**CALIFORNIA COASTAL COMMISSION**
NORTH COAST DISTRICT OFFICE
1385 8th STREET, SUITE 130
ARCATA, CA 95521
VOICE (707) 826-8950
FACSIMILE (707) 826-8960

# W10a

## CDP APPLICATION NO. 1-16-0899

## (CALTRANS)

## SEPTEMBER 12, 2018

## EXHIBITS

**Table of Contents**

**Exhibit 1 – Regional Location Map**

**Exhibit 2 – Project Area/ Aerial Photo**

**Exhibit 3 – Site Plan**

**Exhibit 4 – Site Photos**

**Exhibit 5 – Court Order Granting Caltrans Permission to Enter Subject Properties to Conduct Geotechnical Investigation**

**Exhibit 6 – Updated Project Description**

**Exhibit 7 – Tree Removal Map with Close-Up**

**Exhibit 8 – Spill Response Plans**

**Exhibit 9 – Locations of Environmentally Sensitive Habitat Areas**

**Exhibit 10 – Noise Studies**

**Exhibit 11 – Land Use Map Excerpt**

**Exhibit 12 – Visual Impact Analysis and Simulations**

**Exhibit 13 – Transportation Monitoring Plan**

**Exhibit 14 – Permit Consolidation Requests**

**Exhibit 15 – Correspondence from Tribal Representatives through 8/23/18**

**Exhibit 16 – State and Federal Agency Correspondence through 8/23/18**

**Exhibit 17 – Bat and Bird Survey Memo**

**Exhibit 18 – Memo from Staff Ecologist**

**Exhibit 19 – Example of Drill Platform and Rig**

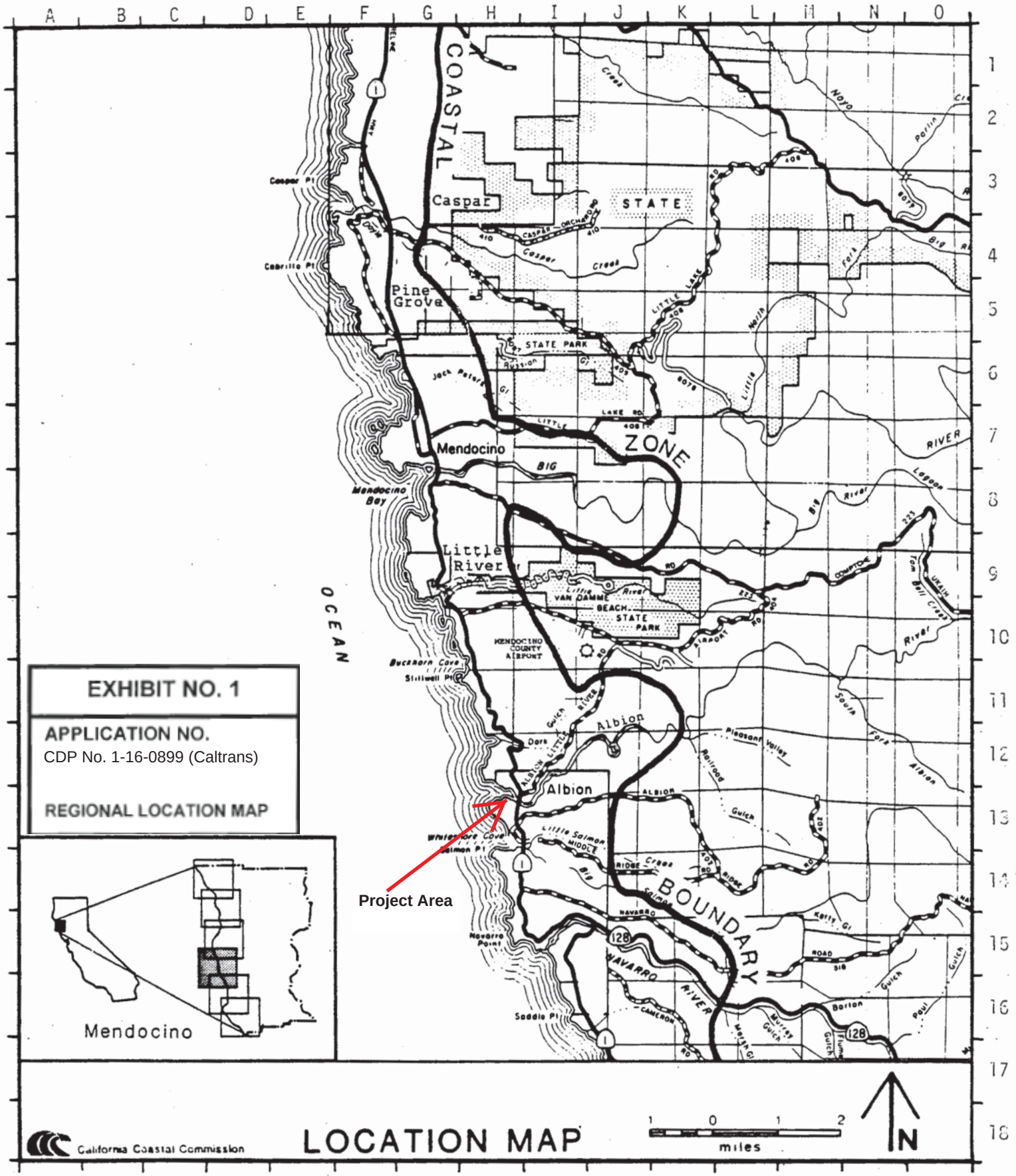
**Exhibit 20 – Geotechnical Memo from Staff Geologist and Engineer**

**Exhibit 21 – Revised Revegetation Plan**

**Exhibit 22 – Authority to Conduct Work within ROW Easements**

**Exhibit 23 – Ex Parte Correspondence through 8/23/18**

**Exhibit 24 – Public Correspondence through 8/23/18**


A B C D E F G H I J K L M N O
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
COASTAL ZONE BOUNDARY
OCEAN
Caspar
Pine Grove
Mendocino
Little River
Albion
STATE PARK
VAN DAMME BEACH STATE PARK
MENDOCINO COUNTY AIRPORT
Project Area
Mendocino
EXHIBIT NO. 1
APPLICATION NO.
CDP No. 1-16-0899 (Caltrans)
REGIONAL LOCATION MAP
California Coastal Commission
LOCATION MAP
1 0 1 2
miles
N
County of Mendocino

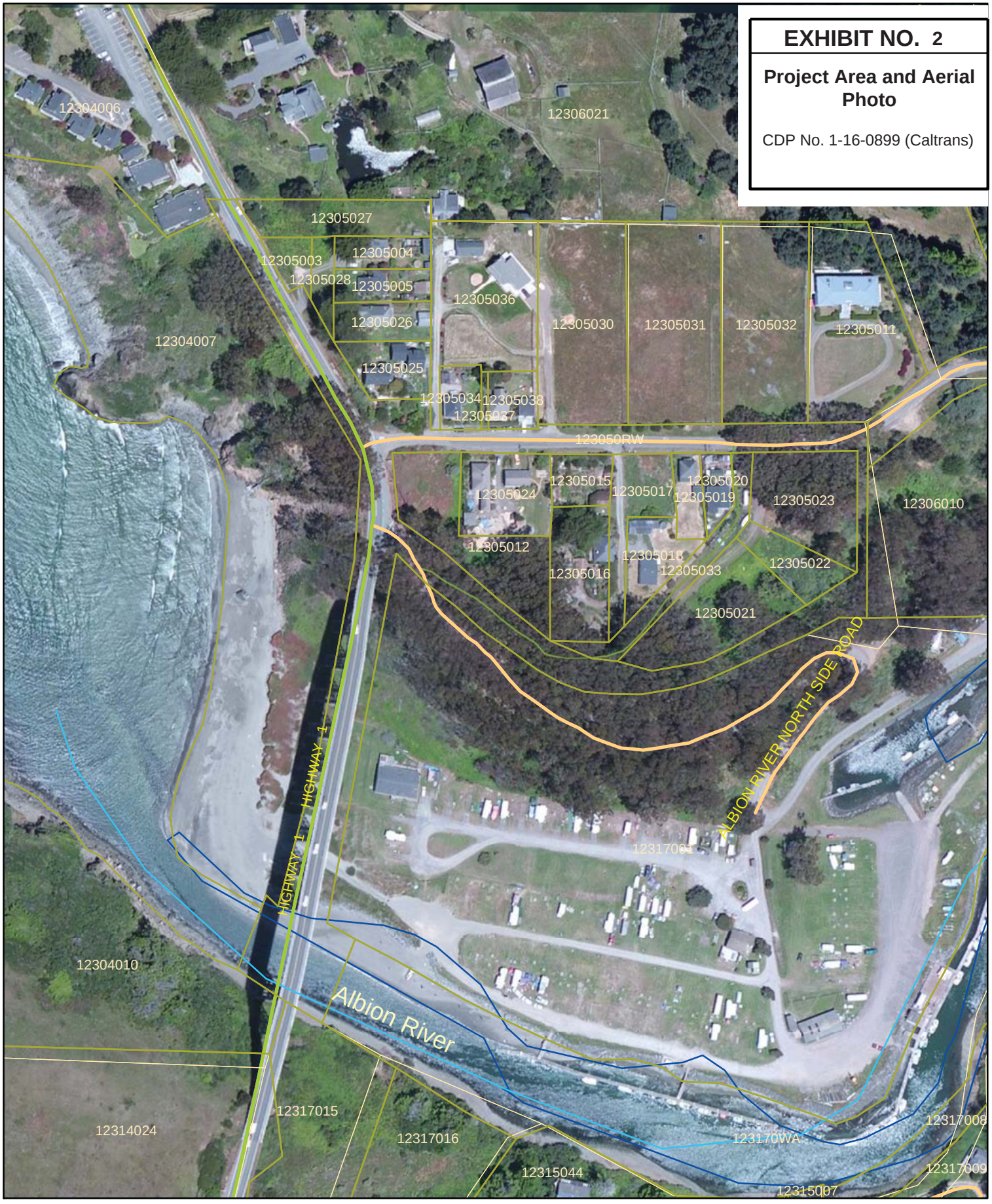



**EXHIBIT NO. 2**

**Project Area and Aerial Photo**

CDP No. 1-16-0899 (Caltrans)

N

1:2,440

0 5 10 20 30 40

Meters

Date: 4/25/2018




# GEOTECHNICAL EXPLORATION PLAN

## ALBION RIVER BRIDGE

SCALE 1 IN = 50 FT

**SHEET 1**

**EXHIBIT NO. 3**

Site Plans

CDP No.
1-16-0899
(Caltrans)
1 of 4

| | | | |
|---|---|---|---|
| CALCULATED-DESIGNED BY | THOMAS PHILLIPS, P.E. | REVISED BY | T. PHILLIPS |
| CHECKED BY | TODD LARK, P.E. | DATE REVISED | 7-30-18 |

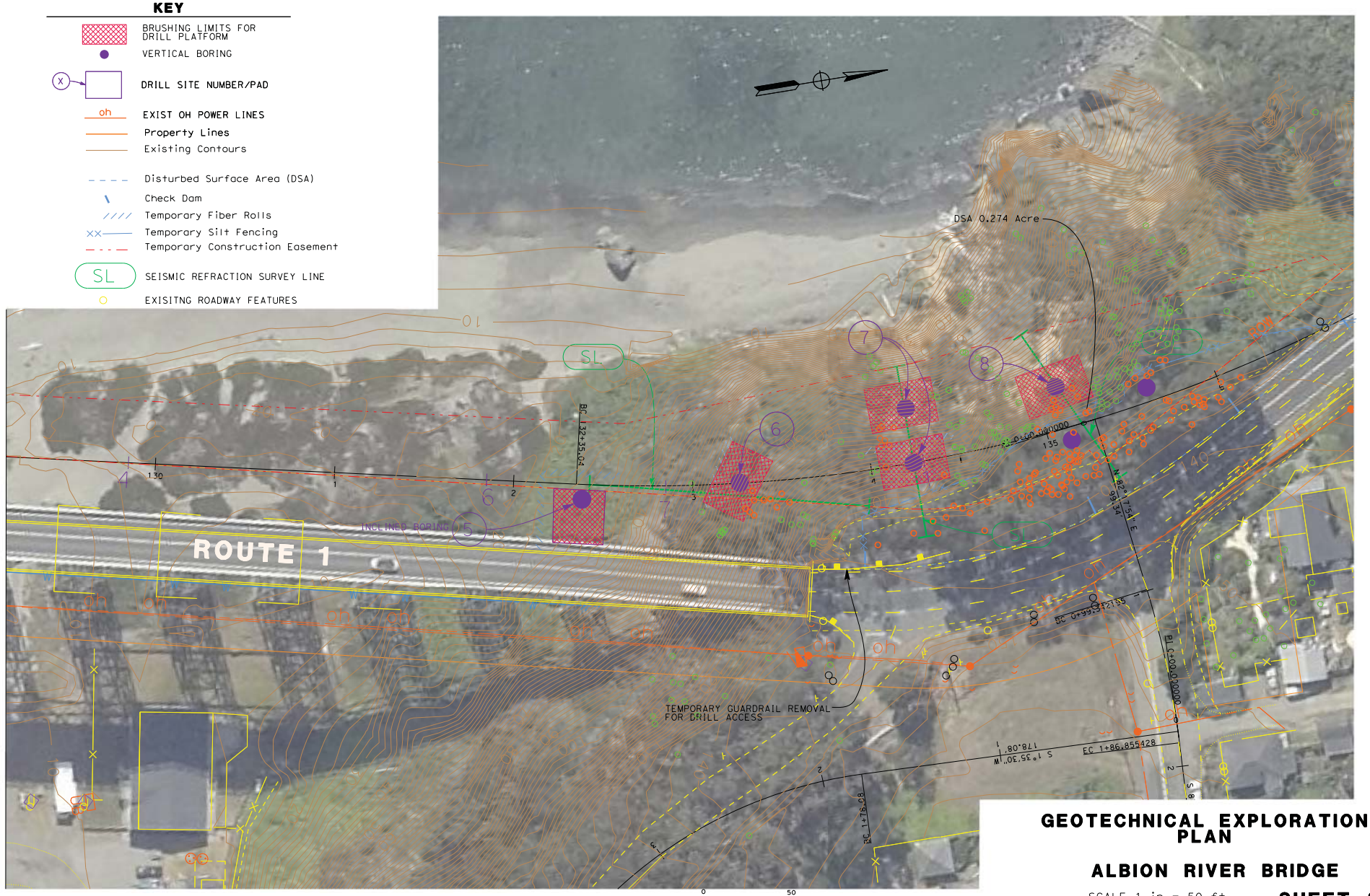
FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

(1 of 4)

LAST REVISION DATE PLOTTED =>




# GEOTECHNICAL EXPLORATION PLAN

## ALBION RIVER BRIDGE

SCALE 1 in = 50 ft

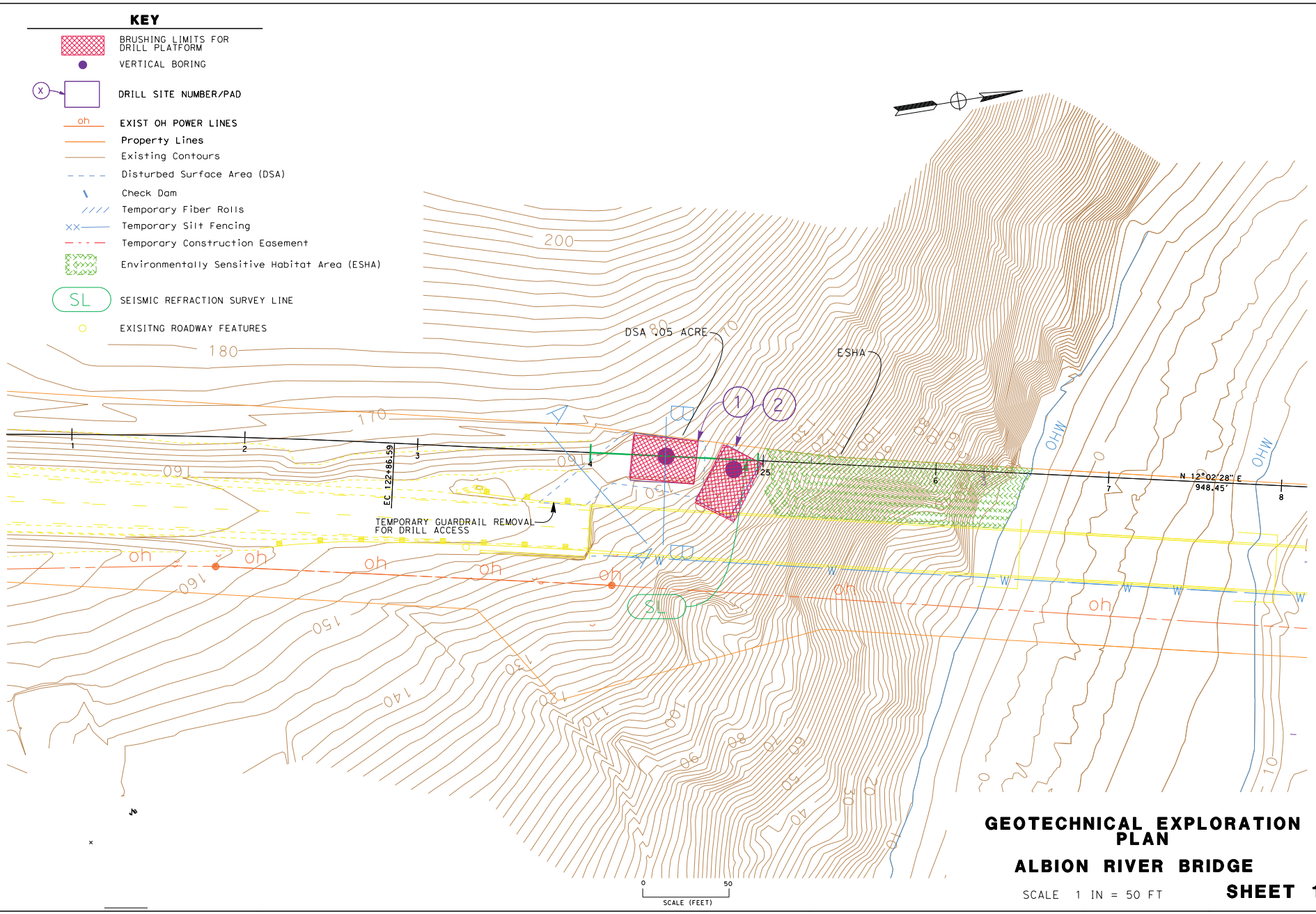
**SHEET 2**

| | | | | | |
|---|---|---|---|---|---|
| | | | | T. PHILLIPS | 8-20-18 |
| | | | REVISED BY | | |
| | | | DATE REVISED | | |
| | | THOMAS PHILLIPS, P.E. | | | |
| | | TODD LARK, P.E. | | | |
| | CALCULATED-DESIGNED BY | | | | |
| | CHECKED BY | | | | |
| | FUNCTIONAL SUPERVISOR | | | | |
| | LENA ASHLEY, P.E. | | | | |
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | | | | | |
| Caltrans DESIGN | | | | | |

(2 of 4)

#REQUEST

LAST REVISION | DATE PLOTTED => 8/20/18




# GEOTECHNICAL EXPLORATION PLAN

## ALBION RIVER BRIDGE

SCALE 1 IN = 50 FT

**SHEET 1**

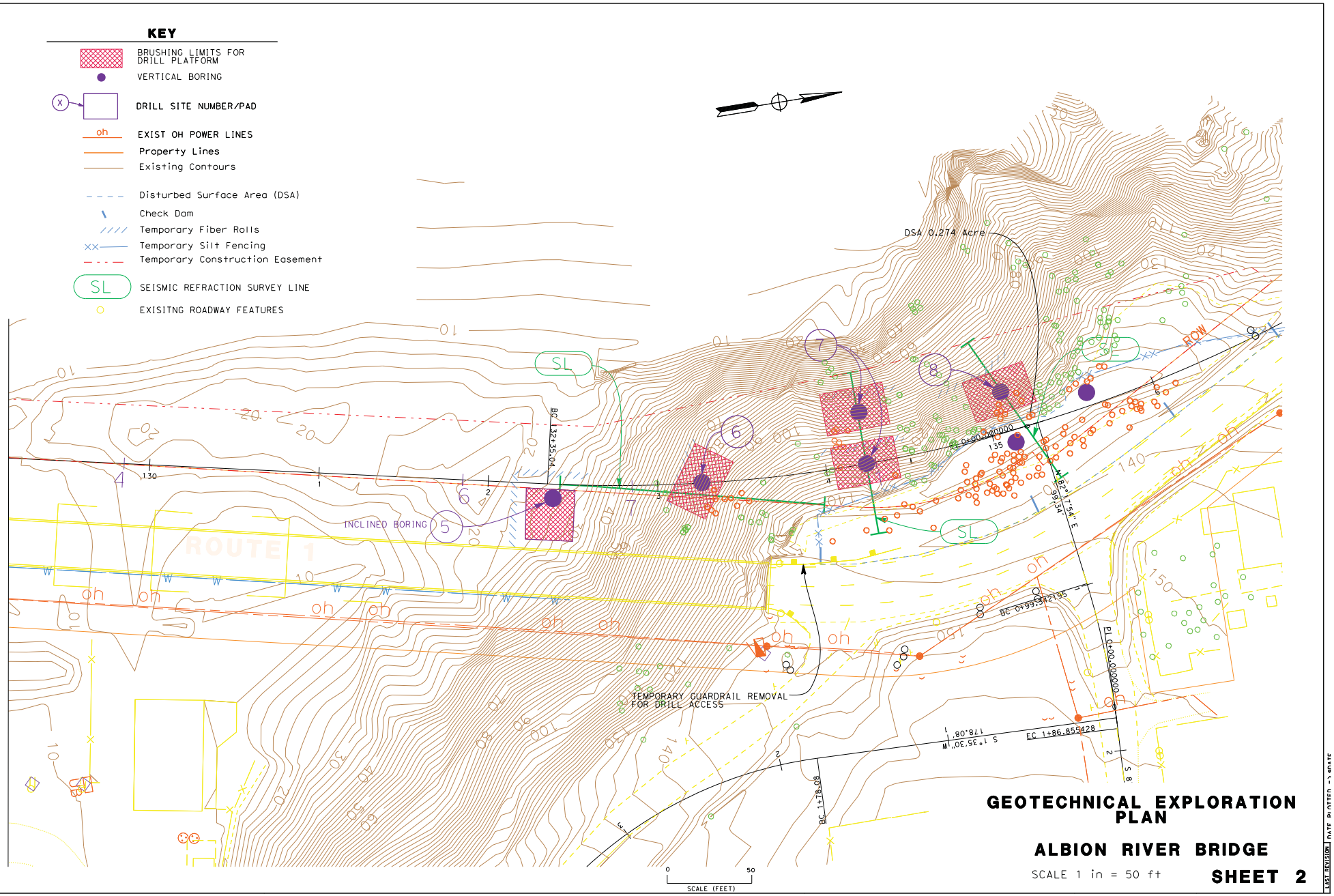
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|---|---|
| CALCULATED-DESIGNED BY | THOMAS PHILLIPS, P.E. |
| CHECKED BY | TODD LARK, P.E. |
| REVISED BY | T. PHILLIPS |
| DATE REVISED | 7-30-18 |
| FUNCTIONAL SUPERVISOR | |

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

**DESIGN**

(3 of 4)

LAST REVISION DATE PLOTTED =>DATE




# GEOTECHNICAL EXPLORATION PLAN

## ALBION RIVER BRIDGE

SCALE 1 in = 50 ft

SHEET 2

| | | | | | | |
|---|---|---|---|---|---|---|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | THOMAS PHILLIPS, P.E. | REVISED BY | | T. PHILLIPS |
| DESIGN | LENA ASHLEY, P.E. | CHECKED BY | TODD LARK, P.E. | DATE REVISED | | 8-20-18 |

#REQUEST

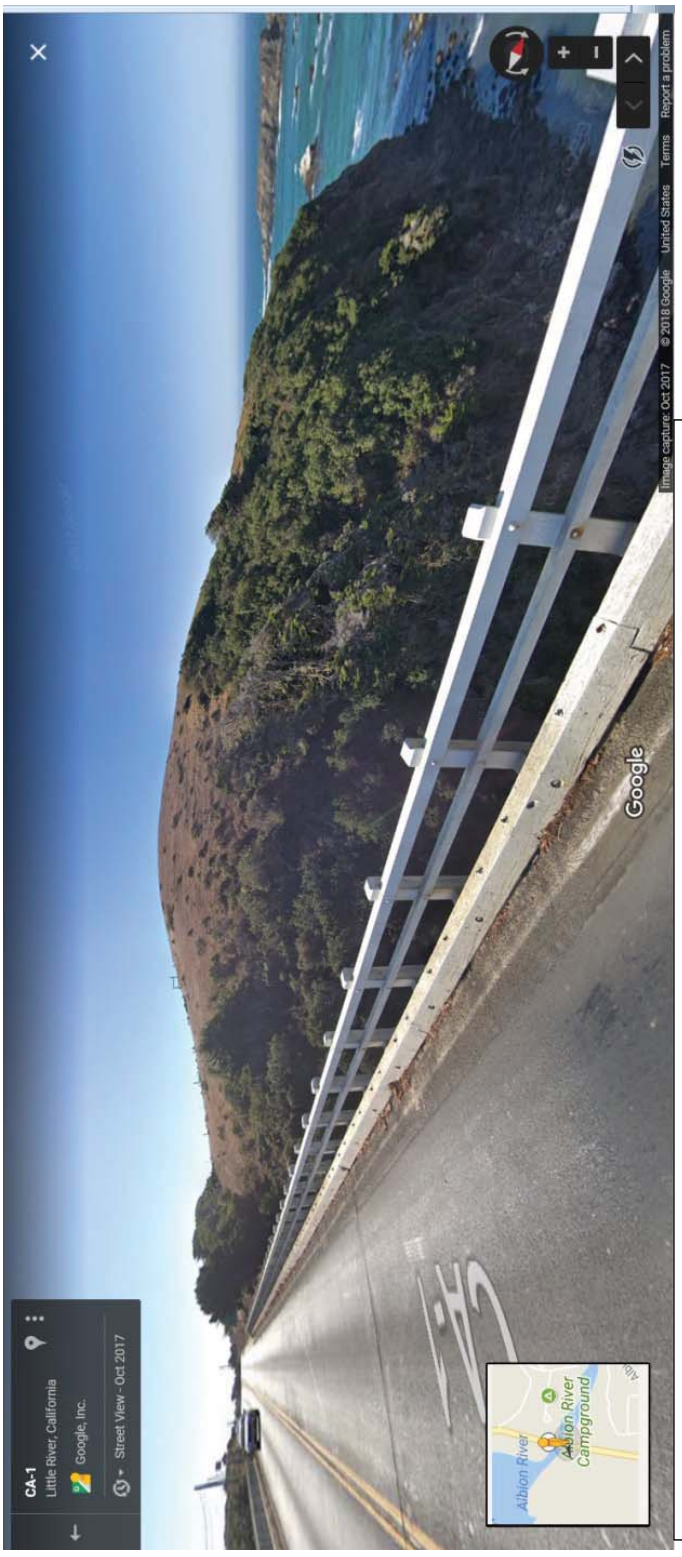
(4 of 4)

LAST REVISION | DATE PLOTTED =>DATE

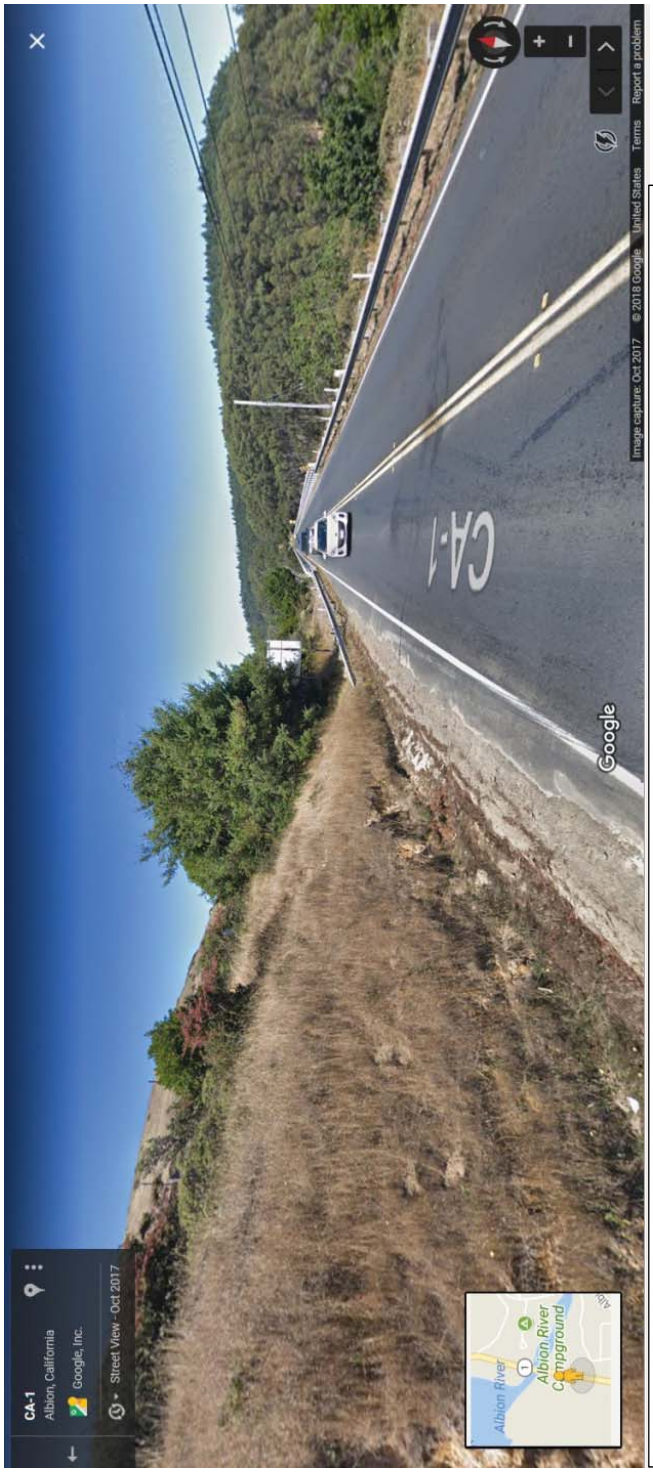
**EXHIBIT NO. 4**

**Site Photos**

CDP No. 1-16-0899 (Caltrans)



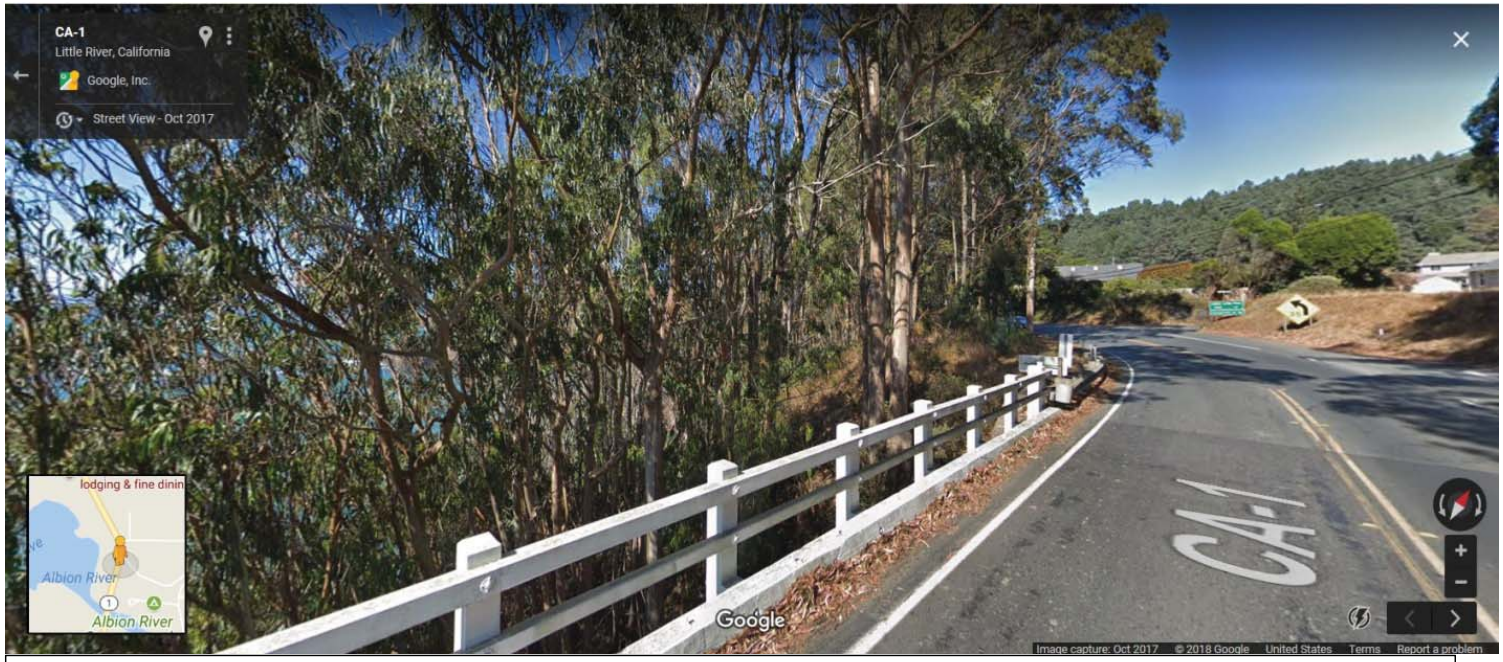

Street view of Albion Head and project activity area, heading southbound on Albion River Bridge.




Street view of Albion Head and project activity area, heading northbound from south side of Albion River Bridge.



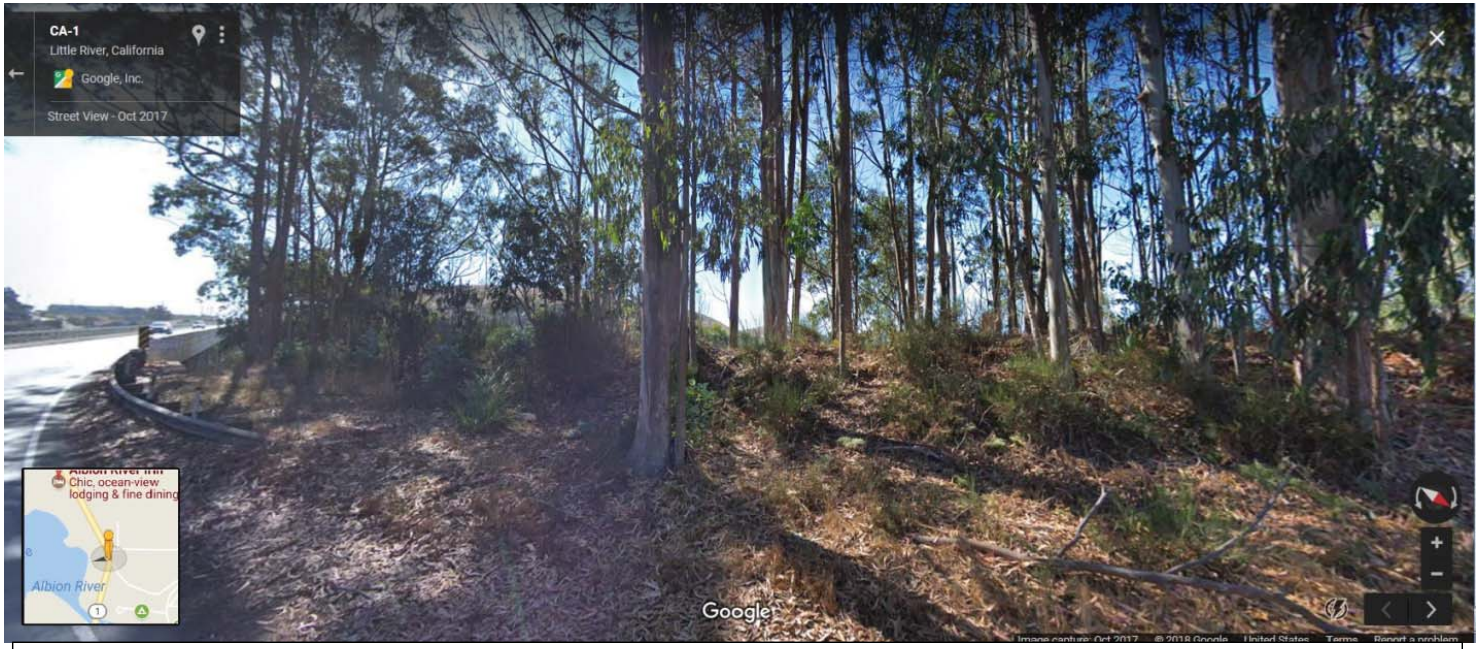

Street view, northbound, of Albion River Bridge and Albion River Cove, with eucalyptus trees in background.




Street view showing close-up of eucalyptus trees with Albion Cove in the background, from north side of Albion River Bridge.




Street view, northbound, of eucalyptus trees, from north side of Albion River Bridge.




Street view, southbound, of eucalyptus trees, from north side of Albion River Bridge.




Street view of eucalyptus trees north of Albion River Bridge, from intersection of Albion Little River Rd. and Highway 1



View from Albion Cove of hillslope at northern end of Albion River Bridge where geotechnical investigation Drill Sites 5, 6, 7, and 8 will be located. Photo taken 01/17/18



Close-up of area near Drill Sites 5 and 6. Photo taken January 17, 2018.



View of Albion River Bridge, looking southbound, from Albion Cove. Photo taken 01/17/18.

**EXHIBIT NO. 5**

Court Order Granting Permission to Enter to Conduct Geotechnical Investigations

CDP No. 1-16-0899 (Caltrans)
**(1 of 13)**

FILED

NOV 0 1 2017

CLERK OF MENDOCINO COUNTY SUPERIOR COURT OF CALIFORNIA

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF MENDOCINO

| | |
|---|---|
| STATE OF CALIFORNIA, acting by and through the Department of Transportation,<br><br>Petitioner,<br><br>vs.<br><br>SUM M. SETO PROPERTIES, LLC; JENNY P. SETO PROPERTIES, LLC; SETO FAMILY TRUST; and DOES 1 to 50, inclusive,<br><br>Respondents. | Case Number: SC-UK-CV-PT 17-69630<br><br>APN 123-040-07; 123-170-01; 123-050-12<br><br>**~~[JOINT PROPOSED]~~ ORDER GRANTING PETITION FOR ORDER PERMITTING ENTRY UPON PROPERTY**<br><br>Date: October 5, 2017<br>Time: 1:30 p.m.<br>Judge: Hon. Jeanine Nadel<br>Dept: E |

The Petition for Order Permitting Entry upon Property under Code of Civil Procedure section 1245.030, filed by the State of California, by and through the Department of Transprotation ("State" or "Petitioner"), came on for hearing on October 5, 2017. Attorney Stacy Lau appeared for Petitioner, and attorney Scott Jenny appeared for Respondents Sum M. Seto Properties, LLC, Jenny P. Seto Properties, LLC, and Seto Family Trust.

It is hereby **ORDERED** that the State's Petition is **GRANTED** and that the State will be permitted to enter Respondents' property at Mendocino County Assessor's parcel numbers 123-

040-07, 123-170-01, 123-050-12 ("subject properties") in accordance with the conditions and limitations set forth below:

*Archaeological Study*

1. The State is permitted to enter the subject properties in order to perform an archaeological study at APN 123-040-07 ("Trust Property") for a total of ten working days beginning on October 20, 2017, and ending on or before November 30, 2017. The location of the archaeological study is marked with blue hatched lines on the map attached as Exhibit A to this Order.

2. The archaeological activities that the State is permitted to conduct on the Trust Property include: (1) inspecting the ground surface, by visual observation and by use of hand tools to scrape aside vegetation if necessary; (2) using a mechanical excavator (backhoe) outfitted with a 36-inch wide, smooth edge bucket to dig up to five east-west trenches, not exceed a length of 100 linear feet and a maximum depth of five feet; (3) using hand tools to make controlled excavation units that will be 1.0 by 1.0 meters (or approximately 3.5 by 3.5 feet) in size to sample deposits of interest along the sidewalls of the trenches; (4) passing soil from the units through hand-held screens and removing any artifacts; and (5) backfilling each trench and excavation unit with the same soil once the aforementioned activities are complete.

3. The State is permitted to use APNs 123-170-01 and 123-050-12 ("LLC Property") to transport vehicles and equipment, including a mechanical excavator or backhoe, to the Trust Property for the archaeological study. The State's vehicles shall travel and park on established dirt or paved roadways on the LLC Property, outlined in blue in Exhibit A to this Order, or on established pathways designated for beach access.

4. The State is permitted up to seven people at a time on the subject properties for the archaeological study.

5. No foreign material may be added to the soil. Any trenches left open overnight should be cordoned off either with stakes and caution tape or temporary plastic fencing, and excavation units should be covered by thick pieces of plywood.

6. The State may temporarily transport any collected artifacts to an off-site laboratory to be cleaned, catalogued, and analyzed. Any artifacts or other materials temporarily removed from the Trust Property shall be returned to the landowner or, with Respondents' permission, donated to a cultural repository or permanently stored at a qualified curation facility.

7. The State shall backfill each excavation and/or trench with the same soil from the Trust Property after the archaeological study is complete.

***Plant and Wildlife Surveys***

8. The State is permitted to enter the subject properties for 10 to 20 days over a period of five months, beginning in October 2017, and ending on or before March 30, 2018, to conduct plant and wildlife surveys, consisting of visual observations, photograph-taking, and collection of plant samples.

9. The State is permitted entry for up to four people at once for the plant and wildlife surveys. No vehicle may be brought onto the subject properties for the surveys.

***Geotechnical Testing***

10. The State is permitted entry onto the subject properties to conduct geotechnical testing on the Trust Property for a total of 50 active work days (ten active weeks). The 50 work days may occur consecutively or intermittently as weather and other practical concerns (e.g., availability of workers, equipment) permit. The locations of the geotechnical testing on the Trust Property are marked with yellow cross-hatched lines on Exhibit A to this Order. The State's entry for geotechnical testing may occur once the State obtains any necessary permits for such testing, and will end on or before June 30, 2019.

11. The State is permitted entry onto the LLC Property for the duration of the geotechnical testing in order to stage and transport its vehicles and equipment to the Trust Property. The State is permitted to stage its equipment at the areas marked on Exhibit A as "Lot 10" and "Lot 11," and underneath the Albion River Bridge. The State will place temporary fencing at Lot 10 and Lot 11, and any equipment stored at these locations will be parked within

the fenced-in area. The State is permitted to transport its vehicles using the roadway outlined with blue lines on Exhibit A.

12. The State is permitted to remove up to 90 trees from the Trust Property, located on the slope above the drill sites marked "6" and "7," and from the area around the drill site marked "8," shown in the map attached as Exhibit B to this Order. The tree removal work may begin after the State obtains any necessary permits for such removal. Before the tree removal work may begin, the State will mark each tree to be removed with a visible tag. Respondents will be provided with notice that the trees have been tagged at least 30 days before any trees are removed. Respondents will be provided with a map or diagram showing the location of the trees to be removed at least 30 days before any trees are removed.

13. The State may access four drill sites at the Trust Property, and drill a total of seven bore holes, with a diameter of 4.5 to 7 inches each, at these drill sites. The drill pad locations are shown with yellow crosshatches in Exhibit A. The State is permitted to perform the following activities at each of the drill sites, labelled "5," "6," "7," and "8" in the map attached as Exhibit B to this Order:

(a) With respect to "Drill Site 5," the State is permitted to make a single inclined boring with an approximate depth of 125 feet. This drill site may be accessed by traversing along an existing road through the Albion Campground and Marina at the LLC Properties (outlined in blue in Exhibit A), proceeding underneath the Albion River Bridge, then turning north onto the access road along the westerly edge of the bridge. The State is permitted use an all-terrain rubber tire- or track-mounted drill rig to reach the site, may place mats temporarily on the ground to facilitate vehicle movements, and may move sand temporarily to bridge the swale on the way to Drill Site 5. Alternatively, the State may use a helicopter to deliver the equipment and supplies. If a helicopter is used, the State may erect a steel platform at Drill Site 5 to allow for delivery of the drill rig to the site. The helicopter is not permitted to land on the subject properties.

(b) With respect to "Drill Site 6," the State may make a boring of approximately 125 feet. The State is permitted to erect a steel platform for the drilling equipment. The State may use a crane at the top of the Trust Property slope to place the steel platform at the site, and provide additional support. Also, if necessary, the State may use a helicopter to deliver a drill rig and materials to the site.

(c) With respect to "Drill Site 7," the State is permitted to make two vertical borings with an approximate depth of 125 feet. The State is permitted to erect a steel platform for the drilling equipment. The State may use a crane at the top of the Trust Property slope to place the steel platform at the site, and provide additional support. Alternatively, the State may utilize a self-leveling track-mounted drill.

(d) With respect to "Drill Site 8," the State is permitted to make three vertical borings with an approximate depth of 70 to 90 feet. The State may grade the area around Drill Site 8, at the top of the bluff, to accommodate access and room for vehicles and staging, and provide crane and other equipment support for Drill Sites 6 and 7. The State is permitted to use drill rigs for the borings, and is permitted to use a crane to place a steel platform and drill rig where needed.

14. The State is permitted to temporarily place a piezometer, slope inclometer, and/or geophysical pipe in the borings. The State shall remove these instruments from the borings a maximum of six weeks later. The State is permitted to seal all borings with a cement/bentonite grout mix.

15. For the geotechnical testing, the State is permitted to use drilling equipment including track-mounted All-Terrain drill rigs, truck-mounted drill rigs, and a smaller skid-mounted rig.

16. The State is permitted to use standard road grading equipment, including trucks and a bulldozer, to grade the area around Drill Site 8.

17. The State is permitted to use additional support vehicles, including an equipment/water tender, drill crew cab, and transport vehicles for staff at the vacant staging area and established pathways described above. The State is permitted to stage these vehicles near the north end of the Albion River Campground at the LLC Property.

18. The State is permitted to place temporary silt fencing and fiber rolls downslope of the drilling locations and any grading locations.

19. The State shall use construction site Best Management Practices to control and contain surface drainage and erosion, if any. The State shall employ precautions during drilling, including use of plastic tarps, absorption mats, and jute waddles, to contain any equipment leaks or drilling fluid spillage.

20. The State is permitted to re-grade and contour any graded areas-in conformance with State drainage and erosion protection standards. The State is permitted to place straw on and re-seed any areas where vegetation had been removed for the geotechnical studies and revegetate graded areas within one year of grading activities.

21. The State is permitted to perform a seismic refraction survey by placing three geophone arrays at the locations shown by the white arrows on the attached Exhibit B. The State may place geophones in the ground in arrays of 24 or more. Each geophone array may be connected to a battery-powered seismograph. The State is permitted minor brush trimming before placement of the geophone arrays. The State shall remove the geophones once the geotechnical studies are completed.

22. The working days of entry for geotechnical testing are limited to weekdays, from 8:00 a.m. to 5:00 p.m.

***Notice and Other Conditions of Entry***

23. The State shall provide 72 hours of notice to Respondents before each entry onto the subject properties. The State need not provide notice before each consecutive day of entry so long as the State provides an estimate of the number of days of entry each time notice is provided.

24. Within two days of receiving a permit from the California Coastal Commission for geotechnical studies on the subject properties, the State shall notify Respondents of the issuance of said permit.

25. For every person who enters the subject properties pursuant to this Order, the State will submit in writing to Respondents the person's name, occupation, and business name and address, and purpose in entering the subject property.

26. The State is responsible for communicating complete contents of this Order to any person entering the property on behalf of the State for the aforementioned studies.

27. Within twenty (20) days of a written request, the State shall provide the Respondents the raw data, and also any data and reports, in final form, relating to the entries onto the owners' property. The State is not required to provide Respondents with any working draft documents. The State shall also provide the property owner with a reasonable opportunity to examine any environmental document created following the testing.

***Compensation***

28. Based on the information provided to the court, the amount of probable compensation for the State's entries onto the subject properties is $43,500.00. Respondents dispute this amount and the actual amount of compensation shall be determined pursuant to a jury trial or settlement between the parties.

29. Respondents argued against the right of entry in its entirety and by this Proposed Order do not waive any rights including the right to appeal.

30. Respondents are immediately entitled to withdraw the $43,500.00 on deposit.

Dated: October 25, 2017

HONORABLE JEANINE NADEL
Judge of the Superior Court

Case Name: *State of California v. Seto Properties, LLC*
Case No.: Mendocino County Superior Court Case No., APN 123-040-07; 123-170-01; 123-050-12

## PROOF OF SERVICE

I am employed in the City of Oakland, County of Alameda, State of California. I am over the age of 18 years and not a party to the within action. My business address is 111 Grand Avenue Suite 11-100, Oakland, CA 94612. On the date set forth below, I served a true copy of the following document(s):

**[JOINT PROPOSED] ORDER GRANTING PETITION FOR ORDER PERMITTING ENTRY UPON PROPERTY**

on the interested parties listed below to said action by the following means:

[X] **(BY MAIL)** By placing a true copy thereof, enclosed in a sealed envelope, with postage thereon fully prepaid, for collection and mailing on that date following ordinary business practices, in the United States Mail at the office of the State of California, Department of Transportation, 111 Grand Avenue Suite 11-100, Oakland, California, addressed as shown below. I am readily familiar with this business's practice for collection and processing of correspondence for mailing with the United State Postal Service, and in the ordinary course of business, correspondence would be deposited with the United States Postal Service the same day it was placed for collection and processing.

[ ] **(BY OVERNIGHT DELIVERY)** By placing a true copy thereof, enclosed in a sealed envelope, with delivery charges to be billed to the office of the State of California, Department of Transportation, to be delivered by Express Mail, to the address(es) shown below.

[ ] **(E-MAIL)** By attaching a copy of the Word Processing file in PDF format.

Scott E. Jenny, Esq.
JENNY & JENNY, LLP
736 Ferry Street
Martinez, CA 94553
Tel No. (925) 228-1265
Fax No. (925) 228-2841
sejlawoffice@cs.com
Attorneys for Respondents Seto Porperties, LLC

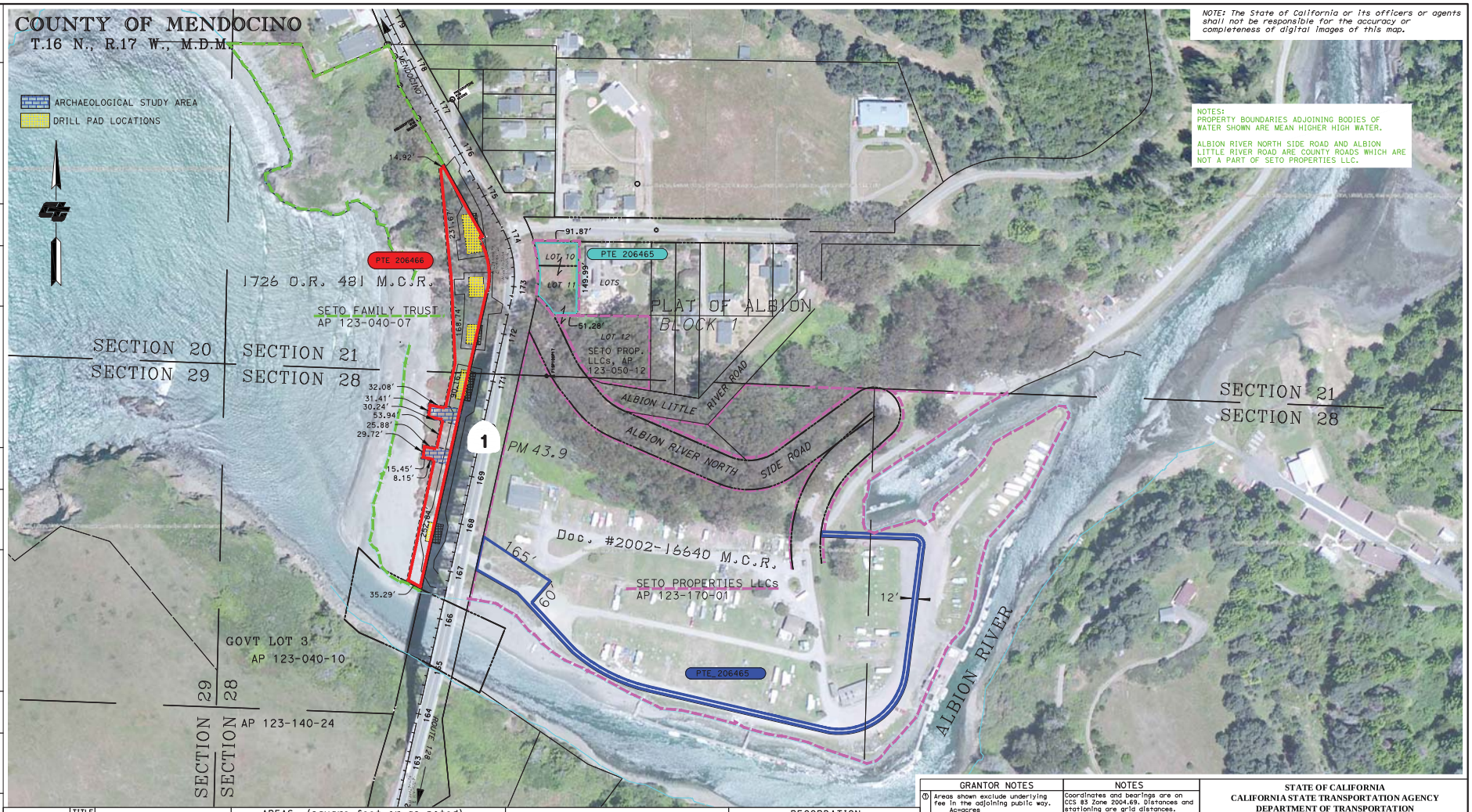
I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

EXECUTED on October 20, 2017, at Oakland, California.

CORAZON PILARE, Declarant

CALIFORNIA DEPARTMENT OF TRANSPORTATION - LEGAL DIVISION
111 Grand Avenue, Suite 11-100, Oakland, CA 94612
Telephone: (510) 433-9100, Facsimile: (510) 433-9167

# EXHIBIT A




| PARCEL# | TITLE CODE ② | GRANTOR | AREAS (square feet or as noted) TOTAL | REQUIRED① | [UF] | EXCESS① | [UF] | REMAINDER | REMARKS | RECORDATION TYPE○ | DATE | DOC.#○ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 206465 | PTE | SETO PROPERTIES LLC | 424,710 | 11,970 | | | | 424,710 | AP 123-050-12 STAGING AREA | | | |
| 206466 | PTE | SETO FAMILY TRUST | 292,802 | 24,930 | | | | 292,802 | AP 123-040-07 STUDY AND DRILLING AREA | | | |
| 206465 | PTE | SETO PROPERTIES LLC | 424710 | 20,147 | | | | 424,710 | AP 123-170-01 12' ACCESS ROAD AND STAGING | | | |

**GRANTOR NOTES**

① Areas shown exclude underlying fee in the adjoining public way. Ac=acres
[ ] Indicates Underlying Fee (UF) Area
EX Indicates Indeterminate UF
② TITLE CODES:
A=Access Rights Only
F=Fee
E=Easement (Ease)
TCE=Temp Construction Ease
T=Other Temp Ease (see Remarks)
O=Other (see Remarks)

**NOTES**

Coordinates and bearings are on CCS 83 Zone 2004.69. Distances and stationing are grid distances. Divide by 0.9999139 to obtain ground distances.
All distances are in feet unless otherwise noted.

**LEGEND**

- Access Prohibited
- Access Superseded
- Existing R/W Superseded
- Access Opening (Private)
- (R) Indicates Radial Bearing
- Indicates Found Monument as noted
- Indicates calculated point. (Does not imply monument set)
- Title to State Required for Others

STATE OF CALIFORNIA
CALIFORNIA STATE TRANSPORTATION AGENCY
DEPARTMENT OF TRANSPORTATION

# RIGHT OF WAY PERMIT TO ENTER MAP

FOR PREVIOUS R/W INFORMATION SEE MAP(S) 83 MAPS 84-94 M.C.R.

SCALE: 1" = 100'

FEET 0 50 100 200 300

TO DESIGN: 4/20/17 EA(s): 40110 FA#: ##
DRAFTED BY: K-PAW CHECKED BY: LAS

| DISTRICT | COUNTY | ROUTE | SHEET PM | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 01 | MEN | 1 | 43.9 | 1 | 1 |
| # | ##### | ### | ### | | |

PROJECT ID: 0100000154

R/W PROJECT SURVEYOR: K-PAW
DATE 1/10/16
REVISIONS BY DATE REVISIONS BY DATE REVISIONS BY DATE REVISIONS BY DATE REVISIONS BY

# EXHIBIT B

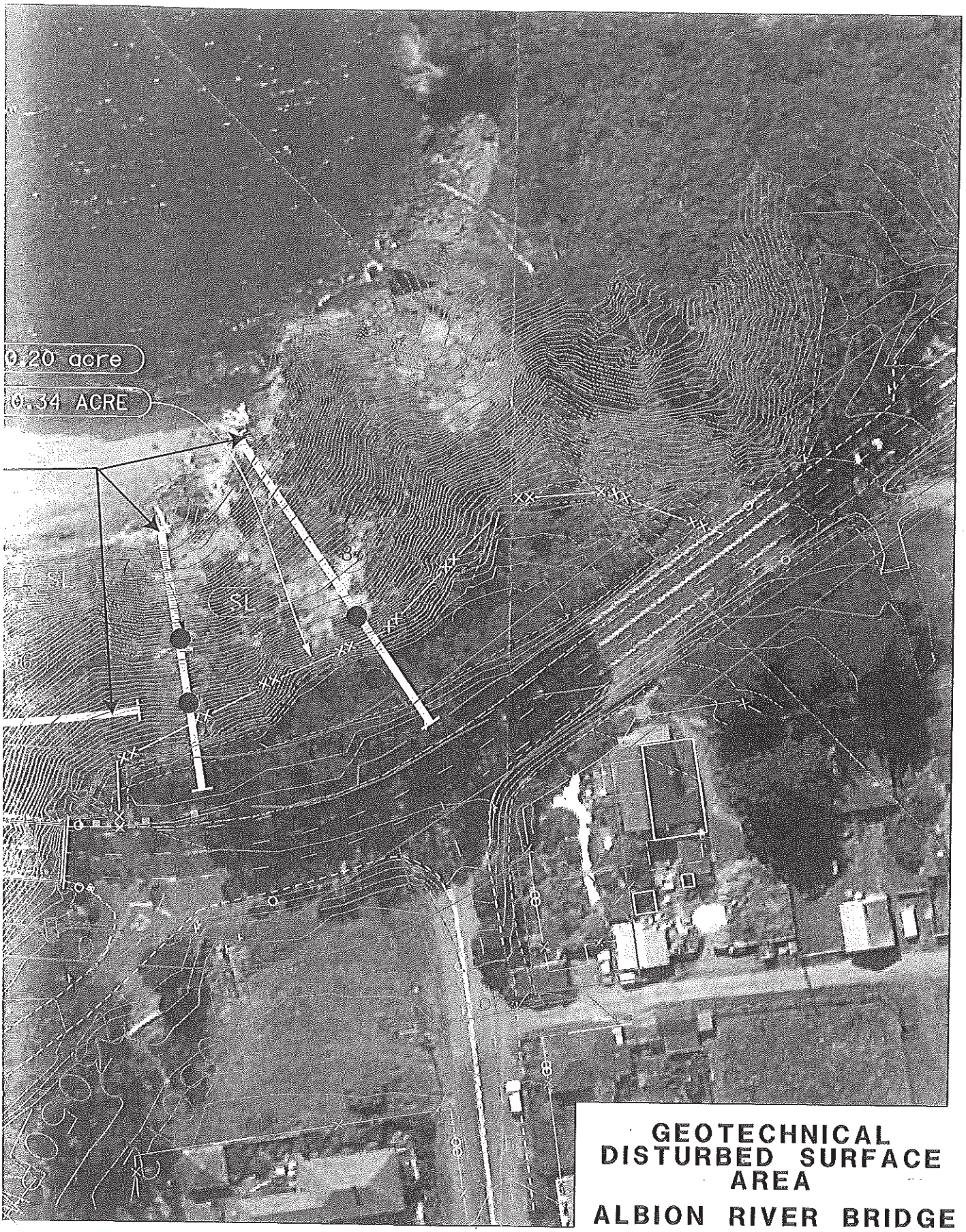
P:\PROJ\01\401110\design\Geotech\Geotech CDP files\Layout letter sheet 3.dgn

| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | - | REVISED BY | | |
|---|---|---|---|---|---|---|
| Caltrans DESIGN | | CHECKED BY | | DATE REVISED | | |

BORDER LAST REVISED 3/1/2007



RELATIVE BORDER SCALE IS IN INCHES




# GEOTECHNICAL DISTURBED SURFACE AREA

## ALBION RIVER BRIDGE

NO SCALE

SHEET 3

(13 of 13)

| LAST REVISION | DATE PLOTTED => 07-DEC-2016 |
|---|---|
| 11-17-14 | TIME PLOTTED => 08:09 |

| | | | |
|---|---|---|---|
| 1 2 3 | USERNAME => s120892<br>DGN FILE => Layout letter sheet 3.dgn | CU 0313 | EA 2010201110 |

State of California
**DEPARTMENT OF TRANSPORTATION**

California State Transportation Agency

**EXHIBIT NO. 6**

**Updated Project Description**

CDP No. 1-16-0899 (Caltrans)

# Memorandum

*Making Conservation a California Way of Life.*

**To:** Tamara Gedik
Coastal Program Analyst
California Coastal Commission

**Date:** August 22, 2018

**File:** **Albion Geotechnical Drilling CDP 1-16-0899**

**From:** Liza Walker
Senior Environmental Planner
North Region Environmental, E4

**Subject:** **UPDATED PROJECT DESCRIPTION – ALBION GEOTECHNICAL DRILLING**

As a follow-up to our telephone conversation requesting clarification/additional information requested for the proposed geotechnical drilling for the Albion River Bridge Rehabilitation/Replacement project, Caltrans has made the following updates to the project description:

- All project components will occur outside of the bird breeding season, which ends September 15th.
- All grading will occur before the beginning of the wet season, or October 15th.
- The drill sites 1A, 1B, 1C and 3 have been removed from the proposed project.
- Drill site 5 will be accessed by helicopter instead of accessing the site via the beach.
- The project components and their associated duration is provided below:
    - Tree removal – 5 to 10 days
    - Earthwork/Grading – Up to two weeks
    - Geotechnical Boring – Up to four weeks
    - Restoration Work – Up to two weeks

  The total project duration will be up to eight weeks as some of the project components will overlap.
- The model of helicopter has been identified as model AS350B3. The flight path remains the same as previously provided.
- The cut/fill quantities have been updated since submittal of the CDP application. The new cut amount is 572.5 cubic yards and the new fill amount is 70 cubic yards. There will be approximately 500 cubic yards of material imported to recontour the area graded for the staging area. Refer to the revegetation plan for details.

- In order to avoid potential impacts that could be caused by noise-generating activities during helicopter work, a biological monitor will survey for hauled out marine mammals at the Albion Cove and the docks at the Albion Campground prior to deployment. A biological monitor will survey at Schooner's Landing only when a helicopter is expected to fly over the Albion River. If marine mammals are observed hauled out in those areas, the helicopter will not be deployed until the mammal(s) have returned to the water.

- A biological monitor will survey the Albion Cove for hauled out marine mammals prior to commencement of the seismic refraction surveys along the four transect lines. If marine mammals are observed hauled out in those areas, work will not commence until after any observed hauled-out marine mammals have returned to the water.

Attached is updated mapping reflecting the above changes to the proposed project that have been recently uploaded to the CCC FTP site. Feel free to contact me at (707) 441-5602 if you need any additional information. Thank you for your continued assistance in issuing the Coastal Development Permit for this project.

SECTION I. APPLICANT

2. Name, mailing address and telephone number of applicant's representatives, if any. Please include all representatives who will communicate on behalf of the applicant or the applicant's business partners, for compensation, with the Commission or the staff. (It is the applicant's responsibility to update this list, as appropriate, including after the application is accepted for filing. Failure to provide this information prior to communication with the Commission or staff may result in denial of the permit or criminal penalties.)

Applicant's Representatives

| Name | Address | Phone Number |
|---|---|---|
| Matthew K. Brady | 1656 UNION STREET, EUREKA CA, 95501 | (707) 445-6445 |
| Richard Mullen | 1656 UNION STREET, EUREKA CA, 95501 | (707) 445-6490 |
| Tom Fitzgerald | 1656 UNION STREET, EUREKA CA, 95501 | (707) 445-6393 |
| Brad Mettam | 1656 UNION STREET, EUREKA CA, 95501 | (707) 445-6413 |
| Sandra Rosas | 1656 UNION STREET, EUREKA CA, 95501 | (707) 441-5730 |
| Bill Bertucci | 5900 FOLSOM BLVD, SACRAMENTO CA, 95819 | (916) 203-7992 |
| Liza Walker | 1656 UNION STREET, EUREKA CA, 95501 | (707) 441-5602 |
| Hilary Sundeen | 1656 UNION STREET, EUREKA CA, 95501 | (707) 441-3983 |
| Lena Ashley | 1656 UNION STREET, EUREKA CA, 95501 | (707) 445-6602 |
| Tom Phillips | 1656 UNION STREET, EUREKA CA, 95501 | (707) 445-7864 |
| Kimberly Hayler | 1656 UNION STREET, EUREKA CA, 95501 | (707) 441-2058 |
| Mark Sobota | 1656 UNION STREET, EUREKA CA, 95501 | (707) 441-5729 |
| Steve Blair | 1656 UNION STREET, EUREKA CA, 95501 | (707) 445-6672 |
| Jeff Pimentel | 1656 UNION STREET, EUREKA CA, 95501 | (707) 445-6440 |
| Rob Wall | 1656 UNION STREET, EUREKA CA, 95501 | (707) 445-5320 |
| Kevin Harper | 1801 30th St., MS 9-8i, SACRAMENTO CA, 95816 | (916) 227-8156 |
| Adam Wagschal | 630 K Street, STE 400, SACRAMENTO, CA 95814 | (707) 496-2088 |

# M e m o r a n d u m

*Making Conservation*
*a California Way of Life.*

**To:** LENA ASHLEY
DESIGN SENIOR
OFFICE of DESIGN NORTH
DESIGN BRANCH E-3

**Date:** August 22, 2018

**File:** 01-MEN-01
PM 43.3/44.2
Albion River Bridge
(Alt A-Single Arch)
EA 01-401100
ID 0100000154

**From:** **DEPARTMENT OF TRANSPORTATION**
**DIVISION OF ENGINEERING SERVICES**
**GEOTECHNICAL SERVICES – MS 5**

**Subject:** **Revised Geotechnical Investigation Plan (GIP)**

BACKGROUND

Per your request, the Office of Geotechnical Design North (OGDN) has prepared this Revised Geotechnical Investigation Plan for the proposed rehabilitation/replacement of the existing Albion River Bridge on Route 01, PM 43.3-44.2 in Mendocino County. At the time of this writing the geotechnical investigation will be limited to alternative Alt. "A" (single arch). Drill sites 1A, 1B, 1C, 3 and 4 have been eliminated from this plan. The purpose of this memorandum is to describe the unique aspects of each possible drill site or group of drill sites for in-house drilling planning purpose. These aspects include:

1. Location of the 6 drill sites and 8 borings.
2. Drilling specifications.
3. Drill site terrain, undergrowth and tree conditions.
4. Proposed earthwork using heavy equipment and/ or handwork that will be required to construct site ingress/regress routes, drill pad/staging areas.
5. Drill and support vehicles including cranes and possible use of helicopter.
6. Site environmental protection and restoration measures during and after completion of work.

DRILL SITES

Drill Site 1 - Abutment 1 (Alt "A")

Access will be from Highway 1 at approximately Station 123+50. Temporary removal of the guard railing will be required. The site terrain ranges from flat to moderately steep. Grading will be necessary to construct an access route and a level pad area (30 feet by 40 feet). An approximate 10 to 12 foot cut slope into the hillside will be required. The cut will be laid back sufficiently to be stable. Vegetation is sparse to moderately dense and consists mainly of underbrush, small trees and grass. Vegetation removal and trimming will be required. A rubber tired truck mounted drill

rig will be used at this site. One boring with an estimated depth of approximately 70 to 90 feet is planned for this site.

Erosion and fluid control BMPs will be installed. Temporary fiber rolls will be placed along the perimeter of the drill site including tarps under the drill rig. Temporary silt fencing will be placed on the downslope side of the drill pad and access road. Upon completion of work, the area will be regraded to the original contours, seeded with native plants and straw will be placed on exposed soil areas.

Drill Site 2 - Pier 2 (Alt "A")

Access will be from Highway 1 (Station 123+50). The site is located on a relatively steep patchy sparse to densely vegetated hillside below Drill Site 1. Grading to provide direct vehicle access to the site is not considered feasible. Utilizing Drill Site 1 as a staging area, a crane may be able to deliver either a self-leveling track mounted drill rig or a steel platform and drill rig to the drill site. Alternatively, a helicopter may be employed to deliver the steel platform equipment and supplies. Support vehicles will be located on Drill Site 1. Brush trimming will be required between Drill Sites 1 and 2 to create an approximately 3 ft. path for personnel to access Site 2. There will be minor ground disturbance anchoring the four corners of the steel platform to the ground. The footpads of the four legs supporting the steel platform will be anchored by driving steel rods into the ground. One boring with an estimated depth of 100 feet is planned for this site.

Erosion and fluid control BMPs will be installed. They include temporary fiber rolls placed downslope and on the sides of the drilling platform including tarps placed under the drill rig. Upon completion of work, straw will be placed on any areas of vegetation trimming and/or removal will be seeded with native plants.

Drill Site 3 – Pier 3 (Alt "A")

Drill Site 3 located at approximately Station 125+83 is designated a particularly sensitive ESHA area. For that reason, this site was temporarily removed from the project and a separate permit application will be pursed with the intent to drill the site later if the westerly alternative is selected as the preferred alternative in the final environmental document. This site will be serviced by helicopter. One inclined boring with an estimated depth of 125 ft. is planned. Also, as required erosion and fluid control BMPs will be installed.

Drill Site 5 Inclined Boring -Pier 4 (Alt "A")

Drill Site 5 is located at Station 132+40 near the base of the south facing slope below Drill Site 6. A Helicopter will be employed to deliver the drill, equipment and supplies. Personnel access to the site can be from the camp ground with vehicles parked at the west end of the camp ground. Water delivery by a hose system will be from a water tender/support truck from the staging area for Drill Site 8. One boring with an estimated depth of is 125 feet is planned for this site. Brush trimming will be required. There will be minor ground disturbance anchoring the four corners of the steel

platform to the ground. The footpads of the four legs supporting the steel platform will be anchored by driving steel rods into the ground. Workman will access Drill Site #5 from the staging area located at the west end of the Albion Campground & Marina avoiding the dune ESHA by traversing along the edge of the bridge timber towers or along the beach.

Erosion and fluid control BMPs will be installed. They include fiber rolls placed downslope and on the sides of the drilling platform including tarps placed under the drill rig. Upon completion of work, straw will be placed on any areas of vegetation trimming and/or removal will be seeded with native plants.

Drill Site 6 – Pier 5 (Alt "A")

This drill site is located at approximately Station 133+25 on the south facing steep slope below the graded staging and Drill Site areas 7 and 8. Removal of several Eucalyptus trees and brush trimming will be required to facilitate installation of a steel platform that will support the drill rig and for personnel access to the site from the graded staging area for Drill sites 7 and 8 or from the westerly end of the campground. There will be minor ground disturbance anchoring the four corners of the steel platform to the ground. The footpads of the four legs supporting the steel platform will be anchored by driving steel rods into the ground. A helicopter will be employed to deliver the steel platform, drill, equipment and supplies. As indicated above, personnel access to the site can be from the campground with vehicles parked at the west end of the campground or from the graded staging area for Drill Sites 7 and 8. Water will be delivered by a hose system connected to a water tender/support truck parked at graded staging area for Drill Sites 6, 7 and 8. One boring with an estimated depth is 125 ft. is planned for this site.

Erosion and fluid control BMPs will be installed. They include temporary fiber rolls placed downslope and on the sides of the drilling platform including tarps placed under the drill rig. Upon completion of work, straw will be placed on any areas of vegetation trimming and/or removal and will be seeded with native plants.

Drill Site 7- Pier 6 (Alt "A")

This drill site is located at approximately Station 134+25 and will be serviced from a graded staging area located at the top of the west facing bluff. In preparation for the proposed grading, ground vegetation and approximately 85 eucalyptus trees including their root systems will be removed (See Grading and Boring Location Plan attached). Two borings are planned to be drill on the slope below the staging area. A helicopter will be employed to deliver the steel platforms, drills, equipment and supplies to the boring locations. Work personnel will ascend to the sites by use of ropes using a rappelling or similar method. Service and support vehicles will be located on the graded staging area during the drilling operations.

Erosion and fluid control BMPs will be installed. They include temporary fiber rolls placed along the perimeter of the staging area and downslope of the drilling platform including tarps placed under the drill rig. Upon completion of work, straw will be placed on any areas where vegetation

trimming and/or removal including the graded area and down slope will be seeded with native plants.

Drill Site 8 – Abutment 7 (Alt "A")

This drill site is located between Stations 135+10 and 135+60 and will be serviced from the graded staging area. Three borings are planned at this site. One boring will be located on the slope below the staging area and two borings will be drill on the staging area. A helicopter will be employed to deliver the steel platforms, drills, equipment and supplies to the down slope bore hole. Work personnel will ascend to the lower bore hole location by use of ropes using a rappelling or similar method. Service and support vehicles will be located on the graded staging area during the drilling operations. A conventional rubber tired or track mounted drill rig will be employed to drill the two borings located on the staging area. The depth of the three borings will range from approximately 70 to 100 feet.

Erosion and fluid control BMPs will be installed. They include temporary fiber rolls placed along the perimeter of the staging area and downslope of the drilling platform including tarps placed under the drill rigs. Also, temporary silt fencing may be placed downslope of the drilling location and graded area as deemed necessary. Upon completion of work, the graded area will be restored as shown on the "Regrading Plan Detail". Straw will be placed on any areas of where vegetation was removed and those areas will be seeded with native plants. In addition, temporary Check Dams will be constructed immediately adjacent to the roadway to prevent water saturated soils from entering the highway.

IMPACT ON STABILITY OF COASTAL BLUFF

The bluff area involved includes the south facing bluff located between approximately Stations 132+50 and 133+50 and the generally west facing bluff located between approximately Stations 134 and 136 (Drill Sites 7 and 8). These bluff areas are steep (Hz: Vt. 1:1 and steeper) and approximately 148 feet in height. Based on our past geologic reconnaissance, we feel that the bluff areas are most likely globally stable. However, one of the purposes of our proposed geotechnical investigation will be to confirm our initial assessment and/or provide remedial recommendations if required. In the case of the west facing bluff area there is obvious shallow (approximately +/- 5 feet) earth movement in the form of mass wasting (particle by particle erosion), slumping and debris flows. The ground movement appears to extend to below the depth of the root system of the Eucalyptus trees that are perched on the bluff slope face. Some of these trees have been completely undermined and have subsequently slid on to the beach below.

Geotechnical Investigation Plan was designed to utilize the minimal space possible to perform safely and efficiently the drilling operations including minimal ground disturbance and vegetation trimming. Grading for the proposed staging area westerly of Highway 1 and north of the Albion River Bridge will facilitate access to the investigation area by lowering the bluff height approximately 7-10 feet. The graded area will be inclined at approximately +2% grade from the edge of pavement of Highway 1 with storm water surface run-off draining towards the highway to a roadside drainage channel along the westerly edge of pavement before draining

north to a natural drainage channel. Impacts on the stability of the coastal bluff from the grading operation are not expected. The Caltrans construction site BMPs will be implemented to control and contain surface drainage and erosion.

DRILLING EQUIPMENT

The drill equipment will include track mounted all-terrain drill rigs, truck mounted drill rigs and a smaller skid mounted rig. Support vehicles include an equipment/water tender, drill crew cab and geologist/engineer vehicles. The drilling and sampling will be done using a rotary wash wire-line system with drill pipe diameters ranging from 94 to 114 mm (rock coring and soil coring), 153 mm (soil auger drilling) and 127 to 153 mm (casing). The boring depths and number of borings per drill site have been previously noted in the Drill Site section. Drilling fluids consisting of water mixed with bentonite and/or polymer that will be re-circulated through a closed system that includes drill pipe, pump, hoses and a mud tank. After completion of the drilling the drill cuttings and fluids will be pumped into 55-gallon drums and transported to the Transportation Laboratory in Sacramento for processing. After the drilling fluids removal, a combined slope inclinometer/piezometer will be installed in selected boring to monitor ground movement and changes in groundwater elevations.

ENVIRONMENTAL PRECAUTIONS

Precautions during drilling will be employed to mitigate any possible equipment leaks or drilling fluid spillage. They may include plastic tarps, absorption mats and jute waddles. Contained drill fluids generated during drilling will be pumped in to 55-gallon steel drums and transported to Caltrans facilities for processing. The contractor employed for this project (Crux Subsurface, Inc.) is an experienced geotechnical contractor that specializes in performing exploration and construction drilling in difficult including steep hillside terrane and at environmentally sensitive locations (See enclosed Crux Subsurface Inc. Relevant project list). On very steep hillsides such as at Albion River Bridge site, the steel work platforms will be stabilized by the installation of certified engineered anchors. Each drill site will be carefully evaluated for proper setup to insure the stability of the steel work platforms. The advantages of employing steel platform drilling is that ground disturbance, erosion, geologic instability and vegetation trimming/removal are minimized.

HELICOPTER SUPPORT

A helicopter will deliver equipment, supplies, personnel and drill rig to up to six bore hole locations on five drill sites. The helicopter will take off from Little River Airport and pick up equipment and supplies from support vehicles and/or staging locations adjacent to drill sites. The cumulative duration of time required by the helicopter to support drilling activities for each drill site where a helicopter is utilized will be approximately 2-4 hours per bore hole. Traffic will be stopped in each direction along Highway 1 and adjacent roadway connections during helicopter support activities. The maximum allowable delay time for roadway closure will be one half hour. Once traffic queues have been cleared, traffic will be stopped and helicopter support activities will resume until work

has been completed at that drill site.

SITE RESTORATION SUMMARY

Ground conditions altered due to work activities will be restored utilizing BMPs. The BMP restoration will include seeding, placement of straw and jute waddles (temporary fiber rolls). Where more extensive earthwork occurs (Drill Sites 1, 7 and 8) the ground will be re-graded to conform to State drainage and erosion protection standards. The borings will be backfilled following the GS-01Directive.

REMOVAL OF SLOPE INCLINOMETERS/PIEZOMETERS

The plan will be to monitor the borings that have these devices installed. During bridge construction, or maintenance and rehabilitation construction, the General or Foundation Contractor (if licensed) will be contracted to seal the borings or subcontract out the procedure to a licensed drilling company. Also, all the borings were drilled under Mendocino County Health Division permits acquired by Kleinfelder. Therefore, Caltrans and Kleinfelder must be notified in advance of the sealing procedure. Also, a Kleinfelder representative must be on site to document the procedure for each boring.

SEISMIC REFRACTION SURVEY

A seismic refraction survey will be employed to supplement the drilling data and geologic mapping of the bridge site. To facilitate the placement of the geophone arrays underbrush and grass trimming will be required where this vegetation is relative dense. Typically, to allow the survey crew to get through a dense underbrush a 3 to 4 wide path is created by trimming back the underbrush. As indicated below in the Seismic Refraction Survey Appendix, a 2-inch square sensor on a 3-inch-long, by 2-inch diameter spike are inserted into the ground at specific intervals (3 to 10 feet typical). As indicated by the size of the spiked sensor a very small area will be disturbed and in most cases, there is no significant disturbance of the ground. Locations of the proposed seismic refraction lines are shown on the Geotechnical Exploration Plan.

If more information and/or clarifications are needed, please contact William Bertucci at 916.203.7992 or John Huang at 916.227.1037

WILLIAM BERTUCCI
Associate Engineering Geologist
Office of Geotechnical Design North

JOHN HUANG
Materials and Research Engineer
Office of Geotechnical Design North

Appendix – Seismic Refraction Surveys and Environmental Impacts

Attachment: Geotechnical Exploration Plan

| | | |
|---|---|---|
| cc: | FDemling | District Project Manager |
| | JAlamares | Structure Maintenance |
| | RClose | Right of Way |
| | LAshley | District Design Branch Chief |
| | TPhillips | District Design-Project Engineer |
| | JHarcharik | Surveys |
| | LWalker | Environmental |
| | KSchinke | Cultural |

**APPENDIX**

## Seismic Refraction Surveys and Environmental Impacts

This document summarizes typical scope and environmental impacts posed by seismic refraction surveys conducted for the Department of Transportation.

### General Description of Work

Geophones (small 2-inch square sensors on a 3-inch-long, by 2 inch diameter spike) are inserted into the ground at specific intervals (3 to 10 feet typical) and connected to a cable that is in turn attached to a battery-powered seismograph.

Geophones record vibratory impulses generated by active sources. The number of source locations used on a typical seismic line varies from 5 to 20, depending on required resolution. The hammer and striker plate locations along the seismic refraction lines are selected based on the goals of the investigation.

Survey locations are selected based on the goals of the investigation, safety requirements and access restrictions imposed by environmental and entry permits. Access to survey locations may be by motor vehicle or by foot, again depending on access restrictions.

### Environmental Impacts

*Site Access*

Site access is by motor vehicle or by foot, depending on access restrictions. When used, motor vehicle access is limited to existing roads and trails. Motorized or non-motorized boats may be used for water access, depending on depth of water and access restrictions.

*Hours of Work*

All work is conducted during daylight hours from Monday through Friday. Exceptions occur during stated emergencies only.

*Equipment Storage*

Unless placed in a designated and secure construction area, no equipment is stored on-site. All equipment is portable and secured in vehicles when not in use.

*Footprint and Area of Related Ground Disturbance*

Twenty-four (24) or more geophones (small 2" square sensors on a 3"spike) are planted at the ground surface. The geophones are removed after work is completed. The spike is approximately 12-inch in diameter, and leaves no lasting impression in the ground surface. Ground and vegetation disturbance is isolated to foot-traffic areas and locations where the sources are employed. (Additional discussion of source effects is provided below). The extent of source disturbance at the ground surface increases with source strength. Typical maximum disturbance consists of a circular area of raised earth approximately 5 feet in diameter centered over the source's original location. An effort is made to conceal disturbed brush and tamp down disturbed soil to return it to its original condition. Minor brush cutting is occasionally required for access and is minimized wherever possible. Effort is made to restore visual impacts after the conclusion of the survey.

*Source Effects*

The hammer and striker plate source consists of a 12- to 16-lb sledgehammer struck against a small metal plate placed on the ground. This creates the least ground disturbance (a dent or divot in ground in the shape of the plate). Contrary to expectation, however, this source typically creates the greatest noise. The "ping" from the hammer striking the plate may exceed 106 dB near the operator, so hearing protection is required when operating this source.




# GEOTECHNICAL EXPLORATION PLAN

## ALBION RIVER BRIDGE

SCALE 1 IN = 50 FT

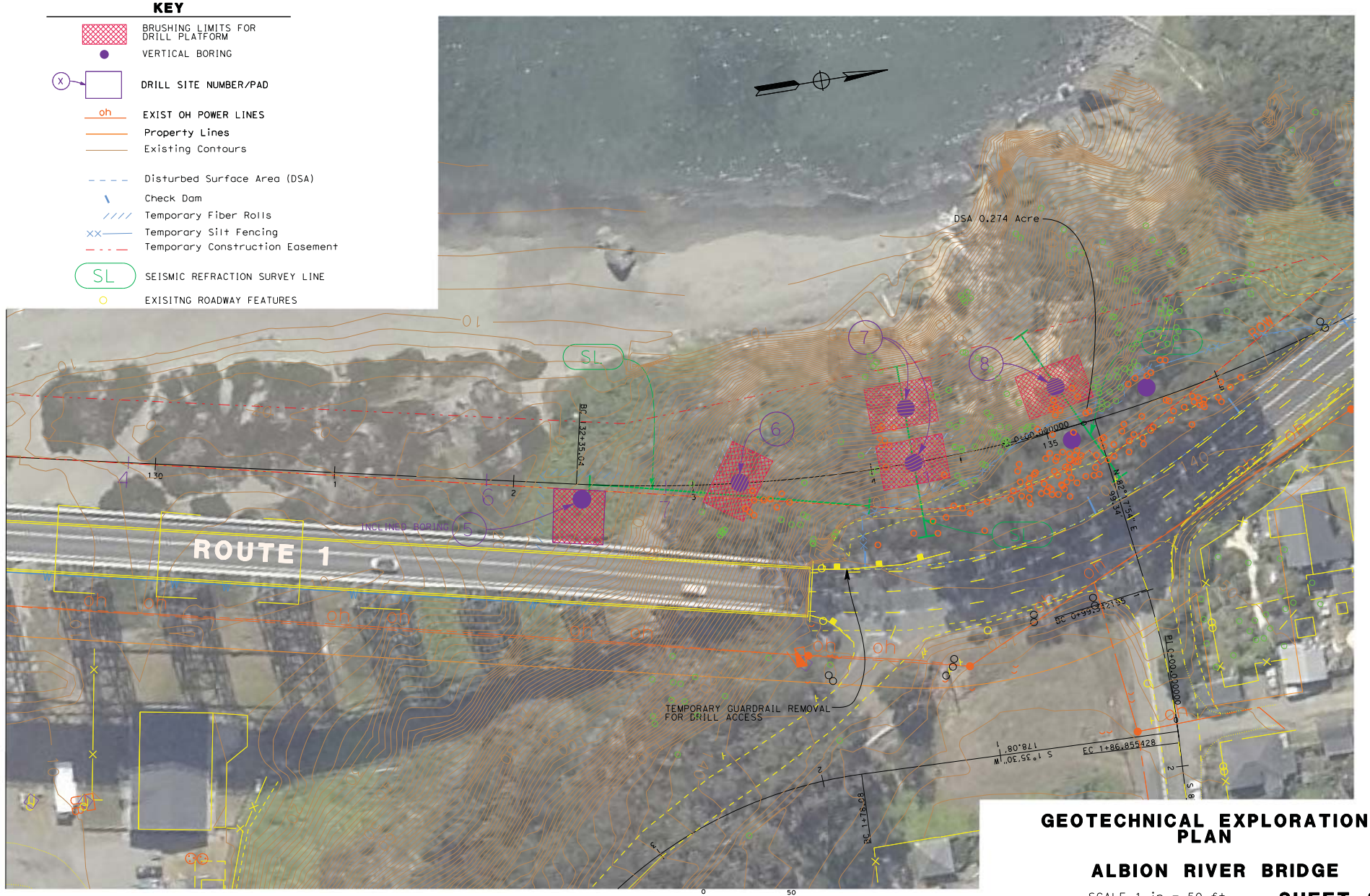
SHEET 1

(19 of 26)

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|---|---|
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| FUNCTIONAL SUPERVISOR | |
| CALCULATED-DESIGNED BY | THOMAS PHILLIPS, P.E. |
| CHECKED BY | TODD LARK, P.E. |
| REVISED BY | T. PHILLIPS |
| DATE REVISED | 7-30-18 |

#REQUEST

LAST REVISION DATE PLOTTED =>DATE




# GEOTECHNICAL EXPLORATION PLAN

## ALBION RIVER BRIDGE

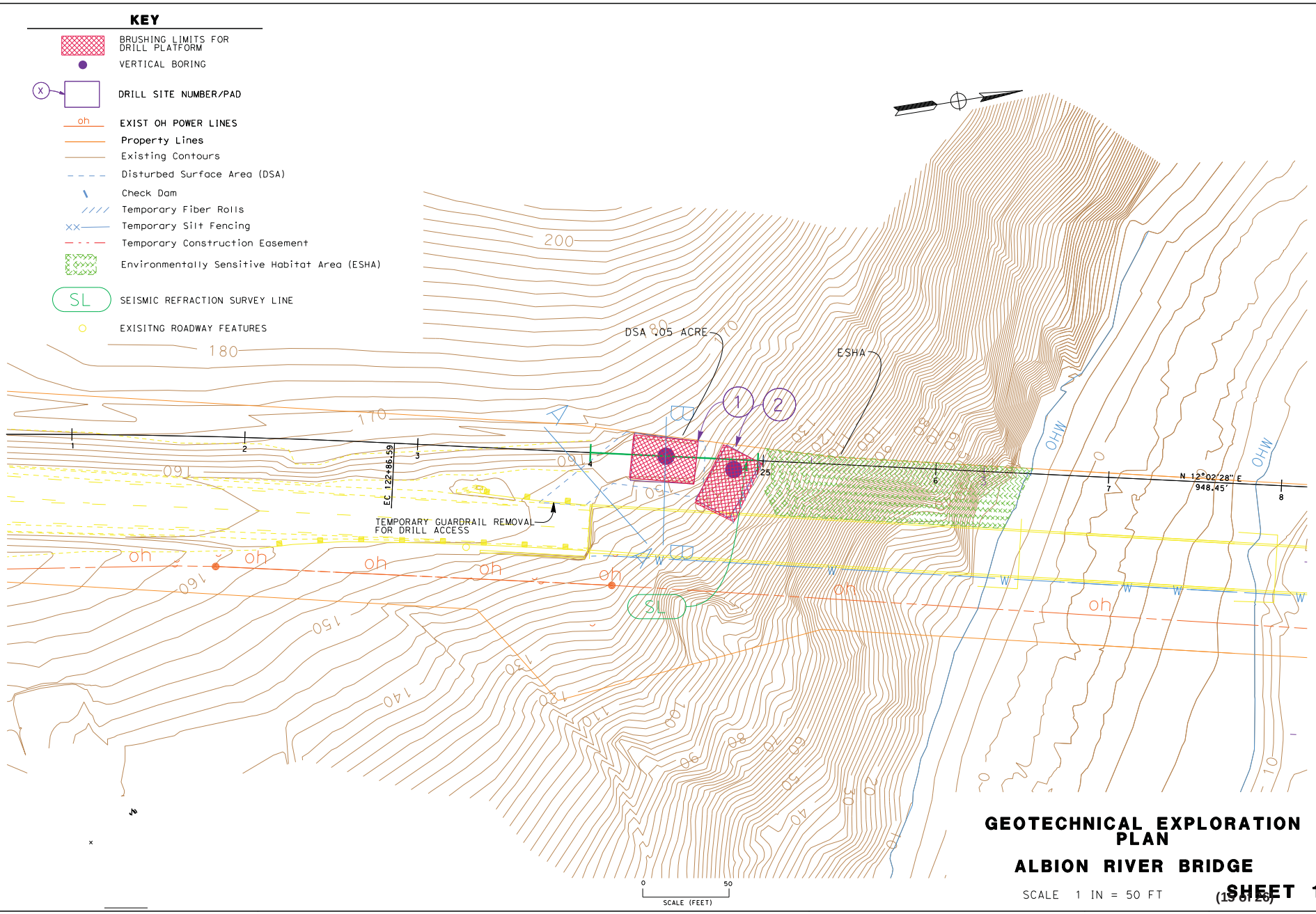
SCALE 1 in = 50 ft

SHEET 2

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| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | THOMAS PHILLIPS, P.E. | REVISED BY | T. PHILLIPS |
| DESIGN | LENA ASHLEY, P.E. | CHECKED BY | TODD LARK, P.E. | DATE REVISED | 8-20-18 |

#REQUEST

LAST REVISION | DATE PLOTTED =>DATE




# GEOTECHNICAL EXPLORATION PLAN

## ALBION RIVER BRIDGE

SCALE 1 IN = 50 FT

SHEET 1 (15 of 26)

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|---|---|
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| CHECKED BY | TODD LARK, P.E. |
| REVISED BY | T. PHILLIPS |
| DATE REVISED | 7-30-18 |
| FUNCTIONAL SUPERVISOR | |

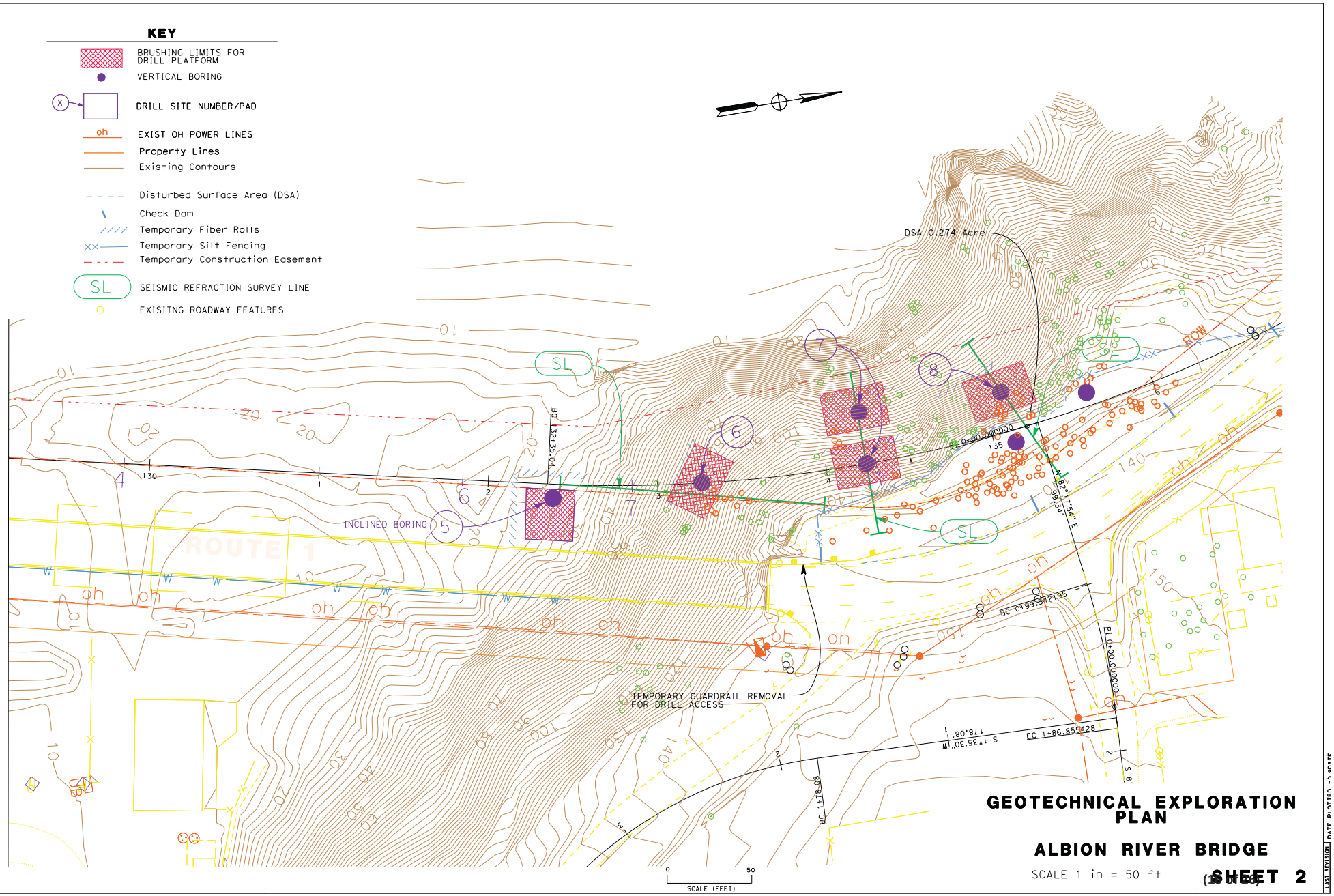
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

Caltrans

#REQUEST

LAST REVISION DATE PLOTTED =>DATE




# GEOTECHNICAL EXPLORATION PLAN

## ALBION RIVER BRIDGE

SCALE 1 in = 50 ft

SHEET 2

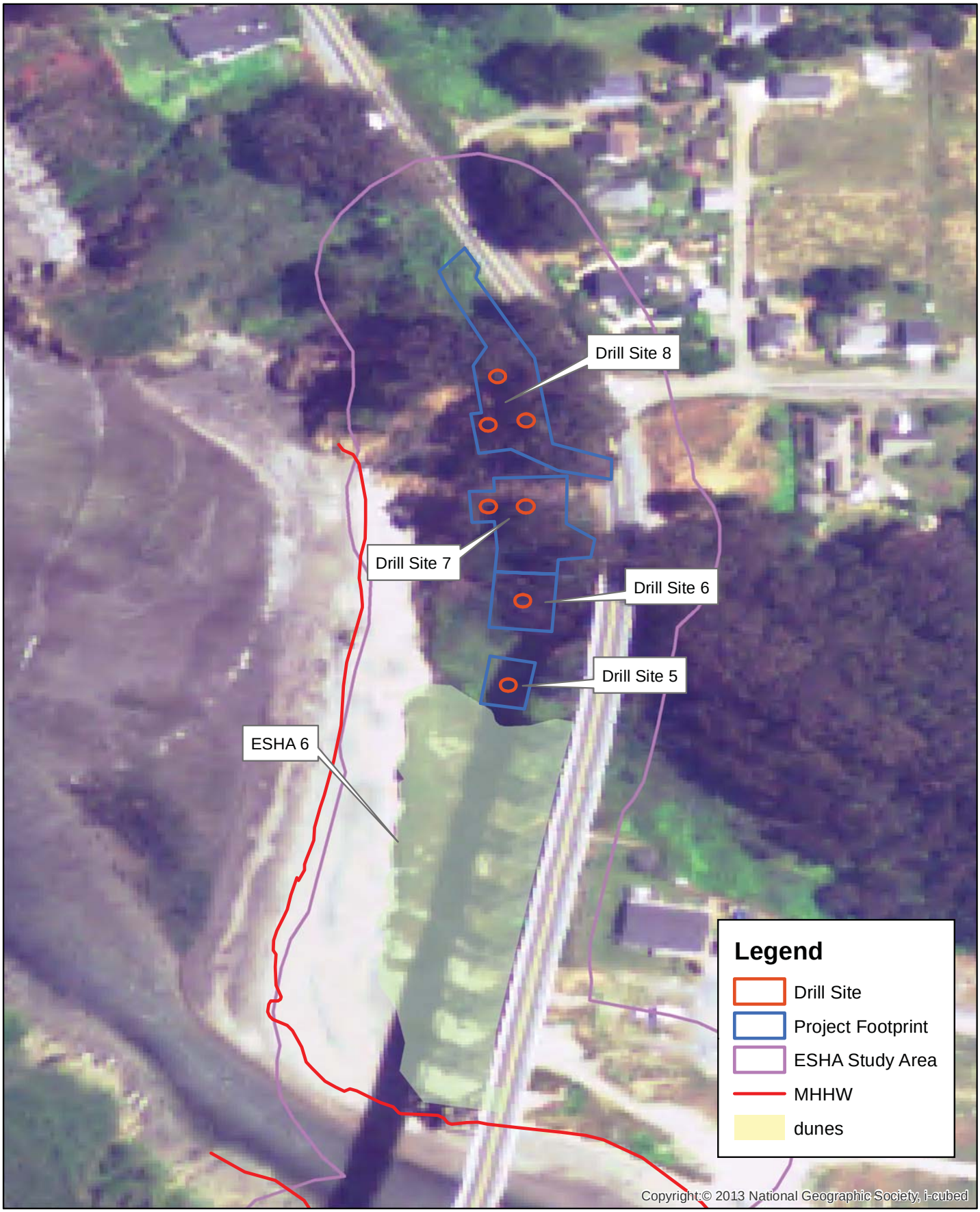
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|---|---|---|---|---|---|
| DESIGN | LENA ASHLEY, P.E. | CHECKED BY | TODD LARK, P.E. | DATE REVISED | 8-20-18 |

LAST REVISION | DATE PLOTTED =>DATE

**Figure 5**
**ESHA in the**
**100-foot ESHA buffer**

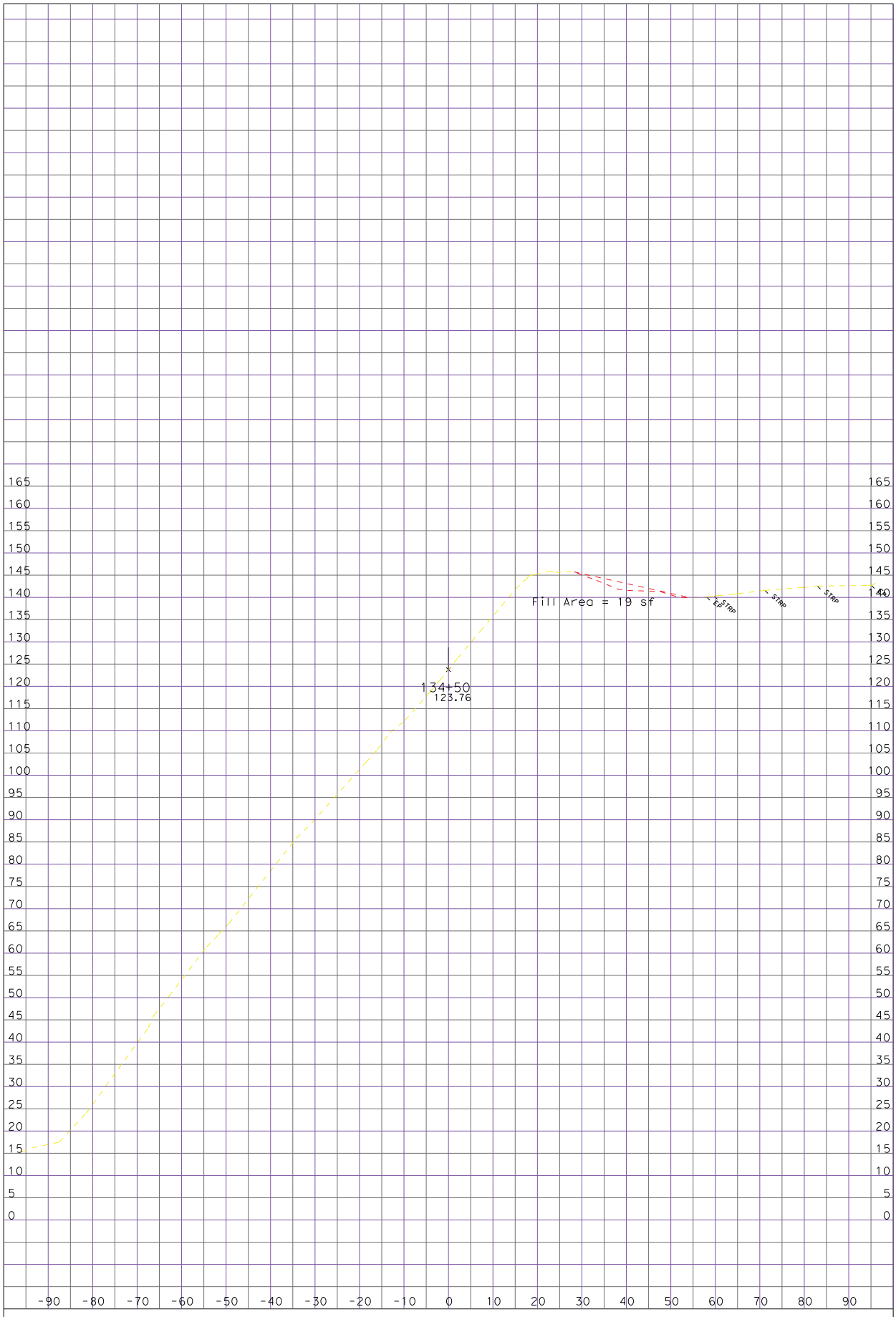


**Figure 6**
**ESHA in the**
**100-foot ESHA buffer**



# DESIGN STUDY ONLY

**All Dimensions are U.S. Survey Feet**




CONTRACT: 01-40110

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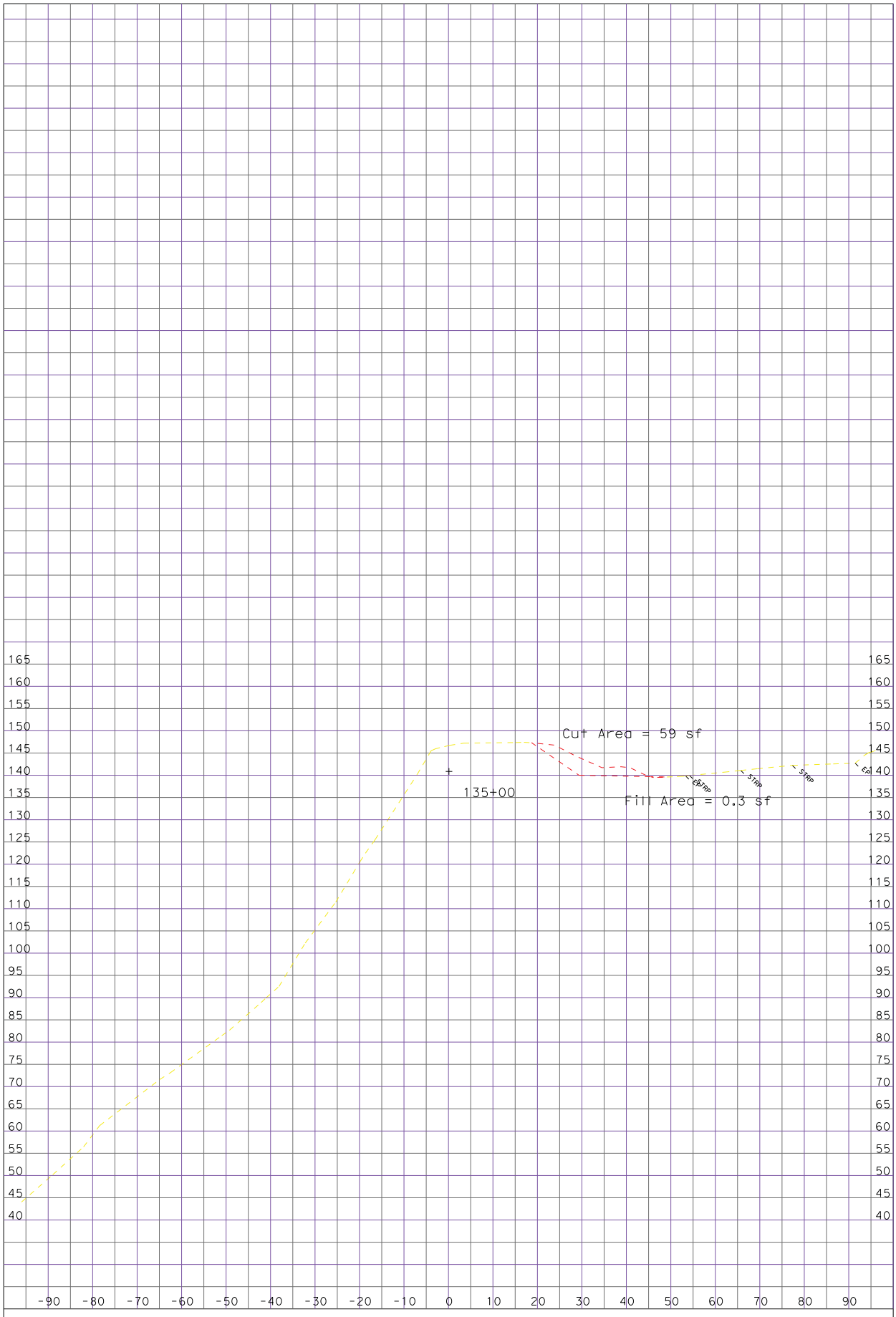
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1" = 10' Vert.

PROJECT ID: 0100000154

**CROSS SECTIONS**

# DESIGN STUDY ONLY

**All Dimensions are U.S. Survey Feet**




CONTRACT: 01-40110

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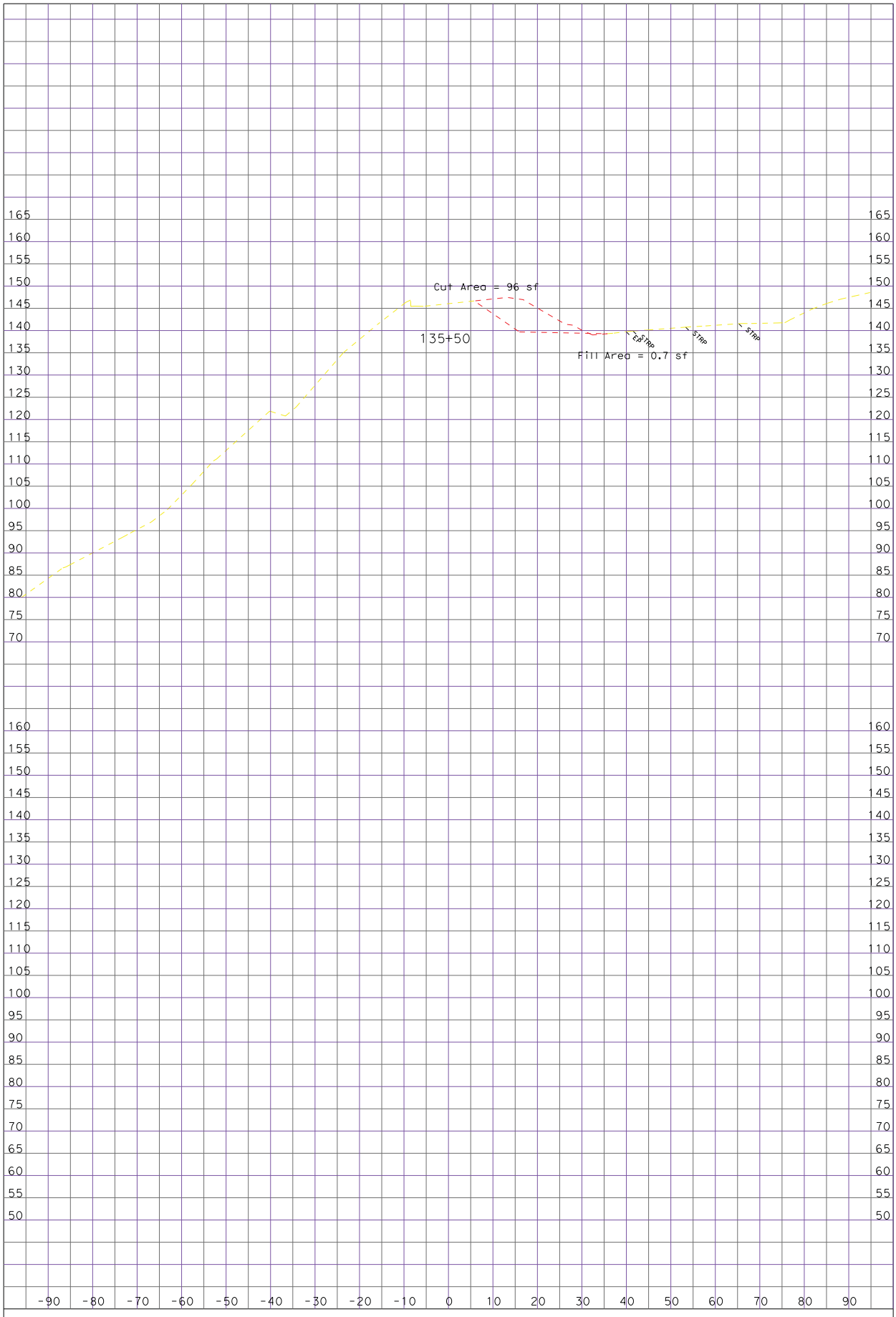
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1" = 10' Vert.

PROJECT ID: 0100000154

**CROSS SECTIONS**

# DESIGN STUDY ONLY

**All Dimensions are U.S. Survey Feet**




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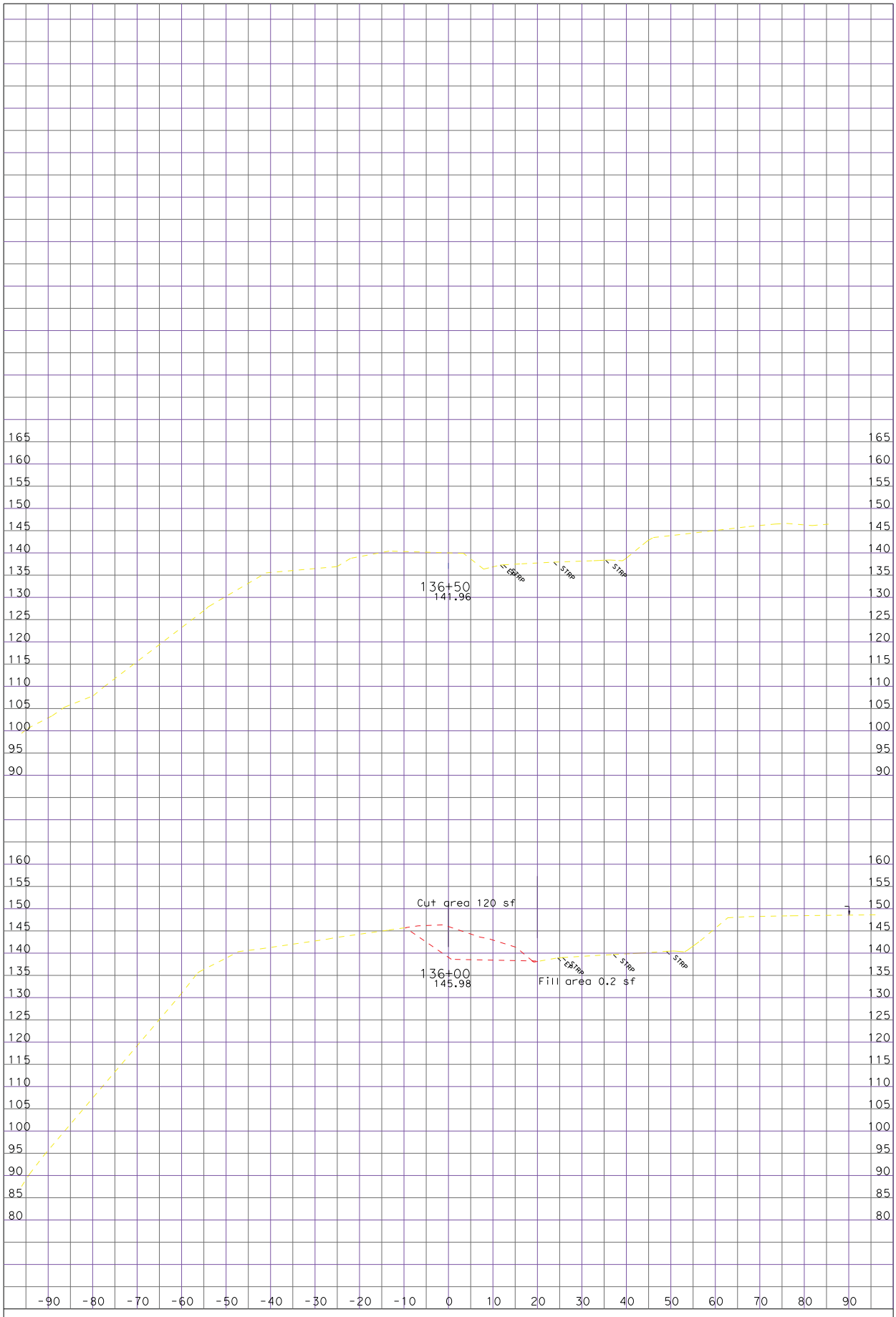
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1" = 10' Vert.

PROJECT ID: 0100000154

**CROSS SECTIONS**

# DESIGN STUDY ONLY

**All Dimensions are U.S. Survey Feet**




CONTRACT: 01-40110

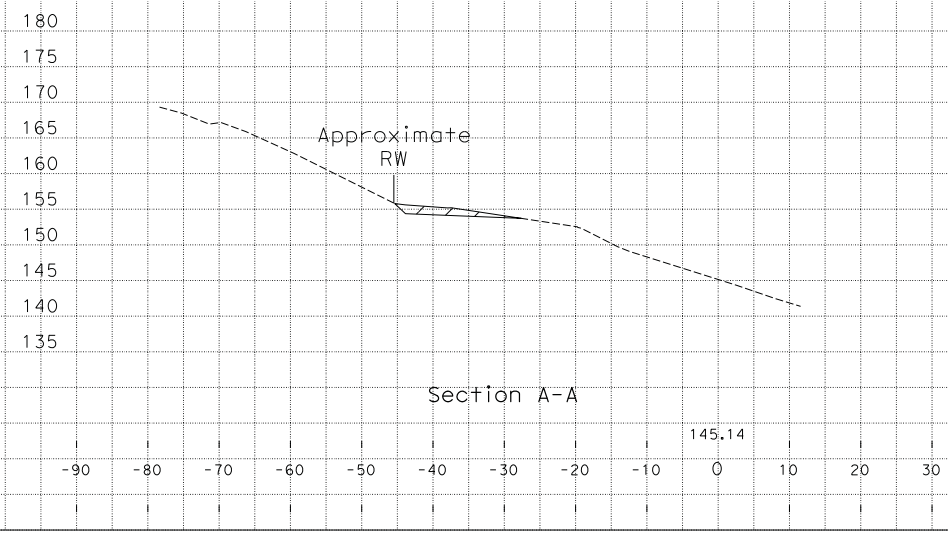
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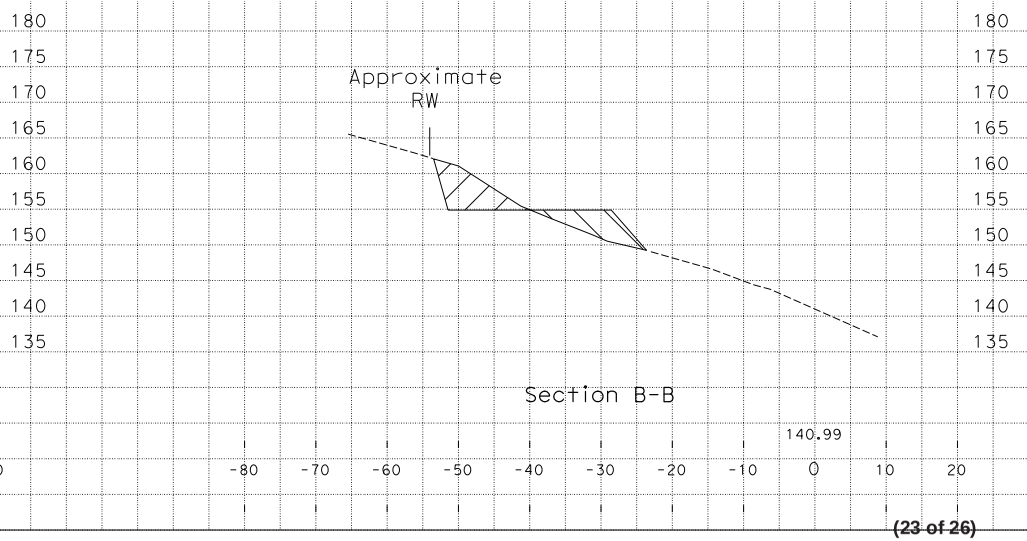
SCALE: 1" = 10' Horiz.
1" = 10' Vert.

PROJECT ID: 0100000154

**CROSS SECTIONS**

# Albion Geotechnical Investigation
# South Bluff Drill Pad Cross Sections



Albion north bluff estimated Geotech Excavation volume

| Sta | XS Area (sf) | Volume | |
|---|---|---|---|
| 134 | 0 | | |
| 134.5 | -19 | -475 | cf |
| 135 | 59 | 1000 | cf |
| 135.5 | 96 | 3875 | cf |
| 136 | 120 | 5400 | cf |
| 136.5 | 0 | 3000 | cf |

| | | |
|---|---|---|
| Method 1 | total (cf) | 12800 |
| | Total (cy) | 474.0741 |

Notes: All material to be stored off site and replaced and area recontoured upon completion of work.

See South Bluff xsections.dgn

| | | | |
|---|---|---|---|
| Section A-A | | | |
| Length | 40 | ft | |
| End area (cut) | 13.6 | sf | |
| Total | 544 | cf | 20 cy's |

| | | | |
|---|---|---|---|
| Section B-B | | | |
| Length | 50 | ft | |
| End area (cut) | 53.2 | sf | |
| End area (fill) | 37 | sf | |
| | | | |
| Total | | | |
| cut | 98.5 | cf | 3.6 cy's |
| fill | 68.5 | cf | 2.5 cy's |

P:\PROJ\01\40110\design\Geotech\Geotech CDP files\Grading plan sheet frame.dgn

| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | - | REVISED BY | | | |
|---|---|---|---|---|---|---|---|
| Caltrans **DESIGN** | | CHECKED BY | | DATE REVISED | | | |

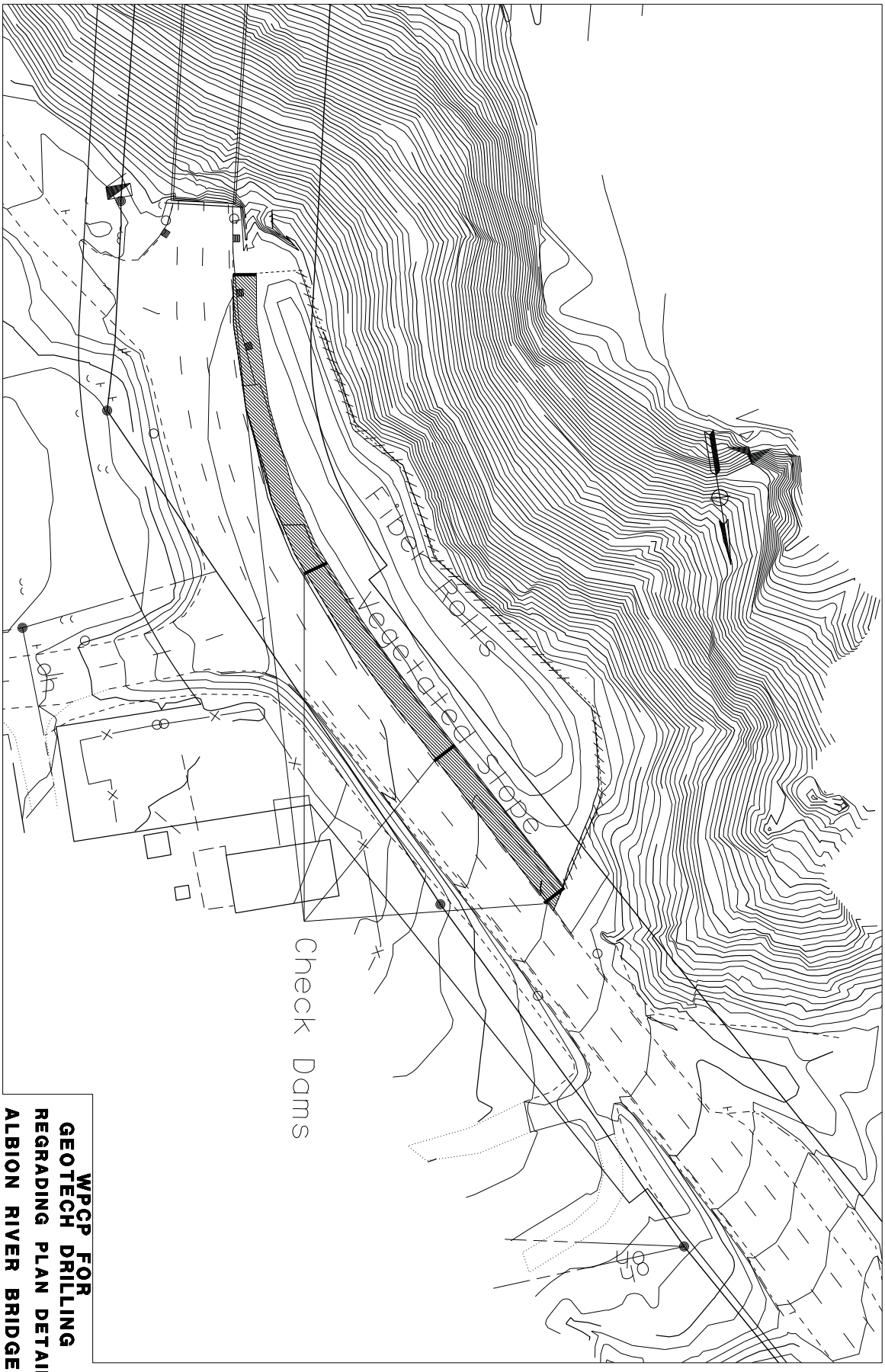
BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => s120892
DGN FILE => Grading plan sheet frame.dgn

CU 0313

EA 20102O110




**WPCP FOR GEOTECH DRILLING**
**REGRADING PLAN DETAIL**
**ALBION RIVER BRIDGE**

NO SCALE

| LAST REVISION | DATE PLOTTED => 07-FEB-2017 |
|---|---|
| 11-17-14 | TIME PLOTTED => 09:14 |




EXHIBIT NO. 7

Tree Removal Map with Close-up

CDP No. 1-16-0899

(Caltrans)

1 of 3

# GEOTECHNICAL EXPLORATION PLAN

## ALBION RIVER BRIDGE

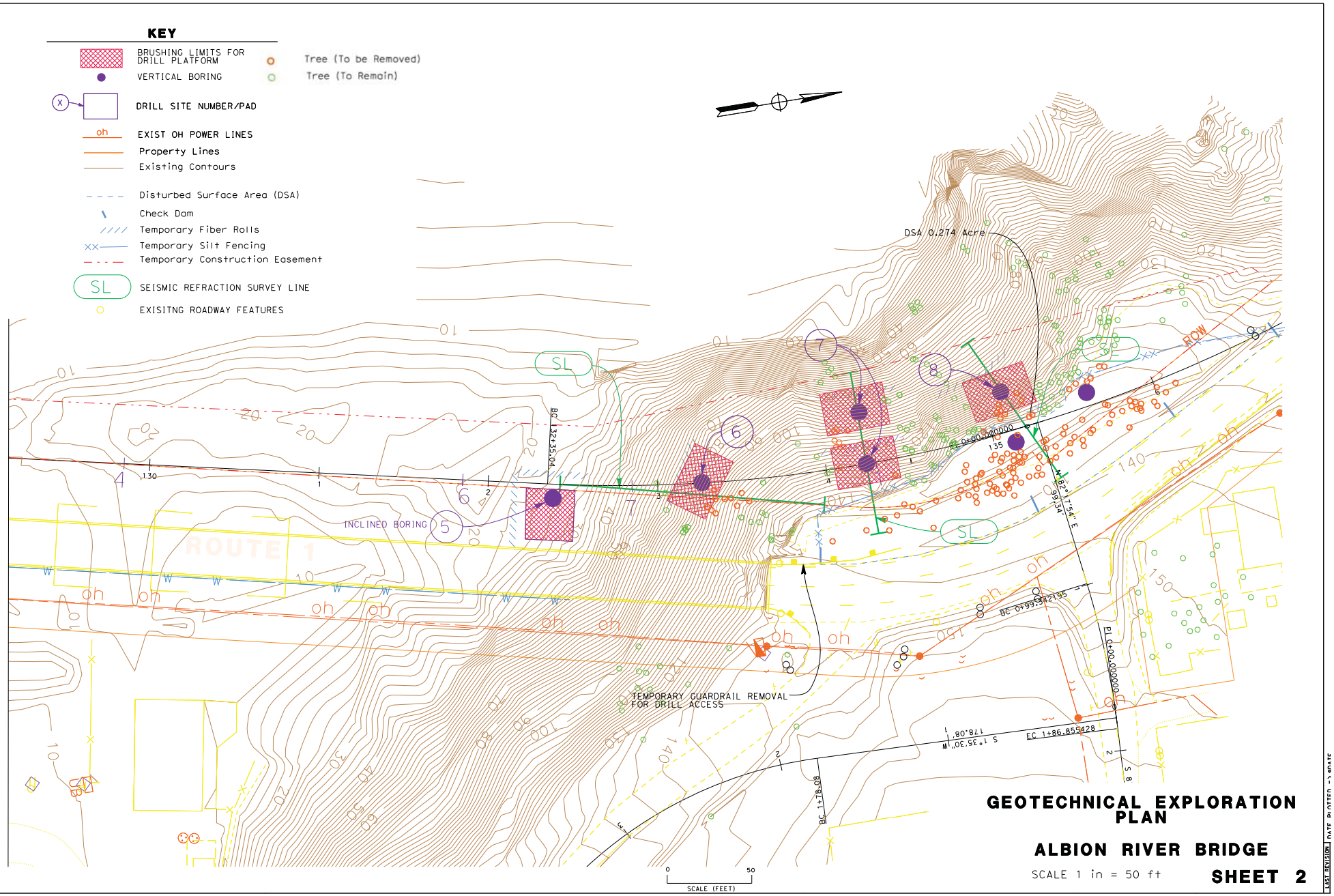
SCALE 1 in = 50 ft

SHEET 2

| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | THOMAS PHILLIPS, P.E. | REVISED BY | T. PHILLIPS |
|---|---|---|---|---|---|
| Caltrans DESIGN | LENA ASHLEY, P.E. | CHECKED BY | TODD LARK, P.E. | DATE REVISED | 8-20-18 |

#REQUEST (1 of 3)

LAST REVISION | DATE PLOTTED =>DATE




# GEOTECHNICAL EXPLORATION PLAN

## ALBION RIVER BRIDGE

SCALE 1 in = 50 ft

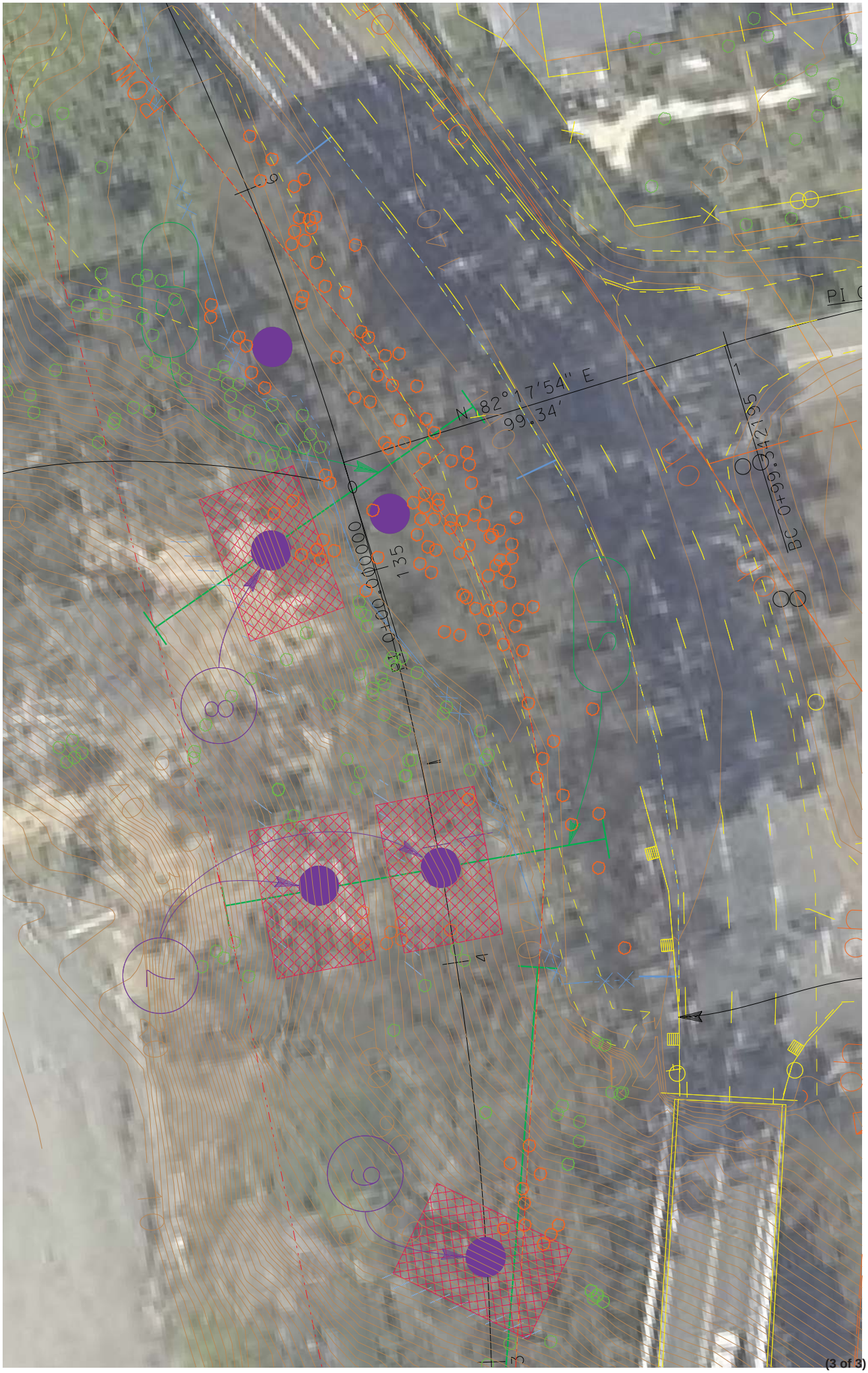
**SHEET 2**

| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | FUNCTIONAL SUPERVISOR | CALCULATED-DESIGNED BY | THOMAS PHILLIPS, P.E. | REVISED BY | T. PHILLIPS |
|---|---|---|---|---|---|
| Caltrans **DESIGN** | LENA ASHLEY, P.E. | CHECKED BY | TODD LARK, P.E. | DATE REVISED | 8-20-18 |

LAST REVISION | DATE PLOTTED =>

#REQUEST

(2 of 3)


ROW
N 82°17'54" E
99.34'
PI
BC 0+99.34
135
0+00.00
8
7
6
5
4
3
2
1

# Spill Prevention and Response Plan (SPRP) – Caltrans Albion River Bridge Replacement Geotechnical Investigation

**EA:** **01-40110**
**ID:** **0100000154**
**01-MEN-01-PM 43.3/44.2**
**Date:** **November 22, 2016**

## Project Contacts and Emergency Notification List

| | | Phone: | Cellular / Night: |
|---|---|---|---|
| 1. | Caltrans Project Geologist: William Bertucci | (916) 203-7992 | Same |
| 2. | District Project Manager: Frank Demling | (707) 445-6554 | |
| 3. | District Design Branch Chief: Lena Ashley | (707) 445-6602 | |
| 4. | District Design-Project Engineer: Tom Phillips | (707) 445-7864 | |
| 5. | Caltrans Drilling Services -Supervisor: Mark Richards | (916) 425- 2434 | |
| 6. | Fort Bragg Caltrans Maintenance: Aaron Christian | (707) 964-4652 | (707) 489-3159 |
| 7. | Caltrans – Maintenance Hazmat Danny Figueiredo | (707) 964-3005 | (707) 498-0577 |
| 8. | Caltrans Environmental Senior: Liza Walker | (530) 741-4139 | |
| 9. | Caltrans Project Biologist: Hilary Sundeen | (707) 441-3983 | |

Emergency Significant Spill Response:

| | | |
|---|---|---|
| 1. | California Office of Emergency Services (Cal OES) | (800) 852-7550 |
| 2. | California Department of Fish and Wildlife (CDFW) | (707) 441-5736 |
| 3. | North Coast Regional Water Quality Control Board (RWQCB) | (707) 570-3767 |
| 4. | United States Coast Guard (USCG) Station Fort Bragg: | (707) 374-2655 |
| 5. | National Response Center | (800) 424-8802 |

## Plan Authorization

A copy of this Plan will be maintained at the drilling site(s) and will be available upon request for on-site review during normal working hours.

## Scope and Objectives

This Plan applies to the work sites where drilling and/or grading activities will occur and where such activities or equipment could potentially discharge materials into the environment (land, Albion River and Pacific Ocean) creating a significant spill. The project work areas and drill sites location are shown on the Geotechnical Investigation Plan, Sheets 1 and 2 and Geotechnical Disturbed Surface Area (plan) Sheets 1 and 2. For additional information on the scope of this project, please refer to the project plans and Geotechnical Investigation Plan prepared by Caltrans by contacting the Project Geoprofessional or District Project Manager.

**Plan Reviews and Amendments**

This Plan shall be reviewed and/or amended, if necessary, whenever there is a change in the design of the site, drilling site activities, operations, or maintenance which materially affects the site's potential to discharge regulated material or drill mud. The Plan will be reviewed and revised when required by a licensed professional of the State of California each time it is amended**.**

**Site Information**

The drilling program consists of nine (9) boreholes at 6 drill site locations shown on the Geotechnical Investigation Plan, Sheets 1 and 2. Drill sites 1a, 1b, 1c, 3 and 4 have been eliminated.

**Spill History**

There is no spill history associated with Caltrans drilling operations.

**Drilling Methods and Scope**

The borehole locations shown in Plate 1 may be drilled initially by Auger (dry) where near surface soils are encountered followed by self-casing wire line rotary wash with a retrieval inner core barrel system when rock is encountered. The nominal bore-hole diameters are 114 and 94 mm respectively. The Rotary wash method will include the use of drilling fluids composed of water and/or a combination of water and bentonite/polymer. The borehole (s) will be advanced utilizing several types of drills and vehicle setups that include trailer, truck and track mounted drill rigs. In addition, a non-vehicle mounted drilling system lowered to a platform by crane and/or helicopter may be employed. During the drilling operation the drilling fluids and cuttings are circulated via a pumped through a closed system that includes the pump, hoses, down the drill pipe and out the drill bit, up through the formation, casing and back into the mud tank then recirculated. As the drill cuttings deposit in the mud tank there are periodically removed and placed in steel drums.

After the planned boring depth has been achieved the drilling fluids are removed stored in sealed drums (see disposition of drums below). Then at selected bore-holes, slope inclinometers and/or piezometers may be installed to measure slope movement/creep and/or changes in groundwater.

Auger drilling soil sampling will include mainly retrieval of drill cuttings and taking (in-situ) 1.4-in diameter x 1.5 ft. long split barrel Standard Penetration Test (SPT) and Pocket Penetration Test (PPT) samples. The former test is typically sampled at 5-foot intervals, the latter test is done when appreciable amount of clay soils are encountered. The retrieved samples are placed in labeled plastic and/or cloth bags and taken to the Transportation Laboratory for testing.

Rotary wash drilling involves hard rock coring using typically diamond impregnated or steel carbide teethed drill bits. The 63.5 mm diameter inner core barrel is retrieved after drilling 5 feet into rock (the length of the core barrel). The retrieved rock cores are placed in labeled core boxes and taken to the Transportation Laboratory for testing.

Drill cuttings – Approximately 2.6 cubic feet or about 1/3 of a 55-gal DOT drum will be generated and handled in accordance with the BMP (contained in steel sealing drums).

Drill Fluids - Approximately 200 gallons will be generated and handled in accordance with the BMP (contained in steel sealing drums and taken to the California Transportation Laboratory for processing).

Cement Grout – Drill Fluids and excess grout generated during bore-hole sealing – Approximately 40 gallons will be generated and handled in accordance with the BMP (contained in steel sealing drums and taken to the California Transportation Laboratory for processing). This material may be regulated as high pH fluids and handled separately from the above.

Drill Rig Tooling Lubricant – Small quantities (< a fluid oz.) of vegetable oil are used on the tool joints. Small quantities (< 1 oz.) of petroleum based copper infused thread lubricant, or grease are applied directly to drill pipe thread as viscous material that does not leak or flow, but may smear or stick.

Fuel and other Petroleum Base Lubricants – Are stored and contained on vehicles on and/or on ground near the drill sites.

**Site Specific Areas of Concern**

The drilling work will be conducted at the drill sites shown in Plate 1. There are no known Project specific areas of concern.

**Caltrans Drilling Services Department- Best Management Practices (BMPs) for Geotechnical Investigations**

Drilling Services Best Management Practices, BMPs, are standard operating procedures that are implemented as appropriate to control on and offsite releases from geotechnical drilling operations.

**Definition and Purpose**

These procedures and practices are used to prevent the discharge of pollutants from the drill sites to the ground and Route 1 roadway and natural hillside and Albion River (Drill Sites 1 and 2); natural hill side, beach area and Pacific Ocean (Drill Sites 5 and 6); Route 1 roadway, natural hillside, beach and Pacific Ocean (Drill sites 6, 7 and 8). Drill Site 1a, 1b, 1c, 3 and 4 have been eliminated.

**Project Contacts and Emergency Notification**

The contact information shall be provided by the Caltrans project Geoprofessional (GP) and included on the Title page of this Site Spill and Prevention Plan, (SPRP) where it is in use. These basic BMPs are in effect when a SPRP is not required. Sufficient information shall be provided in the SPRP to clearly define appropriate parties by phone, e-mail or writing.

**Spill Prevention Training**

The easiest and most effective practice reducing and eliminating negative impact to the job work site area is the thorough understanding of the drilling systems and their component operations, e.g. drilling fluid circulation, drill rig hydraulic system, etc. Drilling Services personnel are trained in the procedures that follow. All drilling and logging personnel will be familiar with these BMPs and the

SPRP where one is in effect. The site personnel will review the BMPs and the SPRP if applicable at the safety meeting on the barge. The meeting and participant signatures will be recorded on the safety meeting form.

**The following are general requirements for any hazardous substances stored or used during the drilling operations.**

- Ensure all hazardous substances are properly labeled.
- Store, dispense and/or use hazardous substances in a way that prevents releases.
- Provide secondary containment when storing hazardous substances in bulk quantities.
- Primary and secondary containment should be checked periodically, and any spills identified must be immediately cleaned up and removed.
- Maintain good housekeeping practices for all stored chemical materials.
- All chemicals that are transferred from a larger to smaller containers must be transferred by use of a funnel or spigot.
- All hazardous substance containers shall be closed while not in use.
- Use drip pans or other collection devices to contain drips or leaks from containers and equipment.
- Implement preventative maintenance activities to reduce the potential for release from equipment.
- Immediately clean up and properly manage all small spills or leaks.

**Drill Crew Preventative Equipment and Materials**

Drilling preventative equipment elements include spill kits. The Drilling Services crews are trained in their use. The spill kits are as follows:

- 55-Gallon Universal Kits – two (2) at the drill site. In addition, xtra- 6 mil plastic sheeting and straw wattles to form a bermed seal enclosure encompassing the fluid usage area.
- 
- Quick Response Spill Kit – at the drill site(s).

Each kit will be re-inventoried if it is used or opened.

The spill kits include:

**<u>Quick Response Spill Kit – Barge</u>**
(15) Absorbent Pads – 15" x 19"
(2) Absorbent Socks – 3" x 8-ft.
(2) Plastic Disposal Bags

**<u>20 Gallon Universal Spill Kit _ Drill Rig (Optional as Needed)</u>**
(12) Absorbent Pads – 15" x 19"
(3) Absorbent Socks – 3" x 8-ft.
(2) Absorbent Pillows – 18" x 18"
(3) Plastic Disposal Bags
(1) 20-Gallon Plastic Container w/lid

**55 Gallon Universal Spill Kit – Available on Project Specific Basis (Optional as Needed)**

(50) Absorbent Pads – 15" x 19"
(8) Absorbent Socks – 3" x 8-ft.
(8) Absorbent Pillows – 18" x 18"
(5) Plastic Disposal Bags
(1) 55-Gallon Plastic Drum w/lid

**Additional Site Preparation and Protection – Available as Needed Sacramento HQ and District Maintenance Yards**

Oil-Only Spill Pads – 16" x 20"
Straw Wattles
Plastic Sheeting
55-Gallon Steel Drums w/lids
5-Gallon Plastic Buckets w/lids
6-mil plastic sheeting

**Spill Containment at the drill site(s)**

The drill pads and steel platforms will be covered with plastic sheeting which will be placed Drilling Services. In addition, to contain any amount of potential spillage on the drill pads, the perimeter of the pads/ platforms will diked utilizing straw waddles or pipe wrapped in the plastic sheeting.

**Significant Spills**

A significant spill is that which requires Agency notification or poses a threat to the public or the environment.

**General Spill Response and Containment Procedures**

In the event of a hazardous substance spill or release, immediately review and follow applicable OSHA guidelines. If doing so does not violate those guidelines, take the following measures to keep the spill contained on the drill site and/or to minimize any material release off the drill site, or affecting human health.

In all cases caution and common sense must be maintained with the primary goal being to prevent and/or limit personal injury.

The person discovering a release of material from a container, tank, or operating equipment should initiate certain action immediately, including:

1. Extinguish any sources of ignition until material is identified as nonflammable and noncombustible.
2. Attempt to move spilled material away from ignition source.
3. Avoid activities creating sparks (smoking cigarettes).
4. Identify the material released (consult MSDS). This material will usually be well known and self-evident, e.g. drill fluid consisting of water and polymer from a leaky swivel.
5. Attempt to stop the release at its source. Turn valves, plug leaks (if there are no health or safety hazard). In most cases this means turning off the equipment.

6. Use rig and tender pumps to evacuate liquids and use absorbers to contain spilled liquid.
7. Retrieve the spill kits (described above) and use as deemed necessary to contain spills.
8. Initiate spill notification and reporting procedures. Report significant spills immediately to the Caltrans Coordinator and Agencies listed on the front page of the SPRP.

   If a spill or release cannot be controlled or injuries have occurred due to the release, the following emergency procedures should be implemented.

   - Immediately call **911** in the event of injury, fire or potential fire, or spill of hazardous substances that give rise to an emergency situation.
   - If a spill has occurred, contact the following immediately:

| | Cellular | Office |
|---|---|---|
| California Office of Emergency Services (Cal OES) | | (800-852-7550) |
| Mendocino County Environmental Health | | (707) 234-6639 |
| Regional Water Quality Control Board (RWQCB) | | (707) 570-3767 |
| Caltrans – Maintenance Hazmat Danny Figueiredo | (707) 498-0577 | (707) 964-3005 |
| Caltrans Office Env Engineering - Kevin Church | | (707) 445-5201 |
| California Department of Fish and Wildlife (CDFW) | (707) 498-0518 | (707) 441-5736 |
| United States Coast Guard | | (707) 374-2655 |
| California Department of Fish and Wildlife (CDFW) | | (800) 424-8802 |
| (After Hours Emergency Contact) Mark Richards | | (916) 425-2434 |

   - In the event of a large spill, a properly trained employee should:

     1. Assess the area for any immediate dangers to health and safety. If dangers are present.

        a. Notify the primary and/or secondary contact from the list above and then continue the spill response. The primary contact should assess additional notification requirements (i.e., notify Cal OES, Mendocino County Environmental Health, NCRWQCB, etc.). See **General Spill Response and Containment Procedures** section above.

**Drilling Operation Material Specific Procedures**

**Drill Fluids** - Are removed from the circulating system by the drill rig mud pump to the drill tender pump. In some cases a separate dedicated auxiliary pump is used to circulate the drill fluids. Drill fluids typically are removed from the mud tank system settling tank to minimize solids content and are stored in 55-gal DOT- H drums.

**Cement and Grouting** - Crews trained in grouting procedures. Careful monitoring of the grout volume and displacement. This also enhances water segregation from high pH cement/water mixture. Cement spills shoveled up into drums for disposal. Residual material from the spill is cleaned with sorbent material and swept up, then rinsed with water.

**Oil, Hydraulic Fluid or Lubricant** - spills are not to be rinsed with water. Cleaned drill fluid spills or cleaned with spill kits and swept up with absorbent material. Note that there are petroleum based and vegetable based lubricants used in these operations. The cleaned spill may be rinsed for final effect to prevent hazard to the travelling public e.g. polymer and motorcycle traffic.

**Disposal and Decontamination**

Dispose of material using containment bag in the spill kit and in compliance with local state and federal regulations.

- Recovered pollutant shall be separated by waste stream type and location where the waste was recovered. Pollutants recovered from Waters of the State shall be kept separate from pollutants recovered elsewhere.
- **Liquids**: Liquids shall be held in secure tanks for gauging to determine oil content by DFW and Responsible Party representatives prior to disposal. In order to expedite cleanup and disposal, a direct assessment of the contents can be made, or a representative sample may be analyzed by the TSD Facility. Liquids recovered during flushing or steaming and decontamination operations should be kept separate from recovered free floating oil.
- **Solids**: Recovered pollutants held in solids will be placed onto roll-off bins or over-pack drums with tare weights. Solids shall be segregated as follows; sorbents, debris (oiled) soil, or PPE. Solids recovered from Waters of the State or Adjacent shorelines shall be stored separate from those recovered elsewhere.
- **Vegetation/Wildlife**: Vegetation and/or Wildlife removed in the cleanup operation will be bagged and weighed separately.

For any questions regarding appropriate disposal methods and procedures for disposal of cleanup or spill materials, contact North Coast Regional Water Quality Control Board (707) 570-3767; California Office of Emergency Services (800-852-7550); Mendocino County Environmental Health, (707) 234-6639; Caltrans Maintenance (707) 964-3005

**Post Drilling Work**

Post Work clean-up operations include cleaning the drilling mud tank. The mud tank will be cleaned of all drill cuttings and drill fluids by pumping and shoveling into a 55-gallon drum. Any residual drill cuttings left on the barge deck surface will removed and placed in 55-gallon drums. All drums will be removed from the barge and transported to the California Department of Transportation Laboratory for testing and processing.

**Spill Reporting**

**Caltrans Field Internal Report**

Significant spills that are regulated per this plan will be documented in the driller's daily field report. At a minimum, the report will document the following items:

- Date, time and duration of the release.
- Source and total volume of the release.
- Spill cleanup procedures.
- Personnel who discovered and/or participated in the spill remediation.
- Equipment used during cleanup.
- Waste disposal methods.
- Agency inspections.

- Photographs of the event and post site cleanup.

**Reporting to Outside Agencies**

The Caltrans project manager will report to outside agencies in the event of a significant spill if necessary**.**

**Notification Requirements**

- If a hazardous substance spill exceeds 25 gallons or if any amount has been released to the surface waters notify the following agencies:

1. California Office of Emergency Services (800) 852-7550
2. Mendocino County Environmental Health – Trey Strickland (Hazmat) (707) 234-6639
3. North Coast Regional Water Quality Control Board – Craig Hunt (707) 570-3767
4. Caltrans Hazmat Manager – Danny Figueiredo (707) 498-0577 (707) 964-3005
5. .

- All spills of oil or hazardous substances into the navigable waters as defined by the Clean Water Act (CWA) and all spills of a reportable quantity of hazardous substances (40 CFR Part 302) must be immediately reported by the spiller to the National Response Center (NRC). The NRC will contact appropriate local US Coast Guard (USCG) or Environmental Protection Agency (EPA) offices, and State Warning Centers. Notifying state offices does not relieve the spiller from federal requirements to notify the NRC nor vice Versa:

National Response Center (NRC): (800) 424-8802

- When reporting a release, be prepared to provide the following information:

1. Your name and telephone number from where you are calling.
2. Exact address (location) of the release or threatened release.
3. Date, time, cause and type of incident (fire, air release, spill etc.)
4. Material and quantity of the release, to the extent known.
5. Information contained on the OSHA safety data sheets.
6. Condition of the facility (barge).
7. Extent of injuries, if any; and
8. Possible hazards to the public health and/or environment out site the facility.

**Training**

- All employees must receive training on the following topics:

1. Spill prevention practices.
2. Where to locate and to interpret OSHA SDS and pictograms.
3. Spill response plan.
4. Emergency response procedures.

- Training must include a review of this Spill Prevention and Response Plan, and review of location and use of emergency response equipment. Training can be recorded through safety committee meetings, staff training logs, or other equivalent record keeping.

- All Personnel who may respond to any spill, need to be trained on the contents and procedures in this plan. Only persons trained on this plan shall respond to a spill. If you are not trained and witness a spill call or notify the primary and secondary contacts listed on page 1.

**Spill Tracking**

Any spills must be entered into the Spill Log (see Appendix A). If a large catastrophic spill occurs, attach additional pages to describe the event. Include known or possible causes, areas affected, and effectiveness of the cleanup. Include a review of the cleanup contractor and their procedures. For small spills, it is sufficient to fill out the Spill Log, and to take measures to prevent a repeat occurrence.

**Facility Inspections**

Routine inspections may be conducted daily during operation. Inspections will include, at a minimum, a visual inspection of the hazardous substances containers and are immediately adjacent to it for signs of a spill or leak. These inspections do not need to be logged unless a spill or leak is detected. Ideally, these inspections will be conducted by a manager or by regular employees.

**Spill Response Equipment**

Spill response equipment must be maintained and located in the areas where the spills are likely to occur. Spill Kits should provide adequate response capabilities to manage any anticipated spill or release. The following general requirements are to be followed which include:

- Stock spill clean-up kits that are compatible with the hazardous substances stored on the site (barge and dock).
- Located spill kits in areas where spills are likely to occur (drill site, support vehicles, chemical storage areas, locations where hazardous substances are being transferred).
- Spill Kits should be sized to manage an anticipated release (spill equal to the largest container).
- Emergency response equipment should be inspected periodically to ensure that the spill kits are complete.

CRUX subsurface, inc.
A QUANTA SERVICES COMPANY

# HAZARDOUS SUBSTANCE SPILL CONTROL AND EMERGENCY RESPONSE PLAN

**Prepared by: Crux Subsurface, Inc**

**This Hazardous Substance Control and Emergency Response Plan has been reviewed and/or approved by the following persons:**

| Name (printed) | Agency | Signature | Date |
|---|---|---|---|
| Jackson Menke | Crux Subsurface, Inc. | | 7/19/18 |
| Mike Kennedy | Crux Subsurface, Inc. | | 7/19/18 |
| | | | |
| | | | |
| | | | |

## TABLE OF CONTENTS

**I. INTRODUCTION ..... 2**
**II. NON-HAZARDOUS MATERIALS ..... 2**
**III. SPILL PREVENTION PLAN ..... 2**
**a. Preventing Spills ..... 3**
**b. Spill Response ..... 4**
**c. Spill Cleanup Requirements ..... 5**
**d. Spill Reporting/Notification Requirements ..... 6**
**IV. SPILL RESPONSE PROCEDURES ..... 7**

**APPENDIX A: Spill Response Procedures and Important Contact Numbers**

## I. INTRODUCTION

The goal of the Hazardous Substance Control and Emergency Responce Plan is to successfully manage those materials which are hazardous or dangerous to human health and/or the environment. A hazardous material is a substance or combination of substances which, because of its quantity, concentration, physical, chemical or infectious characteristics, may either cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating illness; or pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

Avoiding the release of hazardous materials into the environment will require both the control of substances associated with construction, and the identification and proper disposal of any substances that may be encountered during geoconstruction drilling operations.

## II. NON-HAZARDOUS MATERIALS

Personnel shall clean up any waste generated throughout the course of geoconstruction drilling operations to include non-hazardous waste, such as trash, vegetation, and/or soiled dirt determined to be Class I or II Non-Hazardous Waste. Waste shall be disposed of properly at approved, permitted landfills.

General waste should be removed from the worksite at the end of the day or secured inside a covered container until properly disposed.

## III. SPILL PREVENTION PLAN

The criteria listed below are requirements for all oil and hazardous material use during geotechnical drilling operations. All personnel are required to comply with these requirements while working on the project.

**a. Preventing Spills**

The environmental and economic effects of an oil/hazardous material spill can be best avoided by preventing and containing the spill in the first place. The potential for a spill to occur may be reduced by implementing the following requirements:

- No fuel will be stored on site, with the exception of fuel needed for drilling when the drilling equipment is actively drilling on site.

- No non-essential fuel will be allowed to remain on the site overnight.

- Use, storage, and transport of oil, hazardous materials, and wastes must be performed in accordance with all applicable local, state, and federal regulations and the requirements with this document.

- All vehicles and equipment containing petroleum must be inspected daily for leaks or signs of deterioration that could cause a leak or spill. All leaks or deteriorated conditions should be repaired prior to use.

- Personnel must take care at all times not to cause an uncontrolled spill or release of oil or hazardous materials to the environment (i.e. use spill safe fuel cans, absorbent pads, drip pans etc.).

- Personnel must remove all oils, hazardous material, wastes, and unused materials from the work site. This includes full and partially full containers of waste material such as, but not limited to rags, gloves, trash, scrap metal, and empty containers.

- Containers must be kept closed unless material is being transferred.

- Project personnel will ensure that all transferring operations are monitored and not left unattended.

- Handling and disposal of hazardous wastes will be in accordance with the U.S. Environmental Protection Agency regulations (40 CFR 260 through 272).

**b. Spill Response**

If a spill occurs during the course of operations, personnel will first assess the situation for unsafe conditions; employee safety is a priority. If needed, safety concerns will be addressed first and the appropriate safety and emergency personnel will be notified.

After the safety of all personnel has been addressed, the discovering personnel will take the following actions:

- Reference Material Safety Data Sheets (MSDS) for personal safety and cleanup precautions.

- Immediately stop the source of the spill. Stopping the source of the spill will minimize the amount of material needed to be cleaned up and its potential to impact an environmental resource.

- Start containment actions, using on-site equipment and spill supplies to safely respond, contain, and cleanup the spill. If needed, call for additional supplies, equipment and manpower to assist with the cleanup effort.

- Report the spill to the site superintendent and environmental personnel. Environmental personnel will assess the spill and make the necessary notifications. Environmental personnel will also confirm that all contaminated material is removed and properly disposed. Personnel responsible for spill

notification and/or reporting are listed below in section Iv (spill response procedures.)

- All onsite personnel will assist with clean up to the fullest extent possible.

All operational vehicles will maintain a supply of emergency spill clean-up materials for conducting initial containment and clean-up activities. In addition, at least one spill kit will be present at each drilling location during drilling operations and at each staging and grout plant locations. A spill kit shall be accessible at that site and readily available in the instance of a spill. Spill kits will contain oil absorbent pads, 3-mil trash bags or spill bags, gloves, notification requirements, and response procedures.

**c. Spill Cleanup Requirements**

Personnel must immediately cleanup all spills involving oil or hazardous materials. Spill debris and waste must be expedited from the site and the site restored to pre-spill condition.

If required, verification samples must be taken and tested at a certified laboratory for contaminant levels. Additional cleanup will be performed as necessary.

Temporary storage and disposal of spill materials must be performed in accordance with all Federal, State, and local rules and regulation.

If the spill can not be safely handled by on-site personnel, a licensed spill response contractor will be contracted to contain, clean up and perform required sampling, disposal, and reporting of spilled materials and debris. In the unlikely event of a spill of this nature, the Contractor's representative (Project superintendent or Project Manager) will immediately contact a licensed spill response contractor to be determined..

**d. Spill Reporting/Notification Requirements**

The Environmental Protection Agency (EPA) has established requirements to report spills to navigable waters or adjoining shorelines. Specifically, the EPA requires the reporting of discharges of oil or hazardous materials in quantities that may be harmful to public health or welfare, or to the environment.

The requirement for reporting oil spills stems from EPA's Discharge of Oil regulation, which has come to be known as the "sheen rule." Under this regulation, reporting oil spills to the federal government does not depend on the specific amount of oil spilled, but instead relies on the presence of a visible sheen created by the spilled oil. When determining whether to report a spill, ask the following questions:

- Is the spill to navigable waters or adjoining shorelines?
- Could water quality standards be violated?
- Could the spill cause a film, “sheen”, or discoloration?
- Could the spill cause a sludge or emulsion?

If the answer is “no” to all of the above questions, then the spill is not reportable. If the answer is “yes” to any one of these questions, then the spill is required to be reported to the National Response Center at 1-800-424-8802.

More information can be found regarding the EPA’s oil program by calling the National Response Center at 1-800-424-9346 or at http://www.epa.gov/oilspill/oilreqs.htm.

## IV. SPILL RESPONSE PROCEDURES

Spill response procedures, discussed above in section III (b), will be enacted as stated. An environmental representative for Crux Subsurface, Inc. (Project superintendent or Project Manager) will supervise the cleanup operations. As an additional reference, a sheet outlining the Spill Response Procedures and the Important Contact Numbers are included with each spill kit. A copy of the Spill Response Procedures and Important Contact Numbers sheet is provided here as Appendix A.

Spill Response Notification will proceed as follows:

1. Discovering employee immediately notifies the Contractor's Environmental Representative, (Project superintendent or Project Manager),
   Mike Kennedy (Project Manager) 509-290-1481,
   Lyle Murphy (Lead Driller) 509 990-9278.
2. Project superintendent or Project Manager immediately notifies the following personnel:
   a. Owner's On-Site Representative: TBD
   b. Environmental Compliance Coordinator: TBD
   c. California Office of Emergency Services – HAZMAT Spill Notification 1-800-852-7550
   d. Mendocino County Office of Emergency Services (OES) 911
   e. All applicable Federal, State, and Other Agencies as identified above in III (d).

**Appendix A: Spill Response Procedures and Important Contact Numbers**

## SPILL RESPONSE PROCEDURES

If a spill occurs during the course of construction, the discovering employee will take the following actions:

- First, ensure the safety of all personnel. Reference Material Safety Data Sheets (MSDS) for personnel safety and cleanup precautions.
- Immediately stop the source of the spill.
- Start containment actions, using on-site equipment and spill supplies to safely respond, contain, and cleanup the spill. If needed, call for additional supplies, equipment and manpower to assist with the cleanup effort.
- Report the spill to the site superintendent
- Environmental personnel will assess the spill and make the necessary notifications.
- Assist to the fullest extent possible with the clean up effort.

## IMPORTANT PHONE NUMBERS

| Title | Phone Numbers |
|---|---|
| Albion Fire Department | 911 |
| Medical Emergency | 911 |
| | |
| Crux Subsurface, Inc. Spokane Office | (509) 892-9409 |
| (Ask for any of those named below, or contact on cell #'s) | |
| Mike Kennedy Project Manager | (509) 290-1481 |
| Jackson Menke (Safety) | (406) 868-6234 |
| Tim Horlacher (HR) | (509) 280-9080 |
| Nick Salisbury, President | (509) 981-4441 |

**Figure 5**
**ESHA in the**
**100-foot ESHA buffer**

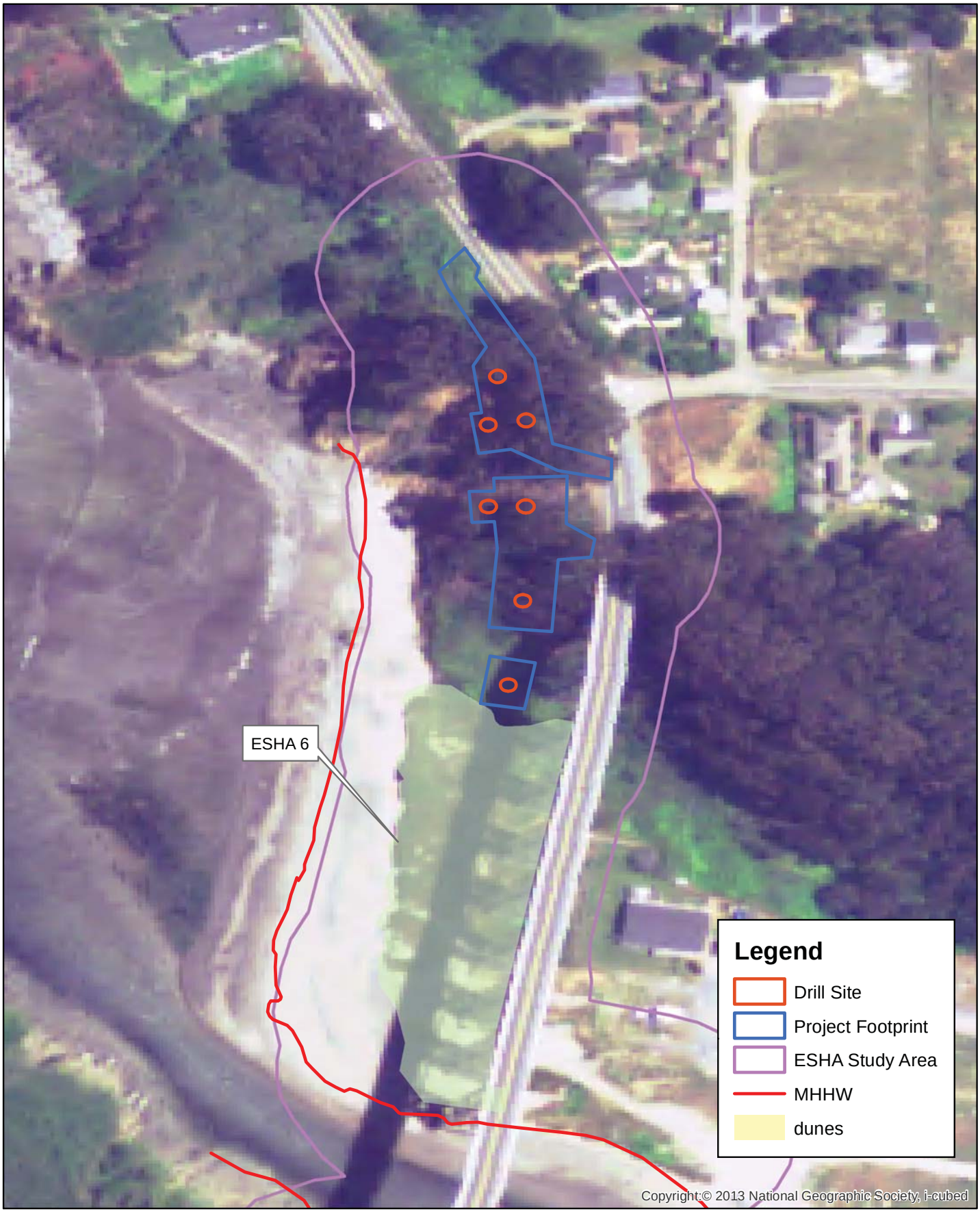
**EXHIBIT NO. 9**

**Locations of ESHAs Occurring in the Project Area**

CDP No. 1-16-0899 (Caltrans)



**Figure 6**
**ESHA in the**
**100-foot ESHA buffer**




(2 of 2)

## Gedik, Tamara@Coastal

**From:** Demling, Frank C@DOT <frank.demling@dot.ca.gov>
**Sent:** Tuesday, April 17, 2018 2:03 PM
**To:** Gedik, Tamara@Coastal
**Cc:** Walker, Liza M@DOT
**Subject:** Fwd: RE: Striker Plate Noise

See below

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**From:** Bertucci, William J@DOT
**Sent:** Tuesday, April 17, 2018 12:03:07 PM
**To:** Pommerenck, Ryan@DOT; Demling, Frank C@DOT
**Cc:** Walker, Liza M@DOT; Hughes, David A@DOT
**Subject:** RE: Striker Plate Noise

Ryan,

You covered the subject sufficiently. I talk to David also, and as I thought the new striker plate material will produce less above ground noise. And using the new striker plate, simply put, the overall quality of the soundwaves entering the ground will be improved. David plans to do a recalibration in the future and that report will be made available.

William Bertucci
Engineering Geologist
OGDN
916.203.7992

---

**From:** Pommerenck, Ryan@DOT
**Sent:** Tuesday, April 17, 2018 11:31 AM
**To:** Demling, Frank C@DOT <frank.demling@dot.ca.gov>
**Cc:** Walker, Liza M@DOT <liza.walker@dot.ca.gov>; Bertucci, William J@DOT <william.bertucci@dot.ca.gov>; Hughes, David A@DOT <david.hughes@dot.ca.gov>
**Subject:** Striker Plate Noise

Hi Frank,

The noise levels included in my noise assessment were based on the information provided on the bottom of page 7 of the attached draft drilling plan. I used 120 dB as the source level and estimated the noise levels at 50 feet using a drop off rate of 6 dB per doubling distance. I'm not sure if I had the striker plate survey data when I prepared my study, but I spoke to David Hughes and Bill Bertucci this morning and we all agreed that the empirical data in the spreadsheet should be used instead of the theoretical noise levels presented in my noise study. David also informed me that they are replacing the metal striker plates with high impact polymer striker plates. Noise levels from the polymer striker plate should be lower than the levels from the metal striker plate.

David and Bill – please let me know if I left anything out.

I apologize for the confusion. If needed, I can update my noise study to include the measured noise levels.

I’m available any time after 1:00 today to discuss.

Thank you,

Ryan Pommerenck
Office of Environmental Engineering South
(530) 741-4472

Caltrans Geophysical and Geology unit, Sacramento, CA
Seismic Refraction striker-plate (source) noise survey Date: 2/26/16
Weather: Thin overcast
Location: Translab (59/Folsom), Sacramento Ambient noise: Traffic, RTE 50
Instrument: 3M SoundPro
Personnel: David Hughes and Robert Runnestrand (CT Geophysics),
Gavin Dillon (CT HQ H&S)

Background: Seismic Refraction is a non-invasive geophysical method of imaging the near sub-surface in a linear profile. The method requires a "source" of seismic energy. The source measured in this investigation consists of a 4.5 lb sledgehammer striking an aluminum "striker plate" on the ground surface. Soundings are measured on soil: soundings directly on rock produce excessive "surface wave" (noise) that swamps the seismic signal in the near geophones. A trigger switch attached to the sledgehammer handle activates the seismograph on impact, recording a small amount of time in great detail. Multiple (5-7) soundings along the line and off the ends of the lines are required to construct a profile. Line lengths are 36m (118 ft) or 48m (157 ft): overall line lengths including offend shots are 72m (236 ft) or 96m (315 ft) [maximum], respectively.

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NORTH COAST DISTRICT

| Distance from Source | Ambient (dB) | Ambient + strike (dB) | Mean (dB) (log calc.) | Striker only (dB) (log calc.) | Intensity (no units, @ 10 ft="1.00") |
|---|---|---|---|---|---|
| 10 ft (3m) | 74.5 | 104.8<br>105.8<br>107.3 | 106.1 | 106.1 | 1.00 |
| 20 ft (6m) | 74.2 | 97.4<br>99.5<br>98.6 | 98.6 | 98.6 | 0.250 |
| 30 ft (9m) | 78.0 | 95.4<br>92.6<br>90.4 | 93.3 | 93.2 | 0.111 |
| 40 ft (12m) | 72.8 | 87.4<br>90.9<br>90.5 | 89.8 | 87.8 | 0.0625 |
| 50 ft (15m) | 75.2 | 84.2<br>outlier<br>88.0 | 86.5 | 86.2 | 0.040 |
| 60 ft (18m) | 73.5 | 86.1<br>outlier<br>86.3 | 86.2 | 86 | 0.0278 |

| | | | | | |
|---|---|---|---|---|---|
| 70 ft (21m) | 75.3 | 83.6<br>83.1<br>84.5 | 83.8 | 83.1 | 0.0204 |
| 80 ft (24m) | 69.2 | 81.8<br>83.3<br>83.6 | 83.3 | 83 | 0.0156 |
| 90 ft (no measurement, all outliers) | | | | | 0.0123 |
| 100 ft (30m) | 70.8 | 79.7<br>79.3<br>80.9 | 80.0 | 79.4 | 0.0100 |
| 110 ft (33m) | 69.2 | 80.2<br>78.1<br>76.6 | 78.6 | 78.1 | 0.0083 |
| 120 ft (36m) | 68.4 | 77.4<br>77.1<br>76.5 | 77.0 | 76.4 | 0.0069 |
| 130 ft (39m) | 72.1 | 75.8<br>outlier<br>73.3 | 74.4 | 73.4 | 0.0059 |
| 140 ft (42m) | 71.4 | 72.7<br>77.7<br>72.9 | 75.0 | 72.5 | 0.0051 |

dB calculations are logarithmic functions, and Internet calculators were used.
Intensity was calculated using the inverse square law.

# Memorandum

**To:** Thaleena Bhattal
Environmental Planner
District 03-Office of Environmental Management

**Date:** June 13, 2016

**From:** **DEPARTMENT OF TRANSPORTATION**
**DISTRICT 3/NORTH REGION**
Office of Environmental Engineering South
Marysville

**File:** 01-MEN-1
PM: 43.3/44.2
EA: 01-4011
Albion River Bridge
Geotechnical Investigation

**Subject:** Noise and Air Quality Analysis

**Introduction:**

A geotechnical investigation will be conducted to collect data that will be used in the foundation design for two of the proposed alternatives for replacing the Albion River Bridge. The geotechnical investigation will take place at eight locations around the existing bridge. In order to access the study locations, temporary roads will be constructed for six of the locations. Two of the locations are difficult to access and will require the equipment to be lowered to the study location by either a crane or helicopter.

**Noise:**

Noise generating activities for the geotechnical investigation will include earthwork/excavation for temporary access roads, helicopter operation to place equipment two of the study locations (if needed), drilling operations and seismic refraction surveys. Noise levels will be a function of the noise generated by individual pieces of construction equipment, the type and amount of equipment operating at any given time, the timing and duration of construction activities, and the proximity of nearby sensitive receptors. The nearest noise sensitive area is the Albion River Campground which is located approximately 100 to 300 feet east of the drilling area. Noise generated by construction equipment drops off at a rate of 6 dB per doubling of distance.

If a helicopter is required, it will depart from the Little River Airport which is located approximately three miles northeast of the project location. The flight path will take the helicopter directly west of the airport to the coastline, then south toward the project area. The helicopter will not be permitted to fly over any residential areas or the Albion River Campground. The helicopter will only hover in the area as long as needed to safely drop off the equipment. Once the equipment has been dropped off the helicopter will return to the airport.

Noise from the seismic refraction survey could occur from hammer and striker plate contact, down-hole shotgun blasts and explosive charges. The hammer and striker plate noise occurs when a

sledgehammer strikes the striker plate to trigger the shotgun blast. Noise levels from the hammer strike can reach 120 dBA $L_{max}$ at the source. The down-hole shotgun uses an eight gauge 350 to 500-grain blank shotgun cartridge. The shotgun blast can produce maximum noise levels of 60 dBA near the source. The shells are typically triggered 20 minutes apart. The final noise source that may occur during the seismic survey are small explosive charges. The detonation occurs underground and causes a low frequency "thump" that ranges between 60 dBA and 80 dBA $L_{max}$ near the source. The charges are typically triggered 30 minutes apart.

Typical maximum noise levels produced by various activities performed during the geotechnical investigation are shown in Table 1.

Table 1 Construction Noise Levels at Varying Distances

| Construction Phase | Maximum Noise Level ($L_{max}$, dBA) | | | |
|---|---|---|---|---|
| | 50 feet | 100 feet | 200 feet | 300 feet |
| Earthwork/Excavation | 85 | 79 | 73 | 69 |
| Helicopter | 90-105 | 84-99 | 78-93 | 74-89 |
| Drilling | 84 | 78 | 72 | 68 |
| Seismic Survey (120 dBA at the source) | 92 | 86 | 80 | 76 |

Construction noise is regulated by Caltrans Standard Specifications Section 14-8.02, "Noise Control". These requirements state:

- Control and monitor noise resulting from work activities.
- Do not exceed 86 dBA $L_{max}$ at 50 feet from the job site activities from 9 p.m. to 6 a.m.

In addition to the Standard Specifications, construction noise can be minimized, if feasible, through the following measures:

1. Unnecessary idling of internal combustion engines should be prohibited.

2. Stationary construction equipment, such as compressors and generators, should be shielded and located as far away from sensitive receptors as practical.

3. Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.

4. Utilize "quiet" air compressors and other "quiet" equipment where such technology exists.

Noise from the geotechnical investigation may intermittently dominate the noise environment in the immediate area. This noise will be temporary and sensitive receptors would not be exposed to the noise source for any longer than necessary to complete the investigation. All work associated with the geotechnical investigation will occur during daytime hours from Monday to Friday. Since the noise generated from the geotechnical investigation will occur over a short duration, during daytime hours and will be conducted in accordance to Caltrans Standard Specifications, no substantial noise impacts are anticipated.

**Air Quality:**

The proposed project may result in the generation of short-term construction-related air emissions, including fugitive dust and exhaust emissions from construction equipment. Fugitive dust, sometimes referred to as windblown dust or PM10, would be the primary short-term construction impact, which may be generated during excavation, grading and hauling activities. However, both fugitive dust and construction equipment exhaust emissions would be temporary and transitory in nature. 40 CFR §93.123(c) (5) states that: "CO, PM10 , and PM2.5 hot-spot analyses are not required to consider construction-related activities which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established 'Guideline' methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site." Because construction of the project is expected to last less than five years, construction-related emissions associated with this project are not considered in the project-level or regional conformity analysis.

Caltrans Standard Specifications should effectively reduce and control emission impacts during construction under the provisions of Section 7-1.02C "Emission Reduction", Section 10-5 "Dust Control" and Section 14-9 "Air Pollution Control".

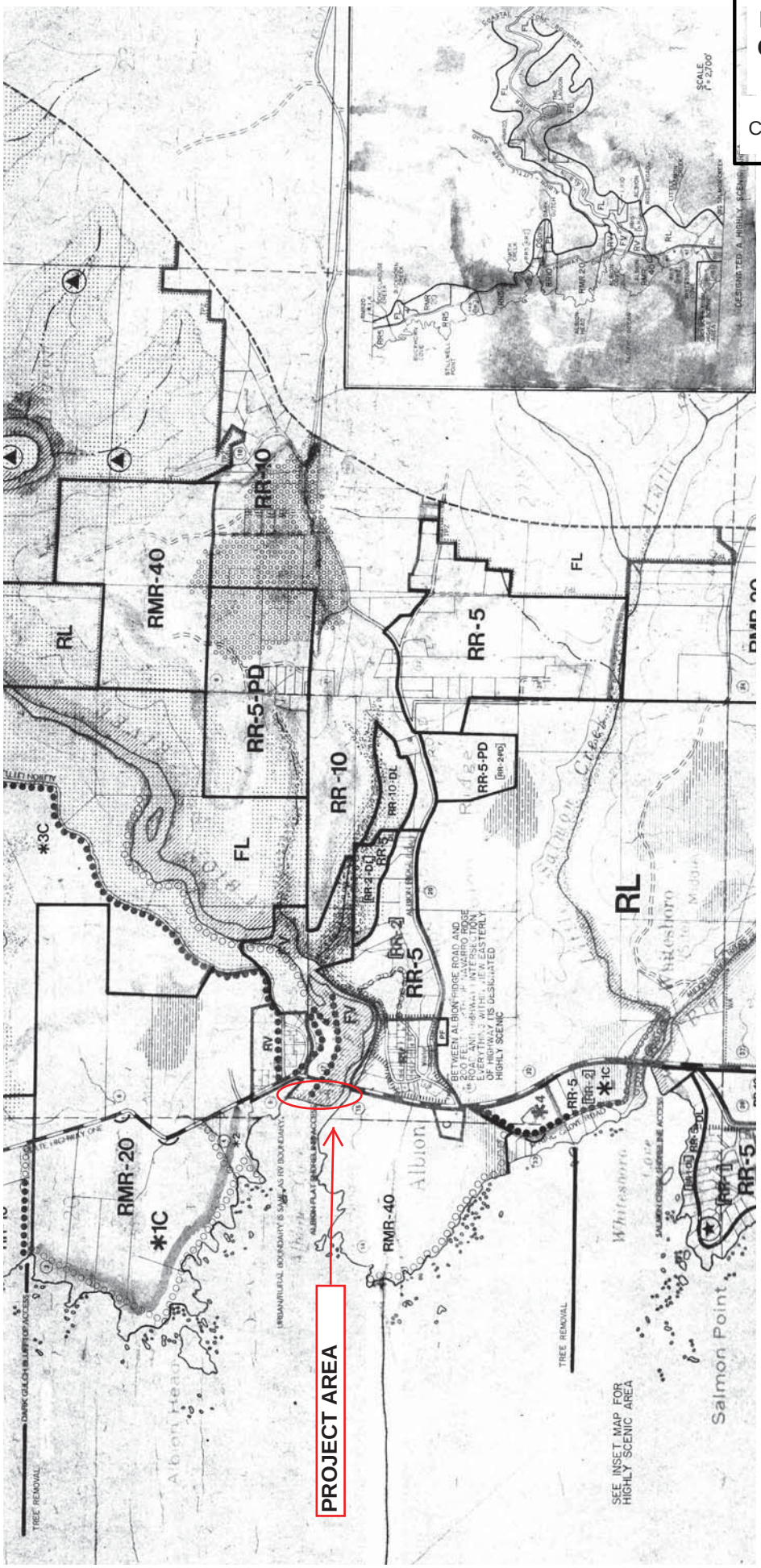


Ryan Pommerenck
Air Quality/ Noise Unit
Office of Environmental Engineering South

**EXHIBIT NO. 11**

**Excerpt of Mendocino County Land Use Plan Map #18 (Albion)**

CDP No. 1-16-0899 (Caltrans)



**State of California** **Business, Transportation and Housing Agency**

# Memorandum

To : Liza Walker
Environmental Planning

Date: April 28, 2015

File No.: MEN-01-PM 43.7/43.8
EA 01-40110K EFIS 01 0000 0154
Albion River Bridge Replacement
Geotechnical Drilling Work

From : Laura Lazzarotto
Landscape Architect
Caltrans District 1
707-445-7878

Subject : **Scenic Resource Evaluation and Visual Impact Assessment for Geotechnical Drilling Work at Albion River Bridge**

INTRODUCTION

This bridge replacement project will have two reviews for visual impacts. This memo addresses potential visual impacts of the proposed geotechnical drilling work required for structural engineering design work for the bridge replacement. A subsequent Visual Impact Assessment (VIA) will address the potential visual impacts of the bridge replacement project.

The proposed project is located on Highway 1 along the northern California coast in Mendocino County, located by the small coastal community of Albion. The landscape types are coastal bluffs, coastal prairie, coastal forest, and rural village.

This section of Highway 1 is not a State Designated Scenic Highway, but is listed as "eligible". As such, care must be taken to preserve the natural resources should the local community desire to apply for a scenic designation at a future date. The project is within the Coastal Zone and is considered a sensitive corridor regarding visual resource issues. Ocean views are available from the highway along the length of the project. The scenic resource in this area is the Pacific Ocean.

PROJECT DESCRIPTION

In order to do the required geotechnical drilling, the project proposes to construct temporary access roads on the west side of the bridge. At the southern approach to the bridge, the road will be 15 feet wide and hillside cuts will be required. For Drill Site 1, which is the southern-most drill pad, guard rail will be removed and there will be extensive cut grading for the 1200 square foot pad. Vegetation which will need to be removed consists of grasses and underbrush. Drill Site 2 and 3 are further down the slope from Drill Site 1. Due to the steepness of the slope, the drill will be winched down the slope to the drill sites. Support vehicles will be located on Site 1, possibly including a crane. A path will be created from

Site 1 to Site 3 which will require brush removal.

From the north, two approaches to the drilling sites are anticipated. Access to Drill Site 4 will be from the Albion River Campground. Access to the campground is via Albion River North Side Road which is located on the northeast side of the bridge. Drill Site 4 is on soft sand which is somewhat covered by non-native Freeway Ice Plant (*Carpobrotus edulis*). Access to Drill Site 5 has two scenarios: One is beginning from Site 4 going over soft sand, up the slope, and then crossing an 80 foot by 6 foot wide swale. The other is to come down the slope from Drill Site 6. Drill Sites 6 and 7 will accessed from Site 8. They are located on steep slopes above Drill Site 5. For vehicle access and staging, the ground will be leveled and much of the brush including a number of the eucalyptus trees will have to be removed. A path will be created from Site 8 down to Site 6 which will require vegetation removal consisting of brush and non-native eucalyptus trees. Drill Site 8 is to the west of the intersection of Highway 1 and Albion Little River Road. The site will be graded to accommodate access for vehicles and staging and eucalyptus trees and brush would be removed.

EXISTING CONDITIONS AND VISUAL IMPACTS

The character of Albion River Bridge is notably from a different era. The bridge deck is narrow and the railing has a linear, horizontal aspect. The three panel rail system has wooden rails and posts. The wood is painted white. The white railing accentuates the length of the bridge over the river canyon. The bridge is 970 feet long. The railing is very "see-through", offering views to the west of the bluffs, beach and ocean. To the east, views are of the river, campground and tree covered hills. For the proposed geotech drilling work, views of the bridge will remain the same.

**Northbound Views along Highway 1**

Northbound, the highway passes the intersection of Albion Ridge Road, makes a gentle curve to the right and then slopes down towards the bridge. The embankment slope to the east prevents the viewer from seeing the bridge until shortly before crossing. The bridge is notable for its old style wood railing, narrowness, and its height and length over Albion River. For the geotechnical drilling work, northbound travelers will see the grading work done for the temporary access road on the southwest side of the bridge. Various types of equipment will be used which range from 10 feet to 20 feet in height. The equipment will be moved from drilling pad to drilling pad. The bridge is narrow and requires driver attention, however, passengers will be able to see the surrounding views for a longer duration, as will cyclists. As the temporary access road and drilling work is to the west and on the far side of the highway, it will not be as visible as it will be for those traveling in the southbound direction.

Viewing across the bridge northbound, eucalyptus trees dominate views on both sides. Drilling equipment will be visible to the west. Very soon after crossing the bridge, the road curves sharply to the left. Several residences on the east side are north of the intersection at Albion Little River Road.

Access to the drilling pads will require the clearing and removal of eucalyptus trees and other vegetation up to 70 feet west from the highway. Coastal views will increase for northbound travelers. Coastal views will also increase for travelers coming up from the river at the

intersection of Albion River North Side Road and Highway 1. Albion River North Side Road is located about half way between, 100 feet in either direction, of the north end of the bridge and Albion Little River Road. North of Albion River North Side Road, the highway appears to have been made by cutting through the original landform. Both sides have a cut slope rising about 5 feet up from the highway. The cut slope blocks views of the ocean for approximately 200 feet. As a result, no additional views of the coast would be afforded by the removal of eucalyptus trees. At this point, the slope comes down to road grade and coastal views open up. On the northeast side of the bridge, there will be no change of existing views.

**Views from Albion Ridge Road and Albion**

Albion Ridge Road is on the south side of the bridge. Traveling westbound on Albion Ridge Road, the road drops in elevation until it reaches the highway. At approximately three-quarters of a mile inland, the Pacific Ocean comes into view. In another quarter mile westward, the Albion River Bridge starts coming into view on the right. In this area it is possible to see the southern approach to the bridge. South of the bridge several Shore Pines (*Pinus contorta*) would be removed and grading work for the temporary access road near the highway would also be visible.

Continuing westward on Albion Ridge Road closer to the Albion Post Office, the northern portion of the bridge comes into view. With the proposed eucalyptus tree removal, there will still be some eucalyptus trees in view which are between the geotech drilling access area and Albion River Inn.

In the village center of Albion, homes are located on the northern slope with views of Albion River and the Albion River Bridge. The residents have views of the southern and northern approaches to the bridge. Grading work for the drilling pads and equipment would be visible through the bridge. South of the bridge several Shore Pines (*Pinus contorta*) would be removed and grading work for the temporary access road near the highway would also be visible. North of the bridge there will still be some eucalyptus trees in view to the west. The views behind the removed trees will open up to the coastal bluffs and possibly of the Albion River Inn. Grading work for the drilling pads and equipment would be somewhat visible through the bridge.

**Views from Albion Little River Road**

Traveling westbound on Albion Little River Road, as the traveler comes around the final curve towards the coast, the view at the end of the road is of a stand of eucalyptus trees. The road continues downslope until it reaches the highway. Travelers pass by a rural residential neighborhood and begin to see views of the Pacific Ocean through the trees.

With the eucalyptus trees removed for the geotech drilling access, westbound travelers on Albion Little River Road will have better views of the sky and improved views of sunsets as they approach Highway 1. Closer to Highway 1, the Pacific Ocean and horizon line comes in view. Much more of the Pacific Ocean will be visible with the trees no longer blocking the view. Residents in the area will also have better views of the ocean. The increase of ocean views will be a positive visual change. Albion Little River Road drops in elevation more dramatically during the final 75 feet to the intersection and views of the Pacific Ocean begin to diminish due to the 5-6 foot cut slope on the western side of Highway 1.

The clearing of vegetation and grading for the geotech drilling access road would be very visible from Albion Little River Road. Drilling equipment at Drill Sites 6, 7, and 8 would also be visible. Equipment will range from 10 to 20 feet in height and will be moved to each drilling site. The drilling equipment will be in place 3-4 months and would be a temporary visual impact which will be lessened due to better coastal views.

**Views of Albion River Bridge from the Albion River**

Albion River North Side Road goes directly down to the river from the north side of the bridge. Recreational facilities are available by the river: Schooner Landing Marina, Canoe and Kayak Rentals, Flats Café and Albion River Campground. The campground is the western-most recreational facility and ends shortly before the bridge's open-framed wooden support columns. The height and number of support columns is a dominant feature. From the campground, the lower pads for drilling on the south side would be visible. The beach is west of the bridge and is accessible from the campground. People who are near, under, and on the west side of the bridge will see the lower drilling pads and equipment on both sides. Changes in the visual environment will be highest for these viewers. The pads for the drilling work will remain in place until after a new bridge is constructed. The visual impact of the drilling equipment will be temporary. Cuts into the hillside for the drilling pads will be a low-moderate visual impact for several years until all construction is complete. Disturbed areas will be re-graded and seeded with California grasses that are native to the Mendocino coast.

**Views of Albion River Bridge from Albion River Inn**

On the northwest side, the Albion River Inn is the closest establishment to the bridge. Guest rooms at the Inn have spectacular ocean views. The gardens and some of the rooms have a direct view of Albion River Bridge. The grading work and equipment being used for geotech drilling will be visible from the Inn but due to the distance and scale, from this angle the work will be a low visual impact.

**Southbound Views along Highway 1**

Southbound, travelers passing by the Albion River Inn are able to see glimpses of the bridge. The road dips down and then goes up a small incline, approaching Albion and Albion Little River Road. At this location, the highway appears to have been made by cutting through the original landform. Both sides have a cut slope rising about 5 feet up from the highway. The cut slope blocks views of the ocean for approximately 200 feet. As a result, no additional views of the coast would be afforded by the removal of eucalyptus trees. To the east, several large Monterey Cypress are a predominate natural element. Further south, straight ahead in the farground, the view is of a dense grove of eucalyptus trees. To the west, eucalyptus trees are in the midground and form a small grove, thinning as the trees go down the slope towards the bluffs. In this area, removal of the eucalyptus trees would open up views of the sky and the eucalyptus grove by Albion River North Side Road.

The clearing of vegetation and grading for the geotech drilling access road would be very visible from the highway. Drilling equipment at pads 6, 7, and 8 would also be visible. The equipment will be moved from drilling pad to drilling pad. The drilling equipment would be a temporary visual impact. The access road will remain until the bridge is constructed. This will have a low-moderate visual impact.

At Albion Little River Road, the highway makes a sharp curve to the right and the eastern side of the Albion River Bridge railing comes into view. To the west, the cut slope comes down to road level. It isn't until the traveler completes the curve that the entire bridge comes into view. The bridge is notable for its old style wood railing, narrowness and its height and length over Albion River. The bridge is narrow and requires driver attention, however, passengers will be able to see the surrounding views for a longer duration, as will cyclists. Viewing across the bridge to the east, some residences are visible on the hillside. To the west, the land slopes up and is a small hill between the highway and the coastline. While crossing the bridge, the temporary access road and drilling equipment work at Drill Site 1 will be visible. Equipment for Drill Site 2 will be visible, and equipment for Drill Site 3 will not be visible. Views of the beach and coastline remain the same. Changes to the visual environment from the highway are low.

SUMMARY

Review of the project site and project plans indicate that the geotechnical drilling work required for the Albion River Bridge replacement project would not result in substantial adverse impacts to the visual environment. No ocean views would be reduced either along the highway or below the bridge. Ocean views will improve with the removal of the northwest eucalyptus trees.

After the bridge construction, the access roads will be removed and the land restored to near original contours. California native plants may be planted to augment the natural recruitment of the adjacent native species.

This review indicates that the project would not adversely affect any Scenic Resource as defined by CEQA statutes or guidelines, or by Caltrans policy.

cc:projfile



View of Graded Pad for Drill Site #1 Looking South



Panoramic View Looking West

to Geotechnical Drilling Staging Area

For Drill Sites #6, #7 and #8

Prior to Tree Removal and Grading







ALBION CREEK BRIDGE (REPLACEMENT)
RTE 1, MENDOCINO COUNTY, ALBION, CA.

# PERSPECTIVE VIEW LOOKING WEST

TREE REMOVAL AND REVEGITATION

DES PROJECT DELIVERY
Caltrans Prepared by Structure Design Services - Bridge Architecture and Aesthetics

DESIGN BY: SD HEATH
DRAWN BY: SD HEATH
DATE: 8-22-2015

State of California
**DEPARTMENT OF TRANSPORTATION**

California State Transportation Agency

# TRANSPORTATION MANAGEMENT PLAN FOR GEOTECHNICAL INVESTIGATION

To: TOM PHILLIPS
Project Engineer
District 1 Design - E3

As Signed By KBC

From: KEVIN CHURCH, Chief
District 1 Office of Traffic Operations

Date: November 22, 2016
File: MEN-1 PM 43.3/44.2
EA: 01-401100
EFIS: 0100000154
Geotechnical Investigation

Project Information

| | | |
|---|---|---|
| Location: | In Mendocino County, in/near Albion, from 3.0 miles north of the Route 1/128 junction to 0.2 miles north of the Albion River. | |
| Type of Work: | Prepare 7 sites for drilling and drill for a geotechnical investigation. Site preparation includes temporary removal of guard rail, grading, vegetation trimming/removal and tree trimming/removal. | |
| Anticipated Traffic Control: | Reversing traffic control<br>Intermittent closure<br>Shoulder closure | |
| Estimated Maximum Delay: | 10 minutes<br>20 minutes during intermittent closures | |
| Peak Hour Traffic Volumes: | 400 vph | |
| Lane Requirement Charts Included: | Yes | |
| Closure During Night Hours: | Possible, but not anticipated | |
| Number of Working Days: | 42 days | |
| PA&ED Date: | February 1, 2018 | |
| RTL Date: | June 30, 2020 | |
| District Traffic Manager/TMP Manager: | Kevin Church | (707) 445-6377 |
| TMP Coordinator: | Paul Hailey | (707) 445-5213 |

**EXHIBIT NO. 13**
**Transportation Management Plan**
CDP No. 1-16-0899 (Caltrans)

Anticipated Traffic Impacts

Significant traffic impacts are not anticipated provided that the following recommendations and requirements are incorporated into the project. In conformance with Deputy Directive-60, District Lane Closure Review Committee approval is not required for projects with anticipated traffic delay less than 30 minutes.

Hours of Work

- See Chart no. 1 "Conventional Highway Lane Requirements" for work hour restrictions.
- See Chart no. 2 "Lane Closure Restrictions for Designated Legal Holidays" for work day restrictions.

Public Notice

- Upon receipt of notice that the total roadway width, including paved shoulder, will be narrowed to less than 16 ft, the Resident Engineer must promptly notify the HQ District 1 Construction Liaison at (916) 322-4822 so annual permit holders can be notified of restrictions.
- The District Public Information Office, (707) 445-6444, must be contacted two weeks in advance of the start of construction/drilling.
- Each closure must be entered in the Lane Closure System (LCS; http://lcs.dot.ca.gov/lcsprod/). The Geotechnical Designer must coordinate who is responsible and how this requirement is to be managed.
    - To access the LCS you will need an account. Contact Jeannette Candalot at (707) 445-7807 to get set up with an account.
    - Every Monday by noon, submit a schedule of planned closures for the next week period. The next week period is defined as Friday midnight through the following Friday at midnight.
    - Closures must be statused daily. Status closures before the first advance warning sign is placed (1097) and after the last advance warning sign is picked up (1098) or if cancelled (1022). Statusing can be accomplished through:

| Status With | Day | Time | Contact Number |
|---|---|---|---|
| LCS | Any | Any | - |
| District 1 Dispatch | Monday-Friday | 6am-6pm | (707) 441-5747 |
| District 3 Dispatch | Monday-Friday | 6pm-6am | (916) 859-7900 |
| District 3 Dispatch | Saturday and Sunday | Any | (916) 859-7900 |

Traffic Control

- One lane closure is permitted within the project limits.
- Reversing traffic control must be in conformance with the attached traffic handling plan dated September 28, 2016 “Typical Lane Closure with Reversible Control.”
  - A minimum of 12 ft of paved roadway must be open for use by public traffic.
  - The maximum length of a reversing traffic control closure is 3,000 ft.
  - During hauling operations and when moving equipment, while reversing traffic control is in effect, the road may be closed and public traffic stopped for periods not to exceed 10 min. After each closure, all accumulated traffic must be allowed to pass through the work before another closure is made.
  - A pilot car may be used to facilitate reversing traffic control.
- Work that occurs within 6 ft of the edge of traveled way on a 2-lane facility must require a shoulder closure. Close the shoulder area with cones or portable delineators. Place the cones or delineators on a taper in advance of work, parked vehicles or equipment and along the edge of the traveled way at 25-foot intervals to a point not less than 25 feet past the last vehicle or piece of equipment. Use at least 9 cones or delineators for the taper. Use a W20-1, "Road Work Ahead," W21-5b, "Right/Left Shoulder Closed Ahead," or C24(CA), "Shoulder Work Ahead," sign mounted on a crashworthy, portable sign support with flags. The sign must be at least 48 by 48 inches in size.
- A minimum of one PCMS in advance of the drilling site must be required to notify the public of the closures related to this project.
  - Start displaying the message on the PCMS 15 minutes before closing the lane.
  - One of the displayed messages must read, “WATCH FOR BIKES”.

- This section of Highway 1 is part of the Pacific Coast Bike Route. Bicyclists must be accommodated through the work zone. Signage must be used to alert vehicles of the possible presence of bicyclists. During reversing traffic control, bicyclists must be instructed to join the vehicle queue.

- COZEEP is not recommended for this project. According to the CA DOT Construction Manual Section 2-215C (3), lane closures on two-lane highways do not require COZEEP.

- The following table lists projects that are currently in construction and have closures within this project's work limits:

| Contract No. | Co-Rte-PM | Location | Type of Work | Est. Delay (min) |
|---|---|---|---|---|
| 01-0E2004 | MEN-1-43.7 | In Albion | Bridge Seismic Retrofit | 5 |
| 01-0F4104 | MEN-1-43.0 | Near Albion | Bridge Joint Seal Repair | 5 |
| 01-440604 | MEN-1-41.5, 44.7 | In/near Albion | Construct Turnouts | 10 (5 min. per location) |

Contingency Plan

The Geotechnical Designer, the responsible party, must prepare a contingency plan for reopening closures to public traffic. Contingencies for unanticipated delays, emergencies, etc. must be coordinated between the Geotechnical Designer and any consultants.

KBC/jnl

CC: 1)KBChurch, 2)JCandalot
LAshley
FDemling
JMcGee
Traffic Safety
PIO

**Chart no. 1**
**Conventional Highway Lane Requirements**

| County: Mendocino | Route/Direction: 1 NB/SB | PM: 43.3/44.2 |
|---|---|---|

Closure limits: At/near the Albion River Bridge (#10-0136)

| From hour to hour | 24 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mondays through Thursdays | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R |
| Fridays | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | | | | | | | | | |
| Saturdays | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sundays | | | | | | | | | | | | | | | | | | | | | R | R | R | R | R |

Legend:

| | |
|---|---|
| R | Provide at least one 12 ft through traffic lane for use by both directions of travel (Reversing Control). The maximum closure length is 3,000 ft. |
| | No lane and/or shoulder closures allowed. |

REMARKS:

1. The full width of the traveled way must be open for use by public traffic when drilling operations are not actively in progress.
2. Maintain access to:
    a. Albion Ridge Road (PM 43.55)
    b. Albion River North Side Road (PM 43.94)
    c. Albion Little River Road (PM 43.97)
    d. Private driveways.

**Chart no. 2: Lane Closure Restrictions for Designated Holidays**

| Thu | Fri | Sat | Sun | Mon | Tues | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|---|---|---|---|
| xx | **H** xx | | | | | | | | | |
| | xx | **H** xx | | | | | | | | |
| | xx | | **H** xx | xx | | | | | | |
| | xx | | | **H** xx | | | | | | |
| | | | | xx | **H** xx | | | | | |
| | | | | | xx | **H** xx | | | | |
| | | | | | | xx | **H** xx | xx | | |

Legend:

| | |
|---|---|
| | Refer to lane requirement charts |
| xx | The full width of the traveled way must be open for use by traffic. |
| **H** | Designated Holiday |

## GENERAL NOTES:

SEE STANDARD PLAN T9 FOR TABLES.

USE CONE SPACING X FOR TAPER SEGMENT, Y FOR TANGENT SEGMENT OR Z FOR CONFLICT SITUATIONS, AS APPROPRIATE, PER TABLE 1, UNLESS X, Y, OR Z CONE SPACING IS SHOWN ON THIS SHEET.

ALL TEMPORARY WARNING SIGNS SHALL HAVE BLACK LEGEND ON FLUORESCENT ORANGE BACKGROUND.

CALIFORNIA CODES ARE DESIGNATED BY (CA). OTHERWISE, FEDERAL (MUTCD) CODES ARE SHOWN.

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | REVISED No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 01 | x | x | x | | |

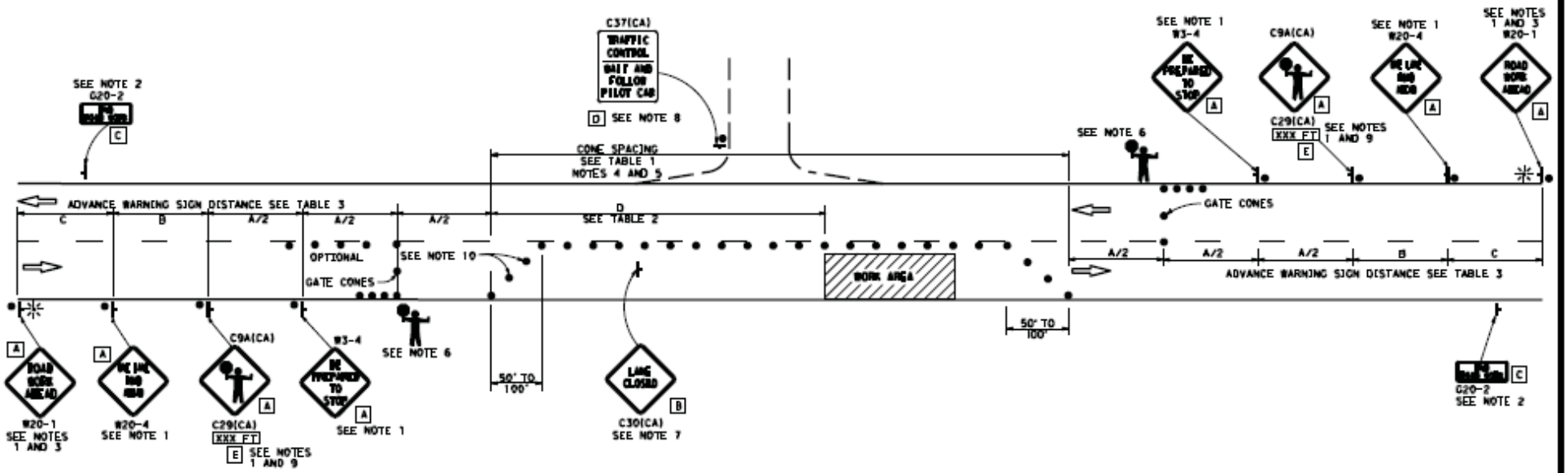
REGISTERED CIVIL ENGINEER — 9-28-16 DATE

SCOTT LEZCHUK No. C79030 exp. 3-31-18 CIVIL STATE OF CALIFORNIA

Month Day, Year
PLANS APPROVAL DATE

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

## TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL




## NOTES:

1. EACH ADVANCE WARNING SIGN IN EACH DIRECTION OF TRAVEL SHALL BE EQUIPPED WITH AT LEAST TWO FLAGS FOR DAYTIME CLOSURE. EACH FLAG SHALL BE AT LEAST 16" X 16" IN SIZE AND SHALL BE ORANGE OR FLUORESCENT RED-ORANGE IN COLOR. FLASHING BEACONS SHALL BE PLACED AT THE LOCATIONS INDICATED FOR LANE CLOSURE DURING HOURS OF DARKNESS.
2. A G20-2 "END ROAD WORK" SIGN, AS APPROPRIATE, SHALL BE PLACED AT THE END OF THE LANE CONTROL UNLESS THE END OF WORK AREA IS OBVIOUS, OR ENDS WITHIN A LARGER PROJECT'S LIMITS.
3. IF THE W20-1 SIGN WOULD FOLLOW WITHIN 2000' OF A STATIONARY W20-1 OR G20-1 "ROAD WORK NEXT _____ MILES", USE A W20-4 SIGN FOR THE FIRST ADVANCE WARNING SIGN.
4. ALL CONES USED FOR LANE CLOSURES DURING THE HOURS OF DARKNESS SHALL BE FITTED WITH RETROREFLECTIVE BANDS (OR SLEEVES).
5. PORTABLE DELINEATORS, PLACED AT ONE-HALF THE SPACING INDICATED FOR TRAFFIC CONES, MAY BE USED INSTEAD OF CONES FOR DAYTIME CLOSURES ONLY.
6. ADDITIONAL ADVANCE FLAGGERS MAY BE REQUIRED. FLAGGER SHOULD STAND IN A CONSPICUOUS PLACE, BE VISIBLE TO APPROACHING TRAFFIC AS WELL AS APPROACHING VEHICLES AFTER THE FIRST VEHICLE HAS STOPPED. DURING THE HOURS OF DARKNESS, THE FLAGGING STATION AND FLAGGER SHALL BE ILLUMINATED AND CLEARLY VISIBLE TO APPROACHING TRAFFIC. THE ILLUMINATION FOOTPRINT OF THE LIGHTING ON THE GROUND SHALL BE AT LEAST 20' IN DIAMETER. PLACE A MINIMUM OF FOUR CONES AT 50' INTERVALS IN ADVANCE OF FLAGGER STATION AS SHOWN.
7. PLACE C30(CA) "LANE CLOSED" SIGN AT 500' TO 1000' INTERVALS THROUGHOUT EXTENDED WORK AREAS. THEY ARE OPTIONAL IF THE WORK AREA IS VISIBLE FROM THE FLAGGER STATION.
8. WHEN A PILOT CAR IS USED, PLACE A C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" SIGN WITH BLACK LEGEND ON WHITE BACKGROUND AT ALL INTERSECTIONS, DRIVEWAYS AND ALLEYS WITHOUT A FLAGGER WITHIN TRAFFIC CONTROL AREA. SIGNS SHALL BE CLEAN AND VISIBLE AT ALL TIMES. WHERE TRAFFIC CAN NOT BE EFFECTIVELY SELF-REGULATED, AT LEAST ONE FLAGGER SHALL BE USED AT EACH INTERSECTION WITHIN TRAFFIC CONTROL AREA.
9. AN OPTIONAL C29(CA) SIGN MAY BE PLACED BELOW THE C9A(CA) SIGN.
10. EITHER TRAFFIC CONES OR BARRICADES SHALL BE PLACED ON THE TAPER. BARRICADES SHALL BE TYPE I, II, OR III.

### SIGN PANEL SIZE (Min)

| | |
|---|---|
| A | 48" x 48" |
| B | 30" x 30" |
| C | 36" x 18" |
| D | 36" x 42" |
| E | 20" x 7" |

### LEGEND

- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- PORTABLE FLASHING BEACON
- FLAGGER

## TRAFFIC HANDLING PLAN

NO SCALE

TH-1

APPROVED FOR TRAFFIC HANDLING WORK ONLY

(6 of 6)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — TRAFFIC OPERATIONS

FUNCTIONAL SUPERVISOR: KEVIN CHURCH
CALCULATED-DESIGNED BY: SCOTT LEZCHUK
CHECKED BY: PAUL HASLEY
REVISED BY
DATE REVISED

BORDER LAST REVISED 7/2/2010 | USERNAME => USER | DGN FILE => sheet1 | RELATIVE BORDER SCALE IS IN INCHES | UNIT 0042 | PROJECT NUMBER & PHASE 0000000000

DATE PLOTTED => 00-00-00
TIME PLOTTED => 0700

**DEPARTMENT OF TRANSPORTATION**
DISTRICT 3
703 B STREET
MARYSVILLE, CA 95901
PHONE (530) 741-4139
FAX (530) 741-4457
TTY 711
www.dot.ca.gov/dist3

*Serious drought.*
*Help save water!*

June 17, 2016

RECEIVED
JUN 20 2016
CALIFORNIA
COASTAL COMMISSION
NORTH COAST DISTRICT

California Coastal Commission
Attn: Tamara Gedik, Coastal Program Analyst
North Coast District Office
1385 8th Street, Suite 130
Arcata, CA 95521

Dear Ms. Gedik:

The California Department of Transportation (Caltrans) proposes to conduct geotechnical drilling at the Albion River Bridge on State Route (SR) 1 between post miles (PM) 43.3 through 44.2 in Mendocino County, California. The purpose of this project is to collect subsurface geotechnical data. This project is needed in order to aid future bridge foundation design for the proposed bridge replacement project. Geotechnical drilling will be performed adjacent and below the bridge. The following items are enclosed for your review:

- Plan to Perform Geotechnical Investigation memo dated February 12, 2015
- Mapping of proposed drill sites

Pursuant to Public Resource Code Section 30601.3, Caltrans is requesting that the project be consolidated and processed by the California Coastal Commission as the project crosses both state and local jurisdictional boundaries.

Please respond that you agree to consolidate this permit. If you have questions or need additional information, please contact me at (530) 741-4139.

Sincerely,

Liza Walker

Liza Walker, Branch Chief
Environmental Management E-M2 Branch

cc: Julia Acker, Planner I, County of Mendocino

Enclosures



**EXHIBIT NO. 14**
**Permit Consolidation Requests**
**CDP No. 1-16-0899**
(Caltrans)

**DEPARTMENT OF TRANSPORTATION**
DISTRICT 3
703 B STREET
MARYSVILLE, CA 95901
PHONE (530) 741-4139
FAX (530) 741-4457
TTY 711
www.dot.ca.gov/dist3

RECEIVED
JUN 20 2016
PLANNING & BUILDING SERV
FORT BRAGG CA

*Serious drought.*
*Help save water!*

June 17, 2016

Mendocino County Department of Planning & Building Services
Attn: Julia Acker
120 West Fir Street
Fort Bragg, CA 95437

Dear Ms. Acker:

The California Department of Transportation (Caltrans) proposes to conduct geotechnical drilling at the Albion River Bridge on State Route (SR) 1 between post miles (PM) 43.3 through 44.2 in Mendocino County, California. The purpose of this project is to collect subsurface geotechnical data. This project is needed in order to aid future bridge foundation design for the proposed bridge replacement project. Geotechnical drilling will be performed adjacent and below the bridge. The following items are enclosed for your review:

- Plan to Perform Geotechnical Investigation memo dated February 12, 2015
- Mapping of proposed drill sites
- Check in the amount of $640

Pursuant to Public Resource Code Section 30601.3, Caltrans is requesting that the project be consolidated and processed by the California Coastal Commission as the project crosses both state and local jurisdictional boundaries.

Please respond that you agree to consolidate this permit. If you have questions or need additional information, please contact me at (530) 741-4139.

Sincerely,

Liza Walker

Liza Walker, Branch Chief
Environmental Management E-M2 Branch

cc: Tamara Gedik, Coastal Program Analyst, California Coastal Commission

Enclosures

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

Steve Dunnicliff, Director
Phone: 707-234-6650
Fax: 707-463-5709
Ft. Bragg Phone: 707-964-5379
Ft. Bragg Fax: 707-961-2427
pbs@co.mendocino.ca.us
www.co.mendocino.ca.us/planning

# MEMORANDUM

DATE: SEPTEMBER 13, 2016

TO: BOARD OF SUPERVISORS

FROM: ROBERT LAPORTE, PLANNING TECHNICIAN II

SUBJECT: CDP_2016-0026 (CALTRANS ALIBION BRIDGE) CONSOLIDATED COASTAL DEVELOPMENT PERMIT

The California Department of Transportation (CalTrans) is requesting a consolidated Coastal Development Permit to authorize geotechnical drilling at the Albion River Bridge of State Route 1. The geotechnical drilling will occur adjacent to the existing Albion River Bridge and on both sides of the Albion River. The project is necessary for bridge foundation design for the proposed bridge replacement project. The project area is located on parcels with split jurisdiction between the County of Mendocino and the California Coastal Commission.

Since 2007, coastal project proponents on sites within the jurisdiction of both the Coastal Commission and a Local Coastal Program can request that permit review be consolidated with the California Coastal Commission. Prior to 2007, an applicant would first garner approval from the County's Local Coastal Program and then apply to the Coastal Commission for their separate approval. Permit consolidation is limited to coastal development permits.

Coastal Development Permit Consolidation may proceed when public participation is not substantially impaired by the consolidation, pursuant to Public Resources Code Section 30601.3, which was added by SB 1843. Public participation will not be substantially impaired, as the Coastal Commission will hold a public hearing.

The proposed consolidation request by Caltrans would allow for streamlined processing of the geotechnical drilling phase of the project in one permit. The alternative would be the processing of separate Coastal Development Permits by the County and the California Coastal Commission, which could impede analysis of the project as a whole.

By authorizing the consolidation, the Board would allow the California Coastal Commission to process a Coastal Development Permit application to conduct geotechnical drilling at the Albion River Bridge on State Route 1. At the request of the applicant, CalTrans, a resolution is requested from the Mendocino County Board of Supervisors, which would consolidate the permit authority with the California Coastal Commission for this specific project only and streamline the permit process.

**Recommendation:** Adopt the Resolution authorizing the California Coastal Commission to process a consolidated Coastal Development Permit for the portions of the geotechnical drilling project located in the jurisdiction of the County of Mendocino.

**Attachments:**

A. CalTrans Consolidation Request, dated June 17, 2016

RESOLUTION NO. 16-115

RESOLUTION OF THE MENDOCINO COUNTY BOARD OF SUPERVISORS AUTHORIZING THE CALIFORNIA COASTAL COMMISION TO PROCESS A CONSOLIDATED COASTAL DEVELOPMENT PERMIT REQUEST FROM THE CALIFORNIA DEPARTMENT OF TRANSPORTATION TO CONDUCT GEOTECHNICAL DRILLING AT THE ALBION RIVER BRIDGE ON STATE ROUTE 1

WHEREAS, Section 30601.3 of the Public Resources Code allows for a consolidated permitting process for projects for which the Coastal Development Permit (CDP) authority is shared by a local government and the California Coastal Commission (Commission), and

WHEREAS, in order for the Commission to process and act upon a consolidated CDP application, Section 30601.3 of the Public Resources Code requires that the applicant, the local government and the Commission consent to the consolidation, provided that public participation is not substantially impaired by the consolidation, and

WHEREAS, the geotechnical drilling at the Albion River Bridge of State Route 1 project is under the coastal development permit authority of both Mendocino County and the Commission and would otherwise require a coastal development permit from both Mendocino County and from the Commission for the portions of the geotechnical drilling located within each jurisdiction, and

WHEREAS, public participation will not be substantially impaired as the Commission will hold a public hearing on the project, allowing interested parties to submit timely comments to the Commission and/or attend said hearing, and which consolidated permit process will allow for this project to be evaluated in its entirety.

NOW, THEREFORE, BE IT RESOLVED, that the Mendocino County Board of Supervisors authorizes the California Coastal Commission to accept and process a consolidated Coastal Development Permit request from the California Department of Transportation to conduct geotechnical drilling at the Albion River Bridge of State Route 1.

This foregoing Resolution introduced by Supervisor McCowen, seconded by Supervisor Brown, and carried this 13th day of September, 2016 by the following vote:

| | |
|---|---|
| AYES: | Supervisors Brown, McCowen, Gjerde, and Hamburg |
| NOES: | None |
| ABSENT: | Supervisor Woodhouse |

WHEREUPON, THE Chair declared said Resolution adopted and SO ORDERED.

ATTEST: CARMEL J. ANGELO
Clerk of the Board

Deputy

*APPROVED AS TO FORM:*

KATHARINE L. ELLIOTT, County Counsel

DAN GJERDE, Chair
Mendocino County Board of Supervisors

I hereby certify that according to the provisions of Government Code Section 25103, delivery of this document has been made.

BY: CARMEL J. ANGELO
Clerk of the Board

Deputy

**Gedik, Tamara@Coastal**

**From:** lorin@stewartspoint.org
**Sent:** Wednesday, January 18, 2017 8:54 AM
**To:** Gedik, Tamara@Coastal
**Subject:** Caltrans Albion Geotech Investigation Project / Mendocino County

Tamara;

The Proposed Project at Albion, Ca. is out of the Aboriginal Territory of the Stewarts Point Rancheria Kashia Band of Pomo Indians.

We do not have any concerns or comments at this time.

Thank You,

Lorin W. Smith, Jr.
Tribal Historic Preservation Officer
1420 Guerneville Road, Suite 1
Santa Rosa CA 95403
Email: lorin@stewartspoint.org

Office: 707-591-0580 x 105
Cell: 707-321-7064

**EXHIBIT NO. 15**

**Correspondence from Tribal Representatives**

CDP No. 1-16-0899 (Caltrans)

## Gedik, Tamara@Coastal

**From:** Javier Silva <jsilva9806@gmail.com>
**Sent:** Wednesday, December 28, 2016 8:57 AM
**To:** Gedik, Tamara@Coastal
**Cc:** svbp.thpo@gmail.com; Sherwood Valley Environmental Director; External, TFitzgerral@DOT; External, MFitzgerral@DOT
**Subject:** Re: Caltrans Albion Geotech Investigation project

Good morning Tamara,

Thank you for contacting us with the situation on the Albion Bridge. Sherwood Valley will be responding to the plans. We will contact you if we have any questions. Again, thank you.

On Tue, Dec 27, 2016 at 12:21 PM, Gedik, Tamara@Coastal <Tamara.Gedik@coastal.ca.gov> wrote:

To whom it may concern:

I was provided your contact information by the Native American Heritage Commission, and/or through previous outreach efforts on other coastal Mendocino County projects.

Our office is currently reviewing coastal development permit (CDP) application materials for the subject project, which is located between post marker (PM) 43.3 and 44.2 at Albion River Bridge (Bridge 10-136), State Route 1, in Mendocino County (APNs 123-050-RW, 123-040-07, and 123-040-10); see attached map. The applicant (California Department of Transportation, aka Caltrans) proposes to conduct geotechnical drilling at 10 sites (note that Caltrans has recently eliminated Site 4 (closest to Albion River) from their current CDP application proposal), as part of Caltrans' evaluation of site conditions for 2 preferred bridge replacement alignment alternatives under consideration for a future project application. The purpose of the proposed project is to provide necessary data regarding subsurface soil, water, and rock conditions to analyze foundation designs for the future bridge project being evaluated by Caltrans.

Geotechnical boring depths range from 50'- 150' feet and some occur in sand, while others occur on relatively flat terrain and on the steep slopes above the Albion River (with a couple sites potentially accessible only by helicopter delivery of equipment). The project also includes seismic refraction surveys that will be conducted along 5 transect lines and involve a sound detonation at the upslope end of each line that will generate a sound of up to 106 dB (within 10 feet of source). The project will also involve removing a large number of eucalyptus trees, and some temporary (vegetation trimming, sand movement) and permanent (vegetation removal) activities within the project area. A 10-12-foot vertical notch must also be cut into the hillside both north and south of the bridge to accommodate drilling equipment.

I have been receiving additional information from Caltrans the past few weeks in response to our request for additional information needed to complete their CDP application. I've attached some of this documentation, particularly as it relates to Caltrans' consultation and site analysis efforts to date pertaining to cultural, archaeological, and historical resources in the project area. I understand that Caltrans staff have coordinated thus far with Sherwood Valley Rancheria and Manchester-Point Arena Rancheria representatives (pg. 23 of attached Late Discovery Plan), and that additional, Phase II investigations will be forthcoming at the site. Attached please find the following:

1. Late Discovery Plan dated August 2016 (confidential information has been redacted);

2. NES (Natural Environment Study) addendum: pgs. 1-4 describe the geoboring sites, pgs. 5-6 describe the bio monitoring, pgs. 9-11 specify the boring and seismic refraction locations, pgs 13-24 contain Caltran's proposed revegetation plan, pgs. 27-30 depict locations of veg trimming vs. removal, and cut/fill areas, pgs. 32-35 contain photos of representative vegetation communities.

Our staff are still reviewing these and other document submittals, but encourage any feedback/comments you have to offer. **Our goal is to schedule this project for consideration and action at the Coastal Commission hearing held February 8-10, 2017 in Newport Beach.** Therefore, ***we would appreciate receiving any comments you have no later than January 26, 2017.***

You can also view other documents Caltrans has provided for our review on our ftp site using the following access instructions:

-Go to: http://ftp.coastal.ca.gov

-Click on "General Public"

-Log in: user name – public; password – ocean03

-File: "Caltrans" then "Albion River Bridge"

Please also let me know if there are any additional tribal contacts not included in this email that you believe would be interested in receiving this information. If you have any questions, feel free to contact me at the phone number listed below, at extension 4.

Thank you,

*~Tamara L. Gedik*
Coastal Program Analyst
California Coastal Commission
**North Coast District Office**

1385 8th Street, Ste. 130 • Arcata, CA 95521

**E:** Tamara.Gedik@coastal.ca.gov
**P: 707.826.8950** • **Fax:** 707.826.8960
*~To purchase a whale tail license plate or access Coastal Commission information, go to www.coastal.ca.gov*

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--
Javier Silva
916-515-7078
jsilva9806@gmail.com

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**CALIFORNIA STATE LANDS COMMISSION**
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

**JENNIFER LUCCHESI,** *Executive Officer*
(916) 574-1800 FAX (916) 574-1810
*California Relay Service From TDD Phone* **1-800-735-2929**
*from Voice Phone* **1-800-735-2922**

***Contact Phone:*** **(916) 574-2320**
***Contact FAX:*** **(916) 574-1925**

*Established in 1938*

April 17, 2018

File Ref: PRC 342.9

**EXHIBIT NO. 16**

**State and Federal Agency Correspondence**

CDP No. 1-16-0899 (Caltrans)

Sent via Electronic Mail and U.S. Postal Service
frank.demling@dot.ca.gov

Frank Demling, PLS
Project Manager
Caltrans District 1 Project Management
P.O. Box 3700
Eureka, CA 95502-3700

Subject: Proposed Early Geotechnical Investigation Project on Assessor Parcel Number's 123-040-07, adjacent to the Albion River at the Albion River Bridge, Mendocino County

Dear Mr. Demling:

This letter is in response to your request for a determination by the California State Lands Commission (Commission) as to whether a lease is required for the above mentioned proposed project.

We understand the California Department of Transportation is proposing to conduct an early geotechnical investigation on Assessor's Parcel Number 123-040-07 adjacent to the Albion River in preparation for the bridge rehabilitation/replacement project. The investigation will include vertical boring and drilling at various sites.

The Albion River, at the location of the Albion River bridge is, State-owned sovereign land and the bridge is currently authorized under Permit No. PRC 342.9 issued to the California Department of Transportation. The extent of the State's sovereign interest, at the project location, extends to the ordinary high-water mark of the Albion River and adjacent Pacific Ocean. The proposed investigation will take place on the upland properties adjacent to the Albion River and the Pacific Ocean. Based upon the information provided, including the attached site maps, and a preliminary review of Commission records, Commission staff has determined that the proposed investigation will not require a lease from the Commission.

The Commission has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The Commission also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions. (Public Resources Codes, §§6301, 6306.) All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the Common Law Public Trust.

As general background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all people of the State for statewide Public Trust purposes, which include but are not limited to waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. On tidal waterways, the State's sovereign fee ownership extends landward to the ordinary high water mark, which is generally shown by the mean high tide line, except for areas of fill or artificial accretion or where the boundary has been fixed by agreement or a court decision. On navigable non-tidal waterways, including lakes, the State holds fee ownership of the bed of the waterway landward to the ordinary low water mark and a Public Trust easement landward to the ordinary high-water mark, except where the boundary has been fixed by agreement or a court decision. Such boundaries may not be readily apparent from present day site inspections.

These comments are made without prejudice to any future assertion of State ownership or public rights, should circumstances change, or should additional information become available. These comments are not intended, nor should they be construed as a waiver or limitation of any right, title, or interest of the State of California in any lands under its jurisdiction.

If you have any questions, please contact Marlene Schroeder, Public Land Management Specialist at (916) 574-2320 or by email at Marlene.Schroeder@slc.ca.gov.

Sincerely,

Grace M. Kato

Grace Kato, Assistant Chief
Land Management Division

Enclosures

c: Marlene Schroeder
Land Management Division
CSLC

**From:** Goodman, Patricia K SPN
**To:** Sundeen, Hilary@DOT
**Subject:** RE: Albion Geotechnical Investigation
**Date:** Friday, May 20, 2016 1:11:17 PM

---

Hello Hilary,

I wanted to get this out to you to finalize what I told you on the phone on May 9th.

I have reviewed the figures that you sent regarding the Albion River project, with regard as to whether a NWP 9 was needed. After looking at your figure, checking historic aerial photography and other sources, I will not be issuing a permit as no permit is needed as the proposed area is outside of US Army Corps jurisdiction. I will be issuing a preliminary jurisdictional determination, and providing a map depicting the location of your project and of the lines marking the limit of mean high tidal waters as well as the high tide line, which both demonstrate that the project is outside of USACE jurisdiction. I will also set up a USACE project number, which I will include in my correspondence, that you can reference in any other correspondence.

Thanks,

Patty

-----Original Message-----
From: Sundeen, Hilary@DOT [mailto:Hilary.Sundeen@dot.ca.gov]
Sent: Thursday, March 17, 2016 12:44 PM
To: Goodman, Patricia K SPN <Patricia.K.Goodman@usace.army.mil>
Subject: [EXTERNAL] Albion Geotechnical Investigation

Hi Patty,

Here's the figure that shows the project distance to the Albion River. My question is will a NWP 6 be necessary for this project, I don't believe it is, just want to get confirmation with you. There are no impacts to wetlands or Waters of the US/State.

Thank you,

Hilary

Hilary Sundeen

Associate Environmental Planner (Biologist)

Caltrans, District 1

707-441-3983

RECEIVED
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CALIFORNIA
COASTAL COMMISSION
NORTH COAST DISTRICT

Hi Hilary,
The last information you sent was helpful. Since the work will not be performed in water, will not include pile driving, and is not expected to disturb marine mammal haul-out areas, we would not expect the geotechnical investigation project to affect marine mammals. This information is specific to the geotechnical investigation project. Different guidance may be applicable for other actions within the vicinity, especially those likely to have in-water construction or hydroacoustic effects arising from in-water or near-water work.
Thank you for your coordination.
Regards,
Darren

On Mon, Aug 24, 2015 at 3:10 PM, Sundeen, Hilary@DOT <Hilary.Sundeen@dot.ca.gov> wrote:

Hi Darren,

Just seeing if I can get an email from you or Angela stating that we don't need to initiate consultation for marine mammals for the Albion Bridge geotech.

Thanks,

Hilary

**From:** Darren Howe - NOAA Federal [mailto:darren.howe@noaa.gov]
**Sent:** Wednesday, August 19, 2015 1:00 PM
**To:** Sundeen, Hilary@DOT
**Subject:** Re: Albion Geotechnical Investigation - Marine Mammals

Perfect. Thanks, Hilary. I'll forward these on and let you know what I learn.

On Wed, Aug 19, 2015 at 12:56 PM, Sundeen, Hilary@DOT <Hilary.Sundeen@dot.ca.gov> wrote:

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COASTAL COMMISSION
NORTH COAST DISTRICT

Hi Darrin,

Yes I do. Here is a close up of both the north and south sections of the project area. The red circles are where the drill sites are located.

Thanks,

Hilary

**Hilary Sundeen**

*Associate Environmental Planner (Biologist)*

*California Dept. of Transportation*

*North Region Environmental*

*707-441-3983*

**From:** Darren Howe - NOAA Federal [mailto:darren.howe@noaa.gov]
**Sent:** Wednesday, August 19, 2015 12:37 PM
**To:** Sundeen, Hilary@DOT
**Subject:** Re: Albion Geotechnical Investigation - Marine Mammals

Hiu hilary,

This is very helpful. I suspect that the areas we'd be most interested in will be the drill sites along the north side of the river. Do you have more information on where and how many these will be?

On Wed, Aug 19, 2015 at 11:39 AM, Sundeen, Hilary@DOT <Hilary.Sundeen@dot.ca.gov> wrote:

Hi Darrin,

Thanks so much for getting back to me today. As we've discussed I'm in the process of conducting the environmental review for the geotechnical investigation for this projects. In concern of marine mammals, I'm hoping to get an understanding of the potential affects that the geotechnical drilling may have on marine mammals near the project site. I've included a PDF of the project area to forward to Monica DeAngelis. Below is a brief project description:

- The California Department of Transportation is proposing to conduct geotechnical drillings in order to provide data for the Albion River Bridge Project. The project is located on State Route (SR) 1 in Mendocino County, between Post Mile (PM) 43.3 and 44.2, and can be found on the Albion 7.5-minute U. S. Geological Survey (USGS) quadrangle, Township 16N, Range 17W, Sections 21 and 28.

- There will be 11 drill sites for this investigation, six located to the south of the Albion River and five located to the north of the river, the entire project area (including site access) is located above the MHHT line.

- Access to survey locations may be by motor vehicle or by foot.

- All work is conducted during daylight hours from Monday through Friday. Exceptions occur during stated emergencies only.

- Platforms in steep terrain may be delivered via crane or helicopter.

- The investigation is proposed to begin next summer September 1st through October 15th.

Thanks again for taking the time to review this information. Let me know if there is anything else you need to make a determination.

Thanks,

Hilary

**OFFICE OF HISTORIC PRESERVATION**
**DEPARTMENT OF PARKS AND RECREATION**
1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov

December 9, 2015

Reply in Reference To: FHWA_2015_1113_001

Kelly Hobbs, Chief
Department of Transportation
Division of Environmental Analysis, MS27
Cultural Studies Office
1120 N Street
Sacramento, CA 94274-0001

**Re:** Historic Property Survey Report for a Proposed Geotechnical Investigation at the Albion River Bridge, Mendocino County, California

Dear Mr. Hobbs:

Thank you for your November 9, 2015 letter in which the California Department of Transportation (Caltrans) is initiating consultation with the State Historic Preservation Officer (SHPO) on the above referenced undertaking in accordance with the January 2014 *First Amended Programmatic Agreement (PA) among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Office, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the to the Administration of the Federal-Aid Highway Program in California*. Caltrans is requesting SHPO concurrence of a no adverse effect without standard conditions as a result of this undertaking per Stipulation X.B.2 of the PA and 36 CFR §800.5(c).

Caltrans, District 1/North Region proposes to conduct a geotechnical field investigation at the Albion River Bridge along State Route 1 between the communities of Mendocino and Point Arena in Mendocino County. A Historic Property Survey Report (HPSR) was submitted with your letter. Consultation and identification efforts revealed two properties within the APE: CA-MEN-3645, a prehistoric low density flaked stone deposit and CA-MEN-3652H, historic-era site representing the remains of a 19th and 20th century lumber mill.

Based on Caltrans' level of effort, they have determined a finding of no adverse effect without standard conditions for the following reasons:

1. In accordance with Stipulation VIII.C.4 of the PA, Caltrans will consider that CA-MEN-3645 and CA-MEN-3652H are eligible for listing on the National Register of Historic Places (NRHP) for the purposes of this undertaking only;
2. Caltrans has applied the criteria of adverse effect pursuant to 36 CFR 800.5(a)(1) and has determined through subsurface investigations that project related affects to portions of CA-MEN-3645 located within the area of direct impact (ADI) would not diminish the characteristics that would make the overall resource eligible for listing in the NRHP;

3. The portions of CA-MEN-3645 which may contain intact archaeological deposits located outside of the ADI will be protected through the designation of environmentally sensitive areas (ESA);
4. The portions of CA-MEN-3652H located within the ADI will be monitored by a historical archaeologist during construction and areas of the site located outside of the ADI will be protected in place through the implementation of an ESA;
5. An ESA Action Plan has been developed; and
6. Caltrans will develop a post-review discovery plan in the event subsurface deposits are encountered during construction within CA-MEN-3652H. Caltrans will submit this plan at a later date for SHPO review and comment prior to construction.

Based on my review of your letter and supporting documentation, I concur with your finding of no adverse effect without standard conditions as a result of this undertaking.

Thank you for seeking my comments and considering historic properties as part of your undertaking. Please be advised that under certain circumstances, such as post-review discoveries or a change in the undertaking description, you may have future responsibilities for this undertaking under the PA and 36 CFR Part 800. If you require further information, please contact Alicia Perez of my staff at 916-445-7020 or at Alicia.Perez@parks.ca.gov.

Sincerely,

Julianne Polanco
State Historic Preservation Officer

State of California
**DEPARTMENT OF TRANSPORTATION**

**EXHIBIT NO. 17**

**Bat and Bird Survey Results**

CDP No. 1-16-0899 (Caltrans)

California State Transportation Agency

# Memorandum

*Making Conservation a California Way of Life.*

To: Liza Walker
Sr. Environmental Planner

Date: ~~June 25, 2018~~
amended August 16, 2018

File: Albion Geotechnical
01-MEN-1-PM 43.3/44.2
EA 01-40110
EFIS 0100000154

From: **Department of Transportation – District 1**
Hilary Sundeen
Associate Environmental Planner/NS

Subject: **Biological Memo - Bat and Bird Survey Results for Albion Bridge Geotechnical Investigation**

Field reviews were conducted on August 29, 2017 and June 6, 2018 in all areas of the geotechnical biological study (BSA), as defined in the Natural Environment Study (NES) for the project (Caltrans 2015) to determine presence of bat and bird species in the geotechnical project area. The surveys included field inspections for roosting bats, maternity colonies, and bird observations. Surveys for bat and bird species was the result of an information request by the California Coastal Commission (CCC), for planning purposes and to document what species are likely to occur in sites where drilling activities for the geotechnical investigation are proposed. This revised Biological Memorandum, originally submitted to the CCC June 25, 2018 was in response to the need for clarification of methodology used when performing the surveys, as deemed necessary by the CCC and California Department of Fish and Wildlife. In addition, results of this survey are intended to provide guidance for preconstruction survey efforts in the future.

Although this survey was deemed necessary by the CCC, it by no means indicates presence/absence of bats or birds during the proposed construction activities (including the geotechnical investigation). Only surveys that are conducted during an appropriately timed window, prior to construction can determine if bat or bird species may be impacted. Additional studies will be conducted, as appropriate for the bridge replacement project.

## Bat Survey

Twenty-five species of bats occur in California many of which are considered Species of Special Concern (SSC) by CDFW. Section 15380 of the CEQA Guidelines indicates that SSC should be included in an analysis of project impacts. California Fish and Game Code section 4150 provides further protection to bats

(non-game mammals) from take or possession. Disturbances by humans, especially in hibernacula and maternity roosts, are a serious threat to most species.

## Means and methods

Bat surveys conducted around the bridge structure and eucalyptus grove included a presence/absence survey and assessment of potential roost habitat. For the bridge, methodology included a thorough evaluation of the entire structure prior to sunset (4:45-6:30 pm) with aid of binoculars to determine bat presence. In addition to looking for bats, sign for bats was also evaluated including urine staining, deposition of guano and listening for vocalizations. The survey for bat species within the eucalyptus grove included a stand search with aid of binoculars to review trees proposed for removal within the geotechnical BSA.

## Results

Bat surveys were conducted on August 29, 2017 and June 6, 2018 to determine if bats were present in the bridge and surrounding eucalyptus grove by Caltrans biologists Coady Reynolds and Hilary Sundeen. The bridge and adjacent forest was surveyed for day time roosts which includes maternity roosts and night roosting (foraging) bats. Day roost sites function to provide enclosed, and cryptic habitat, and in the case of maternity roosts, a site must also provide a thermally stable environment for raising young. Night roosts are sites where animals congregate to rest and digest their food between foraging bouts, these sites can be less protected than maternity roosts, allowing feeding bats easy entry and exit near sources where prey may be abundant.

With aid of binoculars the underside of the bridge was inspected by walking underneath the bridge and looking from vantage points including both abutments and along the hillside adjacent to the bridge for gaps suitable for use as day or night roosts, and the bridge exterior was inspected in the same manner for sign of night roosts. In addition, a stand search was conducted in the eucalyptus grove. This included reviewing all trees that occur within the BSA defined in the NES for the project. Observations made during the site visit include the following:

- During a bat survey conducted on August 29, 2017 for the bridge, no bat or bat sign (guano, urine staining and vocalizations) were observed. It is unlikely that bats would utilize the bridge for roosting (day and night) due to the bridges existence immediately adjacent to the ocean, where wind, rain and fog create unstable conditions for bat species that require a sheltered environment protected from the elements.

- Although limited due to the lack of fresh water, which limits prey availability, and its existence on the immediate coastline where wind, rain and fog create unstable conditions, foraging habitat and potential night roosting habitat does have the potential to be present in the eucalyptus grove. While

expected to roost primarily in well-developed wooded riparian areas with greater species diversity near a fresh water source, tree roosting bats such as the Western red bat (*Lasiurus blossevillii*) may roost in tree foliage virtually anywhere in forest habitats. On June 6, 2018 a stand search was conducted for sign individual bats or sign (guano, urine staining and vocalizations) that bat species are present and occupying the eucalyptus grove. No individual bats or bat sign were observed during the stand search.

Due to factors described above, bats are unlikely to utilize the bridge for either day or night roosting. In addition, no bats were observed within forest habitat. Because of these factors, impacts to bats are not anticipated during activities associated with the geotechnical investigation.

**Best Management Practices**

Due to the sensitivity of the species and habitats in the geotechnical BSA, a preconstruction sweep, no more than 5 days prior to the start of construction activities, will be conducted to ensure that sensitive species will not be impacted by geotechnical work. This preconstruction sweep will include a bat survey.

**Bird Survey**

Numerous native bird species have the potential to nest within all of the habitats present in the BSA including shrubland, forest or grassland habitat. Nesting activities for most birds is February 1st to September 15th. If project activities occur within the nesting season there is a potential for impacts to nesting birds, including migratory birds subject to the Migratory Bird Treaty Act (MBTA) and native birds protected under California Fish and Game Code (CFGC) Section 3503. Use of excavation equipment to remove vegetation within the project area during the nesting season could cause nest abandonment and/or loss of eggs or young. Removal of an active nest or eggs would conflict with the MBTA and CFGC.

Means and methods

A focused early morning bird survey was conducted on June 6, 2018 at 07:15-9:30 by Jeff Wright and Hilary Sundeen to determine species present in the geotechnical BSA The survey was conducted by writing down all species observed including any bird songs heard or individual bird seen, with aid of binoculars in the geotechnical BSA. Additional information on nesting behavior observed was also recorded. See Appendix A for a list of species observed during the bird survey.

The majority of bird species detected occurred in sites where scrub habitat dominated the landscape. This includes areas along the south bank where dense shrubs provide ample cover for nesting species as well as a multitude of flowering plants that provide nectar, seeds, and insect foods needed by breeding birds. Where eucalyptus trees exist in the project area, along the bluff and continuing east across the highway to areas

north of the campground, native plant species are almost entirely absent. This lack of native species diversity is due to the acidity of eucalyptus leaves resulting in a monotypic stand that suppresses native vegetation, thus providing low quality habitat and limited diversity among bird species. Although this habitat could provide roosting and nesting habitat for a variety of raptors, and other opportunistic species such as Common Raven (*Corvus corax*) and California Scrub Jay (*Aphelocoma californica*), adequate nesting habitat for most bird species is limited.

Several species of songbirds were believed to be nesting in shrub dominated habitats in the south bank, including Song-Sparrow (*Melospiza melodia*), White-Crowned Sparrow (*Zonotrichia leucophrys*) House Finch (*Carpodacus mexicanus*) and House Sparrow (*Passer domesticus*). Several species were noted in the forest habitat including Song-Sparrows, Blacked-headed Grosbeaks (*Pheucticus melanocephalus),* American Robin (*Turdus migratorius*) and Pacific-slope Flycatchers (*Empidonax difficilis*), although no nesting or rookery was observed in the eucalyptus grove. Because the project will be completed outside of the nesting season for most birds, no impacts to birds are anticipated.

**Best Management Practices**

Due to the sensitivity of the species and habitats in the geotechnical BSA, a preconstruction sweep, no more than 5 days prior to the start of construction activities, will be conducted to ensure that sensitive species will not be impacted by geotechnical work. This preconstruction sweep will include a review of bird species present and any nesting or rookery activity.

## Refrences

Caltrans (August 2015). Albion Bridge Project – Geotechnical Investigations. Natural Environment Study.

# **Appendix A** Bird Species List

| Common Name | *Scientific Name* | Observations noted |
|---|---|---|
| Acorn woodpecker | *Melanerpes formicivorus* | |
| American crow | *Corvus brachyrhynchos* | |
| American goldfinch | *Carduelis tristis* | |
| American Robin | *Turdus migratorius* | |
| Anna's Hummingbird | *Calypte anna* | |
| Band-tailed pigeon | *Columbia fasciata* | |
| Barn swallow | *Hirundo rustica* | |
| Belted kingfisher | *Ceryle alcyon* | |
| Black-headed Grosbeak | *Pheucticus melanocephalus* | |
| Brewer's Blackbird | *Euphagus cyanocephalus* | |
| Brown-headed Cowbird | *Molothrus ater* | |
| California Scub-jay | *Aphelocoma californica* | |
| Canada Goose | *Branta canadensis* | |
| Chestnut-backed chickadee | *Poecile rufescens* | |
| Common Merganser | *Mergus merganser* | |
| Common Raven | *Corvus corax* | |
| Dark-Eyed Junco | *Junco hyemalis* | |
| Double-crested cormorant | *Phalacrocorax auritus* | |
| Eurasian collared dove | *Streptopelia decaocto* | |
| European starling | *Sturnus vulgaris* | |
| Great blue heron | *Ardea herodias* | |
| Great egret | *Ardea alba* | |
| Gull sp. | *Larus* sp. | |
| Hose Finch | *Carpodacus mexicanus* | Nesting activity observed |
| House sparrow | *Passer domesticus* | Nesting activity observed |
| Mourning dove | *Zenaida macroura* | |
| Northern rough-winged swallow | *Stelgidopteryx serripennis* | |
| Orange-crowned warbler | *Vermivora cleata* | |
| Osprey | *Pandion haliaetus* | |
| Pacific wren | *Troglodytes pacificus* | |
| Pacific-slope flycatcher | *Empidonax difficilis* | |
| Red-tailed hawk | *Buteo jamaicensis* | |
| Rock Dove (Pigeon) | *Columba livia* | |
| Selasphorous sp. (likely Allen's) | *Selasphorous* sp. | |
| Song Sparrow | *Melospiza melodia* | Nesting activity observed |
| Spotted sandpiper | *Actitis macularia* | |
| Tree swallow | *Tachycineta bicolor* | |
| Turkey Vulture | *Cethartes aura* | |
| Violet-green swallow | *Tachycineata thalassina* | |
| Western gull | *Larus occidentalis* | |
| Western Tanager | *Piranga ludoviciana* | |
| White-crowned sparrow | *Zonotrichia leucophrys* | Nesting activity observed |
| Wilson's Warbler | *Wilsonia pusilla* | |
| Wrentit | *Chamaea fasciata* | |

**CALIFORNIA COASTAL COMMISSION**
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105- 2219
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FAX ( 415) 904- 5400
TDD (415) 597-5885

**EXHIBIT NO. 18**

**Staff Ecologist Memo**

CDP No. 1-16-0899 (Caltrans)

# MEMORANDUM

TO: Tamara Gedik, Coastal Analyst

FROM: Laurie Koteen, Ph.D., Ecologist

RE: Albion River Bridge Geotechnical Survey

DATE: August 2, 2018

---

I traveled to visit the Albion River Bridge on three occasions. The first took place on June 2, 2016. I conducted a second visit on August 16, 2017, and a third on January 17th of this year. In 2016, I walked along the southerly approach of the Albion Bridge and over the adjacent ridge to examine drill sites 1 and 2, as they appear in the "Revegetation Plan for the Albion River Bridge Geotechnical Investigation", Appendix A, Figure 3. At both drill sites 1 and 2, I observed primarily weedy, non-native grasses and forbs with scattered clumps of Coyote Brush Scrub. Site dominants included Velvet grass, *Holcus lanatus,* rattlesnake grass, *Briza maxima,* and English ivy, *Hedera helix* among a broader mix of non-natives and scattered native shrubs, (e.g. Coyote brush, *Baccharis pilularis,* coffee berry, *Frangula californica, etc.).* Vegetation of the Coastal silk tassle scrub alliance, which is classified as environmentally sensitive habitat, or ESHA, was visible from drill site 2, however, this habitat type did not occur in the locations where vegetation will be removed in order to locate drill pads for the geotechnical survey.

During both my visits to the Albion Bridge in 2016 and this January, I traversed the area beneath the bridge and walked along the dunes that front the bridge along the shore that are stabilized by ice plant coverage. From the edge of the dunes, where the bridge footings start to climb the hill to the north, I was able to observe all the drill sites along the south-facing bluff face. This includes drill sites 5, 6, and 7, as they are labeled in the "Revegetation Plan for the Albion River Bridge Geotechnical Investigation", Appendix A, Figure 2. Each time I viewed this area, I was able to confirm that no special status species or vegetation were present. I observed primarily coastal bramble vegetation at drill site 5, of the Rubus shrubland alliance at these sites with thimbleberry, *Rubus parviflorus* and California blackberry, *Rubus ursinus,* as co-dominants. At drill sites 6 and 7, dominant species include Blue gum, *Eucalyptus globulus*, poison oak, *Toxicodendron diversilobum,* and Scotch broom, *Cytisus scoparius* in the understory. These vegetation communities do not constitute ESHA.

Lastly, I was able to observe the larger area of vegetation that will be removed at drill site 8, as identified in the "Revegetation Plan for the Albion River Bridge Geotechnical Investigation", Appendix A,

Figure 2, by parking along the northerly approach of the bridge and through observation of Google Earth images. This area is entirely dominated by an overstory of *Eucalyptus globulus*. Scotch broom and California blackberry make up most of the understory species at this location. Wildlife surveys reveal that this area does not support raptor species, which sometimes nest in Eucalyptus stands at other California locations. Therefore, drill site 8 does not constitute ESHA.

**EXHIBIT NO. 19**

**Example of Drill Rig and Platform**

**CDP No. 1-16-0899**

(Caltrans)

**CALIFORNIA COASTAL COMMISSION**
45 FREMONT, SUITE 2000
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**EXHIBIT NO. 20**

**Staff Geologist and Engineer Memo**

CDP No. 1-16-0899 (Caltrans)

August 23, 2018

**GEOTECHNICAL REVIEW MEMORANDUM**

To: Tamara Gedik, Coastal Program Analyst

From: Joseph Street, Geologist
Lesley Ewing, Senior Coastal Engineer

Re: Albion River Bridge Geotechnical Investigation (CDP No. 1-16-0899, Caltrans)

In connection with the above-referenced CDP application, we have reviewed the following documents directly related to the project:

1) California Department of Transportation, 2018a, "Updated Project Description – Albion Geotechnical Drilling", memorandum and attached plans, dated August 22, 2018.
2) California Department of Transportation, 2018b, "Revised Geotechnical Investigation Plan (GIP)", memorandum signed by W. Bertucci, Associate Engineering Geologist, and J. Huang, Materials and Research Engineer, dated August 22, 2018.
3) California Department of Transportation, 2018c "Revegetation Plan – Albion Bridge Geotechnical Investigation", dated August 10, 2018.
4) California Department of Transportation, 2018d, "Updated Project Description – Albion Geotechnical Drilling", memorandum dated July 18, 2018.
5) California Department of Transportation, 2014, "Revised Preliminary Foundation Report (PFR)", memorandum signed by W. Bertucci, Associate Engineering Geologist, J. Huang, Materials and Research Engineer (PE C055671), and S. Moon, Senior Transportation Engineer (PE C63244), dated February 21, 2014.
6) Crux Subsurface, Inc., 2018a, "Specialty Drilling Experience", summary of past projects provided to Commission staff on August 21, 2018.
7) Crux Subsurface, Inc., 2018b, "Albion Bridge Slope Drill Setup", description of drill setup and operations procedures, provided to Commission staff on August 21, 2018.

We also reviewed the following documents which provide additional local geologic information and context:

8) Fuller, M.S., Curless, J.M. and Purcell, M.G., 2004a, "Geologic and Geomorphic Features Related to Landsliding, Albion River Watershed, Mendocino County, California", California Geological Survey, Watershed Mapping Series, Map Set 8, Plate 1.
9) Fuller, M.S., Curless, J.M., Custis, K. and Purcell, M.G., 2004b, "Relative Landslide Potential with Geologic and Geomorphic Features, Albion River Watershed, Mendocino

County, California", California Geological Survey, Watershed Mapping Series, Map Set 8, Plate 2.

In addition, we have reviewed the site plans and cross-sections prepared by Caltrans. The purpose of this memorandum is to address the question of slope stability at the subject sites, and the potential for project activities to destabilize the bluff slopes or result in other adverse geologic impacts.

***Proposed Project***

Caltrans proposes to conduct geotechnical investigations in the vicinity of the existing Highway 1 Albion River Bridge in order to inform the evaluation of alternatives for the future rehabilitation or replacement of the bridge. Caltrans has documented on-going deterioration of existing bridge components and a number of structural deficiencies that must be addressed, either through bridge retrofit or replacement, in order to ensure the on-going safety and functionality of the highway bridge at this site. The proposed geotechnical investigations, including borehole drilling, groundwater and slope monitoring, and a seismic refraction survey, would provide the three-dimensional geological and structural information necessary to evaluate bridge foundation and alignment options for the several retrofit and replacement alternatives.

On numerous previous occasions the Commission has authorized geotechnical investigations and borehole drilling, some authorizations have been through coastal development permits (CDPs), and some, where coastal resources would not be affected, through CDP waivers. In doing so, the Commission has recognized that the collection of subsurface geotechnical information is a necessary preliminary step in the planning and design of coastal development. More specifically, the site-specific, detailed information that is gathered in geotechnical investigations is often critical for determining whether new development will conform to the policies of Section 30253 of the Coastal Act, which states in part:

> *New development shall do all of the following:*
>
> *(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
>
> *(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

In the present case, a geotechnical investigation is needed to ensure that a new or rehabilitated bridge is designed and constructed in a way that minimizes the geologic risk to life and property, both under normal loading and during an extreme event, such as an earthquake, tsunami, or flood.

The proposed geotechnical investigation would involve borehole drilling at sites located at the top of the Albion River bluff (i.e., Drill Sites 1, 8) or on the face of the bluff slope (i.e., Drill Sites 2, 6, 7, 8), on either side of the river. Preparation of the bluff top drill sites and associated staging areas would involve a moderate amount of grading in order to create level pad areas, and some vegetation removal and trimming, including the removal of eucalyptus trees on the southern bluff near Drill Sites 7 and 8. Drilling at the bluff-top sites would be accomplished by a conventional rubber-tired truck mounted drill rig. Borehole drilling at sites located on the bluff face would be carried out using

drill rigs mounted on steel platforms, which would be emplaced on the slope using either a crane or a helicopter. Boring depths on the bluffs would range from 70 to 125 feet.

***Site Geology***

Both the northern bluff (south facing slope) and southern bluff (northwest facing slope) are steeply sloping (≥1:1, horizontal: vertical), approximately 150 feet in height, and appear to be composed of poorly-consolidated Pleistocene marine and nonmarine terrace deposits (predominantly sand) and/or Franciscan complex bedrock. Generally, Franciscan bedrock in the area consists of a mélange of sandstone, conglomerate, shale, greenstone, chert, and limestone, and is highly variable in terms of structure and degree of cementation. Caltrans (2014) reports that surficial deposits near the northern bluff (south-facing) sites consist of marine terrace materials (oxidized sand, gravel, cobbles, colluvium, clay layers at depth) and may include landslide deposits. Records dating from the original construction of the bridge indicate the presence of a landslide rupture surface on the slope below the northern abutment. The west-facing slope east of the north abutment appears to be underlain by a 200-ft wide debris slide. Exposed bedrock in this area includes soft, bedded, steeply-dipping, weathered siltstone, sandstone and claystone, with abundant fracturing and slippage along bedding planes. Outside the slide area, surficial materials consist of moderately weathered, massive sandstone. Bedrock underlying the southern bluff (north facing) appears to consist largely of massive, moderately-hard sandstone (Caltrans 2014). Caltrans (2018d) notes "obvious shallow (approximately +/- 5 feet) earth movement in the form of mass wasting (particle by particle erosion), slumping and debris flows" in the vicinity of Drill Sites 7 and 8. More detailed sub-surface information at the project sites is not currently available; as noted above, the collection of this information is the primary objective of the proposed project.

***Slope Stability and Erosion***

The available information indicates that the Albion River bluffs on either side of the bridge are subject to the mass wasting events (e.g., slumping, debris flows, landslides) that are characteristic of steep slopes comprised of weak substrates, and which are common throughout the coastal areas of Mendocino County. Fuller et al. (2004a, b) identify the steep slopes on either side of both the north and south abutments as having moderate to very high landslide potential. Thus, there is little doubt that the proposed geotechnical investigation would occur in areas of high geologic hazard. It is precisely these hazards that make the investigation necessary, in order to provide the site-specific information needed for evaluating bridge rehabilitation or replacement options in challenging terrain.

In our opinion, Caltrans has proposed reasonable measures for minimizing geologic hazards during the proposed project, and for assuring stability and limiting erosion to the extent possible. The majority of large failures and landslides on steep slopes in California occur during the winter wet season (often during major storms), when water-saturated soils (a) add greatly to the loading of the slope, and (b) reduce the strength and cohesion of slope materials. Caltrans would avoid the period of greatest landslide risk by carrying out the borehole drilling in the fall season, prior to substantial rainfall and when slope conditions are at their driest. Caltrans has also indicated that no significant volume of liquids (e.g., drilling fluids) would be discharged to the slope, avoiding the potential to create localized zones of saturation.

In addition, Caltrans is not proposing substantial grading, the use of vehicles or heavy construction equipment, or a conventional drilling rig on the bluff face; instead, a "portable" drilling platform, designed for use on steep and unstable slopes, would be placed directly on the slope. This proposed

approach would minimize the loading on the slope as compared to the use of conventional equipment. Crux Subsurface (2018b) has estimated that the total weight of the drill rig, platform(s), equipment, and workers would be up to 11,000 lbs, supported on multiple footings, over a footprint of up to 600 square feet. This excess loading would be similar to distributing an additional 3 inch thick layer of marine terrace material[1] over the same footprint, and is very small in comparison to the total load of the slope. Further, the use of the drilling platforms would limit grading for equipment access, ground disturbance and vegetation removal on the slope face to the areas around the platform footings and any needed equipment storage benches (Crux 2018b), and minimize potential contributions to erosion.

At the bluff top drilling sites and staging areas, where more grading and ground disturbance would occur, Caltrans would implement standard erosion control best management practices (BMPs), including the use of ground covers, placement of fiber rolls, temporary check dams, and silt fencing. Upon the completion of the work, affected sites would be regraded and revegetated. If implemented and maintained, these measures can be expected to protect against significant erosion at the work sites.

In summary, there is always the potential for slope instability and landsliding at a project site located on steep slopes, especially where those slopes are composed of weak or unconsolidated materials. In the present case, Caltrans has proposed reasonable measures for minimizing the existing geologic hazards and potential project impacts, given the lack of site-specific data that currently exists. Caltrans' proposed geotechnical investigation is not analogous to other projects in unstable areas that have come before the Commission involving long-term development, such as the siting of commercial or residential development near a coastal bluff edge. Rather, the geotechnical investigation is a temporary project that is a necessary component of the evaluation of a much larger, more permanent project – the repair or replacement of the Albion River Bridge – and the information it can provide is likely to be critical in determining the larger project's consistency with Coastal Act policies.

Please do not hesitate to contact us with any further questions.

Sincerely,

Signature

Joseph Street, Ph.D.
Staff Geologist

Signature

Lesley Ewing, Ph.D., PE, F.CE
Senior Coastal Engineer

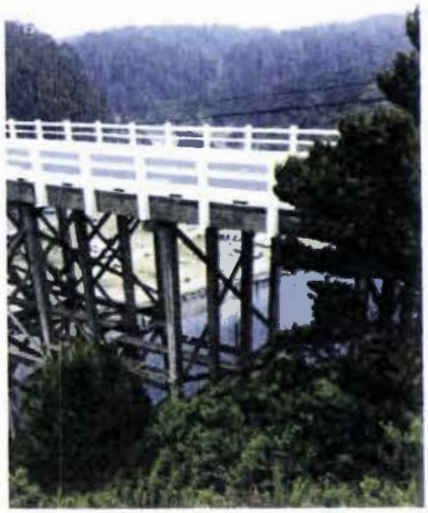
[1] Munster and Harden (2002) measured the bulk density of marine terrace deposit materials near Santa Cruz, and provide a range of 0.8 to 1.6 g/cm$^3$. For this calculation, we have assumed a bulk density of 1.2 g/cm$^3$ (74.8 lbs/ft$^3$).

**EXHIBIT NO. 21**

**Revised Revegetation Plan**

CDP No. 1-16-0899 (Caltrans)

# Revegetation Plan



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COASTAL COMMISSION
NORTH COAST DISTRICT

## Albion Bridge Geotechnical Investigation

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EA 01-40110
EFIS 0100000154

**California Department of Transportation**
Prepared by District 1 Environmental
Coastal Stewardship Branch
Original Version: December 2016
Revised July and August 2018

8/10/18
Prepared by: Kim Hayler
Revegetation Specialist

8/10/18
Prepared by: Hilary Sundeen
Associate Biologist

8/10/18
Approved by: Robert Wall
Senior for D1 Stewardship Branch

## 1) Applicant and Contacts

a) Permit applicant, owner of revegetation site, and party with financial responsibility for completing revegetation work:

i) California Department of Transportation (Caltrans)

b) Permits requiring revegetation:

i) Coastal Development Permit for the California Coastal Commission

c) Contacts:

i) Revegetation Specialist: Kim Hayler, 1656 Union Street, Eureka CA 95501, (707) 441-2058

ii) Project Biologist: Hilary Sundeen, 1656 Union Street, Eureka CA 95501, (707) 441-3983

iii) Project Manager: Frank Demling, 1656 Union Street, Eureka CA 95501, (707) 445-6554

## 2) Geotechnical Investigation Activities and Dominant Species on Site

Information about revegetation activities will be included in Section 6, below.

Geotechnical investigation activities and dominant species, per drill site:

Six drill sites are proposed for this investigation. Some of the drill sites contain multiple bore holes (Appendix A, Figures 1 through 3). Bore holes would be approximately 5 to 6 inches in diameter. Grading is proposed for site access and equipment staging for some bore holes. Work proposed at each of the drill site locations is described below.

### Drill Site 1

Access will be from Highway 1 at approximately Station 123+50 (Appendix A, Figure 3). Temporary removal of the guard railing will be required. The site terrain ranges from flat to moderately steep. Grading will be necessary to construct an access route and a level pad area (30 feet by 40 feet). An approximate 10 to 12 foot cut slope into the hillside will be required. The cut will be laid back sufficiently to be stable. Vegetation removal and trimming will be required. A rubber-tired track-mounted drill rig will be used at this site. One boring with an estimated depth of approximately 70 to 90 feet is planned for this site.

Vegetation is sparse to moderately dense and consists of mainly ruderal vegetation, with scattered coyote brush scrub (see Appendix B, Photos 1 and 4). Dominant species include sweet vernal grass (*Anthoxanthum odoratum*), rattlesnake grass (*Briza maxima*), velvet grass (*Holcus lanatus*), periwinkle (*Vinca major*), English ivy (*Hedera helix*), mustard (*Brassica*

*nigra*), and cotoneaster (*Cotoneaster* sp.), with few native shrub species including coyote brush (*Baccharis pilularis* ssp. *consanguinea*), coffee berry (*Frangula californica* ssp. *californica*), and wax myrtle (*Morella californica*). Vegetation removal and trimming would be required.

**Revegetation relative to Drill Site 1 is anticipated to occur within the area proposed for grading** (i.e., the southerly graded area)**, which is within the black polygon in Figure 3 (Appendix A) that is designated as Cut-fill limits.**

**Drill Site 2**

Access will be from Highway 1 (Station 123+50; Appendix A, Figure 3). The site is located on a relatively steep, patchy, sparsely to densely vegetated hillside below Drill Site 1. Grading to provide direct vehicle access to the site is not considered feasible. Utilizing Drill Site 1 as a staging area, a crane may be able to deliver either a self-leveling, track-mounted drill rig or a steel platform and drill rig to the drill site. Alternatively, a helicopter may be employed to deliver the steel platform equipment and supplies. Support vehicles will be located on Drill Site 1. Brush trimming will be required between Drill Sites 1 and 2 to create an approximately 3 ft. path for personnel to access Site 2. There will be minor ground disturbance anchoring the four corners of the steel platform to the ground. The footpads of the four legs supporting the steel platform will be anchored by driving steel rods into the ground. One boring with an estimated depth of 100 feet is planned for this site.

Vegetation at Drill Site 2 is mainly ruderal and similar to Drill Site 1, with coast silk tassel scrub (*Garrya elliptica*) observed just north of the drill site (see Appendix B, Photos 1 and 5).

**Revegetation relative to Drill Site 2 is anticipated to occur within the area that would have ground disturbance from installation of the steel platform.**

**Drill Site 5**

Drill Site 5 is located at Station 132+40, near the base of a steep south-facing slope that descends from the edge of Highway 1, below Drill Site 6 (Appendix A, Figure 2). A helicopter will be employed to deliver the drill, equipment, and supplies. Personnel access to the site can be from the campground with vehicles parked at the west end of the campground. Water delivery by a hose system will be from a water tender/support truck parked at the staging area for Drill Sites 6, 7 and 8. One boring with estimated depth of 125 feet is planned for this site.

Brush trimming will be required. There will be minor ground disturbance anchoring the corners of the steel platform to the ground. The footpads of the four legs supporting the steel platform will be anchored by driving steel rods into the ground.

Erosion and fluid control BMPs will be installed. They include temporary fiber rolls placed downslope and on the sides of the drilling platform, including tarps placed under the drill rig.

This area is coastal bramble habitat, which includes thimbleberry (*Rubus parviflorus*) and California blackberry (*Rubus ursinus*) as dominant species, and co-dominant species being sword fern (*Polystichum munitum*), cotoneaster, and bracken fern (*Pteridium aquilinum* var. *pubescens*) (see Appendix B, Photos 2 and 3).

**Revegetation relative to Drill Site 5 is anticipated to occur within the area proposed for minor ground disturbance, which is within the platform area in Figure 2.**

**Drill Site 6**

This drill site is located at approximately Station 133+25 on the south facing steep slope below the northerly graded staging area and Drill Sites 7 and 8 (Appendix A, Figure 2). Removal of the above-ground vegetation of several eucalyptus (*Eucalyptus globulus*) trees and brush trimming will be required to facilitate installation of a steel platform that will support the drill rig and for personnel access to the site from below. There will be minor ground disturbance anchoring the four corners of the steel platform to the ground. The footpads of the four legs supporting the steel platform will be anchored by driving steel rods into the ground. A helicopter will be employed to deliver the steel platform, drill, equipment and supplies. As stated above, personnel access to the site can be from the campground with vehicles parked at the west end of the campground. Water delivery by a hose system will be from a water tender/support truck parked at the staging area for Drill Sites 6, 7 and 8. One boring with an estimated depth is 125 ft. is planned for this site.

Erosion and fluid control BMPs will be installed. They include temporary fiber rolls placed downslope and on the sides of the drilling platform including tarps placed under the drill rig.

Vegetation at Drill Site 6 includes a stand of eucalyptus and other sub-dominant species, including poison-oak (*Toxicodendron diversilobum*), California blackberry, and Scotch broom (*Cytisus scoparius*) (see Appendix B, Photo 8).

**No revegetation will occur at Drill Site 6 because the site is steep and would be unsafe for worker access. Additionally, the existing underbrush would only be trimmed sufficient to allow installation of the steel platforms, and minimal bare ground would be exposed after removal of the platforms. The presence of underbrush and stumps from**

**eucalyptus trees and other plants that remain in the soil would allow existing vegetation to sprout.**

**Drill Site 7**

This drill site is located at approximately Station 134+25. Two borings are planned to be drilled on the steep slope at Drill Site 7. A helicopter will be employed to deliver the steel platforms, drills, equipment and supplies to these boring locations. Work personnel will traverse to the sites by use of ropes, via rappelling or similar method. Drill Site 7 will be serviced from a proposed northerly graded staging area located at the top of the west facing bluff, above Drill Site 7, within the black polygon surrounding the two upper bore hole locations at Drill Site 8 (Appendix A, Figure 2). During drilling operations, service and support vehicles will be located on this northerly graded staging area.

Erosion and fluid control BMPs will be installed. They include temporary fiber rolls placed along the perimeter of the staging area and downslope of the drilling platform including tarps placed under the drill rig.

Vegetation at Drill Site 7 includes a stand of eucalyptus and other sub-dominant species, including poison-oak (*Toxicodendron diversilobum*), California blackberry, and Scotch broom (*Cytisus scoparius*) (see Appendix B, Photo 8).

**No revegetation will occur at Drill Site 7 because the site is steep and would be unsafe for worker access. Additionally, the existing underbrush would only be trimmed sufficient to allow installation of the steel platforms, and minimal bare ground would be exposed after removal of the platforms. The presence of underbrush and stumps from eucalyptus trees and other plants that remain in the soil would allow existing vegetation to resprout.**

**Drill Site 8**

This drill site is located between Stations 135+10 and 135+60. Three borings are planned for Drill Site 8. One lower boring will be located on the steep slope below the northerly graded staging area, and two upper borings will be drilled on the northerly graded staging area. The graded area is proposed to surround the two upper borings, indicated by a black polygon (Appendix A, Figure 2). In preparation for the proposed grading in the black polygon area, up to 75 eucalyptus trees, including their root systems, plus all other vegetation within the grading area, including roots, will be removed. Service and support vehicles will be located on the graded staging area during the drilling operations. A conventional rubber-tired track-mounted drill rig will be employed to drill the two borings located on the graded staging

area. A helicopter will be employed to deliver the steel platforms, drills, equipment, and supplies to the lower bore hole. Work personnel will traverse to the lower bore hole location by use of ropes, via rappelling or similar method. The depth of the three borings will range from approximately 70 to 100 feet.

Vegetation at the site includes a dense patch of eucalyptus with co-dominants that include poison-oak, California blackberry and Scotch broom (see Appendix B, Photo 8).

**Revegetation relative to the two upper boring locations for Drill Site 8 is anticipated to occur within the area proposed for grading (i.e., the northerly graded area), which is within the black polygon in Figure 2 (Appendix A) that is designated as Cut-fill limits. No revegetation would occur at the boring location that is down slope of the proposed graded area, since it is very steep and unsafe for worker access.**

## 3) Summary of Anticipated Impacts and Minimization Measures

a) Summary of anticipated impacts:

The proposed geotechnical investigation work would temporarily affect approximately 0.08 acres of native coastal vegetation. This includes areas where vegetation would be trimmed for platform installation and areas where vegetation removal would be necessary after grading to provide site access and equipment staging. See Table 1 for a detailed summary of vegetation impacts, by community. Previously, the anticipated temporary impacts to native coastal vegetation was approximately 0.44 acres, but the Project Development Team worked on changes to the anticipated drilling plan, minimizing the amount of temporary impact to native vegetation.

b) Proposed minimization measures:

A summary of proposed revegetation activities, which serve as proposed minimization measures for anticipated impacts to native vegetation from proposed geotechnical drilling activities, is provided in Table 2, below.

**Table 1. Impacts to Vegetation Communities**

| Vegetation Type | Vegetation Trimmed | Vegetation Removed (Graded, Roots Affected) | Total Vegetation Affected (Trimmed & Removed) |
|---|---|---|---|
| **Coastal Bramble** (predominantly native) | 1,153 sq.ft. (0.026 acre) | 0 | 1,153 sq.ft. (0.026 acre) |
| **Coyote Brush Scrub** (predominantly native) | 1,252 sq.ft. (0.029 acre) | 980 sq.ft. (0.022 acre) | 2,232 sq.ft. (0.051 acre) |
| **Coast Silk Tassel** (predominantly native) | 0 | 0 | 0 |
| **Eucalyptus Grove** (predominantly non-native, invasive) | 4,467 sq.ft. (0.10 acre) | 14,810 sq.ft. (0.34 acre) | 19,277 sq.ft. (0.44 acre) |
| **Total Acres** | **6,872 sq.ft. (0.16 acre)** | **15,790 sq.ft. (0.36 acre)** | **22,662 sq.ft. (0.52 acre)** |
| **Subtotal of Acres Dominated by Native Vegetation** | **2,405 sq.ft. (0.06 acre)** | **980 sq.ft. (0.02 acre)** | **3,385 sq.ft. (0.08 acre)** |
| **Subtotal of Acres Dominated by Non-native, Invasive Vegetation** | **4,467 sq.ft. (0.10 acre)** | **14,810 sq.ft. (0.34 acre)** | **19,277 sq.ft. (0.44 acre)** |

**Table 2. Summary of Proposed Revegetation Activities, Based on Treatment of Existing Vegetation at Each Drill Site**

| Drill Site | Proposed Revegetation Activities |
|---|---|
| 1 (Fig. 3) | **Revegetation planned** within the limits of the proposed southerly graded area; future revegetation area is currently comprised of coyote brush scrub and ruderal vegetation |
| 2 (Fig. 3) | **Revegetation planned** within the limits of the proposed drill platform area; future revegetation area is currently comprised of ruderal vegetation |
| 5 (Fig. 2) | **Revegetation planned** within the limits of the proposed drill platform area; future revegetation area is currently comprised mainly of coastal bramble vegetation (dominated by thimbleberry and California blackberry). |
| 6 (Fig. 2) | **No revegetation proposed** since the site is steep and unsafe for worker access. Vegetation trimming will be minimal, allowing for vegetation to sprout. |
| 7 (Fig. 2) | **No revegetation proposed** since the site is steep and unsafe for worker access. Vegetation trimming will be minimal, allowing for vegetation to sprout. |
| 8 (Fig. 2) | **Revegetation planned** within the limits of the proposed northerly graded area (black polygon around 2 upper bore holes for Drill Site 8 in Fig. 2, Appendix A); future revegetation area is currently comprised of a eucalyptus grove. **No revegetation is proposed for the lower boring location** since the site is steep and unsafe for worker access. For the lower boring location, vegetation trimming will be minimal, allowing for vegetation to sprout. |
| 1A, 1B, 1C, 3, & 4 (removed from plan & maps) | Drill Sites 1A, 1B, 1C, 3, & 4 and the surrounding Cut-Fill Limits were removed from the plan, so no revegetation is proposed since no work will be done there. |

## 4) Revegetation Goal

a) The revegetation goal is to ensure that the areas temporarily affected by grading and vegetation trimming for the anticipated geotechnical drilling are on a trajectory toward becoming a self-sustaining native plant community that is dominated by regionally appropriate native plant species.

i) If the bridge is replaced on the western alignment, the plants that were installed under this revegetation plan would be removed to allow construction, and the old alignment of the currently existing bridge would be revegetated with regionally appropriate, native plant species, unless another post-construction treatment is agreed upon by Caltrans, the Coastal Commission, and any other permitting agencies that provide a permit for construction work.

## 5) Summary of Site Preparation Activities for the Proposed Northerly Graded Area at Drill Site 8 to address potential issues with planting in an area previously dominated by eucalyptus

a) Soil preparation will occur in the northerly graded area at Drill Site 8 to facilitate restoration of a native plant community there since eucalyptus is the dominant species and presence of eucalyptus is often observed to have limited vegetation in the understory.

i) Although eucalyptus vegetation is known to contain volatile oils that may be allelopathic, creating soil toxicity that inhibits plant growth by other species (May and Ash 1990), multiple authors have indicated that the oils may not be as much of a growth inhibitor as other factors.

(1) The mass quantity of biomass (i.e., leaves, branches, and bark) that eucalyptus trees drop creates a thick mulch that prevents other plant seeds from reaching the soil and establishing under eucalyptus trees (M. Wisniewski quoted in UC Agriculture and Natural Resources publication, 1996).

(2) Eucalyptus trees also have a massive, horizontal, fibrous, shallow root system that is extremely efficient at absorbing surface soil moisture, and they have deep tap roots that also tap into the water table when surface soil moisture is low (Bilal, Ali, and Kim 2014). This combination of root systems enables eucalyptus to be extremely efficient at absorbing much of the available soil moisture and nutrients at varying soil levels, which leaves little moisture and nutrients available for other plant species, inhibiting growth by seedlings (Vanderhoff 2011). Vanderhoff's article states "...you can grow a garden under a grove of Eucalyptus or any other tree. The soil isn't poisoned; it's just dry, filled with tree roots and shady. The right plants, proper planting and the proper maintenance can overcome these obstacles."

b) Based on the proposed variety of ways that eucalyptus can inhibit plant growth by other species, several site preparation activities will be used to address potential growth inhibition by eucalyptus.

i) During grading, which will occur prior to drilling, the northerly graded area will have approximately 18 inches of duff and topsoil removed and disposed of at an approved disposal facility.

(1) This will remove eucalyptus biomass and will likely remove most or all of the soil that contains eucalyptus oil, minimizing the presence of smothering biomass and potentially toxic oils. Roots will have also been removed.

ii) To prepare the graded site for drilling, an additional 6.5 to 8.5 ft of soil will be removed and stockpiled in an approved facility.

iii) After drilling, any roots of eucalyptus that are evident in the graded area will be removed or ground up as much as is feasible, with the intent of being thorough, to ensure little or no stump sprouting of eucalyptus and to ensure maximum survival of natives that will be installed.

iv) The stockpiled soil will be returned to the graded area, and organic soil amendment/nutrients will be added to the soil to ensure that the soil is not nutrient poor, since eucalyptus are known to rob soils of nutrients. The amended soil will then be recontoured.

**6) Summary of Initial Revegetation Activities**

a) Revegetation activities will include the following:

i) An enhanced permanent erosion control seed mix composed of regionally appropriate native species and a non-persistent annual grass will be hydroseeded at the end of construction in bare soil areas. The seed mix is considered enhanced by including a woody native plant component, which in this case is coyote brush. Thorough efforts will be made to ensure that the coyote brush seed and other species in the seed mix are of as close to coastal Mendocino origin as possible. Coyote brush can withstand a variety of soil and hydrologic conditions and grows relatively quickly compared to other plants, so that it generally can withstand competition from invasive plants. It also is the dominant native species near vegetation removal, so it is the appropriate species to enhance the seed mix with. The erosion control seed mix is considered a specification that is managed by Construction and Landscape Architecture, and by Maintenance after construction is complete, so it is not part of the revegetation success criteria.

ii) Installation of container plants will occur no later than the end of the first full optimal planting season that occurs after completion of drilling, in fall or winter (i.e., between November and end of February).

(1) Container plants will only be installed in areas that are safe to access for work crews. Drill Sites that will receive container plant installation are 1, 2, 5, and the northerly graded area around the two upper boring locations for Drill Site 8.

(2) In areas where container plants cannot safely be installed and maintained (i.e., Drill Sites 6, 7, and the lower boring location for Drill Site 8), those areas are anticipated to have successful re-establishment of vegetation since each boring location is surrounded by existing vegetation, and vegetation will only be trimmed to allow the drilling platforms to be installed.

(3) Species of container plants will be regionally appropriate; collected within as local a region as possible but restricted to coastal Mendocino County; and will be comprised of species removed during grading activities and/or found within

nearby areas that would likely have a good chance of surviving based on existing site conditions after grading.

(a) Proposed species to be installed at Drill Sites 1 and 2 include coyote brush, coffee berry and wax myrtle. These species are currently present at these drill sites (see section 2 of this plan).

(b) Proposed species to be installed at Drill Site 5 include thimbleberry, California blackberry, and possibly sword fern and/or bracken fern. These species are currently present at this drill site (see section 2 of this plan).

(c) Species to be installed at Drill Site 8 (the two upper boring locations) will include species that are known to occur in similar soils as are found at drill site 8, found at other nearby drill sites, and that are known to be hardy, fast growing, and would be successful at establishing the denuded soils. The following species are anticipated to be used at Drill Site 8, with this list potentially being reduced, depending on commercial availability and site conditions: coyote brush, coffee berry, wax myrtle, California blackberry, and possibly sword fern and/or bracken fern. Sword fern is slow growing, but it can occupy a relatively large space, provide cover for small animals, and is evergreen, making it useful in this planting that is so near the road. Aesthetics are an important component of the planting at Drill Site 8, since it is within view of the traveling public.

(d) Other locally observed native species may be added if the above species are not commercially available from a coastal Mendocino collection source, but other native species are commercially available from a coastal Mendocino collection source and are observed within the vicinity of the project, are present on similar soils and slopes, and seem appropriate to the observable microsite conditions and plant community that is being revegetated, to be determined by the Caltrans Revegetation Specialist. Examples of other species observed in the vicinity and that have been known to be grown from locally collected coastal Mendocino sources include cow parsnip (*Heracleum lanatum*), sticky orange monkeybush (*Mimulus aurantiacus*), bee plant (*Scrophularia californica*), hedgenettle (*Stachys* sp.), Pacific aster (*Symphyotrichum chilense*), etc. There is currently only one, or sometimes two, native plant nurseries that can supply coastal Mendocino plants, so commercially available options can sometimes be limited, and maximum flexibility to select locally appropriate and collected species that would be adapted to the observable site conditions is most helpful and will achieve the best survivability and establishment of the plant communities.

(4) Quantities of plants to be installed will be based on amount of disturbed bare soil at each Drill Site, size of container stock, and target baseline percent cover of natives.

(a) If small plugs are all that are available, the plugs will be installed with at least 2 or 3 plants near each other (e.g., approximately 6 inches on center) to facilitate establishment of plants that will eventually grow so closely together that they create a larger "plant" on a faster timeframe than if they were

installed as individuals. Additionally, plugs seem to have greater success competing with non-native and invasive plants, and watering and weeding are more efficient, when installed closer together instead of several feet or more away.

(b) If containers are approximately 1 gallon or larger, plants are installed at approximately 2-5 ft on-centers for herbs, 5-8 ft on-centers for shrubs, and 10-15 ft. on-centers for trees, depending on species and habitat conditions.

(c) The target baseline cover of native plants immediately after planting will be approximately 70% absolute cover. This proposed target percent cover was developed due to the concern that non-native species might outcompete native plants if native cover is not established quickly enough.

(5) A specific site plan showing exact location for each plant to be installed is not developed for revegetation plans, since flexibility is needed to use microsite conditions that have become apparent after ground disturbance and contouring is complete to determine the most suitable planting location for each plant, to optimize survival and successful growth. Additionally, revegetation plantings are intended to mimic nature and appear natural, so it is important to rely on microsite conditions to determine plant placement as well as to use adjacent vegetation patterns to help determine placement of plants relative to the area of disturbance.

b) Parties involved with installation and establishment of container plants include the following:

i) Installation and plant establishment (i.e., watering, weeding, installation and maintenance of protective cages, etc.) would likely be conducted by the California Conservation Corps (CCC), with direction and oversight by Caltrans Revegetation Specialists.

c) Note that no rodenticides or herbicides will be used in conjunction with revegetation efforts or at the revegetation sites.

**7) Methods and Schedule of Site Maintenance for Container Plants after Initial Revegetation Activities**

a) Supplemental watering

i) Frequency of watering: every other week during the dry season, as directed by the Revegetation Specialist, for 2 years after initial planting

(1) The dry season is anticipated to occur between spring and fall/winter each calendar year. This is usually between April or May and October to December, depending on seasonal rainfall patterns.

(2) The CCC will commence watering as directed by the Revegetation Specialist.

(3) If a rainfall event occurs with more than ½ inch of rain while watering is being conducted, the Revegetation Specialist will determine whether to postpone supplemental watering and the duration to postpone. Watering will be postponed if the soil is saturated to the depth of plant roots in planted areas.

ii) If there is a substantial drought and Caltrans is required to avoid watering, the plants may not be watered, or minimally watered. If watering is required to slow or stop, a remediation measure that may be implemented by the Revegetation Specialist would be to reduce biomass and increase available water and nutrients for installed plants by increasing the frequency of weeding and mulching events.

iii) Amount of watering: Each plant will receive 2 gallons of water per visit, using municipal water sources.

b) Other site maintenance activities

i) Duration of site maintenance: 5 years after installation of container plants, pending concurrence from permitting agencies.

ii) Anticipated activities: weeding, mulching of installed and volunteer plants, fixing or removal of cages, thinning of stump sprouts, installation of replacement plants, and any other activities determined necessary by the Revegetation Specialist or Biologist to assist with establishment of native vegetation in the planting area

(1) Weeding will focus on hand-clearing invasive non-native vegetation within a 3 to 4 ft radius around installed plants and desirable native volunteer plants. No chemical control will be used. Weeding will also target invasive non-native species within revegetation areas at each drill site. Additional weeding will occur as time, funding, right-of-way, and safety limitations permit.

(a) Some invasive species that currently exist on site will regenerate on site and will be infeasible to eradicate; however, they will be controlled in the planting areas to the extent feasible during the 5-year maintenance period to ensure that installed plants survive and establish. Once the native plants are established, installed natives should survive competition with these invasive plants.

(b) Newly introduced invasive plant species will be documented for monitoring reports and removed from the revegetation locations.

(c) Caltrans goal is to ensure that non-native and invasive cover is minimized during the maintenance and monitoring period to the extent feasible, to allow successful establishment of natives, acknowledging that some species are very difficult to control due to existing seed bank; seed dispersal from animals, water, wind, and explosive dehiscence from nearby parent plants; and aggressive vegetative growth with adaptations for re-establishing after being cut or pulled.

Caltrans will document percent cover of non-native and invasive plants in the proposed revegetation areas prior to ground disturbing activities associated with the proposed project. The pre-project cover data will be included in the 1st annual monitoring report and will be used to determine acceptable percent cover of non-native and invasive plant species in the revegetation areas during the monitoring period (see below for monitoring methods and performance and success criteria).

(2) Re-seeding with regionally appropriate native species and covering with organic rice straw or other weed free straw is often necessary after large patches of

invasive plants are weeded. Alternatively, a thick layer of mulch may be used to suppress growth by invasive species in problematic areas.

(3) Mulching: Installed plants will receive an approximately 3 to 4-inch layer of wood chip mulch; re-mulching will likely be necessary during at least the 1st 3 years of the 5-year maintenance period. Once plants grow large enough, they may not need mulch.

(4) Replanting, if determined necessary after monitoring, will be conducted using the same planting criteria as above, with watering and maintenance occurring as stated above.

iii) Annual site inspection to determine maintenance needs:

(1) The Revegetation Specialist or Biologist will inspect the sites at least twice annually, prior to or during, each winter/spring weeding event (of which there are typically 2 weeding events between January and June), to determine maintenance needs.

(2) The Revegetation Specialist will inspect the sites at least once or twice annually during the summer of the watering years (i.e., typically years 1 through 3, presuming that replanting is likely to occur in year 2, and watering occurs for 2 years per plant), to line out the watering crew and ensure that all maintenance needs, including watering, are being addressed.

(3) The Revegetation Specialist or Biologist will review the sites during the 5 years of annual monitoring, which typically occurs between June 1 and November 30, and make additional notes regarding maintenance needs.

(4) The Revegetation Specialist or Biologist may make additional site visits, as time permits, and in conjunction with visiting other sites along the Mendocino coast, to determine maintenance needs.

**8) Monitoring Methods and Performance and Success Criteria**

a) Monitoring methods and schedule will include the following:

i) Photo points: At least one photo point will be established in each revegetation area prior to ground disturbance (i.e., prior to vegetation removal and drilling) and at the time of plant installation, to show most plantings. Photo points will provide a visual indication of survival and establishment of native plants and will help document that native plants are increasing in cover.

ii) Counts of native plants: Installed, sprouting (i.e., stump-sprouting), and volunteer native plants that are alive during monitoring will be counted, by species. Establishment of volunteer native species will be included in the total plant count, since volunteers indicate that revegetation is successfully occurring and that a site is on a trajectory toward being self-sustaining.

(1) Counting the number of living native woody plants is an acceptable quantitative measure of revegetation performance. For each year that woody plants are alive, they are establishing a growing root and shoot system that will eventually allow them to reach typical mature size per species. Since plants are installed at a

density that is closer together than is found in mature vegetation stands, then having 70% or more survival/volunteering by native species will result in an appropriately vegetated plant community, once they reach mature size.

iii) Visual estimation of percent cover –Annual data collection will include percent cover of all plant species and percent cover of bare ground.

(1) Percent cover data

(a) Percent cover data will be documented prior to ground disturbing activities associated with drilling. These cover data will constitute the baseline cover data that the performance and success criteria will be based on for non-native species. See performance and success criteria for non-native plant cover, below.

(2) Cover will also be documented at the time of planting and each year of monitoring. Cover at the time of planting will constitute the baseline cover that the performance and success criteria will be based on for native species cover, with the acknowledgement that the target baseline cover at planting is approximately 70% in each revegetation area, per the Summary of Initial Revegetation Activities, above.

(3) Percent cover data, including pre-disturbance cover, will be summarized in annual monitoring reports.

(4) Cover will be assessed using ocular estimates of species and of bare soil and compared with percent cover charts.

iv) Schedule: photo points, survival counts, and percent cover data will occur annually between June 1 and November 30 for 5 years after initial planting, starting as early as the first June after plant installation. Since plant installation will occur by February, monitoring between June and November will allow a sufficient duration of time to indicate whether plants are surviving and establishing during the 1st growing season.

b) Performance and success criteria:

i) Year 1:

(1) For counts: At least 90% of installed container plants and/or volunteer native plants will be alive in monitoring year 1. Volunteer native plants may count as replacements for installed plants or add to the plant count, so that there may be more than the original number of installed plants if most or all plants survive, and multiple volunteer native plants emerge.

(2) For cover: No criterion is required for cover in year 1 since native plants will barely have grown in year 1 and non-native plant removal is in progress and most challenging in year 1.

ii) Year 2:

(1) For counts: At least 80% of installed container plants and/or volunteer native plants will be alive in monitoring year 2. Volunteer native plants may count as replacements for installed plants or add to the plant count, so that there may be more than the original number of installed plants if most or all plants survive and multiple volunteer native plants emerge.

(2) For cover:

(a) The following cover criteria are subjective and may need to be adjusted if they are infeasible.

(b) Native plant cover will be at least 5% greater than the target baseline cover of native plants that was present on site at the time of planting in each revegetation area, with the target baseline cover being approximately 70%.

(c) Non-native plant cover

(i) Non-native plant cover will be 20% less than the baseline cover of non-native plants that was present on site prior to ground disturbance in each revegetation area, except for the northerly graded area.

(ii) In the northerly graded area, non-native plant cover will be 80% less than the baseline cover of non-native plants that was present on site prior to ground disturbance.

iii) Years 3 through 5:

(1) For counts: At least 70% of installed container plants and/or volunteer native plants will be alive per monitoring year. Volunteer native plants may count as replacements for installed plants or add to the plant count, so that there may be more than the original number of installed plants if most or all plants survive and multiple volunteer native plants emerge.

(2) For cover:

(a) The following cover criteria are subjective and may need to be adjusted if they are infeasible.

(b) Native plant cover:

(i) Year 3: native plant cover will be at least 10% greater than the baseline cover that was present on site at the time of planting in each revegetation area.

(ii) Year 4: native plant cover will be at least 15% greater than the baseline cover that was present on site at the time of planting in each revegetation area.

(iii)Year 5: native plant cover will be at least 20% greater than the baseline cover that was present on site at the time of planting in each revegetation area.

(c) Non-native plant cover

(i) Non-native plant cover will be 20% less than the baseline cover of non-native plants that was present on site prior to ground disturbance in any revegetation area, except for the northerly graded area.

(ii) In the northerly graded area, non-native plant cover will be 80% less than the baseline cover of non-native plants that was present on site prior to ground disturbance.

c) Brief monitoring reports will be developed each year.

i) Reports for monitoring years 1, 3, and 5 will be submitted to the California Coastal Commission.

ii) Monitoring data, photo points, and notes regarding maintenance activities and other field notes for years 2 and 4 will be kept in the project file and made available upon request.

## 9) Remedial measures

a) If performance/success criteria are not met, the Revegetation Specialist and/or Biologist will assess potential reasons for a criterion not being met and develop remedial measures to correct issues. Caltrans will contact the Coastal Commission to discuss the performance/success criteria issues and develop a plan to resolve the issues if the planting area is not on a trajectory toward meeting the 5th year success criterion.

b) Any remedial measures that are implemented will be discussed in monitoring reports.

## Literature Cited

Bilal, H., S. S. Ali, and K.-M. Kim. 2014. Potential of *Eucalyptus* in the Remediation of Environmental Problems: A Review. International Journal of Innovation and Scientific Research. ISSN 235-8014 Vol. 4 No. 2. July 2014. pp. 135-144. http://www.ijisr.issr-journals.org/ Accessed on 6/27/18 at http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.685.9694&rep=rep1&type=pdf

May, F.E. and J.E. Ash. 1990. An Assessment of the Allelopathic Potential of *Eucalyptus*. Australian Journal of Botany. 38(3) 245-254. Accessed on 6/27/18 at http://www.publish.csiro.au/bt/BT9900245

Vanderhoff, R. 2011. The Coastal Gardener: Eucalyptus forests aren't poisonous. Los Angeles Times. July 15, 2011 8:36 pm. Accessed on 6/27/18 at http://www.latimes.com/tn-dpt-0716-vanderhoff-20110714-story.html

Wisniewski, M. quoted in UC Agriculture and Natural Resources publication, author of article not listed. 1996. Californians love, and hate, eucalyptus. California Agriculture, 50(3):6-7. Accessed on 6/27/18 at http://calag.ucanr.edu/Archive/?article=ca.v050n03p6

## Appendices

- **Appendix A.**
  - **Maps**
- **Appendix B.**
  - **Representative photographs of habitat types present within and near the project limits**

# Appendix A

## Maps

**Figure 1**
**Project Area**

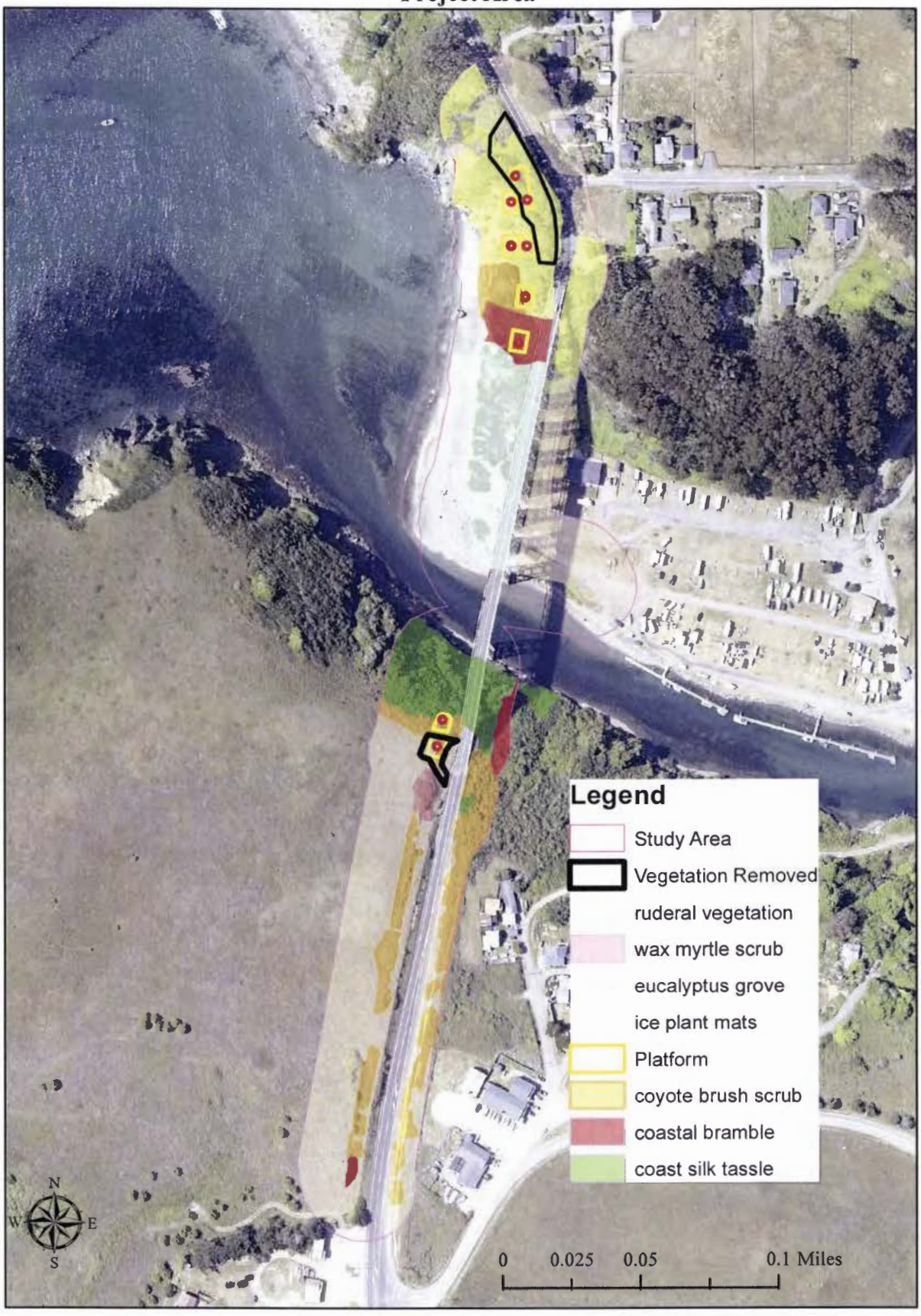


**Figure 2 (DS 5, 6, 7 and 8)**
**Vegetation Communities Observed in the**
**Project Footprint and 100-foot Buffer**

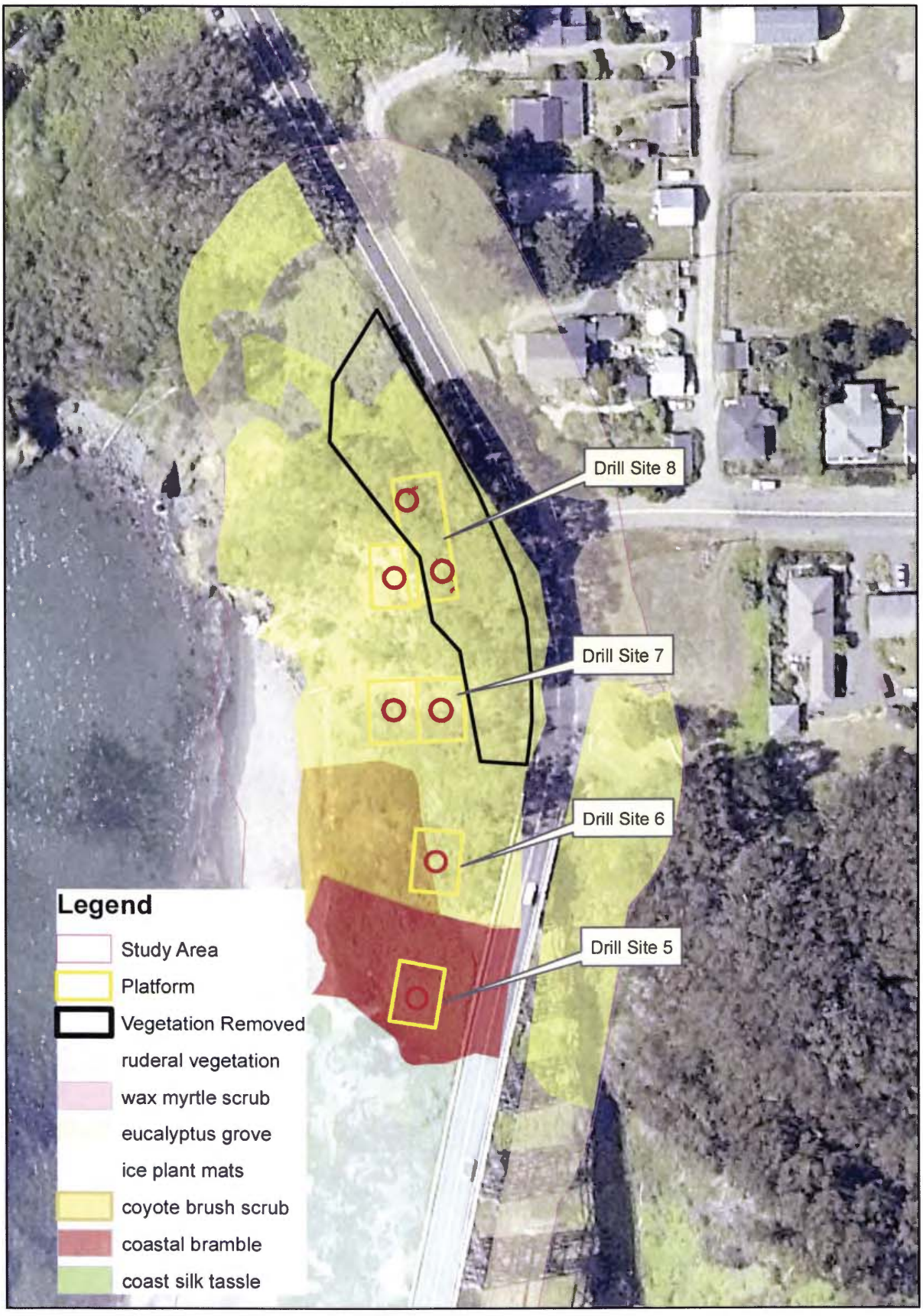
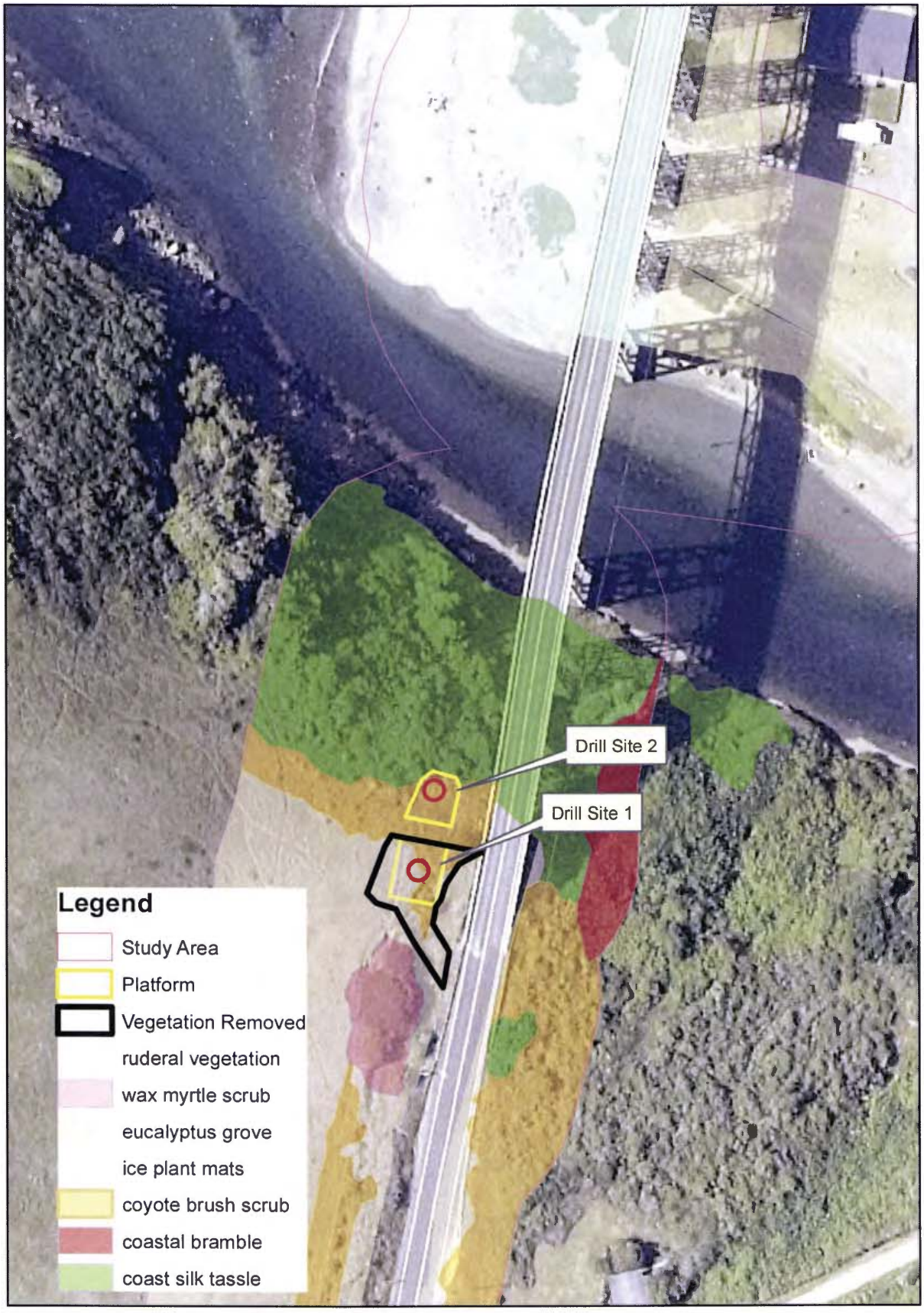


**Figure 3 (DS 1 & 2)**
**Vegetation Communities Observed in the**
**Project Footprint and 100-foot Buffer**



# Appendix B:

## Representative photographs of habitat types present within and near the project limits



Photo 1: Representative photo of ruderal vegetation (non-native annual grasslands).



Photo 2: Representative photo of coastal bramble.



Photo 3: Representative photo of coastal bramble.



Photo 4: Representative photo of coyote brush scrub alliance.



Photo 5: Representative photo of coast silk tassel scrub.



Photo 6: Representative photo of wax myrtle scrub



Photo 7: Representative photo of ice plant mats.



Photo 8: Representative photo of eucalyptus grove.

## Gedik, Tamara@Coastal

**From:** Demling, Frank C@DOT <frank.demling@dot.ca.gov>
**Sent:** Thursday, August 09, 2018 6:21 PM
**To:** Gedik, Tamara@Coastal
**Cc:** Walker, Liza M@DOT; Sanchez, Lorien A@DOT
**Subject:** RE: Albion Geotechnical Investigation CDP application
**Attachments:** DOC_2002-16640.pdf; 40110 pm 44 ownership exhibit-V3.pdf; 1726OR481.pdf; DOC_2003-26641.pdf

Thank you Tamara,

The ownership exhibit and corresponding deeds are attached herewith.

Thank you,

Frank Demling, PLS
Project Manager
(707) 445-6554

**EXHIBIT NO. 22**

**Authority to Conduct Work within ROW Easements**

CDP No. 1-16-0899 (Caltrans)

---

**From:** Gedik, Tamara@Coastal <Tamara.Gedik@coastal.ca.gov>
**Sent:** Thursday, August 9, 2018 5:12 PM
**To:** Demling, Frank C@DOT <frank.demling@dot.ca.gov>
**Cc:** Walker, Liza M@DOT <liza.walker@dot.ca.gov>; Sanchez, Lorien A@DOT <lorien.sanchez@dot.ca.gov>
**Subject:** RE: Albion Geotechnical Investigation CDP application

Thanks Frank and Lorien for your efforts with this. Once I receive the exhibit I'll transmit all the info together to our legal staff.

Sincerely,

*~Tamara L. Gedik*
Coastal Program Analyst
California Coastal Commission
**North Coast District Office**
1385 8th Street, Ste. 130 • Arcata, CA 95521
**E:** Tamara.Gedik@coastal.ca.gov
**P: 707.826.8950 • Fax:** 707.826.8960
*~To purchase a whale tail license plate or access Coastal Commission information, go to www.coastal.ca.gov*

Every Californian should conserve water. Find out how at:

SaveOurWater.com · Drought.CA.gov

**From:** Demling, Frank C@DOT [mailto:frank.demling@dot.ca.gov]
**Sent:** Thursday, August 02, 2018 9:22 AM
**To:** Gedik, Tamara@Coastal
**Cc:** Walker, Liza M@DOT; Sanchez, Lorien A@DOT
**Subject:** Albion Geotechnical Investigation CDP application

Hello Tamara,

Right of Way Engineering, Lorien Sanchez, is working on a map exhibit that will depict the underlying fee ownership for the parcel adjoining the northerly staging area for the geotechnical investigation. We hope to have the exhibit to you by next Tuesday.

Also, I believe you asked that we provide an answer to the following questions (1) how Caltrans can "demonstrate the authority to comply with all conditions of approval" under PRC section 30601.5; and (2) whether District 1 needs to contact all holders or owners of any other interests of record in the affected property about the permit application and invite them to join as co-applicants.

We've discussed with our Legal Department and received direction on how to respond to both questions. I expect you will want to pass along to your Legal Counsel for further discussion.

As to the first question, there is no case law interpreting the relevant Public Resources Code provision or explaining how an applicant can "demonstrate the authority to comply with all conditions of approval." (PRC 30601.5.) However, this provision is located in the larger context of PRC section 30601.5, which requires demonstration of a "legal right, interest, or other entitlement to use the property for the proposed development." In this context, it follows that the District can demonstrate the authority to comply with conditions of approval by pointing to its broad legal rights or interests in the property, which allow for implementation of these conditions.

Caltrans has a broad legal interest in the property which should cover the scope of anticipated conditions, including revegetation. Specifically, the highway easement deed provides "a right of way for Bridge and State Highway over, upon and across the … described lands…," subject to only narrow reservations by the underlying fee owner for defined sewer and transportation/access purposes in specific locations. This broad grant of right-of-way includes the right to conduct activities other than the operation of the highway itself. (See, Streets and Highways Code section 660 [State "highway" includes the entire right-of-way granted in the easement deed, "whether or not the entire area is actually used for highway purposes"].)

Moreover, under pertinent case law, the grant of an easement, such as the highway easement here, is interpreted liberally for the State. (See, *e.g.*, *Norris v. State ex rel. Dept. of Public Works* (1968) 67 Cal.Rptr. 595, 599.) With respect to highway easements, the easement is presumed to be "for **all public purposes**, present or prospective, whether then known or not, consistent with the character of such highways and not actually detrimental to the abutting property." (*Id*.) Anticipated "conditions of approval," such as revegetation, are for a public purpose consistent with the character of the highway, and accordingly, fit in the scope of Caltrans's highway easement. (Compare, *Norris* [establishment of state roadside rests and a vista point is consistent with a legitimate highway use].)

Therefore, District 1 can demonstrate the authority to comply with the conditions of the Coastal Commission's approval by pointing to the easement deed, specifically, the scope of the easement granting "right of way for Bridge and State Highway over, upon and across" the described lands is broad, and under both the Streets and Highways Code and relevant case law, the easement provides Caltrans with the ability to comply with conditions of approval such as revegetation, which have a public purpose.

As to the second question, the District is already moving forward with identifying and contacting all holders or owners of any other interests of record in the property to notify them of the CDP application and invite them to join as co-applicants. Based on a straightforward reading of PRC section 30601.5, contacting these owners of interest is a requirement that independently applies to the State (or any other CDP applicant), whether or not it demonstrates a

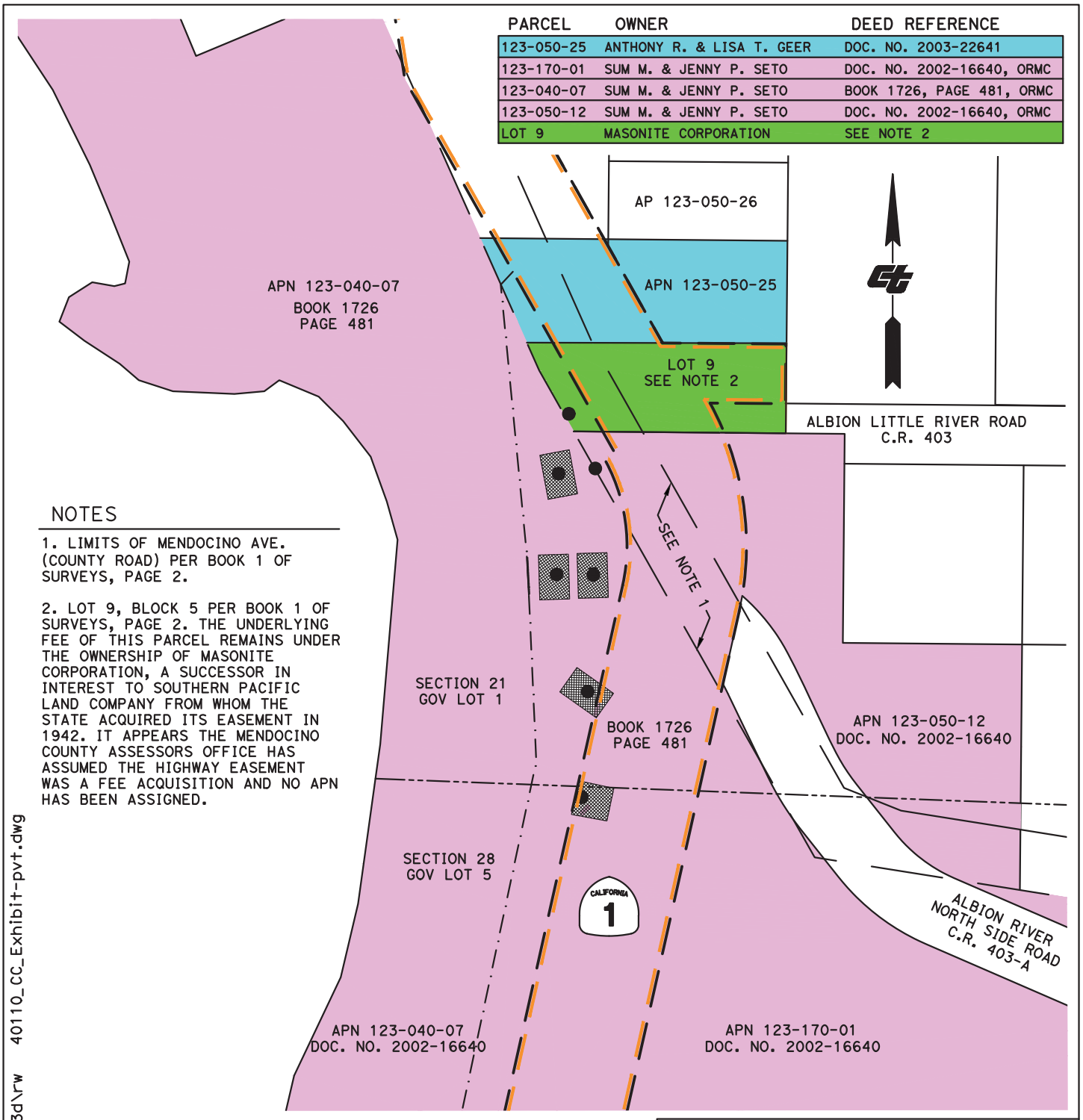
legal right, interest, or other entitlement to use the property. The District will proceed with its efforts to identify all property owners so that appropriate notice can be provided.

Right of Way Engineering has determined that Sum Seto is the underlying fee owner for the parcel in question. The PTE, and court order, only applies to that area that Caltrans does not have a highway easement and based on CT Legal's interpretation of case law and statues, permission from Sum Seto to remove trees and perform grading is not required.

Please let me know if you require anything further. We'll get you the map exhibit by next Tuesday COB.

Thanks,

Frank Demling, PLS
Project Manager
(707) 445-6554




## NOTES

1. LIMITS OF MENDOCINO AVE. (COUNTY ROAD) PER BOOK 1 OF SURVEYS, PAGE 2.

2. LOT 9, BLOCK 5 PER BOOK 1 OF SURVEYS, PAGE 2. THE UNDERLYING FEE OF THIS PARCEL REMAINS UNDER THE OWNERSHIP OF MASONITE CORPORATION, A SUCCESSOR IN INTEREST TO SOUTHERN PACIFIC LAND COMPANY FROM WHOM THE STATE ACQUIRED ITS EASEMENT IN 1942. IT APPEARS THE MENDOCINO COUNTY ASSESSORS OFFICE HAS ASSUMED THE HIGHWAY EASEMENT WAS A FEE ACQUISITION AND NO APN HAS BEEN ASSIGNED.

## LEGEND

| | |
|---|---|
| MCR | MENDOCINO COUNTY RECORDS |
| ORMC | OFFICIAL RECORDS MENDOCINO COUNTY |
| — · — · — | TEMPORARY CONSTRUCTION EASEMENT |
| — — — | LIMITS OF HIGHWAY EASEMENT PER BOOK 162, PAGE 76, ORMC. |
| ——·-·—— | APPROXIMATE SECTION LINE |
| ● | VERTICAL BORING |
| ▨ | BRUSHING LIMITS FOR DRILL PLATFORM |

**STATE OF CALIFORNIA**
**CALIFORNIA STATE TRANSPORTATION AGENCY**
**DEPARTMENT OF TRANSPORTATION**

# RIGHT OF WAY

## IN SECTIONS 21 & 28
## T.16N., R.17W., M.D.B. & M.

## OWNERSHIP EXHIBIT

SCALE: 1" = 120'

FEET 0 60 120 240

| DRAFTED BY | DATE | DISTRICT | COUNTY | ROUTE | SHEET PM | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|
| PVT | 08/07/18 | 1 | MEN | 001 | 44 | 1 | 1 |

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APN 123-050-25
From My First Am

2003-26641
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**RECORDING REQUESTED BY**
First American Title Company

**AND WHEN RECORDED MAIL TO:**
Anthony R. Geer and Lisa T. Geer
3725 N. Hwy One
Albion, CA 95410

2003-26641
Recorded at the request of
FIRST AMERICAN TITLE CO
10/06/2003 10:26A
Fee: 10.00 No of Pages: 2

OFFICIAL RECORDS
Marsha A Wharff, Clerk-Recorder
Mendocino County, CA

Space Above This Line for Recorder's Use Only

A.P.N.: 123 050-25

File No.: 2305-1125415 (SP)

| | |
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| | $20.00 PAID |
| X | PCO FILED |
| | Exempt |

# GRANT DEED

The Undersigned Grantor(s) Declare(s): DOCUMENTARY TRANSFER TAX $143.00; CITY TRANSFER TAX $0.00; SURVEY MONUMENT FEE $

[ XX ] computed on the consideration or full value of property conveyed, OR
[ ] computed on the consideration or full value less value of liens and/or encumbrances remaining at time of sale,
[ XX ] unincorporated area; [ ] City of Albion, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **George J. Tehan, a married man as his sole and separate property**

hereby GRANTS to **Anthony R. Geer and Lisa T. Geer, husband and wife as Joint Tenants**

the following described property in the Unincorporated area of **Albion**, County of **Mendocino**, State of **California:**

**Lots Seven (7) and Eight (8) of Block Five (5) situated in the Town of Albion, as the same are numbered and designated upon the map entitled "Albion" now on filed in the office of the County Recorder of the County of Mendocino, State of California.**

**Excepting therefrom that portion granted to Cora Nylander in the deed recorded September 24, 1969 in Book 800 of Official Records, Page 567, Mendocino County Records, described as follows:**

**The most Northerly 15 feet of Lot No. 7, Block 5, situated in the Town of Albion, as the same is numbered and designated upon the map entitled "Albion" now on file in the office of the County Recorder of the County of Mendocino, State of California.**

Dated: 09/18/2003

George J. Tehan

Mail Tax Statements To: **SAME AS ABOVE**

A.P.N.: 1230050-25 Grant Deed - continued File No.:2305-1125415 (SP)
Date: 09/18/2003

STATE OF N. J. }
} ss.
COUNTY OF Hunterdon }

On October 1, 2003, before me, George J. Tenay Jr personally appeared Flemington, NJ, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

*This area for official notarial seal*

Signature Judith M D'Auto

My Commission Expires: 6-6-04

JUDITH M. D'AUTO
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires June 6, 2004

908-806-4646

(SEAL AFFIXED)

2003-28641
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APN Portion of... 123-170-01 & all... 123-050-12
From: My First AM

2002-16640
Page: 1 of 5

When Recorded Please Mail to:

Kazuo J. Nanya
SETO & ASSOCIATES
2655 Bush Street
San Francisco, CA 94115

2002-16640
Recorded at the request of
SUM M SETO
07/31/2002 11:30A
Fee: 19.00 No of Pages: 5

OFFICIAL RECORDS
Mendocino County, CA
Marsha A Wharff, Clerk-Recorder

Mail Tax Statements to:
Same As Above

The Undersigned Grantors Declare:
Documentary Transfer Tax is: -0- *
Transfer Only changes Capacity of Grantors
*Pursuant to Revenue and Taxation Code §11930

A.P. Nos. _____

# GRANT DEED

FOR A VALUABLE CONSIDERATION RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED,

SETO FAMILY TRUST CREATED JULY 25, 1988

| | |
|---|---|
| | $20.00 PAID |
| X | PCO FILED |
| | Exempt |

HEREBY GRANTS TO

**SUM M. SETO and JENNY P. SETO AS TENANTS IN COMMON,**

All the real property in the County of Mendocino, State of California, commonly known and referred to as (Property Address)

more particularly described in EXHIBIT A appended hereto and made a part hereof.

DATE: 7/3/02

Sum M. Seto
SUM M. SETO, TRUSTEE

DATE: 7/3/2002

Jenny P. Seto
JENNY P. SETO, TRUSTEE

STATE OF CALIFORNIA
SS.
COUNTY OF SAN FRANCISCO

On this 3rd day of JULY, 2002, before me, a Notary Public in and for the State of California, personally appeared SUM M. SETO and JENNYP.SETO who proved to me on the basis of satisfactory evidence to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed same in their authorized capacity, and that by their signature on the instrument, the person, or entity, upon behalf of which the persons acted, executed the instrument.

Witness my hand and official seal.

(SEAL)



Notary Public, State of California

EXHIBIT A – PAGE 1 OF 3
ALBION, CA ACREAGE

PARCEL THREE:

Those certain parcels of land situated in the Town of Albion and numbered and designated upon the map entitled "Albion" now on file in the office of the Count Recorder of the County of Mendocino, State of California.

Block 1: All
SAVING AND EXCEPTING that portion deeded to Alfred Henry Koskela, et ux, in deed recorded March 6, 1950 in Book 266, of Official Records, Page 73, Mendocino County Records.
ALSO EXCEPTING those portion s deeded to Mathew Arve Koskela, et ux, in deed recorded March 6, 1950 in Book 266 of Official Records, Page 74 Mendocino County Records.
ALSO EXCEPTING that portion deeded to Howard A Anderson, et ux, in deed recorded March 6, 1950 in Book 266 of Official Records, Page 75 Mendocino County Records.
ALSO EXCEPTING that portion deeded to Ralph William Rodgers, et ux, in deeds recorded February 20, 1951 in Book 286 of Official Records, Page 139, and in Book 284 of Official Records, Page 157, Mendocino County Records.
ALSO EXCEPTING that portion deeded to Palle Anderson in deed recorded April 13, 1954 in Book 368 of Official Records, Page 184, Mendocino County Records.

A.P. 123-050-12, 17

Block 2:
All.

A. P. 123-050-21, 22, 23

Block 6:
All.
A.P. 123-050-3

PARCEL FOUR:

Lot 5 of Section 28, Township 16 North, Range 17 West, Mount Diablo Meridian according to the official plat thereof.

A. P. 123-170-1

SAVING AND EXCEPTING a non-exclusive easement of right of way reserved unto itself by MASONITE CORPORATION, said easement to be over a 50 foot strip, 25 feet each side of the center line of the existing road running easterly from the point where Sam's Albion Flat Road enters the hereinabove described Lot 5 of Section 28 to the

Easterly line of said Lot 5 of Section 28, said easement to include the right to construct, if necessary, maintain and operate all means of transportation.

PARCEL FIVE:

All of the Southeast quarter of the Southwest quarter of Section 21, Township 16 North, Range 17 West Mount Diablo Base and Meridian lying South and East of the Deeded Masonite Corporation lands and North and West of the center of the Albion River.

A. P. 123-060-05

PARCEL SIX:

A strip of land 50 feet in width along the Southern and Eastern Bank of the Albion River, measured from the line of mean high tide, in Lot 4, Section 28, Township 16 North, Range 17 West, Mount Diablo Meridian.

A. P. 123-170-08

SAVING AND EXCEPTING a non-exclusive easement of right of way reserved unto itself by MASONITE CORPORATION, over said 50 foot strip in said Lot 4, Section 28, said easement to include the right to construct, if necessary, maintain and operate all means of transportation.

PARCEL SEVEN:

A right of way 50 feet wide for road adjoining the south bank of the Albion River in the Southeast ¼ of the Southwest ¼ of Section 21, Township 16 North, Range 17 West, Mount Diablo Meridian.

A. P. 123-060-x06, x07

SAVING AND EXCEPTING a right of way reserved unto itself by MASONTIE CORPORATION over said 50 foot right of way, said reserved right of way to be coextensive with the existing right of way.

PARCEL EIGHT:

A strip of land 100 feet wide and 40 feet wide located along the center line of a railroad (now removed) in the NW ¼ SE ¼ and the E ½ SW ¼ of Section 21, T16N, R17W, M.D.M. described as follows:



EXHIBIT A – PAGE 3 OF 3
ALBION, CA ACREAGE

COMMENCING at a point on the East line of Section 21, T16N, R17W, M.D.M from whence the Northeast corner of said Section 21 bears North 2160.3 feet, thence from a tangent that bears south 41° 51' west 27.6 feet along a 5° curve right through an angle 1° 23' thence south 43° 14' west 26.2 feet, thence 209.3 feet along a 10° curve left through an angle 20° 56' thence south 22° 18' west 19.8 feet, thence 265.3 feet along a 2° 30' curve right through an angle of 6 ° 38', thence south 28° 56' west 304.3 feet, thence 167.1 feet along a 7° 30' curve left through an angle of 12° 32', thence south 16° 24' west 21.4 feet, thence 605.2 feet along a 9° curve right through an angle of 54° 28', thence south 70° 52' west 212.1 feet, thence 163.7 feet along a 10° curve right through an angle of 16° 22', thence south 87° 14' west 153.1 feet, thence 160.8 feet along a 20° curve right through an angle of 32° 10', thence north 60° 36' west 183.0 feet, thence 329.8 feet along a 20° curve left through an angle of 65° 57' thence south 53° 27' west 298.8 feet, to a point on the approximate north bank of the Albion River and BEING THE POINT OF BEGINNING OF THE LAND CONVEYED HEREIN consisting of a strip of land 100 feet wide, being 50 feet on each side of the continued center line, thence continuing 100.2 feet along a 15° curve right through an angle of 15° 02', thence south 68° 29' west 228.8 feet, thence 86.8 feet along a 9° 30' curve left through an angle of 8° 15' to a point on the north and south one-quarter section line of said Section 21, said point being the ending of the 100 foot strip of land and the beginning of a 40 foot wide strip of land, being 20 feet wide on each side of the continued center line, thence continuing along said 9° 30' curve left a distance of 384.8 feet through an angle of 36° 33', thence south 23° 41' west, 18.8 feet, thence 70.0 feet along a 20° curve right through an angle of 14° , thence south 37° 41' west 30.3 feet, thence 180.6 feet along a 21° curve left through an angle of 37° 56', thence south 0° 15' west 222.5 feet, thence 255.0 feet along a 16° curve right through an angle of 40° 48', thence south 40° 33' west 174.0 feet thence 321.9 feet along a 7° curve right through an angle of 22° 32', thence south 63° 05' west 60.0 feet, more or less to a point on the south line of said Section 21.

SAVING AND EXCEPTING a non-exclusive easement of right of way reserved unto itself by MASONITE CORPORATION over said strip of land, said easement to include the right to construct, if necessary, maintain and operate all means of transportation.

## ILLEGIBLE NOTARY CERTIFICATION AND SEAL DECLARATION

Government Code Section 27361.7

Fill in all applicable information and print "N/A" for any items not required.

State of California )

County of San Francisco )

Name of Notary Derrell W. Gee

Place of Notary's Oath/Bond San Francisco County
(County in the seal)

Commission I.D. Number 1208220

Commission Expiration Date January 16, 2003

I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct. (CCP 2015.5)

Executed at San Francisco (Name of City), California, on JULY 3 2002 (Date)

Date JULY 24 2002

By Derrell W. Gee
(Signature)

For T. Okamoto & Co.
(Firm Name)

DERRELL W. GEE
COMM. #1208220
NOTARY PUBLIC-CALIFORNIA
SAN FRANCISCO COUNTY
My Comm. Expires Jan. 16, 2003

---

Fill in all applicable information and print "N/A" for any items not required.

State of _____ )

County of _____ )

Name of Notary _____

Place of Notary's Oath/Bond _____
(County in the seal)

Commission I.D. Number _____

Commission Expiration Date _____

I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct. (CCP 2015.5)

Executed at _____ (Name of City), California, on _____ (Date).

Date _____

By _____
(Signature)

For _____
(Firm Name)

illeg.sel

2002-16640
Page: 5 of 5

APN 123-040-07
Doc. on file with
Mendocino Co. Assessor's office.
—LAS

21701
RECORDED AT REQUEST OF
Atty
BOOK 1726 PAGE 481
DEC 29 2 14 PM '88
OFFICIAL RECORDS
MENDOCINO COUNTY CALIF
MARSHA A. YOUNG
RECORDER

# QUITCLAIM DEED

Recording requested by:
The Law Offices of
Robert Armstrong

When Recorded Mail to:
SUM M. SETO
JENNY P. SETO
459-40th Avenue
San Fransicso, CA 94121

Mail Tax Statements to
the address above

$20.00 PAID
PCO FILED
Exempt

13.00 SP

Space above for Recorder's use

Documentary Transfer Tax -0-

APN# 123-050-10 AND 123-050-11 ET. AL
Acreage, Albion, California

Robert armstrong

For a valuable consideration, receipt of which is hereby acknowledged, SUM M. SETO and JENNY P. SETO Husband and Wife as Joint Tenants, do hereby Quitclaim to SUM M. SETO and JENNY P. SETO, Co-Trustees, or their Successors in Trust, under the SETO FAMILY TRUST, dated July 25, 1988, and any amendments thereto,

the following described real property in the County of Mendocino, State of California:

See legal description on "Exhibit A", attached hereto by this reference incorporated herein.

Date: OCT 06 1988

SUM M. SETO

Jenny P. Seto
JENNY P. SETO

State of California )
County of San Fransicso ) SS

REVOCABLE TRUST TRANSFER
EXEMPT FROM REAPPRAISAL

On OCT 06 1988 before me, the undersigned, a Notary Public in and for said County and State, personally appeared SUM M. SETO and JENNY P. SETO, known to me to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same.

Mary K. Sullivan
Notary Public

OFFICIAL SEAL
MARY K SULLIVAN
NOTARY PUBLIC - CALIFORNIA
SAN FRANCISCO COUNTY
My comm. expires JUN 12, 1992

13.00

PARCEL THREE:

Those certain parcels of land situated in the Town of Albion and numbered and designated upon the map entitled "Albion" now on file in the office of the County Recorder of the County of Mendocino, State of California.

Block 1: All
SAVING AND EXCEPTING that portion deeded to Alfred Henry Koskela, et ux, in deed recorded March 6, 1950 in Book 266, of Official Records, Page 73, Mendocino County Records.
ALSO EXCEPTING those portions deeded to Mathew Arve Koskela, et ux, in deed recorded March 6, 1950 in Book 266 of Official Records, Page 74, Mendocino County Records.
ALSO EXCEPTING that portion deeded to Howard A. Anderson, et ux, in deed recorded March 6, 1950 in Book 266 of Official Records, Page 75, Mendocino County Records.
ALSO EXCEPTING that portion deeded to Ralph William Rodgers, et ux, in deeds recorded February 20, 1951 in Book 286 of Official Records, Page 139, and in Book 284 of Official Records, Page 157, Mendocino County Records.
ALSO EXCEPTING that portion deeded to Palle Anderson in deed recorded April 13, 1954 in Book 368 of Official Records, Page 184, Mendocino County Records.

A. P. 123-050-12,17

Block 2:
All.
A. P. 123-050-21, 22, 23

Block 6:
All.
A. P. 123-050-3

PARCEL FOUR:

Lot 5 of Section 28, Township 16 North, Range 17 West, Mount Diablo Meridian according to the official plat thereof.

A. P. 123-170-1

SAVING AND EXCEPTING a non-exclusive easement of right of way reserved unto itself by MASONITE CORPORATION, said easement to be over a 50 foot strip, 25 feet each side of the center line of the existing road running easterly from the point where Sam's Albion Flat Road enters the hereinabove described Lot 5 of Section 28 to the easterly line of said Lot 5 of Section 28, said easement to include the right to construct, if necessary, maintain and operate all means of transportation.

PARCEL FIVE:

All of the Southeast quarter of the Southwest quarter of Section 21, Township 16 North, Range 17 West, Mount Diablo Base and Meridian lying South and East of the Deeded Masonite Corporation lands and North and West of the center of the Albion River.

A. P. 123-060-05

section line of said Section 21, said point being the ending of the 100 foot strip of land and the beginning of a 40 foot wide strip of land, being 20 feet wide on each side of the continued center line, thence continuing along said 9° 30' curve left a distance of 384.8 feet through an angle of 36° 33', thence south 23° 41' west, 18.8 feet, thence 70.0 feet along a 20° curve right through an angle of 14°, thence south 37° 41' west 30.3 feet, thence 180.6 feet along a 21° curve left through an angle of 37° 56', thence south 0° 15' west 222.5 feet, thence 255.0 feet along a 16° curve right through an angle of 40° 48', thence south 40° 33' west 174.0 feet thence 321.9 feet along a 7° curve right through an angle of 22° 32', thence south 63° 05' west 60.0 feet, more or less to a point on the south line of said Section 21.

SAVING AND EXCEPTING a non-exclusive easement of right of way reserved unto itself by MASONITE CORPORATION over said strip of land, said easement to include the right to construct, if necessary, maintain and operate all means of transportation.

**DEPARTMENT OF TRANSPORTATION**
DISTRICT 1, P. O. BOX 3700
EUREKA, CA 95502-3700
PHONE (707) 445-6554
FAX (707) 441-5733
TTY 711

*Making Conservation a California Way of Life.*

RECEIVED
AUG 22 2018
CALIFORNIA
COASTAL COMMISSION
NORTH COAST DISTRICT

August 21, 2018

Seto Properties LLC
3775 Balboa St.
San Francisco, CA
94121-2605

Dear Mr. Nanya:

The California Department of Transportation (Caltrans) is proposing to conduct a geotechnical investigation to provide data for the Albion River Bridge Rehabilitation/ Replacement project. The purpose of the geotechnical studies is to acquire the information necessary to determine the appropriate alignments and parameters for the design of the Project. This information includes the engineering properties of the soil and/or rock in the potential Project area, and the areal extent, depth, and thickness of each identifiable soil or rock unit. The extent of the exploration and testing, and the number of measurements of each unit or stratum of soil and/or rock, must give a reasonable degree of confidence in the properties measured.

The State will require entry onto the subject properties for a total of eight active work weeks, with an estimated five to ten days for tree removal, up to two weeks for earthwork, up to four weeks for geotechnical studies, and up to two weeks to restore the ground contours to prior conditions. Some of the project components will overlap. The work would be performed on weekdays, from 8:00 a.m. to 5:00 p.m.

Coastal Act Section 30601.5 directs: "Where the applicant for a Coastal Development Permit is not the owner of a fee interest in the property on which a proposed development is to be located, but can demonstrate a legal right, interest, or other entitlement to use the property for the proposed development, the commission shall not require the holder or owner of any superior interest in the property to join the applicant as a co-applicant. All holders or owners of any other interests of record in the affected property shall be notified in writing of the permit application and invited to join as co-applicant. In addition, prior to the issuance of a coastal development permit, the applicant shall demonstrate the authority to comply with all conditions of approval."

In compliance with Section 30601.5 of the Coastal Act, we invite you as an owner of the affected property to join as co-applicant for the CDP application for the proposed geotechnical investigation.

The attached ownership exhibit and record deeds demonstrate that the Seto Family Trust has retained the underlying fee interest to lands that the State has a highway easement along and across. The Mendocino County Assessor's office does not include the area that the Seto Family Trust retained an underlying fee interest as shown on APN 123-040-07. Because of this, Caltrans is sending you this letter inviting you to act as co-applicant for those lands.

Caltrans has a broad legal interest in the property which covers the scope of anticipated conditions, including revegetation. Specifically, the highway easement deed provides "a right of way for Bridge and State Highway over, upon and across the … described lands…," subject to only narrow reservations by the underlying fee owner for defined sewer and transportation/access purposes in specific locations. This broad grant of right-of-way includes the right to conduct activities other than the operation of the highway itself. (See, Streets and Highways Code section 660 [State "highway" includes the entire right-of-way granted in the easement deed, "whether or not the entire area is actually used for highway purposes"].)

Please respond to this letter at your earliest convenience to let us know whether you accept or decline. If you accept, please sign the enclosed application under Item 3 of Section VII. If you choose to authorize Caltrans or another party to act as your agent or representative in this matter, please fill in the blank in Section VIII and sign the signature block in that section.

Should you have any questions, feel free to contact me at (707) 445-6554, or Liza Walker, Senior Environmental Planner, at (707) 441-5602.

Sincerely,

FRANK DEMLING, PLS
Project Manager

Enclosure
c: Daryl Shefrey

RECEIVED
AUG 22 2018
CALIFORNIA
COASTAL COMMISSION
NORTH COAST DISTRICT

preliminary title reports, land surveys, legal descriptions, subordination agreements, and other outside agreements will be required prior to issuance of the permit.

In addition, the Commission may adopt or amend regulations affecting the issuance of coastal development permits. If you would like notice of such proposals during the pendency of this application, if such proposals are reasonably related to this application, indicate that desire..... ☒ Yes ☐ No

## SECTION VI. COMMUNICATION WITH COMMISSIONERS

Decisions of the Coastal Commission must be made on the basis of information in the public record available to all commissioners and the public. Permit applicants and interested parties and their representatives may contact individual commissioners to discuss permit matters outside the public hearing (an "ex parte" communication). However, the commissioner must provide a complete description of the communication either in writing prior to the hearing or at the public hearing, to assure that such communication does not jeopardize the fairness of the hearing or potentially result in invalidation of the Commission's decision by a court. Any written material sent to a commissioner should also be sent to the commission's office in San Francisco and the appropriate district office for inclusion in the public record and distribution to other commissioners.

## SECTION VII. CERTIFICATION

1. I hereby certify that I, or my authorized representative, have completed and posted or will post the **Notice of Pending Permit** stock card in a conspicuous place on the property within three days of submitting the application to the Commission office.

2. I hereby certify that I have read this completed application and that, to the best of my knowledge, the information in this application and all attached appendices and exhibits is complete and correct. I understand that the failure to provide any requested information or any misstatements submitted in support of the application shall be grounds for either refusing to accept this application, for denying the permit, for suspending or revoking a permit issued on the basis of such misrepresentations, or for seeking of such further relief as may seem proper to the Commission.

3. I hereby authorize representatives of the California Coastal Commission to conduct site inspections on my property. Unless arranged otherwise, these site inspections shall take place between the hours of 8:00 A.M. and 5:00 P.M.

_____

*Signature of Authorized Agent(s) or if no agent, signature of* ***Applicant***

***NOTE: IF SIGNED ABOVE BY AGENT, APPLICANT MUST SIGN BELOW.***

## SECTION VIII. AUTHORIZATION OF AGENT

I hereby authorize _____ to act as my representative

and to bind me in all matters concerning this application.

_____

*Signature of Applicant(s)*
*(Only the applicant(s) may sign here to authorize an agent)*

**DEPARTMENT OF TRANSPORTATION**
DISTRICT 1, P. O. BOX 3700
EUREKA, CA 95502-3700
PHONE (707) 445-6554
FAX (707) 445-7810
TTY 711

*Making Conservation a California Way of Life.*

August 7, 2018

**RECEIVED**
AUG 13 2018
CALIFORNIA
COASTAL COMMISSION
NORTH COAST DISTRICT

Masonite Corporate Headquarters
One Tampa City Center
201 North Franklin Street Suite 300
Tampa, FL 33602

To Whom It May Concern:

The California Department of Transportation (Caltrans) is proposing to conduct a geotechnical investigation to provide data for the Albion River Bridge Rehabilitation/ Replacement project. The purpose of the geotechnical studies is to acquire the information necessary to determine the appropriate alignments and parameters for the design of the Project. This information includes the engineering properties of the soil and/or rock in the potential Project area, and the areal extent, depth, and thickness of each identifiable soil or rock unit. The extent of the exploration and testing, and the number of measurements of each unit or stratum of soil and/or rock, must give a reasonable degree of confidence in the properties measured.

The State will require entry onto the subject properties for a total of eight active work weeks, with an estimated five to ten days for tree removal, up to two weeks for earthwork, up to four weeks for geotechnical studies, and up to two weeks to restore the ground contours to prior conditions. Some of the project components will overlap. The work would be performed on weekdays, from 8:00 a.m. to 5:00 p.m.

Coastal Act Section 30601.5 directs: "Where the applicant for a Coastal Development Permit is not the owner of a fee interest in the property on which a proposed development is to be located, but can demonstrate a legal right, interest, or other entitlement to use the property for the proposed development, the commission shall not require the holder or owner of any superior interest in the property to join the applicant as a co-applicant. All holders or owners of any other interests of record in the affected property shall be notified in writing of the permit application and invited to join as co-applicant. In addition, prior to the issuance of a coastal development permit, the applicant shall demonstrate the authority to comply with all conditions of approval."

In compliance with Section 30601.5 of the Coastal Act, we invite you as an owner of the affected property to join as co-applicant for the CDP application for the proposed geotechnical investigation.

Please respond to this letter at your earliest convenience to let us know whether you accept or decline. If you accept, please sign the enclosed application under Item 3 of Section VII. If you choose to authorize Caltrans or another party to act as your agent or representative in this matter, please fill in the blank in Section VIII and sign the signature block in that section.

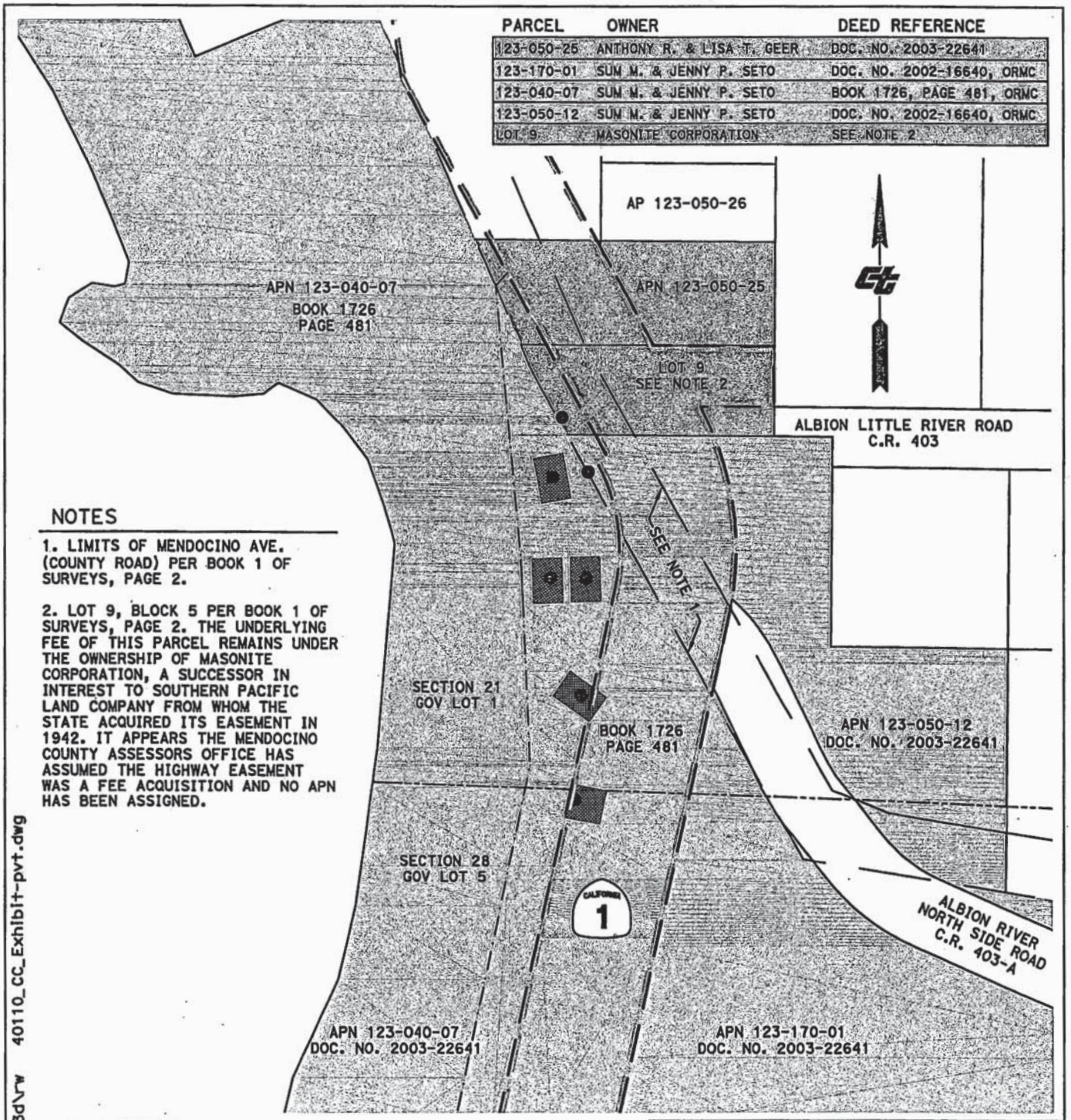
Should you have any questions, feel free to contact me at (707) 445-6554, or Liza Walker, Senior Environmental Planner, at (707) 441-5602.

Sincerely,

JEFF PIMENTEL
FOR

FRANK DEMLING, PLS
Project Manager

Enclosure




## NOTES

1. LIMITS OF MENDOCINO AVE. (COUNTY ROAD) PER BOOK 1 OF SURVEYS, PAGE 2.

2. LOT 9, BLOCK 5 PER BOOK 1 OF SURVEYS, PAGE 2. THE UNDERLYING FEE OF THIS PARCEL REMAINS UNDER THE OWNERSHIP OF MASONITE CORPORATION, A SUCCESSOR IN INTEREST TO SOUTHERN PACIFIC LAND COMPANY FROM WHOM THE STATE ACQUIRED ITS EASEMENT IN 1942. IT APPEARS THE MENDOCINO COUNTY ASSESSORS OFFICE HAS ASSUMED THE HIGHWAY EASEMENT WAS A FEE ACQUISITION AND NO APN HAS BEEN ASSIGNED.

## LEGEND

| | |
|---|---|
| MCR | MENDOCINO COUNTY RECORDS |
| ORMC | OFFICIAL RECORDS MENDOCINO COUNTY |
| — · — · — | TEMPORARY CONSTRUCTION EASEMENT |
| ═══ ═══ | LIMITS OF HIGHWAY EASEMENT PER BOOK 162, PAGE 76, ORMC. |
| ——— | APPROXIMATE SECTION LINE |
| ● | VERTICAL BORING |
| ▬ | BRUSHING LIMITS FOR DRILL PLATFORM |

STATE OF CALIFORNIA
CALIFORNIA STATE TRANSPORTATION AGENCY
DEPARTMENT OF TRANSPORTATION

# RIGHT OF WAY

## IN SECTIONS 21 & 28 T.16N., R.17W., M.D.B. & M.

## OWNERSHIP EXHIBIT

SCALE: 1" = 120'

FEET 0 60 120 240

| DRAFTED BY | DATE | DISTRICT | COUNTY | ROUTE | SHEET PM | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|
| PVT | 08/07/18 | 1 | MEN | 001 | 44 | 1 | 1 |

\\sv01caddvnx1\SURV1\01\40110\c3d\rw 40110_CC_Exhibit-pvt.dwg

preliminary title reports, land surveys, legal descriptions, subordination agreements, and other outside agreements will be required prior to issuance of the permit.

In addition, the Commission may adopt or amend regulations affecting the issuance of coastal development permits. If you would like notice of such proposals during the pendency of this application, if such proposals are reasonably related to this application, indicate that desire..... ☒ Yes ☐ No

## SECTION VI. COMMUNICATION WITH COMMISSIONERS

Decisions of the Coastal Commission must be made on the basis of information in the public record available to all commissioners and the public. Permit applicants and interested parties and their representatives may contact individual commissioners to discuss permit matters outside the public hearing (an "ex parte" communication). However, the commissioner must provide a complete description of the communication either in writing prior to the hearing or at the public hearing, to assure that such communication does not jeopardize the fairness of the hearing or potentially result in invalidation of the Commission's decision by a court. Any written material sent to a commissioner should also be sent to the commission's office in San Francisco and the appropriate district office for inclusion in the public record and distribution to other commissioners.

## SECTION VII. CERTIFICATION

1. I hereby certify that I, or my authorized representative, have completed and posted or will post the **Notice of Pending Permit** stock card in a conspicuous place on the property within three days of submitting the application to the Commission office.

2. I hereby certify that I have read this completed application and that, to the best of my knowledge, the information in this application and all attached appendices and exhibits is complete and correct. I understand that the failure to provide any requested information or any misstatements submitted in support of the application shall be grounds for either refusing to accept this application, for denying the permit, for suspending or revoking a permit issued on the basis of such misrepresentations, or for seeking of such further relief as may seem proper to the Commission.

3. I hereby authorize representatives of the California Coastal Commission to conduct site inspections on my property. Unless arranged otherwise, these site inspections shall take place between the hours of 8:00 A.M. and 5:00 P.M.

_____

*Signature of Authorized Agent(s) or if no agent, signature of **Applicant***

***NOTE: IF SIGNED ABOVE BY AGENT, APPLICANT MUST SIGN BELOW.***

## SECTION VIII. AUTHORIZATION OF AGENT

I hereby authorize _____ to act as my representative

and to bind me in all matters concerning this application.

_____

*Signature of Applicant(s)*
*(Only the applicant(s) may sign here to authorize an agent)*

**DEPARTMENT OF TRANSPORTATION**
DISTRICT 1, P. O. BOX 3700
EUREKA, CA 95502-3700
PHONE (707) 445-6554
FAX (707) 445-7810
TTY 711

*Making Conservation a California Way of Life.*

August 7, 2018

RECEIVED
AUG 13 2018
CALIFORNIA
COASTAL COMMISSION
NORTH COAST DISTRICT

Anthony and Lisa Geer
P.O. Box 688
Albion, CA 95432

Dear Mr. & Ms. Geer:

The California Department of Transportation (Caltrans) is proposing to conduct a geotechnical investigation to provide data for the Albion River Bridge Rehabilitation/ Replacement project. The purpose of the geotechnical studies is to acquire the information necessary to determine the appropriate alignments and parameters for the design of the Project. This information includes the engineering properties of the soil and/or rock in the potential Project area, and the areal extent, depth, and thickness of each identifiable soil or rock unit. The extent of the exploration and testing, and the number of measurements of each unit or stratum of soil and/or rock, must give a reasonable degree of confidence in the properties measured.

The State will require entry onto the subject properties for a total of eight active work weeks, with an estimated five to ten days for tree removal, up to two weeks for earthwork, up to four weeks for geotechnical studies, and up to two weeks to restore the ground contours to prior conditions. Some of the project components will overlap. The work would be performed on weekdays, from 8:00 a.m. to 5:00 p.m.

Coastal Act Section 30601.5 directs: "Where the applicant for a Coastal Development Permit is not the owner of a fee interest in the property on which a proposed development is to be located, but can demonstrate a legal right, interest, or other entitlement to use the property for the proposed development, the commission shall not require the holder or owner of any superior interest in the property to join the applicant as a co-applicant. All holders or owners of any other interests of record in the affected property shall be notified in writing of the permit application and invited to join as co-applicant. In addition, prior to the issuance of a coastal development permit, the applicant shall demonstrate the authority to comply with all conditions of approval."

In compliance with Section 30601.5 of the Coastal Act, we invite you as an owner of the affected property to join as co-applicant for the CDP application for the proposed geotechnical investigation.

Please respond to this letter at your earliest convenience to let us know whether you accept or decline. If you accept, please sign the enclosed application under Item 3 of Section VII. If you choose to authorize Caltrans or another party to act as your agent or representative in this matter, please fill in the blank in Section VIII and sign the signature block in that section.

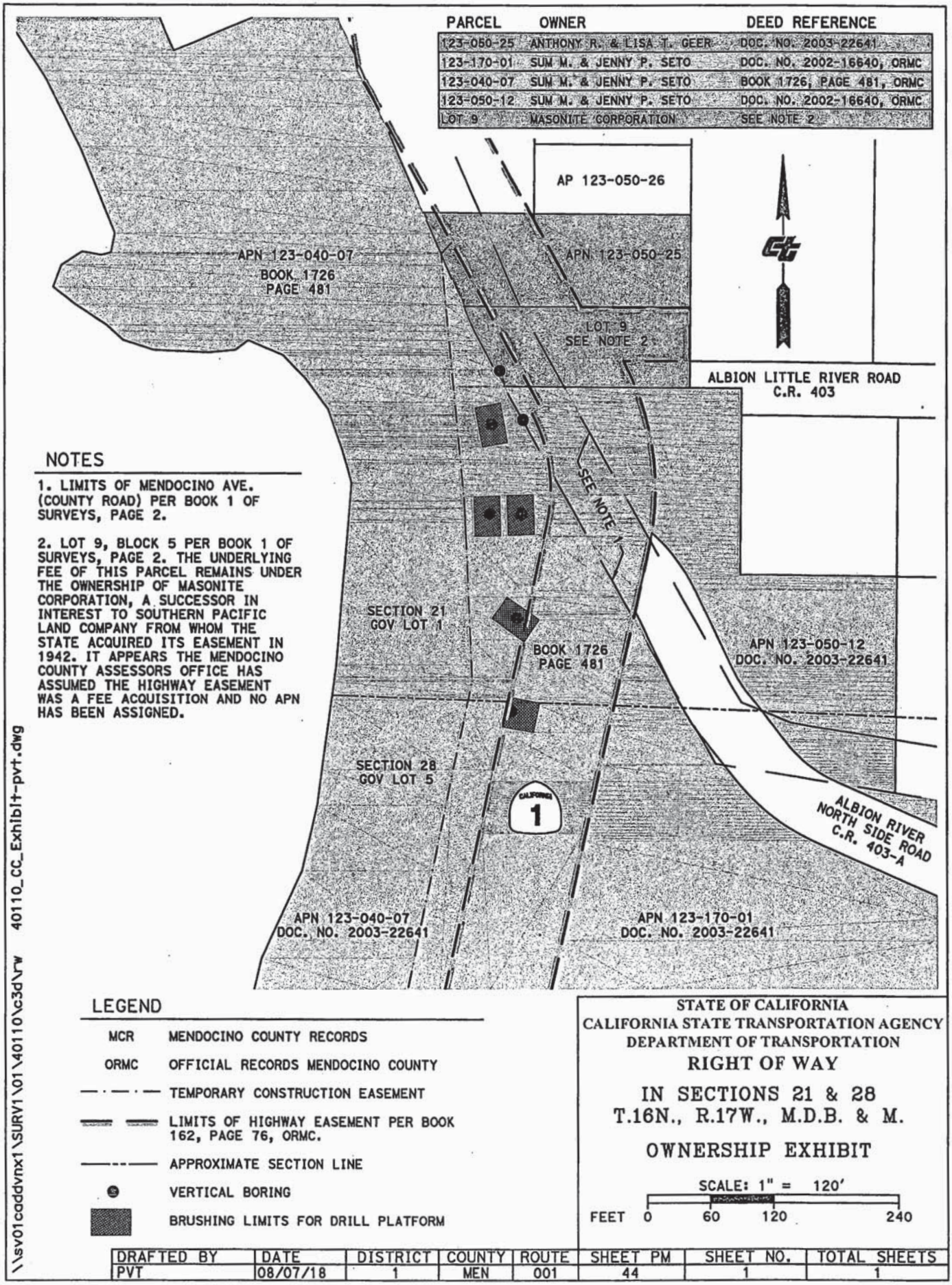
Should you have any questions, feel free to contact me at (707) 445-6554, or Liza Walker, Senior Environmental Planner, at (707) 441-5602.

Sincerely,

JEFF PLUNTZ FOR

FRANK DEMLING, PLS
Project Manager

Enclosure




## NOTES

1. LIMITS OF MENDOCINO AVE. (COUNTY ROAD) PER BOOK 1 OF SURVEYS, PAGE 2.

2. LOT 9, BLOCK 5 PER BOOK 1 OF SURVEYS, PAGE 2. THE UNDERLYING FEE OF THIS PARCEL REMAINS UNDER THE OWNERSHIP OF MASONITE CORPORATION, A SUCCESSOR IN INTEREST TO SOUTHERN PACIFIC LAND COMPANY FROM WHOM THE STATE ACQUIRED ITS EASEMENT IN 1942. IT APPEARS THE MENDOCINO COUNTY ASSESSORS OFFICE HAS ASSUMED THE HIGHWAY EASEMENT WAS A FEE ACQUISITION AND NO APN HAS BEEN ASSIGNED.

## LEGEND

| | |
|---|---|
| MCR | MENDOCINO COUNTY RECORDS |
| ORMC | OFFICIAL RECORDS MENDOCINO COUNTY |
| — · — · — | TEMPORARY CONSTRUCTION EASEMENT |
| ═══ ═══ | LIMITS OF HIGHWAY EASEMENT PER BOOK 162, PAGE 76, ORMC. |
| ——·——·—— | APPROXIMATE SECTION LINE |
| ⊕ | VERTICAL BORING |
| ▓ | BRUSHING LIMITS FOR DRILL PLATFORM |

STATE OF CALIFORNIA
CALIFORNIA STATE TRANSPORTATION AGENCY
DEPARTMENT OF TRANSPORTATION

# RIGHT OF WAY

## IN SECTIONS 21 & 28
## T.16N., R.17W., M.D.B. & M.

## OWNERSHIP EXHIBIT

SCALE: 1" = 120'

FEET 0 60 120 240

| DRAFTED BY | DATE | DISTRICT | COUNTY | ROUTE | SHEET PM | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|
| PVT | 08/07/18 | 1 | MEN | 001 | 44 | 1 | 1 |

\\sv01caddvnx1\SURV1\01\40110\c3d\rw 40110_CC_Exhibit-pvt.dwg

preliminary title reports, land surveys, legal descriptions, subordination agreements, and other outside agreements will be required prior to issuance of the permit.

In addition, the Commission may adopt or amend regulations affecting the issuance of coastal development permits. If you would like notice of such proposals during the pendency of this application, if such proposals are reasonably related to this application, indicate that desire. ☒ Yes ☐ No

## SECTION VI. COMMUNICATION WITH COMMISSIONERS

Decisions of the Coastal Commission must be made on the basis of information in the public record available to all commissioners and the public. Permit applicants and interested parties and their representatives may contact individual commissioners to discuss permit matters outside the public hearing (an "ex parte" communication). However, the commissioner must provide a complete description of the communication either in writing prior to the hearing or at the public hearing, to assure that such communication does not jeopardize the fairness of the hearing or potentially result in invalidation of the Commission's decision by a court. Any written material sent to a commissioner should also be sent to the commission's office in San Francisco and the appropriate district office for inclusion in the public record and distribution to other commissioners.

## SECTION VII. CERTIFICATION

1. I hereby certify that I, or my authorized representative, have completed and posted or will post the **Notice of Pending Permit** stock card in a conspicuous place on the property within three days of submitting the application to the Commission office.

2. I hereby certify that I have read this completed application and that, to the best of my knowledge, the information in this application and all attached appendices and exhibits is complete and correct. I understand that the failure to provide any requested information or any misstatements submitted in support of the application shall be grounds for either refusing to accept this application, for denying the permit, for suspending or revoking a permit issued on the basis of such misrepresentations, or for seeking of such further relief as may seem proper to the Commission.

3. I hereby authorize representatives of the California Coastal Commission to conduct site inspections on my property. Unless arranged otherwise, these site inspections shall take place between the hours of 8:00 A.M. and 5:00 P.M.

_____

*Signature of Authorized Agent(s) or if no agent, signature of* ***Applicant***

***NOTE: IF SIGNED ABOVE BY AGENT, APPLICANT MUST SIGN BELOW.***

## SECTION VIII. AUTHORIZATION OF AGENT

I hereby authorize _____ to act as my representative

and to bind me in all matters concerning this application.

_____

*Signature of Applicant(s)*
*(Only the applicant(s) may sign here to authorize an agent)*

RECEIVED
MAY 01 2018

# EXPARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner Donne Brownsey

1)Name or description of project
Item May 2018 Agenda Item W10 (a) Application No. 1-16-0899 CalTrans Albion River Bridge Permit application for Geotechnical studies. The item was postponed.

2) Date and time of receipt of communication: April 30, 2018 at 2pm

3) Location of communication: The Flow Restaurant in Mendocino CA

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Leonardo Bowers

5) Identity of
person(s) on whose behalf communication was made: Leonardo Bowers on behalf of a local community technical committee formed to review the Albion River Bridge matters

6) Identity of persons(s) receiving communication: Donne Brownsey

7) Identity of all person(s) present during the communication: Donne Brownsey and Leonardo Bowers

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

Bowers provided a history of the Albion River bridge and a recent history of the community groups formed in response to the CalTrans activity regarding the repair and/or replacement of the bridge. Bowers

**EXHIBIT NO. 23**

**Ex Parte Correspondence**

CDP No. 1-16-0899 (Caltrans)
**(1 of 123)**

enumerated the technical concerns with the dilapidated condition of the bridge including safety issues for heavy loads, chromium leakage from the bridge timber and other engineering concerns. He stated that the Fire District are so concerned that they had to reduce the safety rating and would be unable to fill the tanks of the fire trucks due to the concern over the load bearing capacity of the bridge.

Bowers is a retired engineer who during his career had extensive experience with bridge construction and repair. He indicated that a number of community groups and members shared his concerns and that some of them would be sending in their concerns to Commission staff.

He did not provide me with any materials but referred to CalTrans documents which the Commission staff have received. He had sent a letter to the Commission which I forwarded to the staff earlier.

Date: May 1, 2018

Signature of Commissioner

Donne Brownsey

Donne Brownsey

TIMING FOR FILING OF DISCLOSURE FORM

File this form
with the Executive Directorwithin seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

Ms Dayna Bocheo Chairperson April 16, 2018
California Coastal Commission
45 Freemont St. Suite 2000
San Francisco, Ca. 94105-2221

Re: Salmon Creek/Albion River Bridge Replacement – May 9, 2018 meeting

Dear Commissioners;

As Civil Engineer leader of the Albion Technical Bridge Advisory Committee, (all residents of Albion), we want you to know that we support the Request by Caltrans to advance the Bridge Replacement process by approving their request to do Geotechnical Investigation at the site. In addition, please advocate an increase in maintenance efforts of the existing bridges. It is absolutely essential to the economy of our Coastal Region that the bridges not fail before the replacements can be constructed.

These past four years I've studied the bridges, including reading 75 years of maintenance and construction reports. I concur that there appears to be accelerating aging. For example, the first threaded rods and bolts holding the bridge together lasted seven years before some replacement was needed; this time frame is now one year! Wooden timbers are showing signs consistent with over loadings and advanced aging.

These bridges carry approximately 1 million vehicles per year. If failure were to occur it will take between 1 and 2 years to reconstruct the Transportation Corridor. I'm reminded of the truism, "It's the Economy Stupid"! Our Coastal Economy is: Fishing, Lumber, Tourism and Services. The first two are already in failure mode. Without intact bridging we would revert to depression mode.

State Highway #1 Traffic Corridor was created by the first Statewide Bond measure. This election in 1905 moved the Coastal Transportation Corridor from the Ocean to the Land. Caltrans is now planning the 4th crossing of Albion Canyon.

Almost all of the people that we know in the area want to have you vote to advance our access and safety. Yes there is a small group of Albion dissenters . We have heard their arguments which are basically political and nostalgic. Do your job. Protect and advance the State's interest in the Coastal Transportation System.

Thank you for your service,

Leonardo Bowers , RCE 21,001, 29801 Navarro Ridge Road , Albion, Ca. 95410

Members Albion Technical Bridge Advisory Committee:
Marc Schoen, Mike Issel, Dr. Terry Surles, Hugh Foster, Rod Lorimer, Lee Welty, Bob Schloser , Leonardo Bowers

**From:** Leonardo Bowers <leonardo@mcn.org>
**Subject: Salmon Creek/Albion River Bridge Replacement**
**Date:** April 15, 2018 at 4:16:50 PM PDT
**To:** Donne@donnebrownsey.com
**Cc:** Bowers <highpt@mcn.org>

Donne - I'm Karen Bowers husband. Or as I was referred to last night, Mr. Karen. :)

I'm writing to engage you in the discussion of the Albion Bridge. To be very blunt, It's failing. The matter will be before the Coastal Commission shortly.
Attached is the submittal of the Albion Technical Bridge Advisory Committee to your body. I am beginning to be more than concerned. Caltrans has
been recommending for the last 15 years that the Albion River Bridge needs replacement (My local problem here is that people don't trust Caltrans).
The last CT inspection shows serous accelerated aging!

This matter will be coming up at Monday's meeting of the Albion/little River Fire District Board. The fact is that the ABR bridge is no longer rated to to carry
not only our Fire district equipment, but equipment from the surrounding departments. We need to start local protective measures. Reduce the amount of water in our rigs.
Post mandatory regulatory load limits on the route. Formally declare a public hazard and ask for assistance. Such as load enforcement from the CHP. Modifying the automatic
Routing approval Map for overweight over wide loads, Broadband service……...

Getting CT going on the Geotechnical foundation work is critical. I'd like to see the Commission start a fire under the CT for the processing, design, and construction.

My basic understanding is that if we really want to get this moving it would take Gov. Jerry Brown to declare an emergency. In any event you are our local representative.

Let's talk! Leonardo 707-937-3163

RECEIVED
MAY 01 2018

# EXPARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner Donne Brownsey

1)Name or description of project
Item May 2018 Agenda Item W10 (a) Application No. 1-16-0899 CalTrans Albion River Bridge Permit application for Geotechnical studies. The item was postponed.

2) Date and time of receipt of communication: April 30, 2018 at 3pm

3) Location of communication: The Albion River Inn Restaurant in Albion CA

4) Identity of person(s) initiating communication: Annemarie Weibel

5) Identity of
person(s) on whose behalf communication was made: Annemarie Weibel, Peter Wells, Stevie and Norbert Dall

6) Identity of persons(s) receiving communication: Donne Brownsey

7) Identity of all person(s) present during the communication: Donne Brownsey, Annemarie Weibel on behalf of the Albion River Stewards, Peter Wells, owner of the Albion River Inn and Restaurant, Stevie and Norbert Dall on behalf of their client Whitesboro Farm owned by John Danhakl.

The group had a packet of pictures and other documents which they indicated would be submitted to the Commission's North Coast regional office. I was provided with a copy of the May issue of the Real Estate Magazine which featured an article by Ms. Weibel on the bridge. This is a publicly available newspaper. Finally they provided me with a copy of the letter submitted to the Coastal staff on April 26, 2018 from RWG Law firm filed on behalf of Mr. Danhakl. The group provided a history of the Albion River bridge and a recent history of

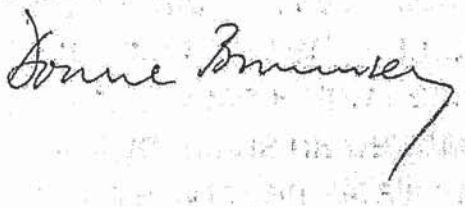
the community groups formed in response to the CalTrans activity regarding the repair and/or replacement of the bridge.

The group had a number of concerns and enumerated many of them during the meeting. Overall their opinion is that the bridge should not be replaced at this time but repaired. Further that the entire project should be before the Commission for approval and not the initial phase of the geotechnical survey solely. They view it as a historical point of interest for the community that enhances the scenic value. The group asserts that the bridge is not structurally deficient nor functionally obsolete. The Dalls articulated a number of Coastal Act provisions that they believe the CalTrans proposed study would violate including but not limited to ESHA and the highly scenic rating of the area. Wells was specifically concerned about the construction impacts on his restaurant and inn including significant visual and sound disturbances. Weibel focused on negative impacts of the unpermitted berm activities and the historical nature of the bridge.

Also discussed was the timing of the studies and construction that would negatively impact visitor serving businesses as well as construction staging problems especially related to the seismic drilling in the hillsides on either side of the bridge and the impact on the trees and other vegetation.

Date: May 1, 2018

Signature of Commissioner

Donne Brownsey 

# EX PARTE COMMUNICATION DISCLOSURE FORM

Filed by Commissioner: Donne Brownsey

1) Name or description of project: Albion Bridge Geotech Investigation 1-16-0899

2) Date and time of receipt of communication: April 16, 2018

3) Location of communication: Temple Coffee 22nd & K Sacramento, CA

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Frank Demling, Project Manager

5) Identity of person(s) on whose behalf communication was made: Caltrans District 1

6) Identity of persons(s) receiving communication: Donne Brownsey

7) Identity of all person(s) present during the communication: Frank Demling Sandra Rosas, Supervising Environmental Planner (EP); Liza Walker, Senior EP

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

Plan to Perform Geotechnical Investigation
Albion Bridge Fact Sheet, Advance Planning Study Submittal
Alternative 1E Planning Study, Alternative 1F Planning Study
Notice of Pending Permit and Evidence of Posting
Geotechnical Investigation Grading Plan and Photo Simulations
Photo example of geotechnical drill rig

See page 2 for discussion.

4.17.18
Date

Donne Brownsey
Signature of Commissioner

**TIMING FOR FILING OF DISCLOSURE FORM:** File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

CalTrans Staff noted that they would be delivering all of the documents that they provided me to the North Coast District office.

The meeting was a briefing to discuss the elements relating to all the phases of the Albion River Bridge project specifically the item relating to the May Agenda Item which is the permit for the geotechnical investigation plan. The staff explained the problems with degradation to the timber and the leaching of chromates from same.

Economic considerations also factor in with respect to the decision to rebuild or replace with the federal government paying 88% of the costs for rebuilding and the state paying 100% of the costs for maintenance.

Concerned about seismic impact, cost effective alternatives and split community feelings surround this project. The staff provided background on the long term nature of the project and that of CalTrans objectives to survey and potentially repair or rebuild a number of bridges located on the Mendocino coast.

**From:** Leonardo Bowers <leonardo@mcn.org>
**Date:** April 15, 2018 at 4:16:50 PM PDT
**To:** Donne@donnebrownsey.com
**Cc:** Bowers <highpt@mcn.org>
**Subject: Salmon Creek/Albion River Bridge Replacement**

Donne - I'm Karen Bowers husband. Or as I was referred to last night, Mr. Karen. :)

I'm writing to engage you in the discussion of the Albion Bridge. To be very blunt, It's failing. The matter will be before the Coastal Commission shortly.
Attached is the submittal of the Albion Technical Bridge Advisory Committee to your body. I am beginning to be more than concerned. Caltrans has
been recommending for the last 15 years that the Albion River Bridge needs replacement (My local problem here is that people don't trust Caltrans).
The last CT inspection shows serous accelerated aging!

This matter will be coming up at Monday's meeting of the Albion/little River Fire District Board. The fact is that the ABR bridge is no longer rated to to carry
not only our Fire district equipment, but equipment from the surrounding departments. We need to start local protective measures. Reduce the amount of water in our rigs.
Post mandatory regulatory load limits on the route. Formally declare a public hazard and ask for assistance. Such as load enforcement from the CHP. Modifying the automatic
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Getting CT going on the Geotechnical foundation work is critical. I'd like to see the Commission start a fire under the CT for the processing, design, and construction.

My basic understanding is that if we really want to get this moving it would take Gov. Jerry Brown to declare an emergency. In any event you are our local representative.

Let's talk! Leonardo 707-937-3163

Ms Dayna Bocheo Chairperson
California Coastal Commission
45 Freemont St. Suite 2000
San Francisco, Ca. 94105-2221

April 16, 2018

Re: Salmon Creek/Albion River Bridge Replacement – May 9, 2018 meeting

Dear Commissioners;

As Civil Engineer leader of the Albion Technical Bridge Advisory Committee, (all residents of Albion), we want you to know that we support the Request by Caltrans to advance the Bridge Replacement process by approving their request to do Geotechnical Investigation at the site. In addition, please advocate an increase in maintenance efforts of the existing bridges. It is absolutely essential to the economy of our Coastal Region that the bridges not fail before the replacements can be constructed.

These past four years I've studied the bridges, including reading 75 years of maintenance and construction reports. I concur that there appears to be accelerating aging. For example, the first threaded rods and bolts holding the bridge together lasted seven years before some replacement was needed; this time frame is now one year! Wooden timbers are showing signs consistent with over loadings and advanced aging.

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Almost all of the people that we know in the area want to have you vote to advance our access and safety. Yes there is a small group of Albion dissenters. We have heard their arguments which are basically political and nostalgic. Do your job. Protect and advance the State's interest in the Coastal Transportation System.

Thank you for your service,

Leonardo Bowers, RCE 21,001, 29801 Navarro Ridge Road, Albion, Ca. 95410

Members Albion Technical Bridge Advisory Committee:
Marc Schoen, Mike Issel, Dr. Terry Surles, Hugh Foster, Rod Lorimer, Lee Welty, Bob Schloser, Leonardo Bowers

# EX PARTE COMMUNICATION DISCLOSURE FORM

RECEIVED
APR 02 2018

Filed by Commissioner: Ryan Sundberg

1) Name or description of project: Albion River Bridge Rehabilitation/Replacement

2) Date and time of receipt of communication: March 23, 2018 10:00 AM

3) Location of communication: Humboldt County Board of Supervisors Conf Rm

(If not in person, include the means of communication, e.g., telephone, e-mail, etc.)

4) Identity of person(s) initiating communication: Matthew K. Brady
Frank Demling

5) Identity of person(s) on whose behalf communication was made: Caltrans District 1

6) Identity of persons(s) receiving communication: Ryan Sundberg

7) Identity of all person(s) present during the communication: Matthew K. Brady, Frank Demling, Jeff Pimentel, Robert Wall

Complete, comprehensive description of communication content (attach complete set of any text or graphic material presented):

October 2017 Albion River Bridge Inspection Report
Albion River Bridge Fact Sheet
Feasibility of Rehabilitation Alternatives and Risk Assessment

4-2-18
Date

Ryan Sundberg
Signature of Commissioner

**TIMING FOR FILING OF DISCLOSURE FORM:** File this form with the Executive Director within seven (7) days of the ex parte communication, if the communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication. If the communication occurred within seven (7) days of the hearing, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication. This form may be filed with the Executive Director in addition to the oral disclosure.

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

# Memorandum

*Flex your power!*
*Be energy efficient!*

**To:** LENA ASHLEY
DISTRICT 1
North Region Design E-3

**Date:** June 13, 2016

**File:** 01-MEN-1-43.74
01-401100 01 00000154
Albion River Bridge (Replace)

**From:** JEFF SIMS
Bridge Design Branch 1
Office of Bridge Design North & Central
Structure Design
Division of Engineering Services MS 9-4/8I

**Subject:** Advance Planning Study Transmittal

Attached is the Advance Planning Study and General Plan (Alt A) pricing update for the above referenced project as requested by Tom Phillips in an e-mail dated April 6, 2016 to Kevin Harper.

The forecast structure cost, including 10% time related overhead, 10% mobilization and 25% contingencies, for the Albion River Bridge replacement alternatives are as follows:

| Bridge Alternative | Estimated Cost |
|---|---|
| APS Alt. 1E | $35,423,000 |
| APS Alt. 1F | $34,021,000 |
| GP Alt. A (Pricing Update) | $36,647,000 |

The estimated costs include $1,735,000 for removal of the existing bridge. This cost includes hazardous waste disposal of the existing treated timber.

The following table summarizes the projected total structure cost based on a variable escalation rate. The escalated structure cost is provided for informational purposes only and does not replace annual cost updates as required by Department policy.

| | Escalated Cost | | |
|---|---|---|---|
| Years Beyond Midpoint | Advance Planning Study Alt. 1E | Advance Planning Study Alt. 1F | General Plan Alt. A |
| 1 | $36,627,000 | $35,177,000 | $37,893,000 |
| 2 | $37,799,000 | $36,303,000 | $39,106,000 |
| 3 | $39,084,000 | $37,537,000 | $40,436,000 |
| 4 | $40,257,000 | $38,663,000 | $41,649,000 |
| 5 | $41,223,000 | $39,591,000 | $42,649,000 |

This Advance Planning Study and associated cost estimate is based on the following assumptions:

1. Abutments are supported on multiple 16" diameter cast-in-drilled-hole (CIDH) concrete piles (service level compression = 90 kip/pile, length = 50 ft./pile)

2. Pier footings are supported on multiple 24" diameter cast-in-drilled-hole (CIDH) concrete piles with permanent steel casings into rock (rock socket). The pile length in soil is assumed to be 60ft/pile and the rock socket is assumed to be an additional 30 ft./pile (nominal compression resistance = 350 kip/pile)

3. The arch foundations at Piers 3 & 10 are assumed to be supported on inclined 10" diameter micropiles. (nominal compression resistance = 640 kip/pile, length = 40 ft./pile)

4. The General Plan Alt A pricing update increase, from the previous 3/17/14 estimate, are mainly due to increased item costs which were considered to be too low in the previous estimate (Structural Concrete-Bridge Footing, Micropile, and Soil Nail). The Contingency percentage was increased from the previous General Plan level of 20% to the Advance Planning level of 25% to allow direct comparison with the Advance Planning Study alternatives.

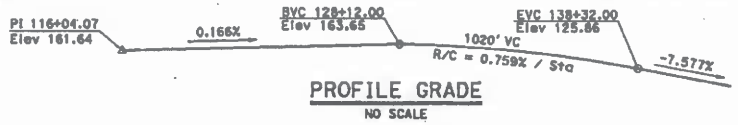
If you have any questions or if you need additional information regarding this study, please contact Kevin Harper at (916) 227-8156 or Jeff Sims at (916) 227- 8497.

Attachments

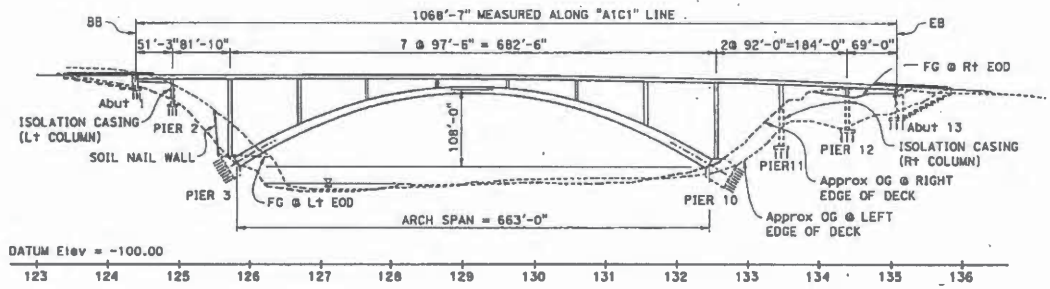
c: ETaddese Project Liaison Engineer
GSetberg, Bridge Design Office Chief
JFujimoto Technical Liaison Engineer
EKaslan Office Chief, Structure Maintenance & Investigations
TFujioka, Program Advisor, Structure Maintenance & Investigations
JBabcock Structure Construction Assistant Deputy Division Chief
TPokrywka Geotechnical Services
JMagana Structure Hydraulics & Hydrology
SHeath Bridge Architecture & Aesthetics
FDemling District Project Manager
TPhillips District Project Engineer

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

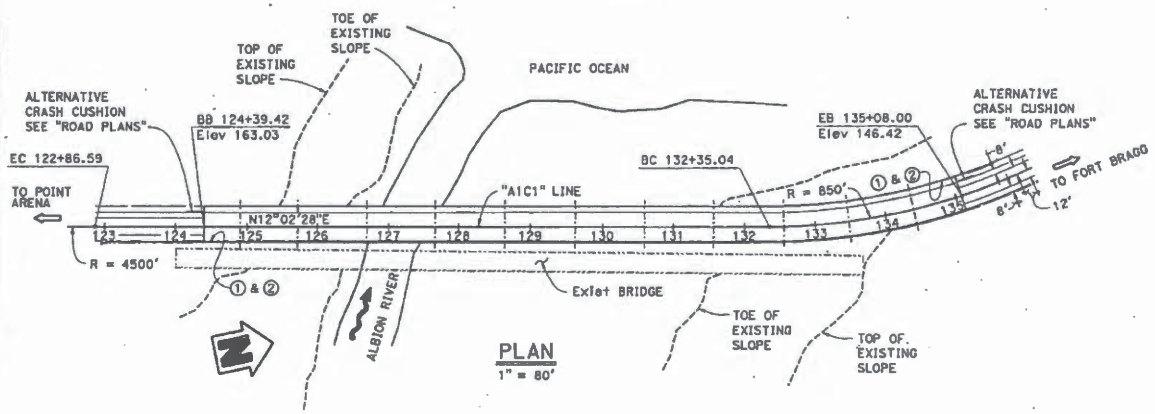
| DIST | COUNTY | ROUTE | POST MILE |
|---|---|---|---|
| 01 | MEN | 1 | 43.74 |



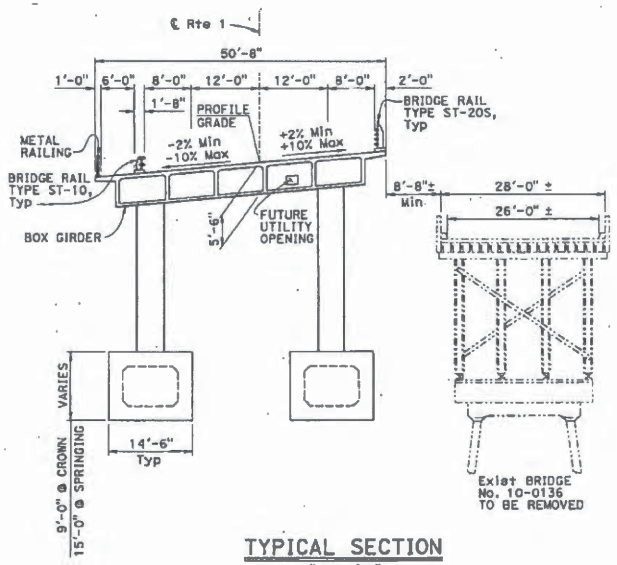

PROFILE GRADE
NO SCALE




DEVELOPED ELEVATION
1" = 80'




PLAN
1" = 80'




TYPICAL SECTION
1" = 10'-0"

| | |
|---|---|
| DATE OF ESTIMATE | 06/13/16 |
| BRIDGE REMOVAL | $1,733,900.00 |
| STRUCTURE DEPTH | 5'-6" |
| LENGTH | 1,068.58 |
| WIDTH | 50.67 |
| AREA | 54,145 |
| COST/SQFT INCLUDING TRO, MOBILIZATION & 25% CONTINGENCY | $623.47 |
| TOTAL COST | $35,423,000.00 |

CURVE DATA - "A1C1" LINE

R = 850.00'
Δ = 38°31'50"
T = 297.09'
L = 571.61'

NOTES:
① Point "ALBION RIVER BRIDGE"
② Point "BR NO 10-0306"
------ Indicates existing structure

| | | |
|---|---|---|
| DESIGNED BY Kevin Harper | DATE 05/03/16 | STRUCTURE DESIGN BRANCH 1 |
| DRAWN BY Jie Tang | DATE 05/03/16 | |
| CHECKED BY | DATE | |
| APPROVED | DATE | |

ORIGINAL SCALE IN INCHES 0 1 2 3

# ALTERNATIVE 1E
## PLANNING STUDY
## ALBION RIVER BR (REPLACE)

| | |
|---|---|
| UNIT: 3576 | BRIDGE No. 10-0306 |
| SCALE: AS SHOWN | PROJECT No. & PHASE: 01000001540 |

CONTRACT No.: 01-401100

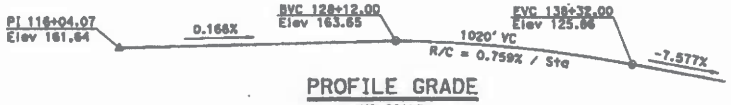
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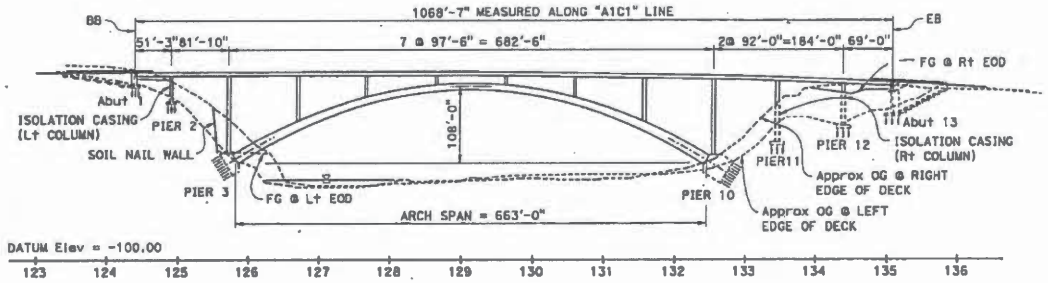
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

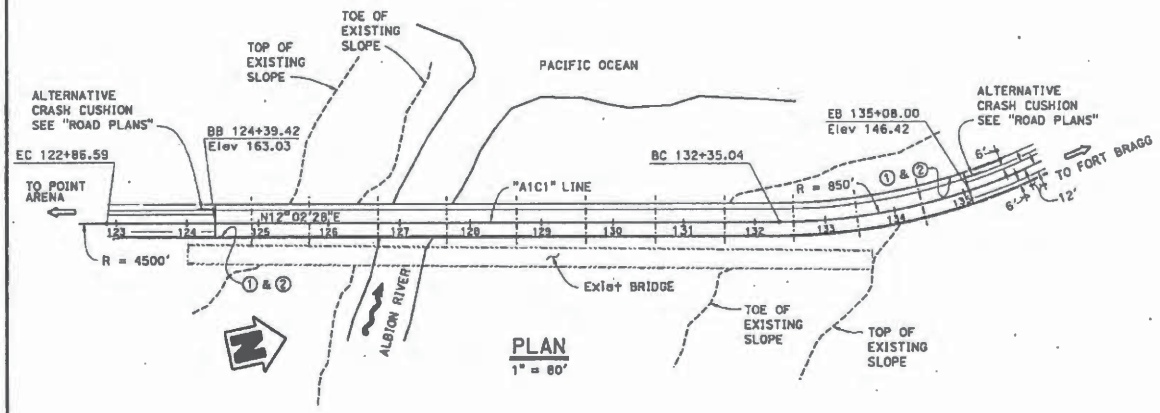
| DIST | COUNTY | ROUTE | POST MILE |
|---|---|---|---|
| 01 | MEN | 1 | 43.74 |



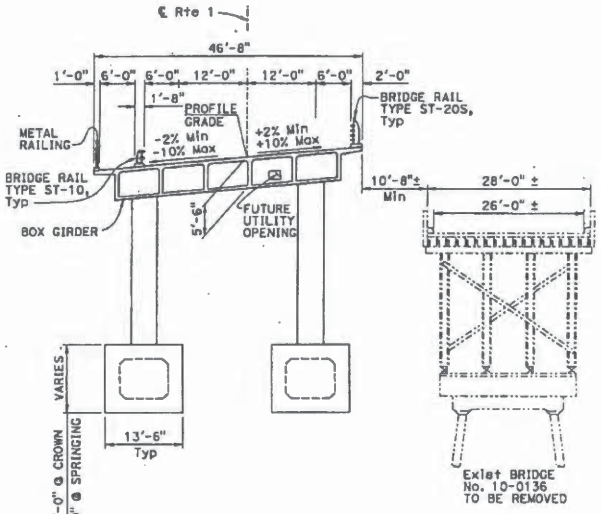

PROFILE GRADE
NO SCALE




DEVELOPED ELEVATION
1" = 80'




PLAN
1" = 80'




TYPICAL SECTION
1" = 10'-0"

| | |
|---|---|
| DATE OF ESTIMATE | 06/13/16 |
| BRIDGE REMOVAL | $1,735,200.00 |
| STRUCTURE DEPTH | 5'-6" |
| LENGTH | 1,068.58 |
| WIDTH | 46.67 |
| AREA | 49,871 |
| COST/SQFT INCLUDING TRO, MOBILIZATION & 25% CONTINGENCY | $648.88 |
| TOTAL COST | $34,021,000.00 |

CURVE DATA - "A1C1" LINE

R = 850.00'
Δ = 36°31'50"
T = 297.09'
L = 571.61'

NOTES:

① Paint "ALBION RIVER BRIDGE"
② Paint "BR NO 10-0306"
----- Indicates existing structure

ORIGINAL SCALE IN INCHES 0 1 2 3

| | | |
|---|---|---|
| DESIGNED BY Kevin Harper | DATE 05/04/16 | STRUCTURE DESIGN BRANCH 1 |
| DRAWN BY Jie Tang | DATE 05/04/16 | |
| CHECKED BY | DATE | |
| APPROVED | DATE | |

ALTERNATIVE 1F
PLANNING STUDY
ALBION RIVER BR (REPLACE)

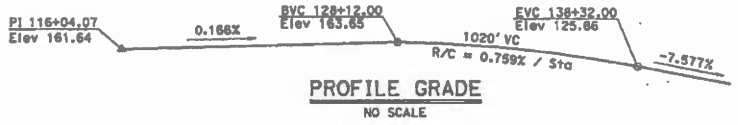
| | |
|---|---|
| UNIT: 3576 | BRIDGE No. 10-0306 |
| SCALE: AS SHOWN | PROJECT No. & PHASE: 01000001540 |

CONTRACT No.: 01-401100

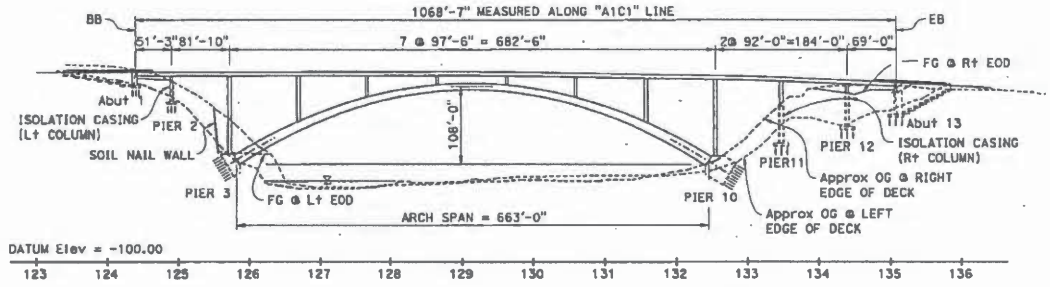
STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) DEV. 08-09-10

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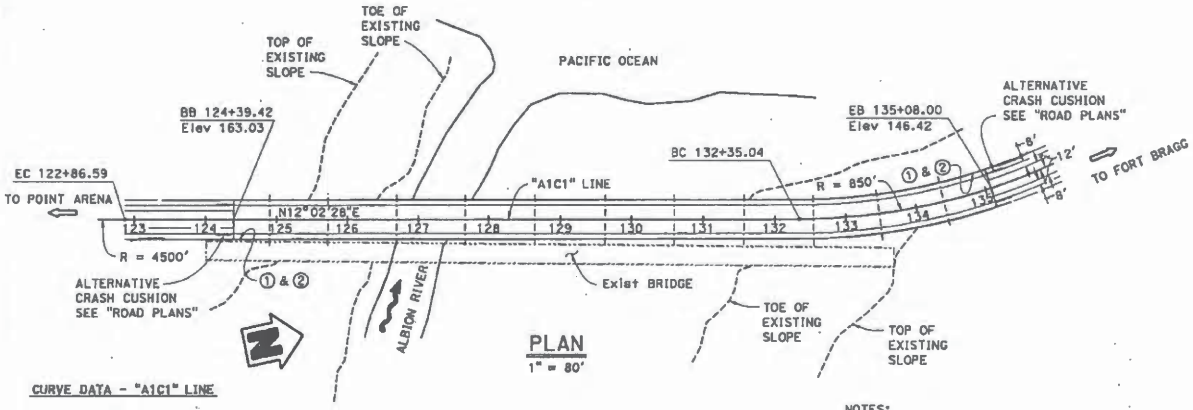
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PROFILE GRADE
NO SCALE



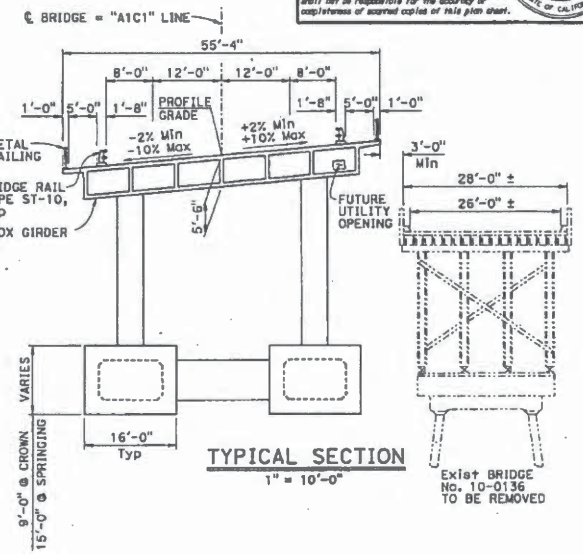

DEVELOPED ELEVATION
1" = 80'




PLAN
1" = 80'

CURVE DATA - "A1C1" LINE

R = 850.00'
Δ = 38°31'50"
T = 297.09'
L = 571.61'




TYPICAL SECTION
1" = 10'-0"

| | |
|---|---|
| DATE OF ESTIMATE | 06/13/16 |
| BRIDGE REMOVAL | $1,734,600.00 |
| STRUCTURE DEPTH | 5'-6" |
| LENGTH | 1,068.58 |
| WIDTH | 55.33 |
| AREA | 59,125 |
| COST/SQFT INCLUDING TRO, MOBILIZATION & 25% CONTINGENCY | $591.81 |
| TOTAL COST | $36,647,000.00 |

NOTES:
① Paint "ALBION RIVER BRIDGE"
② Paint "BR NO 10-0306"
----- Indicates existing structure

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 01 | Men | 1 | | | |

REGISTERED CIVIL ENGINEER — DATE
PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.
Kevin Harper No. 42221 Exp. 3-31-14 CIVIL

ALT A

Jeff Sims
DESIGN ENGINEER

| | BY | CHECKED |
|---|---|---|
| DESIGN | Kevin Harper | X |
| DETAILS | Jie Tang | X |
| QUANTITIES | X | X |

LOAD & RESISTANCE FACTOR DESIGN — LIVE LOADING: HL93 AND PERMIT DESIGN VEHICLE
LAYOUT — Kevin Harper — CHECKED X
SPECIFICATIONS — X — PLANS AND SHEET COMPILED X
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO. 10-0306
POST MILE 43.74

ALBION RIVER BRIDGE (REPLACE)
GENERAL PLAN

UNIT: 3576
PROJECT NUMBER & PHASE: 01000001540
CONTRACT NO.: 01-401104
(FILE =) 01-401104-g-gp.dgn

DISREGARD PRINTS BEARING EARLIER REVISION DATES
REVISION DATES | SHEET 1 | OF X

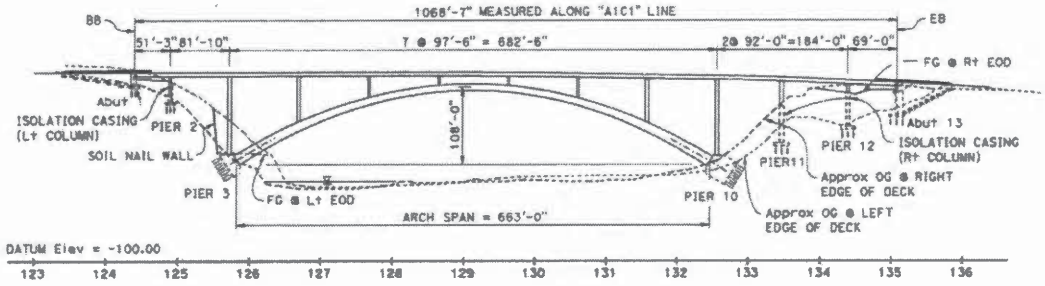
(16 of 123)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

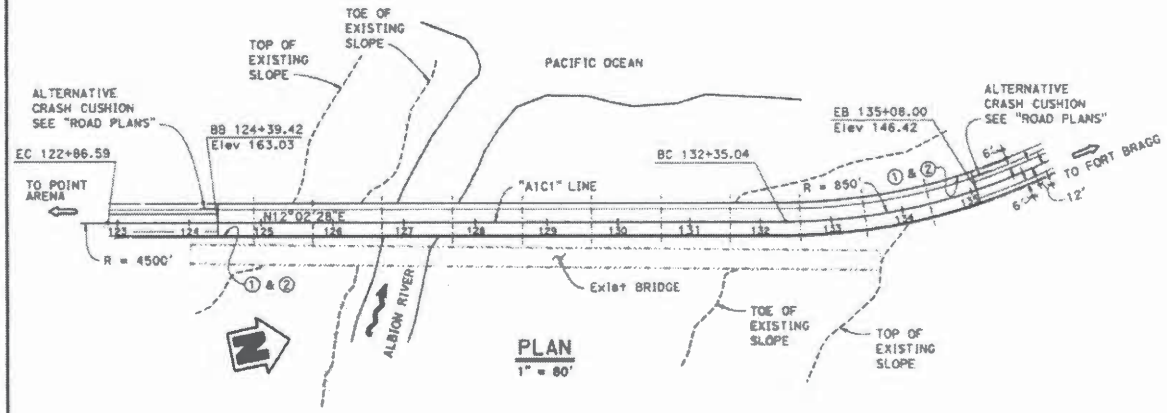
| DIST | COUNTY | ROUTE | POST MILE |
|---|---|---|---|
| 01 | MEN | 1 | 43.74 |



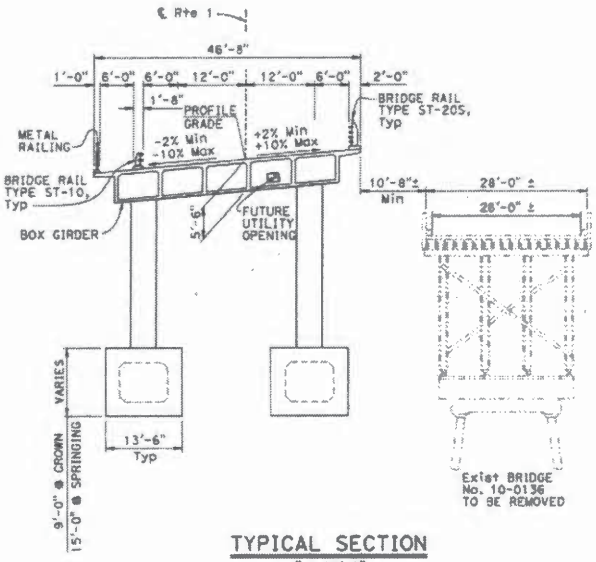

PROFILE GRADE
NO SCALE




DEVELOPED ELEVATION
1" = 80'




PLAN
1" = 80'




TYPICAL SECTION
1" = 10'-0"

| | |
|---|---|
| DATE OF ESTIMATE | 06/13/16 |
| BRIDGE REMOVAL | $1,735,200.00 |
| STRUCTURE DEPTH | 5'-6" |
| LENGTH | 1,068.58 |
| WIDTH | 46.67 |
| AREA | 49,871 |
| COST/SQFT INCLUDING TRO, MOBILIZATION & 25% CONTINGENCY | $648.88 |
| TOTAL COST | $34,021,000.00 |

CURVE DATA - "A1C1" LINE

R = 850.00'
Δ = 36°31'50"
T = 297.09'
L = 571.61'

NOTES:
① Point "ALBION RIVER BRIDGE"
② Point "BR NO 10-0306"
..... Indicates existing structure

ORIGINAL SCALE IN INCHES 0 1 2 3

| | | |
|---|---|---|
| DESIGNED BY | Kevin Harper | DATE 05/04/16 |
| DRAWN BY | Jie Tang | DATE 05/04/16 |
| CHECKED BY | | DATE |
| APPROVED | | DATE |

STRUCTURE DESIGN BRANCH 1

ALTERNATIVE 1F
PLANNING STUDY
ALBION RIVER BR (REPLACE)

| | |
|---|---|
| UNIT: 3576 | BRIDGE No. 10-0306 |
| SCALE: AS SHOWN | PROJECT No. & PHASE: 0100000154O |

CONTRACT No.: 01-401100

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET CONDITION) (REV. 09-09-14)

FILE => albion_river_bridge (replace)1f.dgn

DATE PLOTTED => 09-JAN-2017 13:29

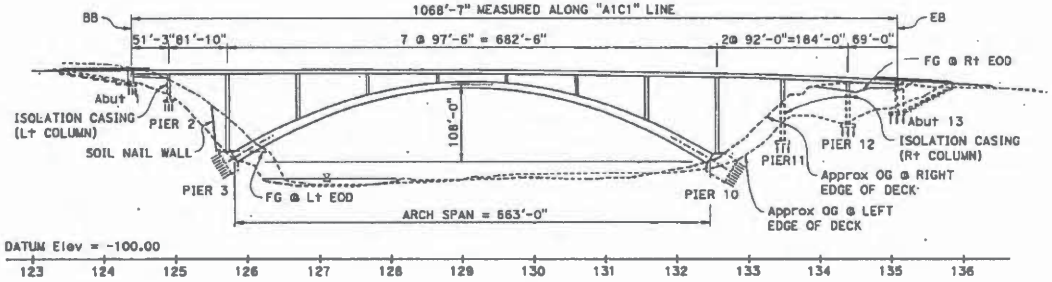
USERNAME => KEVIN HARPER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

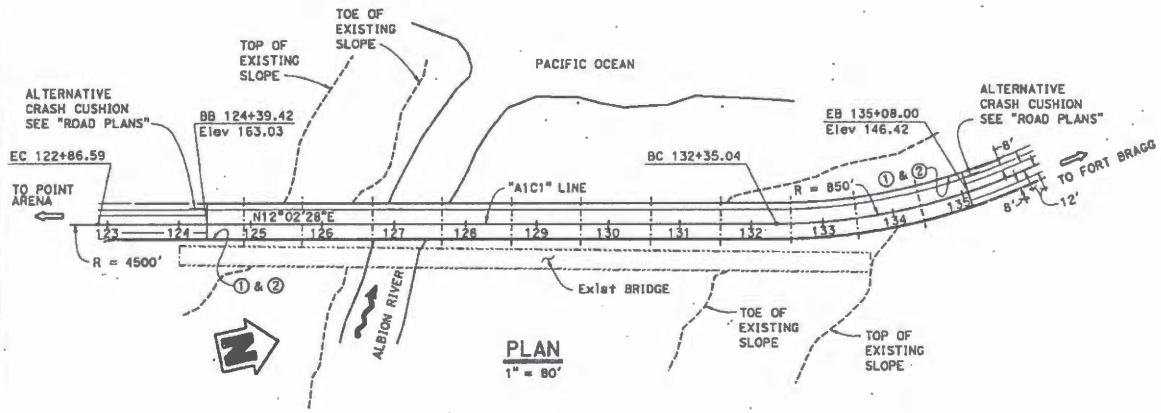
| DIST | COUNTY | ROUTE | POST MILE |
|---|---|---|---|
| 01 | MEN | 1 | 43.74 |



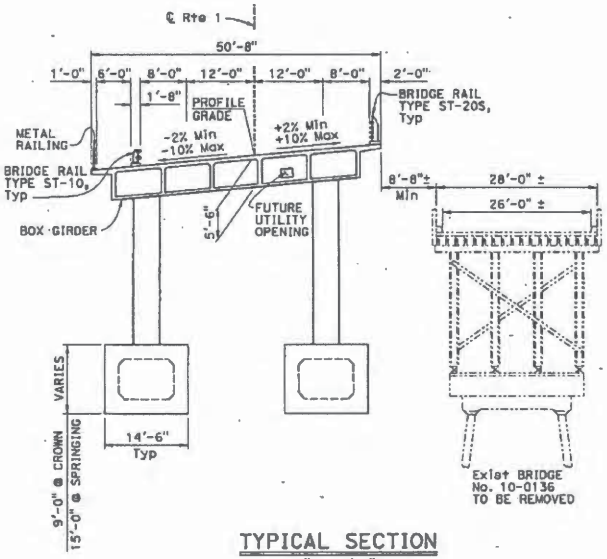

PROFILE GRADE
NO SCALE




DEVELOPED ELEVATION
1" = 80'




PLAN
1" = 80'




TYPICAL SECTION
1" = 10'-0"

| | |
|---|---|
| DATE OF ESTIMATE | 06/13/16 |
| BRIDGE REMOVAL | $1,733,900.00 |
| STRUCTURE DEPTH | 5'-6" |
| LENGTH | 1,068.58 |
| WIDTH | 50.67 |
| AREA | 54,145 |
| COST/SQFT INCLUDING TRO, MOBILIZATION & 25% CONTINGENCY | $623.47 |
| TOTAL COST | $35,423,000.00 |

CURVE DATA - "A1C1" LINE

R = 850.00'
Δ = 38°31'50"
T = 297.09'
L = 571.61'

NOTES:

① Point "ALBION RIVER BRIDGE"
② Point "BR NO 10-0306"
------ Indicates existing structure

| | | |
|---|---|---|
| DESIGNED BY Kevin Harper | DATE 05/03/16 | STRUCTURE DESIGN BRANCH 1 |
| DRAWN BY Jie Tang | DATE 05/03/16 | |
| CHECKED BY | DATE | |
| APPROVED | DATE | |

ORIGINAL SCALE IN INCHES 0 1 2 3

ALTERNATIVE 1E
PLANNING STUDY
ALBION RIVER BR (REPLACE)

| | |
|---|---|
| UNIT: 3576 | BRIDGE No. 10-0306 |
| SCALE: AS SHOWN | PROJECT No. & PHASE: 0100000154O |

CONTRACT No.: 01-401100

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 06-08-16)

FILE => albion_river_bridge (replace)1e.dgn

USERNAME => s134925 DATE PLOTTED => 09-JUN-2016 TIME PLOTTED => 13:28

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

# Memorandum

*Flex your power!*
*Be energy efficient!*

**To:** LENA ASHLEY
DISTRICT 1
North Region Design E-3

**Date:** June 13, 2016

**File:** 01-MEN-1-43.74
01-401100 01 00000154
Albion River Bridge (Replace)

**From:** JEFF SIMS
Bridge Design Branch 1
Office of Bridge Design North & Central
Structure Design
Division of Engineering Services MS 9-4/8I

**Subject:** Advance Planning Study Transmittal

Attached is the Advance Planning Study and General Plan (Alt A) pricing update for the above referenced project as requested by Tom Phillips in an e-mail dated April 6, 2016 to Kevin Harper.

The forecast structure cost, including 10% time related overhead, 10% mobilization and 25% contingencies, for the Albion River Bridge replacement alternatives are as follows:

| Bridge Alternative | Estimated Cost |
|---|---|
| APS Alt. 1E | $35,423,000 |
| APS Alt. 1F | $34,021,000 |
| GP Alt. A (Pricing Update) | $36,647,000 |

The estimated costs include $1,735,000 for removal of the existing bridge. This cost includes hazardous waste disposal of the existing treated timber.

The following table summarizes the projected total structure cost based on a variable escalation rate. The escalated structure cost is provided for informational purposes only and does not replace annual cost updates as required by Department policy.

| | Escalated Cost | | |
|---|---|---|---|
| Years Beyond Midpoint | Advance Planning Study Alt. 1E | Advance Planning Study Alt. 1F | General Plan Alt. A |
| 1 | $36,627,000 | $35,177,000 | $37,893,000 |
| 2 | $37,799,000 | $36,303,000 | $39,106,000 |
| 3 | $39,084,000 | $37,537,000 | $40,436,000 |
| 4 | $40,257,000 | $38,663,000 | $41,649,000 |
| 5 | $41,223,000 | $39,591,000 | $42,649,000 |

This Advance Planning Study and associated cost estimate is based on the following assumptions:

1. Abutments are supported on multiple 16" diameter cast-in-drilled-hole (CIDH) concrete piles (service level compression = 90 kip/pile, length = 50 ft./pile)

2. Pier footings are supported on multiple 24" diameter cast-in-drilled-hole (CIDH) concrete piles with permanent steel casings into rock (rock socket). The pile length in soil is assumed to be 60ft/pile and the rock socket is assumed to be an additional 30 ft./pile (nominal compression resistance = 350 kip/pile)

3. The arch foundations at Piers 3 & 10 are assumed to be supported on inclined 10" diameter micropiles. (nominal compression resistance = 640 kip/pile, length = 40 ft./pile)

4. The General Plan Alt A pricing update increase, from the previous 3/17/14 estimate, are mainly due to increased item costs which were considered to be too low in the previous estimate (Structural Concrete-Bridge Footing, Micropile, and Soil Nail). The Contingency percentage was increased from the previous General Plan level of 20% to the Advance Planning level of 25% to allow direct comparison with the Advance Planning Study alternatives.

If you have any questions or if you need additional information regarding this study, please contact Kevin Harper at (916) 227-8156 or Jeff Sims at (916) 227- 8497.

Attachments

c: ETaddese Project Liaison Engineer
GSetberg, Bridge Design Office Chief
JFujimoto Technical Liaison Engineer
EKaslan Office Chief, Structure Maintenance & Investigations
TFujioka, Program Advisor, Structure Maintenance & Investigations
JBabcock Structure Construction Assistant Deputy Division Chief
TPokrywka Geotechnical Services
JMagana Structure Hydraulics & Hydrology
SHeath Bridge Architecture & Aesthetics
FDemling District Project Manager
TPhillips District Project Engineer

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

# Memorandum

*Flex your power!*
*Be energy efficient!*

**To:** LENA ASHLEY
OFFICE OF DESIGN NORTH
DESIGN BRANCH E-3
EUREKA

**Date:** May 21, 2013

**File:** 01-MEN-1-43.3/44.1
01-401100
Albion River Br. #10-0136
Bridge Rehabilitation

**From:** JEFF SIMS 5/21/2013
Bridge Design Branch 1
Structure Design
Division of Engineering Services MS 9-4/8I

**Subject:** Feasibility Study Transmittal

Attached are two copies of the Feasibility Planning Study for the above referenced project as submitted to the Division of Engineering Services by your (Tom Phillips) initial Request Memo dated July 17, 2012.

The estimated construction costs, including 10% mobilization and 25% contingencies, for the Albion River Bridge replacement alternatives are as follows:

| Bridge Rehab Alternative | Description | Estimated Cost | Annual Maintenance Cost |
|---|---|---|---|
| A | Rehab and upgrade rail | $5,715,000 | $100,000 |
| B | Rehab, widen & upgrade rail | $20,083,000 | $150,000 |
| C | Rehab as pedestrian bridge | $5,349,000 | $100,000 |

The following table summarizes the projected total structure cost based on a variable escalation rate. The escalated structure cost is provided for informational purposes only and does not replace annual cost updates as required by Department policy.

| Years Beyond Midpoint | Escalated Cost Alternative A | Escalated Cost Alternative B | Escalated Cost Alternative C |
|---|---|---|---|
| 1 | $5,715,000 | $20,083,000 | $5,349,000 |
| 2 | $5,824,000 | $20,465,000 | $5,451,000 |
| 3 | $5,981,000 | $21,018,000 | $5,598,000 |
| 4 | $6,166,000 | $21,670,000 | $5,772,000 |
| 5 | $6,326,000 | $22,233,000 | $5,922,000 |

The escalated structure cost is provided for informational purposes only and does not replace annual cost updates as required by Department policy.

The metal tube railing shown on the plans is only a concept for the study. Caltrans does not currently have any bridge rails that can be attached to a timber deck and still meet the crash test criteria of AASHTO. The concept rail shown in the plans, with its attachment to a timber plank deck, will need to be crash tested before it can be incorporated on the bridge per AASHTO and Caltrans requirements.

The current bridge has a low load rating for permit loads (POOXX). The rehabilitation alternatives do not change this load rating. It was not considered feasible to strengthen all the main members of the superstructure and substructure.

The rehabilitation alternatives include earthquake retrofit. The concrete and timber towers are allowed to rock during the design seismic event.

The bridge site is subject to tsunami hazards. The source of the tsunami hazard may be due to local tsunami-generating activity occurring along the California coast, or from sources thousands of miles away across the Pacific Ocean. Tsunamis are most typically associated with offshore subduction zone earthquakes, but can also be caused by submarine landslides, volcanic activity, and other sources. The maximum tsunami wave height at this site is seventeen feet (1000 year event). The tsunami inundation zone extends between bents 10 and 27 at the bridge and runs up the river for about 1 ¾ miles. The wave velocity is assumed to be 23 ft/sec at the bridge site for both the forward run-up wave and the withdrawal. Bents 11 through 26 will be inundated by the tsunami wave. These bents are all on piles and should be okay for the erosion that can occur due to the wave velocity. These bents are also sufficiently strong to resist the drag forces of the high velocity water as it flows around them. However, historical data indicates that a majority of the damage during tsunamis has been from the impact of debris. Records from the 1964 tsunami at Crescent City indicate that substantial damage occurred as a result of debris impacting on structures. The debris included logs, automobiles, and baled lumber. The impact forces either destroyed the load-carrying capacity of walls, or caused bending or breaking of light columns. The fact that the bridge has such closely spaced timber bents in the tsunami induction zone and that there is a campground and marina located just upstream make this bridge especially vulnerable to impact damage that could lead to collapse of a portion of the structure. A long span replacement bridge with no piers in the central half width of the tsunami inundation zone is recommended at this site to reduce the risk of impact damage from upstream debris (boats, automobiles, buildings, trees, boulders, etc).

The rehabilitation alternatives do not add appreciable service life to the bridge. Although the non-redundant, Fracture Critical steel truss span is being replaced in all alternatives, the majority of the bridge superstructure and substructure still consists of 70 year old structural timber that is nearing the end of its life. The estimated remaining life of the bridge components are as follows:

1) The new steel truss is estimated to have a service life of 25 years with a maintenance cost of $1.25 million over the life of the structure to maintain the paint system at today's costs. At 25 years, the truss will require major rehabilitation which may include replacement of some secondary members or total replacement. The relatively short

service life is due to the harsh coastal environment in which the steel members are susceptible to extremely rapid corrosion and deterioration. Recoating the steel truss in this environment is difficult and will likely have a shorter service life than the original coating.

2) The timber connection life expectancy is 2 years. Nuts and bolts have historically required replacement every two years.

3) The estimated remaining life of the existing shear ring connectors in the existing bolted connections is 10 years. The internal shear rings (split ring and toothed ring connectors) in all existing timber connections cannot be accessed for inspection. They can only be accessed by dismantling the connection. Most of the connections have never been dismantled and the integrity of the internal shear rings is unknown. If these rehabilitation alternatives are carried forward, it is recommended that several connections be dismantled to examine the conditions of these shear rings to better determine their remaining life, or if replacement is required immediately (will increase the cost of the alternatives).

4) The expected remaining life of the existing timber is 20 years if currently identified timbers with rot are replaced as shown in the plans and all checks and splits are filled with caulk. It will be difficult and expensive to replace load bearing timber members without disrupting traffic when replacement is required.

5) The expected life of new timber is 40 years assuming splits and checks are inspected and sealed with caulk annually.

The total annual maintenance costs will remain at the current level of $100,000 for Alternatives "A" and "C". This cost is based on the continuing need to replace nuts and bolts on the bolted connections as they experience section loss due to corrosion, caulking checks and splits in the timber members ($50,000 annual cost), and also maintaining the paint system on the steel truss spans ($50,000 annual cost).

The total annual maintenance cost for Alternative "B" is estimated at $150,000.

The history of this bridge has been one of constant repair including replacement of timber connectors, steel connector plates, and portions of the steel truss. Structure Maintenance & Investigations Peer Review, in August 2007, unanimously reaffirmed replacement of the structure as the preferred engineering and most fiscally responsible alternative to ensure the safety and reliability of this critical link of the state highway system.

Due to the high maintenance cost, short life span, low load rating for permit vehicles, and tsunami hazard risk of the rehab alternatives "A" and "B", we also recommend replacement with a structure more suited to the environment.

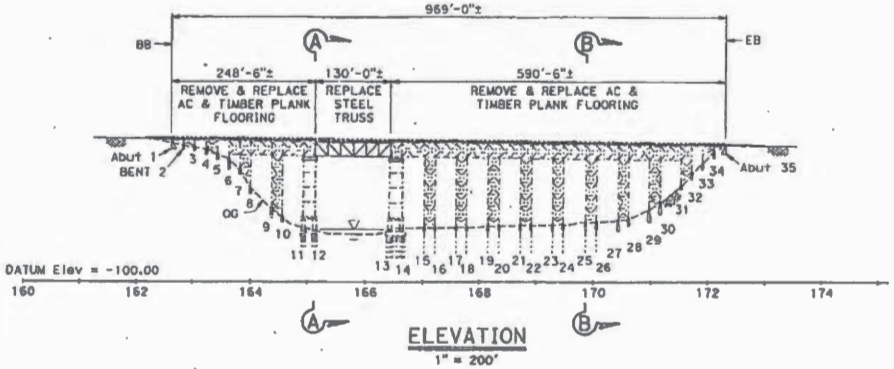
If you have any questions, or if you need additional information, regarding this study, please contact Kevin Harper at (916) 227-8156 or Jeff Sims at (916) 227- 8497.

Attachments

c: ETaddese, Project Liaison Engineer MS 9-5/11G
EKurani, Bridge Design Office Chief MS 9-4/11G
MAmini, Technical Liaison Engineer MS 9-1/5C FM2
JChavez, Structure Aesthetics Branch Chief MS 9-3/1H
PWhitfield, Structure Maintenance & Investigations MS 9-1/9I
KWall, HA21 Program Coordinator MS 9-1/9I
JBabcock, Structure Construction MS 9-2/11H
RBibbens, Geotechnical Services MS 5
SNg, Structure Hydraulics & Hydrology MS 9-1/2I

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

| DIST | COUNTY | ROUTE | POST MILE |
|---|---|---|---|
| 01 | Men | 1 | 43.74 |

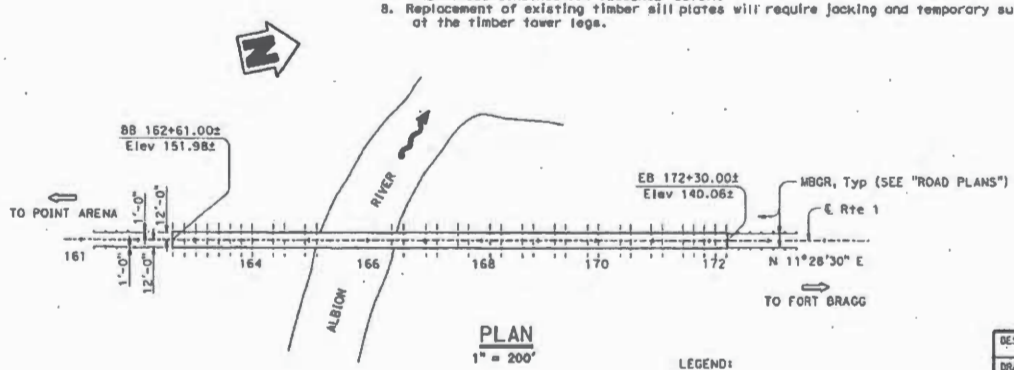



ELEVATION
1" = 200'

| | |
|---|---|
| DATE OF ESTIMATE | 05-17-2013 |
| STR. DEPTH | |
| LENGTH | 969 FT |
| WIDTH | 28 FT |
| AREA | 27,132 SQ FT |
| COST/SQ FT INCLUDING | |
| 10% MOBILIZATION & | |
| 25% CONTINGENCY | $211 /SQ FT |
| TOTAL COST | $5,715,000.00 |

NOTES:

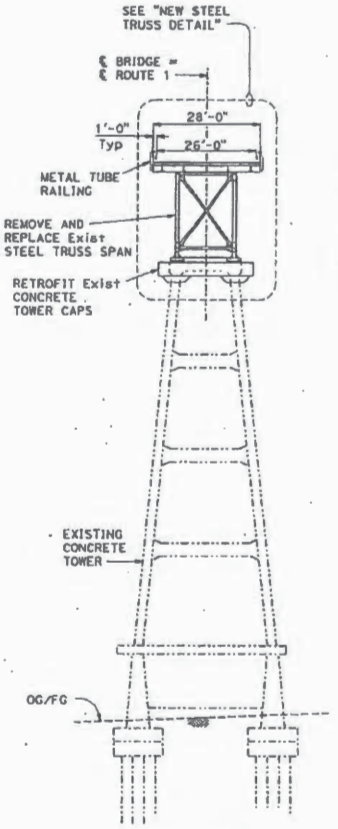
1. One lane traffic control across the bridge is assumed during the replacement of the timber deck planks, AC wearing surface and barrier rail.
2. Total bridge closure assumed at night to remove and replace whole width sections of the two layer plank deck. Sixty (60) linear feet of bridge deck is assumed to be replaced during each night closure.
3. Existing AC wearing surface and barrier rails assumed to be removed over entire bridge length prior to staring work on deck plank replacement. The traffic lane shall have temporary deck plates in place prior to allowing traffic on the existing plank flooring.
4. Place a heavy mop coat of hot asphalt on top of the sub floor and then place top planking while the asphalt is still plastic.
5. Top and sub floor planks may be of random lengths with a maximum of one joint per run. Joints to occur at centerline of stringer. Joints to be staggered so that joints in adjacent planks do not occur at the same stringer or one directly above another. Minimum plank length is 6 feet.
6. AC wearing surface is not to be placed until all plank flooring has been replaced.
7. For the assumed construction sequence of the steel truss span replacement, see "NEW TRUSS CONSTRUCTION SEQUENCE" detail.
8. Replacement of existing timber sill plates will require jacking and temporary supports at the timber tower legs.



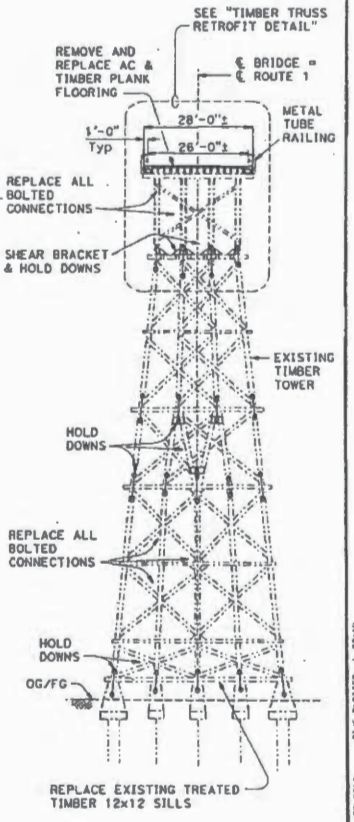

PLAN
1" = 200'

LEGEND:

----- - indicates existing structure




(TYPICAL BENTS 11-14)
SECTION A-A
1" = 30'




SECTION B-B
1" = 30'

| | | | |
|---|---|---|---|
| DESIGNED BY | Kevin Harper | DATE | 12/5/12 |
| DRAWN BY | Bob Huddleston | DATE | 12/20/12 |
| CHECKED BY | | DATE | 4/16/13 |
| APPROVED | | DATE | 4/16/13 |

STRUCTURE DESIGN BRANCH 1

ALT A - REHAB (SHEET 1 OF 2)

PLANNING STUDY

ALBION RIVER BR (RETROFIT)

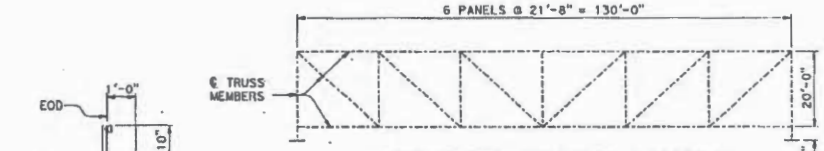
| | |
|---|---|
| BRIDGE NO. 10-0136 | UNIT: 3576 |
| SCALE: as shown | PROJECT NO. & PHASE: 01000001540 |

CONTRACT NO.: 01-401104

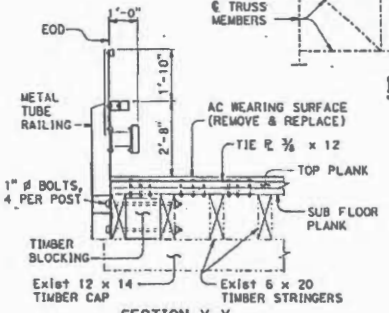
STRUCTURES DESIGN 4BRANCH PLANNING STUDY SHEET CENSUS) (REV. 06-09-10)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

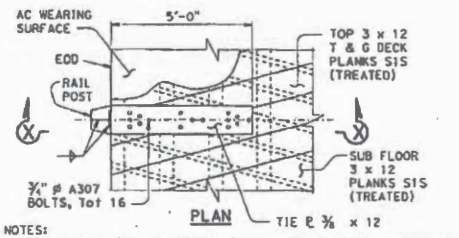
| DIST | COUNTY | ROUTE | POST MILE |
|---|---|---|---|
| 01 | Men | 1 | 43.74 |




NEW STEEL TRUSS ELEVATION
1" = 30'



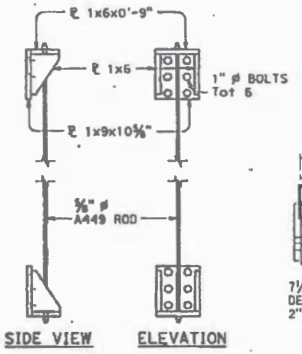

SECTION X-X




PLAN

NOTES:
1. Deck planks (top & subfloor) to be removed and replaced.
2. Attach each plank to each stringer with ⅝"x6" TimberLok heavy duty wood screws.
3. Tube rails not shown in "PLAN".

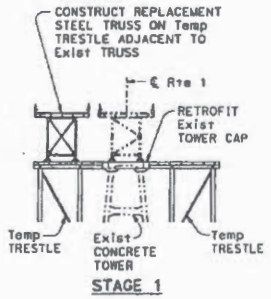
METAL TUBE RAILING AND TIMBER DECK
¼" = 1'-0"



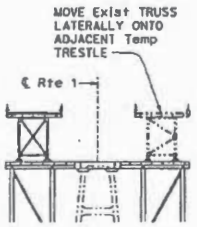

SIDE VIEW ELEVATION

NOTES:
1. All plates shall be Grade 50 steel.
2. All nuts shall have a thread locking system.

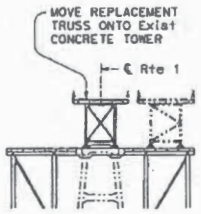
HOLD DOWN DETAIL
½" = 1'-0"




STAGE 1



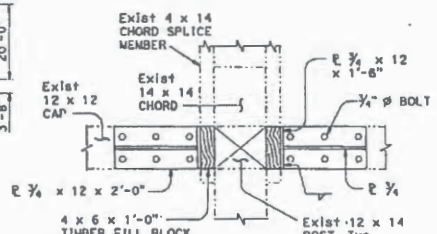

STAGE 2



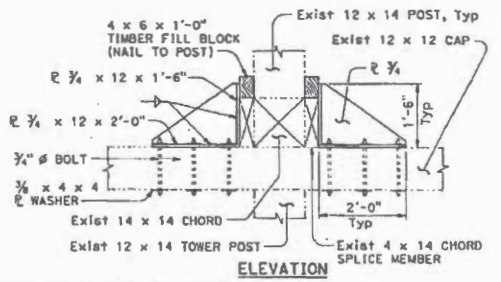

STAGE 3

NEW TRUSS CONSTRUCTION SEQUENCE
NO SCALE

NOTE:
Route 1 shall not be closed for longer than 24 hours during Stage 2 and Stage 3 construction.

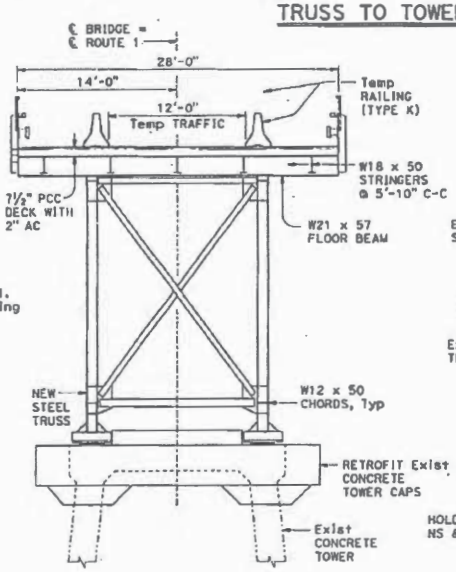



PLAN

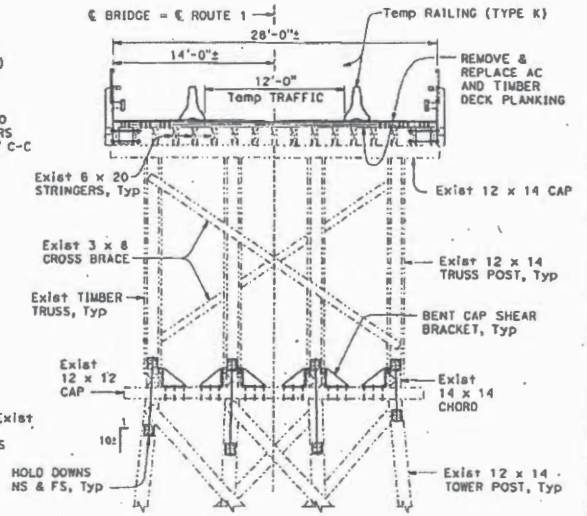



ELEVATION

TRUSS TO TOWER BENT CAP SHEAR BRACKET
⅜" = 1'-0"




NEW STEEL TRUSS DETAIL
1" = 10'




TIMBER TRUSS RETROFIT DETAIL
1" = 10'

LEGEND:
------ Indicates existing structure

| | | |
|---|---|---|
| DESIGNED BY | Kevin Harper | DATE 12/5/12 |
| DRAWN BY | Bob Huddleston | DATE 1/17/13 |
| CHECKED BY | | DATE 4/10/15 |
| APPROVED | | DATE 4/16/15 |

STRUCTURE DESIGN BRANCH 1

ALT A - REHAB (SHEET 2 OF 2)
PLANNING STUDY
ALBION RIVER BR (RETROFIT)

| BRIDGE NO. 10-0136 | UNIT: 3576 |
|---|---|
| SCALE: as shown | PROJECT NO. & PHASE: 0100000154D |

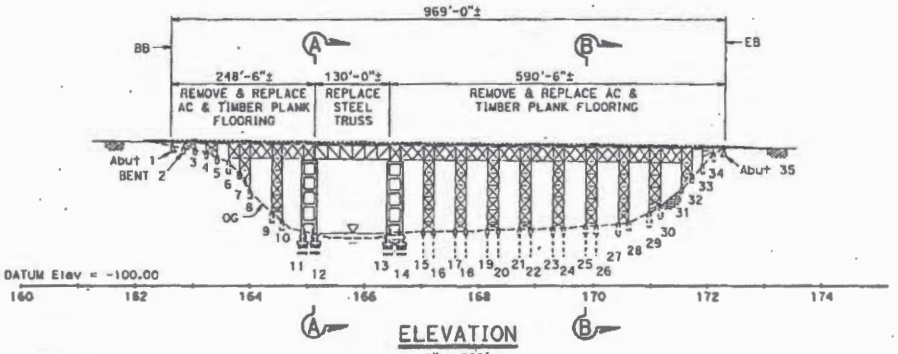
CONTRACT NO. 01-XXXX1U

DATE PLOTTED => 18-APR-2013 TIME PLOTTED => 09:40

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 08-06-10)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

| DIST | COUNTY | ROUTE | POST MILE |
|---|---|---|---|
| 01 | Men | 1 | 43.74 |

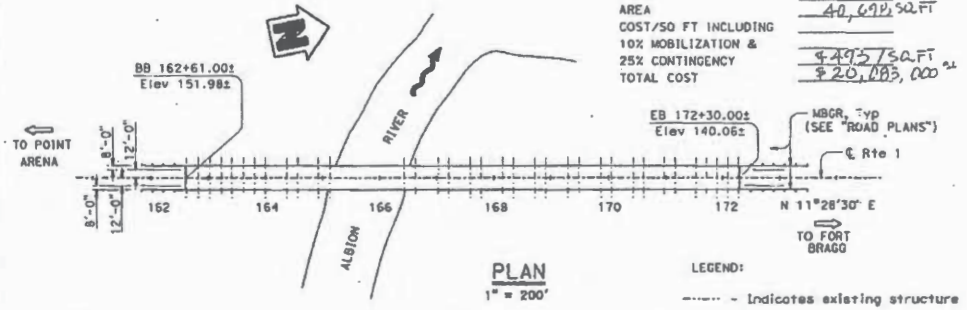



ELEVATION
1" = 200'

NOTES:

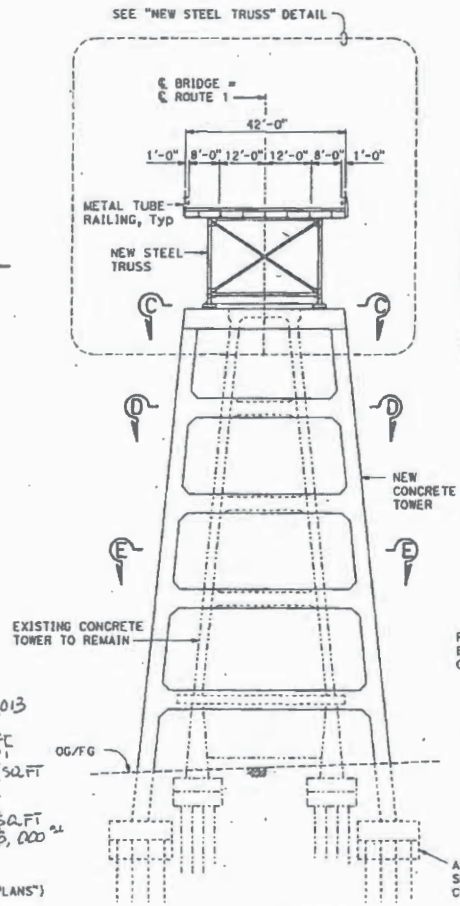
1. One lane traffic control across the bridge is assumed during the replacement of the timber deck planks, AC wearing surface and barrier rail.
2. Total bridge closure assumed at night to remove and replace whole width sections of the two layer plank deck. Sixty (60) linear feet of bridge deck is assumed to be replaced during each night closure.
3. Existing AC wearing surface and barrier rails assumed to be removed over entire bridge length prior to staring work on deck plank replacement. The traffic lane shall have temporary deck plates in place prior to allowing traffic on the existing plank flooring.
4. Place a heavy mop coat of hot asphalt on top of the sub floor and then place top planking while the asphalt is still plastic.
5. Top and sub floor planks may be of random lengths with a maximum of one joint per run. Joints to occur at centerline of stringer. Joints to be staggered so that joints in adjacent planks do not occur at the same stringer or one directly above another. Minimum plank length is 6 feet.
6. AC wearing surface is not to be placed until all plank flooring has been replaced.
7. For the assumed construction sequence of the steel truss span replacement, see "NEW TRUSS CONSTRUCTION SEQUENCE" detail.
8. Replacement of existing timber sill plates will require jacking and temporary supports at the timber tower legs.
9. Structure Excavation (Type A) (cofferdam with seal course) assumed at Bents 11 through 14.
10. Structure Excavation (Type D) assumed at Bents 15 through 28.
11. All supports assumed to be founded on Class 140 Piles.

| | |
|---|---|
| DATE OF ESTIMATE | 05-17-2013 |
| STR. DEPTH | |
| LENGTH | 969 FT |
| WIDTH | 42 FT |
| AREA | 40,698 SQ FT |
| COST/SQ FT INCLUDING | |
| 10% MOBILIZATION & | |
| 25% CONTINGENCY | $495/SQ FT |
| TOTAL COST | $20,083,000 |

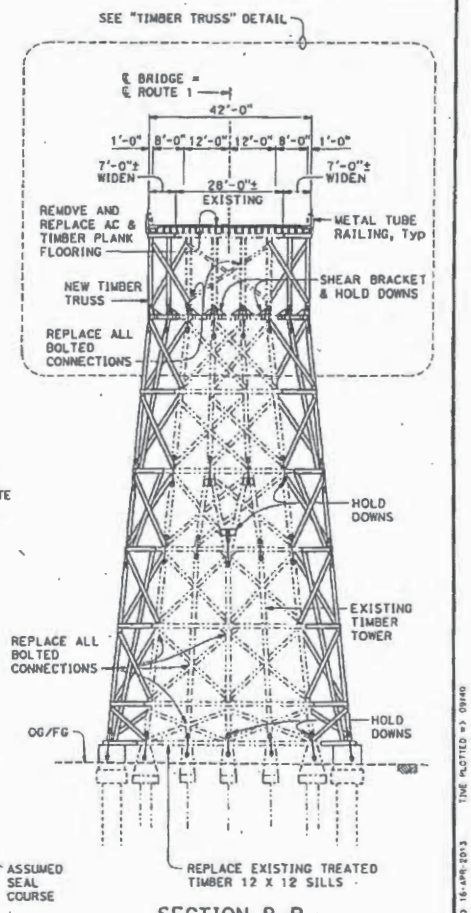



PLAN
1" = 200'

LEGEND:
----- - Indicates existing structure




SECTION A-A
1" = 30'




SECTION B-B
1" = 30'

ALT B - RETROFIT & WIDEN (SHEET 1 OF 2)

| | | | |
|---|---|---|---|
| DESIGNED BY Kevin Harper | DATE 12/5/12 | STRUCTURE DESIGN BRANCH 1 | PLANNING STUDY |
| DRAWN BY Bob Huddleston | DATE 12/31/12 | | ALBION RIVER BR (WIDEN) |
| CHECKED BY | DATE 4/16/13 | | BRIDGE NO. 10-0136 UNIT: 3576 |
| APPROVED | DATE 4/16/13 | | SCALE: as shown PROJECT NO. & PHASE: 01 000001540 |

01-1c albion-rendo-01.dgn

STRUCTURES DESIGN ADVANCE PLANNING SHOP SHEET (ENGLISH) (REV. 08-09-10)

LAYERNAME: 03 x 101842 DATE PLOTTED => 16-APR-2013 TIME PLOTTED => 09:40

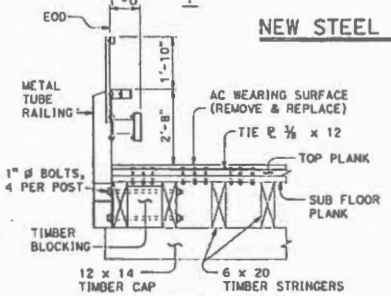
(27 of 123)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

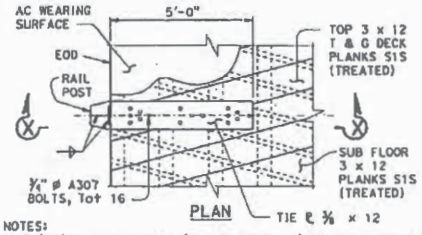
| DIST | COUNTY | ROUTE | POST MILE |
|---|---|---|---|
| 01 | Men | 1 | 43.74 |




NEW STEEL TRUSS ELEVATION
1" = 30'



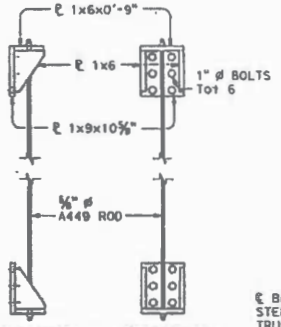

SECTION X-X




PLAN

NOTES:
1. Existing deck planks (top & subfloor) to be removed and replaced.
2. Attach each plank to each stringer with ⅝"x6" TimberLok heavy duty wood screws.
3. Tube rails not shown in "PLAN".

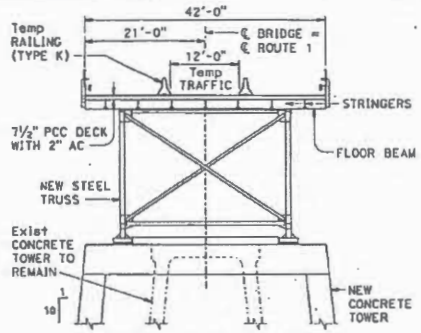
METAL TUBE RAILING AND TIMBER DECK
¼" = 1'-0"



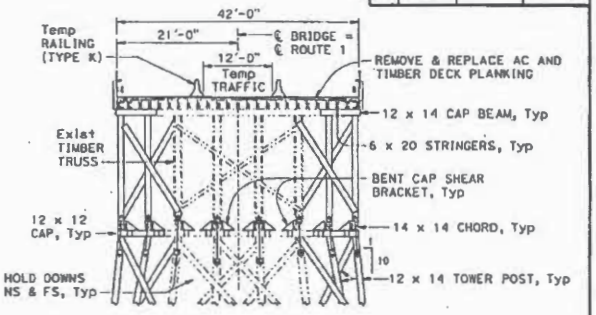

SIDE VIEW ELEVATION

NOTES:
1. All plates shall be Grade 50 steel.
2. All nuts shall have a thread locking system.

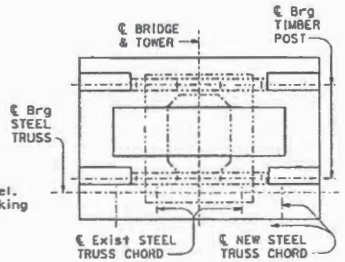
HOLD DOWN DETAIL
½" = 1'-0"



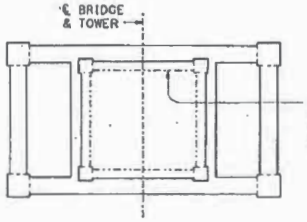

NEW STEEL TRUSS DETAIL
1" = 20'



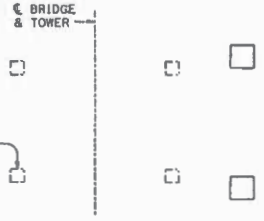

TIMBER TRUSS DETAIL
1" = 20'



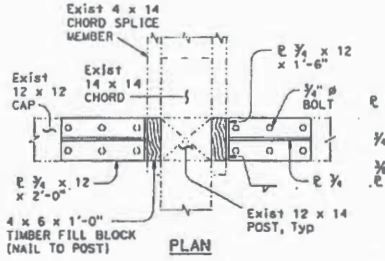

VIEW C-C
1" = 20'



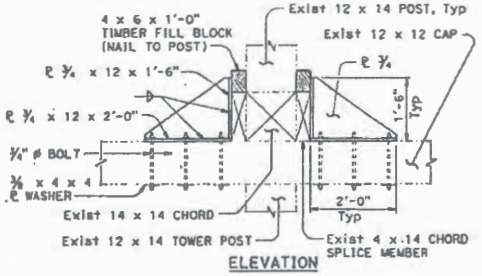

SECTION D-D
1" = 20'




SECTION E-E
1" = 20'



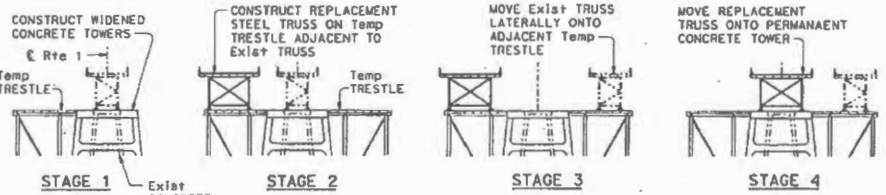

PLAN




ELEVATION

TRUSS TO TOWER BENT CAP SHEAR BRACKET
⅜" = 1'-0"

LEGEND:
------ Indicates existing structure




NEW TRUSS CONSTRUCTION SEQUENCE
NO SCALE

NOTE:
Route 1 shall not be closed for longer than 24 hours during Stage 3 and Stage 4 construction.

**ALT B - WIDEN & RETROFIT (SHEET 2 OF 2)**

| | | | |
|---|---|---|---|
| DESIGNED BY Kevin Harper | DATE 12/5/12 | STRUCTURE DESIGN BRANCH 1 | PLANNING STUDY |
| DRAWN BY Bob Huddleston | DATE 1/9/13 | | ALBION RIVER BR (WIDEN) |
| CHECKED BY | DATE 4/16/13 | | BRIDGE NO. 10-0136 UNIT: 3576 |
| APPROVED | DATE 4/16/13 | | SCALE: as shown PROJECT NO. & PHASE: 0100000154D |

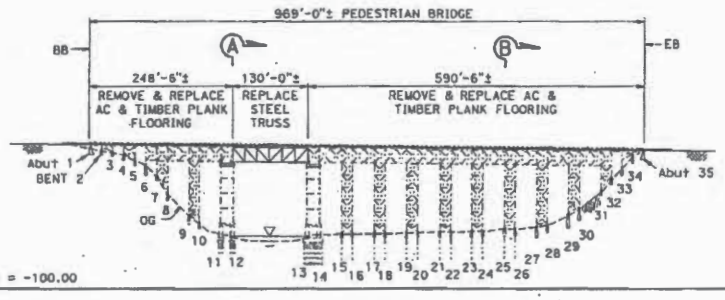
CONTRACT NO.: 01-401104

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (LAST) (REV. 08-05-10)

LOGNAME => albion-rr(2)-07.dgn DATE PLOTTED => 16-APR-2013 TIME PLOTTED => 09:40

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

| DIST | COUNTY | ROUTE | POST MILE |
|---|---|---|---|
| 01 | Men | 1 | 43.74 |

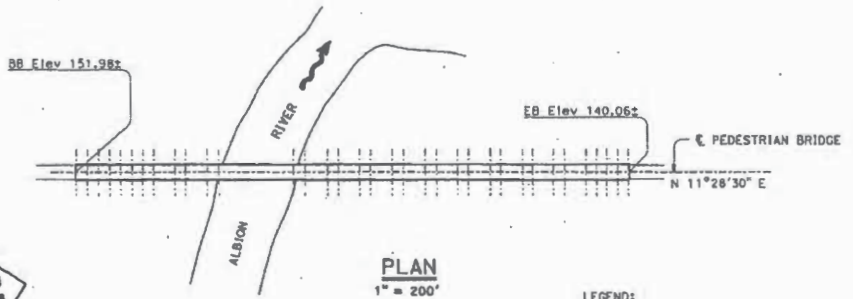



## ELEVATION
1" = 200'

NOTES:

1. New Rte 1 Albion River Bridge not shown.
2. No traffic is assumed to be on the existing bridge during construction. (Route 1 has been realigned to new bridge.)
3. Top and sub floor planks may be of random lengths with a maximum of one joint per run. Joints to occur at centerline of stringer. Joints to be staggered so that joints in adjacent planks do not occur at the same stringer or one directly above another. Minimum plank length is 6 feet.
4. Place a heavy mop coat of hot asphalt on top of the sub floor and then place top planking while the asphalt is still plastic.
5. Replacement of existing timber sill plates will require jacking and temporary supports (dead load only) of the timber tower legs.

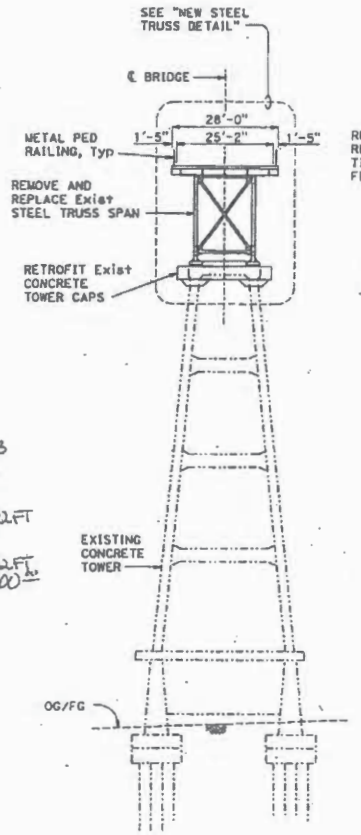
| | |
|---|---|
| DATE OF ESTIMATE | 05-17-2013 |
| STR. DEPTH | |
| LENGTH | 969 FT |
| WIDTH | 28 FT |
| AREA | 27,132 SQFT |
| COST/SQ FT INCLUDING | |
| 10% MOBILIZATION & | |
| 25% CONTINGENCY | +197 SQFT |
| TOTAL COST | $5,349,000 |



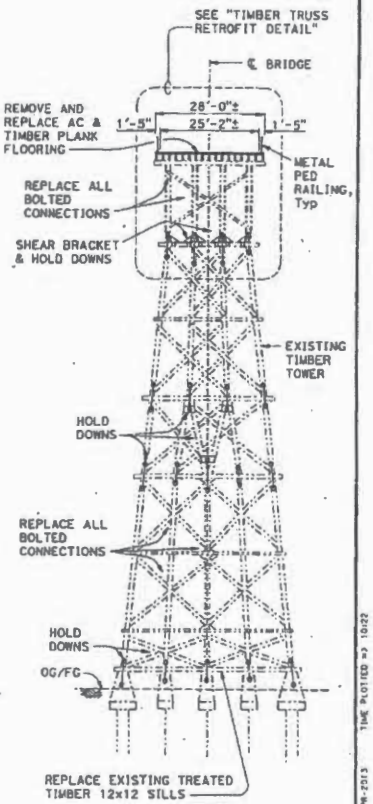

## PLAN
1" = 200'

LEGEND:

----- - Indicates existing structure




## SECTION A-A
1" = 30'




## SECTION B-B
1" = 30'

# ALT C - REHAB FOR PED BRIDGE (SHEET 1 OF 2)

| | | | |
|---|---|---|---|
| DESIGNED BY Kevin Harper | DATE 12/5/12 | STRUCTURE DESIGN BRANCH 1 | PLANNING STUDY |
| DRAWN BY Bob Huggleston | DATE 1/14/13 | | ALBION RIVER BR (RETROFIT) |
| CHECKED BY | DATE 4/16/13 | | BRIDGE NO. 10-0136 UNIT: 3576 |
| APPROVED | DATE 4/10/13 | | SCALE: as shown PROJECT NO. & PHASE: 01000001540 |

FILE => albion-retro-01.dgn

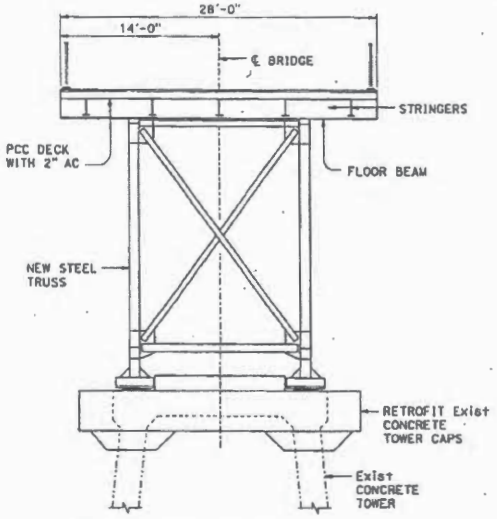
CONTRACT NO.: 01-401104

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET ENGLISH DGN'. 08-09-101

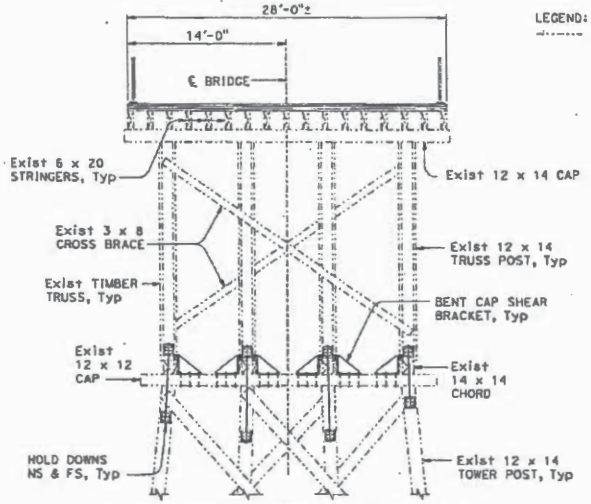
DGNNAME => b10184z DATE PLOTTED => 16-APR-2013 TIME PLOTTED => 10:22

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

| DIST | COUNTY | ROUTE | POST MILE |
|---|---|---|---|
| 01 | Men | 1 | 43.74 |

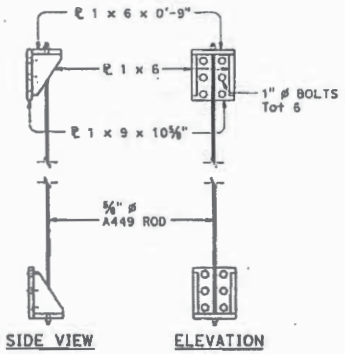



NEW STEEL TRUSS DETAIL
1" = 10'



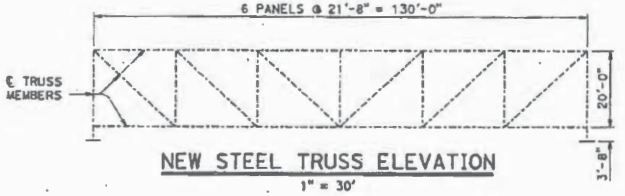

TIMBER TRUSS RETROFIT DETAIL
1" = 10'

LEGEND:
- - - - - Indicates existing structure

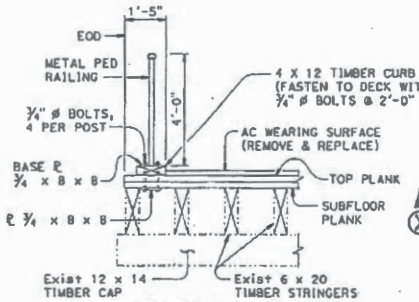



NOTES:
1. All plates shall be Grade 50 steel.
2. All nuts shall have a thread locking system.

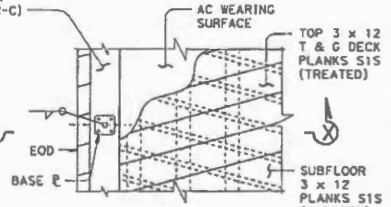
HOLD DOWN DETAIL
½" = 1'-0"




NEW STEEL TRUSS ELEVATION
1" = 30'



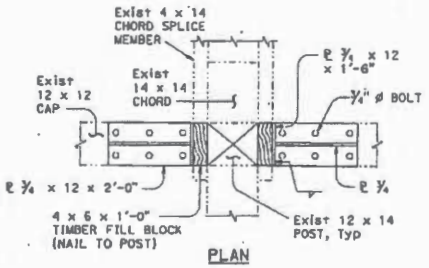

SECTION X-X



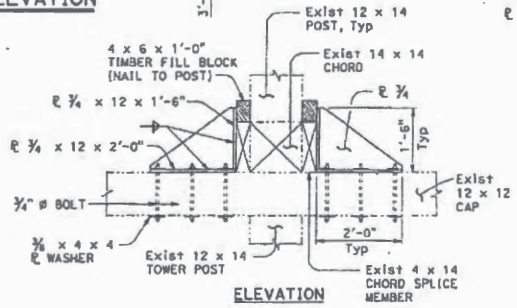

PLAN

NOTES:
1. Deck planks (top & subfloor) to be removed and replaced.
2. Attach each plank to stringer with ⅝" x 6" TimberLok heavy duty wood screws.
3. Tube rails not shown in "PLAN".

METAL PEDESTRIAN RAILING & TIMBER DECK
¼" = 1'-0"




PLAN




ELEVATION

TRUSS TO TOWER BENT CAP SHEAR BRACKET
⅜" = 1'-0"

# ALT C - REHAB FOR PED BRIDGE (SHEET 2 OF 2)

| | | | |
|---|---|---|---|
| DESIGNED BY Kevin Harper | DATE 12/5/12 | STRUCTURE DESIGN BRANCH 1 | PLANNING STUDY |
| DRAWN BY Bob Huddleston | DATE 1/14/13 | | ALBION RIVER BR (RETROFIT) |
| CHECKED BY | DATE 4/16/13 | | BRIDGE NO. 10-0136 UNIT: 3576 |
| APPROVED | DATE 4/16/13 | | SCALE: as shown PROJECT NO. & PHASE: 01000001540 |

=> albion-retro-c2.dgn

CONTRACT NO.: 01-401104

STRUCTURE DESIGN ADVANCE PLANNING STUDY SHEET (LAYOUT) (REV. 08-09-10)

DGNNAME => sto1662 DATE PLOTTED => 16-APR-2013 TIME PLOTTED => 10:22

# Albion River Bridge Fact Sheet

The Albion River Bridge on Route 1 in Mendocino County was built in 1944 out of wood timbers and a salvaged steel trestle due to wartime shortages of steel and concrete. The bridge is on the National Register of Historic Places because it shows the department's ingenuity to design and build a bridge while working within the strict wartime restrictions on building materials. However, by today's standards, the bridge is very narrow, does not meet current seismic and safety standards, and has relatively high maintenance costs. The bridge is part of the Pacific Coast Bike Route and thousands of bicyclists travel across it each year. A new bridge will provide wider shoulders for bicyclists and motorists experiencing vehicle breakdowns, a protected pedestrian pathway, and will meet current seismic standards. A study was performed in 2013 to evaluate the costs and feasibility of rehabilitating the bridge, which would include seismic retrofitting, widening, and replacing the wooden bridge rails. The costs for rehabilitation would be 70-100% of the cost to build a new concrete arch bridge, and would still require costly routine maintenance compared to near zero routine maintenance for a new concrete bridge. Rehabilitation alternatives would not address the current bridge's current inadequate functionality or its vulnerability to fail during a seismic or tsunami event. The department's contractor completed rehabilitation of the bridge in an effort to keep the structure functional before a replacement structure is built. Environmental and design studies are now in progress to study the range of practicable alternatives for replacing the existing structure.

# Albion River Bridge Fact Sheet

- **Functionally Obsolete** due to deck geometry
  - The current bridge is not meeting the current multimodal needs of the community or adequate for the modern trucks traversing the span.
  - Route 1 is legislatively designated as the "Pacific Coast Bike Route" and the current narrow 1' shoulders force bicyclists to share the same lane with motorists
  - The bridge is narrow and does not meet current standards for shoulders and guardrails.
  - The maintenance costs are not sustainable and would continue if we choose to only rehabilitate the bridge. The maintenance costs are estimated to be low if the bridge is replaced with a concrete bridge.
  - Had there been no material shortages a concrete arch structure would have been built similar to other bridges along the Mendocino Coast.
  - The existing bridge was designed to be a temporary fix until a concrete structure could be built; it is now nearly 75 years old.
- **Fracture Critical** due to low redundancy of old riveted steel deck truss – failure of one member could cause collapse of entire span.
- **Low load rating** for permit loads (POOXX) – larger permit trucks are not allowed on the bridge.
- **Deficient Rail** – unsafe – railing not capable of resisting vehicle impact loading requirements of the design code.

# Albion River Bridge Fact Sheet

**The History of This Bridge Is One of Constant Repair (High Maintenance Costs)**

The rehabilitation and repair of the Albion River Bridge was satisfactorily completed on March 16, 2017 under construction contract 01-0E2004. Repairs included the replacement of bolts and threaded rod connectors at timber Bents 15 through 22; repairs to checks, splits and rot in the bottom transverse horizontal timber tower members located on top of foundation pedestals with epoxy paste and epoxy resin injection at Bents 25,26, 27, 28, 29 and 30; repairs to spalled surface area at the concrete towers at Bents 11, 12, 13 and 14; widened steel truss bearing seats on concrete towers at Bents 12 and 13 and repaired checks, splits and rot in the top transverse horizontal timber tower members east of the catwalk with epoxy paste and epoxy resin injection at Bents 32 and 34.

Previous inspection of the bridge deck noted numerous repaired, patched, cracked and raveled areas in both lanes in nearly all spans. The cracking, reveling, and potholing of the AC indicated that the timber two-layer plank deck under the AC was rotting and crushing, causing the failure of the AC riding surface. The timber plank deck appeared to have reached the end of it service life. Further investigation by District Maintenance included obtaining core samples of the timber decking to determine its condition before including replacement of the timber plank deck as part of the scope of work to rehabilitate the structure. Core samples revealed that the timber plank decking is in satisfactory condition along the riding surface and the District included grinding the existing AC overlay and repaving the bridge deck.

Inspection commentary

- Although the steel deck truss of the main span was cleaned and painted in the fall of 2013, the steel truss span will eventually need to be replaced due to section loss.

- 1000's of steel bolts in the timber connections will continue to need replacement due to the harsh coastal environment. Life expectancy of many of the new bolts has averaged approximately 2 years before needing replacement.

- The high capacity internal shear ring connectors that are used in almost all of the bridge timber connections can only be inspected by dismantling the connections which is considered unrealistic given that the structure would need to be closed to thru traffic for an extended period of time to dismantle the connections and inspect the internal shear rings. It is not possible to determine the remaining life of the shear ring connectors and their replacement would be expensive and require full closure of the structure for an extended period of time.

- Connection tie straps and plates need to be replaced due to heavy corrosion loss of the steel.

- The majority of timbers appear sound and may last for no more than 10 years as long as the rotting timbers, checks and splits are repaired.

- The Bridge is seismically deficient and would need to be retrofitted to prevent collapse in a design event.

- The bridge is very susceptible to tsunami damage and possible collapse due to the many closely spaced bridge supports within the tsunami inundation zone.

Bridge repairs in California are not ranked by virtue of their sufficiency rating.

Sufficiency rates are not compared in determining the scope or timing of any bridge repairs in the state. Further any comparison of the sufficiency rating for the Albion Bridge to any other bridge in the state, including the Golden Gate Bridge, would be meaningless.

In California, the condition of every state highway and local agency bridge is documented during regularly scheduled routine inspections. Based on those condition findings, repair work is recommended and initiated in a timely and cost effective manner to ensure the continued safety and reliability of the structure.

# Albion River Bridge Fact Sheet

The federal government uses inspection data compiled by Caltrans engineers to calculate a complex formula called the sufficiency rating to determine federal bridge program funding eligibility. The sufficiency rating combines the condition and functional adequacy data collected on every bridge into a single aggregate number.

Sufficiency rating values range from 0 (low) to 100 (high). If the sufficiency rating on a bridge is 50 or less **and** it is designated as "structurally deficient" or "functionally obsolete" the bridge qualifies for federal replacement funding. A low sufficiency rating number does not necessarily mean that the bridge is in need of repair.

The seismic retrofit details shown in the Feasibility Study assume that the shear rings are still capable of transmitting dead load compression forces from the deck to the ground. The hold down brackets are used for tension forces holding the structure together as one leg tries to uplift during the seismic event. The Feasibility Study Transmittal Memo recommends that several connections be dismantled to examine the conditions of the shear rings to determine if the assumption to not retrofit the connections is valid. The seismic vulnerabilities of this bridge are just one of many issues that lead to the decision to replace the bridge (see Peer Review Fact Sheet, August 15, 2007) The decision on how to act upon network vulnerabilities is associated with how the Department manages risk. Once a bridge structure has been identified as having vulnerabilities they are typically addressed at a project level. If engineering judgement or other data indicates that likelihood of a 'vulnerability incident' occurring within the window of time it takes a to complete a project, then an interim or emergency project may be initiated to stabilize the most critical vulnerabilities until the preferred project is completed. While this may be done in cases where the recurrence interval for an incident is typically small, like storm or flow events, this is not done to address seismic vulnerabilities, where the recurrence interval can be quite large and unpredictable. Caltrans accepts the risk that we can complete a seismic mitigation project within the expected recurrence interval. That is essentially the reason that the Department does not put out interim or emergency projects to address seismic vulnerabilities. These are addressed as part of overall structure need because we accept the risk that the earthquake will not happen before a needs-based project is initiated.

DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

**Bridge Number : 10 0136**
Facility Carried: STATE ROUTE 1
Location : 01-MEN-001-43.74
City :
Inspection Date : 10/11/2017
Inspection Type
Routine FC Underwater Special Other
[X] :Follow Up

# Bridge Inspection Report

**STRUCTURE NAME: ALBION RIVER**

## CONSTRUCTION INFORMATION

Year Built : 1944
Year Modified: N/A
Length (m) : 295.4
Skew (degrees): 0
No. of Joints : 2
No. of Hinges : 0

Structure Description: Simply supported 34-span bridge. Timber 2-ply plank deck, with AC riding surface, timber 17-girder spans on timber A-frame deck trusses on timber tower bents. Eleven timber approach spans at the south end of the bridge, with Span 8 & 10 being a timber A-frame deck truss. A single-span riveted steel deck truss on RC tower bents over the main channel. Twenty-two timber approach spans at the north end of the bridge, with Span 14, 16, 18, 20, 22, 24, 26, 28, & 30 being a timber A-frame deck truss. Both abutments are RC buttress-type with monolithic RC wingwalls and 3-column bents on spread footings. Foundations for Bents 2-10 & 26-34 are concrete pedestal-type spread footings, Tower 11-12 is on driven (split-rail reinforced) PC/RC piles and Tower 13-14 is on driven timber piles, Bents 15-25 are concrete pedestal-type footings on driven timber piles. (The main span is a riveted steel deck truss, expansion at Bent 12 and fixed at Bent 13, which was recycled from an old bridge that had been located on the South Fork of the Feather River approximately 1.5 miles downstream of Bidwell Bar) All timber is treated Douglas Fir (from Washington State).

Span Configuration : 7 @ 19.0 ft, 1 @ 38.0 ft, 1 @ 19.0 ft, 1 @ 38.0 ft, 1 @ 16.5 ft, 1 @ 130.0 ft, 1 @ 16.5 ft, 1 @ 38.0 ft, 1 @ 19.0 ft, 1 @ 38.0 ft, 1 @ 19.0 ft, 1 @ 38.0 ft, 1 @ 19.0 ft, 1 @ 38.0 ft, 1 @ 19.0 ft, 1 @ 38.0 ft, 1 @ 19.0 ft, 1 @ 38.0 ft, 1 @ 19.0 ft, 1 @ 38.0 ft, 1 @ 19.0 ft, 1 @ 38.0 ft, 4 @ 19.0 ft

## SAFE LOAD CAPACITY AND RATINGS

Design Live Load: M-13.5 OR H-15
Inventory Rating: RF=0.70 =>22.7 metric tons Calculation Method: ALLOWABLE STRESS
Operating Rating: RF=0.95 =>30.8 metric tons Calculation Method: ALLOWABLE STRESS
Permit Rating : PGGGO
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

## DESCRIPTION ON STRUCTURE

Deck X-Section: 0.3 ft br, 1.0 ft wg, 26.0 ft, 1.0 ft wg, 0.3 ft br
Total Width: 8.5 m Net Width: 7.9 m No. of Lanes: 2 Speed: 50 mph
Min. Vertical Clearance: Unimpaired Overlay Thickness: 2.0 inches

Rail Code: 0010

| Rail Type | Location | Length (ft) | Rail Modifications |
|---|---|---|---|
| Timber Rail | Right/Left | 2018 | Timber railings on timber posts, with timber wheel guard in front |

## DESCRIPTION UNDER STRUCTURE

Channel Description: Wide, sandy bed on flat slope situated in bottom of relatively narrow canyon at outlet to the ocean. Tidally influenced; flow reversal. Bridge is on straight reach downstream of right bend, about 600 feet from the outlet to the ocean.



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**NOTICE**

The bridge inspection condition assessment used for this inspection is based on the American Association of State Highway and Transportation Officials (AASHTO) Bridge Element Inspection Manual 2013 as defined in Moving Ahead for Progress in the 21st Century (MAP-21) federal law. The new element inspection methodology may result in changes to related condition and appraisal ratings on the bridge without significant physical changes at the bridge.

The element condition information contained in this report represents the current condition of the bridge based on the most recent routine and special inspections. Some of the notes presented below may be from an inspection that occurred prior to the date noted in this report. Refer to the Scope and Access section of this inspection report for a description of which portions of the bridge were inspected on this date.

**INSPECTION COMMENTARY**

SCOPE AND ACCESS

This investigation was conducted over the course of three days and is in response to the recent completion of Maintenance Contract 01-E2004, which focused mainly on the replacement of corroded and failing bolted connections throughout the substructure. On the first day of inspections, the substructure was visually inspected from the ground below. The river was flowing at a depth greater than 10 feet through Span 12 during this inspection and all of the substructure elements were above the water level. On the second day, the ABME met with the Structure Representative for Contract 01-E2004, Moussa Jandal, at the bridge site to walk through all of the recently completed work. The superstructure was also visually inspected on this day from the catwalk. On the third day, the outside edges of the deck and soffit were visually inspected from the Under Bridge Inspection Truck (UBIT). The floor beams and timber stringers were also inspected from the UBIT as well. Many of the members were drilled throughout the day to check for moisture and core rot. District 1 bridge crew provided traffic control for the UBIT inspection.

HISTORY

This structure has a history of advanced corrosion occurring to the bolted connections throughout the trestle substructure, as well as the timber truss superstructure. The bolted connections are acting as pins, as long as the threaded rods are in place the bridge is in sound condition. On the other hand, the nuts keep the threaded rods in place, when they fail there is the chance of the threaded rods coming out of the connection. The bolted connections in the towers have historically been replaced by the District 01 Bridge Crew.

During the Climb inspection performed on 5/15/2012, it was discovered that, on average, approximately 50 to 70% of the nuts had failed due to corrosion from the marine environment. Due to the amount of labor and connections needing replacement, a maintenance contract was put out to bid to replace the majority of the corroded threaded rods and nuts. There were approximately 5,000 threaded rods with nuts that needed replacement, 2,500 to 3,500 of which had failed.

In 2016, Maintenance Contract 01-E2004 was completed which replaced approximately 80% of all of the threaded rods and nuts throughout the substructure. None of the bolted connections of the superstructure were addressed. In addition, rotted and decaying horizontal scabs located between the trestle columns were filled with an epoxy system which filled and sealed any rotted voids present in the members. Additional work included in the project was construction of new concrete bearing pedestals for the steel truss span, new Type "A" pourable joint seals at Bents 13 and 14, as well as a new AC overlay over the majority of the bridge deck. The purpose of this inspection was to document the recently completed work and to perform a complete and thorough inspection on all of the remaining elements and determine if any additional maintenance contracts are



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## INSPECTION COMMENTARY

needed in the near future to maintain the structural integrity of the bridge.

### MISCELLANEOUS

The pipe supports along the right side of the bridge are corroded and many have completely failed (see Photos 1 - 3). At the time of this report, it is unknown what utility is present within the steel conduit but it appears to be either phone or other type of communication cable. The roller supports need to be replaced.

### DECK AND ROADWAY

As part of Contract 01-E2004, the existing AC overlay on the bridge deck was removed from within 2 feet of the curb on each side of the bridge and replaced with a new AC overlay. The condition of the timber deck beneath the AC overlay could not be verified during removal since the Structure Representative was working below on the hardware replacement at the time.

### SUPERSTRUCTURE

Contract 01-E2004 did not address any of the bolted connections in the superstructure. Based on the visual inspection performed, approximately 20 to 30% of the bolts and threaded rods exhibit corrosion with freckled rust throughout and should be eventually replaced (see Photos 22 - 25). Almost every diagonal member of the timber truss exhibits checks that run the full length of the member (see Photos 26 - 34). The checks are typically 0.25 inches wide and penetrate approximately 3 to 4 inches into the member's cross section. These same type of checks are also present on the majority of the vertical members of the truss as well. For a detailed list of each member with its associated defect's characteristics, please refer to the attached table in Appendix A.

Many of the timber scabs that are present at the connections throughout the lower chord are completely split along the plane of the bolted connections (see Photos 35 - 39). These timber scabs assist in the connection of the diagonal truss members to the lower chord at each bent. Approximately 53 of these timber scabs are split and are primarily located throughout the northern approach spans.

Most of the timber bent caps were damp to the touch and had minor core rot present when drilled at the outer 6 to 12 inches (see Photos 40 - 41). Almost all of the timber bent caps throughout the length of the structure displayed horizontal checks approximately 0.125 to 0.25 inches wide that ran the full length of the member and penetrated approximately 3 inches into the members cross section (see Photos 41 - 45).

### SUBSTRUCTURE

Approximately 80% of all of the bolted connections throughout the substructure were replaced under Contract 01-E2004. For a complete list of the bolts replaced, please refer to the hardware table in the as-built drawings for Contract 01-E2004. The remaining 20% of the connections exhibit surface rust throughout but without measurable section loss (see Photos 46 - 49).

All of the timber columns in the timber bents and the timber columns that make up the trestles have 0.125 to 0.25 inch wide vertical checks for most of the members length (see Photos 50 - 64). For a detailed list of each trestle member and its associated defect, please refer to the attached table in Appendix B.



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## INSPECTION COMMENTARY

SAFE LOAD CAPACITY

The load rating for this structure is being reviewed by SMI Ratings Branch. An updated Load Rating Summary Sheet will be archived when this review is complete. The current ratings are based on Midas computer program output dated 11/1/2011.

The steel deck truss main span was found to have lower Inventory, Operating and Permit Ratings than the approach spans, and therefore, to be the controlling portion of the structure. The load rating values shown are for the main span.

RECOMMENDATIONS

Remove and replace the remaining steel bolted connections and hardware (threaded rods, malleys, nuts, straps, etc.) throughout the entire timber substructure and superstructure as necessary.

Repair (remove and replace and/or supplement) all portions of the horizontal transverse beams along the catwalk where the wood is decayed in the interior. Portions of the members were drilled with an auger bit and found to be decayed in the core.

Remove and replace the split timber scabs that connect the diagonal truss members to the bottom chord at the trestle bents.

Remove and replace the rotted and decayed portions of the timber deck along both sides of the edge of deck near the deck drains. Large areas of decay were found extending from the edge of deck inwards approximately 18 to 24 inches.

Remove and replace the rusted and failed pipe supports along the right side of the structure.

## STEEL INVESTIGATIONS

This structure qualifies for an in-depth Steel investigation because it possesses the following fracture critical or fatigue prone details:

Truss: FC Members with Category E Welds

Fracture Critical: Yes  Inspection Freq.: 24  Next Inspection: 03/15/2018

## ELEMENT INSPECTION RATINGS AND COMMENTARY

| Elem No. | Defect /Prot | Element Description | Env | Total Qty | Units | Qty in each Condition State St. 1 | St. 2 | St. 3 | St. 4 |
|---|---|---|---|---|---|---|---|---|---|
| Element Group: 101 - Approach - Southern Spans 1-11 - Timber Deck Trusses | | | | | | | | | |
| 31 | | Deck-Timber | 3 | 651 | sq.m | 631 | 5 | 15 | 0 |
| | 1140 | Decay/Section Loss (Timber) | 3 | 20 | | 0 | 5 | 15 | 0 |
| | 510 | Deck Wearing Surface-Asphalt | 3 | 594 | sq.m | 594 | 0 | 0 | 0 |

(31-1140)
The timber deck consists of two layers of 11.25 inch by 3 inch timber deck planks with the top layer oriented at a 30 degree angle to the bridge deck and the bottom layer oriented perpendicular to the top layer. There are several areas of white fungus present on the soffit of the timber deck (see Photos 4 - 8). When these areas were drilled, the deck appeared to be sound without decay or rot.



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## ELEMENT INSPECTION RATINGS AND COMMENTARY

| Elem No. | Defect /Prot | Element Description | Env | Total Qty | Units | Qty in each Condition State St. 1 | St. 2 | St. 3 | St. 4 |
|---|---|---|---|---|---|---|---|---|---|
| Element Group: 101 - Approach - Southern Spans 1-11 - Timber Deck Trusses | | | | | | | | | |
| | | Large areas of rotted and decayed timber deck planks were discovered along the edge of deck on both sides throughout the length of the structure. The rot was typically present in the area beneath the deck drains and extended approximately 18 to 24 inches into the deck on both layers of deck planks (see Photos 9 - 21). The exact amount of decay (linear footage) was not measured but conservatively estimated at 15 to 20% of the total length of the deck. | | | | | | | |
| (31-510) | | There were no significant defects noted. A new AC overlay was placed on the bridge deck in 2016 under EA 01-E2004. | | | | | | | |
| **111** | | **Girder/Beam-Timber** | 2 | 590 | m | 590 | 0 | 0 | 0 |
| (111) | | There were no significant defects noted. | | | | | | | |
| **117** | | **Stringer-Timber** | 3 | 690 | m | 690 | 0 | 0 | 0 |
| (117) | | There were no significant defects noted. | | | | | | | |
| **135** | | **Truss-Timber** | 3 | 46 | m | 0 | 46 | 0 | 0 |
| | **1020** | **Connection** | 3 | 14 | | 0 | 14 | 0 | 0 |
| | **1150** | **Check/Shake (Timber)** | 3 | 32 | | 0 | 32 | 0 | 0 |
| (135-1020) | | Approximately 30% of the threaded fasteners are exhibiting signs of corrosion. The marine environment has caused near total corrosion of a large number of the nuts on the threaded rods that hold the timber members in place (see Photos 21 - 23 for typical condition). | | | | | | | |
| (135-1150) | | All of the vertical and diagonal members of the truss have checks approximately 0.125 to 0.25 inches wide that penetrate approximately 3 to 4 inches into the members' cross section (see Photos 24 - 31). Refer to Appendix A for a detailed list of each member and its associated defect. | | | | | | | |
| **156** | | **Floor Beam-Timber** | 3 | 52 | m | 0 | 52 | 0 | 0 |
| | **1140** | **Decay/Section Loss (Timber)** | 3 | 10 | | 0 | 10 | 0 | 0 |
| | **1150** | **Check/Shake (Timber)** | 3 | 42 | | 0 | 42 | 0 | 0 |
| (156-1140) | | There is rot and decay present for a length of 6 to 12 inches on the outer edges of the floor beams (see Photos 38 -39). This currently does not warrant a work recommendation but will be monitored during future inspections. | | | | | | | |
| (156-1150) | | Approximately 80% of the floor beams exhibit horizontal checks approximately 0.125 to 0.25 inches wide that penetrate 3 to 4 inches into the members' cross section (see Photos 40 - 43). | | | | | | | |
| **205** | | **Column-RC** | 3 | 2 | each | 2 | 0 | 0 | 0 |
| (205) | | There were no significant defects noted. | | | | | | | |
| **206** | | **Column-Timber** | 3 | 24 | each | 0 | 24 | 0 | 0 |
| | **1150** | **Check/Shake (Timber)** | 3 | 24 | | 0 | 24 | 0 | 0 |
| (206-1150) | | There are 0.125 to 0.25 inch wide vertical checks that penetrate approximately 3 to 4 inches into the | | | | | | | |



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## ELEMENT INSPECTION RATINGS AND COMMENTARY

| Elem No. | Defect /Prot | Element Description | Env | Total Qty | Units | Qty in each Condition State St. 1 | St. 2 | St. 3 | St. 4 |
|---|---|---|---|---|---|---|---|---|---|
| Element Group: 101 - Approach - Southern Spans 1-11 - Timber Deck Trusses | | | | | | | | | |
| members' cross section throughout every column of the trestle (see Photos 48 - 51). | | | | | | | | | |
| 208 | | Trestle-Timber | 3 | 116 | m | 0 | 116 | 0 | 0 |
| | 1020 | Connection | 3 | 1 | | 0 | 1 | 0 | 0 |
| | 1150 | Check/Shake (Timber) | 3 | 115 | | 0 | 115 | 0 | 0 |
| (208-1020) Approximately 20% of the threaded connections have not been replaced and show signs of corrosion with surface rust throughout (see Photos 44 - 47). | | | | | | | | | |
| (208-1150) There are 0.125 to 0.25 inch wide vertical checks that penetrate approximately 3 to 4 inches into the members' cross section throughout every member of the trestle (see Photos 52 - 62). | | | | | | | | | |
| 215 | | Abutment-RC | 3 | 11 | m | 11 | 0 | 0 | 0 |
| (215) There were no significant defects noted. | | | | | | | | | |
| 220 | | Pile Cap/Footing-RC | 2 | 30 | m | 30 | 0 | 0 | 0 |
| (220) There were no significant defects noted. This element represents the concrete footing under each column of the trestle. | | | | | | | | | |
| 234 | | Pier Cap-RC | 3 | 8 | m | 8 | 0 | 0 | 0 |
| (234) There were no significant defects noted. | | | | | | | | | |
| 235 | | Pier Cap-Timber | 3 | 52 | m | 52 | 0 | 0 | 0 |
| (235) There were no significant defects noted. | | | | | | | | | |
| 332 | | Railing-Timber | 3 | 512 | m | 512 | 0 | 0 | 0 |
| (332) The timber bridge rail was cleaned and painted in 2013 as part of EA 01-0A5904. There were no significant defects noted. | | | | | | | | | |
| Element Group: 102 - Main - Main Span - Steel Deck Truss | | | | | | | | | |
| 31 | | Deck-Timber | 3 | 341 | sq.m | 331 | 2 | 8 | 0 |
| | 1140 | Decay/Section Loss (Timber) | 3 | 10 | | 0 | 2 | 8 | 0 |
| | 510 | Deck Wearing Surface-Asphalt | 3 | 341 | sq.m | 341 | 0 | 0 | 0 |

(31-1140)
The timber deck consists of two layers of 11.25 inch by 3 inch timber deck planks with the top layer oriented at a 30 degree angle to the bridge deck and the bottom layer oriented perpendicular to the top layer. There are areas of white fungus present on the soffit of the timber deck (see Photos 4 - 8). When these areas were drilled, the deck appeared to be sound without decay or rot.

Large areas of rotted and decayed timber deck planks were discovered along the edge of deck on both sides throughout the length of the structure. The rot was typically present in the area beneath the deck drains and extended approximately 18 to 24 inches into the deck on both layers of deck planks (see Photos 9 - 21). The exact amount of decay (linear footage) was not measured but conservatively



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## ELEMENT INSPECTION RATINGS AND COMMENTARY

| Elem No. | Defect /Prot | Defect | Element Description | Env | Total Qty | Units | Qty in each Condition State St. 1 | St. 2 | St. 3 | St. 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| Element Group: 102 - Main - Main Span - Steel Deck Truss | | | | | | | | | | |

estimated at 15 to 20% of the total length of the deck.

(31-510)

There were no significant defects noted. A new AC overlay was placed on the bridge deck in 2016 under EA 01-E2004.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **120** | | **Truss-Steel** | 4 | 79 | m | 71 | 0 | 8 | 0 |
| | **1000** | **Corrosion** | 4 | 8 | | 0 | 0 | 8 | 0 |
| | **515** | **Steel Coating-Paint** | 4 | 876 | sq.m | 876 | 0 | 0 | 0 |

(120-1000)

This element was inspected on 3/15/2016 by the Fracture Critical Inspection team and the following defects were observed:

There is minor section loss less than 0.20 inch in random locations on all truss members, particularly on flange edges. All truss members exhibit some pitting of less than 0.20 inch (see Photo 3 from the BIR dated 3/15/2016 and Photo 16 from the BIR dated 10/6/2011).

(120-515)

The steel deck truss of the main span was cleaned and painted in the fall of 2013 as part of EA 01-0A5904. The paint system on the main span steel deck truss appears to be in good condition.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **156** | | **Floor Beam-Timber** | 4 | 573 | m | 57 | 516 | 0 | 0 |
| | **1140** | **Decay/Section Loss (Timber)** | 4 | 58 | | 0 | 58 | 0 | 0 |
| | **1150** | **Check/Shake (Timber)** | 4 | 458 | | 0 | 458 | 0 | 0 |

(156-1140)

There is rot and decay present for a length of 6 to 12 inches on the outer edges of the floor beams (see Photos 38 -39). This currently does not warrant a work recommendation but will be monitored during future inspections.

(156-1150)

Approximately 80% of the floor beams exhibit horizontal checks approximately 0.125 to 0.25 inches wide that penetrate 3 to 4 inches into the members' cross section (see Photos 40 - 43).

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **205** | | **Column-RC** | 3 | 4 | each | 3 | 1 | 0 | 0 |
| | **1080** | **Delamination/Spall/Patched Area** | 3 | 1 | | 0 | 1 | 0 | 0 |

(205)

Local scour exists at Piers 12 and 13 due to tidal influence on the river flows.

(205-1080)

There is a 6 inch diameter spall that has been patched on the east side of the south wall of the base of Tower 13-14.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **227** | | **Pile-RC** | 2 | 1 | ea. | 1 | 0 | 0 | 0 |

(227)

The pile element is included to indicate the presence of piles on this structure. The piles were not exposed for visual inspection. No indication of pile distress was noted in any substructure element.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **228** | | **Pile-Timber** | 2 | 1 | ea. | 1 | 0 | 0 | 0 |

(228)

The pile element is included to indicate the presence of piles on this structure. The piles were not exposed for visual inspection. No indication of pile distress was noted in any substructure element.



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## ELEMENT INSPECTION RATINGS AND COMMENTARY

| Elem No. | Defect /Prot | Defect | Element Description | Env | Total Qty | Units | Qty in each Condition State St. 1 | St. 2 | St. 3 | St. 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| Element Group: 102 - Main - Main Span - Steel Deck Truss | | | | | | | | | | |
| **234** | | | **Pier Cap-RC** | 3 | 17 | m | 17 | 0 | 0 | 0 |
| (234) | | | | | | | | | | |
| There were no significant defects noted. New concrete bearing pedestals were constructed at each truss support tower in 2016 under EA 01-E2004. | | | | | | | | | | |
| **301** | | | **Joint-Pourable Seal** | 2 | 17 | m | 9 | 8 | 0 | 0 |
| | **2330** | | **Seal Damage (Joints)** | 2 | 8 | | 0 | 8 | 0 | 0 |
| (301) | | | | | | | | | | |
| New Type "A" pourable joint seals were installed at Bents 13 and 14 in 2016 under EA 01-E2004. | | | | | | | | | | |
| (301-2330) | | | | | | | | | | |
| The pourable joint seal at Bent 13 already exhibits small tears throughout its length but the seal at Bent 14 remains in good condition. | | | | | | | | | | |
| **304** | | | **Joint-Open Expansion** | 3 | 17 | m | 17 | 0 | 0 | 0 |
| (304) | | | | | | | | | | |
| There were no significant defects noted. | | | | | | | | | | |
| **311** | | | **Bearing-Moveable** | 4 | 2 | each | 2 | 0 | 0 | 0 |
| (311) | | | | | | | | | | |
| There were no significant defects noted. | | | | | | | | | | |
| **313** | | | **Bearing-Fixed** | 4 | 2 | each | 2 | 0 | 0 | 0 |
| (313) | | | | | | | | | | |
| There were no significant defects noted. | | | | | | | | | | |
| **332** | | | **Railing-Timber** | 3 | 79 | m | 79 | 0 | 0 | 0 |
| (332) | | | | | | | | | | |
| The timber bridge rail was cleaned and painted in 2013 as part of EA 01-0A5904. There were no significant defects noted. | | | | | | | | | | |
| Element Group: 103 - Approach - Northern Spans 13-34 - Timber Deck Trusses | | | | | | | | | | |
| **31** | | | **Deck-Timber** | 2 | 1557 | sq.m | 1511 | 10 | 36 | 0 |
| | **1140** | | **Decay/Section Loss (Timber)** | 2 | 46 | | 0 | 10 | 36 | 0 |
| | **510** | | **Deck Wearing Surface-Asphalt** | 2 | 1420 | sq.m | 1420 | 0 | 0 | 0 |
| (31-1140) | | | | | | | | | | |
| The scuppers at the base of the wheel guards on both sides of the deck at the north end of the bridge are plugged with dirt and weeds. | | | | | | | | | | |
| The timber deck consists of two layers of 11.25 inch by 3 inch timber deck planks with the top layer oriented at a 30 degree angle to the bridge deck and the bottom layer oriented perpendicular to the top layer. There are areas of white fungus present on the soffit of the timber deck (see Photos 4 - 8). When these areas were drilled, the deck appeared to be sound without decay or rot. | | | | | | | | | | |
| Large areas of rotted and decayed timber deck planks were discovered along the edge of deck on both sides throughout the length of the structure. The rot was typically present in the area beneath the deck drains and extended approximately 18 to 24 inches into the deck on both layers of deck planks (see Photos 9 - 22). The exact amount of decay (linear footage) was not measured but conservatively estimated at 15 to 20% of the total length of the deck. | | | | | | | | | | |



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## ELEMENT INSPECTION RATINGS AND COMMENTARY

| Elem No. | Defect /Prot | Element Description | Env | Total Qty | Units | Qty in each Condition State St. 1 | St. 2 | St. 3 | St. 4 |
|---|---|---|---|---|---|---|---|---|---|
| Element Group: 103 - Approach - Northern Spans 13-34 - Timber Deck Trusses | | | | | | | | | |
| (31-510) | | | | | | | | | |
| There were no significant defects noted. A new AC overlay was placed on the bridge deck in 2016 under EA 01-E2004. | | | | | | | | | |
| **111** | | **Girder/Beam-Timber** | 2 | 295 | m | 295 | 0 | 0 | 0 |
| (111) | | | | | | | | | |
| There were no significant defects noted. | | | | | | | | | |
| **117** | | **Stringer-Timber** | 3 | 2757 | m | 2757 | 0 | 0 | 0 |
| (117) | | | | | | | | | |
| There were no significant defects noted. | | | | | | | | | |
| **135** | | **Truss-Timber** | 3 | 208 | m | 3 | 205 | 0 | 0 |
| | **1020** | **Connection** | 3 | 62 | | 0 | 62 | 0 | 0 |
| | **1140** | **Decay/Section Loss (Timber)** | 3 | 10 | | 0 | 10 | 0 | 0 |
| | **1150** | **Check/Shake (Timber)** | 3 | 133 | | 0 | 133 | 0 | 0 |
| (135) | | | | | | | | | |
| Approximately 50 of the timber scabs located at the connections of the diagonal truss members to the bottom chord have been split (see Photos 33 - 37). | | | | | | | | | |
| (135-1020) | | | | | | | | | |
| Approximately 30% of the threaded fasteners are exhibiting signs of corrosion. The marine environment has caused near total corrosion of a large number of the nuts on the threaded rods that hold the timber members in place (see Photos 21 - 23 for typical condition).<br><br>The threaded connector that bolts a 3 inch by 8 inch diagonal brace at Bent 17, which is attached to the left side of Column 3 at the catwalk level and extends to the top of Column 3 in Bent 18, has sheared off between the brace and the post. | | | | | | | | | |
| (135-1140) | | | | | | | | | |
| An area of decay was found at the top left horizontal between Bent 15 and Bent 16. The top 4 inches has core rot and extends 10 feet from Bent 15 towards Bent 16.<br><br>An area of decay was found at the top of horizontal member to the right (east) of the catwalk between Bent 23 and 24. The top 3 inches has core rot that extends 5 feet towards Bent 24.<br><br>An area of decay was found at the top of horizontal member to the right (east) of the catwalk between Bent 31 and 32. The top 3 inches has core rot that extends 15 feet towards Bent 32. | | | | | | | | | |
| (135-1150) | | | | | | | | | |
| All of the vertical and diagonal members of the truss have checks approximately 0.125 to 0.25 inches wide that penetrate approximately 3 to 4 inches into the members' cross section (see Photos 24 - 31). Refer to Appendix A for a detailed list of each member and its associated defect. | | | | | | | | | |
| **156** | | **Floor Beam-Timber** | 3 | 243 | m | 0 | 243 | 0 | 0 |
| | **1140** | **Decay/Section Loss (Timber)** | 3 | 49 | | 0 | 49 | 0 | 0 |
| | **1150** | **Check/Shake (Timber)** | 3 | 194 | | 0 | 194 | 0 | 0 |
| (156-1140) | | | | | | | | | |
| There is rot and decay present for a length of 6 to 12 inches on the outer edges of the floor beams (see Photos 38 -39). This currently does not warrant a work recommendation but will be monitored during future inspections. | | | | | | | | | |



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## ELEMENT INSPECTION RATINGS AND COMMENTARY

| Elem No. | Defect /Prot | Defect | Element Description | Env | Total Qty | Units | Qty in each Condition State St. 1 | St. 2 | St. 3 | St. 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| Element Group: 103 - Approach - Northern Spans 13-34 - Timber Deck Trusses | | | | | | | | | | |
| (156-1150) Approximately 80% of the floor beams exhibit horizontal checks approximately 0.125 to 0.25 inches wide that penetrate 3 to 4 inches into the members' cross section (see Photos 40 - 43). | | | | | | | | | | |
| **205** | | **Column-RC** | | 3 | 2 | each | 1 | 1 | 0 | 0 |
| | **1080** | **Delamination/Spall/Patched Area** | | 3 | 1 | | 0 | 1 | 0 | 0 |
| (205) There were no significant defects noted. | | | | | | | | | | |
| (205-1080) The incipient spall located along the northeast corner of Column 2 at Bent 14 has been patched. The patch measures approximately 24 inches tall by 12 inches wide and is located 20 feet above the ground. | | | | | | | | | | |
| **206** | | **Column-Timber** | | 3 | 8 | each | 0 | 8 | 0 | 0 |
| | **1150** | **Check/Shake (Timber)** | | 3 | 8 | | 0 | 8 | 0 | 0 |
| (206-1150) There are 0.125 to 0.25 inch wide vertical checks that penetrate approximately 3 to 4 inches into the members' cross section throughout every column of the timber bents. (see Photos 48 - 51). | | | | | | | | | | |
| **208** | | **Trestle-Timber** | | 3 | 600 | m | 0 | 600 | 0 | 0 |
| | **1020** | **Connection** | | 3 | 1 | | 0 | 1 | 0 | 0 |
| | **1150** | **Check/Shake (Timber)** | | 3 | 599 | | 0 | 599 | 0 | 0 |
| (208-1020) Approximately 20% of the threaded connections have not been replaced and show signs of corrosion with surface rust throughout (see Photos 44 - 47). | | | | | | | | | | |
| (208-1150) There are 0.125 to 0.25 inch wide vertical checks that penetrate approximately 3 to 4 inches into the members' cross section throughout every member of the trestle (see Photos 52 - 62). | | | | | | | | | | |
| **215** | | **Abutment-RC** | | 3 | 11 | m | 11 | 0 | 0 | 0 |
| (215) There were no significant defects noted. | | | | | | | | | | |
| **220** | | **Pile Cap/Footing-RC** | | 2 | 90 | m | 90 | 0 | 0 | 0 |
| (220) There were no significant defects noted. This element represents the concrete footing under each column of the trestle. | | | | | | | | | | |
| **234** | | **Pier Cap-RC** | | 3 | 8 | m | 8 | 0 | 0 | 0 |
| (234) There were no significant defects noted. | | | | | | | | | | |
| **235** | | **Pier Cap-Timber** | | 3 | 17 | m | 17 | 0 | 0 | 0 |
| (235) There were no significant defects noted. | | | | | | | | | | |
| **332** | | **Railing-Timber** | | 3 | 358 | m | 358 | 0 | 0 | 0 |
| (332) The timber bridge rail was cleaned and painted in 2013 as part of EA 01-0A5904. There were no | | | | | | | | | | |



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ELEMENT INSPECTION RATINGS AND COMMENTARY

| Elem No. | Defect /Prot | Defect | Element Description | Env | Total Qty | Units | Qty in each Condition State St. 1 | St. 2 | St. 3 | St. 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| Element Group: 103 - Approach - Northern Spans 13-34 - Timber Deck Trusses | | | | | | | | | | |

significant defects noted.

WORK RECOMMENDATIONS

| | | |
|---|---|---|
| RecDate: 10/11/2017<br>Action : Deck-Misc.<br>Work By: MAINT. CONTRACT<br>Status : PROPOSED | EstCost: $500,000<br>StrTarget: 2 YEARS<br>DistTarget:<br>EA: | Remove the rotted and decaying portions of the deck located along the edge of deck on both sides of the bridge. Large areas of rotted timber deck was encountered along the outermost 24 inches of the bridge deck, particularly in the areas underneath the deck drains. |
| RecDate: 10/11/2017<br>Action : Super-Epoxy Inject<br>Work By: MAINT. CONTRACT<br>Status : PROPOSED | EstCost: $7,500<br>StrTarget: 2 YEARS<br>DistTarget:<br>EA: | Epoxy inject the horizontal members to the right (east) of the catwalk at Bents 23 and 31 and to the left of the catwalk at Bent 15. The member at Bent 15 has an area of decay within the top 4 inches of the cross section by 15 feet in length. The member at Bent 23 has an area of decay within the top 3 inches of the cross section by 5 feet in length. The member at Bent 31 has an area of decay within the top 3 inches of the cross section by 15 feet in length. |
| RecDate: 10/11/2017<br>Action : Super-Misc.<br>Work By: MAINT. CONTRACT<br>Status : PROPOSED | EstCost: $60,000<br>StrTarget: 2 YEARS<br>DistTarget:<br>EA: | Remove and replace the 53 split timber scabs located throughout the northern approach spans. |
| RecDate: 10/11/2017<br>Action : Sub-Misc.<br>Work By: MAINT. CONTRACT<br>Status : PROPOSED | EstCost: $500,000<br>StrTarget: 2 YEARS<br>DistTarget:<br>EA: | Continue the ongoing program of replacement of timber fasteners. Remove and replace the bolted connections and hardware (threaded rods, malleys, nuts, splice plates/straps, scabs, etc.) throughout the entire timber sub-structure. |
| RecDate: 10/11/2017<br>Action : Bridge-Misc<br>Work By: MAINT. CONTRACT<br>Status : PROPOSED | EstCost: $25,000<br>StrTarget: 2 YEARS<br>DistTarget:<br>EA: | Remove and replace the rusted and failed pipe support along the right side of the bridge. |
| RecDate: 03/28/2007<br>Action : Seismic-Retrofit<br>Work By: STRAIN<br>Status : G13 LIST | EstCost: $1,270,000<br>StrTarget: 2 YEARS<br>DistTarget:<br>EA: 40110 | Steel truss members may require strengthening. Priority 4. Final Score 2.8125.<br><br>BELOW THE LINE |



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**WORK RECOMMENDATIONS**

RecDate: 04/05/1999
Action : Bridge-Replace
Work By: STRAIN
Status : G13 LIST

EstCost: $13,200,000
StrTarget: 2 YEARS
DistTarget:
EA: 40110

Replace the steel main span. Estimated at $2,000,000 (NOT including traffic handling costs). Or, replace the entire structure. Estimated at $13,200,000.

THIS AGING STRUCTURE IS IN A MARGINAL AND DETERIORATING CONDITION. IT IS FUNCTIONALLY OBSOLETE, HAS A LOW LOAD RATING, AND IS AN INAPPROPRIATE DESIGN FOR THE ENVIRONMENT. THE LIFE CYCLE ECONOMIC COST OF ADEQUATE MAINTENANCE DOES NOT COMPARE FAVORABLY WITH COST OF REPLACEMENT WITH A STRUCTURE TYPE BETTER SUITED TO THE ENVIRONMENT.

IT IS THEREFORE URGENTLY RECOMMENDED THAT THIS STRUCTURE BE REPLACED. AN SM&I PEER REVIEW IN AUGUST 2007 REAFFIRMED THE RECOMMENDATION THAT THIS BRIDGE BE REPLACED.

RecDate: 07/01/1986
Action : Sub-Rehab
Work By: STRAIN
Status : G13 LIST

EstCost: $1,500,000
StrTarget: 2 YEARS
DistTarget:
EA: 40110

Remove and replace the bolted connections and hardware (threaded rods, malleys, nuts, splice plates/straps, etc) throughout the entire timber sub-structure. Replace the top left horizontal timber element between Bent 15 and Bent 16.

RecDate: 02/10/1984
Action : Railing-Upgrade
Work By: STRAIN
Status : G13 LIST

EstCost: $1,008,600
StrTarget: 2 YEARS
DistTarget:
EA: 40110

F1-10 / F2-6 / F3-1 / Rail Type-WOOD. Replace the bridge rail.

Team Leader : Warren L. Peterson

Report Author : Warren L. Peterson

Inspected By : WL.Peterson/AW.Corker

1/5/18

Warren L. Peterson (Registered Civil Engineer) (Date)






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# STRUCTURE INVENTORY AND APPRAISAL REPORT

**********  IDENTIFICATION  **********

| | | |
|---|---|---|
| (1) | STATE NAME- CALIFORNIA | 069 |
| (8) | STRUCTURE NUMBER | 10 0136 |
| (5) | INVENTORY ROUTE(ON/UNDER)- ON | 131000010 |
| (2) | HIGHWAY AGENCY DISTRICT | 01 |
| (3) | COUNTY CODE 045 (4) PLACE CODE | 00000 |
| (6) | FEATURE INTERSECTED- | ALBION RIVER |
| (7) | FACILITY CARRIED- | STATE ROUTE 1 |
| (9) | LOCATION- | 01-MEN-001-43.74 |
| (11) | MILEPOINT/KILOMETERPOINT | 43.74 |
| (12) | BASE HIGHWAY NETWORK- PART OF NET | 1 |
| (13) | LRS INVENTORY ROUTE & SUBROUTE | 000000000101 |
| (16) | LATITUDE | 39 DEG 13 MIN 30.32 SEC |
| (17) | LONGITUDE | 123 DEG 46 MIN 09.83 SEC |
| (98) | BORDER BRIDGE STATE CODE % SHARE | % |
| (99) | BORDER BRIDGE STRUCTURE NUMBER | |

********  STRUCTURE TYPE AND MATERIAL  *********

| | | |
|---|---|---|
| (43) | STRUCTURE TYPE MAIN:MATERIAL- | STEEL |
| | TYPE- TRUSS - DECK | CODE 309 |
| (44) | STRUCTURE TYPE APPR:MATERIAL- | WOOD OR TIMBER |
| | TYPE- TRUSS - DECK | CODE 709 |
| (45) | NUMBER OF SPANS IN MAIN UNIT | 1 |
| (46) | NUMBER OF APPROACH SPANS | 33 |
| (107) | DECK STRUCTURE TYPE- TIMBER | CODE 8 |
| (108) | WEARING SURFACE / PROTECTIVE SYSTEM: | |
| A) | TYPE OF WEARING SURFACE- BITUMINOUS | CODE 6 |
| B) | TYPE OF MEMBRANE- NONE | CODE 0 |
| C) | TYPE OF DECK PROTECTION- NONE | CODE 0 |

**********  AGE AND SERVICE  **********

| | | |
|---|---|---|
| (27) | YEAR BUILT | 1944 |
| (106) | YEAR RECONSTRUCTED | 0000 |
| (42) | TYPE OF SERVICE: ON- HIGHWAY | 1 |
| | UNDER- WATERWAY | 5 |
| (28) | LANES:ON STRUCTURE 02 UNDER STRUCTURE | 00 |
| (29) | AVERAGE DAILY TRAFFIC | 2100 |
| (30) | YEAR OF ADT 2009 (109) TRUCK ADT | 6 % |
| (19) | BYPASS, DETOUR LENGTH | 51 KM |

**********  GEOMETRIC DATA  **********

| | | |
|---|---|---|
| (48) | LENGTH OF MAXIMUM SPAN | 39.6 M |
| (49) | STRUCTURE LENGTH | 295.4 M |
| (50) | CURB OR SIDEWALK: LEFT 0.3 M | RIGHT 0.3 M |
| (51) | BRIDGE ROADWAY WIDTH CURB TO CURB | 7.9 M |
| (52) | DECK WIDTH OUT TO OUT | 8.5 M |
| (32) | APPROACH ROADWAY WIDTH (W/SHOULDERS) | 7.3 M |
| (33) | BRIDGE MEDIAN- NO MEDIAN | 0 |
| (34) | SKEW 0 DEG (35) STRUCTURE FLARED | NO |
| (10) | INVENTORY ROUTE MIN VERT CLEAR | 99.99 M |
| (47) | INVENTORY ROUTE TOTAL HORIZ CLEAR | 7.9 M |
| (53) | MIN VERT CLEAR OVER BRIDGE RDWY | 99.99 M |
| (54) | MIN VERT UNDERCLEAR REF- NOT H/RR | 0.00 M |
| (55) | MIN LAT UNDERCLEAR RT REF- NOT H/RR | 0.0 M |
| (56) | MIN LAT UNDERCLEAR LT | 0.0 M |

**********  NAVIGATION DATA  **********

| | | |
|---|---|---|
| (38) | NAVIGATION CONTROL- BR PERMIT REQ | CODE 1 |
| (111) | PIER PROTECTION- NOT REQUIRED | CODE 1 |
| (39) | NAVIGATION VERTICAL CLEARANCE | 50.0 M |
| (116) | VERT-LIFT BRIDGE NAV MIN VERT CLEAR | M |
| (40) | NAVIGATION HORIZONTAL CLEARANCE | 35.7 M |

**********

| | | |
|---|---|---|
| | SUFFICIENCY RATING = | 52.4 |
| | STATUS | |
| | HEALTH INDEX | 90.9 |
| | PAINT CONDITION INDEX = | 100.0 |

**********  CLASSIFICATION  ********** CODE

| | | |
|---|---|---|
| (112) | NBIS BRIDGE LENGTH- YES | Y |
| (104) | HIGHWAY SYSTEM- NOT ON NHS | 0 |
| (26) | FUNCTIONAL CLASS- MINOR ARTERIAL RURAL | 06 |
| (100) | DEFENSE HIGHWAY- NOT STRAHNET | 0 |
| (101) | PARALLEL STRUCTURE- NONE EXISTS | N |
| (102) | DIRECTION OF TRAFFIC- 2 WAY | 2 |
| (103) | TEMPORARY STRUCTURE- | |
| (105) | FED.LANDS HWY- NOT APPLICABLE | 0 |
| (110) | DESIGNATED NATIONAL NETWORK - NOT ON NET | 0 |
| (20) | TOLL- ON FREE ROAD | 3 |
| (21) | MAINTAIN- STATE HIGHWAY AGENCY | 01 |
| (22) | OWNER- STATE HIGHWAY AGENCY | 01 |
| (37) | HISTORICAL SIGNIFICANCE- ELIGIBLE | 2 |

**********  CONDITION  ********** CODE

| | | |
|---|---|---|
| (58) | DECK | 7 |
| (59) | SUPERSTRUCTURE | 5 |
| (60) | SUBSTRUCTURE | 5 |
| (61) | CHANNEL & CHANNEL PROTECTION | 8 |
| (62) | CULVERTS | N |

*********  LOAD RATING AND POSTING  ********* CODE

| | | |
|---|---|---|
| (31) | DESIGN LOAD- M-13.5 OR H-15 | 2 |
| (63) | OPERATING RATING METHOD- ALLOWABLE STRESS | 2 |
| (64) | OPERATING RATING- | 30.8 |
| (65) | INVENTORY RATING METHOD- ALLOWABLE STRESS | 2 |
| (66) | INVENTORY RATING- | 22.7 |
| (70) | BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS | 5 |
| (41) | STRUCTURE OPEN, POSTED OR CLOSED- | A |
| | DESCRIPTION- OPEN, NO RESTRICTION | |

**********  APPRAISAL  ********** CODE

| | | |
|---|---|---|
| (67) | STRUCTURAL EVALUATION | 5 |
| (68) | DECK GEOMETRY | 3 |
| (69) | UNDERCLEARANCES, VERTICAL & HORIZONTAL | N |
| (71) | WATER ADEQUACY | 9 |
| (72) | APPROACH ROADWAY ALIGNMENT | 8 |
| (36) | TRAFFIC SAFETY FEATURES | 0010 |
| (113) | SCOUR CRITICAL BRIDGES | 5 |

**********  PROPOSED IMPROVEMENTS  **********

| | | |
|---|---|---|
| (75) | TYPE OF WORK- REPLACE FOR DEFICIENC CODE | 31 |
| (76) | LENGTH OF STRUCTURE IMPROVEMENT | 295.4 M |
| (94) | BRIDGE IMPROVEMENT COST | $5,842,000 |
| (95) | ROADWAY IMPROVEMENT COST | $1,168,400 |
| (96) | TOTAL PROJECT COST | $9,814,560 |
| (97) | YEAR OF IMPROVEMENT COST ESTIMATE | 2017 |
| (114) | FUTURE ADT | 5182 |
| (115) | YEAR OF FUTURE ADT | 2037 |

**********  INSPECTIONS  **********

| | | | | |
|---|---|---|---|---|
| (90) | INSPECTION DATE 08/16 (91) FREQUENCY | 24 | MO | |
| (92) | CRITICAL FEATURE INSPECTION: | | (93) CFI DATE | |
| A) | FRACTURE CRIT DETAIL- YES | 24 MO | A) | 03/16 |
| B) | UNDERWATER INSP- NO | MO | B) | |
| C) | OTHER SPECIAL INSP- NO | MO | C) | |



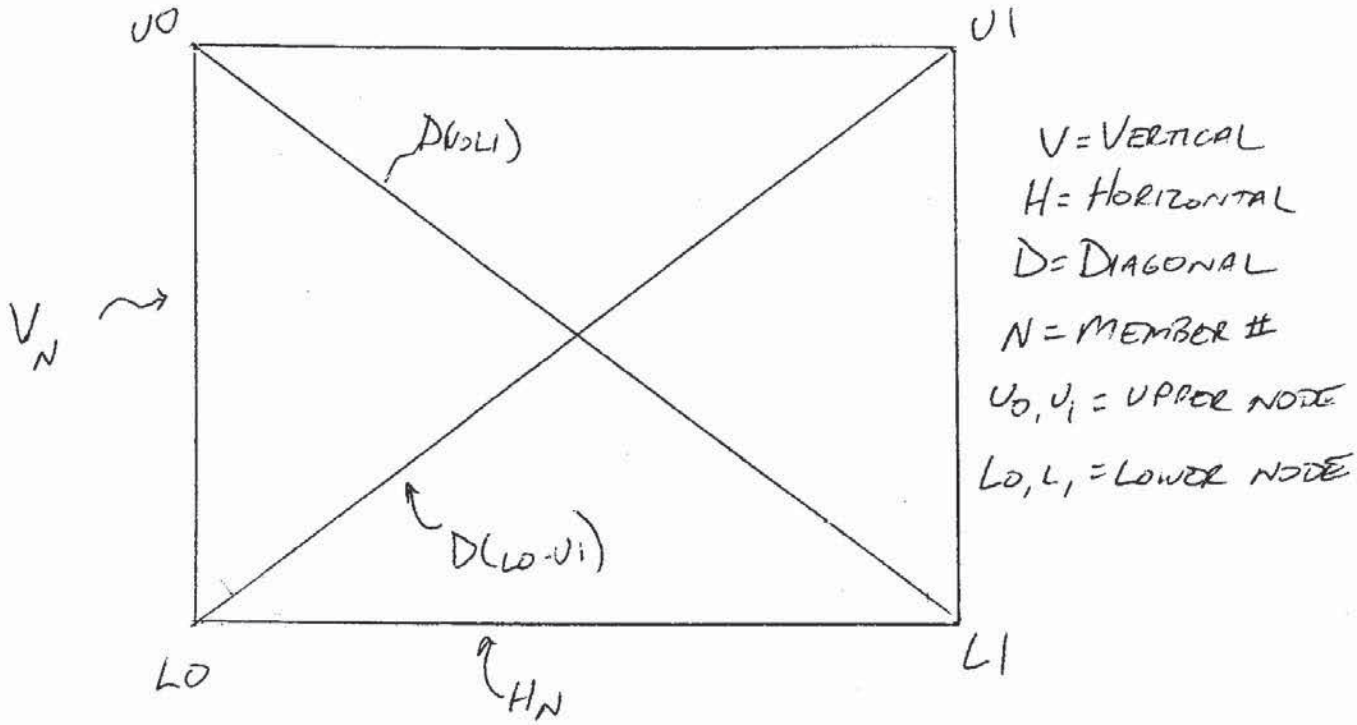
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# APPENDIX A

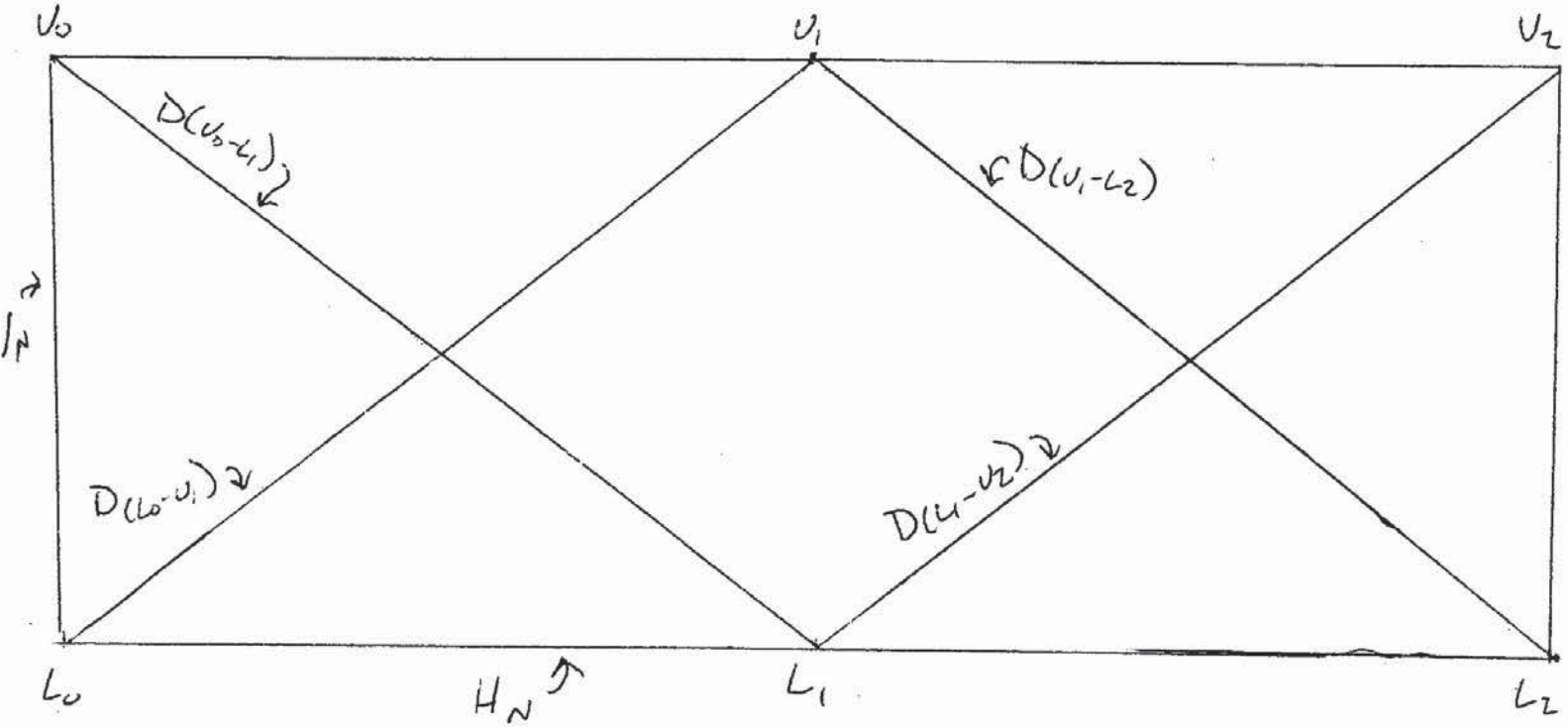


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## SPANS 7, 9, 15, 17, 19, 21, 23, 25, 27, 29 AND 31




## SPANS 8, 10, 14, 16, 18, 20, 22, 24, 26, 28 AND 30






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| Span | Member | Desciption of crack | Location on member | Quantity (lf) |
|---|---|---|---|---|
| 7 | $V_{7\text{-}1}$ | 1/2" wide x 2" deep | East face | 20 |
| | $V_{7\text{-}3}$ | 1/2" wide x 2" deep | North face | 20 |
| | $H_3$ | 2" wide x 4" deep | Top face | 20 |
| 8 | $D_{(L0\text{-}U1)\text{-}2}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}3}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $H_4$ | 1" wide x 2" deep | Top face | 38 |
| 9 | $H_1$ | 1" wide x 2" deep | Top face | 196 |
| | $H_4$ | 1" wide x 2" deep | Top face | 19 |
| 10 | $D_{(L0\text{-}U1)\text{-}1}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}2}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}3}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}4}$ | 1/2" wide x 2" deep | Top face | 28 |
| 13 | $D_{(L0\text{-}U1)\text{-}1}$ | 1/2" wide x 2" deep | East face | 14 |
| | $D_{(L0\text{-}U1)\text{-}2}$ | 1/2" wide x 2" deep | Top and bottom face | 56 |
| 14 | $D_{(U1\text{-}L2)\text{-}3}$ | 1" wide x 4" deep | Top face | 28 |
| 15 | 1 | 5/8" wide x 4 " deep | Top face | 38 |
| | 2 | 5/8" wide x 4 " deep | Top face | 38 |
| | 4 | 5/8" wide x 4 " deep | Top face | 38 |
| 16 | $V_2$ | 1/2" wide x 2" deep | East face | 20 |
| | $D_{(L0\text{-}U1)\text{-}1}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}2}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}3}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}4}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L1\text{-}U2)\text{-}1}$ | 1/2" wide x 2" deep | Bottom face | 28 |
| | $D_{(L1\text{-}U2)\text{-}2}$ | 1/2" wide x 2" deep | East face | 28 |
| | $D_{(L1\text{-}U2)\text{-}3}$ | 1/2" wide x 2" deep | Bottom face | 28 |
| | $D_{(L1\text{-}U2)\text{-}4}$ | 1/2" wide x 2" deep | West face | 28 |
| 17 | $V_2$ | 1/2" wide x 2" deep | East face | 20 |
| | $H_3$ | 1" wide x 2" deep | Top face | 19 |
| 18 | $D_{(L0\text{-}U1)\text{-}1}$ | 1/2" wide x 2" deep | Top face | 28 |



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| | | | | |
|---|---|---|---|---|
| | $D_{(L0\text{-}U1)\text{-}2}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}3}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}4}$ | 1/2" wide x 2" deep | Top face | 28 |
| 19 | $H_1$ | 2" wide x 4" deep | Top face | 19 |
| | $H_3$ | 1" wide x 2" deep | Top face | 19 |
| 20 | $V_3$ | 1/2" wide x 4" deep | West face | 20 |
| | $D_{(L0\text{-}U1)\text{-}1$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}2}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}3}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}4}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L1\text{-}U2)\text{-}4}$ | 1/2" wide x 2" deep | Bottom face | 28 |
| 22 | $D_{(L0\text{-}U1)\text{-}2}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}3}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}4}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L1\text{-}U2)\text{-}1}$ | 1/2" wide x 2" deep | Bottom face | 28 |
| | $D_{(L1\text{-}U2)\text{-}2}$ | 1/2" wide x 2" deep | Bottom face | 28 |
| | $D_{(L1\text{-}U2)\text{-}3}$ | 1/2" wide x 2" deep | Top and Bottom face | 56 |
| | $D_{(L1\text{-}U2)\text{-}4}$ | 1/2" wide x 2" deep | Bottom face | 28 |
| 23 | $V_1$ | 1/2" wide x 4" deep | South face | 20 |
| | $V_2$ | 1/2" wide x 4" deep | South face | 20 |
| | $H_1$ | 1" wide x 4" deep | Top face | 20 |
| | $H_2$ | 1" wide x 4" deep | Top face | 20 |
| | $H_3$ | 3" wide x 4" deep | Top face | 20 |
| | $H_4$ | 1" wide x 4" deep | Top face | 20 |
| 24 | $D_{(L0\text{-}U1)\text{-}1}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}2}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}3}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}4}$ | 1/2" wide x 2" deep | Top face | 28 |
| 26 | $V_4$ | 1/2" wide x 4" deep | South face | 20 |
| | $D_{(L0\text{-}U1)\text{-}1}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}2}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}3}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0\text{-}U1)\text{-}4}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L1\text{-}U2)\text{-}3}$ | 1/2" wide x 2" deep | Bottom face | 28 |



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| | | | | |
|---|---|---|---|---|
| | $D_{(L1-U2)-4}$ | 1/2" wide x 2" deep | Bottom face | 28 |
| | $D_{(U1-L2)-2}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(U1-L2)-3}$ | 1/2" wide x 2" deep | Top face | 28 |
| 28 | $D_{(L0-U1)-1}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0-U1)-2}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0-U1)-3}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L0-U1)-4}$ | 1/2" wide x 2" deep | Top face | 28 |
| | $D_{(L1-U2)-2}$ | 1/2" wide x 2" deep | Bottom face | 28 |
| | $D_{(L1-U2)-3}$ | 1/2" wide x 2" deep | West face | 28 |
| 30 | $V_2$ | 1/2" wide x 4" deep | South and West face | 40 |
| | $V_3$ | 1/2" wide x 4" deep | West face | 20 |
| | $V_4$ | 1/2" wide x 4" deep | South face | 20 |
| 31 | $H_4$ | 4" wide x 6" deep | Top face | 19 |



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# APPENDIX B



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| Bent | Column | Desciption of crack | Location on member | Quantity (lf) |
|---|---|---|---|---|
| 2 | 1 | 1/2" wide x 2" deep | North face | 9 |
| | 2 | 1/2" wide x 2" deep | North and South face | 18 |
| 5 | 3 | 1/2" wide x 2" deep | West face | 26 |
| | 4 | 1/2" wide x 2" deep | West face | 26 |
| 6 | 1 | 1/2" wide x 2" deep | South face | 36 |
| 7 | 1 | 1/2" wide x 2" deep | South face | 36 |
| 8 | 1 | 1/2" wide x 2" deep | East face | 30 |
| | 2 | 1/2" wide x 2" deep | North face | 58 |
| | 3 | 1/2" wide x 2" deep | South face | 58 |
| 9 | 3 | 1/2" wide x 2" deep | South face | 62 |
| 15 | 3 | 5/8" wide x 4 " deep | East face | 113 |
| | 4 | 5/8" wide x 4 " deep | South face | 113 |
| 16 | 2 | 1/2" wide x 2" deep | North face | 32 |
| 17 | 2 | 1/2" wide x 2" deep | North face | 52 |
| 18 | 1 | 1/2" wide x 2" deep | North face | 52 |
| 19 | 2 | 1/2" wide x 2" deep | North face | 41 |
| 21 | 4 | 1/2" wide x 2" deep | South face | 32 |
| | 5 | 1/2" wide x 2" deep | South face | 52 |
| 22 | 1 | 1/2" wide x 2" deep | North face | 21 |
| | 4 | 1/2" wide x 2" deep | North face | 20 |
| | 5 | Repaired bracing | | |
| 23 | 1 | 1/2" wide x 2" deep | North face | 113 |
| | 2 | 1/2" wide x 2" deep | South face | 21 |
| | 3 | 1/2" wide x 2" deep | South face | 113 |
| | 4 | 1/2" wide x 2" deep | North and South face | 113 |
| | 5 | 1/2" wide x 2" deep | South face | 113 |
| 24 | 3 | 1/2" wide x 2" deep | North face | 32 |
| | 4 | 1/2" wide x 2" deep | North face | 113 |
| | 5 | 1/2" wide x 2" deep | North face | 98 |
| 25 | 1 | 5/8" wide x 2-1/2" deep | South face | 52 |
| | 2 | 5/8" wide x 2-1/2" deep | South face | 52 |
| | 3 | 5/8" wide x 2-1/2" deep | South face | 32 |
| | 5 | 5/8" wide x 2-1/2" deep | South face | 72 |
| 26 | 1 | 1/2" wide x 2" deep | South face | 82 |
| | 2 | 1/2" wide x 2" deep | South face | 113 |
| | 3 | 1/2" wide x 2" deep | South face | 113 |
| | 4 | 1/2" wide x 2" deep | South face | 113 |



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| | | | | |
|---|---|---|---|---|
| | 5 | 1/2" wide x 2" deep | South face | 113 |
| 27 | 1 | 1/2" wide x 2" deep | South face | 32 |
| | 3 | 1/2" wide x 2" deep | North and South face | 42 |
| | 5 | 1/2" wide x 2" deep | South face | 54 |
| 28 | 2 | 1/2" wide x 2" deep | South face | 41 |
| 29 | 2 | 1/2" wide x 2" deep | North and South face | 93 |
| | 3 | 1/2" wide x 2" deep | North face | 32 |
| | 4 | 1/2" wide x 2" deep | North face | 32 |
| 30 | 1 | 1/2" wide x 2" deep | North and South face | 93 |
| | 3 | 1/2" wide x 2" deep | North face | 32 |
| | 4 | 1/2" wide x 2" deep | North face | 32 |
| 31 | 1 | 1/2" wide x 2" deep | South face | 113 |
| 32 | 2 | 1/2" wide x 2" deep | South face | 113 |
| | 3 | 1/2" wide x 2" deep | South face | 113 |
| | 4 | 1/2" wide x 2" deep | South face | 113 |



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Photo No. 1
The galvanized steel conduit is failing along the right side of the bridge.





Photo No. 2
The steel pipe hangers along the right side of the bridge are failing.





Photo No. 3
Close up view of the failed pipe supports along the right side of the bridge.





Photo No. 4
White fungus present on the timber soffit.





Photo No. 5
Another area with white fungus present in the timber soffit.





Photo No. 6
Close up look at the white fungus present along the timber soffit.





Photo No. 7
There are several areas where the soffit of the timber deck has white fungus present.





Photo No. 8
Damp area on the soffit of the timber deck.





Photo No. 9
The outer 18 inches of the timber deck is rotted underneath the deck drains.





Photo No. 10
Rot and decay along the edge of the timber deck.





Photo No. 11
Rotted edge of the timber deck.





Photo No. 12
Rotted edge of deck under the deck drain.





Photo No. 13
Close up view of more rot along the edge of the timber deck.





Photo No. 14
Rot and decay present under the deck drain along the edge of deck.





Photo No. 15
Penetration of the drill bit into the rotted edge of the timber deck.





Photo No. 16
More rot along the edge of the timber deck near the deck drains.





Photo No. 17
Timber decking under the deck drains is soft and rotted.





Photo No. 18
The deck planks along the edge of deck are soft due to rot.





Photo No. 19
Close up view of soft deck planks.





Photo No. 20
Another location with rot present along the outside edge of the timber deck.





Photo No. 21
An awl easily penetrates the outside edge of deck where rot is present.






Photo No. 22
Close up look at awl penetration of the outside edge of the timber deck.





Photo No. 23
Many of the bolted connections on the truss are corroded.





Photo No. 24
Close up view of a nut for the bolted connection on the timber truss.





Photo No. 25
Another set of bolted connections for the timber truss displaying corrosion.





Photo No. 26
Typical checking of a diagonal truss member.





Photo No. 27
Close up of awl penetration of a checked diagonal truss member.




Photo No. 28
Measured penetration of a checked diagonal truss member.



Photo No. 29
Typical checking present throughout the vertical and diagonal truss members. **(86 of 123)**



Photo No. 30
Another view of the typical checking present in the superstructure.



Photo No. 31
View of the typical checks present in the diagonal members of the timber truss. **(88 of 123)**





Photo No. 33
Depth of penetration of the awl on the bottom chord of the truss.





Photo No. 34
Detail of the connection between the diagonals with the bottom chord with timber scabs.





Photo No. 35
Typical splitting present in the timber scabs along the bottom chord.





Photo No. 36
Close up view of split timber scab.



Photo No. 37
View showing that the timber gusset scab is split.




Photo No. 38
Another view of a split timber scab.





Photo No. 39
Timber scab that has been crushed locally by rod tensioning.





Photo No. 40
The outer 12 inches of the floor beams have rot and decay present.





Photo No. 41
The outer 12 inches of the floor beams have rot and decay present (typical).





Photo No. 42
Typical checks present in the bent caps.





Photo No. 43
Typical checks present in the bent caps.





Photo No. 44
Typical checks present in the bent caps.





Photo No. 45
Typical checks present in the bent caps.





Photo No. 46
View of a recently replaced bolted connection next to one that hasn't been replaced yet.



Photo No. 47
Close up view of a rusted pinned connection that had not been replaced.






Photo No. 48
A corroded shear ring is visible behind the rusted steel strap at the base of the trestle.



Photo No. 49
Rusted steel strap at the base of the trestle support.



Photo No. 50
Typical checks present in the timber columns.



Photo No. 51
Typical checks present in the timber columns.



Photo No. 52
Typical checks present in the timber columns.



Photo No. 53
Typical checks present in the timber columns (cont).



Photo No. 54
Typical checks present in the trestle's columns of every bent.



Photo No. 55
Typical checks present in the trestle's columns of every bent.



Photo No. 56
Typical checks present in the trestle's columns of every bent.



Photo No. 57
Typical checks present in the trestle's columns of every bent.



Photo No. 58
Typical checks present in the trestle's columns of every bent.



Photo No. 59
Typical checks present in the trestle's columns of every bent.



Photo No. 60
Typical checks present in the trestle's columns of every bent.



Photo No. 61
Typical checks present in the trestle's columns of every bent.



Photo No. 62
Typical checks present in the trestle's columns of every bent.



Photo No. 63
Typical checks present in the trestle's columns of every bent.

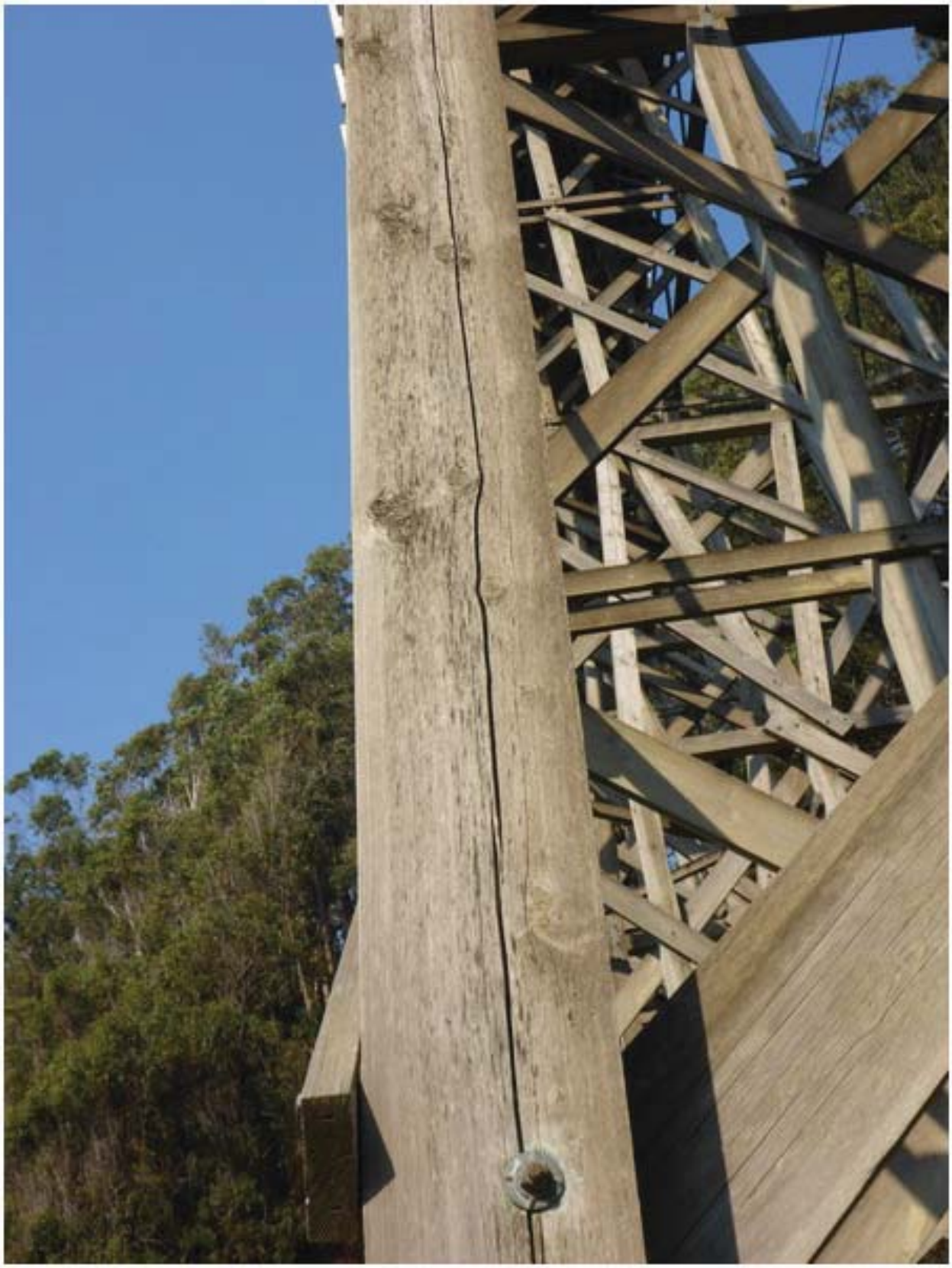


Photo No. 64
Typical checks present in the trestle's columns of every bent.

**From:** Demling, Frank C@DOT <frank.demling@dot.ca.gov>
**Sent:** Tuesday, February 20, 2018 10:08 AM
**To:** Brownsey, Donne@Coastal
**Cc:** ExecutiveStaff@Coastal; Walker, Liza M@DOT; Rosas, Sandra@DOT; Mullen, Richard D@DOT
**Subject:** RE: Request Ex-Parte for CDP 1-16-0899 Albion Geotechnical Investigation

Hi Donne,

Sounds good. I'll check in with you on March 12th to confirm your availability to meet the afternoon of March 19th or the morning of March 23rd. I am planning to be at the Albion dune site on March 15th to assist with the dune restoration effort and then meet with some of the local Albion residents. Let me know if you're interested in getting together at the Albion Bridge and/or Salmon Creek Bridge sites on either March 15th or 16th .

Thank you,

Frank Demling, PLS
Project Manager
(707) 445-6554

---

**From:** Brownsey, Donne@Coastal [mailto:donne.brownsey@coastal.ca.gov]
**Sent:** Tuesday, February 20, 2018 9:54 AM
**To:** Demling, Frank C@DOT <frank.demling@dot.ca.gov>
**Cc:** ExecutiveStaff@Coastal <ExecutiveStaff@coastal.ca.gov>; Walker, Liza M@DOT <liza.walker@dot.ca.gov>; Rosas, Sandra@DOT <sandra.rosas@dot.ca.gov>; Mullen, Richard D@DOT <richard.mullen@dot.ca.gov>
**Subject:** Re: Request Ex-Parte for CDP 1-16-0899 Albion Geotechnical Investigation

hi Frank: let's do the March meetings as that will give me some time to get over to Albion and look at the berm. howabout we check in the week of March 12th for a Sacramento meeting. thanks and best donne

---

**From:** Demling, Frank C@DOT <frank.demling@dot.ca.gov>
**Sent:** Friday, February 16, 2018 8:40:33 AM
**To:** Brownsey, Donne@Coastal
**Cc:** ExecutiveStaff@Coastal; Walker, Liza M@DOT; Rosas, Sandra@DOT; Mullen, Richard D@DOT
**Subject:** RE: Request Ex-Parte for CDP 1-16-0899 Albion Geotechnical Investigation

Hi Donne,

Thank you for getting back to me regarding your availability to meet and discuss CDP 1-19-0899. It may be possible for Liza Walker and I to meet with you in Fort Bragg on February 21st sometime between 11:00 AM and 2:00 PM, if you're available. I'll need to confirm that District and North Region Management representatives (Richard Mullen and Sandra Rosas) are also available to attend meeting either in person or on the phone. The other option is meeting in Sacramento the afternoon of March 19th or the morning of March 23rd , if you're available either of those dates and times.

Regards,

Frank Demling, PLS
Project Manager

Caltrans, District 1 Project Management
(707) 445-6554

---

**From:** Brownsey, Donne@Coastal [mailto:donne.brownsey@coastal.ca.gov]
**Sent:** Friday, February 16, 2018 7:32 AM
**To:** Demling, Frank C@DOT <frank.demling@dot.ca.gov>; ExecutiveStaff@Coastal <ExecutiveStaff@coastal.ca.gov>
**Subject:** Re: Request Ex-Parte for CDP 1-16-0899 Albion Geotechnical Investigation

hi Frank: it is unlikely that i will be in FB on that date. i will be there Feb 19-21st as i am spending most of my time in Sacramento at this time. so i could be available either early next week or another time in Sacramento. let me know what works for you. thanks and best donne

---

**From:** Demling, Frank C@DOT <frank.demling@dot.ca.gov>
**Sent:** Wednesday, February 14, 2018 11:14:14 AM
**To:** Brownsey, Donne@Coastal
**Subject:** Request Ex-Parte for CDP 1-16-0899 Albion Geotechnical Investigation

Hello Donne,

I submitted a "Request for Ex-Parte" using the applet on the Coastal Commission website but I am not sure the request posted. I was hoping to confirm your availability to meet with myself and the Liza Walker, Senior Environmental Planner, sometime during the afternoon of February 28, 2018 in Fort Bragg to discuss the subject project's scope, purpose and need. Please let me know if there is a better date and time that Liza Walker and I would be able to meet with you in Fort Bragg to discuss the subject application.

Best Regards,

Frank Demling, PLS
Project Manager
(707) 445-6554

Hi Donne,

Thank you for getting back to me regarding your availability to meet and discuss CDP 1-19-0899. It may be possible for Liza Walker and I to meet with you in Fort Bragg on February 21st sometime between 11:00 AM and 2:00 PM, if you're available. I'll need to confirm that District and North Region Management representatives (Richard Mullen and Sandra Rosas) are also available to attend meeting either in person or on the phone. The other option is meeting in Sacramento the afternoon of March 19th or the morning of March 23rd , if you're available either of those dates and times.

Regards,

Frank Demling, PLS
Project Manager
Caltrans, District 1 Project Management
(707) 445-6554

**From:** Brownsey, Donne@Coastal [mailto:donne.brownsey@coastal.ca.gov]
**Sent:** Friday, February 16, 2018 7:32 AM
**To:** Demling, Frank C@DOT <frank.demling@dot.ca.gov>; ExecutiveStaff@Coastal <ExecutiveStaff@coastal.ca.gov>
**Subject:** Re: Request Ex-Parte for CDP 1-16-0899 Albion Geotechnical Investigation

hi Frank: it is unlikely that i will be in FB on that date. i will be there Feb 19-21st as i am spending most of my time in Sacramento at this time. so i could be available either early next week or another time in Sacramento. let me know what works for you. thanks and best donne

---

**From:** Demling, Frank C@DOT <frank.demling@dot.ca.gov>
**Sent:** Wednesday, February 14, 2018 11:14:14 AM
**To:** Brownsey, Donne@Coastal
**Subject:** Request Ex-Parte for CDP 1-16-0899 Albion Geotechnical Investigation

Hello Donne,

I submitted a "Request for Ex-Parte" using the applet on the Coastal Commission website but I am not sure the request posted. I was hoping to confirm your availability to meet with myself and the Liza Walker, Senior Environmental Planner, sometime during the afternoon of February 28, 2018 in Fort Bragg to discuss the subject project's scope, purpose and need. Please let me know if there is a better date and time that Liza Walker and I would be able to meet with you in Fort Bragg to discuss the subject application.

Best Regards,

Frank Demling, PLS
Project Manager
(707) 445-6554

## Gedik, Tamara@Coastal

**From:** Chris Spiro <chris@elpescador.com>
**Sent:** Wednesday, August 08, 2018 8:55 AM
**To:** Gedik, Tamara@Coastal; Merrill, Bob@Coastal; acab@mcn.org
**Subject:** please SAVE the Albion River Bridge

As the last timber bridge on the Ca coast, it is both beautiful and significant to the region's history.
It should NOT be destroyed and replaced out of short-sighted economic concerns.
Please do NOT destroy this National Register of Historic Places monument. Do the right thing and repair it as needed.

Christine Spiro
El Pescador Lodge & Villas
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**EXHIBIT NO. 24**
**Public Correspondence**
CDP No. 1-16-0899 (Caltrans)

## Gedik, Tamara@Coastal

**From:** John Johansen <jrja@mcn.org>
**Sent:** Sunday, August 05, 2018 9:29 PM
**To:** Merrill, Bob@Coastal; Gedik, Tamara@Coastal
**Subject:** Albion River Bridge
**Attachments:** IMG_20180805_0002.pdf

Dear Bob,

As our community continues into its10th year of conflict with Caltrans, and itself, over the fate of the Albion River Bridge, The California Coastal Commission has now been dragged into the middle of this mess. Each entity in this confrontation: Albion, Caltrans, and the Coastal Commission supports the idea of safe bridges from Albion to Ft. Bragg. Caltrans plan to repair or replace all 8 bridges along this route is supported by everyone. Presently the plan is bogged down over the appropriateness of massive environmental devastation required for the geotechnical investigation slated for the northern abutment of the 75 million dollar concrete replacement bridge that they are not even sure they are going to build.

I have a very simple solution to this problem. It allows Caltrans to continue, unhindered, with its 8 bridge plan. It allows the Coastal Commission to continue to fulfill its essential role of protecting the integrity of the Coast. And most importantly, the people of Albion will have 10 years to enjoy our historic treasure, while perfecting the plan to save her..

The solution: **Start at Hare Creek!**

See my "Open letter to Caltrans" attached

Thank you for your consideration**,**

Sincerely,

John R. Johansen

15 April 2018

An open letter to Caltrans

In 2009, You came to our community
with a most ambitious plan to fix every bridge
on Highway 1 between Ft. Bragg and Albion.
The plan included seismic upgrades and
a continuous, safe, bike path.

Refurbishing Hare Creek Bridge and providing a bike path
to the Roundabout at Simpson Lane would provide
more than 2 thousand county residents
a safe route to Ft. Bragg.

An upgrade at to the Jug Handle Bridge and
an extension of the bike path would open the route
to most of the residents of Casper.

Rehabilitating the Casper Bridge and extending the bike path
to Russian Gulch would open it up to the rest of the
residents as well as providing a safe route to the Park.

After upgrading the bridges at Russian Gulch and Jack Peters Creek, the Village of Mendocino would be added to the route.

Then after minor alterations to the bridge at Big River, total replacement of the small bridge at Little River, and with an extension of the bike path through one of the most dangerous sections on all of Highway 1, Caltrans would arrive at Albion with a stunning portfolio of bridge rehabilitations along with a safe bike path to Ft. Bragg. And ready to present their ideas to rehabilitate our 87 year old historic bridge.

Instead, as Phase One of your plan, you come to us offering to demolish an essential part of the fabric of Albion, along with massive disruption to the environment and our way of life. All to provide a newer version of something we already have, equipped with a bike path to nowhere.

What kind of a support did you expect?

John R. Johansen, Albion

## Gedik, Tamara@Coastal

**From:** Norbert Dall <norbertdall@icloud.com>
**Sent:** Wednesday, July 11, 2018 5:43 PM
**To:** Merrill, Bob@Coastal; Gedik, Tamara@Coastal
**Cc:** S. Dall; Ginetta Giovinco; Norbert Dall
**Subject:** CDP 1-16-899 (Caltrans, ARB replacement geotech development project application): Comment
**Attachments:** DAanCTphotoDrillBoring04-1Bent2.pdf

Bob and Tamara,

As you know, Caltrans - in its further revised project description (through June 28, 2018) for the Albion River Bridge replacement geotechnical investigation development project (Project) - has submitted information, represented to be accurate and truthful, that its proposed use of a skid-mounted drill rig, transportable by helicopter, for subsurface geotechnical (boring) investigation (e.g.) at bore hole locations/drill sites (DS) 2 [on the steep Albion River bluff), DS 5 [on the Albion Cove dune-berm/wetland], DS 6 [on the Albion Cove coastal bluff], DS 7-1 and 7-2 [on the Albion Cove coastal bluff face], and DS 8-3 [on the Albion Cove coastal bluff face]):

(1) requires no grading (excavation or fill) at the respective drilling sites or bore hole locations;

(2) involves installation of drilling platform footings solely by their insertion into the ground;

(3) involves a drill pad (drill platform) area at DS 2 of ±15 feet by ±19 feet (±285 square feet);

(4) involves a drill pad (drill platform) area at DS 5 of ±28 feet by ±30 feet (±840 square feet); and,

(5) involves no drill pads or drilling platforms at DS 6, DS 7-1, DS 7-2, or DS 8-3.

(The references to drill sites are to those depicted on the Caltrans "Geotechnical Investigation Grading Plan, Albion River Bridge", Sheets 1 and 2, uploaded to the Commission ftp server on or about June 28, 2018. DS 7-1 identifies the easterly bore hole location of drill site 7; DS 7-2, the westerly bore hole location of drill site 7. DS 8-3 identifies the westerly-most bore hole location of drill site 8.)

Caltrans relies in relevant parts on these representations to claim that its proposed geotechnical investigation has no potential for significant impacts on coastal resources.

However, in response to a documents request by DA, Caltrans has produced the attached photographic image of Caltrans subcontractor CRUX's skid-mounted drill rig (the "SMDR"), which DA has annotated with 13 notes. They indicate, by comparison to the specific drill site and/or bore hole locations on the referenced Sheets 1 and 2, that the Caltrans Project description for the six drill sites/boring locations at DS 2, DS 5, DS 6, DS 7-1, DS 7-2, and DS 8-3 are inaccurate, incomplete, and knowingly and intentionally misleading, on the following bases:

(A) The SMDR development component consists of a combination of (i) a skid-mounted drill rig, with a mast of unspecified height, (ii) a sagging (unstable) drilling support platform for drilling equipment, supplies, and workers, (iii) external drilling mud tank, (iv) an apparent water (or power) line from an undisclosed upslope location of a water (or power) source, and (v) one larger diameter and two smaller diameter drain pipes, including of apparent drilling muds or drilling mud-contaminated water, that discharge to the slope below the SMDR.

(B) The SMDR development component involves (i) excavation of an unspecified amount of earthen materials for the drilling mud tank, the drill rig footings on the upslope side of the drill rig platform, and shoring and bracing to support the drill rig footings on the downslope side of the drill rig platform, and (ii) side-casting (fill) of an unspecified amount of earthen material adjacent to the drill rig platform in the lower center foreground of the image.

(C) A drilling material supply dump characterized by yellow containers adjacent to (upslope from) the drilling mud tank excavation.

(D) A wetted and locally eroded (eroding) area beneath and downslope, for an unspecified distance, from the drilling support platform, and below and adjacent to the skid-monted drill rig platform.

(E) A drill string (pipe) storage area, apparently at grade, adjacent to the drilling support platform and drill rig platform.

(F) Slope cover matting between an apparent upslope staging area and near the drilling support platform.

(G) Unspecified adjacent work areas during SMDR (i) site grading, (ii) foundation installation and removal, (iii) drilling support platform installation, operations, and removal, (iv) drill rig installation, operations, and removal, (v) provision of water, other equipment, and drilling supplies, (vi) worker ingress and egress, (vii) worker sanitation facilities, and (viii) post-SDMR removal site remediation, monitoring, and subsequent corrective measures to meet specified/quantified restoration standards.

The at-grade/oblique photographic image provided by Caltrans contains no scale and does not encompass the entire drill site area; however, within the frame, the developed drill site development area encompasses an estimated area of ±30 feet by ±40 feet (±1,200 square feet), and the slope cover matting encompasses an additional area of ±16 by ±50 feet (±800 square feet), for a sub-total area (exclusive of the adjacent upslope and downslope development impact areas) of ±2,000 square feet. For the proposed six drill sites/bore hole locations, the proposed SMDR thus encompasses an area of approximately 12,000 square feet, all of it in environmentally sensitive and variously less than stable river bluff, coastal bluff, dune, or wetland areas.

On the basis of Caltrans' own illustrative SMDR development site depiction, the above-referenced Caltrans "Geotechnical Investigation Grading Plan, Albion River Bridge", Sheets 1 and 2, and the current CDP application considered as a whole, thus do not accurately, completely, or truthfully depict (describe) the proposed development at the subject drill sites.

The annotated Caltrans graphic indicates that the proposed SMDR at these respective drill sites/bore hole locations may potentially result, variously, in (1) discharge of hazardous fluids and earthen materials associated with the proposed drilling to, and thereby degrade, the biologically significant waters of adjacent Albion Cove and Albion River, contrary to PRC sec. 30230 and 30231; (2) unpermitted discharge, in the absence of effective containment, of hazardous substances in the drilling muds, contrary to PRC sec 30232; (3) unpermitted filling of wetlands in the area of DS 5, contrary to PRC sec. 30233(a); (4) interfere with protected recreational fishing activities through helicopter transport and hovering associated with pick-up, installation, supply, removal, and drop-off of the SMDR components, contrary to PRC sec 30234.5; (5) unpermitted use and impacts to environmentally sensitive coastal bluff face, river bluff face, dune, and wetland habitat areas, contrary to PRC sec. 30240(a); (6) incompatible siting of development adjacent to these ESHA's, and the wild-and-scenic Albion River and Albion Cove beach recreation areas, with potentially significant degradation of their resources values, contrary to PRC sec. 30240(b); (7) adverse impacts, through grading and foreseeable erosion, of the productivity of soils on the coastal bluff, river bluff, wetland, and dune DS areas, contrary to PRC sec. 30243; (8) unmitigated adverse impacts, through grading, discharge of contaminated materials, and foreseeable erosion, of archeological and historical resources in the areas of DS 5 and DS 6, contrary to PRC sec. 30244; (9) significant adverse visual impacts, through grading, vegetation removal, use of mechanized equipment, and foreseeable erosion, on protected highly scenic resources on the Albion Cove coastal bluff, Albion Cove dune-wetland, and Albion River bluff, contrary to PRC sec. 30251; (10) avoidable alteration of natural landforms, contrary to PRC sec. 30251; (11) unmitigated risks to life and property in, and adjacent to (e.g., along the public shoreline of), the Albion Cove coastal bluff and Albion river bluff high geologic hazard areas, contrary to PRC sec. 30253(a); (12) failure to assure the stability and structural integrity of the SMDR, contrary to PRC sec. 30253(b); (13) creation of, or contribution to, potentially significant erosion, geologic instability, and/or destruction of the site or surrounding area, contrary to PRC sec. 30253(b); (14) failure, as a result of the use of a helicopter (that originates in New Mexico and requires 10-12 round trip flights per day back to its staging area) to access otherwise inaccessible DS 2, 5, 6, 7, and 8, to minimize energ consumption, contrary to PRC sec. 30253(d); (15) failure to protect the Albion Cove public beach, lower Albion River, Albion Cove, and Albion Flat campground and recreational-fishing boat landings, which are popular visitor destination points for recreational use, contrary to PRC sec. 30253(e); and (16) a new public works facility, the Caltrans-proposed Albion River Bridge replacement, that is inconsistent with numerous coastal resource protection standards of the Coastal Act and the certified County LCP [NHD: as further described in section _ of this memorandum], contrray to PRC sec. 30254. The mitigation measures proposed by Caltrans in the current CDPa specifically do not reduce these potentially significant direct and cumulative effects of the Project on the aforementioned coastal resources [NHD: as further discussed in section _ of this memorandum].

Note: The reference to "this memorandum" is to the complete DA memorandum (in preparation) on the current application for CDP 1-16-899.

Thank you for this opportunity to comment on the current Caltrans application for CDP 1-16-899.

Regards,

**NHD**

Norbert H. Dall
Partner
Dall & Associates
Advisers and Consultants in Sustainable Coastal Management,
Land Use, and Transportation
Co-author, *The Coasts of California* (in preparation)
930 Florin Road, Suite 200
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DA analysis (201851:20180711) of Caltrans illustrative photograph of Subcontractor CRUX (apparent skid-mounted drill rig) “Drill boring 04-1 (Bent 2) 2.jpg”. Impacted *shown* area is ±20-25 by ±40 feet (drill site) and ±16-20 feet by ±50 feet (slope cover matting). The discharged fluids to ground indicate that the drill rig was previously in operation at this location, but the lowered drill mast indicates the drill rig was not in operation at the time the image was taken.

## Gedik, Tamara@Coastal

**From:** Peter Wells <peter@albionriverinn.com>
**Sent:** Wednesday, July 04, 2018 2:27 PM
**To:** Gedik, Tamara@Coastal
**Cc:** Demling, Frank C@DOT; Annemarie
**Subject:** Re: Albion Geotech project postponement

Hi Tamara,

I appreciate the open dialogue we shared last week.

My main concern about the Geotech project is that it be heard by the Coastal Commission only after there has been a public hearing to consider whether the historic bridge might be demolished and a new bridge constructed.

It's obviously wrong to spend public funds on the foundation for a new bridge before the new bridge has been approved by the Coastal Commission. It might never be built.

Therefore I am requesting that the Coastal Commission postpone the hearing for the Geotech project until after
the demolition/construction hearing has been heard.

Sincerely,

Peter Wells
707 357 1194

On Jun 27, 2018, at 5:14 PM, Gedik, Tamara@Coastal <Tamara.Gedik@coastal.ca.gov> wrote:

Hi Peter,

Thank you for talking to me yesterday and sharing your perspectives and concerns regarding the proposed Geotechnical Investigation project (CDP application number 1-16-0899) and the future proposed bridge rehabilitation/replacement project (no application yet). I checked our Interested Persons list and it appears the contact address we had on file for you has been as follows: Peter Wells Trust, P.O. Box 185, Mendocino CA 95460.

I have asked our office administrator to add to our contacts list your information as follows:

Albion River Inn
c/o Peter Wells
P.O. Box 100
Albion, CA 95410

We will send a hearing notice to this address approximately 2 weeks in advance of when the project is scheduled to be heard.

Sincerely,

*~Tamara L. Gedik*
Coastal Program Analyst
California Coastal Commission
**North Coast District Office**
1385 8th Street, Ste. 130 • Arcata, CA 95521
**E:** Tamara.Gedik@coastal.ca.gov
**P: 707.826.8950 • Fax:** 707.826.8960
*~To purchase a whale tail license plate or access Coastal Commission information, go to www.coastal.ca.gov*
<image001.jpg>

Every Californian should conserve water. Find out how at:

<image002.jpg>
SaveOurWater.com · Drought.CA.gov

# Albion Little River Fire Protection District

RECEIVED
JUN 28 2018
CALIFORNIA
COASTAL COMMISSION
NORTH COAST DISTRICT

June, 18, 2018

Ms. Dayna Bochco, Chairperson
California Coastal Commission
45 Freemont St. Suite 2000
San Francisco, Ca. 94105-2221

Re: Highway 1 Albion River Bridge Replacement

Dear Ms. Bochco:

The Board of Directors of the Albion Little River Fire Protection District (ALRFPD) requests that the California Coastal Commission approve the request by Caltrans to perform geotechnical investigations at the site of the current Albion River Bridge. There are several urgent and compelling reasons for doing so.

1. There is a need to know accurate estimates for the cost of replacing the Albion River Bridge to be compared with the estimated cost to maintain the safety and utility of the existing bridge. It is the understanding of members of the board of directors that the purpose for the proposed geotechnical survey is to understand what foundation design would be needed for a replacement bridge and further, to understand the actual conditions under the existing bridge foundation. That would be the only way to know when the State is spending an excessive amount of maintenance money as opposed to investing in a replacement bridge. The bridge foundation is a high-percentage cost element of a bridge. Thus, approval of a permit for the geotechnical field work is simply a request to obtain more accurate data for making informed decisions.

2. Per the recent Caltrans report, this bridge appears to be aging at an accelerating rate. It appears that the threaded rods and bolts holding the bridge together – which previously lasted seven years before some replacement was needed – now need replacement on an almost annual basis. In addition, deteriorating wooden timbers are showing signs consistent with overloading and advanced aging. Spallation of concrete will also require an increasing frequency of repair. Replacement in terms of on-going maintenance may require extended Highway 1 traffic delays.

3. Per the Caltrans report, this accelerated aging implies that some of our ALRFPD emergency vehicles – particularly our fully loaded water trucks will exceed maximum dynamic load ratings, particularly when positioned adjacent to an opposing fully loaded logging truck. This is clearly a major safety concern.

4. ALRFPD is spread out over a number of ridges with the Albion River Bridge being a key lifeline for rapid response for fires and other emergencies. It should be noted that ALRFPD's current capabilities for rapid response allows the members of our fire district to enjoy significantly lower home owner insurance rates.

Response delays due to on-going long-term bridge maintenance could lead to a reduction of our insurance rating and an increase in homeowner's insurance rates or, in the worst case, an inability to obtain insurance.

5. Additional safety issues go beyond our District's immediate concerns. ALRFPD frequently provides and receives mutual aid with neighboring Mendocino Fire District. Bridge problems could limit our ability to share resources.

6. If there is a significant seismic event that would cause the permanent closure of the existing bridge, lack of geotechnical data would likely lead Caltrans to erect the most expedient design, rather than take the time necessary to produce information that would allow for the most efficacious design.

7. The members of our community are dependent on the Albion River Bridge for access to food and other supplies, as well as medical services in Fort Bragg and Mendocino. In addition, our constituents are dependent upon bridge integrity for law enforcement responses.

8. Albion River Bridge carries approximately one million vehicles per year. If failure were to occur it would probably take over a year to reconstruct a replacement bridge. Without having accurate data derived from a geotechnical analysis, the installation of a replacement bridge would be delayed even further.

9. More broadly, our local economy requires an efficient transportation corridor. In addition to necessary local auto traffic, many tourist vehicles, lumber trucks, and other large commercial vehicles cross this bridge daily. Thus, it is essential to the economy and safety of the Mendocino Coast that the Albion River Bridge not fail before a replacement can be constructed.

Regardless of Caltrans' ultimate decision whether to maintain the existing bridge or to build a new bridge, ALRFPD needs to perform our charter mission to provide a continuum of emergency services. A continuously 24/7/365 available and fully functioning Highway 1 transportation corridor, that includes the Salmon Creek and Albion River bridges, is essential for public safety, including the period during geotechnical investigations.

Learning the geotechnical facts is essential to fulfilling the charter mission of both the California Coastal Commission and the ALRFPD. Therefore, Albion Little River Fire Protection District Board strongly urges the California Coastal Commission to approve the Caltrans request for a geotechnical investigation permit.

This letter approved by a vote of the ALRFPD board of directors at the June 18, 2018 regular meeting.

Michael Issel, President
ALRFPD Board of Directors



Albion Little River Fire Protection District • PO Box 634 • Albion, CA 95410 • Phone (707) 937 4022 • Web: http://www.albionfire.com/

## Gedik, Tamara@Coastal

**From:** Pauli Kennelly <paulikennelly@msn.com>
**Sent:** Wednesday, June 27, 2018 1:15 PM
**To:** Gedik, Tamara@Coastal; Merrill, Bob@Coastal
**Cc:** acab@msn.org
**Subject:** Albion Bridge
**Attachments:** albion1.jpg; Albion.jpg

Hello

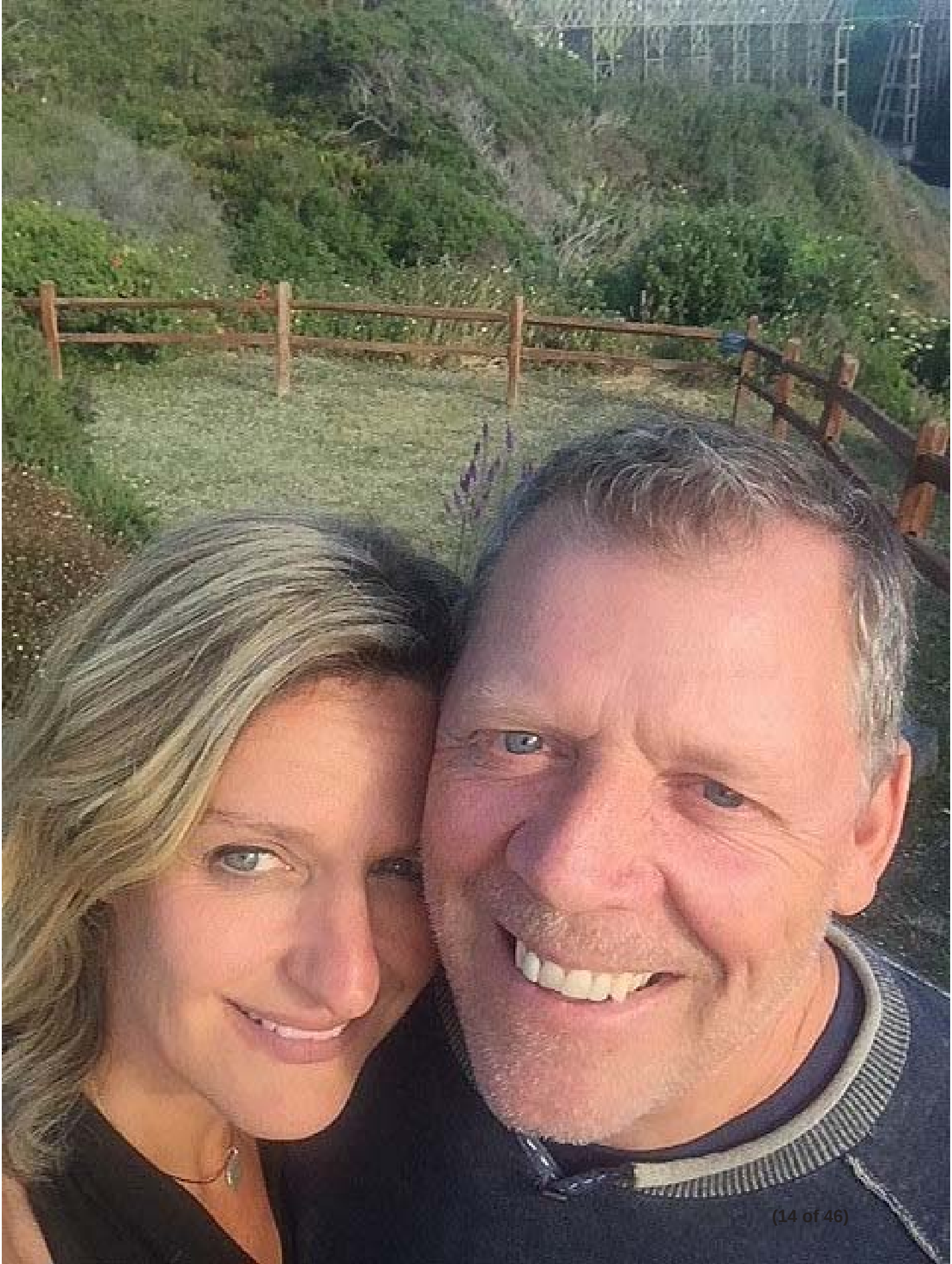
I am writing to share our story of Albion and the Bridge for your consideration as you determine the future of the bridge.

In 1995 my husband surprised me for our 5th year anniversary with a trip to the Albion River Inn (we had read an article in our local paper and fell in love). The first time we crossed the bridge it was a sunny crisp day and one of the most gorgeous sites we have seen. Since then we returned in 2000 with a small group of friends and again in 2005 with a larger group of 12 friends. Each time we would say to ourselves "will it be a beautiful as the last time?" We recently returned again in 2018 to celebrate my husband's birthday and our 4th trip to Albion, and we asked ourselves the same question once again as we got close to the bridge…and the answer every time has been a big YES it is as magical as the first visit 23 years ago! We plan to return in 2020 for our 30th anniversary and hope to see the same lovely site once again. The bridge and Albion is very special to us and we hope you can find a way to preserve the beauty and history it brings to all of us.

Attached are a couple of photos with the bridge

Best Regards,

Pauli and Neil Kennelly
1482 Blair Ave
St. Paul MN 55104
651.238.2760





*Marc & Deanna Schoen*
*P.O. Box 308*
*Albion, CA 95410*

**RECEIVED**
MAY 07 2018
CALIFORNIA
COASTAL COMMISSION
NORTH COAST DISTRICT

April 23, 2018

Ms. Dayana Bocheo, Chairperson
California Coastal Commission
45 Freemont St. Suite 2000
San Francisco, CA 94105-2221

Re: Albion River and Salmon Creek Bridge Core Sampling Application- May 9-11, 2018

Dear Chairperson and Commissioners,

My wife and I are full time residents living south of both subject bridges at 2490 Nonella Lane. We are dependent on both bridges for our food and other supplies, and medical services in the Fort Bragg area and the Village of Mendocino. In addition, we are dependent upon both bridges for Sheriff responses and on the Salmon Creek bridge for fire emergency services.

According To Cal Trans, whom I highly respect for their road and bridge expertise, they have evaluated both bridges and concluded that they are in the late stage of their lives with accelerating rates of degradation.

At this time, we need to know accurate estimates for cost of replacement to be compared with forecast maintenance costs for the two bridges to prolong the safety and utility of them. The purpose to perform the core sampling is to understand what foundation design would be needed for replacement bridges. That would be the only way to know when the State is spending an excessive amount of maintenance money as opposed to investing in the replacement bridges. The bridge foundation is a high-percent cost element for a bridge.

I would also like to point out that the cost of delayed capital improvements is constantly escalating. Also, the impact of a disaster such as an earthquake, would have a devastating effect on this entire community.

I believe this is the most responsible approach for replacement bridge decision-making and I implore you to approve the Cal Trans application without any delay.

Sincerely,

Marc Schoen

Deanna Schoen

Ginetta L. Giovinco

T 213.626.8484
F 213.626.0078
E ggiovinco@rwglaw.com

355 South Grand Avenue
40th Floor
Los Angeles, CA 90071-3101
rwglaw.com

April 26, 2018

VIA ELECTRONIC MAIL (TAMARA.GEDIK@COASTAL.CA.GOV)

Tamara L. Gedik
Coastal Program Analyst
California Coastal Commission
North Coast District Office
1385 8th Street, Suite 130
Arcata, CA 95521

Re: **Coastal Development Permit Application No. 1-16-0899**
**(Caltrans, Highway 1 Albion River Bridge Replacement Alternative "A" Geotechnical Investigation)**
**Agenda Item: Item 10a, Wednesday, May 9, 2018**

Dear Ms. Gedik:

This firm and Dall & Associates represent Mr. John Danhakl, in connection with Whitesboro Farm, in Albion, Mendocino County. For the following reasons, our Client strongly **opposes** setting the above-referenced incomplete (and otherwise internally inconsistent, and in key parts, unsupported) application of the California Department of Transportation ("Caltrans") for hearing until Caltrans has fulfilled its legal obligations as lead agency under the California Environmental Quality Act ("CEQA") (Pub. Res. Code § 21000, *et seq*.).

To date, Caltrans has ignored the dramatic disturbance to, and actual destruction of, the environment and protected coastal resources associated with this proposal, and has purported to exempt from environmental review its efforts to ultimately demolish and replace the State and federally listed historic Albion River Bridge on scenic Highway 1.

If Caltrans' proposed geotechnical investigation were allowed by the Coastal Commission to proceed, sensitive resources will be impacted for at least a 2 ½ month period that starts on June 15 and spans both the summer nesting season and the peak visitor season. The impacted resources include, among others, environmentally sensitive habitats, highly scenic areas, natural landforms, travel on rural Highway 1, and immediately adjacent affordable and other high priority visitor-serving and recreational uses.

Caltrans proposes to engage in this wide range of development activities, each with significant or potentially significant impacts, not *just* based on an inapplicable exemption from CEQA but based on an exemption prepared for an entirely different project and by another Caltrans District, and based on a now outdated biological surveying that, even when current, did not adequately address the project impacts and, particularly, coastal resource impacts.

The effort by Caltrans as lead agency to exempt itself from its own obligation to adequately analyze the potential impacts of the geotechnical investigation does not meet the requirements of CEQA or the Coastal Commission's permit regulations (*e.g.*, at 14 Cal. Code Regs. § 13053.5) and any attempt to rely on the Coastal Commission's CEQA functional equivalent will not remedy this error. As Commission legal staff has explained repeatedly, while the Commission's review under the Coastal Act (and Local Coastal Program, where applicable) is the functional equivalent of CEQA for "responsible agency" review, Commission review does not serve as a lead agency review, *de facto* or otherwise. Moreover, the Commission and its staff (as a responsible agency), and the public are entitled by CEQA to, and are informed by, the mandatory - and publicly vetted - environmental analysis of the project.

SUMMARY OF CALTRANS' "NOTICE OF EXEMPTION" DEFICIENCIES UNDER CEQA

Current Project Components Exceed Those Referenced in NOE. First, the NOE dated June 24, 2016 and filed with the State Clearinghouse on June 27, 2016 (#2016068373) inaccurately describes both the geotechnical investigation now before the Commission as of April 18, 2018, and the project addressed in the Caltrans August 2015 Natural Environment Study (NES) and supplements to it, and the current project components are well beyond what is described in the NOE. For example, the NOE describes 11 drill sites, whereas the current project description ambiguously references 6 drill sites, several of which are in different specific locations.

CEQA Exemption Does Not Cover "Information Collection" That Results in Impacts to the Environment. Second, the NOE claims that the geotechnical investigation is exempt from CEQA based on "Class 6, Information Collection." Setting aside that the NOE is deficient because it does not properly state the section number which Caltrans claims is applicable and which is required on the face of the NOE, an exemption under 14 Cal. Code Regs. § 15306 for information collection is inapplicable. The Caltrans assertion that the project consists of "basic data collection" where the activities "do not result in a serious or major disturbance to an environmental resource…" is at best disingenuous. (*See* NOE.) Under CEQA, because "a determination that a project falls within a categorical exemption excuses any further compliance with CEQA whatsoever, [courts] must construe the exemptions narrowly in order to afford the fullest possible environmental protection." *Save Our Carmel River v. Monterey Peninsula Water Mgmt. Dist.*, 141 Cal.App.4th 677, 697 (2006). "[E]xemption categories are not to be expanded or broadened beyond the reasonable scope of their statutory language." *Id*. (quoting *Dehne v. County of Santa Clara*, 115 Cal.App.3d 827, 842 (1981). "These rules

ensure that in all but the clearest cases of categorical exemptions, a project will be subject to some level of environmental review." *Id*.

Here, Caltrans admits that the geotechnical investigation will result in removal of major vegetation, grading resulting in the lowering of a bluff, and permanent changes to visual resources, among other impacts. The basic description of the geotechnical work as set forth in the April 18, 2018 Caltrans Memorandum alone disqualifies the project from a categorical exemption as a "clear cut" example of simple data collection – such as traffic counts – and instead involves impacts that require "some level of environmental review." Nor is there even an attempt by Caltrans to provide an iota of evidence, let alone the required *substantial* evidence, to support use of an exemption. (*See* Pub. Res. Code § 21168.5 [public agencies relying on categorical exemptions must support their decision with substantial evidence].) Instead, Caltrans simply asserts, without explanation or support, that the exemption applies. This assertion is itself further contradicted by statements on proposed "environmental precautions," an admission of the potential adverse environmental impacts the geotechnical activities may cause. In short, on its face, the geotechnical investigation does not qualify as an exempt activity under CEQA.

<u>This Geotechnical Investigation Triggers Exceptions to Any Exemption That Might Otherwise Apply.</u> Third, even if the categorical exemption for basic data collection applied here, which it does not, the exemption still would be inapplicable because an exception to the exemption would apply. When an exception applies, the exemption cannot be used and the public agency must instead conduct environmental review of the project.

CEQA contains several exceptions to categorical exemptions. (14 Cal. Code Regs. § 15300.2.) The "significant effects" exception provides that a categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to "unusual circumstances." (14 Cal. Code Regs. § 15300.2(c).) What is "unusual," in turn, is "judged relative to the typical circumstances related to an otherwise typical exempt project." *Santa Monica Chamber of Commerce v. City of Santa Monica*, 101 Cal.App.4th 786, 801 (2002). An unusual circumstance is "some feature of the project that distinguishes it from others in the exempt class." *San Lorenzo Valley Cmty. Advocates for Responsible Educ. v. San Lorenzo Valley Unified Sch. Dist.*, 139 Cal.App.4th 1356, 1381 (2006).

Examples of typical projects to which the "basic data collection" exemption applies are the previously mentioned collection of traffic counts or the conduct of a written survey. These data collection activities involve minimal, if any, environmental disturbance. In stark contrast, Caltrans' proposed geotechnical activities involve major vegetation removal, extensive grading, bluff lowering, construction of access routes, permanent viewshed changes, and earthwork reconstruction. By no stretch of the imagination does this qualify as minimal environmental disturbance.

There is, at the very least, a fair argument that Caltrans' geotechnical investigation activities will result in significant adverse environmental impacts. In addition to the obvious examples such as the removal of vegetation (including a Eucalyptus grove rookery) and the permanent change in views near certain sites resulting from the vegetation removal and grading of landform contours, Caltrans activities may de-stabilize slopes, contaminate water based on equipment leaks for fluid spillage (which Caltrans anticipates and insufficiently claims it will address through plastic tarps and absorption mats), and affect environmentally sensitive habitat. The full extent of these significant adverse impacts are not known for the simple reason that Caltrans has failed to conduct any environmental review of the proposed geotechnical activities.

CONCLUSION

In conclusion, the Coastal Commission, as a responsible agency under CEQA, must ensure that proper environmental review of proposed project has been conducted. The Commission's certified regulatory program cannot serve as a functional equivalent where NO environmental review has been conducted by the lead agency/applicant. Instead, here, the Commission must fulfill its statutory obligations by requiring Caltrans to conduct appropriate environmental review prior to proceedings with its application for geotechnical investigation.

For the reasons set forth above, our Client requests that:

- the Commission, and Commission staff, cease all further processing activity related to Caltrans' application until Caltrans as lead agency under CEQA conducts a proper environmental review;
- Caltrans be directed to withdraw its application immediately and provide electronic notice thereof to all known interested persons, organizations, and public agencies; and,
- in the event that Caltrans does not withdraw the CDP application, Commission staff remove or postpone Commission consideration of the proposal to a future time when Caltrans has conducted the requisite CEQA review of all potential impacts associated with the proposed geotechnical work, in order for the Commission and the public to understand the full and adverse impacts of this project.

Please distribute a copy of this letter to all Coastal Commissioners as soon as possible. Please do not hesitate to contact me with any questions or to discuss this matter.

Very truly yours,

Ginetta L. Giovinco

cc: Bob Merrill, North Coast District Manager, California Coastal Commission:
Bob.Merrill@coastal.ca.gov
Alison Dettmer, North Coast District Director, California Coastal Commission:
Alison.Dettmer@coastal.ca.gov
Ann Cheddar, Esq., Senior Attorney, California Coastal Commission:
Ann.Cheddar@coastal.ca.gov
Frank Demling, Project Manager, Caltrans:
frank.demling@dot.ca.gov
Norbert Dall, Dall & Associates: norbertdall@icloud.com
Stephanie Dall, Dall & Associates: sdall49@aol.com

12998-0002\2181307v1.doc

## Gedik, Tamara@Coastal

**From:** John Johansen <jrja@mcn.org>
**Sent:** Tuesday, January 30, 2018 7:32 PM
**To:** Gedik, Tamara@Coastal
**Subject:** Alternate Pedestrian/Bike Path for ARB
**Attachments:** 1732siteplan2.pdf

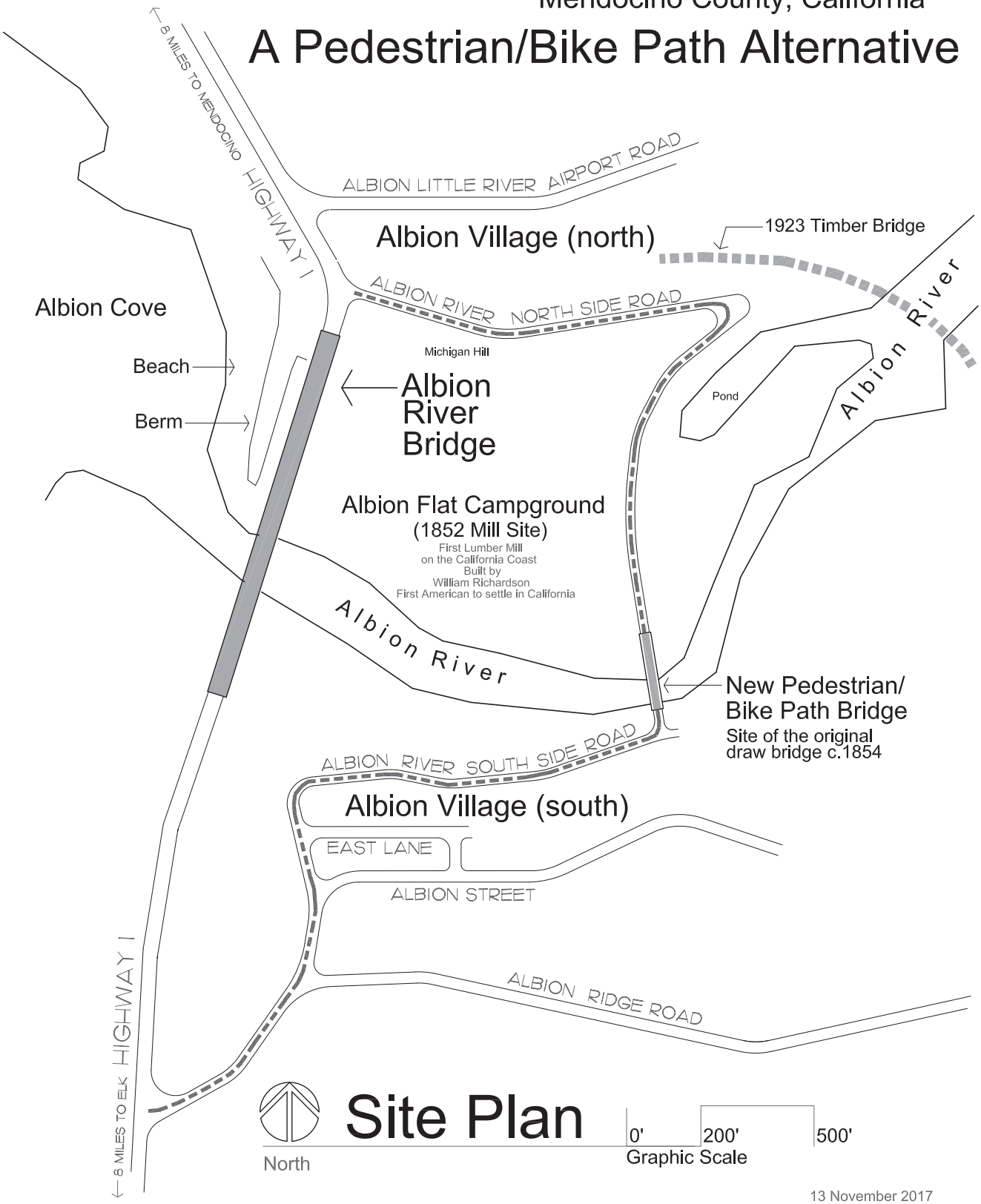
Tamara,

Attached plan per our most recent conversation. Thanks for the help.
I'll keep you informed. - JRJ

# Albion River Bridge

Mendocino County, California

## A Pedestrian/Bike Path Alternative




John Roger Johansen, Architect - Albion, California

13 November 2017
24 October 2017

## Gedik, Tamara@Coastal

**From:** John Johansen <jrja@mcn.org>
**Sent:** Friday, October 13, 2017 8:12 PM
**To:** Gedik, Tamara@Coastal
**Subject:** ARB Pedestrian Alternative

Tamara,

I would like to talk to you about a pedestrian alternative for the Albion River Bridge.

As you know, the lack of a pedestrian/bike path on the bridge is a major element of Caltrans plan to demolish it.

What if we could take both these functions from the bridge and route them down thru the campground, across the river and up thru the village back to Highway 1 and vice versa? The Coastal Trail could also be included. This route would provide a much better view of the bridge than driving or even walking across it.

This would require a pedestrian bridge over the Albion River at the location of the original (c.1860) draw bridge. I would appreciate input from your office regarding basic requirements for such a bridge.

**Something else to think about:** Caltrans has a section of highway with 8 earthquake vulnerable bridges between Albion and Ft. Bragg. In the event of a major quake the people living along this highway have no way to get to the Hospital in Ft. Bragg, so Caltrans wants to do seismic upgrades on all these bridges. This is a great idea, and everyone supports it. but why do they have to start in Albion? If they started with the Hare Creek Bridge, just South of the Highway 20 intersection, they could immediately provide safe access to the thousands of people who live up Simpson Lane. With each bridge completed from the North end, hundreds more people could have safe access to help.

This approach could obviously save the ARB for another 10 to 15 years; but how can you argue with the logic? The main thought here is that given another few years, maybe even Caltrans can come to appreciate this magnificent historical asset.

Save the ARB! - JRJ

RECEIVED

APR 23 2018

CALIFORNIA
COASTAL COMMISSION
NORTH COAST DISTRICT

April 13, 2018

Ms. Dayna Bochco, Chair and Members
California Coastal Commission
45 Freemont Street, Suite 2000
San Francisco, CA 94105-2221

In re: Geotechnical Investigation For Salmon Creek/Albion River Bridge Replacement Projects

As I understand it, Caltrans will be appearing before you on May 9, 2018 to discuss their application to perform geotechnical studies on properties adjacent to the Salmon Creek and Albion River bridges on Hwy 1. The purpose of this letter is to voice my support for their application to perform these studies.

My residence is located adjacent to the north end of the Albion River Bridge. I can see the bridge out the window as I am typing this letter. It's old fashioned look is pleasing as it makes me think of older times when there was a lumber mill and boats milling in the harbor to carry the lumber off for construction around the world. Those days are gone, but the bridge, even though it was build after the end of the lumber mill era, looks like the past.

Even though I enjoy the view of the old bridge I recognize the need to bring it up to date so that it can properly function as one element of an important transportation link. Highway 1 is essential for providing access to a large portion of the north coast of California. In 1944 when the bridge was built, cars were smaller and slower. Trucks were lighter. At that time, structural design for earthquake dangers were practically non-existent. I believe the engineers at Caltrans when they say that the bridge is unsafe because of deterioration or for modern transportation needs and that it would likely collapse in the event of a moderate earthquake. From my own experience, I find that the alignment of the bridge and the highway at the north end, coupled with the eucalyptus trees is a hazard. When driving south and turning on to Albion Little River Road, you cannot see cars travelling north until they are about 150 feet of you. Way too close for cars that often exceed the posted speed advisory.

I am unable to attend the commission meeting to voice my support for Caltrans application, so please accept this letter as its substitute.

Sincerely,

Nicholas G. Tinling
3721 Albion Little River Rd
Albion, CA 95410

RECEIVED

APR 23 2018

CALIFORNIA
COASTAL COMMISSION
NORTH COAST DISTRICT

April 13, 2018

California Coastal Commission
Ms. Dayna Bochco, Chair and Members
45 Fremont St. suite 2000
San Francisco, Ca./ 94105-222

To all concerned:
I am writing this letter on behalf of my husband and I to support Caltrans Geolological Investigation for the Salmon Creek/ Albion River Bridge Replacement Projects.

We live just North of the Albion River Bridge.

We understand that some folks want to maintain the old bridge as it stands, but we believe the Caltrans studies that prove the deterioration of the bridge and the unsafe width of the bridge merits replacement.

We have been to the Caltrans meetings and have been impressed with the considerate and helpful and very informational ways they have tried to include the community with their ideas and findings. They have presented story boards and slide projections that have been quite broad in scope.

Although we are unable to attend the commission meeting, please accept this letter to voice our support for the Caltrans application.

Sincerely,
John and Kathryn Hughes

John D Hughes  Kathryn Hughes

**Abolhassan Astaneh-Asl, Ph.D., P.E.**
Professor and Consultant on Structural Engineering and Bridge Engineering
209 Vernal Drive, Alamo, CA, 94507-1229
Phone (925) 946-0903, E-mail: astanehhassan@gmail.com, Web: www.astaneh.net

Ms. Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd St., Suite 100
Sacramento, CA 95816-7100

RECEIVED
OCT 23 2017
CALIFORNIA
COASTAL COMMISSION
NORTH COAST DISTRICT

Date: April 25, 2017

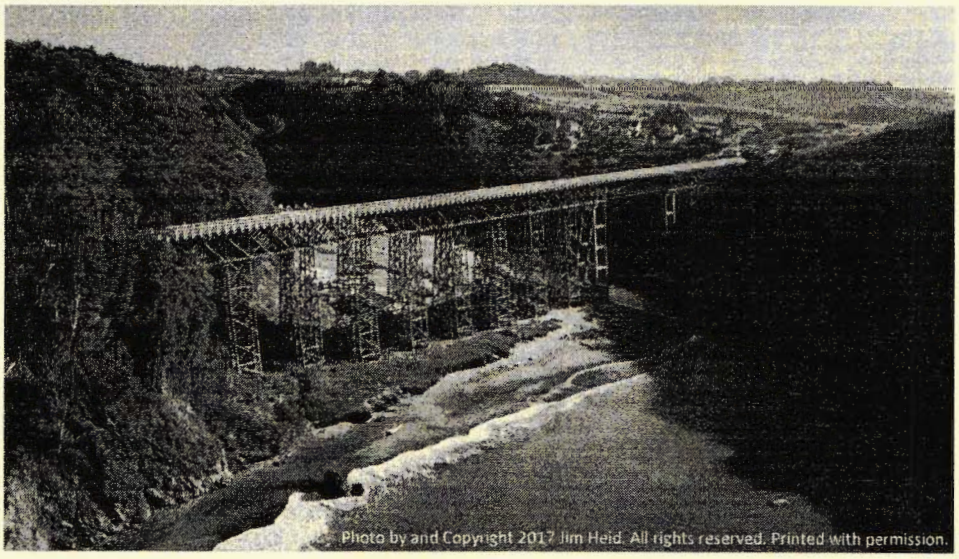
**Subject: A Letter in Strong Support of Albion River Bridge Registration as a National Historic Place**

Dear Ms. Polanco:

I am a Registered Professional Engineer in California (License # CA 48121/Exp. 6-30-2018) and have more than 49 years of experience in design, research, failure analysis of structural engineering of buildings and bridges, and seismic design and protection of buildings and bridges against earthquakes, the wind and terrorist attacks. I am also a Professor of Structural Engineering at the University of California, Berkeley, www.ce.berkeley.edu/~astaneh. My CV is here.

Since 2014, I have been retained as a consultant by a property owner in Albion to study the existing structural integrity of the Albion River and Salmon Creek Bridges, both located in Albion on scenic Highway 1, Mendocino County, California. I have been asked to provide my expert engineering and scientific opinion on the proposed Caltrans plans to rehabilitate or replace these two bridges. This letter will focus on the structural integrity of the Albion River Bridge, which is currently being considered by the State Office of Historic Preservation for listing on the National Register of Historic Places.

I strongly support registration of the Albion River Bridge as a National Historic Place. In the following, I provide information on the existing condition of the Albion River Bridge regarding structural and bridge engineering aspects. I plan to attend May 10, 2017, SHRC Meeting and will be happy to answer any questions you might have regarding my study of structural and bridge engineering aspects of the Albion River Bridge.




**The Albion River Bridge on Scenic Highway 1 with the Town of Albion in the**

The current structural condition of the Albion River Bridge for its Deck, Superstructure and Substructure is 7 in a scale of 0 to 9 on the FHWA National Bridge Inspection Standards condition rating, where a rating of 0 is "out-of-service", 9 is "excellent" and 7 is "good" condition. My Final Report on the structural integrity of this bridge will be released this summer: *The Albion River Bridge: An Engineering Review of Its Existing Condition*. This report is the result of more than three years of extensive investigation, actual field inspection, and analysis of the existing condition of the bridge. In my professional opinion, based on the findings of the study and factual data, there are no engineering, scientific, economic, or transportation planning/management reasons that justify any of the Rehabilitation and Replacement Alternatives developed and proposed by the California Department of Transportation (Caltrans) for the Albion River Bridge. In the following, I have provided more information on the existing condition of the bridge.

The Appendix to this letter is a summary showing the arguments California Department of Transportation has presented in various reports to justify demolition of the historic Albion River Bridge. The FHWA ranks the current condition of the bridge as being in "good" condition. The rationale for replacing a bridge that is currently functioning within the standards of the federal government guidelines seems fiscally irresponsible. In addition, replacing the current bridge with a concrete bridge at an estimated cost of more than $65 million will cause significant harm to the environment and devastate the local economy during construction of the reinforced concrete structure.

In 2015, Caltrans proposed to replace the Albion River Bridge, citing that the bridge was "Structurally Deficient." This designation has been used repeatedly by Caltrans to justify replacing the bridge. All bridges in the State of California must be inspected every other year and a structural assessment completed. These findings are then compiled into a report that is submitted to the FHWA National Bridge Inspection Standards (NBIS); this report is called a "Routine Inspection Report." This report must contain *factual, accurate, and complete inspection data on the current condition* of the bridge. The last page of the Routine Inspection Report is a form called Structure Inventory & Appraisal (SI&A) Report. The form is submitted to the FHWA and is included in the FHWA National Bridge Inventory (NBI) database; it provides a summary of the current structural condition of the bridge and its five major components, which are:

1. Deck ( roadway structure under asphalt),
2. Superstructure (the elements supporting the roadway),
3. Substructure ( piers and foundations),
4. Channels and Channel Protection, and
5. Culverts.

Depending on the condition of these five components at the time of the Routine Inspection, they are assigned a Condition Rating of 0 to 9 with the following definition for each rating [from: FHWA, Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges (1996)].

| | |
|---|---|
| 9 | EXCELLENT CONDITION |
| 8 | VERY GOOD CONDITION- no problems noted. |
| 7 | GOOD CONDITION- some minor problems. |
| 6 | SATISFACTORY CONDITION structural elements show some minor deterioration. |
| 5 | FAIR CONDITION- all primary structural elements are sound but may have minor section loss, cracking, spalling or scour. |
| 4 | POOR CONDITION- advanced section loss, deterioration, spalling or scour. |
| 3 | SERIOUS CONDITION loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present. |
| 2 | CRITICAL CONDITION advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken. |
| 1 | "IMMINENT" FAILURE CONDITION major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put back in light service. |
| 0 | FAILED CONDITION out of service beyond corrective action. |

According to Caltran's own inspections, up until 2015 all Structure Inventory & Appraisal Report for the Albion River Bridge assigned a condition rating of 6, 7 or 8 out of 9 for the components of the bridge. For a bridge to be rated "Structurally Deficient," the condition rating of one of its components should be equal or less than 4 (defined as in "Poor Condition " in FHWA definition given on the previous page). Until 2015 per Caltrans' own assessment, none of the condition ratings of the bridge was equal or less than 4, and the Albion River Bridge was not listed as "Structurally Deficient" in the FHWA National Bridge Inventory database. In 2015, however, the condition assessment of some components drastically changed. Below on the left is a part of the 2013 Structure Inventory & Appraisal Report for the Albion River Bridge that shows the "Structural Condition" of the bridge in 2013. On the right is the same section of the 2015 Structure Inventory & Appraisal Report.

**2013**

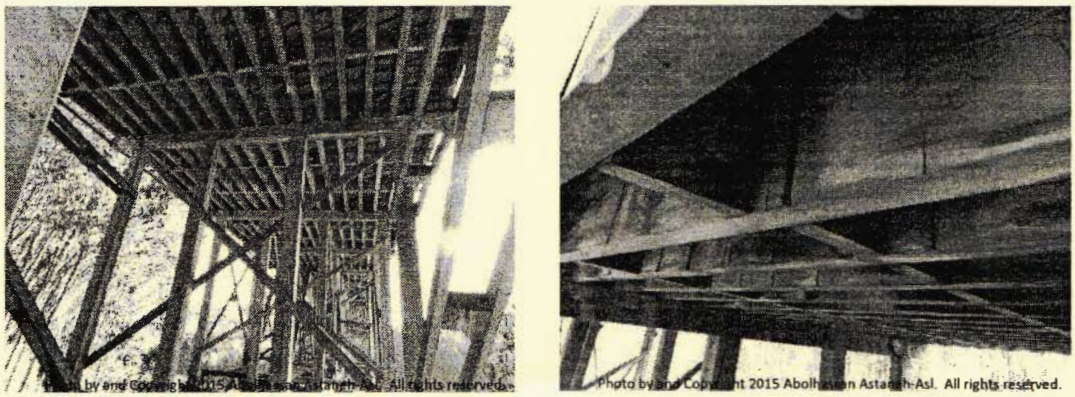
| ********** CONDITION ********** | CODE |
|---|---|
| DECK | 5 |
| SUPERSTRUCTURE | 7 |
| SUBSTRUCTURE | 7 |
| CHANNEL & CHANNEL PROTECTION | 8 |
| CULVERTS | N |
| ********* LOAD RATING AND POSTING ********* | CODE |
| DESIGN LOAD- M-13.5 OR H-15 | 2 |
| OPERATING RATING METHOD- LOAD FACTOR | 1 |
| OPERATING RATING- | 30.8 |
| INVENTORY RATING METHOD- LOAD FACTOR | 1 |
| INVENTORY RATING- | 22.7 |
| BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS | 5 |
| STRUCTURE OPEN, POSTED OR CLOSED- | A |
| DESCRIPTION- OPEN, NO RESTRICTION | |
| ********** APPRAISAL ********** | CODE |
| STRUCTURAL EVALUATION | 6 |

**2015**

| ********** CONDITION ********** | CODE |
|---|---|
| DECK | 7 |
| SUPERSTRUCTURE | 7 |
| SUBSTRUCTURE | 3 |
| CHANNEL & CHANNEL PROTECTION | 8 |
| CULVERTS | N |
| ********* LOAD RATING AND POSTING ********* | CODE |
| DESIGN LOAD- M-13.5 OR H-15 | 2 |
| OPERATING RATING METHOD- LOAD FACTOR | 1 |
| OPERATING RATING- | 30.8 |
| INVENTORY RATING METHOD- LOAD FACTOR | 1 |
| INVENTORY RATING- | 22.7 |
| BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS | 5 |
| STRUCTURE OPEN, POSTED OR CLOSED- | A |
| DESCRIPTION- OPEN, NO RESTRICTION | |
| ********** APPRAISAL ********** | CODE |
| STRUCTURAL EVALUATION | 3 |

There are three major changes in the condition of the bridge from 2013 to 2015:

1. In 2013 the bridge Deck was rated as "5-Fair Condition"; in 2015 this rating was changed to "7-Good Condition.". In 2007, a Routine Inspection report for the Albion River Bridge included the statement: " the two-layer plank deck under the AC (asphalt) is rotting and crushing". However, a visual inspection of the deck by the author in 2013 did not see any evidence of rotting or crushing, see photos below. In 2014, Caltrans did a sampling and laboratory investigation of the deck planks and concluded that the timber deck was not rotting or crushing, and revised its previous condition assessment from a "5-Fair Condition" to "7-Good". This is reflected in the 2015 form that shows the condition of the Deck as 7 out of 9.

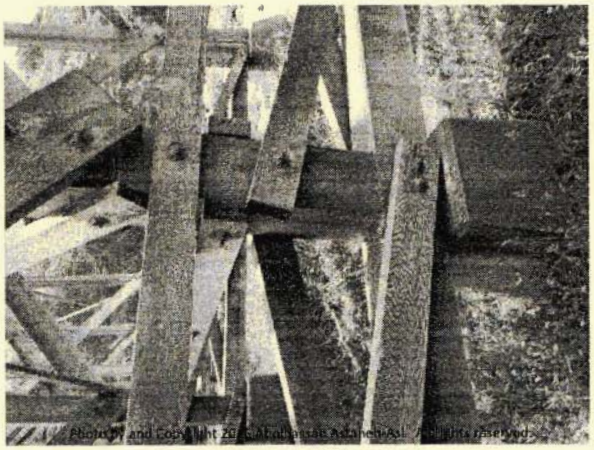


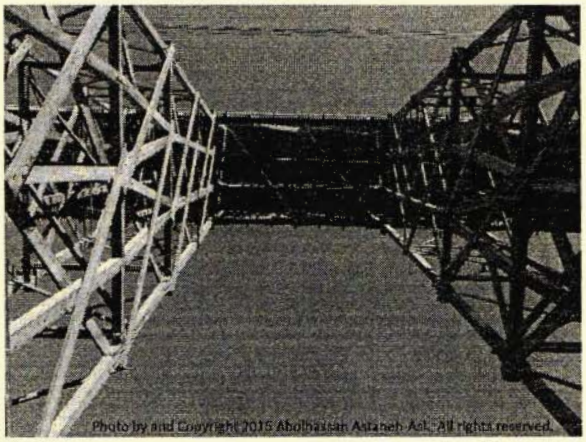

The existing timber members are in very good condition with no sign of rotting or crushing

2. The Structural Evaluation Rating ( see tables on the previous page) of the bridge in 2013 was "6-Good Condition." By In 2013 the Substructure was rated as: "7-Good Condition." By 2015, this rating had been downgraded to "3-Serious Condition." In very rare circumstances such a drop may occur in the event of a natural disaster such as an earthquake, fire, or hurricane, where a bridge is so seriously damaged that its rating drops a full four points. The Albion River Bridge was not subject to any unusual events during 2013–2015. The condition of the Substructure has previously received a rating between 6 and 7, and never below 6 until 2015. A review of the 2015 Routine Inspection Report also did not reveal any reason given for this downgrading of rating of the condition of the Substructure.

The Substructure of this bridge consists of timber and reinforced concrete piers supported on timber and reinforced concrete piles. Given that there is no record of an inspection of the piles being conducted between 2013 and 2015, it is difficult to understand the rationale for such a dramatic change in rating. As for the concrete and timber towers supporting the Superstructure, their condition has not changed in any noticeable way between 2013–2015. Previous Routine Inspection reports for the Albion River Bridge had stated that the bolts connecting the timber elements to each other exhibited evidence of corrosion and require replacing. But given that no unusual corrosion of the bolts occurred during the 2013–2015 period, it is difficult to justify downgrading the condition of the bridge Substructure from a "7-Good Condition" to a "3-Serious Condition.". Finally, if corrosion of steel bolts were the cause of such a dramatic change in the rating of the substructure, these same bolts are used in the Superstructure of the bridge, but the Superstructure maintains "7-Good Condition" rating; see the two tables on the previous page.

In 2013, the bridge underwent major painting and maintenance. The corroded bolts were replaced at the time and were coated to prevent corrosion; see the photographs below. Given that the bolts have been replaced, if the downgrading of the bridge was dependent on corroded bolts, those concerns should have been eliminated. Caltrans had not provided a rationale or documented any conditions that support the downgrading of the bridge, yet between 2013–2015 the bridge went from a rating of 7 to a 3, as attested to in the Routine Inspection Report and the Structure Inventory & Appraisal Reports submitted to the FHWA. I note that entering false data into a bridge inspection report submitted to the FHWA is prohibited by law.




**The bolts connecting the timber members are in good condition in these 2015 photos**

3. The Structural Evaluation Rating ( see tables on the previous page) of the bridge in 2013 was "6-Good Condition." By 2015, only two years later, it was dropped to "3-Serious Condition.". As discussed above, there were no noticeable changes in the structural condition of the bridge

between 2013 and 2015, or any inspection data to support such a change in structural integrity. Should the bridge be structurally unsound, obviously the Albion River Bridge should be replaced. But Caltrans has not provided any data to support the downgrading of the structural rating of this bridge from "7-Good Condition" to "3-Serious Condition and designating it in 2015 "Structurally Deficient". As a licensed engineer with decades of experience, my visual inspection of the bridge saw no evidence to support the downgrading of this bridge to "Structurally Deficient."

I believe that the assessment of the bridge in 2013 reflects the true integrity of this bridge, which according to Caltrans' own records rated the bridge as being in "Good Condition." Based on this 2013 assessment, I strongly support designating the Albion River Bridge as a National Historic Place.

Respectfully submitted,




Abolhassan Astaneh-Asl, Ph.D., P.E.,
Professor and Consultant in Structural Engineering,
Earthquake Engineering and Bridge Engineering

Disclaimer The opinions expressed in this document are solely those of the author and do not necessarily represent the views of the University of California, Berkeley, where he is a professor or the views of those individuals and agencies whose names appear in this document.

# Appendix

## Summary of the Arguments California Department of Transportation Has Made to Replace the Albion River Bridge and Why the Arguments are Not Valid

By Abolhassan Astaneh-Asl, Ph.D., P.E.

April 25, 2017

This Appendix is a summary of findings of a report: "The Albion River Bridge: An Engineering Review of Its Existing Condition - By A. Astaneh-Asl, Ph.D., P.E " to be released this summer (2017). The Albion River Bridge has a steel deck truss main span crossing the Albion River, which flows to the Pacific Ocean a few hundred yards after it passes under the steel truss main span of the bridge. The main span steel trusses are supported on two 4-legged reinforced concrete towers. To the north and south of the main span, there are timber approach structures that consist of timber deck trusses supported on 10-legged braced timber towers. The bridge has a length of 969.2 feet and a deck width of 25.9 feet. It opened to traffic in 1944 by Governor of California. The design and construction of the bridge were done under the supervision of legendary bridge engineer, Charles Purcell, who earlier was the Chief Engineer of the San Francisco-Oakland Bay Bridge. The Albion River Bridge is eligible for listing as a National Historic Place with the National Parks Service of the Department of the Interior.

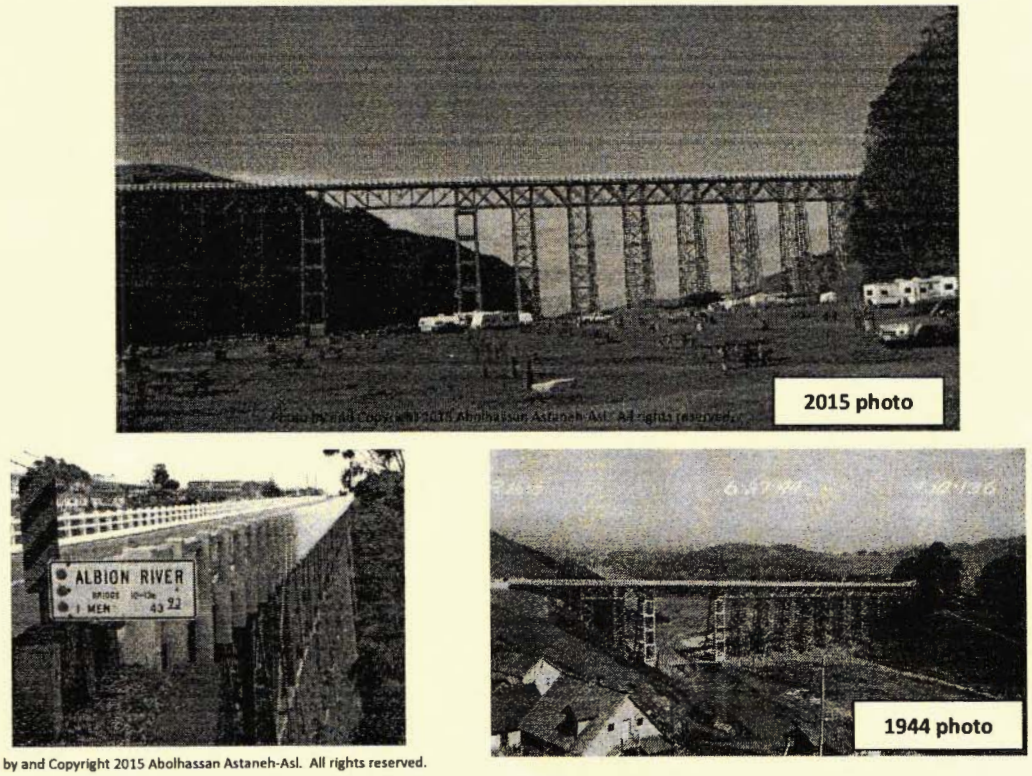



Photo by and Copyright 2015 Abolhassan Astaneh-Asl. All rights reserved.

**Figure 1. The Albion River Bridge**

The California Department of Transportation (Caltrans) has developed plans to replace the bridge and has officially stated several reasons why the bridge should be rehabilitated or replaced. Currently, all indications are that at the present Caltrans is moving forward with only replacement options and has officially asked SHOPP (the state transportation funding program) for $66 million for the replacement option.

The main goal of this review was to investigate the existing (2014–2016) condition of the Albion River bridge. Once the structural integrity of the bridge is established, a review of Caltrans official reports and specifically the Routine Inspection Reports, the Fracture Critical Inspection reports, the Load Rating Data Sheet and calculations, and Special Inspection Report starting from 2015 and going as far back as the 1950s was conducted to determine if the rationale for rehabilitation or replacement of the Albion River Bridge is based on engineering and scientific principles, thus supporting the current structural condition of the bridge.

A detailed and extensive field investigation of the current condition of the bridge and a review of documents, specifically the latest official documents on condition of the bridge prepared by Caltrans, was performed by the author. These documents include the 2015 Routine Inspection Report, the 2014 Structure Load Rating Data Sheets, the 2014 Fracture Critical Inspection Report, and almost entire Bridge Inspection Reports Inventory System (BIRIS) and numerous other documents by FHWA, AASHTO, Caltrans, and others. Based on an evaluation of these documents in conjunction with engineering and scientific protocols, there is no justification for the rehabilitation or replacement of the Albion River Bridge.

The proposed alternatives are based on incomplete data of the current condition of the bridge. Based on the 2014 Structure Load Rating Data Sheet and calculations, as well as the 2014 Fracture Critical Inspection Report accurately and correctly, in a complete manner, report the condition of the Albion River Bridge as "satisfactory and very good condition". In the view of this reviewer, these two official and legal documents are professionally done. Even though this reviewer has not checked all the calculations and data entered into these reports, he does not have any reason to believe that the data in those reports are not accurate and reliable. However, the 2015 Routine Inspection Report submitted to the FHWA and National Bridge Inventory Database, as well as its earlier versions, contains, in the opinion of this reviewer, numerous misstatements and inaccurate inspection data.

Caltrans has stated in its official documents why the Albion River Bridge needs to be replaced. Although the case for replacement is not matched by an equally thorough consideration of rehabilitation. Given Caltrans' commitment to completely replacing the bridge, this author has addressed the arguments that Caltrans has provided for replacement. The Review evaluates only the engineering and scientific data that are in the Caltrans official inspection reports as signed by a Caltrans Registered Professional Engineer and submitted to the Federal Highway Administration as required by law (i.e., The National Bridge Inspection Standards).

## 1. Caltrans reason to replace ARB: The Bridge is "Structurally Deficient"

**Engineering Review Comment: The above statement is not true.**

In order for a bridge to be structurally deficient, structural rating of at least one component of the bridge should be equal or less than 3. Until 2013, all Routine Inspection Reports and the Structure Inventory & Appraisal Reports submitted to FHWA by Caltrans had the structural rating of the bridge as 6 or 7 out of a maximum of 9. In the 2015 Structure Inventory & Appraisal Report, the structural rating of the Albion River Bridge was changed by Caltrans to a rating of "3-Serious Condition" with no data supporting this change. The bridge condition has not changed in any noticeable manner to justify its condition being downgraded from a rating of "7-Good" in 2013 to a rating

of "3-Serious" in 2015. This appears to be an arbitrary change of actual inspection data to be able to designate the bridge "Structurally Deficient", where in reality the bridge has a rating of 7 out of 9 and thus is NOT Structurally Deficient.

2. **Caltrans reason to replace ARB: The timber deck is rotting and crushing**

   **Engineering Review Comment: The above statement is not true.**

   Any visual inspection of the bridge will show that the deck is in a very good condition with no rots or crushing. In addition, the 2014 field inspection and tests by an independent laboratory hired by Caltrans stated that the deck was in good condition, with neither rotting nor crushing

3. **Caltrans reason to replace ARB: The timber structure has reached its end of life**

   **Engineering Review Comment: The above statement is not true**

   There are a total of 6,155 timber elements (members) in the Albion River Bridge structure excluding the deck. In the 2013 Caltrans Routine Inspection Report, all of these elements were listed as having "Condition State 1- No Decay, which is the best condition). The deck has a total of 2,529 elements (planks etc.). In the 2013 Routine Inspection Report, these deck elements, are listed under "Condition State 3- Decayed and lost strength." The independent laboratory tests in 2014 reported that **all** 8,684 timber structural members of the Albion River Bridge were in "Condition State 1-No Decay" (very good). Given the results of this report, it is difficult to interpret Caltrans' statement that this structure has come to the end of its life.

4. **Caltrans reason to replace ARB: The steel truss main span is "fracture critical", heavily corroded, needs painting every 5-10 years and should be replaced**

   **Engineering Review Comment: The above statement is not true.**

   I note here that almost all steel trusses are "fracture critical." I also note that the 2013 Caltrans Fracture Critical Inspection Report gave the steel truss span a complete bill of health, stating that there was no corrosion, no cracks, and the condition of the paint was "excellent." In addition, the 2014 Caltrans Load Rating Sheet states that the strength of the steel truss elements (as well as timber elements) remains the same as it was when the bridge was originally designed and built.

5. **Caltrans reason to replace ARB: The steel truss main span is "riveted" and is "recycled from an old railroad bridge"**

   **Engineering Review Comment: The above statement is not true.**

   Research, laboratory tests, and actual performance indicate that "riveted" bridges have much better performance than the bolted and welded bridges when it comes to cyclic stresses due to earthquakes and passage of trucks over the bridge. Also, a steel truss being "recycled from an old railroad bridge" does not automatically mean there is anything wrong with it unless a problem is actually detected, which is not the case here. Because the steel trusses were part of a railroad bridge indicates that they have plenty of additional strength since they were designed originally to carry trains, which are much heavier than cars and trucks. In fact, it could be argued that these riveted steel trusses should be kept in place because of the improved performance of rivets over welds and

the enhanced strength of the trusses given their original purpose.

6. **Caltrans reason to replace ARB: The bolts in timber connections need to be replaced frequently in this bridge because of corrosion, therefore the bridge should be replaced**

   **Engineering Review Comment: The above statement is not true.**

   Based on facts, the problem with corrosion of bolts and their replacement have been overstated. The bolts are galvanized and the extent of corrosion is minimal. The inspection of bridge indicated that in fact, many of the bolts in the bridge are the original bolts that remain in serviceable condition with minor or no corrosion. Standard bridge maintenance requires replacing bolts and is not a legitimate argument for replacing an entire bridge.

7. **Caltrans reason to replace ARB: The asphalt on the bridge is cracking and the potholes are because the deck supporting it is rotting and crushing.**

   **Engineering Review Comment: The above statement is not true**

   As discussed in Item 2 earlier, the deck is in very good condition, it is not rotting or crushing. The statement about potholes and cracks on the asphalt is not related to the structure being a timber bridge. The reason the asphalt has developed cracks and potholes are primarily due to deferred maintenance: the asphalt on this bridge has not been replaced in more than 14 years. The item needing replacement is the asphalt pavement and not the bridge. In 2016, the old asphalt was removed and replaced with new asphalt.

8. **Caltrans reason to replace ARB: The Albion River Bridge cannot be seismically retrofitted.**

   **Engineering Review Comment: The above statement is not true.**

   The Caltrans website on Earthquake Retrofit Program states that 99.9% of more than 12,000 Caltrans bridges have been seismically retrofitted if they required it. However, it did not include the Albion River Bridge in the major $10 billion plus retrofit budget that the State of California provided. In 2014, under pressure from the Albion Community Advisory Board and the Reviewer who were demanding seismic retrofit for the Albion River Bridge, Caltrans developed seismic retrofit plans. In 2017, Caltrans implemented the Interim Seismic Retrofit on the Albion River Bridge making it, from the seismic retrofit point of view, similar to other bridges in California that have been retrofitted after the 1989 Loma Prieta earthquake.

9. **Caltrans reason to replace ARB: The Bridge cannot carry its traffic load.**

   **Engineering Review Comment: The above statement is not true.**

   The 2014 Load Rating Sheet for the Albion River Bridge states that the strength of bridge elements is the same as it was when the bridge was originally designed and built. The bridge is sufficiently strong for its traffic loads and is compatible with the surrounding roads.

**10. Caltrans reason to replace ARB: A tsunami can collapse part of the bridge**

**Engineering Review Comment: The above statement is not true.**

Caltrans documents discussing the tsunami effects state that the bridge will be able to withstand the tsunami when the water waves arrive and hit the bridge. It is anticipated that when the tsunami water passes the bridge and enters Albion Flats, it will return with heavy debris and this debris hitting the bridge will cause it to collapse. This scenario is not based on facts. First of all, when tsunamis come in, they have a very high speed and much more mass than when they return. Given that the Albion Flats to the east of the bridge are very flat, the water return will be very slow. The Flats are currently a campground with a small café and a residential building on the side. Unlike earthquakes, tsunami do not happen suddenly and without warning.

Depending on which major fault in the Pacific Ocean causes tsunami, the Albion River Bridge has four to eight hours of warning time on the tsunami's arrival. During the tsunami created by the Great 2011 Japan earthquake, the Sheriff's office dispatched officers to warn people on the arrival of tsunami. When it arrived, the tsunami waves were barely 3 feet high and did not pose a hazard to the bridge.

**11. Caltrans reason to replace ARB: The railing of the bridge needs to be replaced**

**Engineering Review Comment: The above statement is not true**

The timber railing of the Albion River Bridge does not comply with the requirements of the current standards. However, as the standards change and become more stringent over time, many elements of a bridge end up not satisfying those standards developed after the bridge was designed. The national policy on this issue is that as long as the element (in this case railing) is serviceable and serves its intended purpose as it was originally designed, there is no need to replace them to comply with the current standards. The rationale for this is obvious: otherwise, railings of hundreds of thousands of bridges would need to be replaced. Even if the railings were not serviceable, it would be a small part of the bridge to be replaced and not the entire bridge. The timber railings of the Albion River Bridge are in very good and satisfactory condition (see Figure 1 on Page 6 earlier.) They are an essential historical and aesthetic feature of the bridge, which is eligible to be listed as a National Historic Place by the National Park Service of the Department of the Interior.

**12. Caltrans reason to replace ARB: The Bridge is "Functionally Obsolete" because of its deck width and needs to be replaced**

**Engineering Review Comment: The above statement is not true**

The National Bridge Inventory Database lists the Albion River Bridge as "functionally obsolete" because of its deck width is 26 feet instead of current standard of 28 feet. More than 30% of all bridges in the U.S. and in California are Functionally Obsolete. Being Functionally Obsolete does not mean there are safety concerns or that the bridge needs to be replaced. In this case, increasing the width of the deck from current 26 feet to a width of 55 feet in a replacement bridge does not make any engineering nor economic sense. The State Route 1, which is carried by this bridge for hundreds of miles, is a two-lane road with no shoulders.

**13. Caltrans reason to replace ARB: The Bridge does not have bike and pedestrian lanes and needs to be replaced with a new bridge that does.**

**Engineering Review Comment: The above statement is not true**

This is not a valid reason to justify replacing a fine bridge that is not structurally deficient and has a structural rating of 7 out of a maximum of 9. State Route 1 that is carried by this bridge, for its entire length to the north and south of this bridge, does not have bike or pedestrian lanes. Replacing the bridge to create bike and pedestrian lane for only 960 feet of the State Route that is more than 400 miles long does not make any engineering or economic sense.

# Conclusions

After reviewing the latest Caltrans official reports; the 2015 Routine Inspection Report, the 2014 Fracture Critical Report and the 2014 Structure (Load) Rating Data Sheet and Calculations, the earlier versions of these reports, Caltrans official reports, as-built drawings, as well as relevant documents, some listed in the References, the following conclusions are reached:

1. There is no Engineering, Scientific, Economic or Transportation Planning/Management reason that can be used to justify any of the Rehabilitation and Replacement Alternatives developed and proposed by Caltrans. Many of the reasons given by Caltrans in support of its Rehabilitation and Replacement plans for the Albion River Bridge are inaccurate or misleading.
2. Caltrans official documents and inspection reports, signed and stamped by Caltrans Registered Professional Engineers and submitted to the Federal Highway Administration (FHWA) as part of the requirements of the National Bridge Inspection Standards contain numerous incorrect, incomplete, and/or erroneous data.
3. The 2015 Routine Inspection Report for Albion River Bridge, which was submitted to the Federal Highway Administration in 2016, has downrated the structural condition of the bridge from an actual 7 out of a maximum of 9 to a 3. There is not, to this author's knowledge, inspection data to support this change of the structural condition of this bridge.
4. Given that Caltrans' own inspection data in 2013 factually reflects the very good to excellent conditions of steel, concrete and timber elements of the Albion River Bridge, there is no justification for rehabilitation. Naturally, it follows that if the bridge is sound enough that rehabilitation is not required, then replacing the bridge should be out of the question.
5. None of the reasons that California Department of Transportation (Caltrans) has stated in official documents to justify funds to replace the Albion River Bridge are based on sound engineering principles. According to the available factual data, the structure of the Albion River Bridge remains in satisfactory to good condition, which justifies preserving it as a registered National Historic Place.

# The 2013 Structure Inventory & Appraisal Report for the Albion River Bridge

## STRUCTURE INVENTORY AND APPRAISAL REPORT

| | | |
|---|---|---|
| | ********** IDENTIFICATION ********** | |
| (1) | STATE NAME- CALIFORNIA | 069 |
| (8) | STRUCTURE NUMBER | 10 0136 |
| (5) | INVENTORY ROUTE(ON/UNDER)- ON | 131000010 |
| (2) | HIGHWAY AGENCY DISTRICT | 01 |
| (3) | COUNTY CODE 045 (4) PLACE CODE | 00000 |
| (6) | FEATURE INTERSECTED- | ALBION RIVER |
| (7) | FACILITY CARRIED- | STATE ROUTE 1 |
| (9) | LOCATION- | 01-MEN-001-43.74 |
| (11) | MILEPOINT/KILOMETERPOINT | 43.74 |
| (12) | BASE HIGHWAY NETWORK- PART OF NET | 1 |
| (13) | LRS INVENTORY ROUTE & SUBROUTE | 000000000101 |
| (16) | LATITUDE | 39 DEG 13 MIN 35.2 SEC |
| (17) | LONGITUDE | 123 DEG 46 MIN 08.55 SEC |
| (98) | BORDER BRIDGE STATE CODE % SHARE | % |
| (99) | BORDER BRIDGE STRUCTURE NUMBER | |
| | ******** STRUCTURE TYPE AND MATERIAL ********* | |
| (43) | STRUCTURE TYPE MAIN:MATERIAL- | STEEL |
| | TYPE- TRUSS - DECK | CODE 309 |
| (44) | STRUCTURE TYPE APPR:MATERIAL- | WOOD OR TIMBER |
| | TYPE- STRINGER/MULTI-BEAM OR GDR | CODE 702 |
| (45) | NUMBER OF SPANS IN MAIN UNIT | 1 |
| (46) | NUMBER OF APPROACH SPANS | 33 |
| (107) | DECK STRUCTURE TYPE- TIMBER | CODE 8 |
| (108) | WEARING SURFACE / PROTECTIVE SYSTEM: | |
| A) | TYPE OF WEARING SURFACE- BITUMINOUS | CODE 6 |
| B) | TYPE OF MEMBRANE- NONE | CODE 0 |
| C) | TYPE OF DECK PROTECTION- NONE | CODE 0 |
| | ********** AGE AND SERVICE ********** | |
| (27) | YEAR BUILT | 1944 |
| (106) | YEAR RECONSTRUCTED | 0000 |
| (42) | TYPE OF SERVICE: ON- HIGHWAY | 1 |
| | UNDER- WATERWAY | 5 |
| (28) | LANES:ON STRUCTURE 02 UNDER STRUCTURE | 00 |
| (29) | AVERAGE DAILY TRAFFIC | 2100 |
| (30) | YEAR OF ADT 2009 (109) TRUCK ADT | 6 % |
| (19) | BYPASS, DETOUR LENGTH | 51 KM |
| | ********** GEOMETRIC DATA ********** | |
| (48) | LENGTH OF MAXIMUM SPAN | 39.6 M |
| (49) | STRUCTURE LENGTH | 295.4 M |
| (50) | CURB OR SIDEWALK: LEFT 0.0 M | RIGHT 0.0 M |
| (51) | BRIDGE ROADWAY WIDTH CURB TO CURB | 7.9 M |
| (52) | DECK WIDTH OUT TO OUT | 8.6 M |
| (32) | APPROACH ROADWAY WIDTH (W/SHOULDERS) | 7.3 M |
| (33) | BRIDGE MEDIAN- NO MEDIAN | 0 |
| (34) | SKEW 0 DEG (35) STRUCTURE FLARED | NO |
| (10) | INVENTORY ROUTE MIN VERT CLEAR | 99.99 M |
| (47) | INVENTORY ROUTE TOTAL HORIZ CLEAR | 7.9 M |
| (53) | MIN VERT CLEAR OVER BRIDGE RDWY | 99.99 M |
| (54) | MIN VERT UNDERCLEAR REF- NOT H/RR | 0.00 M |
| (55) | MIN LAT UNDERCLEAR RT REF- NOT H/RR | 0.0 M |
| (56) | MIN LAT UNDERCLEAR LT | 0.0 M |
| | ********** NAVIGATION DATA ********** | |
| (38) | NAVIGATION CONTROL- BR PERMIT REQ | CODE 1 |
| (111) | PIER PROTECTION- NOT REQUIRED | CODE 1 |
| (39) | NAVIGATION VERTICAL CLEARANCE | 50.0 M |
| (116) | VERT-LIFT BRIDGE NAV MIN VERT CLEAR | M |
| (40) | NAVIGATION HORIZONTAL CLEARANCE | 35.7 M |

| | | |
|---|---|---|
| | ********** | |
| | SUFFICIENCY RATING = 63.9 | |
| | STATUS FUNCTIONALLY OBSOLETE | |
| | HEALTH INDEX 93.5 | |
| | PAINT CONDITION INDEX = 100.0 | |
| | ********** CLASSIFICATION ********** | CODE |
| (112) | NBIS BRIDGE LENGTH- YES | Y |
| (104) | HIGHWAY SYSTEM- NOT ON NHS | 0 |
| (26) | FUNCTIONAL CLASS- MINOR ARTERIAL RURAL | 06 |
| (100) | DEFENSE HIGHWAY- NOT STRAHNET | 0 |
| (101) | PARALLEL STRUCTURE- NONE EXISTS | N |
| (102) | DIRECTION OF TRAFFIC- 2 WAY | 2 |
| (103) | TEMPORARY STRUCTURE- | |
| (105) | FED.LANDS HWY- NOT APPLICABLE | 0 |
| (110) | DESIGNATED NATIONAL NETWORK - NOT ON NET | 0 |
| (20) | TOLL- ON FREE ROAD | 3 |
| (21) | MAINTAIN- STATE HIGHWAY AGENCY | 01 |
| (22) | OWNER- STATE HIGHWAY AGENCY | 01 |
| (37) | HISTORICAL SIGNIFICANCE- ELIGIBLE | 2 |
| | ********** CONDITION ********** | CODE |
| (58) | DECK | 5 |
| (59) | SUPERSTRUCTURE | 7 |
| (60) | SUBSTRUCTURE | 7 |
| (61) | CHANNEL & CHANNEL PROTECTION | 8 |
| (62) | CULVERTS | N |
| | ********** LOAD RATING AND POSTING ********** | CODE |
| (31) | DESIGN LOAD- M-13.5 OR H-15 | 2 |
| (63) | OPERATING RATING METHOD- LOAD FACTOR | 1 |
| (64) | OPERATING RATING- | 30.8 |
| (65) | INVENTORY RATING METHOD- LOAD FACTOR | 1 |
| (66) | INVENTORY RATING- | 22.7 |
| (70) | BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS | 5 |
| (41) | STRUCTURE OPEN, POSTED OR CLOSED- | A |
| | DESCRIPTION- OPEN, NO RESTRICTION | |
| | ********** APPRAISAL ********** | CODE |
| (67) | STRUCTURAL EVALUATION | 6 |
| (68) | DECK GEOMETRY | 3 |
| (69) | UNDERCLEARANCES, VERTICAL & HORIZONTAL | N |
| (71) | WATER ADEQUACY | 9 |
| (72) | APPROACH ROADWAY ALIGNMENT | 8 |
| (36) | TRAFFIC SAFETY FEATURES | 0010 |
| (113) | SCOUR CRITICAL BRIDGES | 5 |
| | ********** PROPOSED IMPROVEMENTS ********** | |
| (75) | TYPE OF WORK- DECK REPLACEMENT | CODE 37 |
| (76) | LENGTH OF STRUCTURE IMPROVEMENT | 295.4 M |
| (94) | BRIDGE IMPROVEMENT COST | $2,540,000 |
| (95) | ROADWAY IMPROVEMENT COST | $508,000 |
| (96) | TOTAL PROJECT COST | $4,267,200 |
| (97) | YEAR OF IMPROVEMENT COST ESTIMATE | 2010 |
| (114) | FUTURE ADT | 5080 |
| (115) | YEAR OF FUTURE ADT | 2031 |
| | ********** INSPECTIONS ********** | |
| (90) | INSPECTION DATE 01/14 (91) FREQUENCY | 24 MO |
| (92) | CRITICAL FEATURE INSPECTION: | (93) CFI DATE |
| A) | FRACTURE CRIT DETAIL- YES 24 MO | A) 03/12 |
| B) | UNDERWATER INSP- NO MO | B) |
| C) | OTHER SPECIAL INSP- NO MO | C) |

# The 2015 Structure Inventory & Appraisal Report for the Albion River Bridge

## STRUCTURE INVENTORY AND APPRAISAL REPORT

| | | |
|---|---|---|
| | ********** IDENTIFICATION ********** | |
| (1) | STATE NAME- CALIFORNIA | 069 |
| (8) | STRUCTURE NUMBER | 10 0136 |
| (5) | INVENTORY ROUTE(ON/UNDER)- ON | 131000010 |
| (2) | HIGHWAY AGENCY DISTRICT | 01 |
| (3) | COUNTY CODE 045 (4) PLACE CODE | 00000 |
| (6) | FEATURE INTERSECTED- | ALBION RIVER |
| (7) | FACILITY CARRIED- | STATE ROUTE 1 |
| (9) | LOCATION- | 01-MEN-001-43.74 |
| (11) | MILEPOINT/KILOMETERPOINT | 43.74 |
| (12) | BASE HIGHWAY NETWORK- PART OF NET | 1 |
| (13) | LRS INVENTORY ROUTE & SUBROUTE | 000000000101 |
| (16) | LATITUDE | 39 DEG 13 MIN 30.32 SEC |
| (17) | LONGITUDE | 123 DEG 46 MIN 09.83 SEC |
| (98) | BORDER BRIDGE STATE CODE % SHARE | % |
| (99) | BORDER BRIDGE STRUCTURE NUMBER | |
| | ******** STRUCTURE TYPE AND MATERIAL ********* | |
| (43) | STRUCTURE TYPE MAIN:MATERIAL- | STEEL |
| | TYPE- TRUSS - DECK | CODE 309 |
| (44) | STRUCTURE TYPE APPR:MATERIAL- | WOOD OR TIMBER |
| | TYPE- STRINGER/MULTI-BEAM OR GDR | CODE 702 |
| (45) | NUMBER OF SPANS IN MAIN UNIT | 1 |
| (46) | NUMBER OF APPROACH SPANS | 33 |
| (107) | DECK STRUCTURE TYPE- TIMBER | CODE 8 |
| (108) | WEARING SURFACE / PROTECTIVE SYSTEM: | |
| A) | TYPE OF WEARING SURFACE- BITUMINOUS | CODE 6 |
| B) | TYPE OF MEMBRANE- NONE | CODE 0 |
| C) | TYPE OF DECK PROTECTION- NONE | CODE 0 |
| | ********** AGE AND SERVICE ********** | |
| (27) | YEAR BUILT | 1944 |
| (106) | YEAR RECONSTRUCTED | 0000 |
| (42) | TYPE OF SERVICE: ON- HIGHWAY | 1 |
| | UNDER- WATERWAY | 5 |
| (28) | LANES:ON STRUCTURE 02 UNDER STRUCTURE | 00 |
| (29) | AVERAGE DAILY TRAFFIC | 2100 |
| (30) | YEAR OF ADT 2009 (109) TRUCK ADT | 6 % |
| (19) | BYPASS, DETOUR LENGTH | 51 KM |
| | ********** GEOMETRIC DATA ********** | |
| (48) | LENGTH OF MAXIMUM SPAN | 39.6 M |
| (49) | STRUCTURE LENGTH | 295.4 M |
| (50) | CURB OR SIDEWALK: LEFT 0.0 M | RIGHT 0.0 M |
| (51) | BRIDGE ROADWAY WIDTH CURB TO CURB | 7.9 M |
| (52) | DECK WIDTH OUT TO OUT | 8.6 M |
| (32) | APPROACH ROADWAY WIDTH (W/SHOULDERS) | 7.3 M |
| (33) | BRIDGE MEDIAN- NO MEDIAN | 0 |
| (34) | SKEW 0 DEG (35) STRUCTURE FLARED | NO |
| (10) | INVENTORY ROUTE MIN VERT CLEAR | 99.99 M |
| (47) | INVENTORY ROUTE TOTAL HORIZ CLEAR | 7.9 M |
| (53) | MIN VERT CLEAR OVER BRIDGE RDWY | 99.99 M |
| (54) | MIN VERT UNDERCLEAR REF- NOT H/RR | 0.00 M |
| (55) | MIN LAT UNDERCLEAR RT REF- NOT H/RR | 0.0 M |
| (56) | MIN LAT UNDERCLEAR LT | 0.0 M |
| | ********** NAVIGATION DATA ********** | |
| (38) | NAVIGATION CONTROL- BR PERMIT REQ | CODE 1 |
| (111) | PIER PROTECTION- NOT REQUIRED | CODE 1 |
| (39) | NAVIGATION VERTICAL CLEARANCE | 50.0 M |
| (116) | VERT-LIFT BRIDGE NAV MIN VERT CLEAR | M |
| (40) | NAVIGATION HORIZONTAL CLEARANCE | 35.7 M |

| | | |
|---|---|---|
| | SUFFICIENCY RATING = | 15.3 |
| | STATUS | STRUCTURALLY DEFICIENT |
| | HEALTH INDEX | 81.7 |
| | PAINT CONDITION INDEX = | 100.0 |
| | ********** CLASSIFICATION ********** | CODE |
| (112) | NBIS BRIDGE LENGTH- YES | Y |
| (104) | HIGHWAY SYSTEM- NOT ON NHS | 0 |
| (26) | FUNCTIONAL CLASS- MINOR ARTERIAL RURAL | 06 |
| (100) | DEFENSE HIGHWAY- NOT STRAHNET | 0 |
| (101) | PARALLEL STRUCTURE- NONE EXISTS | N |
| (102) | DIRECTION OF TRAFFIC- 2 WAY | 2 |
| (103) | TEMPORARY STRUCTURE- | |
| (105) | FED.LANDS HWY- NOT APPLICABLE | 0 |
| (110) | DESIGNATED NATIONAL NETWORK - NOT ON NET | 0 |
| (20) | TOLL- ON FREE ROAD | 3 |
| (21) | MAINTAIN- STATE HIGHWAY AGENCY | 01 |
| (22) | OWNER- STATE HIGHWAY AGENCY | 01 |
| (37) | HISTORICAL SIGNIFICANCE- ELIGIBLE | 2 |
| | ********** CONDITION ********** | CODE |
| (58) | DECK | 7 |
| (59) | SUPERSTRUCTURE | 7 |
| (60) | SUBSTRUCTURE | 3 |
| (61) | CHANNEL & CHANNEL PROTECTION | 8 |
| (62) | CULVERTS | N |
| | ********** LOAD RATING AND POSTING ********** | CODE |
| (31) | DESIGN LOAD- M-13.5 OR H-15 | 2 |
| (63) | OPERATING RATING METHOD- LOAD FACTOR | 1 |
| (64) | OPERATING RATING- | 30.8 |
| (65) | INVENTORY RATING METHOD- LOAD FACTOR | 1 |
| (66) | INVENTORY RATING- | 22.7 |
| (70) | BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS | 5 |
| (41) | STRUCTURE OPEN, POSTED OR CLOSED- | A |
| | DESCRIPTION- OPEN, NO RESTRICTION | |
| | ********** APPRAISAL ********** | CODE |
| (67) | STRUCTURAL EVALUATION | 3 |
| (68) | DECK GEOMETRY | 3 |
| (69) | UNDERCLEARANCES, VERTICAL & HORIZONTAL | N |
| (71) | WATER ADEQUACY | 9 |
| (72) | APPROACH ROADWAY ALIGNMENT | 8 |
| (36) | TRAFFIC SAFETY FEATURES | 0010 |
| (113) | SCOUR CRITICAL BRIDGES | 5 |
| | ********** PROPOSED IMPROVEMENTS ********** | |
| (75) | TYPE OF WORK- DECK REPLACEMENT | CODE 37 |
| (76) | LENGTH OF STRUCTURE IMPROVEMENT | 295.4 M |
| (94) | BRIDGE IMPROVEMENT COST | $2,540,000 |
| (95) | ROADWAY IMPROVEMENT COST | $508,000 |
| (96) | TOTAL PROJECT COST | $4,267,200 |
| (97) | YEAR OF IMPROVEMENT COST ESTIMATE | 2010 |
| (114) | FUTURE ADT | 5182 |
| (115) | YEAR OF FUTURE ADT | 2037 |
| | ********** INSPECTIONS ********** | |
| (90) | INSPECTION DATE 10/15 (91) FREQUENCY | 24 MO |
| (92) | CRITICAL FEATURE INSPECTION: | (93) CFI DATE |
| A) | FRACTURE CRIT DETAIL- YES 24 MO | A) 03/14 |
| B) | UNDERWATER INSP- NO MO | B) |
| C) | OTHER SPECIAL INSP- NO MO | C) |

## Gedik, Tamara@Coastal

**From:** Annemarie <aweibel@mcn.org>
**Sent:** Wednesday, September 20, 2017 2:50 PM
**To:** Gedik, Tamara@Coastal
**Subject:** Albion River Bridge geotechnical & seismic permit proposal, postings & photo of bridge & eucalyptus trees
**Attachments:** Albion-Bridge-Photo-Musgrove Annessa-May-24-2015.JPG

Thank you Tamara very much for sending this information and spending so much of your precious time with me.

I never noticed these postings. I hardly ever go to the Albion Campground & Marina. If I go down there I go to Schooner's Landing. I will check today to see if any of these postings are still in place. The one posted in the post office needed to be posted on the cork board. If not, they are taken down by the post master who also wants to stamp everything that people want to post. It does not look as if there is a stamp on it. I go to the post office daily and do not recall having seen this poster.

The photo of the Albion Bridge and the eucalyptus trees was taken by my daughter Annessa Musgrove who was raised in Albion. She took this photograph with a Leica camera. She developed it herself. The photo was taken in 2001 or 2002. As you can see the eucalyptus trees act like a veil. Imagine the narrow Albion bridge spanning the bay of the Albion River nestled between the undeveloped headlands hump of cow pasture on the south and to the north, a Eucalyptus grove concealing an employee parking lot, a maintenance shack, the bustle of the Albion River Inn.
Think of the eucalyptus grove as a lacy veil. Grazing land, the ocean, the river, the pocket beach, the lacy veil, a two-lane rural roadway, the 26 foot wide bridge: that bucolic scenic view protected by The California Coastal Act.

Thanks again, Annemarie

On 9/20/2017 1:05 PM, Gedik, Tamara@Coastal wrote:
> Hi Annemarie,
>
> Thank you for you inquiry this morning. Per our conversation and your request, attached please find a copy of the Notice of Pending Permit and Declaration of Posting, along with photo documentation of locations where Caltrans posted the notice for CDP application 1-16-0899 (Albion River geotechnical investigation) in September 2016.
>
> Sincerely,
>
> ~Tamara L. Gedik
> Coastal Program Analyst
> California Coastal Commission
> North Coast District Office
> 1385 8th Street, Ste. 130 • Arcata, CA 95521
> E: Tamara.Gedik@coastal.ca.gov
> P: 707.826.8950 • Fax: 707.826.8960
> ~To purchase a whale tail license plate or access Coastal Commission
> information, go to www.coastal.ca.gov
>
>

> Every Californian should conserve water.  Find out how at:
>
> SaveOurWater.com · Drought.CA.gov
>
>
> -----Original Message-----
> From: Annemarie [mailto:aweibel@mcn.org]
> Sent: Wednesday, September 20, 2017 10:25 AM
> To: Gedik, Tamara@Coastal
> Subject: can you call me about the Albion River Bridge geotechnical & seismic permit proposal?
>
> Hi Tamara,
> I have some questions for you. Can you call me? I left a message
> today, but did not leave my phone #. Here it is 707-937-5575. Thanks,
> Annemarie
>
> ---
> This email has been checked for viruses by Avast antivirus software.
> https://www.avast.com/antivirus
>

## Gedik, Tamara@Coastal

**From:** nsi@mcn.org
**Sent:** Wednesday, September 20, 2017 9:58 AM
**To:** Gedik, Tamara@Coastal
**Attachments:** [MCN-Announce]- [Fwd: Video link] HARK! Albion River Bridge ALERT: . . .“Planned Geotechnical Investigation” Coming Sooner Th an We Thought. PART 1: . . . July 27 , 2017 . . . portion of field excursion with Caltrans pr oject manager Frank Demling..msg

Tamara: Please consider my FACEBOOK entry as formal input on Caltran's application for a permit for a "Geotechnical Investigation". I would like you to take the time to watch it.
If I have to do anything else to get the video and my preface on the record, please let me know. Thank you. Beth Bosk 707.937-5703

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|---|---|
| **From:** | Delhazan |
| **To:** | Gedik, Tamara@Coastal |
| **Subject:** | Re: Impending Geotechnical Investigation |
| **Date:** | Tuesday, September 19, 2017 7:20:07 AM |

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Thank you so much for your reply.

My mailing address is:
Diana Stroupe
31350 Sherwood Road
Fort Bragg, CA 95437

On Monday, September 18, 2017 11:17 AM, "Gedik, Tamara@Coastal" <Tamara.Gedik@coastal.ca.gov> wrote:

Dear Ms. Stroupe,

Thank you for contacting me. The proposed Albion River Bridge geotechnical project (CDP 1-16-0899) has not yet been scheduled for a hearing. Please provide me with your mailing address and I will add you to the Interested Persons list to be notified when the project is scheduled for a hearing.

If you would like to discuss the project proposed by Caltrans you are welcome to contact me. Additionally, Caltrans has information about the future bridge enhancement/replacement project available on their website at http://www.dot.ca.gov/dist1/d1projects/albion/; scroll down to the bottom for additional documents and other information. I also encourage you to contact the Caltrans staff to obtain additional information about the questions you raise below. Their contact information is as follows:

Frank Demling, Project Manager: frank.demling@dot.ca.gov
Liza Walker liza.walker@dot.ca.gov

Sincerely,

**~Tamara L. Gedik**
Coastal Program Analyst
California Coastal Commission
**North Coast District Office**
1385 8th Street, Ste. 130 • Arcata, CA 95521
**E:** Tamara.Gedik@coastal.ca.gov
**P: 707.826.8950** • **Fax:** 707.826.8960
*~To purchase a whale tail license plate or access Coastal Commission information, go to www.coastal.ca.gov*

Every Californian should conserve water.  Find out how at:




SaveOurWater.com · Drought.CA.gov

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**From:** Delhazan [mailto:delhazan@yahoo.com]
**Sent:** Saturday, September 16, 2017 9:18 PM
**To:** Gedik, Tamara@Coastal
**Subject:** Impending Geotechnical Investigation

I have heard that there is an impending Geotechnical Investigation at the site of Albion River Bridge.  I am very confused by what was said - namely that they plan to clear cut a grove of eucalyptus trees and more just to do testing for a bridge they don't even have the money to build.  Why on EARTH would anyone in THIS part of California be so reckless and foolish to destroy our natural beauty when they don't even have the means to follow up on it?  The description  of the placement for the new bridge likewise sounds like extremely bad planning.  Why can't they just repair and/or maintain the existing bridge?

Please let me know of any upcoming hearings on this matter.  This area needs to be preserved and protected, not bulldozed.  I'd also like to know who is getting paid for this so called Geotechnical Investigation nonsense.  You know someone is.

Fort Bragg Resident
Diana L. Stroupe

## Gedik, Tamara@Coastal

**From:** announce-bounces@lists.mcn.org on behalf of nsi@mcn.org
**Sent:** Monday, September 18, 2017 8:24 PM
**To:** announce@lists.mcn.org
**Subject:** [MCN-Announce]- [Fwd: Video link] HARK! Albion River Bridge ALERT: . . ."Planned Geotechnical Investigation" Coming Sooner Th an We Thought. PART 1: . . . July 27 , 2017 . . . portion of field excursion with Caltrans pr oject manager Frank Demling.
**Attachments:** untitled-[2]; ATT00001.txt

---------- Original Message ----------
Subject: Video link
From: "Jim Heid" <jim@heidsite.com>
Date: Sun, September 17, 2017 7:08 am
To: nsi@mcn.org
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https://www.facebook.com/albion.nation/posts/761925887340635

You wisely posted it as a public video, so even people who don't have Facebook accounts should be able to see it.

More a little later today...on the road and pecking this on my phone.