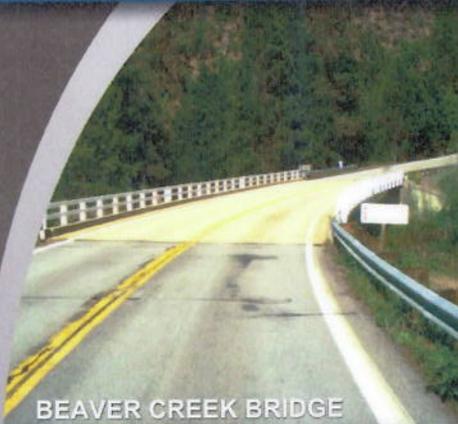




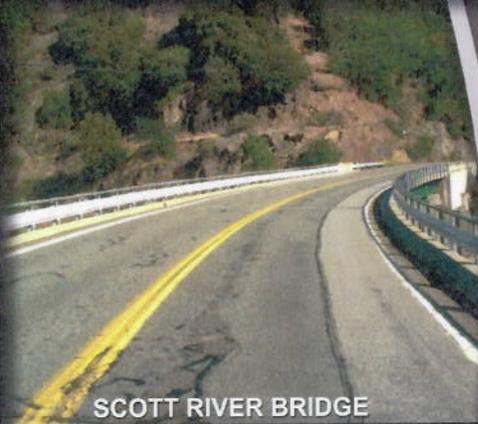
# Supplemental Project Scope Summary Report

## SISKIYOU 4 BRIDGES RAIL REPLACEMENT

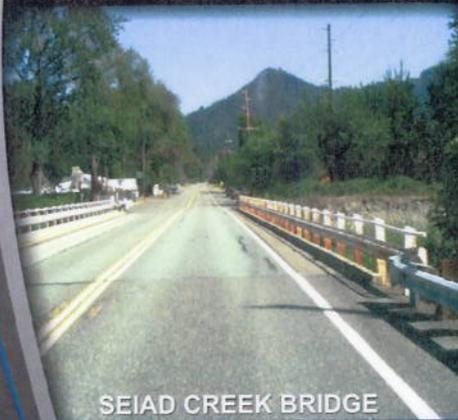
02-SIS-96 PM VAR  
20.10.201.112  
PPNO 3473  
02 1200 0012  
02-4E650 K  
September 2011



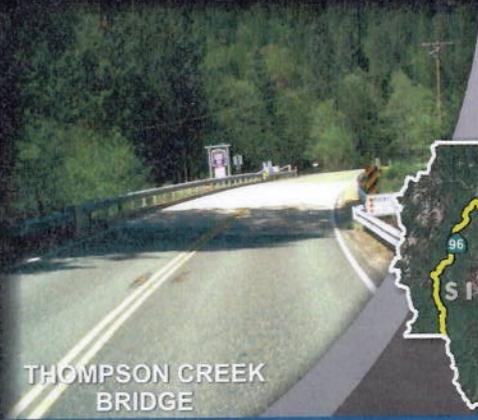
BEAVER CREEK BRIDGE



SCOTT RIVER BRIDGE



SEIAD CREEK BRIDGE



THOMPSON CREEK BRIDGE

### PROJECT LOCATION

In Siskiyou County near Seiad Valley at various locations from Slater Butte Road to 0.1 mile west of Beaver Creek Bridge



Approval Recommended:

*Tim Huckabay*  
**TIM HUCKABAY, P.E.**  
Project Manager, District 2

8-30-11  
Date

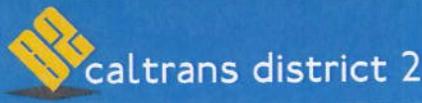
*Ed Lamkin* 8.30.11  
**ED LAMKIN, P.E.**  
Deputy District Director  
Maintenance and Operations, District 2  
SHOPP Program Manager

Date

Approved By:

*John Bulinski* 8/31/11  
**JOHN BULINSKI, P.E.**  
District Director, District 2

Date



# REPORT SIGNATURE SHEET



This Supplemental Project Scope Summary Report has been prepared by the following Registered Civil Engineer. The Registered Civil Engineer attests to the best of his knowledge the technical information contained therein and has judged the qualifications of any technical specialists providing engineering data upon which recommendations, conclusions and decisions are based.



Steve Veatch  
Steve Veatch, P.E.  
Registered Civil Engineer

8-29-2011  
Date

# SUPPLEMENTAL PROJECT SCOPE SUMMARY REPORT (BRIDGE RAIL REPLACEMENT)

## 1. INTRODUCTION

This Supplemental Project Scope Summary Report provides cost estimate and schedule updates to a Project Scope Summary Report (PSSR) which was approved in September of 2001. The project proposes to replace the non-standard bridge rails at Thompson Creek, Seiad Creek, Scott River, and Beaver Creek Bridges on State Route (SR) 96 in Siskiyou County. Widening of all four structures is required to meet 3-R standards.

<b>Capital Costs:</b>	<u>Current</u>	<u>Escalated</u>
	\$8.6 million	\$9.9 million
<b>Structures:</b>	\$5.6 million	\$6.4 million
<b>Roadway:</b>	\$3.0 million	\$3.5 million

**Right of Way Costs:** \$268,000

**Funding Source:** 2012 SHOPP

**Type of Facility:** Two lane conventional highway

**Project Program:** 20.XX.201.112

**Anticipated Environmental Determination Document:** CEQA – Initial Study/Negative Declaration  
NEPA – Environmental Assessment/Finding of No Significant Impact

**Construction Year:** 2015/2016

**Working Days:** 90

**PM Locations:** 52.48, 60.17, 71.23, & 88.26

**Legal Description:** In Siskiyou County near Seiad Valley at various locations from Slater Butte Road to 0.1 miles west of Beaver Creek Bridge.

**Performance Measures:**

- 4 Structures Bridge Rail Upgrades
- 16 Guardrail End Treatments Replaced
- 1 Bridge Deck Replacement



Seiad Creek Bridge at PM 60.2.



Beaver Creek Bridge at PM 88.3.

## 2. RECOMMENDATION

Proposed improvements remain the same as those recommended in the original PSSR approved in September of 2001. Project scope includes the following:

- Replace the non-standard bridge rails at Thompson Creek, Seiad Creek, Scott River, and Beaver Creek bridges.
- Widen shoulders of all four bridges to 3-R Standards.
- Replace approach metal beam guard railing (MBGR) and replace terminal sections to meet current standards.
- Place additional rock slope protection (RSP) to protect abutments.
- Reconstruct approach pavement and shoulders to conform to widened structures and profile changes.
- Install joint seals on the Thompson Creek, Scott River, and Beaver Creek bridges
- Construct five-foot sidewalks on the right side of the Seiad Creek and Scott River bridges.
- Remove existing asphalt concrete from the Seiad Creek structure, replace unsound concrete, and apply polyester overlay to the deck.
- Replace the deck on the Scott River Bridge.

The bridges have been prioritized based on the sufficiency rating of each structure as listed in the District Structure Replacement and Improvement Needs Report and are listed as follows:

- **Priority 1: Thompson Creek (Sufficiency rating 72.50; est. cost \$1.3 million)**
- **Priority 2: Beaver Creek (Sufficiency rating 74.80; est. cost \$2.3 million)**
- **Priority 3: Scott River (Sufficiency rating 83.90; est. cost \$2.7 million)**
- **Priority 4: Seiad Creek (Sufficiency rating 93.00; est. cost \$2.3 million)**

## 3. PURPOSE AND NEED STATEMENT

The purpose of this project is to bring the bridge railing of the four structures up to current standards. The structures were identified in the State's Bridge Rail Program for bridge rail replacement.

This project is needed to continue the District's efforts to eliminate non-standard bridge rail on structures within the District and improve safety.

## 4. FUNDING/SCHEDULING

### 4A. COST ESTIMATE (See Attachment A)

Structures costs are based on the Advance Planning Study (APS) completed in November of 2001. The original PSSR structure cost estimates were obtained from Division of Engineering Services as "ball park estimates", as the APS was not completed prior to the PSSR approval. An escalation rate of 3.5% was used to reflect current capital costs for the structures.

**4B. PROJECT SUPPORT**

The following table outlines the estimated hourly effort and other support costs. These hours and support costs are based on the project schedule shown below. Costs are shown in \$1000s.

NOTE		CAPITAL & SUPPORT COSTS BY PROGRAM AND PROJECT FUNDING COMPONENT						
Please provide input to all yellow cells		Sis 96 Bridge Rail Replacement						
Program	Component	"Baseline" (Original Identified Hours and Funding)						
EA 02-4E650 EFIS 0212000012		Planned (Hours)	Loaded Rate Estimate (\$/Hr.)	Program Funding by Component (x1000)			Support/Capital (%)	
				Prior Allocation	Initial Programming Expectation			Total Component Funding
					Direct Charges	Indirect Charges (ICRP)		
201.112	PA&ED	9,000	\$91.00	\$0	\$553	\$266	\$900	8.8%
201.112	PS&E	15,000	\$96.00	\$0	\$972	\$468	\$1,500	14.7%
201.112	RW	1,100	\$80.00	\$0	\$59	\$29	\$90	0.9%
201.112	CON	16,000	\$93.00	\$0	\$1,004	\$484	\$1,500	14.7%
SUPPORT SUBTOTAL		41,100		\$0	\$2,588	\$1,247	\$3,990	39.0%
		Baseline	Escalation	Program Funding Total	<i>Bottoms up estimate!</i> PPM Deputy Directors Initials <i>SC</i> 8/30/11			
201.112	RW Capital	\$268.0	\$57.8	\$328				
201.112	Construction	\$6,877	\$1,015	\$7,900				
201.112	Con Contingencies	\$1,719	\$254	\$1,980				
201.112	Con Capital total	\$8,596	\$1,268	\$9,900				
CAPITAL SUBTOTAL		\$8,864	\$1,326	\$10,228				
TOTALS				\$14,218				
Rate Information		Input	Historic Program Support/Capital Cost Data (%)					
Capital Contingency Rate %	25%	RANGE	Lowest Similar Project		60.3%			
ICRP Rate %	32.52%		Highest Similar Project		92.4%			
Escalation Rate Construction	3.50%		Average Similar Project		69.9%			
Escalation Rate RW	5.00%	Cumulative 2012 SHOPP Support/Capital					24.1%	
# of years to escalate	4							

**4C. PROJECT SCHEDULE**

Project #	02-4E650	Project Name:	Sis 96 - Replace Bridge Railings			
Work Description	Bridge Rail Replacement					
Bridge #	Bridge Name	Co-Rte-PM	Work Days	Work Description	Programming	Estimate
02-0068	Thompson Creek	Sis 96 52.48			Const Cap	\$ 8,596,000.00
02-0072	Seiad Creek	Sis 96 60.17			R/W Cap	\$ 268,000.00
02-0079	Scott River	Sis 96 71.23			Support	\$ 3,990,000.00
02-0081	Beaver Creek	Sis 96 88.26			Delivery Yr	FY 15/16
Schedule Information						
Milestone	Description	Current Schedule	Schedule Duration			
M000	ID Need	06/01/01	Environmental			Time Given
M010	Approve PID	09/01/11	M040	Begin Project	08/01/12	
M015	Program Project	07/01/12	M020	Begin Environmental	09/01/12	1 months
M040	Begin Project	08/01/12	M120	Circulate DED	09/01/13	12 months
M020	Begin Environmental	09/01/12	M200	PA&ED	04/01/14	7 months
M224	Right of Way Maps	11/01/12		M020 to M200		19 months
M225	Regular Right of Way	01/01/13	Right of Way			Time Given
M221	Bridge Site Data Accpt	02/01/13	M040	Begin Project	08/01/12	
M120	Circulate DED	09/01/13	M224	Right of Way Maps	11/01/12	3 months
M275	General Plans	04/01/13	M225	Regular Right of Way	01/01/13	2 months
M200	PA&ED	04/01/14	M200	PA&ED	04/01/14	15 months
	Structures P&Q	10/01/14	M410	Right of Way Cert.	07/01/15	15 months
M378	Draft Structures PS&E	12/01/14		M224 to M410		32 months
M377	P&E to DOE	11/01/14	Structures, Design, OE			Time Given
	Structures Final PS&E		M040	Begin Project	08/01/12	
M380	HQ Project PS&E	03/15/15	M221	Bridge Site Data Accpt	02/01/13	6 months
M410	Right of Way Cert.	07/01/15	M275	General Plans	04/01/13	2 months
M460	Ready to List	08/01/15	M378	Draft Structures PS&E	12/01/14	20 months
M470	CTC Vote	09/15/15	M377	P&E to DOE	11/01/14	-30 days
M480	HQ Advertise	10/01/15	M380	HQ Project PS&E	03/15/15	19 weeks
M490	Bid Opening	12/01/15	M460	Ready to List	08/01/15	19 weeks
M495	Award	01/15/16	M470	Fund Allocation	09/15/15	6 weeks
M500	Approve Contract	02/15/16	M480	HQ Advertise	10/01/15	2 weeks
M600	Contract Acceptance	05/15/18	M490	Bid Opening	12/01/15	9 weeks
M700	Final Report	01/15/19	M495	Award	01/15/16	6 weeks
M800	End Project	01/15/20	M500	Approve Contract	02/15/16	4 weeks
	Permits PAED to RTL			M377 to M500		15 months
		M200		Start work	35 days	03/21/16
		M460				06/01/11
	PAED to PE					
		M200				
		M377				
			Delivery	M040 to M460		36 months

## **5. PROPOSED FUNDING**

This project is anticipated to be programmed in the 20.XX.201.112 program for 2012 SHOPP. The project is located on the Surface Transportation System and is eligible for Federal Bridge Restoration and Replacement Funds.

## **6. LIST OF ATTACHMENTS**

- A. Preliminary Project Cost Estimate
- B. Advance Planning Study (metric) (5)
- C. Risk Management Log

# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST-CO-RTE: 02-SIS-96  
PM: Var  
EA: 02-4E650K

Type of Estimate: PSSR

Program Code: 20.XX.201.112

Project Description: In Siskiyou County near Seiad Valley at various locations from Slater Butte Road to 0.1 miles west of Beaver Creek Creek Bridge

**Proposed Improvement: Bridge Rail Replacements, Bridge and Approach Widening, and MBGR Replacement**

Updated Estimate: Yes  No

Alternative: Thompson Creek Bridge

Roadway Items: \$623,000

Structure Items: \$730,000

Subtotal Construction: \$1,353,000

Engineering (R/W, Design & Const.): \$528,000

Right of Way: \$67,000

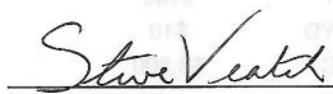
Total Project Cost: \$1,900,000

Reviewed by Project Manager  
Phone No. (530)225-3466

  
\_\_\_\_\_  
Tim Huckabay, P.E.

8-30-11  
\_\_\_\_\_  
Date

Estimate Prepared by  
Project Engineer  
Phone No. (530)225-4646

  
\_\_\_\_\_  
Steve Veatch, P.E.

8-30-2011  
\_\_\_\_\_  
Date

# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

## I ROADWAY ITEMS

### Section 1: Earthwork

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Roadway Excavation	540	CY	\$70	\$37,800
Import Borrow	130	CY	\$60	\$7,800
Clearing & Grubbing	1.0	LS	\$10,000	\$10,000
<b>Total Earthwork:</b>				<b>\$56,000</b>

### Section 2: Roadway Structural Section

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Hot Mix Asphalt	535	TON	\$150	\$80,250
Aggregate Base	165	CY	\$90	\$14,850
Bridge Approach Slabs		SQFT	\$90	\$0
Edge Drains		LF	\$10	\$0
HMA Dike	165	LF	\$10	\$1,650
Cold Plane AC Surface	610	SQYD	\$15	\$9,150
<b>Total Roadway Structural Section:</b>				<b>\$106,000</b>

### Section 3: Drainage

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Underdrains	0	LF	\$40	\$0
Ditch Lining RSP	0	CY	\$60	\$0
Downdrains	66	LF	\$45	\$2,970
<b>Total Drainage Items:</b>				<b>\$3,000</b>

### Section 4: Specialty Items

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
COZEEP	0	DAYS	\$450	\$0
SRT	4	EA	\$3,500	\$14,000
Metal Beam Guardrail	100	LF	\$40	\$4,000
Structure Excavation	0	CY	\$60	\$0
Class A Concrete	0	CY	\$800	\$0
Rock Slope Protection	200	CY	\$100	\$20,000
RSP Fabric	180	SQYD	\$10	\$1,800
Erosion Control	2.5	AC	\$3,500	\$8,750
<b>Total Specialty Items:</b>				<b>\$49,000</b>

# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

## Section 5: Traffic Items

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Portable Changeable Msg. Sign	2	EA	\$2,000	\$4,000
Luminaires		EA	\$12,000	\$0
Temporary Traffic Signals	1	LS	\$45,000	\$45,000
Construction Signing	1	LS	\$5,000	\$5,000
Paint Striping	2,625	LF	\$0.20	\$525
Permanent Roadsigns	2	EA	\$500	\$1,000
Construction K-Rail	400	LF	\$50	\$20,000
Traffic Control	50	DAYS	\$1,800	\$90,000

<b>Total Traffic Items:</b>	<b>\$166,000</b>
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## Section 6: Minor Items

(subtotal of sections 1 - 5) x (5% - 10%) = \$380,000 7%

<b>Total Minor Items:</b>	<b>\$27,000</b>
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## Section 7: Roadway Mobilization

(subtotal of sections 1 - 6) x (0% - 10%) = \$407,000 10%

<b>Total Roadway Mobilization:</b>	<b>\$41,000</b>
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## Section 8: Roadway Additions

### Supplementals

(subtotal of sections 1 - 6) x (5% - 10%) = \$407,000 7% \$28,490

### SWPPP, BMP, etc.

(subtotal of sections 1 - 6) x (6%) = \$407,000 6% \$24,420

### Contingencies

(subtotal of sections 1 - 6) x (20% - 30%) = \$407,000 30% \$122,100

<b>Total Roadway Additions:</b>	<b>\$175,000</b>
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<b>Total Roadway Items:</b>	<b>\$623,000</b>
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## Section 9: Engineering

Right of Way and Design	\$1,353,000	25%	\$338,250
Construction	\$1,353,000	14%	\$189,420

<b>Total Engineering:</b>	<b>\$528,000</b>
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# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

## II. STRUCTURES ITEMS

	Unit Cost	Unit Price	Unit	Quantity
Bridge Name	\$4,000		EA	2
Structure Type	\$48,000	\$15,000	EA	1
Width, ft. (new or width addition)	\$800	\$8,000	LF	1
Span Length, ft.	\$1,000	\$800	EA	2
Total Area, sq. ft.		\$1,800	DAY	20
Footing Type (Pile/Spread)				
Cost Per Square Foot (includes 10% mobilization and 25% contingency)		\$808		
Total Cost of Structure		\$730,000		
Bridge Removal				
		<b>Total Structure Items:</b>		<b>\$730,000</b>

## III. Right of Way

Acquisition, including excess lands and damages to remainder(s)	\$6,400
Mitigation acquisition & credits	\$60,000
Utility Relocation	\$0
Clearance/Demolition	\$0
Relocation Assistance	\$0
Title and Escrow Fees	\$600
Construction Contract Work	\$0
<b>Total Right of Way: \$67,000</b>	

# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST-CO-RTE: 02-SIS-96  
PM: Var  
EA: 02-4E650K

Type of Estimate: PSSR

Program Code: 20.XX.201.112

Project Description: In Siskiyou County near Seiad Valley at various locations from Slater Butte Road to 0.1 miles west of Beaver Creek Creek Bridge

**Proposed Improvement: Bridge Rail Replacements, Bridge and Approach Widening, and MBGR Replacement**

Updated Estimate: Yes  No

Alternative: Beaver Creek Bridge

Roadway Items: \$758,000

Structure Items: \$1,540,000

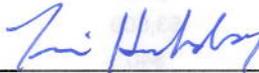
Subtotal Construction: \$2,298,000

Engineering (R/W, Design & Const.): \$896,000

Right of Way: \$67,000

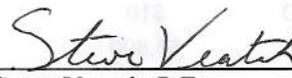
Total Project Cost: \$3,300,000

Reviewed by Project Manager  
Phone No. (530)225-3466

  
\_\_\_\_\_  
Tim Huckabay, P.E.

8-30-11  
\_\_\_\_\_  
Date

Estimate Prepared by  
Project Engineer  
Phone No. (530)225-4646

  
\_\_\_\_\_  
Steve Veatch, P.E.

8-30-2011  
\_\_\_\_\_  
Date

# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

## I ROADWAY ITEMS

### Section 1: Earthwork

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Roadway Excavation	630	CY	\$70	\$44,100
Import Borrow	1,400	CY	\$60	\$84,000
Clearing & Grubbing	1.0	LS	\$10,000	\$10,000

<b>Total Earthwork:</b>	<b>\$138,000</b>
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### Section 2: Roadway Structural Section

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Hot Mix Asphalt	530	TON	\$150	\$79,500
Aggregate Base	170	CY	\$90	\$15,300
Bridge Approach Slabs		SQFT	\$90	\$0
Edge Drains		LF	\$10	\$0
HMA Dike	130	LF	\$10	\$1,300
Cold Plane AC Surface	700	SQYD	\$15	\$10,500

<b>Total Roadway Structural Section:</b>	<b>\$107,000</b>
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### Section 3: Drainage

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Underdrains	0	LF	\$40	\$0
Ditch Lining RSP	0	CY	\$60	\$0
Downdrains	66	LF	\$45	\$2,970

<b>Total Drainage Items:</b>	<b>\$3,000</b>
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### Section 4: Specialty Items

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
COZEEP	0	DAYS	\$450	\$0
SRT	4	EA	\$3,500	\$14,000
Metal Beam Guardrail	100	LF	\$40	\$4,000
Structure Excavation	0	CY	\$60	\$0
Class A Concrete	0	CY	\$800	\$0
Rock Slope Protection	200	CY	\$100	\$20,000
RSP Fabric	180	SQYD	\$10	\$1,800
Erosion Control	2.5	AC	\$3,500	\$8,750

<b>Total Specialty Items:</b>	<b>\$49,000</b>
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# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

## Section 5: Traffic Items

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Portable Changeable Msg. Sign	2	EA	\$2,000	\$4,000
Luminaires		EA	\$12,000	\$0
Temporary Traffic Signals	1	LS	\$45,000	\$45,000
Construction Signing	1	LS	\$5,000	\$5,000
Paint Striping	2,625	LF	\$0.20	\$525
Permanent Roadsigns	2	EA	\$500	\$1,000
Construction K-Rail	400	LF	\$50	\$20,000
Traffic Control	50	DAYS	\$1,800	\$90,000

<b>Total Traffic Items:</b>	<b>\$166,000</b>
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## Section 6: Minor Items

(subtotal of sections 1 - 5) x (5% - 10%) = \$463,000 7%

<b>Total Minor Items:</b>	<b>\$32,000</b>
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## Section 7: Roadway Mobilization

(subtotal of sections 1 - 6) x (0% - 10%) = \$495,000 10%

<b>Total Roadway Mobilization:</b>	<b>\$50,000</b>
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## Section 8: Roadway Additions

### Supplementals

(subtotal of sections 1 - 6) x (5% - 10%) = \$495,000 7% \$34,650

### SWPPP, BMP, etc.

(subtotal of sections 1 - 6) x (6%) = \$495,000 6% \$29,700

### Contingencies

(subtotal of sections 1 - 6) x (20% - 30%) = \$495,000 30% \$148,500

<b>Total Roadway Additions:</b>	<b>\$213,000</b>
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<b>Total Roadway Items:</b>	<b>\$758,000</b>
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## Section 9: Engineering

Right of Way and Design	\$2,298,000	25%	\$574,500
Construction	\$2,298,000	14%	\$321,720

<b>Total Engineering:</b>	<b>\$896,000</b>
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# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

## II. STRUCTURES ITEMS

Bridge Name	Beaver Creek	Unit Price	Unit	Quantity
Structure Type	Steel Girder			
Width, ft. (new or width addition)	9.2			
Span Length, ft.	150			
Total Area, sq. ft.	1,380			
Footing Type (Pile/Spread)	Pile			
Cost Per Square Foot (includes 10% mobilization and 25% contingency)	\$1,116			
Total Cost of Structure	\$1,540,000			
Bridge Removal				
<b>Total Structure Items:</b>		<b>\$1,540,000</b>		

## III. Right of Way

Acquisition, including excess lands and damages to remainder(s)	\$6,400	
Mitigation acquisition & credits	\$60,000	
Utility Relocation	\$0	
Clearance/Demolition	\$0	
Relocation Assistance	\$0	
Title and Escrow Fees	\$600	
Construction Contract Work	\$0	
<b>Total Right of Way:</b>		<b>\$67,000</b>

# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST-CO-RTE: 02-SIS-96  
PM: Var  
EA: 02-4E650K

Type of Estimate: PSSR

Program Code: 20.XX.201.112

Project Description: In Siskiyou County near Seiad Valley at various locations from Slater Butte Road to 0.1 miles west of Beaver Creek Creek Bridge

**Proposed Improvement: Bridge Rail Replacements, Bridge and Approach Widening, and MBGR Replacement**

Updated Estimate: Yes  No

Alternative: Scott River Bridge

Roadway Items: \$721,000

Structure Items: \$1,950,000

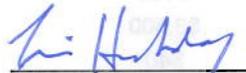
Subtotal Construction: \$2,671,000

Engineering (R/W, Design & Const.): \$1,042,000

Right of Way: \$67,000

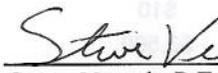
**Total Project Cost: \$3,800,000**

Reviewed by Project Manager  
Phone No. (530)225-3466

  
\_\_\_\_\_  
Tim Huckabay, P.E.

8-30-11  
\_\_\_\_\_  
Date

Estimate Prepared by  
Project Engineer  
Phone No. (530)225-4646

  
\_\_\_\_\_  
Steve Veatch, P.E.

8-30-2011  
\_\_\_\_\_  
Date

# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

## I ROADWAY ITEMS

### Section 1: Earthwork

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Roadway Excavation	690	CY	\$70	\$48,300
Import Borrow	875	CY	\$60	\$52,500
Clearing & Grubbing	1.0	LS	\$10,000	\$10,000
<b>Total Earthwork:</b>				<b>\$111,000</b>

### Section 2: Roadway Structural Section

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Hot Mix Asphalt	525	TON	\$150	\$78,750
Aggregate Base	235	CY	\$90	\$21,150
Bridge Approach Slabs		SQFT	\$90	\$0
Edge Drains		LF	\$10	\$0
HMA Dike	165	LF	\$10	\$1,650
Cold Plane AC Surface	660	SQYD	\$15	\$9,900
<b>Total Roadway Structural Section:</b>				<b>\$111,000</b>

### Section 3: Drainage

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Underdrains	0	LF	\$40	\$0
Ditch Lining RSP	0	CY	\$60	\$0
Downdrains	100	LF	\$45	\$4,500
<b>Total Drainage Items:</b>				<b>\$5,000</b>

### Section 4: Specialty Items

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
COZEEP	0	DAYS	\$450	\$0
SRT	4	EA	\$3,500	\$14,000
Metal Beam Guardrail	100	LF	\$40	\$4,000
Structure Excavation	0	CY	\$60	\$0
Class A Concrete	0	CY	\$800	\$0
Rock Slope Protection	130	CY	\$100	\$13,000
RSP Fabric	120	SQYD	\$10	\$1,200
Erosion Control	2.5	AC	\$3,500	\$8,750
<b>Total Specialty Items:</b>				<b>\$41,000</b>

# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

## Section 5: Traffic Items

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Portable Changeable Msg. Sign	2	EA	\$2,000	\$4,000
Luminaires		EA	\$12,000	\$0
Temporary Traffic Signals	1	LS	\$45,000	\$45,000
Construction Signing	1	LS	\$5,000	\$5,000
Paint Striping	2,625	LF	\$0.20	\$525
Permanent Roadsigns	2	EA	\$500	\$1,000
Construction K-Rail	520	LF	\$50	\$26,000
Traffic Control	50	DAYS	\$1,800	\$90,000

<b>Total Traffic Items:</b>	<b>\$172,000</b>
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## Section 6: Minor Items

(subtotal of sections 1 - 5) x (5% - 10%) = \$440,000 7%

<b>Total Minor Items:</b>	<b>\$31,000</b>
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## Section 7: Roadway Mobilization

(subtotal of sections 1 - 6) x (0% - 10%) = \$471,000 10%

<b>Total Roadway Mobilization:</b>	<b>\$47,000</b>
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## Section 8: Roadway Additions

### Supplementals

(subtotal of sections 1 - 6) x (5% - 10%) = \$471,000 7% \$32,970

### SWPPP, BMP, etc.

(subtotal of sections 1 - 6) x (6%) = \$471,000 6% \$28,260

### Contingencies

(subtotal of sections 1 - 6) x (20% - 30%) = \$471,000 30% \$141,300

<b>Total Roadway Additions:</b>	<b>\$203,000</b>
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<b>Total Roadway Items:</b>	<b>\$721,000</b>
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## Section 9: Engineering

Right of Way and Design	\$2,671,000	25%	\$667,750
Construction	\$2,671,000	14%	\$373,940

<b>Total Engineering:</b>	<b>\$1,042,000</b>
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# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

## II. STRUCTURES ITEMS

Bridge Name	Scott River			
Structure Type	Steel Girder			
Width, ft. (new or width addition)	38.9	(includes entire deck width due to replacement of the bridge deck)		
Span Length, ft.	228			
Total Area, sq. ft.	8,869			
Footing Type (Pile/Spread)	Pile			
Cost Per Square Foot (includes 10% mobilization and 25% contingency)	\$220			
Total Cost of Structure	\$1,950,000			
Bridge Removal				
<b>Total Structure Items:</b>		<b>\$1,950,000</b>		

## III. Right of Way

Acquisition, including excess lands and damages to remainder(s)	\$6,400			
Mitigation acquisition & credits	\$60,000			
Utility Relocation	\$0			
Clearance/Demolition	\$0			
Relocation Assistance	\$0			
Title and Escrow Fees	\$600			
Construction Contract Work	\$0			
<b>Total Right of Way:</b>		<b>\$67,000</b>		

# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

DIST-CO-RTE: 02-SIS-96  
PM: Var  
EA: 02-4E650K

Type of Estimate: PSSR

Program Code: 20.XX.201.112

Project Description: In Siskiyou County near Seiad Valley at various locations from Slater Butte Road to 0.1 miles west of Beaver Creek Creek Bridge

**Proposed Improvement: Bridge Rail Replacements, Bridge and Approach Widening, and MBGR Replacement**

Updated Estimate: Yes  No

Alternative: Seiad Creek Bridge

Roadway Items: \$875,000

Structure Items: \$1,400,000

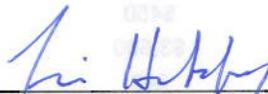
**Subtotal Construction: \$2,275,000**

Engineering (R/W, Design & Const.): \$887,000

Right of Way: \$67,000

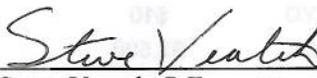
**Total Project Cost: \$3,200,000**

Reviewed by Project Manager  
Phone No. (530)225-3466

  
\_\_\_\_\_  
Tim Huckabay, P.E.

8-30-11  
Date

Estimate Prepared by  
Project Engineer  
Phone No. (530)225-4646

  
\_\_\_\_\_  
Steve Veatch, P.E.

8-30-2011  
Date

# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

## I ROADWAY ITEMS

### Section 1: Earthwork

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Roadway Excavation	590	CY	\$70	\$41,300
Import Borrow	65	CY	\$60	\$3,900
Clearing & Grubbing	1.0	LS	\$10,000	\$10,000

<b>Total Earthwork:</b>	<b>\$55,000</b>
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### Section 2: Roadway Structural Section

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Hot Mix Asphalt	560	TON	\$150	\$84,000
Aggregate Base	160	CY	\$90	\$14,400
Bridge Approach Slabs		SQFT	\$90	\$0
Edge Drains		LF	\$10	\$0
HMA Dike	263	LF	\$10	\$2,630
Cold Plane AC Surface	615	SQYD	\$15	\$9,225

<b>Total Roadway Structural Section:</b>	<b>\$110,000</b>
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### Section 3: Drainage

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Underdrains	0	LF	\$40	\$0
Ditch Lining RSP	0	CY	\$60	\$0
Downdrains	66	LF	\$45	\$2,970

<b>Total Drainage Items:</b>	<b>\$3,000</b>
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### Section 4: Specialty Items

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
COZEEP	0	DAYS	\$450	\$0
SRT	4	EA	\$3,500	\$14,000
Metal Beam Guardrail	100	LF	\$40	\$4,000
Structure Excavation	0	CY	\$60	\$0
Class A Concrete	0	CY	\$800	\$0
Rock Slope Protection	1600	CY	\$100	\$160,000
RSP Fabric	1435	SQYD	\$10	\$14,350
Erosion Control	2.5	AC	\$3,500	\$8,750

<b>Total Specialty Items:</b>	<b>\$201,000</b>
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# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

## Section 5: Traffic Items

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>
Portable Changeable Msg. Sign	2	EA	\$2,000	\$4,000
Luminaires		EA	\$12,000	\$0
Temporary Traffic Signals	1	LS	\$45,000	\$45,000
Construction Signing	1	LS	\$5,000	\$5,000
Paint Striping	2,500	LF	\$0.20	\$500
Permanent Roadsigns	2	EA	\$500	\$1,000
Construction K-Rail	400	LF	\$50	\$20,000
Traffic Control	50	DAYS	\$1,800	\$90,000

<b>Total Traffic Items:</b>	<b>\$166,000</b>
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## Section 6: Minor Items

(subtotal of sections 1 - 5) x (5% - 10%) = \$535,000 7%

<b>Total Minor Items:</b>	<b>\$37,000</b>
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## Section 7: Roadway Mobilization

(subtotal of sections 1 - 6) x (0% - 10%) = \$572,000 10%

<b>Total Roadway Mobilization:</b>	<b>\$57,000</b>
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## Section 8: Roadway Additions

### Supplementals

(subtotal of sections 1 - 6) x (5% - 10%) = \$572,000 7% \$40,040

### SWPPP, BMP, etc.

(subtotal of sections 1 - 6) x (6%) = \$572,000 6% \$34,320

### Contingencies

(subtotal of sections 1 - 6) x (20% - 30%) = \$572,000 30% \$171,600

<b>Total Roadway Additions:</b>	<b>\$246,000</b>
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<b>Total Roadway Items:</b>	<b>\$875,000</b>
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## Section 9: Engineering

Right of Way and Design	\$2,275,000	25%	\$568,750
Construction	\$2,275,000	14%	\$318,500

<b>Total Engineering:</b>	<b>\$887,000</b>
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# PRELIMINARY PROJECT COST ESTIMATE SUMMARY

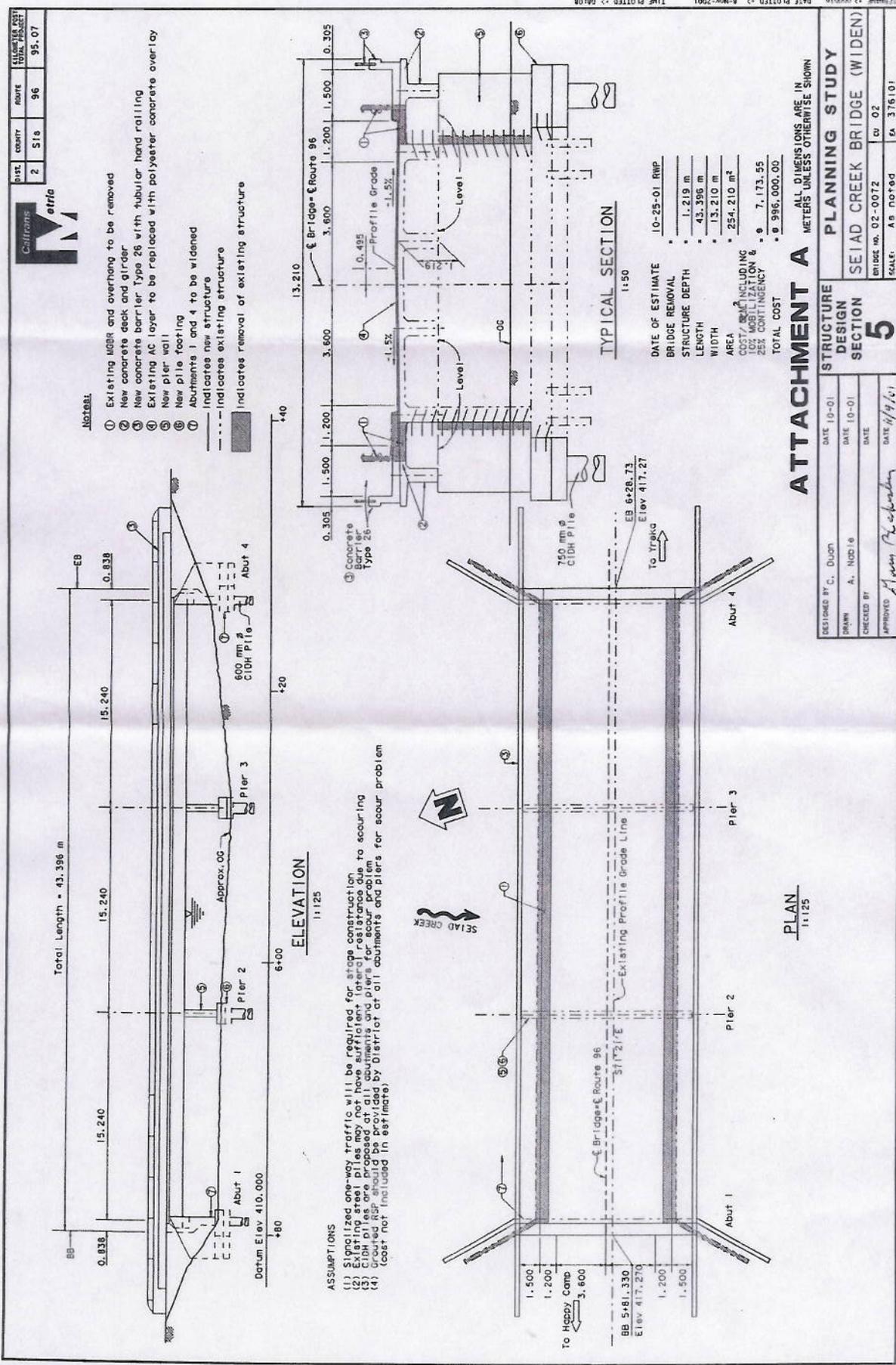
## II. STRUCTURES ITEMS

Bridge Name	Seiad Creek	
Structure Type	Concrete Girder	
Width, ft. (new or width addition)	43.3	(includes entire deck width due to removal of AC and unsound concrete)
Span Length, ft.	142	
Total Area, sq. ft.	6,149	
Footing Type (Pile/Spread)	Pile	
Cost Per Square Foot (includes 10% mobilization and 25% contingency)	\$228	(includes removal of AC and unsound concrete from deck and application of polyester overlay)
Total Cost of Structure	\$1,400,000	
Bridge Removal		
<b>Total Structure Items:</b>		<b>\$1,400,000</b>

## III. Right of Way

Acquisition, including excess lands and damages to remainder(s)	\$6,400	
Mitigation acquisition & credits	\$60,000	
Utility Relocation	\$0	
Clearance/Demolition	\$0	
Relocation Assistance	\$0	
Title and Escrow Fees	\$600	
Construction Contract Work	\$0	
<b>Total Right of Way:</b>		<b>\$67,000</b>





		DATE	PROJECT	DATE	PROJECT
2	S18	96	95.07		

**NOTES:**

- ① Existing WGBR and overhang to be removed
  - ② New concrete deck and girder
  - ③ New concrete barrier Type 26 with tubular hand railing
  - ④ Existing AC layer to be replaced with polyester concrete overlay
  - ⑤ New pier wall
  - ⑥ New pile footing
  - ⑦ Abutments 1 and 4 to be widened
- Indicates new structure  
 - - - - - Indicates existing structure  
 ■ Indicates removal of existing structure

**ELEVATION**  
1:125

- ASSUMPTIONS**
- (1) Signalized one-way traffic will be required for stage construction
  - (2) Existing steel piles may not have sufficient lateral resistance due to scouring
  - (3) CIDH piles are proposed at all abutments and piers for scour problem
  - (4) Cost by District of all abutments and piers for scour problem (cost not included in estimate)

**TYPICAL SECTION**  
1:50

DATE OF ESTIMATE	10-25-01 RMP
BRIDGE REMOVAL	1.219 m
STRUCTURE DEPTH	43.396 m
LENGTH	13.210 m
WIDTH	254.210 m <sup>2</sup>
COST/AREA INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	7,173.55
TOTAL COST	996,000.00

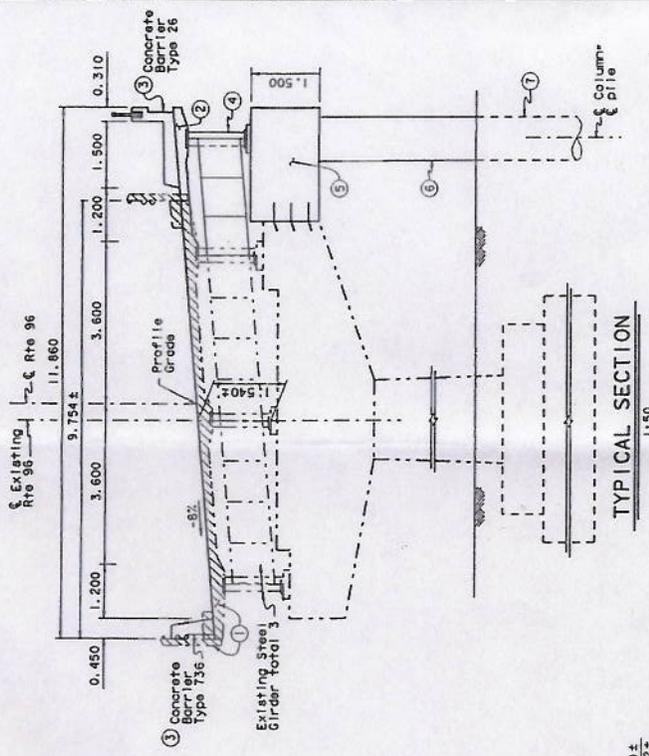
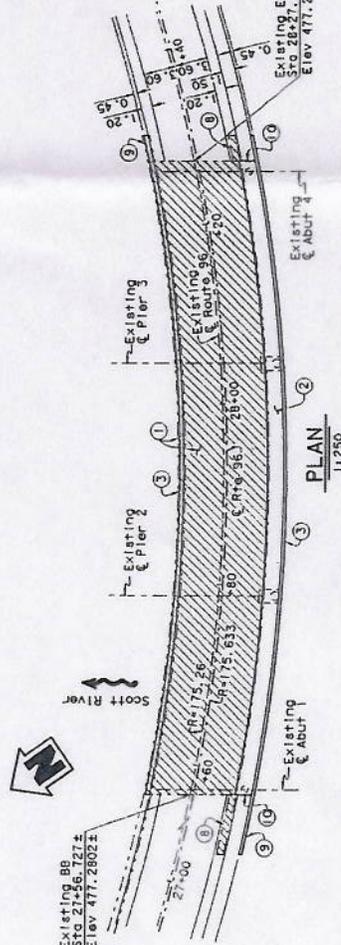
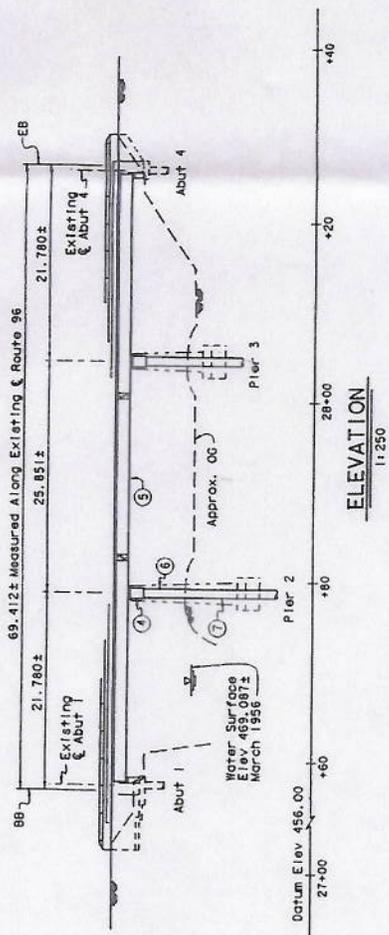
**PLAN**  
1:125

**ATTACHMENT A**  
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

DESIGNED BY: C. DUON	DATE: 10-01	STRUCTURE DESIGN SECTION	PLANNING STUDY
DRAWN: A. NODI &	DATE: 10-01	SEIAD CREEK BRIDGE (WIDEN)	
CHECKED BY:	DATE:	BRIDGE NO. 02-0072	CV 02
APPROVED: <i>Henry P. ...</i>	DATE: 11/14/01	SCALE: AS NOTED	SA 376101

Caltrans **M**etric

DIST.	COUNTY	ROUTE
02	S18	96



DATE OF ESTIMATE	10 - 25 - 01	RWP
STRUCTURE DEPTH	15400 mm	
LENGTH	69.412 m	
WIDTH	2.200 m	
AREA	152.705 m <sup>2</sup>	
COST / m <sup>2</sup> INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	\$7680.43	
TOTAL COST	\$1,173,000.00	

- Assumptions**
- Signalized one-way traffic will be required during construction
  - Existing concrete deck containing high chlorides will be replaced. One of the following three options may be needed in replacing existing deck:
    - shut down traffic during construction, 2) use special bracing system, and 3) build a widened structure with one-lane first to accommodate one-way traffic during construction. The construction costs for these options are not included in the estimate
  - CIDH piles are proposed at all abutments and piers for scour problem
  - RSP should be provided by District at Piers 2 and 3 for scour problem (cost not included in the estimate)

- Notes:**
- Existing MCBR and concrete deck to be removed
  - New concrete deck
  - Concrete Barrier Type 26 with tubular hand railing and Concrete Barrier Type 736 to be installed
  - New Steel Girder
  - New Bent Cap
  - New 1000 mm Ø Column
  - Existing Retaining Walls to be installed
  - New Retaining Walls to be removed
  - Widened Abutment part
  - indicates new structure
  - indicates existing structure
  - /// indicates existing structure to be removed

**ALTERNATIVE # 1**  
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

<b>STRUCTURE DESIGN SECTION 5</b>	<b>PLANNING STUDY</b>
DESIGNED BY Carl Duon	DATE 10-05-01
DRAWN BY Thuymai Tran	DATE 10-09-01
CHECKED BY Carl Duon	DATE 10-15-01
APPROVED Harry P. Labadie	DATE 11/01
FILE # 11810.000/007/0427	

SCOTT RIVER BRIDGE (WIDEN)

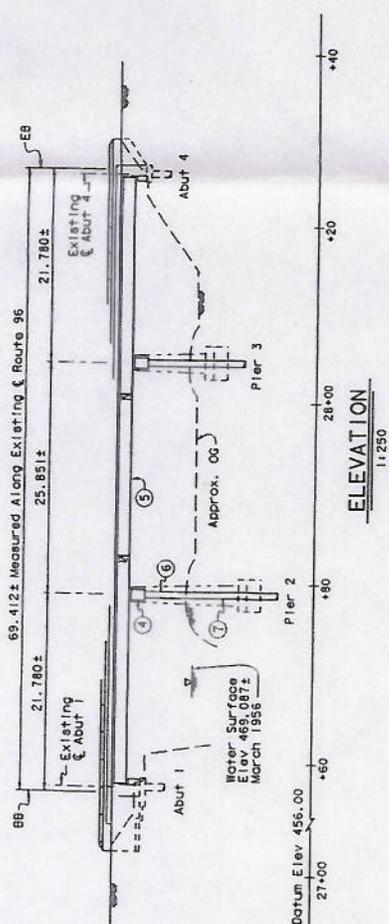
BRIDGE NO. 02-0079

SCALE: NOTED

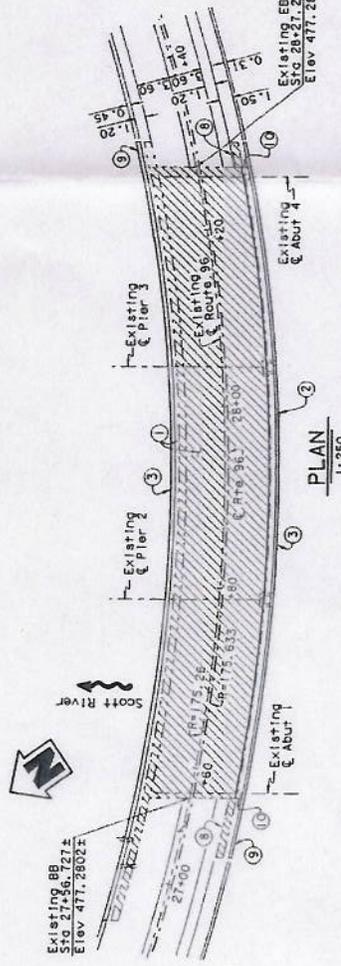
EX 376 OK

Caltrans **Metric**

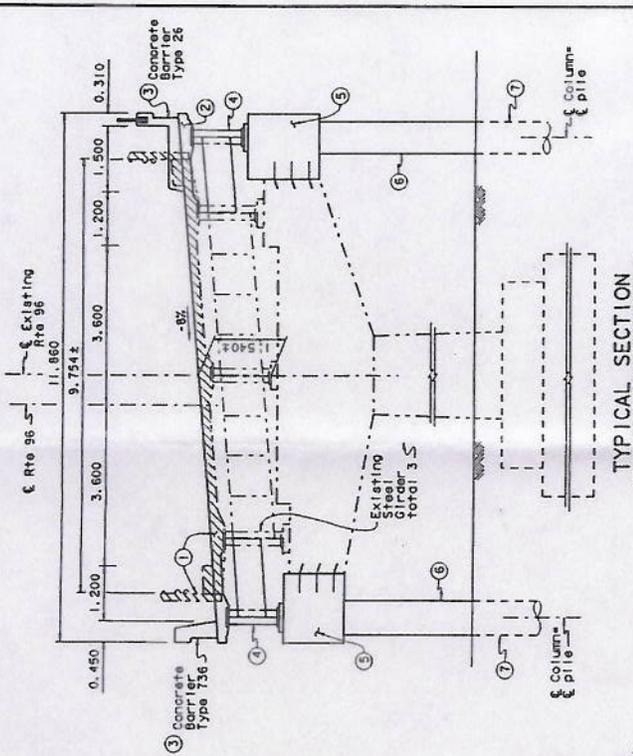
DIST	COUNTY	ROUTE	PROJECT
02	SIS	96	



ELEVATION  
1:1,250



PLAN  
1:1,250



TYPICAL SECTION  
1:1,50

DATE OF ESTIMATE	10 - 25 - 01	RMP
STRUCTURE DEPTH	15400 mm	
LENGTH	69.412 m	
WIDTH	2.200 m	
AREA	152.706 m <sup>2</sup>	
COST/25 m <sup>2</sup> INCLUDING 10% MOBILIZATION & 25% CONTINGENT	\$9062.18	
TOTAL COST	\$1,395,000.00	

- Assumptions
- Signalized one-way traffic will be required during construction
  - Existing concrete deck containing high chlorides will be replaced. One of the following three options may be needed in replacing existing deck:
    - shut down traffic during construction, 2) use special bracing system, and 3) build a widened structure with one-lane first to accommodate one-way traffic during construction. The construction costs for these options are not included in the estimate
  - CIDH piles are proposed at all abutments and piers for scour problem
  - RSP should be provided by District at Piers 2 and 3 for scour problem (cost not included in the estimate)

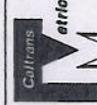
- Notes:
- Existing MGR and concrete deck to be removed
  - New concrete deck
  - Concrete Barrier Type 26 with tubular hand railing and Concrete Barrier Type 735 to be installed
  - New Steel Girder
  - New Bent Ccp
  - New 750 mm Ø CIDH pile to be installed
  - Existing Retaining Walls at Abut 1 & 4 to be removed (1 m below ground)
  - New Retaining Walls to be constructed
  - Widened abutment part
  - Indicates new structure
  - Indicates existing structure
  - Indicates existing structure to be removed

**ATTACHMENT A**  
ALTERNATIVE # 2

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

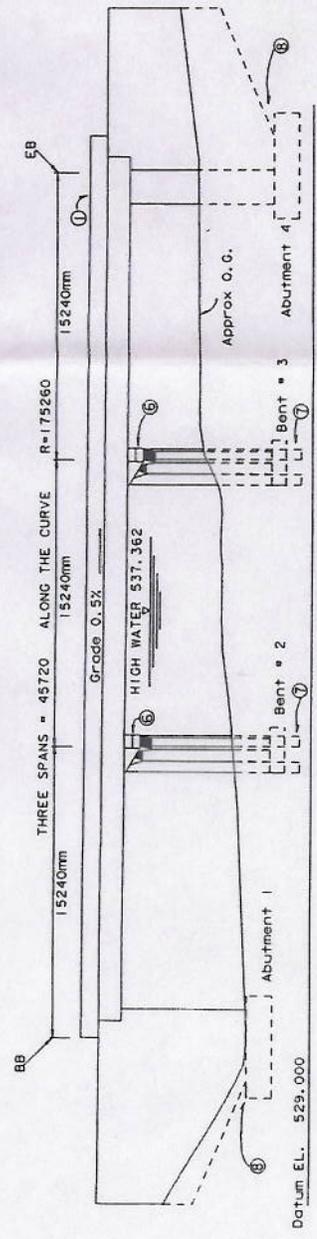
DESIGNED BY	Carl Duon	DATE	10-10-01
DRAWN BY	Thuy-Mai Trgon	DATE	10-11-01
CHECKED BY	Carl Duon	DATE	10-15-01
APPROVED BY	<i>Thuy B. B. B.</i>	DATE	11/01

STRUCTURE DESIGN SECTION	5
PLANNING STUDY	SCOTT RIVER BRIDGE (WIDEN)
SCALE	NOTED
CU	02
EA	376.0K

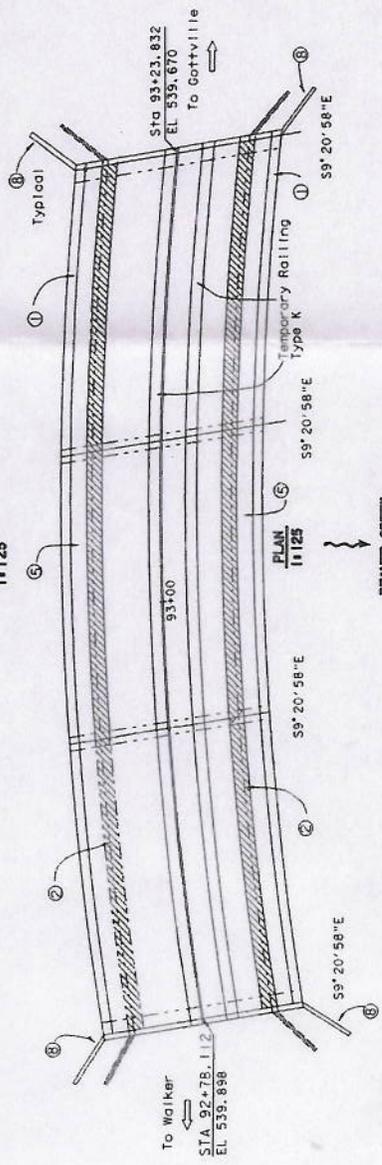


DIST.	COUNTY	ROUTE	SHEET NO.	TOTAL SHEETS
02	515	96	06	26

DATE OF ESTIMATE 10-25-01 RWD  
 STRUCTURE DEPTH 11.27m  
 LENGTH 45720mm  
 WIDTH 2800mm  
 AREA 128.01m<sup>2</sup>  
 COST / km<sup>2</sup> INCLUDING 10% MOBILIZATION & 25% CONTINGENCY \$ 8,539.61  
 TOTAL COST \$ 1,093,000.00



ELEVATION 1:125



NOTES:

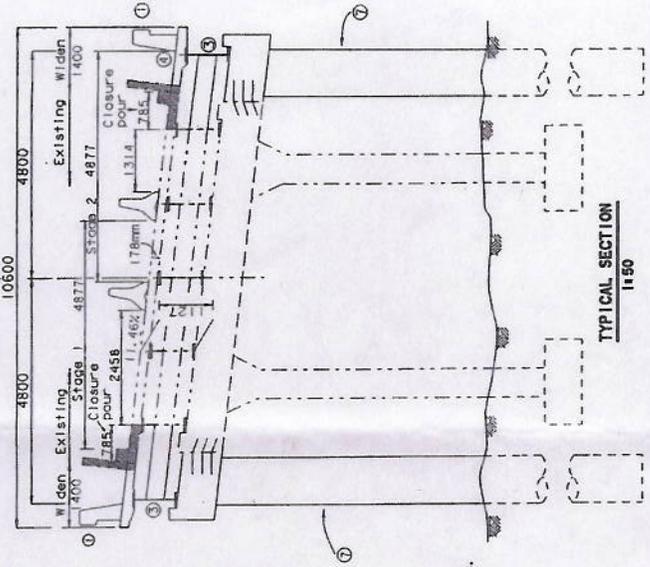
- ① Concrete Barrier type 736 (epoxy-coated rebar).
- ② Existing structure to be removed.
- ③ New steel girders.
- ④ Scupper drainage (TBD)
- ⑤ New concrete deck.
- ⑥ New bent cap.
- ⑦ Install CIDH pile 1000mm diameter.
- ⑧ Widen abutment.

- indicates existing structure
- ▨ indicates new structure.
- ▩ indicates concrete removal

Fiber optic line will be attached to the superstructure.  
 Final deck finishing shall not be made until deck concrete for the entire span is placed.  
 Seasonal construction required.  
 Replace any unsounded concrete on the deck.  
 Clean throughout depth of expansion joints and install joint seals.  
 Clean and paint the existing steel girders. (not included in the estimate)

ASSUMPTIONS:

- Signalized one-way traffic during construction.
- New structure foundation at the same elev. as existing.
- Concrete seal may be required.
- Storm water drain into the Beaver Creek channel.
- Temporary crash cushion type at each end by District.



ATTACHMENT A

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

DESIGNED BY	Marlo Guadamuz	DATE	9/01
DRAWN BY	Marlo Guadamuz	DATE	9/01
CHECKED BY	Carl Duon	DATE	9/01
APPROVED	<i>M. L. L.</i>	DATE	11/01

BRIDGE NO.	02-0081	CU	02
<b>PLANNING STUDY</b>			
<b>BEAVER CREEK (WIDEN)</b>			
<b>STRUCTURE DESIGN SECTION</b>		<b>5</b>	

