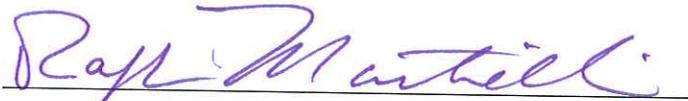


## Request for Programming in 2010 SHOPP (Small Value Capital Project)

PROJECT LOCATION: In Humboldt County from the Eel River Bridge, to 0.3 mile south of Van Duzen River Bridge.

APPROVAL RECOMMENDED:



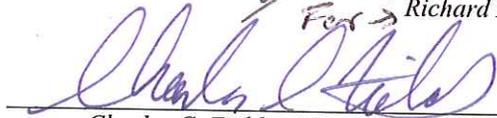
Ralph Martinelli, DISTRICT PROGRAM MANAGER

APPROVAL RECOMMENDED:



Richard Mullen, PROJECT MANAGER

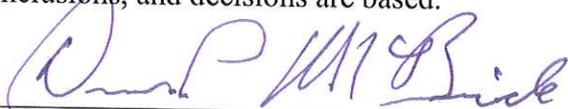
APPROVED:



Charles C. Fielder, DISTRICT DIRECTOR

11/29/2011  
DATE

This project initiation document has been prepared under the direction of the following Registered Civil Engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.



Dennis P. McBride, REGISTERED CIVIL ENGINEER

11-29-2011  
DATE



**Initiating Office/Initiator:**

The District Program Manager for the SHOPP Collision Reduction Program has established that a project is needed that meets the qualification for 201.010 Safety Improvement Category.

It is proposed that this project be amended into the 2010 State Highway Operations and Protection Program (SHOPP). A project report will serve as final approval of the proposal.

**Purpose and Need:**

The purpose of this project is to reduce the potential for cross median collisions. This segment was identified in the 2009 Median Barrier Report due to the total number of cross median collisions that occurred during the reporting period. The District 1 Traffic Safety Office identified this project to address cross median collisions.

**Deficiency Summary:**

This location was identified as having 24 percent of collisions located beyond the left shoulder, each with the potential of contacting opposing traffic.

**Project Proposal**

This safety project proposes to include clearing and grading the median, adjusting drainage inlets, importing ballast rock to establish a median cross slope ratio of 10:1, place Minor Concrete (weed barrier), and installing cable median barrier. Conceptually, Crash Cushion (Type CAT) will be placed to serve as the anchoring system at the ends of each segment. In addition, MBGR will be placed immediately north of the Eel River Bridge where grade precludes the use of Cable Median Barrier. Access to the disposal site will be retained. Surveys will be required for the earthwork in the median. The cost estimate for the improvements is \$950,000.

The purpose of this project is to install a median barrier. Existing highway features, e.g. shoulder width, that do not conform with current standards in the vicinity of these improvements are beyond the scope of a median barrier project and will not otherwise be addressed. On 11/16/2011, Jim DeLuca, Design Coordinator to the North Region, and Heidi Sykes, Design Reviewer stated that they concurred with this statement and that no additional documentation is required, except to provide a note to the file.

Cable median barrier (CMB) was selected for this location because of its ability to minimize visual impacts along the roadway and to enable quick maintenance repairs. In addition, the CMB is more economical than concrete or three beam median barrier.

**R/W:**

All work will be conducted within the State Highway Right of Way. The Design Engineer has consulted with the Eureka Right of Way Project Development Team and has received a commitment that additional Right of Way will not be required. Utility verification will be required, however.

**Disposal Site:**

A disposal site is not needed, although one is within the project limits. Southbound access to the disposal site will be retained by leaving a gap between the end of the MGBR and the beginning of the cable median barrier.

**Utilities:**

No utilities are expected to be affected by this project. The cable median barrier posts and post sleeves extend only 16 inches deep into the ground. In the event a utility is in conflict the cable median barrier post locations will be adjusted as needed.

**Environmental:**

Environmental did a preliminary review of the Project Initiation Form. This project would likely only require a screening memo since work occurs on previously disturbed soils. Native American consultation with local tribes should also occur to identify any concerns. Cultural resource effort would likely involve a maximum of 40 hours over 3 month duration. The probable environmental document is a CE/CE, assuming no hazardous wastes issues are identified. Allow 3 to 6 months for PA&ED. It is not anticipated that permits would be required.

**Sea Level Rise:**

This project is not located where Sea Level Rise will occur according to Pacific Institute mapping.

**Programming:**

See Programming Sheet, Attachment D, for Project Capital Cost, Project Support Components, and Schedule.

Key assumptions for the cost estimate:

- 1- R/W is not required.
- 2- Unit Cost of cable median barrier is estimated in accordance with recent bid results.
- 3- Thirty percent contingency to allow for a bidding environment that may be

influenced by an improving economy.

Key assumptions for support cost estimate.

- 1- Resource estimates provided by Design.
- 2- Significant line item allocations in the resources sheets were reviewed by the project manager and adjusted to meet project needs.

Key assumptions for the schedule:

- 1- Five months given to process environmental document.
- 2- AADD Project.

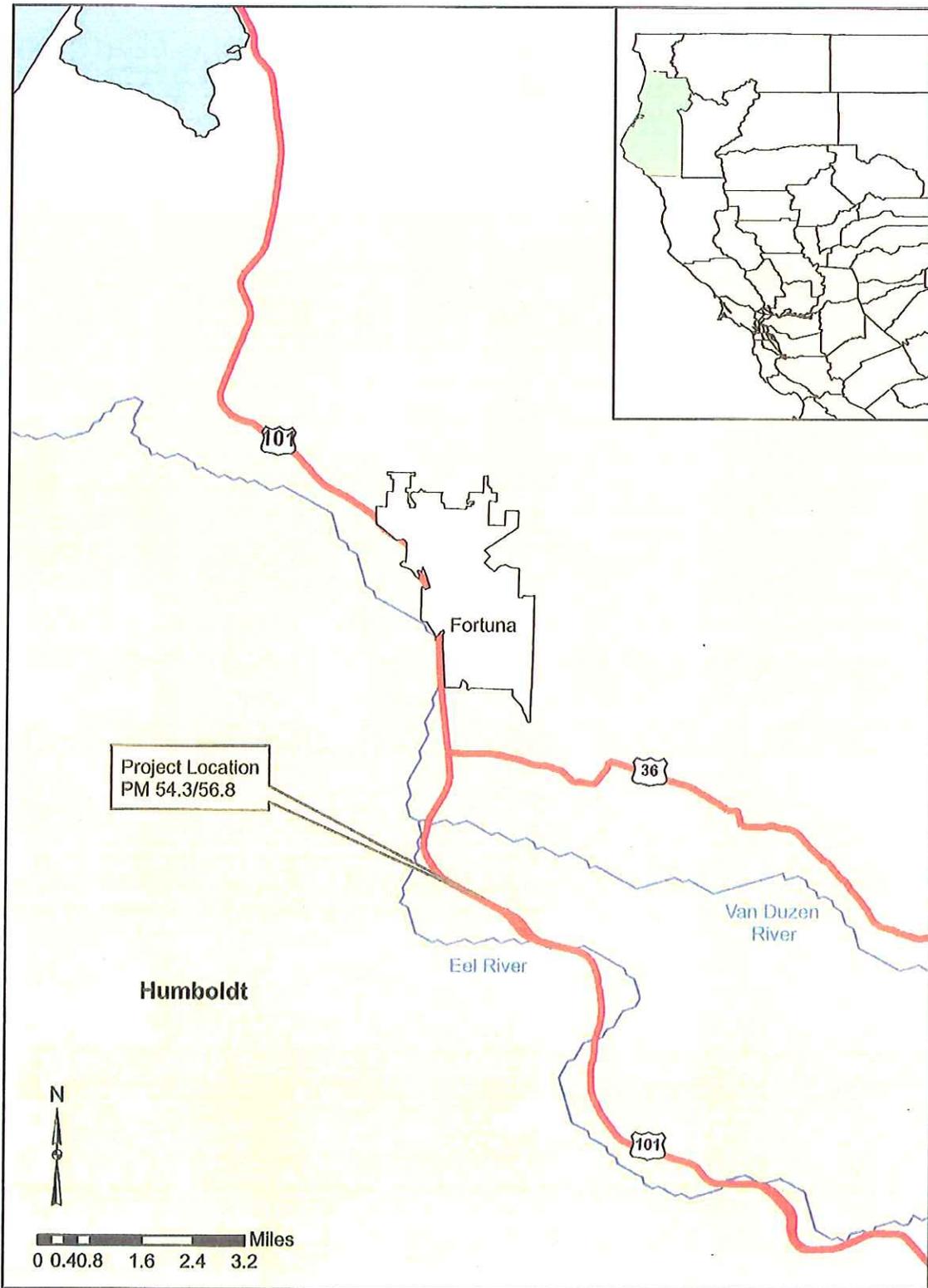
**Cost Estimate:**

The District recommends that this project be programmed for \$963,000 in construction costs and for \$0 in Right of Way cost in FY 2012/2013. This project qualifies for funding through the 20.10.201.010 Safety Improvement Program and is eligible for Federal Funding. For a detailed cost estimate see Attachment C.

**Attachments:**

- Attachment A – Project Location Map
- Attachment B – Typical Cross-section
- Attachment C - Preliminary Cost Estimate
- Attachment D – Programming Sheet

# HUM 101 Median Barrier Project



# Preliminary Estimate of Cost

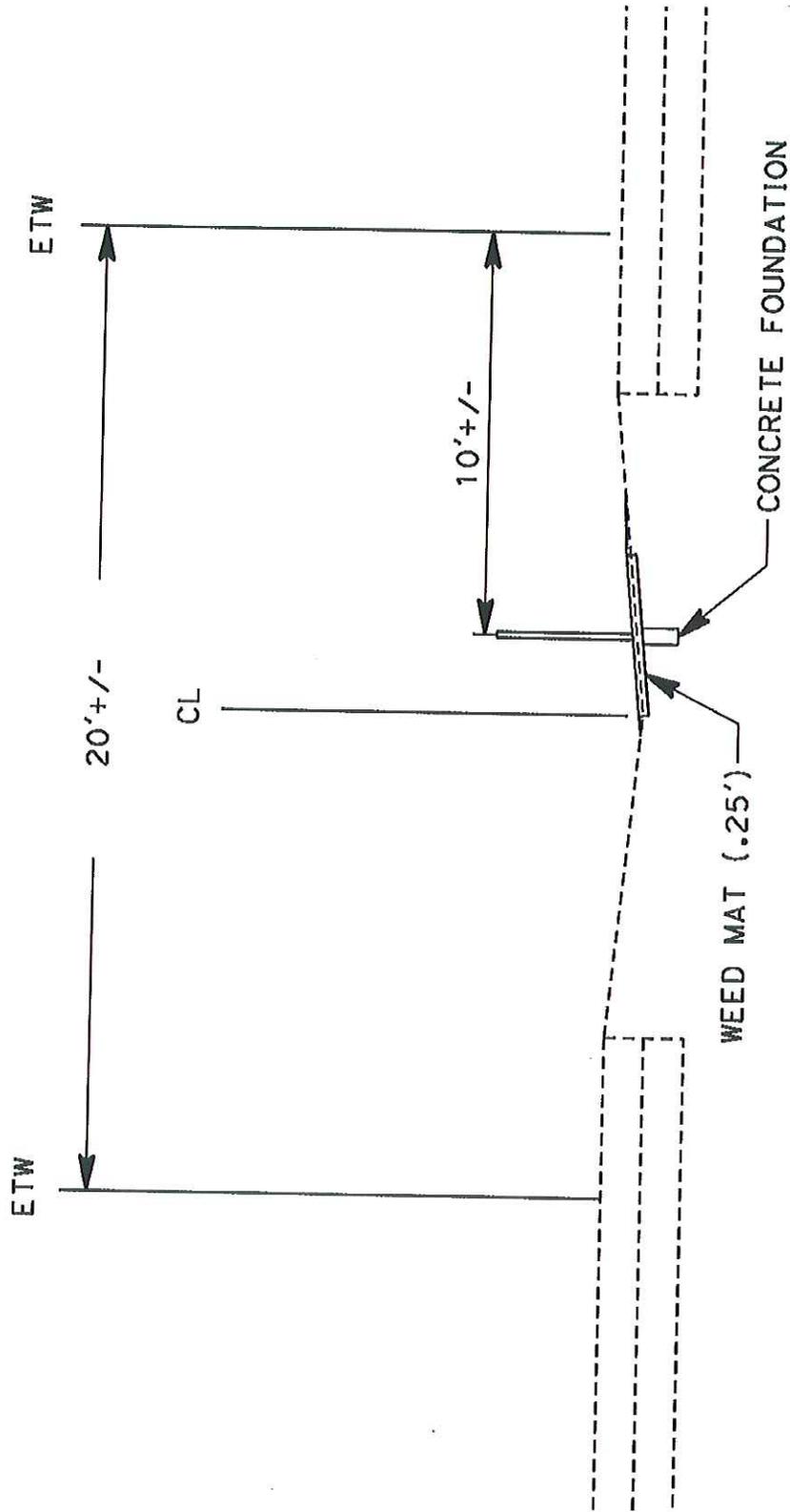
11/22/2011

File: 01-HUM-101- PM 54.3/56.8

Description: Cable Median Barrier

ITEM #	ITEM DESCRIPTION	QUANTITY	UNIT	PRICE	AMOUNT
74017	Prepare WPC Program	1	LS	\$1,100	\$1,100
74020	Water Pollution Control	1	LS	\$5,000	\$5,000
120090	Construction Area Signs	1	LS	\$10,000	\$10,000
74017	Construction Site Management	1	LS	\$4,000	\$4,000
190110	Aerial Deposited Lead Plan	1	LS	\$2,000	\$2,000
128650	Portable Concrete Washout	2	EA	\$3,500	\$7,000
160101	PCMS	4	EA	\$2,500	\$10,000
	Clearing and Grubbing	1	LS	\$15,000	\$15,000
	COZEPP	1	LS	\$10,000	\$10,000
	Imported material	1660	CY	\$35	\$58,100
	adjust drainage inlets	11	EA	\$1,500	\$16,500
	Cable Median Barrier	8,950	LF	\$15	\$134,250
	Cable Barrier Anchor	4	EA	\$2,500	\$10,000
	Minor Concrete (Weed Barrier)	5,642	SY	\$50	\$282,100
	Inline Terminal System	1	EA	\$3,000	\$3,000
	WB transition	1	EA	\$3,500	\$3,500
	MBGR (wood post)	400	LF	\$40	\$16,000
	End Block	1	EA	\$2,500	\$2,500
839566	Terminal System (Type CAT) w/ Backup	11	EA	\$4,650	\$51,150
839581	End Anchor Assembly (Type SFT)	11	EA	\$650	\$7,150
	<b>Subtotal</b>				\$648,350
120100	Traffic Control System (5% item cost)	1	LS	\$32,418	\$32,418
	Maintain Traffic (5% item cost)	1	LS	\$32,418	\$32,418
	<b>Subtotal</b>				\$713,185
	Misc. Minor Items			(5% Subtotal)	\$35,659
	Contingencies (30%)				\$213,956
	<b>TOTAL=</b>				<b>\$963,000</b>

\* Cable Barrier prices taken from recent District 2 project



TYPICAL CROSS SECTION

**PROGRAMMING SHEET - 2011/2012**

EA: 01-0b190

Proj Name: Eel River to Van Duzen Median Barrier

Project Manager: Richard Mullen

Co-Rle-PM: HUM-101- 054.3/056.8

Date: 11/22/11

Typo: SHOPP

**PROJECT SCHEDULE**

MILESTONE		DATE (STATUS)
Begin Environmental Document	M020	01/01/2012 (T)
Begin Project Report	M040	01/01/2012 (T)
Circulate Environmental Document (DED)	M120	
Project Approval & Environmental Document (PA&E)	M200	08/01/2012 (T)
District Submits Bridge Site Data to Structures	M221	
Right of Way Maps	M224	
Regular Right of Way	M225	
District Plans, Specifications & Estimates to DOE	M377	11/01/2012 (T)
Draft Structures Plans, Specifications & Estimates	M378	
District Plans, Specifications & Estimates (PS&E)	M380	01/01/2013 (T)
Right of Way Certification	M410	02/01/2013 (T)
Ready to List (RTL)	M460	03/01/2013 (T)
Headquarters Advise (HQ AD)	M480	05/01/2013 (T)
Approve Construction Contract	M500	07/01/2013 (T)
Contract Acceptance (CCA)	M600	12/01/2014 (T)
End Project	M800	12/01/2015 (T)

ESTIMATE	DATE	AMOUNT
ROADWAY	11/22/11	\$ 963
BRIDGE		\$ 0
Subtotal Const		\$ 963
RIGHT OF WAY		\$ 0
MITIGATION		\$ 0
Subtotal RW		\$ 0
<b>GRAND TOTAL</b>		<b>\$ 963</b>

EXISTING PROGRAMMING	
PAED	\$
PS&E	\$
RW - Sup	\$
RW - Cap	\$
Const - Sup	\$
Const - Cap	\$

\*Does not apply to RW Capital + Not Escalated ++ Only Escalated to 1 year into Future

**PROJECT COSTS BY SB45 CATEGORY**

CAPITAL COST ESTIMATE (Escalation Factor)	Prior Yrs+	11/12+	12/13 (3.5%)	13/14 (3.5%)	14/15 (3.5%)	15/16 (3.5%)	Future++ (3.5%)	Total	
Right of Way								\$ 0	
Construction						1105		\$ 1,105	
<b>CAPITAL COSTS TOTAL</b>								<b>\$ 1,105</b>	
SUPPORT COSTS (Escalation Factor)			(1.5%)	(1.5%)	(1.5%)	(1.5%)	(1.5%)		Sup/Cap
PAED		26	193	4				\$ 222	20%
PS&E			12	99	74	84	2	\$ 270	24%
Right of Way				35	3	3	8	\$ 49	4%
Construction						5	169	\$ 184	15%
<b>SUPPORT COSTS TOTAL</b>								<b>\$ 706</b>	<b>63%</b>
<b>TOTAL PROJECT COSTS</b>								<b>\$ 1,811</b>	

**PROJECT SUPPORT IN PYS**

	Prior Yrs	11/12	12/13	13/14	14/15	15/16	Future	Total	PY %
Environmental	0.00	0.03	0.39	0.10	0.06	0.04	0.10	0.72	14.15%
Design	0.00	0.03	0.27	0.11	0.17	0.11	0.02	0.71	13.95%
Engineering Services	0.00	0.01	0.09	0.07	0.10	0.11	0.10	0.48	9.43%
Surveys	0.00	0.02	0.24	0.34	0.01	0.02	0.11	0.74	14.64%
Right of Way	0.00	0.01	0.05	0.01	0.01	0.01	0.01	0.10	1.96%
Traffic	0.00	0.01	0.09	0.06	0.03	0.03	0.06	0.28	5.50%
Construction	0.00	0.00	0.04	0.02	0.02	0.07	0.67	0.72	14.15%
Project Management	0.00	0.05	0.13	0.09	0.05	0.01	0.05	0.38	7.47%
District Units*	0.00	0.04	0.42	0.11	0.06	0.04	0.11	0.78	15.32%
Subtotal Dist/Region Resources	0.00	0.20	1.72	0.91	0.51	0.44	1.13	4.91	96.46%
59-DES Project Development	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.20%
59-DES Structures Foundation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
59-Office Engineer	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.17	3.34%
59-DES Project Management	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
59-DES Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
59-DES Other Units**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
Subtotal DES Resources	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.18	3.54%
<b>TOTAL PYs</b>	<b>0.00</b>	<b>0.20</b>	<b>1.72</b>	<b>0.91</b>	<b>0.61</b>	<b>0.62</b>	<b>1.13</b>	<b>5.09</b>	

\*Admin, Ping, Maintenance

\*\*DES Admin, DES Ping, DES Maintenance

HRS/PYS = 1758

Comments: