

Memorandum

*Flex your power!
Be energy efficient!*

To: FUK NYAN KURNIAWAN
Program Advisor
Bridge Rail Upgrade

Date: September 16, 2011
File: 04-MRN-101-PM 1.5/14.0
201.112
EA 04-2A040K
Bridge Rail Upgrade

From: BETCY JOSEPH 
Project Management North

Subject: Project Initiation Document (PID) Refresher

The Project Scope Summary Report (PSSR) for the above-referenced project was approved on November 15, 2005 and was "refreshed" for cost in November 2007 to program in the 2008 State Highway Operation and Protection Program (SHOPP) but not programmed. This project has been "refreshed" for cost for programming in the 2012 SHOPP.

This project proposes to replace existing reinforced concrete baluster bridge rails with the latest standard bridge rails on the following bridges at various locations along Route 101 in Marin County:

- Location #1: Bridge #27-0006, N. Branch Gallinas Cr., 04-Mrn-101-PM 13.99 (KP 22.52)-SRF
- Location #2: Bridge #27-0008, Corte Madera Cr., 04-Mrn-101- PM 8.47 (KP 13.64)-Lksp
- Location #3: Bridge #27-0008k, Corte Madera Cr.(SB On-ramp), 04-Mrn-101- PM 8.47 (KP 13.64)-Lksp
- Location #4: Bridge #27-0008s, Corte Madera Cr. (NB Off-ramp), 04-Mrn-101- PM 8.47 (KP 13.64)-Lksp
- Location #5: Bridge #27-0033s, San Rafael Harbor, 04-Mrn-101-PM 10.81 (KP 17.40)-SRF
- Location #6: Bridge #27-0066, Spencer Ave OC, 04-Mrn-101- PM 1.52 (KP 2.45)-Saus
- Location #7: Bridge #27-0067, Monte Mar Dr UC, 04-Mrn-101- PM 1.68 (KP 2.70)-Saus

Preliminary Project Cost Estimate

- Current project cost estimate is \$5.59M
- RTL cost in October 2014 is \$6.32M
- Mid-year construction cost in June 2015 is \$6.48M.
- District 04 recommended an escalation rate of 4%, with 25% contingency for all escalation computations

Attachments: Updated cost estimate, updated Support Cost Estimate, Fact Sheet, updated RWDS, updated APS, updated PEAR, updated SWDR, and Risk Management Plan

PRELIMINARY PROJECT COST ESTIMATE

04-MRN-101

PM: 1.5/14.0

EA: 2A040K

Program Code: SHOPP 201.112

Project Description: Bridge Rail Upgrade

Limits: Various bridge locations along Route 101 in Marin County

Proposed Improvement (Scope): This project proposes to replace existing reinforced concrete baluster bridge rails with the latest standard bridge rails on bridges at various locations along Route 101 in Marin County.

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	<u>\$ 1,649,000</u>
TOTAL STRUCTURE ITEMS	<u>\$ 3,938,588</u>
SUBTOTAL CONSTRUCTION COSTS	<u>\$ 5,587,588</u>
TOTAL RIGHT OF WAY ITEMS	<u>\$ 5,000</u>
TOTAL PROJECT CAPITAL OUTLAY COSTS	<u>\$ 5,593,000</u>

Reviewed by District Program Manager



Fuk Nyan Kurniawan

Date:

09/16/11

Approved by Project Manager:



Betsy Joseph

Date:

9/16/11

04-MRN-101
 PM: 1.5/14.0
 EA: 2A040K
 Program Code: SHOPP 201.112

I. ROADWAY ITEMS

Section 1 - Earthwork

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Clearing & Grubbing	1	LS	\$ -	\$ -	
Subtotal Earthwork					\$ -

Section 2 - Pavement Structural
Section

	Quantity	Unit	Unit Price	Item Cost	Section Cost
				\$ -	
Subtotal Pavement Structural Items					\$ -

Section 3 - Drainage

	Quantity	Unit	Unit Price	Item Cost	Section Cost
		LS		\$ -	
Subtotal Drainage					\$ -

Section 4- Specialty Items

	Quantity	Unit	Unit Price	Item Cost	Esc. Item Cost
Erosion Control	1	LS	\$ 50,000	\$ 50,000	\$ 62,854
Hazmat Removal	1	LS	\$ 25,000	\$ 25,000	\$ 31,427
Crash Cushion	1	LS	\$ 25,000	\$ 25,000	\$ 31,427
Bridge approach Guard Rail	1	LS	\$ 105,000	\$ 105,000	\$ 131,993
Water Pollution Control (E.M.)	1	LS	\$ 80,000	\$ 80,000	\$ 100,566
Curb Ramps and Sidewalk	1	LS	\$ 380,000	\$ 380,000	\$ 380,000
Electrical Work	1	LS	\$ -	\$ -	\$ -
Prepare SWPPP	1	LS	\$ -	\$ -	\$ -
Lead Compliance Plan	1	LS	\$ -	\$ -	\$ -
Hazardous Waste Investigation	1	LS	\$ -	\$ -	\$ -
Temporary Construction Site WPC	1	LS	\$ -	\$ -	\$ -
Subtotal Specialty Items					\$ 738,266

04-MRN-101
 PM: 1.5/14.0
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Section 5 - Traffic Items

	Quantity	Unit	Unit Price	Item Cost	Esc. Item Cost
Trans Mgmt Plan (TMP) incl CMS, COZEI	1	LS	\$ 160,000	\$ 160,000	\$ 201,132
Traffic Control Sys (incl Lane Closure)	1	LS	\$ 75,000	\$ 75,000	\$ 94,280
<i>Subtotal Traffic Items</i>					\$ 295,412

Section 6 - Planting and Irrigation

Quantity	Unit	Unit Price	Item Cost	Section Cost
			\$ -	
<i>Subtotal Planting & Irrigation</i>				\$ -

Section 7 - Roadside Management and Safety

Quantity	Unit	Unit Price	Item Cost	Section Cost
Vegetation Control (Minor Concrete)	1	Yd2	\$ -	\$ -
Constuction Area Signs	1	LS	\$ -	\$ -
<i>Subtotal Roadside Management & Safety</i>				\$ -

TOTAL SECTIONS: 1 thru 7 **\$ 1,033,678**

Use \$ **1,034,000**

04-MRN-101
PM: 1.5/14.0
EA: 2A040K
Program Code: SHOPP 201.112

Section 8 - Minor Items

\$ 1,034,000 x 10% = \$ 103,400
(Subtotal Section 1-7)

Total Minor Items \$ 103,400

Section 9 - Roadway Mobilization

Subtotal Section (1-7) \$ 1,034,000
Minor Items (8) \$ 103,400
Sum (1-8) \$ 1,137,400 x 10% = \$ 113,740

Total Roadway Mobilization \$ 113,740

Section 10 - Roadway Additions

Supplemental Work

Subtotal Section (1-7) \$ 1,034,000
Minor Items (8) \$ 103,400
Sum (1-8) \$ 1,137,400 x 10% = \$ 113,740

Contingencies

Subtotal Section 1-7 \$ 1,034,000
Minor Items (8) \$ 103,400
Sum \$ 1,137,400 x 25% = \$ 284,350

Total Roadway Additions \$ 398,000

TOTAL ROADWAY ITEMS (Total of Sections 1-8) \$ 1,649,000

Estimate Prepared By: Nelson Bustos

Date: 9/8/2011

Phone #: 510-286-5526

Estimate Checked By: Robert Blanco

Date: 9/8/2011

Phone #: 510-286-5676

04-MRN-101
 PM: 1.5/14.0
 EA: 2A040K
 Program Code: SHOPP 201.112

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	_____	_____	_____
Structure Type	_____	_____	_____
Width (out to out) - (ft)	_____	_____	_____
Span Lengths - (ft)	_____	_____	_____
Total Area - (ft)	_____	_____	_____
Footing Type (pile/spread)	_____	_____	_____
Cost per ft2	_____	_____	_____
Total Cost for Structure	\$0	\$0	\$0

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Bridge Rail Replacement (Total)	1	LS	\$3,938,588	\$ 3,938,588	

Subtotal Structures Items \$ 3,938,588
(Sum of Total Cost for Structures)

Railroad Related Costs: _____

Subtotal Railroad Items \$ -

(Structures 30% Contingency and 10% Mobilization) Included

TOTAL STRUCTURES ITEMS \$ 3,938,588
(Sum of Structures Items & railroad Items)

COMMENTS: *Unit price for the Concrete Anchor Block was provided by Majid Madani, DES Technical Liaison Engineer on August 16, 2011.*

Estimate Prepared By: _____ N/A _____ Date: _____
 Phone #: _____

04-MRN-101
 PM: 1.5/14.0
 EA: 2A040K
 Program Code: SHOPP 201.112

III. RIGHT OF WAY ITEMS

	Escalated Value
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ _____
B. Utility Relocation (State Share)	\$ _____
C. Relocation Assistance	\$ _____
D. Clearance/Demolition	\$ _____
E. Title and Escrow Fees	\$ _____
TOTAL RIGHT OF WAY ITEMS	\$ 5,000
	<i>(Escalated Value)</i>

Anticipated Date of R/W Cert \$ _____
(Date to which Values are Escalated)

F. Construction Contract Work

Brief Description of Work:

Right of Way Branch Cost Estimate for Work * \$ _____

** This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. Do not include in Right of Way Items.*

COMMENTS: *** R/W Cost assumed as 1% of the total Construction Capital Cost for this project only*

Estimate Prepared By: _____ N/A

Date: _____
 Phone #: _____

Cost Estimate Breakdown for EA 2A040K (Original vs. Refreshed)

Nov 05 (Original) Sept 01, 2011* (Refreshed) RTL-Oct/2014 (Refreshed) Mid-Const 6/2015 (Refreshed) End-01/01/16 (Refreshed)

STRAIN and other Structural Work:

Bridge Rail Replacement	\$ 1,454,545	\$ 2,301,772	\$ 2,597,653	\$ 2,666,505	\$ 2,728,179
TR0	\$ -	\$ 230,177	\$ 259,765	\$ 266,651	\$ 272,818
Mobilization	\$ 145,455	\$ 281,328	\$ 317,491	\$ 325,907	\$ 333,444
Contingencies	\$ 400,000	\$ 1,125,311	\$ 1,269,964	\$ 1,303,625	\$ 1,333,777
Structural Costs Subtotal	\$ 1,999,999	\$ 3,938,588	\$ 4,444,874	\$ 4,562,687	\$ 4,668,218
District Work:					
Traffic Control	\$ 75,000	\$ 94,280	\$ 106,762	\$ 109,232	\$ 111,758
Bridge Approach Guard Rail	\$ 105,000	\$ 131,993	\$ 149,467	\$ 152,924	\$ 156,461
Water Pollution Control	\$ 80,000	\$ 100,566	\$ 113,880	\$ 116,514	\$ 119,208
Crash Cushions	\$ 25,000	\$ 31,427	\$ 35,587	\$ 36,411	\$ 37,253
Hazmat Removal	\$ 25,000	\$ 31,427	\$ 35,587	\$ 36,411	\$ 37,253
Erosion Control	\$ 50,000	\$ 62,854	\$ 71,175	\$ 72,821	\$ 74,505
Curb Ramps and Sidewalk	\$ -	\$ 380,000	\$ 430,308	\$ 440,260	\$ 450,443
TMP Element CMS, COZEEP	\$ 160,000	\$ 201,132	\$ 227,759	\$ 233,027	\$ 238,417
Others - Minor Items (10%)	\$ -	\$ 103,368	\$ 117,053	\$ 119,760	\$ 122,530
Others - Mobilization (10%)	\$ 30,000	\$ 113,705	\$ 128,758	\$ 131,736	\$ 134,783
Others - Supplemental Work (10%)	\$ -	\$ 113,705	\$ 128,758	\$ 131,736	\$ 134,783
Subtotal Costs	\$ 550,000	\$ 1,364,455	\$ 1,545,094	\$ 1,580,831	\$ 1,617,394
Contingencies = 25% of Subtotal	\$ 137,500	\$ 284,261	\$ 321,895	\$ 329,340	\$ 336,957
Costs	\$ 137,500	\$ 284,261	\$ 321,895	\$ 329,340	\$ 336,957
RW Cost	\$ -	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
District Costs Subtotal	\$ 687,500	\$ 1,653,717	\$ 1,871,989	\$ 1,915,170	\$ 1,959,351
TOTAL PROJECT COST	\$ 2,687,499	\$ 5,592,305	\$ 6,316,863	\$ 6,477,858	\$ 6,627,569
		say \$5.593M	say \$6.317M	say \$6.478M	say \$6.628M

SUPPORT COST:

PA/ED		\$ 1,044,000		\$ 1,209,415	
DES		\$ 594,000		\$ 688,116	
ROW		\$ 54,000		\$ 62,556	
CONST		\$ 247,500		\$ 286,715	
TOTAL SUPPORT COST		\$ 1,939,500		\$ 2,246,802	
% TOTAL SUPPORT COST OF TOTAL PROJECT CAPITAL OUTLAY COSTS		35%		35%	

T0: Office of Advance Planning – PSR II

Date 9/8/2011
Dist 4 Co Mrn Rte 101
PM 1.5/14.0

Attention: ROBERT BLANCO
District Branch Chief

EA 2A040K (No EFIS ID yet)

From: ENID LAU
Right of Way Resource Manager

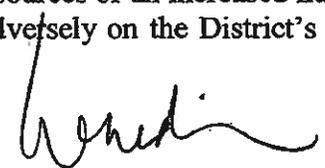
Bridge Rail Replacement
D.S. #5983

Subject: Current Estimated Right of Way Costs

We have completed an estimate of the right of way costs for the above referenced project based on maps we received from you on August 18, 2011 and the following assumptions and limiting conditions.

- 1. The mapping did not provide sufficient detail to determine the limits of the right of way required.
- 2. The transportation facilities have not been sufficiently designed so our estimator could determine the damages to any of the remainder parcels affected by the project.
- 3. Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.
- 4. This estimate does not include \$ _____ right of way costs previously incurred on the project, which may affect the total project right of way costs for programming purposes.
- 5. We have determined there are no right of way functional involvements in the proposed project at this time, as designed.

Right of Way Lead Time will require a minimum of 6 months after we begin receiving final right of way requirements (PYPSCAN node No. 224), necessary environmental clearance has been obtained, and freeway agreements have been approved. From the date of receipt of final right of way requirements (PYPSCAN node No. 265), we will require a minimum of 7 months prior to the date of certification of the project. Shorter lead times will require either more right of way resources or an increased number of condemnation suits to be filed. Either of these actions may reflect adversely on the District's other programs or our public image generally.



Right of Way Resource Manager

Attachments:

- Right of Way Data Sheet – Page One (always required)
- Right of Way Data Sheet – All Pages (required when interest in real property is being acquired)
- Utility Information Sheet
- Railroad Information Sheet

RIGHT OF WAY DATA SHEET

TO: Office of Advance Planning
 PSR II

Date 8/31/2011 D.S. # 5983
 Dist. 04 Co. Mrn Rte 101 PM 1.5/14.0
 EA 04-2A040K (04)

ATTN: ROBERT BLANCO

Project Description: Replace Bridge Rails

SUBJECT: Right of Way Data - Alternate No. _____

1. Right of Way Cost Estimate:

	Current Value (Future Use)	Escalation Rate	Escalated Value
A. Acquisition, including Excess Lands, Damages, and Goodwill	<u>\$0.00</u>	%	<u>\$0.00</u>
Project Permit Fees			<u>\$0.00</u>
Grantor's Appraisal Cost			<u>\$0.00</u>
B. Utility Relocation (State Share)	<u>\$0.00</u>	%	<u>\$0.00</u>
C. Railroad (from page 6)			<u>\$0.00</u>
D. Relocation Assistance	<u>\$0.00</u>	%	<u>\$0.00</u>
E. Clearance Demolition	<u>\$0.00</u>	%	<u>\$0.00</u>
F. Title and Escrow Fees	<u>\$0.00</u>	%	<u>\$0.00</u>
G. TOTAL ESCALATED VALUE			<u>\$0.00</u>
H. Construction Contract Work	<u>\$0.00</u>		

2. Anticipated Date of Right of Way Certification

7/2014

3. Parcel Data:

Type	Dual/Appr	Utilities	RR Involvements
X _____		U4-1 _____	None _____
A _____		-2 _____	C&M Agrmt _____
B _____		-3 _____	Svc Cont. _____
C _____		-4 _____	Design _____
D _____		U5-7 <u>2</u>	Const. _____
E <u>XXXX</u>		-8 _____	Lic/RE/Clauses <u>1</u>
F <u>XXXX</u>		-9 _____	
Misc R/W Work			
RAP Displ			<u>0</u>
Clear Demo			<u>0</u>
Const. Permits			<u>0</u>
Condemnation			<u>0</u>
Total <u>0</u>			

Areas: Right of Way

Enter PMCS Screens

Enter AGRE Screen (Railroad Data Only)

No. Excess Parcels

By M. C. Hunt

Excess _____

By _____

4. Are there any major items of construction contract work?
Yes No (If yes, explain)
5. Provide a general description of the right of way and excess lands required(zoning, use, major improvements critical or sensitive parcels, etc.).
No right of way required.
6. Is there an effect on assessed valuation? (If yes explain)
Yes Not Significant No
7. Are utility facilities or rights of way affected? Yes No
If yes, attach Utility Information Sheet Exhibit 01-01-05)
8. Are railroad facilities or rights of way affected? Yes No
If yes, attach Railroad Information Sheet Exhibit 01-01-06)
9. Were any previously unidentified sites with hazardous waste and/or material found?
Yes None evident
(If yes, attach memorandum per Procedural Handbook Volume 1, Section 101.011)
10. Are RAP displacements required? Yes No
(If yes, provide the following information)
- No. of single family _____ No. of business/non profit _____
No. of multi-family _____ No. of farms _____
- Based on Draft / Final Relocation Impact Statement / Study dated _____, it is anticipated that sufficient replacement housing will / will not be available without Last Resort Housing.
11. Are material borrow and / or disposal sites required? Yes No
(If yes, explain)
12. Are there potential relinquishments / abandonments? Yes No
(If yes, explain)
13. Are there any existing and/or potential Airspace sites? Yes No
(If yes, explain)

14. Are there Environmental Mitigation costs? Yes No
(If yes, explain)

15. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if District proposes less than PMCS lead time and / or if significant pressures for project advancement are anticipated.)

PYPSCAN lead time (from Regular RW to project certification) 6 months.

16. Is it anticipated that all Right of Way work be performed by CALTRANS staff?
Yes No (If no, discuss)

Assumptions and Limiting Conditions

- This data sheet was completed without a hazardous waste/materials report.
- Information on this data sheet was based on maps provided by Robert Blanco on 8/18/2011

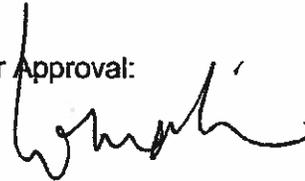
Evaluation Prepared By: Renata Frey

Right of Way: Name Renata Frey Date 8/31/11

Railroad: Name Pat G... Date 8-31-11

Utilities: Name Joe Munnick Date 8-31-11

Recommended for Approval:



Right of Way Capital Cost Coordinator

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



Chief, RW Appraisal Services

9-7-11

Date

cc: Program Manager
Project Manger

RAILROAD INFORMATION SHEET

1. Describe railroad facilities or right of way affected.
 SMART

2. When branch lines or spurs are affected, would acquisition and/or payment of damages to businesses and/or industries served by the railroad facility be more cost effective than construction of a facility to perpetuate the rail services? (See Procedural Handbook Volume 4a, Chapter 440 for further detail.)
 Yes No (If yes, explain)

3. Discuss types of agreements and rights required from the railroads. Are grade crossings requiring service contracts, or grade separations requiring construction and maintenance agreements involved?

4. Remarks (Nonoperating railroad right of way involved?)

5. PMCS Input Information

	<u>RR Involvements</u>	<u>Estimated Cost</u>
None	_____	
C&M Agreement	_____	\$ _____
Svc Contract	_____	\$ _____
	Design _____	
	Const. _____	
Lic/RE/Clauses	<u>1</u>	
TOTAL ESTIMATED COST		\$ <u>0</u>

Prepared by: Pat Coggins

Pat Coggins
 Right of Way Railroad Coordinator

8-31-11
 Date

RCVD BY: RWP

IN EST: 8/30/2011

OUT EST: 9/7/2011

BRIDGE: Monte Mar Dr (Left and Right) BR. No.: 27-0067

DISTRICT: 04

TYPE:

RTE: 101

CU: 04-000

CO: Mrn

EA: 04-2A040K

PM:

LENGTH: 105.00 WIDTH: 35.00 AREA (SF)= 3,675

DESIGN SECTION: 16

OF STRUCTURES IN PROJECT : 07

EST. NO.

PRICES BY : COST INDEX:

PRICES CHECKED BY : DATE:

QUANTITIES BY: S. Kotalawala DATE: 8/30/2011

	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	PRICE	AMOUNT
1	TEMPORARY RAILING	K	LF	525	\$17.00	\$8,925.00
2	REMOVE CONCRETE DECK		CY			
3	REMOVE CONCRETE BARRIER(LEFT+RIGHT)	BALUSTER	LF	104	\$30.00	\$3,120.00
4	NEW CONCRETE BARRIER	80.00	LF	105	\$250.00	\$26,250.00
5	TUBULAR STEEL TEMPORARY PLATFORM		LB	3,873	Incl. in item #3	
6	BAR REINFORCING STEEL (BRIDGE)		LB			
7	DRILL & BOND DOWELS FOR CONCRETE BARRIERS(#5 BAR)	1 1/8"X6 5/8" HOLE	LF	132	\$35.00	\$4,620.00
8	DRILL & BOND DOWELS FOR DECK OVERHANG (# 6 BAR)	(7/8"X6 5/8" HOLE)	LF			
9	EPOXY FITTED ALL THREADED RODS(3/4" THREAD)	(7/8"X6 5/8" HOLE)	LF	21	Incl. in item #3	
10	TIMBER BOARDS TEMPORARY RAILING		BDFT	3,240	Incl. in item #3	
11	REFINISH BRIDGE DECK		SF	157	\$25.00	\$3,925.00
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

SUBTOTAL \$46,840

TIME RELATED OVERHEAD \$4,684

MOBILIZATION (@ 10 %) \$5,725

SUBTOTAL BRIDGE ITEMS \$57,249

CONTINGENCIES @ 40% \$22,900

BRIDGE TOTAL COST \$80,148

COST PER SQ. FOOT \$21.81

BRIDGE REMOVAL (CONTINGENCIES INCL.)

WORK BY RAILROAD OR UTILITY FORCES

GRAND TOTAL \$80,148

BUDGET ESTIMATE AS OF 9/7/11 \$80,000

ROUTING

1. DES SECTION
2. OFFICE OF BRIDGE DESIGN - NORTH
3. OFFICE OF BRIDGE DESIGN - CENTRAL
4. OFFICE OF BRIDGE DESIGN - SOUTH
5. OFFICE OF BRIDGE DESIGN - WEST
6. OFFICE OF BRIDGE DESIGN SOUTHERN CALIFORNIA

COMMENTS:

RCVD BY: RWP

IN EST: 8/30/2011

OUT EST: 9/7/2011

BRIDGE: Spencer Ave OC (Left and Right) BR. No.: 27-0066

DISTRICT: 04

TYPE:

RTE: 101

CU: 04-000

CO: Mrn

EA: 04-2A040k

PM:

LENGTH: 314.00 WIDTH: 33.92 AREA (SF)= 10,651

DESIGN SECTION: 16

OF STRUCTURES IN PROJECT : 07 EST. NO.

PRICES BY : EMC COST INDEX:

PRICES CHECKED BY : DATE:

QUANTITIES BY: S. Kotalawala DATE: 8/30/2011

	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	PRICE	AMOUNT
1	TEMPORARY RAILING	K	LF	1,048	\$17.00	\$17,816.00
2	REMOVE CONCRETE DECK		CY	15	\$1,000.00	\$15,000.00
3	REMOVE CONCRETE BARRIER(LEFT+RIGHT)	BALUSTER	LF	628	\$30.00	\$18,840.00
4	NEW CONCRETE BARRIER	80.00	LF	628	\$250.00	\$157,000.00
5	TUBULAR STEEL TEMPORARY PLATFORM		LB	25,076	Incl. in item #3	
6	BAR REINFORCING STEEL (BRIDGE)		LB	9,553	\$2.00	\$19,106.00
7	DRILL & BOND DOWELS FOR CONCRETE BARRIERS(#5 BAR)	1 1/8"X6 5/8" HOLE	LF	396	\$35.00	\$13,860.00
8	DRILL & BOND DOWELS FOR DECK OVERHANG (# 6 BAR)	(7/8"X6 5/8" HOLE)	LF	347	\$35.00	\$12,145.00
9	EPOXY FITTED ALL THREADED RODS(3/4" THREAD)	(7/8"X6 5/8" HOLE)	LF	72	Incl. in item #3	
10	TIMBER BOARDS TEMPORARY RAILING		BDFT	26,376	Incl. in item #3	
11	REFINISH BRIDGE DECK		SF	236	\$25.00	\$5,900.00
12	STRUCTURAL CONCRETE, BRIDGE		CY			
13	NEW CONCRETE DECK		CY	21	\$750.00	\$15,750.00
14	STRUCTURAL CONCRETE, APPROACH SLAB		CY			
15	JOINT SEAL	B	LF	98	\$65.00	\$6,370.00
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

SUBTOTAL \$281,787

TIME RELATED OVERHEAD \$28,179

MOBILIZATION (@ 10 %) \$34,441

SUBTOTAL BRIDGE ITEMS \$344,406

CONTINGENCIES @ 40% \$137,763

BRIDGE TOTAL COST \$482,169

COST PER SQ. FOOT \$45.27

BRIDGE REMOVAL (CONTINGENCIES INCL.)

WORK BY RAILROAD OR UTILITY FORCES

GRAND TOTAL \$482,169

BUDGET ESTIMATE AS OF 9/7/11 \$482,000

ROUTING

1. DES SECTION
2. OFFICE OF BRIDGE DESIGN - NORTH
3. OFFICE OF BRIDGE DESIGN - CENTRAL
4. OFFICE OF BRIDGE DESIGN - SOUTH
5. OFFICE OF BRIDGE DESIGN - WEST
6. OFFICE OF BRIDGE DESIGN SOUTHERN CALIFORNIA

COMMENTS:

RCVD BY: RWP

IN EST: 8/30/2011

OUT EST: 9/7/2011

BRIDGE: Corte Madera (SB) On Ramp (Left + Right)

BR. No.: 27-0008K

DISTRICT: 04

TYPE:

RTE: 101

CU: 04-000

CO: Mm

EA: 04-2A040k

PM:

LENGTH: 2,010.00 WIDTH: 33.17 AREA (SF)= 66,672

DESIGN SECTION: 16

OF STRUCTURES IN PROJECT : 07

EST. NO.

PRICES BY :

COST INDEX:

PRICES CHECKED BY :

DATE:

QUANTITIES BY:

S. Kotalawala

DATE: 8/30/2011

	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	PRICE	AMOUNT
1	TEMPORARY RAILING	K	LF	2,520	\$17.00	\$42,840.00
2	REMOVE CONCRETE DECK		CY			
3	REMOVE CONCRETE BARRIER(LEFT+RIGHT)	BALUSTER	LF	2,010	\$30.00	\$60,300.00
4	NEW CONCRETE BARRIER	80.00	LF	2,010	\$250.00	\$502,500.00
5	TUBULAR STEEL TEMPORARY PLATFORM		LB	60,949	Incl. in item #3	
6	BAR REINFORCING STEEL (BRIDGE)		LB			
7	DRILL & BOND DOWELS FOR CONCRETE BARRIERS(#5 BAR)	1 1/8"X6 5/8" HOLE	LF	2,532	\$35.00	\$88,620.00
8	DRILL & BOND DOWELS FOR DECK OVERHANG (# 6 BAR)	(7/8"X6 5/8" HOLE)	LF			
9	EPOXY FITTED ALL THREADED RODS(3/4" THREAD)	(7/8"X6 5/8" HOLE)	LF	224	Incl. in item #3	
10	TIMBER BOARDS TEMPORARY RAILING		BDFT	52,252	Incl. in item #3	
11	REFINISH BRIDGE DECK		SF	3,015	\$25.00	\$75,375.00
12	STRUCTURAL CONCRETE, APPROACH SLAB		CY			
13	JOINT SEAL	A	LF	331	\$20.00	\$6,620.00
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SUBTOTAL	\$776,255
TIME RELATED OVERHEAD	\$77,626
MOBILIZATION (@ 10 %)	\$94,876
SUBTOTAL BRIDGE ITEMS	\$948,756
CONTINGENCIES @ 40%	\$379,502
BRIDGE TOTAL COST	\$1,328,259
COST PER SQ. FOOT	\$19.92
BRIDGE REMOVAL (CONTINGENCIES INCL.)	
WORK BY RAILROAD OR UTILITY FORCES	
GRAND TOTAL	\$1,328,259
BUDGET ESTIMATE AS OF 9/7/11	\$1,328,000

ROUTING

1. DES SECTION
2. OFFICE OF BRIDGE DESIGN - NORTH
3. OFFICE OF BRIDGE DESIGN - CENTRAL
4. OFFICE OF BRIDGE DESIGN - SOUTH
5. OFFICE OF BRIDGE DESIGN - WEST
6. OFFICE OF BRIDGE DESIGN SOUTHERN CALIFORNIA

COMMENTS:

RCVD BY: _____

IN EST: 8/30/2011

OUT EST: 9/7/2011

BRIDGE: CORTE MADERA CREEK BRIDGE BR. No.: 27-0008S

DISTRICT: 04

TYPE: Barrier Replacement

RTE: 101

CU: 04 000

CO: MRN

EA: 2A040K

PM: 1.51614/14.0429

LENGTH: _____ WIDTH: _____ AREA (SF)= _____

DESIGN SECTION: 16

OF STRUCTURES IN PROJECT : 07 EST. NO. _____

PRICES BY : _____ COST INDEX: _____

PRICES CHECKED BY : _____ DATE: _____

QUANTITIES BY: Ghiath Taleb-Agha DATE: 8/30/2011

	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	PRICE	AMOUNT
1	CONCRETE BARRIER	80.00	LF	1,939	\$250.00	\$484,750.00
2	TEMPORARY RAILING	K	LF	2,580	\$17.00	\$43,860.00
3	REMOVE EXISTING BARRIER	BALUSTER	LF	1,939	\$30.00	\$58,170.00
4						
5	MISCELLANEOUS METAL (TEMP PLATFORMS)	HSS	LB	54,665.25	Incl. in item #1	
6	STRUCTURAL TIMBER	DFL#2	MBF		Incl. in item #1	
7	REFINISH BRIDGE DECK (DECK SURF.)		Sq.ft.	1,454	\$25.00	\$36,356.25
8	GROUTED ANCHORS (TEMP PLATFORMS)	EMPOXY	EA.	390	Incl. in item #1	
9	DRILL/BOND DOWELS	GROUTED	LF	1,819	\$35.00	\$63,656.25
10	REMOVE, KEEP & REINSTALL ELECTROLIER		EA.	13	\$4,100.00	\$53,300.00
11	PAINT BR. NAME AND NUMBER		EA.	3	\$10.00	\$30.00
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SUBTOTAL	\$740,123
TIME RELATED OVERHEAD	\$74,012
MOBILIZATION (@ 10 %)	\$90,459
SUBTOTAL BRIDGE ITEMS	\$904,594
CONTINGENCIES @ 40%	\$361,838
BRIDGE TOTAL COST	\$1,266,432
COST PER SQ. FOOT	
BRIDGE REMOVAL (CONTINGENCIES INCL.)	
WORK BY RAILROAD OR UTILITY FORCES	
GRAND TOTAL	\$1,266,432
BUDGET ESTIMATE AS OF 9/7/11	\$1,266,000

ROUTING

1. DES SECTION
2. OFFICE OF BRIDGE DESIGN - NORTH
3. OFFICE OF BRIDGE DESIGN - CENTRAL
4. OFFICE OF BRIDGE DESIGN - SOUTH
5. OFFICE OF BRIDGE DESIGN - WEST
6. OFFICE OF BRIDGE DESIGN SOUTHERN CALIFORNIA

COMMENTS: _____

RCVD BY: _____

IN EST: 8/30/2011

OUT EST: 9/7/2011

BRIDGE: CORTE MADERA CREEK BRIDGE in Larkspur BR. No.: 27-0008

DISTRICT: 04

TYPE: Barrier Replacement

RTE: 101

CU: 04 000

CO: MRN

EA: 2A040K

PM: 1.51614/14.0429

LENGTH: _____ WIDTH: _____ AREA (SF)= _____

DESIGN SECTION: 16

OF STRUCTURES IN PROJECT : 07 EST. NO. _____

PRICES BY : _____ COST INDEX: _____

PRICES CHECKED BY : _____ DATE: _____

QUANTITIES BY: Ghiath Taleb-Agha DATE: 8/30/2011

	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	PRICE	AMOUNT
1	CONCRETE BARRIER	80.00	LF	922	\$250.00	\$230,500.00
2	TEMPORARY RAILING	K	LF	1,140	\$17.00	\$19,380.00
3	REMOVE EXISTING BARRIER	BALUSTER	LF	922	\$30.00	\$27,660.00
4						
5	MISCELLANEOUS METAL (TEMP PLATFORMS)	HSS	LB	26,349.00	Incl. in item #1	
6	STRUCTURAL TIMBER	DFL#2	MBF	27,291.000	Incl. in item #1	
7	REFINISH BRIDGE DECK (DECK SURF.)		Sq.ft.	1,614	\$25.00	\$40,350.00
8	GROUTED ANCHORS (TEMP PLATFORMS)	EMPOXY	EA.	188	Incl. in item #1	
9	DRILL/BOND DOWELS	GROUTED	LF	872	\$35.00	\$30,531.90
10	PAINT BR. NAME AND NUMBER		EA.	1	\$10.00	\$10.00
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SUBTOTAL \$348,432

TIME RELATED OVERHEAD \$34,843

MOBILIZATION (@ 10 %) \$42,586

SUBTOTAL BRIDGE ITEMS \$425,861

CONTINGENCIES @ 40% \$170,344

BRIDGE TOTAL COST \$596,206

COST PER SQ. FOOT

BRIDGE REMOVAL (CONTINGENCIES INCL.)

WORK BY RAILROAD OR UTILITY FORCES

GRAND TOTAL \$596,206

BUDGET ESTIMATE AS OF 9/7/11 \$596,000

ROUTING

1. DES SECTION
2. OFFICE OF BRIDGE DESIGN - NORTH
3. OFFICE OF BRIDGE DESIGN - CENTRAL
4. OFFICE OF BRIDGE DESIGN - SOUTH
5. OFFICE OF BRIDGE DESIGN - WEST
6. OFFICE OF BRIDGE DESIGN SOUTHERN CALIFORNIA

COMMENTS: _____

Revised - August 30, 2011

RCVD BY: _____

IN EST: 8/30/2011

OUT EST: 9/7/2011

BRIDGE: San Rafael Harbor (NB Off Ramp) BR. No.: 27-0033S

DISTRICT: 04

TYPE: Barrier Replacement

RTE: 101

CU: 04 000

CO: MRN

EA: 2A040K

PM: 1.51614/14.0429

LENGTH: _____ WIDTH: _____ AREA (SF)= _____

DESIGN SECTION: 16

OF STRUCTURES IN PROJECT : 07 EST. NO. _____

PRICES BY : _____ COST INDEX: _____

PRICES CHECKED BY : _____ DATE: _____

QUANTITIES BY: Ghiath Taleb-Agha DATE: 8/30/2011

	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	PRICE	AMOUNT
1	CONCRETE BARRIER	80.00	LF	191	\$250.00	\$47,750.00
2	TEMPORARY RAILING	K	LF	620	\$17.00	\$10,540.00
3	REMOVE EXISTING BARRIER	BALUSTER	LF	191	\$30.00	\$5,730.00
4						
5	MISCELLANEOUS METAL (TEMP PLATFORMS)	HSS	LB	5,887.00	Incl. in item #1	
6	STRUCTURAL TIMBER	DFL#2	MBF	5,655.000	Incl. in item #1	
7	REFINISH BRIDGE DECK (DECK SURF.)		Sq.ft.	334	\$25.00	\$8,350.00
8	GROUTED ANCHORS (TEMP PLATFORMS)	EMPOXY	EA.	42	Incl. in item #1	
9	DRILL/BOND DOWELS	GROUTED	LF	108	\$35.00	\$3,780.00
10	PAINT BR. NAME AND NUMBER		EA.	1	\$10.00	\$10.00
11	INSTALL NEW ELECTRICAL CABLES		LF	191		
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SUBTOTAL \$76,160

TIME RELATED OVERHEAD \$7,616

MOBILIZATION (@ 10 %) \$9,308

SUBTOTAL BRIDGE ITEMS \$93,084

CONTINGENCIES @ 40% \$37,234

BRIDGE TOTAL COST \$130,318

COST PER SQ. FOOT

BRIDGE REMOVAL (CONTINGENCIES INCL.)

WORK BY RAILROAD OR UTILITY FORCES

GRAND TOTAL \$130,318

BUDGET ESTIMATE AS OF 9/7/11 \$130,000

ROUTING

1. DES SECTION
2. OFFICE OF BRIDGE DESIGN - NORTH.
3. OFFICE OF BRIDGE DESIGN - CENTRAL
4. OFFICE OF BRIDGE DESIGN - SOUTH
5. OFFICE OF BRIDGE DESIGN - WEST
6. OFFICE OF BRIDGE DESIGN SOUTHERN CALIFORNIA

COMMENTS: _____

RCVD BY: _____

IN EST: 8/30/2011

OUT EST: 9/7/2011

BRIDGE: North Branch Gallinas Creek Bridge BR. No.: 27-0006

DISTRICT: 04

TYPE: Barrier Replacement

RTE: 101

CU: 04 000

CO: MRN

EA: 2A040K

PM: 1.51614/14.0429

LENGTH: _____ WIDTH: _____ AREA (SF)= _____

DESIGN SECTION: 16

OF STRUCTURES IN PROJECT : 07 EST. NO. _____

PRICES BY : _____ COST INDEX: _____

PRICES CHECKED BY : _____ DATE: _____

QUANTITIES BY: Ghiath Taleb-Agha DATE: 8/30/2011

	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	PRICE	AMOUNT
1	CONCRETE BARRIER	80.00	LF	72	\$250.00	\$18,000.00
2	TEMPORARY RAILING	K	LF	520	\$17.00	\$8,840.00
3	REMOVE EXISTING BARRIER	BALUSTER	LF	72	\$30.00	\$2,160.00
4						
5	MISCELLANEOUS METAL (TEMP PLATFORMS)	HSS	LB	2,803.00	Incl. in item #1	
6	STRUCTURAL TIMBER	DFL#2	MBF	2,124.000	Incl. in item #1	
7	REFINISH BRIDGE DECK (DECK SURF.)		Sq.ft.	30	\$25.00	\$750.00
8	GROUTED ANCHORS (TEMP PLATFORMS)	EMPOXY	EA.	20	Incl. in item #1	
9	DRILL/BOND DOWELS	GROUTED	LF	69	\$35.00	\$2,415.00
10	PAINT BR. NAME AND NUMBER		EA.	1	\$10.00	\$10.00
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SUBTOTAL \$32,175

TIME RELATED OVERHEAD \$3,218

MOBILIZATION (@ 10 %) \$3,933

SUBTOTAL BRIDGE ITEMS \$39,325

CONTINGENCIES @ 40% \$15,730

BRIDGE TOTAL COST \$55,055

COST PER SQ. FOOT

BRIDGE REMOVAL (CONTINGENCIES INCL.)

WORK BY RAILROAD OR UTILITY FORCES

GRAND TOTAL \$55,055

BUDGET ESTIMATE AS OF 9/7/11 \$55,000

ROUTING

1. DES SECTION
2. OFFICE OF BRIDGE DESIGN - NORTH
3. OFFICE OF BRIDGE DESIGN - CENTRAL
4. OFFICE OF BRIDGE DESIGN - SOUTH
5. OFFICE OF BRIDGE DESIGN - WEST
6. OFFICE OF BRIDGE DESIGN SOUTHERN CALIFORNIA

COMMENTS: _____



PRELIMINARY ENVIRONMENTAL ANALYSIS REPORT

Project Information

District 04	County MRN	Route 101	PM 1.52 – 14.00	EA 2A040K
Project Title: Replace Bridge Rails at Various Locations on Route 101 in Marin County				
Project Manager Betsy Joseph			Phone # 510.286.5097	
Project Engineer Nelson Bustos			Phone # 510.286.5526	
Environmental Office Chief/Manager Melanie Brent			Phone # 510.286.5231	
PEAR Preparer Phillip Badal			Phone # 510.622.1746	

Project Description

Purpose and Need

The project is to replace existing reinforced concrete baluster bridge rails with latest standard rails in Marin County on Route 101 at North Branch Gallinas Creek and San Rafael Harbor in San Rafael, at Corte Madera Creek in Larkspur, and at Spencer Avenue Overcrossing and Monte Mar Drive Undercrossing in Sausalito.

Description of work

This project will replace existing metal beam guard rail (MBGR) and reinforced concrete baluster bridge rails with the latest standard bridge rails in Marin County on Route 101 at North Branch Gallinas Creek and San Rafael Harbor in San Rafael, at Corte Madera Creek in Larkspur, and at Spencer Avenue over-crossing and the Monte Mar Drive under-crossing in Sausalito. Updated bridge rails will be concrete barriers, Type 732, and Type 80, which provide enhanced ability to prevent an errant vehicle from leaving the structure and reduce the severity potential crashes.

Alternatives

Build alternative is described above. If this project is not complete, the existing non-standard bridge rails will remain as is.

Anticipated Environmental Approval

CEQA		NEPA	
Environmental Determination			
Statutory Exemption	<input type="checkbox"/>		
Categorical Exemption	<input checked="" type="checkbox"/>	Categorical Exclusion	<input checked="" type="checkbox"/>
Environmental Document			
Initial Study or Focused Initial Study with proposed Negative Declaration (ND) or Mitigated ND	<input type="checkbox"/>	Routine Environmental Assessment with proposed Finding of No Significant Impact	<input type="checkbox"/>
		Complex Environmental Assessment with proposed Finding of No Significant Impact	<input type="checkbox"/>
Environmental Impact Report	<input type="checkbox"/>	Environmental Impact Statement	<input type="checkbox"/>
CEQA Lead Agency (if determined): The California Department of Transportation (Caltrans) is the lead CEQA Agency for the project. FHWA assigned, and Caltrans has assumed, all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA.			
Estimated length of time (months) to obtain environmental approval:			6
Estimated person hours to complete identified tasks: Completing environmental document and work through construction phase.			6200

PEAR Technical Summaries

Visual/Aesthetics:

BCDC requested the use of Type 80 railing on Corte Madera Creek mainline to enhance motorist's view of the scenery.

Water Quality and Storm Water Runoff:

Construction will adhere to the Department Statewide National Pollutant Discharge Elimination System (NPDES) Permit. To comply with this permit, a Water Pollution Control Program (WPCP) must be developed and implemented, per Standard Special Provision (SSP) 07-340. Pursuant to the Department Stormwater Management Plan (SWMP), temporary and permanent Best Management Practices (BMPs) shall be considered and incorporated, as necessary, using Best Available Technology (BAT) to the Maximum Extent Practicable (MEP). Such BMPs are recommended, in order to minimize, or prevent, any potential increased impact to existing water quality.

Cultural Resources:

No potential to affect historical properties. No concern regarding archeology due to the fact that no ground disturbing activities are proposed. Additionally, no concerns regarding the built environment, as no significant buildings/structures are present.

Hazardous Waste/Materials:

The project structures will need to be tested for asbestos during the design phase. Funds have already been allocated in the project for this task.

Biological Environment:

The habitat for the project sites is Highway 101, which is a very heavily traveled, 6-lane divided highway.

Potential impacts of the bridge rail replacement project on biological conditions along SR-101, in Marin County, were assessed by Steven Harris, Caltrans Biologist on 7-9 September 2011. Mr. Harris reviewed the project design, biological surveys, CNDDDB, aerial photography, and maps of State and Federally Listed Species to determine potential project impacts on listed species, wetland, waters of the State, and waters of the U.S. The California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDDB) and the U.S. Fish and Wildlife Service (USFWS) list threatened/endangered species that have the potential to occur in the San Quentin, San Francisco North, San Rafael, and Point Bonita U.S. Geological Survey (USGS) Quadrangles, which cover the project area. However, the highly disturbed and urban locations of this project make it unlikely that the project will impact any T/E species.

Birds:

Compliance with the Migratory Bird Treaty Act (MBTA) regarding nesting birds will be required. Surveys for migratory birds that may be nesting under project the bridges may be required. Exclusionary netting and limiting the construction timeframe to avoid nesting season (February 15 to September 1) may be required. If an active bird nest with eggs is found, the nests must be monitored before and during the construction period to ensure that the birds are not disturbed. Project work will occur within the paved roadway; therefore, biological impacts are expected to be minimal.

Bats:

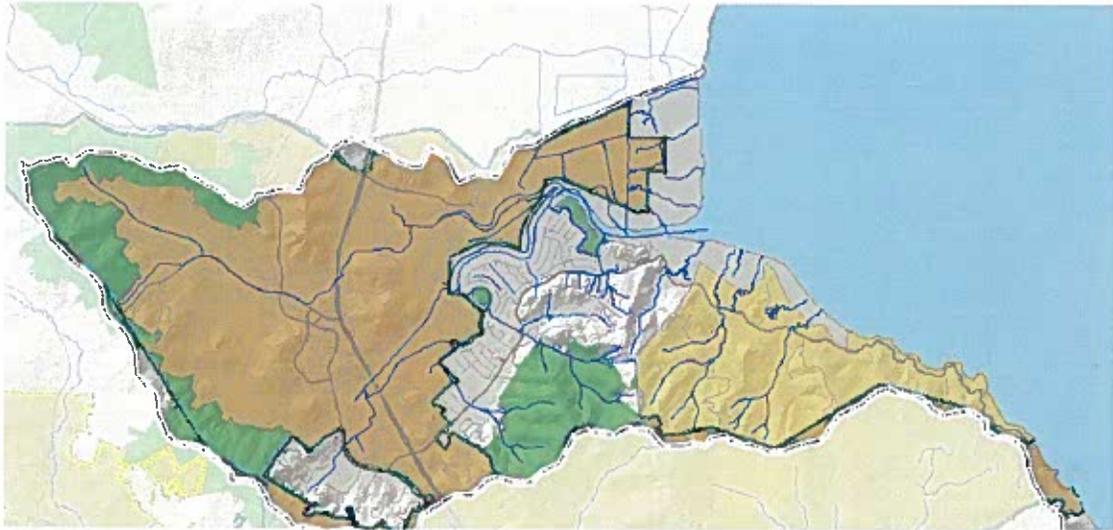
Surveys for bats roosting under the bridges may be required. Exclusionary netting and limiting the construction timeframe to avoid the roosting season (June 1 to October 1) may be required. If an active bat roost is found, the roost must be monitored before and during the construction period to ensure that the bats are not disturbed. Project work will occur within the paved roadway; therefore, biological impacts are expected to be minimal.

Plants:

The highly disturbed and urban locations of this project make it unlikely that the project will impact any T/E plants species.

Fisheries:

Watersheds in the project area include Gallinas Creek, and Corte Madera Creek in Larkspur.



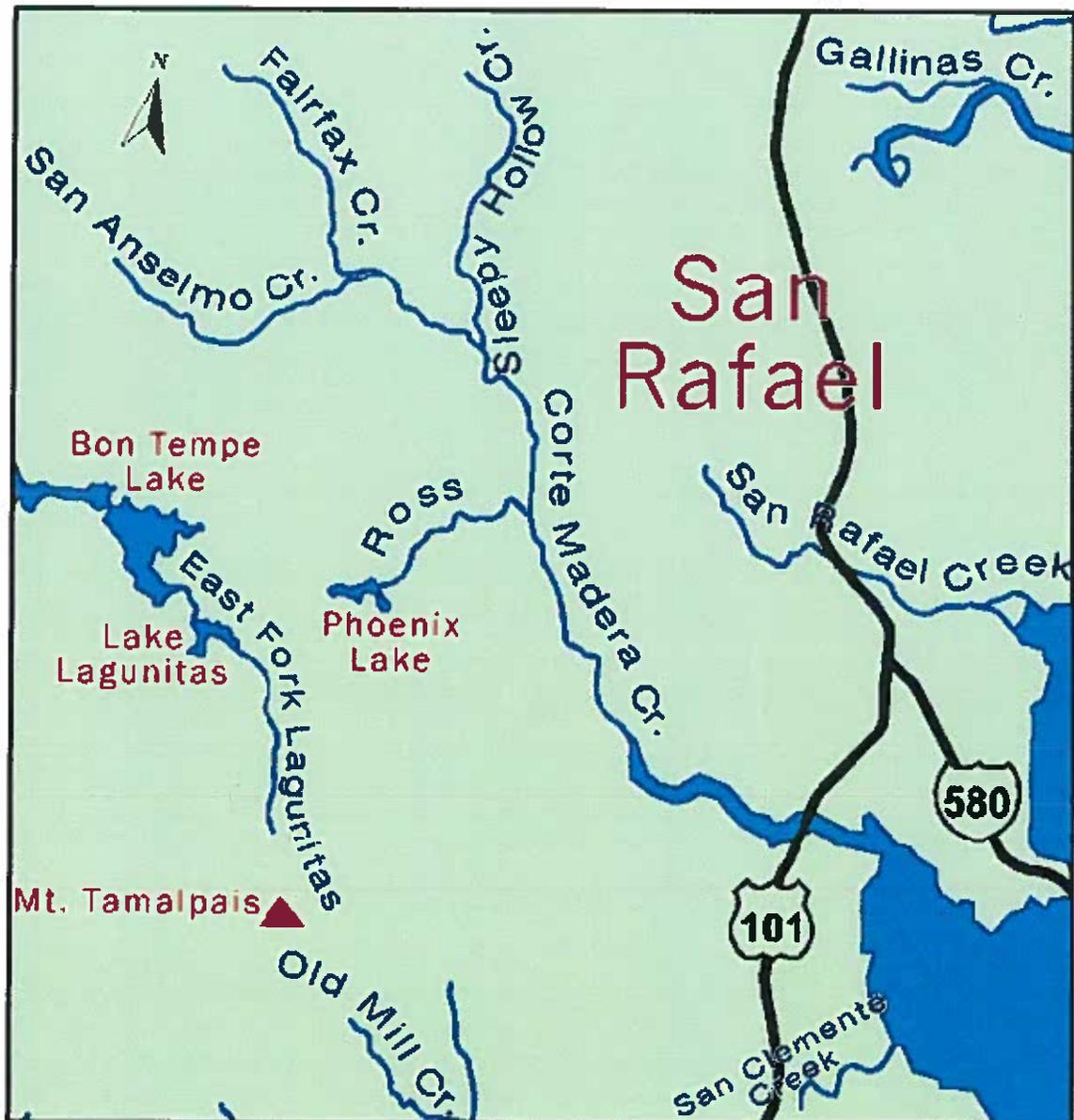
Gallinas Creek watershed:

Historically, the Gallinas Creek watershed may have supported steelhead and other fish. Historical observations occurred at least as far as St. Isabella's Church, upstream of Las Gallinas Avenue, at Trinity Avenue. Currently, the upper Gallinas Creek watershed is not known to support fish due to a lack of habitat and perennial water. The lower tidal sloughs likely support estuarine fish; however, there are no reports documenting their occurrence.

There are no reported occurrences of federally-listed as threatened and California Species of Special Concern California red-legged frog within the watershed (CDFG 2008 4). A U.S. Fish and Wildlife Service protocol site assessment for red-legged frogs was conducted at St. Vincent's School in 2001 by LSA in adjacent Miller Creek (LSA 2001 5). The assessment found only marginal habitat for this species and no historical or recent records of California red-legged frogs in this area.

There are no reported occurrences of California Species of Special Concern northwestern pond turtle within the watershed (CDFG 2008).

Corte Madera Creek watershed:



Corte Madera Creek is one of few streams flowing into San Francisco Bay with a Steelhead trout (*Oncorhynchus mykiss*) population.

Regardless of the presence of special status species in these watersheds, full attention and effort should be given to BMP's to prevent sediments from running off the project site and any stream and ditches in the region.

Waters/Wetlands:

In the event that equipment staging could affect the potential wetland located near the project site. ESA fencing would be needed to keep project activities and materials out of this area. This potential wetland may be delineated to determine whether is under the US Army Corps of Engineers (USACOE) jurisdiction.

Permits:

Full attention and effort should be given to preventing and sediments from running off the project site and entering Waters of the U.S. Release of sediments from the project site may require USACE's 404 Nationwide Permit, the California Department of Fish and Game's 1602 Agreement, and the U.S. Fish and Wildlife's Biological Opinion. In addition, a Clean Water Act Section 401 Water Quality Certification Permit from the Regional Water Quality Control Board may be required.

Mitigation:

The project requires implementation of standard Caltrans erosion control, housekeeping, spill prevention, and Best Management Practices (BMP's). In addition, the project may require fencing of Environmentally Sensitive Area's (ESA) to prevent impacts to off-site resources.

Disclaimer

This Preliminary Environmental Analysis Report (PEAR) provides information to support programming of the proposed project. It is not an environmental determination or document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in the Project Scope Summary Report (PSSR). The estimates and conclusions in the PEAR are approximate and are based on cursory analyses of probable effects. A reevaluation of the PEAR will be needed for changes in project scope or alternatives, or in environmental laws, regulations, or guidelines.

Review and Approval

I confirm that environmental cost, scope, and schedule have been satisfactorily completed and that the PEAR meets all Caltrans requirements. Also, if the project is scoped as a routine EA, complex EA, or EIS, I verify that the HQ DEA Coordinator has concurred in the Class of Action.



Environmental Branch Chief

Date: 9/15/2011



Project Manager

Date: 9/16/2011

REQUIRED ATTACHMENTS:

PEAR Environmental Studies Checklist

PEAR Environmental Commitments Cost Estimate

Environmental Technical Reports or Studies Required (2A040K)

	Study or Report	Document Text Only	Not Anticipated
Community Impact Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Farmland	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Section 4(f) Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Visual Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floodplain Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Noise Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Air Quality Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Paleontology	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wild and Scenic River Consistency	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cumulative Impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Growth Inducing/Indirect Impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cultural			
Archaeological Survey Report (ASR)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Historic Resources Evaluation Report (HRER)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Historic Property Survey Report (HPSR)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Historical Resource Compliance Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SHPO / PRC 5024.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Native American Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other Finding of Effect:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Data Recovery Plan:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Memorandum of Agreement*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(*if Federal Permit is required)			
Hazardous Waste			
ISA (Additional)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PSI	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biological			
Endangered Species (Federal)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Endangered Species (State)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Species of Concern (CNPS, USFS, BLM, S, F)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Biological Opinion (USFWS, NMFS, State)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fish Passage Barriers Assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wetlands	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Invasive Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Natural Environment Study	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
NEPA 404 Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

PEAR Mitigation and Compliance Cost Estimate*

District 04	County Marin	Route US 101	PM 1.5 to 14.0	EA 2A040K
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Description of Work: Replace bridge railings at seven locations on Route 101 in Marin County

Project Manager	Betsy Joseph	Date	
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Prepared by	Phillip Badal	Date	
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	Mitigation			Compliance
	Project Feature ¹	Enviro. Obligation ²	Statutory Require. ³	Permit & Agreement ⁴
Fish & Game 1602 Agreement				
Coastal Development Permit				
State Lands Agreement				
NPDES Permit				
COE 404 Permit- Nationwide				
COE 401 Permit				
COE Section 10 Permit				
COE Section 9 Permit				
Other:				
Noise attenuation				
Special landscaping				
Archaeological				
Biological				
Wetland/riparian				
Historical				
Scenic resources				
Asbestos Testing/Mitigation				
Other: Landscaping				
TOTAL (included in project cost estimate)	TBD	TBD	TBD	TBD

Costs are to include all costs to complete the commitment including: 1) capital outlay and staff support; 2) cost of right-of-way or easements; 3) long-term monitoring and reporting; and 4) any follow-up maintenance.

¹ Mitigation that Caltrans would normally do if not required by a permit or environmental agreement.

² Mitigation that Caltrans would not normally do but is required by conditions of a permit or environmental agreement.

³ Mitigation that Caltrans would not normally do and is not required by a permit or Enviro. Agreement, but is required by a law.

⁴ Non-mitigation Caltrans would not normally do but is required by conditions of a permit or agreement.



Dist-County-Route: 04-Mrn-101 _____
 Post Mile Limits: Various _____
 Project Type: Bridge Rail Replacement _____
 Project EA: 2A040K _____
 Program Identification: 201.112 _____
 Phase: PID
 PA/ED
 PS&E

Regional Water Quality Control Board(s): Region 2 San Francisco _____

- | | | |
|---|------------------------------|--|
| 1. Is the project required to consider incorporating Treatment BMPs? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 2. Does the project disturb 5 or more acres of soil? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 3. Does the project disturb more than 1 acre of soil and not qualify for the Rainfall Erosivity Waiver? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 4. Does the project potentially create permanent water quality impacts? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 5. Does the project require a notification of ADL reuse | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |

If the answer to any of the preceding questions is "Yes", prepare a Long Form – Storm Water Data Report.

Estimate Construction Start Date: TBD _____ Construction Completion Date: TBD _____

Separate Dewatering Permit (if yes, permit number) Yes Permit # _____ No

Erosivity Waiver Yes Date: _____ No

This Short Form – Storm Water Data Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

Albert Tan _____ *9/15/11* _____
 Albert Tan, Registered Project Engineer Date

I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

Norman Gonsalves _____ *09/15/2011* _____
 Norman Gonsalves, District/Regional SW Coordinator Date

[Stamp Required for PS&E only]

1. Project Description

This project is a safety project which will upgrade the bridge railings at 7 locations to bring them to standard bridge rails. The concrete railings will be upgraded to Concrete Barrier Type 732 which is a stronger type railing that will prevent any colliding vehicle from leaving the bridge deck, thus reducing the severity of any crash.

The existing bridge rail and concrete curb will be removed and replaced with the Type 732 Concrete Barrier. All waste will become property of the contractor.

There will be 0.07 acres of disturbed soil area, no added impervious area and no reworked area. There will be 307 cubic yards of Portland Cement Concrete (PCC) grinding and 827 cubic yards of new PCC.

The project lies in the Hydrological Sub Areas (HSA)'s 206.20 and 203.20, and drains ultimately into the San Francisco Bay Central and San Pablo Bay. Two of the bridges span surface water bodies Corte Madera Creek and Branch Gallinas Creek. The Corte Madera Creek is listed on the Environmental Protection Agency's 303d listed water bodies and has a Total Maximum Daily Load (TMDL) for Diazinon.

2. Construction Site BMPs

A WPCP will be used since the project disturbs less than an acre of soil. A risk assessment is not necessary since the project has a WPCP.

Construction Site Management will be included as a separate bid line item. Other BMPs are being considered such as Portable Concrete Washout, Street Sweeping and others. A final decision will be made at the PS&E phase as to which BMPs to include.

3. Required Attachments

Vicinity Map

Evaluation Documentation Form

District 4 Construction Concurrence Memo



Evaluation Documentation Form

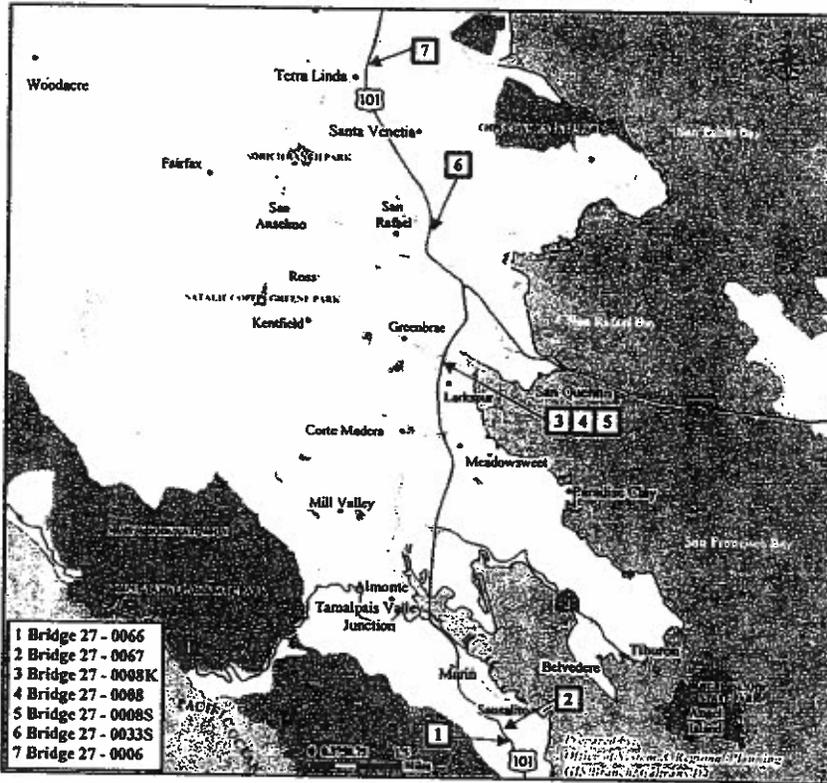
DATE: 09/14/2011 _____

Project EA:2A040K _____

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. <i>MG</i> (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>Marin</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. <i>MG</i> (Dist./Reg. Design SW Coord. Initials) <i>AT</i> (Project Engineer Initials) <u>9/15/11</u> (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

PROJECT SCOPE SUMMARY REPORT (Structure Rehabilitation)



In Marin County on Route 101 at North Gallinas Branch Creek & San Rafael Harbor in San Rafael, at Corte Madera Creek in Larkspur, and at Spencer Ave OC & Monte Mar Dr UC in Sausalito

I have reviewed the right of way information contained in this Project Scope Summary Report and the Right of Way Data Sheet attached hereto, and find the data to be complete, current, and accurate:

R.A. MACPHERSON
DEPUTY DISTRICT DIRECTOR - RIGHT OF WAY

APPROVAL RECOMMENDED:

JIT PANDHER
PROJECT MANAGER

APPROVED:

BIJAN SARTIPI
DISTRICT DIRECTOR

11/15/2005
DATE

FACT SHEET
Bridge Rail Upgrade

Date: August 9, 2011

Prepared by: Nelson Bustos (510) 286-5526
Office of Advance Planning – PSR II

Project ID: 04-2A040K

Project Location: 04-Mrn-101- PM 1.52/14.00 (KP 2.4/22.6)

- Location #1: Bridge #27-0006, N. Branch Gallinas Cr., 04-Mrn-101-PM 13.99 (KP 22.52)-SRF
- Location #2: Bridge #27-0008, Corte Madera Cr., 04-Mrn-101- PM 8.47 (KP 13.64)-Lksp
- Location #3: Bridge #27-0008k, Corte Madera Cr.(SB On-ramp), 04-Mrn-101- PM 8.47 (KP 13.64)-Lksp
- Location #4: Bridge #27-0008s, Corte Madera Cr. (NB Off-ramp), 04-Mrn-101- PM 8.47 (KP 13.64)-Lksp
- Location #5: Bridge #27-0033s, San Rafael Harbor, 04-Mrn-101-PM 10.81 (KP 17.40)-SRF
- Location #6: Bridge #27-0066, Spencer Ave OC, 04-Mrn-101- PM 1.52 (KP 2.45)-Saus
- Location #7: Bridge #27-0067, Monte Mar Dr UC, 04-Mrn-101- PM 1.68 (KP 2.70)-Saus

Background:

North Branch Gallinas Creek in Marin County on Route 101 was originally built in 1951. The bridge has MBGR rail on 6" W posts.

Corte Madera Creek (Mainline, SB On-ramp, and NB Off-ramp), in Marin County on Route 101, were originally built in 1957, 1959, and 1961 respectively. They all have concrete baluster rails.

San Rafael Harbor, Spencer Avenue OC, and Monte Mar Drive, also in Marin County on Route 101, were originally built in 1941, 1954, and in 1954 respectively. All these three bridges have concrete baluster rails.

The District Ten-year State Highway Operation and Protection Plan recommends that the Department reduce the non-crash worthy bridge rails from 715,00 linear feet (135 miles) to 315,000 linear feet (60 miles) by 2012.

Project Description:

The project will replace the MBGR (Bridge #27-0006), and the concrete baluster (Bridges #27-0008, -0008k, and -0008s, Bridges #27-0033s, -0066, and -0067) on the bridge with current standard bridge rails Type 732.

Purpose and Need:

The MBGR, and the concrete baluster at these structures need to be replaced with the latest standard bridge rails, Concrete Barrier Type 732, that provide enhanced ability to prevent a vehicle from leaving the structure, and thus, reduce the severity of potential crashes

Sponsor Agency: Caltrans

Fund Sources: SHOPP, Funding Code 201.112

Type of PID: PSSR

Environ Doc: PEAR

Project Capital Cost (current year estimate): \$6.055 Million

Tentative Schedule:

PSSR	- 10/11
PA&ED	- 07/13
Project PS&E	- 07/14
Right of Way Certification	- 07/14
Ready to List	- 10/14
Advertising	- 12/14
Approve Construction Contract	- 02/15
Contract Acceptance	- 10/15
End Project	- 01/16

Responsible Unit:

Project Manager	Betsy Joseph	(510) 286-5097
Branch Chief PSR II, Advance Planning	Robert Blanco	(510) 622-0761
Project Engineer	Nelson Bustos	(510) 286-5526
Assistant Project Engineer	Albert Tan	(510) 622-1665

DMT, E.A. 04-20A00K	GO-RTR-RH HRN-101-PM 1.5F14#	Project Name Bridge Rail Replacement	Project Manager Betsy Joseph	Release Number (S10) 208-9097	Date 9/10/2011	Version V01
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Status	Identification				Quantitative Analysis				Response Strategy		Monitoring and Control					
	Phase	Identified Risk (must be specific and measurable)	Risk Trigger	Additional Information	Probability	Type	Estimated Impact	Cat. Number	Excluded Impact	Risk Matrix	Strategy	Response Action including alternatives and contingencies	WBS TASK AFFECTED	Task Owner / Function	Status Inferred or Mitigation Check	Changes and Comments (Reference to other sheets and/or other sheets in this log)
Active	PROJECT MANAGEMENT	Project not progressing	Resources to deliver project may not be available due to temporary priorities	The PRSR was originally approved on 11/15/2008	VL	Cost (1) Schedule (2) Scope (3) Quality (4)	\$0 0 Days 0 Days 0 Days	10 10 10 10	H H H H	High Impact	Acceptance	This risk can also affect risk E.	100			
Active	RW	Unprotected debris is close to right of way	Operation of operation due to emergency liability insurance	PCLE AT&T, Comcast, Main, Microsoft (Power), Verizon, and Local Sanitary District need to be notified ahead of time to establish them to identify and coordinate utility	L	Cost (1) Schedule (2) Scope (3) Quality (4)	\$0 0 Days 0 Days 0 Days	10 10 10 10	H H H H	High Impact	Acceptance	This risk can also affect risk E.	210			
Active	CONSTRUCTION	The possibility of utility falling down before on Hwy 101 - accidents and delays can occur during construction	The above utility down on Hwy 101, creates, or other local streets.		L	Cost (1) Schedule (2) Scope (3) Quality (4)	\$0 0 Days 0 Days 0 Days	10 10 10 10	H H H H	High Impact	Mitigation	This risk can also affect risk E.	210			