

INFORMATION HANDOUT

For Contract No. 01-0B3204

At 01-DN-199-24.7

Identified by

Project ID 0112000116

PERMITS

PLAC - United States Army Corps of Engineers, San Francisco District

Non-Reporting Nationwide 404
Application and Conditions for Nationwide Permit No. 14
Dated April 14, 2015

WATER QUALITY

PLAC - California Regional Water Quality Control Board, North Coast Region

Water Quality Certification
Board Order No. WDID No. 1B15014WDN, ECM PIN CW-813031
Dated April 6, 2015

AGREEMENTS

PLAC - California Department of Fish and Wildlife, Northern Region

1602 Lake and Streambed Alteration Agreement
Notification No. 1600-2015-0031-R1
Dated April 21, 2015

MATERIALS INFORMATION

Foundation Report for Middle Fork ERS dated September 4, 2014

Division of Occupational Safety and Health Mining and Tunneling Unit Underground Classification letter dated February 2, 2015

Typical Plan for Exist MBGR (Special)



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET, 16th Floor
SAN FRANCISCO, CALIFORNIA 94103-1398

OB320
MIDDLE FORK WALL

APR 14 2015

Regulatory Division

SUBJECT: File No. 2015-00075N

Ms. Gail Popham
California Department of Transportation District 1
1656 Union Street
Eureka, California 95501

Dear Ms. Popham:

This letter is in reference to your submittal received February 6, 2015, concerning Department of the Army (Corps) permit authorization to construct a 180-foot long soldier pile tieback wall at two locations on State Route 199 at post miles 24.6 and 24.7, (Lat. 41.8822, Long. -123.8216) adjacent to the Middle Fork Smith River, Del Norte County, California.

The project would construct an about 180-foot long soldier pile tie-back wall on US 199 at PM 24.6/24.7 adjacent to the Middle Fork Smith River. This would stabilize a geologically unstable area that is undermining the roadway. Two existing steel bin walls are failing due to saturation of the existing roadway prism. Caltrans would install a soldier pile wall encapsulating the two existing walls and the unstable area between to prevent the sinking of the soil in the short space between two bin walls.

Work within U.S. Army Corps of Engineers' (Corps) jurisdiction would include impacts to Section 404 waters that would temporarily impact 0.005-acre of other waters. Impacts would result from the above-mentioned improvements and installation of about 0.005 cubic yards of fill. All work shall be completed at the site locations indicated in the drawings entitled: "Project Plans (Appendix C of the Natural Environmental Study dated October 22, 2014)," sheets 1-12, all received February 6, 2015 (enclosure 1).

Section 404 of the Clean Water Act (CWA) generally regulates the discharge of dredged or fill material below the plane of ordinary high water in non-tidal waters of the United States, below the high tide line in tidal waters of the United States, and within the lateral extent of wetlands adjacent to these waters. A Preliminary Jurisdictional Determination (JD) has been completed for your site. Preliminary JD's are written indications that there may be waters of the U.S. on a parcel or indications of the approximate location(s) of waters of the U.S. on a parcel. The enclosed delineation map entitled, "USACE File #2015-00075, SR 199 Repairs at PM 24.6 and 24.7 Jurisdictional Determination" in one sheet, dated February 25, 2015 (enclosure 2), depicts the extent and location of wetlands and other waters of the United States within the boundary area of the site that may be subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act. The basis for this preliminary jurisdictional

determination is fully explained in the enclosed *Preliminary Jurisdictional Determination Form*. You are requested to sign and date this form and return it to this office within two weeks of receipt.

You are advised that the preliminary jurisdictional determination may **not** be appealed through the U.S. Army Corps of Engineers' *Administrative Appeal Process*, as described in 33 C.F.R. Section 331 (65 Fed. Reg. 16,486; Mar. 28, 2000). Under the provisions of 33 C.F.R. Section 331.5(b)(9), non-appealable actions include preliminary jurisdictional determinations since they are considered to be only advisory in nature and make no definitive conclusions on the jurisdictional status of the water bodies in question. However, you may request this office to provide an approved jurisdictional determination that precisely identifies the scope of jurisdictional waters on the site; an approved jurisdictional determination may be appealed through the *Administrative Appeal Process*. If you anticipate requesting an approved jurisdictional determination at some future date, you are advised not to engage in any on-site grading or other construction activity in the interim to avoid potential violations and penalties under Section 404 of the Clean Water Act. Finally, you may provide this office new information for further consideration and request a reevaluation of this preliminary jurisdictional determination.

Based on a review of the information you submitted, your project qualifies for authorization under Department of the Army Nationwide Permit (NWP) 14 *Linear Transportation Projects*, 77 Fed. Reg. 10,184, February 21, 2012 (enclosure 3), pursuant to Section 404 of the CWA of 1972, as amended (33 U.S.C. § 1344 *et seq.*). The project must be in compliance with the terms of the NWP, the general conditions of the Nationwide Permit Program, and the San Francisco District regional conditions cited in enclosure 4. You must also be in compliance with any special conditions specified in this letter for the NWP authorization to remain valid. Non-compliance with any term or condition could result in the revocation of the NWP authorization for your project, thereby requiring you to obtain an Individual Permit from the Corps. This NWP authorization does not obviate the need to obtain other State or local approvals required by law.

This verification will remain valid until March 18, 2017, unless the NWP authorization is modified, suspended, or revoked. Activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon a NWP will remain authorized provided the activity is completed within 12 months of the date of a NWP's expiration, modification, or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 C.F.R. § 330.4(e) and 33 C.F.R. §§ 330.5 (c) or (d). This verification will remain valid if, during the time period between now and March 18, 2017, the activity complies with any subsequent modification of the NWP authorization. The Chief of Engineers will periodically review NWP's and their conditions and will decide to either modify, reissue, or revoke the permits. If a NWP is not modified or reissued within five years of its effective date, it automatically expires and becomes null and

void. It is incumbent upon you to remain informed of any changes to the NWP's. Changes to the NWP's would be announced by Public Notice posted on our website (<http://www.spn.usace.army.mil/Missions/Regulatory.aspx>). Upon completion of the project and all associated mitigation requirements, you shall sign and return the Certification of Compliance (enclosure 5) verifying that you have complied with the terms and conditions of the permit.

General Condition 18 stipulates that project authorization under a NWP does not allow for the incidental take of any federally-listed species in the absence of a biological opinion with incidental take provisions. As the principal federal lead agency for this project, the Caltrans (through an agreement with Federal Highways) used programmatic consultations with the U.S. Fish and Wildlife Service (FWS) programmatic document AFWO-12B0001-1210001 and National Marine Fisheries Service (NMFS) programmatic document 2013-9731 to address project related impacts to listed species, pursuant to section 7(a) of the Endangered Species Act of 1973, as amended, 16 U.S.C. § 1531 *et seq.* Both programmatic documents covered impacts to listed fish, marbled murrelet, and northern spotted owls and designated critical habitat for these species.

To ensure compliance with this NWP authorization and to further minimize adverse impacts to water quality and other aquatic resources, including federally listed threatened and endangered species and designated critical, the project is subject to the following Special Conditions:

1. The USFWS and NMFS concurred with the determination that the project was not likely to adversely affect northern spotted owl, federally threatened marbled murrelet, and designated critical habitat for these species, SONCC coho salmon, coho critical habitat and EFH for Pacific salmon. This concurrence was premised, in part, on project work restrictions outlined in programmatic Letter of Concurrence File No. AFWO-12B0001-1210001 and programmatic Biological Opinion No. 2013-9731, respectively. These work restrictions are incorporated as special conditions to the NWP authorization for your project to ensure unauthorized incidental take of species and loss of critical habitat does not occur.
2. Best management practices (BMP's) will be implemented including installation of silt fences, straw bales, gravel bags, and fiber rolls, if appropriate. Placement of these materials will control sediment discharge and minimize sediment release into receiving waters. Additional BMP's are outlined on page 5 of the PCN.
3. Fueling activities will occur in designated upland locations.

4. No concrete washings or water from concrete will be allowed to flow into waterways. No concrete will be poured within flowing water in waterways. Waste management best management practices will be implemented.
5. No debris, sand, silt, trash, concrete or washings thereof, oil or other petroleum products or washings thereof, or other foreign materials shall be allowed to enter or be placed where it may be washed by rainfall or runoff into waters of the U.S. Upon project completion, any and all excess construction materials, debris, and/or other excess project materials shall be removed to an appropriate upland disposal site.
6. All construction materials (new and old) will be stored in a contained area in the staging area.
7. All debris will be transported to an appropriate disposal landfill.
8. The permittee shall restore all temporarily impacted areas to pre-construction contours. All disturbed areas shall be revegetated with pre-existing and/or native wetland vegetation.

You may refer any questions on this matter to Carol Heidsiek of our Regulatory staff by telephone at 707-443-0855 or by email at Carol.A.Heidsiek@usace.army.mil. All correspondence should be addressed to the Regulatory Division, North Branch, Eureka Field Office, 601 Startare Drive, Box 14, Eureka, California 95501, referencing the file number at the head of this letter.

The San Francisco District is committed to improving service to our customers. My Regulatory staff seeks to achieve the goals of the Regulatory Program in an efficient and cooperative manner, while preserving and protecting our nation's aquatic resources. If you would like to provide comments on our Regulatory Program, please complete the Customer Service Survey Form available on our website: <http://www.spn.usace.army.mil/Missions/Regulatory.aspx>

Sincerely,


Jane M. Hicks
Chief, Regulatory Division

Enclosures

Copies Furnished (w/o encls):

NMFS, Arcata, CA

USFWS, Arcata, CA

CA RWQCB, Santa Rosa, CA

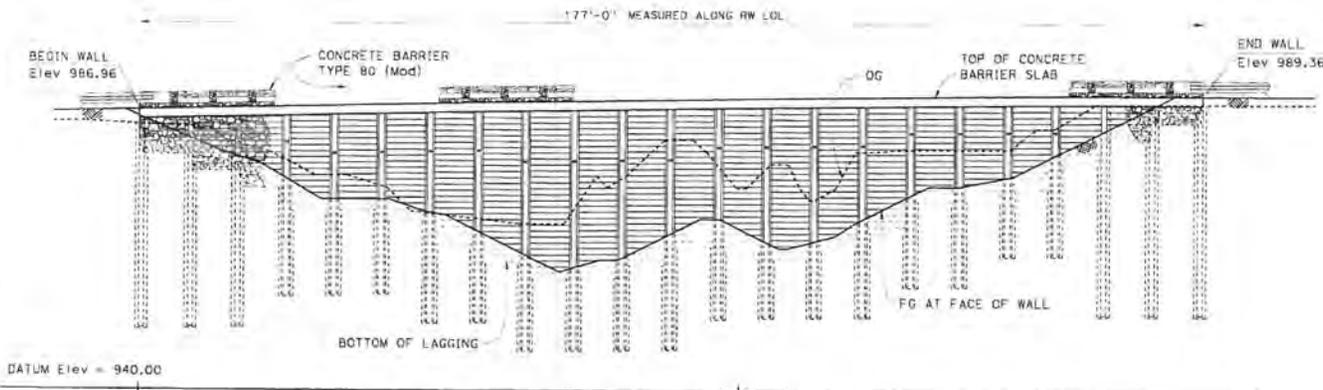
8-28-14

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
0	DN	199			

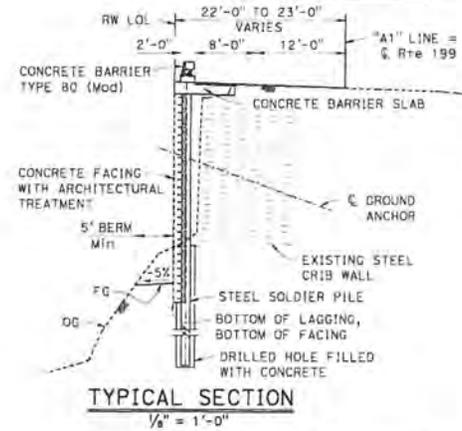
REGISTERED CIVIL ENGINEER	DATE
Y	

APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY DATA OBTAINED FROM THIS PLAN SHEET.



DEVELOPED MIRRORED ELEVATION
1" = 10'

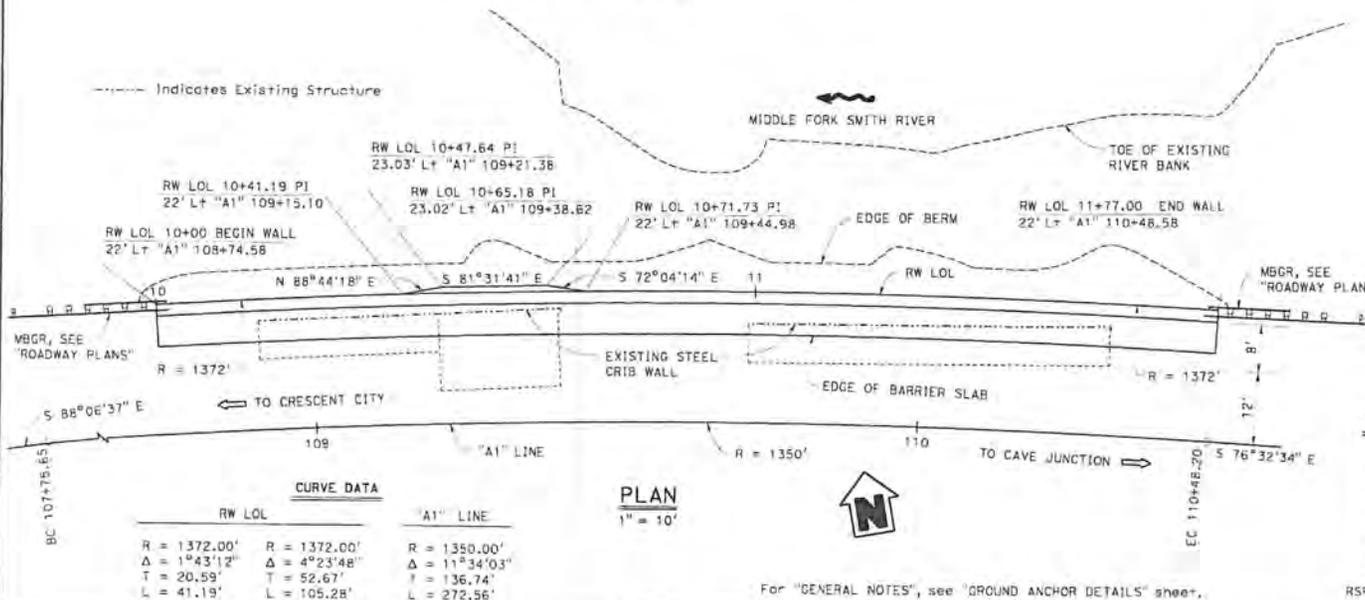


TYPICAL SECTION
1/8" = 1'-0"

UNCHECKED DETAILS

INDEX TO PLANS

SHEET NO.	TITLE
1.	GENERAL PLAN
2.	STRUCTURE PLAN NO. 1
3.	STRUCTURE PLAN NO. 2
4.	FOUNDATION PLAN
5.	TYPICAL SECTION
6.	WALL DETAILS No. 1
7.	WALL DETAILS No. 2
8.	GROUND ANCHOR DETAILS
9.	EXCAVATION AND BACKFILL LIMITS
10.	CONCRETE BARRIER TYPE 80 (Mod)
11.	FUTURE BICYCLE RAILING DETAILS
12.	LOG OF TEST BORINGS 1 OF 3
13.	LOG OF TEST BORINGS 2 OF 3
14.	LOG OF TEST BORINGS 3 OF 3



CURVE DATA

RW LOL	'A1' LINE
R = 1372.00'	R = 1372.00'
Δ = 1°43'12"	Δ = 4°23'48"
T = 20.59'	T = 52.67'
L = 41.19'	L = 105.28'

PLAN
1" = 10'

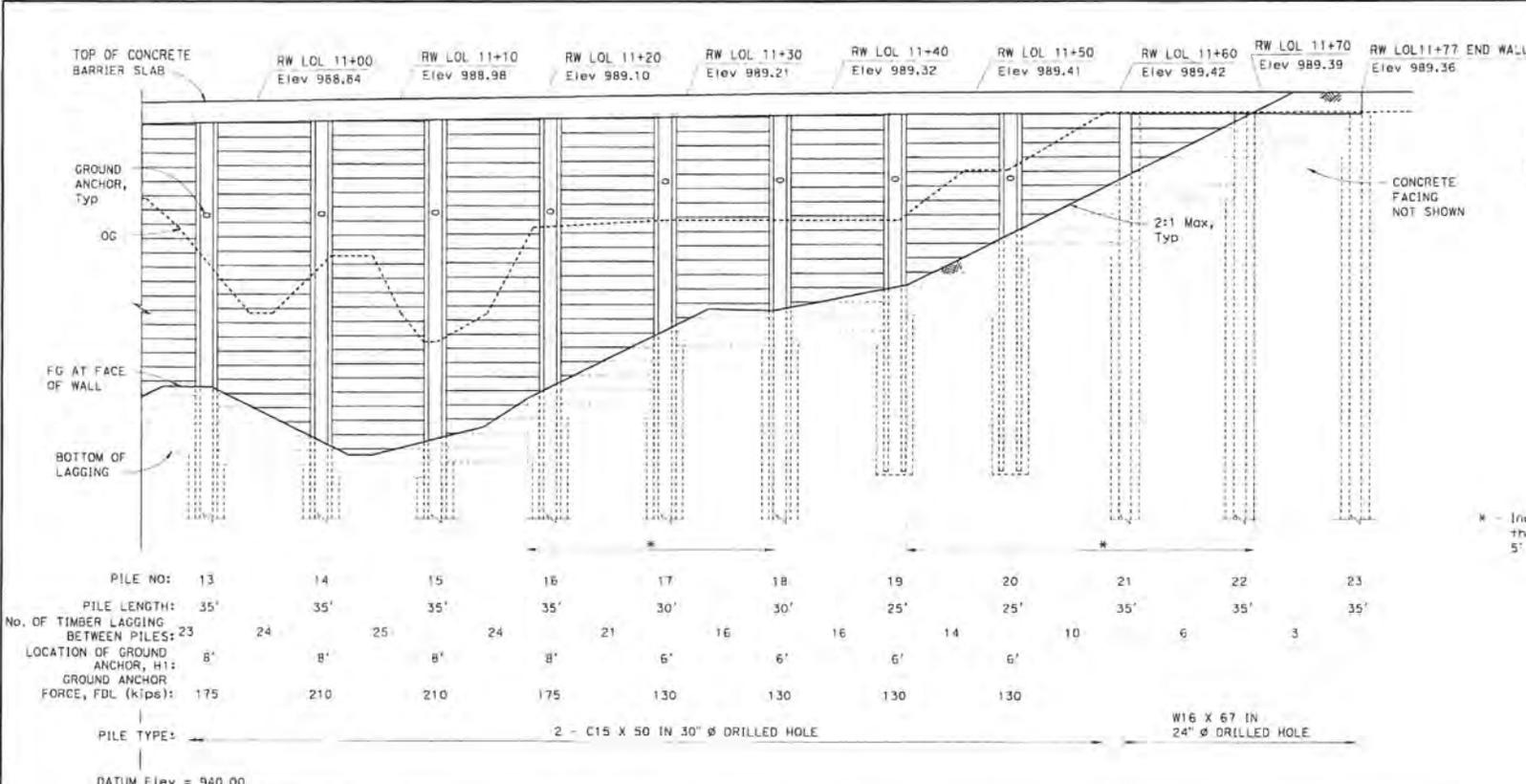
For "GENERAL NOTES", see "GROUND ANCHOR DETAILS" sheet.

STANDARD PLANS DATED 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
A10F	LEGEND - SOIL (SHEET 1 OF 2)
A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
RSP B11-60	CONCRETE BARRIER TYPE 80 (SHEET 1 OF 2)

DESIGN BY: Kevin Harper	CHECKED BY: Jie Tang	LOAD & RESISTANCE FACTOR DESIGN BY: Kevin Harper	SHEKED BY: Kevin Harper	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO. 24.5	MIDDLE FORK WALL GENERAL PLAN
DESIGN ENGINEER: Jeff Sims	QUANTITIES BY: Jie Tang	SPECIFICATIONS BY: Kevin Harper	PLANS AND SPECS CHECKED BY: Kevin Harper	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3576 PROJECT NUMBER & PHASE: 012000161	CONTRACT NO.: 01-03204	DISREGARD PRINTS BEARING EARLIER REVISION DATES

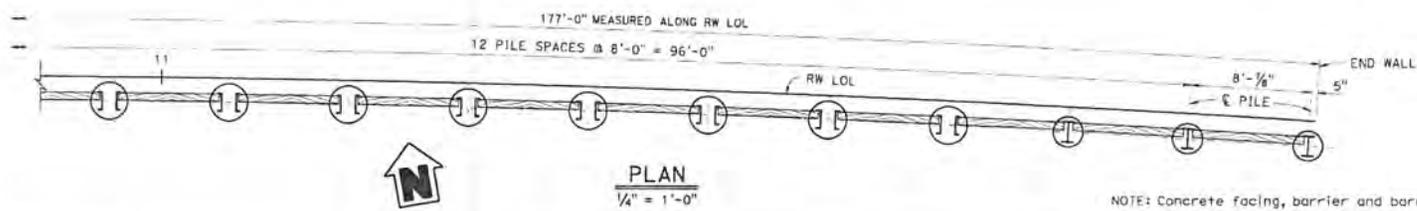
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	DN	199			
				X	
REGISTERED CIVIL ENGINEER				DATE	
				Kevin Harper	
				No. 42221	
				Exp. 3/31/18	
				CIVIL	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



PILE NO:	13	14	15	16	17	18	19	20	21	22	23
PILE LENGTH:	35'	35'	35'	35'	30'	30'	25'	25'	35'	35'	35'
No. OF TIMBER LAGGING BETWEEN PILES:	23	24	25	24	21	16	16	14	10	6	3
LOCATION OF GROUND ANCHOR, H1:	8'	8'	8'	8'	6'	6'	6'	6'			
GROUND ANCHOR FORCE, FDL (kips):	175	210	210	175	130	130	130	130			
PILE TYPE:	2 - C15 X 50 IN 30" Ø DRILLED HOLE							W16 X 67 IN 24" Ø DRILLED HOLE			

* - Indicates location where the Berm is wider than 5' (2:1 Max slope grading)

DEVELOPED MIRRORED ELEVATION
1/4" = 1'-0"



PLAN
1/4" = 1'-0"

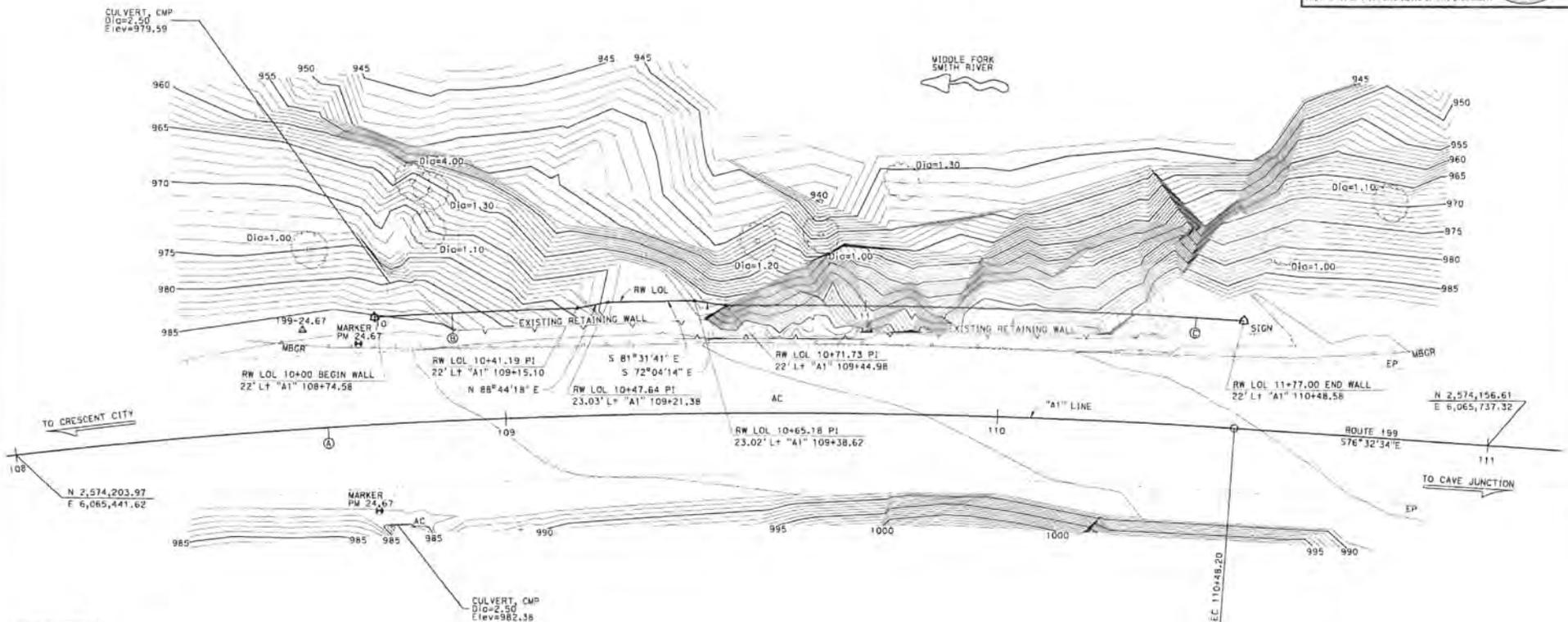
NOTE: Concrete facing, barrier and barrier slab not shown.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Kevin Harper	CHECKED	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	MIDDLE FORK WALL STRUCTURE PLAN NO. 2
	DETAILS	BY Jie Tang	CHECKED		DESIGN BRANCH 1	POST MILE	
	QUANTITIES	BY	CHECKED			24.5	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3576	PROJECT NUMBER & PHASE: 0120001161	CONTRACT NO.: 01-0B3204	SINERGARD PRINTS BEARING EARLIER REVISION DATES
				0	1	2	3
				3	4	5	6
				7	8	9	10
				11	12	13	14

CURVE DATA					
No.	Q	R	Δ	T	L
Ⓐ		1350.00'	11°34'03"	136.74'	272.56'
Ⓑ		1372.00'	1°43'12"	20.59'	41.19'
Ⓒ		1372.00'	4°23'48"	52.67'	105.28'

DIST	COUNTY	ROUTE	POST MILES	SHEET	TOTAL
01	DN	199	TOTAL PROJECT	No.	SHEETS
REGISTERED CIVIL ENGINEER			X	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.



SURVEY CONTROL
 199-24.67
 Fnd CalTrans Alum CAP
 20.26 Ft Lt Rte 199
 Stn 108+59.94
 N 2,574,219.76
 E 6,065,503.32
 Elev = 985.74

199-24.76 (NOT SHOWN ON PLAN)
 Fnd CalTrans Alum CAP
 18.26 Ft Rt Rte 199
 Stn 113+62.48
 N 2,574,105.01
 E 6,065,998.15
 Elev = 894.35

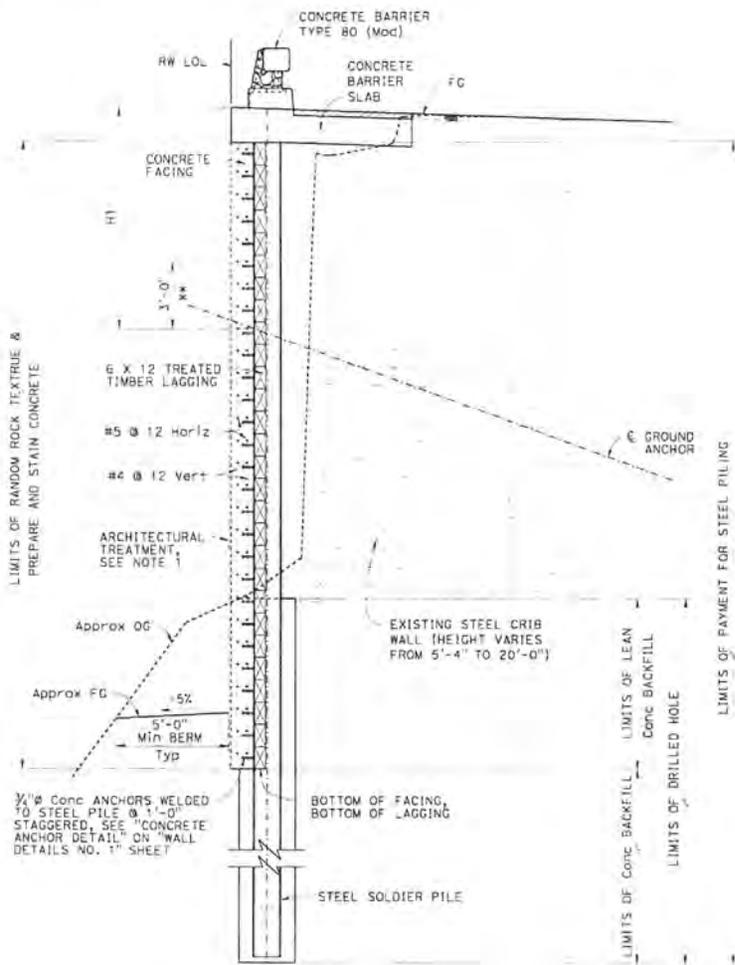
PRELIMINARY INVESTIGATION SECTION				DESIGN	M Kevin Harper	CHECKED	X	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.		MIDDLE FORK WALL FOUNDATION PLAN	
SCALE	VERT. DATUM	NAD83	PHOTOGRAHMETRY	AS OF 1 X	DETAILS	M Jia Tang	CHECKED			X	POST MILE		24.5
1"=10'	HORIZ. DATUM	NAD83 (2011.69)	SURVEYED	M DISTRICT	CHECKED	M J. BORDEN	03/2014			X			
ALIGNMENT	FILES	DIAGRAM	TRAVERSE SHEET	DRAFTED	M T. ZOLANIKOV	03/2014	CHECKED	M S. SOU	03/2014				

STRUCTURE FOUNDATION PLAN SHEET (ENCL. 14) (REV. 03-01-14) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 1 2 3 4 5 UNIT: 3576 PROJECT NUMBER & PHASE: 0120001161 CONTRACT NO.: 01-QB3204 DISKLAND PRINTS BEARING EARLIER REVISION DATES 4 14

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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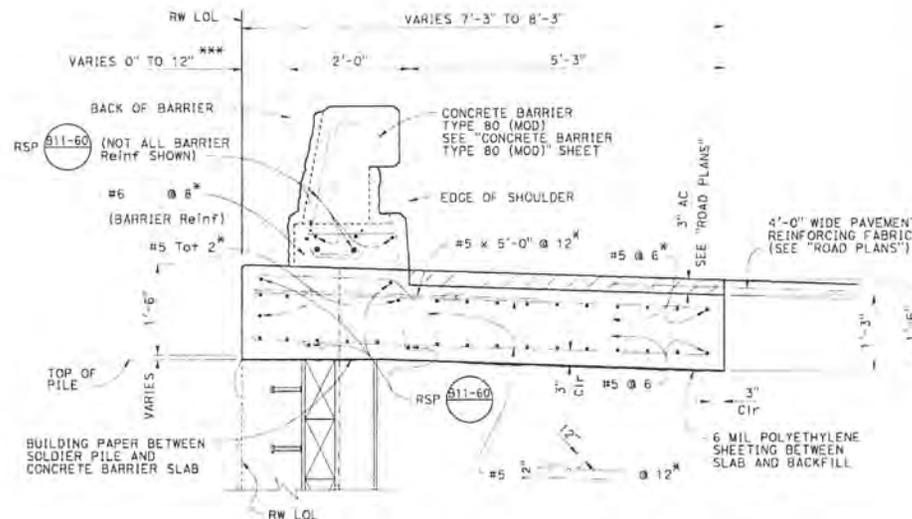
REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

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TYPICAL SECTION

3/8" = 1'-0"



CONCRETE BARRIER SLAB DETAIL

1" = 1'-0"

NOTES:

1. For Architectural Treatment, see "ARCHITECTURAL DETAILS" on "WALL DETAILS NO. 2" sheet.
2. For H1 dimensions, see "STRUCTURE PLAN" sheet.

LEGEND:

- - - indicates existing structure Steel Crib Wall
- * indicates epoxy coated reinforcement
- ** indicates level of backfill prior to stressing Ground Anchor
- indicates bundled bars

DESIGN	BY Kevin Harper	CHECKED		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	MIDDLE FORK WALL TYPICAL SECTION
DETAILS	BY Jik Tang	DRAWN			DESIGN BRANCH 1	POST MILE	
QUANTITIES	BY	CHECKED				24.5	

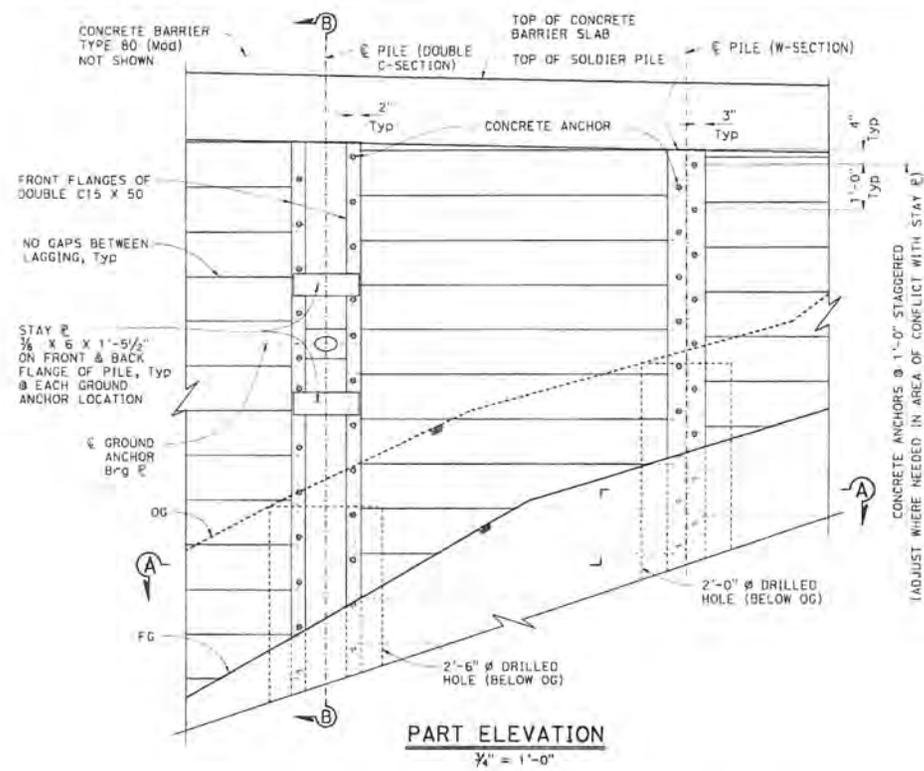
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 04-07-11)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3576	PROJECT NUMBER & PHASE: 01120001161	CONTRACT NO.: 01-033204	DIVISION PRINTS BEARING EARLIER REVISION DATES	5	14
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	DN	199			

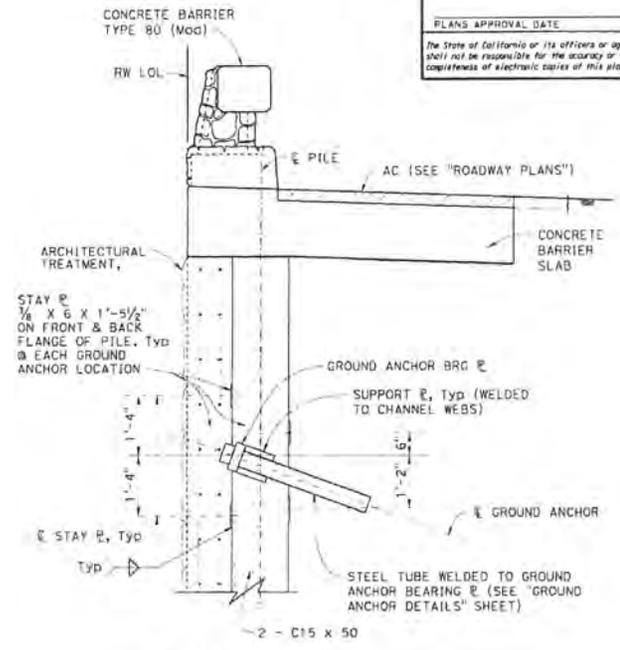
REGISTERED CIVIL ENGINEER	X	DATE
PLANS APPROVAL DATE		

Kevin Harper
 No. 42721
 Exp. 3/31/15
 CIVIL

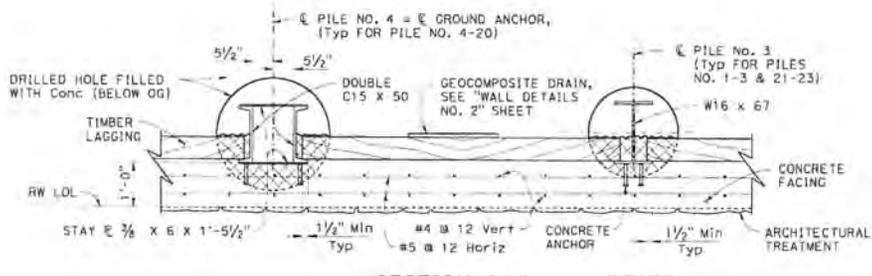
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PART ELEVATION
 $\frac{3}{4}'' = 1'-0''$

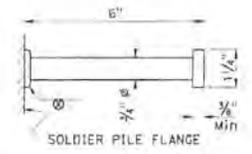


SECTION B-B
 $\frac{3}{4}'' = 1'-0''$



SECTION A-A
 $\frac{3}{4}'' = 1'-0''$

Indicates Lean Concrete Removal Limits



CONCRETE ANCHOR DETAIL
 $6'' = 1'-0''$

DESIGN	#1	Kevin Harper	CHECKED	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.	MIDDLE FORK WALL		
	DETAILS	#1	Jie Tong			CHECKED		POST MILE	WALL DETAILS NO. 1
	QUANTITIES	#1				CHECKED		24.5	

UNIT: 3576 PROJECT NUMBER & PHASE: 01120001161 CONTRACT NO.: 01-053204

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

DISREGARD PRINTS BEARING EARLIER REVISION DATES

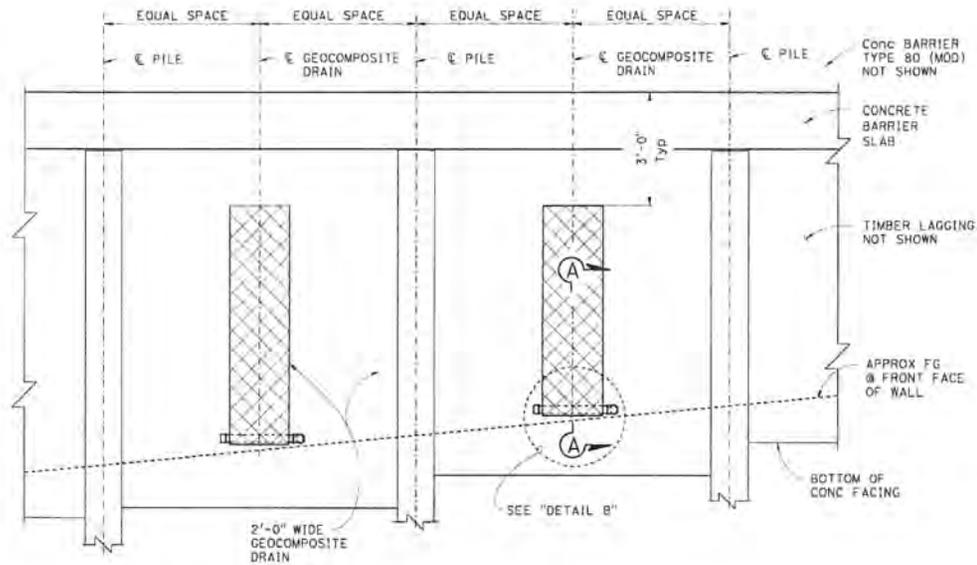
DATE	BY	APP
6	14	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	DN	199			

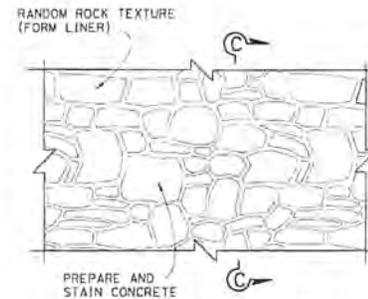
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

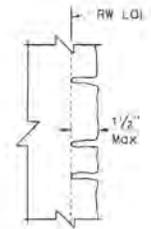
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PART REAR ELEVATION - GEOCOMPOSITE DRAIN
NO SCALE

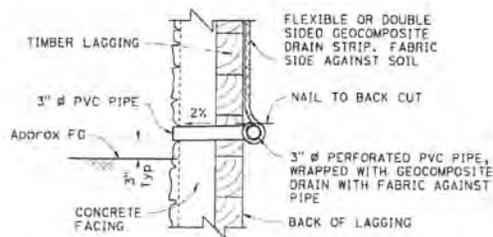


PART ELEVATION
3/4" = 1'-0"

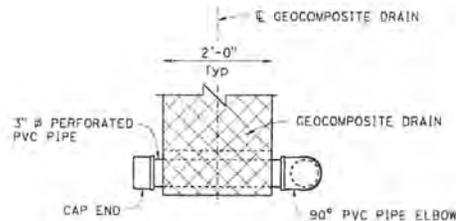


SECTION C-C
NO SCALE

ARCHITECTURAL DETAILS
NO SCALE



SECTION A-A
NO SCALE



DETAIL B
NO SCALE

STRUCTURED DESIGN DETAIL SHEET (ENGLISH) (REV) 09-01-101	DESIGN BY	Kevin Harper	DRAWN		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	MIDDLE FORK WALL WALL DETAILS NO. 2
	DETAILS BY	Jie Tang	ENGINEER			DESIGN BRANCH 1	POST MILE	
	QUANTITIES BY		CHECKED		UNIT: 3576 PROJECT NUMBER & PHASE: 011200011G1	CONTRACT NO.: 01-093704	DESIGNED BY	
					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		DATE	7/16

DIST	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
01	DN	199			
REGISTERED CIVIL ENGINEER DATE			X		
PLANS APPROVAL DATE			3/21/16		



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.

GENERAL NOTES LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO Bridge Specifications, Sixth Edition with California Amendments.

LIVE LOAD:
2'-0" Level Earth Surcharge

SOIL PARAMETERS:
(For determination of design lateral earth pressures)
 $\phi = 35^\circ$, $\gamma = 130$ pcf (above bottom of facing)
 $\phi = 50^\circ$, $\gamma_{sub} = 82.5$ pcf (below bottom of facing)

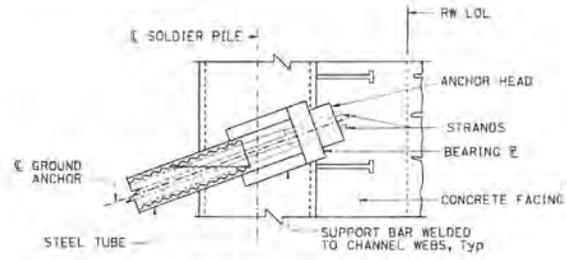
PRESTRESSING STEEL:
(GROUND ANCHORS)
 Strands - ASTM designation: A416
 Bars - ASTM designation: A722 Type I
 FTL = Factored Test Load Per Anchor (kips)
 FDL = Factored Design Load Per Anchor (kips)
 FTL = 1.0 FDL
 LL = Lock off Load = 0.55 FDL
 f_{pu} = Minimum ultimate tensile stress of steel in ground anchor (kips/in²)
 A_s (Min) = Minimum gross sectional area of prestressing steel in Ground Anchor (square inch)
 A_s (Min) = $\frac{1.0 FTL}{0.75 f_{pu}}$

REINFORCED CONCRETE:
 $f'_c = 3.5$ ksi
 $f_y = 60$ ksi
 $n = 8$

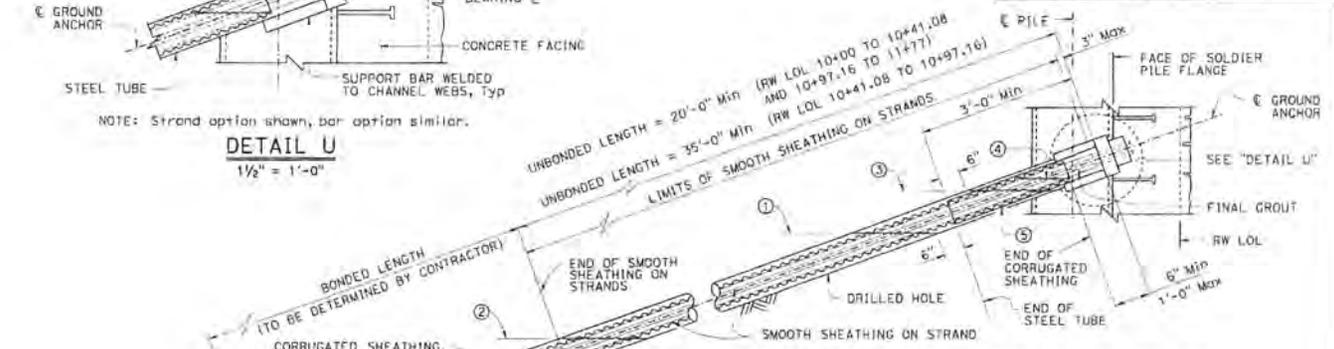
STRUCTURAL STEEL:
 $f_y = 50$ ksi

STRUCTURAL TIMBER:
 Treated Douglas Fir No. 2 or better
 Timber to be full sawn

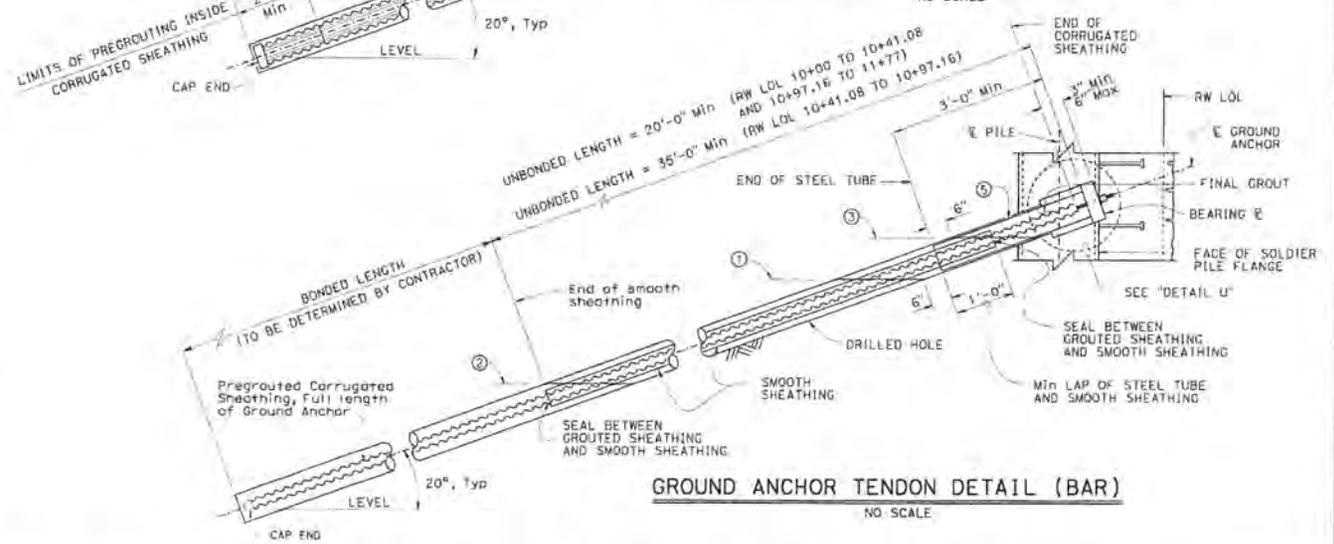
- LEGEND:**
- ① Level of initial grouting for drilled hole 6" ϕ or smaller
 - ② Level of initial grouting for drilled hole greater than 6" ϕ
 - ③ Level of secondary grouting
 - ④ Level of initial grouting inside corrugated sheathing
 - ⑤ Steel tube welded to bearing plate, inside diameter of steel tube shall be at least 1" greater than the outer diameter of corrugated sheathing. (Min thickness = $\frac{1}{4}$ ")
 Galvanize assembly after fabrication. Fill tube with grout.



NOTE: Strand option shown, bar option similar.
DETAIL U
 $\frac{1}{2}'' = 1'-0''$



GROUND ANCHOR TENDON DETAIL (STRAND)
 NO SCALE



GROUND ANCHOR TENDON DETAIL (BAR)
 NO SCALE

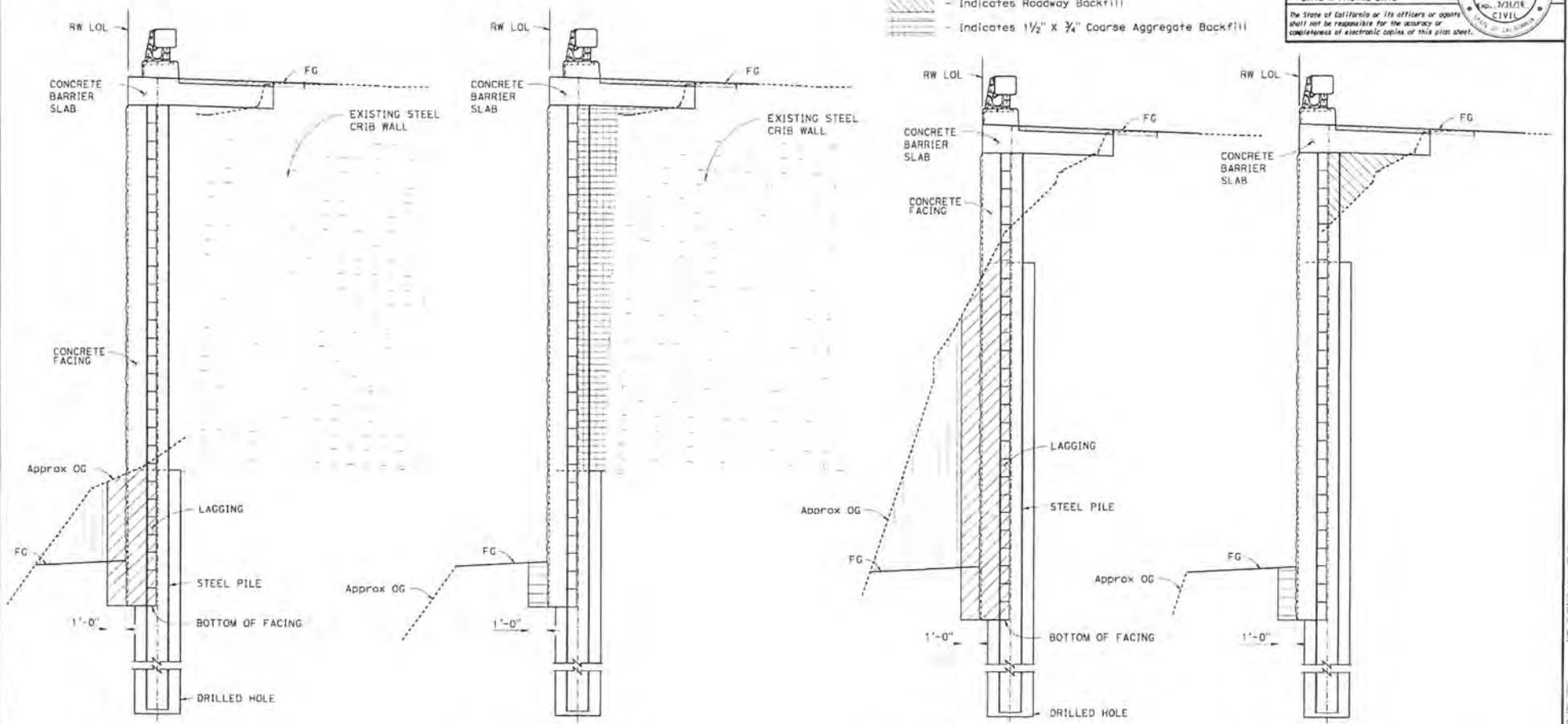
DESIGN	BY: Kevin Harper	CHECKED:	DATE:	STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES	BRIDGE NO.:	MIDDLE FORK WALL
DETAILS	BY: Jie Tang	CHECKED:	DATE:	DEPARTMENT OF TRANSPORTATION	STRUCTURE DESIGN	POST MILE:	GROUND ANCHOR DETAILS
QUANTITIES	BY:	CHECKED:	DATE:		DESIGN BRANCH 1	24.5	
ORIGINAL SCALE: 3/8" = 1'-0" FOR REDUCED PLANS				UNIT: 3576	PROJECT NUMBER & PHASE: 01120001161	CONTRACT NO.: 01-CR3204	SUBSEQUENT PRINTS BEARING EARLIER REVISION DATES

- LEGEND:
- Indicates Structure Excavation
 - Indicates Structure Backfill
 - Indicates Roadway Excavation
 - Indicates Roadway Backfill
 - Indicates 1 1/2" X 3/4" Coarse Aggregate Backfill

REGISTERED CIVIL ENGINEER DATE X
 Kevin Harper No. 47221
 No. 5/31/16
 CIVIL
 STATE OF CALIFORNIA

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.



PAY LIMITS NEAR EXISTING CRIB WALL
 $\frac{3}{8}'' = 1'-0''$

TYPICAL PAY LIMITS
 $\frac{3}{8}'' = 1'-0''$

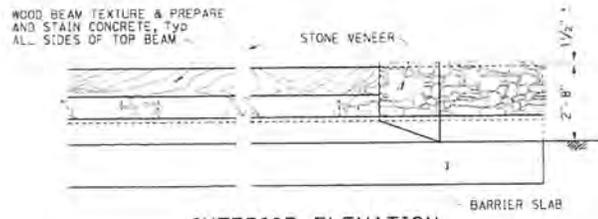
DESIGN BY Kevin Harper	CHECKED	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.	MIDDLE FORK WALL EXCAVATION AND BACKFILL LIMITS
DETAILS BY Jie Tong	ENGINEER			POST MILE	
QUANTITIES BY	CHECKED			24.5	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3576 PROJECT NUMBER & PHASE: 01120001161	CONTRACT NO.: 01-083204	DISREGARD PRINTING BEARING EARLIER REVISION DATES	SHEET NO. 9 TOTAL SHEETS 14

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 08-21-10)

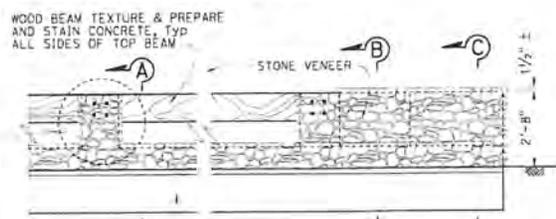
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	DN	199			

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

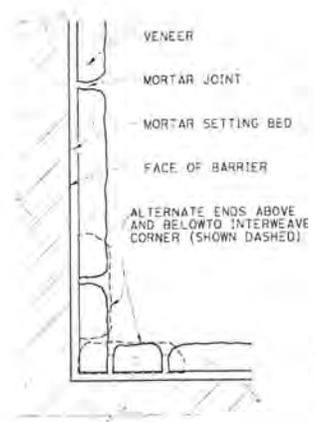
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



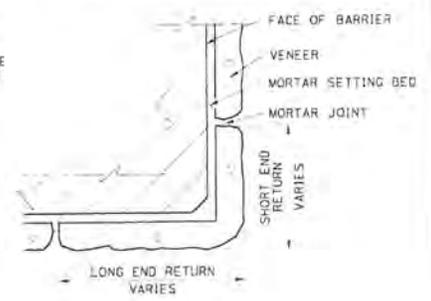
INTERIOR ELEVATION
no scale



EXTERIOR ELEVATION
no scale



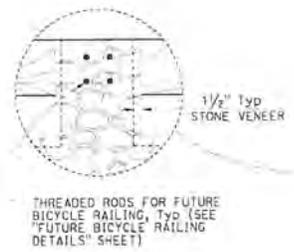
INSIDE CORNER DETAIL



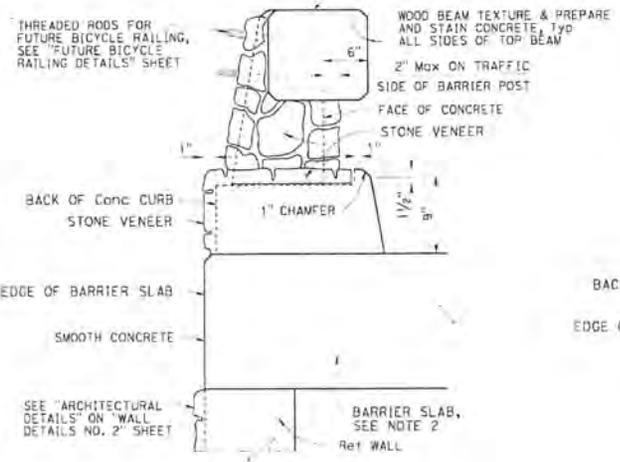
OUTSIDE CORNER DETAIL

MANUFACTURED STONE VENEER TEXTURE
NO SCALE

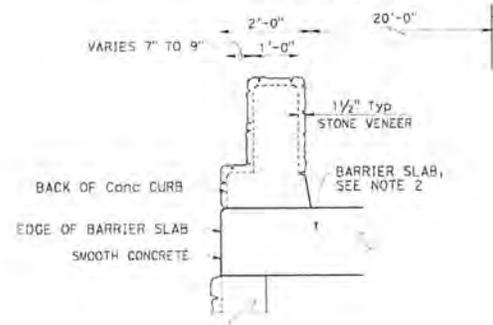
- NOTES:
1. For details not shown, see REVISED STANDARD PLAN B11-60.
 2. For Barrier Slab details, see "CONCRETE BARRIER SLAB DETAIL" on "TYPICAL SECTION" sheet.
 3. The average installed thickness of the stone veneer shall be approximately 1 1/2".



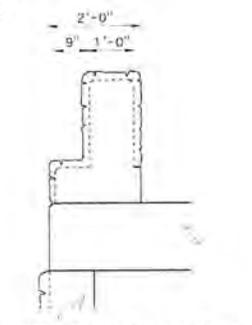
THREADED RODS FOR FUTURE BICYCLE RAILING, Typ (SEE "FUTURE BICYCLE RAILING DETAILS" SHEET)



SECTION A-A
1 1/2" = 1'-0"



SECTION B-B
3/4" = 1'-0"



SECTION C-C
3/4" = 1'-0"

NOTE: For details not shown, see "SECTION B-B"

DESIGN	BY Kevin Harper	CHECKED
DETAILS	BY Jie Tang	CHECKED
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	
POST MILE	24.5

MIDDLE FORK WALL
CONCRETE BARRIER TYPE 80 (Mod)

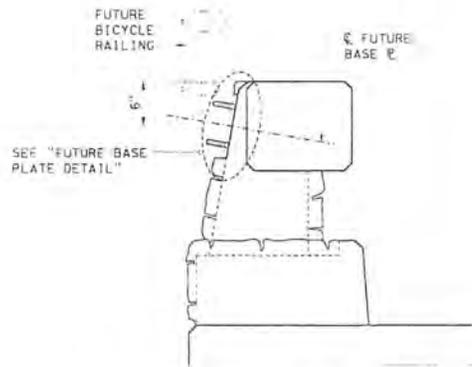
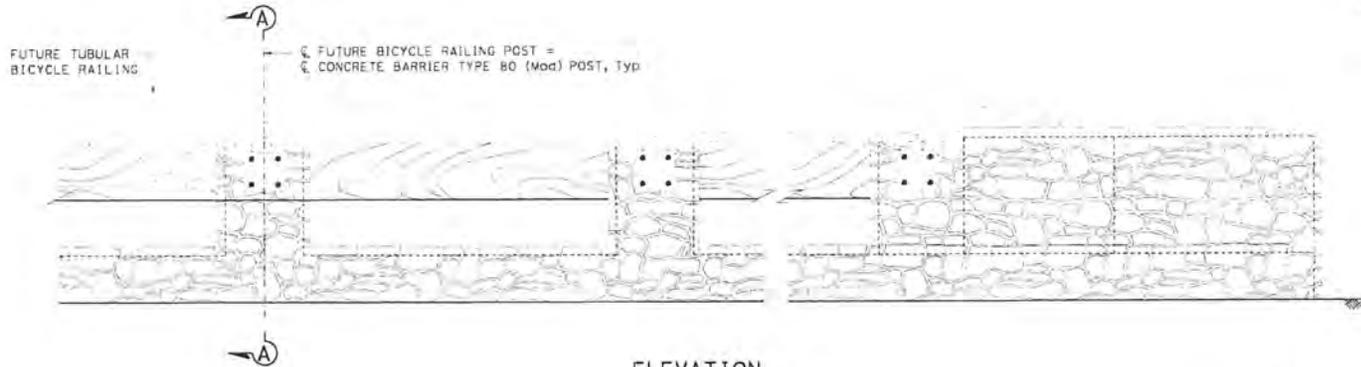
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SPLIT No.	TOTAL SHEETS
01	DN	199			

REGISTERED CIVIL ENGINEER	X	DATE
Kevin Harper No. 42221 Exp. 1/31/16 CIVIL		
PLANS APPROVAL DATE		

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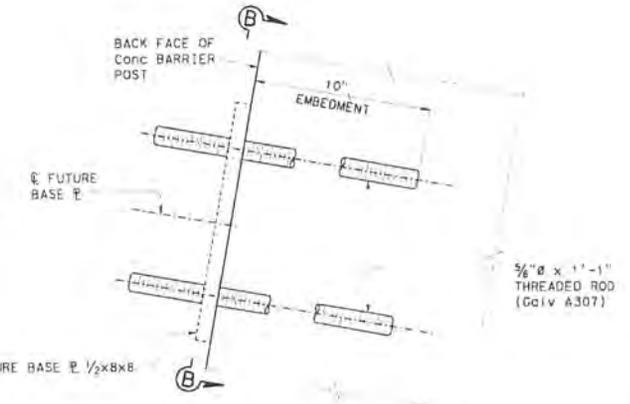
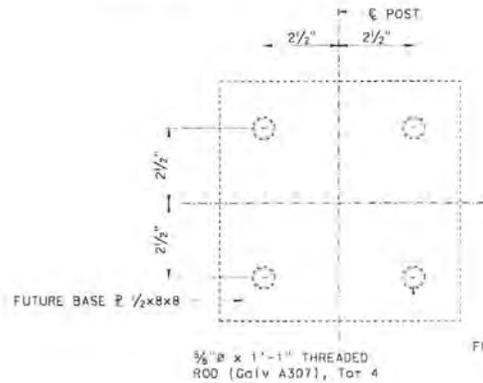
NOTES:

- For details not shown see "CONCRETE BARRIER TYPE 80 (Mod)" sheet.
- Place rock veneer around threaded rods in the area of the future base plate.



NOTE: Rock veneer is shown removed in area of future base plate for attachment of bicycle railing. See Note 2.

SECTION A-A
1/2" = 1'-0"



FUTURE BASE PLATE DETAIL
6" = 1'-0"

SECTION B-B
6" = 1'-0"

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN BY Kevin Harper	CHECKED	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.	MIDDLE FORK WALL
	DETAILS BY Jie Tang	CHECKED			POST MILE	
	QUANTITIES BY	CHECKED	UNIT: 3576 PROJECT NUMBER & PHASE: 01120001161	CONTRACT NO.: 01-093204	DISREGARD PRINTS BEARING EARLIER REVISION DATES	11 14

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

San Francisco District

This Preliminary Jurisdictional Determination finds that there "may be" waters of the United States in the subject review area and identifies all such aquatic features, based on the following information:

Regulatory Division: North Branch

File Number: 2015-00075Select

PJD Completion Date: 2/25/15

Review Area Location

City/County: US 199/ Del Norte State: California
Nearest Named Waterbody: Middle Fork Smith River
Approximate Center Coordinates of Review Area
Latitude (degree decimal format): 41.8822°N
Longitude (degree decimal format): -123.8216°W
Approximate Total Acreage of Review Area: 0.5 acres

File Name: OB320

Applicant or Requestor Information

Name: Gail Popham
Company Name: California Department of Transportation
Street/P.O. Box: 1656 Union St.
City/State/Zip Code: Eureka, CA 95501

Estimated Total Amount of Waters in Review Area

Non-Wetland Waters: 200 lineal feet 1 feet wide and/or
0.005 acre(s) Flow Regime: Perennial

Wetlands: 0 lineal feet 0 feet wide and/or
0 acre(s) Cowardin Class: Select

Name of Section 10 Waters Occurring in Review Area

Tidal: 0
Non-Tidal: 0

Office (Desk) Determination

Field Determination:

Date(s) of Site Visit(s): 2/25/15

SUPPORTING DATA: Data reviewed for Preliminary JD (check all that apply – checked items should be included in case file and, where checked and requested, appropriately reference sources below)

Maps. Plans, plots or plat submitted by or on behalf of applicant/requestor (specify):

Data sheets submitted by or on behalf of applicant/requestor (specify):

Corps concurs with data sheets/delineation report.

Corps does not concur with data sheets/delineation report.

Data sheets prepared by the Corps.

Corps navigable waters' study (specify):

U.S. Geological Survey Hydrologic Atlas:

USGS NHD data.

USGS HUC maps.

U.S. Geological Survey map(s) (cite quad name/scale):

USDA Natural Resources Conservation Service Soil Survey.

National wetlands inventory map(s) (specify): USFWS National Wetland Inventory August 2013

State/Local wetland inventory map(s) (specify):

FEMA/FIRM maps.

100-year Floodplain Elevation (specify, if known):

Photographs: Aerial (specify name and date): NAIP 2010

Other (specify name and date): Site photographs, Caltrans 2014

Previous JD determination(s) (specify File No. and date of response letter):

Other information (specify): No wetlands impacted. Temporary impacts to 0.004-acre other waters. See attached chart for all wetlands/waters in the project vicinity.

IMPORTANT NOTE: If the information recorded on this form has not been verified by the Corps, the form should not be relied upon for later jurisdictional determinations.

Signature and Date of Regulatory Project Manager
(REQUIRED)

Signature and Date of Person Requesting Preliminary JD
(REQUIRED, unless obtaining the signature is impracticable)

14. Linear Transportation Projects.

Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project. This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to preconstruction elevations. The areas affected by temporary fills must be revegetated, as appropriate. This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) The loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 31.) (Sections 10 and 404)

Note: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

Nationwide Permit General Conditions

1. Navigation
2. Aquatic Life Movements
3. Spawning Areas
4. Migratory Bird Breeding Areas
5. Shellfish Beds
6. Suitable Material
7. Water Supply Intakes
8. Adverse Effects From Impoundments
9. Management of Water Flows
10. Fills Within 100-Year Floodplains
11. Equipment
12. Soil Erosion and Sediment Controls
13. Removal of Temporary Fills
14. Proper Maintenance
15. Single and Complete Project
16. Wild and Scenic Rivers
17. Tribal Rights
18. Endangered Species
19. Migratory Birds and Bald and Golden Eagles
20. Historic Properties
21. Discovery of Previously Unknown Remains and Artifacts
22. Designated Critical Resource Waters
23. Mitigation
24. Safety of Impoundment Structures
25. Water Quality
26. Coastal Zone Management
27. Regional and Case-By-Case Conditions
28. Use of Multiple Nationwide Permits
29. Transfer of Nationwide Permit Verifications
30. Compliance Certification
31. Pre-Construction Notification

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/ or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation. (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States. (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the

structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the preconstruction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed. (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary. (c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect federally listed endangered or threatened species or designated critical habitat, the pre-construction notification must include

the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps. (d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWP. (e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. (f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.noaa.gov/fisheries.html> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied. (b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary. (c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the preconstruction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National

Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed. (d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete preconstruction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps. (e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/ THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment. (a) Discharges of dredged or fill material into waters of the United States are not authorized by NWP's 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including

wetlands adjacent to such waters. (b) For NWP's 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWP's only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal: (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site). (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal. (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require preconstruction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332. (1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment. (2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered. (3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2)-(14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). (4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided. (5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan. (d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment. (e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWP's. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWP's. (f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance,

and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses. (g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management. (h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include: (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions; (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and (c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification—(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either: (1) He or she is notified in writing

Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act. (c) *Form of Pre-Construction Notification*: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used. (d) *Agency Coordination*: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWP's and the need for mitigation to reduce the project's adverse environmental effects to a minimal level. (2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the preconstruction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWP's, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5. (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act. (4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of preconstruction notifications to expedite agency coordination.

San Francisco District Regional Conditions

A. General Regional Conditions that apply to all NWP's in the Sacramento, San Francisco, and Los Angeles Districts:

1. When pre-construction notification (PCN) is required, the permittee shall notify the U.S. Army Corps of Engineers, San Francisco District (Corps) in accordance with General Condition 31 using either the South Pacific Division Preconstruction Notification (PCN) Checklist or a signed application form (ENG Form 4345) with an attachment providing information on compliance with all of the General and Regional Conditions. In addition, the PCN shall include:
 - a. A written statement describing how the activity has been designed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States;
 - b. Drawings, including plan and cross-section views, clearly depicting the location, size and dimensions of the proposed activity, as well as the location of delineated waters of the U.S. on the site. The drawings shall contain a title block, legend and scale, amount (in cubic yards) and area (in acres) of fill in Corps jurisdiction, including both permanent and temporary fills/structures. The ordinary high water mark or, if tidal waters, the mean high water mark and high tide line, should be shown (in feet), based on National Geodetic Vertical Datum (NGVD) or other appropriate referenced elevation. All drawings for activities located within the boundaries of the Los Angeles District shall comply with the September 15, 2010 Special Public Notice: *Map and Drawing Standards for the Los Angeles District Regulatory Division*, (available on the Los Angeles District Regulatory Division website at: www.spl.usace.army.mil/regulatory/); and
 - c. Numbered and dated pre-project color photographs showing a representative sample of waters proposed to be impacted on the site, and all waters of the U.S. proposed to be avoided on and immediately adjacent to the activities site. The compass angle and position of each photograph shall be identified on the plan-view drawing(s) required in subpart b of this Regional Condition.
2. The permittee shall submit a PCN, in accordance with General Condition 31, For all activities located in areas designated as Essential Fish Habitat (EFH) by the Pacific Fishery Management Council (i.e., all tidally influenced areas - Federal Register dated March 12, 2007, 72 C.F.R. 11,092, in which case the PCN shall include an EFH assessment and extent of proposed impacts to EFH. Examples of EFH habitat assessments can be found at: <http://www.swr.noaa.gov/efh.htm>.
3. For activities in which the Corps designates another Federal agency as the lead for compliance with Section 7 of the Endangered Species Act (ESA) of 1973 as amended, 16 U.S.C. §§ 1531-1544, Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act (EFH), 16 U.S.C. § 1855(b)(4)(B) and/or Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, 16 U.S.C. §§ 470-470h, the lead Federal agency shall provide all relevant documentation to the appropriate Corps demonstrating any previous consultation efforts, as it pertains to the Corps Regulatory permit area (for Section 7 and EFH compliance) and the Corps Regulatory area of potential effect (APE) (for Section 106 compliance). For activities requiring a PCN, this information shall be submitted with the PCN. If the Corps does not designate another Federal agency as the lead for ESA, EFH and/or NHPA, the Corps will initiate consultation for compliance, as appropriate.

4. For all activities in waters of the U.S. that are suitable habitat for Federally-listed fish species, the permittee shall design all road crossings to ensure that the passage and/or spawning of fish is not hindered. In these areas, the permittee shall employ bridge designs that span the stream or river, including pier- or pile-supported spans, or designs that use a bottomless arch culvert with a natural stream bed unless determined to be impracticable by the Corps.
5. The permittee shall complete the construction of any compensatory mitigation required by special condition(s) of the NWP verification before or concurrent with commencement of construction of the authorized activity, except when specifically determined to be impracticable by the Corps. When mitigation involves use of a mitigation bank or in-lieu fee program, the permittee shall submit proof of payment to the Corps prior to commencement of construction of the authorized activity.
6. Any requests to waive the 300 linear foot limitation for intermittent and ephemeral streams for NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51 and 52, or to waive the 500 linear foot limitation along the bank for NWP 13, must include the following:
 - a. A narrative description of the stream. This should include known information on: volume and duration of flow; the approximate length, width, and depth of the waterbody and characteristics observed associated with an Ordinary High Water Mark (e.g. bed and bank, wrack line or scour marks); a description of the adjacent vegetation community and a statement regarding the wetland status of the adjacent areas (i.e. wetland, non-wetland); surrounding land use; water quality; issues related to cumulative impacts in the watershed, and; any other relevant information;
 - b. An analysis of the proposed impacts to the waterbody, in accordance with General Condition 31;
 - c. Measures taken to avoid and minimize losses to waters of the U.S., including other methods of constructing the proposed activity(s); and
 - d. A compensatory mitigation plan describing how the unavoidable losses are proposed to be offset, in accordance with 33 CFR 332.

B. General Regional Conditions that apply to all NWPs in the San Francisco District:

1. Notification to the Corps (in accordance with General Condition No. 31) is required for any activity permitted by NWP if it will take place in waters or wetlands of the U.S. that are within the **San Francisco Bay diked baylands** (see figure 1) (undeveloped areas currently behind levees that are within the historic margin of the Bay. Diked historic baylands are those areas on the Nichols and Wright map below the 5-foot contour line, National Geodetic Vertical Datum (NGVD) (see Nichols, D.R., and N. A. Wright. 1971. Preliminary map of historic margins of marshland, San Francisco Bay, California. U.S. Geological Survey Open File Map)). The notification shall explain how avoidance and minimization of losses of waters or wetlands are taken into consideration to the maximum extent practicable (see General Condition 23).
2. Notification to the Corps (in accordance with General Condition No. 31) is required for any activity permitted by NWP if it will take place in waters or wetlands of the U.S. that are within the **Santa Rosa Plain** (see figure 2). The notification will explain how avoidance and minimization of losses of waters or wetlands are taken into consideration to the maximum extent practicable in accordance with General Condition No. 23.
3. Notification to the Corps (in accordance with General Condition No. 31), including a compensatory mitigation plan, habitat assessment, and extent of proposed-project impacts

to Eelgrass Beds are required for any activity permitted by NWP if it will take place within or adjacent to **Eelgrass Beds**.

C. Regional Conditions that apply to specific NWPs in the San Francisco District:

3. MAINTENANCE:

1. To the extent practicable, excavation equipment shall work from an upland site (e.g., from the top of the bank, the road bed of the bridge, or culverted road crossing) to minimize adding fill into waters of the U.S. If it is not practicable to work from an upland site, or if working from the upland site would cause more environmental damage than working in the stream channel, the excavation equipment can be located within the stream channel but it must minimize disturbance to the channel (other than the removal of accumulated sediments or debris). As part of the notification to the Corps (in accordance with General Condition No. 31), an explanation as to the need to place excavation equipment in waters of the U.S. is required, as well as a statement of any additional necessary fill (e.g., cofferdams, access road, fill below the OHW mark for a staging area, etc.).
2. If the activity is proposed in a special aquatic site, the notification to the Corps (in accordance with General Condition No. 31) shall include an explanation of why the special aquatic site cannot be avoided, and the measures to be taken to minimize impacts to the special aquatic site.

11. TEMPORARY RECREATIONAL STRUCTURES:

1. Notification to the Corps (in accordance with General Condition No. 31) is required if any temporary structures are proposed in wetlands or vegetated shallow water areas (e.g. in eelgrass beds). The notification shall include the type of habitat and areal extent affected by the structures.

12. UTILITY LINE ACTIVITIES:

1. Excess material removed from a trench, associated with utility line construction, shall be disposed of at an upland site away from any wetlands or other waters of the U.S. so as to prevent this material from being washed into aquatic areas.
2. This NWP permit does not authorize the construction of substation facilities. Utility line substations can usually be constructed in uplands.

13. BANK STABILIZATION:

1. Notification to the Corps (in accordance with General Condition No. 31) is required for all activities stabilizing greater than 300 linear feet of channel. Where the removal of wetland vegetation (including riparian wetland trees, shrubs and other plants) or submerged, rooted, aquatic plants over a cumulative area greater than 1/10 acre or 300 linear feet is proposed, the Corps shall be notified (in accordance with General Condition No. 31). The notification shall include the type of vegetation and extent (e.g., areal dimension or number of trees) of the proposed removal. The notification shall also address the effect of the bank stabilization on the stability of the opposite side of the streambank (if it is not part of the stabilization activity), and on adjacent property upstream and downstream of the activity.
2. This permit allows excavating a toe trench in waters of the U.S., and, if necessary, to use the material for backfill behind the stabilizing structure. Excess material is to be disposed of in a manner that will have only minimal impacts to the aquatic environment. The notification to the Corps (in accordance with General Condition No. 31) shall include location of the disposal site.
3. For man-made banks, roads, or levees damaged by storms or high flows, the one cubic yard per running foot limit is counted only for that additional fill which encroaches (extends) beyond the pre-flood or pre-storm shoreline condition of the waterway. It is not counted for

the fill that would be placed to reconstruct the original dimensions of the eroded, man-made shoreline.

4. For natural berms and banks, the one cubic yard per running foot limit applies to any added armoring.
5. To the maximum extent practicable, any new or additional bank stabilization must incorporate structures or modifications beneficial to fish and wildlife (e.g., soil bioengineering or biotechnical design, root wads, large woody debris, etc.). Where these structures or modifications are not used, the applicant shall demonstrate why they were not considered practicable.

14. LINEAR TRANSPORTATION PROJECTS:

1. Notification to the Corps (in accordance with General Condition No. 31) is required for all projects filling greater than 300 linear feet of channel. For projects involving greater than 300 linear feet of bank stabilization, the project proponent shall address the effect of the bank stabilization on the stability of the opposite side of the streambank (if it is not part of the stabilization activity), and on adjacent property upstream and downstream of the activity.
2. This permit does not authorize construction of new airport runways and taxiways.
3. If this NWP has been used to authorize previous project segments within the same linear transportation project, justification must be provided demonstrating that the cumulative impacts of the proposed and previously authorized project segments do not result in more than minimal impacts to the aquatic system.
4. To the maximum extent practicable, any new or additional bank stabilization required for the crossing must incorporate structures or modifications beneficial to fish and wildlife (e.g., soil bioengineering or biotechnical design, root wads, large woody debris, etc.). Where these structures or modifications are not used, the applicant shall demonstrate why they were not considered practicable. Bottomless and embedded culverts are encouraged over traditional culvert stream crossings.

23. APPROVED CATEGORICAL EXCLUSIONS:

1. Use of this NWP requires notification to the Corps (in accordance with General Condition No. 31). The notification shall include the following:
 - a. A copy of the Federal Categorical Exclusion (Cat/Ex) document signed by the appropriate federal agency. If the Cat/Ex is signed by a state or local agency representative instead of by a federal agency representative, then copies of all documentation authorizing alternative agency signature shall be provided.
 - b. Written description of Corps authority (e.g., Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act.);
 - c. a list of conditions described in the Cat/Ex and/or attachments outlining measures that must be taken prior to, during, or after project construction to minimize impacts to the aquatic environment;
 - d. a copy of the jurisdictional delineation performed by qualified specialists showing the project limits and the location (delineated boundaries) of Corps jurisdiction within the overall project limits;
 - e. map(s) showing the locations of potentially permanent and temporary project impacts to areas within Corps jurisdiction;

- f. a clear and concise description of all project impacts including, but not necessarily limited to:
 1. quantification and description of permanent project impacts to areas within Corps jurisdiction,
 2. quantification and description of temporary impacts to areas within Corps jurisdiction, and
 3. linear extent of Corps jurisdiction affected by the project,
 - g. a general description of activities covered by the Cat/Ex that do not require Corps authorization but are connected or related to the activities in Corps jurisdiction;
 - h. a complete description of any proposed mitigation and/or restoration including, but not necessarily limited to, locations of any proposed planting, short- and long-term maintenance, proposed monitoring, success criteria and contingency plans;
 - i. written justification of how the project complies with the Nationwide Permit Program including less than minimal impact to the aquatic environment and compliance with the General Conditions.
 - j. For Federal Highway Administration (FHWA) Cat/Ex projects, the notification should describe how activities described in the Cat/Ex meet the description of the Cat/Ex project published in the August 28, 1987 Federal Register part 771.117 (a)(b)(c) and (d) (Volume 52, No. 167) or any updated version published in the Federal Register.
2. Only activities specifically described in the Cat/Ex project description will be covered by the NWP 23 authorization. If other activities not described in the Cat/Ex project description will be performed (e.g., dewatering, slope protection, etc.), these activities must receive separate NWP authorizations.
 3. Notification to the Corps (in accordance with General Condition 31) must include a copy of the signed Cat/Ex document and final agency determinations regarding compliance with Section 7 of the Endangered Species Act (ESA), Essential Fish Habitat (EFH) under the Magnussen-Stevens Act, and Section 106 of the National Historic Preservation Act.

27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities

1. Notification to the Corps (in accordance with General Condition 31) must include documentation of a review of project impacts to demonstrate that at the conclusion of the work that the project would result in a net increase in aquatic function. Additionally, the documentation must include a review of project impacts on adjacent properties or structures and must also discuss cumulative impacts associated with the project.

29. Residential Developments:

1. When discharge of fill results in the replacement of wetlands or waters of the U.S. with impervious surfaces, to ensure that the authorized activity does not result in more than minimal degradation of water quality (in accordance with General Condition 25), the residential development shall incorporate low impact development concepts (e.g. native landscaping, bioretention and infiltration techniques, and constructed green spaces) to the extent practicable. A description of the low impact development concepts proposed in the project shall be included with the permit application. More information including low impact development concepts and definitions is available at the following website:
<http://www.epa.gov/owow/NPS/lid/>
2. Use of this NWP is prohibited within the San Francisco Bay diked baylands (undeveloped areas currently behind levees that are within the historic margin of the Bay. Diked historic baylands are those areas on the Nichols and Wright map (see figure 1) below the 5-foot

contour line, National Geodetic Vertical Datum (NGVD) (see Nichols, D.R., and N. A. Wright. 1971. Preliminary map of historic margins of marshland, San Francisco Bay, California. U.S. Geological Survey Open File Map)).

33. TEMPORARY CONSTRUCTION, ACCESS, AND DEWATERING:

1. Access roads shall be designed to be the minimum width necessary and shall be designed to minimize changes to the hydraulic flow characteristics of the stream and degradation of water quality (in accordance with General Conditions 9 and 25). The following Best Management Practices (BMPs) shall be followed to the maximum extent practicable to ensure that flow and circulation patterns of waters are not impaired and adverse effects on the aquatic environment will be kept to a minimum:
 - a. The road shall be properly stabilized and maintained during and following construction to prevent erosion.
 - b. Construction of the road fill shall occur in a manner that minimizes the encroachment of trucks, tractors, bulldozers, or other heavy equipment within waters of the United States (including adjacent wetlands) that lie outside the lateral boundaries of the fill itself.
2. Vegetative disturbance in the waters of the U.S. shall be kept to a minimum.
3. Borrow material shall be taken from upland sources whenever feasible.
4. Stream channelization is not authorized by this NWP.

35. MAINTENANCE DREDGING OF EXISTING BASINS:

1. Use of this NWP will require notification to the Corps (in accordance with General Condition No. 31). The notification information should be provided on the Consolidated Dredging-Dredged Material Reuse/Disposal Application. This application and instructions for its completion can be found on our web site at: <http://www.spn.usace.army.mil/conops/applications.html>. The information must include the location of the proposed upland disposal site. A jurisdictional delineation of the proposed upland disposal site prepared in accordance with the current method required by the Corps may also be required.
2. The U.S. Coast Guard will be notified by the permittee at least 14 days before dredging commences if the activity occurs in navigable waters of the U.S. (Section 10 waters).
3. The permittee will be required to provide the following information to the Corps:
 - a. Dredge Operation Plan: Submit, for approval by this office, no earlier than 60 calendar days and no later than 20 calendar days before the proposed commencement of dredging, a plan which includes the following: **Corps file number**, a copy of the dredging contract or description of the work under which the contractor will do the permitted work; name and telephone numbers of the dredging contractor's representative on site; proposed dredging start and completion dates; quantity of material to be removed; dredging design depth and typical cross section including overdepth; and date of last dredging episode and design depth. The Dredge Operational Plan shall also provide the following information: The controls being established to insure that dredging operations occur within the limits defined by the basin or channel dimensions and typical channel section.
 - b. Pre-Dredge Survey: Submit no earlier than 60 calendar days and no later than 20 calendar days before commencement of dredging, a survey with accuracy to one-tenth foot that delineates and labels the following: areas to be dredged with overdepth allowances; existing depths; estimated quantities to be dredged to the design depth; and

estimated quantities for overdepth dredging. **All surveys shall be signed by the permittee to certify their accuracy. Please include the Corps file number.**

- c. Solid Debris Management Plan: Submit no earlier than 60 calendar days and no later than 20 calendar days before commencement of work, a plan which describes measures to ensure that solid debris generated during any dredging operation is retained and properly disposed in areas not under Corps jurisdiction. **At a minimum, the plan shall include the following: source and expected type of debris; debris retrieval method; Corps file number; disposal method and site; schedule of disposal operations; and debris containment method to be used, if floatable debris is involved. (Please note that failure to provide all of the information requested in a, b, and c above may result in delays to your project. When your Dredge Operation Plan has been approved, you will receive a written authorization to commence with your project.)**
- d. Post-Dredge Survey: Submit, **within 30 days of the last disposal activity** ("last" is defined as that activity after which no further activity occurs for 15 calendar days), a survey with accuracy to one-tenth foot that delineates and labels the areas dredged and provides the dredged depths. **Also, include the Corps file number, actual dates of dredging commencement and completion, actual quantities dredged for the project to the design depth, and actual quantities of overdepth.** The permittee shall substantiate the total quantity dredged by including calculations used to determine the volume difference (in cubic yards) between the Pre- and Post-Dredge Surveys and **explain any variation in quantities greater than 15% beyond estimated quantities or dredging deeper than is permitted (design plus overdepth allowance).** **All surveys shall be accomplished by a licensed surveyor and signed by the permittee to certify their accuracy.** A copy of the post dredge survey should be sent to the National Ocean Service for chart updating:
NOAA/National Ocean Service,
Nautical Data Branch
N/CS26, SSMC3, Room 7230
1315 East-West Highway
Silver Spring, Maryland 20910-3282.
- e. **The permittee or dredge contractor shall inform this office when: 1) a dredge episode actually commences, 2) when dredging is suspended (suspension is when the dredge contractor leaves the dredge site for more than 48 hours for reasons other than equipment maintenance), 3) when dredging is restarted, and 4) when dredging is complete. Each notification should include the Corps file number.** Details for submitting these notifications will be provided in the verification letter (to whom and how).

39. Commercial and Institutional Developments:

1. When discharge of fill results in the replacement of wetlands or waters of the U.S. with impervious surfaces, to ensure that the authorized activity does not result in more than minimal degradation of water quality (in accordance with General Condition 25), the commercial and institutional development shall incorporate low impact development concepts (e.g. native landscaping, bioretention and infiltration techniques, and constructed green spaces) to the extent practicable. A description of the low impact development concepts proposed in the project shall be included with the permit application. More information including low impact development concepts and definitions is available at the following website: <http://www.epa.gov/owow/NPS/lid/>.
2. Use of this NWP is prohibited within the San Francisco Bay diked baylands (undeveloped areas currently behind levees that are within the historic margin of the Bay. Diked historic baylands are those areas on the Nichols and Wright map (see figure 1) below the 5-foot

contour line, National Geodetic Vertical Datum (NGVD) (see Nichols, D.R., and N. A. Wright. 1971. Preliminary map of historic margins of marshland, San Francisco Bay, California. U.S. Geological Survey Open File Map)).

40. AGRICULTURAL ACTIVITIES:

1. This NWP does not authorize discharge of fill into the channel of a perennial or intermittent watercourse that could impede high flows. This limitation does not apply to watercourses that flow only when there is an irregular, extraordinary flood event.

41. RESHAPING EXISTING DRAINAGE DITCHES:

1. Compensatory mitigation may be required if the Corps determines there will be a detrimental impact to aquatic habitat.
2. Notification to the Corps (in accordance with General Condition 31) is required if the applicant proposes to re-grade, discharge, install channel lining, or redeposit fill material.
3. The notification to the Corps (in accordance with General Condition 31) shall include an explanation of the project's benefit to water quality and a statement demonstrating the need for the project.

42. RECREATIONAL FACILITIES:

1. If buildings are proposed to be built in waters of the United States, including wetlands, the applicant must demonstrate that there is no on-site practicable alternative that is less environmentally damaging as defined by the Section 404(b)(1) guidelines.

Enclosure 5

Permittee: California Department of Transportation, District 1

File Number: 2015-00075N

**Certification of Compliance
for
Nationwide Permit**

"I hereby certify that the work authorized by the above referenced File Number and all required mitigation have been completed in accordance with the terms and conditions of the Nationwide Permit."

PERMITTEE

DATE

Return to:

Carol Heidsiek
U.S. Army Corps of Engineers
San Francisco District
Eureka Field Office, CESP-N-R-N-EK
601 Startare Drive, Box 14
Eureka, California 95501

INFORMATION HANDOUT

For Contract No. 01-0B3204

At 01-DN-199-24.7

Identified by
Project ID 0112000116

PERMITS

PLAC - United States Army Corps of Engineers, San Francisco District

Non-Reporting Nationwide 404
Application and Conditions for Nationwide Permit No. 14
Dated April 14, 2015

WATER QUALITY

PLAC - California Regional Water Quality Control Board, North Coast Region

Water Quality Certification
Board Order No. WDID No. 1B15014WDN, ECM PIN CW-813031
Dated April 6, 2015



AGREEMENTS

PLAC - California Department of Fish and Wildlife, Northern Region

1602 Lake and Streambed Alteration Agreement
Notification No. 1600-2015-0031-R1
Dated April 21, 2015

MATERIALS INFORMATION

Foundation Report for Middle Fork ERS dated September 4, 2014

Division of Occupational Safety and Health Mining and Tunneling Unit Underground Classification letter dated February 2, 2015

Typical Plan for Exist MBGR (Special)

North Coast Regional Water Quality Control Board

April 6, 2015

**In the Matter of
Water Quality Certification**

for the

**California Department of Transportation
State Route 199 Middle Fork Smith River Wall Project
41.8822, -123.8216
WDID No. 1B15014WNDN, ECM PIN CW-813031
Caltrans EA No. 01-0B320**

APPLICANT: California Department of Transportation
RECEIVING WATERS: Middle Fork Smith River
HYDROLOGIC AREA: Hydrologic Planning Area 103.30, Middle Fork Smith River
COUNTY: Del Norte
FILE NAME: CDOT Middle Fork Wall Highway 199

FINDINGS BY THE EXECUTIVE OFFICER:

1. On February 6, 2015, the North Coast Regional Water Quality Control Board (Regional Water Board) received an application from the California Department of Transportation (Caltrans) requesting Federal Clean Water Act (CWA) section 401, Water Quality Certification (certification) for activities related to the State Route 199 Middle Fork Wall Project (Project).
2. **Hydrologic Unit:** The proposed Project would cause impacts to the Middle Fork Smith River (Basin Plan Hydrologic Planning Area 103.30, Middle Fork Smith River).
3. **Public Notice:** The Regional Water Board provided public notice of the application pursuant to title 23, California Code of Regulations, section 3858 on March 5, 2015, and

posted information describing the Project on the Regional Water Board's website. No comments were received.

4. **Project Description:** The Project location is in Del Norte County between post-miles 24.6 and 24.7 on State Route 199 (SR 199). The purpose of the Project is to fortify a section of SR 199 that overlies a geologically unstable area immediately adjacent the Middle Fork Smith River. Two existing steel bin walls are failing due to saturation of the existing roadway prism. Caltrans would install a soldier pile tieback wall to encapsulate the existing walls and the unstable area between the walls; the goal is to prevent the sinking of the soil in the space between the two bin walls.
5. **Construction Timing:** Project construction is expected to require 150 days between July 2015 and October 2016.
6. **Permanent Impacts:** Approximately 4,160 square feet (0.1 acres) of riparian habitat would be removed as a result of construction access and activities. Riparian vegetation removal would consist of two alder trees (12" and 16"), saplings, shrubs, and herbaceous vegetation.
7. **Temporary Impacts:** Caltrans has determined that the proposed Project would result in approximately 0.16 acres (200 linear feet) of temporary impacts to the upper bank of the Middle Fork Smith River as a result of construction access.
8. **Mitigation for Project Impacts:** Due to the very steep terrain, the 0.1-acre area of impacted riparian habitat shall be seeded with local native plant species instead of planted. Natural recruitment is expected to occur due to the Project location's proximity to existing, forested riparian areas.
9. **Post-Construction Stormwater Treatment:** Project implementation would result in approximately 0.03 acres of new impervious surface area. Post-construction storm water treatment is not required.
10. **Disturbed Soil Area:** Project implementation would result in less than one acre of disturbed soil area. Caltrans shall utilize appropriate erosion control, sediment control, and site management Best Management Practices to prevent discharge of pollutants during construction.
11. **Utility Relocations:** Utility relocations affecting jurisdictional waters are not proposed for this Project.
12. **Other Agency Actions:** Caltrans has applied for coverage under U.S. Army Corps of Engineers Nationwide Permit No. 14, pursuant to the Clean Water Act, section 404.

Caltrans has also submitted a section 1600 Notification of Lake or Streambed Alteration to the California Department of Fish and Wildlife.

13. **Wild and Scenic River:** The Smith River is designated as a California Wild and Scenic River under the California Wild and Scenic Rivers Act (CWSRA) (CA Public Resources Code Section 5093.5 et seq.). The Smith River at the Project location is designated as Recreational under the CWSRA. This certification does not certify any activities that would affect either the free-flowing character or recreational values of the Middle Fork Smith River.
14. **CEQA Compliance:** The Regional Water Board, as lead California Environmental Quality Act (CEQA) agency, has determined that the Project qualifies for a Categorical Exemption, (section 15301, *Existing Facilities*), and has filed a Notice of Exemption with the State Clearinghouse concurrent with issuance of the certification, pursuant to CEQA guidelines.
15. **Antidegradation Policy:** The federal antidegradation policy requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. This certification is consistent with applicable federal and State antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes of treated wastewater, and does not otherwise authorize degradation of the waters affected by this Project.
16. This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification," which requires compliance with all conditions of this certification. A weblink to this Order is included at the end of this certification.

Receiving Water:	Middle Fork Smith River (Basin Plan Hydrologic Planning Area 103.30, Middle Fork Smith River)	
Filled and/or Excavated Areas:	Permanent – riparian habitat	0.1 acres
	Temporary – jurisdictional waters	0.16 acres (200 linear feet)
Dredge Volume:	none	
Latitude/Longitude:	41.8822, -123.8216	

Accordingly, based on its independent review of the record, the Regional Water Board certifies that the State Route 199 Middle Fork Wall Project (WDID No. 1B15014WNDN), as described in the application will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided that Caltrans complies with the following terms and conditions:

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

Project-Specific Conditions Requiring Reports

1. The Regional Water Board shall be notified in writing (e-mail is acceptable) at least five working days prior to commencement of ground disturbing activities for each construction season.

Project-Specific Conditions

2. Tree removal is prohibited, except for a 12-inch and 16-inch alder.
3. Disturbed areas shall be seeded with local native plant species and weed-free mulch shall be applied, immediately upon construction completion.
4. Disturbed soil areas shall be fully stabilized or otherwise protected in advance of any rain event.
5. Work within the wetted portion of the channel and below ordinary high water is prohibited.

Standard Conditions

6. Herbicides and other pesticides shall not be used within the Project limits. If Caltrans has a compelling case as to why pesticides should be used, then a request for pesticide use and a BMP plan may be submitted to the Regional Water Board staff for review and acceptance.
7. All Project activities and BMPs shall be implemented according to the submitted application package and the findings and conditions of this certification. Subsequent changes to the Project that could significantly impact water quality shall first be submitted to Regional Water Board staff for prior review, consideration, and written concurrence. If the Regional Water Board is not notified of an alteration to the Project that results in an impact to water quality, it will be considered a violation of this Order, and Caltrans may be subject to Regional Water Board enforcement actions.

Standard Conditions (continued)

8. All conditions required by this Order shall be included in the Contract Documents prepared by Caltrans for the contractor. In addition, Caltrans shall require compliance with all conditions included in this Order in the bid contract for this Project.
9. Caltrans is prohibited from discharging waste to waters of the State, unless explicitly authorized by this certification. For example, no debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or concrete washings, welding slag, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, shall be allowed to enter into State waters.
10. Except for temporary stockpiling of waste generated during demolition operations ("temporary" in this instance means generated and removed during the same working day), waste materials shall not be placed in a manner where the materials may be transported into waters of the State. Waste materials shall not be placed within 100 linear feet of State waters. Exceptions to the 100-foot limit may be granted on a case-by-case basis provided Caltrans first submits a proposal in writing that is found acceptable by Regional Water Board staff.
11. Caltrans is liable and responsible for the proper disposal, reuse, and/or recycling of all Project-generated waste in compliance with applicable State and Federal laws and regulations, and as described in Caltrans 2010 Standard Specifications 13-4.03D, Waste Management. Additionally, when handling, transporting, disposing, reusing, and/or recycling Project-generated waste, Caltrans and their contractors shall:
 - i) Provide the Regional Water Board with a copy of the Solid Waste Disposal and Recycling Report prepared for Caltrans by the contractor per Caltrans 2010 Standard Specification 14-10.02A(1), Submittals. These reports shall be provided not later than January 31 for each year work is performed during the previous calendar year. A copy of the final Solid Waste Disposal and Recycling Report shall be submitted to the Regional Water Board within 30 days after being received by Caltrans from the contractor.
 - ii) For waste other than solid waste, obtain evidence that waste has been appropriately disposed, reused, and/or recycled. Evidence shall include type and quantity of waste and may include, but not be limited to, property owner agreements, permits, licenses, and environmental clearances. Evidence shall be provided to the Regional Water Board upon request; and
 - iii) For waste other than solid waste, ensure the Resident Engineer has given written permission for disposal, reuse, and/or recycling, prior to the actual disposal, reuse, and/or recycling.

Standard Conditions (continued)

12. Asphalt-concrete grindings shall not be placed in any location where they may, at any time, be directly exposed to surface waters or seasonally high ground water, except asphalt-concrete grindings may be re-used and incorporated into hot mix asphalt products or encapsulated within the roadway structural section.
13. Caltrans and their contractors shall comply with the activity restrictions detailed in Caltrans 2010 Standard Specifications 13-4.03C(1). In addition, fueling, maintenance, storage and staging of vehicles and equipment shall be prohibited within waters of the State (e.g., gravel bars, seeps, ephemeral streams) and riparian areas.
14. Fueling, maintenance, and/or staging of individual equipment types within waters of the State or riparian areas may be authorized if Caltrans first prepares a plan for review and approval by Regional Water Board staff that:
 - i) Identifies the specific piece of machinery that may require fueling, maintenance, and/or staging within waters of the State or riparian areas;
 - ii) Provides justification for the need to refuel, maintain, or stage within State waters or riparian areas. The justification shall describe why conducting the activity outside of jurisdictional waters is infeasible; and
 - iii) Includes a narrative of specific BMPs that shall be employed to prevent discharges to State waters and riparian areas;
15. Caltrans shall not use leaking vehicles or equipment within State waters or riparian areas.
16. Only 100-percent biodegradable erosion and sediment control products that will not entrap or harm wildlife shall be used. Photodegradable synthetic products are not considered biodegradable. If Caltrans finds that erosion control netting or products have entrapped or harmed wildlife, personnel shall remove the netting or product and replace it with wildlife-friendly biodegradable products. This condition does not prohibit the use of plastic sheeting used in water diversion or dewatering activities. Caltrans shall request approval from the Regional Water Board if an exception to this requirement is needed for a specific location.
17. Work in flowing or standing surface waters, unless otherwise proposed in the Project description and approved by the Regional Water Board, is prohibited.
18. Non-stormwater discharges are prohibited unless the discharge is first approved by the Regional Water Board and in compliance with the Basin Plan. If dewatering of groundwater is necessary, then Caltrans shall use a method of water disposal other than disposal to ground or surface waters, such as land disposal. Groundwater

Standard Conditions (continued)

disposed of to land shall not enter State waters. Alternatively, Caltrans may apply for coverage under the Low Threat Discharge Permit or an individual National Pollutant Discharge Elimination System (NPDES) Permit. If Caltrans applies for coverage under either of these permits, then discharge is prohibited until Caltrans has received notification of coverage under the respective permit.

19. Gravel bags used within State waters shall:

- i) Comply with Caltrans 2010 Standard Specifications sections 13-5.02G and 88-1.02F;
- ii) Be immediately removed and replaced if the bags have developed or are developing holes or tears; and
- iii) Be filled only with clean washed gravel.

Exceptions to these criteria are subject to the review and acceptance of Regional Water Board staff.

20. This Order does not authorize drafting of surface waters.

21. Caltrans shall provide access to the Project construction site upon request by Regional Water Board staff.

22. Initial water pollution control training described in Caltrans 2010 Standard Specifications 13-1.01D(2), Training, shall apply to all Caltrans employees, contractors, and sub-contractors. Initial water pollution control training topics shall include Regional Water Board 401 certification and construction general permit requirements, identification of state waters and riparian areas, and violation avoidance and discharge reporting procedures.

23. Caltrans shall maintain logs of all Caltrans staff, contractors, and sub-contractors trained pursuant to the Caltrans 2010 Standard Specifications 13-1.01D(2). The logs shall include the names of trainees, training dates, and summary of the scope of training. Caltrans shall provide evidence of this documentation upon the request of the Regional Water Board.

24. If an unauthorized discharge to surface waters (including wetlands, rivers or streams) occurs, or any other threat to water quality arises as a result of Project implementation, the associated Project activities shall cease immediately until the threat to water quality is otherwise abated. If there is a discharge to State waters, the Regional Water Board shall be notified no more than 24 hours after the discharge occurs.

Standard Conditions (continued)

25. Uncured concrete shall not be exposed to State waters or surface waters that may discharge to State waters. Concrete sealants may be applied to the concrete surface where difficulty in excluding flow for a long period may occur. If concrete sealant is used, water shall be excluded from the site until the sealant is cured. If groundwater comes into contact with fresh concrete, it shall be prevented from flowing towards surface water.
26. Ground and surface water that has come into contact with fresh concrete, and all other wastewater, shall not be discharged to State waters or to a location where it may discharge to State waters; the wastewater shall be collected and re-used or disposed of in a manner approved by the Regional Water Board.
27. All imported fill material shall be clean and free of pollutants. All fill material shall be imported from a source that has the appropriate environmental clearances and permits. The reuse of low-level contaminated solids as fill on-site shall be performed in accordance with all State and Federal policies and established guidelines and must be submitted to the Regional Water Board for review and consideration of acceptance.
28. Caltrans shall provide a copy of this certification and State Water Resources Control Board (SWRCB) Order No. 2003-0017-DWQ (web link referenced below) to the contractor and all subcontractors conducting the work, and require that copies remain in their possession at the work site. Caltrans shall be responsible for work conducted by its contractor and subcontractors.
29. The validity of this certification is conditioned upon total payment of any fee required under title 23, California Code of Regulations, section 3833. The total Application fee is \$2,700. The Regional Water Board received \$2,700 from Caltrans on February 6, 2015.
30. This certification will be subject to annual billing during the construction phase ("Annual Active Discharge Fee") and during the monitoring phase of the Project ("Annual Post Discharge Monitoring Fee"), per the current fee schedule, which can be found on our website:
http://www.swrcb.ca.gov/northcoast/water_issues/programs/water_quality_certification.shtml. These fees will be automatically invoiced to Caltrans.
31. Caltrans shall notify the Regional Water Board upon Project construction completion to request termination of the Annual Active Discharge Fee and to receive a "Notice of Completion of Discharges Letter." If the Project is subject to the Annual Post Discharge Monitoring Fee, then Caltrans shall also notify the Regional Water Board at the end of the monitoring period to request termination of the fee and receive a "Notice of Project Complete Letter." Caltrans may be required to submit completion reports at the end of each of these phases. Regional Water Board staff may request site visits at the end of

Standard Conditions (continued)

- each Project phase to confirm Project status and compliance with this Order.
32. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to title 23, California Code of Regulations, section 3855, subdivision (b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
 33. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In response to any violation of the conditions of this certification, the Regional Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.
 34. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330 and title 23, California Code of Regulations, section 3867.
 35. This certification is not transferable. In the event of any change in control of ownership of land presently owned or controlled by Caltrans, Caltrans shall notify the successor-in-interest of the existence of this certification by letter and shall forward a copy of the letter to the Regional Water Board. The successor-in-interest must send to the Regional Water Board Executive Officer a written request for transfer of this certification to discharge dredged or fill material under this Order. The request must contain the following:
 - i) Requesting entity's full legal name;
 - ii) The state of incorporation, if a corporation;
 - iii) The address and phone number of contact person; and
 - iv) A description of any changes to the project or confirmation that the

Standard Conditions (continued)

successor-in-interest intends to implement the project as described in this Order.

36. Except as may be modified by any preceding conditions, all certification actions are contingent on:

- i) The discharge being limited, and all proposed revegetation, avoidance, minimization, and mitigation measures being completed, in strict compliance with Caltrans's project description and CEQA documentation, as approved herein;
- ii) Caltrans shall construct the project in accordance with the project described in the application and the findings above; and
- iii) Compliance with all applicable water quality requirements and water quality control plans including the requirements of the Water Quality Control Plan for the North Coast Region (Basin Plan), and amendments thereto.

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

37. The authorization of this certification for any dredge and fill activities expires five years from the date of this Order. Conditions and monitoring requirements outlined in this Order are not subject to the expiration date outlined above, and remain in full effect and are enforceable.

Condition 1 includes a reporting requirement. Any requirement for a report made as a condition to this certification is a formal requirement pursuant to California Water Code section 13267, and failure or refusal to provide, or falsification of such required report is subject to civil liability as described in California Water Code, Section 13268.

The Regional Water Board may add to or modify the conditions of this Order, as appropriate, to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

Please contact our staff Environmental Scientist, Brendan Thompson at (707) 576-2699, or via e-mail, at Brendan.Thompson@waterboards.ca.gov, if you have any questions.

Matthias St. John
Executive Officer

150406_BJT_dp_CDOT_DN199_MiddleForkWall_401

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

Original to: Mr. Kevin Church, Caltrans, District 1, 1656 Union Street, Eureka, CA 95501
Kevin.Church@dot.ca.gov

cc: Robert Meade, Robert.meade@dot.ca.gov 
Holly Costa, U.S. Army Corps of Engineers holly.n.costa@usace.army.mil
JoAnn Dunn, California Department of Fish and Wildlife JoAnn.Dunn@wildlife.ca.gov
State Water Resources Control Board stateboard401@waterboards.ca.gov
Environmental Protection Agency, Region 9 R9-WTR8-Mailbox@epa.gov
Gail Popham, Caltrans Gail.Popham@dot.ca.gov

INFORMATION HANDOUT

For Contract No. 01-0B3204

At 01-DN-199-24.7

Identified by
Project ID 0112000116

PERMITS

PLAC - United States Army Corps of Engineers, San Francisco District

Non-Reporting Nationwide 404
Application and Conditions for Nationwide Permit No. 14
Dated April 14, 2015

WATER QUALITY

PLAC - California Regional Water Quality Control Board, North Coast Region

Water Quality Certification
Board Order No. WDID No. 1B15014WDN, ECM PIN CW-813031
Dated April 6, 2015

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PLAC - California Department of Fish and Wildlife, Northern Region

1602 Lake and Streambed Alteration Agreement
Notification No. 1600-2015-0031-R1
Dated April 21, 2015



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Foundation Report for Middle Fork ERS dated September 4, 2014

Division of Occupational Safety and Health Mining and Tunneling Unit Underground Classification letter dated February 2, 2015

Typical Plan for Exist MBGR (Special)

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
REGION 1 - NORTHERN
619 SECOND STREET
EUREKA, CALIFORNIA, 95501



RECEIVED

APR 21 2015

CDFW - EUREKA

STREAMBED ALTERATION AGREEMENT
NOTIFICATION No. 1600-2015-0031-R1
MIDDLE FORK SMITH RIVER AND

CALIFORNIA DEPARTMENT OF TRANSPORTATION
MIDDLE FORK WALL
EA 01-0B320; U.S. 199 PMs 24.6-24.7, DEL NORTE COUNTY

This 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. Kevin Church.

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) Section 1602, Permittee notified CDFW on February 5, 2015, that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC Section 1603, 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 situated on Middle Fork Smith River, tributary to Smith River, tributary to Pacific Ocean. The project is located in the County of Del Norte; State of California; Section 10, Township 17 North, Range 3 East, Humboldt Base and Meridian; Shelly Creek Ridge U.S. Geological Survey 7.5-minute quadrangle.

PROJECT DESCRIPTION

Caltrans is proposing to construct a tieback retaining wall to stabilize the roadway adjacent to the Middle Fork Smith River due to the failure of two existing steel bin walls. The proposed 180-foot-long soldier pile wall will encapsulate the two existing walls and

the slipout between them. A Type 80 architectural barrier is proposed for the top of the wall; centerline rumble strips will also be installed as part of the project.

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*)**, other non-game and game fishes, amphibians, reptiles, aquatic invertebrates, mammals, nesting resident and migratory birds, 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 indirect mortality of fish, amphibians and other aquatic species;
- injury to downstream fish and benthic invertebrates and spawning and/or rearing habitats through sediment transport and deposition and/or spills of deleterious materials;
- changes in channel form and contour of bed, bank, or channel;
- temporary increase of sediment and turbidity;
- temporary loss of riparian habitat;
- potential mortality of nesting birds, eggs or young through vegetation removal and construction disturbance; and
- colonization by non-native and/or invasive plants.

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, 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 in responsible positions 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.
- 1.5 Permittee shall notify CDFW within the 7-day period preceding the beginning of work permitted by this Agreement. Information to be disclosed shall include Agreement number, and the anticipated start date. Subsequently, the Permittee shall notify CDFW no later than 7 days after the project is fully completed. Notification shall be faxed to CDFW at (707) 441-2021, Attn: JoAnn Dunn, Senior Environmental Scientist (Specialist), or via e-mail at joann.dunn@wildlife.ca.gov.

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and other aquatic species, Permittee shall implement each measure listed below.

- 2.1 Except where otherwise stipulated in this Agreement, all work shall be in accordance with Permittee's notification, including all maps, plans, photographs, drawings, and all other supporting documents submitted as part of the notification and received as of February 5, 2015. The Permittee shall use the mitigative features described in the notification and supporting documents, unless such features are modified by the provisions of this Agreement, in which case the activities shall be conducted as described in this Agreement.
- 2.2 All work within the bed, bank or channel shall be confined to the period June 1 to October 15 of any year in which this Agreement is valid, unless consultation with CDFW provides for a site-specific seasonal work period variance. Any variance approved shall also require the Permittee comply with Measures 2.3a) – 2.3d).
- 2.3 As feasible, vegetation removal from the work area shall take place between September 15 and February 28 to avoid impacts to nesting birds. Fall and winter vegetation removal during the non-nesting season, and any other work proposed outside of a June 1 – October 15 work window, shall adhere to all measures in this Agreement and a) – e) below.
 - a) Prior to any work at a site outside June 1 – October 15, the Permittee shall stock-pile erosion control materials at the site. Erosion control materials shall be applied in sufficient quantity immediately upon completion of work and prior to the onset of precipitation capable of generating runoff with re-application as needed to avoid any visible increase in surface erosion or turbidity in any receiving streams.

- b) Vegetation limbing and felling shall minimize soil disturbance using effective Best Management Practices (BMPs) such as hand-cutting. Ground-disturbing work shall only be performed when soils are sufficiently dry so that sediment is not discharged into streams.
 - c) The Permittee shall install erosion control measures within 24 hours of CDFW directing the Permittee to do so.
 - d) When a 7-day National Weather Service forecast of rain for Hiouchi at <http://www.weather.gov> includes a minimum of 5 consecutive days with any chance of precipitation, 3 consecutive days with a 30% or greater chance of precipitation, or 2 consecutive days of 50% or greater chance of precipitation, the Permittee shall refrain from undertaking further vegetation removal work prior to the rain event. Permittee shall not resume vegetation removal work until the soil surface is dry, defined as a surface which is no wetter than that found during normal dust abatement watering treatments, and treatment of vegetation does not cause deformation of the soil surface.
 - e) Once vegetation is trimmed or removed in compliance with Measure 2.3, repeated hand-cutting of re-growth during the nesting season is permitted as needed to avoid re-growth that may attract nesting birds.
- 2.4 Removal of existing vegetation shall not exceed the minimum necessary to complete operations. If vegetation must be removed during the nesting season (March 1 to September 14) nest surveys shall be conducted prior to vegetation clearing.
- 2.5 The Permittee shall protect migratory birds, their occupied nests, and their eggs as specified by the Federal Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), Title 50 Code of Federal Regulations part 10, and California Fish and Game Code (FGC) sections 3503 and 3513. Nesting or attempted nesting by migratory birds within the project area is anticipated to occur between, but not limited to, March 1 and August 15.
- 2.6 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 to check the status of viable historic and active osprey nests within 0.5 miles of U.S. 199 PM markers 24.6-24.7 prior to operations each year. If osprey are found nesting in or within 0.5 miles of the project area at the time of construction, the Permittee shall consult with CDFW to determine if additional avoidance or minimization measures may be needed.
- 2.7 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.

- 2.8 No fill material shall be placed within a stream except as specified in this Agreement. No work shall be conducted below the ordinary high water (OHW) mark or the wetted channel of the Middle Fork Smith River.
- 2.9 Adequate and effective erosion and siltation control measures shall be used at all times to prevent sediment or turbid or silt-laden water from entering streams. Where needed, the Permittee shall use native vegetation or other treatments including native slash, jute netting, straw wattles, and geotextiles to protect and stabilize soils. Geotextiles, fiber rolls, and other erosion control treatments shall not contain plastic mesh netting that can entrap or harm wildlife. Photodegradable synthetic products are not considered biodegradable.
- 2.10 Excepting rock slopes that shall have rock bolting, all bare mineral soil exposed in conjunction with construction, deconstruction, maintenance or repair shall be treated for effective 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 measures shall include the proper installation and maintenance of approved BMPs and may include applications of seed, weed-free straw, compost, fiber, commercial fertilizer, stabilizing emulsion and mulch, or combinations thereof. Non-vegetative methods such as jute mat, coir mat, wood chip mat, straw mat or wattle, straw mulch, native duff (leaves, needles, fine twigs, etc.), or lopped native slash may be used as erosion control to protect and stabilize soils. Straw mulching shall utilize at least 2 to 4 inches of clean straw (such as rice, barley, wheat) or weed-free straw. Seeding shall use 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 in erosion control or revegetation seed mixes.
- 2.11 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.
- 2.12 The Permittee shall provide site maintenance during the life of the Agreement and the life of the structure, including, but not limited to, re-applying erosion control to minimize surface erosion and ensuring stream banks remain sufficiently functional, armored and/or stable. Modifications, repairs, and improvements to erosion control measures shall be made as needed following storm events to prevent sediment from entering the Middle Fork of the Smith River.
- 2.13 All construction-related materials and equipment shall be stored in designated staging areas outside of the floodplain.

- 2.14 Refueling of machinery or heavy equipment, or adding or draining oil, lubricants, coolants, or hydraulic fluids shall not take place within stream bed, channel, and bank. All such fluids and containers shall be disposed of properly off-site. Heavy equipment used or stored within stream bed, channel, and bank shall use drip pans or other devices (i.e., absorbent blankets, sheet barriers or other materials) as needed to prevent soil and water contamination.
- 2.15 Any equipment or vehicles driven and/or operated adjacent to the stream channel shall be checked and maintained daily to prevent leaks of materials that could be deleterious to aquatic and terrestrial life or riparian habitat.
- 2.16 Stationary equipment such as motors, pumps, generators, and welders that contain deleterious materials, located adjacent to the stream channel shall be positioned over drip pans.
- 2.17 To prevent the release of materials that may be toxic to fish and other aquatic species, poured concrete shall be isolated from stream flow and allowed to dry/cure for a minimum of 30 days. As an alternative, the Responsible Party shall monitor the pH of water that has come into contact with the poured concrete. If this water has a pH of 9.0 or greater, the water shall be pumped to tanker truck or to a lined off-channel basin and allowed to evaporate or be transported to an appropriate facility for disposal. During the pH monitoring period, all water that has come in contact with poured concrete shall be isolated and not allowed to flow 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 and water may be allowed to flow downstream. Results of pH monitoring shall be made available to CDFW upon request.
- 2.18 All construction activities performed in or near the stream shall have absorbent materials designated for spill containment and clean-up activities on-site for use in an accidental spill. In the event of a discharge, the Permittee shall immediately notify the California Emergency Management Agency State Warning Center at 1-800-852-7550 and immediately initiate clean-up activities. CDFW shall be notified by the Permittee within 24 hours and consulted regarding clean-up procedures.
- 2.19 Except as otherwise stipulated in this Agreement, no debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, asphalt, paint or other coating material, oil or petroleum products or other organic or earthen material from any construction, or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream or lake.

CONTACT INFORMATION

Written communication that Permittee or CDFW submits to the other shall be delivered to the address below unless Permittee or CDFW specifies otherwise:

To Permittee:

Mr. Kevin Church
Caltrans
1656 Union St.
Eureka, CA 95501
Email: kevin.church@dot.ca.gov

To CDFW:

California Department of Fish and Wildlife
Northern Region
619 Second Street
Eureka, California 95501
Attn: Lake or Streambed Alteration Program
Notification #1600-2015-0031-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 Calif. Code Regs., Title 14, Section 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 Calif. Code Regs., Title 14, Section 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 Calif. Code Regs., Title 14, Section 699.5). CDFW shall process the extension request in accordance with FGC Section 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 (FGC Section 1605(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.dfg.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall expire **three years** from the effective date, 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.

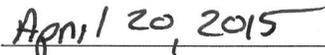
CONCURRENCE

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

FOR CALIFORNIA DEPT. OF TRANSPORTATION



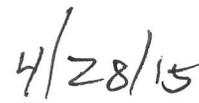
Kevin Church
Project Manager


Date

FOR CALIFORNIA DEPT. OF FISH AND WILDLIFE



Gordon Leppig
Senior Environmental Scientist (Supervisor)


Date

INFORMATION HANDOUT

For Contract No. 01-0B3204

At 01-DN-199-24.7

Identified by

Project ID 0112000116

PERMITS

PLAC - United States Army Corps of Engineers, San Francisco District

Non-Reporting Nationwide 404
Application and Conditions for Nationwide Permit No. 14
Dated April 14, 2015

WATER QUALITY

PLAC - California Regional Water Quality Control Board, North Coast Region

Water Quality Certification
Board Order No. WDID No. 1B15014WDN, ECM PIN CW-813031
Dated April 6, 2015

AGREEMENTS

PLAC - California Department of Fish and Wildlife, Northern Region

1602 Lake and Streambed Alteration Agreement
Notification No. 1600-2015-0031-R1
Dated April 21, 2015

MATERIALS INFORMATION

Foundation Report for Middle Fork ERS dated September 4, 2014

Division of Occupational Safety and Health Mining and Tunneling Unit Underground Classification letter dated February 2, 2015

Typical Plan for Exist MBGR (Special)

Memorandum

*Serious Drought!
Help Save Water!*

To: JEFF SIMS
CHIEF
Design Branch 1
Office of Bridge Design North & Central
Division of Engineering Services

Date: September 4, 2014

File: 01-DN-199- PM 24.67
Middle Fork ERS
Storm Damage Repair
EA# 01-0B3201
EFIS 0112000116

Attn: Kevin Harper
Project Engineer

From: **DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Geotechnical Services – MS 5
Office of Geotechnical Design – North**

Subject: Foundation Report for Middle Fork ERS

INTRODUCTION

Per the request of the Office of Bridge Design North and Central (OBDNC), the Office of Geotechnical Design-North (OGDN) has prepared this Foundation Report (FR) for an Earth Retaining System (ERS) proposed to be constructed at approximately PM 24.67 and 24.70 on Route 199, in northern Del Norte County, California (see vicinity map, Plate No. 1). The ERS is being proposed to stabilize the roadway where two existing metal bin walls are exhibiting distress as indentified in an OGDN memo dated July 28, 2011 (Reference No. 15); a repair has been scoped in the Damage Assessment Form (DAF) No. CEP-CT101-009-0 associated with the March 2011 storm event (Disaster No. CA11-3).

PROJECT DESCRIPTION/SCOPE OF WORK

According to the “General Plan” sheet (Reference No. 30) provided by OBDNC on August 12, 2014. the proposed ERS will extend approximately 177 feet in length along a wall layout line (RW LOL) located 22 feet left (northerly) from the Route 199 centerline (see “A1” Line, Plate No. 2). The ERS is proposed to be composed of steel (I-beam) soldier piles placed in 2.0 and 2.5 feet diameter holes (filled with concrete) spaced at roughly 8.0 feet centers. The ERS facing will consist of timber lagging overlain with a concrete facing. A single row of ground anchors is proposed at a vertical distance of 6 to 10 feet below the top of the wall and the anchors will be sloped downwards at 20 degrees from the horizontal. The ERS retained height (height of lagging) was shown to be as high as roughly 28 feet in the ERS center area and stepped down to 3 to 6 feet height on the ends. A “Type 80” concrete barrier and a 9 feet wide concrete slab is proposed atop the ERS.

The scope of our work included performing a literature and historical review in an effort to obtain geotechnical and geological data pertaining to the subject site that could provide insight into the design and construction of the proposed retaining wall. The historical review included searching the Caltrans intranet As Built records from the Document Retrieval System (DRS); it should be noted that the As Built plans utilized to complete this report were absent of a vertical datum in reference to specified elevations. Historical geotechnical data was obtained from the Digital Archive of Geotechnical Data (GeoDOG) database. OGDN has evaluated the site conditions and geology based on a review of the obtained As-Built Plans, geologic literature and mapping, aerial photographs, multiple site visits and a subsurface investigation program performed during August 2013. The foundation recommendations elevations provided in this report are based on the NAVD88 (vertical datum) and the horizontal coordinates are based on the NAD83 (horizontal datum).

EXISTING SITE CONDITIONS AND BACKGROUND

According to as built plans, the existing roadway facility was originally constructed around 1922. As-built plans dated 1965 (Reference No. 2) indicate the subject site was improved with the construction of two metal crib (or “bin”) walls totaling 573 square feet of Type “A” wall face and 400 square feet of Type “D” wall face (see Plate No. 2 for wall plan view footprints and heights). Perforated metal pipe (PMP) drainage outlets are detailed beneath the walls (see Location 10, 1965 As Built Plans Appendix C), but appeared to be lined-out and the outlets were not seen in the field. The metal bin walls appear to have been founded on rock ledges on a north-facing rock slope; the base of the walls are roughly 30 to 40 feet above the Smith River to the north. The ground surface below the walls slopes as steep as approximately 30 to 60 degrees. Between the walls the ground surface is as steep as 60 to 70 degrees (see Photo No. 5, Appendix A) and appears partially comprised of fill placed at a steep slope by utilizing a rockery (interlocked boulder) facing. Southerly of the metal bin walls, on the opposite (uphill) side of the roadway, cut slopes are present and appear to be sloped as steep as roughly ½H:1V and extend as high as roughly 40 feet (see Photo Nos. 1 and 2). The cut slopes are composed of hard formational rock covered with volunteer vegetation; the cut slopes did not exhibit evidence of significant slope instability; only a shallow slump failure was noted (see Photo No. 3). Surface drainage upslope of the proposed wall location is carried across the road by a culvert adjacent to the west of the wall location. According to a July 2011 OGDN Memo (Reference No. 15), on March 26, 2011 a “slipout” occurred between the two metal bin walls. The slipout was attributed to “Excessive rainfall saturating the roadway prism behind and between the walls”. The result was “deflection” (or bulging) of the crib wall faces (see Photo No. 4) and “shoulder failure” between the walls. A soldier pile wall was recommended to “secure the failing crib walls”. A Damage Assessment Form (DAF No. CEP-CT101-009-0, attached in Appendix B) was developed for the site and approval was obtained for a Permanent Restoration Federal Emergency Relief project. According to a 2012 Director’s Order (DO) Request (attached in Appendix B), a year later (on March 21, 2012), rainfall reportedly “accelerated” the slope failure between the walls by dislodging a roughly 4 feet diameter boulder from the rockery supporting the slope (see Photo No. 5). The renewed slope failure reportedly resulted in a “drop” in the shoulder approximately 15 feet long and 2.5 feet wide, developing a “wheel trap” in the shoulder between the MBGR and the travel way. The DO indicated that an emergency project was needed

to “temporarily shore the existing shoulder” by constructing a temporary gabion wall. Based on information provided by District personnel and on observations made at the site, it appears that rockery facing was rebuilt on the slope between the walls and the proposed temporary gabion wall was not constructed. District personnel reported that the stability of the slope was enhanced by placing deadman anchorages attached to the posts supporting the MBGR. An asphalt concrete patch was subsequently placed at the approximate location shown on the “Site Plan” of Plate No. 2 (see also Photo Nos. 1 and 2).

FIELD INVESTIGATION AND TESTING PROGRAM

OGDN conducted a subsurface investigation in August 2013. The subsurface investigation program consisted of placing a total of five mud rotary borings reaching a maximum depth of approximately 50 feet. The mud rotary borings were advanced using a self-casing wireline coring method. Sampling recovery of the subsurface materials was achieved by utilizing the Standard Penetration Test (SPT) sampler in soil materials and diamond coring in rock materials. A summary of information regarding the borings drilled during the subsurface investigation program is included in Table No. 1. The provided hammer efficiencies were obtained from the April 2013 “Standard Penetration Test (SPT) Hammer Efficiencies for Caltrans Drill Rigs” provided by the Caltrans Foundation Testing Branch (Reference No. 19); the hammer efficiencies are reported to be determined in general conformance with ASTM D4633 “Standard Test Method for Energy Measurement for Dynamic Penetrometers”.

**Table No. 1- Summary of the 2013 Subsurface Investigations for
the proposed Middle Fork ERS**

Boring No.	Completion Date	Drill Rig Type	Hammer Type	Hammer Efficiency (%)	Ground Surface Elevation (ft)	Boring Depth (ft)
RC-10-001	8/6/13	CS2000	Auto	85	987.7	40.0
RC-10-002	8/6/13	CS2000	Auto	92	988.6	50.0
RC-10-003	8/13/13	CS2000	Auto	92	987.3	45.0
RC-11-004	8/14/13	CS2000	Auto	92	988.0	24.5
RC-11-005	8/14/13	CS2000	Auto	92	986.7	25.0

LABORATORY TESTING PROGRAM

Laboratory testing was performed on selected samples of the subsurface materials obtained from the 2013 subsurface investigation. Tests were performed to determine the corrosion and engineering properties of the subsurface materials. The corrosion test results for the soil samples are in the “Corrosion Evaluation” section of this report. Strength testing on selected rock samples consisted of unconfined compressive strength tests (ASTM D 7012) and point load index tests (ASTM D 5731). The results of the laboratory testing included as Appendix D. The

locations of samples which were laboratory tested can be found on the Log of Test Borings (LOTBs).

It should be noted that upon reviewing the photos and stress strain curves associated with unconfined compressive strength testing, it appears that several samples failed along rock discontinuities such as healed fractures and bedding planes. Therefore, rock strength test results were influenced by the discontinuities, and the reported unconfined compressive strength could be significantly lower than the true intact rock unconfined compressive strength.

Point Load strength indices were converted to Uniaxial Compressive Strengths (UCS) utilizing correlations offered in ASTM D5731-08. A majority of the point load tests were noted to have been performed parallel to a “plane of weakness”; thus, with the rock specimens exhibiting anisotropic strength, the intact rock UCS should be considered significantly greater in value.

SITE GEOLOGY AND SUBSURFACE CONDITIONS

Regional Geologic Setting

The project is located within the northern section of the Klamath Mountains geomorphic province. Within the province there are a number of major terranes, several of which are subdivided into two or more subterranes. The terranes were accreted in a westward succession, are generally younger from east to west, and are penetratively deformed and bordered by major faults. The project site is located in the Smith River subterrane of the Western Klamath terrane. The Western Klamath terrane is the youngest in the Klamath Mountains and became attached to North America approximately 150 million years ago during the Mesozoic Era. Local to the project site, the Smith River subterrane includes the Galice Formation and the Josephine ophiolite (per USGS MIS Map I-2148, Reference No. 4).

Site Geology

The “Geologic Map of the Weed Quadrangle, California” (scale = 1:250,000, Reference No. 3), indicates the site to be underlain with materials of the Galice Formation (Jg) which are generally described as consisting of “slate, metagraywacke and some massive greenstone”. More detailed published mapping (USGS Bulletin 995-C, Scale 1:50,000, Reference No. 1) describes the site to be underlain by “dark-gray to black fine-grained thinly layered rocks generally with slaty cleavage, a few thin sandstone beds and some thin layers of grit” (see Plate Nos. 3a and 3). The subsurface investigation of the project site revealed materials similar to the aforementioned Galice Formation descriptions.

According to the USGS Bulletin 995-C, locally the bedding of the Galice dips directly east at around 40 to 60 degrees. The map (Plate No 2a) denotes the dip near the site to be at 45 degrees to the southeast. Due to the vegetation covering the cut slope (see “Existing Site Conditions and Background” section), the strike and dip of the bedding could not be determined. Nevertheless, the relatively good performance of the cut slope suggests that the bedding is favorable to the north-facing slope.

Naturally Occurring Asbestos (NOA)

The project site is located in the Western Klamath terrane (see “Regional Geologic Setting) where the primary source of NOA is the ultramafic rocks of the Josephine Ophiolite formation which contain serpentine and serpentinized peridotite. The eastern edge of the Josephine Ophiolite formation is located around PM 21.74 (see Plate No. 2a), over a mile westerly of the project site. Serpentine materials are also noted on the attached Geology Map just over 1 mile east of the project site.

A review of other published NOA maps, including Caltrans, USGS and United States Forest Service (USFS) mapping (Reference Nos. 6, 17 and 8, respectively), revealed that the project site is not located in an area designated “likely” to contain NOA. The Caltrans NOA database indicates the closest section of NOA materials in Del Norte County to be on Route 199 between PM 21.44 to 21.74 (see Table No. 2, below). Ultramafic/serpentinite of serpentinized rocks were not encountered in our surface and subsurface exploration at the site.

Table No. 2- Summary of Locations of NOA on Caltrans Roadways in Del Norte County (from the Caltrans NOA database)

County	Route	Length	Postmile	NOA I.D.	Geologic Formation*
DN	197	0.6	R0.1 /R0.7	WEE-112-R	Jum
DN	199	0.2	11.56 / 11.768	WEE-120-R	Qls
DN	199	0.1	12.36 / 12.46	WEE-124-R	Jum
DN	199	0.5	12.96 / 13.468	WEE-123-R	Qls
DN	199	0.3	21.44 / 21.74	WEE-112-R	Jum
DN	199	0.6	6.26 / 6.86	WEE-112-R	Jum
DN	199	6.5	T14.76 / 19.84	WEE-112-R	Jum

Subsurface Conditions

During the 2013 subsurface investigation, three borings (RC-13-001 through RC-13-003) were drilled in the existing southbound lane of Route 199 and two borings (RC-13-004 and RC-13-005) were drilled in the existing northbound lane of Route 199.

Borings RC-13-002 and RC-13-003 encountered approximately 12 inches of asphalt concrete with approximately 5 to 6 inches of aggregate base and 15 to 18 feet of fill overlying metamorphic rock. The fill material consists of medium dense to very dense silty gravel with sand and cobbles and silty sand with gravel.

Borings RC-13-001, RC-13-004 and RC-13-005 encountered approximately 6 to 11 inches of asphalt concrete with approximately 6 inches of aggregate base overlying metamorphic rock.

The metamorphic rock encountered in all the borings consisted of interbedded metagraywacke, metasandstone, metasilstone, and slate. The formational rock is typically moderately weathered to fresh, moderately hard to very hard with some soft and very soft zones (sheared), and intensely fractured to slightly fractured with some very intensely fractured zones. Some zones included very hard and hard quartz veins and calcite veins. The metamorphic rock was encountered to the maximum depth explored, 50 feet (elevation 938.6 feet).

More detailed descriptions of the subsurface conditions encountered are presented on the Log of Test Borings (LOTBs) provided on the project plans.

Groundwater

During the 2013 subsurface investigation, drill mud was utilized during drilling of the borings at the site; therefore, groundwater measurements in the borehole would be influenced by the presence of the drill fluids. In an effort to effectively assess groundwater conditions, borehole RC-13-001 was left open for a period of 8 days prior to measuring. Groundwater was measured in the open hole of boring RC-13-001 at a depth of 29 feet (approximate elevation of 958.7).

Groundwater surface elevations are subject to seasonal fluctuations and may occur at higher or lower elevations depending on rainfall patterns and water levels in the river.

CORROSION EVALUATION

Composite soil samples were collected from Borings RC-13-002 and RC-13-004 drilled during the 2013 subsurface investigations. The Office of Testing and Technology Service, Corrosion Technology Branch tested the composite samples for corrosive potential. The Corrosion Technology Branch considers a site to be corrosive if one or more of the following conditions exist for the representative soil samples: chloride concentration is 550 ppm or greater, sulfate concentration is 2000 ppm or greater, or the pH is 5.5 or less. The minimum resistivity serves as an indicator for the possible presence of soluble salts and is not used to define a site as being corrosive. It is the practice of the Corrosion Technology Branch that if the minimum resistivity of the sample is greater than 1000 ohm-cm, the sample is considered to be non-corrosive and testing to determine the sulfate and chloride content is not performed.

The results of the laboratory tests determined that the composite samples were considered to be non-corrosive. Refer to Table No. 3 for a summary of the corrosion test results included in Appendix D.

Table No. 3 - Corrosion Test Summary of the Composite Samples for the Middle Fork Earth Retaining System

SIC Corrosion Number	Boring Number	Sample Depth (ft)	pH	Minimum Resistivity (ohm-cm)	Chloride Content (ppm)	Sulfate Content (ppm)
C701660	R-13-002	0.0-6.5	7.81	7837	N/A	N/A
C701661	R-13-004	2.5-6.5	6.93	5954	N/A	N/A

FAULTING/GEOLOGIC HAZARDS

According to Memo To Designers 20-10, fault rupture analyses will be performed for structures where any portion of the structure falls within an Alquist-Priolo Earthquake Fault Zone (EFZ) or where any portion of a structure falls within 1,000 ft of an “unzoned” fault (not in an EFZ) that is Holocene or younger in age (ruptured in last 11,700 years). A review of the available EFZ maps (Reference No. 13), indicates that the proposed structure location is not in an EFZ. Fault data provide on the “2010 Fault Activity Map of California” (Reference No. 10), and the USGS Google Earth KML files/Fault Database indicates the closest “active” (late-Quaternary in age/movement in the past 700,000 years) fault is the Late Quaternary Bald Mountain-Big Lagoon fault zone (USGS Fault No. 787) located 28 miles southwesterly. Therefore, a fault rupture analyses does not appear necessary. The fault mapping indicates numerous inactive and pre-Quaternary (older than 1.6 million years) faults nearby the project site. The fault locations can be seen on the “Geology Map” of Plate No. 2a, and do not appear to come within 1,000 feet of the site.

Based on the conditions encountered in the site subsurface exploration, the potential for soil liquefaction does not exist for the subsurface materials anticipated to support the proposed ERS.

SEISMIC RECOMMENDATIONS

Based on the 2013 subsurface investigation, a V_{S30} (the weighted average shear wave velocity for the top 100 feet of foundation materials) of 2,500 feet per second is considered to be applicable for the site seismic evaluation.

According to the Caltrans ARS Online Tool (Version 2.3.06), the nearest active fault for the site is the “Big Lagoon-Bald Mountain” fault with a rupture plane distance of approximately 22 miles southwesterly. The ARS Online Tool indicates that the controlling deterministic fault is the Cascadia Subduction Zone (Caltrans Fault I.D.: 5) with a fault rupture plane approximately 37 miles southwest and a MMax of 8.3.

Based on the “Methodology for Developing Design Response Spectrum for Use in Seismic Design Recommendations, November 2012”, (Reference No. 20) the design ground motion is

the highest spectral acceleration as obtained by any of, or a combination of, the following three methods for the Middle Fork ERS project site.

- 1) Statewide minimum deterministic spectrum requirements with MMax of 6.5, vertical strike-slip event with a rupture distance of 7.5 miles.
- 2) The nearest active controlling fault as shown on the ARS Online Tool (Version 2.3.06).
- 3) The USGS 5% Probability of Exceedance in 50 years (975 years return period).

Utilizing the assigned V_{S30} , the governing ARS for the project site is based on method “3” above. Accordingly, the ARS Online tool generated a design ARS with a spectral acceleration of 0.30g at a period (T) of 0 seconds. This value corresponds to the peak horizontal ground acceleration (PHGA) to be utilized for design.

FOUNDATION RECOMMENDATIONS

Recommendations are being provided for the ground anchor ERS with soldier pile as described in the “Project Description/Scope of Work” section of this FR. Accordingly, geotechnical engineering parameters are being provided for active lateral earth pressure application in accordance with Memo To Designers (MTD) 5-12 “Earth Retaining Structures Using Ground Anchors” (Reference No. 23). Engineering parameters for derivation of the design passive lateral earth pressure resistance are provided based on the procedures presented in the 2012 AASHTO LRFD Bridge Design Specifications (BDS) and the Caltrans BDS Section 5 “Retaining Walls (Reference Nos. 19 and 5, respectively).

Lateral Loading

For determining the lateral earth pressure acting from the top of the wall to the bottom of lagging (i.e. “Design grade”), a soil internal friction angle (Φ) of 35° and a total unit weight (γ_t) of 130 pcf may be used. The recommended parameters are based on the assumption that an adequate drainage system will be provided to prevent the development of hydrostatic pressure behind the wall from groundwater. Although MTD 5-12 indicates active pressure to be acting on the wall below the design grade, it is anticipated that intact formational rock (similar to the rock exposed on the steep cut slope southerly of the proposed ERS) will be present below the design grade at the wall layout line. Therefore, it is acceptable to omit the application of the active earth pressure below the design grade in accordance with Figure 3.11.5.6-2 of the 2012 AASHTO LRFD BDS (see also Figure 5.5.5.6-2 of the Caltrans BDS Section 5).

Lateral Resistance

OBDNC has requested engineering parameters to derive the passive lateral earth pressure for lateral resistance based on equivalent Mohr-Coulomb strength parameters. OBDNC has taken the responsibility of deriving the design passive lateral earth pressure coefficient (K_p) which is highly influenced by the presence of the sloping ground in front of the wall (effective slope of β), below the design grade. It should be noted that significant variations in β can be derived base on

individual interpretation of the topography below the design grade, and care should be taken when applying the parameters provided below.

Based on the provided plans, a berm (or horizontal bench) a least 5 feet wide will be maintained at least 2 feet above the ERS design grade (i.e. bottom of lagging). Below the design grade, passive lateral resistance may be applied for the effective width of the pile based on the following generalized parameters: an internal friction angle (Φ) of 50° and a total unit weight (γ_t) of 145 pcf. Due to the locality of the Middle Fork Smith River, the buoyant unit weight may be appropriate for design for conditions of high water in the river.

In an effort to capture the strength of the formational rock materials beneath the site, at the “RW LOL” the materials below the elevations provided in Table No. 4 may be treated as “cohesive soils” and a cohesion of 4,000 psf may be utilized. Utilizing the aforementioned cohesive component requires an embedment of the pile of at least 7 feet below the Table No. 4 elevations to have effective development of the passive resistance within rock formation materials.

Table No. 4 – Anticipated Top of Rock-Like Materials for Application of the “Cohesive Soils” Passive Lateral Earth Pressure

Station (“A1” Line)	108+74.58 to 109+15	109+15 to 109+85	109+85 to 110+48.58
Elevation (feet)	955	950	955

*Note: Minimum pile embedment of 7 feet below provided elevations required for effective passive resistance development.

Ground Anchors

Ground anchors are proposed to be installed at an angle of 20 degrees from the horizontal. Based on this inclination, the un-bonded lengths below are recommended. Some ground anchors are anticipated to be drilled through the existing metal crib walls (see “Construction Considerations” section).

Table No. 5 – Recommended Minimum Un-bonded Lengths

Station (“A1” Line)	108+74.58 to 109+15	109+15 to 109+70	109+70 to 110+48.58
Un-bonded Length (feet)	20	35	20

ERS Backfill/Drainage

To provide free-draining conditions, to reduce the amount of compactive effort for fill near the proposed wall face, and to minimize the potential for post construction material migration, Coarse Aggregate is recommended to be placed as fill material between the existing gabion wall and the back of the wall lagging. The Coarse Aggregate should consist of crushed rock meeting a grading corresponding to 1-½ inch x ¾ inch grading per Section 90-1.02C(4)(b) of the 2010 Caltrans Standard Specifications. The project plans indicate that a barrier slab will be placed atop the fill prism between the existing crib wall/slope face and the proposed wall; hence, the Coarse Aggregate should provide an acceptable leveling course. Where pavement is proposed atop the Coarse Aggregate fill, it may be preferable to place a Class A1 Subgrade Enhancement Geotextile (per Section 88-1.02O of the 2010 Caltrans Standard Specifications) to provide separation between the overlying dissimilar material of the pavement section base course.

The parameters provided above are based on the assumption that an adequate drainage system will be provided to prevent the development of hydrostatic pressure behind the proposed wall. “Deflection” of the existing crib wall faces was reported to have occurred as a result of “excessive rainfall saturating the roadway prism behind and between the walls” (see “Existing Site Conditions and Background” section). Structure Design indicated that drilling of drainage holes through the existing crib walls is being proposed. OGDN concurs and recommends the drilled drainage holes should be sloped upward, and at a minimum, perforated pipe should be placed in the drilled holes. Collected water should be directed to drain properly through and around the proposed wall.

CONSTRUCTION CONSIDERATIONS

1. Based on the findings in the “Naturally Occurring Asbestos (NOA)” section above, OGDN concludes that the project site has a very low potential for the presence of serpentine, serpentized ultramafic rocks, and therefore, NOA. In consideration for the potential presence of NOA materials, the North Region Hazardous Material Officer should be contacted to determine if the project has the need for Airborne Toxic Control Measures (ATCMs) during project construction.
2. The contractor may encounter difficulties during drilling for anchors and piles due to the presence of zones of fresh, very hard rock encountered in subsurface exploration. The zones of hard rock will likely necessitate the use of specialty equipment (down-hole hammers, core barrels, etc.) to drill to the required pile depths and anchor lengths.
3. The self-casing wire-line drill system drilling techniques utilized during the subsurface investigations make it difficult to directly assess borehole stability and the potential for sidewall collapse. Caving conditions are likely to occur in the soil, fill and crib wall materials overlying formational rock at the site that contain gravel, cobbles and boulders. In addition, the fractured formational rock is conducive to rock wedge failures into unsupported holes excavated for anchor and pile installations; hence, casing would likely be needed to keep the holes open prior to placing grout and concrete.

4. Previous studies at the site indicated that saturation has occurred in the ground behind the existing retaining walls (see “Existing Site Conditions and Background” section). In addition, groundwater was measured in a borehole left open for an extended period (see “Groundwater” section). During construction, it can be expected that significant groundwater at the site could be encountered either perched atop rock materials, or flowing through rock fractures. In some cases, confined (under pressure) groundwater aquifers could be encountered while drilling even during the driest periods. Hence, the pile and anchor installations may require dewatering or the placement of concrete and grout in wet conditions. If the contractor opts to place the concrete and grout in wet conditions, the specifications should require the displacement of water via a closed system using a concrete pump or a tremie tube to place concrete and grout at the bottom of the hole. In cases where drilling encounters confined aquifers, the contractor should expect water seepage out of the hole at the surface for a significant period of time.
5. The contractor should be prepared to install ground anchors through the existing metal bin crib walls. Hard drilling and containment of grout (i.e. by permanent casing) may be required.
6. Due to the fractured nature of the underlying rock materials, the potential for excess loss of concrete and grout in voids and fractures should be expected. Controlling measures, such as the use of a “grout sock”, could potentially reduce grout loss.

SUPPLEMENTAL PROJECT INFORMATION

Section 2-1.06B “Supplemental Project Information” of the 2010 Standard Specifications addresses supplemental information (“as specified in the special provisions”) made available to Bidders by Caltrans. The following items are being provided for insertion into the table in Section 2-1.06B of the project special provisions.

Included in the Information Handout:

- Foundation Report for Middle Fork ERS dated September 4, 2014.

Included with the project plans:

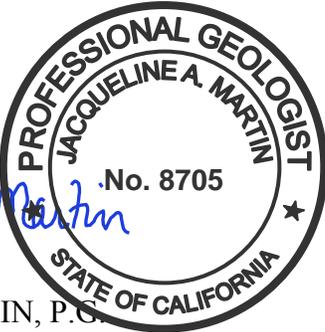
- Log of Test Borings (Middle Fork ERS).

Available for inspection at the Transportation Laboratory:

- Core Samples.

CLOSURE

The recommendations included in this Foundation Report are based on project information that has been provided by the Office of Bridge Design North, Design Branch 1. Any questions regarding the above recommendations should be directed to the attention of Jacqueline A Martin (916) 227-1051 or Mark Hagy (916) 227-1077, Geotechnical Services, Office of Geotechnical Design-North.

JACQUELINE A MARTIN, P.G.
Engineering Geologist
Office of Geotechnical Design-North




MARK HAGY, P.E., G.E.
Transportation Engineer
Office of Geotechnical Design-North

cc: OGDN
DPM – Kevin Church
John Huang

Attachments:

REFERENCES

PLATES

Plate No. 1	Vicinity Map
Plate No. 2	Site Plan
Plate No. 3a and 3b	Geology Map

APPENDICES

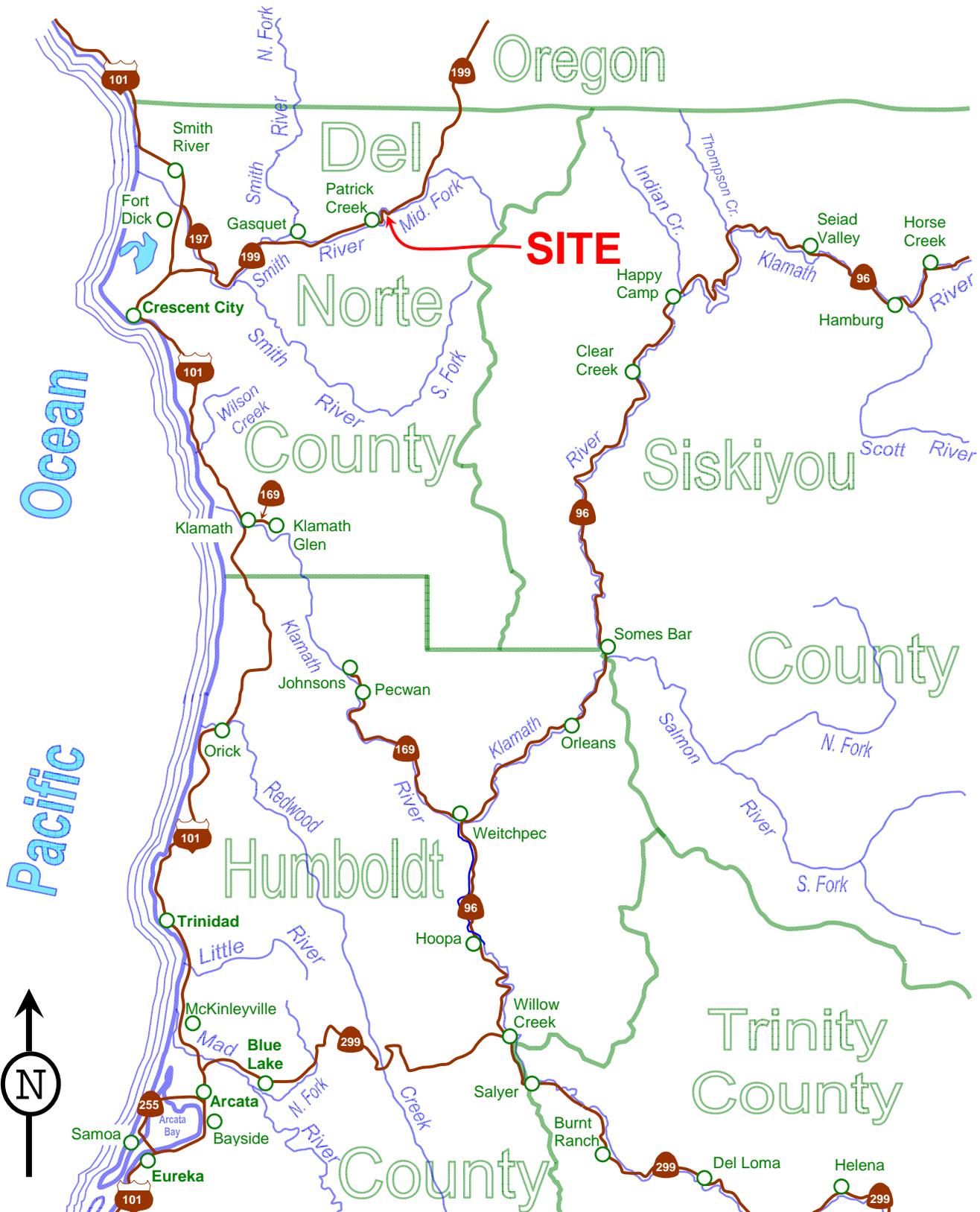
Appendix A	Photographs
Appendix B	2011 DAF/2012 Director's Order Request
Appendix C	1965 Metal Crib Wall As Builts
Appendix D	Laboratory Test Results

REFERENCES

1. (1953) USGS “Geology Map and the Structure Sections of the Gasquet Quadrangle, California”, Plate 11, Scale 1:50,000, from Cater, F.W., Jr. and Wells, F.G. (1953) “Geology and Mineral Resources of the Gasquet Quadrangle, California-Oregon”; United States Geologic Survey Bulletin 995-C.
2. Caltrans (1965), “Plans for Construction on State Highway In Del Norte County between 6.2 miles and 16.4 miles north of Gasquet,” DN 199 PM 20.4/30.7, Contract No. 01-076744, As-Built Plan approval date May 17, 1965.
3. CDMG (1987) “Geologic Map of California the Weed quadrangle, California”.; California Division of Mines and Geology (California Geological Survey), Regional Geologic Map Series, Map No. 4A, compiled by Wagner, D.L. and Saucedo, G. L, Scale 1:250,000.
4. USGS (1994) “Geologic map of the Klamath Mountains, California and Oregon:”, U.S. Geological Survey Miscellaneous Investigations Series Map I-2148, compiled by Irwin, W.P., scale 1:500,000.
5. Caltrans (2004) “Section 5 – Retaining Walls”, Bridge Design Specifications, dated August 2004.
6. Caltrans, (2005), “Areas Likely to contain Naturally Occurring Asbestos – Caltrans District 1”, mapping prepared by the Division of Maintenance GIS in coordination with the Division of Environmental Analysis, 2005.
7. NCHRP (2006) “Rock-Socketed Shafts for Highway Structure Foundations”, National Cooperative Highway Research Program, Transportation Research Board, Synthesis 360, Washington, D.C.
8. USFS (2008) “Areas More Likely to contain Naturally Occurring Asbestos, Six Rivers National Forest”, prepared by the United States Forests Service, Department of Agriculture, compiled after 10-7-08.
9. Caltrans (2009) “Development of the Caltrans Deterministic PGA Map and Caltrans ARS Online”, M. Merriam, Geotechnical Services, and T. Shantz, Division of Research & Innovation, Caltrans.
10. CGS (2010) “Fault Activity Map of California, 2010”; Scale: 1:750,000, California Department of Conservation, California Geological Survey Geologic Data Map No. 6; Compilation and Interpretation by: Charles W. Jennings and William A. Bryant.
11. CGS (2010) “An Explanatory Text to Accompany the Fault Activity Map of California”; Scale: 1:750,000, California Geological Survey, California Department of Conservation; Compilation and Interpretation by: Charles W. Jennings and William A. Bryant.

12. FHWA (2010) “Drilled Shafts: Construction Procedures and LRFD Design Methods”, Volumes I and II, Federal Highway Administration, Pub. No. FHWA NHI-10-016, FHWA GEC 010, May 2010.
13. CGS (2011) “ Alquist-Priolo Earthquake Fault Zone Maps”, obtained from California Geologic Survey at http://www.quake.ca.gov/gmaps/ap/ap_maps.htm.
14. Caltrans (2011) “Damage Assessment Form (DAF)”, DN-199-pm 24.67, DAF No. CEP-CT01-009-0, Permanent Restoration EA Contract 01-0B320, Disaster No. CA11-3, 4 sheets, incident date March 26, 2011.
15. Caltrans (2011) “March Storm Damage Recommendations Located on DN 199 PM 24.67”, Caltrans Memorandum prepared by the Office of Geotechnical Design – North, Geotechnical Services, dated July 28, 2011.
16. Caltrans (2011) “Design of Earth Retaining Systems”, Memorandum prepared by Caltrans Structure Policy and Innovation, dated July 22, 2011 (and Attachment).
17. CGS (2011) “Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California”, California Geological Survey Map Sheet 59, U.S. Geologic Survey Open-File Report 2011-1188, by J.P Clinkenbeard (CGS) and B.S. Van Gosen (USGS), dated 2011.
18. Caltrans (2011) “Corrosion Guidelines”, Corrosion and Structure Concrete – Field Investigation Branch, Materials Engineering and Testing Services, Caltrans, Version 2.0, November 2011.
19. AASHTO (2012) “AASHTO LRFD Bridge Design Specifications”, 6th Edition.
20. Caltrans (2012) “Methodology for Developing Design Response Spectrum for Use in Seismic Design Recommendations”, Caltrans Geotechnical Services, dated November 2012.
21. Caltrans (2012) “Corrosion Guidelines”, Corrosion and Structure Concrete Field Investigation Branch, Materials Engineering and Testing Services, Caltrans, Version 2.0, November 2012.
22. Caltrans (2012) “Review of Shop Drawings for Ground Anchors”, Caltrans Memo To Designers 5-14, dated June 2012.
23. Caltrans (2012) “Earth Retaining Systems Using Ground Anchors”, Caltrans Memo To Designers 5-12, dated July 2012.
24. Caltrans (2012) “Director’ Order Request – Funds Request”, 01-DN-199 PM 24.67, EFIS Project No. 0112000233, EA 01-0C1904, incident date March 21, 2012.

25. Caltrans (2013) “Standard Penetration Test (SPT) Hammer Efficiencies For Caltrans Drill Rigs”, Foundation Testing Branch, Caltrans Geotechnical Services, dated April 2013.
26. Caltrans (2014) “Request for Final Foundation Recommendation”, Middle Fork Wall Storm Damage Repair, 01-DN-199-PM 24.67, 01-0B3201, Caltrans Division of Engineering Services, Structure Design, Office of Bridge Design North & Central, Bridge Design Branch 1, dated March 25, 2014 (attachment: “Planning Study” revision date January 29, 2014).
27. Caltrans (2014) “Planning Study”, Middle Fork Wall Storm Damage Repair, 01-DN-199-PM 24.67, 01-0B3201, Caltrans Division of Engineering Services, Structure Design, Office of Bridge Design North & Central, Bridge Design Branch 1, “Minimum Grading Alt” red-lined revision dated April 7, 2014.
28. Caltrans (2014) “Planning Study”, Middle Fork Wall Storm Damage Repair, 01-DN-199-PM 24.67, 01-0B3201, Caltrans Division of Engineering Services, Structure Design, Office of Bridge Design North & Central, Bridge Design Branch 1, “Minimum Grading Alt” and “Single Tie Back Wall”, red-lined revision dated June 11, 2014.
29. Caltrans (2014) “Request for Final Foundation Recommendations”, Caltrans Memorandum prepared by the Office of Bridge Design North and Central, Caltrans Structure Design, 01-DN-199 PM 24.67, EA 01-0B3201, dated March 25, 2014.
30. Caltrans (2014) “General Plan”, Middle Fork Wall, prepared by Structure Design – Design Branch 1, 01-DN-199 PM 24.5, EA 01-0B3201, revision date July 15, 2014.



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EA: 01-0B3201
 Date: September 2014

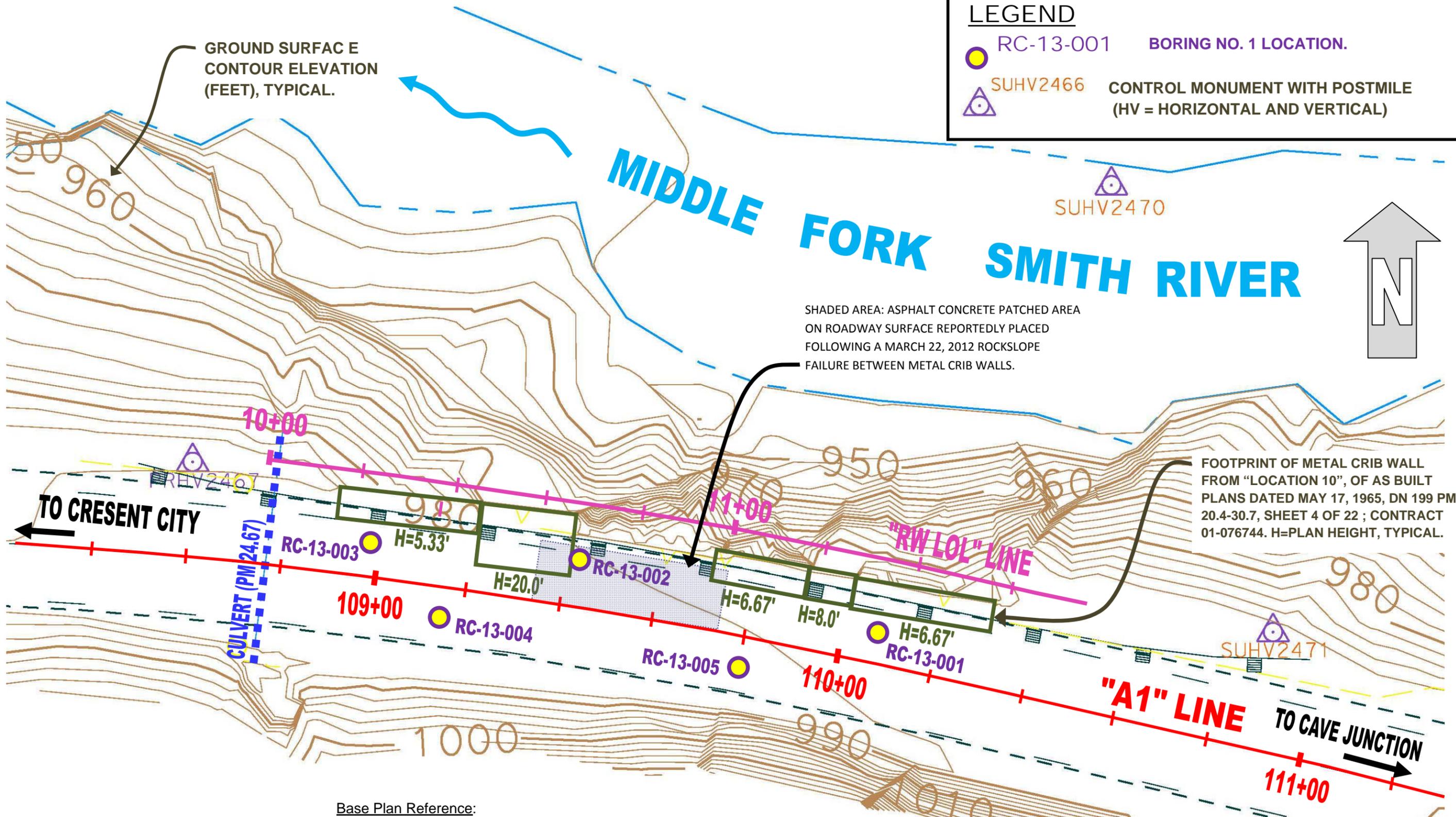
VICINITY MAP

**01-DN-199 PM 24.67/24.70
 Middle Fork ERS
 FOUNDATION REPORT**

Plate
 No. 1

LEGEND

-  RC-13-001 BORING NO. 1 LOCATION.
-  SUHV2466 CONTROL MONUMENT WITH POSTMILE (HV = HORIZONTAL AND VERTICAL)



Base Plan Reference:
 Topography plan from Microstation file "0B320_BASEMAP.DGN" provided by Caltrans District 3 Design E-3. Contour interval = 2 feet.

Wall Data:
 General Plan, Middle Fork Wall, Structure Design - Design Branch 1, DN 199 PM 24.5, Sheet 1, revision date 7-7-14.

APPROXIMATE SCALE : 1" = 20 feet



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EA: 01-0B3201

Date: September 2014

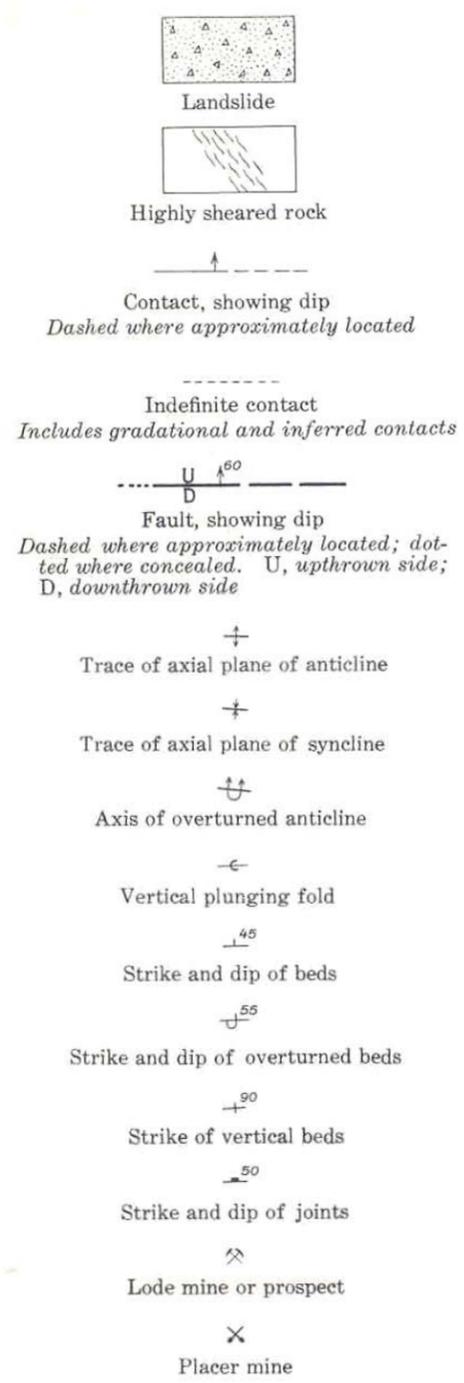
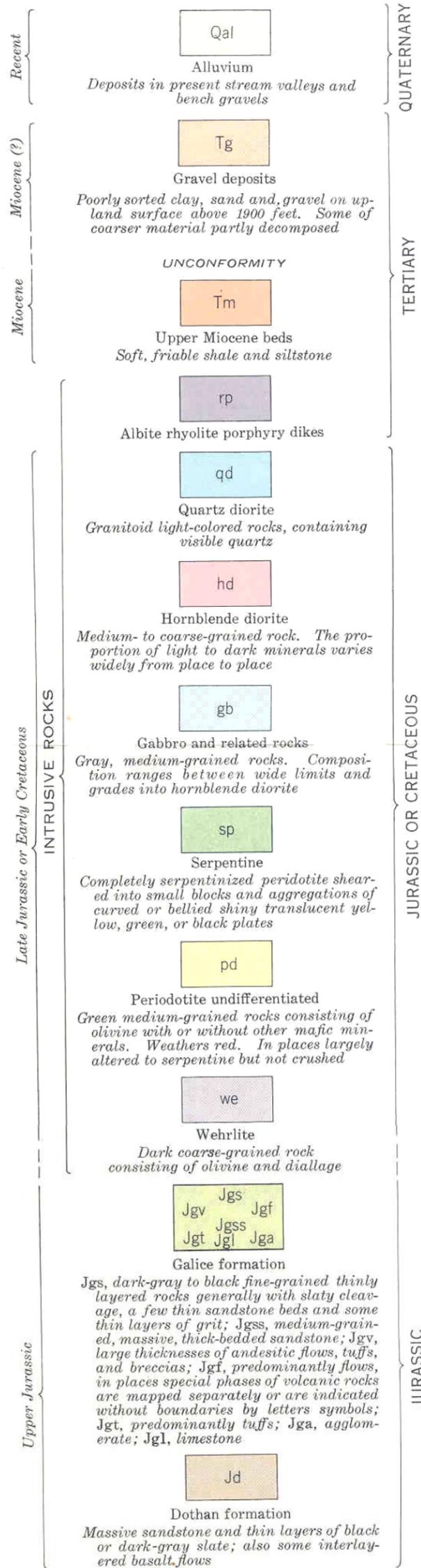
SITE PLAN

01-DN-101 PM 24.67/24.70
 MIDDLE FORK WALL
 FOUNDATION REPORT

Plate
 No. 2

ABBREVIATED EXPLANATION

Approximate stratigraphic relationships only; see referenced publication for more detailed stratigraphic relationships and unit descriptions.



MINES AND PROSPECTS

CHROMITE		CHROMITE	
2. Pine Flat Chromite		47. Sunrise	
5. Richey		48. Grumpy	
6. Logan		49. Gilmore	
7. Tangarene		52. Bluebird	
8. Toujours Gai			
9. Holiday group		QUICKSILVER	
17. Chrome Hill No. 1		Hg 4. Big Boy	
18. Bonanza		10. Webb	
19. High Plateau		50. Sunnybrook	
20. Judy		51. Diamond Creek	
21. Skyline			
22. Angela		GOLD	
23. Black Jack		Au 11. Continental	
24. Niggerhead		12. Name unknown	
25. Fairview		13. Name unknown	
26. Margy		14. Blue Rock	
27. French Hill Chrome Mine		15. Name unknown	
33. Hawkins		16. Name unknown	
34. Fourth of July		28. Morrel Placer	
36. Coon Mountain group		29. French Hill Placer	
37. Coon Creek No. 1		30. French Hill Placer	
38. Cooncan		31. Name unknown	
39. Big Dipper		32. Name unknown	
40. Patterson		35. Name unknown	
41. Thursday Evening			
42. Apex		COPPER	
43. Sunset		Cu 1. Name unknown	
44. Zinc Saddle		3. Cleopatra	
46. Camp B		45. Higgins	

Reference: "Geology Map and the Structure Sections of the Gasquet Quadrangle, California", Plate 11, Scale 1:50,000, from Cater, F.W., Jr. and Wells, F.G. (1953) "Geology and Mineral Resources of the Gasquet Quadrangle, California-Oregon"; United States Geologic Survey Bulletin 995-C.



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EA: 01-0B3201	GEOLOGY MAP LEGEND
Date: September 2014	
01-DN-199 PM 24.67/24.70 MIDDLE FORK ERS FOUNDATION REPORT	Plate No. 3b

Appendix A

Photographs



Photo No. 1. Cut slope uphill of existing metal crib wall location. Note AC patched area. Viewing easterly from left of approx. STA "A1" 109+00 (photo date 4-16-13).

Photo No. 2. Cut slope uphill of existing metal crib wall location. Note AC patched area. Viewing westerly from left of approx. STA "A1" 110+80 (photo date 4-16-13).



Photo No. 3. Shallow slump failure on cut slope uphill of existing metal crib wall location. Viewing southerly from centerline at approx. STA "A1" 110+00 (photo date 4-16-13).



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EA: 01-0B3201

Date: September 2014

PHOTOGRAPHS

**01-DN-199 PM 24.67/24.70
 Middle Fork ERS
 FOUNDATION REPORT**

Plate
 No. A-1



Photo No. 4. Existing metal crib wall face left of approx. STA "A1" 109+20 (photo date 4-16-13).

BULGING WALL FACE



BOULDER DISLODGED IN 2012

Photo No. 5. Rockery covered slope between existing metal crib walls. Viewing downslope (northerly) left of approx. STA "A1" 109+40 (photo date 4-16-13).



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Date: September 2014

PHOTOGRAPHS

**01-DN-199 PM 24.67/24.70
 Middle Fork ERS
 FOUNDATION REPORT**

Plate
 No. A-2

Appendix B

2011 DAF

“Damage Assessment Form (DAF)”, DN-199-pm 24.67, DAF No. CEP-CT01-009-0, Permanent Restoration EA Contract 01-0B320, Disaster No. CA11-3, 4 sheets, incident date March 26, 2011.

2012 DO’s Request

“Director’ Order Request – Funds Request”, 01-DN-199 PM 24.67, EFIS Project No. 0112000233, EA 01-0C1904, incident date March 21, 2012.

U.S. Department of Transportation Federal Highway Administration- California Division- Title 23 Damage Assessment Form (DAF)		DAF No. CEP - CT01 - 009 - 0	Sheet # 1 of 4 Federal Project # EO ER - ()
Disaster No. CA 1 1 - 3 PR ER - ()		Applicant CALTRANS	County DEL NORTE
Incident Date (mm/dd/yyyy) 03/26/2011		Inspection	
Location of Damage: Per Site <input checked="" type="checkbox"/> or <input type="checkbox"/> Per Mile		Federal-aid Highway? Y for yes, if no, ineligible for ER funds <input type="checkbox"/> Y	
Name of Road/Bridge: Route 199		Map No 2A	
PM Begin: 24.67 PM Length: 200.00 (in feet)		Functional Classification Type: Principal Arterial	
Road/Bridge Data: Bridge No n/a Type:		Route # 199	
Traveled Way: Width 2-12' lanes Type: PCC <input type="checkbox"/> AC <input checked="" type="checkbox"/> Gravel <input type="checkbox"/>		Forest Hwy? Y/N <input type="checkbox"/> Interstate? Y/N <input checked="" type="checkbox"/> Y	
Shoulder: Width var 1-4' Type: PCC <input type="checkbox"/> AC <input checked="" type="checkbox"/> Gravel <input type="checkbox"/>		Existing ADT: 4,000	
Description of Damage: Slipout and Bin Wall Failure			

COST ESTIMATE

Emergency Opening (EO)	Type of Repair	Description of Work	Cost Summary	
	EO- AGENCY FORCES CT Work Order #(s):		PE	
	EA(s):		CE	
			Construction	
	EO- CONTRACT		PE	
	EO EA(s):		CE	
			Construction	
NOTE: Environmental documentation for EO is required. It is generally started after work has begun.			R/W	
			Subtotal Emergency Opening	
Permanent Restoration (PR)	PR- CONSTRUCTION FA requires an approved PIF	Work includes construct soldier pile wall and reconstruct roadway.	PE	
	<input checked="" type="checkbox"/> Contract <input type="checkbox"/> FA		CE	
	PR EAs 0B320		Construction	
NOTE: PRIOR AUTHORIZATION (APPROVED E-76) IS REQUIRED TO PROCEED WITH PERMANENT RESTORATION R/W & CONSTRUCTION			R/W	
NOTE: Environmental clearance for permanent restoration is conducted through normal Federal-aid procedures			Subtotal Permanent Restoration	
Eligible		Signature	Date	PE Total
<input type="checkbox"/> Yes <input type="checkbox"/> No	Local Agency (if applicable):			CE Total
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Caltrans <i>Talitha Hodgson</i>		7/28/2011	R/W Total
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	FHWA*: <i>Cesar Perez</i>		8/2/11	Construction Total
TOTAL ESTIMATE				

Agency sig. Name (print): N/A FHWA Sig. Name (print): CESAR PEREZ
 CT signature Name (print): TALITHA HODGSON DAF Prepared by (print): T. HODGSON

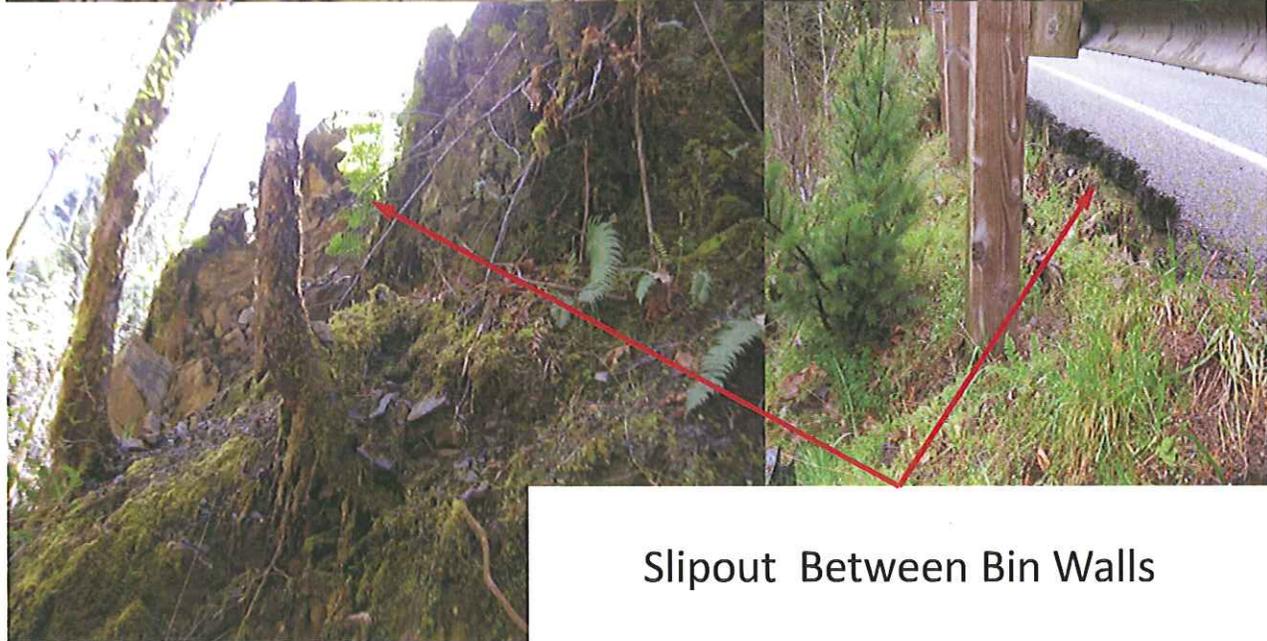
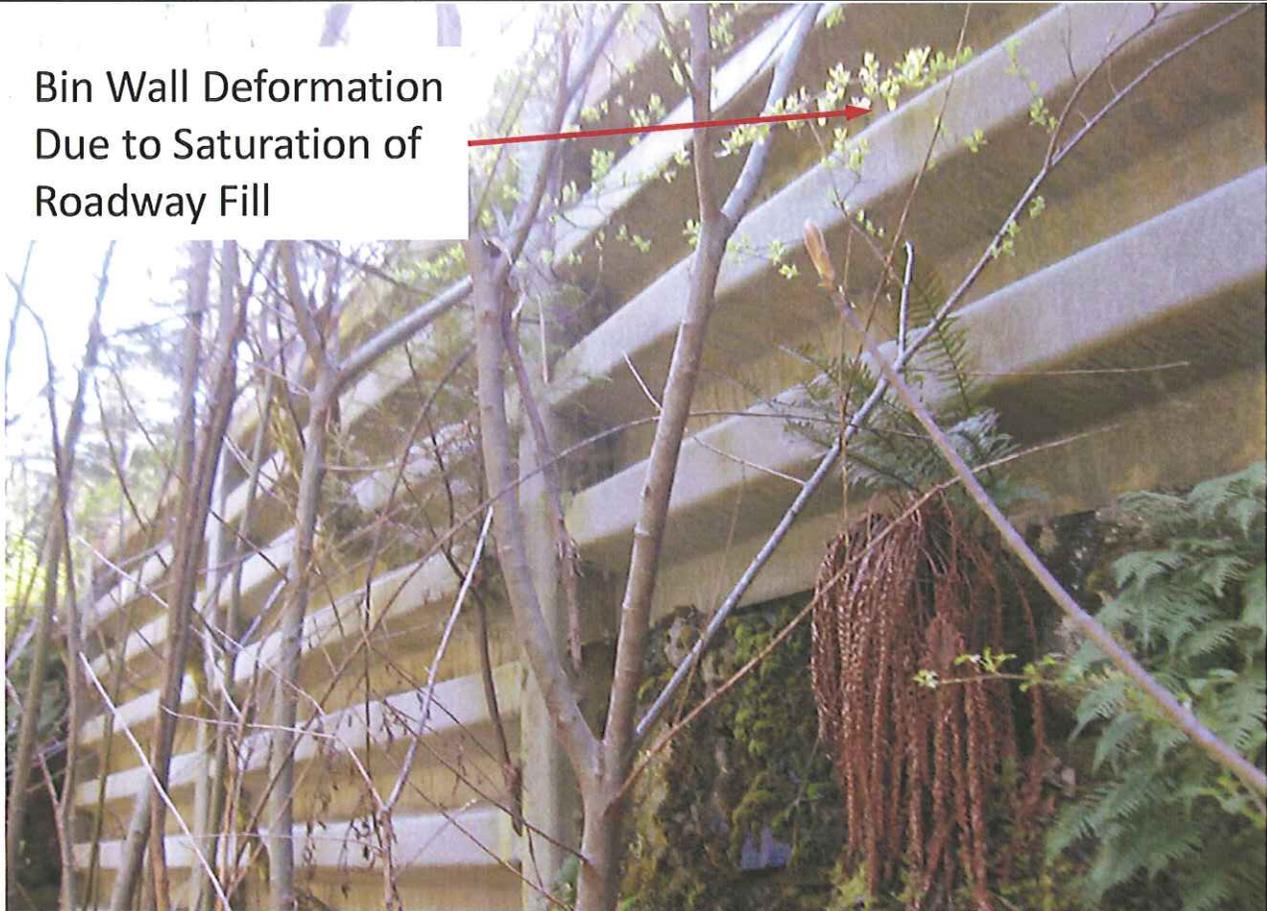
Original: Caltrans District Copies: FHWA, Division of Local Assistance(local roads), Federal Resources (state hwy), HQ Major Damage Engineer (state hwy)
 *Write "N/A" in FHWA signature block if the project has no Federal ER funding or Federal ER funding delegated to the State.
 FHWA Signature: REQUIRED for all Federal Funded State projects. REQUIRED for any Local Agency projects with 1) any BETTERRMINT, 2) more than 2 ROW takes or 3) when paving is more than 50% of the Total Estimated Cost. Reminder: This DAF must be accompanied by photos of the damage.

U.S. Department of Transportation
Federal Highway Administration
California Division – Title 23
Damage Assessment Form (DAF)

DAF # CEP - CTO1 - 009 - 0
Sheet # 3 of 4
Applicant
CALTRANS

Photos, Sketches and/or Narrative

Bin Wall Deformation
Due to Saturation of
Roadway Fill



Slipout Between Bin Walls

Memorandum

*Flex your power!
Be energy efficient!*

To: Talitha Hodgson
Major Damage Coordinator

Date: July 28, 2011
File: 01-DN-199-PM 24.67

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

Subject: March Storm Damage Recommendation Located on DN 199 PM 24.67

On March 26, 2011 a slipout occurred between two existing steel crib walls on Route 199 in Del Norte County. A site review indicated the slipout was caused by excessive rainfall saturating the roadway prism behind and between the walls resulting in noticeable steel crib wall deflection and shoulder failure in the soil presently unretained by any wall structure. The existing steel crib walls exhibit distress and are founded a few feet above the Smith River high water line on the same weathered and fractured rock outcrop that is currently failing between the crib walls. The only option available to secure the failing crib walls and the slipout between the two walls is to construct a soldier pile wall that encompasses the entire failure to include the existing walls.

Due to the steep slope below the roadway and the proximity of the river, a wall is necessary to prevent further damage to the roadway and mitigate future failures of the roadway at this location. A gravity wall or rock buttress would require a footprint that impinges on the Smith River. Selection of these alternatives is not feasible because they could not be permitted by the regulatory agencies.

If you have any questions or require further assistance, please call me at (707) 441-2024.

Report by: Kathy Gallagher

Reviewed by: Charlie Narwold



Director's Order Request - Funds Request

MTC-0130 REV (5/2011)

Proposed Contract Method
Emergency Force Account

Use this form:

- 1) to request exemption from State Contract Act for projects over \$250,000
- 2) all G-11 Supplementals
- 3) approval for emergency Equipment Rental over \$250,000

- 4) Supplemental Director's Orders
- 5) Day Labor > \$25,000
- 6) out of scope change orders.

1. Date and Location of Incident or Problem

District 01	Route 199	PM [Back] 24.67	PM [Ahead]	Incident Date (MM/DD/YYYY) 03/21/2012
County DN	Route, 2nd	PM [2nd]	PM [2nd]	Bridge Number

2. Damage and Mobility

Damage or Incident: Has Occurred	Severity Road - Shoulder Lost
Cause of Failure Slipout	Traffic Restrictions Open, but Shoulders Closed

3. Contract Information

Contractor Name (Required for Force Account) Robert J Frank Construction Inc.				<input checked="" type="checkbox"/> Small Business	
				<input type="checkbox"/> To Be Determined (IB and ELB)	
EA (1st 5 Characters) 0C190	EFIS Project Number (10 Characters) 0112000233	Working Days	A. Contract Amount	B. <input checked="" type="checkbox"/> Check to include authority for R/W Capital.	Total Request (A + B)

If a Supplemental, enter dates and amounts of prior Director's Orders

4. Project Information, Funding and Legal Authority

Project Schedule		Support Costs	Funding
(Informal Bid)	Advertise Date		Which Request? <input checked="" type="checkbox"/> Use This Request <input type="checkbox"/> See Separate Funds Request <input type="checkbox"/> \$0
	Bid Open Date		Location Description In Del Norte County Near Patricks Creek at 0.6 mi north of Middle Fork Smith River Bridge #1-15 .
	Award Date 03/27/2012		Work Description Repair Slipout
(All Contracts)	Begin Work Date 03/27/2012		Program Code 20.20.201.130 Major Damage (Emer Open)
	Acceptance Date 05/22/2012		PPNO (See Instructions on PPNO numbers) 1088
	Permits? Pending		Type 100% SHA 042T
RW? Not Needed		Proposed Allocation: <input checked="" type="checkbox"/> G-11 or Other Delegation <input type="checkbox"/> CTC Vote <input type="checkbox"/> Maintenance (HM)	
Major Damage Coordinator / Construction Senior		FHWA ER Funding: <input type="checkbox"/> Yes, DAF Approved <input checked="" type="checkbox"/> Anticipated <input type="checkbox"/> None	
Major Damage Coordinator Talitha Hodgson		ER Classification: <input checked="" type="checkbox"/> EO <input type="checkbox"/> PR <input type="checkbox"/> Not Applicable	
Construction Senior Gary Johnson		Performance Indicator 1 Locations	Is or Will Be in FTIP? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

Legal Authority (Select one): PCC 10122(a) Failure or Threat of Failure of Transportation Facility

Director's Order Request - Funds Request

MTC-0130 REV (5/2011)

District	EA
01	0C190

5. Justification

NEW PROJECTS: Discuss 1) the damage or problem 2) proposed solution 3) scope of work, listing the major items of work and 4) explain why normal contract procedures are not satisfactory. SUPPLEMENTALS: Discuss for each that apply, 1) how the scope, cost or severity of the problem have changed 2) scope of work of additional work, listing major items of new work 3) summary of current financial status of the project and 4) explain why performing the additional work by normal contract procedures is not appropriate.

The rainfall of March 22, 2011 worsened a slipout below the roadway on Route 199 in Del Norte County near PM 24.67. The site is approved as a 10/11 Permanent Restoration Federal ER project scheduled for delivery in two years. The scope of the PR project includes constructing a soldier pile tie back wall to secure two failing bin walls and the failing slope between the bin walls. On March 22, the failure between the bin walls accelerated with a large rockfall into the river resulting in a 15' long, 32" drop off in the shoulder. There is now a 1 1/2 foot gap between the face of the MBGR and the head scarp in the shoulder. Field Maintenance contacted Maintenance Engineering because the repair is beyond their ability. On Friday March 23 Maintenance Engineering and Geotechnical staff reviewed the site. It was determined that the rock in the slipout location is highly fractured, unstable and an Emergency Project is needed immediately to temporarily shore up the roadway until the PR project can be designed and constructed. With each rainfall event the rock is degrading further and falling into the river. Currently there is a large wheel trap in the shoulder between the MBGR and traveled way and the MBGR posts are exposed without imbedment. A moderate rainfall event will likely result in a large rockfall and full closure of the roadway.

An emergency project is needed immediately to temporarily shore the existing shoulder, reconstruct the MBGR and reconstruct the shoulder. This slide repair is needed to prevent damage or loss of life, and the complete loss of the roadway.

An emergency contract must be initiated immediately to protect the traveling public and preserve the route.

The scope Emergency Opening work defined by Geotech and Maintenance Engineering includes:

- Provide Traffic Control;
- Construct Temporary Gabion Wall;
- Reconstruct Shoulder;
- Reconstruct MBGR; and
- Erosion Control.

This emergency project has been coordinated with the permitting agencies and the work is cleared for construction. Reimbursement from FHWA will be sought since this location is an 10/11 Federal ER Permanent Restoration project.

This Emergency Director's Order is requested using Emergency Force Account contract method since the delivery time associated with conventional contract methods are not acceptable, considering the risk to the traveling public and likely loss of roadway. This project is needed to prevent and mitigate the loss of impairment of life, health, property, and essential services.

6. District Director Signature

DISTRICT DIRECTOR SIGNATURE

Cory Miller for CCF

DATE

3/26/2012

Director's Order Request - Funds Request

MTC-0130 REV (5/2011)

District
01

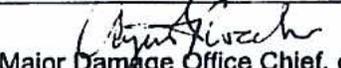
EA
0C190

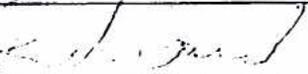
7. Headquarters Approval

- Pursuant to your authority under Section 10122(a) of the Public Contract Code,
- Pursuant to your authority under Section 10122(c) of the Public Contract Code,
- Pursuant to your authority under Section 10122(d) of the Public Contract Code,
- Pursuant to your authority under Section 10255 of the Public Contract Code,
- Pursuant to the Director's Order Guidelines for Supplemental Directors Orders, you are requested to authorize performance by emergency contract procedures.

CONCURRENCE

 3/27/12
Major Damage Engineer

 3/28/12
Major Damage Office Chief, or
Division of Construction Chief (CCO
only)

 Allocation Method G-11
 Vote
Div of Programming HM

 3/26/12
Legal Division

 FOR TAVARES. 3/28/12
Chief, Division of Maintenance
APPROVED: Date

MALCOLM DOUGHERTY
ACTING DIRECTOR

BY  3/20/12

Check if verbal approval given. Date of verbal ___/___/___ BY ___

Director's Order Request - Funds Request

MTC-0130 REV (5/2011)

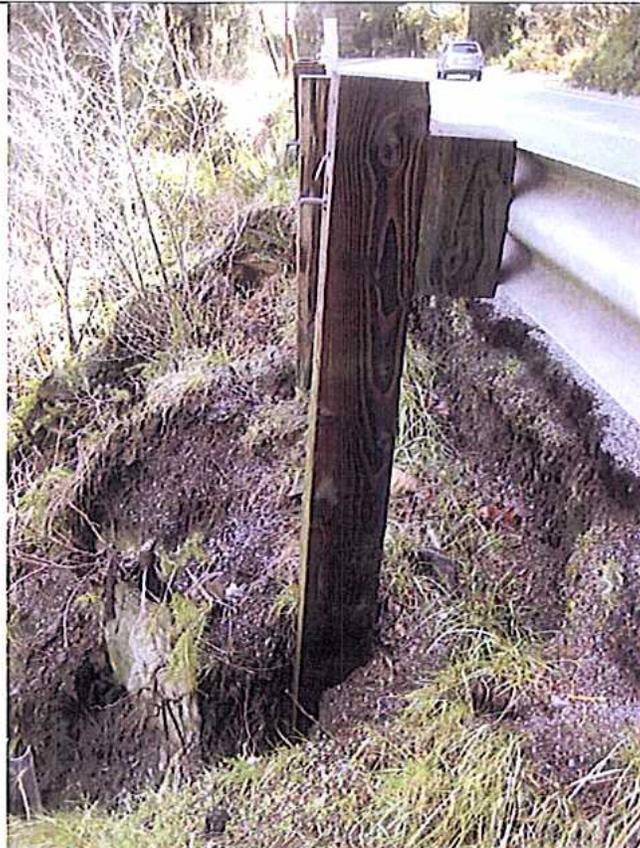
District
01

EA
0C190

8. Photo Page



Potential wheel trap: 32" deep drop off; approximately 15' long.



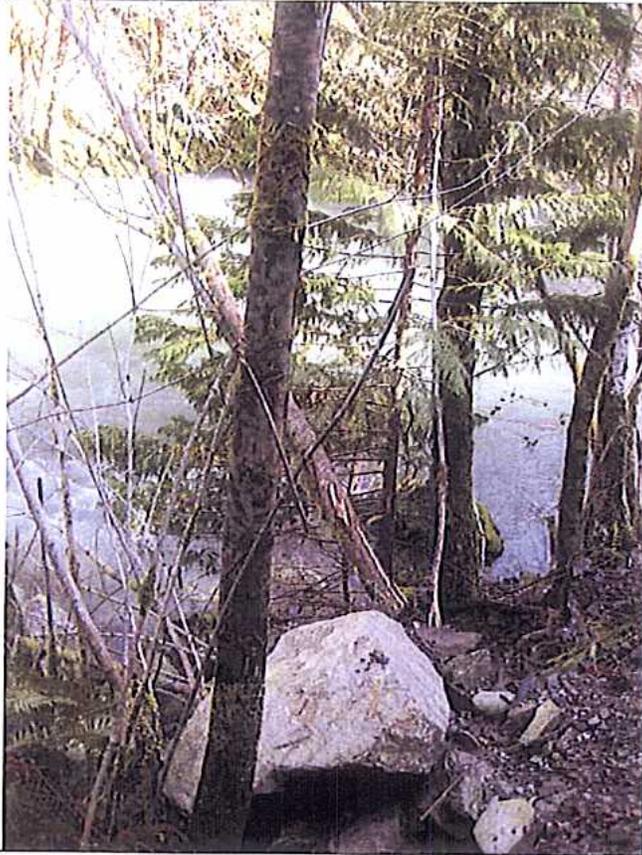
Exposed MBGR posts due to rock slipout.

Director's Order Request - Funds Request

MTC-0130 REV (5/2011)

District	EA
01	0C190

8. Photo Page



Trees downed by large boulders that popped out of slope.



View up degrading rock slip to shoulder and MBGR.

Appendix C

1965 METAL CRIB WALLS AS BUILT PLANS

“Plans for Construction on State Highway In Del Norte County between 6.2 miles and 16.4 miles north of Gasquet,” DN 199 PM 20.4/30.7, Contract No. 01-076744, As-Built Plan approval date May 17, 1965.

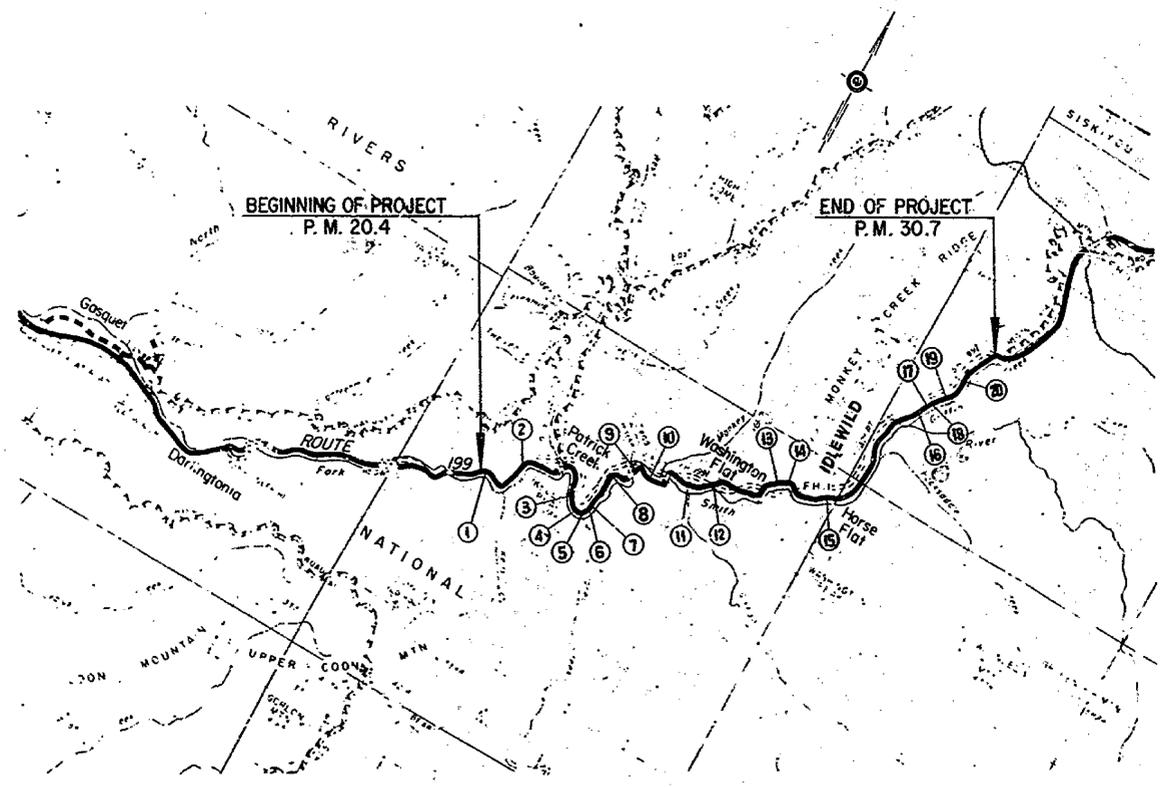
INDEX OF SHEETS

Sheet No.	1-	Title Sheet
"	2-3	Typical Cross-Sections <i>Shad & Dunes</i>
"	4-8	Location Plans
"	9-10	Contract Quantity Summaries
"	11-12	Drainage Details
"	13-22	Standard Details
Sheet No.		Mass Diagram
"	1-47	Cross-Sections

STATE OF CALIFORNIA
HIGHWAY TRANSPORTATION AGENCY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

In Del Norte County between 6.2 miles and 16.4 miles north of Gasquet



LOCATION	PM TO PM
1	20.44 20.80
2	21.25 21.64
3	22.50 22.69
4	22.98
5	23.01 23.14
6	23.19 23.33
7	23.34 23.37
8	23.78 24.00
9	24.11 24.13
10	24.65 24.68
11	25.16 25.28
12	25.54 25.73
13	26.86 26.91
14	27.00 27.01
15	27.80 27.91
16	29.86 30.07
17	30.23 30.31
18	30.39 30.42
19	30.52 30.56
20	30.69 30.73

SCALE IN MILES

Length of Project 2.4 Miles

AS BUILT PLANS
Contract No. 01-076744
Date Completed _____
Document No. 10000474

01-076744

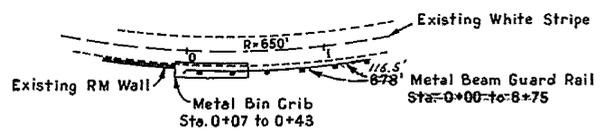
Sam Helms
Approved _____
H. H. Dunder
Approved _____
Approved May 17, 1966
J. C. Wernick
Registered Civil Engineer No. 1296
J. H. Smith
REGISTERED CIVIL ENGINEER No. 1296

Project Engineer	Date	Design Engineer	Date	Approved & Recommended By	Date
R. BUDY	4-65	B. VAN ZANT	4-56	C.P. SWEET JR.	4-65

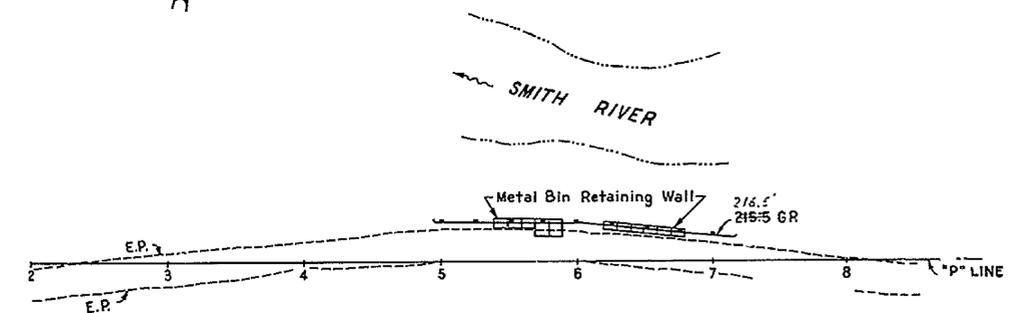
Contract No. 01-076744

EWO-076741

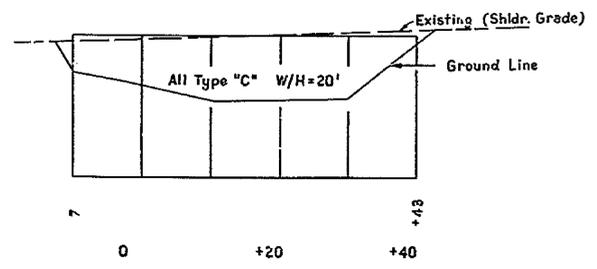
STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7 CALIF.				
CONTRACT	DATE	DATE	DATE	DATE
01 DN	193	20.4 / 30.7	4	22
<i>Sam Helmer</i> APPROVED: <u>May 17, 1965</u> <i>H. H. Drandoff</i> REGISTERED PROFESSIONAL ENGINEER LICENSE NO. 10000474				



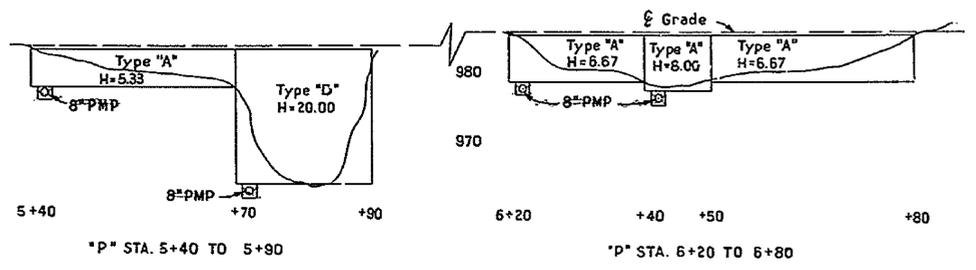
LOCATION 5
Scale: 1"=50'



LOCATION 10
Scale: 1"=50'



FRONT ELEVATION METAL CRIB WALL
LOCATION 5
Scale: 1"=10'



LOCATION 10
Scale: 1"=10'

AS BUILT PLANS
 Contract No. 01-076744
 Date Completed _____
 Document No. 10000474

01-076744

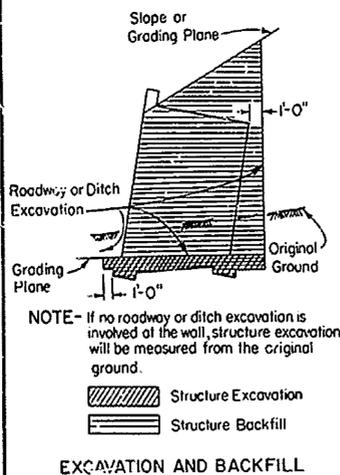
Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
F. SMITH	4-65	A. VAN ZANDT	4-65	C.P. SWEET, JR.	4-65

4

Surcharge	Level	With Superimposed Load	Unlimited
Wall On 1:6 Batter	① R=45	② R=50	③ R=55
Wall Vertical	④ R=55	⑤ R=60	⑥ R=65

R = $\frac{\text{base width}}{\text{height}}$
 ① Curve number

TABLE Y



EXCAVATION AND BACKFILL

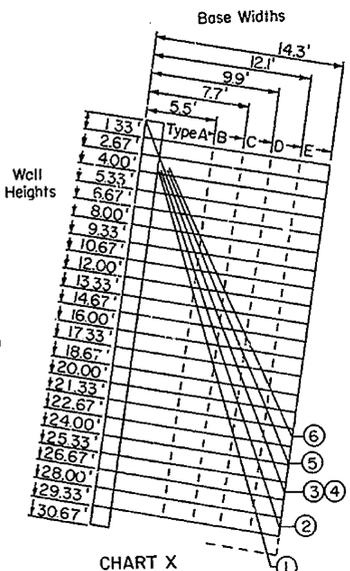
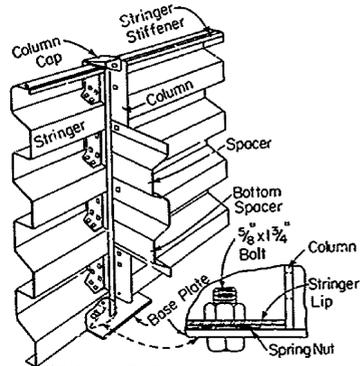
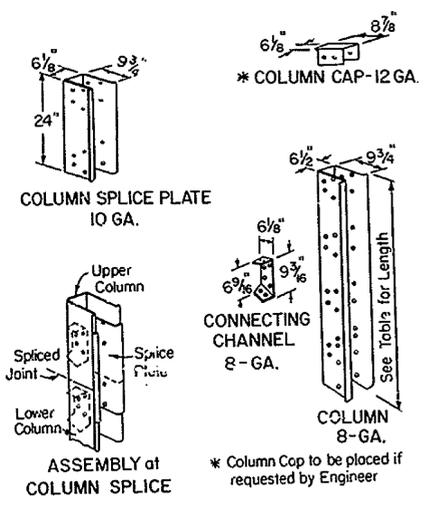


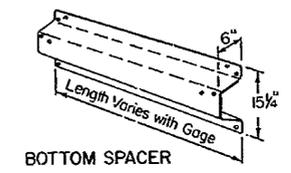
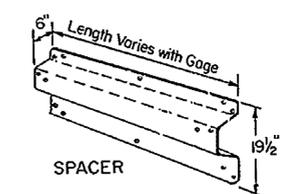
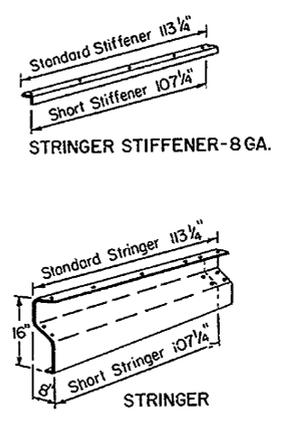
CHART X

NOTE - Use curve ①, ②, ④ or ⑤ shown on Standard Drawing C8-A when "hinge point" of shoulder is Left of vertical line thru rear of crib.
 Use curve ③ or ⑥ shown on Standard Drawing C8-A when "hinge point" of shoulder is Right of vertical line thru rear of crib.

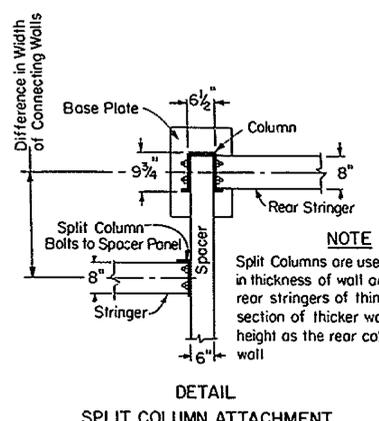
HOW TO USE - Select proper circled number in Table (Y) according to batter and surcharge conditions. In Chart (X), determine where the line with that number intercepts the desired height.
 Example - Wall on 1:6 batter, unlimited surcharge Wall height 20 ft. These conditions are found as (3) in table. In chart, line (3) intercepts the 20-ft height line about midway of Type "D" which has a base width of 12.1 feet.



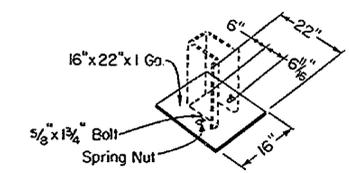
CRIB ASSEMBLY FRONT COLUMN
 Rear Column Similar



NOTE - See Table on Standard Drawing C8-A for Gage and Length.



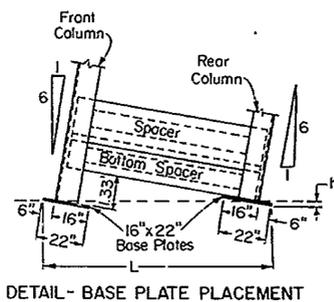
DETAIL SPLIT COLUMN ATTACHMENT



BASE PLATE ARRANGEMENT

To accompany plans dated May 17, 1965
 DISTRICT COUNTY ROUTE Post Miles Total Project
 01 011 199 20.4 130.7 17 22

APPROVAL RECOMMENDED
 [Signature]
 Assistant State Highway Engineer
 Registered Civil Engineer No. 5390
 Approved May 18, 1964
 [Signature]
 State Highway Engineer
 Registered Civil Engineer No. 5945

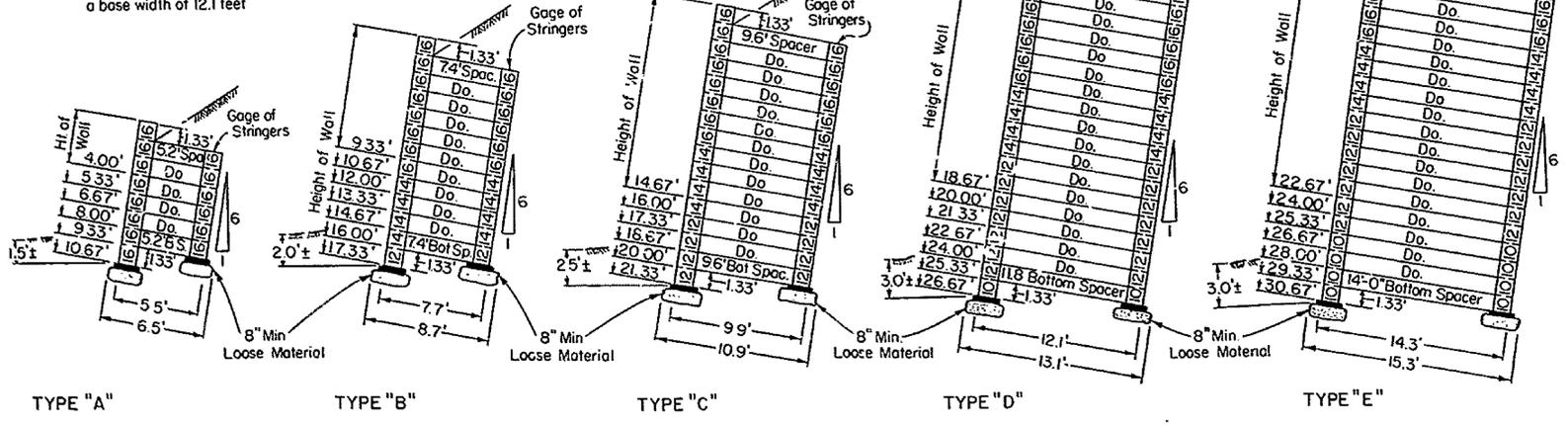


DETAIL - BASE PLATE PLACEMENT

WALL WIDTH TYPE	h	L
"A"	3"	6'-7 5/8"
"B"	1 3/8"	8'-9 5/8"
"C"	5 13/16"	10'-11 13/16"
"D"	10 3/16"	13'-2 1/16"
"E"	14 9/16"	15'-4 5/16"

* NOTE - Distance "h" for Type "A" is a Minus Quantity --- that is, Front Column Base is LOWER than Rear Column Base.
 All bolts to be 5/8" with a minimum length of 1 1/4"

AS BUILT PLANS
 Contract No. 01-076744
 Date Completed _____
 Document No. 10000474



TYPE "A"

TYPE "B"

TYPE "C"

TYPE "D"

TYPE "E"

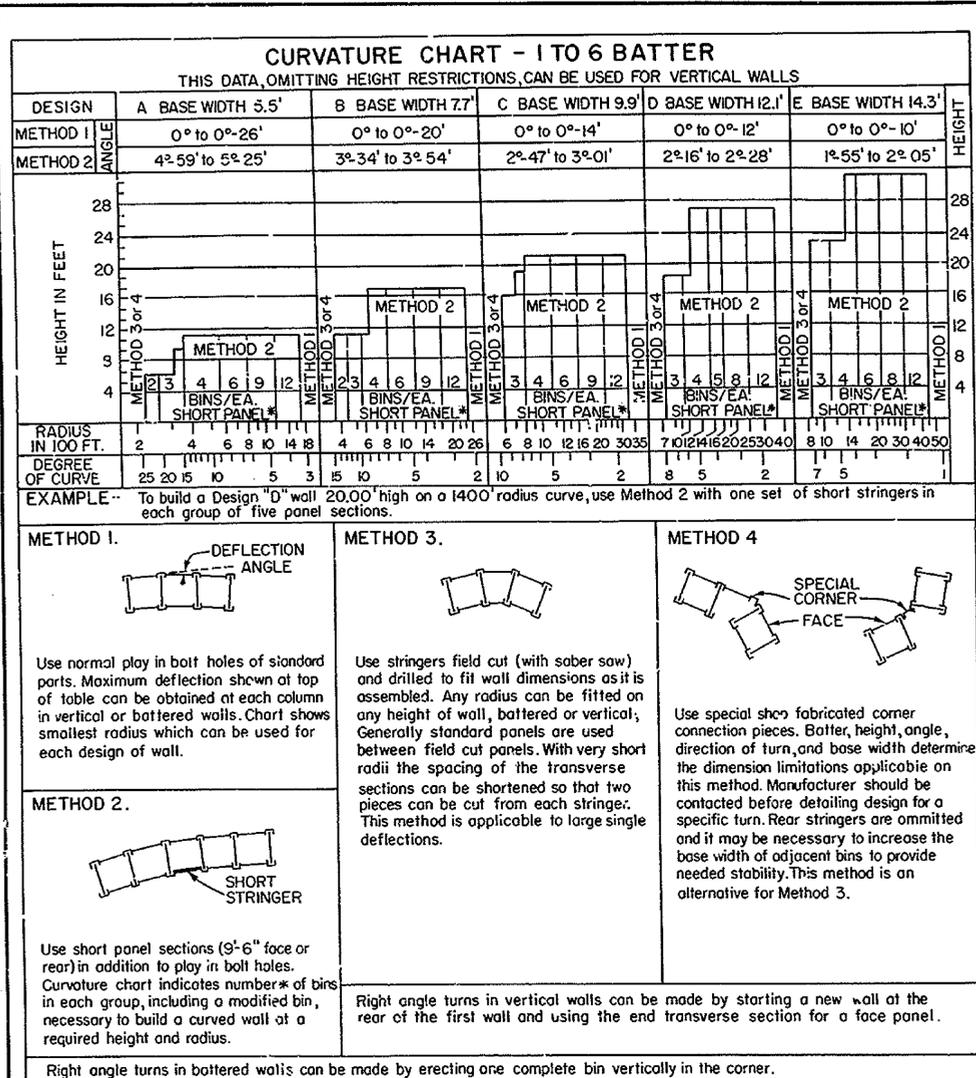
NOTE - Design "Type" to be shown on all crib layouts

NOTE - For Design Data See Standard Drawing C8-A

01-076744

STATE OF CALIFORNIA
 HIGHWAY TRANSPORTATION AGENCY
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

CONSTRUCTION DETAILS FOR
 METAL CRIB WALL C8-3



NOTE - Use Chart X and Table Y shown on Standard Drawing C8-3 to determine base width to height ratio for the various surcharges on both vertical and batter walls.

UNITS REQUIRED PER SHORT PANEL SECTION

WALL HEIGHT FEET	SHORT STRINGERS IN FRONT OF WALL					SHORT STRINGERS IN REAR OF WALL				
	16 Go.	14 Go.	12 Go.	10 Go.	Std	16 Go.	14 Go.	12 Go.	10 Go.	Std
	9.5'	9.0'	9.5'	9.0'	9.5'	9.0'	9.5'	9.0'	9.5'	9.0'
4.00	1	3				3	1			
5.33	2	4				4	2			
6.67	3	5				5	3			
8.00	4	6				6	4			
9.33	5	7				7	5			
10.67	6	8				8	6			
12.00	6	8				8	6			
13.33	6	8	2	2		8	6	2	2	
14.67	6	8	3	3		8	6	3	3	
16.00	6	8	4	4		8	6	4	4	
17.33	6	8	4	4	1	1	8	6	4	4
18.67	6	8	4	4	2	2	8	6	4	4
20.00	6	8	4	4	3	3	8	6	4	4
21.33	6	8	4	4	4	4	8	6	4	4
22.67	6	8	4	4	5	5	8	6	4	4
24.00	6	8	4	4	6	6	8	6	4	4
25.33	6	8	4	4	7	7	8	6	4	4
26.67	6	8	4	4	7	7	8	6	4	4
28.00	6	8	4	4	7	7	8	6	4	4
29.33	6	8	4	4	7	7	8	6	4	4
30.67	6	8	4	4	7	7	8	6	4	4

NOTE - This table applies only to short panel sections for curved walls and includes units for both front and rear of a 9.5' element of wall.

UNITS REQUIRED PER TRANSVERSE SECTION

WALL HEIGHT FEET	BEARING PLATE 16" x 22"	FRONT COLUMN HEIGHT IN FEET				REAR COLUMN HEIGHT IN FEET				SPACERS GAGE & LENGTH				BOT. SPACER GAGE & LENGTH				STRINGERS				ST. WALL HEIGHT FEET
		1st Lift	2nd Lift	3rd Lift	Total Height	1st Lift	2nd Lift	3rd Lift	Total Height	16	14	12	10	16	14	12	10	16 Go.	14 Go.	12 Go.	10 Go.	
		9.5'	9.0'	9.5'	9.0'	9.5'	9.0'	9.5'	9.0'	5.2	4.96	4.72	4.48	5.2	4.96	4.72	4.48	9.5'	9.5'	9.5'	9.5'	
4.00	2	4.00			4.00	1.33			1.33	5.33												4.00
5.33	2	5.33			5.33	2.67			2.67	8.00												5.33
6.67	2	6.67			6.67	4.00			4.00	10.67												6.67
8.00	2	8.00			8.00	5.33			5.33	13.33												8.00
9.33	2	9.33			9.33	6.67			6.67	16.00												9.33
10.67	2	10.67			10.67	8.00			8.00	18.67												10.67
12.00	2	12.00			12.00	9.33			9.33	21.33												12.00
13.33	2	8.00	5.33		13.33	10.67			10.67	24.00												13.33
14.67	2	8.00	6.67		14.67	12.00			12.00	26.67												14.67
16.00	2	8.00	8.00		16.00	8.00	5.33		13.33	29.33												16.00
17.33	2	12.00	5.33		17.33	8.00	5.67		14.67	32.00												17.33
18.67	2	12.00	6.67		18.67	8.00	8.00		16.00	34.67												18.67
20.00	2	12.00	8.00		20.00	12.00	5.33		17.33	37.33												20.00
21.33	2	12.00	9.33		21.33	12.00	6.67		18.67	40.00												21.33
22.67	2	12.00	10.67		22.67	12.00	8.00		20.67	42.67												22.67
24.00	2	12.00	12.00		24.00	12.00	9.33		21.33	45.33												24.00
25.33	2	12.00	8.00	5.33	25.33	12.00	10.67		22.67	48.00												25.33
26.67	2	12.00	8.00	6.67	26.67	12.00	12.00		24.00	50.67												26.67
28.00	2	12.00	8.00	8.00	28.00	12.00	8.00	5.33	25.33	53.33												28.00
29.33	2	12.00	12.00	5.33	29.33	12.00	8.00	6.67	26.67	56.00												29.33
30.67	2	12.00	12.00	6.67	30.67	12.00	8.00	8.00	28.00	58.67												30.67

AS BUILT PLANS
 Contract No. 01-076744
 Date Completed _____
 Document No. 10000474

To accompany plans dated May 17, 1966

DISTRICT	COUNTY	ROUTE	POST MILES - Total Project	POST MILES	DATE
01	017	199	20.4	130.7	78 22

APPROVAL RECOMMENDED

[Signature]
 Assistant State Highway Engineer
 Registered Civil Engineer No. 5390

APPROVED May 18, 1966

[Signature]
 State Highway Engineer
 Registered Civil Engineer No. 5945

NOTE - This table applies only to standard panel sections and includes units for both front and rear of a 10' element of wall.

NOTE - For Construction Details See Standard Drawing C8-3

01-076744

STATE OF CALIFORNIA
 HIGHWAY TRANSPORTATION AGENCY
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

DESIGN DATA FOR
METAL CRIB WALL C8-A

Appendix D

Laboratory Test Results

Results sent to: MARK HAGY

Division of Engineering Services
Materials Engineering and Testing Services
Corrosion and Structural Concrete Field Investigation Branch

Report Date: 8/29/2014
Reported by Michael Mifkovic

CORROSION TEST SUMMARY REPORT - SOIL

EFIS: **0112000116**

Dist/Co/Rte/PM **01 / DN /199/ / 24.6 PM**

CORROSION			DEPTH (FT)		MINIMUM RESISTIVITY ¹		CHLORIDE CONTENT ²	SULFATE CONTENT ³	IS SAMPLE CORROSIVE?
LAB #	TL101 #	BORE #	START	END	(ohm-cm)	pH ¹	(ppm)	(ppm)	
SOIL SAMPLE FROM: MIDDLE FORK SMITH RIVER									
CR20140234	C701660	RC-13-002	0	6.5	7837	7.81			NO

This site is not corrosive to foundation elements (see note below).

Note: For Structural Elements, the Department considers a site corrosive if one or more of the following conditions exist: pH is 5.5 or less, chloride concentration is 500 ppm or greater, sulfate concentration is 2000 ppm or greater. Resistivity is not considered for Structural Elements. MSE backfill shall conform to the requirements of section 47-2.02C Structure Backfill in the 2010 Standard Specifications.

¹CT 643, ²CT 422, ³CT 417

CR20140234 - CR20140234

9/2/2014

Results sent to: MARK HAGY

Division of Engineering Services
Materials Engineering and Testing Services
Corrosion and Structural Concrete Field Investigation Branch

Report Date: 8/29/2014
Reported by Michael Mifkovic

CORROSION TEST SUMMARY REPORT - SOIL

EFIS: **0112000116**

Dist/Co/Rte/PM **01 / DN /199/ / 24.6 PM**

CORROSION			DEPTH (FT)		MINIMUM RESISTIVITY ¹		CHLORIDE CONTENT ²	SULFATE CONTENT ³	IS SAMPLE CORROSIVE?
LAB #	TL101 #	BORE #	START	END	(ohm-cm)	pH ¹	(ppm)	(ppm)	
SOIL SAMPLE FROM: MIDDLE FORK SMITH RIVER									
CR20140236	C701661	RC-13-004	2.5	6.5	5954	6.93			NO

This site is not corrosive to foundation elements (see note below).

Note: For Structural Elements, the Department considers a site corrosive if one or more of the following conditions exist: pH is 5.5 or less, chloride concentration is 500 ppm or greater, sulfate concentration is 2000 ppm or greater. Resistivity is not considered for Structural Elements. MSE backfill shall conform to the requirements of section 47-2.02C Structure Backfill in the 2010 Standard Specifications.

¹CT 643, ²CT 422, ³CT 417

CR20140236 - CR20140236

9/2/2014

INFORMATION HANDOUT

For Contract No. 01-0B3204

At 01-DN-199-24.7

Identified by
Project ID 0112000116

PERMITS

PLAC - United States Army Corps of Engineers, San Francisco District

Non-Reporting Nationwide 404
Application and Conditions for Nationwide Permit No. 14
Dated April 14, 2015

WATER QUALITY

PLAC - California Regional Water Quality Control Board, North Coast Region

Water Quality Certification
Board Order No. WDID No. 1B15014WDN, ECM PIN CW-813031
Dated April 6, 2015

AGREEMENTS

PLAC - California Department of Fish and Wildlife, Northern Region

1602 Lake and Streambed Alteration Agreement
Notification No. 1600-2015-0031-R1
Dated April 21, 2015

MATERIALS INFORMATION

Foundation Report for Middle Fork ERS dated September 4, 2014

Division of Occupational Safety and Health Mining and Tunneling Unit Underground Classification letter dated February 2, 2015

Typical Plan for Exist MBGR (Special)

DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
MINING AND TUNNELING UNIT
2424 Arden Way, Suite 125
Sacramento, California 95825
oc@m&tsac@dir.ca.gov



Telephone (916) 574-2540
FAX (916) 574-2542

February 2, 2015

Calif. Dept. of Transportation
District 1
PO Box 3700
Eureka, CA 95502

Attention: Thomas Phillips

Subject: Project: 15060 – Middle Fork Wall, Del Norte County
Classification: Potentially Gassy With Special Conditions
Number Attached: 1(A)

The information provided to this office relative to the above project has been reviewed. On the basis of this analysis, an Underground Classification of "Potentially Gassy With Special Conditions" has been assigned to the tunnel identified on your submittal. Please retain the original Classification for your records and deliver a true and correct copy of the Classification to the tunnel contractor for posting at the job site.

When the contractor who will be performing the work is selected, please advise them to notify this office to schedule the mandated Pre-Job Conference with the Division prior to commencing any activity associated with boring of the tunnel. A Pre-Job Request Form is enclosed.

Should you have another bore under construction that is not required to have an Underground Classification (i.e.: less than 30 inches in diameter), please contact the Mining and Tunneling Unit prior to any employee entry of such a space.

If you have any questions on this subject, please contact this office at your earliest convenience.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Douglas Patterson', written over a horizontal line. The signature is stylized and cursive.

Douglas Patterson
Senior Engineer

enc: Classification
Pre-Job Request Form

cc: Bruce Allard, Mining & Tunneling Unit



State of California

Department of Industrial Relations

DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
MINING AND TUNNELING UNIT

Underground Classification

15060A015CT

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

of

DISTRICT 1, PO BOX 3700; EUREKA, CA 95502

at

MIDDLE FORK WALL PROJECT

has been classified as

*** POTENTIALLY GASSY WITH SPECIAL CONDITIONS ***

as required by the California Labor Code § 7955.

The Division shall be notified if sufficient quantities of flammable gas or vapors have been encountered underground. Classifications are based on the California Labor Code Part 9, Tunnel Safety Orders and Mine Safety Orders.

SPECIAL CONDITIONS

1. A Certified Gas Tester shall perform pre-entry and continuous monitoring of the underground environment to measure Oxygen and detect explosive, flammable, and toxic gasses whenever an employee is working in the underground environment.
2. Mechanical ventilation shall provide for continuous exhaust of fumes and air at any time an employee is working in the underground environment. The primary ventilation fans must be located outside of the underground environment and shall be reversible by a single switch near the fan location.
3. The Division shall be notified immediately if any Flammable Gas or Petroleum Vapor exceeds 5% of the Lower Explosive Limit.
4. All utilities that may be in conflict with the project shall be identified and physically located (potholed) prior to the start of project operations.

The twenty-three 30-inch-diameter 35-foot-deep drilled vertical shafts along Route 199 located approximately 10.2 miles west of the Mitchell Road & Route 199 intersection in Patrick Creek, Del Norte County

This classification shall be conspicuously posted at the place of employment.

Douglas Patterson, Senior Engineer

February 3, 2015

REQUEST FOR PRE-JOB (TUNNEL)

ATTACH COPY OF CLASSIFICATION AND DIESEL PERMIT

Company Name: _____

Phone _____ FAX: _____

DATE FAXED: _____

PLEASE NOTE: THE BORING CONTRACTOR SHOULD SCHEDULE THE PREJOB AS FAR IN ADVANCE AS POSSIBLE - AT LEAST 3-4 DAYS IN ADVANCE. THE DIVISION REQUIRES THE JOB TO BE SET UP WHEN THE FIELD ENGINEER ARRIVES FOR THE PREJOB. THIS MEANS THAT THE BORE PIT HAS BEEN DUG AND PROPERLY GUARDED, THE CRANE IS IN PLACE AND READY TO LIFT, THE BORING MACHINE IS IN THE PIT AND READY TO GO, AND THE CREW IS READY TO BEGIN BORING THE TUNNEL. IF THERE IS A DELAY IN SETTING UP THE JOB, THE BORING CONTRACTOR SHOULD CONTACT THE DIVISION IMMEDIATELY.

PRE-JOB REQUEST DATE & TIME: _____

ON-SITE SUPERVISOR & CELL NO.: _____

CLASSIFICATION #: _____ DIESEL PERMIT #: _____

BORE DIAMETER AND LENGTH: _____
(Diameter) (Length)

IS BORE ENTRY ANTICIPATED? YES NO
(Circle One)

You MUST contact the Division if entry is planned, REGARDLESS of the bore diameter.

MANNER OF EXCAVATION: _____

JOB-SITE LOCATION AND DIRECTIONS: _____

GENERAL CONTRACTOR: _____

SUBMITTED BY: _____

REVIEWED BY: _____ DATE: _____

Mining & Tunneling Unit, District 1
2424 Arden Way, Suite 125
Sacramento, California 95825-2400
(916) 574-2540; FAX: (916) 574-2542

Mining & Tunneling Unit, District 2
6150 Van Nuys Blvd., Suite 310
Van Nuys, California 91401-3333
(818) 901-5420; FAX: (818) 901-5579

Mining & Tunneling Unit, District 3
464 West Fourth Street, Suite 354
San Bernardino, California 92401-1442
(909) 383-6782; FAX: (909) 388-7132

INFORMATION HANDOUT

For Contract No. 01-0B3204

At 01-DN-199-24.7

Identified by

Project ID 0112000116

PERMITS

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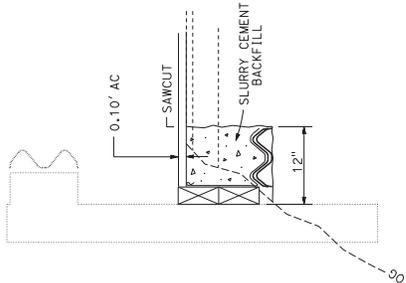
Division of Occupational Safety and Health Mining and Tunneling Unit Underground Classification letter dated February 2, 2015

Typical Plan for Exist MBGR (Special)

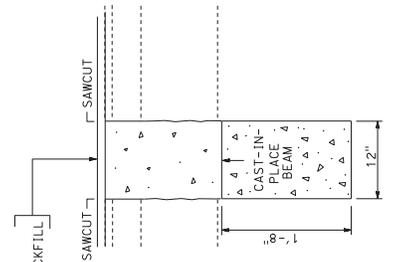


Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET TOTAL SHEETS

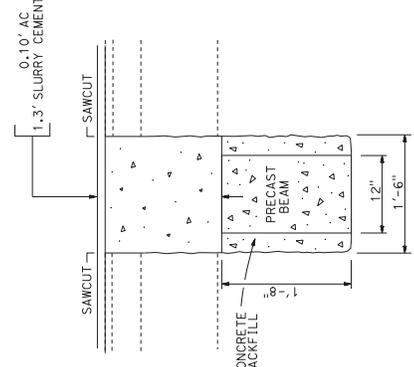
REGISTERED CIVIL ENGINEER DATE
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 THE ACCURACY OR COMPLETENESS OF PLANNED
 COPIES OF THIS PLAN SHEET.



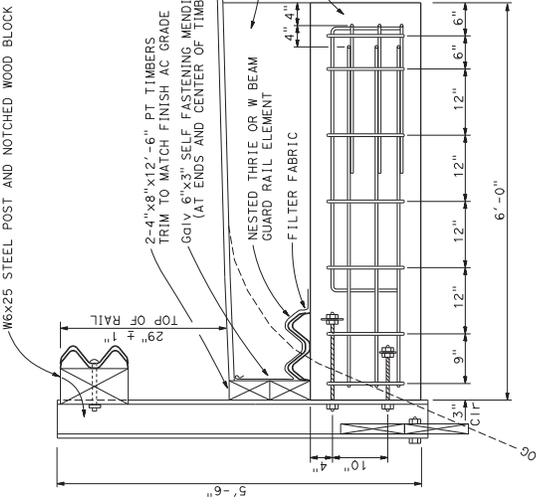
SECTION C-C



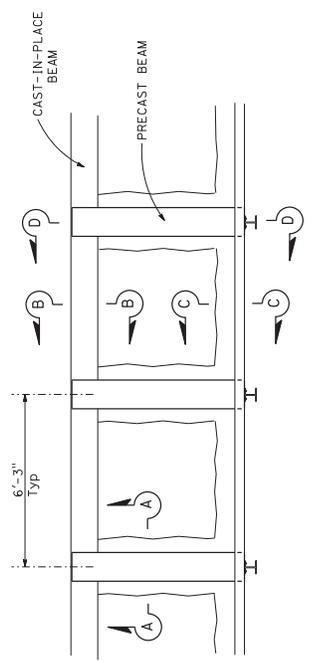
SECTION B-B



SECTION A-A



SECTION D-D



PLAN VIEW

MBGR (SPECIAL)
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 FUNCTIONAL SUPERVISOR
 CALCULATED BY DESIGNED BY CHECKED BY
 REVISOR BY DATE REVISED

