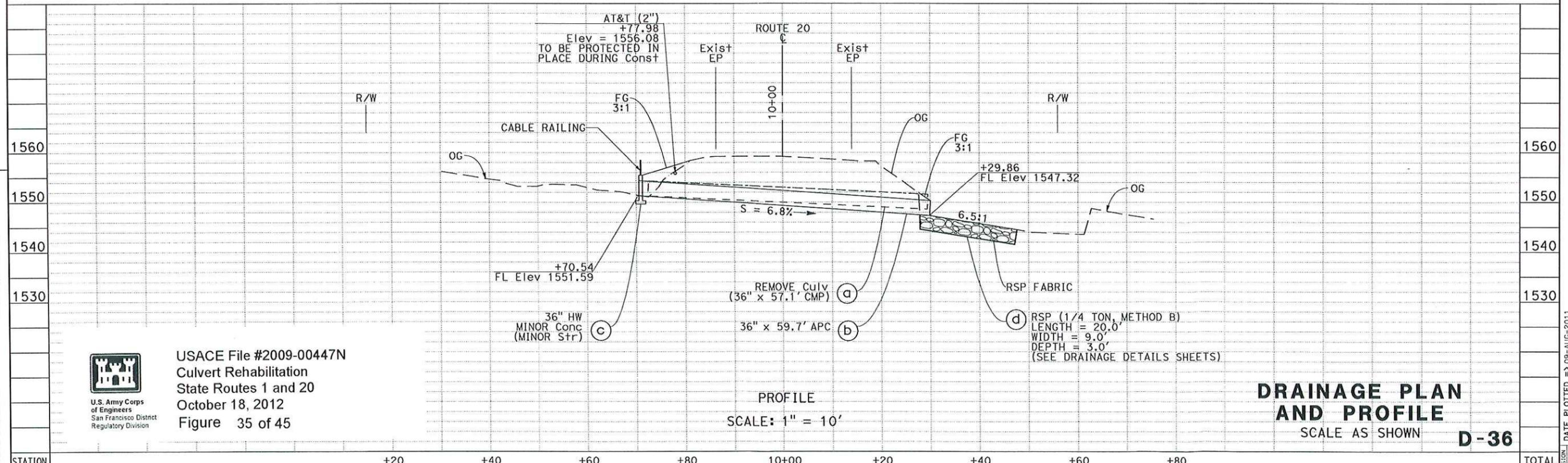
1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
4. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEPHONE LINE. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.



PLAN  
**DRAINAGE SYSTEM No. 36**

ROUTE 20  
PM 29.77

SCALE: 1" = 20'



PROFILE  
SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-36**



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 35 of 45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
03-DESIGN	ROBERT E. POLGAR	SARJU D. PATEL	W. KEITH MACK
		CALCULATED BY	CHECKED BY

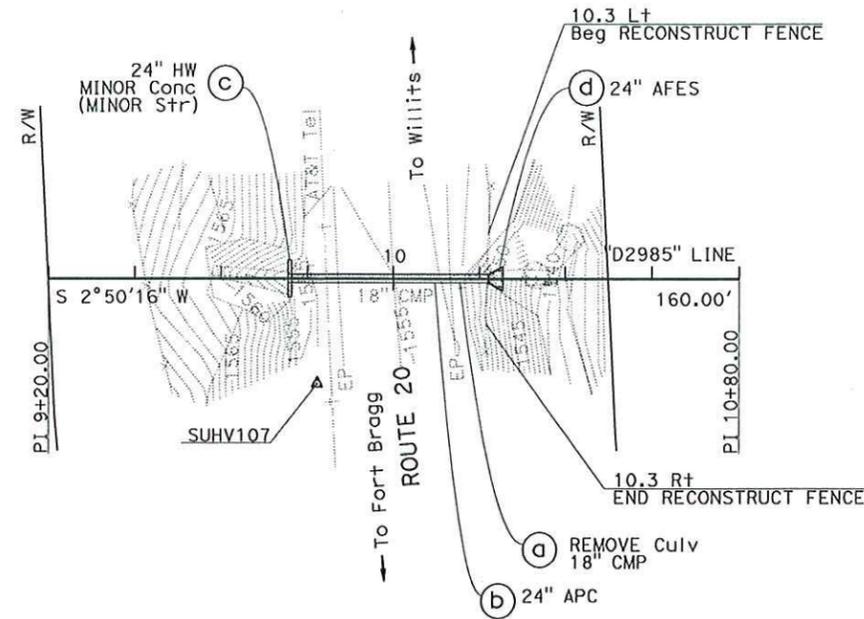
STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										

DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:42

**NOTES:**

- FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
- CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEPHONE LINE. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.

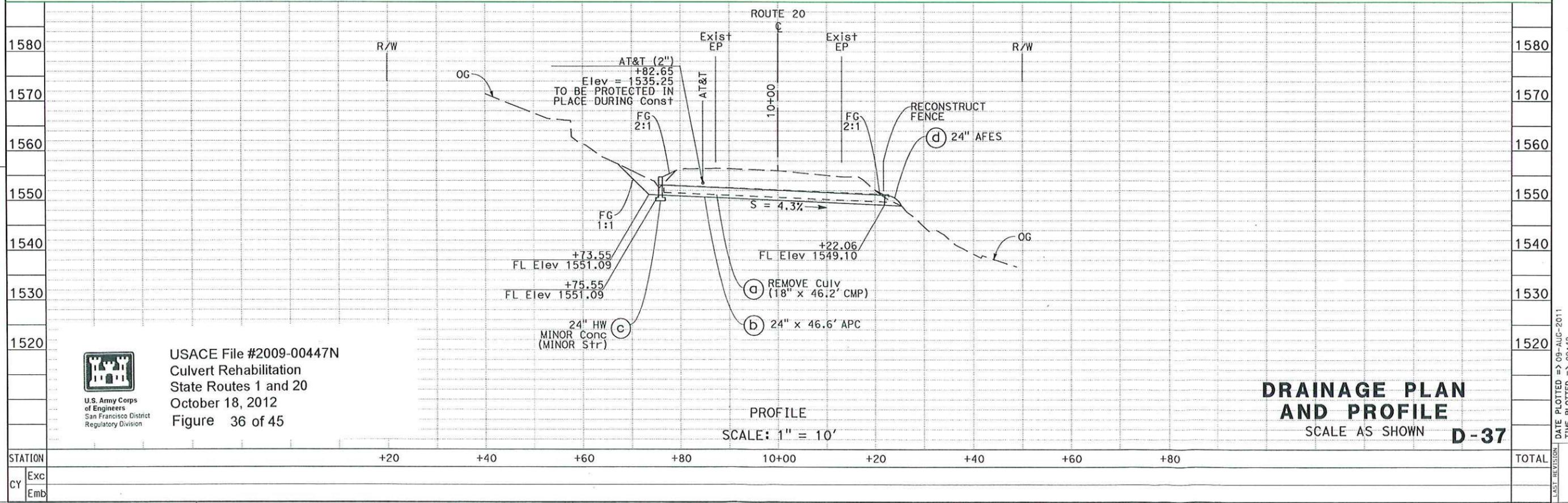
T18N R14W MDB&M SECTION 22



PLAN  
**DRAINAGE SYSTEM No. 37**

ROUTE 20  
PM 29.85

SCALE: 1" = 20'



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 36 of 45

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-37**

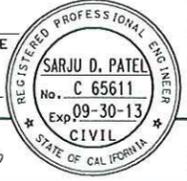
STATION	+20	+40	+60	+80	10+00	+20	+40	+60	+80	TOTAL
Exc										
Emb										

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



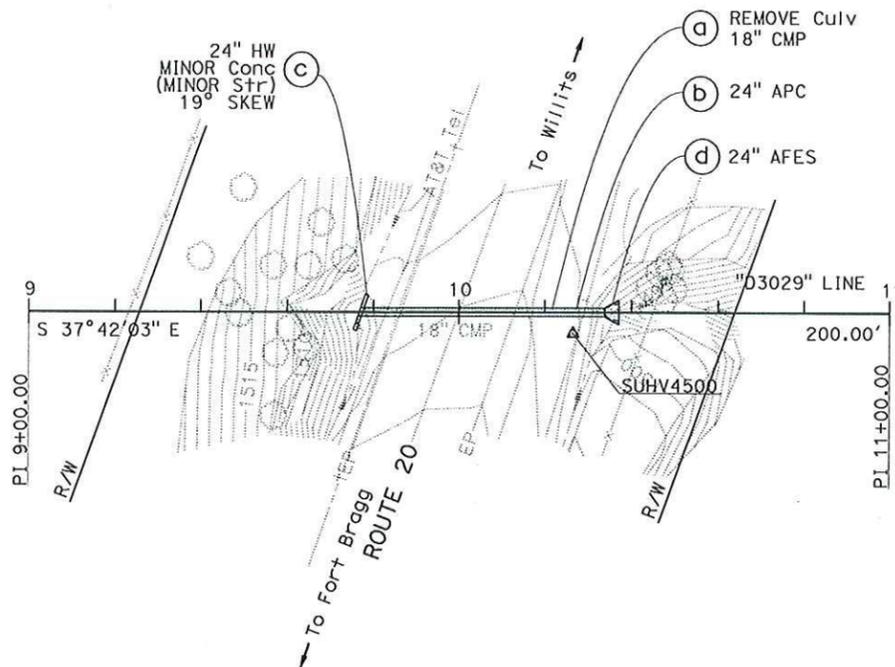
REVISOR	REVISION
SARJU D. PATEL	DESIGNED BY
W. KEITH MACK	CHECKED BY
	FUNCTIONAL SUPERVISOR
	ROBERT E. POLGAR
	DEPARTMENT OF TRANSPORTATION
	03-DESIGN
	STATE OF CALIFORNIA

DATE PLOTTED => 08-AUG-2011 TIME PLOTTED => 08:42



**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.



T18N R14W MDB&M SECTION 22



**PLAN  
DRAINAGE SYSTEM No. 39**

ROUTE 20  
PM 30.29

SCALE: 1" = 20'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

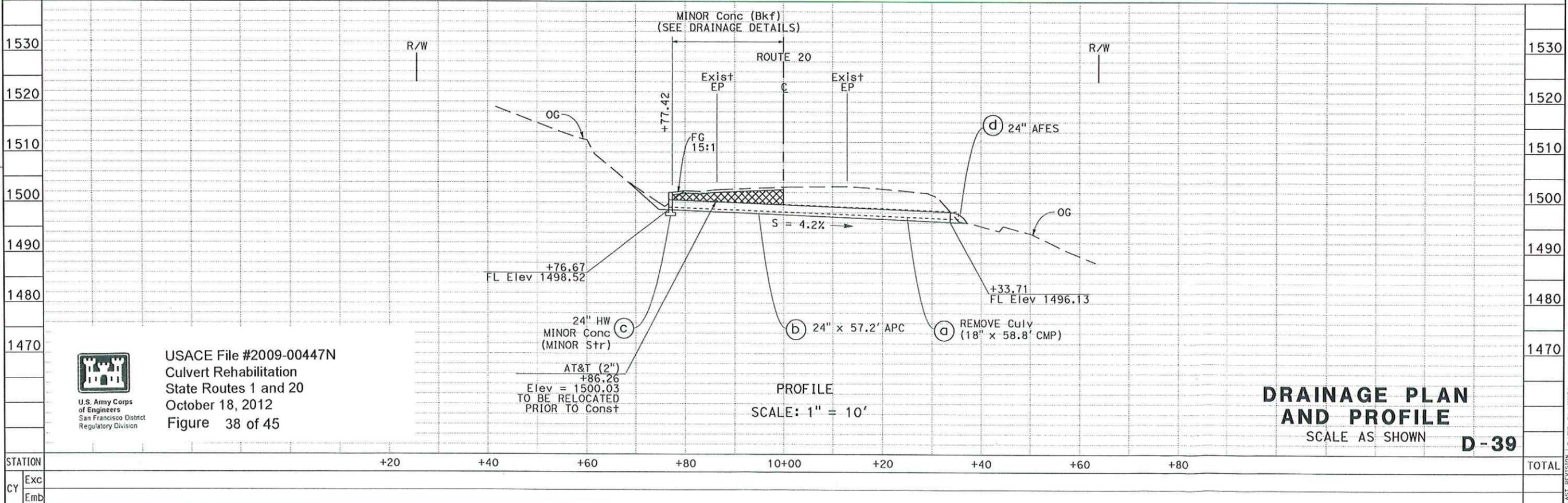
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**SARJU D. PATEL**  
No. C 65611  
Exp 09-30-13  
CIVIL  
STATE OF CALIFORNIA

REVISOR	REVISION
SARJU D. PATEL	
W. KEITH MACK	
ROBERT E. POLGAR	



**PROFILE  
SCALE: 1" = 10'**

**DRAINAGE PLAN AND PROFILE  
SCALE AS SHOWN D-39**



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 38 of 45

DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:42

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

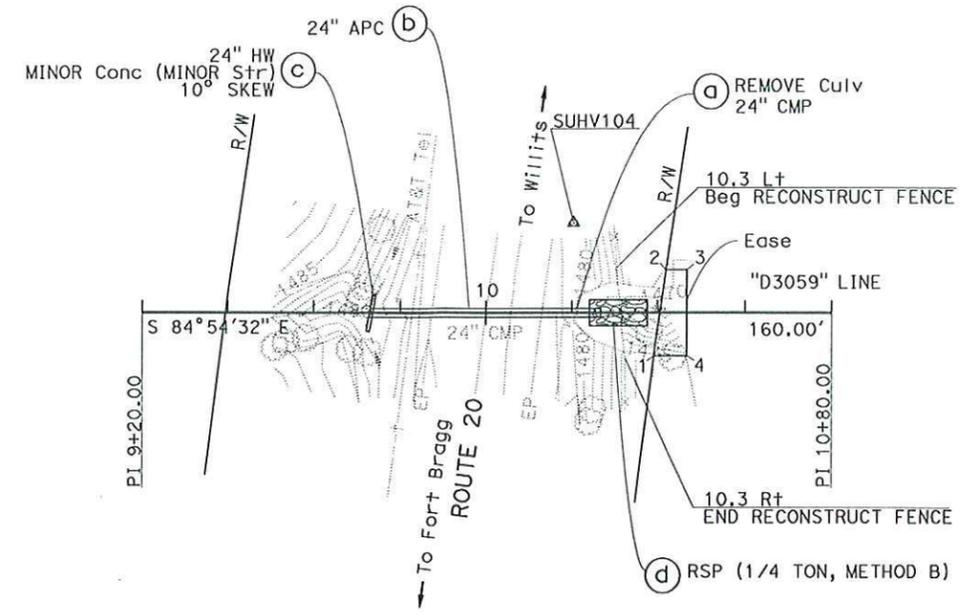
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



T18N R14W MDB&M SECTION 23

**NOTES:**

- FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
- FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
- CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEPHONE LINE. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.



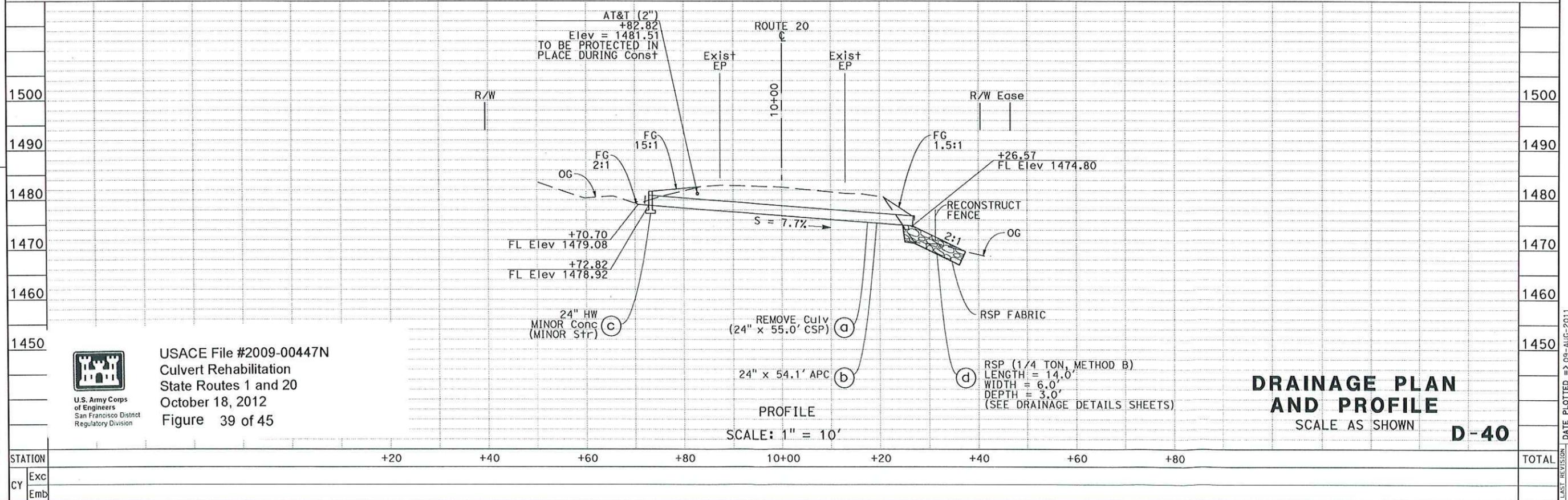
**EASEMENT**

POINT	STATION	OFFSET
1	10+39.016	9.822 Rt
2	10+41.872	9.864 Lt
3	10+46.595	9.867 Lt
4	10+46.604	9.818 Rt

PLAN  
**DRAINAGE SYSTEM No. 40**

ROUTE 20  
PM 30.59  
SCALE: 1" = 20'

REVISOR: SARJU D. PATEL, W. KEITH MACK  
DESIGNER: ROBERT E. POLGAR  
FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR  
DESIGNATION: 03-DESIGN  
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
U.S. Army Corps of Engineers San Francisco District Regulatory Division



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 39 of 45

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN  
**D-40**

DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:42

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
4. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEPHONE LINE. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.

T18N R14W MDB&M  
SECTION 23

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER

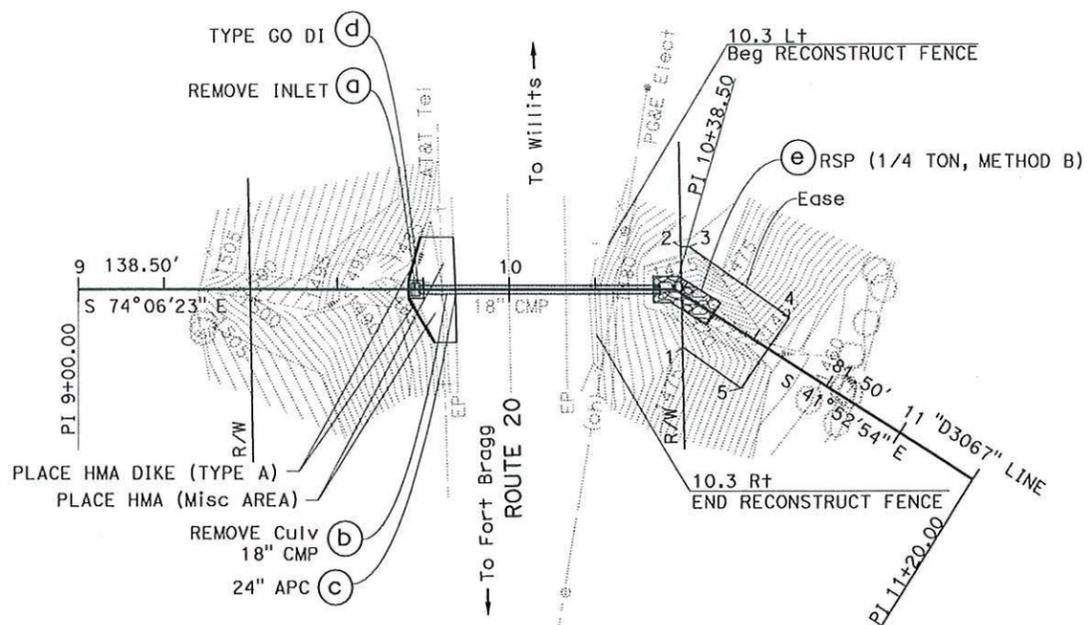
SARJU D. PATEL

No. C 65611

Exp 09-30-13

CIVIL

STATE OF CALIFORNIA

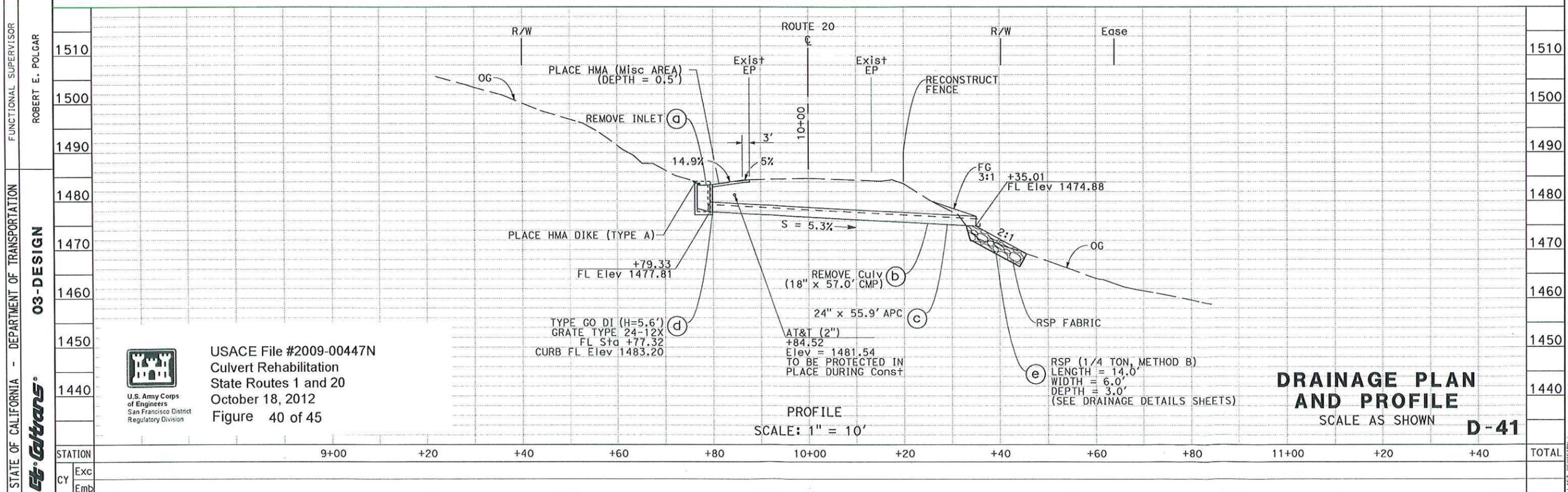


**EASEMENT**

POINT	STATION	OFFSET
1	10+47.026	10.186 Rt
2	10+38.500	**9.850 Lt
3	10+38.500	*10.301 Lt
4	10+64.373	8.733 Lt
5	10+63.482	10.931 Rt

\*\*GIVEN OFFSET IS AT A BEARING OF N 23°40'30.796"E FROM STATION

\*GIVEN OFFSET IS AT A BEARING OF N 34°34'40.343"E FROM STATION



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

03-DESIGN

FUNCTIONAL SUPERVISOR: ROBERT E. POLGAR

DESIGNED BY: SARJU D. PATEL

CHECKED BY: W. KEITH MACK

REVISOR: \_\_\_\_\_

DATE REVISION: \_\_\_\_\_

DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:42

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

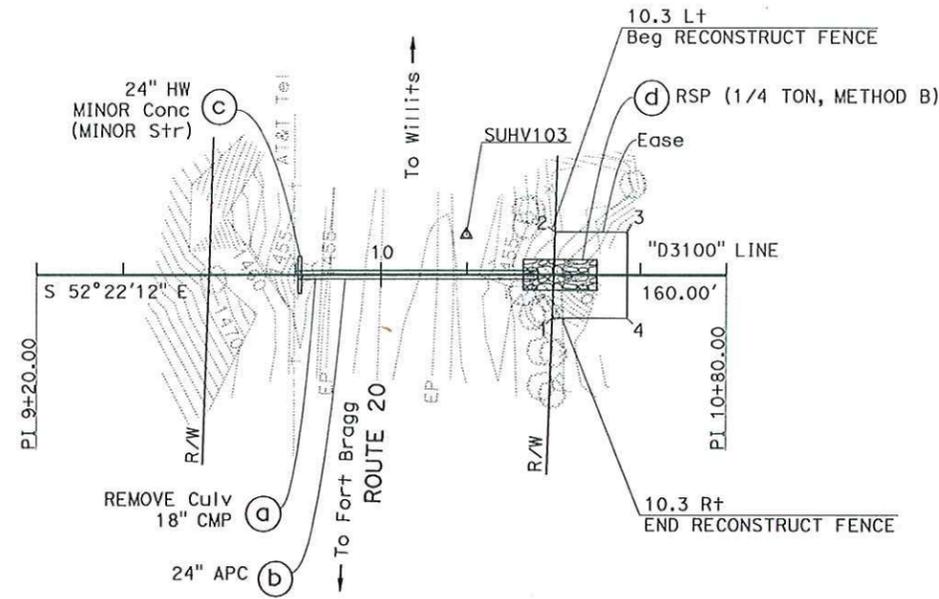
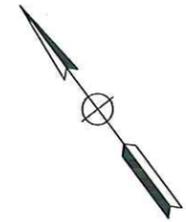
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 SARJU D. PATEL  
 No. C 65611  
 Exp. 09-30-13  
 CIVIL  
 STATE OF CALIFORNIA

T18N R14W MDB&M SECTION 23

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.
4. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.



PLAN  
**DRAINAGE SYSTEM No. 42**

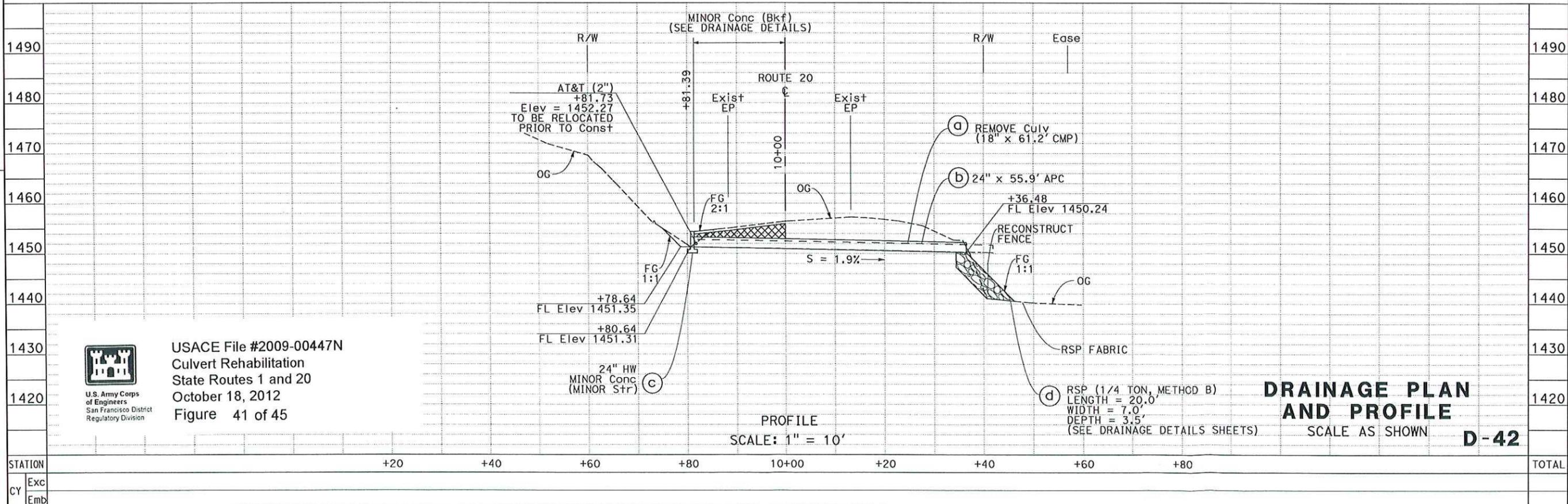
ROUTE 20  
 PM 31.00

SCALE: 1" = 20'

**EASEMENT**

POINT	STATION	OFFSET
1	10+39.728	9.842 Rt
2	10+40.307	9.842 Lt
3	10+56.970	9.842 Lt
4	10+56.970	9.843 Rt

REVISOR	REVISION
SARJU D. PATEL	W. KEITH MACK
ALICULATED-DESIGNED BY	CHECKED BY
ROBERT E. POLGAR	



PROFILE  
 SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
 SCALE AS SHOWN  
**D-42**

USACE File #2009-00447N  
 Culvert Rehabilitation  
 State Routes 1 and 20  
 October 18, 2012  
 Figure 41 of 45

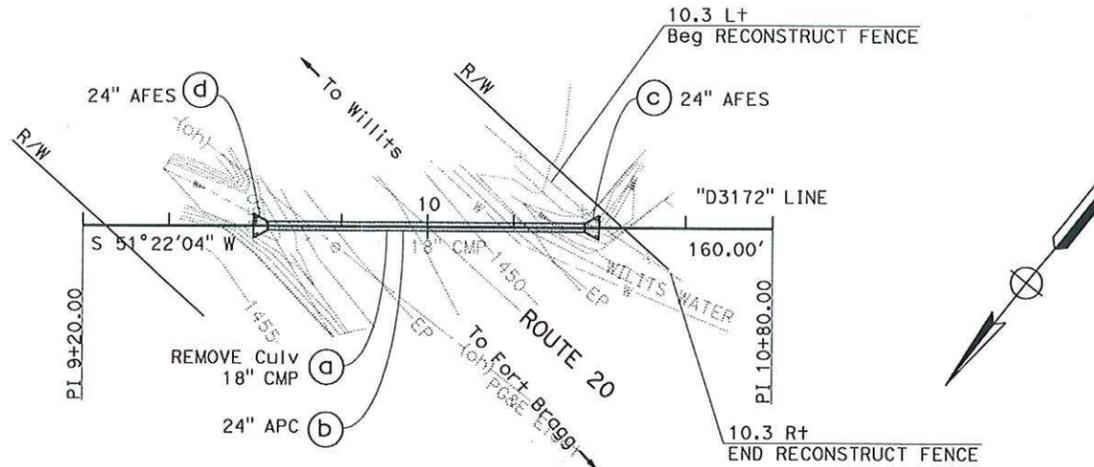


DATE PLOTTED => 09-AUG-2011  
 TIME PLOTTED => 09:42

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR MINOR CONCRETE (BACKFILL) DETAILS SEE DRAINAGE DETAIL SHEETS.
4. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND WATER LINE. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.

T18N R14W MDB&M  
SECTION 14



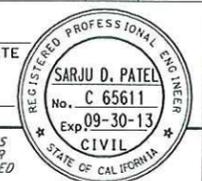
PLAN  
**DRAINAGE SYSTEM No. 43**  
ROUTE 20  
PM 31.72  
SCALE: 1" = 20'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

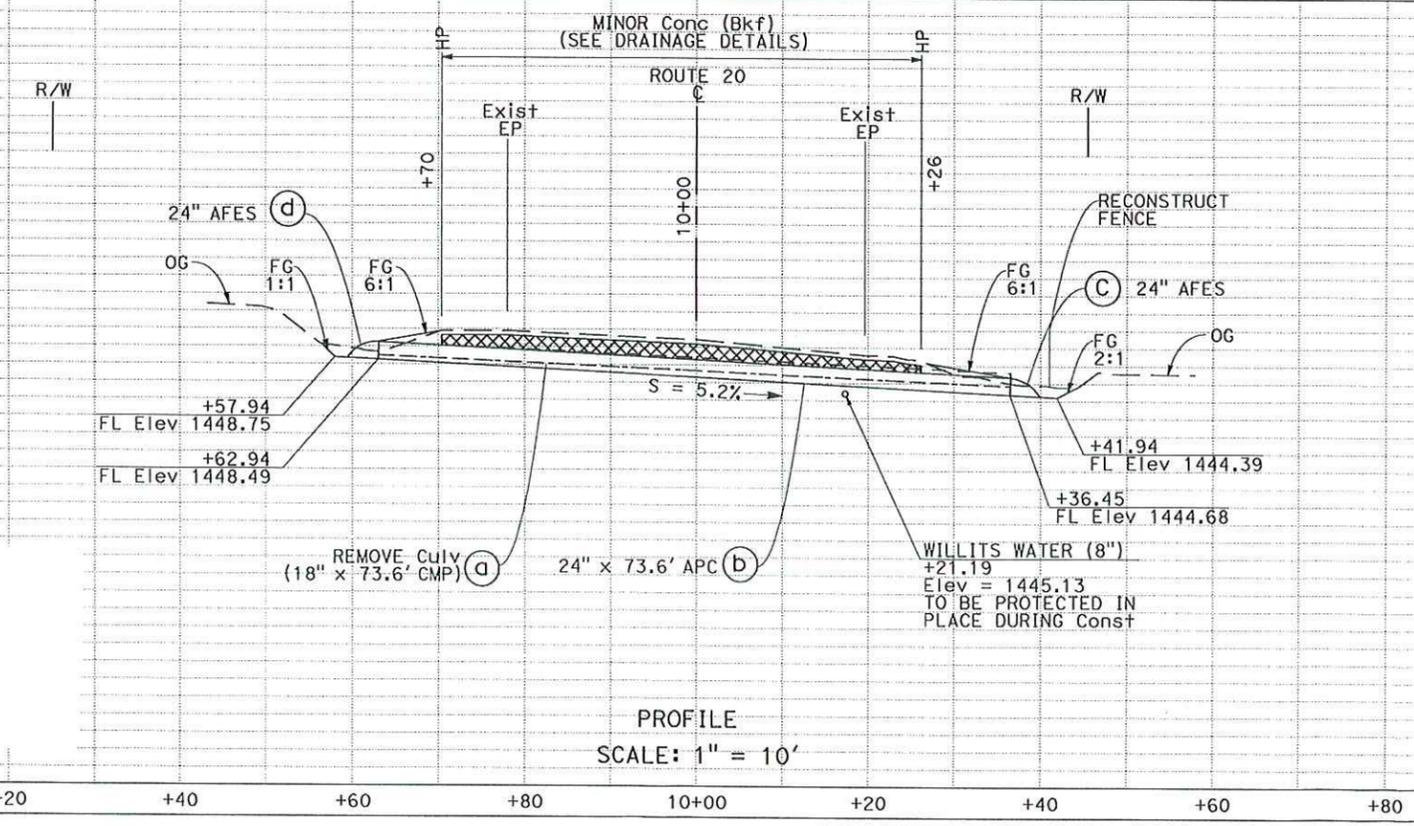
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REVISOR	REVISION
SARJU D. PATEL	DESIGNED BY
W. KEITH MACK	CHECKED BY
ROBERT E. POLCA	FUNCTIONAL SUPERVISOR
03-DESIGN	DEPARTMENT OF TRANSPORTATION
Caltrans	STATE OF CALIFORNIA



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 42 of 45



**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN  
**D-43**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER	DATE
SARJU D. PATEL	
No. C 65611	
Exp 09-30-13	
CIVIL	

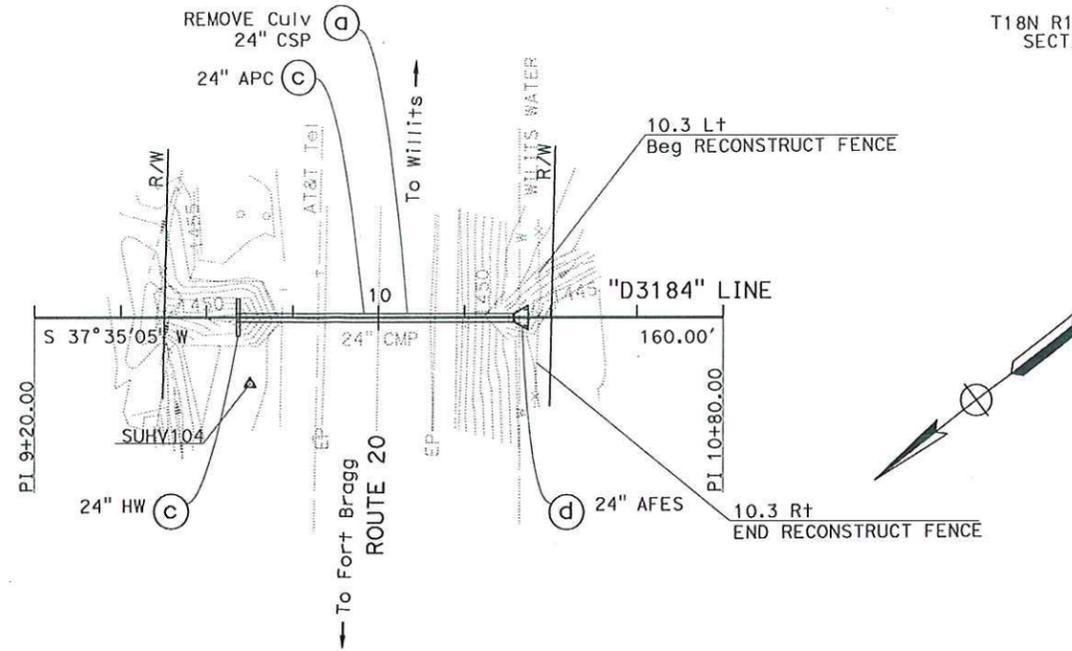
PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

T18N R14W MDB&M SECTION 14

**NOTES:**

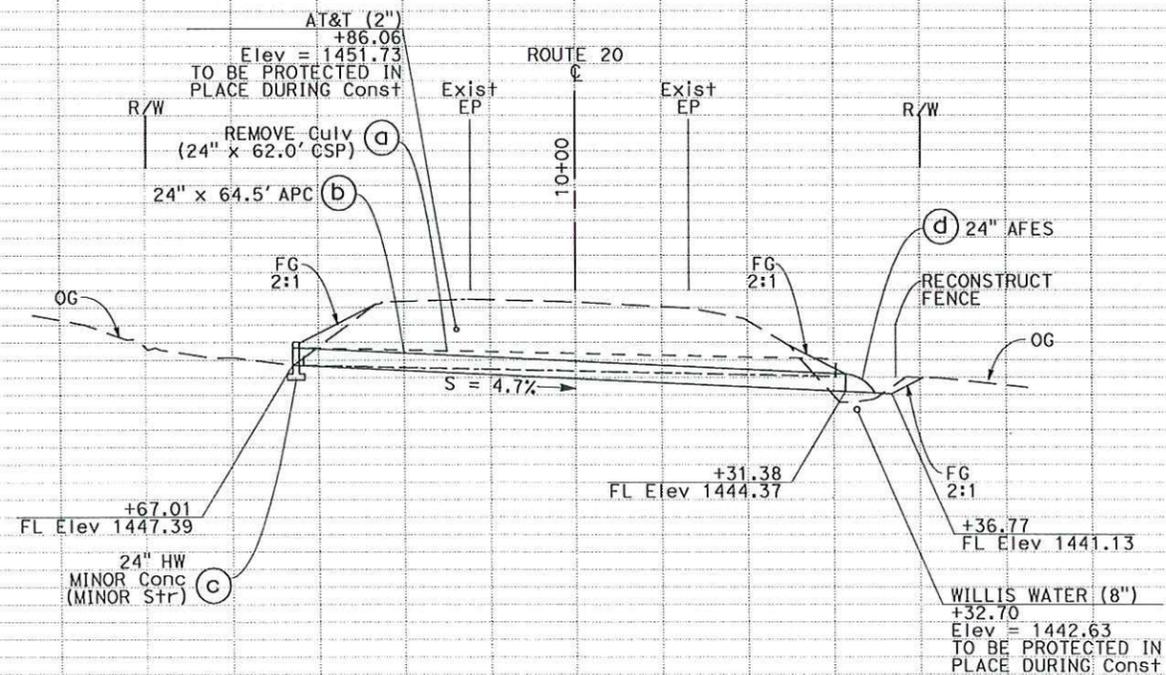
1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEPHONE AND WATER LINES. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.



PLAN  
**DRAINAGE SYSTEM No. 44**

ROUTE 20  
PM 31.84

SCALE: 1" = 20'



PROFILE

SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**

SCALE AS SHOWN

**D-44**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPPL. / J. OR	DESIGNED BY	REVISOR
<b>Et-Galtrans</b>	ROBERT E. POLAR	SARJU D. PATEL	W. KEITH MACK
<b>03-DESIGN</b>	CHECKED BY	CALCULATED-DESIGNED BY	DATE REVISED



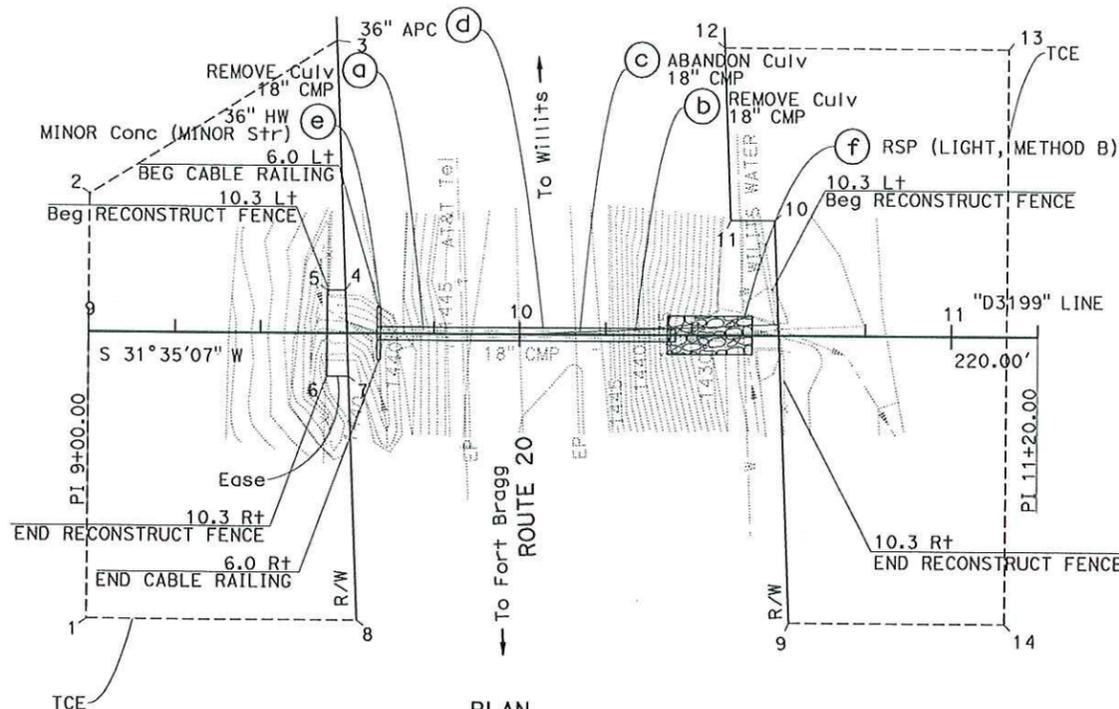
USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 43 of 45

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
3. FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
4. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN PLACE THE UNDERGROUND TELEPHONE AND WATER LINES. THE ENGINEER IS TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKING AT THIS LOCATION.

**EASEMENT AND TCE**

POINT	STATION	OFFSET
1	08+99.885	65.575 Rt
2	08+99.943	31.523 Lt
3	09+57.219	66.739 Lt
4	09+59.536	9.849 Lt
5	09+55.376	9.853 Lt
6	09+55.376	9.832 Rt
7	09+60.355	9.832 Rt
8	09+62.720	65.612 Rt



**DRAINAGE SYSTEM No. 45**

ROUTE 20  
PM 31.99

SCALE: 1" = 20'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

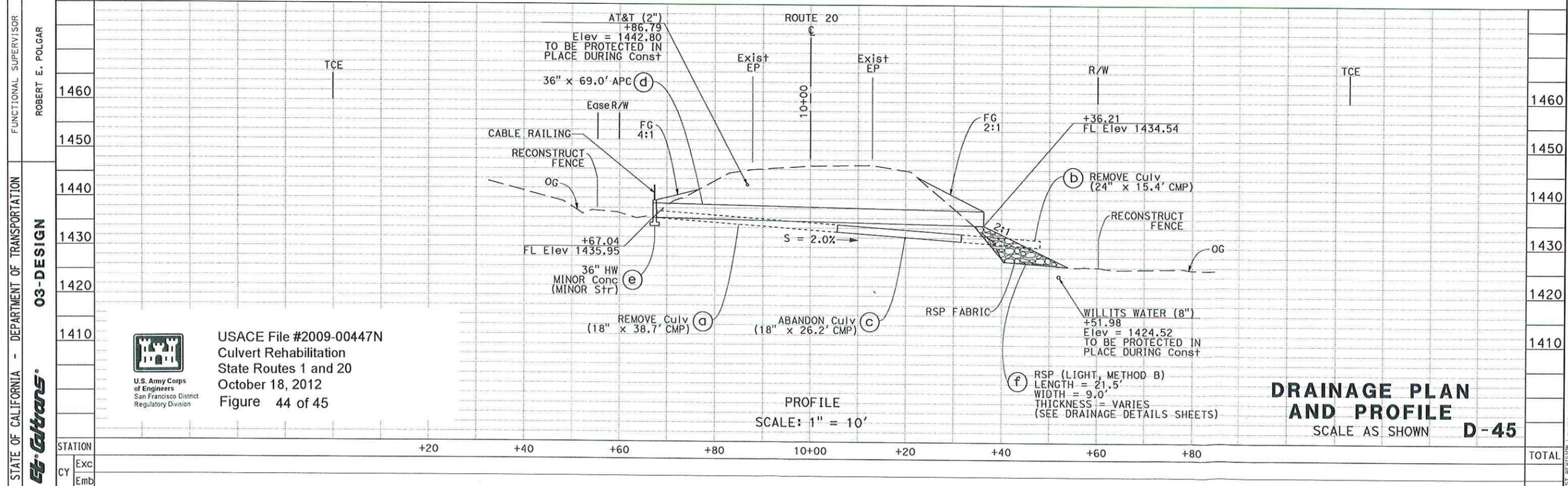
REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**TCE**

POINT	STATION	OFFSET
9	10+62.880	65.671 Rt
10	10+58.984	26.194 Lt
11	10+48.802	26.200 Lt
12	10+47.133	65.571 Lt
13	11+12.889	65.532 Lt
14	11+12.811	65.701 Rt



**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN **D-45**

USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 44 of 45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1, 20, 101	Var		

REGISTERED CIVIL ENGINEER	DATE
SARJU D. PATEL	
No. C 65611	
Exp. 09-30-13	
CIVIL	

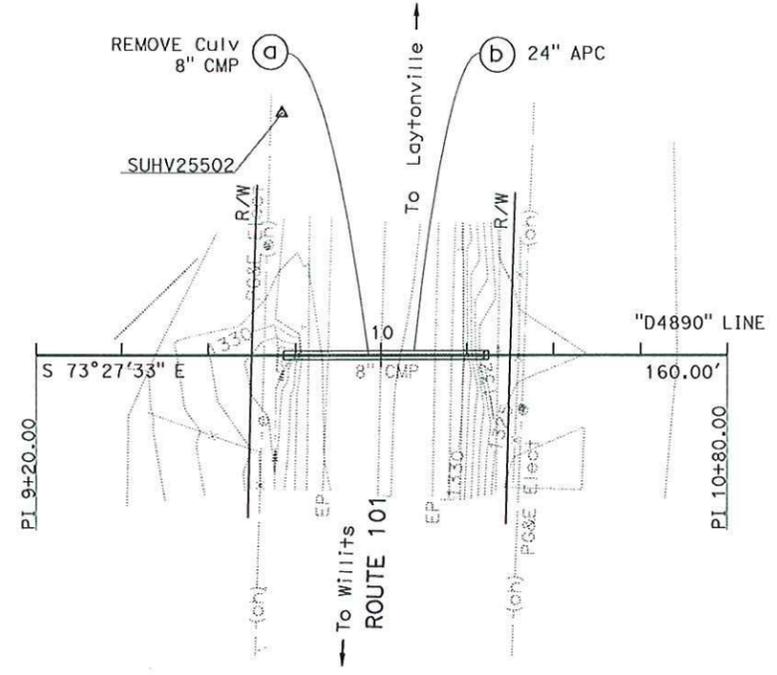
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

T18N R14W MDB&M  
SECTION 1

**NOTES:**

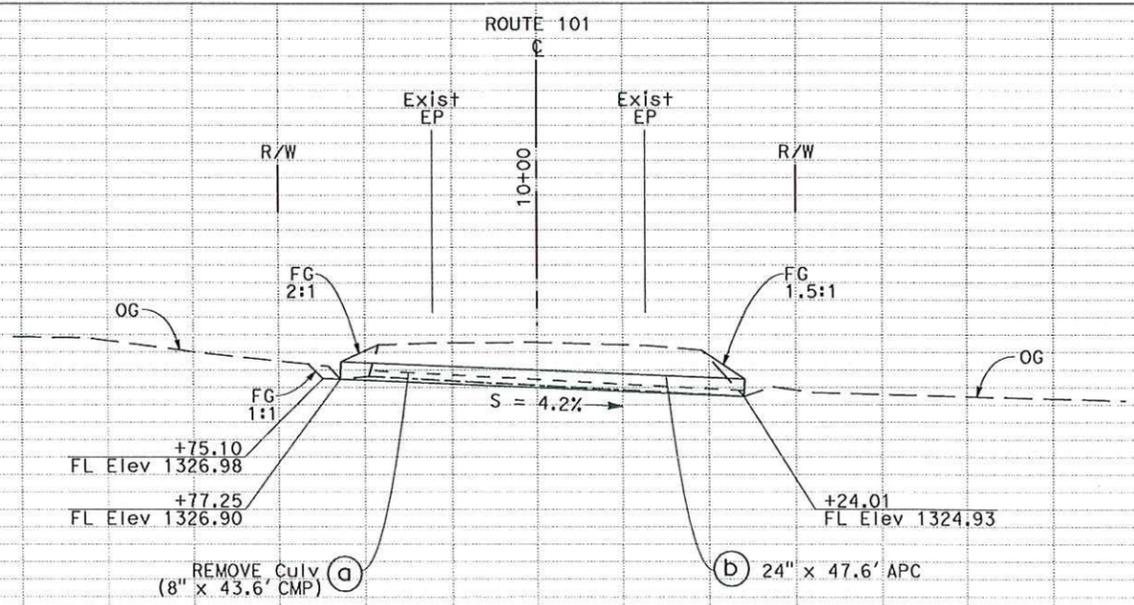
- FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.



PLAN  
**DRAINAGE SYSTEM No. 46**

ROUTE 101  
PM 48.90

SCALE: 1" = 20'



PROFILE  
SCALE: 1" = 10'

**DRAINAGE PLAN AND PROFILE**  
SCALE AS SHOWN  
**D-46**



USACE File #2009-00447N  
Culvert Rehabilitation  
State Routes 1 and 20  
October 18, 2012  
Figure 45 of 45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	ROBERT E. POLGAR
<b>Caltrans</b>	DESIGNED BY	SARJU D. PATEL
<b>03-DESIGN</b>	CHECKED BY	W. KEITH MACK
	REVISOR	
	DATE	

STATION	Exc	Emb	TOTAL
+20			
+40			
+60			
+80			
10+00			
+20			
+40			
+60			
+80			

DATE PLOTTED => 09-AUG-2011  
TIME PLOTTED => 09:42



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

April 19, 2010

In response refer to:  
2010/00776

Sandra Rosas  
Environmental Branch Chief  
Caltrans District 3  
703 B Street  
P.O. Box 911  
Marysville, California 95901-0911

Dear Ms. Rosas:

Thank you for the letter dated January 21, 2010, regarding the proposed rehabilitation of 49 culverts between Post Miles (PM) 3.87 and 47.19 on State Route (SR) 1, PM 13.76 and 31.99 on SR 20, and at PM 48.90 on SR 101 in Mendocino County, California (EA# 01-364320). The California Department of Transportation (Caltrans) proposes to use funding from the Federal Highway Administration (FHWA) to replace or repair the 49 culverts and has requested initiation of informal consultation pursuant to section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*) and the Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) with NOAA's National Marine Fisheries Service (NMFS). This response also serves as consultation under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act of 1934 (FWCA), as amended.

Caltrans will be acting as the lead agency as per the agreement with the FHWA in accordance with Section 6005 (a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (PL-109-59) to assume the FHWA Secretary's responsibilities under the National Environment Policy Act of 1969 42 USC 4351, *et seq.* and all or part of the FHWA Secretary's responsibilities for environmental review, consultation, or other action required under any environmental law with respect to one or more highway projects within the state.

The 49 culverts convey water from roadside ditches, intermittent streams and perennial streams and have deteriorated from heavy use or have exceeded the end of their design life. Eighteen of these culverts drain to anadromous waterways, including the North Fork of Big River, Broaduss and Elk Creeks. All 49 culvert repairs will take two seasons to complete. This consultation only analyzed the effects from work on the 18 culverts as the other 31 culverts under this project do not drain to anadromous streams and therefore will not have any effects to listed species or designated critical habitat. Work on the 18 culverts is scheduled for the first work season and all



repairs and replacements will be conducted on the upland banks, away from the wetted channels. The project activities are proposed to occur between May 15 and October 15 for the Elk Creek and North Fork Big River sites and August 1 and October 15 for the Broaddus Creek sites. Any extension to the proposed work window will be contingent upon NMFS' approval and weekly rain forecasts and conditions. Elk Creek and the Big River are coastal drainages and Broaddus Creek is a tributary to Outlet Creek, which is tributary to the Eel River.

Repairs involve the replacement of damaged sections with either a new section or with a liner installed into an existing section. Some culverts will be fitted with flared-end sections and/or headwalls to dissipate water energy and protect inlet and outlet ends of the culverts respectively. Rock slope protection, placed above the ordinary high water mark will also be installed at some locations to achieve these effects.

Fourteen of the culverts will be replaced while the remaining four will be repaired. Caltrans will use a half-width trenching construction technique for replacing culverts. All work will occur from the road surface and will be completed by trenching across one-half of the roadway while maintaining traffic on the other half. The excavated material from trenching will either be temporarily stored on the pavement within the work area or hauled to a designated disposal site. Any water existing within the culverts during the removal process will drain into the creek or river below.

Caltrans has incorporated best management practices (BMPs) into the project description to prevent pollution and minimize impacts to water quality with methods that include: refueling and maintaining equipment offsite; using sediment and erosion control devices; maintenance of drainage and culvert inlets; and other good housekeeping practices to maintain clean work areas. All 18 culverts are located between 12 to 60 feet from wetted channels and dewatering activities will not be employed.

### **Endangered Species Act**

Available information indicates that the following listed species and their respective designated critical habitat occupy Elk and Broaddus Creeks and the Big River in the vicinity of the 18 culvert locations:

**Northern California (NC) steelhead** (*Oncorhynchus mykiss*) Distinct Population Segment (DPS)  
Threatened (71 FR 834; January 5, 2006)  
Critical habitat (70 FR 52488; September 5, 2005)

**Central California Coast (CCC) coho salmon** (*O. kisutch*) Evolutionary Significant Unit (ESU)  
Endangered (70 FR 37160; June 28, 2005)  
Critical Habitat (64 FR 24049; May 5, 1999)

**Southern Oregon/Northern California Coast (SONC) coho salmon (*O. kisutch*) ESU**

Threatened (70 FR 37160; June 28, 2005)

Critical Habitat (64 FR 24049; May 5, 1999)

**California Coastal Chinook salmon (*O. tshawytscha*) ESU**

Threatened (70 FR 37160; June 28, 2005)

Critical Habitat (70 FR 52488; September 5, 2005)

Juvenile steelhead and coho salmon are expected to be rearing in all three water bodies during project activities. Adult steelhead and coho salmon begin upstream migrations in the winter and are also not expected to be present during project activities. Chinook salmon juveniles will have undergone smoltification and migrated from these creeks prior to project activities and are not expected to be present. Chinook salmon adults can start migrating as early as mid-August and could potentially be present in all the areas prior to work completion for the season; however, since work will not be conducted in wetted channels, take of these adults resulting from project activities is not expected.

Because project activities include no in-water work, direct impacts to aquatic species will be avoided. Project activities may disturb banks and may mobilize sediment resulting in minor and temporary increases in turbidity following the first rains. However, the BMPs proposed by Caltrans, are expected to minimize erosion and reduce sediment from entering channels and minimize any minor and temporary increases in turbidity. In addition to BMPs, Caltrans will also require a Storm Water Pollution and Prevention Plan (SWPPP) from their contractor that will prevent all construction materials, debris, and petroleum products from entering surface waters. By implementing BMPs and a SWPPP, the project will avoid or minimize impacts to listed salmonids. The minor and temporary increase in turbidity associated with this project is not expected to impair or harm listed steelhead and will not result in any long-term impacts to aquatic habitat.

Increased levels of turbidity may affect listed fish species by disrupting normal feeding behavior, reducing growth rates, increasing stress levels, and reducing respiratory functions. However, increased turbidity levels due to this project are expected to be considerably less than the thresholds commonly cited as the cause of the above behavioral and physical impacts. Because no equipment will be operated within the wetted channel and construction activities will not be conducted within the wetted channel of any of the creeks, the project is expected to avoid impacts to listed salmonids.

Primary constituent elements of designated critical habitat for listed salmonids in the project area include water quality and quantity, foraging habitat, and migratory corridors free of obstructions. The potential effects of this project to designated critical habitat for listed salmonids include minor, short-term disturbance of the bed and banks and vegetation removal associated with accessing the project sites. The amount of riparian vegetation that will be removed will be minimal. Because equipment will not be operated within the wetted channel nor will any construction activities be conducted within the wetted channel, and BMPs will be implemented, the project is expected to avoid impacts to designated critical habitat. When the project is completed, no ongoing adverse impacts to designated critical habitat are expected. The culvert

repairs are expected to prevent future performance failures that could lead to increased sediment releases and bank failures.

Based on the best available information, NMFS concurs with Caltrans' determination that the proposed project is not likely to adversely affect the NC steelhead DPS, CC Chinook salmon ESU, SONC coho salmon ESU, and the CCC coho salmon ESU or designated critical habitat for these species. This concludes consultation in accordance with 50 CFR 402.13(a) for the proposed culvert repairs and replacements along SR 1, 20, and 101 in Mendocino County, California. However, further consultation may be required if: (1) new information becomes available indicating that listed species or critical habitat may be affected by the project in a manner or to an extent not previously considered; (2) current project plans change in a manner that causes an effect to listed species or critical habitat in a manner not previously considered, or (3) a new species is listed or critical habitat designated that may be affected by the action.

### **Magnuson-Stevens Fishery Conservation and Management Act**

The project area is within an area identified as EFH for the Pacific Coast Salmon Fishery Management Plan (FMP). NMFS has evaluated the proposed project for potential adverse effects to EFH pursuant to Section 305(b)(2) of the MSA. Under the EFH implementing regulations [50 CFR 600.810(a)], the term "adverse effect" is defined as any impact that reduces quality and/or quantity of EFH and may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quantity and/or quality of EFH. Potential adverse effects to EFH from project activities include temporary increase in turbidity in adjacent waters following excavation activities. These impacts are expected to be minor as described above.

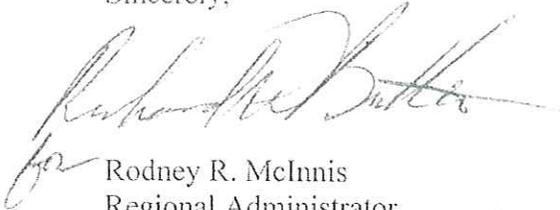
NMFS has determined that the proposed action would adversely affect EFH for Chinook and coho salmon. However, the proposed action contains adequate measures to avoid, minimize, and mitigate the adverse effects to EFH. Therefore, NMFS has no EFH Conservation Recommendations to provide. Pursuant to 50 CFR 600.920(l), Caltrans must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH.

### **Fish and Wildlife Coordination Act**

The purpose of the FWCA is to ensure that wildlife conservation receives equal consideration, and is coordinated with other aspects of water resources development [16 U.S.C. 661]. The FWCA establishes a consultation requirement for federal departments and agencies that undertake any action that proposes to modify any stream or other body of water for any purpose, including navigation and drainage [16 U.S.C. 662(a)]. Consistent with this consultation requirement, NMFS provides recommendations and comments to federal action agencies for the purpose of conserving fish and wildlife resources. The FWCA allows the opportunity to offer recommendations for the conservation of species and habitats beyond those currently managed under the ESA. NMFS has no FWCA recommendations to offer regarding this project.

If you have questions concerning this consultation, please contact Dave Walsh at (707) 575-6016, or by email at: dave.walsh@noaa.gov.

Sincerely,



Rodney R. McInnis  
Regional Administrator

cc: Jennifer Olah, Caltrans District 3  
Copy to File Administrative Record # 151422SWR2010SR00083



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Arcata Fish and Wildlife Office

1655 Heindon Road

Arcata, CA 95521

(707) 822-7201

FAX (707) 822-8411



In Reply Refer To:  
1-14-2002-1190.2

January 22, 2003

Deborah L. Harmon  
Chief, Environmental Management Branch E1  
Caltrans District 1  
P.O. Box 3700  
Eureka, CA 95502-3700

**Subject: Informal Consultation on the Effects of the Highway 1 Culvert Replacement Project (EA 01-364300) on Point Arena Mountain Beaver**

Dear Ms. Harmon:

This letter responds to your September 24, 2002, letter requesting the U.S. Fish and Wildlife Service's (Service) concurrence with your determination of effects on Federally listed species for the Highway 1 culvert replacement project, Mendocino County, California. You have determined that the project may affect but is not likely to adversely affect the endangered Point Arena mountain beaver (*Aplodontia rufa nigra*).

The California Department of Transportation (Caltrans) has submitted a biological assessment (BA) and initiated informal section 7 consultation on behalf of the Federal Highway Administration (FHWA) consistent with FHWA's April 24, 2002, delegation of authority to conduct informal consultation to your Department per 50CFR402.08 (*Designation of Non-Federal Representative*).

This consultation is based on information provided in your September 2002, BA and other information shared among staff of the Arcata Fish and Wildlife Office (AFWO), Peter Lewendal of your staff, and Julian Colescott of North State Resources, Mt. Shasta, California. The BA contains a complete description of the proposed action and its effects on the species. A complete administrative record for this consultation is on file in this office. This response is prepared in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act).

As part of the development of the BA and project design, surveys were conducted July 1, 2 and 3, 2002, by biologists Julian Colescott of North State Resources and Kim Fitts of Bioconsultant, near the seven culverts. The surveys were conducted in habitat within 100 feet of the area of potential effects (APE), which includes staging areas and the locations of all other work activities proposed at each culvert location. A 100 percent search was conducted in all habitats,

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1/22/03

suitable and unsuitable, in the APE.

The overall project proposes to replace up to 77 failing culverts along Highways 1, 20 and 101 in Mendocino County, California. Seven of these culverts along Highway 1 are located within the known range of the Point Arena mountain beaver, or within its suspected range (i.e., within approximately 5 miles of the known range). Of the seven culverts within this range only one, at post mile (PM) 24.43, has evidence of Point Arena mountain beaver in the vicinity, based on the 2002 surveys. The 900 mm-diameter, 17.7 m-long culvert at this site will be replaced using equipment including, but not limited to, backhoes, excavators, dump trucks, pavement saws, and mechanical brushers. Culvert design calls for a 7.9 percent slope, with ground level inlet and outlet placement to reduce erosion and facilitate the movement of Point Arena mountain beaver and other wildlife under the roadway. Construction is anticipated to take less than one week per culvert, and is scheduled to occur during the summer of 2004.

During surveys, suitable habitat was found near four of the culverts, at PMs 24.43, 31.22, 8.09 and 27.75. One active and one inactive burrow system were found near the PM 24.43 culvert, adjacent to Irish Gulch, where several Point Arena mountain beaver populations are known to occur within 1 mile of this proposed project site. The active burrow system is located 95 feet from the edge of the APE, and the inactive burrow system is located 93 feet east of the APE. No other active or inactive burrows were found near the six other work sites. These surveys and their results are described in detail in the BA.

The following measures were incorporated into the project design to minimize potential adverse effects to occupied burrows of mountain beavers near the PM 24.43 site. Culvert replacement activities are limited to the period July 1 through December 14 to avoid the breeding season of the species. Habitat disturbance shall be limited to the smallest area feasible around the culvert inlet and outlet in which the work can be done; exclusionary fence shall be installed to delineate the work area. Dogs will not be allowed on the site. At the PM 24.43 site, surveys will be conducted within 2 weeks prior to construction to determine if the burrow system has expanded further into the proposed work area. If it is determined that Point Arena mountain beaver have expanded their burrow system closer to the actual work area, Caltrans shall reinitiate consultation prior to any construction activities.

A complete description of the project design and mitigation measures can be found in the BA.

We concur with your determination that the proposed project may affect but is not likely to adversely affect the Point Arena mountain beaver. Our concurrence is based on the following factors:

1. Surveys for Point Arena mountain beaver in the vicinity of culverts within the known and suspected range of the species located only one active burrow system, at the PM 24.43 culvert replacement site. This active burrow system was located 95 ft (29 m) from the edge of the proposed work area. Habitat near the work site is suitable for Point Arena mountain beaver use, but habitat on the opposite side of the road is marginal due to its more xeric nature and small size, as evidenced by an abandoned burrow system. Caltrans has

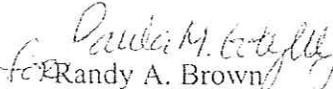
incorporated measures into its project design to effectively minimize the risk of adverse effects to these burrows and this habitat, as described in the BA and summarized above. No occupied suitable habitat of the species will be modified by the proposed action. Suitable habitat within the actual work area, currently unoccupied, may be temporarily modified by cutting or mowing to facilitate work at the culvert inlet and outlet, but is anticipated to rapidly regrow following construction. In addition, the project calls for surveys within 2 weeks prior to actual construction to ensure that any expansion of the known burrow system closer to the work area following this consultation are addressed through reinitiation of consultation, if needed. These measures ensure that Point Arena mountain beaver have a low and unquantifiable likelihood of being directly or indirectly affected by the proposed action, and have a very low risk of being taken.

2. The proposed project will not use equipment capable of generating sounds or vibrations substantially exceeding ambient conditions on the existing highway. The project will not entail the use of explosives. Pile driving will not occur as part of this project. Guard rails and similar structures, if needed, will be installed by the use of other techniques, such as to auger individual post holes. Proposed work activities are limited to an area not less than 95 ft from the current location of active burrows for the species. All construction activities will occur outside of the breeding season. Thus, Point Arena mountain beaver are not likely to be adversely affected by noise or vibrations generated as part of this construction activity.

This concludes informal consultation on the proposed Highway 1 culvert replacement project. Unless new information reveals that the proposed actions (1) may affect listed species in a manner or to an extent not considered in your correspondence, (2) the action is modified in a manner that causes an effect on the listed species or critical habitat not considered in your correspondence, or (3) a new species or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the Act is necessary. Please contact staff biologist Ray Bosch at (707) 822-7201 if you should have further questions regarding this consultation.

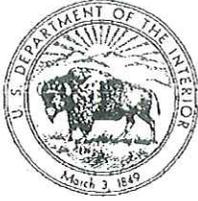
The Service appreciates the efforts of Caltrans to protect the Point Arena mountain beaver at this project site, and your agencies' efforts to contribute to the available data on this species through survey activities.

Sincerely,

  
 Randy A. Brown  
 Acting Project Leader

cc:

Caltrans District 1, Eureka, CA (Attn: Peter Lewendal)  
 FHWA, Sacramento (Attn: Harry Khani)  
 North State Resources, Redding (Attn: Julian Colescott)  
 Bioconsultant, Santa Rosa (Attn: Kim Fitts)



## United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Arcata Fish and Wildlife Office

1655 Heindon Road

Arcata, California 95521

Phone: (707) 822-7201 FAX: (707) 822-8411



In Reply Refer To:  
81331-2010-I-0052

MAY 24 2010

Sandra E. Rosas, Chief  
Environmental Management, M2 Branch, District 3  
California Department of Transportation  
703 B Street  
P.O. Box 911  
Marysville, California 95901-0911

Subject: Informal Consultation for the Mendocino Culvert Rehabilitation Project, Mendocino County, California

Dear Ms. Rosas:

We have reviewed your request, dated 26 April 2010 and received 28 April 2010, for reinitiation of informal consultation with the Fish and Wildlife Service (Service) for the Mendocino Culvert Rehabilitation Project (Caltrans EA 01-364320) on State Routes 1, 20, and 101. This response is prepared in accordance with the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act), and its implementing regulations (50 CFR § 402). The California Department of Transportation (Caltrans) is seeking concurrence that the proposed project may affect, but is not likely to adversely affect the federally listed as endangered Point Arena mountain beaver (*Aplodontia rufa nigra*; PAMB) and the federally listed as threatened California red-legged frog (*Rana draytonii*; CRLF).

The proposed project includes removal and rehabilitation or replacement of standard drainage inlet and outlet structures on 49 culverts at the following locations: on State Route 1 between Post Mile (PM) 3.87, near the town of Anchor Bay, and PM 47.19, near the town of Little River; State Route 20 between PM 13.76, near Fort Bragg, and PM 31.99, west of Willits; and State Route 101 at PM 48.90 north of Willits.

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IN AMERICA 

### **Point Area Mountain Beaver**

The December 2009 Habitat Assessment (Habitat Assessment) prepared by Caltrans, concluded that PAMB habitat was present at two proposed project locations: State Route 1 at PM 24.43 and PM 31.22. Surveys for PAMB were conducted in February 2010 at those two locations (and at State Route 1, PM 8.09, 27.75, and 29.27) and no burrows were found. As described in the Habitat Assessment, because burrows were not present at any of the surveyed locations, avoidance measures for PAMB will not be incorporated into the project.

#### *Concurrence:*

The Service concurs with your determination that proposed culvert removal, rehabilitation, or replacement activities may affect, but are not likely to adversely affect PAMB; based on the absence of burrows at proposed project locations.

According to the Service's 2005 "*Draft Guidelines for Project Related Habitat Assessments and Surveys for Point Arena Mountain Beaver (Aplodontia rufa nigra)*" survey results are valid for 2 years; if conducted within 500 feet of the impact area. Therefore, if project construction does not begin prior to February 2012, additional PAMB surveys will need to be conducted.

### **California Red-legged Frog**

Caltrans has determined that potential habitat for the CRLF is located at 16 project locations along State Route 1. These locations are within the area described in our letter, dated 18 June 2009, to the Federal Highway Administration, which extended regulatory protections to all red-legged frogs within the Point Arena, Garcia, and Gualala hydrographic units of Mendocino County. In addition, two of the culvert locations, PM 24.43 and 27.75, are within designated critical habitat for CRLF (Critical Habitat Unit MEN-1). The closest CRLF occurrence record within the California Natural Diversity Database (CNDDB; Rarefind version March 2010) is Mallo Pass Creek (2 July 2002) at State Route 1, approximately 0.9 mile north of the PM 24.43 culvert and about 1.7 miles south of the PM 27.75 culvert. The remaining 14 culvert locations are 3.2 to 10 miles from the nearest CRLF occurrence.

Caltrans proposes to implement the following measures to avoid adverse effects to CRLF and its designated critical habitat:

- A qualified biologist will conduct Worker Environmental Awareness Training (Awareness Training) for construction workers prior to beginning of construction activities. Awareness Training will include a brief review of the biology of the CRLF. Awareness Training will also include guidelines that must be followed by all construction personnel to avoid take of CRLF and minimize potential effects to all sensitive biological resources during the construction period.

The qualified biologist will appoint a biological monitor (e.g., the crew foreman) who will be responsible for ensuring that all crewmembers comply with the

guidelines. Awareness Training will be conducted for new personnel before they can participate in construction activities. The qualified biologist, through Caltrans' Resident Engineer, will ensure that work is stopped and the Service is contacted if a CRLF at any life stage is encountered during project activities.

- A qualified biologist will be on-site to monitor all initial ground disturbing construction activities. The biologist's duties will include surveying the project area for all life stages of CRLF immediately prior to ground disturbing activities.
- If a CRLF is encountered during any project activities, construction will cease in the area and the Service will be notified to determine how to proceed.
- Water pumps will be screened with wire mesh screens no larger than 0.2 inch to prevent CRLF larvae, juveniles, and adults from entering the pump system.
- All food related trash will be disposed of in closed containers and removed from the project area at least twice per week during the construction period.
- Contractors will implement a toxic materials control and spill response plan. Equipment refueling will only occur at staging areas where fuel will not enter the floodplain.
- All vegetation removal activities will be done with the use of hand tools only (including chainsaws).
- The number of access routes, numbers and sizes of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the project goal. Routes and boundaries will be clearly demarcated.

#### *Concurrence*

The Service concurs with your determination that proposed culvert removal, rehabilitation, or replacement activities may affect, but are not likely to adversely affect the CRLF, based on the following factors:

1. Surveys for CRLF prior to work activities will determine whether the species is present at the 16 project sites that may contain suitable habitat and implementation of Awareness Training will ensure that construction activities will cease if CRLF are detected during work activities.
2. Suitable aquatic breeding habitat will not be removed. This is especially important at the two project sites (PM 27.43 and 27.75) that are within CRLF designated critical habitat.

### Conclusion

This concludes informal consultation on the proposed Mendocino Culvert Rehabilitation Project. However, obligations under section 7 of the Act, as amended, should be reconsidered if: (1) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not previously considered; 2) this action is subsequently modified in a manner that was not considered; 3) a new species is listed or critical habitat designated that may be affected by the action; or 4) you are unable to implement all of the measures described above.

Thank you for your coordination on this project. Please contact staff biologist Gregory Schmidt at (707) 825-5103 should you have further questions regarding this consultation.

Sincerely,

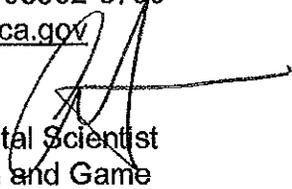
A handwritten signature in black ink, appearing to read "Nancy J. Finley". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Nancy J. Finley  
Field Supervisor

## Memorandum

**Date:** November 6, 2012

**To:** Mr. Steven Blair  
California Department of Transportation  
1656 Union Street  
Eureka, California 95502-3700  
[Steven\\_Blair@dot.ca.gov](mailto:Steven_Blair@dot.ca.gov)

**From:** Mr. Tony LaBanca   
Senior Environmental Scientist  
Department of Fish and Game  
619 Second Street  
Eureka, California 95501

**Subject:** Amendment Number 1 of Lake or Streambed Alteration Agreement  
Notification No. 1600-2012-0088-R1  
Culvert Replacement Project  
State Highway 1 at Post Mile 4.11  
Unnamed Tributary to the Pacific Ocean, Mendocino County

The Department of Fish and Game (DFG) has received your request to amend Lake or Streambed Alteration Agreement 1600-2012-00088-R1 (Agreement) and the required fee in the amount of \$560.25 for a major amendment. Your request to amend the Agreement includes: a) remove headwall at culvert inlet, b) remove sections of old culvert at outlet and inlet ends, c) install a new 24-inch, 77.3-foot-long steel culvert, d) install new headwall at inlet and e) add rock slope protection at inlet and outlet.

DFG hereby agrees to amend the agreement with the addition of the following conditions:

1. Condition 2.22 in Agreement 1600-2012-0008-R1 is hereby voided and replaced with the following conditions 2-3 below.
2. Proposed work for this Amendment shall adhere to the plans outline in the attached *Drainage Plan and Profile D-3* (see Attachment).
3. Biologists shall conduct pre-construction surveys for California red-legged frog. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins.
4. All other conditions in the Agreement remain in effect unless otherwise noted herein.

Please sign and return one copy of this letter to acknowledge the amendment. Copies of the Agreement and this amendment must be readily available at project worksites and must be presented when requested by a Department representative or agency with inspection authority.

If you have any questions regarding this letter, please contact Rick Macedo at (707) 928-4369 or [rmacedo@dfg.ca.gov](mailto:rmacedo@dfg.ca.gov).

**ACKNOWLEDGEMENT**

I hereby agree to the above-referenced amendment.

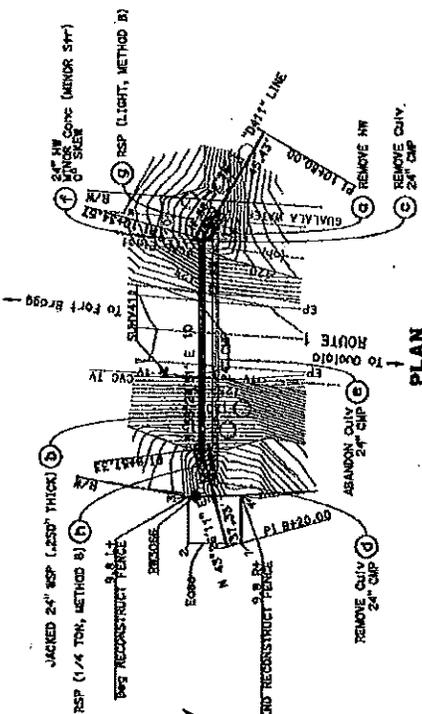
Print Name: STEVEN BLAIR Date: 1-17-13

Signature: 

Attachment

DIST	COUNTY	ROUTE	LOCAL PROJECT	DATE
01	MON	1, 20, 101	VEP	12-1-11

TYIN RISK ABRASH  
SECTION 10



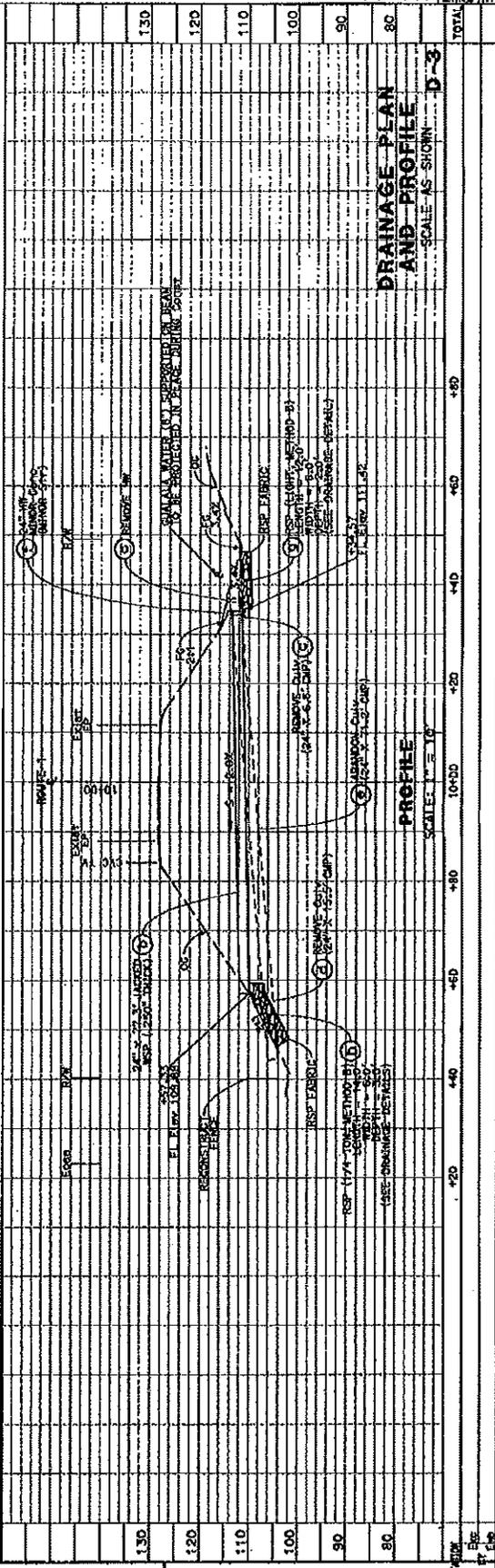
**DRAINAGE SYSTEM NO. 3**

ROUTE 1  
PM 4.11  
SCALE: 1" = 20'

**EASEMENT**

POINT STATION	OFFSET
1	9+22.84 9.265 FT
2	9+22.85 9.455 FT
3	9+40.01 9.585 FT
4	9+40.71 9.86 FT

- NOTES:**
- FOR ACCURATE DRAFT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
  - THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.
  - FOR ROCK SLOPE PROTECTION DETAILS SEE DRAINAGE DETAIL SHEETS.
  - CONTRACTOR TO COORDINATE WITH THE ENGINEER TO PROTECT IN JACKED UNDERLINE. THE ENGINEER IS TO BE PROVIDED A WORKING DMS PRIOR TO WORKING AT THIS LOCATION.



**DRAINAGE PLAN AND PROFILE**

SCALE AS SHOWN

D-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	ROBERT E. POLAK	CHECKED BY	W. REINHOLD	DATE REVISION	REVISION BY	SARAH D. PAVEL	DATE REVISION	REVISION BY
--	-----------------------	-----------------	------------	-------------	---------------	-------------	----------------	---------------	-------------

**CALIFORNIA DEPARTMENT OF FISH AND GAME**  
NORTHERN REGION  
601 LOCUST STREET  
REDDING, CALIFORNIA 96001

RECEIVED

OCT 31 2012



**LAKE OR STREAMBED ALTERATION AGREEMENT**  
NOTIFICATION No. 1600-2012-0088-R1  
Numerous Watersheds

D. F. G. – EUREKA

#### **46 Encroachments**

Mr. Steven Blair representing the Dept. of Transportation (Caltrans)  
CULVERT REHABILITATION PROJECT; STATE HIGHWAYS 1, 20 AND 101;  
NUMEROUS WATERSHEDS, MENDOCINO COUNTY

This Lake or Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Game (DFG) and Mr. Steven Blair (Permittee), representing the California Department of Transportation (Caltrans).

#### **RECITALS**

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified DFG on April 9, 2012 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1602, DFG has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

## PROJECT LOCATION

Project locations vary over a large area on State Highways 1, 20 and 101 within numerous watersheds in Mendocino County. The table below includes Post Mile (PM) information. Locations 1 through 19 are on State Highway 1, locations 20 through 45 are on State Highway 20 and location 46 is on State Highway 101:

A. Project		A. Project	
Location	Post Mile	Location	Post Mile
1	3.87	24	18.37
2	3.9	25	18.82
3	4.11	26	18.87
4	5.33	27	18.89
5	5.38	28	19.16
6	5.48	29	19.5
7	6.6	30	27.32
8	8.09	31	28.13
9	24.43	32	28.14
10	27.75	33	28.3
11	29.27	34	28.79
12	29.68	35	29.39
13	30.18	36	29.77
14	31.22	37	29.85
15	34.74	38	30.21
16	35.04	39	30.29
17	41.19	40	30.59
18	46.18	41	30.67
19	47.19	42	31
20	13.76	43	31.72
21	17.05	44	31.84
22	18.12	45	31.99
23	18.23	46	48.9

## PROJECT DESCRIPTION

The project involves 46 encroachments: a culvert rehabilitation project that will replace and/or upgrade existing drainage culvert crossings on non-fish bearing streams most of which are ephemeral. Some vegetation will be removed as a result of this project.

## PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: California red-legged frog (*Rana draytonii*), northern red-legged frog (*Rana aurora*), foothill yellow-legged frog (*Rana boylei*), downstream populations of steelhead (*Oncorhynchus mykiss*), coho salmon (*O. kisutch*) and other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include: direct and/or incidental take, impede up- and/or down-stream migration, damage to spawning and/or rearing habitat and potential cumulative impacts.

## **MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES**

### **1. Administrative Measures**

Permittee shall meet each administrative requirement described below.

- 1.1 Documentation at Project Site. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to DFG personnel, or personnel from another state, federal, or local agency upon request.
- 1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 Notification of Conflicting Provisions. Permittee shall notify DFG if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, DFG shall contact Permittee to resolve any conflict.
- 1.4 Project Site Entry. Permittee agrees that DFG personnel may enter the project site at any time to verify compliance with the Agreement.

### **2. Avoidance and Minimization Measures**

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

- 2.1 Except where otherwise stipulated in this Agreement, all work shall be in accordance with the forms, work plans, biological reports and maps submitted with Notification No. 1600-2012-0088, as modified or amended on April 9, 2012.
- 2.2 All work within the bed, bank and channel shall be confined to the period June 15 through October 15 of each year. Work may be conducted in or near the stream during the late season work period October 15 through November 1, provided adherence to all conditions in this Agreement and a) – c) below.

- a) The Permittee shall complete any unfinished encroachment work, including erosion control measures, within 24 hours of DFG directing the Permittee to do so.
  - b) Prior to any work at a site, the Permittee shall stock-pile erosion control materials at the site. All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance or repair or removal shall be treated for erosion immediately upon completion of work on the crossing, and prior to the onset of precipitation capable of generating runoff.
  - c) When a 7-day National Weather Service forecast of rain includes a minimum of 5 consecutive days with any chance of precipitation, 3 consecutive days with a 30% or greater chance of precipitation, or 2 consecutive days of 50% or greater chance of precipitation, the Permittee shall finish work underway at encroachment and refrain from starting any new work at encroachment prior to the rain event.
- 2.3 No fill material shall be placed within a stream except as specified in this Agreement.
  - 2.4 All heavy equipment (including parts e.g., buckets) that will be entering the stream channel shall be free of materials deleterious to aquatic life including oil, grease, hydraulic fluid, soil and other debris. Cleaning of equipment shall take place outside of the channel and prior to entering the water.
  - 2.5 Any equipment or vehicles driven and/or operated within or adjacent to the stream channel shall be checked and maintained in a manner which prevents materials that, if introduced to water, could be deleterious to aquatic life, wildlife, or riparian habitat.
  - 2.6 Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. The disturbed portions of any stream channel or lake margin within the high water mark of the stream or lake shall be restored to as near their original condition as possible. Restoration shall include re-vegetation of areas stripped or exposed by project activities. Slash pack, rock, or other erosion protection suitable to DFG shall be placed in areas where vegetation cannot reasonably be expected to become reestablished.
  - 2.7 Adequate and effective erosion and siltation control measures shall be used to prevent sediment or turbid or silt-laden water from entering streams. Where needed, the Permittee shall use native vegetation or other treatments including native slash, jute netting, straw wattles, and geotextiles to protect and stabilize soils. Geotextiles, fiber rolls, and other erosion control treatments shall not contain plastic mesh netting.
  - 2.8 All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance or repair, shall be treated for erosion prior to the

onset of precipitation capable of generating run-off or the end of the yearly work period, whichever comes first. Restoration shall include using native slash or seeding and mulching of all bare mineral soil exposed in conjunction with encroachment work. Erosion control shall consist of at least 2 to 4 inches of certified weed-free straw mulch and 100 lbs/acre equivalent barley seed for native mixes. No annual (Italian) ryegrass (*Lolium multiflorum*) shall be used.

- 2.9 Encroachments and associated structures, fills, and other exposed soils shall be armored as needed to protect fill, abutments, and the stream channel and banks from erosion.
- 2.10 All large woody debris (LWD) excavated during crossing construction or deconstruction shall be used on site or at other locations throughout the property for streambed and bank stabilization or erosion control. LWD shall be sufficiently anchored or keyed-in to resist movement during high flows and placed in a manner that prevents undercutting of streambanks.
- 2.11 The Permittee shall provide site maintenance including, but not limited to, re-applying erosion control to minimize surface erosion and ensuring drainage structures, streambeds and banks remain sufficiently armored and/or stable.
- 2.12 Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the ordinary high water mark before such flows occur or the end of the yearly work period, whichever comes first.
- 2.13 Refueling of equipment and vehicles and storing, adding or draining lubricants, coolants or hydraulic fluids shall not take place within or adjacent to any stream. All such fluids and containers shall be disposed of properly. Heavy equipment parked within or adjacent to the stream shall use drip pans or other devices (e.g., absorbent blankets, sheet barriers or other materials) as needed to prevent soil and water contamination.
- 2.14 All activities performed in the field which involve the use of petroleum or oil based substances shall employ absorbent material designated for spill containment and clean up activity on site for use in case of accidental spill. Clean-up of all spills shall begin immediately. The Permittee shall immediately notify the State Office of Emergency Services at 1-800-852-7550. DFG shall be notified by the Permittee and consulted regarding clean-up procedures.
- 2.15 No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from construction work, or associated activity of whatever nature shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into Waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. (Not applicable to material installed permanently or temporarily as part of the project activities).

- 2.16 Upon DFG determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation, shall be halted until effective Department approved control devices are installed, or abatement procedures are initiated.
- 2.17 Installation or modification of culverts shall be such that water flow is not impaired and upstream or downstream passage of all aquatic life-forms is assured at all times.
- 2.18 Equipment shall not operate in a live (flowing) stream or wetted channel except as may be necessary to construct and remove in-stream structures to catch and contain water (i.e., cofferdams) to divert stream flow and isolate the work site, or as otherwise specifically provided for in this Agreement.
- 2.19 To prevent the release of materials that may be toxic to fish and other aquatic species, poured concrete shall be isolated from stream flow and allowed to dry/cure for a minimum of 30 days. As an alternative, the Responsible Party shall monitor the pH of water that has come into contact with the poured concrete. If this water has a pH of 9.0 or greater, the water shall be pumped to tanker truck or to a lined off-channel basin and allowed to evaporate or be transported to an appropriate facility for disposal. During the pH monitoring period, all water that has come in contact with poured concrete shall be isolated and not allowed to flow downstream or otherwise come in contact with fish and other aquatic resources. The water shall be retested until pH values become less than 9.0. Once this has been determined, the area no longer needs to be isolated and water may be allowed to flow downstream. Results of pH monitoring shall be made available to DFG upon request.
- 2.20 Where flowing water is present during operations:
  - a) Biologist shall be on-site to identify and, if necessary, remove and relocate amphibians, reptiles or other aquatic species.
  - b) Cofferdams shall be installed to divert stream flow and isolate and dewater the work site, and to catch any sediment-laden water and minimize sediment transport downstream. Cofferdams shall be constructed of non-polluting materials including sand bags, rock, and/or plastic tarps. Mineral soil shall not be used in the construction of cofferdams.
  - c) Flowing water shall be cleanly bypassed and/or prevented from entering the work area through pumping or gravity flow, and cleanly returned to the stream below the work area. Flow diversions shall be done in a manner that shall prevent pollution and/or siltation and provides flows to downstream reaches.
  - d) The Responsible Party shall remove any turbid water and sediment present in the work area prior to restoring water flow through the project site, and place them in a location where they cannot enter the Waters of the State.

SITE-SPECIFIC MEASURES:

State Highway 1 Projects:

- 2.21 At Location 1 (PM 3.87) on Highway 1, biologists shall conduct pre-construction surveys for California red-legged frog. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins.
- 2.22 At Location 3 (PM 4.11), the notification received on April 9, 2012 proposes installation of a 20-inch plastic pipe liner. Due to the apparent collapse of the existing 24-inch CMP, a complete replacement may be necessary. This Agreement does not authorize a complete replacement at this location. An amendment will be required if replacement is necessary. The amendment notification shall include an update on projected impacts. Biologists shall conduct pre-construction surveys for California red-legged frog. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins.
- 2.23 At Location 4 (PM 5.33) on Highway 1, biologists shall inspect an existing bird nest on a California bay tree near the existing culvert outlet. If the nest is active, biologists shall consult with DFG staff to determine appropriate protective measures before construction begins.
- 2.24 At Location 7 (PM 6.60) on Highway 1, biologists shall conduct pre-construction surveys for California red-legged. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins. An unauthorized water diversion exists near the existing culvert outlet. This water diversion is not presently permitted by DFG. Remove all existing pipe and other water diversion structures that currently exist within Caltrans' ownership.
- 2.25 At location 8 (PM 8.09) on Highway 1, work was completed under an emergency declaration by Caltrans. Completed and on-going work varied significantly from what was disclosed in the April 9, 2012 notification. To address impacts at this site, a survey and mitigation/monitoring plan shall be completed that enumerates the number and species of trees removed and replaces these trees at a minimum 3:1 ratio. Planted trees shall be monitored for a minimum of 5 years and all dead or dying planted trees shall be replaced during this period.
- 2.26 At Location 10 (PM 27.75) on Highway 1, biologists shall conduct pre-construction surveys for California red-legged frog. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins. In addition, biologists shall inspect ivy-covered areas near the existing culvert outlet for active bird nests. If active nest(s) are identified, biologists shall consult with DFG staff to determine appropriate protective measures before construction begins.

- 2.27 At Location 11 (PM 29.27) on Highway 1, biologists shall conduct pre-construction surveys near the existing culvert outlet for California red-legged frog. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins.
- 2.28 At Location 14 (PM 31.22) on Highway 1, install environmental sensitive area (ESA) barrier fencing near the existing culvert outlet to protect sensitive species within the Elk Creek riparian corridor. Instruct workers to avoid entering stream bank and channel area of Elk Creek.
- 2.29 At Location 16 (PM 35.04) on Highway 1, biologists shall conduct pre-construction surveys near the existing culvert outlet for California red-legged frog. Appropriate measures including avoidance, capture and relocation shall be completed before construction begins.

State Highway 20 Projects:

- 2.30 At Location 20 (PM 13.76) on Highway 20, an unauthorized water diversion exists in the vicinity of this crossing including water conveyance pipes that extend through the existing culvert. This water diversion is not presently permitted by DFG. Remove all existing pipe and other water diversion structures that currently exist within Caltrans' ownership. During construction, water may have to be diverted around work site (see Measure 2.20).
- 2.31 At Location 24 (PM 18.37) on Highway 20, protect the redwood tree clump that exists immediately below the culvert outlet.
- 2.32 At Location 25 (PM 18.82) on Highway 20, protect the 16-inch diameter redwood tree that exists immediately below the culvert outlet.
- 2.33 At Location 30 (PM 27.32) on Highway 20, pull back and stabilize perched fill near culvert outlet in conjunction with plans for installing rock slope protection.
- 2.34 At Location 31 (PM 28.13) on Highway 20, remove graded dirt berm on road prism near culvert outlet to address road-induced gully that exists immediately east of the culvert outlet.
- 2.35 At Location 33 (PM 28.30) on Highway 20, an unauthorized water diversion exists in the vicinity of this crossing including a 1/2 -inch metal water conveyance pipe that extends through the existing 8-inch perforated corrugated metal pipe that is set under the highway. This water diversion is not presently permitted by DFG. Remove all existing pipe and other water diversion structures that currently exist within Caltrans' ownership. During construction, water may have to be diverted around work site (see Measure 2.20). Protect the existing clump of bigleaf maple and Douglas-fir trees that are near the inlet

- 2.36 At Location 34 (PM 28.79) on Highway 20, pull back and stabilize over-steepened banks along gully at culvert outlet. Reach as far down slope of outlet as feasible to stabilize gully and remove perched fill.
- 2.37 At Location 36 (PM 29.77) on Highway 20, protect multi-stemmed bigleaf maple tree near the existing culvert outlet.
- 2.38 At Location 37 (PM 29.85) on Highway 20, install ESA barrier fencing near the existing culvert outlet to protect sensitive species within the channel and riparian zone of Broaddus Creek. Instruct workers to avoid entering stream bank and channel area of Broaddus Creek.
- 2.39 At Location 39 (PM 30.29) on Highway 20, protect bigleaf maple tree clump near outlet. To address on-going sediment delivery to Broaddus Creek, stabilize existing gully using rock slope protection or other measures designed to arrest head-cut, reduce erosion and stop sediment delivery.
- 2.40 At Location 42 (PM 31.0) on Highway 20, minimize limb removal of the over-hanging California bay tree that exists near the culvert outlet. If possible, avoid removing the entire tree. Protect existing bigleaf maple samplings near the culvert outlet.
- 2.41 At Location 43 (PM 31.72) on Highway 20, an unauthorized water diversion exists in the vicinity of this crossing including a ¾-inch black plastic pipe that is visible near the culvert outlet. This water diversion is not presently permitted by DFG. Remove all existing pipe and other water diversion structures that currently exist within Caltrans' ownership.
- 2.42 At Location 44 (PM 31.84) on Highway 20, minimize vegetation removal and protect the existing 16-inch valley oak tree near the culvert inlet.

State Highway 101 Project:

No specific measures

**3. Reporting Measures**

Permittee shall meet each reporting requirement described below.

- 3.1 Permittee shall notify the Department, in writing, at least five (5) days prior to initiation of construction (project) activities and at least five (5) days prior to completion of construction (project) activities. Notification shall be faxed to the Department at (707) 441-2021, Attn: Rick Macedo, Staff Environmental Scientist, or via e-mail at [rmacedo@dfg.ca.gov](mailto:rmacedo@dfg.ca.gov).

**CONTACT INFORMATION**

Any communication that Permittee or DFG submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or DFG specifies by written notice to the other.

To Permittee:

Mr. Steven Blair  
Caltrans  
1656 Union Street  
Eureka, California 95501  
Office Phone: 707-441-5899  
E-Mail: [Steven\\_Blair@dot.ca.gov](mailto:Steven_Blair@dot.ca.gov)

To DFG:

Department of Fish and Game  
Region 1  
619 Second Street  
Eureka, California 95501  
Attn: Lake and Streambed Alteration Program – Laurie Harnsberger  
Notification #1600-2012-0088-R1  
Fax: 441-2021  
Email: [lharnsberger@dfg.ca.gov](mailto:lharnsberger@dfg.ca.gov)

## **LIABILITY**

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute DFG's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

## **SUSPENSION AND REVOCATION**

DFG may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before DFG suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before DFG suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused DFG to issue the notice.

## **ENFORCEMENT**

Nothing in the Agreement precludes DFG from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects DFG's enforcement authority or that of its enforcement personnel.

## **OTHER LEGAL OBLIGATIONS**

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 et seq. (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse

disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

## **AMENDMENT**

DFG may amend the Agreement at any time during its term if DFG determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by DFG and Permittee. To request an amendment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

## **TRANSFER AND ASSIGNMENT**

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter DFG approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

## **EXTENSIONS**

In accordance with FGC section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to DFG a completed DFG "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). DFG shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (Fish & G. Code, § 1605, subd. (f)).

## **EFFECTIVE DATE**

The Agreement becomes effective on the date of DFG's signature, which shall be: 1) after Permittee's signature; 2) after DFG complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at [http://www.dfg.ca.gov/habcon/ceqa/ceqa\\_changes.html](http://www.dfg.ca.gov/habcon/ceqa/ceqa_changes.html).

## **TERM**

This Agreement shall expire five years after the date the Agreement is fully executed, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

## **EXHIBITS**

None

## **AUTHORITY**

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

### AUTHORIZATION

This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify DFG in accordance with FGC section 1602.

### CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

#### FOR DEPARTMENT OF TRANSPORTATION



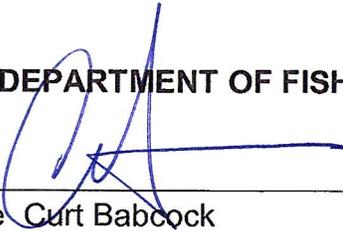
10-31-12

Name Steven Blair

Date

Title PROJECT MANAGER

#### FOR DEPARTMENT OF FISH AND GAME



T. Casanova

10/31/12

Name Curt Babcock

Date

Environmental Program Manager

Prepared by: Rick Macedo  
Staff Environmental Scientist  
7-3-12

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