



PROJECT STUDY REPORT

COLLISION REDUCTION Safety Improvements

SR 20 / Potter Valley Road Safety Project

01-MEN-020-R37.8/R38.4

01-0E470K

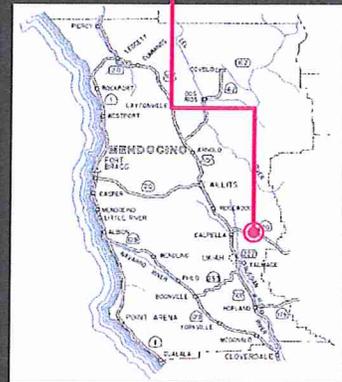
01 1400 0072

201,010

October 2014



PROJECT LOCATION
IN MENDOCINO COUNTY
NEAR CALPELLA FROM 0.1
MILE WEST OF COLD CREEK
BRIDGE #1 TO 0.5 MILE EAST
OF POTTER VALLEY ROAD



I have reviewed the right of way information contained in this Project Study Report and the R/W Data Sheet attached hereto, and find the data to be complete, and accurate:

Karen E. Hawkins
Assistant Chief, North Region Right of Way

Approval Recommended:

Kevin Church
Project Manager

FOR K.C.

David Morgan
District Program Manager

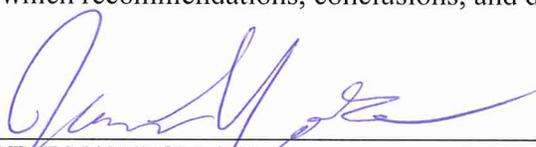
Approved By:

CHARLES C. FIELDER
District Director

October 10, 2014

Date

This Project Study Report has been prepared under the direction of the following registered engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.



JAIME MATTEOLI, P.E.
REGISTERED CIVIL ENGINEER

10/9/2014
Date



1. INTRODUCTION

Project Description:

District 1 Advance Planning has prepared this Project Study Report (PSR) for a safety improvement project (SHOPP 201.010) located in Mendocino County near Calpella on State Route 20 at Potter Valley Road. A Project Location Map is shown as Attachment A. The project proposes a number of safety improvements at the intersection: adding an eastbound acceleration lane, removing a merge conflict point, correcting drainage issues, installing safety lighting, installing centerline and edge line rumble stripe, and closing cross-highway access to a private driveway. Two alternatives were considered for the project: build and no build. The project typical cross sections are shown in Attachment B. The project layout sheets are shown in Attachment C.

See the cost estimate for specific work items included in this project. The project cost estimate is shown in Attachment D.

Project Limits (Dist., Co., Rte., PM)	01-MEN-020 PM R37.8/R38.4
Number of Alternatives:	Two (including No Build)
Alternative Recommended for Programming:	The build alternative
Current Capital Outlay Construction Estimate:	\$2,260,000 (2014)
Current Capital Outlay Right of Way Estimate:	\$16,500 (2014)
Funding Source:	2014 SHOPP 201.010
Funding Year:	2017/18
Type of Facility (conventional, expressway, freeway):	Two-Lane Expressway
Posted Speed Limit:	55 mph
AADT:	11,900 vpd
Number of Structures:	0
Anticipated Environmental Determination or Document:	IS/ND (CEQA) CE (NEPA)
Legal Description	IN MENDOCINO COUNTY NEAR CALPELLA FROM 0.1 MILE WEST OF COLD CREEK BRIDGE #1 TO 0.3 MILE EAST OF POTTER VALLEY ROAD

2. RECOMMENDATION

A project report at the next phase will serve as approval of the selected alternative.

The build alternative is recommended for programming. It is proposed that this project be amended into the 2014 State Highway Operation and Protection Program (SHOPP) and funded in the 2017/18 fiscal year through the 201.010 Safety Improvement Program. The current total estimated capital cost of the project is \$2,276,500 which includes \$2,260,000 for construction and \$16,500 for right of way. The cost estimate is included as Attachment D.

3. BACKGROUND

Existing Facility:

SR 20 is functionally classified as a Rural Minor Arterial from SR 1 to US 101, and along the north shore of Clear Lake from SR 29 to SR 53. The remainder of SR 20 in District 1, including the project area, is functionally classified as a Rural Principal Arterial.

SR 20 within District 1 is approximately 90 miles in length, and the portion east of US 101 is just over 57 miles in length in Mendocino and Lake Counties. The existing facility is typically a 2-lane conventional highway with 12-foot lanes and 0 to 10 foot shoulders. Horizontal alignment is generally curvilinear and vertical alignment is rolling to mountainous. The 2014 average daily traffic for project area is 11,900 vehicles per day.

Project Initiation:

The project was initiated as a result of the recommendations of a Traffic Investigation Report (TIR) produced by the project sponsor, District 1 Traffic Safety. The TIR was initiated in response to concerns from the local community regarding collisions at the intersection of SR 20 and Potter Valley Road. In response to the investigation, District 1 Traffic Safety developed safety improvements that formed the basis of the project scope.

4. PURPOSE AND NEED STATEMENT

Purpose:

The purpose of this project is to reduce the frequency and severity of collisions at the intersection of SR 20 and Potter Valley Road.

Need:

This project is needed to improve the safety of the intersection.

This section of highway has experienced 21 total collisions resulting in 7 *Injury* and 1 *Fatal* for the most recent 5-year period. The actual *Fatal* rate is 8.9 times greater than the statewide average (SWA) rate for similar facilities; the *Fatal* + *Injury* rate is 3.7 times greater than SWA; and the *Total* collision rate is 3.9 times greater than SWA. The predominant type of collisions was broadsides, accounting for 33% (7 of 21) of the total collisions.

5. DEFICIENCIES

This safety project was proposed in response to collisions occurring on this segment of highway. The five-year collision history shows 1 *Fatal* and 7 *Injury* collisions in 21 *Total* collisions. This segment of highway has an actual *Total* collision rate 3.9 times greater than the statewide

average for similar facilities. Seven night collisions occurred at the intersection within this five-year period.

Collision Data:

The collision data was provided in a Memorandum dated 07/21/14 from District 1 Traffic Safety Office. The Traffic Collision Analysis Memorandum is included as Attachment E.

MEN 20 PM: R37.8/R38.4 Collision Data Summary (1/1/07 to 12/31/11)		
Total Collisions	Fatal Collisions	Injury Collisions
21	1	7

MEN 20 PM: R37.8/R38.4 Collision Rate Comparison* (1/1/07 to 12/31/11)		
Actual		
Fatal	F+I	Total
8.9	3.7	3.9

*Ratio of the actual collision rates compared to the statewide rates for similar facilities
F+I = Fatal plus Injury

6. CORRIDOR AND SYSTEM COORDINATION

SR 20 serves a variety of traffic including local, commuter, recreational, interregional freight, and tourist (primarily seasonal) traffic. Along the north shore of Clear Lake, SR 20 functions as the main street for the communities of Nice, Lucerne, Glenhaven, and Clearlake Oaks. Through these communities the route is widely used by pedestrians, cyclists, and transit services. SR 20 is important to local Lake County traffic, regional traffic traveling to and from Lake County, and interregional traffic traveling between US 101 and Interstate 5 in the Sacramento Valley.

This portion of SR 20, MEN-20-33.2/44.1, is functionally classified as Rural Principal Arterial. The concept for this portion of SR 20 is that it should be upgraded to a 4-lane freeway/expressway. The concept level of service for SR 20 from Route 101 to Route 29 is "C."

At this time there are no future projects planned for the general area of the proposed project.

7. ALTERNATIVES

The build alternative and the no build alternative were considered for this project.

Build Alternative:

The build alternative proposes to make the following improvements at and near the intersection of SR 20 and Potter Valley Road:

- Provide a left turn acceleration lane for vehicles turning left from Potter Valley Road onto EB SR 20 and eliminate intersection skew for this turning movement.
- Extend the EB passing lane from 0.8 miles to 1.0 miles.
- Relocate the WB passing lane west of Potter Valley Road, which reduces intersection conflict points and eliminates merging traffic by using the on-ramp as the number two lane of WB 20.

- Increase the deceleration lane length of left turn pockets on both WB and EB 20.
- Close centerline striping opening for the driveway at PM R37.80 and add delineators to restrict centerline crossings.
- Add centerline and edge line rumble stripe.
- Install safety lighting at the intersection.
- Provide a new surface for new striping by overlaying 0.1' OGAC from PM R37.93/R38.37.
- Construct side gutters on the WB off-ramp to eliminate improper drainage issues.
- In areas of new overlaying, upgrade MBGR and bridge rail transitions to current MGS standards.

No Build Alternative:

The no build alternative is not recommended because it does not meet the purpose and need of the project.

8. COMMUNITY INVOLVEMENT

It is recommended that community outreach efforts occur during the next phase.

9. RIGHT OF WAY

A Right of Way Data Sheet was prepared for the project Alternatives and is included as Attachment F. The current estimated right of way costs for each alternative will be evaluated and revised at the next phase. For programming purposes, the build alternative estimated costs have been used.

North Region Right of Way estimates that for the build alternative, Right of Way lead time will require a minimum of 12 months after receipt of appraisal maps, utility conflict maps, environmental clearance and certificate of sufficiency. A minimum of 9 months before certification will be required from submittal of the last map or revision.

10. ENVIRONMENTAL DETERMINATION/DOCUMENT

A Mini-Preliminary Environmental Analysis Report (Mini-PEAR) dated January 29, 2014 was prepared to support programming of the project. The Mini-PEAR for the project is included as Attachment G. An environmental study will be completed to determine the appropriate environmental document for this project. The required environmental document is expected to be an Initial Study/Negative Declaration pursuant to the California Environmental Quality Act and a Categorical Exclusion pursuant to the National Environmental Policy Act. The estimated length of time to obtain the environmental approval is 12-24 months.

11. OTHER CONSIDERATIONS

11A. HAZARDOUS WASTE

An Initial Site Assessment (ISA) was prepared for this project and is included as Attachment H. The ISA found that the project likely has only nominal hazardous waste issues related to lead in soils from Aerially Deposited Lead (ADL) and lead in delineation

that will be ground up. These issues will require a Lead Compliance Plan contract item and two standard special provisions (SSPs): one SSP for earth material containing lead and one SSP for residue containing lead from pain and thermoplastic.

11B. TRANSPORTATION MANAGEMENT PLAN

Significant traffic impacts are not anticipated provided that the Transportation Management Plan (TMP) recommendations and requirements are incorporated into the project. A TMP was prepared for this project and is included as Attachment I. One lane closure is permitted within the project limits. A minimum of 16 feet of paved roadway in each direction of travel shall be open for use by public traffic. Bicyclists shall be accommodated through the work zone. Signage shall be used to alert vehicles of the possible presence of bicyclists.

11C. INTERSECTION CONTROL EVALUATION

District 1 Traffic Operations was consulted with it was recommended that an Intersection Control Evaluation (ICE) be prepared during the next phase of the project.

11D. PRELIMINARY HYDRAULICS REPORT

Floodplain analysis indicated that some portions of the project are located within the 100-year floodplain, with most of the project area located above the 500-year floodplain. The proposed construction activities are not expected to have any significant adverse floodplain impacts. The Preliminary Hydraulics Report is included as Attachment J.

11E. PRELIMINARY MATERIALS RECOMMENDATION

The North Region Materials Laboratory was consulted to determine the required structural section. A Preliminary Materials Recommendation was prepared and is included as Attachment K.

11F. STORM WATER DATA REPORT

North Region Office of Engineering Services prepared a Storm Water Data Report which is included as Attachment L.

11G. LANDSCAPE ARCHITECTURE ASSESSMENT SHEET

A Landscape Architecture Assessment Sheet was prepared for the project and is included as Attachment M.

12. FUNDING /PROGRAMMING

This project is eligible for federal-aid funding.

The District recommends that this project be amended into the 2014 SHOPP for \$2,260,000 in Construction capital costs and for \$16,500 in Right of Way cost. This project qualifies for funding through the 20.10.201.010 Safety Improvement Program. For a detailed cost estimate, see Attachment D.

The support cost is estimated and support to capital ratio can be found in the programming sheet which is included as Attachment N.

13. SCHEDULE

The Programming Sheet, which summarizes the project schedule, is attached as Attachment N.

A summary of milestones is included in the table below:

Project Milestone Descriptions	Project Milestone	Scheduled Delivery Date (Month, Day, Year)
Program Project	M015	01/01/15
Begin Environmental Document (ED)	M020	03/01/15
PA & ED	M200	05/01/17
Right of Way REQTS	M224	01/01/17
PS&E To DOE	M377	12/01/17
PROJECT PS&E	M380	02/01/18
Right of Way Certification	M410	02/01/18
Ready to List	M460	03/01/18
HQ Advertise	M480	06/01/18
Award	M495	08/01/18
Approve Contract	M500	09/01/18
Contract Acceptance	M600	12/01/19
End Project	M800	12/01/21

14. RISK REGISTER

A risk register has been prepared for the project and is included as Attachment O.

15. FHWA COORDINATION

The project is eligible for federal aid funding and the Federal Highway Administration (FHWA) will review this project for funding approval during a later phase. The project is considered to be State authorized under current FHWA/Caltrans Stewardship agreements.

16. PROJECT REVIEWS

Field Review	J. Matteoli & N. Steen	Date:	08/15/14
Advance Planning	Ralph Martinelli	Date:	09/10/14
District Maintenance	Matt Brady	Date:	10/02/14
District Safety Review	Lena Ashley	Date:	09/23/14
Constructability Review	Jim McGee	Date:	09/23/14
Project Manager Review	Kevin Church	Date:	09/23/14
District Program Advisor	David Morgan	Date:	09/23/14

17. PROJECT PERSONNEL

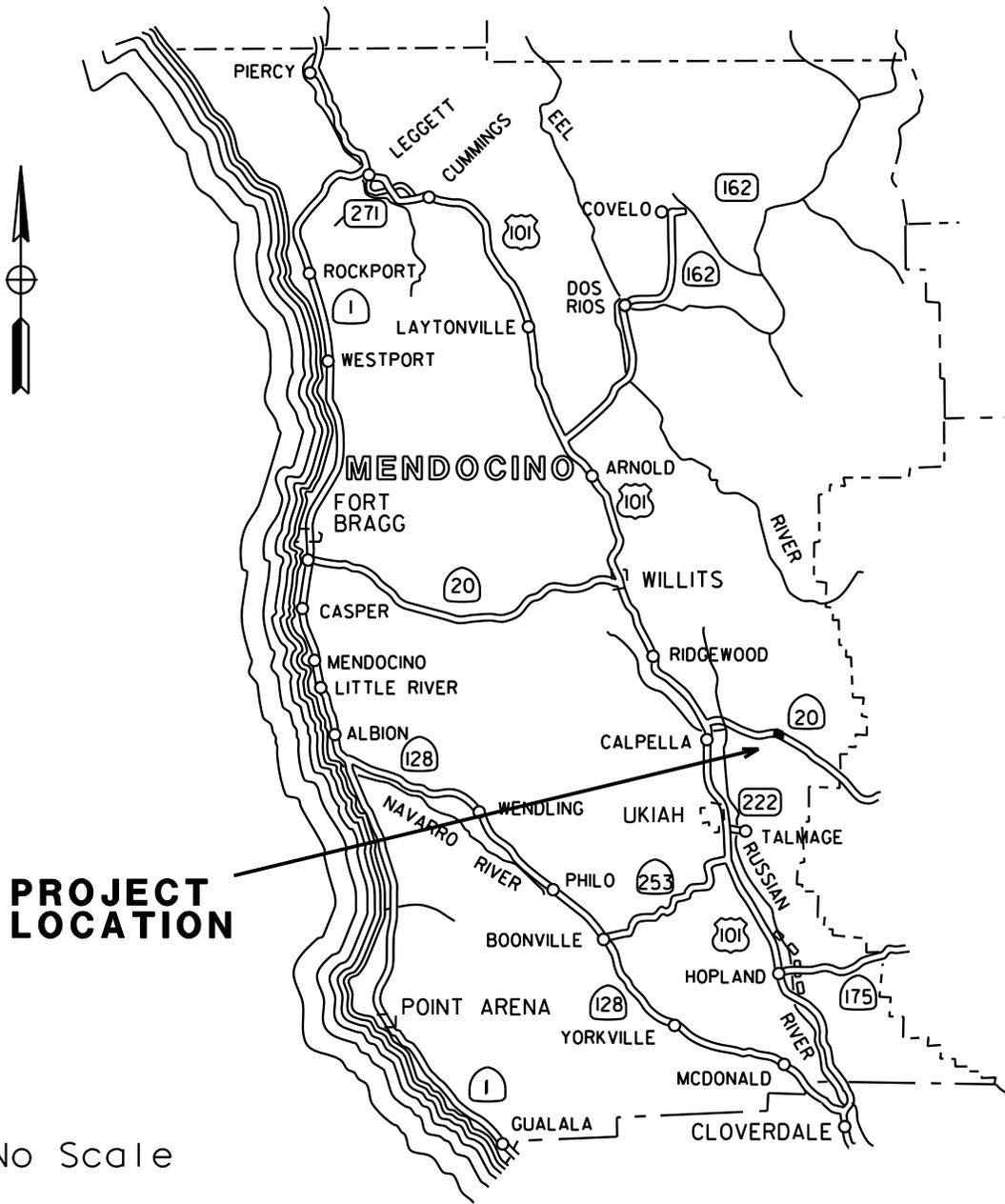
Name	Title	Phone Number
Jaime Matteoli	Project Engineer	(707) 441-4581
Kevin Church	Project Manager	(707) 445-6440
Ralph Martinelli	Chief, Advance Planning	(707) 441-3969
Troy Arseneau	Chief, Traffic Operations	(707) 445-6377
David Morgan	Chief, Traffic Safety	(707) 445-6376
Brandon Larsen	Senior Environmental Planner	(707) 445-6410
Jenna Larson	Environmental Coordinator	(707) 441-4566
Leota Lovelace	Senior Right of Way Agent	(707) 445-6582

18. ATTACHMENTS

- A. Project Location Map
- B. Typical Cross Sections
- C. Project Layouts
- D. Cost Estimate
- E. Traffic Collision Analysis
- F. Right of Way Data Sheet
- G. Mini-Preliminary Environmental Assessment Report
- H. Initial Site Assessment
- I. Transportation Management Plan
- J. Preliminary Hydraulics Report
- K. Preliminary Materials Recommendation
- L. Storm Water Data Report
- M. Landscape Architecture Assessment Sheet
- N. Programming Sheet
- O. Risk Register

ATTACHMENT A
Project Location Map

VICINITY MAP



**PROJECT
LOCATION**

No Scale

**MEN 20 & POTTER VALLEY ROAD
SAFETY PROJECT
01-MEN-20 R37.80/ R38.37
01 1400 0072**

ATTACHMENT B
Typical Cross Sections

ATTACHMENT C
Project Layouts

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

REVISOR BY
 DATE REVISED

CALCULATED-DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR

BORDER LAST REVISED 4/11/2008

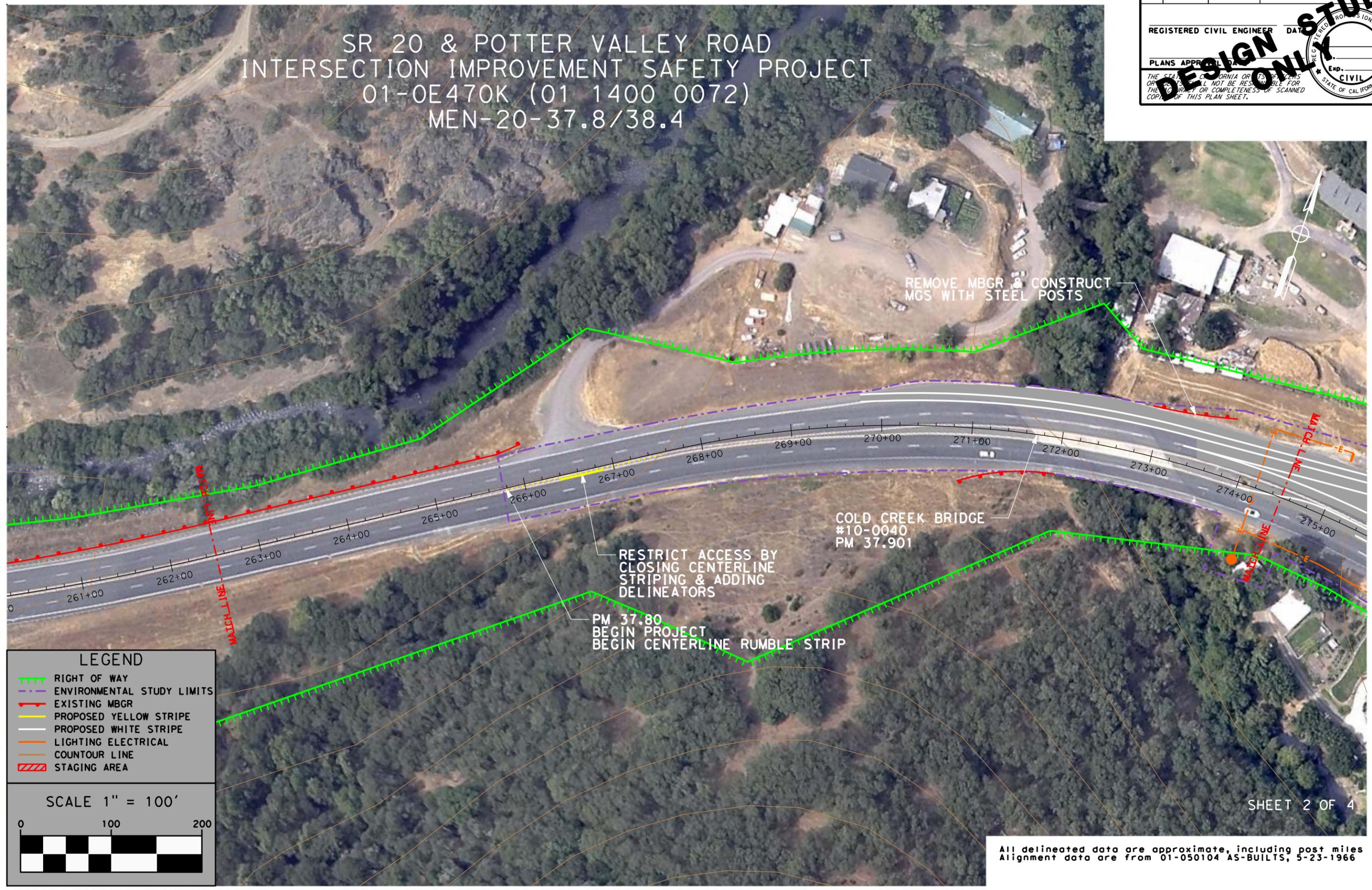
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	SR 20	37.80/38.37	3	3

DESIGN STUDY

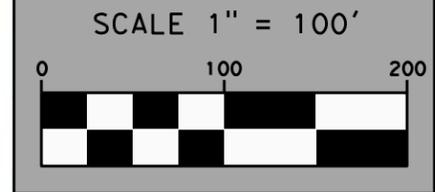
REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVED BY _____
 E#D# _____
 CIVIL
 STATE OF CALIFORNIA

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

SR 20 & POTTER VALLEY ROAD
 INTERSECTION IMPROVEMENT SAFETY PROJECT
 01-0E470K (01 1400 0072)
 MEN-20-37.8/38.4



- LEGEND**
- RIGHT OF WAY
 - ENVIRONMENTAL STUDY LIMITS
 - EXISTING MBGR
 - PROPOSED YELLOW STRIPE
 - PROPOSED WHITE STRIPE
 - LIGHTING ELECTRICAL
 - COUNTOUR LINE
 - STAGING AREA



SHEET 2 OF 4

All delineated data are approximate, including post miles
 Alignment data are from 01-050104 AS-BUILTS, 5-23-1966

ATTACHMENT D
Cost Estimate

PSR Cost Estimate

District-County-Route 01-MEN-020
PM 37.80/38.37
EA 01-0E470K
Program Code 201.010

Project Description:

Limits: IN MENDOCINO COUNTY NEAR WILLITS FROM 0.1 MI WEST OF COLD CR BR#1 #10-40 TO END BRIDGE #10-40

Proposed Improvement (Scope): Improve the safety at the intersection of SR 20 and Potter Valley Road.

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	<u>\$2,260,000</u>
TOTAL STRUCTURE ITEMS	<u>\$0</u>
SUBTOTAL CONSTRUCTION COSTS	<u>\$2,260,000</u>
TOTAL RIGHT OF WAY ITEMS	<u>\$16,500</u>
TOTAL PROJECT CAPITAL OUTLAY COSTS	<u>\$2,276,500</u>

Reviewed by District Program Manager

David Meyer
(Signature)

Date

10/9/2014

Approved by Project Manager

Jesse Hales *Edo K.C.*
(Signature)

Date

10/9/14

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost
Clearing & Grubbing	1	LS	\$10,000	\$10,000
Roadway Excavation	200	CY	\$70	\$14,000
Obliterate Surfacing	23,600	SQYD	\$5	\$118,000
Subtotal Earthwork				\$142,000

Section 2 Pavement Structural Section	Quantity	Unit	Unit Price	Item Cost
Hot Mix Asphalt (Type A)	3,115	TON	\$111	\$345,765
Aggregate Base (Class 2)	2,000	CY	\$73	\$146,000
Geosynthetic Pavement Interlayer	400	SQYD	\$20	\$8,000
Paving Asphalt (binder, geosynthetic interlayer)	0.20	TON	\$2,500	\$500
Cold Plane AC (0.30'- 0.55')	27,300	SQYD	\$4	\$109,200
Price Index Fluctuations (AC)	1	LS	\$13,619	\$13,619
Subtotal Pavement Structural Section				\$623,084

Section 3 Drainage	Quantity	Unit	Unit Price	Item Cost
Drainage	1	LS	\$40,000	\$40,000
Subtotal Drainage				\$40,000

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost
Progress Schedule (Critical Path)	1	LS	\$12,000	\$12,000
Construction Site Management	1	LS	\$60,000	\$60,000
Prepare Storm Water Pollution Prevention Plan	1	LS	\$7,500	\$7,500
Lead Compliance Plan	1	LS	\$3,000	\$3,000
Environmental Mitigation (Permanent Impacts, Biological/Wetland)	1	LS	\$0	\$0
Temporary/Construction BMP Items	1	LS	\$33,000	\$33,000
Remove/Replace Fencing	1	LS	\$2,000	\$2,000
Resident Engineer Office Space (\$2,500/MON, 150 DAYS)	1	LS	\$12,500	\$12,500
Subtotal Specialty Items				\$130,000

Section 5 Traffic Items	Quantity	Unit	Unit Price	Item Cost
Thermoplastic Striping (6")	13,100	LF	\$2	\$26,200
Thermoplastic Striping (4", Broken)	2,900	LF	\$1.0	\$2,900
Thermoplastic Striping (4")	5,500	LF	\$2.50	\$13,750
Delineators (Class 1 Flexible Post)	20	LF	\$50	\$1,000
Pavement Marker (Retroreflective-Type D)	300	LS	\$6	\$1,800
Thermoplastic Pavement Marking	800	SQFT	\$5.00	\$4,000
Rumble strip	71	STA	\$50.00	\$3,550
Remove MBGR	900	LF	\$11.00	\$9,900
Install MGS (steel post)	900	LF	\$25.00	\$22,500
MGS Bridge Rail Transitions	5	EA	\$5,000.00	\$25,000
Lighting	1	LS	\$250,000	\$250,000
Portable Changeable Message Sign (PCMS)	2	EA	\$7,500	\$15,000
Roadside Sign - One Post	9	EA	\$400	\$3,600
Roadside Sign - Two Post	3	EA	\$550	\$1,650
Remove Roadside Sign	1	LS	\$2,000	\$2,000
Construction Area Signs	1	LS	\$10,000	\$10,000
Subtotal Traffic Items				\$392,850

Traffic Additions (Added in "TOTAL SECTIONS 1 thru 5)				
Traffic Control System	1	LS	(10% Item Subtotal)	\$132,800
Maintain Traffic	1	LS	(10% Item Subtotal)	\$132,800
SUBTOTAL				\$1,327,934

TOTAL SECTIONS 1 thru 5	\$1,593,534
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District-County-Route 01-MEN-020
 PM 37.80/38.37
 EA 01-0E470K

Section 6 Planting and Irrigation	Quantity	Unit	Unit Price	Item Cost
Erosion Control	1	LS	\$15,000	\$15,000
Landscaping	0	LS	\$0	\$0
Subtotal Planting and Irrigation				\$15,000

Section 7 Roadside Management and Safety	Quantity	Unit	Unit Price	Item Cost
Miscellaneous Paving	1	LS	\$5,000	\$5,000
Subtotal Roadside Management and Safety				\$5,000

Section 8 Minor Items	Quantity	Unit	Unit Price	Item Cost
Minor Items	1	LS	5%	\$0
Subtotal Minor Items				\$0

Section 9 Roadway Mobilization	Quantity	Unit	Unit Price	Item Cost
			\$1,613,534 x (10%) =	\$161,353
			(Subtotal Sections 1 thru 8)	
Subtotal Roadway Mobilization				\$161,353

Section 10 Roadway Additions	Quantity	Unit	Unit Price	Item Cost
Supplemental Work			\$1,613,534 x (5%) =	\$80,677
			(Subtotal Sections 1 thru 8)	
Contingencies			\$1,613,534 x (25%) =	\$403,383
			(Subtotal Sections 1 thru 8)	
Subtotal Roadway Additions				\$484,060

TOTAL ROADWAY ITEMS \$2,258,947
 (Subtotal Sections 1 thru 10)

TOTAL ROADWAY ITEMS	\$2,259,000
CALL	\$2,260,000

District-County-Route	01-MEN-020
PM	<u>37.80/38.37</u>
EA	<u>01-0E470K</u>

II. STRUCTURES ITEMS		
Total Cost for Structure	SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures)	\$0
Railroad Related Costs:	SUBTOTAL RAILROAD ITEMS	\$0

TOTAL STRUCTURES ITEMS	\$0
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(Sum of Structures Items plus Railroad Items)

III. RIGHT OF WAY ITEMS

A. Acquisition, including excess lands, damages to remainders(s) and Goodwill	\$6,250
B. Appraisal Fees Estimate	\$5,000
C. Mitigation Acquisition & Credits	\$0
D. Project Development Permit Fees	\$4,721
E. Utility Relocation (State Share)	\$0
F. Relocation Assistance (RAP)	\$0
G. Clearance/Demolition	\$0
H. Title and Escrow Fees	\$500
	SUBTOTAL RIGHT OF WAY ITEMS
	\$16,471

TOTAL RIGHT OF WAY ITEMS	\$16,471
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CALL \$16,500

Anticipated Date of Right of Way Certification February 5, 2020
(Date to which Values are Escalated)

There is no Construction Contract Work associated with this project.

Estimate Prepared By: Nathaniel Steen Phone # (707) 441-2044 Date: November 2014

Estimate Checked By: Jaime Matteoli Phone # (707) 441-4581 Date: November 2014

ATTACHMENT E
Traffic Collision Analysis

Memorandum

*Serious drought.
Help Save Water!*

To: JAMIE MATTEOLI
PROJECT ENGINEER, ADVANCE PLANNING
District 1- Eureka

Date: July 21, 2014

File: 01-MEN-20
PM R37.80/R38.37
MEN 20 & Potter
Valley Safety Project
EA 01-0E470K
(01 1400 0072)

From: Nicole Braafladt Farrell
District 1 Traffic Safety



Subject: **COLLISION ANALYSIS**

This memo is a response to the request for a collision analysis, sent June 17, 2014 for the preparation of a Project Study Report (PSR) for the intersection of State Route 20 and Potter Valley Road in Mendocino County.

The collision analysis requested is for post mile limits that have been lengthened from the original Project Initiation Form (PIF) which were from PM R37.84 to R38.34. The new project limits are R37.80 to R38.37, and have been extended to include additional improvements. The 5 year time period for the project is the same used in the PIF, and is from 1/1/2007 to 12/31/2011.

On MEN 20 from PM R37.80 to R38.37 there were 21 Total collisions, 1 Fatal and 7 Injury collisions reported from 1/1/2007 to 12/31/2011. Of these, 6 were "wet" collisions, and 7 were "dark" collisions. All of the Actual collision rates for this location are greater than the Statewide Average collision rates for similar facilities (Table 1). The Actual collision rates for this segment are 0.089, 0.71, and 1.87 for the Fatal, F+I, and Total collision rates, respectively. These are approximately 8.9, 3.7 and 3.9 times greater than the statewide average collision rates for similar facilities.

Table 1. ACTUAL VS. STATEWIDE AVERAGE COLLISION RATES

	<i>Actual Collision Rates</i>	<i>Statewide Average Collision Rate for Similar Facilities</i>	<i>Times Greater than Statewide Average</i>
Fatal	0.089	0.010	8.9
F+I	0.71	0.19	3.7
Total	1.87	0.48	3.9

Four of the six "wet" collisions were located between PM R37.83 and R37.92. These four "wet" collisions all involved 2 vehicles in which at least one of the vehicles was traveling westbound. Two of the four "wet" collisions occurred at the same post mile, on the same day, within minutes of each other. These two collisions occurred within minutes of each other because a driver in the second collision was stopping for the first collision and was subsequently rear ended.

JAMIE MATTEOLI

July 21, 2014

Page 2 of 2

Five of the seven "dark" collisions were located in the curve between PM R37.99 and R38.04. Each of these five collisions involved single vehicles traveling westbound. Intersection lighting will likely enhance visibility at this intersection and decrease the concentration of "dark" collisions.

The most common "type of collisions" were "broadside", at 33%, or 7 of the 21 collisions. Both "sideways" and "hit-object" type of collisions each comprised 24%, or 5 of the 21 total collisions. The other 19%, or 4 of the collisions were "rear end" type collisions. Five of the seven broadside collisions occurred within the intersection of Potter Valley Road and State Route 20, and all five involved at least one vehicle traveling westbound. These types of collisions will likely become less common with the reduction to one westbound through lane.

The collisions had the following "primary collision factors": 6 collisions were "improper turn", 5 collisions were "speeding", 4 collisions were "failure to yield", 3 collisions were "other violations", 1 collision was "under the influence", 1 collision was "other than driver", and 1 collision was "unknown".

As far as "objects struck" during these collisions, sixteen of the vehicles hit other vehicles. Two collisions involved vehicles hitting drainage ditches. In three of the collisions westbound vehicles lost control and traveled through the triangular median area, across the westbound onramp and hit the metal beam guardrail along the north side of the westbound onramp. All three of these collisions occurred under "dark" conditions, and two were under "wet" conditions.

If you have any questions, please contact me at (707) 445-6681.

Attachment:
Collision Diagram

Cc:
1) MBrady
2) DMMorgan
3) NBFarrell
4) File

ATTACHMENT F
Right of Way Data Sheet

MEMORANDUM

*Flex your power!
Be energy efficient!*

To: NATHANIEL STEEN
Design Engineer
Department of Transportation

Attention: JAIME MATTEOLI
Project Engineer

Date: September 22, 2014

File: 01-MEN-20-PM 37.84/38.34
EFIS No.: 01 1400 0072
EA: 0E470K
Alternate: 1 of 1

From: TAUNI VISSER MELVIN
Senior Right of Way Agent
Project Delivery
Eureka

Subject: CURRENT ESTIMATED RIGHT OF WAY COSTS

Project Description: In Men Co. near Potter Valley from 0.1 mile west of Cold Cr BR #1 #10-40 to end Bridge #10-40

Alternate Description: MEN 20 & Potter Valley Road

We have completed an estimate of the right of way costs for the above referenced project based on information received from you on September 22, 2014 .

Right of Way Lead Time will require a minimum of 12 months after receipt of appraisal maps, utility conflict maps, environmental clearances (HMDD) and Certificate of Sufficiency (COS). A minimum of 9 months prior to certification will be required from submittal of the last map or revision.



TAUNI VISSER MELVIN
Senior Right of Way Agent
Project Delivery Branch
EUREKA

Attachments:
Right of Way Data Sheet

cc. Kevin Church

State of California - Department of Transportation
RIGHT OF WAY DATASHEET



EA: 0E470K
PROJECT NO.: 01 1400 0072
LOCATION: 01-MEN-20-PM 37.84/38.34
Description: Resurfacing In Men Co. near Potter Valley from 0.1 mile west of Cold Cr BR #1 #10-40 to end Bridge #10-40

ALTERNATE: 1 of 1
DATE: 9/22/2014
Datasheet Type: Revision

1. Right of Way Cost Estimate:

	Current Value Future Use	Escalation Rate	Escalated Value
A. Total Acquisition Cost	\$6,250	5%	\$8,124
B. Appraisal Fees Estimate	\$5,000	N/A	\$5,000
C. Mitigation Acquisition & Credits	\$0		\$0
D. Project Development Permit Fees	\$4,721	5%	\$6,137
Subtotal	\$15,971		\$19,261
E. Utility Relocation (State's Share)	\$0		\$0
(Owner's Share: _____ \$0 _____)			
F. Relocation Assistance (RAP)	\$0		\$0
G. Clearance/Demolition	\$0		\$0
H. Title & Escrow	\$500	5%	\$650
I. Total Estimated Right of Way Cost	\$16,471		Rounded \$19,900 *
J. Construction Contract Work	\$0		

2. Current Date of Right of Way Certification February 5, 2020

3. Parcel Data:

Type	Dual/Appr	Utilities	Railroad
X 0		U4 - 1 0	C&M Agreement 0
A 1		- 2 0	Service Contract 0
B 0		- 3 0	Easements 0
C 0	0	- 4 0	Rights of Entry 0
D 0	0	U5 - 7 3	Clauses 0
RR 0		- 8 0	
Total 1		- 9 0	
Excess 0			

Areas:	Mitigation	Misc. R/W Work
R/W 0.05 AC	Impacts 0	RAP Displaces N/A
TCE N/A	Parcels 0	Clear/Demo N/A
Excess N/A	Credits 0	Permit to Enters N/A
Mitigation N/A		Condemnation 0
		USA Involvement No

4. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.).

476 s.f. (0.01 acre) is required in Fee from APN 177-180-04 to improve site distance near this intersection. A 1,901 s.f. (0.04 acre) easement is also required from this property. The easement will be from a utility pole to provide power to project area for safety lighting. Impacted property is zoned RL-160 (FP).

5. Are any properties acquired for this project expected to be rented, leased, or sold?

Yes _____ No X

6. Are RAP displacements required?

Yes _____ No X

No. of single family N/A

No. of business/nonprofit N/A

No. of multi-family N/A

No. of farms N/A

Based on Draft/Final Relocation Impact Statement/Study dated _____ N/A

 N/A Sufficient replacement housing will be available without last resort housing.

 N/A Sufficient replacement housing will not be available without last resort housing.

7. Is there an effect on assessed valuation?

Yes _____ No X Not Significant _____

8. Are there any items of Construction Contract Work?

Yes X No _____

Repair or replace 2 sections of chain link fencing.

9. Are utility facilities or rights of way affected?

Yes X No _____

Names of Utility Companies requiring verification only.

AT&T (Communication), PG&E (Gas), PG&E (Electric)

Names of Utility Companies requiring involvements.

None anticipated.

Additional information concerning Utility Involvement on this project.

As additional information becomes available, this estimate may need to be revised.

10. Are railroad facilities or rights of way affected?

Yes _____ No X Phase 4 Capital \$0

11. Are USA Lands or Rights Affected?

Yes _____ No X Phase 4 Capital \$0

Agencies Involved:

US Forest Service _____ BLM _____ Army Corps of Engineers _____
National Parks _____ BIA _____ Veterans Administration _____
US Fish & Wildlife _____ GSA _____

Rights or Permissions to acquire:

Easement _____ Special Use Permit _____ Courtesy Letter _____
Right of Way Grant _____ Cooperative Work Agreement _____ Cost Recovery _____
Mineral Agreement _____ Letter of Concurrence _____ Timber Sale _____

12. Is an RE Office required for the project?

Yes _____ No X

Type of RE Office

Modular _____ Move In _____

13. Were any previously unidentified sites with hazardous waste and/or material found?

Yes _____ None Evident X

14. Are there material borrow and/or disposal sites required?

No X Optional _____ Manditory _____

15. Are there potential relinquishments and/or abandonments?

Yes _____ No X

16. Are there any existing and/or potential airspace sites?

Yes _____ No X

17. What type of mitigation is required for the project?

Per Env Coordinator, mitigation is unlikely. If required the mitigation would likely be handled on-site for impacts to wetlands.

18. Is it anticipated that Caltrans will perform all Right of Way work?

Yes X No _____

19. Indicate the anticipated Right of Way schedule and lead time requirements.

Right of Way Lead Time will require a minimum of **12** months after we receive first appraisal maps, utility conflict maps, necessary environmental clearances and freeway agreements have been approved and obtained. Additionally a minimum of **9** months will be required after receiving the last appraisal map to Right of Way for certification.

20. Assumptions and limiting Conditions: (Check boxes that apply.)

- Mapping did not provide sufficient detail to determine the limits of the right of way required.
- Transportation facilities have not been sufficiently designed to determine the damages to any of the remainder parcels affected by the project.
- Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.
- Design will secure necessary encroachment permits from local agencies.
- Project permits are not required for the project.
- _____
- _____
- _____
- _____
- _____
- _____

Evaluation Prepared By:

Right of Way Kevin Waxman
KEVIN WAXMAN

Date 9/22/2014

Reviewed By
RW Project Coordinator Robert Close
ROBERT CLOSE

Date 9/23/14

I have personally reviewed this Right of Way Data Sheet and all supporting information. I certify that the probable Highest and Best Use, estimated values, escalation rates and assumptions are reasonable and proper, subject to the limiting conditions set forth, and I find this Data Sheet to be complete and current.

Tauni Visser Melvin for
TAUNI VISSER MELVIN
Senior Right of Way Agent
Project Delivery Branch
Eureka

9/23/14
Date

ATTACHMENT G
Mini - Preliminary Environmental Assessment Report



Mini-Preliminary Environmental Analysis Report

Project Information

District: 01 County: MEN Route: 20 PM: 37.80/38.37
EA: **0E470** EFIS Project ID: **0114000072**
Project Title: MEN 20 & Potter Valley Safety
Project Manager: Kevin Church Phone # 707-445-6440
Project Engineer: Jaime Matteoli Phone # 707-441-4581
Environmental Office Chief: Brandon Larsen Phone # 707-445-6410

Project Description

Purpose and Need

Write a concise statement of the project purpose and need. It should be consistent with the purpose and need statement in the Project Initiation Document.

The purpose of this project is to reduce the frequency and severity of collisions. This section of highway has experienced 20 total collisions resulting in 7 injury and 1 fatal for the most recent 5-year period. The actual Fatal is 10.2 times greater than the statewide average (SWA) for similar facilities; the Fatal + Injury (F+I) rate is 4.3 times greater than SWA; and the Total collision rate is 4.3 times greater than SWA. Traffic Investigation Report (TIR) #134-0018P initiated this project. Multiple individuals from the public have expressed concern following two recent fatal collisions that occurred west of the intersection. The predominant collision pattern for injury and fatal collisions can be attributed to west bound (WB) vehicles that are passing within the intersection.

Description of work

Write a brief summary of the proposed work that will be done. Include work required that is incidental to the project, such as: access roads, utility relocation, de-watering, etc

The project proposes the following improvements:

1. Eliminate passing by WB vehicles within the intersection by removing the WB passing lane west of the intersection. The length of the WB passing lane will be reduced from 0.9 miles to 0.6 miles.
2. Provide a refuge within the intersection for turning vehicles.
3. Provide a left turn acceleration lane for vehicles turning east from Potter Valley Road.
4. Extend the east bound (EB) passing lane east of the intersection. The length of the EB passing lane will be increased from 0.8 miles to 1.0 miles.
5. Channelize the WB 20 entrance ramp as a parallel type.
6. Add intersection lighting.
7. Close centerline striping and install delineators on the centerline to eliminate left turns at the driveway near PM R37.80.
8. Add centerline and edge line rumble stripe.

The project scope entails the following components:

1. Relocate the existing median and drainage by excavating median and filling the full depth with HMA. Excavate existing WB #1 lane to create new median drainage. Relocate DI and extend culvert to new median.
2. Provide a new surface for new striping by applying 0.1' DGAC from PM R38.06/R38.37.
3. Apply striping, markers, and pavement markings as shown on attached preliminary layouts.
4. Relocate EB lane drop signs and WB passing signs.
5. Install centerline and edge line rumble stripe from PM R38.06/R38.37.

No work will occur over the channel of Cold Creek. The only work that will occur on Cold Creek Bridge #2, 10-0041, will be removal and installation of metal guard rail connections. Paving and drainage work on the mainline will be limited to existing paved area. New paved area will be created in the unpaved gore as a result of re-aligning the southbound lane of Potter Valley road.

Anticipated Environmental Approval

CEQA

- Categorical Exemption
- Statutory Exemption
- Initial Study/Negative Declaration
- Initial Study/Mitigated Negative Declaration
- Environmental Impact Report (EIR)

NEPA

- Categorical Exclusion
- "Routine" EA/FONSI
- "Complex" EA/FONSI
- Environmental Impact Statement (EIS)

Anticipated Environmental Approval Time

12 to 24 months.

Summary Statement (this statement will go directly into the PSR)

In order to identify environmental issues, constraints, costs, and resource needs, a Mini-PEAR was prepared for the project. Potential disposal, staging, and borrow sites will need to be identified in the PA&ED phase for complete environmental review. Field studies were not conducted and technical studies have been deferred to the PA&ED phase.

Technical Studies

- Natural Environment Study (NES)
- Botanical Surveys
- Water Quality Assessment (WQA) or Exemption
- Historic Property Survey Report (HPSR)
- Archaeological Survey Report (ASR)
- Finding of Effect (FOE)
- Native American Consultation

Permits/Approvals

- The project is in an area that is designated as "may contain" Naturally Occurring Asbestos (NOA) on Mendocino County Air Quality Management District's (MCAQMD) maps. Caltrans-derived data from the area suggests that no NOA is actually present at the site. MCAQMD requires a NOA dust control plan in areas that are designated as "may contain", unless an exemption is granted. An exemption from the MCAQMD requirements has been applied for, and the results of that request will be forwarded the Project Engineer when received.

Special Considerations

Include a very brief summary of key environmental issues that have been identified within the project area. Subheadings for each resource may be included (e.g. Biology, Cultural Resources, Noise, etc.). Include any studies that will be required as well as permits and any anticipated mitigation. Include, as applicable, additional needs that may impact the project's scope, schedule, and/or cost, such as survey windows, construction windows, biological monitoring, Native American monitoring, Permits to Enter required during PA&ED, etc.

Biological Resource

A two season botanical survey will be need to be conducted in the areas that will receive any earthwork and/or equipment storage. These surveys can be completed within the same year (spring/summer) if that year's surveys will be conducted during a normal rainfall year. All areas within the construction footprint, including staging areas would need to be surveyed.

Since there will be no work done over Cold Creek, water quality permits will not be required. Since work done on Cold Creek Bridge will be limited to the metal beam guard rail, bat surveys will not be necessary.

Cultural Resources

Past cultural resource studies conducted within the project area include the D1 TEA Cultural Resources Survey and D1 cultural resource surveys for prior projects. There are 5 or 6 known cultural resources within the MEN-20 Potter Valley Safety Project Area. To comply with Section 106, a Phase I and Extended Phase I Survey including an Archaeological Survey Report (ASR) and Historical Property Survey Report (HPSR) as well as an Extended Phase I ASR will be required. A Finding of Effect and potential Phase II and Phase III studies may also be required. Native American Consultation with Potter Valley Rancheria, Redwood Valley Rancheria, Coyote Valley Reservation, Pinoleville Reservation and potentially others will be necessary.

Visual Resources

Upon review of the project scope, the North Region Office of Landscape Architecture – Eureka finds that there will be no adverse impacts on the visual quality or scenic resources due to this project or its design elements. It is determined this project can proceed without any further scenic/visual resource studies.

Hazardous Waste

An Initial Site Assessment (ISA) was conducted for the MEN-20 & Potter Valley Safety Project as requested in your memorandum of June 17, 2014. Based on the information provided, the ISA found that the project likely has only nominal hazardous waste issues related to lead in soils from Aerially Deposited Lead (ADL) and lead in delineation that will be ground up. These issues will require a Lead Compliance Plan contract item and SSP 7-1.02K(6)(i)(iii) for EARTH MATERIAL CONTAINING LEAD and SSP 15-1.03B- RESIDUE CONTAINING LEAD FROM PAINT AND THERMOPLASTIC. Note that the ISA found that the project work site is not on the *Hazardous Waste and Substances Site List (Cortese List)*.

Level of Effort: Risks and Assumptions

See Section 5.2 PEAR Handbook regarding important considerations that can affect the level of effort and resources needed not only for the environmental document but also for the PEAR scoping document.

Cultural Resources

The cultural resource expenditure estimates vary depending on whether or not utilities are going to be included in the project and also on the results of field surveys. Even with utilities, there is a chance the cultural hours can be cut in half if excavation only occurs on non-native ground. This will be determined in the Zero phase once soil samples are taken.

Below are the resource estimates for best and worst case scenarios with and without utilities.

Original Scope with utilities

	Best Case Scenario	Worst Case Scenario
Studies required	ASR/HPSR No Adverse Effect and Finding of Effect	Potential for Phase II and Phase III Studies and Finding of Adverse Effect
Hours/PYs	1648 hours (0.9 PYs)	3308 hours (1.9 PYs)

No utilities

	Best Case Scenario	Worst Case Scenario
Studies Required	ASR/HPSR No Adverse Effect with Standard conditions	ASR/HPSR No Adverse Effect and Finding of Effect
Hours/PYs	880 hours (0.5 PYs)	1648 hours (0.9 PYs)

Anticipated Environmental Commitments

- Vegetation clearing for this project may be necessary and a “working window” for the removal of vegetation is recommended to comply with the Migratory Bird Treaty Act. Clearing will likely need to occur between September 1 and March 1 to minimize the potential of affecting nesting birds. All vegetated areas beyond the construction footprint will be marked as Environmentally Sensitive Areas (ESA) with flagging or fencing.

PART 3. ENVIRONMENTAL COMMITMENTS FOR PERMANENT IMPACTS

To complete the following information:

- Report costs in \$1,000s.
- Include all costs to complete the commitment:
 - O.K. to break down by phase: Design, ROW, Construction, and/or provide Sub-Total.
 - Capital outlay and staff support. Refer to Estimated Resources by WBS Code. For example, if you estimated 80 hours for biological monitoring (WBS 235.35 Long Term Mitigation Monitoring), convert those hours to a dollar amount for this entry. For current conversion rates from PY to dollars, see the Project Manager.
 - Cost of right of way or easements.
 - If compensatory mitigation is anticipated (for wetlands, for example), insert a range for purchasing credits in a mitigation bank.
 - Long-term monitoring and reporting
 - Any follow-up maintenance
 - Use current costs; the Project Manager will add an appropriate escalation factor.
 - This is an estimating tool, so a range is not only acceptable, but advisable.

Environmental Commitments					
All 3 Alternatives					
	Estimated Cost in \$1,000's				Notes
	<u>Phases</u>				
	<u>Design</u>	<u>ROW</u>	<u>Construction</u>	<u>Sub-Total</u>	
Noise abatement or mitigation					
Special landscaping					
Archaeological resources					
Biological resources					
Historical resources					
Scenic resources					
Wetland/riparian resources					
Res./bus. relocations					
Other:					
Total (enter zeros if no cost)	0	0	0	0	

Disclaimer

Include the following statement:

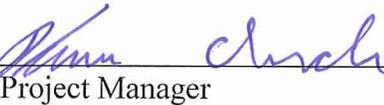
This report is not an environmental document or determination. The above information and recommendations are based on the project description provided in this report. The discussion and conclusions provided by this Mini-PEAR are approximate and based on a *cursory* review of existing records, databases, and mapping tools to estimate the potential for probable environmental effects. The purpose of this report is to provide a preliminary level of environmental analysis to support the Project Initiation Document. Changes in project scope, alternatives, existing environmental conditions, and/or environmental laws or regulations will require a re-evaluation of this report.

Approval



Environmental Office Chief

Date: 08/27/14



Project Manager

Date: 8/27/14

Headquarters Coordinator’s Class of Action Concurrence has been obtained (e-mail concurrence is attached)—required for environmental documents only and not CEs.

REQUIRED ATTACHMENTS:

Attachment B: Estimated Resources by WBS Code

Attachment D: PEAR Environmental Commitments Cost Estimate

Attachment D: PEAR Environmental Commitments Cost Estimate

Standard PSR Only

(Prepare a separate form for each viable alternative described in the Project Study Report)

PART 1 PROJECT INFORMATION

rev. 11/08

District-County-Route-Post Mile 01-MEN-20 37.80/38.37	EA: 0E470
Project Description: Potter Valley Safety	
Form completed by (Name/District Office): Jenna Larson- District 1 Local Assistance	
Project Manager: Kevin Church	Phone Number: 707-445-6440
Date: 07/11/14	

PART 2 PERMITS AND AGREEMENTS

	Permits and Agreements (\$\$)
<input checked="" type="checkbox"/> Fish and Game 1602 Agreement	921
<input type="checkbox"/> Coastal Development Permit	
<input type="checkbox"/> State Lands Agreement	
<input checked="" type="checkbox"/> Section 401 Water Quality Certification	3800
<input checked="" type="checkbox"/> Section 404 Permit – Nationwide (U.S. Army Corps)	0
<input type="checkbox"/> Section 404 Permit – Individual (U.S. Army Corps)	
<input type="checkbox"/> Section 10 Navigable Waters Permit (U.S. Army Corps)	
<input type="checkbox"/> Section 9 Permit (U.S. Coast Guard)	
<input type="checkbox"/> Other:	0
Total (enter zeros if no cost)	4721

ATTACHMENT H
Initial Site Assessment

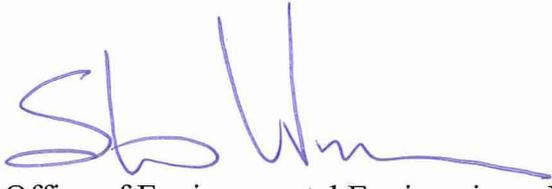
Memorandum

*Serious drought.
Help save water*

To: Jaime Matteoli, Project Engineer
District 1 Advance Planning

Date: August 4, 2014

File No.: 1- MEN-20
PM R37.80/R38.37
01-0E470K
01 1400 0072
MEN 20 & Potter Valley Safety
Project

From: Steve Werner 
North Region Office of Environmental Engineering—North

Subject: Initial Site Assessment

An Initial Site Assessment (ISA) was conducted for the MEN-20 & Potter Valley Safety Project as requested in your memorandum of June 17, 2014. Based on the information provided, the ISA found that the project likely has only nominal hazardous waste issues related to lead in soils from Aerially Deposited Lead (ADL) and lead in delineation that will be ground up. These issues will require a Lead Compliance Plan contract item and SSP 7-1.02K(6)(i)(iii) for EARTH MATERIAL CONTAINING LEAD and SSP 15-1.03B – RESIDUE CONTAINING LEAD FROM PAINT AND THERMOPLASTIC.

The project is in an area that is designated as “may contain” Naturally Occurring Asbestos (NOA) on Mendocino County Air Quality Management District’s (MCAQMD) maps. Caltrans-derived data from the area suggests that no NOA is actually present at the site. MCAQMD requires a NOA dust control plan in areas that are designated as “may contain”, unless an exemption is granted. We have applied for an exemption from the MCAQMD requirements, and will forward the Project Engineer the results of that request when received.

Note that the ISA found that the project work site is not on the *Hazardous Waste and Substances Site List (Cortese List)*.

If there are any changes to the scope of the project, please send an e-mail or letter describing the changes so that an evaluation can be made for possible hazardous waste issues that could affect your project.

cc: 1-SWerner 2-File

e-mail copies to: Steve Werner

SSW/ks

ATTACHMENT I
Transportation Management Plan

TRANSPORTATION MANAGEMENT PLAN

To: JAIME MATTEOLI
Project Engineer
Advance Planning

Date: 16 July 2014
File: MEN-20 PM R37.8/R38.8
EA: 01-0E470K
EFIS: 0114000072
MEN 20 & Potter Valley Safety
Project

From: TROY ARSENEAU, Chief
District 1 Office of Traffic Operations

Project Information

Location: In Mendocino County near Willits from 0.1 mi west of Cold Cr Br #1 #10-40 to end of Bridge #10-40.

Type of Work: Relocate median, obliterate pavement, DGAC overlay, striping, markers, rumble strip, markings, relocate signs, install light poles, trenching.

Anticipated Traffic Control: Lane reduction.
Moving lane closure.
Shoulder closure.

Estimated Maximum Delay: Minimal.

Peak Hour Traffic Volumes: 1150 vph.

Lane Requirement Charts Included: Yes

Closure During Night Hours: Possible, but improbable.

Number of Working Days: TBD.

PA&ED Date: October/2017

RTL Date: February/2020

District Traffic Manager/ TMP Manager: Troy Arseneau (707) 445-6377

TMP Coordinator: Paul Hailey (707) 445-5213

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.

Requirement

A request for an updated Transportation Management Plan (TMP) shall be made during the design phase.

Hours of Work

- See Chart no. 1 “Expressway Lane Requirements” for work hour restrictions.
- The full width of the traveled way shall be open for use by public traffic for the following Special Days:

Event	Event Date	Special Days
Redwood Run & Music Festival	Second Weekend in June	Friday through Monday
Reggae on the River Festival	Third Weekend in July	Thursday through Monday
Reggae Rising Festival	First Weekend in August	Thursday through Monday
Kate Wolfe Memorial Music Festival	Last Weekend in June	Friday through Monday

The contractor shall verify the actual dates for these Special Events. See Chart no. 2 “Lane Closure Restrictions for Designated Legal Holidays and Special Days” for work day restrictions.

Public Notice

- Upon receipt of notice that the roadway width, including paved shoulder, for a direction of travel will be narrowed to less than 16 ft, the Resident Engineer shall promptly notify the HQ District 1 Construction Liaison D’Ann Watanabe-Gulling at (916) 322-4822.
- The District Public Information Office, (707) 445-6444, shall be contacted two weeks in advance of the start of construction.

- Any emergency service agency whose ability to respond to incidents will be affected by any lane closure must be notified prior to that closure.
- Work shall be coordinated with the local busing system (including school buses and public systems) to minimize impact on their bus schedules.
- The Resident Engineer shall provide information to residents and businesses before and during project work that may represent a negative impact on commerce and travel surrounding the zone of construction. Funding shall be included in supplemental funds for public information.
- Notify the Resident Engineer at least 5 days in advance of excavation work in the vicinity of possible Caltrans electrical facilities. The Resident Engineer shall contact the Maintenance-Electrical Supervisor at (707) 463-4713 to locate existing Caltrans underground electrical facilities.

Traffic Control

- One lane closure is permitted within the project limits.
- The W11-1 vehicular traffic sign (bicycle symbol) and the W16-1p supplemental plaque (SHARE THE ROAD) shall be placed, in each direction of travel, prior to the construction zone.
- Work that requires a lane and/or shoulder closure on an expressway shall be in conformance with the Caltrans Revised Standard Plan T-10, "TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS."
 - A minimum of 16 ft of paved roadway in each direction of travel shall be open for use by public traffic.
- Work that requires a moving lane closure on a multilane facility shall be in conformance with the Caltrans Revised Standard Plan T-15, "TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURES ON MULTILANE HIGHWAYS."
 - A minimum of one PCMS in advance of both ends of the construction site shall 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.

- Access to businesses, side roads and residences shall be maintained at all times. When work or traffic queues extend through an intersection, additional traffic control will be required at the intersection.
- Left-turn pockets and access to/from Potter Valley Road shall be maintained at all times.
- Bicyclists shall be accommodated through the work zone. Signage shall be used to alert vehicles of the possible presence of bicyclists. During lane reduction traffic control, bicyclists shall be provided space adjacent to the open traffic lane to traverse through the work zone.
- COZEEP is not recommended for this project. According to the CA DOT Construction Manual Section 2-215C (3), daytime closures on multilane highways do not require COZEEP.

Contingency Plan

The contractor shall prepare a contingency plan for reopening closures to public traffic. The Contractor shall submit the contingency plan for a given operation to the Engineer within one working day of the Engineer's request. Contingencies for unanticipated delays, emergencies, etc. shall be coordinated between the RE and the Contractor.

Approval

Approved by:

As Signed By TAA

Approved by:

District Traffic/ TMP Manager

TAA/pwh

CC: 1)TAArseneau, 2)JCandalot
RMMartinelli
KChurch
JMcGee
Traffic Safety
PIO

Chart no. 1 Expressway Lane Requirements																										
County: MEN					Route/Direction: 20 EB/WB										PM: R37.6/R38.8											
Closure limits:																										
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		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fridays		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										
Saturdays																										
Sundays																							1	1	1	1
Legend:																										
1		Provide at least one through expressway lane open in direction of travel.																								
		Except during stage construction, no lane and/or shoulder closures allowed.																								
REMARKS: Except during stage construction , the full width of the traveled way shall be open for use by public traffic when construction operations are not actively in progress.																										

Chart no. 2: Lane Closure Restrictions for Designated Legal Holidays and Special Days										
Thu	Fri	Sat	Sun	Mon	Tues	Wed	Thu	Fri	Sat	Sun
xx	H xx									
	SD xx									
	xx	H xx								
		SD xx								
	xx		H xx	xx						
			SD xx							
	xx			H xx						
				SD xx						
				xx	H xx					
					xx	H xx				
						xx	H xx	xx		
							SD xx			
Legend:										
	Refer to lane requirement charts									
xx	Except during stage construction, the full width of the traveled way shall be open for use by public traffic.									
H	Designated Legal Holiday									
SD	Special Day									

ATTACHMENT J
Preliminary Hydraulics Report

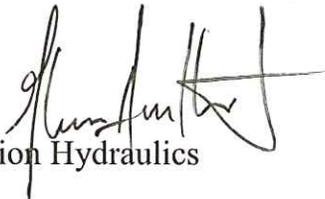
Memorandum

To: Jaime Matteoli, PE
Advanced Planning
District 1, Eureka

Date: August 8, 2014

File No.: 01-Men-20 PM R37.8/R38.37
Men 20/Potter Valley
Safety Improvement
EA 01-0E470K

From: Glenn Hurlburt, PE
Caltrans, North Region Hydraulics



Subject: Proposed Floodplain Analysis and Preliminary Hydraulic Recommendation

After reviewing the site in the field and discussion with Advanced Planning personnel the following hydraulic and floodplain recommendations are attached.

Hydraulics

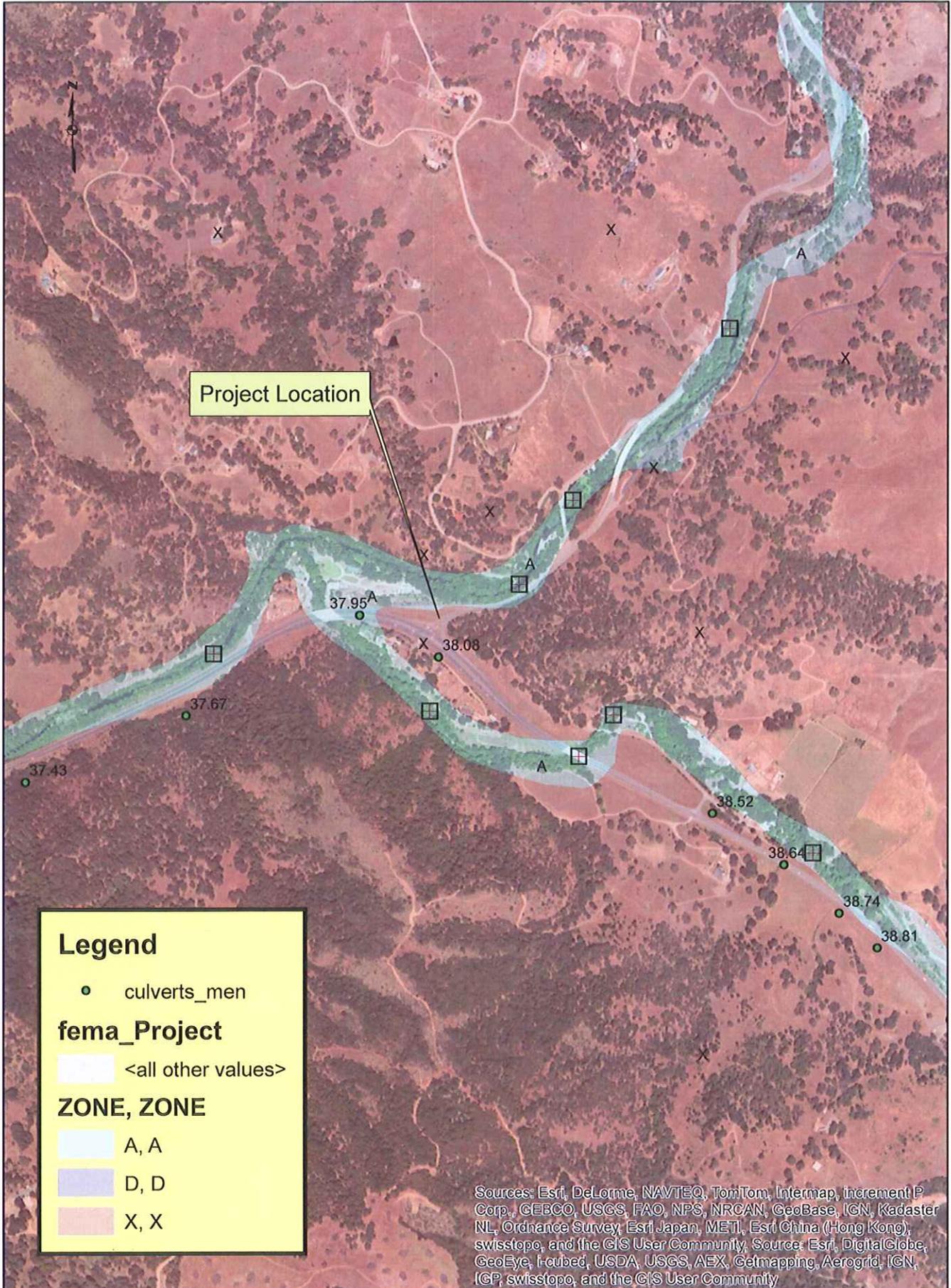
There are two existing culverts within the project limits, an 18" CSPH at PM 37.95 and a 24" CSPH at PM 38.08. The 18" culvert drains the existing median and is proposed to be eliminated due to proposed improvements to the Route 20 and Potter Valley intersection. Roadside runoff will now flow across four lanes into the existing roadside ditch. The existing ditch appears large enough to handle the additional runoff. No work was proposed for the culvert at PM 37.95

Floodplain

Route20 alignment at this location crosses Cold Creek and the East Fork of Russian River. The project lies within Zone A and Zone X on Firm Panels 06045C507F and 06045C1550F. Zone A is the designated 100-year floodplain (also known as the Special Flood Hazard Area) where the base flood elevations have not been determined. Zone X is the designation for areas determined to be outside of the 500-year floodplain (0.2% annual chance floodplain). The proposed construction activities are not expected to have any significant adverse floodplain impacts (see attached FERS).

cc: Tim Boese'
file

Vicinity Map



FLOODPLAIN EVALUATION REPORT SUMMARY

District: 01 **County:** MEN **Route:** 20 **P.M.:** 37.8/38.4
Project EA: 01-0E470K **EFIS Project ID:** 01-1400 0072 **Bridge Number:** n/a

Limits: The proposed improvements to the Men 20 and Potter Valley Rd intersection include the following: Provide a left turn acceleration lane for vehicles turning left from Potter Valley Road onto EB SR 20. Extend the EB passing lane east of the intersection. Shorten the WB passing lane east of the WB 20 onramp. Increase the deceleration lane length of left turn pockets on both WB and EB 20. Add centerline and edge line rumble stripe. Install safety lighting.

Floodplain Description: Route20 alignment at this location crosses Cold Creek and the East Fork of Russian River. The project lies within Zone A and Zone X on Firm Panels 06045C507F and 06045C1550F. Zone A is the designated 100-year floodplain (also known as the Special Flood Hazard Area) where the base flood elevations have not been determined. Zone X is the designation for areas determined to be outside of the 500-year floodplain (0.2% annual chance floodplain). The proposed construction activities are not expected to have any significant adverse floodplain impacts.

- | | No | Yes |
|---|--------------|-------------|
| 1. Is the proposed action a longitudinal encroachment of the base floodplain? | <u> x </u> | <u> </u> |
| 2. Are the risks associated with the implementation of the proposed action significant? | <u> x </u> | <u> </u> |
| 3. Will the proposed action support probable incompatible floodplain development? | <u> x </u> | <u> </u> |
| 4. Are there any significant impacts on natural and beneficial floodplain values? | <u> x </u> | <u> </u> |
| 5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain. | <u> x </u> | <u> </u> |
| 6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q)? | <u> x </u> | <u> </u> |
| 7. Are Location Hydraulic Studies that document the above answers on file? If not explain. No studies considered necessary. | <u> x </u> | <u> </u> |

PREPARED BY:

Glenn G. Hurlburt
 Signature - Dist. Hydraulic Engineer

6/19/2014
 Date

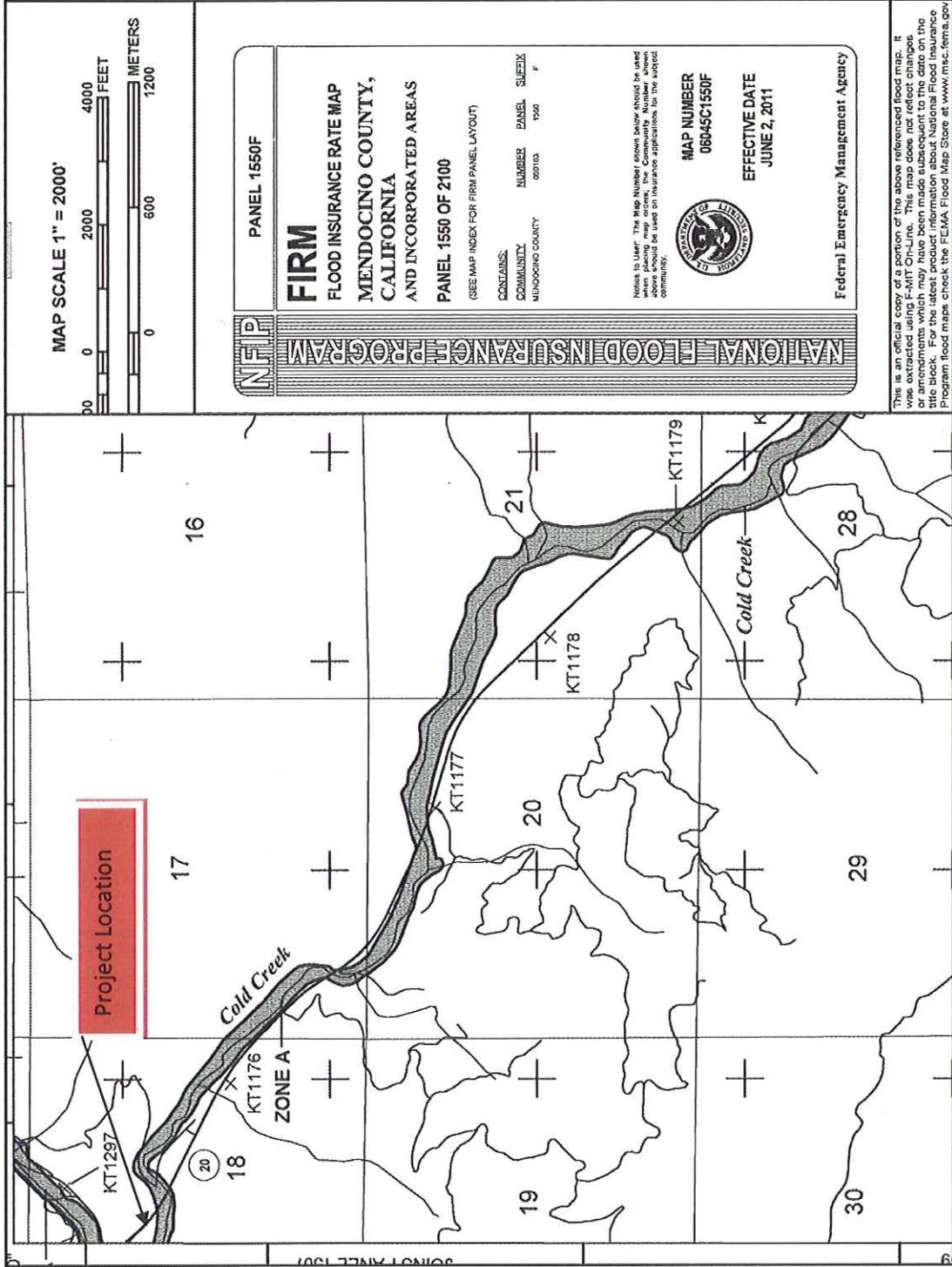


 Signature - Dist. Environmental Branch Chief

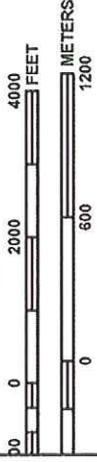
 Date

 Signature - Dist. Project Engineer

 Date



MAP SCALE 1" = 2000'



NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1550F
FIRM
FLOOD INSURANCE RATE MAP
MENDOCINO COUNTY,
CALIFORNIA
AND INCORPORATED AREAS
PANEL 1550 OF 2100
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

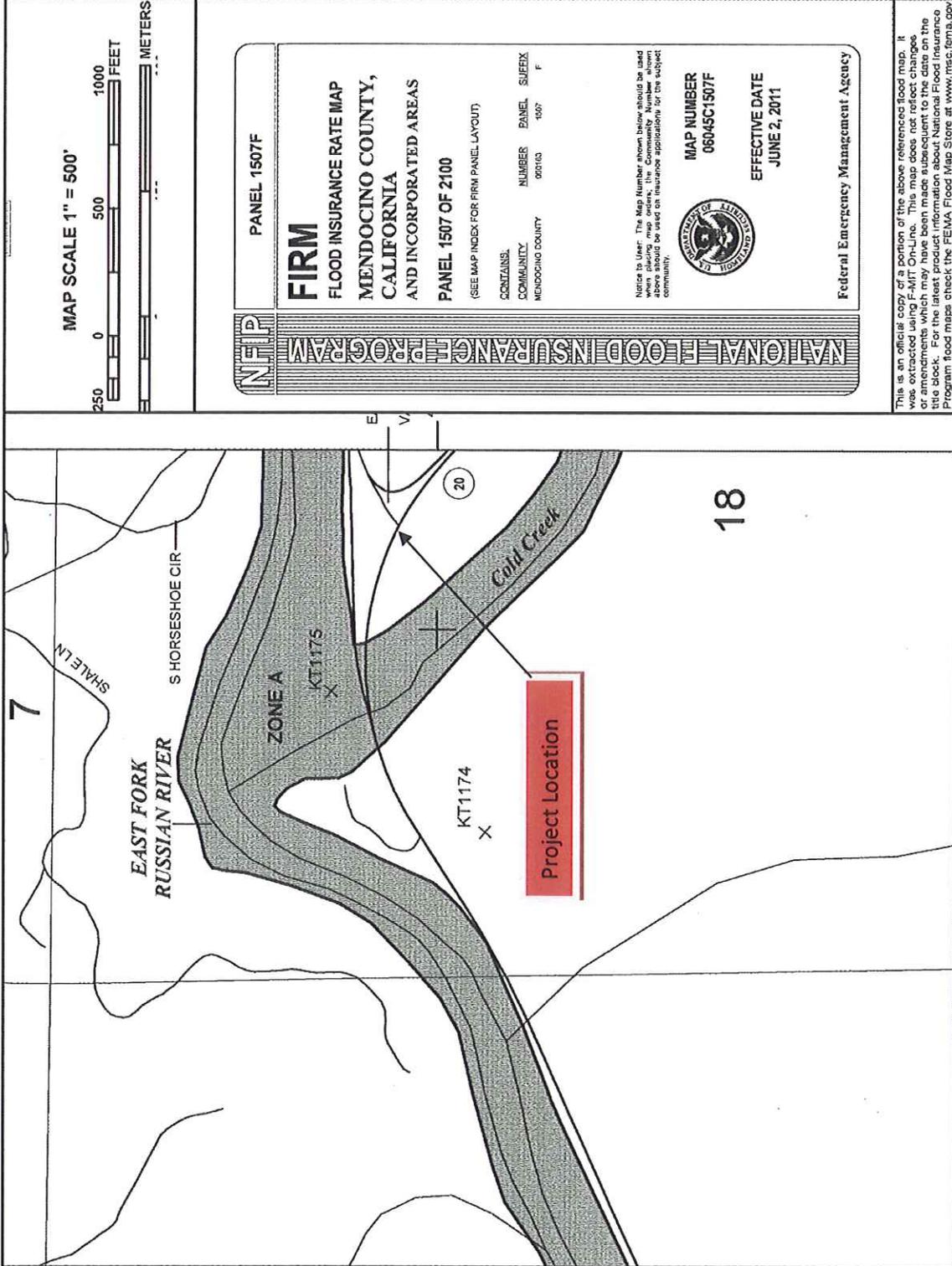
CONTAINS:	NUMBER	PANEL	SUFFIX
MUNICIPALITY	060163	1550	F

Notes to User: The Map Number shown below should be used to identify the map sheet. The information shown above should be used on insurance applications for the subject community.

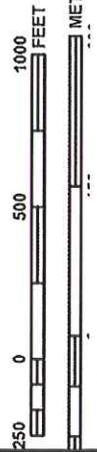
MAP NUMBER
06045C1550F
EFFECTIVE DATE
JUNE 2, 2011

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using FIRM Explorer. This map does not reflect changes to the flood map since the date of the original map. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.msc.fema.gov.



MAP SCALE 1" = 500'



NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1507F

FIRM
 FLOOD INSURANCE RATE MAP
 MENDOCINO COUNTY,
 CALIFORNIA
 AND INCORPORATED AREAS

PANEL 1507 OF 2100

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:
 COMMUNITY NUMBER 06045C
 MENDOCINO COUNTY PANEL NUMBER 1507
 SUBJECT F

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
 06045C1507F

EFFECTIVE DATE
 JUNE 2, 2011

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the most current information on flood insurance, please contact your insurance agent or the National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

ATTACHMENT K
Preliminary Materials Recommendation

Memorandum

*Serious drought.
Help save water!*

To: Ralph Martinelli, Chief
Advance Planning

Date: July 29, 2014

File: 01-MEN-20
PM R37.80/R38.37
EA: 01-0E470K
EFIS: 0114000072
MEN 20 & Potter
Valley Safety
Project

Attn: Jamie Matteoli
Project Engineer, Advance Planning

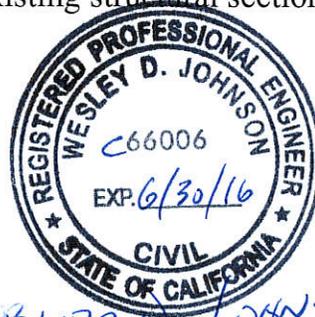
From: Wesley D. Johnson
Materials Engineering
Department of Transportation – North Region

Subject: **Preliminary Materials Recommendation**

In response to a request for an expedited materials recommendation from Nathaniel Steen of your office dated June 17, 2014, the following preliminary materials recommendation is provided. The Department's Document Retrieval System (DRS) and the Materials Laboratory's project history files were reviewed for previous work within and adjacent to this project's limits. A field review was not conducted due to the response time requested and the phase of this project. No soil and water samples were obtained for the purposes of this recommendation. Historic soils data (R-value) and an estimated Traffic Index (TI) were used for calculation of the structural section alternatives.

Existing Structural Section and Pavement Surface Condition

The Materials Laboratory's Structural Section History Files and the "as-built" project files of the existing roadway were reviewed to determine the existing structural section



Wesley D. Johnson

and surface treatment through the project's limits. Additionally, a review of the Department's database of ground penetrating radar (iGPR) indicates the structural section thicknesses consists of 0.60 feet to 0.90 feet of HMA in the east bound direction on top of unknown base material. Additionally, records indicate that this section of roadway was overlaid with 0.08 feet RHMA-O on top of 0.20 feet of RHMA-G by project 01-316104 in 2005. This project also filled in the median with 0.55 feet of HMA on top of 0.75 feet of aggregate base. A review of the iVision data (from July 2011) for this section indicates 11.1 % minor wheel path cracking overall through this section.

Repairs Prior to Overlay

Due to the resilient nature of rubberized hot mix asphalts, overlay is not recommended without prior removal of the resilient layer. Cold plane and remove 0.30 feet of RHMA-O and RHMA-G from edge of pavement to edge of pavement prior to project work and overlay. Review the cold planed surface for any cracking wider than 1/4 inch and seal random cracks with the rout and seal method.

Overlay

Upon completion of the cold plane and remove operation and any necessary repairs to the structural section, overlay the existing roadway from edge of pavement to edge of pavement with 0.10 feet of OGFC.

Structural Section for Traveled Way and Shoulder (20 year design life)

Should widening or repairs to the existing structural section be necessary, the following structural section strategies are provided. Based on an estimated R-value of **20** and an estimated 20 year traffic index of **10.0**, the following structural section strategies are recommended for traveled way and shoulder. Due to minimal material savings offset by higher costs to construct a narrow thin section through the short limits of the project, a separate structural section for shoulder is not recommended. The OGFC Overlay noted above is repeated below clarity. Each strategy below is structurally equivalent.

	<u>OGFC</u>	<u>HMA-A</u>	<u>AB (C1- 2)</u>	<u>AS (C1 2)</u>
Strategy				
1	0.10'	0.50'	0.80'	0.75'
2	0.10'	0.50'	1.50'	----
3	0.10'	1.15'	----	----

Notes:

- Local or imported borrow used to construct embankment, must meet a minimum R-value of 25 when placed within 4 feet of finished grade.
- For structural sections designed to last 20 years, the alternative to use full depth HMA (Type A) should be considered for special situations only. This would include, but not be limited to, narrow widening, shallow utilities coverage, or reducing traffic control periods due to less overall construction time.

Material Specifications

- Open Graded Friction Course (OGFC): Shall conform to Section 39 of the Standard Specifications.
- Hot Mix Asphalt (HMA-A): Shall conform to Section 39 of the Standard Specifications.
- Paint Binder (Tack Coat): Shall conform to Section 39 of the Standard Specifications.
- Asphalt Binder: For “**Low Mountain**” area shall be **PG 64-16** for HMA-A and OGFC. The estimated percentage of asphalt to be added per dry weight of aggregate is 6.0% for HMA-A and 6.5 % for OGFC.
- Asphalt Concrete Dike: Hot Mix Asphalt used in the construction of dikes shall be 3/8 inch, Type A (HMA-A), conforming to Section 39 of the Standard Specifications. Please see Attachment “A” for placement of HMA Dike on OGFC.
- Shoulder Backing: Shall conform to the requirements in the Standard Special Provisions for shoulder backing, with the following change: The minimum loose unit weight per California Test Method 212, Compacted Method (by rodding) shall be 105 lb/ft³.

If you have any questions, please call Wesley Johnson at (707) 445-6386.

Attachment:

WJ:wj

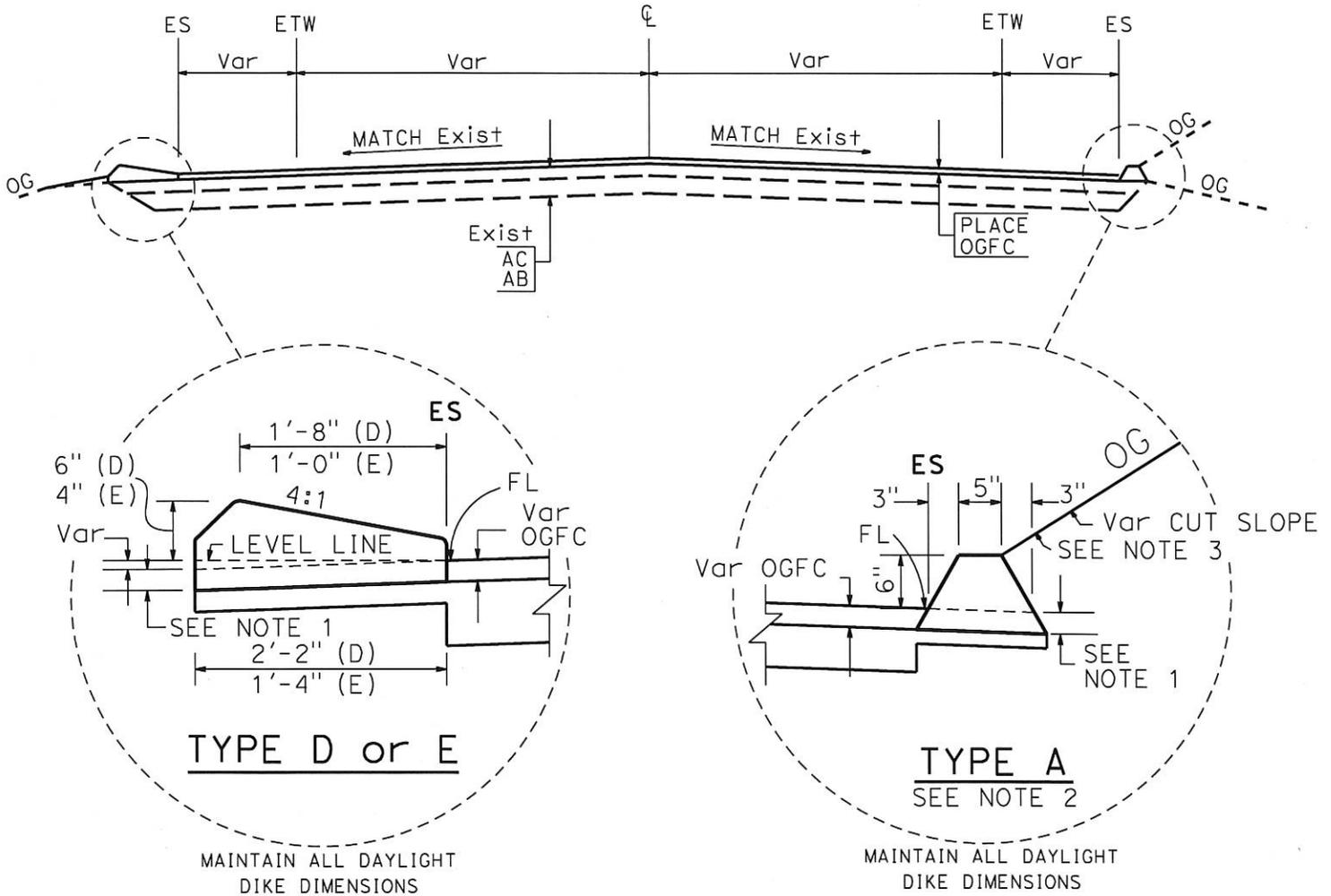
cc: R.Martinelli
J.Matteoli
N.Steen
K.Church
Lab File

ATTACHMENT A

01_MEN_20 PM R37.80-R38.37

01-OE470K

MODIFIED HMA DIKE



HOT MIX ASPHALT DIKE TYPICAL WHEN PLACED WITH OGFC

DIKE QUANTITIES

TYPE	CUBIC YARDS PER LINEAR FOOT
A	* 0.0135
C	* 0.0038
D	* 0.0293
E	* 0.0130
F	* 0.0066

QUANTITIES BASED
ON 5% CROSS SLOPE

* ADJUST QUANTITY TO COMPENSATE
FOR OGFC DEPTH/HMA DIKE HEIGHT
EXTENSION

NOTES:

1. THE ADDITIONAL HEIGHT OF DIKE SHALL BE EQUIVALENT TO THE DEPTH OF OGFC.
2. TYPE A DIKE ONLY TO BE USED WHERE RESTRICTIVE SLOPE CONDITIONS DO NOT PROVIDE ENOUGH WIDTH TO USE TYPE D OR TYPE E DIKE.
3. FILL AND COMPACT WITH EXCAVATED MATERIAL TO TOP OF DIKE.

NO SCALE

ATTACHMENT L
Storm Water Data Report

1. Project Description

- Advance Planning is currently preparing a Project Study Report (PSR) PID for a Safety Improvement (201.010) project at the intersection of SR 20 and Potter Valley Road in Mendocino County. The proposed improvements to the intersection include the following:
 - Provide a left turn acceleration lane for vehicles turning left from Potter Valley Road onto EB SR 20 and eliminate intersection skew for this turning movement.
 - Extend the EB passing lane east of the intersection. The length of the EB passing lane will be increased from 0.8 mile to 1.0 mile.
 - Shorten the WB passing lane east of the WB 20 onramp, which eliminates merging traffic by joining the onramp, and the number two lane of WB 20.
 - Increase the deceleration lane length of left turn pockets on both WB and EB 20.
 - Close centerline striping opening for the driveway at PM R37.80 and add delineators to discourage centerline crossings.
 - Add centerline and edge line rumble stripe.
 - Install safety lighting.
- The project scope of work entails the following:
 - Relocate the existing median east of intersection by excavating median and filling the full depth with HMA. Remove DI and abandon culvert.
 - Obliterate sections of pavement.
 - Provide a new surface for new striping by overlaying 0.1' DGAC from PM R37.93/R38.37.
 - Apply striping, markers, rumble strip, and pavement markings.
 - Relocate EB lane drop signs and WB passing signs.
 - Install light poles and trench between poles for electrical wiring.
- The total disturbed soil area (DSA) is 0.20 acres. The DSA includes access, staging and construction areas. The net increase in impervious surface area is 0.0 acres. The existing impervious surface area is 6.9 acres.
- Receiving waters within project limits: Russian River HU, Upper Russian River HA, Coyote Valley HSA. The Russian River is 303(d) listed for Sedimentation/Siltation.
- A 401 Certification is anticipated for this project.

2. Construction Site BMPs

- This project will be constructed under a Contractor prepared WPCP approved by the Resident Engineer. Anticipated temporary construction BMP's include: Prepare WPCP; Job Site Management; Temporary Concrete Washout (portable); Temporary Drainage Inlet Protection and Temporary Soil Stabilization and Temporary Sediment Control BMP's. The Percent of Total Cost method using Table F-3 on page F6 of the Project Planning and Design Guide (PPDG) was used to determine the percentage of cost for construction site BMP's based on the total construction costs (not including right-of-way costs). The total cost of construction site BMP's was estimated to be 1.5% of the total project cost. Additional BMP's may be identified during the PA&ED and PS&E project phases.
- The attached Construction Site Consideration Form documents concurrence in accordance with North Region directives.



3. Required Attachments¹

- Vicinity Map
- Evaluation Documentation Form
- Construction Site BMP Consideration Form (required at PS&E only)

¹ Additional attachments may be required as applicable or directed by the District/Regional Design Storm Water Coordinator (e.g. BMP line item estimate, DPP, CS checklists, etc).

Evaluation Documentation Form

DATE: 07/29/14

Project ID (or EA): 01-0E470K

NO.	CRITERIA	YES ✓	NO ✓	SUPPLEMENTAL INFORMATION FOR EVALUATION
1.	Begin Project Evaluation regarding requirement for consideration of Treatment BMPs	✓		See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs. Go to 2
2.	Is this an emergency project?		✓	If Yes , go to 10. If No , continue to 3.
3.	Have TMDLs or other Pollution Control Requirements been established for surface waters within the project limits? Information provided in the water quality assessment or equivalent document.		✓	If Yes , contact the District/Regional NPDES Coordinator to discuss the Department's obligations under the TMDL (if Applicable) or Pollution Control Requirements, go to 9 or 4. _____ (Dist./Reg. SW Coordinator initials) If No , continue to 4.
4.	Is the project located within an area of a local MS4 Permittee?		✓	If Yes . (<i>write the MS4 Area here</i>), go to 5. If No , document in SWDR go to 5.
5.	Is the project directly or indirectly discharging to surface waters?	✓		If Yes , continue to 6. If No , go to 10.
6.	Is it a new facility or major reconstruction?		✓	If Yes , continue to 8. If No , go to 7.
7.	Will there be a change in line/grade or hydraulic capacity?	✓		If Yes , continue to 8. If No , go to 10.
8.	Does the project result in a <u>net increase of one acre or more of new impervious surface</u> ?		✓	If Yes , continue to 9. If No , go to 10. _____ (Net Increase New Impervious Surface)
9.	Project is required to consider approved Treatment BMPs.			See Sections 2.4 and either Section 5.5 or 6.5 for BMP Evaluation and Selection Process. Complete Checklist T-1 in this Appendix E.
10.	Project is not required to consider Treatment BMPs. _____ (Dist./Reg. Design SW Coord. Initials) JM (Project Engineer Initials) 8/13/14 (Date)	✓		Document for Project Files by completing this form, and attaching it to the SWDR.

1 See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs

Construction Site BMP Consideration Form

DATE: 07/29/14

Project ID (or EA): 01-0E470K

Project Evaluation Process for the Consideration of Construction Site BMPs

NO.	CRITERIA	YES ✓	NO ✓	SUPPLEMENTAL INFORMATION
1.	Will construction of the project result in areas of disturbed soil as defined by the Project Planning and Design Guide (PPDG)?	✓		If Yes, Construction Site BMPs for Soil Stabilization (SS) will be required. Complete CS-1, Part 1. Continue to 2. If No, Continue to 3.
2.	Is there a potential for disturbed soil areas within the project to discharge to storm drain inlets, drainage ditches, areas outside the right-of-way, etc?	✓		If Yes, Construction Site BMPs for Sediment Control (SC) will be required. Complete CS-1, Part 2. Continue to 3.
3.	Is there a potential for sediment or construction related materials and wastes to be tracked offsite and deposited on private or public paved roads by construction vehicles and equipment?	✓		If Yes, Construction Site BMPs for Tracking Control (TC) will be required. Complete CS-1, Part 3. Continue to 4.
4.	Is there a potential for wind to transport soil and dust offsite during the period of construction?		✓	If Yes, Construction Site BMPs for Wind Erosion Control (WE) will be required. Complete CS-1, Part 4. Continue to 5.
5.	Is dewatering anticipated or will construction activities occur within or adjacent to a live channel or stream?		✓	If Yes, Construction Site BMPs for Non-Storm Water Management (NS) will be required. Complete CS-1, Part 5. Continue to 6.
6.	Will construction include saw-cutting, grinding, drilling, concrete or mortar mixing, hydro-demolition, blasting, sandblasting, painting, paving, or other activities that produce residues?	✓		If Yes, Construction Site BMPs for Non-Storm Water Management (NS) will be required. Complete CS-1, Parts 5 & 6. Continue to 7.
7.	Are stockpiles of soil, construction related materials, and/or wastes anticipated?		✓	If Yes, Construction Site BMPs for Waste Management and Materials Pollution Control (WM) will be required. Complete CS-1, Part 6. Continue to 8.
8.	Is there a potential for construction related materials and wastes to have direct contact with precipitation; stormwater run-on, or stormwater runoff; be dispersed by wind; be dumped and/or spilled into storm drain systems?	✓		If Yes, Construction Site BMPs for Waste Management and Materials Pollution Control (WM) will be required. Complete CS-1, Part 6. Continue to 9.
9.	End of checklist.	✓		Document for Project Files by completing this form, and attaching it to the SWDR.

PE to initialize after concurrence with Construction (PS&E only)

Date

ATTACHMENT M
Landscape Architecture Assessment Report



NORTH REGION
LANDSCAPE ARCHITECTURE ASSESSMENT SHEET
 03-LAND-0002 (Rev. 3/03)

TO: Jaime Matteolli FROM: Logan Moore Unit/Senior TE Name: 03-314/Ron Flory Project Manager: Kevin Church	CO: MEN DISTRICT: 01 DATE: 7/15/2014 EA: 01-0E470K	RTE: 20	PM: R37.80/R38.37
PROJECT SEPARATION: <input type="checkbox"/> Landscape as part of roadway work EA <input type="checkbox"/> Landscape under separate EA (Follow-up)		PROJECT: Potter Valley Safety Project TYPE: SHOPP PROJECT MILESTONE: PID	

PROJECT DESCRIPTION: Advance Planning is currently preparing a project Study Report (PSR) for a Safety Improvement Project at the intersection of SR 20 and Potter valley Road in Mendocino County. The proposed improvements to the intersection include the following:

- Provide a left turn acceleration lane for vehicles turning left from Potter Valley Road onto EB SR 20 and eliminate intersection skew for this turning movement.
- Extend the EB passing lane east of the intersection. The length of the EB passing lane will be increased from 0.8 mile to 1.0 mile.
- Shorten the WB passing lane east of the WB 20 onramp, which eliminates merging traffic by joining the onramp, and the number two lane of WB 20.
- Increase the deceleration lane length of the left turn pockets on both WB and EB 20.
- Close centerline striping opening for the driveway at PM R37.80 and add delineators to discourage centerline crossings.
- Add centerline and edge line rumble stripe.
- Install safety lighting.

The project scope of work entails the following:

- Relocate the existing median east of the intersection by excavating median and filling the full depth with HMA. Remove DI and abandon culvert.
- Obliterate section of pavement.
- Provide a new surface for new striping by overlaying 0.1' DGAC from PM R37.93/R38.37.
- Apply striping, markers, rumble strip, and pavement markings as shown on attached preliminary layouts.
- Relocate EB lane drop signs and WB passing signs.
- Remove MBGR and construct MGS with steel posts.
- Install light poles and trench between poles for electrical wiring.

AREA (SQFT) FOR HIGHWAY PLANTING:	N/A
AREA (ACRE) FOR EROSION CONTROL:	1.5 Acres
PLANT COUNT FOR MITIGATION PLANTING:	N/A
LANDSCAPE FREEWAY STATUS:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Warranted <input type="checkbox"/> Not Warranted
HIGHWAY PLANTING IS:	<input type="checkbox"/> Officially Designated <input checked="" type="checkbox"/> Eligible <input checked="" type="checkbox"/> Not Designated <input type="checkbox"/> Permit Required <input type="checkbox"/> Offset of Visual Impact <input type="checkbox"/> Other (Forest Service, BLM, etc.)
SCENIC HIGHWAY STATUS:	
REVEGETATION REQUIRED?	
BIOLOGIST CONTACT:	Peter Lewendall
DATE OF CONTACT:	
REVEG. SPECIALIST CONTACT:	Tami Camper/Kim Hayler

ADJACENCY TO BILLBOARDS:
<input type="checkbox"/> Project area is adjacent to outdoor advertising. <input checked="" type="checkbox"/> Project area is not adjacent to outdoor advertising.

WATER AND POWER AVAILABILITY: N/A

IS THERE (E) IRRIGATION THAT WILL BE IMPACTED BY THIS PROJECT: Yes No



DESIGN FOR MAINTENANCE SAFETY: N/A

CONTEXT SENSITIVITY:

- It is determined that the project will involve consideration of highway aesthetics and will require further evaluations pertaining to specific roadside enhancements.
- No foreseen issues with highway aesthetics Other _____

COOPERATIVE MAINTENANCE AGREEMENTS: N/A

- | | | | |
|--|--|---|---|
| Project may
Involve additional
tasks indicated | <input type="checkbox"/> Visual Simulation | <input checked="" type="checkbox"/> Erosion Control | <input type="checkbox"/> SWPPP/NPDES |
| | <input type="checkbox"/> Highway Planting | <input checked="" type="checkbox"/> Field Visit | <input type="checkbox"/> Context Sensitive Solutions/Aesthetics |
| | <input type="checkbox"/> Contour Grading | <input type="checkbox"/> Cost Estimate | <input type="checkbox"/> Landscape Evaluation |

COST INFORMATION:

- | | |
|--|------------------|
| <input type="checkbox"/> Highway Planting, Irrigation, and/or Mitigation | \$ |
| <input type="checkbox"/> ___-year Plant Establishment | \$ |
| <input checked="" type="checkbox"/> Erosion Control | \$ 15,000 |
| <input type="checkbox"/> Slope Protection | \$ |
| <input type="checkbox"/> Aesthetic Treatment | \$ |
| TOTAL | \$ 15,000 |

ROADSIDE VEGETATION MANAGEMENT TREATMENT NEEDS:

- Extended Gore Areas
- Guardrails and Signs
- Medians
- Road Edge
- Side Slopes/Embankment Slopes

(See: <http://www.dot.ca.gov/hq/LandArch/roadside/index.htm> for potential treatment measures)

PREPARED BY: Logan Moore

DATE: 7/15/14

CONCURRED BY:


 (Project Manager)

DATE: 7/17/14

APPROVED BY: 
 (Landscape Architecture or Engineering Services Branch Chief)

DATE: 7/15/14

ATTACHMENT N
Programming Sheet

PROGRAMMING SHEET

09/30/2014

EFIS ID: 0114000072 EA:01-0E470 County: MEN Route: 020 PostMile: 37.84/38.34

Project Manager: CHURCH, KEVIN B	PM Assistant: LAW, REBECCA L	Project Nickname: MEN 20 & Potter Valley Road
Project Description - Long: IN MENDOCINO COUNTY NEAR POTTER VALLEY FROM 0.1 MI WEST OF COLD CR BR#1 #10-40 TO END BRIDGE #10-40		
Work Description - Long: RESURFACING		
PPNO: 4596	Program: Planning	RTP: No
Open for Time: Yes	Subprogram: Safety Improvements	Funding Candidate: No
10 Yr SHOPP: No	AADD: Yes	CT Status: APL
Dist Category: SHOPP K-PHASE	FED Aid Eligible:	RMP: RMP Date:
		PROGRAM YR: Working Days:

MS	MS Description	MS Date
M000	ID NEED	03/28/2014 (A)
M010	APPROVE PID	11/01/2014 (T)
M015	PROG PROJ	01/01/2015 (T)
M020	BEGIN ENVIRO	03/01/2015 (T)
M040	BEGIN PROJ	02/01/2015 (T)
M120	CIRC DPR & DED EXT	05/01/2016 (T)
M200	PA & ED	05/01/2017 (T)
M224	R/W REQTS	01/01/2017 (T)
M225	REGULAR R/W	06/01/2017 (T)
M377	PS&E TO DOE	12/01/2017 (T)
M380	PROJ PS&E	02/01/2018 (T)
M410	R/W CERT	02/01/2018 (T)
M460	RTL	03/01/2018 (T)
M470	FUND ALLOCATION	05/01/2018 (T)
M480	HQ ADVERT	06/01/2018 (T)
M495	AWARD	08/01/2018 (T)
M500	APPROVE CONTRACT	09/01/2018 (T)
M600	CONTRACT ACCEPT	12/01/2019 (T)
M700	FINAL REPORT	12/01/2020 (T)
M800	END PROJ	12/01/2021 (T)

Capital Cost Estimates		
	Amount \$k	EST Date
Roadway	2,220	09/02/14
Structures	0	03/24/14
Const Total	2,220	
ROW	20	
Total	2,240	

Env Doc:	CE (NEPA), IS,
----------	----------------

Funding Info (\$k)						
Fund Source	PA&ED	PS&E	ROW	CON	ROW Cap	CON CAP
4050201.010	0	0	0	0	0	0
Grand Total:	0	0	0	0	0	0

Capital Cost Estimates	
	2018
CC Escalation %:	3.50%
CC Escalated \$:	2,460
ROW CAPITAL:	20
TOTAL:	2,480

PROJECT SUPPORT COSTS									
Phase	PRIOR	2015	2016	2017	2018	2019	Future	Total	Sup/Cap
Escalation Rate	ACT \$	ETC	(1.50%)	(1.50%)	(1.50%)	(1.50%)	(1.50%)		
0	0	159	391	95	0	0	0	645	26.01%
1	0	0	0	48	374	52	0	474	19.11%
2	0	0	0	7	21	4	11	43	1.73%
3	0	0	0	0	0	227	206	433	17.46%
TOTAL SUPPORT COSTS								1,596	64.31%
TOTAL PROJECT COSTS								4,076	

PROJECT SUPPORT PYs									
Division	PRIOR	2015	2016	2017	2018	2019	Future	Total	
	ACT PYs	ETC PYs	ETC PYs	ETC PYs	ETC PYs	ETC PYs	ETC PYs	PYs	
01	ADMN	0.00	0.00	0.01	0.01	0.01	0.00	0.01	0.04
01	MTCE	0.00	0.00	0.02	0.06	0.00	0.00	0.00	0.08
01	PPM	0.00	0.06	0.12	0.15	0.26	0.13	0.26	0.98
01	TPLN	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.03
01	TROP	0.00	0.05	0.10	0.03	0.18	0.14	0.04	0.53
01	TOTALS:	0.00	0.11	0.25	0.25	0.48	0.27	0.31	1.66
03	CONS	0.00	0.01	0.02	0.01	0.14	0.90	0.56	1.64
03	ENVM	0.00	0.70	1.82	0.46	0.42	0.07	0.12	3.59
03	ESRV	0.00	0.00	0.01	0.01	0.25	0.02	0.02	0.31
03	PRJD	0.00	0.10	0.21	0.08	0.50	0.07	0.03	1.00
03	RWLS	0.00	0.02	0.04	0.02	0.15	0.02	0.01	0.25
03	SURV	0.00	0.07	0.15	0.03	0.10	0.12	0.09	0.57
03	TOTALS:	0.00	0.90	2.24	0.63	1.57	1.20	0.83	7.37
59	METS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59	OE	0.00	0.00	0.00	0.00	0.11	0.06	0.00	0.17
59	TOTALS:	0.00	0.00	0.00	0.00	0.11	0.06	0.00	0.17
PROJECT TOTALS:		0.00	1.02	2.49	0.88	2.15	1.53	1.14	9.20

Comments: Resources received from Env, ROW, Con, Design, Eng Services, Surveys and Traffic Electrical

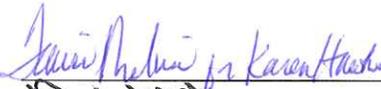
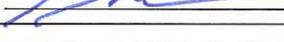
ATTACHMENT O
Risk Register

RISK REGISTER CERTIFICATION (ACCOUNTABILITY CHECKPOINTS)

Form PM-0001/NR (Rev. 10/30/2012)

The risk register is to be approved and signed-off by the deputies listed below for all scalability levels. By signing this form, you are certifying that you have reviewed the risks documented in the register and agree that they have been managed to the extent possible by the PDT.

<u>Project Information</u>	
District – EA/EFIS	01-0E470/0114000072
Project Description	Resurfacing MEN 20 & Potter Valley Road
Project Risk Manager (Same as PM for Risk Level 1&2 Projects)	Kevin Church
Project Manager (PM)	Kevin Church

<u>PID (Required)</u>	
Deputy Dist Director, Right of Way	 Date: 10/20/14
Deputy Dist Director, Planning	 Date: 10/20/14
Deputy Dist Director, Design	 Date: 10/20/14
Deputy Dist Director, Proj. Management	 Date: 10/20/14
Deputy Dist Director, Maintenance & Traffic Ops.	 Date: 10/20/14
Deputy Dist Director, Environmental	 Date: 10/20/14

<u>PA&ED (Required)</u>	
Deputy Dist Director, Right of Way	_____ Date: _____
Deputy Dist Director, Planning	_____ Date: _____
Deputy Dist Director, Design	_____ Date: _____
Deputy Dist Director, Proj. Management	_____ Date: _____
Deputy Dist Director, Maintenance & Traffic Ops.	_____ Date: _____
Deputy Dist Director, Environmental	_____ Date: _____

<u>Prior to PS&E (Required)</u>	
Deputy Dist Director, Design	_____ Date: _____
Deputy Dist Director, Construction	_____ Date: _____
Deputy Dist Director, Right of Way	_____ Date: _____
Deputy Dist Director, Environmental	_____ Date: _____
Deputy Dist Director, Proj. Management	_____ Date: _____
Deputy Dist Director, Maintenance & Traffic Ops.	_____ Date: _____

<u>Re File Hand-Off (Recommended)</u>	
Deputy Dist Director, Design	_____ Date: _____
Deputy Dist Director, Construction	_____ Date: _____
Deputy Dist Director, Proj. Management	_____ Date: _____
Deputy Dist Director, Maintenance	_____ Date: _____
Project Manager	_____ Date: _____

LEVEL 1 - RISK REGISTER				Project Name: 01-0E470			DIST- EA	01-0E470	Project Manager	PM Person	Kevin Church	
Risk Identification							Risk Rating		Risk Response			
Status	ID #	Type	Category	Title	Risk Statement	Current status/assumptions	Priority Rating	Rationale for Rating	Strategy	Response Actions	Risk Owner	Updated
Active	10	Threat	Environmental	Permits and Approvals	Due to the required Spring plant survey, plants could be discovered that may require mitigation which could adversely effect project delivery.	Protected plants are not expected to be discovered. If found, design could be modified to avoid areas.	Low	Plant survey required in unpaved areas.	Mitigate	Monitor the approval process to identify potential project impacts as soon as possible.	D1 Environmental - PM	9/19/2014
Active	20	Threat	Environmental	Archaeological issues	As a result of potential impacts due to pre-historic sites and cultural areas, delays during project development could occur.	Environmental has reviewed the project limits and identified the areas of concern.	High	Per Mini-PEAR, there are 5 or 6 known cultural resources within project area. Early consultation with at least four tribes will be needed.	Mitigate	Recommend early consultation with Tribes. Monitoring by tribal representation during construction has been included in the project scope.	D 1 Environmental - Construction - PM	9/19/2014
Active	30	Threat	Design	Guardrail	If the the existing MBGR does not meet current standards or propesd work impacts MBGR height, the MBGR would need to be brought to current standards resulting in increases to capital costs and potential delay in project delivery.	The project proposes to grind the existing paved surface and it is likely that the MBGR will have to be upgraded.	High	Current scope includes grinding existing pavement and repaving to current height profile.	Avoid	The project proposed to upgrade all MGBR and bridge rail transitions over paved areas.	Design - Construction - PM	9/24/2014
Active	40	Threat	ROW	Condemnation	If additional r/w is required to meet sight distance design standards, the owner may not be willing to sell the required portion of their property, resulting in condemnation. This would increase support costs and as well as delay the delivery.	R/W will be needed to meet design standards. The property required is in front of an existing residential structure with vegetation screening the structure from the roadway. Some portion of this screening would need to be removed to accommodate the proposed improvements.	Medium	see current status column	Mitigate	Initiate contact with the property owner as soon as the design phase is open to determine owners support level for the project.	R/W - PM	9/24/2014
Active	50	Threat	ROW	Additional R/W	If additional r/w is needed for the proposed project, the time and resources required for acquisition could delay delivery and require additional capital and support resources.	No additional r/w is expected to be needed at this time	Low	NA	Mitigate	Review scope and design requirements early in design phase to	R/W - PM	9/25/2014
Active	70	Threat	Design	Design Exceptions	If environmental or other constraints require the approval of non-standard design features Design Exceptions may be required, resulting is additional resources needs and delays in delivering the project.	No Mandatory Design Exception Fact Sheets are expected for this project. Design standards will be reconsidered in the next phase when terrain data become available.	Low	The proposed design addresses mandatory design standards	Mitigate	Monitor the study of design standards in future phases and consult with HQ geometrician as soon as possible.	Design - PM	9/23/2014
Active	80	Threat	Construction	Intelligent Compaction	If Intelligent Compaction is required and there is no existing control, surveys will have to establish control within the project limits, resulting in the need for additional resources.	No info at this time	Low	The rating is low because the risk is easily mitigated and the potential impact is small.	Mitigate	Design will determine if the Intelligent Compaction specification applys and if control is needed. Surveys will establish control in the 0-phase as appropriate.	James Harcharik	9/25/2014