

INFORMATION HANDOUT

MATERIALS INFORMATION

(NOT A PART OF THE CONTRACT)

FOUNDATION REPORT, RETAINING WALL AT PM 13.66, DATED OCTOBER 13,
2011

FOUNDATION REPORT FOR GROUND ANCHOR/SOIL NAIL RETAINING WALL #8
DATED MARCH 2, 2012

FOUNDATION REPORT ADDENDUM FOR RETAINING WALL AT PM 13.66 DATED
OCTOBER 11, 2012

FOUNDATION REPORT ADDENDUM FOR GROUND ANCHOR/SOIL NAIL
RETAINING WALL #8 DATED OCTOBER 11, 2012

GEOTECHNICAL DESIGN REPORT DATED AUGUST 7, 2012

PERMITS, LICENSES, AGREEMENTS, CERTIFICATIONS (PLACs)

YUOK TRIBE
TRIBAL EMPLOYMENT RIGHTS ORDINANCE (TERO) REQUIREMENTS
MEMORANDUM OF UNDERSTANDING (MOU)
YUOK TERO
TERO HIGHWAY CONSTRUCTION PERMIT (THCP) APPLICATION

UNITED STATES ARMY CORPS OF ENGINEERS
NON-REPORTING NATIONWIDE PERMIT NO. 14

YUOK TRIBE ENVIRONMENTAL PROGRAM (YTEP)
401 CERTIFICATION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 CERTIFICATION

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
STREAMBED ALTERATION AGREEMENT 1600

Memorandum

*Flex your power!
Be energy efficient!*

To: JOE DOWNING
Structure Design Branch 3
Office of Bridge Design North

Date: October 13, 2011

File: 01-HUM-169-PM 13.6/33.8
EA: 01-450901
EFIS ID: 0100000219

Attn: Quang H. Nguyen

From: DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
OFFICE OF GEOTECHNICAL DESIGN NORTH
BRANCH B

Subject: Foundation Report, Retaining Wall at PM 13.66

1.0 Project Description

This Foundation Report has been prepared to summarize the results of the geotechnical investigation and provide foundation recommendations for the proposed soldier pile wall on Route 169 at PM 13.66 in Humboldt County (Vicinity Map, Figure 1). The wall is proposed in order to widen the traveled way to 20 feet. A standard Metal Beam Guard Rail (MBGR) is also proposed.

The proposed soldier pile wall is approximately 120 feet in length with a maximum wall height (to bottom of lagging) of 12 feet. The wall layout line is shown on the layout sheet (Layout, Figure 2).

The embankment at PM 13.66 is situated on an outside meander of the Klamath River and is currently armored with rock slope protection (RSP). During the winter of 2005-2006, the shoulder choker at approximately PM 13.92 was washed out due to high flows.

2.0 Scope of Work

The recommendations contained in this report are based on geotechnical borings, laboratory testing of soil samples, geotechnical calculations using data obtained from the subsurface investigation and laboratory testing. Subsurface conditions were evaluated only at the boring locations and may deviate elsewhere within the project limits. The elevations reported are with respect to Mean Sea Level (MSL).

3.0 Pertinent Reports and Investigations

The following documents were reviewed in preparation of this report:

Project Plans

Existing and Proposed Plan Views of Proposed Project, dated May 2008.

Typical Cross Sections of Proposed Project Plans, dated February 2008.

Caltrans Reports

Preliminary Geotechnical Report, 01 HUM 169 PM 13.66/33.77, EA: 01-450901, October 28, 2008.

Ordinary High Water Elevations (OHWE), March 25, 2005 North Region Hydraulics, District 01, Eureka Office

Project Study Report Caltrans November 28, 2005 01-Hum-169, PM 13.6/33.8 EA 01-45090K

Literature

Turner, A.K., 1996, Colluvium and talus, in Landslides - investigation and mitigation: National Research Council, Transportation Research Board, Special Report 247, Chapter 20, p. 525-554.

Wagner, D.L., and Saucedo, G.J., 1987, Geologic map of the Weed quadrangle, California: California Department of Conservation, Division of Mines and Geology, Regional Geologic Map Series, Map No. 4A (Geology), 4 sheets, 1:250,000.

4.0 Field Investigation and Laboratory Testing Program

Two mud rotary borings, designated RC-09-001 and RC-09-002, were drilled at this site. The approximate locations of the borings are shown on Figure 2. The boreholes were advanced using a truck mounted Acker MPCA 750 drill rig using a 94-mm HXB casing with a diamond impregnated core bit. Soil and rock samples were logged in accordance to the Caltrans Soil and Rock Logging, Classification, and Presentation Manual 2010 Edition. A piezometer was installed in Boring RC-09-001. A summary of the borings is provided in Table 1.

TABLE 1 – BORING DATA SUMMARY

Borehole I.D.	Date Completed	Approx. Station ("K1"-line)	Offset ⁽¹⁾	Depth of Boring (ft)	Surface Elev. (ft)	Depth to Bedrock (ft)
RC-09-001	06-03-09	12+64	9 feet left	50	116	18.5
RC-09-002	06-03-09	11+86	6.5 feet right	49.8	116	25.5

(1) Approximate distance from highway centerline, facing in direction of increasing stationing.

Laboratory testing of selected soil samples obtained from the borings was performed in the District 1 Materials Laboratory in Eureka, California. The testing was performed to classify soils using ASTM Unified Soil Classification System (USCS) and determine the engineering properties of the soil. Tests performed included:

- Mechanical analyses (ASTM D422).
- Atterberg Limits tests (ASTM D4318).

The laboratory test results are attached in Appendix A

5.0 Regional and Site Geology

The site lies within the Coast Ranges geomorphic province (Project Geologic Map, Figure 3). Based on mapping by Wagner and Saucedo (1987) bedrock in the Project area is Franciscan Complex South Fork Mountain Schist (Kjfs) and sandstone (Kjfs).

According to Wagner et al. (1987), the project site is underlain by marine sedimentary and metasedimentary rocks of the Coastal Belt Franciscan Complex. This Cretaceous to Jurassic age bedrock is comprised of sandstone with smaller amounts of shale, chert, limestone and conglomerate.

There is no evidence of global instability within the wall limits. Shallow debris slides are visible on the existing cut slopes outside the limits of the proposed wall.

6.0 Subsurface Conditions

The project site is underlain by approximately 8.5 feet of fill. The fill prism is composed clayey gravel (GC), sandy lean clay with gravel (CL), clayey sand (SC) and gravel with silt and sand (GM). Boring RC-09-001 encountered a 2-foot sandstone boulder at 8 feet that is interpreted to

be rock slope protection. This boulder was underlain by an approximately 5 foot thick, river terrace deposit, composed of well-graded sand (SW). The fill and the river terrace deposit are underlain by an approximately 10 foot thick schist layer decomposed to clayey sand with gravel (SC) and clayey gravel (GC). Less intensely weathered schist was encountered below the decomposed schist to the termination depth of the boreholes.

Figure 4 shows a typical cross section at roadway station 12+20 and Figure 5 shows a subsurface profile along the wall layout line.

Logs of Test Borings (LOTBs) will be provided at a future date to be included in the plans.

7.0 Groundwater Conditions

Groundwater levels were recorded on June 3 and June 4, 2011. The groundwater surface elevations (measured from top of casing) in boring RC-09-001 ranged between 14.8 to 17.1 feet in depth (approximately 101.2 feet and 98.9 feet in elevation).

8.0 Corrosion Evaluation

Based on the Caltrans Corrosion Guidelines (2003 version 1.0) and laboratory test results, the site may be considered corrosive to steel and concrete. The pH level of the sample was 6.34. The resistivity level was 5,500 ohm-cm, which is above the 1500 ohm-cm minimum resistivity that constitutes a corrosive condition. The lab test report is attached in Appendix A.

9.0 Recommended Wall Design Parameters

Lateral forces determined from earth pressure theory using the soil and rock parameters provided in Table 2 control the design loading, and are recommended for the wall design per Caltrans Bridge Design Specifications (BDS) Chapter 5.

TABLE 2 – DESIGN PARAMETERS

Layer	Approximate range in thickness (ft) ¹	Total Unit Weight (pcf) ²	Saturated Unit Weight (pcf) ²	Angle of Internal Friction (ϕ , degrees) ²	Cohesion (c, psf)	K_a ³	K_p ⁴
(1) Fill/ Decomposed Bedrock (GC)	25 to 29	120	126	33	200	0.27	0.95
(2) Schist	25 to 50	130	NA	35	2,000	0.24	5.5

1. See Figure 5 for anticipated thickness of layers along wall layout line.
2. Based on correlations with field penetration test data and soil type.
3. K_p based on log spiral method of analysis
4. K_a based on Coulomb method of analysis in accordance with BDS, section 5.5.5.7.

The recommended design groundwater surface elevation is 16 feet below the top of the finish grade of wall.

Steel HP piling placed in structural concrete and timber lagging is planned. Table 3 summarizes the recommended minimum pile lengths to assure embedment into competent material and wall heights (measured to bottom of lagging).

Table 3: Recommended Minimum Pile Lengths

Approx. Wall Height ¹ (ft)	Recommended Pile length (ft)	Approx. Station Limits
6	18	11+70 to 11+94
12	36	11+94 to 12+58
6	27	12+58 to 12+90

1. Measured to bottom of lagging.

We recommend that the finished grade provide a berm in front of the wall face at least 4 feet wide and a design grade at least 2 feet below finished grade (both measured from the face of the wall) per the BDS Section 5.7.6. Shims should be placed between the timber lagging. A geotextile should be placed at the back of the wall between the structure backfill and the timber

lagging.

Because of the possibility of flooding, it is recommended that a 2.5-foot thick layer of ½ ton RSP be placed on the finished grade via Method A placement. Design details for the RSP will be provided in the roadway plans. In addition to the RSP the finish grade between the wall and the edge of traveled way needs to be paved.

10.0 Construction Considerations

RSP consisting of sandstone boulders may be encountered along the wall layout line and may need to be removed prior to drilling. RSP removed inboard of the wall layout line during pile installation and construction will need to be replaced with structure backfill. If RSP is encountered, the potential for the loss of concrete and grout into voids should be expected. Controlling measures such as the use of a “grout sock” could greatly reduce the potential for grout loss.

Caving conditions may be encountered during drilling for the piles due to the granular nature of the soils encountered, and the intensely weathered and fractured nature of the rock. Temporary casing, drilling under slurry or placement of slurry cement or concrete backfill and re-drilling may be required to control caving and should be performed in conformance with the provisions in Section 49-4.03 “Drilled Holes,” of the Standard Specifications.

Groundwater will likely be encountered in the pile boreholes. Pile installations may require dewatering or the placement of concrete and grout under water. If water is present and the holes are not dewatered, displacement of the water by means of a closed system using a concrete pump or tremie tube to place concrete and grout at the bottom of the holes will be required in conformance with the provisions in Section 51-1.10 “Concrete Deposited Under Water,” of the Standard Specifications.

There are no overhead and underground utilities in the proposed wall construction area.

Project Information

Standard Special Provisions S5-280, “Project Information,” discloses to bidders and contractors a list of pertinent information available for their inspection prior to bid opening. The following is an excerpt from SSP S5-280 disclosing information originating from Geotechnical Services. Items listed to be included in the Information Handout will be provided in Acrobat (.pdf) format to the addressee(s) of this report via electronic mail.

Data and information attached with the project plans are:

A. None

Data and information included in the Information Handout provided to the bidders and Contractors are:

A. Foundation Report for HUM 169 PM 13.7 Retaining Wall, dated October 13, 2011

Data and information available for inspection at the District Office:

A. None

Data and information available for inspection at the Eureka Annex:

A. Rock Cores

If any conceptual changes are made during final project design, the Office of Geotechnical Design North should review those changes to determine if these foundation recommendations are still applicable.

If you have any questions or require further assistance, please contact June James at (707) 441-4692 or Charlie Narwold at (707) 445-6036.



M. JUNE JAMES
Transportation Engineer
Office of Geotechnical Design North
Branch B

Handwritten signature: JND



CHARLIE NARWOLD
Senior Engineering Geologist
Office of Geotechnical Design North
Branch B

List of Figures:

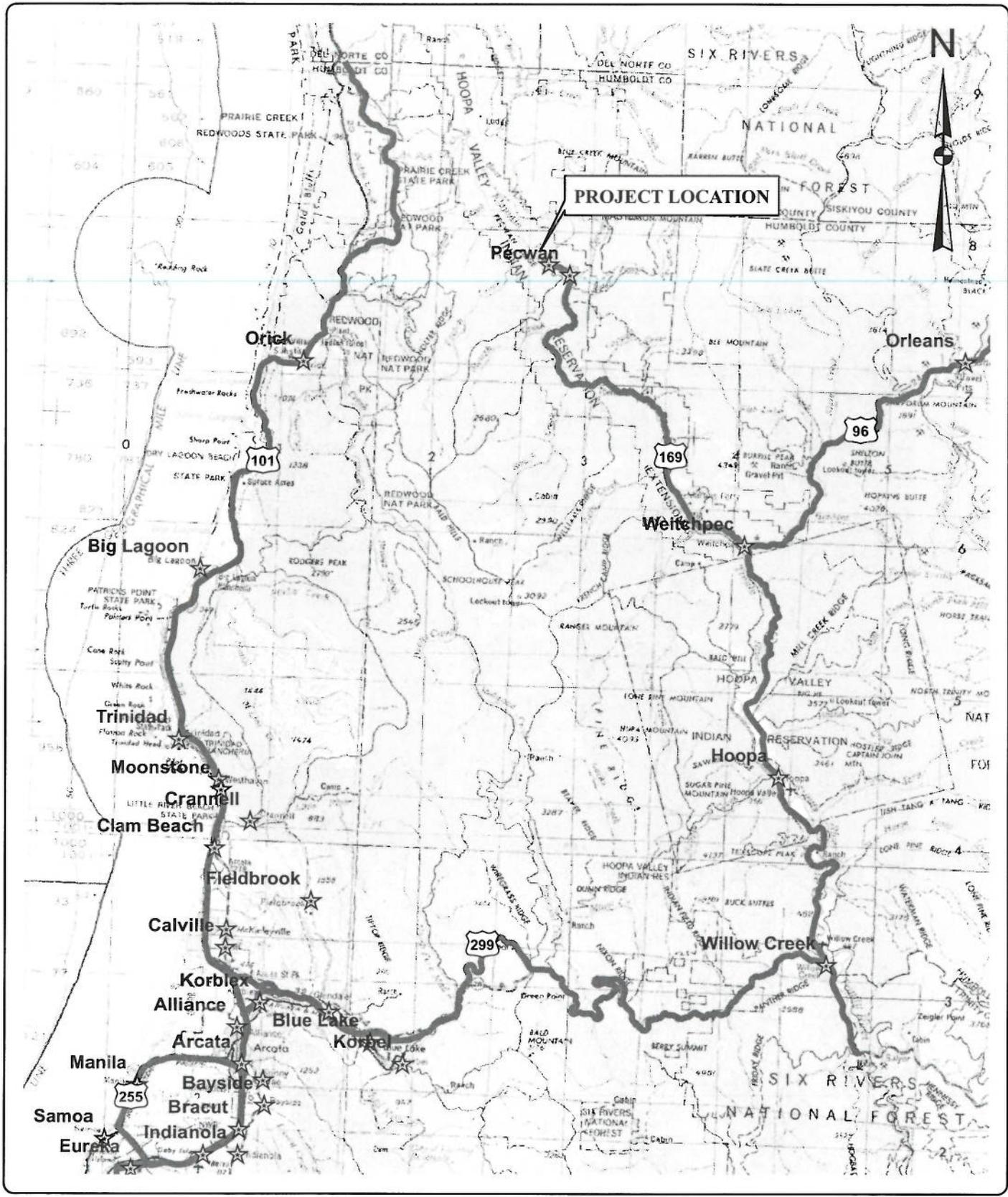
- Figure 1 – Vicinity Map
- Figure 2 – Layout
- Figure 3 - Project Geologic Map
- Figure 4 – Typical Cross Section
- Figure 5 – Subsurface Profile Along Wall Layout Line

Attachments:

Appendix A – Summary of Laboratory Test Data

C:

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GS File Room (email gs_file_room@dot.ca.gov)
Structure Construction RE Pending File (email RE_pending_file@dot.ca.gov)
Project Manager



Department of Transportation
 Division of Engineering Services
 Geotechnical Services
 Office of Geotechnical Design North
 Branch B

EFIS ID:010000219
 Date: October 2011

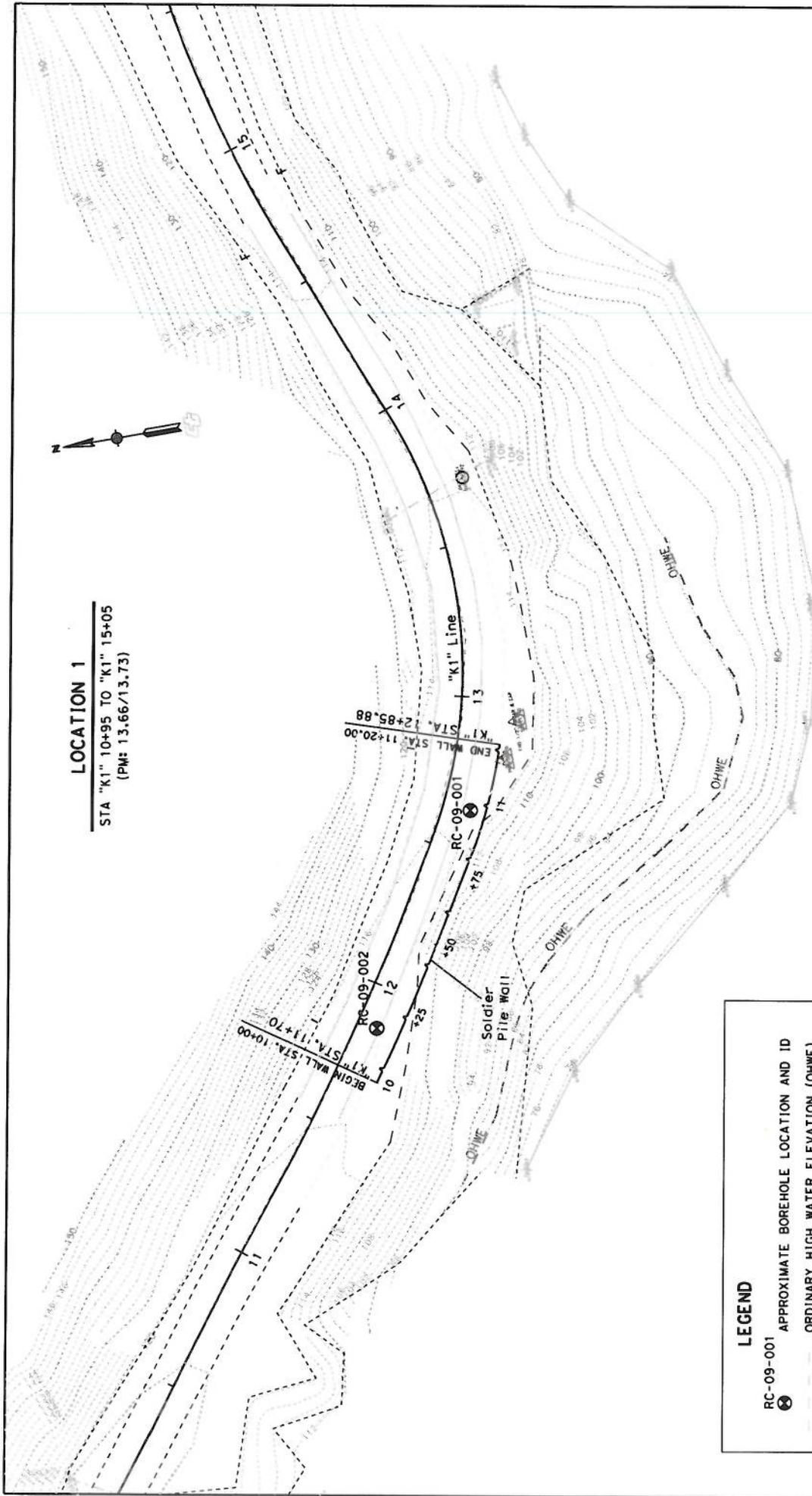
VICINITY MAP

FOUNDATION REPORT
 RETAINING WALL AT PM 13.66

FIGURE 1

LOCATION 1

STA "K1" 10+95 TO "K1" 15+05
(PM: 13.66/13.73)



LEGEND

- RC-09-001 APPROXIMATE BOREHOLE LOCATION AND ID
- ORDINARY HIGH WATER ELEVATION (OHWE)
- Soldier Pile Wall

NOTE:
REFERENCE DRAWING DATED APRIL 6, 2007



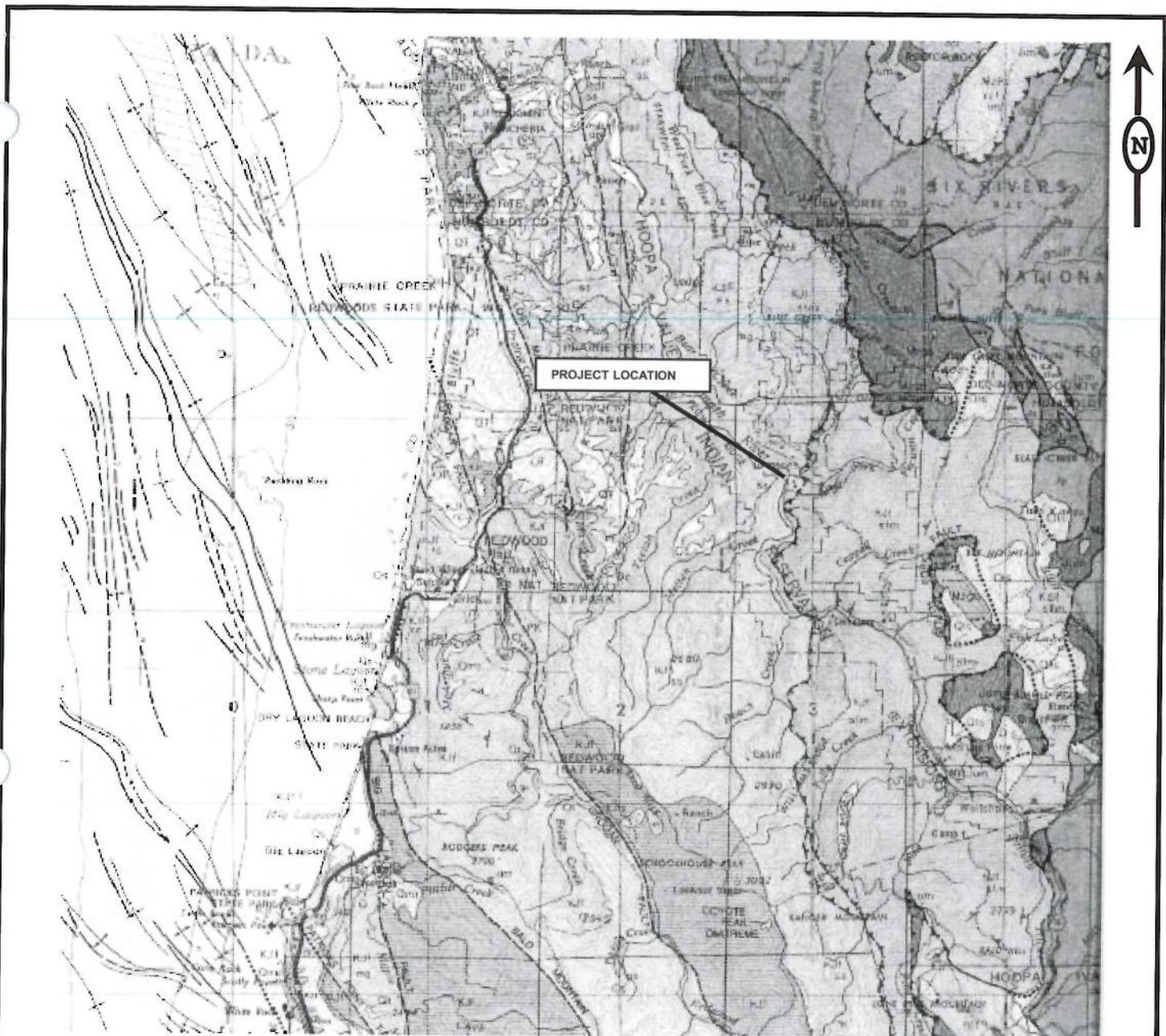
Department of Transportation
Division of Engineering Services
Office of Geotechnical Design North
Branch B

EAT 0100000219
DATE: OCTOBER 2011

LAYOUT

FOUNDATION REPORT
RETAINING WALL AT PM 13.66

FIGURE
2



Reference: Wagner, D. L. and Saucedo, G.J. "Geologic Map of the Weed Quadrangle, California" 1987

LEGEND:

- KJf ss –Franciscan Complex sandstone
- KJf sfm – Franciscan Complex South Fork Mountain Schist
- Jum – Ultramafic rocks – partially to completely serpentinized
- Qls – Landslide deposits

Scale: 1:250,000



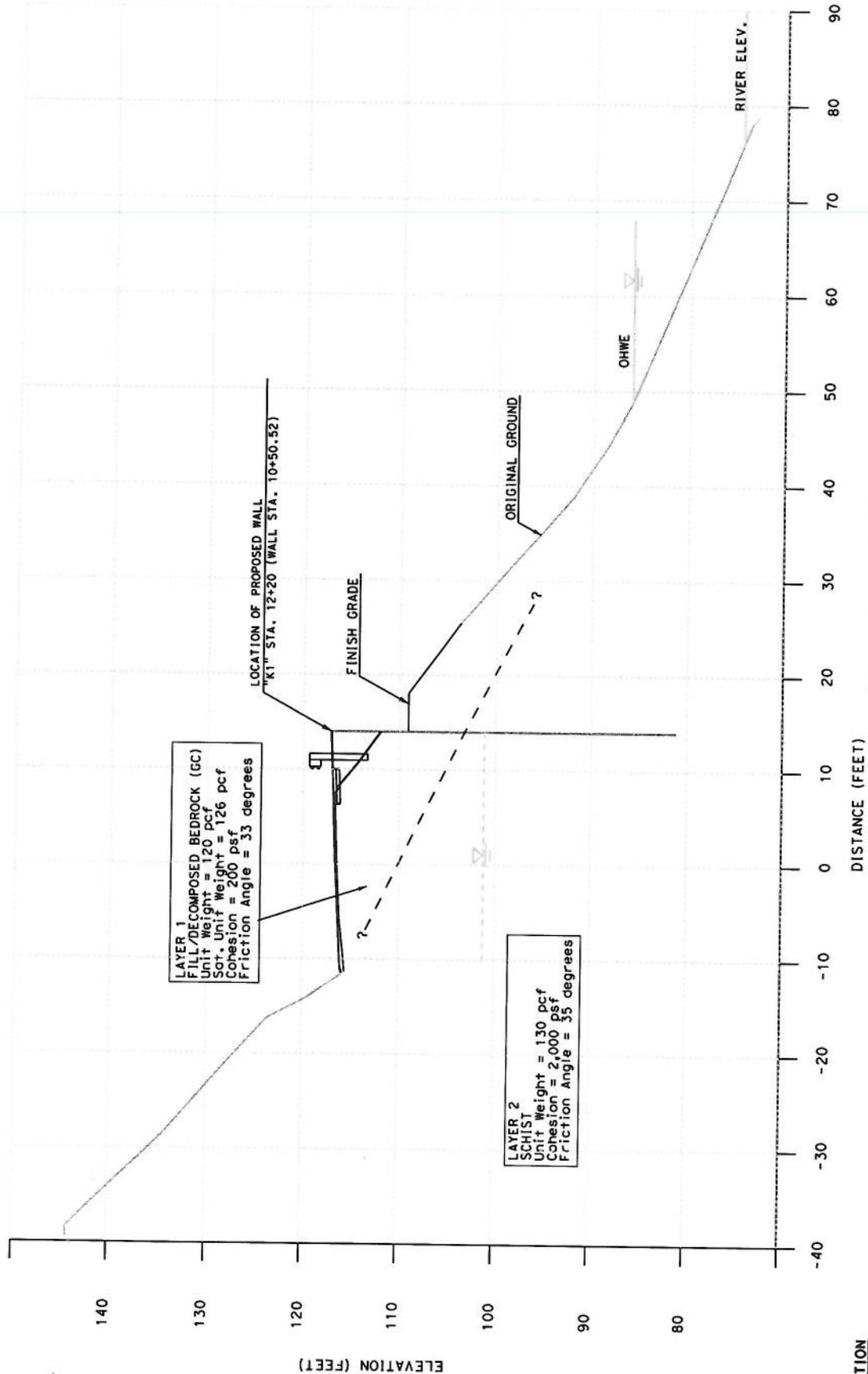
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 Division of Engineering Services
 Geotechnical Services
 Office of Geotechnical Design - North

EFIS ID: 010000219
 DATE: OCTOBER 2011

PROJECT GEOLOGIC
 MAP

FOUNDATION REPORT
 RETAINING WALL AT PM 13.66

FIGURE
 3



LAYER 1
 FILL/DECOMPOSED BEDROCK (GC)
 Unit Weight = 120 pcf
 Sat. Unit Weight = 126 pcf
 Cohesion = 200 psf
 Friction Angle = 33 degrees

LAYER 2
 SCHIST
 Unit Weight = 130 pcf
 Cohesion = 2,000 psf
 Friction Angle = 35 degrees

LOCATION OF PROPOSED WALL
 "KT" STA. 12+20 (WALL STA. 10+50.52)

FINISH GRADE

ORIGINAL GROUND

OHWE

RIVER ELEV.

EXPLANATION

— GEOLOGIC CONTACT, SOLID WHERE CERTAIN, DASHED WHERE APPROXIMATELY LOCATED
 ? AND QUERIED WHERE EXISTENCE IS UNCERTAIN

— APPROXIMATE GROUNDWATER SURFACE



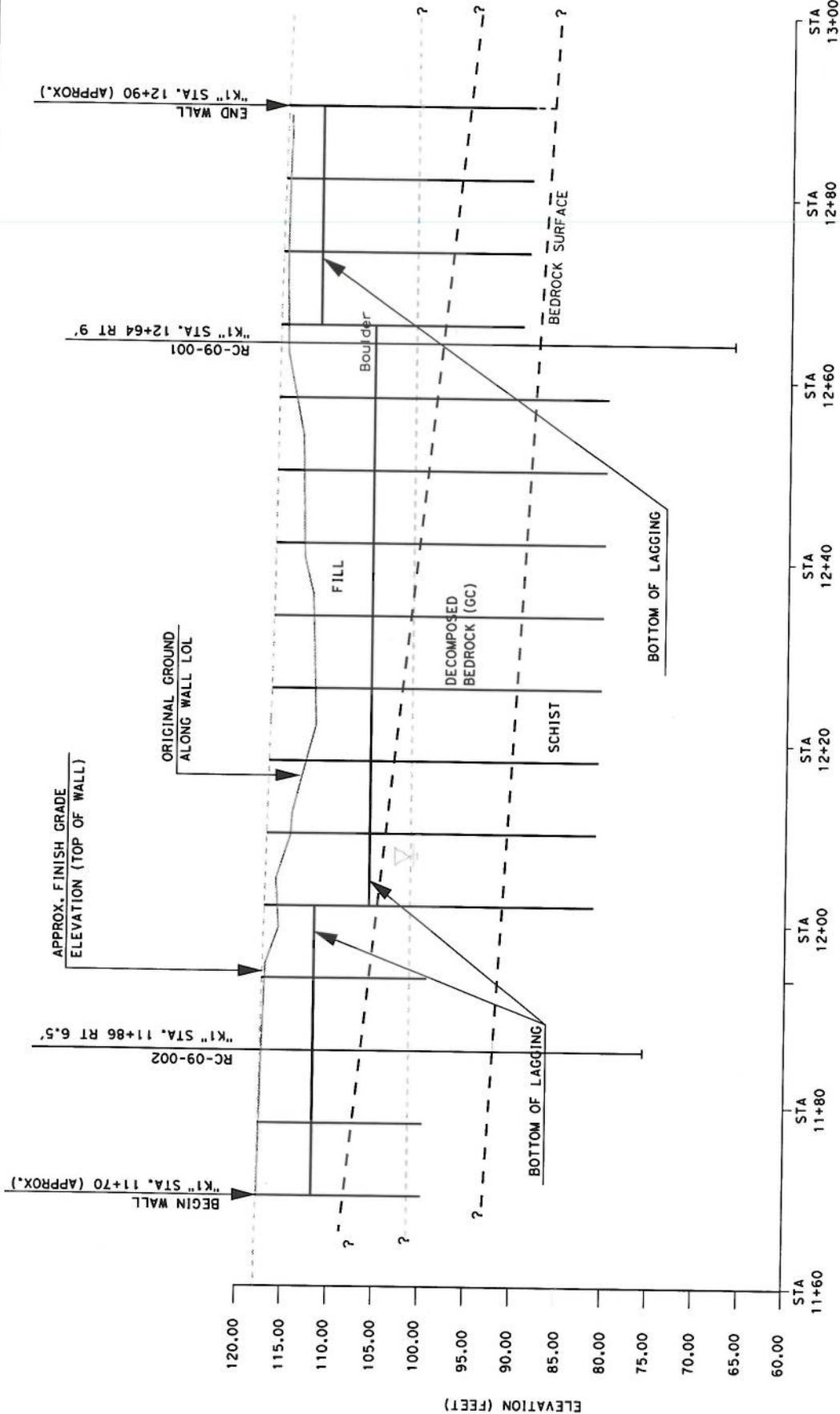
Department of Transportation
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 Office of Geotechnical Design North
 Branch B

EFIS ID: 0100000219
 DATE: OCTOBER 2011

TYPICAL CROSS SECTION

FOUNDATION REPORT
 RETAINING WALL AT PM 13.66

FIGURE
 4



"K1" ALIGNMENT STATIONING (FEET)

EXPLANATION

GEOLGIC CONTACT, SOLID WHERE CERTAIN, DASHED WHERE APPROXIMATELY LOCATED
 AND QUERIED WHERE EXISTENCE IS UNCERTAIN

APPROXIMATE GROUNDWATER SURFACE

Department of Transportation
 Division of Engineering Services
 Geotechnical Services
 Office of Geotechnical Design North



EFIS ID: 0100000219
 DATE: OCTOBER 2011

SUBSURFACE PROFILE
 ALONG WALL LAYOUT LINE

FOUNDATION REPORT
 RETAINING WALL AT PM 13.66

APPENDIX A

SUMMARY OF LABORATORY TEST RESULTS

GRAIN SIZE ANALYSIS

Boring ID	Depth (ft, bgs)	USCS	Description	ASTM Atterberg Limits		
				LL	PL	PI
RC-09-001	5' - 7'	GC	Clayey Gravel with Sand	27	18	9
	40' - 45'	GP	Poorly-graded Gravel with Sand	-	-	-
RC-09-002	8' - 9'	SC	Clayey Sand	25	16	9

CORROSION TEST SUMMARY

Boring ID	Depth (ft, bgs)	Min.Resistivity (ohms)	pH
RC-09-002	5' - 7.5'	5500	6.34

Memorandum

*Flex your power!
Be energy efficient!*

To: MR. JOE DOWNING
Structure Design Branch 3
Office of Bridge Design North

Date: March 2, 2012

File: 01-HUM-169-PM 23.28
EA: 01-450901
EFIS ID: 0100000219
Bridge No: 04E0031

Attn: Quang H. Nguyen

From: DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES – OGDN BRANCH B

Subject: Foundation Report for Ground Anchor/Soil Nail Retaining Wall #8

INTRODUCTION

This Foundation Report summarizes the results of the foundation investigation and provides geotechnical recommendations for the proposed ground anchor / soil nail wall on Route 169 between post mile (PM) 23.25 and PM 23.39 (Location 8) in Humboldt County, CA (Figure 1- Vicinity Map). The wall is required to retain the proposed cut slope along the northern side of the highway when the traveled way is widened to 20 feet. The recommendations contained in this report are based on a review of geotechnical/geologic literature, a subsurface investigation, laboratory testing of soil samples, geotechnical calculations, field observations, and engineering judgment. Subsurface conditions were evaluated only at the boring and refraction survey line locations and may deviate elsewhere within the project limits.

PROJECT DESCRIPTION

This segment of State Route 169 serves the Yurok tribal community between Weitchpec and Johnsons and consists of one lane of variable width and an intermittent center stripe along some sections. This project proposes to widen the travel way to 20 feet and construct guardrail at numerous locations. At Location 8 a wall is planned inboard of the existing cut slope to achieve the proposed widening. A top-down constructed retaining wall is recommended using a combination of ground anchor and soil nail walls.

The proposed wall is 465 feet in length with an approximate maximum wall height of 24 feet.

The limits for each type of wall are as follows.

TABLE 1: WALL TYPES AND LIMITS

Wall Type	Wall Station	“K8” Station	Wall Length (feet)
Ground Anchor	10+00 to 12+70	81+20 to 83+91.5	270
Soil Nail Wall	12+70 to 14+65	83+91.5 to 85+94.88	195

The wall layout line is shown in Figure 2. The wall profile and type limits are shown in Figure 3.

PERTINENT REPORTS AND INVESTIGATIONS

The following documents were reviewed for this report:

Project Plans

Existing and Proposed Plan Views of Proposed Project dated September 2011.

Typical Cross Sections of Proposed Project Plans, dated November 2011.

Caltrans Reports

Preliminary Geotechnical Report, 01-HUM-PM-13.37/33.77 Dated 10-28-2008

Literature

Wagner, D.L., and Saucedo, G.J., 1987, Geologic map of the Weed quadrangle, California: California Department of Conservation, Division of Mines and Geology, Regional Geologic Map Series, Map No. 4A (Geology), 4 sheets, 1:250,000.

SUBSURFACE INVESTIGATION AND LABORATORY TESTING

The subsurface investigation was completed in July 2009. Six horizontal borings and five vertical borings were advanced to depths ranging from 20 to 65 feet. The vertical boreholes were drilled using a truck-mounted Acker MPCA drill rig with an automatic hammer. A track mounted CS2000 AT was used to drill the horizontal borings. Slope inclinometer casing was installed in Boring RC-09-001. The slope inclinometer casing was perforated so that the ground water surface elevation could be measured. Monitoring wells were installed in borings RC-09-003, RC-09-005 and RC-09-006. In addition to the borings, 3 seismic refraction surveys were

conducted to aid in characterizing the subsurface conditions. The location of the borings and seismic refraction survey lines are shown on Figure 2.

REGIONAL GEOLOGY

The project lies within the Coast Ranges geomorphic province (Figure 4 –Project Geologic Map). Based on mapping by Wagner and Saucedo (1987) bedrock in the vicinity of the proposed wall is Cretaceous to Jurassic age South Fork Mountain Schist (Kjfsm). The South Fork Mountain Schist is a metamorphosed greywacke that is part of the regional Franciscan Assemblage (Kjf).

RAINFALL

According to the Western Regional Climate Center (<http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6508>), Monthly Climate Summary for Orleans, California (046508) 1903-2007 the average total annual precipitation is 51.13 inches (in.). The majority of the precipitation falls between October and April. Average total annual snowfall is 5.9 in. occurring between November and March.

SITE GEOLOGY

Along the wall layout line the subsurface conditions consist primarily of a dormant landslide deposit overlying decomposed rock and rock. The dormant landslide deposit ranges between 2 feet and 40 feet in thickness and is composed of gravels with clay, silt and sand and some cobbles, ranging in density from loose to medium dense. The dormant landslide deposit is underlain by a layer of decomposed rock up to 23 feet thick, containing poorly graded gravel with clay and sand. The rock is composed of moderately hard to hard, moderately to very intensely weathered phyllite and metaconglomerate. At the wall layout line rock elevations range from 255 to 302 feet. Log of Test Borings (LOTBs) will be provided at a future date to be included in the plans.

A debris slide deposit exists to the west of the proposed wall (Figure 5). The debris slide is approximately 160 feet across. The eastern limit of the debris slide deposit is at approximately “K8” roadway station 81+20 (Wall Station 10+00). The deposit is bound to the west by a bedrock outcrop. Based on air photo analysis and field observations, the landslide most likely occurred between 45 and 60 years ago. Between approximately “K8” roadway stations 81+20 and 81+65 (Wall Stations 10+00 and 10+45), a recent (<50 years old) debris flow deposit exists on the slope above the roadway (Figure 5). Several pistol butted trees observed on the slope above the roadway (within the limits of the proposed wall) are interpreted to be the result of soil creep and are not an indication of global instability.

The slope inclinometer in boring RC-09-001 was installed to monitor for slope movement related to cracks observed in the travelway near the outboard edge of the roadway. To date, no

subsurface movement has been detected and the cracks are assumed to be the result of settlement of the subgrade.

SEISMICITY

Table 2 lists the active or potentially active faults located in the project vicinity based on the *Caltrans Seismic Design Procedure 1.6 and the ARS online tool*.

TABLE 2: ACTIVE AND POTENTIALLY ACTIVE FAULTS

Fault Name	Maximum Magnitude	Distance to Project Site (miles)	Fault Type	Peak Ground Acceleration (g)
Bald Mountain – Big Lagoon fault zone	7.5	18.0	Reverse	0.30
Cascadia Subduction Zone	8.3	62.0	Reverse	0.20

Ground rupture hazard at the project location is considered low, as no known faults cross the site.

Liquefaction is a loss of soil strength and stiffness due to an increase in pore water pressure during cyclic loading, such as during an earthquake. Soils with liquefaction potential include loose cohesionless soils such as loose sands and gravels with 35 percent fines or less, and that have the potential of becoming saturated. Liquefaction potential at the project site is considered low.

SLOPE STABILTY ANALYSIS

The soil strength parameters for the design were initially determined by using the standard penetration test (SPT) N values obtained from the vertical boreholes and published correlations. These initial values and cross section A-A' ("K8" Station 82+00 and Wall Station 10+80.63) were used in the back analysis (Figures 2 and 6). A factor of safety of 1.1 was assumed for the existing dormant landslide material and the soil strength parameters were adjusted until the results matched the field observations. This is considered the critical design cross section for the ground anchor wall. Table 3 outlines the soil and rock design properties that are recommended for the design of the ground anchor portion of the retaining wall.

TABLE 3: SOIL AND ROCK DESIGN PROPERTIES FOR GROUND ANCHOR WALL (CROSS-SECTION A-A')

Layer	Approximate Thickness (ft) ¹	Total Unit Weight (pcf)	Angle of Internal Friction (ϕ , degrees)	Cohesion (c, psf)
(1) Dormant Landslide Deposit	40	125	34	300
(2) Metamorphic Rock	> 50	135	38	1,000

Notes: 1 – At wall layout line

The same strength parameters for the dormant landslide deposits were used in cross section B-B' at "K8" Station 84+06 (Wall Station 12+84.05), (Figures 2 and 7). This is considered the critical design cross section for the soil nail portion of the wall. Table 4 outlines the soil and rock design properties that are recommended for the design of the soil nail portion of the retaining wall.

TABLE 4: SOIL AND ROCK DESIGN PROPERTIES FOR SOIL NAIL WALL (CROSS SECTION B-B')

Layer	Approximate Thickness (ft) ¹	Total Unit Weight (pcf)	Angle of Internal Friction (ϕ , degrees)	Cohesion (c, psf)
(1) Dormant Landslide Deposit	8	125	34	300
(2) Decomposed Metamorphic Rock	11	135	36	200
(3) Metamorphic Rock	> 50	135	38	1,000

Notes: 1 – At wall layout line

RIPPABILITY

Based on the boring logs, results of the seismic refraction investigation, and field observations, we expect the material within the excavation limits for the wall to be rippable. The results of the seismic refraction surveys can be found in Appendix A.

GROUNDWATER CONDITIONS

Piezometers were installed in borings RC-09-001, RC-09-003, RC-09-005 and RC-09-006. Groundwater elevations ranged between approximately elevations of 226 and 279 feet above mean sea level (MSL). This indicates that the groundwater at the site is in the bedrock. In bedrock groundwater is typically fracture controlled and therefore localized and governed by fracture interconnections. No seeps were observed on the cut slope in front of the proposed soil nail wall. Surface seepage and hydrophyllic plants were observed as late as July 2009 in the ditch at the east end of the proposed wall (approximate "K8" Station 86+00 and Wall Station 14+64). The design groundwater surface was assumed to be higher than the observed levels.

CORROSION

The Department considers a site to be corrosive to foundation elements if one or more of the following conditions exist for the representative soil and/or water samples taken at the site: Chloride concentration is greater than or equal to 500 ppm, sulfate concentration is greater than or equal to 2000 ppm, or the pH is 5.5 or less. Soils are not tested for chloride and sulfate concentrations if the minimum resistivity is greater than 1,000 ohm-cm.

Corrosion analyses was conducted on a soil sample from borehole R-09-006 at a depth interval of 6 to 7 feet. The pH level of the sample was 5.99 and the minimum resistivity level was 15,000 ohm-cm. The test data are attached in Appendix B.

Based on the Caltrans Corrosion Guidelines (2003 version 1.0) and laboratory test results, the site may be considered non-corrosive to steel and concrete.

DESIGN CRITERIA FOR GROUND ANCHOR WALL

Table 5 includes the ground anchor wall design parameters that were determined through slope stability analysis and evaluation of site soils. The SLOPE-W slope stability analysis program version 2007 was used to determine recommended anchor design for a factor of safety of at least 1.3. Attached is the graphical output from the stability analysis for the tieback wall at cross

section A-A' at wall station 10+80.63 (Figure 8). The groundwater surface assumed for design is shown on Figure 8.

TABLE 5: GROUND ANCHOR WALL DESIGN PARAMETERS

Horizontal anchor Spacing	10 feet
Vertical anchor Spacing	5 feet
Anchor inclination	15°
Design Load	50 kips
Unbonded Length (L_U)	35 feet

DESIGN CRITERIA FOR SOIL NAIL WALL

The design for the soil nail portion of the proposed retaining wall was performed using Caltrans' Soil Reinforcement Computer Program SNAILWIN version 3.10 (Figure 9). The groundwater surface assumed for design is shown on Figure 9. Provisions for drainage will be required at the back of the wall face. The following limiting criteria were used in the design of the proposed soil nail portion of the wall.

- 1) The minimum factor of safety for static loading, $FOS_{static} = 1.5$
- 2) Maximum design soil nail wall height = 20 feet
- 3) Maximum horizontal and vertical spacing = 5.0 feet
- 4) The inclination angle of the nails to the horizontal = 15 degrees
- 5) Minimum diameter of drilled hole for corrosion protection = 5.0 inches
- 6) The maximum vertical distance from bottom of wall to the bottom row of the soil nails = 3 feet.
- 7) A single zone is recommended for soil nail testing using the following parameters:
 - Friction angle, $\phi = 34$ degrees
 - Cohesion, $C = 300$ psf
 - Total unit weight = 125 pcf
- 8) Design Pullout Resistance (Q_d) = 2710 pounds per linear ft
- 9) Minimum punching shear capacity = 40 kips
- 10) Nail Bar Size Diameter (#9) = 1.128 inches
- 11) Maximum vertical distance between top of cut and the top most row of soil nails = 2 feet
- 12) The recommended minimum nail lengths are as shown in Table 6.

TABLE 6: MINIMUM NAIL LENGTHS FOR SOIL NAIL WALL

Wall Station	Row Number	Minimum Nail Length (ft)
12+70 to 13+85	1	20
	2	20
	3	20
	4	20
13+85 to 14+20	1	20
	2	20
	3	20
14+20 to 14+40	1	15
	2	15
14+40 to 14+65	1	15

STABILITY TESTING

For the purpose of stability and load testing, it is recommended that the entire wall be treated as a single zone.

SOIL NAIL PROOF TESTING

Approximately 10 soil nail proof tests are anticipated (8% of the production nails). Figure 10 shows the recommended locations of the proof tests.

CONSTRUCTION CONSIDERATIONS

The typical sequence of excavation, soil nail, ground anchor, and facing installation, shall follow the Special Provisions for this project.

A. Excavation and Drilling Difficulties

The exploratory borings and seismic refraction survey indicates that the rock is rippable using conventional earth moving equipment. See previous section on Rippability.

The horizontal borings were re-occupied with a 1” tremie pipe to check for caving conditions within a week after drilling. All boreholes had caved in within that time frame. It is anticipated that caving may occur in the areas where landslide deposits and highly fractured rock exists, especially if percussion drilling is used. Casing may be required. The Contractor should utilize appropriate drilling methods for caving conditions.

B. Hazardous Materials

The landslide deposits within the Project Limits do not contain NOA.

C. Grout and Test Nail

Due to the existence of moderate to highly fractured rock at the project site, some loss of grout may occur during the grouting operation. If this situation occurs, a representative of Geotechnical Services should be contacted for further recommendation.

PROJECT INFORMATION

Standard Special Provisions S5-280, “Project Information”, discloses to bidders and contractors a list of pertinent information available for their inspection prior to bed opening. The following is an excerpt for SSP-280 disclosing information originating from Geotechnical Services. Items listed to be included in the information Handout will be provided in Acrobat (pdf) format to addressee(s) of this report via electronic mail.

*Data and information attached with the project plans are:
Log of Test Borings for Retaining Wall at PM 23.28*

Data and information included in the Information Handout provided to the bidders and contractors are:

A. Foundation Report for Ground Anchor/Soil Nail Retaining Wall #8 dated March 2, 2012.

Data and Information available for observation at the Transportation Laboratory:

A. Borehole Core Samples

If you have any questions or need more information, please contact June James at (707) 441-4692 or Jim Morris at (530)265-9867.



JUNE JAMES
Transportation Engineer
Office of Geotechnical Design – North



JIM MORRIS
Senior Materials & Research Engineer
Office of Geotechnical Design – North



CND

CHARLIE NARWOLD
Senior Engineering Geologist
Office of Geotechnical Design – North

List of Figures:

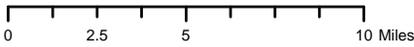
- Figure 1 - Vicinity Map
- Figure 2 - Site Map and Boring Layout
- Figure 3 - Wall Elevation View
- Figure 4 - Project Geologic map
- Figure 5 - Photos of Debris Slide and Debris Flow Deposits

- Figure 6 - Back Analysis Section A-A'
- Figure 7 - Back Analysis Section B-B'
- Figure 8 - Ground Anchor Stability Analysis Section A-A'
- Figure 9 - SNAILWIN Analysis for Section B-B'
- Figure 10 - Soil Nail Proof Test Locations

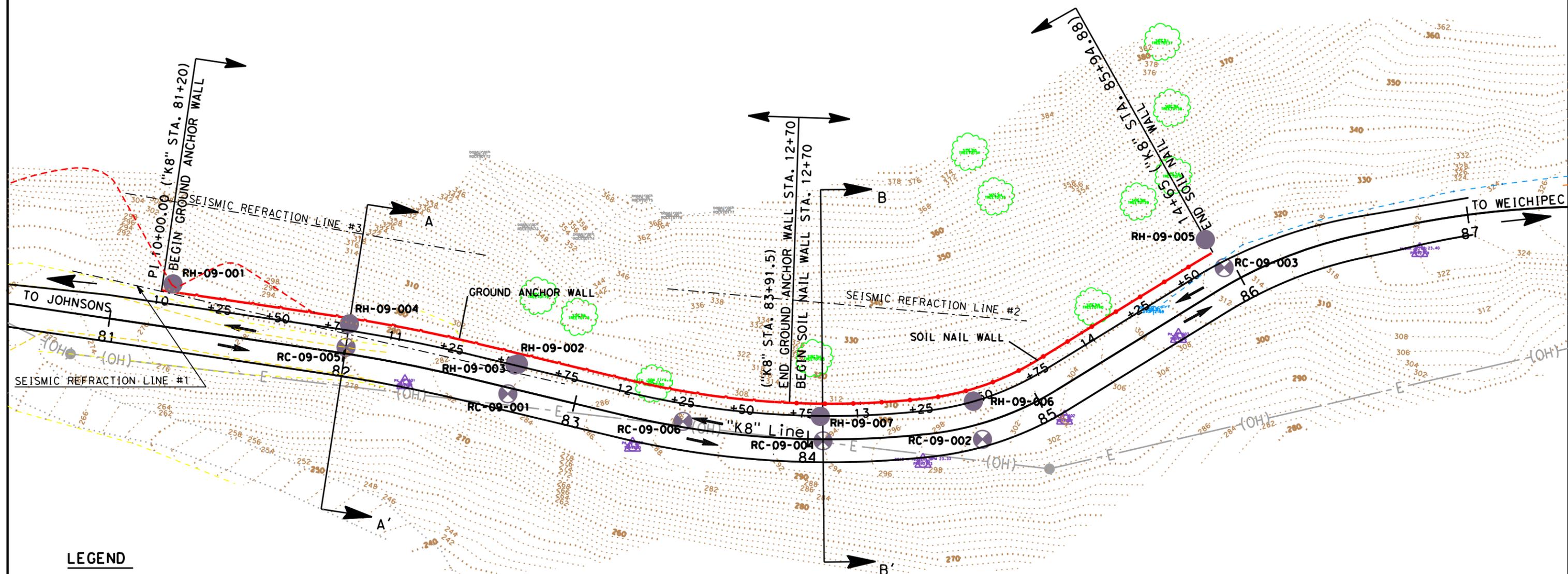
Attachments:

- Appendix A: Seismic Refraction Data
- Appendix B: Laboratory Test Data

- C: RBibbens (E-copy)
GS File Room (email: gs_file_room@dot.ca.gov)
Structure Construction RE Pending File (email: RE_pending_file@dot.ca.gov)
Project Manager



	Department of Transportation Division of Engineering Services Geotechnical Services Office of Geotechnical Design North Branch B	EFIS ID:0100000219	VICINITY MAP
		Date: March 2012	
	FOUNDATION REPORT RETAINING WALL AT PM 23.28	FIGURE 1	



LEGEND

- RC-09-001 APPROXIMATE VERTICAL BORING LOCATION
- RH-09-001 APPROXIMATE HORIZONTAL BORING LOCATION
- A A' CROSS-SECTION LOCATION
- SOIL NAIL WALL
- GROUND ANCHOR WALL
- SEISMIC REFRACTION LINE AND ID
- DEBRIS SLIDE AND DEBRIS FLOW LIMITS



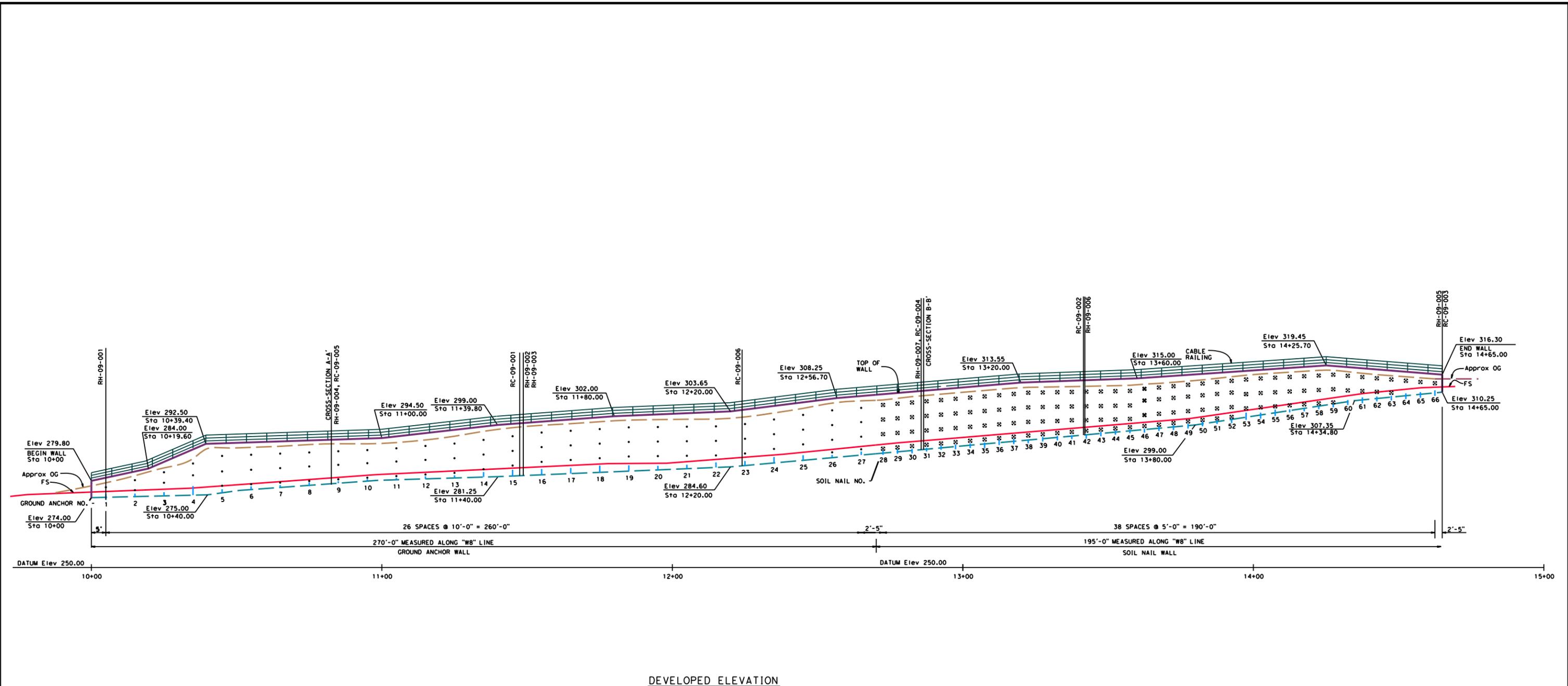
Department of Transportation
 Division of Engineering Services
 Geotechnical Services
 Office of Geotechnical Design North
 Branch B

EFIS ID: 0100000219
 DATE: MARCH 2012

SITE MAP AND BORING LAYOUT

FOUNDATION REPORT
 RETAINING WALL AT PM 23.28

FIGURE
 2



DEVELOPED ELEVATION

LEGEND:

- GROUND ANCHOR
- * SOIL NAIL

NOTE:

For Ground Anchor and Soil Nail elevations, see "WALL DETAILS NO. 1" sheet



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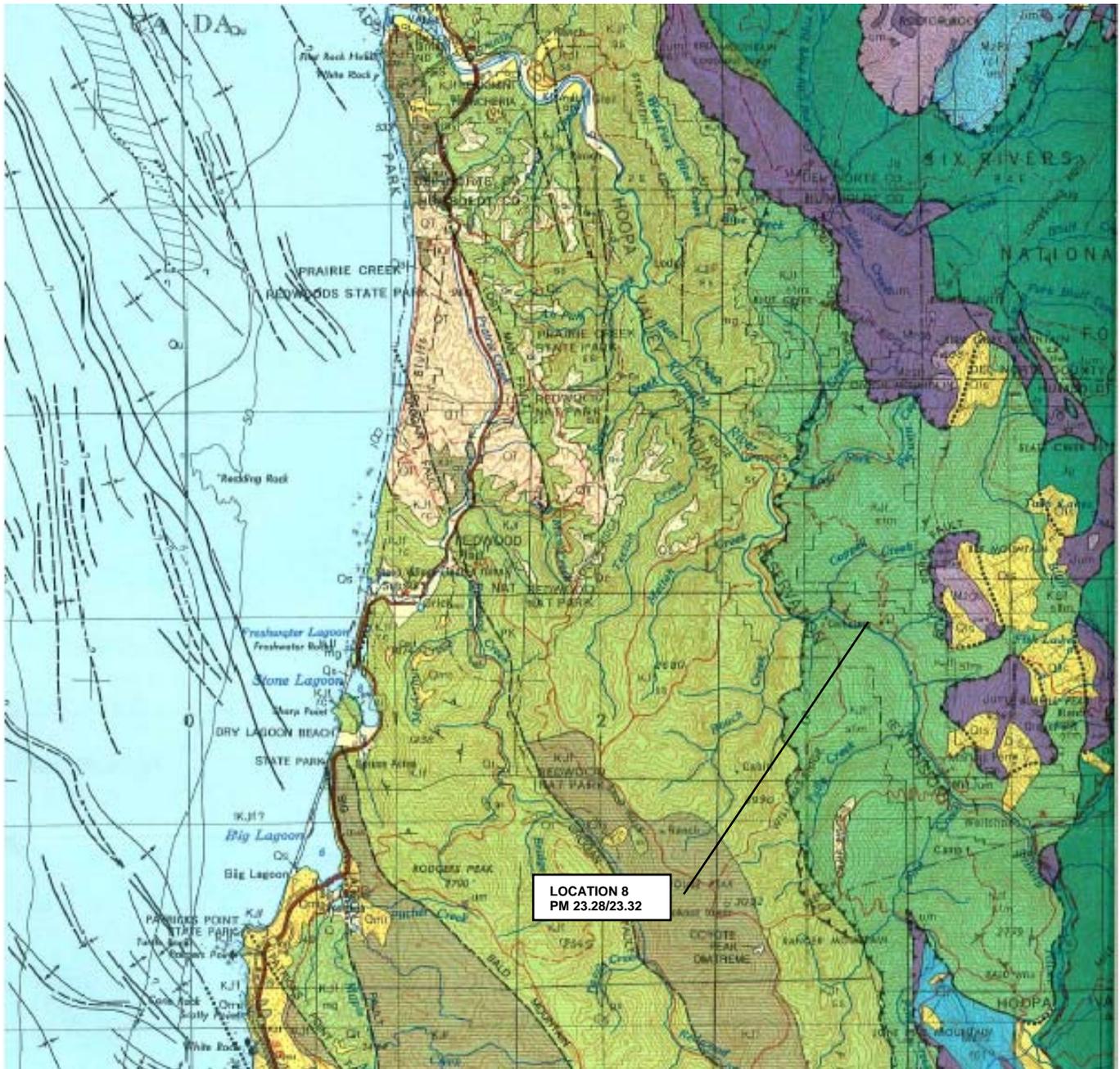
EFIS ID: 010000219

DATE: MARCH 2012

RETAINING WALL ELEVATION VIEW

FOUNDATION REPORT
 RETAINING WALL AT PM 23.28

FIGURE 3



Reference: Wagner, D. L. and Saucedo, G.J. "Geologic Map of the Weed Quadrangle, California" 1987

LEGEND:

- KJf ss – Franciscan Complex sandstone
- KJf sfm – Franciscan Complex South Fork Mountain Schist
- Jum – Ultramafic rocks – partially to completely serpentinized
- Qls – Landslide deposits

Scale: 1:250,000



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 Office of Geotechnical Design North
 Branch B

EFIS ID: 0100000219

Date: March 2012

**PROJECT GEOLOGIC
 MAP**

**FOUNDATION REPORT
 RETAINING WALL AT PM 23.28**

**Figure
 4**



Photo showing a portion of debris slide deposit located west of proposed wall. White line denotes approximate limits of deposits.



Photo showing eastern limit of debris slide and debris flow deposit between approximately "K8" Station 81+20 and 81+65. View is to the east.



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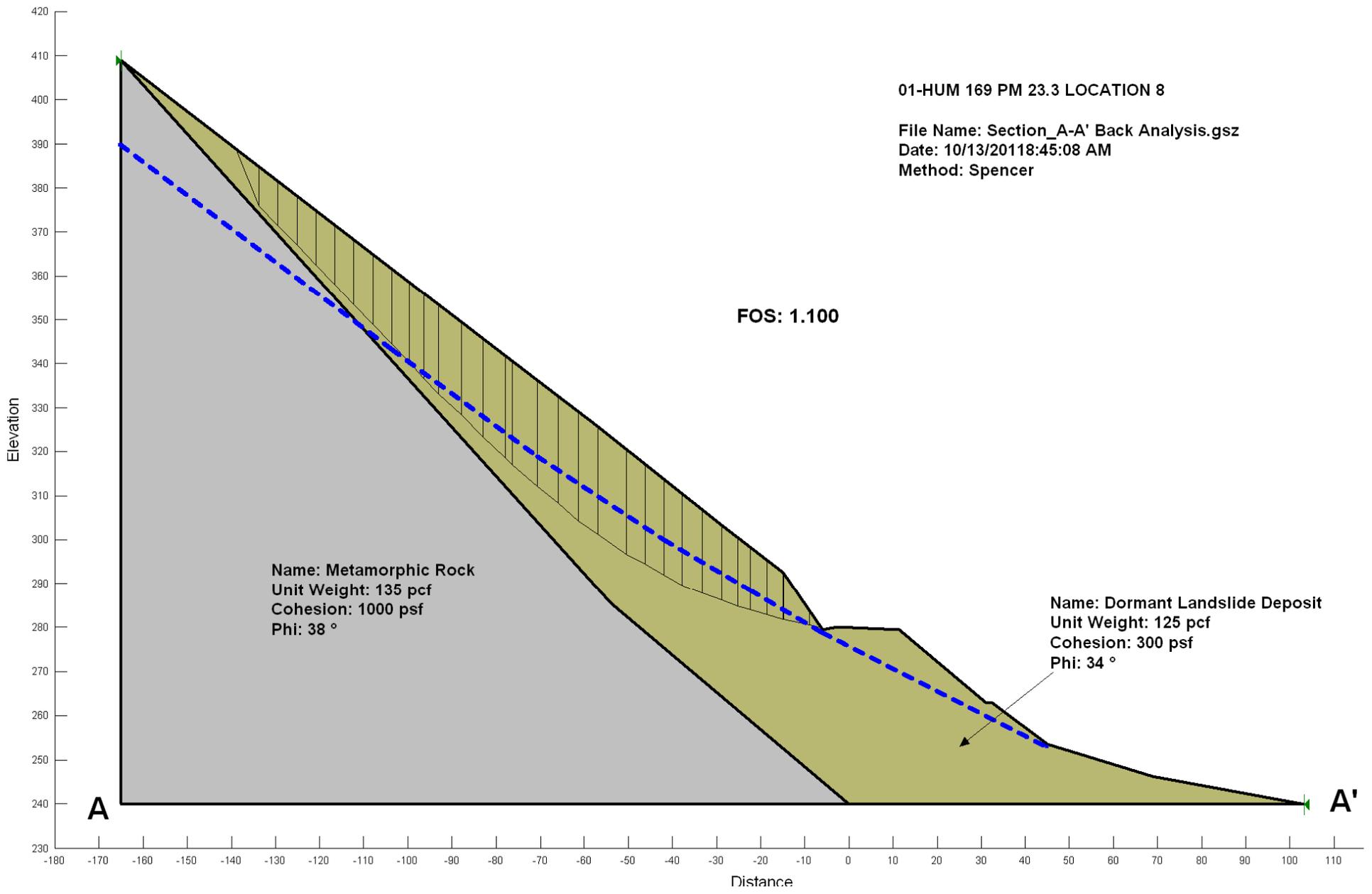
EFIS ID:0100000219

Date: March 2012

PHOTOS OF DEBRIS SLIDE AND DEBRIS FLOW
 DEPOSITS

FOUNDATION REPORT
 RETAINING WALL AT PM 23.28

Figure
 5



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Division of Engineering Services
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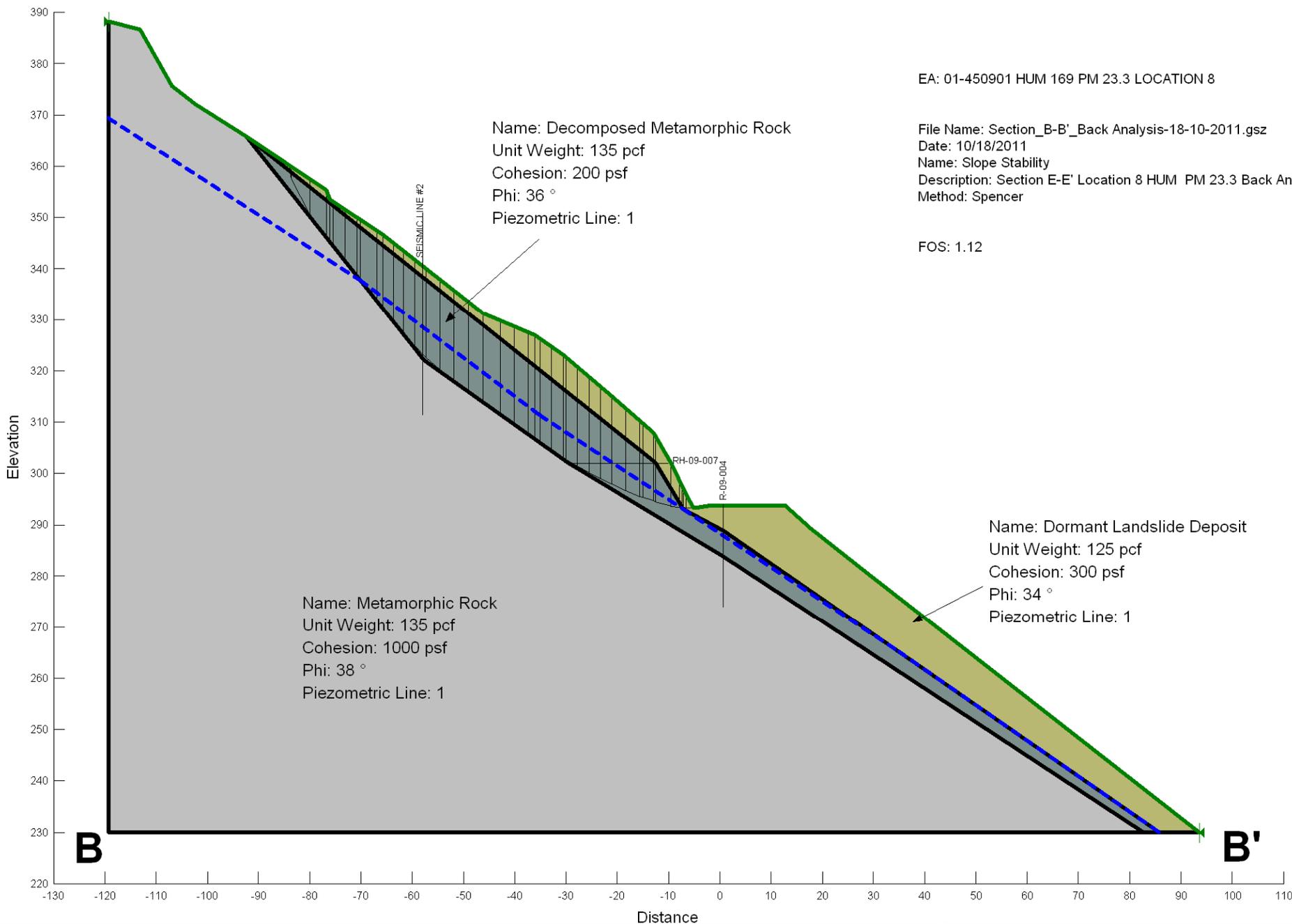
EFIS ID: 0100000219

Date: March 2012

BACK ANALYSIS SECTION A-A'

**FOUNDATION REPORT
RETAINING WALL AT PM 23.28**

Figure 6



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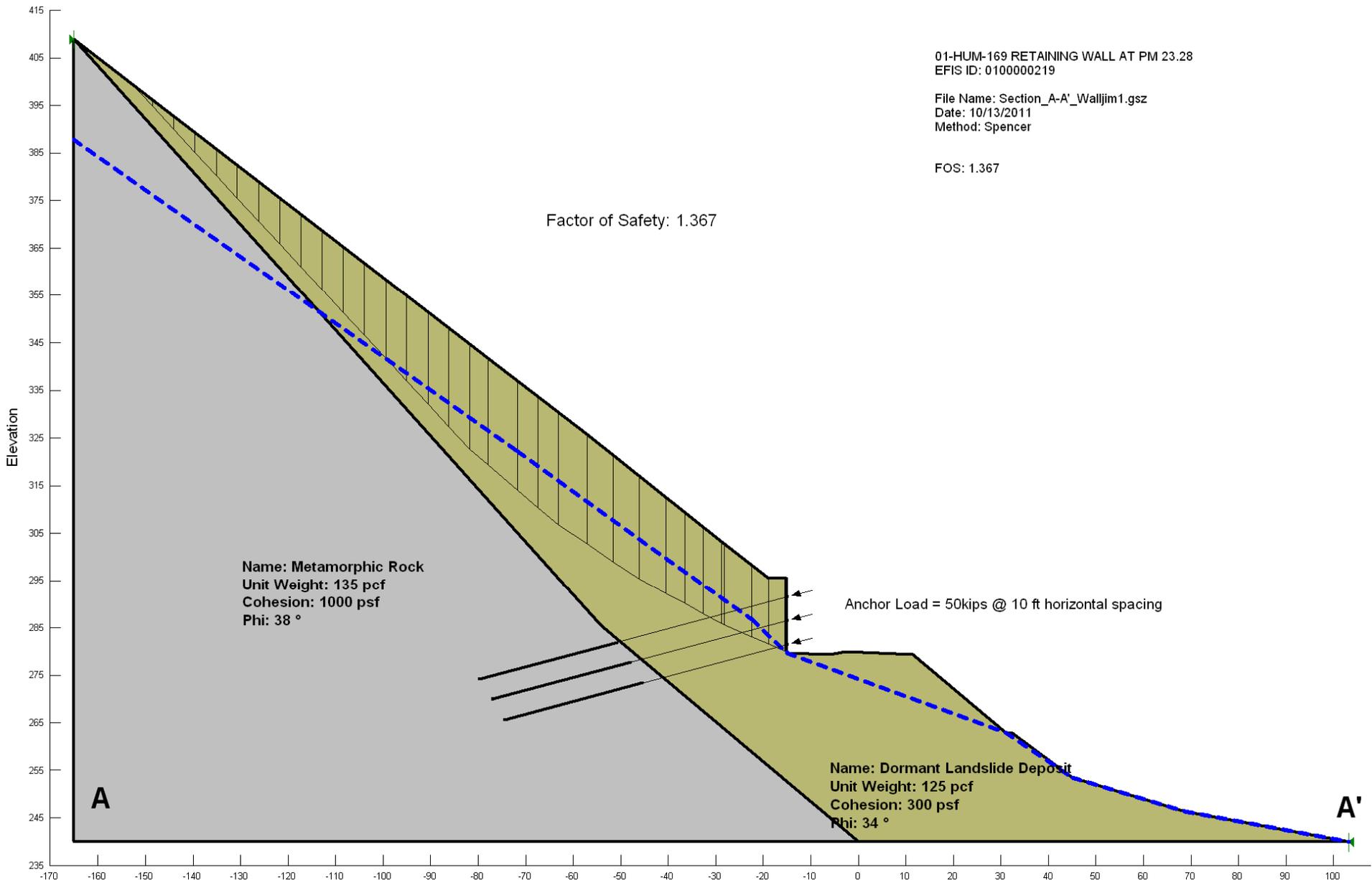
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Date: March 2012

BACK ANALYSIS SECTION B-B'

**FOUNDATION REPORT
 RETAINING WALL AT PM 23.28**

Figure 7



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 Branch B

EFIS ID: 0100000219

Date: March 2012

**GROUND ANCHOR STABILITY ANALYSIS
 SECTION A-A'**

**FOUNDATION REPORT
 RETAINING WALL AT PM 23.28**

Figure 8

Date: 10-18-2011

SnailWin 3.10

File: Section B-B'-jim 11-18-11

Minimum Factor of Safety = 1.52

50.0 ft Behind Wall Crest

0.0 ft Below Wall Toe

H= 20.3 ft

1
2
3

LEGEND:

PS= 40.0 Kips

FY= 75.0 Ksi

Sh= 5.0 ft

Sv= 5.0 ft

	GAM	PHI	COH	SIG
	pcf	deg	psf	psi
1	125.0	34	300	11.0
2	135.0	36	200	11.0
3	135.0	38	1000	18.0

Soil Bound.<2>

Scale = 10 ft



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Geotechnical Services
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Branch B

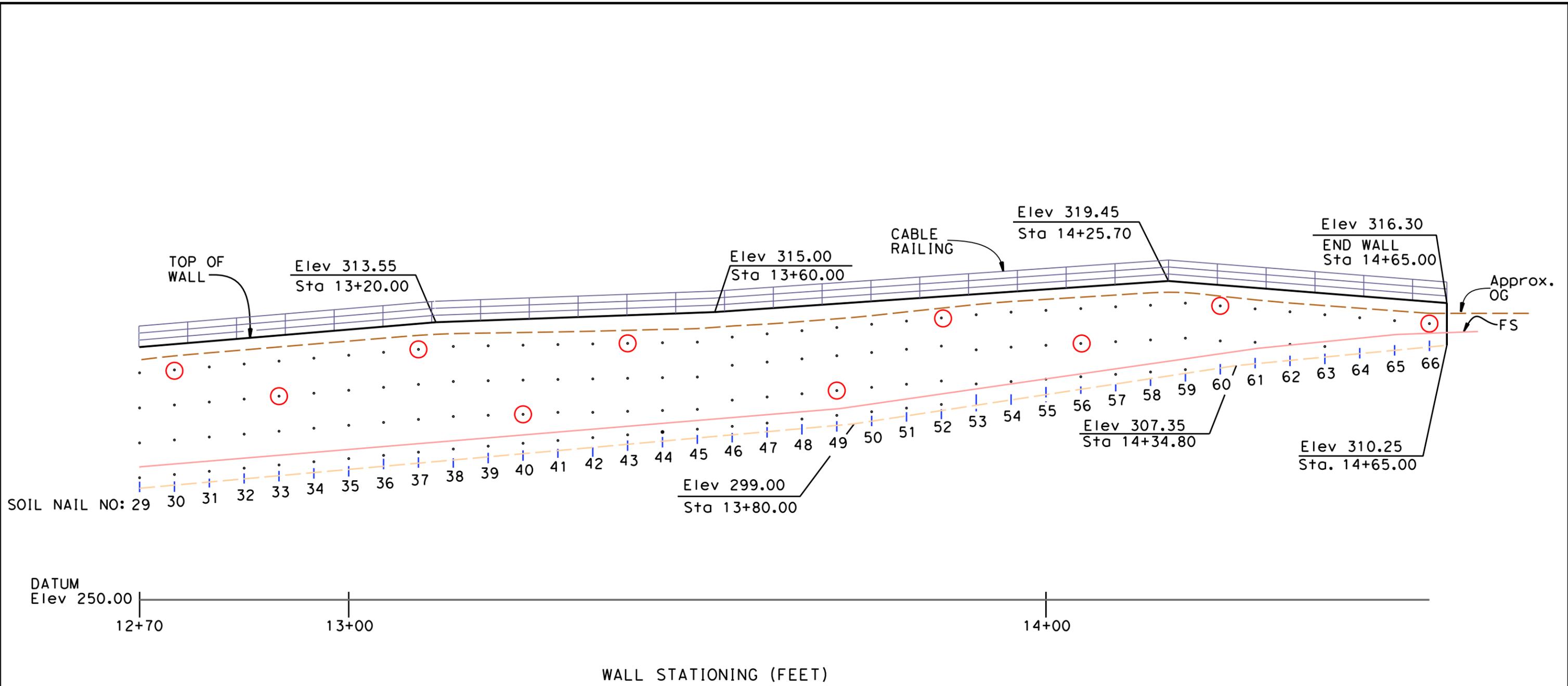
EFIS ID: 0100000219

Date: March 2012

SNAILWIN ANALYSIS FOR SECTION B-B'

FOUNDATION REPORT
RETAINING WALL AT PM 23.28

Figure 9



SOIL NAIL NO: 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66

DATUM
Elev 250.00

12+70

13+00

14+00

WALL STATIONING (FEET)

LEGEND:

- SOIL NAIL LOCATION
- SOIL NAIL PROOF TEST LOCATION



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Office of Geotechnical Design North
Branch B

EFIS ID: 0100000219	SOIL NAIL PROOF TEST LOCATIONS
DATE: MARCH 2012	
FOUNDATION REPORT RETAINING WALL AT PM 23.28	
FIGURE 10	

Figure_10_SOIL-NAIL-PROOF-LOCATIONS.dgn 3/2/2012 12:10:28 PM

APPENDIX A

SEISMIC REFRACTION DATA

Results of Seismic Refraction Surveys

Line number	Layer	Range in Thickness (ft)	Average Velocity (ft/s)	Rippability ¹
1	1-1	0-12	1500	ER
	1-2	18-24	2000	ER
	1-3	NA	6000	DR/LB
2	2-1	4-12	1200	ER
	2-2	11-14	3700	MD
	2-3	NA	7000	BR
3	3-1	2-7	1500	ER
	3-2	15-21	2400	ER
	3-3	NA	7500	BR

1 ER= Easily Ripped, MD= Moderately Difficult, DR/LB= Difficult Ripping/Light Blasting, BL= Blasting Required. NA=Not Applicable.

Rippability

Ripping ability is based on unpublished Caltrans data for a Caterpillar D9G series bulldozer with a single-tooth ripper. The values are as follows:

P wave Velocity (f/s)	Rippability
<3445	Easily Ripped
3445-4920	Moderately Difficult
4920-6560	Difficult Ripping/Light Blasting
>6560	Blasting Required

APPENDIX B

LABORATORY TEST DATA

TEST NUMBER 58840

RECEIVED 9/24/09

REPORTED 9/29/09

pH and RESISTIVITY TESTS
on soils and water

CALIFORNIA TEST No. 643

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
SAMPLE IDENTIFICATION CARD
TL-0101 (REV. 10/97)

CARD NUMBER
C 706525

- PRELIMINARY TESTS
- PROCESS TESTS
 - ACCEPTANCE TESTS
 - INDEPENDENT ASSURANCE TESTS
 - SPECIAL TESTS
- SAMPLE SENT TO:
- HDQTRS. LAB
 - BRANCH LAB
 - DIST. LAB
- INDEPENDENT ASSURANCE TESTS
- DIST. LAB
 - TRANS. LAB
- SPECIAL TESTS
- DIST. LAB
 - TRANS. LAB

FIELD NO. _____
DIST. LAB NO. 28840
LOT NO. _____
P.O. OR REQ. NO. _____
SHIPMENT NO. _____
AUTHORIZATION NO. 01-450900

SAMPLE OF SOIL
FOR USE IN FR

SAMPLE FROM Hum 169 PM 23.3
DEPTH 6'-7'
LOCATION OF SOURCE Shoulder

THIS SAMPLE IS SHIPPED IN _____ AND IS ONE OF _____ A GROUP OF _____
(NO. CONTAINERS)

OWNER OR MANUFACTURER Corrosion CT 643

TOTAL QUANTITY AVAILABLE _____ TEST RESULTS DESIRED _____ DATE NEEDED _____
 NORMAL PRIORITY

REMARKS _____

COVER ADDITIONAL INFORMATION WITH LETTER

DATE SAMPLED 7-14-09
BY DANN McQuarrie
DIST. CO. RTE, PM Hum 169 PM 23.3

LIMITS _____

CONT. NO. _____

FED. NO. _____

RES. ENGR. OR SUPT. _____

ADDRESS _____

CONTRACTOR _____

WATER ADDED (Milliliters)	SPECIMEN RESISTANCE (Ohms)	RESISTIVITY (Ohms x 1.0) (Ohms-cm)	EA
15	1.58 x 10 ⁶		450900
25	1.58 x 10 ⁶		
35	1.58 x 10 ⁶	15,000	
40	1.6 x 10 ⁶		
45			
50			
55			
60			
65			
70			
75			
80			
85			
90			
95			
100			
105			
110			
120			
125			
130			
135			
140			
145			
150			
155			
160			
165			
170			
175			
180			

WATER pH _____
SOIL Ph 5.99 pH

WATER MINIMUM RESISTIVITY: _____
SOIL MINIMUM RESISTIVITY: 15,000

REMARKS _____

Department of Transportation
District 1 Materials Lab
1726 Albee Street
Eureka, CA 95501-2200

TESTED BY: Christer

DATE: 9/29/09

ENCLOSE WITH SAMPLE

Memorandum

*Flex your power!
Be energy efficient!*

To: JOE DOWNING
Structure Design Branch 3
Office of Bridge Design North

Date: October 11, 2012

File: 01-HUM-169-PM 13.6/23.4
EA: 01-450901
EFIS ID: 0100000219

Attn: Quang H. Nguyen

From: DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
OFFICE OF GEOTECHNICAL DESIGN NORTH
BRANCH B

Subject: Foundation Report Addendum for Retaining Wall at PM 13.66

In response to a request from Structure Design Branch 3, the Foundation Report for HUM 169 PM 13.66 Retaining Wall, dated October 13, 2011 should be modified with the following recommendations.

Based on the Caltrans Corrosion Guidelines (2003 version 1.0) and laboratory test results, the site may be considered non-corrosive to steel and concrete.

A Class C Geosynthetic filter fabric should be placed at the back of the wall between the structure backfill and the timber lagging.

Temporary casing, drilling under slurry or placement of slurry cement or concrete backfill and re-drilling may be required to control caving and should be performed in conformance with the provisions in Section 49-3.02C(3) "Temporary Steel Casings" of the Standard Specifications.

Groundwater will likely be encountered in the pile boreholes. Pile installations may require dewatering or the placement of concrete and grout under water. If water is present and the holes are not dewatered, displacement of the water by means of a closed system using a concrete pump or tremie tube to place concrete and grout at the bottom of the holes will be required in conformance with the provisions in Section 51-1.03D(3) "Concrete Placed Under Water," of the Standard Specifications.

Standard Specifications (SP) 2-1.06B, "Supplemental Project Information," discloses to bidders and contractors a list of pertinent information available for their inspection prior to bid opening.

The Information Handouts available for the Bidders are the:
"Foundation Report, Retaining Wall at PM 13.66, dated October 13, 2011"
"Foundation Report Addendum for Retaining Wall at PM 13.66, dated October 11, 2012"

This may be viewed at the Bidders' Exchange Web site.

Rock cores may be viewed by sending a request to Corerroom@dot.ca.gov.

If you have any questions or require further assistance, please contact June James at (707) 441-4692 or Charlie Narwold at (707) 445-6036.



CND



M. JUNE JAMES
Transportation Engineer
Office of Geotechnical Design North
Branch B

CHARLIE NARWOLD
Senior Engineering Geologist
Office of Geotechnical Design North
Branch B

C:
RBibbens (E-copy)
GS File Room (email gs_file_room@dot.ca.gov)
Structure Construction RE Pending File (email RE_pending_file@dot.ca.gov)
Project Manager

Memorandum

*Flex your power!
Be energy efficient!*

To: JOE DOWNING
Structure Design Branch 3
Office of Bridge Design North

Date: October 11, 2012

File: 01-HUM-169-PM 13.6/23.4
EA: 01-450901
EFIS ID: 0100000219

Attn: Quang H. Nguyen

From: DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
OFFICE OF GEOTECHNICAL DESIGN NORTH
BRANCH B

Subject: Foundation Report Addendum, for Ground Anchor/Soil Nail Retaining Wall #8

This addendum to the Foundation Report for Ground Anchor/Soil Nail Retaining Wall #8, dated March 02, 2012, was prepared in response to a request from Structure Design Branch 3.

The reference to the Standard Special Provisions S5-280 should be modified as follows.

Standard Specifications (SP) 2-1.06B, "Supplemental Project Information," discloses to bidders and contractors a list of pertinent information available for their inspection prior to bid opening.

The Information Handouts available for the Bidders are the:

Foundation Report for Ground Anchor/Soil Nail Retaining Wall #8, dated March 2, 2012
Foundation Report Addendum for Anchor/Soil Nail Retaining Wall #8, dated October 11, 2012.

These may be viewed at the Bidders' Exchange Web site.

If you have any questions or require further assistance, please contact June James at (707) 441-4692 or Charlie Narwold at (707) 445-6036.



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Transportation Engineer
Office of Geotechnical Design North
Branch B

CND



CHARLIE NARWOLD
Senior Engineering Geologist
Office of Geotechnical Design North
Branch B

C:
RBibbens (E-copy)
GS File Room (email gs_file_room@dot.ca.gov)
Structure Construction RE Pending File (email RE_pending_file@dot.ca.gov)
Project Manager

Memorandum

*Flex your power!
Be energy efficient!*

To: LENA ASHLEY
Branch Chief
North Region Design Branch E-3

Date: August 07, 2012
File: 01-HUM-169-PM 13.7/33.8
EA: 01-450901
EFIS ID: 0100000219

Attn: BIJAN SAMRAD

From: **DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
OFFICE OF GEOTECHNICAL DESIGN NORTH
BRANCH B - EUREKA**

Subject: Geotechnical Design Report, Locations 2, 3 and 5 through 7

1. Project Description

This Geotechnical Design Report (GDR) was prepared for the proposed Safety Project along State Route 169 between PM 13.7 and PM 33.8, within the Native American Indian Yurok Tribal Reservation in Humboldt County, California.

This segment of HUM-169 is not an engineered alignment and generally does not comply with the horizontal and vertical alignment standards of the Highway Design Manual (HDM). The existing traveled way is reduced to a single lane at some locations, and the recovery area is minimal to nonexistent. This safety Project was initiated in response to the Yurok Tribal Community concerns regarding run off road type collisions. This GDR addresses the following five locations (See Figure 1 -Vicinity map).

- Location 2, from PM 18.94 to PM 19.08
- Location 3, from PM 20.48 to PM 20.62
- Location 5, from PM 22.60 to PM 22.71
- Location 6, from PM 22.73 to PM 22.82
- Location 7, from PM 22.88 to PM 22.99

The purpose of this report is to document the geotechnical conditions, provide analyses of anticipated site conditions as they pertain to the project described herein, and to recommend design and construction criteria for the roadway portions of the project. This report also establishes a geotechnical baseline to be used in assessing the existence and scope of changed site conditions. This report is intended for use by the project design engineer, construction personnel, bidders and contractors.

2. Existing Facilities and Proposed Project Improvements

State Route 169 consists of a one lane traveled way of variable width with paved and unpaved shoulders of variable width, and an intermittent center stripe along some sections. The roadway is typically constructed on cuts (in-board edge) and fills (out-board edge). Cuts in the Project area appear to be performing well and range from approximately 5 feet to 70 feet in height and range from 20 degrees to 74 degrees. Locally the fill slopes are oversteepened due to slope failures. Fills have a maximum height of approximately 50 feet with slope ratios that range between 31° to 55°. At several locations the roadway shows signs of distress.

Location 2 (PM 18.94 to PM 19.08)

The proposed Project at this site is to widen the roadway to 20 feet by cutting existing slopes at a slope ratio of 1H:1V with a maximum height of 21 feet. Cantilevered Metal Beam Guard Rail (MBGR) will be installed on the right side of the roadway to minimize runoff road-type collisions. (Figure 2- Location 2 Layout)

Existing Site Conditions

The cut slope at this location is composed of colluvium and locally contains cobbles and boulders. There is evidence of an arcuate crack at the outboard edge of the roadway at approximately Station 24+50.

Caltrans Maintenance said that currently, they do not have a maintenance concern at this location other than tree loss due to snow loads. At the time of the field visit (July 2008) there was no slope debris in the ditch. Many mature trees on the proposed cut slopes were removed in 2009 by PG&E for power line construction.

Location 3 (PM 20.48 to PM 20.62)

The proposed Project at this site is to widen the travel way to 20 feet by cutting the in-board side slope at a 0.5H:1V to a maximum height of 55 feet and installing standard MBGR (Figure 3- Location 3 Layout). The culvert inlet at PM 20.60 will be extended northward.

Existing Site Conditions

The site pavement width varies between 10.5 feet to 18 feet and the surveyed roadway elevation ranges from 336 feet to 352 feet NGVD. The outboard side slope varies between 8° to 45° within the Project Limits. The pavement shows no signs of distress. The inboard slope is a sparsely vegetated rock outcrop with slopes ranging between 12° to 71°. The site drains via an inboard ditch to two culverts at PM 20.47 and PM 20.60. The 24-inch corrugated metal pipe (CMP) culvert at PM 20.47 collects water from a hillside creek. The culvert inlet was partially buried by rock. The damaged 18-inch CMP culvert at PM 20.60 was moist at the time of the survey. The culvert at PM 20.60 has a steep drop at the outlet. Caltrans Maintenance reported that the slope constantly ravel and the ditch contained rock debris at the time of our field review.

Location 5 (PM 22.60 to PM 22.71)

The proposed Project at this site is to widen the travel way to 20 feet. This is to be done by cutting the existing slope at a slope ratio of 0.25H:1V to a maximum height of 35 feet to a length of 345 feet. Cantilevered MBGR will be installed on the outboard edge and the culvert at PM 22.68 will be extended (Figure 4- Location 5 Layout). Caltrans Maintenance called this an “active” area and said that the slope constantly ravel. Minor rock debris was observed in the ditch.

Existing Site Conditions

The site pavement width varies between 11.5 feet to 26 feet and the surveyed roadway elevation ranges from 216’ to 218’ NGVD. The outboard side slope varies between 34° to 57° within the Project limits. There were no signs of pavement distress. The inboard slope is a sparsely vegetated rock outcrop with slopes ranging between 39° to 74°. The site drains via an inboard ditch to an 18-inch CMP culvert marked as PM 22.68.

Location 6 (PM 22.73 to PM 22.82)

The Project at this site is to widen the travel way to 20 feet by cutting the rock face at a 0.5H: 1V slope ratio to a maximum height of 31 feet. A cantilevered MBGR will be constructed on the outboard edge and the culvert at PM 22.77 will be replaced. (Figure 5- Location 6 Layout).

Existing Site Conditions

The site pavement width varies between 12’ to 16’ and the surveyed roadway elevation averages 216’ NGVD. The outboard side slope varies between 36° to 43° within the Project limits. The condition of the pavement was good. The inboard slope is a sparsely vegetated rock outcrop with slopes ranging between 60° to 85°. The site drains via an in-board ditch to two 18” CMP culverts marked as PM 22.77 and PM 22.80. Both culverts collect roadside runoff and a hillside drainage/creek. The culvert at PM 22.80 was wet at time of survey. The post mile markers at this location may be incorrect. The culvert at PM 22.77 has a steep drop at the outlet.

Location 7 (PM 22.88 to PM 22.99)

The proposed Project at this site is to widen the travel way to 20 feet by cutting a 1H: 1V slope to a maximum height of 19 feet and constructing a cantilevered MBGR (Figure 6- Location 7 Layout).

Existing Site conditions

The site pavement width varies between 10 feet to 26.4 feet and the surveyed roadway elevation ranges between 216 feet to 242 feet NGVD. The outboard side slope varies between 32° to 42° within the Project Limits. The road surface is distressed from the beginning of the Project Limits to approximately Station 73+00. The pavement in this area is heavily patched. The pavement shows no signs of distress from Station 73+00 to the end of the Project.

The heavily vegetated in board slopes typically range between 56° to 65°. But several exposed bedrock locations are as steep as 74°. The site drains via an inboard ditch into two culverts marked as PM 22.85 and PM 22.98. The 24-inch CMP culvert at PM 22.85 collects hillside drainage and outlets on to an old logging road. The culvert was wet at time of the field survey. The 18-inch CMP culvert at PM 22.98 collects roadside drainage. Evidence of wetland vegetation in ditch near the culvert inlet suggests that the ditch remains saturated in the summer.

3. Scope of Work

The recommendations contained in this report are based on a review of geotechnical/geologic literature, seismic refraction surveys, geotechnical calculations, field observations, and engineering judgment. Subsurface conditions were evaluated only at the seismic refraction survey line locations and may deviate elsewhere within the project limits.

4. Pertinent Reports and Investigations

The following documents were reviewed in preparation of this report:

Project Plans

Existing and Proposed Plan Views of Proposed Project, dated January 2012.

Typical Cross Sections of Proposed Project Plans, dated January 2012.

Caltrans Reports

Draft Project Report, 01-HUM-PM-13.37/33.8 Dated 02-02-2010

Preliminary Geotechnical Report, 01 HUM 169 PM 13.66/33.77, EA: 01-450901, October 28, 2008.

Literature

Turner, A.K., 1996, Colluvium and talus, in Landslides - investigation and mitigation: National Research Council, Transportation Research Board, Special Report 247, Chapter 20, p. 525-554.

Wagner, D.L., and Saucedo, G.J., 1987, Geologic map of the Weed quadrangle, California: California Department of Conservation, Division of Mines and Geology, Regional Geologic Map Series, Map No. 4A (Geology), 4 sheets, 1:250,000.

5. Physical Setting

5.1 Rainfall

According to the Western Regional Climate Center (<http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6508>), Monthly Climate Summary for Orleans, California (046508) 1903-2007 the average total annual precipitation is 51.13 inches (in.). The majority of the precipitation falls between October and April. Average total annual snowfall is 5.9 in. occurring between November and March.

5.2 Topography & Drainage

The Project is located in the Northern Coast Ranges. State Highway 169 traverses a steep south to west-facing slope that follows the trend of the Klamath River north of the confluence of the Trinity River (Figure 1-Vicinity Map). Roadway drainage is achieved via ditches along the inboard edge of the roadway that drain to the outboard edge of the roadway via cross culverts. At Locations 3 and 6, culverts capture intermittent streams from the hillside.

5.3 Man-made and Natural Features of Engineering and Construction Significance

The Project is within Yurok Tribal Land. According to personal communication with Caltrans' archeologist, Darrell Cardiff, some areas within the Project Limits were fire managed by the Native Americans to maintain prairies.

5.4 Regional Geology

The Project lies within the Coast Ranges geomorphic province. A geologic map showing the approximate location of the Project is shown in Figure 7. Based on mapping by Wagner and Saucedo (1987) bedrock in the Project area is Cretaceous to Jurassic age Franciscan Complex sandstone (Kjfs) and South Fork Mountain Schist (Kjfsm). The South Fork Mountain Schist is a metamorphosed greywacke that is part of the regional Franciscan Assemblage (Kjf).

5.5 Seismicity

Seismic design criteria were not considered for this project for it does not include any "critical" structures.

6. Exploration

6.1 Geophysical Studies

Seismic Refraction surveys were conducted at Locations 2, 3, 6, and 7 on May 12 through 14, 2009. The approximate locations of the seismic refraction survey lines are shown on the attached layout sheets. The following table summarizes the results of the seismic refraction surveys.

Location	Line I.D.	Layer	Average Thickness (ft)	Average Velocity (ft/s)	Rippability ¹
7	K1	1	0-4	2000	ER
7	K1	2	12-20	5000	DR
7	K1	3	NA	9500	NR
2	K3	1	2-8	1000	ER
2	K3	2	8-22	2000	ER
2	K3	3	NA	4100	MD
6	K2	1	4	1100	ER
6	K2	2	10-12	3000	ER
6	K2	3	NA	4300	MD
3	K4	1	4	1200	ER
3	K4	2	10-22	3000	ER
3	K4	3	NA	3400	MD
3	K5	1	8	1200	ER
3	K5	2	4-28	2000	ER
3	K5	3	NA	3200	MD

¹ER-Easily Ripped, MD-Moderately Difficult, DR-Difficult Ripping, NR-Not Rippable
 NA-Not applicable

Ripping ability is based on unpublished Caltrans data for a Caterpillar D9 series bulldozer with a single-tooth ripper. The velocities and corresponding rippability is as follows:

Velocity (ft/s)	Rippability
<3445	Easily Ripped
3445-4921	Moderately Difficult
4921-6562	Difficult Ripping
>6562	Not Rippable

Different excavation equipment may experience different results. Penetrating efficacy of the ripping tooth is often more important in predicting ripping success than seismic velocity alone.

7. Site Geology

Location 2

The material exposed in the existing cut slope is composed of colluvium and locally contains cobbles and boulders. A soil sample taken from the existing cut slope at PM 18.96 was classified as silty, clayey sand with gravel (SC-SM).

Location 3

The cut slopes at Location 3 expose bedrock and numerous shallow debris slides between Station 30+60 to approximately Station 32+65. The bedrock exposed in the existing cut is sedimentary rock (greywacke sandstone), fine grained, thinly to thickly bedded, gray and greenish gray, slightly weathered, moderately hard to hard, intensely fractured.

Location 5

The bedrock exposed in the existing cut is metamorphic rock (phyllite), fine to medium grained, laminated to very thinly bedded, from light gray to black, slightly weathered, moderately hard, intensely fractured. Quartz was observed in some discontinuities.

Location 6

The bedrock exposed in the existing cut is metamorphic rock (phyllite), fine to medium grained, laminated to very thinly bedded, from light gray to black, slightly weathered, moderately hard, intensely fractured.

Location 7

The inboard side slope between Station 72+15 to approximately Station 74+00 consist of a debris flow consisting of an unconsolidated mixture of poorly sorted boulders, cobbles and gravel in a clayey matrix. There are two bedrock outcrops at this location. The first outcrop starts at the culvert at approximately Station 70+15 and continues to approximately Station 72+15. The second outcrop, approximately 130 feet long, starts around Station 74+00 and continues to approximately Station 75+30. Both outcrops are metamorphic rock (phyllite), fine to medium grained, laminated to very thinly bedded, gray, slightly weathered, moderately hard, intensely to very intensely fractured.

8. Geotechnical Design Recommendations

Location 2 (PM 18.94 to PM 19.08)

We recommend a 1H:1V cut slope ratio for the proposed cut. The seismic refraction survey results indicate that the material within the limits of the proposed cut is rippable. It is recommended that the cut slope be vegetated following excavation to minimize erosion.

Location 3 (PM 20.48 to PM 20.62)

We recommend a 0.5H:1V cut slope ratio for the proposed cut. The seismic refraction survey results indicate that the rock may be moderately difficult to rip below approximately elevation 380 feet.

Location 5 (PM 22.60 to PM 22.71)

We recommend a cut slope ratio of 0.25H:1V for the proposed cut. We anticipate the rock will be rippable.

Location 6 (PM 22.73 to PM 22.82)

We recommend a cut slope ratio of 0.5H:1V for the proposed cut. The seismic refraction survey results indicate that the rock may be moderately difficult to rip below approximately elevation 234 feet.

Location 7 (PM 22.88 to PM 22.99)

We recommend a cut slope ratio of 1H:1V for the proposed cut slope. The results of the seismic refraction survey results indicate that the material within the limits of the proposed cut is rippable.

9. Material Disposal

According to the Project Report the disposal of approximately 7,500 cubic yards of excess material will become the property of the Contractor and will not be disposed within the Yurok reservation boundaries.

10. Construction Considerations

Based on field observations and the results of the seismic refraction surveys, the material within the limits of the proposed cuts will be rippable. However, construction of the cuts will be difficult. Given the narrow roadway width, the need to maintain traffic during construction, limited access, and the height and narrow width of the proposed cuts at Locations 3 and 5, we anticipate specialty techniques will be required to construct the proposed cuts.

If rock that cannot be ripped is encountered within the limits of the proposed cuts, removal of the rock will be performed in accordance with Standard Special Provision 19-4 Rock Excavation. If blasting is required, all blasting will be performed in accordance with Standard Special Provision 19-4 Rock Excavation (Controlled Blasting).

Hazardous Waste Considerations

According to the 2005 District 1 Areas to Likely Contain Naturally Occurring Asbestos (NOA) Map, Quaternary landslide deposits that likely contain partially to completely serpentinized ultramafic rocks exist at approximately PM 30.00. According to personal communication with Steve Werner, District 1 Hazardous Waste Coordinator on August 25, 2008, the Quaternary landslide deposits within the Project Limits do not contain NOA.

Differing Site Conditions

The subsurface conditions “in the contract” are those defined by this report. Early communication between the Resident Engineer, the Contractor and the Geotechnical Professional is recommended as soon as conditions that differ from those established by the GDR are recognized.

11. Project Information

Standard Special Provisions S5-280, “Project Information,” discloses to bidders and contractors a list of pertinent information available for their inspection prior to bid opening. The following is an excerpt from SSP S5-280 disclosing information originating from Geotechnical Services. Items listed to be included in the Information Handout will be provided in Acrobat (.pdf) format to the addressee(s) of this report via electronic mail.

Data and information attached with the project plans are:

A. None

Data and information included in the Information Handout provided to the bidders and Contractors are:

A. Geotechnical Design Report for HUM 169 PM 13.6/33.8, dated July 31, 2012

Data and information available for inspection at the District Office:

A. None

If any conceptual changes are made during final project design, the Office of Geotechnical Design North should review those changes to determine if these recommendations are still applicable.

If you have any questions or require further assistance, please call June James at (707) 445-6036.

Report by:

Reviewed by:



Handwritten signature of Charles Frederick Narwold.

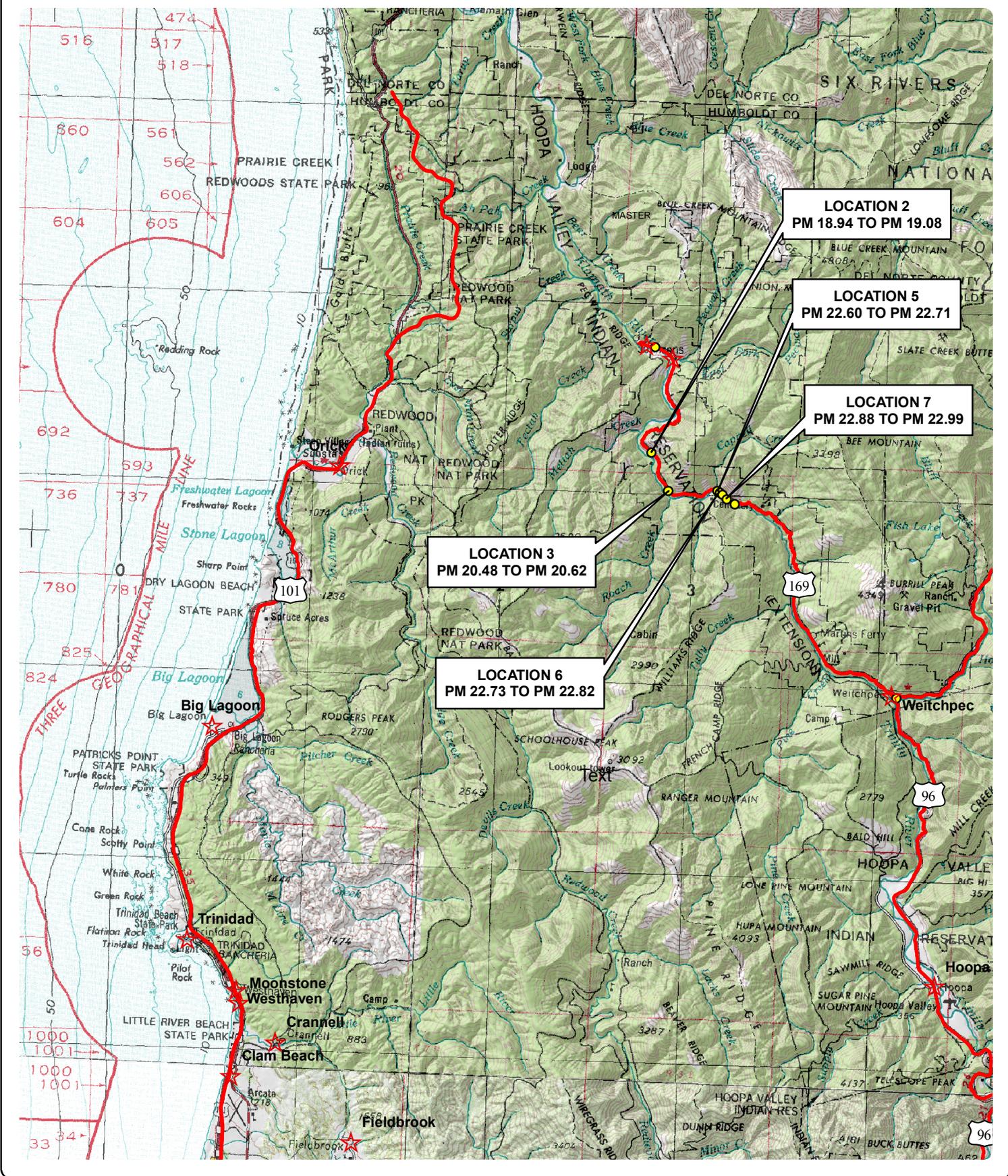
M. JUNE JAMES
Transportation Engineer
Office of Geotechnical Design - North
Branch B

CHARLIE NARWOLD
Senior Engineering Geologist
Office of Geotechnical Design - North
Branch B

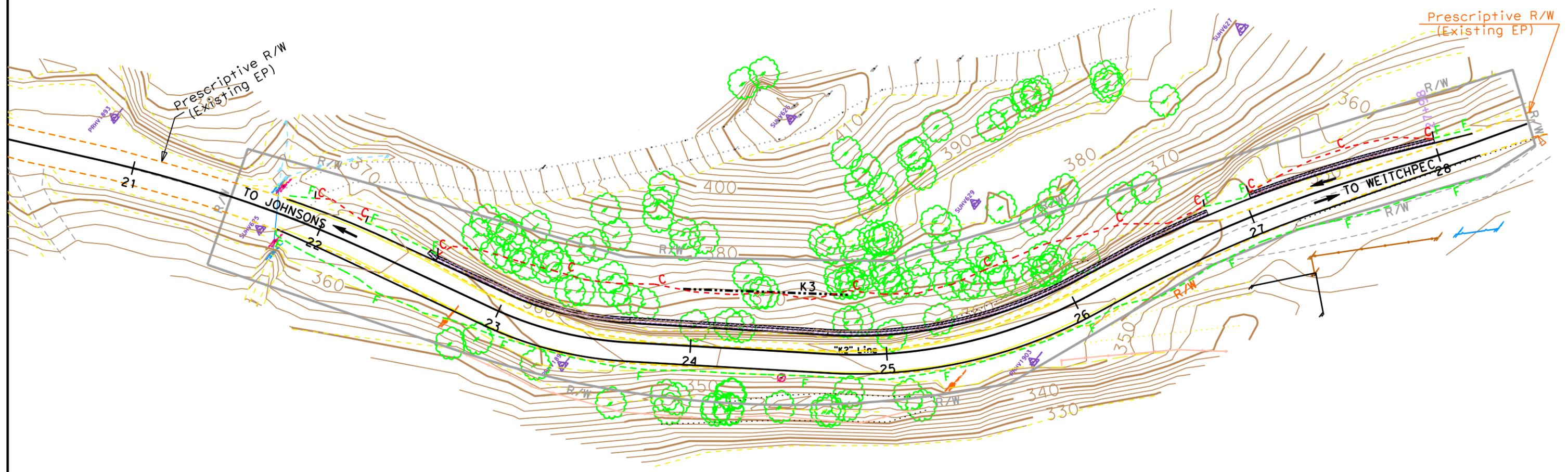
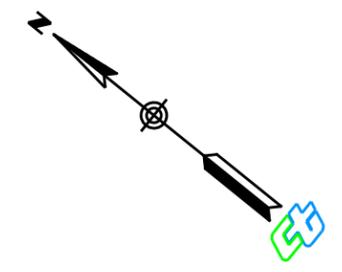
Attachments:

- Figure 1 – Vicinity Map
- Figure 2 –Location 2 Layout
- Figure 3 –Location 3 Layout
- Figure 4 –Location 5 Layout
- Figure 5 –Location 6 Layout
- Figure 6 –Location 7 Layout
- Figure 7 – Project Geologic Map

c: OGDN Project Folder
GS File Room



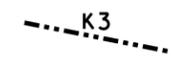
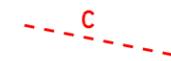
	Department of Transportation Division of Engineering Services Geotechnical Services Office of Geotechnical Design North- Branch B	EFIS ID:010000219	VICINITY MAP
		DATE: AUGUST 2012	
		GEOTECHNICAL DESIGN REPORT	FIGURE 1



LOCATION 2

STA "K2" 21+50 TO "K2" 28+50
(PM: 18.94/19.08)

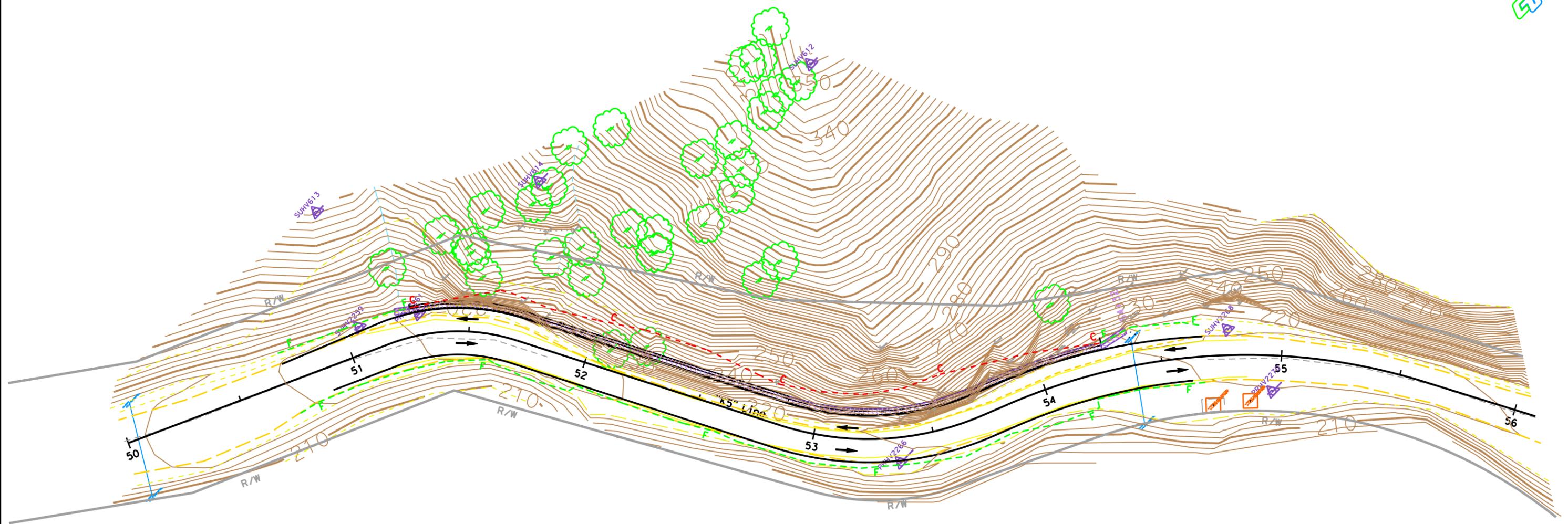
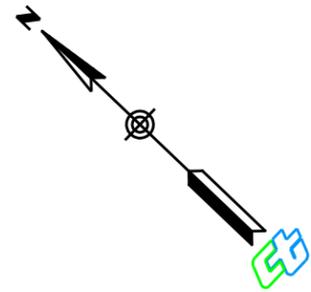
LEGEND

-  SEISMIC REFRACTION LINE AND ID
-  CUT LIMITS
-  FILL LIMITS



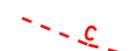
Department of Transportation
Division of Engineering Services
Office of Geotechnical Design North
Branch B

EFIS ID: 0100000219	LOCATION 2 LAYOUT	
DATE: AUGUST 2012		
GEOTECHNICAL DESIGN REPORT 01-HUM-169-PM 13.7/33.8		FIGURE 2



LOCATION 5
 STA "K5" 50+40 TO "K5" 55+00
 (PM: 22.60/22.71)

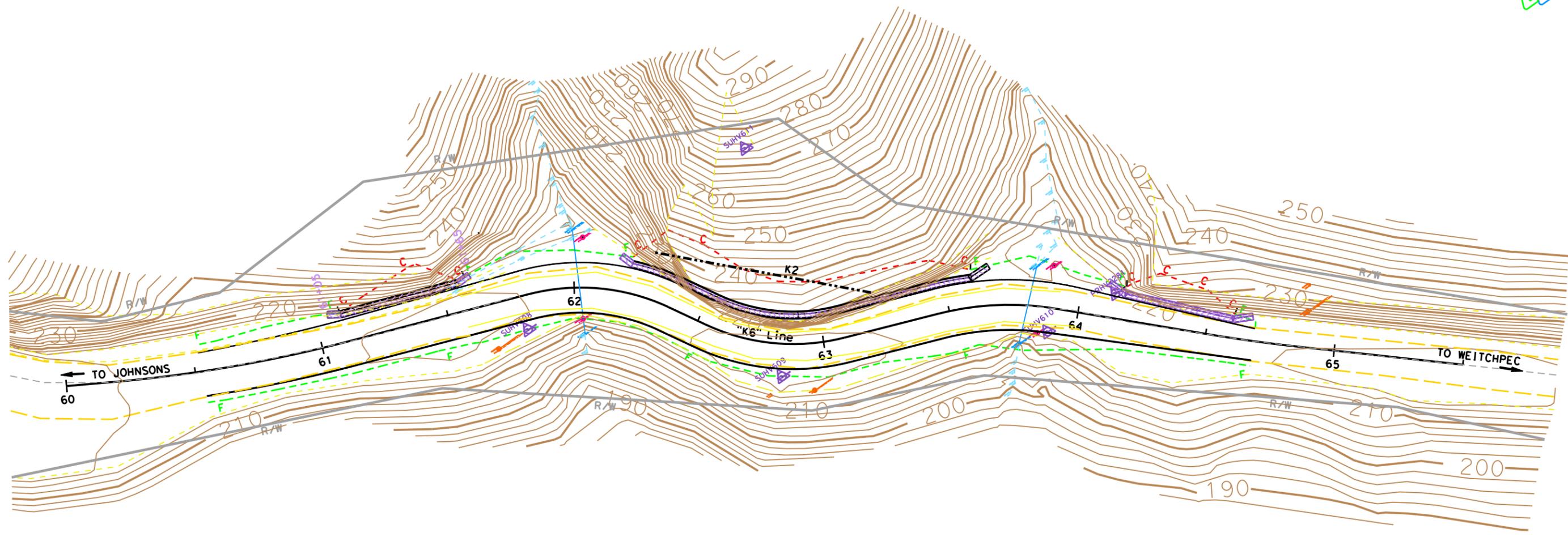
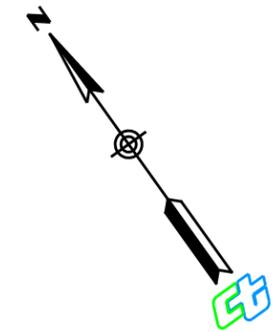
LEGEND

-  LIMITS OF CUT
-  LIMITS OF FILL



Department of Transportation
 Division of Engineering Services
 Geotechnical Services
 Office of Geotechnical Design North
 Branch B

EFIS ID: 0100000219	LOCATION 5 LAYOUT	
DATE: AUGUST 2012		
GEOTECHNICAL DESIGN REPORT 01-HUM-169-PM 13.7/33.8		FIGURE 4



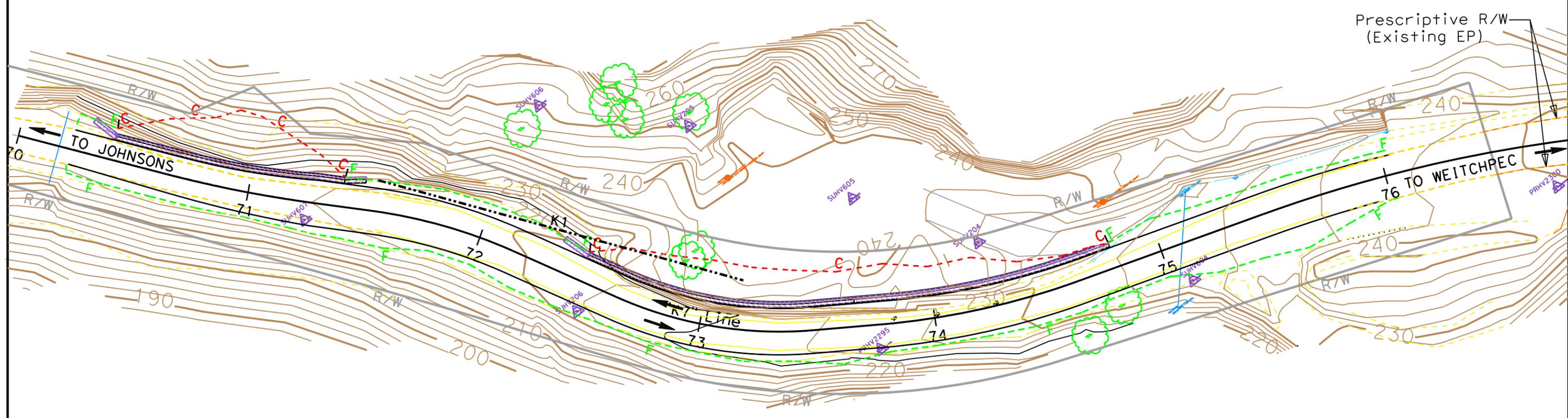
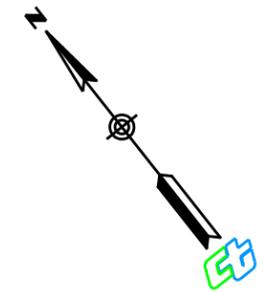
LOCATION 6
(PM: 22.73/22.82)

- LEGEND**
- SEISMIC REFRACTION LINE AND ID
 - CUT LIMITS
 - FILL LIMITS



Department of Transportation
 Division of Engineering Services
 Geotechnical Services
 Office of Geotechnical Design North
 Branch B

EFIS ID: 0100000219	LOCATION 6 LAYOUT	
DATE: AUGUST 2012		
GEOTECHNICAL DESIGN REPORT 01-HUM-169-PM 13.7/33.8	FIGURE 5	



LOCATION 7

(PM: 22.88/22.99)

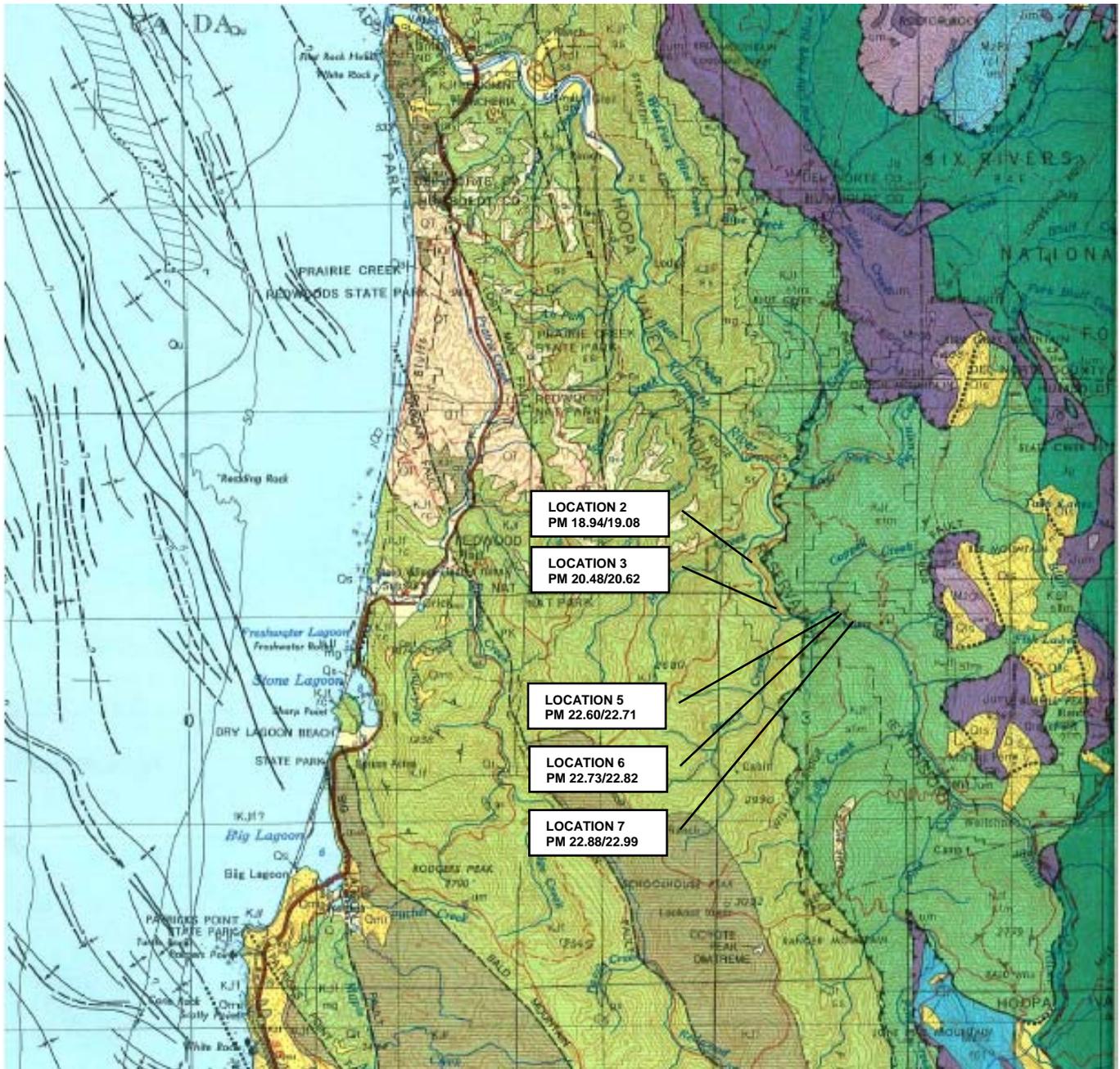
LEGEND

-  SEISMIC REFRACTION LINE AND ID
-  CUT LIMITS
-  FILL LIMITS



Department of Transportation
 Division of Engineering Services
 Geotechnical Services
 Office of Geotechnical Design North
 Branch B

EFIS ID: 0100000219	LOCATION 7 LAYOUT
DATE: AUGUST 2012	
GEOTECHNICAL DESIGN REPORT 01-HUM-169-PM 13.7/33.8	FIGURE 6



Reference: Wagner, D. L. and Saucedo, G.J. "Geologic Map of the Weed Quadrangle, California" 1987

LEGEND:

- KJfss –Franciscan Complex sandstone
- KJfsfm – Franciscan Complex South Fork Mountain Schist
- Jum – Ultramafic rocks – partially to completely serpentinized
- Qls – Landslide deposits

Scale: 1:250,000



Department of Transportation
 Division of Engineering Services
 Geotechnical Services
 Office of Geotechnical Design - North

EFIS ID: 0100000219	PROJECT GEOLOGIC MAP		
Date: AUGUST 2012			
GEOTECHNICAL DESIGN REPORT		Figure 7	

Memorandum

*Flex your power!
Be energy efficient!*

To: LENA ASHLEY
Branch Chief
North Region Design Branch – E3

Date: April 24, 2013

File: 01-HUM-169-PM 13.6/23.4
EA: 01-450901
EFIS ID: 0100000219

Attn: Bijan Samrad

From: DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
OFFICE OF GEOTECHNICAL DESIGN NORTH
BRANCH B

Subject: Geotechnical Design Report Addendum, Locations 2, 3 and 5 through 7

In response to a request from North Region Design, the following modifications to the Geotechnical Design Report, Locations 2, 3 and 5 through 7 dated August 07, 2012 should be noted.

The following modifications do not change our Geotechnical recommendations.

The revised maximum height of the cut slopes are as follows:

- Location 2 - 22 feet
- Location 3 – 60 feet
- Location 5 – 40 feet
- Location 7 - 23 feet.

The culverts at the following locations will be replaced:

- Location 5 – culvert at PM 22.68
- Location 6 – culverts at PM 22.77 and 22.8

The project plans and cross sections referenced in the Geotechnical Design Report, were dated 03-15-2012.

The Draft Project Report referenced in the GDR was dated 05-28-2010.

The quantity of excess material that will need to be disposed is 10,000 cubic yards based on the Project Report dated, 10-29-2010.

The Project Information disclosed to the bidders can be found under the Standard Specifications (SP) 2-1.06B, "Supplemental Project Information".

The Information Handouts available for the Bidders are the:

Geotechnical Design Report, Locations 2, 3 and 5 through 7, dated August 07, 2012"
Geotechnical Design Report Addendum, Locations 2, 3 and 5 through 7, dated April 24, 2013.

These may be viewed at the Bidders' Exchange Web site.

If you have any questions or require further assistance, please contact June James at (707) 441-4692 or Charlie Narwold at (707) 445-6036.



M. JUNE JAMES
Transportation Engineer
Office of Geotechnical Design North
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CHARLIE NARWOLD
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GS File Room (email gs_file_room@dot.ca.gov)
Project Manager

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

The Yurok Tribe (**Tribe**) and the State of California Department of Transportation (**Caltrans**), in order to coordinate and carry out their respective functions and duties regarding Indian Employment Preference on State highway construction projects on lands within the Yurok Tribe reservation, lands held in trust for the Yurok Tribe by the BIA or lands under the direct ownership of the Yurok Tribe (**Tribal Lands**), do hereby enter into this Memorandum of Understanding (**MOU**).

This **MOU** constitutes a guide to the respective intentions, obligations, and policies of the **Tribe** and **Caltrans** in entering into this agreement. It is not intended to be used as a sole basis for authorizing funding, nor is it a legally binding contract upon either party.

Contract No. Project ID	Project County-Route- Postmile	Work Description	Yurok Tribal Lands	Yurok IRR Inventory
01-450904 0100000219	Hum 169 13.60/23.40	Widen and Metal Beam Guard Rail	Hum 169 All	Hum 169 All

I. INDIAN EMPLOYMENT PREFERENCE AND TERO FEE

A. Recitals

1. Section 122 of the Surface Transportation and Uniform Relocation Assistance Act of 1987, Pub. L. 100-17, 23 USC ss. 140(d), recognizes the establishment of Indian Employment Preferences in the Federal Aid Highway Program.
2. The **Tribe** has enacted certain tribal employment rights policies included within the Yurok Tribe **Tribal Employment Rights Ordinance** establishing a tribal employment rights function and mandating Indian Employment Preferences on State construction projects and in other forms of employment within the Reservation.

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

3. The parties hereto recognize that Caltrans shall employ the services of one or more independent contractors in order to accomplish all or some of the activities necessary for State highway construction on **Tribal Lands**.
4. **Caltrans** and the **Tribe** desire to promote Indian employment by
 - a) applying Indian Employment Preferences to the State's contractors for highway work conducted on **Tribal Lands** or on any State highway included in the **Tribe's** Indian Reservation Road (IRR) Inventory when a portion of the project is on Tribal Lands, and
 - b) establishing a mechanism to ensure that the **Tribe** receives TERO Fees for the portion of the project that is on **Tribal Lands**.
5. The parties desire to clarify the rights and obligations of the **Tribe**, **Caltrans**, and prospective bidders and contractors who may perform work on **Tribal Lands** for State highway construction contracts.

B. Statement Of Intent

1. **Caltrans** shall inform prospective bidders of the Tribal, State, and Federal laws with respect to Indian Employment Preferences by inserting provisions (Attachment A) in its information to prospective bidders. These provisions shall become part of the State highway construction contract. The provisions shall require
 - a) submittal of TERO Highway Contract Permit (THCP) to Tribe within 5 days after Contract Approval
 - b) a 45-day delayed start to allow for Contractor submittals to and from Tribe and Contractor submittal of completed THCP to Engineer
2. **Caltrans** shall not allow the contractor to begin work until the contractor has obtained, from the **Tribe**, a TERO Highway Contract Permit (Attachment B) from The TERO officer of the **Tribe**.
3. The TERO Officer of the **Tribe** shall work with Caltrans and Caltrans' contractor to process the TCHP in a timely manner and ensure that there is

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

no delay in either beginning work or in providing qualified candidates to meet the contractor's personnel needs. The Tribe shall return the completed THCP to the contractor within 30 days of receiving the application.

4. Immediately after Contract Approval, **Caltrans** shall provide the TERO officer of the Tribe with all documentation necessary for the Tribe to properly invoice Caltrans for the TERO Fee. The **Tribe** shall invoice **Caltrans** for the TERO Fee, 3% of the total bid amount, within 15 days after issuing the THCP. Upon receipt of an invoice for the TERO Fee, Caltrans shall forward the invoice to Accounting within 7 days and make prompt payment of the TERO Fee to the Tribe.
5. **Caltrans** and the **Tribe** shall make a reasonable effort to conduct joint investigations and share information. Nothing in this **MOU** shall be construed to restrict the authority of the **Tribe**, either to initiate enforcement actions in the Tribal Court or to amend Tribal laws.

II. TERO PROVISIONS – Pertaining to Contracted State Highway Work

Listed below are those provisions from the Yurok TERO Ordinance that pertain to State Highway Work. Inapplicable sections or provisions are indicated by “N/A”.

Yurok Tribe
Tribal Employment Right Ordinance
Approved: October 22, 2003
Amended: June 9, 2005

SUBJECT: Establishment of the Yurok Tribal Employment Rights Office (TERO) and adoption of standards and procedural guidelines for application of Yurok and Indian Preference in Employment.

TABLE OF CONTENTS

SECTION 1.0 SHORT TITLE

- 1.1 Authority
- 1.2 Jurisdiction
- 1.3 Statement of Purpose
- 1.4 Consistency with Federal Laws

SECTION 2.0 DEFINITIONS SECTION 3.0 ROLE OF YUROK TRIBAL COUNCIL

- 3.1 Authority

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

- 3.2 Council Expenses
- 3.3 Duties of the Council
- 3.4 Powers of the Council
- 3.5 Delegation of Authority

SECTION 4.0 THE YUOK TRIBAL EMPLOYMENT RIGHTS OFFICE

- 4.1 Establishment of Office and Hiring of TERO officer(s)
- 4.2 Coverage
- 4.3 Duties of the TERO Administrative Officer
- 4.4 TERO Officer Authority

SECTION 5.0 APPLICABILITY AND COVERAGE

- 5.1 Applicability
- 5.2 Covered Positions
- 5.3 Qualified Indians and Employment Criteria
- 5.4 Eligible Indians

SECTION 6.0 IMPLEMENTATION OF SPECIFIC INDIAN PREFERENCE

- 6.1 Employers, Contractors, and Subcontractors
- 6.2 Goals and Timetables for Indian Employment
- 6.3 Training
- 6.4 Tribal Skills Bank and Referral Process
- 6.5 Preference in Employment Contracting and Subcontracting
- 6.6 Indian Preference/Pre-Award Labor Force Projection
- 6.7 Failure to Submit Indian Preference/Pre-Award Labor Force
Projection
- 6.8 Amendments to Plan
- 6.9 Bid Shopping Prohibited
- 6.10 Layoffs or Reductions in Workforce
- 6.11 Consideration for Promotion
- 6.12 Summer Employment for Students

SECTION 7.0 TERO PERMIT PROCESS

SECTION 8.0 THE YUOK TRIBAL EMPLOYMENT RIGHTS FEE

- 8.1 Establishment of Tribal Employment Rights Fee
- 8.2 Fee Schedule
- 8.3 Duties of TERO Officer/Method of Payment

SECTION 9.0 COMPLIANCE BY UNIONS

- 9.1 Mandatory Elements of Union Agreements
- 9.2 Recognition of Unions

SECTION 10.0 DUE PROCESS AND HEARINGS

- 10.1 Right to Hearings
- 10.2 Notice of Hearing
- 10.3 TERO Office Complaint Procedure
- 10.4 Individual Complaint Procedure
- 10.5 Complaint by an Employer or Union

**MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance**

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

- 10.6 Investigations
- 10.7 Hearing Procedures
- 10.8 Appeals
- 10.9 Confidentiality

SECTION 11.0 TERO COMPLIANCE

SECTION 12.0 REPORTING AND ON-SITE INSPECTIONS

SECTION 13.0 PENALTIES FOR VOLATIONS

SECTION 14.0 ORDERS OF THE YUROK TRIBAL POLICE

SECTION 15.0 PUBLICATION OF ORDINANCE

SECTION 16.0 SEVERABILITY

SECTION 17.0 EFFECTIVE DATE

SECTION 18.0 SOVEREIGN IMMUNITY

SECTION 19.0 EXCLUSIVITY OF REMEDY

SECTION 1.0 SHORT TITLE

The short title of this ordinance shall be the "Yurok Tribal Employment Rights Office Ordinance," or Yurok TERO Ordinance.

1.1 AUTHORITY

This Ordinance is established by the Yurok Tribal Council pursuant to the authority delegated to the Tribal Council by Article IV, Section 5(a) of the Constitution of the Yurok Tribe.

1.2 JURISDICTION

The jurisdiction of the Yurok Tribe to enforce the TERO ordinance shall extend to (. . . N/A . . .) the area within the exterior boundaries of the "reservation" as defined in Article I, sections 1 through 3 of the Constitution of the Yurok Tribe. Additionally, the Tribe retains jurisdiction to enforce provisions of the TERO ordinance for all projects initiated or taken over by the Yurok Indian Housing Authority, whether on, or off, the Yurok reservation.

1.3 STATEMENT OF PURPOSE

The Yurok Tribal Council operates under a constitutional mandate to protect the sovereignty of the Yurok Tribe and to provide for the cultural, social, and economic well being of current and future Yurok tribal members. In fulfillment of its duty to guarantee the unique employment rights of all Yurok tribal members and other Indians within its jurisdiction, the Yurok Tribal Council hereby creates a Tribal Employment Rights Office, (TERO) and establishes standards and procedural guidelines to assure 1) equal and effective application of

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

this Ordinance; and 2) due process for all individuals affected by the application of its requirements.

1.4 CONSISTENCY WITH FEDERAL LAWS

Indians have unique and special employment rights, and are entitled to the protection of laws established by the federal government to combat employment discrimination on or near Indian reservations, including the following:

- 1.4.1 Title VII of the civil Rights Act, including Section 703(i), which makes Indian preference in employment permissible.
- 1.4.2 Executive Order 11246 of the Federal Office of Contract Compliance, which exempts from the general requirements policies extending preference in employment for Indians living on or near an Indian Reservation, and which further prohibits discrimination among Indians as a group on the basis of religion, sex, or tribal affiliation. E.O. 11246 applies only to employers working under federal contracts.
- 1.4.3 The Indian Self-Determination Act, Section 7(b) of Public Law 93-638 which provides for Indian Preference in employment and training, and contracting or subcontracting on all contracts negotiated or let on behalf of an Indian Tribe.
- 1.4.4 The Indian Civil Rights Act of 1968 (ICRA) which prohibits Indian tribal governments from enacting or enforcing laws that violate certain individual rights similar to those individual rights guaranteed under the Bill of Rights of the United States Constitution.

SECTION 2. DEFINITIONS

- 2.1 "**CHAIRPERSON**" means the Chairperson of the Yurok Tribal Council.
- 2.2 "**COMMERCE**" means the exchange or provision of goods, services and/or property, or the offer of same, without reference to the locality where transaction is conducted or consummated.
- 2.3 "**COMMUTE**" means the distance in miles, one way, customary for the occupation and region.
- 2.4 "**CORE EMPLOYEE**" means an employee who performs an essential

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

job function and has been identified as an employee who is vital to the success of the endeavor. (Core Employees should be identified in coordination with the TERO Office and employer possesses records of past employment as a supervisor or foreman).

- 2.5 "TRIBAL COUNCIL" or "COUNCIL"** means the Yurok Tribal Council.
- 2.6 "COVERED EMPLOYER"** means any person, company, contractor, subcontractor *or* entity located *or* engaging in commercial or employment activity on the Yurok Indian Reservation, and which employs two or *more* persons, including the Yurok Tribe, regardless of where the activity occurs.
- 2.7 "EMPLOYEE"** means any non-supervisory employee in a non-managerial position working on the Yurok Indian Reservation or its contiguous lands.
- 2.8 "EXECUTIVE DIRECTOR"** means the administrative officer designated by the Tribal Council as such.
- 2.9 "GRANDFATHERING"** means providing an exception to a restriction that allows all those already doing something to continue, even though it may be otherwise prevented by the restriction.
- 2.10 "INDIAN"** means an enrolled member of any federally recognized Indian tribe.
- 2.11** N/A
- 2.12 "INDIAN PREFERENCE"** means the policy of extending preference in employment or training opportunities to Yurok Tribal Members and other Indians, regardless of tribal affiliation, over non-Indians: (. . . N/A . . .)
- 2.13 "LOCATED ON OR NEAR THE YUROK RESERVATION"** means located within what a reasonable, prudent person would construe as the normal commuting distance from a location off the reservation to the exterior boundaries of the Yurok Indian Reservation as defined in Article I, Sections 1 through 3 of the Constitution of the Yurok Tribe.
- 2.14 "NOTICE"** means that notification required to be given by the Yurok TERO Officer, the appointed tribal judge, the Tribal Council sitting as the interim final appeal body, or the Tribal Court acting as the body of final appeal

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

regarding TERO related activities.

- 2.15** **"PERSON"** means both natural persons and artificial persons including, but not limited to, corporations, trusts, partnerships, unions, agents, societies, and sole proprietorships.
- 2.16** **"QUALIFIED INDIAN"** means an Indian who meets the requirements for a position as determined by the job requirements, the minimum qualifications statements for the position, and, for internal tribal hiring only, the final interview process. No employer may utilize any employment criteria not legitimately-related to the performance of the position.
- 2.17** N/A
- 2.18** **"SECRETARY"** means the Secretary of the United States Department of the Interior, or his/her duly-authorized and designated representative.
- 2.19** **"TERO OFFICER"** means the administrative officer employed by the Tribe to oversee and ensure compliance with the TERO Ordinance. The TERO Officer shall have the authority, for good cause shown, to impose sanctions and to issue stop work orders for reasons of non-compliance.
- 2.20** **"TRIBE"** means the federally recognized Yurok Tribe of the Yurok Reservation, operating under the authority of the Yurok Constitution.
- 2.21** **"UNION" or "LABOR UNION"** means any organization, of any kind, or any agency of employee representation committee or plan, associated or organized for the purposes of collective bargaining for the benefit of employees and that exists for the purpose, in whole or part, of dealing with employers concerning grievances, working conditions, or terms of employment.
- 2.22** **"YUROK RESERVATION"** means all lands within the exterior boundaries of the Yurok Reservation; and any lands outside the exterior boundaries of the Yurok Reservation subsequently acquired, or put into trust, for the Tribe.
- 2.23** N/A

SECTION 3.0 ROLE OF YUROK TRIBAL COUNCIL

3.1 Authority. Through the sovereign powers vested in the Yurok Tribal Council through

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

the Constitution of the Yurok Tribe, the Council shall be responsible for designating such officers, agents, and employees as it deems necessary to assist in fulfilling Yurok Tribal TERO obligations, duties, and responsibilities. The Tribal Council will oversee TERO implementation; and shall either sit as the TERO Hearing body, or identify the composition of a hearing body

3.2 Council Expenses. The Yurok Tribal Council shall not receive compensation of any kind for fulfilling its TERO related duties, obligations, and responsibilities.

3.3 Duties of the Council. Within the scope of overseeing the Yurok TERO, the Council is authorized to prevent any person, whether an individual or an entity, from engaging in any unlawful Indian preference in employment practices as set forth in the Yurok Tribe's TERO Ordinance.

3.4 Powers of the Council. As the oversight body for TERO, the Council has jurisdiction and authority to:

- 3.4.1** Formulate, adopt, amend and rescind rules, regulations and guidelines reasonably necessary to implement the provisions of this ordinance
- 3.4.2** To conduct hearings or appoint alternate hearing bodies and to subpoena witnesses and documents in accordance with this ordinance
- 3.4.3** Prohibit covered employers from using qualification criteria or other personnel requirements that serve as barriers to Indian employment, unless the employer can demonstrate that such criteria or requirements are an essential business necessity, and receives written approval from the TERO Officer that such qualifications are essential.
- 3.4.4** Engage in discussion, and enter into agreements, with unions to ensure compliance with this ordinance. Such agreements shall in no way constitute recognition or endorsement of any union or union-related activity, including formation thereof.
- 3.4.5** Require employers to submit reports and take all actions deemed necessary for the fair and vigorous implementation of this Ordinance.

3.5 Delegation of Authority. The Tribal Council shall delegate such authority to the TERO administrative officer (hereinafter "TERO Officer") as is convenient or necessary for the efficient administration of this ordinance, except that the Council will not delegate its powers or duties to:

- 3.5.1** Adopt, amend or rescind rules, regulations or guidelines; or
- 3.5.2** Conduct hearings or impose sanctions outside the scope of Section 12 of this Ordinance; or
- 3.5.3** Appropriate funds and/or approve budgets; or

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

3.5.4 Waive the collection of TERO taxes.

SECTION 4. THE YUROK TRIBAL EMPLOYMENT RIGHTS OFFICE

4.1 Establishment of Office and Hiring of TERO Officer(s)

The Yurok Tribal Council hereby establishes the Yurok Tribal Employment Rights Office (hereinafter TERO Office). The TERO Office is vested with the authority to implement the provision of this Ordinance. The Yurok Tribe Executive Director shall both hire the TERO Officer(s), and serve as his/her/their direct supervisor.

4.2 Coverage. All employers are required to give preference to Indians in hiring, promotion, training, temporary reductions in work force and all other aspects of employment, (. . . N/A . . .), and must comply with this Ordinance and the rules, regulations and orders of the Tribal Council.

4.3 Duties of the TERO Administrative Officer

The TERO Officer shall be charged with the overseeing the implementation and enforcement of this Ordinance, as well as day-to-day operations of the TERO office. The TERO Officer's duties include, but are not limited to, ensuring that Indian preference in employment is fully implemented by covered employers; and preventing any person from engaging in any unlawful practice that would interfere with application and/or enforcement of the provisions of this Ordinance.

4.4 TERO Officer Authority

The TERO Officer shall administer the policies and rules promulgated and adopted by the Tribal Council, and hold the powers and authorities prescribed by Council, including, but not limited to:

4.4.1 The authority to expend funds appropriated or obtained from various sources to carry out requirements of this Ordinance.

4.4.2 The authority to impose numerical hiring goals and timetables on an employer specifying the minimum numbers of qualified Tribal members and qualified Indians to be hired by occupation, craft, or skill level.

4.4.3 N/A

4.4.4 The duty to create and maintain a Tribal skills bank for all eligible Tribal members

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

and other Indians residing in the administrative area covered by this Ordinance.

- 4.4.5** The ability to restrict or prevent the hiring of (. . . N/A . . .) non-Indians until the TERO Officer certifies that qualified Tribal members or qualified Indians, as appropriate, are not available to fill the position in question.
- 4.4.6** N/A.
- 4.4.7** The ability to facilitate support programs to assist eligible Yurok Tribal members, the Yurok Tribal community and other Indians in obtaining and keeping employment.
- 4.4.8** The duty to recommend amendments or changes to the rules and regulations adopted by Council, or other actions necessary to achieve the purpose and objectives of the Yurok TERO established by this Ordinance.
- 4.4.9** The duty to locate training opportunities and programs designed to teach Yurok Tribal Members and other Indians skills and qualifications needed to obtain employment.
- 4.4.10** The TERO Officer shall have the authority to issue stop work orders and mandatory compliance orders when necessary either to achieve the goals of this Ordinance, or to compel compliance therewith. When necessary, the TERO Officer is also authorized to request assistance from the Yurok Tribe Office of Public Safety in enforcing any stop work order where circumstances in existence at the time of inspection reasonably warrant such intervention. The standard for whether assistance by Public Safety Officers is warranted is that of the reasonable person under the same or similar circumstances.

SECTION 5. APPLICABILITY AND COVERAGE

5.1 Applicability

Unless specifically prohibited by federal or Yurok Tribal law, this Ordinance shall apply to all employers, including but not limited to: the Tribal Council, (its programs, departments, entities, or enterprises); private employers; and independent contractors and subcontractors, including those performing work for the Council, the State of California, or the United States.

All employers shall extend an employment preference to qualified Indians, as provided in Section 5.4, in all aspects of employment, including but not limited to recruitment, hiring, promotion, lateral transfers, retentions, training, (. . . N/A . . .). No employer may recruit, hire, or otherwise employ any non-Indian for any

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

employment position covered by this Ordinance, unless and until the TERO Officer has furnished written notice to such employer that no qualified Indians are available for such position.

5.2 Covered Positions

The Yurok Tribe Indian Employment Preference Policy Section 5.4 shall apply to every job classification, skill area, or craft recognized or utilized by an employer, including administrative, supervisory, and professional classifications.

5.3 Qualified Indians and Employment Criteria

An Indian shall be deemed qualified for employment in a position if he/she meets the minimum requirements for such position. Any qualified Indian shall be afforded the preference to which he/she is entitled under Section 5.4 of this Ordinance. No employer may utilize any employment criteria that is not legitimately related to the performance of the position; and that has not been approved by the Yurok TERO Officer.

5.4 Eligible Indians

(. . . N/A . . .) (A)ll enrolled members of federally-recognized Indian tribes, whether Yurok Tribal members or not, are eligible for employment equally.

SECTION 6. IMPLEMENTATION OF SPECIFIC INDIAN PREFERENCE REQUIREMENTS

6.1 Employers, Contractors, and Subcontractors

The requirements set forth in this Ordinance are binding on all employers, contractors, and subcontractors and will be considered a part of all resulting subcontract specifications. The employer bears the primary responsibility for compliance with the requirements of this Ordinance, and for ensuring that all contractors and subcontractors similarly comply.

All employers, contractors, and subcontractors shall be subject to the penalties provided herein for non-compliance with the terms and requirements of this Ordinance. All employers, contractors and subcontractors shall include in their contracts clauses acknowledging the equal opportunity and Indian preference requirements contained in this Ordinance.

6.2 Goals and Timetables for Indian Employment

The TERO Officer will consult with individual employers engaged in commerce on, or near,

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

the Yurok Reservation to establish the minimum number of qualified Tribal members and qualified Indians to be employed by each employer. Goals will be established for all job classifications and skill areas, and will include administrative, supervisory, and professional categories. The goals set will be expressed as:

- 6.2.1** Project hours of Tribal Members and Indian employment as a percentage of the total project hours worked by the regular work force for each specific job classification, skill level, or category.
- 6.2.2** Numerical goals based on surveys of the available Tribal member and Indian labor forces and projections of employment opportunities for each specific job classification, skill level, or category.

6.3 Training N/A.

6.4 Tribal Skills Bank and Referral Process

The TERO Officer shall, in cooperation with other tribal departments, establish and administer a data bank of Yurok Tribal members and other Indians seeking employment. This data bank shall be called the Tribal skills bank, and shall list all available workers, their respective skills and qualifications, and include documentation of training or other special qualifications and/or needs.

No employer may hire non-tribal members until a reasonable time for referral, as defined in this subsection, has elapsed or the TERO Office has certified, in writing, that no qualified (. . . N/A . . .) Indians are available to fill particular job openings.

"Reasonable time for referral" for purposes of this Ordinance means:

(a) For construction jobs: the TERO Officer will locate and refer qualified Tribal members within 72 hours of the date and time of receiving the initial notice of available opening from the employer.

(b) N/A

The TERO Officer may agree to waive or modify these requirements if there is a clear indication that the time limits would impose an undue burden on the project.

N/A

Employers found to be in violation of this Subsection will be subject to the penalties defined in Section 12 of this Ordinance and may further be required to remove any

**MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance**

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

employees so hired.

6.5 N/A

6.6 N/A

6.7 N/A

6.8 N/A

6.9 N/A

6.10 Layoffs or Reductions in Workforce

6.10.1 N/A

6.10.2 Termination of Indians

No worker who is an Indian will be terminated due to a reduction in workforce if a non-Indian worker in the same job classification is still employed. If an employer lays off workers by crews, all qualified Indians must be transferred to other crews to be retained as long as non-Indians in the same job classification are employed elsewhere on the job site.

6.11 Consideration for Promotion

Every employer shall give Indians preferential consideration for all promotion opportunities, and shall encourage Indians to seek such opportunities. For every supervisory position filled by a non-Indian, the employer shall file a report with the TERO Office expressly indicating:

- (a) What efforts were made to inform Indian workers about the position; and
- (b) How many Indians applied for the position; and
- (c) The reason(s) why each Indian was not hired for the position.

6.12 N/A

SECTION 7. N/A

SECTION 8. THE YUOK TRIBAL EMPLOYMENT RIGHTS FEE

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

8.1 N/A

8.2 Fee Schedule

8.2.1 (. . . N/A . . .) a one-time fee of three-percent (3%) (of the contract award amount)

8.2.2 N/A.

8.3 Duties of TERO Officer/Method of Payment

The TERO Officer shall be responsible for collecting all TERO fees from covered employers.

8.3.1 The TERO fee shall be paid to the Yurok Tribe; and shall be credited to the account of the Yurok Tribe TERO for use in implementing this Ordinance; and shall be governed by guidelines approved by the Yurok Tribal Council.

8.3.2 N/A

8.3.3 The Yurok Tribe Fiscal Department shall be exempt from any TERO Fees.

8.3.4 N/A

8.3.5 N/A

SECTION 9. N/A

9.1 N/A

9.1.1 N/A

9.1.2 N/A

9.1.3 N/A

9.1.4 N/A

9.1.5 N/A

9.1.6 N/A

9.2 N/A

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

SECTION 10. DUE PROCESS AND HEARINGS

10.1 Right to Hearings

An individual, employer, union, or the TERO Officer may request a hearing pursuant to either allegation(s) of a violation of this Ordinance; or that any rule, regulation, or order of the TERO Officer is believed to be erroneous or illegal.

10.2 Notice of Hearing

Whenever a hearing is requested by the TERO Officer, an individual, an employer, or a union, written notice thereof must be provided to all involved parties.

10.2.1 Said notice shall include:

- (a) The names
- (b) Names of whenever party or of all parties to an action; and those not yet party to an action, known; or whose identity as a potential parties would be discovered through the exercise of due diligence; and
- (c) The nature of the hearing; and
- (d) An express statement that the party or parties named have the right to be present at the hearing; and
- (e) An express statement that anyone named in the notice has the right to present testimony of witnesses or other evidence; and
- (f) An express statement that anyone named in the notice has the right to representation by counsel at their own expense; and
- (g) An express statement that the TERO Officer may be represented by General Counsel for the Yurok Tribe.

10.2.2 Notice shall be published in at least two newspapers of appropriate circulation. If the whereabouts of any party or parties is unknown, then:

- (a) Notice shall be posted in a public place within the Yurok Reservation for not less than ten (10) working days; and
- (b) Notice shall be kept on file in the tribal offices located In Eureka, Weitchpec, and Klamath, available upon request; and
- (c) Notice shall also be posted in the Eureka, Weitchpec, and Klamath tribal offices and therefore, available for public inspection.

10.3 TERO Office Complaint Procedure

The TERO Officer may file a complaint on the basis of noncompliance with the requirements of this Ordinance by an employer, contractor, subcontractor, or union.

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

The TERO Officer may first attempt to resolve the matter informally, but if that is not possible or futile, the TERO Officer may request a hearing pursuant to subsection 10.1 of this Ordinance.

10.4 Individual Complaint Procedure

- 10.4.1** An individual may file a complaint with the TERO Office regarding any alleged violation on the part of an employer, contractor, subcontractor, or union. To substantiate a verbally-delivered complaint, the TERO Officer must request that the complainant submit the complaint in writing.
- 10.4.2** Upon receipt of a written complaint, the TERO Officer has an affirmative duty to investigate the allegations. Both the party or parties named as violators and the complainant will receive written notice stating that an investigation *will* be conducted and setting forth with specificity the factual basis for the complaint.
- 10.4.3** Once the investigation is complete, the TERO Officer will issue a written finding either sustaining or not sustaining the alleged violation(s). If the allegations are not sustained, the complaint shall be dismissed and written notice provided to all involved parties within ten (10) business days of the date of the finding. If the allegations are sustained, the TERO Officer shall issue written notice within ten (10) business days of the date of the finding to all involved parties.
- 10.4.4** If an allegation of a TERO violation is sustained, the TERO Officer will then request to meet informally with both the complainant and TERO violator in an attempt to resolve the issue. The request for a meeting can be made either in writing or telephonically. If telephonic, a log shall be kept at the Yurok TERO containing the date, time, and content of the conversation.
- 10.4.5** If the matter cannot be resolved informally, either the parties or TERO Officer may request a hearing pursuant to Subsection 10.1.
- 10.4.6** Any employer, contractor, subcontractor, or union that takes retaliatory action against a Yurok tribal member or other Indian employee who has utilized this complaint procedure, or who asserts any rights under this Ordinance, will be subject to the penalties provided in section 12 of this Ordinance.

10.5 Complaint by an Employer or Union

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

- 10.5.1** Any employer or union may file a complaint with the Yurok Tribal Council alleging that a provision of this Ordinance, or any rule, regulation, or order of the TERO Office is illegal, erroneous, and/or erroneously applied.
- 10.5.2** Any such complaint must be in writing, and addressed to both the Tribal Council and TERO Officer. The complaint must specify, in detail, the basis for the complaint.
- 10.5.3** Upon receipt of the complaint, the Tribal Council, or its designee, shall schedule a hearing on the merits. To prevail at the hearing, the employer or union must establish prove their allegations by a preponderance of the evidence. Following the hearing, the Council must rule whether the allegation(s) is/are sustained or not sustained. The finding shall be forwarded within ten (10) business days of the date of the decision to all involved parties, along with notice of the right to appeal the decision of the Council to the Yurok Tribal Court.

10.6 Investigations

The TERO Officer and/or any field compliance officer designated by the Council may conduct such private or public investigations within the jurisdiction of this Ordinance, to determine the facts or the instances of alleged violations of this Ordinance. The TERO Officer and/or field compliance officer may enter the place of business or employment of any employer to conduct such investigations during regular business hours.

Investigations can include, but are not limited to: taking statements of workers on site or at the Yurok Tribal headquarters, whether by hand or recording device; taking photographs or video recordings of work areas and workers on any given site; requesting certified payroll records, proof of liability and workmen's compensation insurance, and any other regularly-kept business records relating to employee attendance and activity; making more than one site visit per day; taking statements, whether by hand or via a recording device, of community members having information about an employer's practices that formed the basis of a written complaint; and interviewing record-keeping staff of any respective employer.

10.7 Hearing Procedures

The following procedures will apply all hearings:

- 10.7.1** All parties may present testimony of witnesses and other evidence; and may be represented by counsel at their own expense.

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

10.7.2 The Tribal Council or TERO Officer, may receive advice and assistance from the Yurok Tribe's in-house legal counsel. Outside counsel, when deemed necessary by the Council, may also be consulted.

10.7.3 The hearing shall be governed by the rules of practice and procedure adopted by the Council. The Council shall not be bound by technical rules of evidence while conducting hearings, and no informality in any proceeding, including the manner of taking testimony, shall invalidate any order, decision, rule or regulation made, approved, or confirmed by the Council.

10.7.4 Depending on the type of hearing, the following person(s) may preside: The Chair or Vice Chair of the Tribal Council or a hearing officer appointed by the Tribal Council.

10.7.5 Any finding sustaining an allegation of violation by any party defendant must be supported by a preponderance of the evidence.

10.7.6 At the close of the hearing, the Council may take immediate action or take the matter under advisement and render a decision on a later date. If rendering of a decision is postponed, all parties shall be so notified, on the record, prior to adjourning the hearing session. If possible, a date by which a final decision will be rendered shall also be provided to all parties.

10.7.7 Any decision by a hearing officer, or hearing body, must be issued in writing, and submitted no more than thirty (30) days after the date of the conclusion of the hearing. It shall be served on all parties via certified mail, return-receipt requested, or in person. If service is accomplished in person, proof of receipt shall be achieved by having the recipient place their signature in a logbook bearing a brief description of the document(s) received. The logbook shall be kept at the Tribal headquarters in Klamath, California.

10.7.8 Official transcripts shall be made of every hearing conducted. Said transcript(s) shall be made available to any party wishing to appeal the decision of the Tribal Council or its designee for a fee of two-hundred-fifty-five dollars U.S. (\$250.00 U.S.). From time-to-time, this fee shall be adjusted without prior notice to account for increased market costs and inflation. Should the Yurok Tribal Council contract transcription services outside the Tribal facility, the rate shall be the market rate for that particular service provider. In the event the appellant is the TERO Officer and/or his/her designee, the fee for the transcript shall be waived unless the transcript is provided by a contract transcription services provider.

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

10.8 Appeals

10.8.1 Accurate records of all testimony, evidence, and other matters material to the issue on appeal presented at evidentiary hearings conducted by the Councilor its designee.

10.8.2 Any final order of the Tribal Council may be appealed to the Yurok Tribal Court. On appeal, the case will be tried de novo.

10.8.3 The Notice of Appeal must:

- (a) Be filed, in writing, at the TERO Office within fifteen (15) days after the date of entry of the final order.
- (b) Identify the order and set forth the grounds upon which the request for a reversal or modification is sought.

10.8.4 Compliance with any order, which is the subject of a timely appeal, will be held in abeyance pending a decision on the matter by the Tribal Court. If an order under appeal is modified or set aside by the Tribal Court, the decision of the Tribal Court will be sent via certified mail, return-receipt requested, to all parties. Any amendments to this Ordinance ordered as a result of an appeal to the Tribal Court will be sent via certified mail, return-receipt requested, to employers, federal and state agencies, and other interested parties; and will be posted in public places on the Yurok Reservation.

10.9 Confidentiality

10.9.1 All information collected pursuant to an investigation authorized under this Ordinance shall be kept confidential. Portions of hearings that involve the use or disclosure of confidential documents such as employee records shall be closed to the public, and files containing such confidential information shall be sealed. Such confidential information may only be obtained pursuant to a Tribal Court order following a hearing on an affidavit proving the necessity of disclosure.

10.9.2 Any person whose confidential information is sought shall be given sufficient notice in advance of disclosing such confidential information, so that the person may object to the disclosure.

SECTION 11. TERO COMPLIANCE

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

As of the effective date of this Ordinance, no new covered employer may commence work on the Yurok Indian Reservation without consulting with the Tribe through its TERO Office, and filing an acceptable (. . . N/A. . .) TERO Pre-Award Labor Force Projection Form.

SECTION 12. REPORTING AND ON-SITE INSPECTIONS

Each employer, as part of their compliance activity, shall submit monthly reports to the TERO Office, on a form provided by the TERO Officer, indicating the number of employees -including a separate tally of Indians -on its workforce; monthly hires and terminations and/or lay-offs; and other information as may be identified on the form.

An employer who fails to submit monthly reports shall be subject to sanctions.

The TERO Officer will have the authority to make on-site inspections during regular working hours in order to monitor compliance with this Ordinance, and any other rules, regulations, and/or order of the TERO Officer or Council. The TERO Officer or designated field compliance investigator has the right to inspect and copy all relevant records of any employer, signatory union, contractor, or subcontractor, to interview or speak to workers and otherwise conduct investigations on the job site. All information collected will be kept confidential unless or until disclosure is required during a hearing or appeal as provided in section 10.7.

SECTION 13. PENALTIES FOR VIOLATIONS

Any employer, contractor, subcontractor, or union who violates this Ordinance or the rules, regulations, or orders promulgated by the TERO Officer or Council will be subject to the following penalties for such violation:

- (a) N/A
- (b) Payment of any back pay and damages to compensate any injured party.
- (c) Removal of any employees hired in violation of this Ordinance or the rules, regulations, and orders pertaining thereto.
- (d) An order requiring the employment, promotion, (. . . N/A . . .) of qualified Tribal members, and other Indians who suffered economic injury as a direct result of the violation.
- (e) Imposition of monetary civil penalties and fines.
- (f) An order mandating changes in procedure or policies necessary to eliminate or correct the violation.

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

- (g) An order mandating any other provision deemed necessary by the TERO Officer, the Council, or the Tribal Court to alleviate, eliminate, or compensate for any violation.

The maximum penalty that may be imposed is \$500.00 for each occurrence. Every day during which a violation exists shall be deemed a separate occurrence.

SECTION 14. ORDERS OF THE YUOK TRIBAL POLICE

The Yurok Tribe Office of Public Safety is expressly authorized and directed to enforce any cease and desist or related order issued by the TERO Officer, in-house legal department, or Council only when such order is supported by either a judicial decree, or order, from the Yurok Tribal Court. The Tribal police will not be civilly liable for enforcing such Tribal Court orders or judicial decrees, provided that the order or decree bears the signature of a judge of the Tribal Court.

SECTION 15. PUBLICATION OF ORDINANCE

The Council will notify all Covered Employers regarding the adoption of this Ordinance and their obligation to comply. All bid announcements issued by any tribal, federal, state, or other public or private entity shall contain a statement that the successful bidder will be required to comply with this Ordinance and all rules, regulations, and orders of the TERO Office and Tribal Council within its jurisdiction. Council will send copies of this Ordinance to every employer operating on, or near, the Yurok Reservation or its contiguous lands, as defined in this Ordinance; and to every covered employer within thirty (30) days of the effective date of this Ordinance.

SECTION 16. SEVERABILITY

If any provision of this Ordinance, or its application to any person or circumstances, is held invalid by a court of appropriate jurisdiction, the remainder of the Ordinance or application of the provision to other persons or circumstances, shall not be affected thereby.

SECTION 17. EFFECTIVE DATE

This Ordinance shall be effective and enforceable from the date of its approval and adoption by the Yurok Tribal Council.

SECTION 18. SOVEREIGN IMMUNITY

Nothing in the enactment, contents, administration, or enforcement of this Ordinance is intended to, nor shall, waive the sovereign immunity from unconsented suit of the Yurok Tribe, its officers, officials, employees, or agents acting within the course and scope of their

MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

official duties or authority, including, but not limited, to the following:

- (a) Taking legal action against any person to enforce or otherwise further the purposes of this Ordinance;
- (b) Defending legal action taken by another person to invalidate all or a portion of this Ordinance, or any actions taken under the authority of this Ordinance, for any failure to act under this Ordinance; or
- (0) Acting to enforce any penalties or sanctions under this Ordinance.

SECTION 19. EXCLUSIVITY OF REMEDY

The procedures, remedies, and forums set forth in this Ordinance are the sole and exclusive procedures, remedies, and forums for addressing any grievances, claims, or causes of action brought by any person pursuant to this Ordinance. The Tribe specifically does not consent to any grievances, claims, or causes of action other than those set forth in this Ordinance. By enacting this Ordinance, the Tribe is not creating any private causes of action.

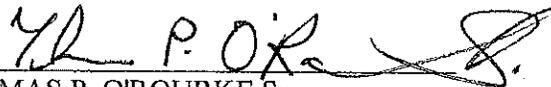
**MEMORANDUM OF UNDERSTANDING
Tribal Employment Rights Ordinance**

Caltrans contract 01-450904
Widen and Metal Beam Guard Rail
Hum-169-13.60/23.40
TERO MOU 13-02

This **MOU** may be amended by written agreement of the parties, or terminated by either party upon reasonable written notice. In the event of termination, unless otherwise mutually agreed by the parties, the provisions of this **MOU** will remain in force with respect to any contract covered hereunder which has already been awarded or for which contractor performance has already commenced.

The parties hereto have agreed to the objectives, principles, and recitations cited in this document and have further approved this **MOU** for signature by their duly authorized representatives.

for the Yurok Tribe

By: 
THOMAS P. O'ROURKE Sr.
Chairman

Date: 6/12/13

for the CALIFORNIA DEPARTMENT OF TRANSPORTATION

By: 
CHARLES C. FIELDER
District Director, District 1

Date: 6/17/2013

ATTACHMENT A

Project-Specific Special Provisions For Yurok Tribe TERO 2013-02 MOU

SPECIAL NOTICE:

- This project includes Tribal Employment Rights Ordinance (TERO) requirements. See section 5-1.20E and 8-1.04C for TERO submittal requirements.

SSP 2-1.06B SUPPLEMENTAL PROJECT INFORMATION

The Department makes the following supplemental project information available:

Supplemental Project Information

Means	Description
Included in <i>Information Handout</i>	Yurok Tribe TERO Memorandum of Understanding (MOU) with TERO Highway Construction Permit (THCP) Application

INFORMATION HANDOUT:

Yurok Tribe TERO Requirements Information Handout contains:

1. Signed one-time MOU between the Yurok Tribe and the Department.
2. Attachment A project-specific TERO special provisions.
3. Attachment B TERO Highway Construction Permit Application (THCP).

SSP 5-1.20E Tribal Employment Rights Ordinance Requirements:

Complete the Yurok Tribe TERO Highway Construction Permit (THCP) Application included in the *Information Handout*. Within 5 days after Contract approval, submit the completed application to the Tribe and a copy of the submitted application to the Engineer.

Submit the executed THCP to the Engineer within 10 days after you receive it from the Tribe.

SSP 8-1.04C:

Use a minimum 45-day delayed start after contract approval.

Do not start job site activities until the Department authorizes or accepts your submittal for:

Executed Yurok Tribe TERO Highway Construction Permit (THCP)

Do not start other job site activities until all the submittals from the above list are authorized or accepted and the following information is received by the Engineer:

Copy of the Yurok Tribe TERO Highway Construction Permit (THCP) Application submitted to the Tribe.

ATTACHMENT B
TERO Highway Construction Permit (THCP)

YUROK TRIBE
TRIBAL EMPLOYMENT RIGHTS OFFICE
MEMORANDUM ON COMPLYING WITH TRIBAL AND FEDERAL EMPLOYMENT LAWS



The Tribal Employment Rights Office (TERO), on the Yurok Indian Reservation, has been implemented to assist employers, contractors, and/or subcontractors towards meeting the required rules and regulations of the Yurok Tribal Council, and the employment laws of the U.S. Government.

TERO HIGHWAY CONSTRUCTION PERMIT APPLICATION (THCP)

1. State Contractor (Employer) shall file a Yurok TERO Labor Force Projection Form with the TERO office for themselves and all subcontractors (Employer) listed on State contract bid form within five (5) days after contract approval.

2. If available, qualified Indians must be hired in preference to non-Indians. Employer shall neither recruit nor hire any non-Indians for any covered position until the Yurok TERO has provided written notice that no qualified Indians are available to fill such covered position. Covered positions are defined in the Yurok TERO Policy. Each waiver issued is only for that particular position/task and the employee cannot be transferred to another position once that job is done.

3. The Yurok TERO maintains a Indian Skills-Bank to assist Employers to meet the Indian Preference requirements of the TERO Policy of the Yurok Tribe. Please note: "Core Crew" is key employees of the firm who have worked continuously for the firm for many seasons and who were not recently hired for this particular project. (Possessing records of past employment as proof as a supervisor or foreman).

PLEASE RETURN COMPLETED LABOR FORCE PROJECTION FORMS TO:

Jennifer Elk, TERO Officer
Yurok Tribe
190 Klamath Blvd.
Klamath, CA 95548
(707) 482-1350

YUOK TRIBE
TRIBAL EMPLOYMENT RIGHTS OFFICE
LABOR FORCE PROJECTION FORM



Prime
employer and all subcontractors are required to submit the following
information to the TERO:

Employer/Supplier Name: _____
Mailing Address: _____
City, State, and Zip Code: _____
Phone Number _____
Cell # _____
Contact: _____
Contract Number: _____
Amount of Contract: _____ \$ _____
Contracting With: _____

THIS IS AN AGREEMENT BETWEEN *THE YUOK TRIBE* AND EMPLOYER FOR CONDUCTING EMPLOYMENT ACTIVITY WITHIN THE EXTERIOR BOUNDARIES OF THE YUOK INDIAN RESERVATION AND YUOK TRIBAL "Lands".

EMPLOYER hereby agrees to comply with the requirements and procedures for the recruitment of viable Indian applicants through TERO.

TERO shall receive notice, in the form of copies of bid forms by awarded prime Employer seeking bids of all sub-contract work to be conducted on the Yurok Indian Reservation. Notice shall be made reasonably in advance of contract approval, but not later than five (5) days after approval.

The above named employer understands that they are required to comply with the portions of the Yurok Tribal Councils TERO *Ordinance* (adopted *October 22, 2003*) listed in the Yurok Tribe/Caltrans TERO MOU (dated *June 17, 2013*).

COMPLIANCE INSPECTIONS: The TERO Officer or other designated staff shall make periodic or site visitations for assurance to all involved parties that employment rules are adhered to.

MAINTAINING EMPLOYMENT RECORDS: Employer shall maintain accurate employment records on all employees and all applicants for employment; regardless of length and category or employment, hired, fired, or laid-off. The files shall reflect: name, address and employment category for which applicant performed or applied to perform. If applicant was contacted but not hired, hired and fired, all data should reflect action taken by that firm. Such informational records shall be made available to the TERO Officer, upon reasonable notice.

ASSISTANCE: If an Employer deems that an Indian employee's performance is such that he or she is jeopardizing and endangering job loss, suspension, or termination, Employer may contact TERO to provide assistance toward resolving of that issue.

EMPLOYMENT POLICIES AND PROCEDURES: It is further understood that Employer recognizes that its operations are taking place within a unique cultural setting on the Yurok Indian Reservation. Accordingly, all firms in conjunction with the TERO Officer should consider seriously Tribal Holidays and ceremonial customs; and to accommodate those Indian employees requesting certain leave of absences for religious purposes.

****This form must be completed and filed with the TERO. Attach additional sheets if necessary.***

Briefly describe the basic tasks and types of work to be performed:

Please list types of skills and categories which will be required towards performing said contract:

1.	7.
2.	8.
3.	9.
4.	10.
5.	11.
6.	12.

Indian Preference shall be accorded at every Tier Level. Please list the names and positions of your Core Crew. (Key staff). (Core Crew members are the vitally needed Supervisors that you depend on every day). All other persons needed on this job will go through the TERO Skills Bank.

NAME	JOB TITLE
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	

Note:

(Please utilize as many sheets as necessary for explaining your on-site employment related projection)

**U. S. Army Corps of Engineers Nationwide Permit
Non-Reporting Permit # 14 Linear Transportation Projects**

Roadway Widening and Metal Beam Guard Rail Project

01-HUM-169-POST MILE 13.6/33.9

EA 450900

October 2012

Introduction

The California Department of Transportation (Caltrans) proposes to improve safety along Route 169 in Humboldt County from Post Mile (PM) 13.66 to 23.39. Route 169 is a northwest-southeast route that runs along the Klamath River. The highway is located entirely within the boundaries of the Yurok Indian Reservation and functions as the primary route serving the Yurok Tribal Nation. It provides access to several small communities, while also providing access to the Klamath River for tribal needs, recreation, and sport fishing purposes. The lanes and shoulders on Route 169 are relatively narrow at many locations, where the existing traveled way is reduced to a single lane with minimal or nonexistent recovery area.

The purpose of this project is to improve safety through roadway widening and the installation of metal beam guard railing. The project was initiated in response to tribal concerns to decrease the potential of collisions at eight locations identified by Yurok tribal representatives. This project is needed to decrease the potential of collisions and to reduce the severity of run-off road collisions at the locations of concern identified by Yurok tribal representatives.

Use of non-reporting Nationwide Permit 14

The project will be constructed in accordance with the terms and conditions of United States Army Corps Nationwide Permit 14 (Linear Transportation Projects). A Nationwide Permit Pre-Construction Notification (PCN) form and relevant project information are attached. The use of a non-reporting Nationwide Permit 14 is warranted because the project:

- will not result in a loss of waters of the United States greater than 0.10 acre;
- will not result in filling greater than 300 linear feet of channel; and
- does not create a use differing from what is currently existing at this location

Project Description and Environmental Setting

Project details (including project plans and site photos) and a description of the environmental setting are provide in the Project Description and Environmental Review.

Project Impacts

up to 348.9 ft² of the stream at PM 22.77 and 38.7 ft² of the stream at PM 22.80 will be permanently affected for a total of 387.6 ft². Approximately 74.1 ft² of the stream at PM 22.77 and 65.0 ft² of the stream at PM 22.80 will be temporarily impacted with the culvert replacements for a total of 139.1 ft². A total of 5.2 yds³ of material (the existing culverts) will be dredged while a total of 22.4 yds³ of material (rock energy dissipator, fabric under the dissipater, dirt and the new culverts) will be discharged.

Revegetation will consist of erosion control and hydroseeding with low-growing grasses and forbs applied upon final site grading. Additional mulching, planting or seeding will be performed as necessary during the plant establishment window to fully control erosion of the areas disturbed by project construction. The planting of container plants is not warranted due to the steepness of the new slopes.

Permitting Requirements

There are two streams within the project boundaries at Location 6 (one at PM 22.77 and one at PM 22.80). Both of these streams are jurisdictional under:

- Section 1602 of the California Fish and Game Code (California Department of Fish and Game)
- Section 404 of the Clean Water Act (Army Corps of Engineers). A non-reporting nationwide permit has been prepared and is attached.
- Section 401 of the Clean Water Act (Yurok Tribe Environmental Program and Environmental Protection Agency)

Attachments

Attachment 1 Nationwide Permit Pre-Construction Notification (PCN) Form

Attachment 2 Delineation of Waters – Roadway Widening and Metal Beam Guardrail Project on Route 169

U. S. Army Corps of Engineers South Pacific Division



Nationwide Permit Pre-Construction Notification (PCN) Form

This form integrates requirements of the U. S. Army Corps of Engineers Nationwide Permit Program within the South Pacific Division (SPD), including General and Regional Conditions. You MUST fill out all boxes related to the work being done. Fillable boxes in this form expand if additional space is needed.

Box 1 Project Name Roadway Widening and Metal Beam Guard Rail Project on Highway 169			
Applicant Name Richard Mullen		Applicant Title Project Manager	
Applicant Company, Agency, etc. California Department of Transportation		Applicant's internal tracking number (if any) EA 45090, EFIS 0100000219	
Mailing Address P. O. Box 3700 Eureka, CA 95502			
Work Phone with area code 707-441-5877	Mobile Phone with area code 707-498-3516	Home Phone with area code	Fax # with area code 707-441-5733
E-mail Address Richard_mullen@dot.ca.gov		Relationship of applicant to property: X <input type="checkbox"/> Owner <input type="checkbox"/> Purchaser <input type="checkbox"/> Lessee <input type="checkbox"/> Other:	
Application is hereby made for verification that subject regulated activities associated with subject project qualify for authorization under a U.S. Army Corps of Engineers Nationwide Permit or Permits as described herein. I certify that I am familiar with the information contained in this application and, that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. I hereby grant to the agency to which this application is made the right to enter the above-described location to inspect the proposed, in-progress, or completed work. I agree to start work <u>only</u> after all necessary permits have been received and to comply with all terms and conditions of the authorization.			
Signature of applicant			Date (m/d/yyyy)

If anyone other than the person named as the Applicant will be in contact with the U. S. Army Corps of Engineers representing the Applicant regarding this project during the permit process, Box 2 MUST be filled out.

Box 2 Authorized Agent/Operator Name Lisa Embree		Agent/Operator Title Project Biologist	
Agent/Operator Company, Agency, etc. California Department of Transportation		E-mail Address Lisa_embree@dot.ca.gov	
Mailing Address P. O. Box 3700 Eureka, CA 95502			
Work Phone with area code 707-441-5722	Mobile Phone with area code	Home Phone with area code	Fax # with area code 707-441-5775
I hereby authorize the above named authorized agent to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application. I understand that I am bound by the actions of my agent and I understand that if a federal or state permit is issued, I, or my agent, must sign the permit.			
Signature of applicant			Date (m/d/yyyy)
I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete, and accurate.			
Signature of authorized agent			Date (m/d/yyyy)

Box 3 Name of property owners(s), if other than applicant:		
Owner Title	Owner Company, Agency etc.	
Mailing Address		
Work Phone with area code	Mobile Phone with area code	Home Phone with area code

Box 4 Name of contractor(s) (if known):		
Contractor Title	Contractor Company, Agency, etc.	
Mailing Address		
Work Phone with area code	Mobile Phone with area code	Home Phone with area code

Box 5 Project location(s), including street address, city, county, state, zip code where proposed activity will occur:	
Two culverts: Post Miles 22.77 and 22.80. State Route 169 In Humboldt County, approximately 10.5-11 miles west of the community of Weitchpec.	
Waterbody (if known, otherwise enter "an unnamed tributary to"):	
Unnamed streams empty onto upper portions of slopes above the Klamath River. The streams may have possible indirect hydrological connection to the Klamath River	
Latitude & Longitude (D/M/S, DD, or UTM with Zone): Location 6: 431194.7 4570186.34 Meters/Zone 10 Location 7: 431235.95 4570061.39 Meters/Zone 10	Section, Township, Range: Weitchpec and French Camp: T 9N, R 4E Weitchpec, French Camp, and Johnsons: T 10N, R 4E French Camp and Johnsons: T 10N, R 3E Johnsons: T 11N, R 3E
County Assessor parcel number (include county name): Humboldt County Location 6: 53420124, 53413216 Location 7: 53420124	USGS Quadrangle map name: See above
Watershed (HUC and watershed name ¹): 18010209, Lower Klamath ¹ http://water.usgs.gov/GIS/regions.html	Size of permit area or project boundary: Location 6: 0.5 acre/475.2 ft Location 7: 0.7 acre/580.8 ft
Directions to the project location and other location descriptions, if known: From Eureka CA: Take Route 101 north approx 8 miles to Route 299. Take Route 299 east approx 39 miles to Route 96. Take Route 96 north approx 23 miles to Route 169. Take Route 169 west.	

Nature of Activity (Description of project, include all features): roadway widening, culvert replacement, metal beam guardrail, rock energy dissipaters, retaining walls, asphalt v-ditches

Project Purpose (Description of the reason or purpose of the project): Improve safety by increasing site distance

Box 6 Reason(s) for discharge into Waters of the United States (Description of why dredged and/or fill material needs to be placed in Waters of the United States): To increase site distance, widening will occur primarily on uphill slope requiring culverts to be replaced. Concrete v-ditches will be constructed to minimize sheet flow over the highway.

Proposed discharge of dredge and/or fill material. Indicate total surface area in acres and linear feet (where appropriate) of the proposed impacts to Waters of the United States, indicate water body type (tidal wetland, non-tidal wetland, riparian wetland, ephemeral stream/river, intermittent stream/river, perennial stream/river, pond/lake, vegetated shallows, bay/harbor, lagoon, ocean, etc.), and identify the impact(s) as permanent and/or temporary for each requested Nationwide Permit¹:

¹Enter the intended permit number(s). See Nationwide Permit regulations for permit numbers and qualification information: <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/NationwidePermits.aspx>

Water Body Type	Requested NWP Number: 14 (Non-reporting)				Requested NWP Number:				Requested NWP Number:			
	Permanent		Temporary		Permanent		Temporary		Permanent		Temporary	
	Area	Length	Area	Length	Area	Length	Area	Length	Area	Length	Area	Length
	ft ² /acre	ft	ft ² /acre	ft								
Unnamed stream Location 6, PM 22.77	348.9 / 0.008	41.4	74.1 / 0.002	47.4								
Unnamed stream Location 6, PM 22.80	38.7 / 0.000	5.4	65.0 / 0.001	37.3								
Total:	387.6 / 0.00	46.8	139.1 / 0.003	84.7								

Total volume (in cubic yards) and type(s) of material proposed to be dredged from or discharged into Waters of the United States:

Material Type	Total Volume Dredged	Total Volume Discharged
Rock Energy Dissipator		0.9 yds ³ (PM 22.77) 0.7 yds ³ (PM 22.80)
Rock Energy Dissipator fabric		0.3 yds ³ (PM 22.77) 0.2 yds ³ (PM 22.80)
Dirt		0.6 yds ³ (PM 22.77)
Steel Pipe	3.0 yds ³ (PM 22.77) 2.2 yds ³ (PM 22.80)	15.4 yds ³ (PM 22.77) 4.3 yds ³ (PM 22.80)
Total	5.2 yds ³	22.4 yds ³

Activity requires a written waiver to exceed specified limits of the Nationwide Permit? YES NO
If yes, provide Nationwide Permit number and name, limit to be exceeded, and rationale for each requested waiver:

Activity will result in the loss of greater than 1/2-acre of Waters of the United States? YES NO
If yes, provide an electronic copy (compact disc) or multiple hard copies (7) of the complete PCN for appropriate Federal and State Pre-discharge Notification (See General Condition #31, Pre-construction Notification, Agency Coordination, Section 2 and 4):

Describe direct and indirect effects caused by the activity and how the activity has been designed (or modified) to have minimal adverse effects on the aquatic environment (See General Condition #31, Pre-construction Notification, District Engineer's Decision, Section 1): Direct effects: Potential impacts to amphibians will be minimized by having a biologist survey the streams prior to the onset of construction activities. Indirect effects: 1) Downstream water quality will be maintained by diverting any flow downstream of the work area. Construction would be avoided during any periods of heavy rain that would result in degradation of water quality or erosion of sediment beyond the project area. Minimization measures: Vegetation removal is limited to September 1-February 28 to avoid the bird nesting season (March 1-August 31). No suitable nesting habitat for northern spotted owls and marbled murrelets will be removed. Construction activities associated with the two streams will be confined to the period of June 15 to October 31. Cleaning and refueling of construction vehicles will not be allowed near or in the streams. Water drafting will not be allowed.

Potential cumulative impacts of proposed activity (if any): Additional proposals for construction and road maintenance in the area could multiply the effects of construction of the project described in this application, which will be referred to as Project A in this section of the application in order to differentiate between it and other projects that may contribute to cumulative impacts. The most significant cumulative impact due to Project A may be increased noise levels. Although blasting is not anticipated at any of the locations, there will be a variety of construction equipment contributing varying levels of noise along the highway. Cumulative impacts on the spawning habitat, rearing habitat, and water quality of the Klamath River is expected to be minimal, if at all, with implementation of Project A.

Caltrans Maintenance Work

General maintenance of the highway includes road maintenance and annual scraping (blading) the roadside ditches clear of vegetation. These types of activities are not expected to substantially increase cumulative impacts.

Yurok Tribal Council Construction Projects

Of the tribal priorities, Project A which will improve site distance at eight locations is the Tribe's top priority. Construction of the utility lines was completed in 2009. No other large Tribal Council Construction projects are expected to occur during the time frame that Project A will be constructed.

Repair slipouts at three locations: This project would repair slipouts at three locations that are within the limits of Project A. The improvements/construction associated with this project is likely to have impacts similar to Project A, although it is unknown at this time if the construction timeframe for this project will overlap with that of Project A. If there is overlap and if general guidelines are followed, cumulative impacts from this work can be minimized.

Replace or retrofit Martin's Ferry Bridge. A significant portion of this project has already been completed. Cumulative impacts from this project would likely be minimal.

Required drawings and figures (see each U. S. Army Corps of Engineers District's Minimum Standards Guidance):

Vicinity map: X Attached (or mail copy separately if applying electronically)

To-scale Plan view drawing(s): X Attached (or mail copy separately if applying electronically)

To-scale elevation and/or Cross Section Drawings(s): X Attached (or mail copy separately if applying electronically)

Numbered and dated pre-project color photographs: X Attached (or mail copy separately if applying electronically)

Sketch drawing(s) or map(s): X Attached (or mail copy separately if applying electronically)

Has a wetland/waters of the U.S. delineation been completed?

X Yes, Attached² (or mail copy separately if applying electronically) No

If a delineation has been completed, has it been verified in writing by the Corps?

Yes, Date of approved jurisdictional determination (m/d/yyyy):
²If available, provide ESRI shapefiles (NAD83) for delineated waters

Corps file number:

X No (non-reporting)

For proposed discharges of dredged material resulting from navigation dredging into inland or near-shore waters of the U.S. (including beach nourishment), please attach³ a proposed Sampling and Analysis Plan (SAP) prepared according to Inland Testing Manual (ITM) guidelines (including Tier I information, if available), or if disposed offshore, a proposed SAP prepared according to the Ocean Disposal Manual.

³Or mail copy separately if applying electronically

Is any portion of the work already complete? YES X NO

If yes, describe the work:

Box 7 Authority

Is Section 10 of the Rivers and Harbors Act applicable?: YES X NO

Is Section 404 of the Clean Water Act applicable?: X YES NO

Is the project located in U. S. Army Corps of Engineers property or easement?: YES X NO

If yes, has Section 408 process been initiated?: YES NO

Would the project affect a U. S. Army Corps of Engineers structure?: YES X NO

If yes, has Section 408 process been initiated?: YES NO

Is the project located on other Federal Lands (USFS, BLM, etc.)?: YES X NO

Is the project located on Tribal Lands?: X YES NO

Box 8 Is the discharge of fill or dredged material for which Section 10/404 authorization is sought part of a larger plan of development?: YES X NO

If discharge of fill or dredged material is part of development, name and proposed schedule for that larger development (start-up, duration, and completion dates):

Location of larger development (if discharge of fill or dredged material is part of a plan of development, a map of suitable quality and detail of the entire project site should be included):

Box 9 Measures taken to avoid and minimize impacts to waters of the United States:

Impacts to the streams at PM 22.77 and PM 22.80 within Location 6 limits will be avoided and/or minimized by the following:

If water is present in the streams at the time of construction, the flow will be diverted around the work areas.

Work at these locations will be confined to the period of June 15-October 15.

If water is present in the streams, a biologist will survey the streams and ditches in order to find and relocate any wildlife such as amphibians, that may be using them.

If found necessary, structures such as k-rail will be placed above the downhill slope to minimize material falling down the slope and entering the Klamath River.

Concrete washings or concrete will not be allowed to enter the water ways.

Cleaning and refueling of construction vehicles will not be allowed near or in the waterways.

Water drafting will not be allowed.

Box 10 Proposed Compensatory Mitigation related to fill/excavation and dredge activities. Indicate in **acres** and **linear feet** (where appropriate) the total quantity of Waters of the United States proposed to be created, restored, enhanced and/or preserved for purposes of providing compensatory mitigation. Indicate water body type (tidal wetland, non-tidal wetland, riparian wetland, ephemeral stream/river, intermittent stream/river, perennial stream/river, pond/lake, vegetated shallows, bay/harbor, lagoon, ocean, etc.) or non-jurisdictional (uplands¹). Indicate mitigation type (permittee-responsible on-site/off-site, mitigation bank, or in-lieu fee program). If the mitigation is purchase of credits from a mitigation bank, indicate the bank to be used, if known:

¹ For uplands, please indicate if designed as an upland buffer.

Site Number	Water Body Type	Created		Restored		Enhanced		Preserved		Mitigation Type
		Area	Length	Area	Length	Area	Length	Area	Length	
Total:										

If no mitigation is proposed, provide detailed explanation of why no mitigation would be necessary:

The project will result in minimal effects to waters of the US. Increase in culvert sizes will allow for improved flow and minimize sheet flow over the highway.

If permittee-responsible mitigation is proposed, provide justification for not utilizing a Corps-approved mitigation bank or in-lieu fee program: N/A

Has a draft/conceptual mitigation plan been prepared in accordance with the April 10, 2008 Final Mitigation Rule² and District Guidelines?

²http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/mitig_info.aspx

³**Sacramento and San Francisco Districts**-http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/pdf/Mitigation_Monitoring_Guidelines.pdf

⁴**Los Angeles District**-http://www.spl.usace.army.mil/regulatory/mmg_2004.pdf

⁵**Albuquerque District**-http://www.spa.usace.army.mil/reg/mitigation/SPA%20Final%20Mitigation%20Guidelines_OLD.pdf

Yes, Attached (or mail copy separately if applying electronically) X No

If no, a mitigation plan must be prepared and submitted, if applicable.

Mitigation site(s) Latitude & Longitude (D/M/S, DD, or UTM with Zone):

USGS Quadrangle map name(s):

Assessor Parcel Number(s):

Section(s), Township(s), Range(s):

Other location descriptions, if known:

Directions to the mitigation location(s):

Box 11 Threatened or Endangered Species

Please list any federally-listed (or proposed) threatened or endangered species or critical habitat (or proposed critical habitat) within the project area (include scientific names (e.g., Genus species), if known):

- a. Southern Oregon/Northern California Coast (SONCC) coho salmon (*Oncorhynchus kisutch*)
- b. northern spotted owl (*Strix occidentalis caurina*)
- c. marbled murrelet (*Brachyramphus marmoratus*)
- d.
- e.
- f.

Have surveys, using U.S. Fish and Wildlife Service/NOAA Fisheries protocols, been conducted?

Yes, Report attached (or mail copy separately if applying electronically) X No

If a federal-listed species would be impacted, please provide a description of the impact and a biological evaluation, if available

Yes, Report attached (or mail copy separately if applying electronically) X No

Has Section 7 consultation been initiated by another federal agency?

Yes, Initiation letter attached (or mail copy separately if applying electronically) X No

Has Section 10 consultation been initiated for the proposed project?

Yes, Initiation letter attached (or mail copy separately if applying electronically) X No

Has the USFWS/NOAA Fisheries issued a Biological Opinion?

X Yes, Attached (or mail copy separately if applying electronically) No

If yes, list date Opinion was issued (m/d/yyyy): USFWS LOC 7/30/10, NMFS LOC 8/17/10

Box 12 Historic properties and cultural resources

Are any cultural resources of any type known to exist on-site? YES X NO

Please list any historic properties listed (or eligible to be listed) on the National Register of Historic Places:

- a.
- b.
- c.
- d.
- e.
- f.

Has a cultural resource records search been conducted?

X Yes, Report attached (or mail copy separately if applying electronically) No

Has a cultural resource pedestrian survey been conducted for the site?

X Yes, Report attached (or mail copy separately if applying electronically) No

Has another federal agency been designated the lead federal agency for Section 106 consultation?

Yes, Designation letter/email attached (or mail copy separately if applying electronically) X No

Has Section 106 consultation been initiated by another federal agency?

Yes, Initiation letter attached (or mail copy separately if applying electronically) X No

Has a Section 106 MOA or PA been signed by another federal agency and the SHPO?

Yes, Attached (or mail copy separately if applying electronically) X No

If yes, list date MOA or PA was signed (m/d/yyyy):

Box 13 Section 401 Water Quality Certification:

Applying for certification? X Yes, Attached (or mail copy separately if applying electronically) No

401 Certification will be processed through the Yurok Tribe and the Environmental Protection Agency.

Certification issued? Yes, Attached (or mail copy separately if applying electronically) No

Certification waived? Yes, Attached (or mail copy separately if applying electronically) No

Certification denied? Yes, Attached (or mail copy separately if applying electronically) No

Exempted Activity? Yes X No

Agency concurrence? Yes, Attached No

If exempt, state why:

Box 14 Coastal Zone Management Act

Is the project located within the Coastal Zone? Yes X No

If yes, applying for a coastal commission-approved Coastal Development Permit?

Yes, Attached (or mail copy separately if applying electronically) No

If no, applying for separate CZMA-consistency certification?

Yes, Attached (or mail copy separately if applying electronically) X No

Permit/Consistency issued? Yes, Attached (or mail copy separately if applying electronically) No

Exempt? Yes No

Agency concurrence? Yes, Attached No

If exempt, state why:

Box 15 List of other certification or approval/denials received from other federal, state, or local agencies for work described in this application:

Agency	Type Approval ⁴	Identification Number	Date Applied	Dated Approved	Date Denied
CA DFG	1602				
US EPA	401				
Yurok Tribe	401				

⁴Would include but is not restricted to zoning, building, and flood plain permits

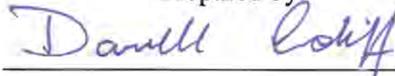
Nationwide Permit General Conditions (GC) checklist:

(<http://www.gpo.gov/fdsys/pkg/FR-2012-02-21/pdf/2012-3687.pdf>)

Check	General Condition	Rationale for compliance with General Condition
<input checked="" type="checkbox"/>	1. Navigation	The project will not result in any changes to navigation.
<input checked="" type="checkbox"/>	2. Aquatic Life Movements	Once flow has been diverted, any amphibians remaining will be relocated to the undiverted section of stream
<input checked="" type="checkbox"/>	3. Spawning Areas	The project will not affect spawning areas.
<input checked="" type="checkbox"/>	4. Migratory Bird Breeding Areas	The project will not affect migratory bird breeding areas
<input checked="" type="checkbox"/>	5. Shellfish Beds	The project will not affect shellfish beds.
<input checked="" type="checkbox"/>	6. Suitable Material	Concrete will be properly cured prior to flow being restored.
<input checked="" type="checkbox"/>	7. Water Supply Intakes	The project will not affect water supply intakes.
<input checked="" type="checkbox"/>	8. Adverse Effects from Impoundments	The project will not result in adverse impoundments.
<input checked="" type="checkbox"/>	9. Management of Water Flows	The project will not affect water flow management.
<input checked="" type="checkbox"/>	10. Fills Within 100-Year Floodplains	Fill will not be placed within the 100 floodplain of the Klamath River.
<input checked="" type="checkbox"/>	11. Equipment	Equipment will not be allowed to access through any stream course.
<input checked="" type="checkbox"/>	12. Soil Erosion and Sediment Controls	Work in the streams will occur after flow has been diverted.
<input checked="" type="checkbox"/>	13. Removal of Temporary Fills	All temporary fill (such as material to divert flow) will be removed at the completion of construction.
<input checked="" type="checkbox"/>	14. Proper Maintenance	The project is designed to allow for better unobstructed flow through the ditches and culverts.
<input checked="" type="checkbox"/>	15. Single and Complete Project	The activity is a single and complete project.
<input checked="" type="checkbox"/>	16. Wild and Scenic Rivers	The project will not affect a wild and scenic river.
<input checked="" type="checkbox"/>	17. Tribal Rights	The project will not affect tribal rights
<input checked="" type="checkbox"/>	18. Endangered Species	Letters of Concurrences have been received from National Marine Fisheries Service (coho salmon) and US Fish and Wildlife Service (northern spotted owl and marbled murrelet).
<input checked="" type="checkbox"/>	19. Migratory Bird and Bald and Golden Eagle Permits	Bald eagles have been observed within the Klamath River corridor. The project will not result in effects to migratory birds or bald and golden eagles. Potential nesting habitat for migratory birds will be removed outside of the nesting season.
<input checked="" type="checkbox"/>	20. Historic Properties	The project will not affect any historic property.
<input checked="" type="checkbox"/>	21. Discovery of Previously Unknown Remains and Artifacts	Discovery of Previously Unknown Remains and Artifacts is not anticipated with the project.
<input checked="" type="checkbox"/>	22. Designated Critical Resource Waters	The project will not affect a designated critical resource water.
<input checked="" type="checkbox"/>	23. Mitigation	Mitigation is not warranted.
<input checked="" type="checkbox"/>	24. Safety of Impoundment Structures	The project will not result in any unsafe impoundment structures.
<input checked="" type="checkbox"/>	25. Water Quality	Water quality certification will be processed with the Yurok Tribe and EPA,
<input checked="" type="checkbox"/>	26. Coastal Zone Management	The project limits are outside of the coastal zone.
<input checked="" type="checkbox"/>	27. Regional and Case-by-Case Conditions	The project complies with regional and case-by-case conditions.
<input checked="" type="checkbox"/>	28. Use of Multiple Nationwide Permits	The project is proposed to be authorized under NW 14 (non-reporting).
<input checked="" type="checkbox"/>	29. Transfer of Nationwide Permit Verifications	The project is being proposed and will be constructed by the state of CA.
<input checked="" type="checkbox"/>	30. Compliance Certification	The compliance certification will be filled out and returned to the Corps upon completion of the project.
<input checked="" type="checkbox"/>	31. Pre-Construction Notification	The project is being authorized with a non-reporting nationwide and a pre-construction notification is not warranted.

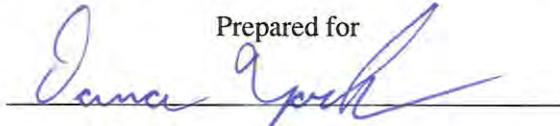
**HISTORIC PROPERTY SURVEY REPORT
FOR
HUM-169 WIDENING AND GUARDRAIL
HUMBOLDT COUNTY, SR 169
POST MILES 13.7, 19, 20.5, 22.5, 22.63, 22.75, 22.90, 23.30 &
33.76
EA 01-450900**

Prepared by:



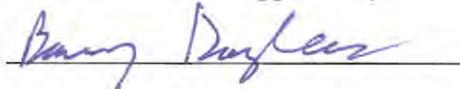
Darrell Cardiff, Associate Environmental Planner (Archaeology),
Co-Principal Investigator, Prehistoric Archaeology (PQS)
North Region Environmental Management Branch (E2), Caltrans District 01, Eureka, CA

Prepared for



Dana York, North Region Environmental Management Branch (E2) Chief,
Caltrans District 01, Eureka, CA

Reviewed for approval by:



Barry Douglas, Associate Environmental Planner (Archaeology),
Principal Investigator, Prehistoric Archaeology (PQS)
North Region Environmental Management Branch (E1), Caltrans District 01, Eureka, CA

August 2011

SUMMARY OF FINDINGS

The California Department of Transportation (Caltrans) is developing a safety improvement project on Route 169 that includes nine locations from PM 13.6 to PM 33.8 in Humboldt County. The purpose of this project is to improve safety through the installation of metal beam guard railing and roadway widening. This project is needed to decrease the potential of collisions and reduce the severity of run-off road collisions at the locations of concern identified by Yurok tribal representatives.

Ethnographic literature research combined with consultation with the Yurok Culture Committee and the Yurok Tribal Heritage Officer has served to document the existence of Yurok Cultural Places in the vicinity of the project locations.

Caltrans Archaeologist Darrell Cardiff (Project Archaeologist) conducted multiple archaeological surveys of the project area since January 2006. The survey effort did not identify any Historic Properties within the project's Area of Direct Impact (ADI) or Area of Potential Effects (APE). The APE maps are located in Appendix 1: Maps 2 through 10. The archaeological survey focused on walking over all areas of the APE as well as adjacent areas in and outside the SR 169 corridor. The archaeological survey focused on walking over all areas of the APE as well as adjacent areas in and outside the SR 169 corridor.

There are several cultural places in the vicinity of all the project locations. Individual places or properties generally exist within a larger context and serve as contributing elements to the Yurok cultural landscape/Klamath Riverscape. For the most part, these cultural places would be eligible for the National Register under Criterion A: (a) that are associated with events that have made a significant contribution to the broad patterns of our [Yurok] history. The cultural places have been considered while assessing the project's potential to affect Historic Properties. Under the authority of FHWA, Caltrans has determined a Finding of **No Adverse Effect**, according to 36 CFR 800.5(d)(1), is appropriate for this undertaking.

The Project Archaeologist will establish Environmentally Sensitive Areas (ESAs) that will include rock catchment systems and potentially ESA fencing at Locations 5, 6, and 7 to prevent potential construction impacts to known cultural places downslope.

The Project Archaeologist will include a Contract Specification requiring consultation with the Yurok Tribal Heritage Preservation Officer regarding tribal ceremonial events. If tribal ceremonial events are scheduled to occur during the proposed construction, construction activities will be suspended for the duration of the ceremonial event.

It is Caltrans' policy to avoid Historic Properties whenever possible. If previously unidentified cultural materials are unearthed during construction, it is Caltrans' policy that work be halted in that area until a qualified archaeologist and Yurok archaeologist can assess the significance of the find. Additional archaeological surveys will be needed if project limits are extended beyond the present survey limits.

UNDERTAKING DESCRIPTION AND LOCATION

EA 45090—Hum-169 Widening & Guardrail

Purpose and Need

The California Department of Transportation (Caltrans) is developing a safety improvement project on Route 169 that includes nine locations from PM 13.6 to PM 33.8 in Humboldt County. The purpose of this project is to improve safety through the installation of metal beam guard railing and roadway widening. This project is needed to decrease the potential of collisions and reduce the severity of run-off road collisions at the locations of concern identified by Yurok tribal representatives.

Project Description

This safety improvement project includes widening the existing roadway at nine locations to a minimum width of 20' (one 10' lane in each direction) and placing metal beam guard railing where needed. The nine locations identified for improvement were selected based upon a higher than normal number of collision type accidents.

Alternatives

The project development team determined that there was only one feasible build alternative and the no build alternative, they are described as follows:

1. Proposed Build Alternative

The Proposed Build Alternative consists of construction at nine locations along Route 169 in Humboldt County between PM 13.69 and 33.77. The project proposes widening the existing roadway to a width of 20' and installing metal beam guardrail in eight locations and replacing metal beam guardrail in one location. The existing roadway widths and steep terrain will not allow for detours for the traveling public so scheduled closures will be necessary. The widening work will require roadway closures with durations varying from 2 hours to 4 hours in length to accomplish the work. Equipment will not be able to be mobilized and demobilized to allow for shorter duration closures.

Possible staging areas are the wide shoulders at PM 13.6, 18.8, 19.1, 20.3, 20.8, 22.7, 23.5, 30.0-30.2 and 33.7. The work at each location is detailed as follows:

Location 1 (PM 13.69 to 13.71): The roadway will be widened to a minimum 20' via construction of a soldier pile wall on the outboard edge of the roadway. The proposed wall is approximately 15' to 20' high and 115' long. Metal beam guardrail will also be placed along the top of the wall. The existing roadway width at this location varies from 16' to 22' in width. Construction of the soldier pile wall would require temporary relocation of the large boulders that are currently armoring the bank below the roadway. After the boulders are moved, drilling for the CIDH (Cast-In-Drilled-Hole) soldier piles would commence. After the CIDH piles are poured, the timber lagging and tiebacks will be placed. When the wall is completed, rock slope protection must be placed at the toe of the wall to minimize river scour. Finally the roadway paving will be expanded to the back of the wall to prevent washout of fines from the structure backfill. A debris catchment fence will be placed below the wall to minimize the potential for debris to enter the river. Equipment to be used for construction at this location will likely include

a drill rig, boom truck, concrete pump truck, large excavator, paver, grader, and compaction equipment. Access to construct the wall will be from the existing roadway and roadway closures will be up to two hours in length.

Location 2 (PM 18.96 to 19.04): The roadway will be widened to a minimum 20' width via cutting existing left slopes at a slope ratio of 1H:1V with a maximum cut height of 17' and cantilevered metal beam guard railing will be installed along the right. A long-armed excavator will likely be used to construct the cut, a paver, grader and compaction equipment will be utilized to reconstruct the roadway and a concrete pump truck and excavator will be utilized to build the cantilevered metal beam guardrail. Six trees with diameters of 11" or larger will be impacted by this work.

Location 3 (PM 20.47 to 20.61): The work at this site includes widening the existing roadway to 20' by cutting the existing slopes at a slope ratio of 0.5H:1V and 1H:1V to a maximum height of 55' and installing standard metal beam guard railing. Since the rock slopes are highly fractured in this area, the excavated slopes will be covered with cable drapes to mitigate for potential rock fall. Due to variations in slope, there will be approximately 160' of slope that will be cut at a ratio of 1H:1V and 575' of slope cut at a ratio of 0.5H:1V. The culvert inlet will be extended northward at PM 20.60. The excavation at this location will likely require specialized equipment such as a crane-mounted mini-hoe ram, blasting equipment and small scrapers. This location will require closures up to four hours in duration. One tree with a diameter of 11" or larger will be impacted by this work.

Location 4 (PM 22.48 to 22.51): Work at this location will be limited to realigning the existing roadway and placing cantilevered metal beam guardrail. Concrete trucks, a concrete pump truck and excavator will be utilized to build the cantilevered metal beam guardrail.

Location 5 (PM 22.63 to 22.64): Alternative A. The proposed work at this location includes widening the existing travel way to 20' via a 0.5:1 cut. The cut will be a maximum height of 65' and length of 345'. There is potential for rock fall during construction at this location therefore containment measures will be utilized to minimize the potential for rock to enter the river.

Excavation at this location will include utilizing an excavator to generate access on each side of the large cut, working upslope. The first order of work at this location will include installing rock fall barrier on the existing roadway to minimize the potential for rock debris to enter the river. Double twisted wire mesh may be required to control shedding rock debris. Concrete trucks, a concrete pump truck and excavator will be utilized to build the cantilevered metal beam guardrail and excavate the hillside for the widened roadway. Road closed up to four hours will be required at this location.

Alternative B. If further geotechnical studies indicate the 0.5:1 cut is unstable, a soil nail wall will be constructed at this location to widen the existing roadway. A 3' to 4' wide bench will be constructed and a rock fall fence will be placed at the top of the wall. Excavators and scrapers will likely be used to construct the cut, a paver, grader and compaction equipment will be utilized to reconstruct the roadway and a concrete pump truck and excavator will be utilized to build the cantilevered metal beam guardrail. Road closure durations are expected to be up to two hours at the wall conforms at this location.

Location 6 (PM 22.74 to 22.76): The work at this location includes widening the existing traveled way to 20' by cutting the existing rock face at a slope ration of 1H:1V to a maximum

height of 60' and constructing cantilevered metal beam guard railing. The culvert at PM 22.77 will also be replaced at this location. The culvert is damaged and flow is now subsurface somewhere under the culvert. A long-armed excavator will likely be used to construct the cut, a paver, grader and compaction equipment will be utilized to reconstruct the roadway and a concrete pump truck and excavator will be utilized to build the cantilevered metal beam guardrail. Road closure durations are expected to be up to two hours at this location.

There is potential for rock fall during construction at this location therefore containment measures will be utilized to minimize the potential for rock to enter the river.

Location 7 (PM 22.89 to 22.95): The proposed work here includes widening the existing roadway via excavation of slopes at a slope ratio of 1H:1V and constructing cantilevered metal beam guard rail. Excavators, graders, concrete pump truck and paving equipment will likely be utilized at this location. Excavated slopes will be revegetated to prevent rilling and/or gullyng of the slope face.

There is potential for rock fall during construction at this location therefore containment measures will be utilized to minimize the potential for rock to enter the river.

Location 8 (PM 23.28 to 23.32): The work at this location includes widening the existing roadway to 20' via construction of a soil nail wall approximately 510' long with a maximum height of 20' and construction of both cantilevered and standard metal beam guardrail. A 3' to 4' wide bench will be constructed and a rock fall fence will be placed at the top of the wall. Two trees with diameters of 11" or larger will be impacted by this work. Excavators and scrapers will likely be used to construct the cut, a paver, grader and compaction equipment will be utilized to reconstruct the roadway and a concrete pump truck and excavator will be utilized to build the cantilevered metal beam guardrail. Road closure durations are expected to be up to two hours at the wall conforms at this location.

Location 9 (PM 33.76 to PM 33.77): The work here will only require replacing damaged metal beam guardrail.

2. No-Build Alternative

The No-build alternative would result in no improvement to these safety impaired locations.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DISCUSSION

Several alternatives were considered during the project development process but were eliminated based upon issues of feasibility and/or Constructibility. The alternatives considered but eliminated from further discussion are as follows:

1. **Standard 12' Lane Width.** Improving safety through widening the existing roadway to a standard 24' width (i.e. 12' lanes in each direction) was eliminated as an alternative due to the excessive right of way required and large impacts to the vegetation. This alternative would have required extensive cuts and fills that would permanently change the aesthetics of scenic nature of the existing route. In addition the project cost would result in an unfundable project.

2. **Standardize Roadway Geometrics.** Improving safety through meeting standard conventional highway geometrics was also eliminated from further consideration. The existing segment is not an engineered alignment and generally does not comply with geometric standards such as horizontal curve radius, vertical alignment, stopping sight distance and roadway cross section. Any attempt to meet these standards would require reconstruction of the route and result in excessive construction and right of way costs and impacts to environmental resources.

The construction scenario portion of this document has been reviewed and approved of by the Construction Area Senior.

AREA OF POTENTIAL EFFECTS

The Area of Potential Effects (APE) for the project was established in consultation with *Darrell Cardiff, Co-PI Prehistoric Archaeology*, and *Richard Mullen, Project Manager*, on 6/9/10. The APE maps are located in *Appendix 1* in this Historic Property Survey Report.

The APE was established to include all areas to be impacted during clearing, staging and construction. The APEs established exceed the anticipated Area of Direct Impacts.

CONSULTING PARTIES / PUBLIC PARTICIPATION

X Local Government (*Head of local government, Preservation Office / Planning Department*)

- Yurok Tribal Heritage Preservation Office. Dr Thomas Gates, Tribal Heritage Preservation Officer. 15900 Hwy 101 North, Klamath California 95548
- Dr. Gates was consulted during the initial planning process (January 2006, March 2007, July 2007) for this project.
- Yurok Tribal Heritage Preservation Office. Robert McConnell, Tribal Heritage Preservation Officer. 15900 Hwy 101 North, Klamath California 95548
- Mr. McConnell was consulted during March 2009 and June 2009.

X Native American Tribes, Groups and Individuals

- Yurok Culture Committee meeting February 26, 2010.
- Yurok Culture Committee meeting September 21, 2009
- Yurok Culture Committee meeting February 22, 2008. Location #1 was discussed associated with geotechnical drilling efforts. No cultural concerns were expressed by any committee members regarding this specific location.
- Yurok Culture Committee meeting August 22, 2008. No cultural concerns were expressed by any committee members regarding the project.
- Yurok Culture Committee meeting February 27 2009
- Robert McConnell (Yurok Tribe Environmental Program – Cultural Resources Division) examined Locations 1-9 in July 2007.

Visual impacts to cultural places and the Klamath as a Wild and Scenic River has been a concern for the Project Development Team, the Yurok Culture Committee, the Yurok THPO and the Yurok Tribe Environmental Program. In February 2010, Darrell Cardiff (project archaeologist) and Lena Ashley (Senior Design Engineer) presented a series of proposed visual impact minimization measures that were hoped to serve as Context Sensitive Solutions for the project to

the Culture Committee. Proposed Context Sensitive Solutions and Visual Impact minimization measures included:

- Timber lagging and colored vertical beams for the Soldier Pile wall at location #1.
- Painted cable drapes at locations 3, 5, and 6 if cable drapes are necessary.
- Etched or painted Metal Beam Guardrail at Location #4.

The Culture Committee did not express any objections to the above proposed Context Sensitive Solutions and Visual Impact minimization measures.

The aesthetic treatment options presented for the wall at Location #8 did generate some debate. The Culture Committee requested that Caltrans bring the matter back with more detailed potential alternates. Caltrans and the Project Development Team committed to returning to the Culture Committee and continuing consultation regarding potential aesthetic treatments for the wall.

Please see Appendix 2 for the presentation presented to the Culture Committee.

Caltrans returned to the Culture Committee on January 28, and April 29, 2011.

Please see Appendix 2 for the aesthetic alternative selected by the Culture Committee.

SUMMARY OF IDENTIFICATION EFFORTS

- National Register of Historic Places Month & Year: 1979-2002 & supplements
- California Register of Historical Resources Year: 1992 & supplemental information to date
- California Inventory of Historic Resources Year: 1976
- California Historical Landmarks Year: 1995 & supplemental information to date
- Archaeological Site Records [*List names of Institutions & date below*]
 - NCIC Records Search, File # Cardiff 08-02. Date of results: 06/10/08.
- Other sources consulted [*e.g., historical societies, city archives, etc. List names and dates below*]
 - Caltrans District 1 history files
 - Historical maps
 - Anthropological and ethnographic literature
- Results:** (*provide a brief summary of records search and research results, as well as inventory findings*)
 - No archaeological sites within project APEs.

PROPERTIES IDENTIFIED

- No archaeological deposits** in project APE.
See Attached Archaeological Survey Report.

Ethnographic literature research combined with consultation with the Yurok Culture Committee and the Yurok Tribal Heritage Officer has served to document the existence of a series of Yurok

cultural places in the vicinity of each of the project locations. The cultural places have been considered while assessing the project's potential to affect Historic Properties.

HPSR TO YUROK THPO

Under the authority of FHWA, Caltrans has determined a Finding of **No Adverse Effect**, according to 36 CFR 800.5(d)(1), is appropriate for this undertaking.

ATTACHED DOCUMENTATION

- Project Plans
- Project Vicinity, Location, and APE Maps
- Archaeological Survey Report (ASR)
Archaeological Survey Report for the Widen & Install Metal Beam Guardrail: Nine Locations Project, Humboldt County, California 01-HUM-169, PM 13.7, 19, 20.5, 22.5, 22.63, 22.75, 22.90, 23.30 & 33.76 EA 01-450900

APPENDIX 1: LOCATION MAPS

Widen & Install MBGR: Nine Locations
01-HUM-169

01-450900

Location Map 2

01-HUM-169 Project Location Map:
Location 1

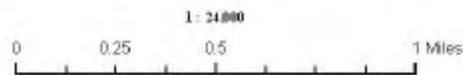
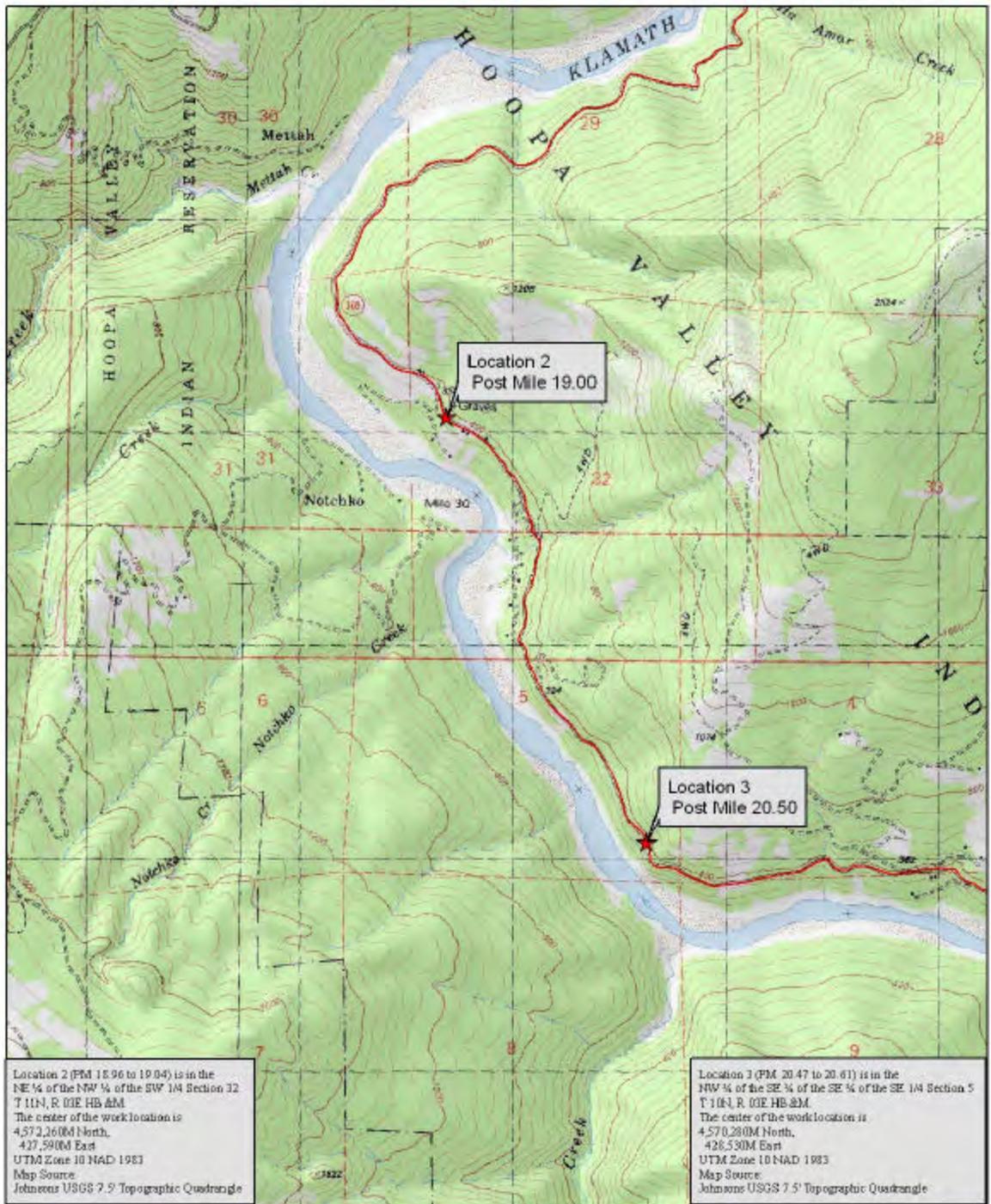


Widen & Install MBGR: Nine Locations
01-HUM-169

01-450900

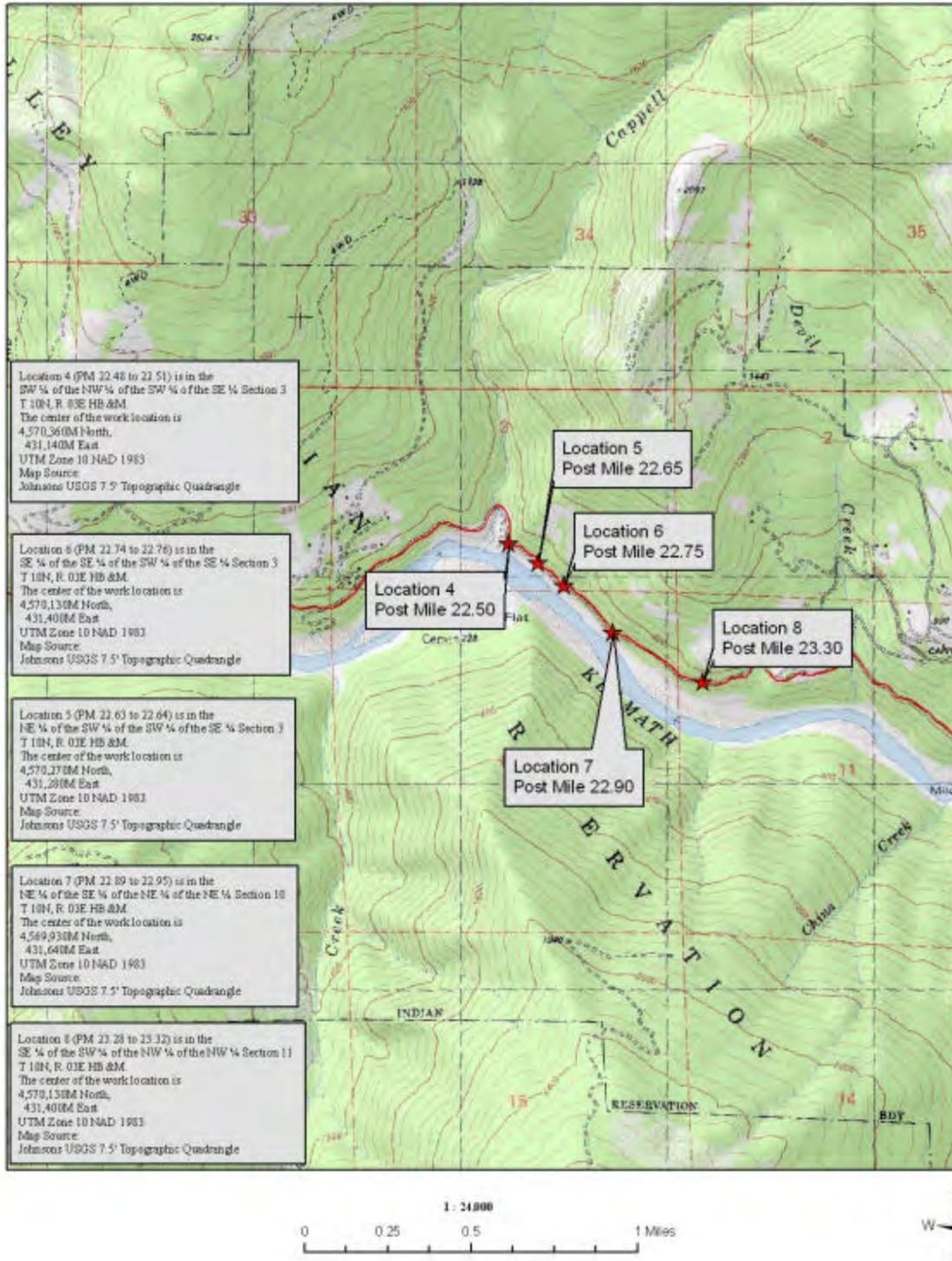
Location Map 3

01-HUM-169 Project Location Map:
Location 2 and 3



Location Map 4

01-HUM-169 Project Location Map:
Locations 4 through 8

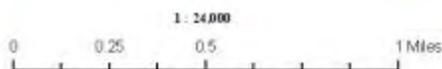


Widen & Install MBGR: Nine Locations
01-HUM-169

01-450900

Location Map 5

01-HUM-169 Project Location Map:
Location 9



Widen & Install MBGR: Nine Locations
01-HUM-169

01-450900

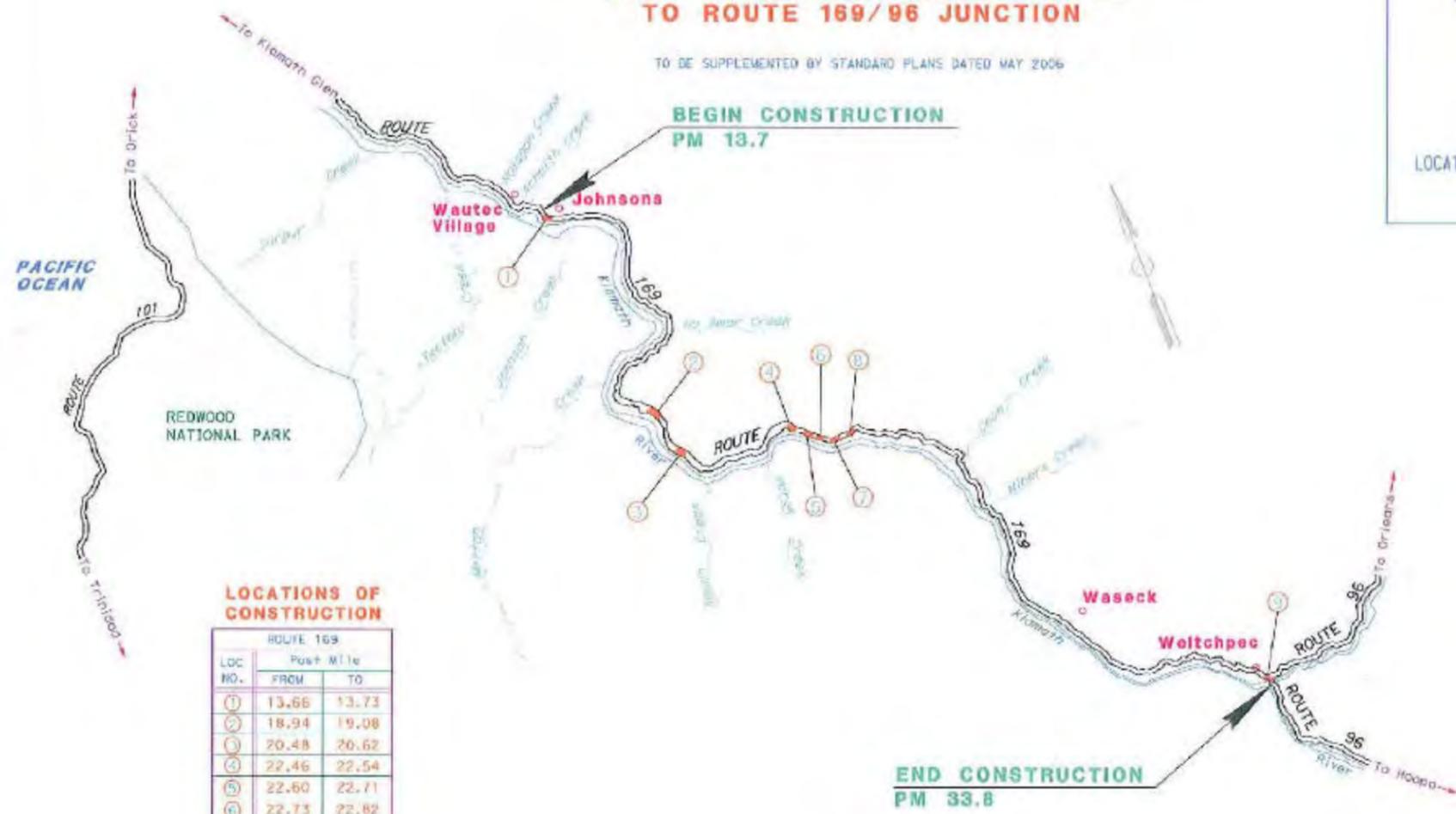
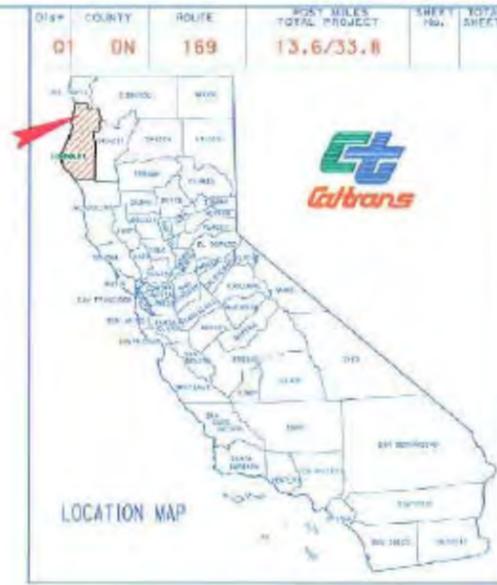
APPENDIX 1: PROJECT PLANS

INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN HUMBOLDT COUNTY
AT VARIOUS LOCATIONS FROM 0.8 MILES
WEST OF PECWAN CREEK BRIDGE
TO ROUTE 169/96 JUNCTION

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



LOCATIONS OF CONSTRUCTION

LOC NO.	ROUTE 169 Post Mile	
	FROM	TO
1	13.66	13.73
2	18.94	19.08
3	20.48	20.62
4	22.46	22.54
5	22.60	22.71
6	22.73	22.82
7	22.88	22.99
8	23.25	23.39
9	33.78	33.80

END CONSTRUCTION
PM 33.8

BEGIN CONSTRUCTION
PM 13.7

NOT TO BE USED FOR PRELIMINARY PLANS FOR CONSTRUCTION
FOR THE PROJECT
01-20-2006

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS
COUNTY OFFICIALS SHALL NOT BE
RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



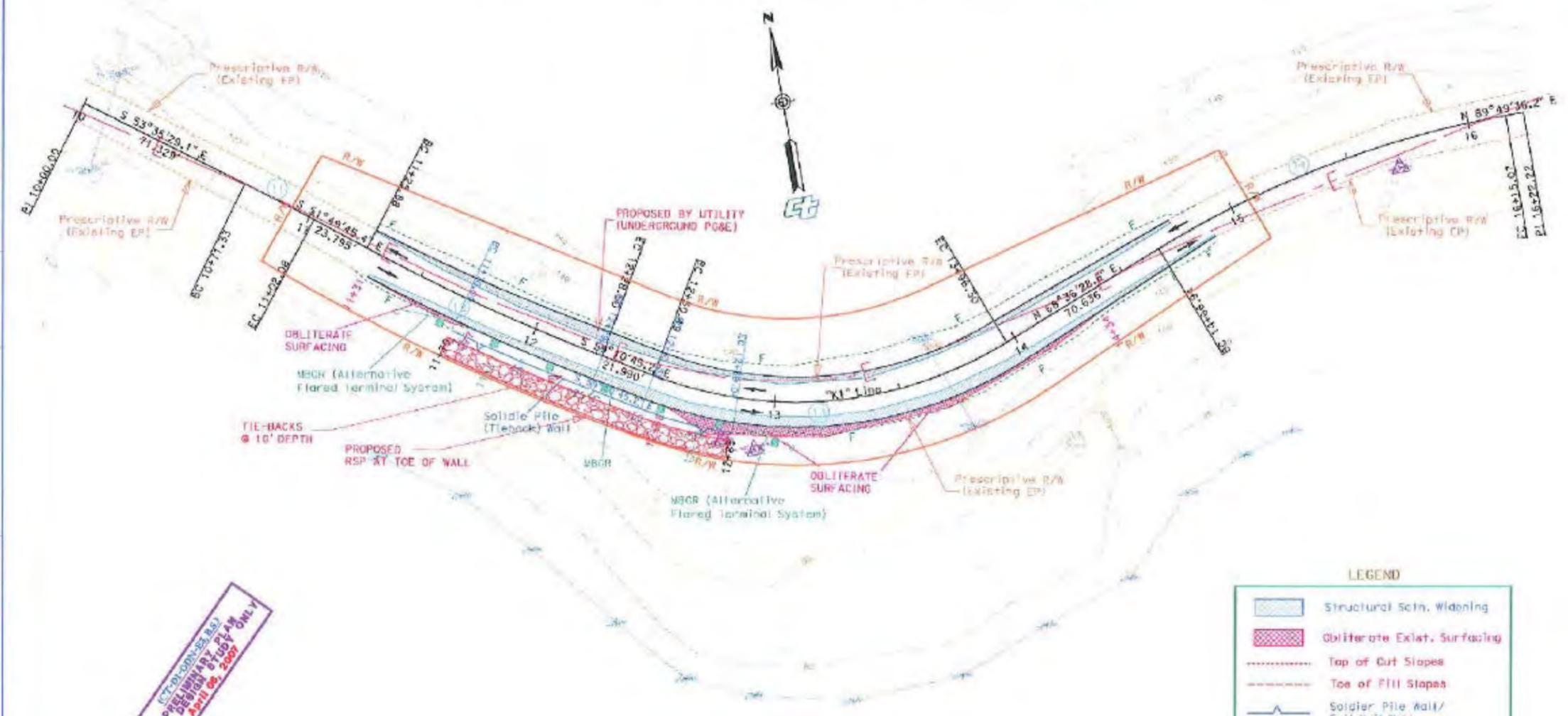
CONTRACT No. **01-450904**
CU 03232 EA 450901

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO CONTRACTORS."

NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	HUM	169	13.66/13.75		
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 ELECTRONIC COPIES OF THIS PLAN SHEET.</small>					

NO.	R	Δ	T	L	N	E
(1)	1000.00	1°45'43.7"	15.38	30.76	2379266.75	6048625.17
(2)	800.00	-7°20'59.8"	51.38	107.63	2380667.15	6049756.28
(3)	180.00	-52°12'46.2"	78.41	145.81	2380166.27	6048447.27
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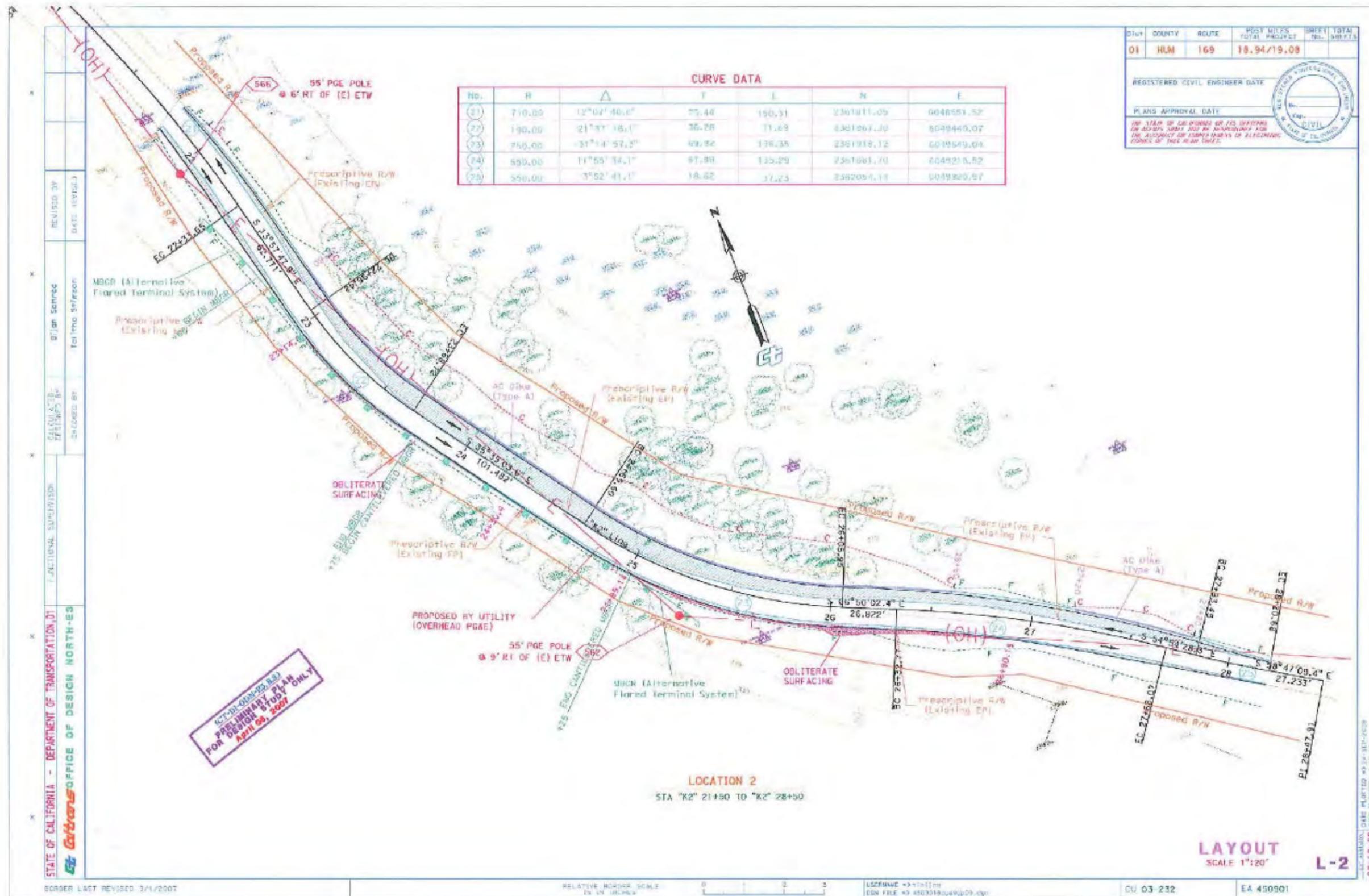


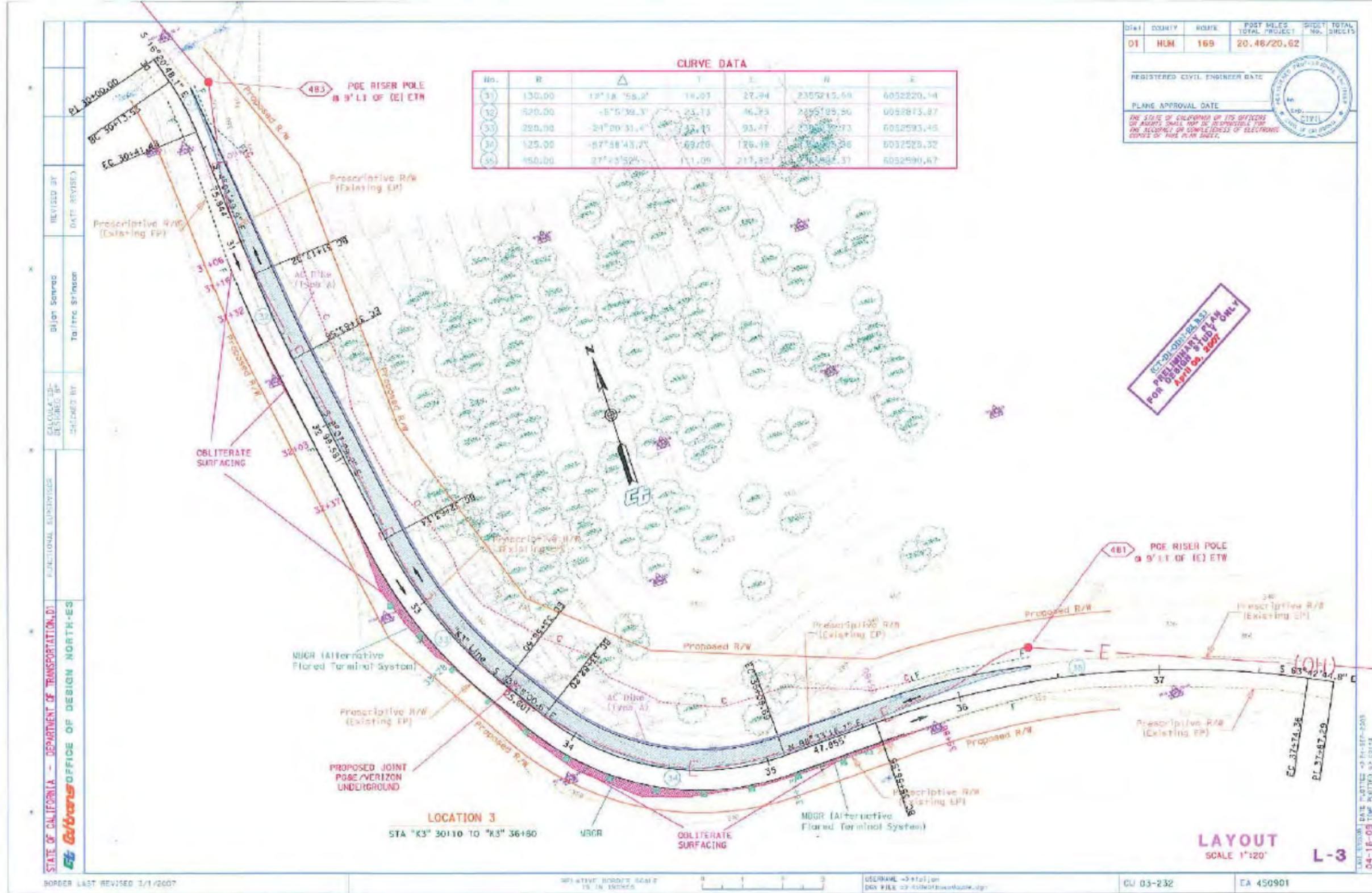
	Structural Sect. Widening
	Obliterate Exlat. Surfacing
	Top of Cut Slopes
	Toe of Fill Slopes
	Soldier Pile Wall/ Soil Nail Wall
	AC Dike

(C:\p\01\016-09\016-09-01) 11.19.09
 PRELIMINARY
 FOR DESIGN STUDY ONLY
 April 09, 2007

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION, DISTRICT 01
 CALTRANS OFFICE OF DESIGN NORTH-EAST
 FUNCTIONAL SUPERVISOR
 CALCULATED BY
 CHECKED BY
 DESIGNED BY
 DATE REVISED BY
 DATE REVISED

LAYOUT
SCALE 1"=20'
L-1





CURVE DATA

No.	R	Δ	T	L	N	E
1	130.00	12°18'58.2"	18.07	27.94	2355215.69	6052220.14
2	520.00	-8°5'39.3"	23.73	46.23	2355185.50	6052273.27
3	220.00	-24°00'31.4"	37.17	93.47	2355087.73	6052393.45
4	125.00	-87°58'43.2"	69.20	126.18	2354938.36	6052529.32
5	150.00	27°43'52.5"	111.09	211.82	2354647.37	6052590.67

DATE	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	HUM	169	20.46/20.62		

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 ELECTRONIC COPIES OF THIS PLAN SHEET.

OCT 01 2007 09:45 AM
 PRELIMINARY PLAN
 FOR DATE 06, 2007

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 OFFICE OF DESIGN NORTH-ES
 BORDER LAST REVISED 3/1/2007

LAYOUT
 SCALE 1"=20'
L-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION, DT
Caltrans OFFICE OF DESIGN NORTH-EG
 FUNCTIONAL SUPERVISOR: [Blank]
 CHECKED BY: [Blank]
 DESIGNED BY: [Blank]
 DRAWN BY: [Blank]
 REVISIONS: [Blank]

CURVE DATA

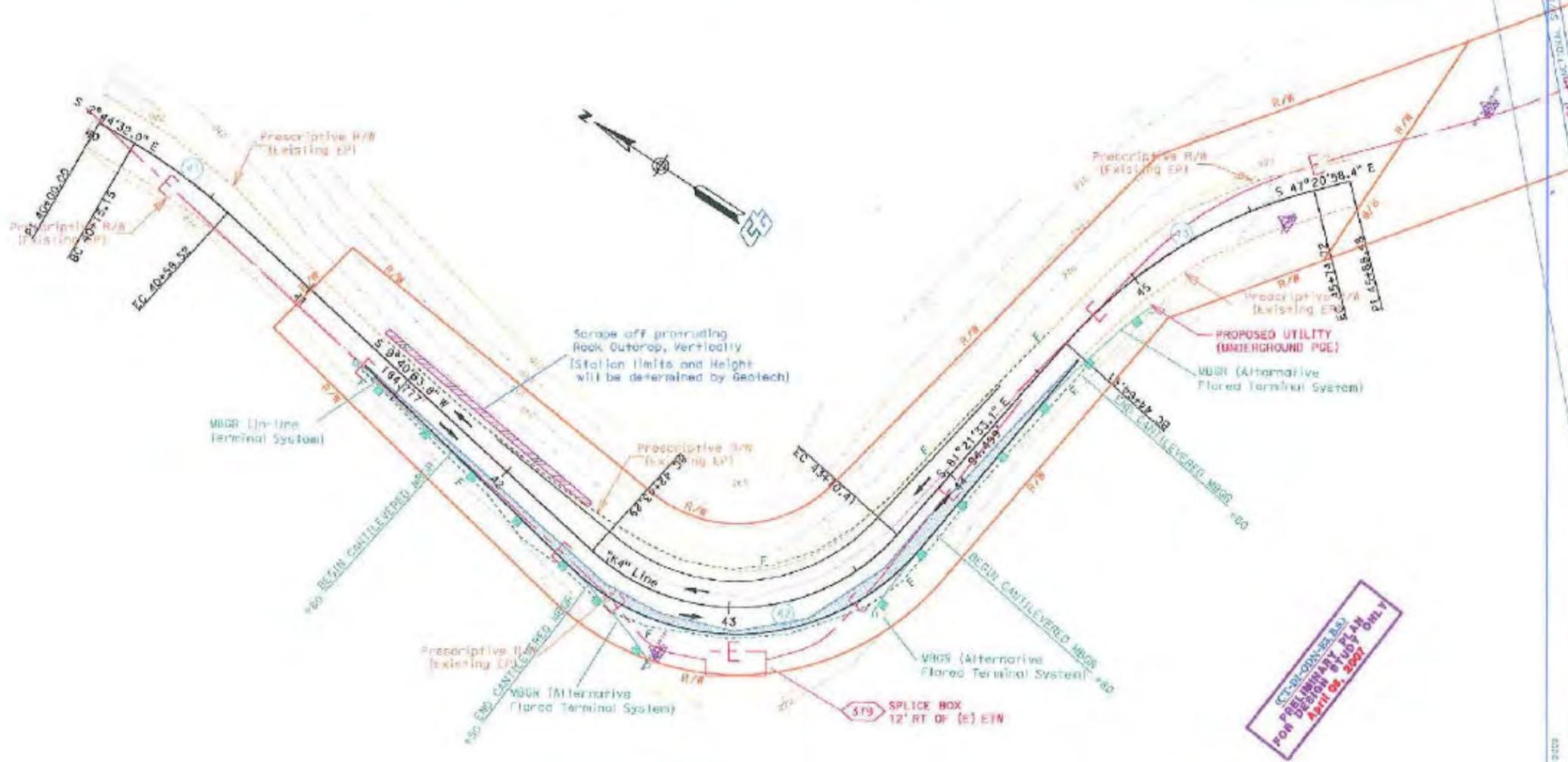
No.	R	Δ	T	L	M	E
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(3)	185.00	34°0'34.7"	59.58	-129.83	2355377.02	6060980.86

SHA#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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PLANS APPROVAL DATE: [Blank]

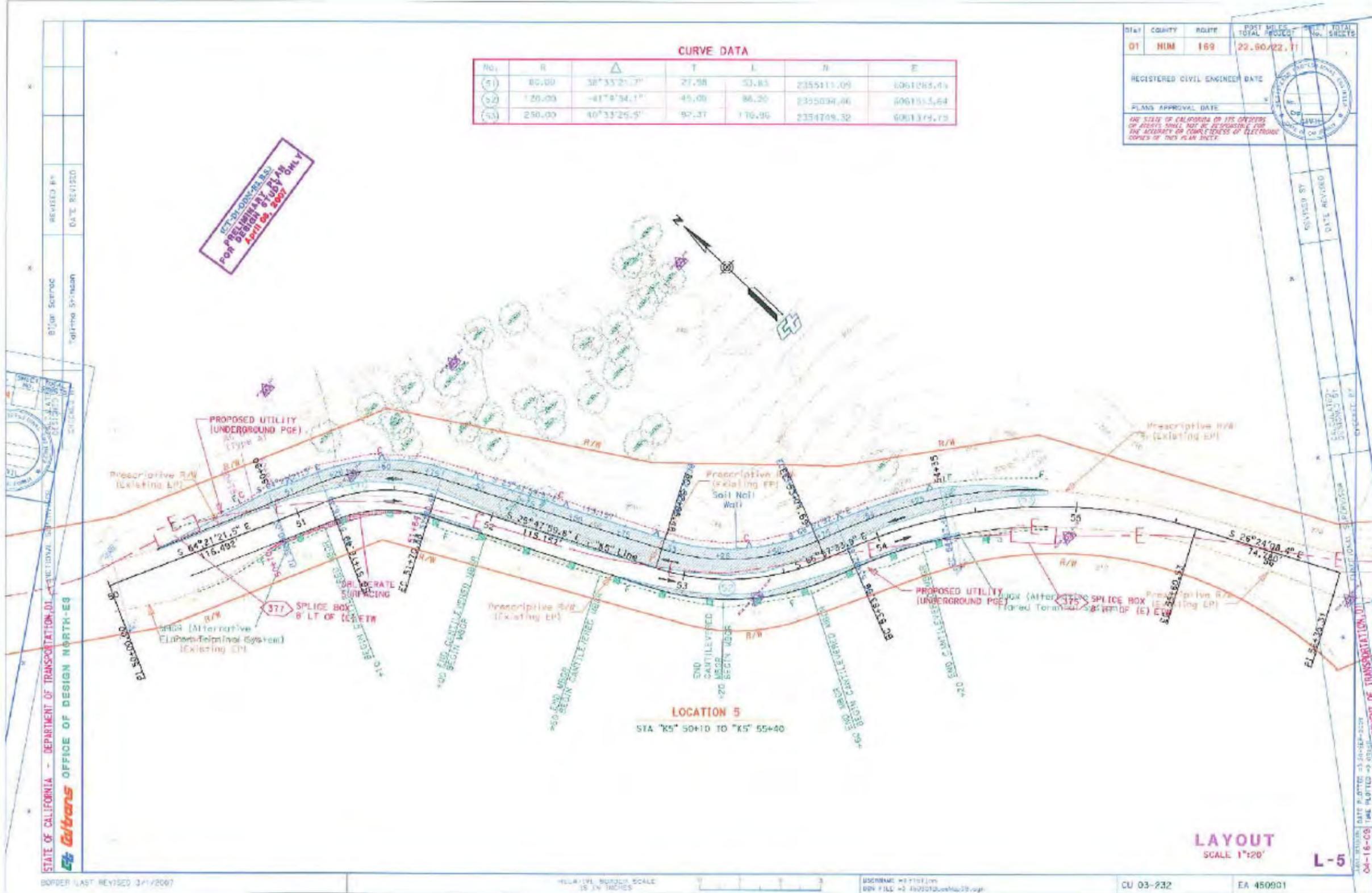
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR ANY ACCIDENT OR DAMAGE CAUSED BY THE USE OF THIS PLAN SHEET.



LOCATION 4
 STA "K4" 41+00 TO "K4" 45+00

ECT: [Blank]
 PRELIMINARY STUDY ONLY
 April 22, 2007

LAYOUT
 SCALE 1"=20'
L-4



CURVE DATA

No.	R	Δ	T	L	B	E
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(52)	120.00	-41°9'34.1"	45.00	86.20	2355034.46	6061333.64
(53)	250.00	10°33'25.5"	97.37	176.95	2354749.32	6061374.73

Dist	Quantity	Route	Post Miles	Total Project	Total Sheets
01	HUM	169	22.80/22.11		

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 ELECTRONIC COPIES OF THIS PLAN SHEET.

ECT-DIVISION-DESIGN
 PRELIMINARY DESIGN
 FOR DESIGN STUDY ONLY
 April 29, 2007

LOCATION 5
 STA "K5" 50+10 TO "K5" 55+40

LAYOUT
 SCALE 1"=20'
L-5

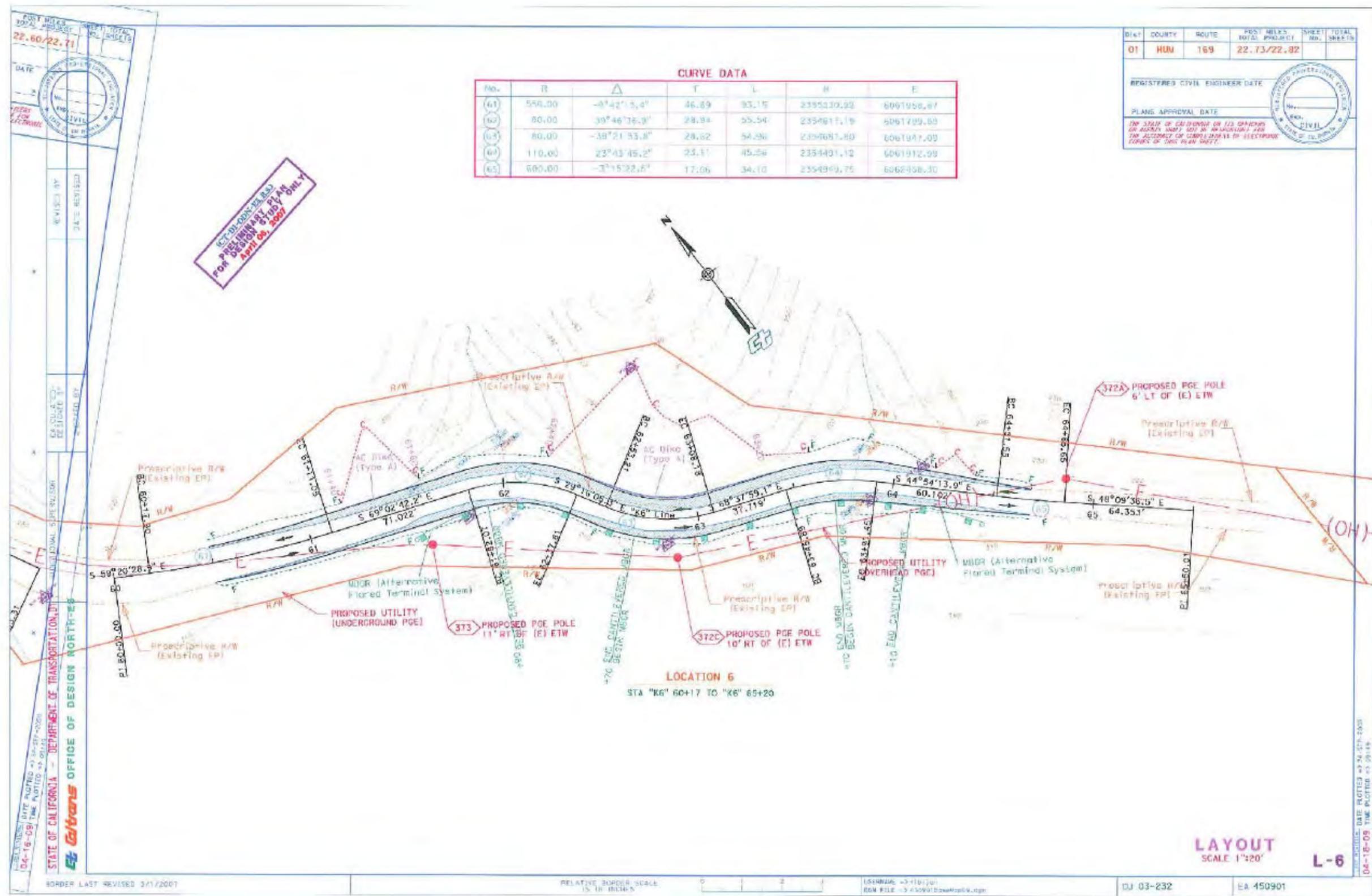
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	HUM	169	22.73/22.82		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

IN THE STATE OF CALIFORNIA ON THE DRAWING OR DESIGN I AM NOT AN ARCHITECT AND I AM ACCOUNTABLE TO THE BOARD OF ARCHITECTS FOR THE STATE OF CALIFORNIA.

No.	R	Δ	T	L	H	E
(61)	556.00	-8°42'13.4"	46.89	33.15	2355230.33	6091956.97
(62)	80.00	39°46'36.9"	28.94	55.54	2354917.19	6061789.83
(63)	80.00	-38°21'33.8"	28.52	54.26	2354987.80	6061947.09
(64)	110.00	23°43'45.2"	23.31	45.26	2354401.12	6061912.99
(65)	660.00	-3°15'22.6"	17.06	34.10	2354869.75	6062358.30



ICED-001-000-22.82-03
 PRELIMINARY PLAN
 FOR DESIGN STUDY ONLY
 April 06, 2007

LAYOUT
 SCALE 1"=20'
 L-6

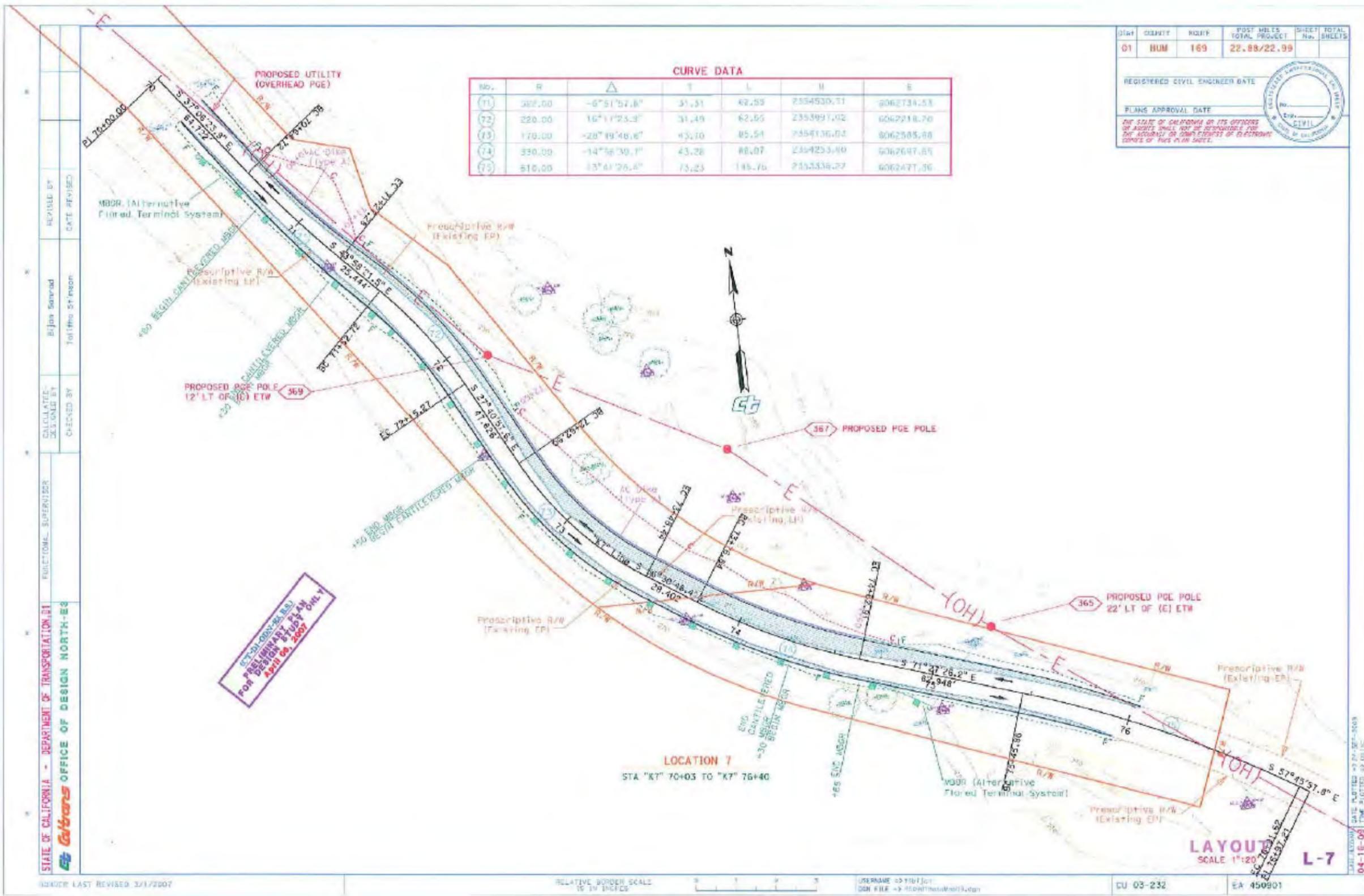
DATE	QUANTITY	RISER	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	169	22.88/22.99		

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 ELECTRONIC COPIES OF THIS PLAN SHEET.

No.	R	Δ	T	L	M	E
71	302.00	-6°51'37.8"	31.31	62.55	2354530.31	6062734.53
72	220.00	16°11'25.3"	31.49	62.55	2353991.02	6062718.70
73	170.00	-28°49'48.6"	43.10	85.54	2354135.04	6062585.88
74	330.00	-14°58'30.1"	43.28	86.07	2354253.40	6062647.85
75	510.00	13°41'26.4"	73.23	145.76	2352336.27	6062477.36

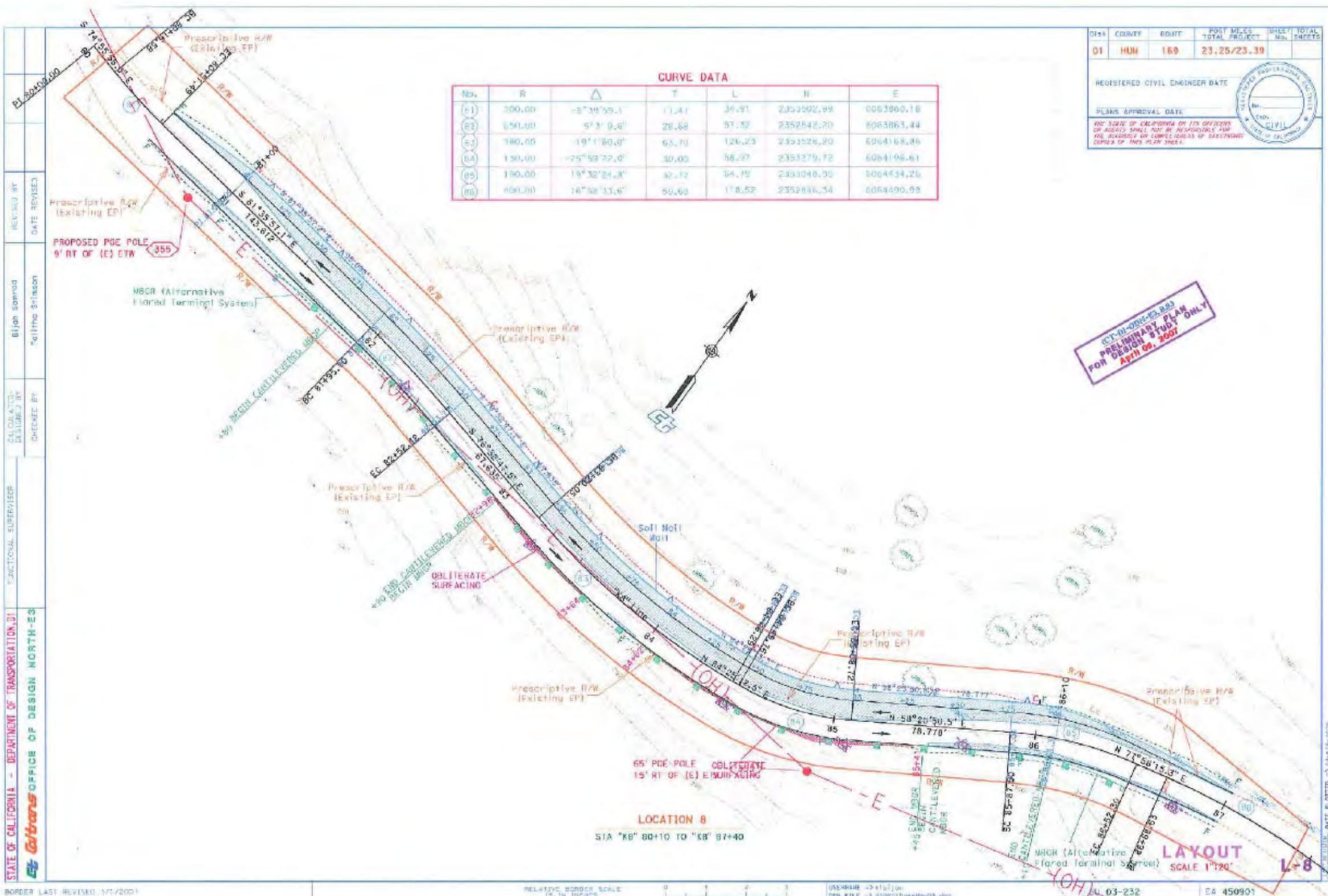


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION, DT
Caltrans OFFICE OF DESIGN NORTH-E3
 FUNCTION - SUPERVISOR
 CALCULATE -
 DESIGNED BY
 CHECKED BY
 REVISIONS BY
 DATE REVISED
 REVISIONS BY
 DATE REVISED

ICTAD/LOBBY-RE-REV
 PRELIMINARY PLAN
 For Design Study Only
 April 09, 2007

LOCATION 7
 STA 'K7' 70+03 TO 'K7' 76+40

LAYOUT
 SCALE 1"=20'
 L-7



APPENDIX 3: AREA OF POTENTIAL EFFECT MAPS

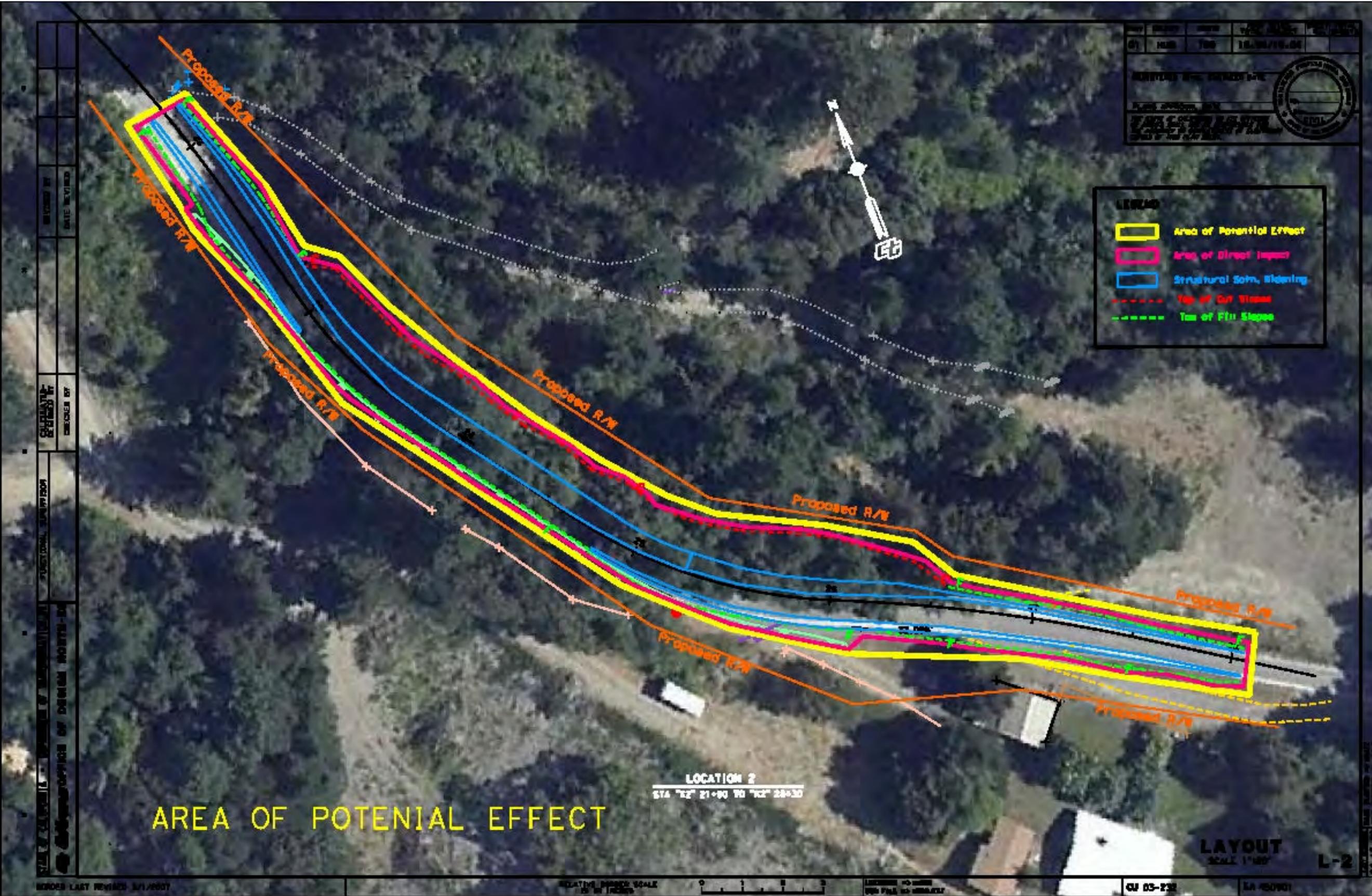
REV	DATE	BY	APP'D	DESCRIPTION
01	MAR 10 2009	TJM		18.00/18.00

APPROVED FOR PERMIT	
DATE	
BY	

PROJECT NO.	LA 450901
DATE	6/11/2009

LEGEND

- Area of Potential Effect
- Area of Direct Impact
- Structural Soil, Sliding
- Top of Cut Slopes
- Top of Fill Slopes



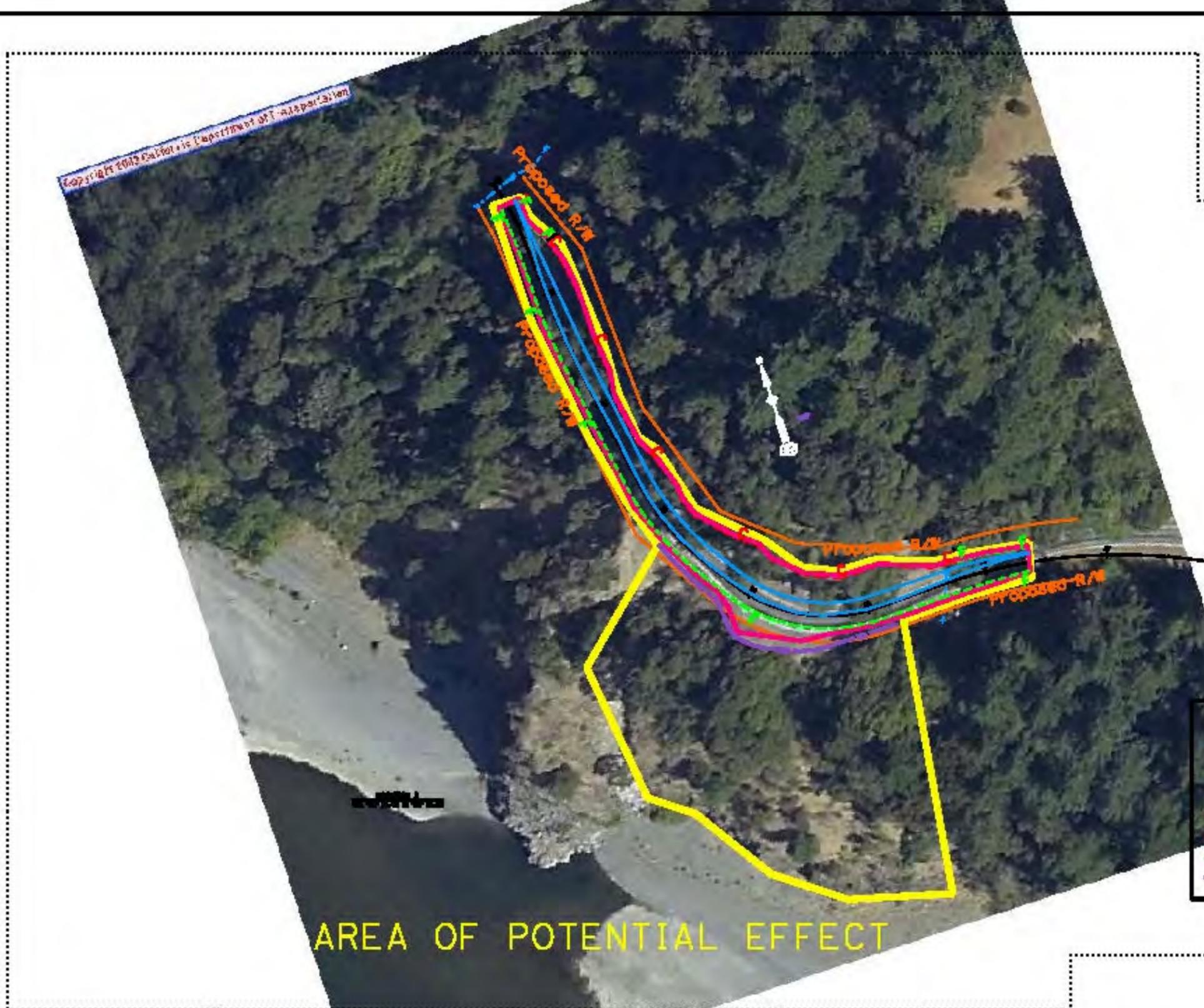
LOCATION 2
 STA "K2" 21+00 TO "K2" 28+30

AREA OF POTENTIAL EFFECT

LAYOUT
 SCALE 1"=80'
 L-2

Dist	COUNTY	ROUTE	PROJECT NUMBER	DATE	SCALE
01	HUM	180	20.47/20.61		

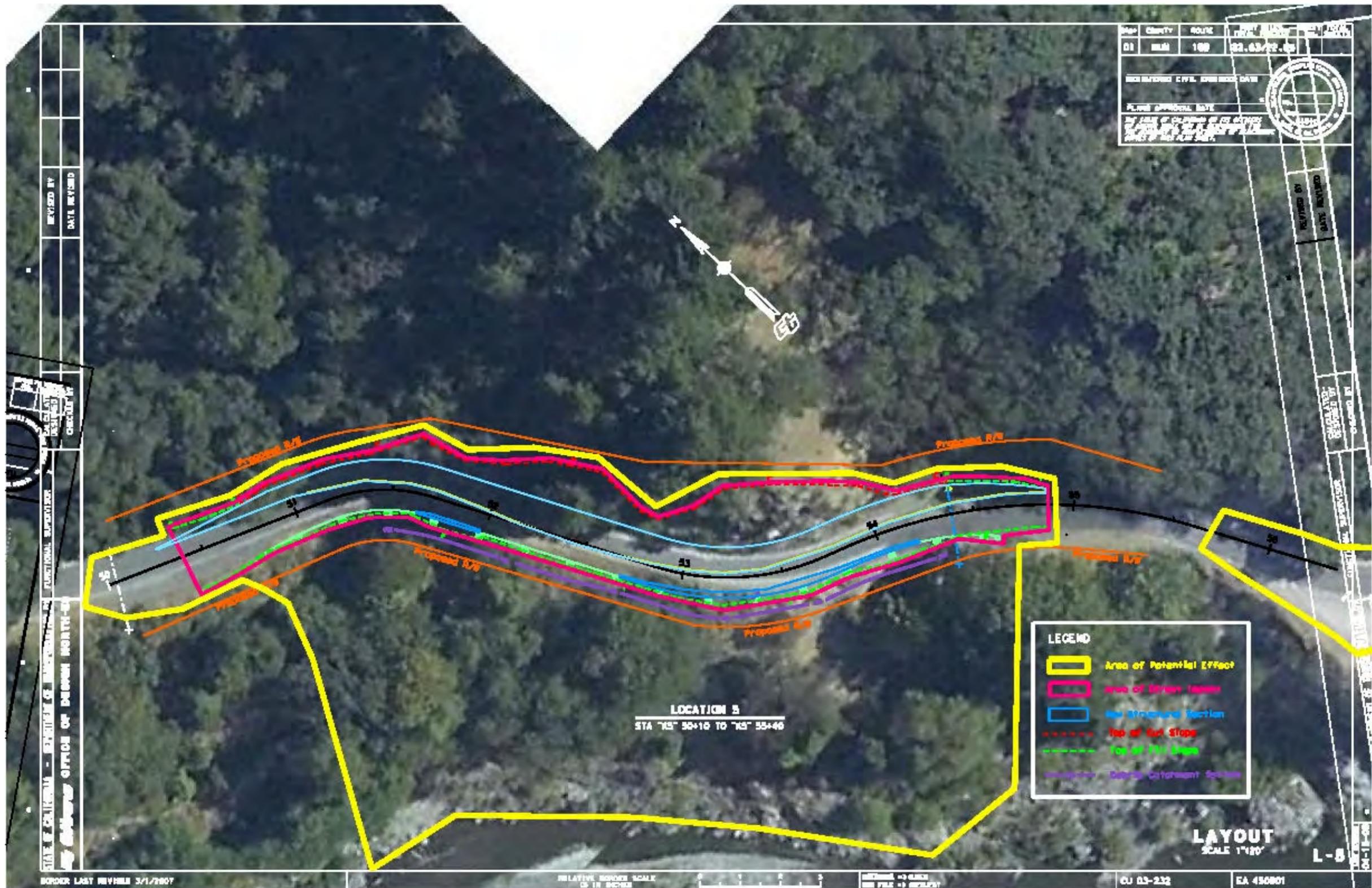
REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA
 CIVIL ENGINEERING
 No. 5011
 JOHN J. ...
 1000 ...
 ...

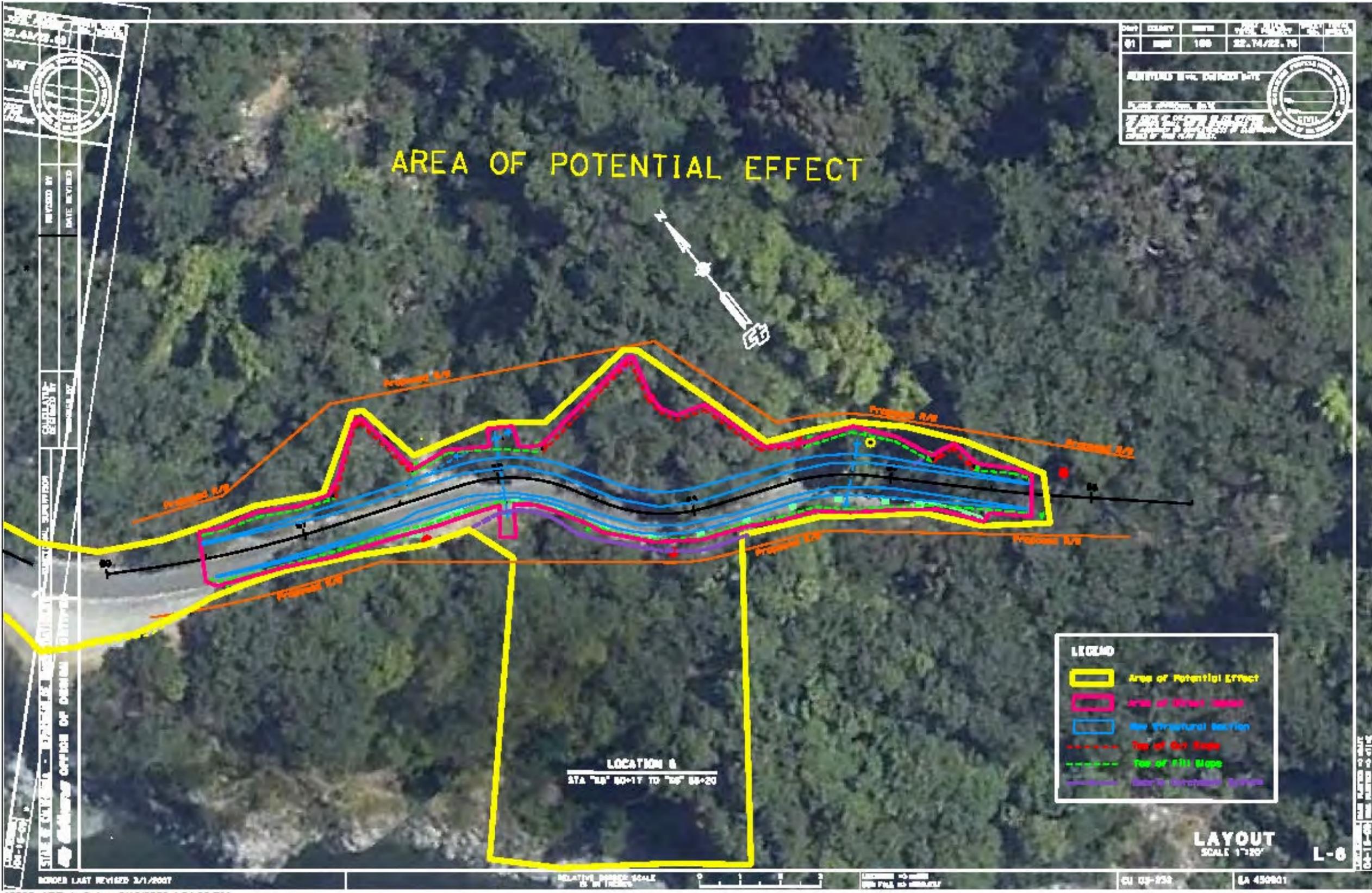


LEGEND

	Area of Potential Effect
	Structural Setback
	Area of Direct Impact
	Top of Cut Slopes
	Top of Fill Slopes
	Geologic Containment System

DATE OF ORIGINAL DESIGN	DESIGNER	FUNCTIONAL SUPERVISOR	CALCULATED BY	REVIEWED BY
DATE OF REVISION	REVISION	CHECKED BY	DATE REVISION	





DIST	COUNTY	TOWNSHIP	RANGE	SECTION	DATE
01	MIAMI	100	22.74/22.76		

REVISED BY: [Signature]
 DATE: [Date]
 PROJECT: [Project Name]
 SHEET: [Sheet Number]

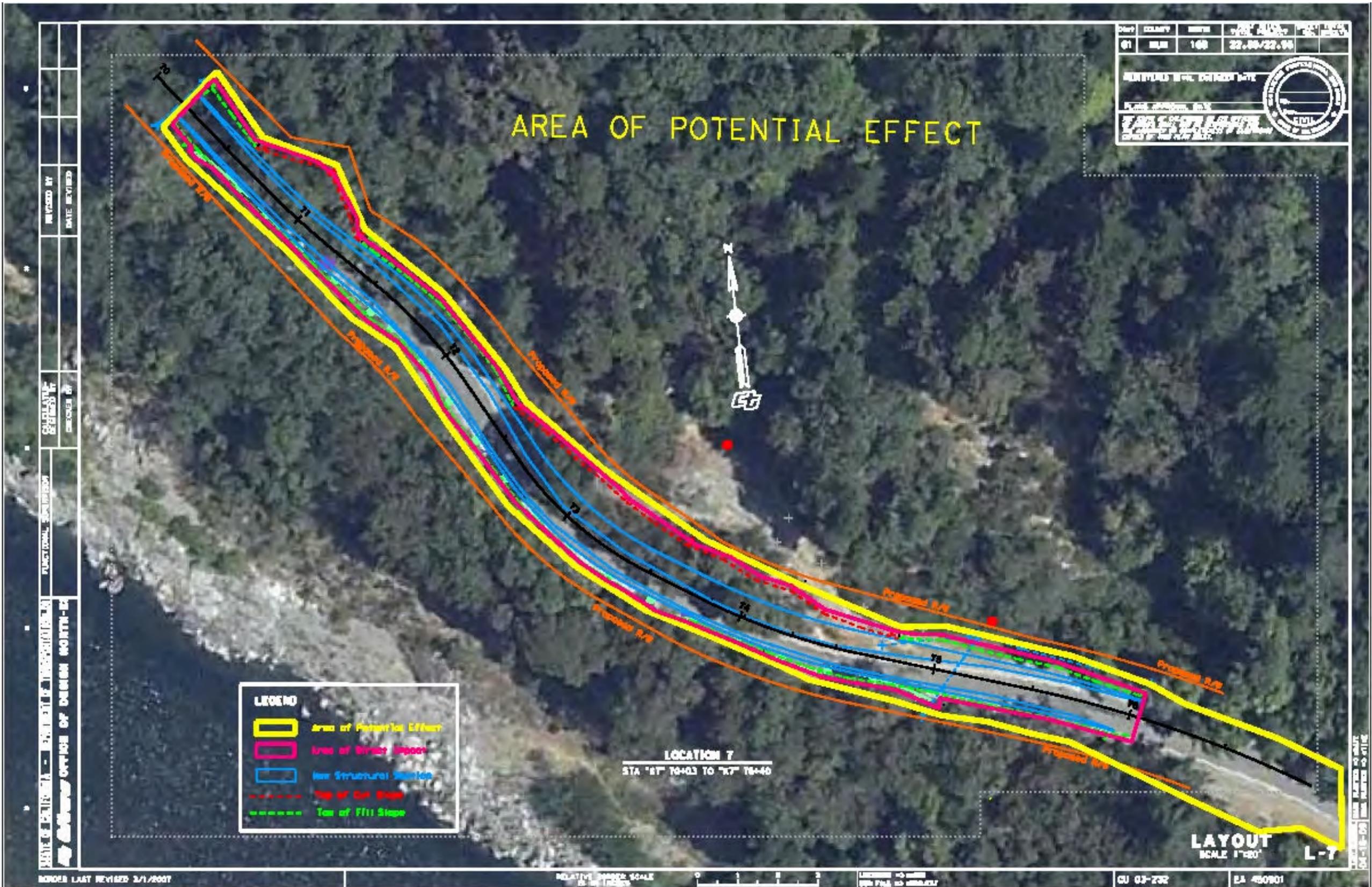
NO.	DATE	BY	REVISIONS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

LEGEND

- Area of Potential Effect
- Area of Direct Effect
- New Structural Section
- Top of Cut Slope
- Top of Fill Slope
- Base of Proposed Bridge

LOCATION 6
 STA "85" 80+17 TO "86" 88+20

LAYOUT
 SCALE 1"=20'
L-6

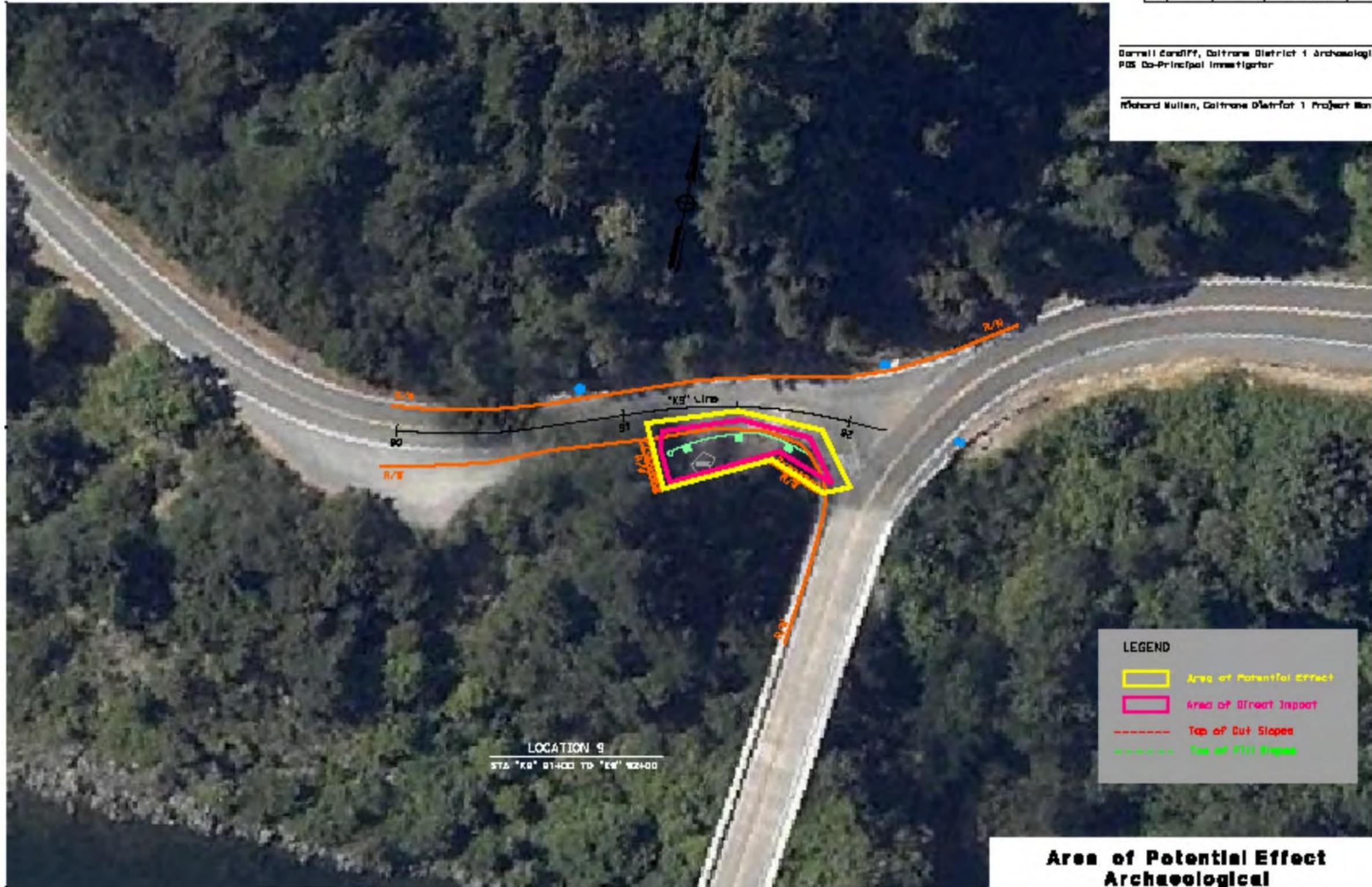


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL
 FUNCTIONAL BENCHMARK DATA YEAR
 CALCULATED/DESIGNED BY
 D. CARROLL
 R. FLAMERY
 REVISED BY
 DATE REVISED

DIST	COUNTY	ROUTE	PROJECT MILEAGE TOTAL PROJECT	PROJECT BEGIN DATE	PROJECT END DATE
01	Humboldt	109	13.8/35.0		

Darrell Carroll, Caltrans District 1 Archaeologist
 PDS Co-Principal Investigator

Richard Mullen, Caltrans District 1 Project Manager



LOCATION 9
 STA. 90+00 TO 92+00

LEGEND

- Area of Potential Effect
- Area of Direct Impact
- Top of Cut Slopes
- Top of Fill Slopes

Area of Potential Effect Archaeological

SCALE: 1" = 20'

LOCATION-0

APPENDIX 4:
PRESENTATION TO THE YUOK CULTURE COMMITTEE
FEBRUARY 26, 2010
And
April 28, 2011

Route 169



Location 1:

Example of wall below roadway



Location 5:

Example of mesh with anchor bolts



Locations 3 & 6:

Example of cable drape



Location 8:

Example of rock wall aesthetic treatments



Safety Project

Route 169
Location 1 - Wall below road



For aesthetics, piles can be painted



Timber lagging can be placed between piles



Example of soldier pile, tie-back, timber lag wall



Proposed wall location

Route 169

Location 3 & 6 - *Examples of cable drapes*



For aesthetics, cable drapes can be painted



Close-up of cable drape



Example of cable drape

Route 169
Location 5 - Wire mesh with anchor bolts



Example of wire mesh with anchor bolts. For aesthetic treatment, wire mesh can be painted

Route 169
Location 8 - Long Wall with Aesthetic Treatment



Proposed wall location



Example of a high relief, textured wall

Route 169
Location 8 - Long Wall with Aesthetic Treatment

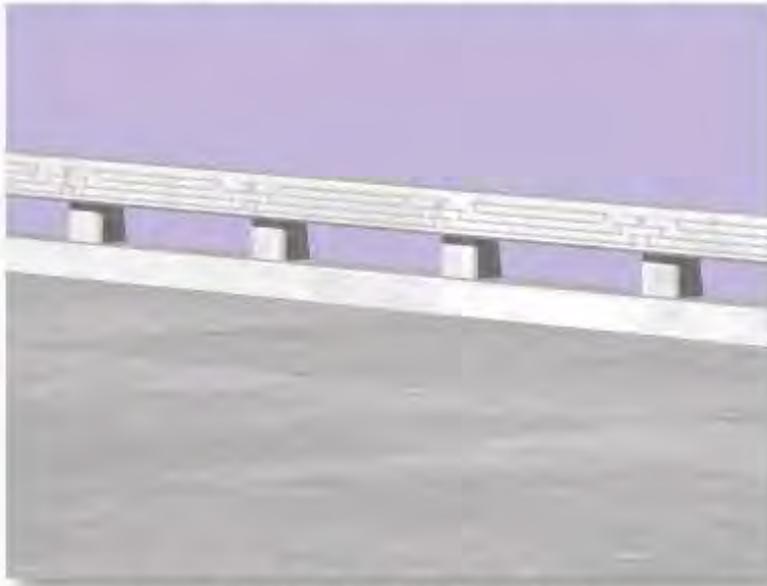
Split Slate - Max Depth 0.25"



Philadelphia Ashlar - Max Depth 0.75"



Examples of low relief treatments/textures for rock face



Example of embossed basket weave

Aesthetic Chosen for Location 8 April 28, 2011



PREPARED BY STRUCTURE DESIGN SERVICES
BRIDGE ARCHITECTURE AND AESTHETICS

OPTION 4C

Roadway Widening and Metal Beam Guard Rail Project on Route 169



Delineation of Waters of the US

01-HUM-169- PM 13.66-33.78

EA 450900

EFIS 0100000219

October 2012

Delineation of Waters of the US for a Roadway Widening and Metal Beam Guard Rail Project on Route 169

Introduction

This report presents the results of a delineation for Caltrans' project to improve safety along Route 169 in Humboldt County from Post Mile (PM) 13.66 to 23.39 (Figures 1 and 2). The highway is located entirely within the boundaries of the Yurok Indian Reservation and functions as the primary route serving the Yurok Tribal Nation. It provides access to several small communities, while also providing access to the Klamath River for tribal needs, recreation, and sport fishing purposes. The lanes and shoulders on Route 169 are relatively narrow at many locations, where the existing traveled way is reduced to a single lane with minimal or nonexistent recovery area. The project will result in roadway widths of 20 feet and the placement of metal beam guard rail (MBGR) along the new edge of pavement on the downhill side of the highway at each location.

The project site is located on the following U.S. Geological Survey (USGS) 7.5 minute quadrangle maps:

- Weitchpec and French Camp: T 9N, R 4E
- Weitchpec, French Camp, and Johnsons: T 10N, R 4E
- French Camp and Johnsons: T 10N, R 3E
- Johnsons: T 11N, R 3E

Project Description

Improvements are proposed at eight locations, which are discussed below.

Location 1, PM 13.66-13.73. The highway will be widened primarily on the downhill side where a retaining wall (soldier pile wall) will be constructed. The proposed wall will be approximately 15 to 20 feet high and 115 feet long. Construction of the wall will require a temporary access road in an area that will eventually be incorporated into the wall, and the temporary relocation of large boulders that are currently armoring the slope below the roadway. After the boulders are moved, drilling for the Cast-In-Drilled-Hole (CIDH) soldier piles will commence.

After the CIDH piles are poured, timber lagging will be placed between the piles. When the wall is completed, a trench will be dug below the wall. Rock slope protection (RSP), consisting of the original boulders and new rock, will be keyed into the slope at the toe of the wall lagging to minimize river scour to the wall when river elevations are high (above ordinary high water elevation).

An asphalt V-ditch will be constructed along 110 linear feet of the new widening on the uphill side. A structure such as a chain link fence with fiber rolls and/or a silt fence will be placed below the construction work to minimize material falling downslope toward the river during construction of the wall.

Location 2, PM 18.94-19.08. Sight distance will be improved by cutting back the slope on the uphill side of the roadway along a length of 500 feet. Asphalt V-ditches will be constructed along 510 linear feet of the new widening on the uphill side.

Location 3, PM 20.48-20.64. The work at this site includes cutting back the existing uphill slope to a maximum height of 55 feet and an approximate length of 530 feet. An asphalt V-ditch will be constructed along 546 linear feet of the new widening on the uphill side.

Other items of work include moving the culvert at PM 20.60, which carries flow from a roadside ditch, to a new location approximately 13 feet east of the existing 18 inch culvert. The existing outlet is perched over the downhill slope. The new culvert will be 24 inches in diameter but shorter in length and has been designed to eliminate the perched condition of the existing culvert. A rock energy dissipator will be built below the new outlet to minimize erosion of the slope.

Location 4, PM 22.46-22.54. Work at this location will include realigning the existing roadway to the south, towards the downhill slope.

Location 5, PM 22.60-22.71. The widening at this location will occur primarily on the uphill slope, which necessitates cutting back the slope. To provide stability to the new slope, rock bolts and wire mesh will be installed on the slope to a maximum height of 35 feet and length of 310 feet. An asphalt V-ditch will be constructed along 315 linear feet of the new widened area on the uphill side of the roadway. Flow from a roadside ditch empties into an 18 inch culvert at PM 22.68. The culvert will be replaced at the same location with a 30 inch culvert.

Location 6, PM 22.73-22.82. Widening will occur primarily on the uphill slope, which necessitates cutting back the slope to a maximum height of 60 feet and length of 230 feet. Three asphalt V-ditches will be constructed along 265 linear feet of the new widening on the uphill side. Two culverts that transport flow from jurisdictional streams as well as from roadside ditches will be replaced:

- PM 22.77: The culvert has failed, resulting in the flow going subsurface under the downhill slope. The flow resurfaces approximately 50 feet below the outlet of the culvert. The 18 inch culvert will be replaced in the same general location with a 30 inch double barrel culvert. A rock energy dissipator will be built below the new outlet to minimize erosion of the slope.
- PM 22.80: The 18 inch culvert will be replaced in the same general location with a slightly longer 24 inch diameter culvert. A rock energy dissipator will be built below the new outlet to minimize erosion of the slope.

Location 7, PM 22.88-22.99. At this location, the widening will occur primarily on the uphill slope, which necessitates cutting the slope back to a maximum height of 19 feet and length of 365 feet. Asphalt V-ditches will be constructed along 366 linear feet of the new widening on the uphill side.

Location 8, PM 23.25-23.39. At this location, the road will be widened on the uphill side. To minimize the necessary cut into the uphill slope, while still providing for highway improvements, the project will include construction of a combined 270-foot-long soil-nail wall and a 195-foot ground-anchor wall with a maximum height of 20 feet. A 3-4 foot wide bench will be constructed, and a rock fall fence will be placed at the top of the walls.

Environmental Setting

The project setting is a forested river corridor adjacent to the Klamath River, a designated Wild and Scenic River, located entirely within the Yurok Reservation. The highway directly parallels the Klamath River, which meanders in a northwest-southeast route.

The road is narrow with steep slopes extending from the edge of the road uphill to the north or east and downhill towards the river to the south or west. Elevations of the eight sites range between 280-440 feet. The slopes are densely vegetated due to the considerable precipitation received each year, moderate year-round temperatures, and high relative humidity. The dominant vegetation community is Douglas fir forest although several types of oak species were observed at some of the locations.

The Willow Creek weather station, operated by the US Forest Service, Lower Trinity Ranger District of the Six Rivers National Forest, lies south of the project area in Willow Creek. The station reports an average of 70 °F in summer and 40 °F in winter. July is the warmest month with an average maximum of 94.7 °F and January is the coolest month with an average minimum temperature of 34.5 °F. Average annual precipitation is 54.49 inches per year with a 9.38 inch average in December. Most precipitation occurs in the fall and winter months between October and April. Historical weather data for Willow Creek indicates a growing season of 281 days (50% chance of 28 °F or greater).

Topography in this mountainous region is steep and rugged. This region of the Klamath Mountains has rounded ridges with steep sides and narrow canyons. Narrow floodplains and high terraces occur along the Klamath River. Elevation ranges from 250 to 4,000 feet. Erosion in this region is the result of mass wasting and fluvial processes, with many slides occurring in the winter with water-laden soils (Irwin 1966). Soils are well drained with mesic temperatures. Most of the slopes are steep with a south/south west aspect.

Watershed Overview

The project is located on a portion of Route 169 that runs in a northwest-southeast route along the Klamath River. The Klamath River is a perennial river which drains to the Pacific Ocean. Originating from Upper Klamath Lake in southern Oregon, the Klamath River flows 240 miles from Oregon into northern California before emptying into the Pacific Ocean near Klamath, CA. The river drains an area of about 13,000 square miles. Elevations range from about 5 feet at the mouth of the river to approximately 4,000 feet in the headwater areas.

Geology and Soils

The delineation area is underlain by Mesozoic Sedimentary and Metasedimentary Rocks according to the California Geological Survey. Soils found in and adjacent to the project site are described in the attached Soil Reports generated by the Natural Resources

Conservation Service (Attachment 1). The delineation area is underlain by four soil types:

- 168, Floaters-Riverwash complex, 0-2 percent slopes, excessively drained
- 447, Hullygully-Burroin complex, 50-75 percent slopes, well drained
- 464, Mooncreek-Tossup-Noisy complex, 15-50 percent slopes, well drained
- 465, Sidehill-Oakside-Darkwoods complex, 50-100 percent slopes, well drained

Vegetation Communities

California Black Oak - Douglas Fir – Big-leaf Maple Association is the dominant plant community at the project site. This plant community was identified following the classification system of the California Department of Fish and Game's List of Vegetation Alliances and Associations.

Methods

Fieldwork for the delineation was conducted on May 9, 2011, and June 12 and August 2, 2012 by Caltrans biologists Lisa Embree. The delineation area included approximately 4,700 linear feet along the highway and the associated slopes, above the Klamath River. The entire delineation area was walked looking for potential wetland areas that might meet the required three parameters to qualify as a U. S. Army Corps of Engineers (USACE) jurisdictional wetland-positive indicators of wetland hydrology, hydrophytic plants, and hydric soils.

Data were collected using the routine onsite determination methods described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), supplemented by the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (U. S. Army Corps of Engineers 2008). Methods were also in conformance with the USACE San Francisco District's *Information Requested for Verification of Corps Jurisdiction* (U. S. Army Corps of Engineers 2007).

The boundaries of non-tidal, non-wetland waters (i.e., perennial, intermittent, and ephemeral streams) were delineated at the ordinary high water mark (OHWM) as defined in 33 Code of Federal Regulations (CFR) 328.3. The OHWM represents the limit of potential USACE jurisdiction over non-tidal waters in the absence of adjacent wetlands (USACE Regulatory Guidance Letter 05-05 (U. S. Army Corps of Engineers 2005).

Results

Wetlands. No wetlands were found in the delineation area.

Other Waters. Locations 1-3 and 5-8, include work associated with existing roadside ditches that are the result of roadway construction. The ditches are annually maintained (scraped clear of vegetation) by Caltrans' maintenance crews to minimize sheet flow over the highway. Water was present in several of the ditches year-round, presumably due to exposed ground water. Most of the ditches carry only roadside and possibly hillside runoff. Flow is carried under the highway through culverts and empties out onto the

vegetated slopes high above the Klamath River. These roadside ditches are not 404 jurisdictional as they:

- have no significant ordinary high water (OHW);
- are a result of highway construction and were excavated on dryland;
- have no significant nexus with a Traditional Navigable Water (TNW);
- do not have hydric soils; they have only a narrow layer of soil that is able to hold water long enough for plants to establish in areas that did not previously contain wetland soils or vegetation;
- are not dominated by hydrophytes;
- the only source of water is from occasional periods of surface runoff and in some cases exposed ground water;
- they do not extend or reroute former flows that passed through a natural drainage course or basin (having a definable bed and bank); and
- they are used exclusively for drainage

In addition to the roadside ditches, two intermittent un-named streams occur within the project boundaries; both are within the limits of Location 6, at PMs 22.77 and 22.80 (Figure 3). These streams flow from the uphill slopes into culverts that also carry flow from the ditches. These waterways are considered ‘other waters’ as they are streams with a defined OHW (Figures 4 and 5).

There is a total of 191.8 feet² of other waters of the U. S. and 150.5 feet² of culverted waters of the U. S within the project limits (Table 1).

Table 1 Delineation of Waters of the US

	PM 22.77			PM 22.80		
	Length (feet)	Width (feet)	Area (feet ² /acre)	Length (feet)	Width (feet)	Area (feet ² /acre)
OWUS¹	37.4	2	74.8/0.002	39	3	117/0.003
Subtotal Length: 76.4 feet						
CWUS²	41.4	2.5	103.5/0.002	31.3	1.5	47/0/001
Subtotal Length: 72.7 feet						
TOTAL Length: 149.1 feet						

¹OWUS: Other Waters of the US

²CWUS: Culverted Waters of the US

Attachments

Attachment 1 Soil Report

Figures

Figure 1 Vicinity Map
Figure 2 Location Map
Figure 3 Site Photos of 2 streams at Location 6
Figure 4 Other Waters, Location 6, PM 22.77 (Drainage System 3)
Figure 5 Other Waters, Location 6, PM 22.80 (Drainage System 4)

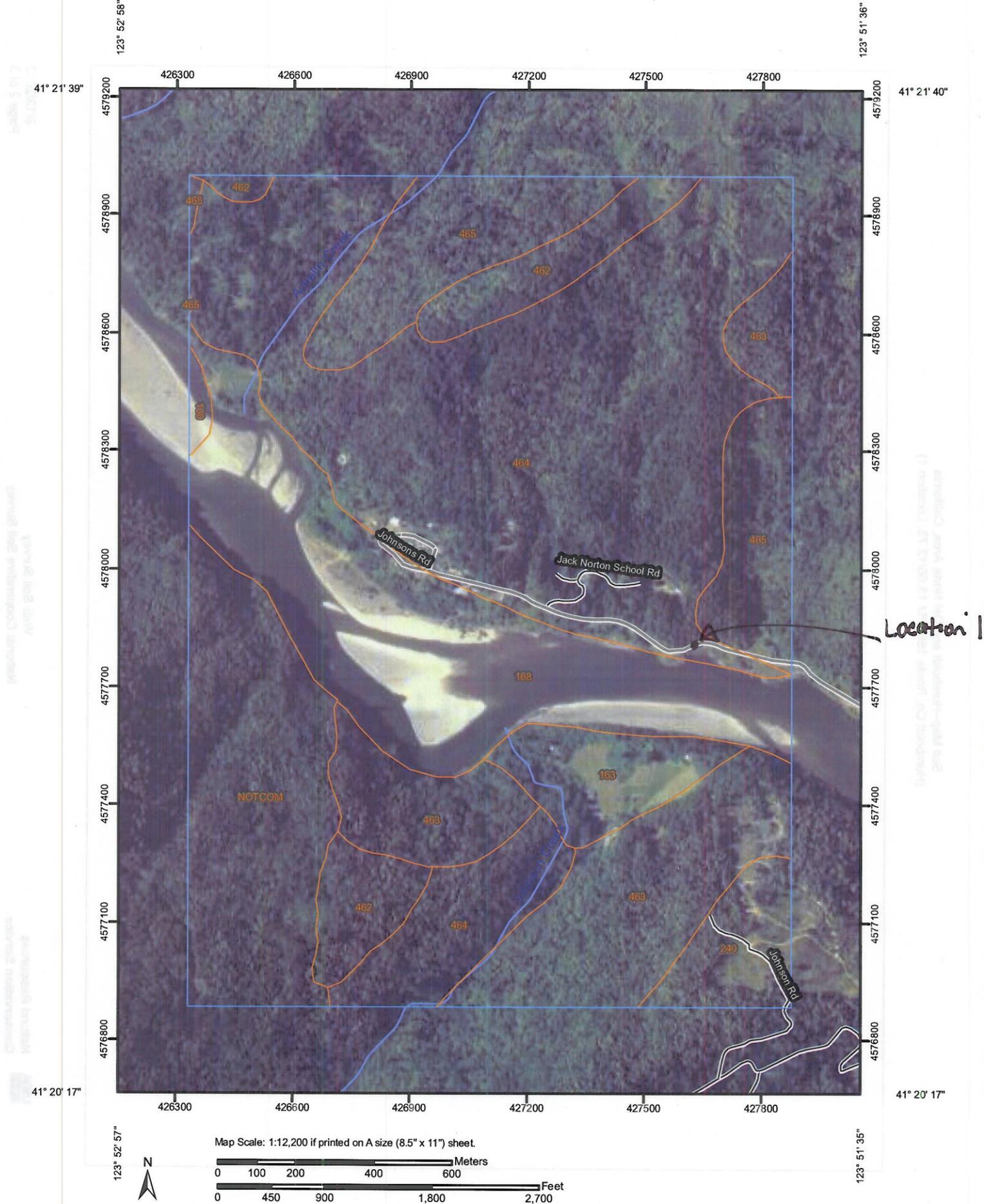
Tables

Table 1 Delineation of Waters of the US

References

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http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/google_maps.aspx.
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- U. S. Army Corps of Engineers. 2007. *San Francisco District Information Requested for Verification of Corps Jurisdiction*. San Francisco, CA
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- U. S. Department of Agriculture, Natural Resources Conservation Service. 2009. Web soil survey of California. <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>.
- U. S. Fish and Wildlife Service. 2011. National Wetland Inventory.
<http://www.fws.gov/wetlands/>

Soil Map—Humboldt and Del Norte Area, California
(Humboldt Co, Route 169, PM 13.66/13.73, Location 1)



MAP LEGEND

Area of Interest (AOI)	Very Stony Spot
Soils	Wet Spot
Soil Map Units	Other
Special Point Features	Special Line Features
Blowout	Gully
Borrow Pit	Short Steep Slope
Clay Spot	Other
Closed Depression	Political Features
Gravel Pit	Cities
Gravelly Spot	Water Features
Landfill	Streams and Canals
Lava Flow	Transportation
Marsh or swamp	Rails
Mine or Quarry	Interstate Highways
Miscellaneous Water	US Routes
Perennial Water	Major Roads
Rock Outcrop	Local Roads
Saline Spot	
Sandy Spot	
Severely Eroded Spot	
Sinkhole	
Slide or Slip	
Sodic Spot	
Spoil Area	
Stony Spot	

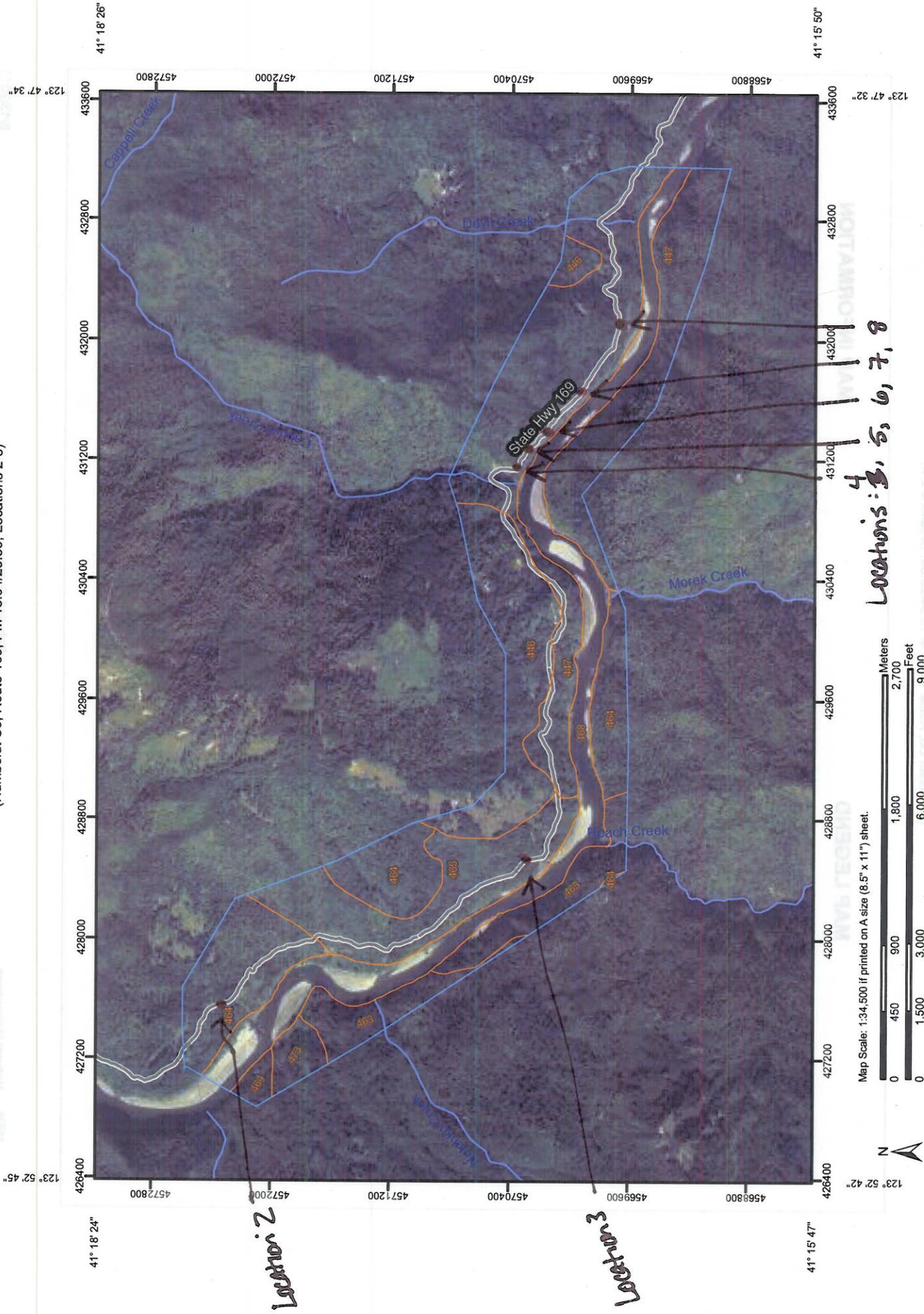
MAP INFORMATION

Map Scale: 1:12,200 if printed on A size (8.5" x 11") sheet.
 The soil surveys that comprise your AOI were mapped at 1:24,000.
 Please rely on the bar scale on each map sheet for accurate map measurements.
 Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 10N NAD83
 This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.
 Soil Survey Area: Humboldt and Del Norte Area, California
 Survey Area Data: Version 5, Jul 2, 2009
 Date(s) aerial images were photographed: 6/23/2005; 6/30/2005
 The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Humboldt and Del Norte Area, California (CA605)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
100	Riverwash	2.8	0.3%
163	Hullygully, 2 to 15 percent slopes	28.1	3.5%
168	Floater-Riverwash complex, 0 to 2 percent slopes	138.8	17.2%
240	Tullycreek, 9 to 15 percent slopes	23.2	2.9%
462	Mooncreek-Noisy-Tossup complex, 9 to 30 percent slopes	41.1	5.1%
463	Mooncreek-Noisy-Sidehill complex, 30 to 75 percent slopes	106.9	13.2%
464	Mooncreek-Tossup-Noisy complex, 15 to 50 percent slopes	300.9	37.3%
465	Sidehill-Oakside-Darkwoods complex, 50 to 100 percent slopes	73.6	9.1%
NOTCOM	Mapping Not Completed	91.5	11.3%
Totals for Area of Interest		806.9	100.0%

Soil Map—Humboldt and Del Norte Area, California
(Humboldt Co., Route 169, PM 18.94/23.39, Locations 2-8)



Locations: 3, 5, 6, 7, 8

MAP LEGEND

	Area of Interest (AOI)		Very Stony Spot
	Area of Interest (AOI)		Wet Spot
	Soil Map Units		Other
	Blowout	Special Line Features	
	Borrow Pit		Gully
	Clay Spot		Short Steep Slope
	Closed Depression		Other
	Gravel Pit	Political Features	
	Gravelly Spot		Cities
	Landfill	Water Features	
	Lava Flow		Streams and Canals
	Marsh or swamp		Transportation
	Mine or Quarry		Rails
	Miscellaneous Water		Interstate Highways
	Perennial Water		US Routes
	Rock Outcrop		Major Roads
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		
	Spoil Area		
	Stony Spot		

MAP INFORMATION

Map Scale: 1:34,500 if printed on A size (8.5" x 11") sheet.
 The soil surveys that comprise your AOI were mapped at 1:24,000.
 Please rely on the bar scale on each map sheet for accurate map measurements.
 Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 10N NAD83
 This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.
 Soil Survey Area: Humboldt and Del Norte Area, California
 Survey Area Data: Version 5, Jul 2, 2009
 Date(s) aerial images were photographed: 6/23/2005; 6/30/2005
 The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Humboldt and Del Norte Area, California (CA605)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
168	Floaters-Riverwash complex, 0 to 2 percent slopes	309.7	17.2%
446	Burroin-Bagaul-Redtop complex, 15 to 50 percent slopes	219.8	12.2%
447	Hullygully-Burroin complex, 50 to 75 percent slopes	594.2	32.9%
463	Mooncreek-Noisy-Sidehill complex, 30 to 75 percent slopes	66.1	3.7%
464	Mooncreek-Tossup-Noisy complex, 15 to 50 percent slopes	296.1	16.4%
465	Sidehill-Oakside-Darkwoods complex, 50 to 100 percent slopes	286.5	15.9%
473	Higoaks-Noisy-Mudhorse complex, 9 to 50 percent slopes	31.0	1.7%
Totals for Area of Interest		1,803.5	100.0%

Humboldt and Del Norte Area, California

464—Mooncreek-Tossup-Noisy complex, 15 to 50 percent slopes

Map Unit Setting

Elevation: 60 to 4,920 feet
Mean annual precipitation: 49 to 80 inches
Mean annual air temperature: 50 to 59 degrees F
Frost-free period: 150 to 250 days

Map Unit Composition

Mooncreek and similar soils: 40 percent
Tossup and similar soils: 20 percent
Noisy and similar soils: 15 percent
Minor components: 25 percent

Description of Mooncreek

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium and residuum derived from sandstone and mudstone

Properties and qualities

Slope: 15 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.2 inches)

Interpretive groups

Land capability (nonirrigated): 6e
Ecological site: Pseudotsuga menziesii-Lithocarpus densiflorus/
Lithocarpus densiflorus (F005XB101CA)

Typical profile

0 to 2 inches: Slightly decomposed plant material
2 to 3 inches: Gravelly clay loam
3 to 6 inches: Gravelly clay loam
6 to 38 inches: Gravelly clay loam
38 to 79 inches: Gravelly clay loam

Description of Tossup

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Colluvium and residuum derived from sandstone and mudstone

Properties and qualities

Slope: 15 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 10.6 inches)

Interpretive groups

Land capability (nonirrigated): 6e
Ecological site: Pseudotsuga menziesii-Lithocarpus densiflorus/
Lithocarpus densiflorus (F005XB101CA)

Typical profile

0 to 1 inches: Slightly decomposed plant material
1 to 4 inches: Loam
4 to 12 inches: Clay loam
12 to 61 inches: Clay

Description of Noisy

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Colluvium and residuum derived from sandstone and mudstone

Properties and qualities

Slope: 15 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.40 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.6 inches)

Interpretive groups

Land capability (nonirrigated): 7e

*Ecological site: Pseudotsuga menziesii-Lithocarpus densiflorus/
Lithocarpus densiflorus (F005XB102CA)*

Typical profile

0 to 2 inches: Slightly decomposed plant material

2 to 5 inches: Very gravelly loam

5 to 31 inches: Very gravelly loam

31 to 61 inches: Very gravelly sandy clay loam

Minor Components

Redtop

Percent of map unit: 10 percent

Landform: Mountain slopes

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex

Across-slope shape: Linear

*Ecological site: Pseudotsuga menziesii-Quercus chrysolepis/
Lithocarpus densiflorus var. echinoides (F005XB103CA)*

Xerorthents, frequently flooded

Percent of map unit: 5 percent

Landform: Drainageways

Down-slope shape: Linear

Across-slope shape: Concave

Darkwoods

Percent of map unit: 4 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Convex

Across-slope shape: Linear

*Ecological site: Pseudotsuga menziesii-Lithocarpus densiflorus/
Lithocarpus densiflorus (F005XB102CA)*

Oakside

Percent of map unit: 2 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: Pinus jeffreyi/Quercus vacciniifolia (F005XB104CA)

Sidehill

Percent of map unit: 2 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: Pseudotsuga menziesii-Lithocarpus densiflorus/
Lithocarpus densiflorus (F005XB102CA)

Endoaquents

Percent of map unit: 1 percent

Landform: Debris slides

Landform position (three-dimensional): Mountainflank

Down-slope shape: Concave

Across-slope shape: Concave

Rock outcrop

Percent of map unit: 1 percent

Landform: Ridges

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Convex

Across-slope shape: Convex

Data Source Information

Soil Survey Area: Humboldt and Del Norte Area, California

Survey Area Data: Version 5, Jul 2, 2009

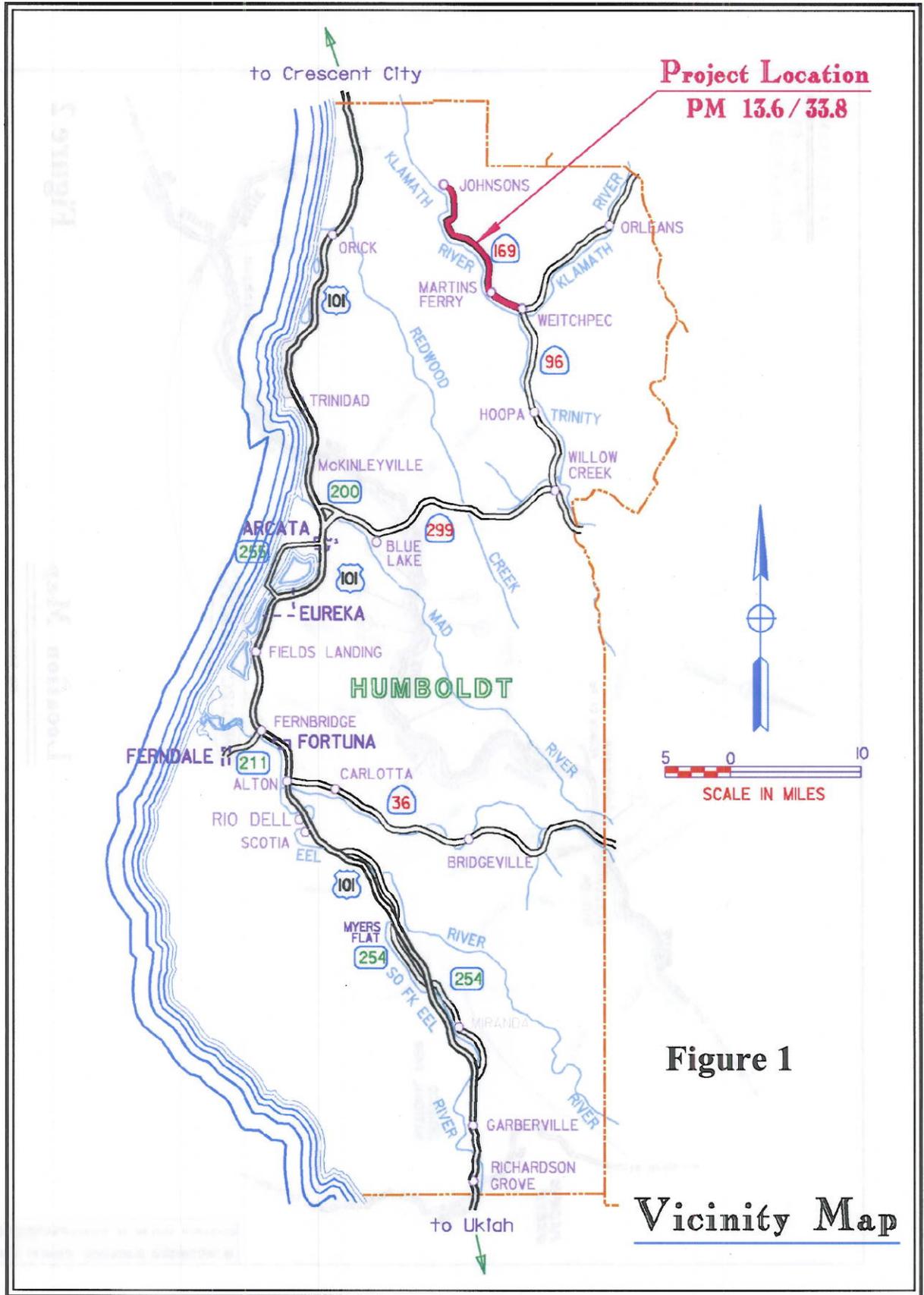
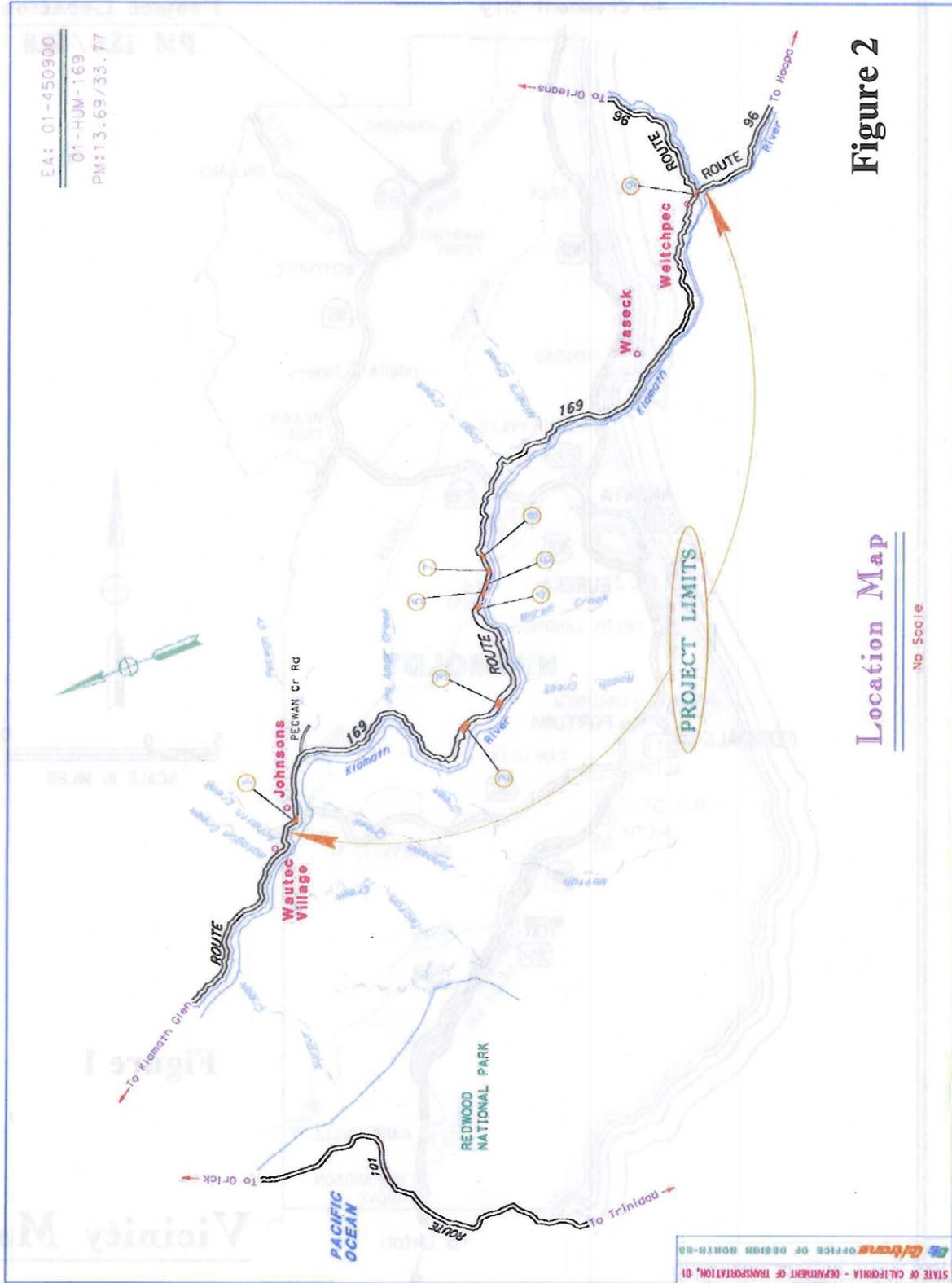


Figure 1

Vicinity Map



EA: 01-450900
 01-HUM-169
 PM: 13.69/33.77

Figure 2

Location Map

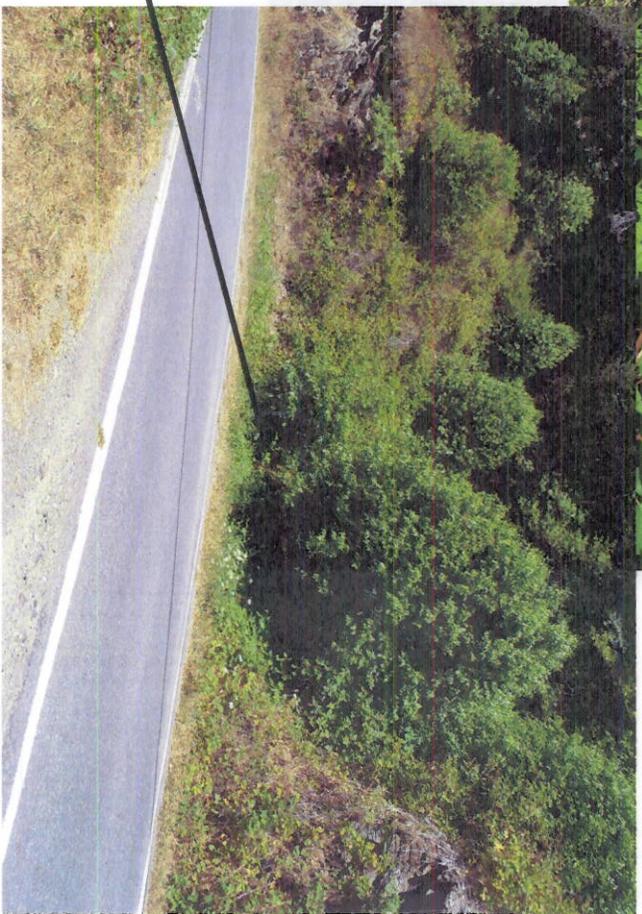
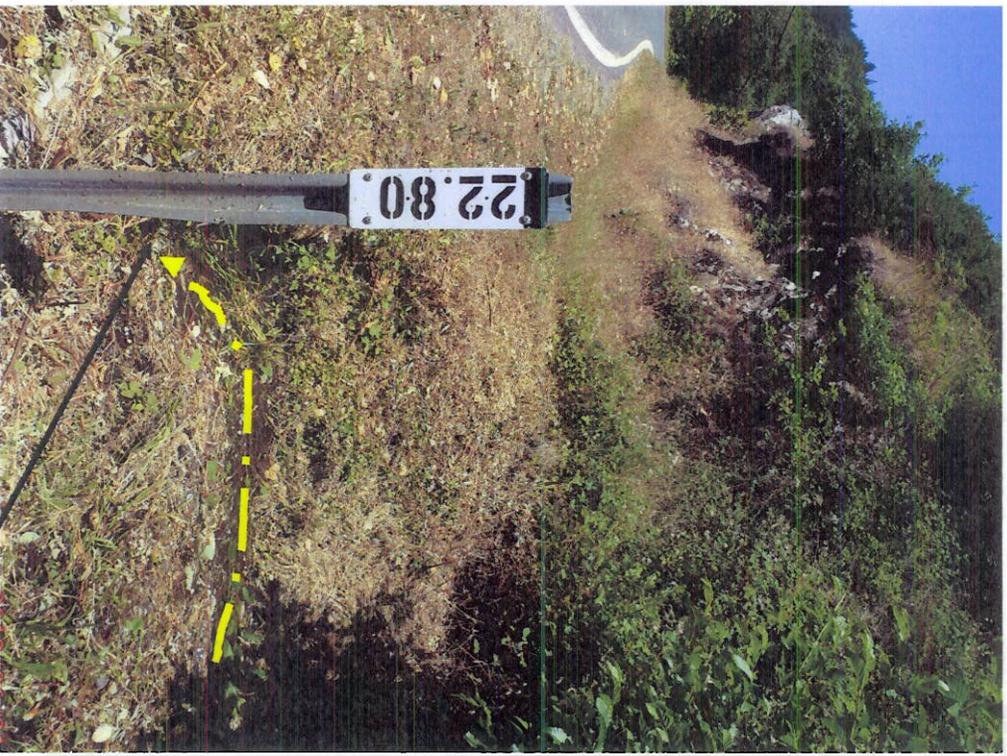
No. Scale

Figure 3, Site Photos, Location 6
Humboldt County, Route 169, PM, PM 22.73-22.82
EA 45090

Stream flowing into culvert at PM 22.77



Figure 3, Site Photos, Location 6
Humboldt County, Route 169, PM, PM 22.73-22.82
EA 45090



Stream flowing into culvert at PM 22.80

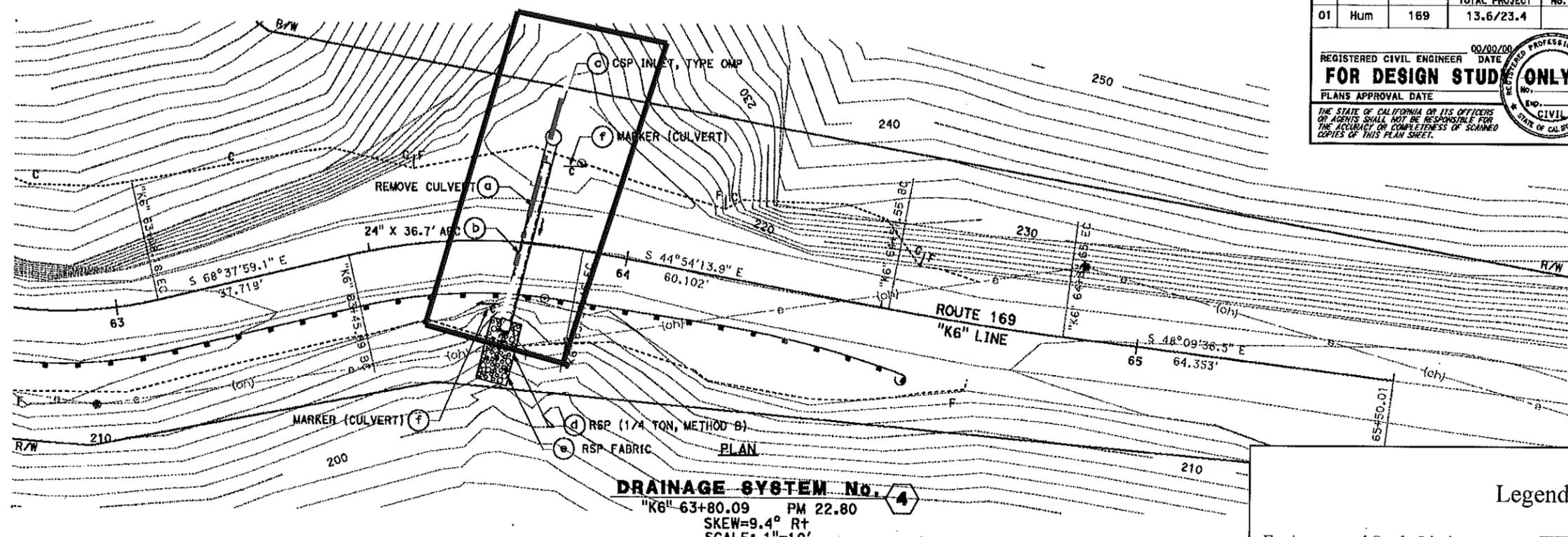
2

Humboldt County, State Route 169 Drainage System 4 Post Mile 22.80
EA 45090

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	169	13.6/23.4		

REGISTERED CIVIL ENGINEER DATE 00/00/00
FOR DESIGN STUDY ONLY
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

Environmental Study Limits —————

Other Waters of the US (OWUS) ————

Culverted Waters of the US (CWUS) - - - - -

Length and Area of Other Waters of the U. S.

	Length (feet)	Width (feet)	Area (feet ² /acre)
OWUS	39	3	117/0.03
CWUS	31.3	1.5	47/0.01
Total			165/0.04

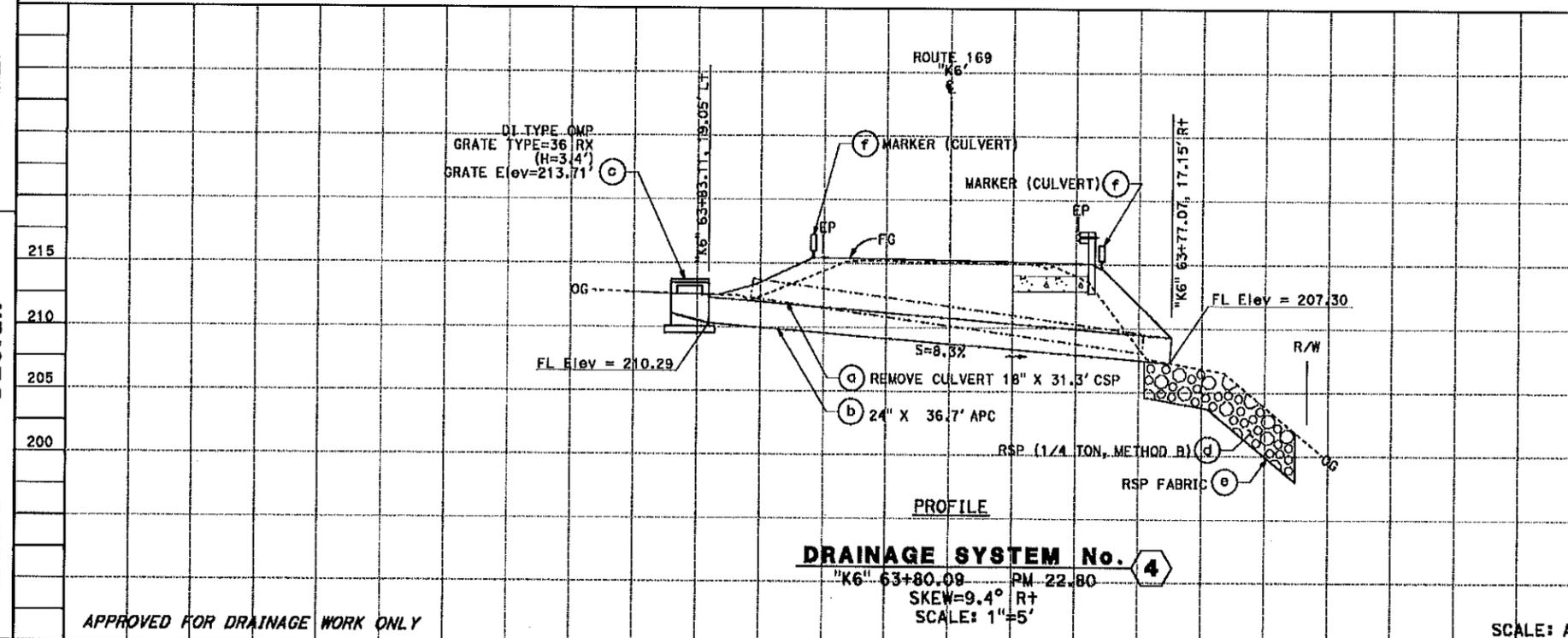


Figure 5
PM 22.80
DRAINAGE PLAN AND PROFILE
D-4

DESIGN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
FUNCTIONAL SUPERVISOR L.R. ASHLEY
CHECKED BY
DESIGNED BY
CHECKER BIJAN SAMRAD
REVISED BY
DATE REVISED



YUROK TRIBE

190 Klamath Boulevard • Post Office Box 1027 • Klamath, CA 95548
Phone: (707) 482-1350 • Fax: (707) 482-1377

March 5, 2013

YTWQCP-12-010

Lisa Embree
Project Biologist
California Dept. of Transportation
North Region Environmental
PO BOX 3700
Eureka, CA 95502-3700

Subject: Yurok Tribe Water Quality Control Plan Section 401 Water Quality Certification for
*Roadway Widening and Metal Beam Guard Rail Project, Highway 169, PM 13.36 to
23.39.*

Dear Ms. Embree,

The Yurok Tribe Environmental Program (YTEP) received the application for a Yurok Tribe Water Quality Control Plan Section 401 Water Quality Certification for the *Highway 169 Roadway Widening and Metal Beam Guard Rail Project* on November 6, 2012. Thank you for providing the project description and the complete application. YTEP staff have reviewed the application and performed a site visit with CalTrans staff.

Please be informed that under the Clean Water Act (CWA) you may need to apply to USEPA to obtain CWA Section 401 certification if the project will involve a US Army Corps of Engineers section 404 permit or any discharges to waters of the United States.

Project Description

According to the project description and supporting documentation, the purpose of the project is to improve safety through widening the roadway and installing metal beam guard railing at 8 locations. This project will also involve the replacement of four culverts which will be increased in size to meet maintenance cleaning and bedload transport requirements.

Certification

We hereby grant Yurok Tribe Water Quality Control Plan Section 401 Certification for your project with the following conditions:

1. All work in the bank or bed of the tributaries listed in the project description, shall occur between June 15th and October 15th during the life of this permit. This permit is valid for calendar year 2013 and 2014. Should the project need to be extended, early consultation with YTEP should be initiated.
2. All sites will be 'winterized' prior to seasonal work shut down. An inspection by Yurok Tribe staff shall be requested at least 7 days in advance of seasonal work shut down. The applicant may request seasonal extensions based on field review by YTEP and in conjunction with other permit and regulatory requirements (i.e. NOAA fisheries, U.S. Army Corps, USEPA).
3. You shall limit any excavation work in and adjacent to applicable waters to that necessary for the project.
4. No construction materials -- including cement, debris, oil or petroleum products, sand, sawdust, silt, slash, or soil -- shall be allowed to enter or be placed where it may enter the live channel of applicable waters in amounts that are considered to have adverse effects on the beneficial uses.
5. You shall not permanently dispose of any construction material, demolition wastes, wastewater, or any other pollutant within applicable waters or on lands within the Yurok Reservation boundaries.
6. Water used in dust suppression shall contain no contaminants that could violate surface water or aquifer standards and originate from a source based on consultation with Yurok Tribe Fisheries and/or Environmental Program (see Yurok Tribe Water Quality Control Plan for water quality objectives).
7. All stationary machinery that uses gasoline or diesel fuel shall be placed within impermeable spill containment vessels capable of preventing migration of fuel in the event of a spill.
8. All contractors and subcontractors shall report, verbally and in writing, immediately upon discovery, any spills of chemical contaminants, including oil, gasoline, hydraulic fluid, or diesel fuel, during or after operations. Reports shall be submitted to EPA Region 9 and the Yurok Tribe. Appropriate cleanup of spills shall commence immediately. Within two weeks following cleanup, a summary report shall be submitted to EPA Region 9 and the Yurok Tribe that describes the reason for the spill, the spill duration and volume, steps taken to correct the problem, the remediation/clean up activities and steps taken to prevent a recurrence of the problem.
9. Best Management Practices (BMPs) for sediment and turbidity control shall be implemented in accordance with the project description provided in the permit application and in place prior to, during and after construction in order to prevent discharges to applicable waters.
10. Water discharged from the project site shall not contain settleable materials or suspended materials in concentrations that cause nuisance or adversely affect beneficial uses. The project

shall not violate any narrative and numeric criteria established in the Yurok Tribe Water Quality Control Plan (see Yurok Tribe Water Quality Control Plan for water quality objectives)

11. Final erosion control and hydroseeding with low growing grasses and forbs shall not contain non-native plant species.

12. If, at any time, an unauthorized discharge to surface water occurs, or any water quality problem arises, the project shall cease immediately and you shall immediately notify EPA Region 9 and the Yurok Tribe.

13. Yurok Tribe shall be notified at least three business days in advance of construction in order to allow staff to be present during construction.

14. If there are any substantive changes in the proposed project that may affect water quality, you shall notify the Yurok Tribe Environmental Program, immediately. Failure to do so will result in revocation of this certification.

15. You shall provide a copy of this certification to all contractors and subcontractors. You also shall review the conditions of this certification with all such contractors and subcontractors.

16. You shall request written permission for any activities related to water withdrawal and or water drafting prior to commencement of this activity. Written requests for water withdrawal shall be submitted to YTEP.

Monitoring

No water quality monitoring is required for this permit.

The project proponent, or its contractor, shall conduct a visual inspection of the project site with YTEP staff immediately after the first significant rainfall, and will take any additional erosion control measures, including applying additional straw mulch and silt fences, if required.

The point of contact at the Yurok Tribe is Ken Fetcho. Please contact Mr. Fetcho at (707) 954-1523 or at kfetcho@yuroktribe.nsn.us the point of contact for the proposed project at EPA Region 9 is Melissa Scianni. Please contact Ms. Scianni at (415) 972-3821 or at scianni.melissa@epa.gov.

Sincerely,



Kathleen Sloan

Director

Yurok Tribe Environmental Program

e-copy:

David Hillemeier, Yurok Tribe Fisheries, Klamath
Thomas P. O'Rourke Sr., Chair, Yurok Tribe
Troy Fletcher, Executive Director, Yurok Tribe
Robert McConnell, Yurok Tribe Heritage Preservation Officer
John Corbett, Attorney, Yurok Tribe
Joe James, Transportation Manager, Yurok Tribe
Ken Fetcho, Assistant Director, Yurok Tribe Environmental Program
Carol Heidsiek, US Army Corps of Engineers
Melissa Scianni, US Environmental Protection Agency

Embree, Lisa@DOT

From: Scianni, Melissa [Scianni.Melissa@epa.gov]
Sent: Wednesday, March 20, 2013 11:42 AM
To: Embree, Lisa@DOT
Cc: kfetcho@yuroktribe.nsn.us
Subject: RE: 401 for Humboldt Co Rt 169 project
Attachments: EPA R9 Tribal 401 Cert_2012 NWP_3.30.12.pdf

Lisa,

EPA has reviewed the submitted pre-construction notification for Route 169 Project in Humboldt County, CA. The proposed project is located within land owned by the Yurok Tribe. EPA understands the project will be authorized by USACE under a non-reporting Nationwide Permit (NWP) 14. The project meets the terms and conditions of EPA's Programmatic Conditional Clean Water Act Section 401 Certification of the 2012 Nationwide Permits for projects on applicable tribal lands.

I have attached a copy of EPA's NWP Section 401 certification letter for your review. Please ensure the project complies the general conditions and NWP 14 specific conditions, as well as the conditions in the Yurok Tribe Water Quality Permit. You will not receive a separate 401 certification letter from EPA. If your project changes, please notify our office. If you have any questions about the conditions in our programmatic certification, feel free to contact me using the information below.

Regards,
Melissa

Melissa Scianni
Wetlands Office
EPA Region 9
75 Hawthorne St, WTR-8
San Francisco, CA 94105
(415) 972-3821

* EPA cannot receive emails greater than 25MB

From: Embree, Lisa@DOT [<mailto:lisa.embree@dot.ca.gov>]
Sent: Tuesday, March 19, 2013 8:52 AM
To: Scianni, Melissa
Subject: 401 for Humboldt Co Rt 169 project

Hi Melissa, I'm working on a project to widen sections of Route 169 in Humboldt County. We've received the 401 from the Yurok Tribe (attached). I've also attached a copy of the non-reporting 404. I will forward a copy of a detailed project description that was submitted to the Tribe, in a subsequent email (we just switched to a new email system and I don't know how many (and size) files that can be sent at one time).

Please let me know if you need any additional information in order to process EPA's certification.

Thank you

Lisa

Lisa Embree
Biologist
Caltrans, District 1, Eureka
(707) 441-5722



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

MAR 30 2012

Colonel Michael C. Wehr, PE
Division Engineer, South Pacific Division
U.S. Army Corps of Engineers
1455 Market Street
San Francisco, CA 94103-1398

Subject: Conditional Clean Water Act Section 401 certification of the 2012 Nationwide Permits for tribal lands within Region 9 of the U.S. Environmental Protection Agency

Dear Colonel Wehr:

The U.S. Environmental Protection Agency, Region 9 (EPA) has responsibility under section 401 of the Clean Water Act (CWA) to evaluate and certify water quality protections for federal permits or licenses issued for work on most tribal lands. We have reviewed the U.S. Army Corps of Engineers (Corps) February 21, 2012 Federal Register notice announcing the reissuance of the Corps' CWA Section 404 Nationwide Permits (NWP), and are transmitting our conditional programmatic water quality certification of these general permits. The enclosed conditions become binding requirements of any NWP issued for work on tribal lands within Region 9¹. Please instruct your regulatory staff to provide this certification to anyone contacting the Corps with applicable projects.

Consistent with the *EPA Policy on Consultation and Coordination with Indian Tribes*, EPA sent a letter dated October 31, 2011, offering to consult with tribes in Region 9 on this certification. We subsequently provided our draft conditional certification, dated February 2, 2012, to tribes for review and comment. EPA did not receive any formal requests for consultation or any written comments on the draft certification.

In summary, we are certifying 49 of the 50 proposed active permits with general conditions, 17 of which are further subject to permit-specific conditions. These requirements will protect water quality and help ensure that the NWP program will have no more than minimal adverse impacts on the aquatic environment on tribal lands, both individually and cumulatively, as required by CWA Section 404(e). A table summarizing types of conditions, notification requirements, impact limits, and additional information for each NWP is included in the attached certification. Some conditions of note include:

- Notification to EPA for use of any NWP on tribal lands (General Condition 01)
- Modifications to length, size and/or acreage limits on ten of the NWPs (12, 13, 14, 29, 40, 41, 45, 46, 48, and 49)

¹ This water quality certification does not apply to activities proceeding in the territories of the ten tribes in Region 9 that have been approved as Section 401 certifying authorities—the Navajo Nation, Hualapai Tribe, Paiute-Shoshone of the Bishop Community, Big Pine Paiute-Shoshone Tribe, Twenty-Nine Palms Band of Mission Indians, Hoopa Valley Tribe, Hopi Tribe, Pyramid Lake Paiute Tribe, Dry Creek Rancheria of Pomo Indians, and White Mountain Apache Tribe. In limited circumstances some lands within tribal boundaries fall outside a tribe's Section 401 certifying authority and are subject to this certification.

- General prohibition of impact limit waivers under this programmatic certification, except where EPA approves a written determination that a waiver would result in minimal impacts to aquatic resource functions
- Limiting NWP 12 (Utility Line Activities) and 14 (Linear Transportation Projects) to a single use for a single and complete project having independent utility
- Requiring EPA approval that NWP 27 projects will increase aquatic resource functions
- Requiring EPA approval that NWP 31 levee vegetation removal will have minimal adverse impacts
- Denial without prejudice of NWP 43 (Stormwater Management Facilities) due to ongoing experience with adverse impacts from in-stream stormwater structures

Projects failing to meet the enclosed conditions, but otherwise qualifying for use of a NWP, are not eligible for coverage under this programmatic certification and must contact EPA for individual project certification. Projects meeting the enclosed conditions must notify EPA pursuant to General Condition 01. *Notification*, but may proceed without further written verification from EPA except when a specific EPA approval is required in accordance with general or permit-specific conditions of this certification. Finally, EPA may periodically undertake inspections or other compliance monitoring activities pursuant to our CWA enforcement authorities (CWA Section 308(a)(4)(B)).

In 2002, we concluded that twelve of the NWPs were insufficiently protective of water quality to be covered by our programmatic certification; in 2007, that list was narrowed to four NWPs. With each five-year revision of the program, the NWPs generally become more protective of the environment, and we commend the many Corps and EPA staff across the nation who worked to further improve the 2012 NWPs. This conditional certification will remain in effect for the authorization period of the 2012 NWPs, and will be revisited and potentially revised when the NWPs are next proposed for reissuance and revisions in 2017.

Thank you for your ongoing partnership in implementing the regulatory programs of the CWA. Please contact me at (415) 972-3572 with any questions regarding this conditional certification, or have your staff contact Paul Amato at (415) 972-3847 or amato.paul@epa.gov.

Sincerely,


Alexis Strauss
Director
Water Division

Enclosure:

General and Permit-Specific Conditions of EPA's Programmatic Clean Water Act Section 401 certification of the 2012 Nationwide Permits for tribal lands in California, Nevada and Arizona

cc:

All federally recognized Indian Tribes within EPA Region 9
Jane Hicks, Regulatory Branch Chief, San Francisco District
Michael Jewel, Regulatory Branch Chief, Sacramento District
David Castanon, Regulatory Branch Chief, Los Angeles District
Allan Steinle, Regulatory Branch Chief, Albuquerque District
Wade Eakle, Corps, South Pacific Division
Debra Daniel, Arizona Department of Environmental Quality
Kelly Wolff-Krauter, Arizona Department of Game and Fish
Thor Anderson, Arizona Department of Transportation
Bill Orme, California State Water Resources Control Board
Sarah Rains, California Department of Fish and Game
Jay Norvell, California Department of Transportation
John Heggeness, Nevada Division of Environmental Protection
Brad Hardenbrook, Nevada Department of Wildlife
Steve Cooke, Nevada Department of Transportation

General Conditions

Projects that are unable to comply with the general conditions of this programmatic certification are denied certification without prejudice and the applicant must apply to EPA for an individual certification. Applicants can apply for an individual certification by providing the same content required in a MPCN described in General Condition 01. *Notification*, of this programmatic certification, but EPA may request additional project information for individual certifications after receiving notification materials. When an individual certification is required, EPA will strive to issue, deny, or waive certification within sixty days of receipt of complete project information, but our review shall not exceed one year, the statutory limit beyond which certification is considered waived.²

01. Notification

To improve the government's ability to demonstrate whether the NWP program has minimal adverse impacts to the aquatic environment, individually and cumulatively, all NWP-authorized projects proceeding on tribal lands within Region 9 shall submit a form of notification to EPA Region 9 as described below.³ Notification is required in order to be eligible for any NWP under this certification.

Projects seeking authorization under this certification will fall under one of the following two notification categories:

Pre-Construction Notification (PCN):

- The Corps already requires a PCN, subject to criteria in the Corps' General Condition 31, because the project proposes use of a NWP that requires a PCN automatically or for specific activities authorized by the NWP. Applicants must simply forward a second copy of the PCN already required by the Corps to EPA Region 9 for notification. If a PCN is already required by the Corps and a waiver of impact limits is proposed beyond what is approved under this certification, applicants must include written determinations specified in General Condition 02. *Waivers* for EPA approval.

Modified Pre-Construction Notification (MPCN):

- The Corps does not require a PCN for any activities authorized under the NWP proposed for use, or for impacts below limits identified in the NWP for a PCN. Applicants must forward a MPCN to EPA Region 9 for notification, subject to the criteria below. If a waiver of impact limits is proposed beyond what is approved under this certification, applicants must include written determinations specified in General Condition 02. *Waivers* for EPA approval.
- 1) **Timing.** Applicants shall submit an MPCN to EPA Region 9 as early as possible, and in advance of any authorization letter from the Corps allowing the applicant to proceed under a given NWP. When an EPA approval is required by condition of this certification, EPA will act within sixty days of receiving a complete MPCN.
 - 2) **Content.** MPCNs must be in writing (electronic mail submittal is acceptable) and include the following information:

² Clean Water Act Section 401 Certification (a): <http://water.epa.gov/lawsregs/guidance/wetlands/sec401.cfm>

³ NOTE: this requirement does not modify or eliminate existing Corps requirements regarding PCNs for projects proceeding on tribal lands (or elsewhere).

- a) Name, address and telephone numbers of the applicant and any agents or representatives. If available, the electronic mail address and fax numbers for these persons;
- b) Location of the proposed project;
- c) A description of the proposed project and impacts including
 - i) the project's purpose;
 - ii) direct and indirect adverse environmental effects the project would cause, including the proposed acreages and linear feet (for streams) of waters impacted, avoided, and where applicable, created or otherwise mitigated;
 - iii) any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity.

The description should be sufficiently detailed to determine compliance with NWP and EPA 401 conditions and to determine whether compensatory mitigation may be necessary. Maps, drawings and/or photographs of the project area and aquatic resources are not mandatory, but usually help to clarify the project and allow for quicker review. At minimum, a narrative description of any special aquatic sites and other waters of the United States on the project site must be included;

- d) Consistent with General Condition 02. *Waivers*, a written demonstration that any proposed impact limit waiver that may be allowable under this certification will result in minimal impacts to aquatic resource functions;
- e) Consistent with General Condition 03. *Avoidance, Minimization, and Mitigation*, a written statement documenting measures taken to avoid and minimize temporary and permanent impacts to waters of the U.S.;
- f) Consistent with General Condition 04. *Prohibition on the Multiple Use of One NWP for a Single Project*, for proposed utility or transportation projects where the same NWP is proposed at multiple locations, a written determination will be provided describing independent utility of each impact location and how the project will not contribute to more than minimal direct, indirect and cumulative impacts to waters of the U.S., either at the impact site or to upstream, downstream, or adjacent aquatic resources;
- g) The name(s) of any species listed as endangered or threatened under the Endangered Species Act which may be adversely affected by the proposed work, either directly or by impacting designated critical habitat;
- h) Identification of any cultural or historic properties listed in, or eligible for listing in, the National Register of Historic Places that may be adversely affected by the proposed work.

Written notification should be mailed to USEPA Region 9, WTR-8, 75 Hawthorne Street, San Francisco, CA 94105.

02. Waivers

For certain NWPs, Corps District Engineers may waive impact thresholds for intermittent and ephemeral drainages by making a written determination that the discharge will result in minimal adverse effects. To ensure that these waters, commonly found on tribal lands in the arid southwest, receive an adequate level of protection, and to prevent the NWP Program from having more than minimal adverse impacts to the aquatic environment, all proposed impact limit waivers are denied under this certification unless EPA approves a written determination that the waiver will not exceed minimal impacts to aquatic resource functions.

For some NWPs where the Corps does not include an impact limit, EPA has added an impact limit as a permit-specific condition. Some of these NWPs also include a condition that a waiver may be provided when EPA approves a written determination that the waiver will not exceed minimal impacts to aquatic resource functions.

Impacts to special aquatic sites are not permitted under this certification unless EPA approves a written determination that impacts to aquatic resource functions will be minimal. "Special aquatic sites" include sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs and riffle pool complexes.

When EPA approval is required for a waiver, EPA will act within sixty days of receiving a complete PCN or MPCN.

03. Avoidance, Minimization, and Mitigation

To protect water quality and beneficial uses of U.S. waters on tribal lands, all projects using NWPs must avoid discharges to the maximum extent practicable, and utilize the best available and practicable means of minimizing the adverse impact of discharges that cannot be avoided.

A written statement documenting measures taken to avoid and minimize temporary and permanent impacts to waters of the U.S. will be provided to EPA and the Corps with each PCN or MPCN.

To the extent practicable, temporary impact sites will be returned to pre-construction contours and substrate. Where applicable, banks shall be reseeded or replanted with native vegetation.

EPA shall make a written determination, within sixty days of receipt of a complete PCN or MPCN, whether compensatory mitigation measures are required to ensure the activity will have only minimal adverse effects, but no such determination is required for a project to begin work if otherwise in compliance with the NWP, this programmatic certification, and any applicable tribal or local authorities' requirements. Nevertheless, should compensatory mitigation be determined necessary by EPA, the mitigation becomes a condition of water quality certification and thus a condition of the Corps' permit. Failure to address an EPA mitigation requirement would therefore place a permittee out of compliance with their NWP and potentially subject to a range of Corps and EPA enforcement actions.

The need for post-project performance and/or mitigation monitoring and reporting (if applicable) will be determined by EPA on a case-by-case basis.

04. Prohibition on the Multiple Use of One NWP for a Single Project

Permittees may not use the same NWP multiple times (more than once) for one single and complete project at locations that do not have independent utility; to do so circumvents acreage limitations of the NWPs and may result in more than minimal adverse impacts to water quality and other ecosystem services. For example, under this certification, linear transportation projects on tribal lands must sum the impacts of each proposed crossing of individual waters of the U.S. and use that total to determine eligibility for NWP 14 (Linear Transportation Projects). If the acreage or linear foot impacts exceed the limits of the applicable NWP (or combination of applicable *different* NWPs), minimal adverse impacts to water quality may be exceeded and the project is not eligible for 401 certification under this programmatic action. Under these circumstances, projects must seek individual certification from EPA, and EPA may grant, grant with conditions, waive, or deny 401 certification of the project under the NWP. In the event of a denial, the NWP would not be available to the project proponent and therefore

applicants may need to apply to the Corps for authorization under a different General Permit, Letter of Permission, or Individual Permit as appropriate and determined by the Corps. EPA would review these other proposed permit actions for case-by-case certification. Note that, on a case-by-case basis, EPA may waive this General Condition and allow the use of multiple NWPs if the applicant so appeals, and demonstrates in their PCN or MPCN that authorization under the NWP will result in minimal and/or completely mitigated impacts to the aquatic environment, individually and cumulatively.

05. Use of Appropriate Fill Material

To the extent practicable, local, native materials should be used as fill material. (*e.g.*, soil, sand, or rock from the site or near the site; clean building materials or clean imported earthen fill). Inappropriate and unauthorized fill materials include, but are not limited to: tires, junked or abandoned vehicles, appliances, or other equipment; garbage; debris; oil drums or other chemically contaminated vessels; artificial turf; non-native vegetation; etc. If an applicant has any doubts or questions about the suitability of a proposed fill material, they should consult with the Corps and/or EPA prior to discharging into waters of the U.S. Such consultation may be via phone, or written letter, fax or electronic mail.

06. Dewatered Conditions

Discharges below the ordinary high water mark or within jurisdictional wetlands are not approved under this certification unless the discharge site is naturally dewatered (*e.g.*, seasonally dry), or dewatering has been authorized by the Corps, thereby avoiding direct discharge of pollutants into the water column. If the site is artificially dewatered, permittees shall, to the extent practicable, avoid dewatering techniques that require additional temporary or permanent discharges of fill material within jurisdictional waters (*e.g.*, coffer dams).

07. Fills Within Floodplains

Projects requiring NWP authorization for discharges of fill material within 100-year floodplains shall include in their PCN or MPCN a statement of compliance with Executive Order 11988 (Floodplain Management). However, discharges within the FEMA-mapped 100-year floodplain associated with residential and commercial development are not certified for use under the NWP program on tribal lands. The 100-year floodplain is based on hydrologic conditions prior to permit issuance.

08. Best Management Practices

Except as specified in the application, no debris, silt, sand, cement, concrete, oil or petroleum, organic material, or other construction related materials or wastes shall be allowed to enter into or be stored where it may be washed by rainfall or runoff into waters of the U.S.

Silt fences, straw wattles, and other techniques shall be employed as appropriate to protect waters of the U.S. from sedimentation and other pollutants.

Water used in dust suppression shall not contain contaminants that could violate surface water or aquifer standards.

Permittees and their contractors shall take necessary steps to minimize channel and bank erosion within waters of the United States during and after construction.

A copy of the permit conditions shall be provided to all contractors and subcontractors, and will be posted visibly at project construction sites.

09. Transportation Projects

Permittees shall implement State transportation agencies' guidelines for construction sites to protect water quality and aquatic habitat. In California, CALTRANS has guidance in the *CALTRANS Stormwater Quality Manuals and Handbooks*⁴; in Nevada NDOT has guidance in their *NDOT Water Quality Manuals*⁵; and in Arizona, ADOT has guidance in their *Erosion and Pollution Control Manual*⁶.

10. Inspections

The permittee shall allow EPA representatives to inspect the authorized activity and any mitigation areas at any time deemed necessary to determine compliance with the terms and conditions of the NWP verification.

11. Buffers

Unless specifically determined to be impracticable by the Corps and EPA, for NWP 29, 39, 40, and 42, the permittee shall establish and maintain upland buffers in perpetuity between upland structures constructed as part of the project approved by the NWP and all preserved open waters, streams and wetlands, including created, restored, enhanced or preserved waters of the U.S. Buffers should be vegetated whenever practicable. Plantings in buffers should be dominated by native species, and not include any federal or state listed invasive or noxious weed species⁷. Except in unusual circumstances, as determined by the Corps and EPA, buffers shall be at least 50 feet in width from the lateral limits of the Corp's jurisdiction⁸.

12. Protected Lands

The permittee shall record the NWP verification with the Registrar of Deeds or other appropriate official charged with the responsibility for maintaining records of title of interest in real property for areas designated to be preserved as part of compensatory mitigation for authorized impacts, including any associated covenants or restrictions.

13. Impaired Water Bodies

If a proposed activity would result in dredge or fill in water bodies listed as impaired under Section 303(d) of the CWA, the PCN or MPCN must include specific measures that will be used to avoid exacerbating the impairment(s).⁹

⁴ <http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>

⁵ http://www.nevadadot.com/About_NDOT/NDOT_Divisions/Engineering/Hydraulics/Water_Quality_BMP_Manuals.aspx

⁶ http://www.azdot.gov/inside_adot/OES/Water_Quality/Stormwater/Manuals.asp

⁷ <http://plants.usda.gov/java/noxiousDriver>

⁸ ordinary high water mark in non-tidal and the mean higher high water line in tidal waters

⁹ EPA Region 9 lists of impaired water bodies: <http://www.epa.gov/region9/water/tmdl/303d.html>

Specific Nationwide Permits

NWP-01 Aids to Navigation

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-02 Structures in Artificial Canals

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-03 Maintenance

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

“Currently serviceable structures” which may be maintained under this permit do not include undersized culverts or structures that cause or exacerbate channel incision, bank destabilization, and/or prevent fish and wildlife passage due to inadequate design or construction standards.

Certification of this permit is granted only if the existing structure proposed to be maintained demonstrably preserves (via design, flow modeling or other information in the PCN) the natural functions of the affected aquatic resource when the structure is fully operational. Otherwise, an alternative permit should be utilized as appropriate (e.g., NWP 13 Bank Stabilization).

Where existing bank stabilization structures are to be maintained, bioengineered methods shall be utilized to the extent practicable in lieu of “rip-rap” or other hardscape engineered materials.

This permit shall not authorize the enlargement of, or increase in, the footprint of a structure within waters of the U.S., unless that enlargement consists of the replacement of existing artificial channel armoring materials (e.g., rip-rap, soil cement, etc.) with low-impact bioengineered natural channel design structures (e.g., log revetments, geotextile rolls/mats, root wads, brush mattresses, willow wattling, etc.)

NWP-04 Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-05 Scientific Measurement Devices

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-06 Survey Activities

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-07 Outfall Structures and Associated Intake Structures

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-08 Oil and Gas Structures on the Outer Continental Shelf

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-09 Structures in Fleeting and Anchorage Areas

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-10 Mooring Buoys

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-11 Temporary Recreational Structures

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-12 Utility Line Activities

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Impacts under this permit are limited to the greater of 1/2 acre or 300 linear feet of waters of the U.S., including intermittent and ephemeral streams. Only the 300 linear foot limit may be waived by EPA upon approval, consistent with General Condition 02. *Waivers*.

Under this certification, NWP 12 can only be used once for a single and complete project having independent utility. When NWP 12 is proposed for multiple locations a written determination will be provided describing independent utility of each impact location for approval by EPA, consistent with General Condition 01. *Notification*.

Permittees are required to ensure that the construction of utility lines does not result in the draining of any water of the U.S., including wetlands. This may be accomplished through the use of clay blocks, bentonite, or other suitable material (as approved by EPA) to seal the trench.

For utility line trenches, during construction, the permittee shall remove and stockpile, separately, the top 6 – 12 inches of topsoil. Following installation of the utility line(s), the permittee shall replace the stockpiled topsoil on top and seed the area with native vegetation.

NWP-13 Bank Stabilization

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Unless approved by EPA, consistent with General Condition 02. *Waivers*, impacts under this permit are limited to the greater of 1/2 acre or 300 linear feet of waters of the U.S., including intermittent and ephemeral streams.

All bank stabilization activities under this permit shall involve either the sole use of native vegetation or other bioengineered design techniques (e.g. willow plantings, root wads, large woody debris, etc.) or a combination of hard-armoring (e.g. rock) and native vegetation or bioengineered design techniques, unless specifically determined to be impracticable by the EPA.

NWP-14 Linear Transportation Projects

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Impacts under this permit are limited to the greater of 1/2 acre or 300 linear feet of non-tidal waters of the U.S., including intermittent and ephemeral streams, and 1/3 acre or 300 linear feet of tidal waters of the U.S.

NWP 14 can only be used once for a single and complete project having independent utility. When NWP 14 is proposed for multiple locations a written determination will be provided describing independent utility of each impact location for approval by EPA, consistent with General Condition 01. *Notification.*

All bank stabilization activities under this permit shall involve either the sole use of native vegetation or other bioengineered design techniques (e.g. willow plantings, root wads, large woody debris, etc.) or a combination of hard-armoring (e.g. rock) and native vegetation or bioengineered design techniques, unless specifically determined to be impracticable by the EPA.

NWP-15 U.S. Coast Guard Approved Bridges

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-16 Return Water from Upland Contained Disposal Areas

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-17 Hydropower Projects

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-18 Minor Discharges

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-19 Minor Dredging

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-20 Response Operations for Oil and Hazardous Substances

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-21 Surface Coal Mining Activities

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Before an applicant may use this permit, EPA must approve a compensatory mitigation plan sufficient to ensure impacts to aquatic resource functions are minimal.

NWP-22 Removal of Vessels

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-23 Approved Categorical Exclusions

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-24 Indian Tribe or State Administered Section 404 Programs

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-25 Structural Discharges

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-26 [Reserved]

This NWP is no longer in use. No certification is necessary.

NWP-27 Aquatic Habitat Restoration, Establishment, and Enhancement Activities

Subject to the General Conditions above, and the following permit-specific condition, this NWP is hereby programmatically certified.

Upon review of a PCN or MPCN, consistent with General Condition 01. *Notification*, EPA will approve or deny on a case-by-case basis whether the proposed project will result in a net increase in aquatic resource functions and services, consistent with the NWP. An individual certification may be required in the event EPA denies approval of a waiver for this NWP.

NWP-28 Modifications of Existing Marinas

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-29 Residential Developments

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Unless approved by EPA, consistent with General Condition 02. *Waivers*, impacts under this permit are limited to 1/4 acre of impacts to non-tidal waters of the U.S. for single family houses, and the greater of 1/2 acre or 300 linear feet of impact to waters of the U.S. for multi-unit residential developments.

Under this certification, this permit will not be used to approve residential developments and their attendant features within the 100-year floodplain. The 100-year floodplain is determined based on hydrologic conditions at the time of the NWP application.

Recreational facilities such as playgrounds, playing fields, and golf courses are not authorized under this certification. These projects are separate and distinct from residential developments, are not required to be included in a residential development project for it to be practicable, and their construction within waters is normally avoidable.

NWP-30 Moist Soil Management for Wildlife

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-31 Maintenance of Existing Flood Control Facilities

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Upon review of a PCN, consistent with General Condition 01. *Notification*, EPA will approve or deny on a case-by-case basis whether the proposed project will result in minimal impacts to waters of the U.S. for projects that include removal of levee vegetation.

NWP-32 Completed Enforcement Actions

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-33 Temporary Construction, Access, and Dewatering

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-34 Cranberry Production Activities

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-35 Maintenance Dredging of Existing Basins

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-36 Boat Ramps

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Unless approved by EPA, consistent with General Condition 02. *Waivers*, impacts under this permit are limited to 50 cubic yards of fill and ramps that are 20 feet wide or less.

NWP-37 Emergency Watershed Protection and Rehabilitation

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-38 Cleanup of Hazardous and Toxic Waste

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-39 Commercial and Institutional Developments

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Under this certification, this permit will not be used to approve commercial and institutional developments and their attendant features within the 100-year floodplain. The 100-year floodplain is determined based on hydrologic conditions at the time of the NWP application.

Recreational facilities such as playgrounds, playing fields, and golf courses are not authorized under this certification. These projects are separate and distinct from commercial and institutional development, are not required to be included in such developments to be practicable, and their construction within waters is normally avoidable.

NWP-40 Agricultural Activities

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Construction of farmponds under this certification is limited to those that do not qualify for the Clean Water Act section 404(f)(1)(C) exemption because of the recapture provision at section 404(f)(2).

Under this certification, no discharges are authorized which would impact hydrological connectivity between jurisdictional waters to such an extent as to convert waters of the U.S. to uplands, or otherwise isolate waters and eliminate federal regulatory jurisdiction.

Unless approved by EPA, consistent with General Condition 02. *Waivers*, impacts under this permit are limited to the greater of 1/2 acre or 300 linear feet of impacts to non-tidal waters of the U.S., including intermittent and ephemeral streams.

NWP-41 Reshaping Existing Drainage Ditches

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Unless approved by EPA, consistent with General Condition 02. *Waivers*, impacts under this permit are limited to the greater of 1/2 acre or 300 linear feet of impacts to non-tidal waters of the U.S., including intermittent and ephemeral streams.

All sidecast materials from excavation must be stored and/or disposed of within non-jurisdictional uplands under this certification. A statement must be included in the notification as to how the applicant's activities will improve water quality.

Under this certification, no discharges are authorized which would impact hydrological connectivity between jurisdictional waters to such an extent as to convert waters of the U.S. to uplands, or otherwise isolate waters to eliminate federal regulatory jurisdiction.

NWP-42 Recreational Facilities

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-43 Stormwater Management Facilities

Use of this NWP is not covered by this programmatic certification, and prospective users on tribal lands must seek individual project certification from EPA in all cases. NWP authorization of constructing stormwater facilities within waters of the U.S. discourages applicants from using practicable construction options that locate stormwater retention and detention facilities "off line" from streams. For example, retention facilities are often built as sediment (or debris) basins within a stream. This practice includes constructing a dam in the stream, excavating out a basin, and regular sediment removal to maintain the structure. These facilities cause considerable and unnecessary damages to stream functions as retention facilities can be located "off line" by constructing a high flow diversion channel above the ordinary high water mark. If applicants can continue to use the traditional, more damaging practices that are sanctioned by this NWP, there is no incentive for these management practices to improve. We do not believe NWP-43 for new facilities complies with the CWA Section 404(b)(1) Guidelines.

CWA section 401 certification for this NWP is denied without prejudice. Applicants for projects on tribal lands must apply to EPA for individual certification if this NWP is proposed to be used. Applicants can apply for an individual certification by providing the same content required in a MPCN described in General Condition 01. *Notification*, of this certification.

NWP-44 Mining Activities

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Applicants must ensure that mining activities (e.g., aggregate mining) approved by this NWP will not cause upstream head cutting or downstream incision. Notification to EPA shall include a narrative description and design drawing, when applicable, of any measure that will be implemented to comply with the condition.

When used for in-stream aggregate mining activities, compensatory mitigation is likely to be required due to extensive indirect impacts and temporal losses typical of this type of impact.

NWP-45 Repair of Uplands Damaged by Discrete Events

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Unless approved by EPA, consistent with General Condition 02. *Waivers*, impacts under this permit are limited to the greater of 1/2 acre or 300 linear feet of impacts to non-tidal waters of the U.S., including intermittent and ephemeral streams.

NWP-46 Discharges in Ditches

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Unless approved by EPA, consistent with General Condition 02. *Waivers*, impacts under this permit are limited to the greater of 1/2 acre or 300 linear feet of impacts to non-tidal waters of the U.S., including intermittent and ephemeral streams.

NWP-47 [Reserved]

This NWP is no longer in use. No certification is necessary.

NWP-48 Commercial Shellfish Aquaculture Activities

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Under this certification, impacts to submerged aquatic vegetation are prohibited, consistent with NWP 19. *Minor Dredging*, and NWP 36. *Boat Ramps*.

NWP-49 Coal Remining Activities

Subject to the General Conditions above, and the following permit-specific conditions, this NWP is hereby programmatically certified.

Unless approved by EPA, consistent with General Condition 02. *Waivers*, impacts under this permit are limited to the greater of 1/2 acre or 300 linear feet of impacts to non-tidal waters of the U.S., including intermittent and ephemeral streams.

Applicants must provide information in the PCN illustrating that activities authorized under NWP-49 will result in a net increase in aquatic resource functions.

NWP-50 Underground Coal Mining Activities

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-51 Land-Based Renewable Energy Generation Facilities

Subject to the General Conditions above, this NWP is hereby programmatically certified.

NWP-52 Water-Based Renewable Energy Generation Pilot Projects

Subject to the General Conditions above, this NWP is hereby programmatically certified.

Summary Table – EPA Region 9 §401 Certification of NWP for projects on tribal lands

NWP	Certification Status			*Notification	Impact Limits	Notes
	General Conditions	Specific Conditions	Denied			
1	X			MPCN	None	
2	X			MPCN	None	
3	X	X		PCN or MPCN	Generally no increase in fill footprint	-No undersized structures -Bioengineering used whenever practicable
4	X			MPCN	None	
5	X			MPCN	25 cyds	
6	X			MPCN	25 cyds	
7	X			PCN	None	
8	X			PCN	None	
9	X			MPCN	None	
10	X			MPCN	None	
11	X			MPCN	None	
12	X	X		PCN or MPCN	**1/2 acre or 300'	-Only once per single and complete project with independent utility -Waiver approval required from EPA for 300'
13	X	X		PCN or MPCN	**1/2 acre or 300'	Waiver approval required from EPA
14	X	X		PCN or MPCN	**1/2 acre or 300' non-tidal, 1/3 acre or 300' tidal	Only once per single and complete project with independent utility
15	X			MPCN	None	
16	X			MPCN	None	
17	X			PCN	None	
18	X			PCN or MPCN	1/10 acre or 25 cyds	
19	X			MPCN	25 cyds	
20	X			MPCN	None	
21	X	X		PCN	1/2 acre or 300'	EPA approves mitigation plan first
22	X			PCN or MPCN	None	
23	X			PCN or MPCN	None	
24	X			MPCN	None	
25	X			MPCN	None	
26						Reserved
27	X	X		PCN or MPCN	None	Approval required from EPA
28	X			MPCN	None	
29	X	X		PCN or MPCN	**1/4 acre for single house, 1/2 acre or 300' for multi-unit	-Waiver approval required from EPA -No recreational impacts authorized
30	X			MPCN	None	
31	X	X		PCN	None	Approval for levee vegetation removal required from EPA

USEPA Region 9 Conditional CWA§401 Certification of the 2012 NWP for projects on applicable tribal lands

32	X			MPCN	5 acres non-tidal or 1 acre tidal	
33	X			PCN	None	
34	X			PCN	10 acres	
35	X			MPCN	Lesser of previously authorized or controlling depths	
36	X			PCN or MPCN	50 cyds, 20'-wide ramp	Waiver approval required from EPA
37	X			PCN or MPCN	None	
38	X			PCN	None	
39	X	X		PCN or MPCN	1/2 acre or 300' non-tidal	Waiver approval required from EPA
40	X	X		PCN or MPCN	1/2 acre or 300' non-tidal	Waiver approval required from EPA
41	X	X		PCN or MPCN	**1/2 acre or 300' non-tidal	Waiver approval required from EPA
42	X	X		PCN	1/2 acre or 300' non-tidal	
43			X	MPCN	N/A	Must apply to EPA for individual cert.
44	X	X		PCN or MPCN	1/2 acre or 300' non-tidal	Waiver approval required from EPA
45	X	X		PCN or MPCN	**1/2 acre or 300'	Waiver approval required from EPA
46	X	X		PCN or MPCN	**1/2 acre or 300' non-tidal	Waiver approval required from EPA
47						Reserved
48	X	X		PCN or MPCN	**Impacts to submerged aquatic veg. prohibited	
49	X	X		PCN or MPCN	**1/2 acre or 300' non-tidal	Waiver approval required from EPA
50	X	X		PCN or MPCN	1/2 acre or 300' non-tidal	Waiver approval required from EPA
51	X	X		PCN or MPCN	1/2 acre or 300' non-tidal	Waiver approval required from EPA
52	X	X		PCN or MPCN	1/2 acre or 300'	Waiver approval required from EPA

***Notification Category: Pre-Construction Notification (PCN):**

- The Corps already requires a PCN, subject to criteria in the Corps' General Condition 31, because the project proposes use of a NWP that requires a PCN automatically or for specific activities authorized by the NWP. Applicants must simply forward a second copy of the PCN already required by the Corps to EPA Region 9 for notification. If a PCN is already required by the Corps and a waiver is proposed for impacts beyond those approved under this certification, applicants must include a written determination that the waiver will not result in more than minimal impacts to aquatic resource functions for EPA approval.

Notification Category: Modified Pre-Construction Notification (MPCN):

- The Corps does not require a PCN for any activities authorized under the NWP proposed for use, or because proposed impacts fall below impact limits identified in the NWP for a PCN. Applicants must forward a MPCN to EPA Region 9 for notification. If a waiver is proposed for impacts beyond those approved under this certification, applicants must include a written determination that the waiver will not result in more than minimal impacts to aquatic resource functions for EPA approval, subject to the criteria below.

**Impact limits are modified by EPA

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
REGION 1 - NORTHERN
601 LOCUST STREET
REDDING, CALIFORNIA, 96001



STREAMBED ALTERATION AGREEMENT
NOTIFICATION No. 1600-2012-0282-R1
Unnamed Tributaries to Klamath River
STREAM ENCROACHMENTS ON SR 169 PM 13.6 – 23.4

RECEIVED

MAY 23 2013

D. F. G. – EUREKA

CALIFORNIA DEPARTMENT OF TRANSPORTATION,
AS REPRESENTED BY MR. RICHARD MULLEN
ROADWAY WIDENING ON SR 169, HUMBOLDT COUNTY

This Lake or Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and the California Department of Transportation (Caltrans) (Permittee), as represented by Mr. Richard Mullen.

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified CDFW on November 5, 2012 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1602, CDFW 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

The project is located between Post Mile (PM) markers 13.6 and 23.4 on State Route (SR) 169, between the communities of Weitchpec and Johnsons, and includes installation of a retaining wall at PM 13.66 – 13.73 (Location 1) and replacement of two permanent culverts on streams at PM markers 22.77 and 22.80 (Location 6) in the County of Humboldt, State of California; Sections 3 and 10, Township 9N, Range 3E; Humboldt Base and Meridian, in the Johnsons USGS 7.5-minute quadrangle.

PROJECT DESCRIPTION

At Location 1 the project includes installation of a Cast-In-Drilled-Hole (CIDH) soldier pile retaining wall at PM 13.66 – 13.73 adjacent to the existing road along the upper banks of the Klamath River.

At Location 6, the project includes removal and replacement of two tributary permanent culverts on SR 169. Within Location 6, at PM 22.77, Caltrans proposes to remove the existing 18-inch culvert and replace it with two 30-inch culverts and a headwall. At PM 22.80, the proposal is to replace an 18-inch culvert with a 24-inch culvert; however, a field evaluation indicates a larger culvert size is warranted at this site. If flowing water is present at the culvert replacement sites it will be diverted around the work site and surveys will be conducted to relocate amphibians found onsite.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: **Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*O. kisutch*), steelhead (*O. mykiss*), coastal cutthroat trout (*O. clarki clarki*), northern red-legged frog (*Rana aurora*), foothill yellow-legged frog (*R. boylei*)**, 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 of aquatic species, damage to spawning and/or rearing habitats 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 CDFW 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 CDFW 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, CDFW shall contact Permittee to resolve any conflict.
- 1.4 Project Site Entry. Permittee agrees that CDFW 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, drawings, biological reports and maps submitted with Notification No. 1600-2012-0282 as submitted by December 11, 2012. No asphalt ditches shall be installed.
- 2.2 All work within the bed, bank and channel shall be confined to the period June 15 through October 15 of each year.
- 2.3 Vegetation proposed for removal shall be removed between September 15 and February 28 to avoid impacts to nesting birds.
- 2.4 If Permittee proposes to remove vegetation in the nesting season (March 1 – Aug 31), an avian survey, monitoring and nest protection plan (Survey Plan) that includes surveys and protection measures for all species that may be found in the project area shall be submitted to CDFW at least 30 days prior to proposed surveys for CDFW review and approval. The Survey Plan shall include a list of bird species anticipated to nest in the area, a description of species life history to help focus survey design protocols; survey protocols that are tailored specifically to detect the various species anticipated to nest in the area, proposed nest buffers to avoid “take” of birds, nests, eggs and nestlings, and disturbance monitoring and reporting protocols.
- 2.5 If project work is proposed between March 1 and September 1, the Permittee shall conduct a database and ground-based nest search for new osprey nests and to check the status of viable historic and active osprey nests¹ within 0.25 miles of SR 169 PM markers 13.6 – 23.4 prior to operations each year.
 - a) Following the initial ground-based nest search, surveys of nest sites/territories shall consist of three visits lasting at least 2 hours and separated by at least 7 days, the first one occurring after April 1 and at least one occurring after May 1,

¹ Note: On April 15, 2013, CDFW and Caltrans observed two osprey near the Pecwan Creek Bridge (PM 14.25); and an active osprey nest located on SR 169 at approximately PM 17.31.

until/unless occupancy is observed. The Permittee shall provide osprey nest survey results to CDFW prior to beginning project activities.

- b) For construction activities within 0.25 miles of occupied nests, the Permittee shall conduct monitoring between March 1 and August 31 to determine if encroaching operations adversely affect nesting ospreys or their young. For construction activities further than 0.25 miles from occupied nests, the Permittee is encouraged to collect information on the start of nesting behavior, fledging dates, and productivity of osprey nests to help refine the critical nesting period.
 - c) If osprey appear disturbed by construction activities at any time, Permittee shall immediately suspend operations causing the disturbance pending results of consultation with CDFW.
 - d) Except use of the existing SR 169, no project construction work, tree felling, or other project-related work shall occur within 500 feet of a nest tree until nest, perch, screen and replacement trees are marked and retained to maintain the viability of the nest and nesting territory. A description of the retained trees and rationale for their retention shall be provided to CDFW for review and written concurrence before commencement, or re-commencement, of operations.
- 2.6 If sightings or den sites of ring-tailed cat (*Bassariscus astutus*), Pacific fisher (*Martes pennanti*), or marten (*Martes americana*) are encountered in the course of activities at project sites, the Permittee shall immediately notify and consult with CDFW to identify any measures that may be needed to avoid take or minimize adverse impacts to these species.
- 2.7 No fill material shall be placed within a stream except as specified in this Agreement.
- 2.8 Where flowing water is present during operations:
- a) 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.
 - b) 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.
 - c) 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.

- 2.9 No heavy equipment shall 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. Equipment or vehicles driven and/or operated on banks 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.
- 2.10 Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations unless specifically authorized to do so under this Agreement. The disturbed portions of any stream channel or banks 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 CDFW shall be placed in areas where vegetation cannot reasonably be expected to become reestablished.
- 2.11 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 be made with wildlife-friendly, biodegradable³ products that will not entrap or harm wildlife. Permanent erosion control products shall not contain synthetic (e.g., plastic or nylon) netting or materials.
- 2.12 All bare mineral soil outside the stream bed exposed in conjunction with encroachment 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. Erosion control shall include using native slash or seeding and mulching with at least 2 to 4 inches clean straw (such as rice, barley, wheat, or weed-free straw), and seeding with regional native seed or non-native seed that is known not to persist or spread, e.g., barley (*Hordeum vulgare*) or wheat (*Triticum aestivum*). No known invasive grass seed such as annual or perennial ryegrass (*Lolium multiflorum* or *L. perenne*, which are now referred to as *Festuca perennis*), shall be used.
- 2.13 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.
- 2.14 The Permittee shall provide site maintenance for the life of the structures, 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.

³ Photodegradable synthetic products are not considered biodegradable.

- 2.15 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.
- 2.16 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.
- 2.17 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 for all types of hazardous materials spills and incidents. CDFW shall be notified by the Permittee and consulted regarding clean-up procedures.
- 2.18 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. (This is not applicable to material installed permanently or temporarily as a permitted part of the project activities). When operations are complete, any excess materials or debris within 150 feet of the stream channel shall be removed from the work area and disposed of properly prior to the first rainfall.

SITE-SPECIFIC MEASURES:

- 2.19 When existing culverts are removed for culvert replacement at PMs 22.77 and 22.80, all fill shall be excavated down to the original stream channel and outwards, horizontally, as wide as or wider than the natural channel to form a channel as close as feasible to the natural stream grade and alignment. Excavated fill shall be placed in stable areas where it cannot enter or erode into a stream.
- 2.20 Permanent culverts installed at stream crossings shall be sized to pass the estimated 100-year flood flow, including debris and sediment loads, without overtopping or diverting. Culvert sizing factors shall include transportation of bedload, and the abundance and size of woody debris likely to be introduced to the stream upstream of the culvert crossing.
- 2.21 Permanent culverts shall extend lengthwise completely beyond the toe of fill. Permanent culverts and their outfall structures shall be aligned with the stream channel, as wide as or wider than the channel width, and shall be placed with the bottom set at or slightly below the natural streambed elevation to the maximum extent feasible. If permanent culverts cannot be set to grade, they shall have

downspouts and/or energy dissipators below the outfall as needed to effectively control erosion.

- 2.22 The permanent stream crossing at PM 22.77 shall be installed and designed to accept and include the stream flow draining into the inboard ditch approximately 135 feet to the west.
- 2.23 At PM 22.80, stream channel conditions observed by CDFW on April 15, 2013 indicate a drainage that appears to provide higher discharges than calculated in the February 22, 2013 "Drainage Recommendations for Culvert Treatments" memorandum. Based on field observations at PM 22.80, the Permittee shall install a minimum 36-inch culvert, and shall ensure the top of the proposed drop inlet structure is placed at the elevation of the stream channel bottom.
- 2.24 Installation 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.
- 2.25 To prevent the release of materials that may be toxic to fish and other aquatic species, poured concrete at the Cast-In-Drilled-Hole (CIDH) soldier piles for the proposed retaining wall at PM 13.66 – 13.73 shall be isolated from water and allowed to dry/cure for a minimum of 30 days. As an alternative, the Permittee shall monitor the pH of any 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 downslope 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. Results of pH monitoring shall be made available to CDFW upon request.
- 2.26 At Location 1, a silt fence shall be installed immediately downslope of the project site to ensure no material moves beyond the proposed project limits as described in the notification. If the project in this location changes in any manner, including needing additional area for the access road to the site or for silt fence or other BMPs, this Agreement shall be amended to include the revised description and scope of the work at this location.

3. Reporting Measures

Permittee shall meet each reporting requirement described below.

- 3.1 Permittee shall notify CDFW 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. Information to be disclosed in Notification shall include Agreement number and anticipated start/completion date.
- 3.2 Permittee shall submit to CDFW by the end of each year, California Natural Diversity Data Base forms for osprey and other special status species encountered during the year at or near the project site.

CONTACT INFORMATION

Written communication or documentation that Permittee or CDFW submits to the other shall be delivered to the address below unless Permittee or CDFW specifies otherwise:

To Permittee:

Mr. Richard Mullen
Caltrans
1656 Union Street
Eureka, California 95501
Office Phone: 707-441-5899
E-Mail: Richard_Mullen@dot.ca.gov

To CDFW:

Department of Fish and Wildlife
Region 1
619 Second Street
Eureka, California 95501
Attn: Lake and Streambed Alteration Program
Notification #1600-2012-0282-R1
Fax: 707-441-2021

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 CDFW'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

CDFW 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 CDFW 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 CDFW 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 CDFW to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes CDFW 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 CDFW'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

CDFW may amend the Agreement at any time during its term if CDFW 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 CDFW and Permittee. To request an amendment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in CDFW'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 CDFW 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 CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in CDFW'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 CDFW a completed CDFW "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). CDFW 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 CDFW's signature, which shall be: 1) after Permittee's signature; 2) after CDFW 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.cdfw.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.

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 CDFW in accordance with FGC section 1602.

CONCURRENCE

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

FOR CALIFORNIA DEPT OF TRANSPORTATION

for 

Richard Mullen
Project Manager

5/22/13

Date

FOR DEPARTMENT OF FISH AND WILDLIFE

for 

Curt Babcock
Environmental Program Manager

6/6/13

Date

**CALIFORNIA ENVIRONMENTAL QUALITY ACT
NOTICE OF EXEMPTION**

To: Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, California 95814

Date: June 6, 2013

From: California Department of Fish and Wildlife
Northern Region
601 Locust Street
Redding, California 96001

Project Title: Issuance of Lake or Streambed Alteration Agreement No. **1600-2012-0282-R1**, Roadway Widening on State Route 169, PM 13.6 – 23.4.

Project Location (Specific): The project is located in Sections 3 and 10, Township 9N, Range 3E; Humboldt Base and Meridian, in the Johnsons USGS 7.5-minute quadrangle.

Project Location (City and County): The project is located between Post Mile (PM) markers 13.6 and 23.4 on State Route (SR) 169, between the communities of Weitchpec and Johnsons in the County of Humboldt.

Description of Project: The project includes installation of a Cast-In-Drilled-Hole (CIDH) soldier pile retaining wall with rock slope protection at PM 13.66 – 13.73 adjacent to the existing roadway along the upper banks of the Klamath River above the ordinary high water (OHW); and removal and replacement of two tributary permanent culverts on SR 169.

Name of Public Agency Approving Project: California Department of Fish and Wildlife

Name of Entity Carrying Out Project: California Department of Transportation

Exempt Status (Guidelines Section and Class): **Categorical Exemption: Section 15301**, Existing Facilities.

Reasons Why Project is Exempt: The project proposes to install a CIDH soldier pile retaining wall adjacent to the existing roadway, outside the wetted channel and above the OHW of the Klamath River, and to remove and replace two tributary permanent culverts under SR 169. Work is limited to between June 15 and October 15 and during no or low flow conditions, and includes best management practices to avoid the potential for debris or sediment to enter the river. All rock slope protection will be placed above the OHW to avoid impacts to salmonids. Piles will be cast-in-place to avoid noise and vibration impacts to birds and salmonids. Removal of potential nesting bird habitat will be removed in the non-nesting season or surveys will be completed prior to vegetation removal. There would be no significant adverse impact on endangered, rare or threatened species or their habitat pursuant to section 15065. There are no hazardous materials at or around the project site that may be disturbed or removed. There will be no expansion of existing roadway use in connection with the project. The project will not result in impacts that are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

Lead Agency Contact Person: JoAnn Dunn

Phone: (707) 441-2076

Signature:

Title:

for

Curt Babcock

Habitat Conservation Program Manager, Northern Region

T. Babcock

Date:

6/6/13

Signed by Lead Agency

Date received for filing at OPR:

Signed by Applicant