

# **ATTACHMENT C**

## **Alternative A**

### **Preliminary Cost Estimate**

*I-80 Express Lanes*  
*Preliminary Project Cost Estimate Summary*

District-County-Route:	04-Sol.-80
PM:	11.2-29.3
Project No.:	0412000332K
Program Code:	HB4C

**PROJECT DESCRIPTION:**

*Limits:* I-80 Express Lanes - Red Top Road to I-505

*Scope:* Alternative A - HOV conversion and proposed median widening of I-80,  
placement of median barrier, continuous ingress/egress striping and CHP enforcement areas.

**SUMMARY OF PROJECT COST ESTIMATE**

***PROJECT CONSTRUCTION COSTS***

ROADWAY ITEMS (2011 Value)	\$ 127,467,000
STRUCTURE ITEMS (2011 Value)	\$ 5,148,000
SUBTOTAL CONSTRUCTION (2011 Value)	\$ 132,615,000

***CAPITAL OUTLAY SUPPORT***

ENGINEERING (18% of Construction Costs)	\$ 23,900,000
RIGHT OF WAY SUPPORT (12% of R/W Costs)	\$ 500,000
CONSTRUCTION SUPPORT (15% of Construction Costs)	\$ 19,900,000
SUBTOTAL CAPITAL OUTLAY SUPPORT	\$ 44,300,000

***ESCALATED PROJECT COSTS***

ROADWAY ITEMS (2015 Value)	\$ 139,332,100
STRUCTURE ITEMS (2015 Value)	\$ 5,627,200
SUBTOTAL CONSTRUCTION (2015 Value)	\$ 144,959,300
RIGHT OF WAY (2015 Value)	\$ 4,072,000
CAPITAL OUTLAY SUPPORT (From Above)	\$ 44,300,000
TOTAL ESCALATED PROJECT COST (2015 Value)	\$ 194,000,000

02/17/12

(Date)

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**I. ROADWAY ITEMS**

<u>Section 1 - Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Roadway Excavation	200,000	CY	\$15	\$3,000,000	
Imported Borrow	6,000	CY	\$10	\$60,000	
Clearing & Grubbing	1	LS	\$190,000	\$190,000	
Develop Water Supply	1	LS	\$46,000	\$46,000	
Top Soil Reapplication	1	LS	\$20,000	\$20,000	
Stepped Slopes and Slope Rounding (Contour Grading)	1	LS	\$50,000	\$50,000	
Contaminated Soil Excavation (Type Y-1) (ADL)	43,400	CY	\$20	\$868,000	
Contaminated Soil Excavation (Type Y-2) (ADL)	28,200	CY	\$30	\$846,000	
Contaminated Soil Excavation (Type Z-2) (ADL)	1,650	CY	\$200	\$330,000	
				<b>Subtotal Earthwork</b>	<b>\$5,410,000</b>
<u>Section 2 - Structural Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Asphalt Concrete (Open Graded)	64,800	Ton	\$80	\$5,184,000	
Asphalt Concrete (HMA)	123,000	Ton	\$90	\$11,070,000	
Lean Concrete Base	60,500	CY	\$110	\$6,655,000	
Class 3 Aggregate Base	0	CY	\$0	\$0	
Class 4 Aggregate Subbase	143,000	CY	\$20	\$2,860,000	
Treated Permeable Base	0	CY	\$0	\$0	
Subgrade Enhancement Fabric	63,400	SQYD	\$1	\$63,400	
Remove OGAC	698,000	SQYD	\$2	\$1,396,000	
				<b>Subtotal Pavement Structural Section</b>	<b>\$27,228,400</b>
<u>Section 3 - Drainage</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Large Drainage Facilities	0	LS	\$0	\$0	
Project Drainage	1	LS	\$3,000,000	\$3,000,000	
Hydromodification	1	LS	\$1,000,000	\$1,000,000	
Grated Line Drain	5,800	LF	\$130	\$754,000	
Edge Drains	0	LF	\$0	\$0	
				<b>Subtotal Drainage</b>	<b>\$4,754,000</b>

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<u>Section 4 - Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Retaining Walls <sup>(1)</sup>	43,900	SQFT	\$150	\$6,585,000	
Soundwalls <sup>(1)</sup>	0	SQFT	\$0	\$0	
Equipment/Animal Passes	0	EA	\$0	\$0	
Water Pollution Control	1	LS	\$5,310,000	\$5,310,000	
Hazaroudous Waste Investigation and/or Mitigation Work	0	LS	\$0	\$0	
R/W Fence	1,000	LF	\$15	\$15,000	
Environmental Compliance	0	LS	\$0	\$0	
Concrete Barrier	63,100	LF	\$52	\$3,281,200	
MBGR	1	LS	\$500,000	\$500,000	
Remove Concrete Barrier	4,000	LF	\$23	\$92,000	
Remove K-Rail	50,600	LF	\$2	\$101,200	
Remove MBGR	3,100	LF	\$9	\$27,900	
Remove Thrie Beam Railing	43,800	LF	\$10	\$438,000	
Remove Existing Facilities <sup>(2)</sup>	1	LS	\$100,000	\$100,000	
Resident Engineer Office	1	LS	\$500,000	\$500,000	
<b>Subtotal Specialty Items</b>					<b>\$16,950,300</b>

<u>Section 5 - Traffic Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Lighting (New & Relocate)	1	LS	\$205,000	\$205,000	
Traffic Delineation Items	1	LS	\$480,000	\$480,000	
Traffic Signals	0	LS	\$0	\$0	
Traffic Operating Systems	1	LS	\$500,000	\$500,000	
Roadside Sign	1	LS	\$200,000	\$200,000	
Overhead Sign	17	EA	\$200,000	\$3,400,000	
Lightweight Overhead Gantry	34	EA	\$100,000	\$3,400,000	
Bridge Mounted Sign	6	EA	\$80,000	\$480,000	
Traffic Control System	1	LS	\$570,000	\$570,000	
Transportation Management Plan	1	LS	\$500,000	\$500,000	
System Integrator and Hardware	1	LS	\$10,600,000	\$10,600,000	
K-Rail	47,400	LF	\$10	\$474,000	
Stage Construction	1	LS	\$2,100,000	\$2,100,000	
<b>Subtotal Traffic Items</b>					<b>\$22,909,000</b>

(1) MSE and Non-Standard Retaing Walls are included in the Structures Section

(2) Removal of Existing Facilities entails Curb & Gutter, Sidewalk, Lighting, etc.

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<u>Section 6: Planting and Irrigation</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Highway Planting	0	AC	\$0	\$0	
Replacement Planting	0	AC	\$0	\$0	
Irrigation Modification	1	LS	\$100,000	\$100,000	
Relocate Existing Irrigation	1	LS	\$150,000	\$150,000	
Irrigation Crossovers	1	LS	\$10,000	\$10,000	
			<b>Subtotal Planting and Irrigation</b>		<b>\$260,000</b>

<u>Section 7: Roadside Management &amp; Safety</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Vegetation Control Treatments	1	LS	\$100,000	\$100,000	
Gore Area Pavement	1	LS	\$50,000	\$50,000	
Pavement Beyond Gore Area	1	LS	\$50,000	\$50,000	
Miscellaneous Paving	1	LS	\$100,000	\$100,000	
Erosion Control (Permanent BMP)	1	LS	\$1,110,000	\$1,110,000	
Slope Protection	1	LS	\$100,000	\$100,000	
Side Slopes/Embankment Slopes	1	LS	\$100,000	\$100,000	
Maintenance Vehicle Pull Outs	0	EA	\$0	\$0	
Roadside Facilities (Crash Cushions)	1	LS	\$50,000	\$50,000	
Off-Freeway Access (Gates, etc.)	0	LS	\$0	\$0	
			<b>Subtotal Roadside Managemetn &amp; Safety</b>		<b>\$1,660,000</b>

**TOTAL SECTIONS: 1 thru 7** **\$79,171,700**



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**II. STRUCTURES ITEMS**

Bridge Name	<u>Davis St Undercrossing</u> 23-0023 L/R Widen Existing	<u>Mason Undercrossing</u> 23-0051 L/R Widen Existing	<u>Ulatis Creek Bridge</u> 23-0052 L/R Widen Existing	<u>Pine Tree Creek Bridge</u> 23-0036 L Widen Existing	<u>Horse Creek Bridge</u> 23-0011 L Widen Existing
Structure Type	<u>Concrete Tee Beam</u>	<u>Steel Girder</u>	<u>Steel Girder (R) Concrete Slab (L)</u>	<u>Concrete Slab</u>	<u>Concrete Slab</u>
New Width (Ft)					
Widening Width (Ft)	<u>20.00</u>	<u>20.00</u>	<u>20.00</u>	<u>19.00</u>	<u>22.00</u>
Retrofit Width (Ft)					
Span Lengths (Ft)	<u>260.0</u>	<u>280.0</u>	<u>135.0</u>	<u>45.0</u>	<u>125.0</u>
Total New Area (SQ Ft)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Widening Area (SQ Ft)	<u>5,200</u>	<u>5,600</u>	<u>2,700</u>	<u>855</u>	<u>2,750</u>
Total Retrofit Area (SQ.Ft)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Footing Type (pile/spread)	<u>CIDH</u>	<u>Spread</u>	<u>CIDH</u>		
Cost per Sq. ft of New	<u>\$130</u>	<u>\$130</u>	<u>\$130</u>	<u>\$250</u>	<u>\$250</u>
Cost per Sq. ft of Widening	<u>\$260</u>	<u>\$340</u>	<u>\$300</u>	<u>\$300</u>	<u>\$300</u>
Cost per Sq. ft of Retrofit	<u>\$16</u>	<u>\$16</u>	<u>\$16</u>	<u>\$16</u>	<u>\$16</u>
Including: Mobilization: 10% Contingency: 20%					
Total Cost for Widening	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Total Cost for Widening	<u>\$ 1,352,000</u>	<u>\$ 1,904,000</u>	<u>\$ 810,000</u>	<u>\$ 257,000</u>	<u>\$ 825,000</u>
Total Cost for Retrofit	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Bridge Removal	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Total Cost for Structures	<u>\$ 1,352,000</u>	<u>\$ 1,904,000</u>	<u>\$ 810,000</u>	<u>\$ 257,000</u>	<u>\$ 825,000</u>
Railroad Related Costs					
					<b><u>\$5,148,000</u></b>

COMMENTS:

Estimate Prepared By: Sean Charles, PE 02/17/12  
 (Print Name) (Date)

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**III. RIGHT OF WAY ITEMS**

Right-of-Way estimates should consider the probable highest and best use and type and intent of improvements at the time of acquisition. Assume acquisition including utility relocation occurs at the right of way certification milestone as shown in the Funding and Scheduling Section of the PSR. For further guidance see Chapter 1, Caltrans Right of Way Procedural Handbook.

	Current Values (Future Use) (2011)	Escalation Rate (%/yr)	Escalated Value (2015)
A. Acquisition (Fee & TCE), including excess lands and damages to remainders	\$ 1,000,000	5%/Yr	\$ 1,216,000
B. Utility Relocation (State share)	\$2,000,000	5%/Yr	\$ 2,430,000
C. Relocation Assistance	\$ -	5%/Yr	\$ -
D. Clearance / Demolition	\$ -	5%/Yr	\$ -
E. R/W Services - Title and Escrow Fees	\$ 300,000	5%/Yr	\$ 365,000
Easement ( Utility Corridor)	\$ 50,000	5%/Yr	\$ 61,000
<b>TOTAL RIGHT OF WAY ITEMS</b>	<b>\$ 3,350,000</b>		<b>\$4,072,000</b>

F. Construction Contract Work

Brief Description of Work:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Right of Way Branch Cost Estimate for Work\* \_\_\_\_\_

amount is to

COMMENTS:

Estimate prepared by: Brian Stewart, P.E. (925) 974-2572 02/17/12  
 (Print Name) (Phone) (Date)