

Evaluation of I-80 Long-Life Corridor Costs

Part of Item 4.15 PPRC Strategic Plan

**Technical Memorandum Prepared for
California Department of Transportation (Caltrans)**

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1.0 INTRODUCTION

This technical memorandum summarizes the analysis performed in evaluating Long-Life Pavement Rehabilitation Strategies (LLPRS) cost. This study is part of the effort to develop an Integrated Pavement Strategy Decision Support System to allow engineers to analyze efficient allocation of financial resources when planning pavement projects.

This study analyzed cost performances of a long-life pavement project on Interstate 80 between Nevada County (Truckee) from east of the Fireboard undercrossing to the west end of the Truckee River Bridge.

1.1 Project Description

The rehabilitation project involved rehabilitation of an 11-mile stretch of I-80 (approximately 46 lane miles) between West Boca and Floriston, east of Truckee. The contract was awarded to Granite Construction Company of Watsonville; construction began April 2, 2001. The cost of the project was estimated to be \$88 million, however, the final cost of the project totaled at about \$99 million. The analysis performed determines the reasons for the difference between the estimated and actual costs.

1.2 Definitions

For this analysis, the original contract amount and the actual cost of the project are compared. Included in this comparison are the original bid cost, actual bid cost, and the total costs including contract change orders. The 'original bid cost' consists of the costs of the bid items as proposed by the contractor before construction. The 'actual bid cost' is the actual amount expended for these bid items at the end of the project. The engineer's estimate, which

includes the bid estimate, supplemental work, state furnished materials, and contingencies anticipated by Caltrans, is also included for comparison.

To analyze the expenditures for these projects, costs were divided into several categories.

- The total cost is divided into direct, indirect, and administrative costs.
- Direct costs consist of cost of the pavement or work done directly relating to building the pavement.
- Indirect costs include non-pavement items such as traffic handling, drainage, and roadside and operational costs.

See Appendix A for a complete list and description of each subcategory.

For each cost category, the percentage of the total cost and a cost multiplier is calculated.

Each multiplier represents a ratio of each amount to the direct cost:

$$\text{Multiplier} = (\text{Line Item Cost Category}) / (\text{Direct Cost})$$

Also determined is the percentage difference between the original bid amount and the actual bid amount.

2.0 RESULTS

The original bid amount for the I-80 rehabilitation project was \$87.9 million. Figure 1 illustrates the cost breakdown based on the Original Bid.

Figure 2 illustrates the Project Cost Breakdown of the Actual Bid Costs. The actual cost of the bid items was 0.04% less than the Original Bid Cost and came in at \$89.8 million. Figure 2 shows the breakdown for the Actual Bid Cost.

While the totals for these two bid costs were nearly identical, the allocations of the costs were noticeably different. The direct costs for the Actual Bid Cost were 18 percent higher than

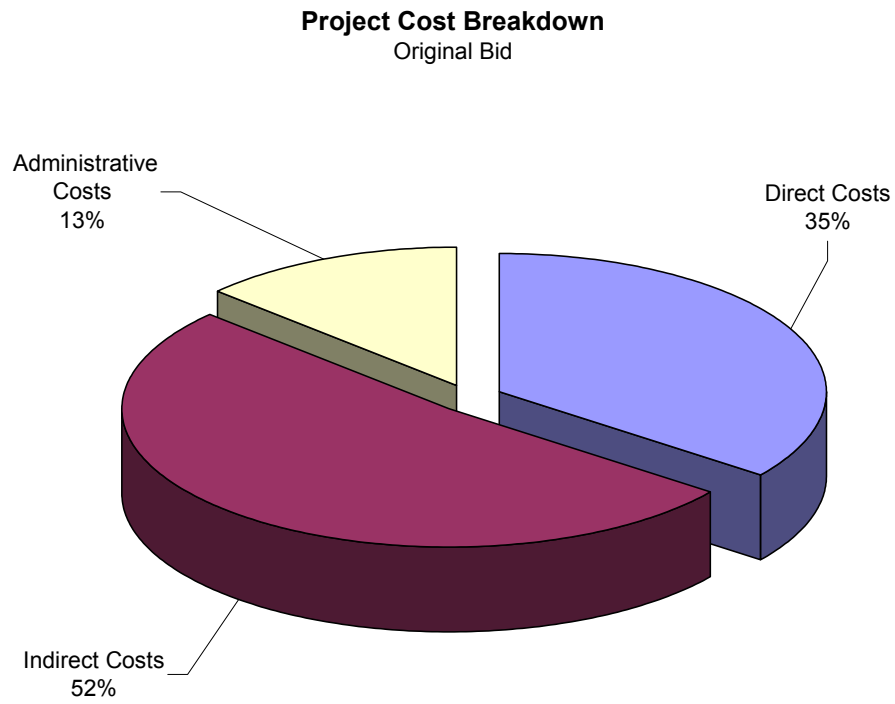


Figure 1. Breakdown of the Original Bid costs.

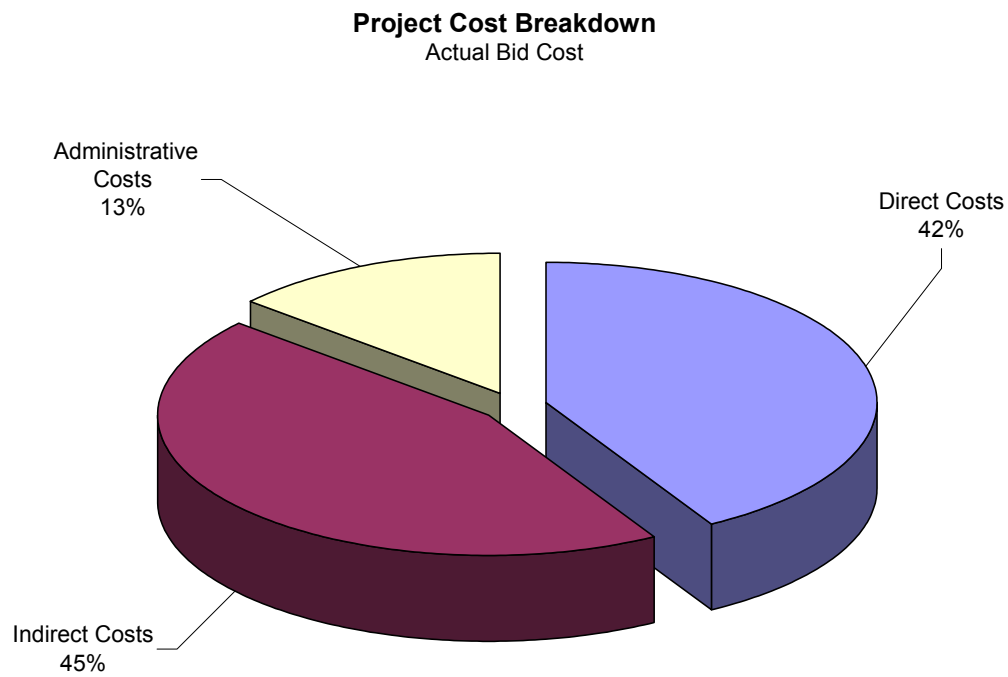


Figure 2. Breakdown of the Actual Bid costs.

for the original bid, and the indirect cost was 13 percent lower. Table 1 shows the detailed breakdown and difference between these two costs, as well as the totals for the Engineer's Estimate, Contract Change Orders (CCO), Total Cost, and Cost per Lane Mile.

The multipliers in Table 1 provide an alternate perspective on the costs of the project as they show the relative relationship of a given cost category to the total direct costs. The total indirect costs summed 0.78 – 1.46 times the direct costs; the total administrative costs summed to 0.32 – 0.54 times the direct costs; the total project costs summed to 2.24 – 2.83 times the direct costs.

Even though the bid costs were nearly identical, the Total Cost of the project equaled \$100.9 million, which is \$13 million more than the Bid Cost and \$11 million more than the Engineer's Estimate. This overrun is attributed to the CCOs for the project.

The largest contributor of CCOs was accounted for in extra work performed repairing the existing pavement. This category falls under direct costs. Table 1 shows that for this category, the CCOs for repairing the existing pavements accounted for \$5.8 million. This amount is 44 percent of the total CCO cost. Totaling \$13.1 million, these costs are broken down in Figure 3.

Not shown in this cost analysis is the CCO days charged. For this project, there were 33 CCO days awarded as of May 2004. These extra work days may contribute to economic and other impacts not included in this analysis.

It is important to note that due to deadlines, all of the CCO data is current only until May 2004. As of April 2005, the CCO cost had risen to nearly \$18 million.

Figure 4 demonstrates the relationship between the Actual Bid Cost and the CCOs. Together, they form the Total Cost for the project. The breakdown of cost allocations for the Total Cost is shown in Figure 5.

Table 1 Project Cost Breakdown

Direct Costs

Category	Engineer's Estimate			Original Bid			Actual Bid Cost			% Dif-ference ¹	CCO			Total Cost			Cost/ lane mile ³
	Amount	%	Multi-plier ²	Amount	%	Multi-plier ²	Amount	%	Multi-plier ²		Amount	%	Multi-plier ²	Amount	%	Multi-plier ²	46.00 lane-mi.
Repair Existing Pavement	\$31,667,922	35.34	0.96	\$26,814,600	30.51	0.86	\$32,189,522	36.65	0.88	20.04	\$5,505,315	42.13	1.00	\$37,694,837	37.36	0.89	\$819,453
Earthwork	\$1,122,840	1.25	0.03	\$3,503,600	3.99	0.11	\$3,659,786	4.17	0.10	4.46	\$10,000	0.08	0.00	\$3,669,786	3.64	0.09	\$79,778
Pavement Striping	\$319,765	0.36	0.01	\$691,240	0.79	0.02	\$785,636	0.89	0.02	13.66	\$17,598	0.13	0.00	\$803,234	0.80	0.02	\$17,462
Open Graded Surface	\$0	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	\$0
Subtotal (Direct Costs)	\$33,110,527	36.95	1.00	\$31,009,440	35.29	1.00	\$36,634,945	41.71	1.00	18.14	\$5,532,913	42.34	1.00	\$42,167,858	41.79	1.00	\$916,693

¹ % Difference = (Actual - Original) / Original

² Multiplier = (Cost Category)/(Direct Pavement Cost)

³ Lane Mile Cost = (Total Cost)/(Lane Miles)

Indirect Costs

Category	Engineer's Estimate			Original Bid			Actual Bid Cost			% Dif-ference ¹	CCO			Total Cost			Cost/ lane mile ³	
	Amount	%	Multi-plier ²	Amount	%	Multi-plier ²	46.00 lane-mi.	%	Multi-plier ²		Amount	%	Multi-plier ²	Amount	%	Multi-plier ²	46.00 lane-mi.	
Traffic Handling	Traffic Control	\$5,135,441	5.73	0.16	\$2,625,390	2.99	0.08	\$2,647,660	3.01	0.07	0.85	\$294,301	2.25	0.05	\$2,941,961	2.92	0.07	\$63,956
	Temporary Detours	\$0	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	0.00	\$596,949	4.57	0.11	\$596,949	0.59	0.01	\$12,977
	Perm. Widening for Construction Traffic Handling	\$0	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	\$0
	Others	\$0	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	\$0
Drainage	Dikes/Curbs	\$88,866	0.10	0.00	\$50,960	0.06	0.00	\$49,869	0.06	0.00	-2.14	\$112,800	0.86	0.02	\$162,669	0.16	0.00	\$3,536
	Modify within Pavement	\$32,760	0.04	0.00	\$25,600	0.03	0.00	\$18,000	0.02	0.00	-29.69	\$47,500	0.36	0.01	\$65,500	0.06	0.00	\$1,424
	Repair Existing	\$199,013	0.22	0.01	\$94,750	0.11	0.00	\$76,855	0.09	0.00	-18.89	\$0	0.00	0.00	\$76,855	0.08	0.00	\$1,671
	Upgrade/New	\$4,470,485	4.99	0.14	\$4,083,698	4.65	0.13	\$4,325,631	4.92	0.12	5.92	\$639,482	4.89	0.12	\$4,965,113	4.92	0.12	\$107,937
Storm Water Upgrades	\$27,000	0.03	0.00	\$5,000	0.01	0.00	\$5,000	0.01	0.00	0.00	\$48,557	0.37	0.01	\$53,557	0.05	0.00	\$1,164	
Safety	Identified in Safety Analysis	\$0	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	\$0
	Guardrail/Barriers	\$3,946,532	4.40	0.12	\$3,085,535	3.51	0.10	\$3,115,104	3.55	0.09	0.96	\$48,814	0.37	0.01	\$3,163,918	3.14	0.08	\$68,781
	Meet 3R Design Standards	\$0	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	\$0
	Other Safety Upgrades	\$0	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	\$0

¹ % Difference = (Actual - Original) / Original

² Multiplier = (Cost Category)/(Direct Pavement Cost)

³ Lane Mile Cost = (Total Cost)/(Lane Miles)

Indirect Costs (continued)

Category	Engineer's Estimate			Original Bid			Actual Bid Cost				% Dif-ference ¹	CCO			Total Cost			Cost/ lane mile ³
	Amount	%	Multi-plier ²	Amount	%	Multi-plier ²	Amount	%	Multi-plier ²	Amount		%	Multi-plier ²	Amount	%	Multi-plier ²	46.00 lane-mi.	
Roadside	Embankment Upgrades	\$2,433,600	2.72	0.07	\$4,258,800	4.85	0.14	\$0	0.00	0.00	-100.00	\$1,279,123	9.79	0.23	\$1,279,123	1.27	0.03	\$27,807
	Erosion Control	\$1,782,602	1.99	0.05	\$1,299,623	1.48	0.04	\$1,009,484	1.15	0.03	-22.32	\$0	0.00	0.00	\$1,009,484	1.00	0.02	\$21,945
	Roadside/ Ditch Paving	\$209,720	0.23	0.01	\$142,100	0.16	0.00	\$142,100	0.16	0.00	0.00	\$103,349	0.79	0.02	\$245,449	0.24	0.01	\$5,336
	Landscaping	\$31,500	0.04	0.00	\$31,500	0.04	0.00	\$31,500	0.04	0.00	0.00	\$0	0.00	0.00	\$31,500	0.03	0.00	\$685
	Environmental Mitigation	\$708,144	0.79	0.02	\$99,952	0.11	0.00	\$93,725	0.11	0.00	-6.23	\$566,815	4.34	0.10	\$660,540	0.65	0.02	\$14,360
Right of Way	New Right of Way	\$289,000	0.32	0.01	\$289,000	0.33	0.01	\$289,000	0.33	0.01	0.00	\$0	0.00	0.00	\$289,000	0.29	0.01	\$6,283
	Temp. Construction Easements	\$0	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	0.00	\$116,748	0.89	0.02	\$116,748	0.12	0.00	\$2,538
	Utility Relocations	\$140,000	0.16	0.00	\$140,000	0.16	0.00	\$140,000	0.16	0.00	0.00	\$158,980	1.22	0.03	\$298,980	0.30	0.01	\$6,500
Bridges	All Works Done on Bridges	\$17,409,909	19.43	0.53	\$26,430,890	30.08	0.85	\$24,746,872	28.17	0.68	-6.37	\$84,791	0.65	0.02	\$24,831,663	24.61	0.59	\$539,819
Operational	Lane Additions	\$0	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	0.00	\$39,501	0.30	0.01	\$39,501	0.04	0.00	\$859
	Other Widening (beyond 3R Stds)	\$0	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	0.00	\$141,541	1.08	0.03	\$141,541	0.14	0.00	\$3,077
	ITS/Fiber Optic	\$1,149,300	1.28	0.03	\$1,715,000	1.95	0.06	\$1,715,000	1.95	0.05	0.00	\$160,402	1.23	0.03	\$1,875,402	1.86	0.04	\$40,770
	Electrical Code Upgrades	\$0	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	\$0
	New Electrical	\$327,088	0.36	0.01	\$593,800	0.68	0.02	\$608,200	0.69	0.02	2.43	\$152,783	1.17	0.03	\$760,983	0.75	0.02	\$16,543
	Sign Structures	\$192,130	0.21	0.01	\$263,959	0.30	0.01	\$293,836	0.33	0.01	11.32	\$10,584	0.08	0.00	\$304,421	0.30	0.01	\$6,618
	Roadside Signs	\$27,630	0.03	0.00	\$62,100	0.07	0.00	\$56,650	0.06	0.00	-8.78	\$16,438	0.13	0.00	\$73,088	0.07	0.00	\$1,589
Subtotal (Indirect Costs)		\$38,600,720	43.07	1.17	\$45,297,656	51.55	1.46	\$39,364,486	44.81	1.07	-13.10	\$4,619,458	35.35	0.83	\$43,983,945	43.59	1.04	\$956,173

¹ % Difference = (Actual - Original) / Original

² Multiplier = (Cost Category)/(Direct Pavement Cost)

³ Lane Mile Cost = (Total Cost)/(Lane Miles)

Administrative Costs

Category	Engineer's Estimate			Original Bid			Actual Bid Cost			% Dif-ference ¹	CCO			Total Cost			Cost/ lane mile ³ 46.00 lane-mi.
	Amount	%	Multi-plier ²	Amount	%	Multi-plier ²	Amount	%	Multi-plier ²		Amount	%	Multi-plier ²	Amount	%	Multi-plier ²	
Administrative Related	\$16,852,000	18.81	0.51	\$10,518,000	11.97	0.34	\$10,791,750	12.29	0.29	2.60	\$2,663,313	20.38	0.48	\$13,455,063	13.33	0.32	\$292,501
State Furnished Materials	\$1,050,230	1.17	0.03	\$1,050,230	1.20	0.03	\$1,050,230	1.20	0.03	0.00	\$252,367	1.93	0.05	\$1,302,597	1.29	0.03	\$28,317
Supplemental Work	\$0	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	0.00	\$0	0.00	0.00	\$0	0.00	0.00	\$0
Subtotal (Administrative Costs)	\$17,902,230	19.98	0.54	\$11,568,230	13.16	0.37	\$11,841,980	13.48	0.32	2.37	\$2,915,680	22.31	0.53	\$14,757,660	14.62	0.35	\$320,819

¹ % Difference = (Actual - Original) / Original

² Multiplier = (Cost Category)/(Direct Pavement Cost)

³ Lane Mile Cost = (Total Cost)/(Lane Miles)

Total (All Costs)

Category	Engineer's Estimate			Original Bid			Actual Bid Cost			% Dif-ference ¹	CCO			Total Cost			Cost/ lane mile ³ 46.00 lane-mi.
	Amount	%	Multi-plier ²	Amount	%	Multi-plier ²	Amount	%	Multi-plier ²		Amount	%	Multi-plier ²	Amount	%	Multi-plier ²	
Total (All Costs)	\$89,613,477	100	2.71	\$87,875,326	100	2.83	\$87,841,411	100	2.40	-0.04	\$13,068,051	100	2.36	\$100,909,462	100	2.39	\$2,193,684

¹ % Difference = (Actual - Original) / Original

² Multiplier = (Cost Category)/(Direct Pavement Cost)

³ Lane Mile Cost = (Total Cost)/(Lane Miles)

Project Cost Breakdown
Contract Change Orders

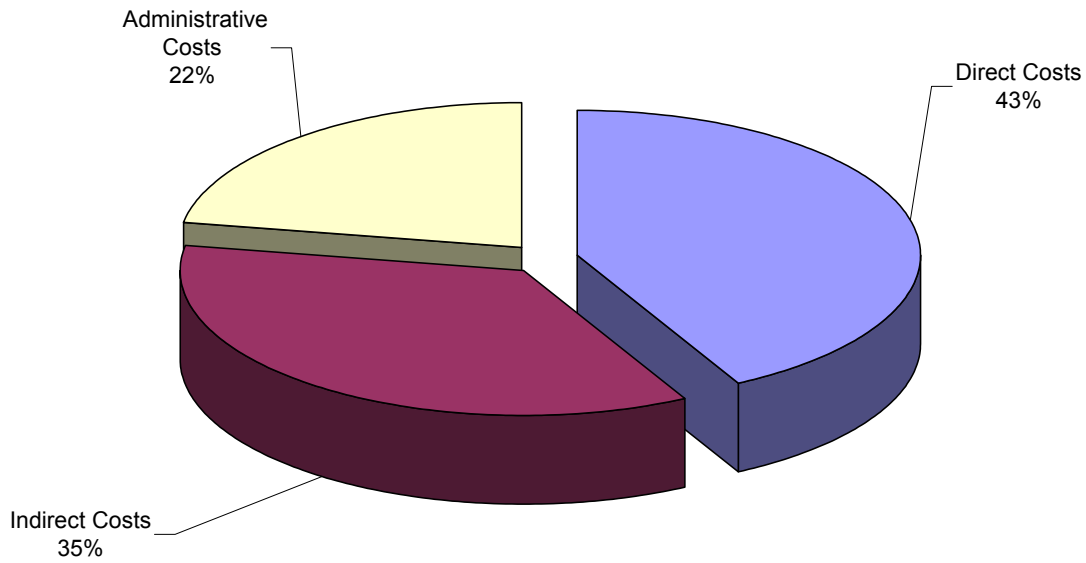


Figure 3. Breakdown of the CCO Costs.

Total Cost Distributions

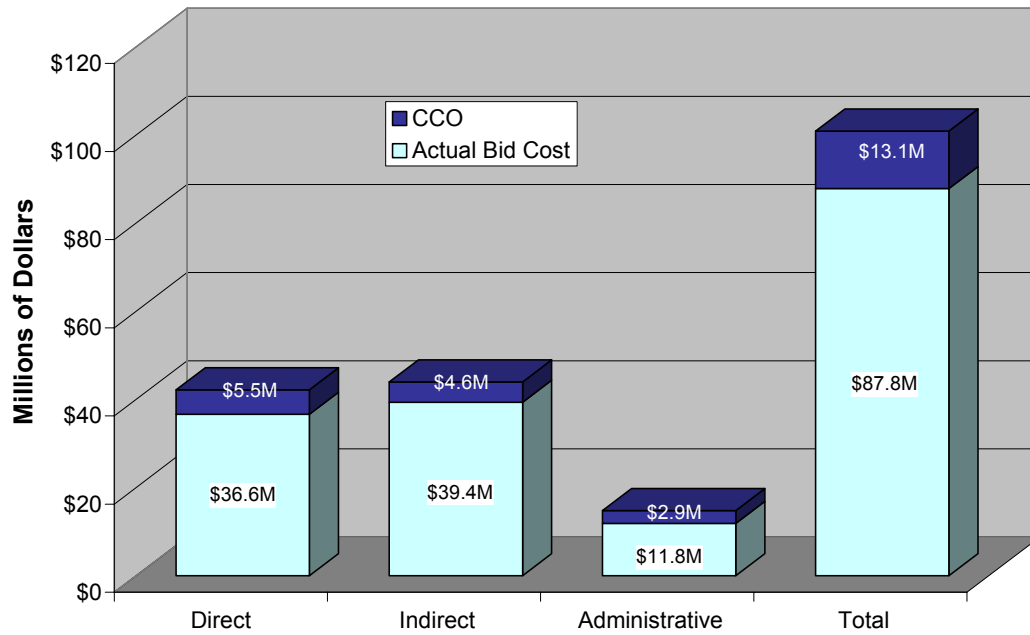


Figure 4. Contract cost and CCO distributions of the actual cost for project.

Project Cost Breakdown
Total Cost

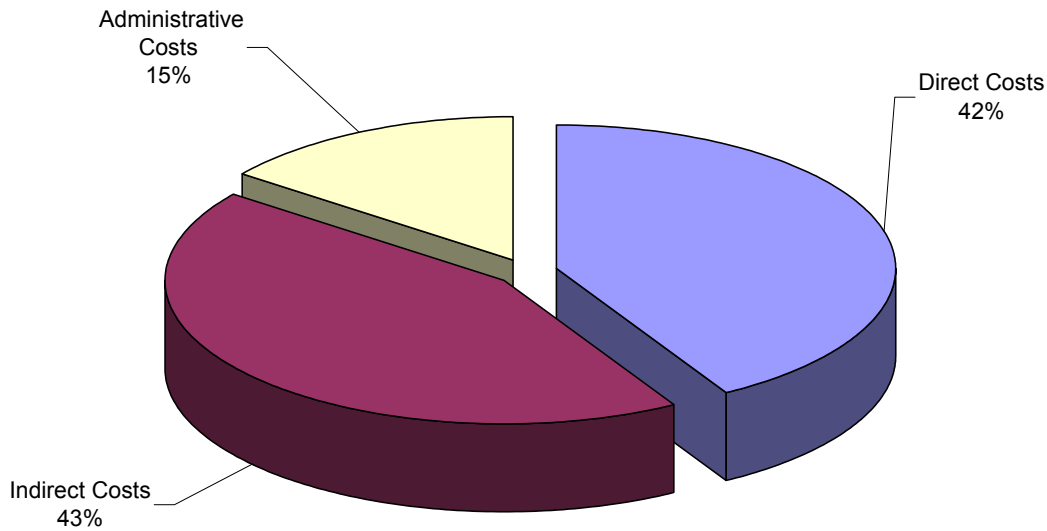


Figure 5. Breakdown of the Total Cost.

3.0 CONCLUSIONS

Since all of the bid costs were very close to each other, the CCOs (and the delays caused by them) are the source of the cost overrun for the I-80 Boca-Floriston project. The cost multipliers seen in Table 1 can be used as tools to project costs for similar projects. These multipliers stayed reasonably constant between differing costs (indirect, administrative, and total) indicating that they hold some accuracy within given constraints.

4.0 APPENDIX A

Table A1 Cost Categories

Category	Code	Item	Description	Sample Items (Partial List)
Direct	D-010	Repair Exist Pavement	Work done to existing pavement to repair deficiencies and extend life	Overlays, Reconstruct Existing, Replace AC, PCC Slab Replacement, Cold Planing, Grinding
	D-020	Earthwork	Work done to embankment to construct pavement repairs and eliminate dropoffs	Shoulder Backing, Embankment reconstruction next to pavement
	D-030	Pavement Striping	Work done to restripe new pavement	Permanent traffic stripes and markers
	I-034	Open Graded Surface	Placement of open graded surfaces on top of pavement	OGAC, RAC-O
Traffic Handling	I-011	Traffic Control	Costs incurred to manage traffic during construction	Traffic Control, Construction Area Signs, Temporary Signing and Striping, Temporary Barriers, Portable Message Signs
	I-012	Temporary Detours	Temporary pavement, bridges, and drainage built to handle traffic during construction	Asphalt Concrete, Aggregate Base and Subbase, Earthwork related to detours
	I-013	Permanent Widening for Construction Traffic Handling	Permanent pavement placed to be used for traffic handling during construction	Asphalt Concrete, Aggregate Base and Subbase, Earthwork related widening work
	I-014	Others	Work not covered under above items	
Drainage	I-021	Dikes/Curbs	Replace existing dikes and curbs	Place Dike (Type ___), Minor Concrete Curb. Includes costs to replace existing dikes and curbs
	I-022	Modify within Pavement	Work done to adjust drainage systems to match new pavement profile	Adjust or replace inlets, manholes
	I-023	Repair Existing	Work done to repair existing deficiencies	Replaced damaged pipes, inlets. Fix ponding or other drainage deficiencies
	I-024	Upgrade/New	Improvements to overall drainage system	New systems placed due to widenings, realignments
	I-025	Storm Water Upgrades	Work done to address storm water issues	Detention Basins, Catch Basins, Litter Catchers
Safety	I-031	Identified in Safety Analysis	Work done to address site specific issues raised in the project safety analysis	Associated paving and earthwork for realignments, left or right turns lanes
	I-032	Guardrail/Barriers	Replacement and upgrade of guardrails and barriers	Metal Beam Guardrail, Concrete Barriers, End Anchors, Crash Cushions
	I-033	Meet 3R Design Standards	Work done to upgrade facility to meet 3R Design Standards	Shoulder Widening, Lane Widening, Vertical Clearance
	I-035	Other Safety Upgrades	Safety work not identified in above items	

Category	Code	Item	Description	Sample Items (Partial List)
Roadside	I-041	Embankment Upgrades	Work done to pavement not impacted by paving operations	Flattening Slopes
	I-042	Erosion Control	All erosion control work done to new or existing pavements	
	I-043	Roadside/Ditch Paving	Paving work done to the roadside	
	I-044	Landscaping	Upgrade or addition of landscaping	
	I-045	Environmental Mitigation	Work done to meet environmental commitments	
Right of Way	I-051	New Right of Way	New Right of Way	Costs are incurred prior to construction and are found separately in the Right of Way costs
	I-052	Temp. Construction Easements	Temporary Construction Easements	
	I-053	Utility Relocations	Utility Relocations	
Bridges	I-061	All Works Done on Bridges	All work done to bridges	Replacement, Widening, Bridge Rail Upgrade
Operational	I-071	Lane Additions	Work done to add lanes not required for traffic handling during construction	Auxiliary, Truck, Passing, and Turn Lanes not constructed for traffic handling or safety reasons
	I-072	Other Widening (beyond 3R Stds)	Other widening work performed that is not required for traffic handling during construction	Additional shoulder widening beyond 3R Design Standards
	I-073	ITS/Fiber Optic	All work to upgrade or install new Intelligent Transportation elements	Cameras, Radios, Changeable Message Signs, Fiber Optics
	I-074	Electrical Code Upgrades	Upgrades to existing electrical systems to meet current code	Usually part of a lump sum item. Need cost breakdown from electrical
	I-075	New Electrical	New non-ITS electrical systems	New Lighting, Traffic Signals, Ramp Meters
	I-076	Sign Structures	Replacement or construction of new sign structures	Furnish and Place Sign Structure
	I-077	Roadside Signs	Replacement or construction of new roadside signs	Roadside Signs
Administrative	I-080	Administrative Related	Administrative Related Costs	Mobilization, Time Related Overhead
	I-090	State Furnished Materials	State Furnished Materials	Found Separately. Includes COZEEP, additional traffic control, etc.
		Supplemental Work	Supplemental Work	Found Separately

Table A2 Engineer's Estimate, Original Bid Costs, Actual Bid Costs

Bid No.	Item Code	Item Descriptions	Engineer's Estimate		Original Contract		Actual Contract		Cost Code
			Quantity	Amount	Quantity	Amount	Quantity	Actual	
1	19731	Temporary Fend (Environmentally Sensitive Areas)	2060	\$18,540.00	2060	\$12,772.00	1829	\$11,339.80	I-045
2	19732	Swallow Nesting Prevention	Lump Sum	\$45,000.00	1	\$18,000.00	1	\$18,000.00	I-045
3	70010	Progress Schedule (Critical Path)	Lump Sum	\$27,000.00	1	\$15,000.00	0.75	\$11,250.00	I-080
4	70018	Time-Related Overhead	400	\$7,994,000.00	400	\$3,000,000.00	437	\$3,277,500.00	I-080
5	73031	900-mm Temporary Culvert	160	\$47,520.00	160	\$24,000.00	147	\$22,050.00	I-024
6	19733	Health and Safety Plan	Lump Sum	\$18,000.00	1	\$3,000.00	1	\$3,000.00	I-080
7	74019	Prepare Storm Water Pollution Prevention Plan	Lump Sum	\$27,000.00	1	\$5,000.00	1	\$5,000.00	I-025
8	74020	Water Pollution Control	Lump Sum	\$607,340.00	1	\$50,000.00	1	\$50,000.00	I-045
9	74029	Temporary Silt Fence	580	\$8,120.00	580	\$3,596.00	572	\$3,546.40	I-042
10	120090	Construction Area Signs	Lump Sum	\$36,000.80	1	\$40,000.00	1	\$40,000.00	I-011
11	120100	Traffic Control System	Lump Sum	\$675,000.00	1	\$600,000.00	1	\$600,000.00	I-011
12	120102	Traffic Control Surveillance	Lump Sum	\$180,000.00	1	\$200,000.00	1	\$200,000.00	I-011
13	120120	Type III Barricade	74	\$1,332.00	74	\$3,700.00	49	\$2,450.00	I-032
14	120149	Temporary Pavement Marking (Paint)	170	\$12,240.00	170	\$1,190.00	166.14	\$1,162.98	I-011
15	120151	Temporary Traffic Stripe (Tape)	178000	\$96,120.00	178000	\$623,000.00	60206.1	\$210,721.35	I-011
16	120152	Temporary Pavement Marking (Tape)	230	\$16,560.00	230	\$9,200.00	81.9	\$3,276.00	I-011
17	120159	Temporary Traffic Stripe (Paint)	410000	\$221,400.00	410000	\$123,000.00	627496.68	\$188,249.00	I-011
18	128650	Portable Changeable Message Sign	Lump Sum	\$90,000.00	1	\$60,000.00	1	\$60,000.00	I-011
19	19734	Portable Radar Trailer	2	\$27,000.00	2	\$16,000.00	0.579	\$4,632.00	I-011
20	129000	Temporary Railing (Type K)	90800	\$3,722,800.00	90800	\$908,000.00	127661.91	\$1,276,619.10	I-011
21	129100	Temporary Crash Cushion Module	180	\$58,320.00	180	\$45,000.00	252	\$63,000.00	I-011
22	150206	Abandon Culvert	430	\$11,610.00	430	\$17,200.00	418	\$16,720.00	I-023
23	150305	Obliterate Surfacing	410	\$5,740.00	410	\$1,640.00	402.1	\$1,608.40	D-010
24	150615	Remove Entrance Taper	5	\$1,575.00	5	\$250.00	6	\$300.00	I-032
25	150662	Remove Metal Beam Guard Railing	10700	\$67,410.00	10700	\$74,900.00	10364.7	\$72,552.90	I-032
26	150668	Remove Flared End Section	17	\$3,978.00	17	\$425.00	25	\$625.00	I-032
27	150711	Remove Painted Traffic Stripe	24700	\$44,460.00	24700	\$32,110.00	58022.51	\$75,429.26	D-030
28	150742	Remove Roadside Sign	78	\$7,020.00	78	\$7,800.00	78	\$7,800.00	I-077
29	150771	Remove Asphalt Concrete Dike	10600	\$38,160.00	10600	\$13,250.00	10599.4	\$13,249.25	I-021
30	150805	Remove Culvert	1330	\$95,760.00	1330	\$18,620.00	774.6	\$10,844.40	I-023
31	19735	Remove Slotted Pipe	44	\$3,388.00	44	\$3,080.00	29.1	\$2,037.00	I-023
32	150820	Remove Inlet	53	\$16,695.00	53	\$18,550.00	62	\$21,700.00	I-023
33	19736	Remove Drainage Inlet (Temporary Traffic Cover)	96	\$30,240.00	96	\$16,800.00	22	\$3,850.00	I-023
34	150823	Remove Downdrain	380	\$22,420.00	380	\$11,400.00	409.3	\$12,279.00	I-023

Bid No.	Item Code	Item Descriptions	Engineer's Estimate		Original Contract		Actual Contract		Cost Code
			Quantity	Amount	Quantity	Amount	Quantity	Actual	
35	48370	Remove Retaining Wall (Portion), Location A	Lump Sum	\$2,600.00	1	\$2,500.00	1	\$2,500.00	I-061
36	48371	Remove Retaining Wall (Portion), Location B	Lump Sum	\$1,800.00	1	\$2,000.00	1	\$2,000.00	I-061
37	150846	Remove Concrete Pavement	1020	\$137,700.00	1020	\$10,200.00	1491.6	\$14,916.00	D-010
38	150857	Remove Asphalt Concrete Surfacing	2860	\$51,480.00	2860	\$22,880.00	3699.52	\$29,596.16	D-010
39	150859	Remove Asphalt Concrete Overside Drain	28	\$18,900.00	28	\$9,100.00	29	\$9,425.00	I-023
40	150860	Remove Base and Surfacing	27200	\$244,800.00	27200	\$163,200.00	10102.39	\$60,614.34	D-010
41	151625	Reconstruct Metal Beam Guard (Wood Post)	290	\$15,660.00	290	\$11,020.00	257.5	\$9,785.00	I-032
42	152320	Reset Roadside Sign	83	\$11,205.00	83	\$33,200.00	66	\$26,400.00	I-077
43	152430	Adjust Inlet	36	\$32,400.00	36	\$21,600.00	25	\$15,000.00	I-022
44	152437	Adjust Overside Drain	4	\$360.00	4	\$4,000.00	3	\$3,000.00	I-022
45	19737	Pipeliners – 450 mm Fold and Form	690	\$248,400.00	690	\$690,000.00	782.6	\$782,600.00	I-024
46	19738	Pipeliners – 600 mm Fold and Form	990	\$400,950.00	990	\$1,009,800.00	705.38	\$719,487.60	I-024
47	19739	Pipeliners – 750 mm Fold and Form	170	\$76,500.00	170	\$187,000.00	191.1	\$210,210.00	I-024
48	19740	300-mm Plastic Pipeliner	42	\$17,010.00	42	\$6,300.00	0	\$0.00	I-024
49	152666	400-mm Plastic Pipeliner	150	\$60,750.00	150	\$23,250.00	74	\$11,470.00	I-024
50	152668	525-mm Plastic Pipeliner	420	\$160,860.00	420	\$75,600.00	766.2	\$137,916.00	I-024
51	152669	675-mm Plastic Pipeliner	60	\$20,280.00	60	\$11,400.00	0	\$0.00	I-024
52	19741	825-mm Plastic Pipeliner	130	\$49,790.00	130	\$27,300.00	89.5	\$18,795.00	I-024
53	19742	1125-mm Plastic Pipeliner	55	\$32,175.00	55	\$16,500.00	55	\$16,500.00	I-024
54	153153	Cold Plane Asphalt Concrete Pavement (45 mm Maximum)	330	\$5,940.00	330	\$1,650.00	200	\$1,000.00	D-010
55	19743	Cold Plane Asphalt Concrete Pavement (135 mm Maximum)	1420	\$38,340.00	1420	\$8,520.00	4257.5	\$25,545.00	D-010
56	153210	Remove Concrete	39	\$7,020.00	39	\$2,340.00	44.1	\$2,646.00	D-010
57	153214	Remove Concrete Curb	1390	\$10,008.00	1390	\$12,510.00	666.3	\$5,996.70	I-021
58	153221	Remove Concrete Barrier	10900	\$245,250.00	10900	\$163,500.00	11360	\$170,400.00	I-032
59	153225	Prepare Concrete Bridge Deck Surface	13920	\$36,888.00	13920	\$83,520.00	13920	\$83,520.00	I-061
60	155003	Cap Inlet	22	\$16,830.00	22	\$8,800.00	32	\$12,800.00	I-024
61	157551	Bridge Removal, Location A	Lump Sum	\$338,000.00	1	\$338,000.00	1	\$338,000.00	I-061
62	157552	Bridge Removal, Location B	Lump Sum	\$338,000.00	1	\$338,000.00	1	\$338,000.00	I-061
63	157553	Bridge Removal, Location C	Lump Sum	\$165,000.00	1	\$165,000.00	1	\$165,000.00	I-061
64	157554	Bridge Removal, Location D	Lump Sum	\$106,000.00	1	\$106,000.00	1	\$106,000.00	I-061
65	157555	Bridge Removal, Location E	Lump Sum	\$453,000.00	1	\$453,000.00	1	\$453,000.00	I-061
66	157556	Bridge Removal, Location F	Lump Sum	\$178,000.00	1	\$178,000.00	1	\$178,000.00	I-061
67	157561	Bridge Removal (Portion), Location A	Lump Sum	\$12,000.00	1	\$6,000.00	1	\$6,000.00	I-061
68	157652	Bridge Removal (Portion), Location B	Lump Sum	\$2,200.00	1	\$2,000.00	1	\$2,000.00	I-061
69	158100	Salvage Crash Cushion	2	\$1,080.00	2	\$2,000.00	3	\$3,000.00	I-032

Bid No.	Item Code	Item Descriptions	Engineer's Estimate		Original Contract		Actual Contract		Cost Code
			Quantity	Amount	Quantity	Amount	Quantity	Actual	
70	160101	Clearing and Grubbing	Lump Sum	\$31,500.00	1	\$31,500.00	1	\$31,500.00	I-044
71	190101	Roadway Excavation	79400	\$714,600.00	79400	\$3,176,000.00	83304.66	\$3,332,186.40	D-020
72	192003	Structure Excavation (Bridge)	4170	\$408,660.00	4170	\$1,355,250.00	4170	\$1,355,250.00	I-061
73	192023	Structure Excavation (Type H)	130	\$28,860.00	130	\$45,500.00	130	\$45,500.00	I-061
74	192037	Structure Excavation (Retaining Wall)	3934	\$137,690.00	3934	\$236,040.00	64	\$3,840.00	I-061
75	193003	Structure Backfill (Bridge)	2330	\$123,490.00	2330	\$163,100.00	2330	\$163,100.00	I-061
76	193013	Structure Backfill (Retaining Wall)	2682	\$118,008.00	2682	\$80,460.00	12	\$360.00	I-061
77	193031	Pervious Backfill Material (Retaining Wall)	290	\$15,370.00	290	\$13,920.00	0	\$0.00	I-061
78	19744	Geosynthetic Reinforced Mechanically Stabilized Earth Wall	16900	\$2,433,600.00	16900	\$4,258,800.00	0	\$0.00	I-041
79	198007	Imported Material (Shoulder Backing)	25200	\$408,240.00	25200	\$327,600.00	25200	\$327,600.00	D-020
80	202007	Duff	54800	\$37,264.00	54800	\$19,180.00	41100.5	\$14,385.18	I-045
81	203003	Straw (Erosion Control)	28	\$5,040.00	28	\$8,400.00	38.83	\$11,649.00	I-042
82	203014	Fiber (Erosion Control)	8400	\$7,560.00	8400	\$6,720.00	12952.2	\$10,361.76	I-042
83	203024	Compost (Erosion Control)	29000	\$26,100.00	29000	\$21,750.00	44743.9	\$33,557.93	I-042
84	203045	Pure Live Seed (Erosion Control)	165	\$14,850.00	165	\$70,125.00	253.13	\$107,580.25	I-042
85	203056	Commercial Fertilizer (Erosion Control)	11450	\$16,030.00	11450	\$19,465.00	17662.1	\$30,025.57	I-042
86	203061	Stabilizing Emulsion (Erosion Control)	1030	\$927.00	1030	\$1,442.00	1589.59	\$2,225.43	I-042
87	19745	Willow Bundle	355	\$40,115.00	355	\$71,000.00	168	\$33,600.00	I-042
88	19746	75-mm Hot Dipped Galvanized Conduit	1280	\$53,760.00	1280	\$35,840.00	1265.5	\$35,434.00	I-024
89	260201	Class 2 Aggregate Base	47700	\$1,287,900.00	47700	\$429,300.00	24124.1	\$217,116.90	D-010
90	280000	Lean Concrete Base	12300	\$1,107,000.00	12300	\$947,100.00	13117.88	\$1,010,076.76	D-010
91	377501	Slurry Seal	780	\$105,300.00	780	\$124,800.00	1640.7	\$262,512.00	D-010
92	390095	Replace Asphalt Concrete Surfacing	230	\$41,400.00	230	\$39,100.00	200	\$34,000.00	D-010
93	390188	Asphalt Concrete (Type A, 37.5-mm Maximum Grading)	87300	\$6,285,600.00	87300	\$5,674,500.00	86777.16	\$5,640,515.40	D-010
94	390189	Asphalt Concrete (Type A, 19-mm Maximum Grading)	68500	\$4,932,000.00	68500	\$4,452,500.00	157888.58	\$10,262,757.70	D-010
95	394002	Place Asphalt Concrete (Miscellaneous Area)	2040	\$36,720.00	2040	\$36,720.00	2791.3	\$50,243.40	D-010
96	394040	Place Asphalt Concrete Dike (Type A)	280	\$1,512.00	280	\$700.00	267.5	\$668.75	I-021
97	394044	Place Asphalt Concrete Dike (Type C)	300	\$1,620.00	300	\$750.00	543.18	\$1,357.95	I-021
98	394048	Place Asphalt Concrete Dike (Type E)	3740	\$16,830.00	3740	\$9,350.00	4063.26	\$10,158.15	I-021
99	394049	Place Asphalt Concrete Dike (Type F)	5760	\$20,736.00	5760	\$14,400.00	7375.09	\$18,437.73	I-021
100	397001	Asphaltic Emulsion (Paint Binder)	190	\$25,650.00	190	\$76,000.00	235.029	\$94,011.60	D-030
101	401000	Concrete Pavement	131000	\$15,327,000.00	131000	\$13,100,000.00	134178.53	\$13,417,853.00	D-010
102	401100	Replace Concrete Pavement	2290	\$309,150.00	2290	\$286,250.00	2513.27	\$314,158.75	D-010
103	19749	Replace Concrete Pavement (Asphalt Concrete)	5800	\$783,000.00	5800	\$580,000.00	1839.8	\$183,980.00	D-010

Bid No.	Item Code	Item Descriptions	Engineer's Estimate		Original Contract		Actual Contract		Cost Code
			Quantity	Amount	Quantity	Amount	Quantity	Actual	
104	19748	Intermediate Pavement Anchor	14	\$73,080.00	14	\$42,000.00	14	\$42,000.00	D-010
105	40492	Seal Pavement Joint	251000	\$803,200.00	251000	\$815,750.00	169182.26	\$549,842.35	D-010
106	415101	Crack Existing Concrete Pavement	105000	\$47,250.00	105000	\$52,500.00	89780.5	\$44,890.25	D-010
107	490505	Furnish Steel Piling (HP 250 × 62)	1120	\$30,240.00	1120	\$56,000.00	933.406	\$46,670.30	I-061
108	490506	Drive Steel Pile (HP 250 × 62)	65	\$58,500.00	65	\$52,000.00	65	\$52,000.00	I-061
109	490511	Furnish Steel Piling (HP 250 × 85)	5894	\$206,290.00	5894	\$353,640.00	5238.31	\$314,298.60	I-061
110	490512	Drive Steel Pile (HP 250 × 85)	355	\$319,500.00	355	\$355,000.00	355	\$355,000.00	I-061
111	490566	Furnish Steel Piling (HP 360 × 132)	4926	\$310,338.00	4926	\$418,710.00	0	\$0.00	I-061
112	490567	Drive Steel Pile (HP 360 × 132)	315	\$283,500.00	315	\$441,000.00	0	\$0.00	I-061
113	19747	1.68-m Cast-In-Drilled-Hole Concrete Piling	191	\$135,610.00	191	\$821,300.00	191	\$821,300.00	I-061
114	490669	2.1-m Cast-In-Drilled-Hole Concrete Piling	172	\$189,200.00	172	\$688,000.00	150.34	\$601,360.00	I-061
115	19750	1.68-m Cast-In-Drilled-Hole Concrete Piling (Rock Socket)	143	\$486,200.00	143	\$657,800.00	145.72	\$670,312.00	I-061
116	19751	1.68-m Permanent Steel Casing	191	\$229,200.00	191	\$124,150.00	191	\$124,150.00	I-061
117	19752	2.1-m Cast-In-Drilled-Hole Concrete Piling (Rock Socket)	41	\$217,300.00	41	\$533,000.00	39.82	\$517,660.00	I-061
118	19753	2.1-m Permanent Steel Casing	172	\$395,600.00	172	\$124,700.00	150.34	\$108,996.50	I-061
119	19754	Isolation Casing	9130	\$73,040.00	9130	\$54,780.00	9130	\$54,780.00	I-061
120	19755	Furnish Piling (Class 625) (Alt "W")	1076	\$66,712.00	1076	\$80,700.00	1066.051	\$79,953.83	I-061
121	19756	Drive Pile (Class 625) (Alt "W")	56	\$72,800.00	56	\$86,800.00	56	\$86,800.00	I-061
122	500050	Tieback Anchor	28	\$126,000.00	28	\$23,800.00	28	\$23,800.00	I-061
123	510051	Structural Concrete, Bridge Footing	860	\$266,600.00	860	\$344,000.00	860	\$344,000.00	I-061
124	510053	Structural Concrete, Bridge	8170	\$3,635,650.00	8170	\$6,258,220.00	8170	\$6,258,220.00	I-061
125	510060	Structural Concrete, Retaining Wall	1180	\$448,400.00	1180	\$554,600.00	0	\$0.00	I-061
126	510086	Structural Concrete, Approach Slab	1310	\$537,100.00	1310	\$602,600.00	1486	\$683,560.00	I-061
127	510502	Minor Concrete (Minor Structure)	440	\$356,400.00	440	\$418,000.00	662.39	\$629,270.50	I-061
128	19757	Precast Concrete Box Culvert	131	\$2,358,000.00	131	\$786,000.00	131	\$786,000.00	I-024
129	19758	Drystack Rock Texture	1302	\$104,160.00	1302	\$104,160.00	1301	\$104,080.00	I-061
130	511106	Drill and Bond Dowel	71	\$4,118.00	71	\$7,100.00	61	\$6,100.00	I-061
131	511109	Drill and Bond Dowel (Epoxy Cartridge)	27	\$1,080.00	27	\$2,025.00	27	\$2,025.00	I-061
132	511118	Clean Expansion Joint	110	\$6,380.00	110	\$24,750.00	110	\$24,750.00	I-061
133	512233	Furnish Precast Prestressed Concrete Girder (25 m to 30 m)	28	\$229,600.00	28	\$448,000.00	28	\$448,000.00	I-061
134	19759	Furnish Precast Prestressed Concrete Bulb-Tee Girder (20 m to 25 m)	14	\$124,600.00	14	\$259,000.00	14	\$259,000.00	I-061
135	19760	Furnish Precast Prestressed Concrete Bulb-Tee Girder (25 m to 30 m)	69	\$703,800.00	69	\$1,552,500.00	69	\$1,552,500.00	I-061
136	19761	Furnish Precast Prestressed Concrete Bulb-Tee Girder (30 m to 35 m)	20	\$266,000.00	20	\$560,000.00	20	\$560,000.00	I-061

Bid No.	Item Code	Item Descriptions	Engineer's Estimate		Original Contract		Actual Contract		Cost Code
			Quantity	Amount	Quantity	Amount	Quantity	Actual	
137	19762	Furnish Precast Prestressed Concrete Bulb- Tee Girder (35 m to 40 m)	13	\$191,100.00	13	\$351,000.00	13	\$351,000.00	I-061
138	19763	Furnish Precast Prestressed Concrete Bulb- Tee Girder (40 m to 45 m)	14	\$236,600.00	14	\$546,000.00	14	\$546,000.00	I-061
139	512500	Erect Precast Prestressed Concrete Girder	158	\$205,400.00	158	\$1,106,000.00	158	\$1,106,000.00	I-061
140	515041	Furnish Polyester Concrete Overlay	680	\$850,000.00	680	\$1,496,000.00	697	\$1,533,400.00	I-061
141	515042	Place Polyester Concrete Overlay	31330	\$845,910.00	31330	\$595,270.00	32178	\$611,382.00	I-061
142	519117	Joint Seal (MR 30 mm)	135	\$13,770.00	135	\$11,475.00	68.64	\$5,834.40	I-061
143	519120	Joint Seal (MR 15 mm)	65	\$4,940.00	65	\$7,150.00	62.64	\$6,890.40	I-061
144	519125	Joint Seal Assembly (MR 70 mm)	28	\$8,960.00	28	\$8,400.00	28	\$8,400.00	I-061
145	519126	Joint Seal Assembly (MR 80 mm)	28	\$8,960.00	28	\$8,400.00	17	\$5,100.00	I-061
146	519142	Joint Seal (MR 40 mm)	39	\$5,265.00	39	\$3,120.00	40.7	\$3,256.00	I-061
147	519144	Joint Seal (MR 50 mm)	250	\$40,000.00	250	\$30,000.00	247.18	\$29,661.60	I-061
148	520102	Bar Reinforcing Steel (Bridge)	711000	\$760,770.00	711000	\$995,400.00	707987	\$991,181.80	I-061
149	1	Item Deleted Per Addendum	Lump Sum	1 0.00	1	\$0.00	0	\$0.00	
150	520110	Bar Reinforcing Steel (Epoxy Coated) (Bridge)	548000	\$926,120.00	548000	\$876,800.00	556286	\$890,057.60	I-061
151	19764	Bar Reinforcing Steel (Epoxy Coated) (Retaining Wall)	151600	\$256,204.00	151600	\$197,080.00	4000	\$5,200.00	I-061
152	530100	Shotcrete	115	\$46,000.00	115	\$70,495.00	115	\$70,495.00	I-061
153	540050	Seal Concrete Surface	2420	\$33,880.00	2420	\$19,360.00	2420	\$19,360.00	D-010
154	540101	Asphalt Membrane Waterproofing	66	\$4,422.00	66	\$4,290.00	66	\$4,290.00	D-010
155	56218	Furnish Sigh Structure (Truss)	28422	\$102,319.20	28422	\$142,110.00	31874	\$159,370.00	I-076
156	56219	Install Sign Structure (Truss)	28422	\$14,211.00	28422	\$36,948.60	31874	\$41,436.20	I-076
157	561008	760 mm Cast-In-Drilled-Hole	35	\$56,700.00	35	\$63,000.00	23.6	\$42,480.00	I-076
158	561009	920 mm Cast-In-Drilled-Hole Concrete Pile (Sign Foundation)	4	\$7,200.00	4	\$7,600.00	18.5	\$35,150.00	I-076
159	561012	1220 mm Cast-In-Drilled-Hole Concrete Pile (Sign Foundation)	6.5	\$11,700.00	6.5	\$14,300.00	7	\$15,400.00	I-076
160	566011	Roadside Sign – One Post	27	\$3,645.00	27	\$9,450.00	17	\$5,950.00	I-077
161	19765	Roadside Sign (Barrier Mounted)	2	\$900.00	2	\$1,350.00	2	\$1,350.00	I-077
162	566012	Roadside Sign – Two Post	10	\$2,250.00	10	\$4,500.00	11	\$4,950.00	I-077
163	568001	Install Sign (Strap and Saddle Bracket Method)	29	\$2,610.00	29	\$5,800.00	51	\$10,200.00	I-077
164	597601	Prepare and Stain Concrete	1072	\$33,232.00	1072	\$10,505.60	1374.51	\$13,470.20	I-061
165	620902	200-mm Alternative Pipe Culvert	16	\$4,320.00	16	\$2,560.00	12.2	\$1,952.00	I-024
166	620909	450-mm Alternative Pipe Culvert	810	\$138,510.00	810	\$263,250.00	960.4	\$312,130.00	I-024
167	620913	600-mm Alternative Pipe Culvert	720	\$162,000.00	720	\$237,600.00	1820.08	\$600,626.40	I-024

Bid No.	Item Code	Item Descriptions	Engineer's Estimate		Original Contract		Actual Contract		Cost Code
			Quantity	Amount	Quantity	Amount	Quantity	Actual	
168	650069	450-mm Reinforced Concrete Pipe	65	\$11,700.00	65	\$24,375.00	64	\$24,000.00	I-024
169	650075	600-mm Reinforced Concrete Pipe	1130	\$254,250.00	1130	\$372,900.00	1101	\$363,330.00	I-024
170	650079	900-mm Reinforced Concrete Pipe	120	\$37,800.00	120	\$84,000.00	109.4	\$76,580.00	I-024
171	664015	450-mm Corrugated Steel Pipe (2.01 mm Thick)	3.8	\$1,197.00	3.8	\$893.00	0	\$0.00	I-024
172	664029	750-mm Corrugated Steel Pipe (2.77 mm Thick)	5	\$1,350.00	5	\$1,075.00	9	\$1,935.00	I-024
173	682002	Permeable Material (Underdrain)	5	\$900.00	5	\$3,375.00	5	\$3,375.00	I-024
174	680933	200-mm Perforated Plastic Pipe Underdrain	1150	\$124,200.00	1150	\$51,750.00	1074	\$48,330.00	I-024
175	681135	100-mm Plastic Pipe (Edge Drain)	22	\$990.00	22	\$2,530.00	0	\$0.00	I-024
176	692090	450-mm Entrance Taper	12	\$8,640.00	12	\$3,000.00	10	\$2,500.00	I-024
177	692246	450-mm Downdrain Slip Joint	13	\$9,945.00	13	\$2,730.00	37	\$7,770.00	I-024
178	692385	450-mm Anchor Assembly	31	\$5,580.00	31	\$6,975.00	40	\$9,000.00	I-024
179	692409	Cable Anchorage System	36	\$1,116.00	36	\$720.00	201.7	\$4,034.00	I-024
180	698162	450-mm Alternative Pipe Downdrain	560	\$88,480.00	560	\$89,600.00	641.9	\$102,704.00	I-024
181	698169	600-mm Alternative Pipe Downdrain	23	\$3,726.00	23	\$4,140.00	24.4	\$4,392.00	I-024
182	19766	Corrugated Steel Pipe Reducer Assembly	4	\$1,800.00	4	\$1,500.00	3	\$1,125.00	I-024
183	703233	Grated Line Drain	78	\$49,140.00	78	\$18,330.00	0	\$0.00	I-024
184	703271	450-mm Corrugated Steel Pipe Riser	21	\$5,670.00	21	\$3,675.00	6	\$1,050.00	I-024
185	19767	610-mm Welded Steel Pipe Casing (Bridge)	160	\$64,000.00	160	\$39,200.00	217	\$53,165.00	I-061
186	705222	450-mm Concrete Flared End Section	2	\$1,440.00	2	\$850.00	2	\$850.00	I-024
187	705224	600-mm Concrete Flared End Section	1	\$900.00	1	\$460.00	1	\$460.00	I-024
188	705227	900-mm Concrete Flared End Section	4	\$3,240.00	4	\$2,600.00	4	\$2,600.00	I-024
189	705336	450-mm Alternative Flared End Section	6	\$1,620.00	6	\$300.00	18	\$900.00	I-024
190	705337	600-mm Alternative Flared End Section	22	\$6,446.00	22	\$1,540.00	27	\$1,890.00	I-024
191	705338	750-mm Alternative Flared End Section	1	\$450.00	1	\$145.00	2	\$290.00	I-024
192	705339	900-mm Alternative Flared End Section	2	\$1,170.00	2	\$490.00	0	\$0.00	I-024
193	705341	1200-mm Alternative Flared End Section	1	\$1,080.00	1	\$545.00	1	\$545.00	I-024
194	720119	Rock Slope Protection (1T, Method A)	1860	\$167,400.00	1860	\$70,680.00	0	\$0.00	I-042
195	720120	Rock Slope Protection (1/2T, Method A)	810	\$47,790.00	810	\$32,400.00	0	\$0.00	I-042
196	721009	Rock Slope Protection (Facing, Method B)	1220	\$142,740.00	1220	\$46,360.00	2008.46	\$76,321.48	I-042
197	721010	Rock Slope Protection (Backing No. 1, Method B)	2530	\$126,500.00	2530	\$96,140.00	1214.59	\$46,154.42	I-042
198	19768	Rock Slope Protection (Backing No. 1, Method A)	1770	\$111,510.00	1770	\$67,260.00	601	\$22,838.00	I-042
199	721022	Rock Slope Protection (1T, Method B)	1910	\$120,330.00	1910	\$72,580.00	1465	\$55,670.00	I-042
200	721023	Rock Slope Protection (1/2T, Method B)	810	\$43,740.00	810	\$30,780.00	0	\$0.00	I-042
201	721024	Rock Slope Protection (1/4T, Method B)	3500	\$189,000.00	3500	\$133,000.00	4490	\$170,620.00	I-042
202	19769	Rock Slope Protection (1/2T, Method A)	3220	\$231,840.00	3220	\$122,360.00	0	\$0.00	I-042

Bid No.	Item Code	Item Descriptions	Engineer's Estimate		Original Contract		Actual Contract		Cost Code
			Quantity	Amount	Quantity	Amount	Quantity	Actual	
203	721420	Concrete (Ditch Lining)	490	\$209,720.00	490	\$142,100.00	490	\$142,100.00	I-043
204	19770	Concreted-Rock Slope Protection (Backing No. 3, Method B)	940	\$67,680.00	940	\$89,300.00	926.67	\$88,033.65	I-042
205	721520	Concreted-Rock Slope Protection (1/4T, Method A)	900	\$48,600.00	900	\$117,000.00	529.9	\$68,887.00	I-042
206	722020	Gabion	1870	\$336,600.00	1870	\$209,440.00	2166.51	\$242,649.12	I-042
207	729040	Rock Slop Protection Fabric	13100	\$30,130.00	13100	\$9,825.00	7685.25	\$5,763.94	I-042
208	750001	Miscellaneous Iron and Steel	35900	\$114,880.00	35900	\$143,600.00	46338.07	\$185,352.28	I-061
209	750501	Miscellaneous Metal (Bridge)	11883	\$95,064.00	11883	\$59,415.00	11883	\$59,415.00	I-061
210	19771	Concrete Barrier Delineator (400 mm)	28	\$896.00	28	\$1,400.00	28	\$1,400.00	I-032
211	820108	Delineator (Class 2)	570	\$20,520.00	570	\$17,100.00	1461	\$43,830.00	D-030
212	820112	Marker (Culvert)	170	\$8,500.00	170	\$7,650.00	310	\$13,950.00	D-030
213	19772	Marker (Concrete Pavement Anchor)	26	\$1,300.00	26	\$1,300.00	26	\$1,300.00	D-030
214	19773	Highway Post Marker	24	\$1,080.00	24	\$1,080.00	34	\$1,530.00	D-030
215	820115	Snow Pole Marker	9	\$1,215.00	9	\$765.00	12	\$1,020.00	D-030
216	820118	Guard Railing Delineator	6	\$78.00	6	\$240.00	6	\$240.00	D-030
217	19774	Concrete Barrier Marker (Non-Impactable)	1100	\$3,960.00	1100	\$11,000.00	1270	\$12,700.00	D-030
218	820151	Object Marker (Type L-1)	35	\$1,260.00	35	\$1,575.00	88	\$3,960.00	D-030
219	832001	Metal Beam Guard Railing	3670	\$183,500.00	3670	\$172,490.00	4609.8	\$216,660.60	I-032
220	832062	Metal Beam Guard Railing (2.1-m Post)	3080	\$166,320.00	3080	\$184,800.00	2251.43	\$135,085.80	I-032
221	833152	Concrete Barrier (Type 25)	4	\$1,060.00	4	\$2,800.00	4	\$2,800.00	I-061
222	19775	Concrete Barrier (Type 732B)	2900	\$1,096,200.00	2900	\$551,000.00	2710.05	\$514,909.50	I-032
223	19776	Concrete Barrier (Type Shoulder Barrier Railing)	430	\$648,440.00	430	\$236,500.00	361.9	\$199,045.00	I-032
224	829521	Cable Railing	195	\$8,775.00	195	\$9,750.00	195	\$9,750.00	I-061
225	19777	Terminal Anchor Assembly (Type CA)	3	\$1,890.00	3	\$3,000.00	2	\$2,000.00	I-032
226	19778	Terminal Anchor Assembly (Type SFT)	20	\$10,800.00	20	\$12,000.00	21	\$12,600.00	I-032
227	839551	Terminal Section (Type B)	28	\$3,276.00	28	\$7,000.00	22	\$5,500.00	I-032
228	829553	End Section	18	\$2,430.00	18	\$3,600.00	9	\$1,800.00	I-032
229	839559	Terminal System (Type ET)	3	\$9,450.00	3	\$7,500.00	7	\$17,500.00	I-032
230	839565	Terminal System (Type SRT)	29	\$65,250.00	29	\$58,000.00	29	\$58,000.00	I-032
231	83570	Return Section	1	\$126.00	1	\$150.00	1	\$150.00	I-032
232	839605	Crash Cushion (React 9SCBS)	3	\$63,219.00	3	\$120,000.00	2	\$80,000.00	I-032
233	839710	Concrete Barrier (Type 60S)	14600	\$919,800.00	14600	\$1,168,000.00	14176	\$1,134,080.00	I-032
234	839712	Concrete Barrier (Type 60SC)	760	\$68,400.00	760	\$174,800.00	1512	\$347,760.00	I-032
235	839713	Concrete Barrier (Type 60SE)	50	\$20,250.00	50	\$19,500.00	50	\$19,500.00	I-032
236	19779	Concrete Barrier (Type 60SA Modified)	541	\$73,035.00	541	\$75,740.00	541	\$75,740.00	I-061
237	83721	Concrete Barrier (Type 732A)	334	\$48,430.00	334	\$62,124.00	334	\$62,124.00	I-061
238	19780	Concrete Barrier (Type 732 Modified)	965	\$221,950.00	965	\$150,540.00	965	\$150,540.00	I-061

Bid No.	Item Code	Item Descriptions	Engineer's Estimate		Original Contract		Actual Contract		Cost Code
			Quantity	Amount	Quantity	Amount	Quantity	Actual	
239	840560	Thermoplastic Traffic Stripe (Sprayable)	76200	\$27,432.00	76200	\$45,720.00	86654	\$51,992.40	D-030
240	19781	100-mm Thermoplastic Traffic Stripe (Recessed, Broken 5.18 m – 2.14 m)	460	\$2,070.00	460	\$4,600.00	479.82	\$4,798.20	D-030
241	840573	100-mm Thermoplastic Traffic Stripe (Recessed, Broken 10.98 m – 3.66 m)	40700	\$146,520.00	40700	\$447,700.00	39584.79	\$435,432.69	D-030
242	19782	200-mm Thermoplastic Traffic Stripe (Recessed, Broken 3.66 m – 0.92 m)	180	\$1,980.00	180	\$2,520.00	284.7	\$3,985.80	D-030
243	19783	200-mm Thermoplastic Traffic Stripe (Recessed)	2140	\$29,960.00	2140	\$38,520.00	2088.78	\$37,598.04	D-030
244	840666	Paint Pavement Marking (2-Coat)	140	\$3,780.00	140	\$3,360.00	160.76	\$3,858.24	D-030
245	19754	Chain on Lighting	Lump Sum	\$69,300.00	1	\$192,000.00	1	\$192,000.00	I-075
246	860460	Lighting and Sign Illumination	Lump Sum	\$229,500.00	1	\$325,000.00	1	\$325,000.00	I-075
247	860520	Highway Advisory Radio System	Lump Sum	\$64,800.00	1	\$65,000.00	1	\$65,000.00	I-073
248	19785	Changeable Message Sign System	Lump Sum	\$27,000.00	1	\$40,000.00	1	\$40,000.00	I-073
249	19786	Weigh Station Bypass System	Lump Sum	\$69,300.00	1	\$135,000.00	1	\$135,000.00	I-073
250	19787	Roadside Weather Information System	Lump Sum	\$58,500.00	1	\$75,000.00	1	\$75,000.00	I-073
251	19788	Fiber Optic System	Lump Sum	\$929,700.00	1	\$1,400,000.00	1	\$1,400,000.00	I-073
252	19789	Type 9 Pull Box	128	\$28,288.00	128	\$76,800.00	152	\$91,200.00	I-075
253	2	Item Deleted per Addendum	Lump Sum	\$0.00	1	\$0.00	0	\$0.00	
254	20169	Traffic Plastic Drum	Lump Sum	\$350,000.00	1	\$110,000.00	1	\$110,000.00	I-032
255	99990	Mobilization	Lump Sum	\$8,813,000.00	1	\$7,500,000.00	1	\$7,500,000.00	I-080
		Totals		\$88,134,247.00		\$86,396,096.20		\$86,362,181.34	

Table A3 Contract Change Orders (CCOs)

CCO No.	Item Description	Amount	Cost Code
1	Flagging and Traffic Control	\$82,000.00	I-011
1 SUP 1		\$120,000.00	I-011
2	Partnering	\$10,000.00	I-080
2 SUP 1		\$2,000.00	I-080
2 SUP 2	Supplement #2	\$25,000.00	I-080
2 SUP 3	Supplement #3	\$15,000.00	I-080
3	Training	\$11,200.00	I-080
4	Dispute Resolution Board - amount to be updated	\$9,000.00	I-080
5	SWPPP Revised to 2001	\$5,000.00	I-045
6	Storm Water Pollution Prevention Plan (SWPPP)	\$54,650.00	I-045
7	Swallow Nesting Prevention Amendment	\$9,000.00	I-045
8	Removing and disposing of de-icing sand	\$50,000.00	I-080
8 SUP 1		\$100,000.00	I-080
8 SUP 2		\$90,000.00	I-080
9	Elongated Pile Rebar Casing; Permanent Casing	\$106,636.00	I-061
10	Pedestal Bearing Seats for Bridges 17-62 and 17-61	\$64,172.00	I-061
11	Slab Replacement Structural Section Change	-\$31,923.00	I-061
12	Drainage Revisions	\$46,557.00	I-024
13	Fiber Optic Spacers	\$0.00	
14	Unassigned	-\$68,307.00	I-080
15	Unsuitable Material Deer Crossing Culvert	\$33,200.00	I-024
15 SUP 1		\$16,500.00	I-024
16	Unsound Concrete	\$10,000.00	D-010
17	Mammal Disposal	\$5,000.00	I-045
18	MBGR Repair	\$25,000.00	D-010
18 SUP 1	Supplement 2	\$8,500.00	D-010
19	Temp Support Lane #1 EB Floriston	\$50,000.00	I-012
20	Speed Limit Reduction Sign Install	\$25,000.00	I-011
21	Weigh in Motion	\$9,945.65	I-073

CCO No.	Item Description	Amount	Cost Code
21 SUP 1	Replace PCCP & Loops at WIM	\$26,015.25	I-073
22	Highway Maintenance	\$25,000.00	D-010
23	Harker & Harker Invoice for Purchasing Item which were supposed to be State Furnished	\$7,000.00	I-090
24	RWIS (Roadside Weather Information System)		
25	Profile Corrections		
26	Aggregate Base Minimum Unit Weigh Modification	\$0.00	
27	Rafter Access/Egress - Public Access	\$2,000.00	I-011
28	Final PCC Texture	\$0.00	
29	Additional RCB Deer Crossing #2	\$6,635.00	I-024
30	Nightwork Adjustment Compensation	\$17,290.00	I-080
31	Mobilization for Shoulder Paving Between Br 12 and 14	\$5,955.00	I-080
32	Bridge 13 Pier 2 Column Correction	\$5,000.00	I-061
33	Install Count Loops	\$9,000.00	I-073
33 SUP 1	Revise CCO 33	\$5,000.00	I-073
34	General Electrical Repair/Installation	\$20,000.00	I-075
35	Increase in Backfill Item	\$17,500.00	I-041
36	DI Adjustments	\$47,500.00	I-022
37	Decrease in PCCP Time Requirement for Traffic to Be on PCCP	\$0.00	
38	Sediment Basin #1 Re-Design	\$31,822.00	D-010
38 SUP 1		\$447.00	D-010
39	Maintain Existing Highway Structural Section	\$50,000.00	D-010
39 SUP 1		\$53,650.00	D-010
39 SUP 2	Maintain Existing Highway Structural Section	\$70,000.00	D-010
40	Median Retaining Wall CRIP	-\$137,923.00	I-042
41	Snow Plow Deflectors		
42	Modify Drainage, Relocate Fiber Optics/Conduit	\$55,530.00	I-073
43	Fiber Optic (CHP/Floriston)	\$105,934.35	I-073
44	Part of CCO 24		
45	Fold and Form	\$0.00	
45 SUP 1		\$0.00	

CCO No.	Item Description	Amount	Cost Code
45 SUP 2		\$0.00	
45 SUP 3		\$0.00	
46	T6 Taper	-\$8,150.00	D-010
47	Union Mills Drainage	\$49,286.00	I-024
48	Misc. Fiber Optics	\$20,000.00	I-073
49	Stage Changes (Union Mills)	-\$44,013.00	I-024
50	450 mm Fold and Form	\$0.00	
51	Unassigned		
52	Fiber Optic Concrete/Slurry Change	-\$23,970.00	I-073
53	Providing Lateral Support for Concrete Girders	\$2,698.00	I-032
54	Repair Grade Discrepancy at Fibreboard	\$2,908.00	I-073
55	Deduct for Gabions being out of spec	-\$1,400.00	I-041
56	Widening EB Hirschdale On Ramp	\$115,454.00	I-072
57	Winterization	\$114,000.00	I-080
57 SUP 1	Winterization	\$45,000.00	I-080
57 SUP 2	Winterization	\$2,500.00	I-080
58	Floriston Contamination	\$85,000.00	I-045
59	Unassigned		
60	RSP at the three Truckee River Bridges	-\$276,125.50	I-061
60 SUP 1		-\$5,425.25	I-061
61	CC Myers Delay Costs associated with the 9-11 lane closures restrictions	\$4,645.00	I-011
62	Drainage Revisions	\$70,947.50	I-024
63	Drainage System 72	\$29,035.65	I-024
64	“Rainy Season” definition revision		
65	Compensation for change in “Rainy Season”		
66	Compensation for writing SAP	\$4,000.00	I-080
67	Implementation of SAP	\$15,000.00	I-080
68	Underdrain		
69	Utility Casing Change in Quantity	\$148,980.00	I-053
69 SUP 1	Future utility openings	\$10,000.00	I-053

CCO No.	Item Description	Amount	Cost Code
70	2002 Drainage Changes	\$27,152.50	I-024
71	Structural Section Changes	\$146.00	I-061
72	Eliminate widening at CHP scales	-\$41,938.56	I-072
73	AC oil price fluctuations	\$201,000.00	D-010
74	Fiber Optic (West Bound) Boca Bridge to Floriston	\$0.00	I-073
75	Temporary Ramp for CHP Scales	\$79,248.00	I-012
75 SUP 2	Temporary Ramp for CHP Scales	\$7,500.00	I-012
75 SUP 3	Temporary Ramp for CHP Scales	\$5,000.00	I-012
76	Extend Plastic Liner DS 160	\$0.00	
77	Pave Shoulder	\$85,000.00	D-010
77 SUP 2	Pave shoulder	\$65,000.00	D-010
78	Median Paving CRIP	-\$68,424.00	D-010
79	Section Change East of Bridge 13	\$112,645.00	D-010
80	Fix Scour Hole PM 25.69	\$2,418.00	D-010
80 SUP 1	CCO 80 supplement 1	\$2,582.00	D-010
81	Substitute PCCP for LCB	\$0.00	
82	Additional compensation for MSE wall excavation and haul	\$1,075,714.57	I-041
83	K-Rail Median	\$41,405.00	I-032
84	Purchase, load, haul, unload, place and dispose of k-rail from Whitmore Maintenance Yard	\$158,977.93	I-032
85	DS #169 Changes	\$1,000.00	I-024
86	Fold and Form DS #35 & 38	\$71,980.00	I-024
87	Resurfacing skip lines with slurry	\$33,998.81	D-010
88	Prepare Closure pour Bridges 12 and 14	\$25,000.00	I-061
89	Provide Payment on Interest	\$15,000.00	I-080
90	Drainage @ Bridge 13 Temp		
91	CIDH permanent casing	\$25,000.00	D-010
92	Repair Damaged Roadway	\$50,000.00	D-010
93	10% RAP	\$0.00	
94	Drainage System 105A	\$32,423.60	I-024
95	Modify DS 100, 107, 111, 111A	\$43,970.70	I-022
96	Cattle Truck Accident	\$20,000.00	I-080

CCO No.	Item Description	Amount	Cost Code
96 SUP 1	CCO 96 supplement 1	\$35,000.00	I-080
97	Median Paving CRIP Stage 1 Phase 0A and Stage 2 Phase 0A Deer Crossing	-\$143,823.50	I-045
98	Modify DS 86, 137, 157, 162	-\$64,000.00	I-022
99	Modify DS 112 and 114A	\$108,301.90	I-022
99 SUP 1		\$239,660.10	I-022
100	MBGR @ Sediment Basin	\$2,442.00	D-010
101	Pave failed shoulders	\$190,000.00	D-010
102	Concrete Washouts	\$46,200.00	D-010
102 SUP 1	Additional funds	\$115,000.00	D-010
103	Floriston Onramps	\$81,439.63	I-071
104	Change oil to AC 1000		
105	Man made buried objects	\$99,000.00	I-080
106(1)	17-63 R&R	\$495,243.00	D-010
106(2)		\$1,980,972.00	I-080
107	Delete D.S. 166 & 187 (FF) and D.S. 187 (PPL)	-\$39,500.00	I-024
108	Differing site conditions 17-13 P3		
109	Deer crossing #1, remove left section, add right section	\$49,000.00	I-045
109 SUP 1	CCO 109 supplement 1	\$30,000.00	I-045
110	Modify concrete taper WB chain area, east of Fibreboard Bridge	-\$1,103.00	D-010
111	SWPPP (New Items)	\$39,375.00	I-025
112	Profile Corrections	\$3,246,425.00	D-010
113	Joint seal repair at Union Mills	\$14,849.24	D-010
114	Profile grind and repair spalled joints at bb and eb of bridges	\$10,000.00	D-010
115	Change in deck mix for 17-12 & 13	\$73,777.00	I-061
116	Change diaphragm stirrup at Floriston	\$2,403.40	D-010
117	Change emergency vehicle barrier	\$7,500.00	I-032
118	SWPPP "Agreed Unit Price"	\$449,240.00	I-025
119	Gabion filters	\$10,000.00	I-042
119 SUP 1	Gabion filters	\$19,600.00	I-042
120	Drainage system 76, change to plastic pipe-liner	-\$41,832.00	I-024

CCO No.	Item Description	Amount	Cost Code
121	K-rail at Farad onramp WB	\$5,000.00	I-032
122	Change color in concrete barrier	-\$100,490.32	I-032
123	2003 Winterization	\$44,588.75	I-080
124	Traffic switch	\$45,000.00	I-011
125	Credit for tracer wire	-\$5,000.00	I-075
126	key cut A/C approaches	\$167,000.00	D-010
127	Bridge stage 3 changes	\$0.00	I-061
128	Haul, process, place and compact backfill material for sediment basins	\$31,252.34	I-025
129	Chip off concrete-Hirschdale	\$5,000.00	D-010
130	profile grind at the Fibreboard Bridges		D-010
131	Place grindings on Prosser frontage road	\$16,000.00	D-010
132	Widen W/B of ramp at Floriston	\$26,087.28	I-072
133	Rumble strip	\$37,452.15	I-035
134	Paint K-rail		
135	Med barrier 60SC	-\$9,165.00	I-032
136	Thermo in existing recess	\$12,266.00	D-010
137	Grind skips Hinton/Floriston	\$25,000.00	D-010
138	Martis Fire Suspension	\$7,985.03	I-080
139	pave W/B approach Slabs Acid Flats Bridge	\$46,603.16	I-061
140	2003 drainage changes	\$81,439.63	I-024
141	Hinton K-rail move	\$5,000.00	I-032
142	stage changes 2003	\$46,948.50	I-012
142 SUP 1		\$150,000.00	I-012
142 SUP 2		\$350,000.00	I-012
143	Not Assigned		
144	Moving K-rail		
145	Shoulder Widening	\$46,943.77	I-043
146	remove unsound concrete		
147	Floriston Pit		
148	PCC OSD E/B at Prosser		
149	Profile Grind PCCP		

CCO No.	Item Description	Amount	Cost Code
150	DS #144		
151	Assembly Bill 75 Waste Disposal Report	\$2,500.00	I-045
152	Replace Pole Top Luminaires	\$70,117.10	I-075
153	Drainage	\$0.00	
154	Drainage		
155	600mm to 525 fold and form	-\$60,462.67	I-024
156	Drainage	\$29,150.00	I-024
157	Minor Various Widening	\$25,000.00	I-052
158	PCCP 255mm at Fibreboard	-\$2,863.00	I-073
159	DS 142	\$5,400.00	I-024
160	20 mm grind at bridge approach slabs	\$0.00	
161	Pin K-rail at gabion wall	\$7,500.00	I-032
162	Modify 732b barrier rail quantities	\$70,117.10	I-032
163	Survey bust Soil Nail to Boca/Hirshdale slope	\$26,208.06	I-041
164	replace Type 31 poles with Type 30 poles at Prosser	\$7,757.50	I-075
165	Hinton Slab EB	\$17,868.92	D-010
166	Gabion Baskets from Floriston to Prosser	-\$36,955.00	I-042
167	Add T1 and T3 taper quantities	\$37,750.00	D-010
168	Conduit Placement on Truckee River Bridges	\$0.00	
169	Return Maintenance K-rail		
170	Hinton Rd. perforated pipe	\$0.00	
171	Temp. Slope protection, paved	\$5,000.00	I-042
172	Grind approach and departure slabs Prosser		D-010
173	Add electrolier	\$9,947.79	I-075
174	Linear Option Mob.	\$17,598.00	D-030
175	Overhead sign structure increases	\$15,938.00	I-077
176	Fiber optic vault relocation	\$0.00	I-073
177	Misc. Drainage	\$10,890.00	I-024
177 SUP 1		-\$712.25	I-024
178	Joint Sealant change	\$403,458.82	D-010

CCO No.	Item Description	Amount	Cost Code
179	Fibreboard E/B west end Item 71	\$10,000.00	I-073
180	Traffic Switch Accel	\$15,655.60	I-011
181	Survey Bust		
182	Grind high spots due to AC overlay first season	\$10,000.00	D-010
183	Pullouts	\$16,876.00	D-010
184	Boca Joint Seal Assembly	\$215,000.00	I-061
185	Budget Impasse		
186			
187	DS 174	-\$21,150.30	I-024
188	Move Grinder		I-080
189	Remove, Replace, Repair A/C Dike	\$13,800.00	I-021
190	Pavement Anchor Drainage modification	\$10,000.00	I-024
191	Hirshdale Road Structural Section		
192	CHP Escorts	\$0.00	I-080
193	Lahontan fines, NOPC 9 & 10	-\$85,250.00	I-045
194	Grade bust at Floriston		
195	Install Cable Railings	\$18,000.00	I-032
196	Slopes		
197	Remove A/C - Boca - Union Mills		
198	Change overhead sign lighting	\$6,518.44	I-076
198 SUP 1	Increase 2 each	\$4,066.00	I-076
199	Construct Paving Notches	\$10,000.00	D-010
200	Stage changes, Acid Flats		
201	Type 732 Barrier at Union Mills	\$35,000.00	I-032
202	Grade ditch at Soil Nail Wall	\$15,000.00	I-043
203	OT differential for RSP on Saturday		
204	Replace Joint Seals	\$184,041.00	D-010
205	Sed. Basin 25-A	\$17,000.00	I-025
206	DS 146	\$12,079.40	I-024
207	Uncap DS. 104 & 134	\$9,600.00	I-024

CCO No.	Item Description	Amount	Cost Code
208	Prosser Drainage Inlets	\$15,000.00	I-024
209			
210	Quattro at Floriston	\$2,300.00	I-045
211	Grind Gutter Depressions	\$20,000.00	I-021
212	EW @ drainage system 143	\$7,500.00	I-024
213	Winter configuration 2003	\$27,069.00	I-080
214	Turnout at Hinton	\$17,500.00	D-010
215	Slotted Drain at chain area opening		I-024
216	Install Chain Control Signs		I-077
217	Hydro EWFA	\$2,000.00	I-025
218	Class 2 Delineators and culvert markers		D-030
219	Remove Stop Sign @ Hirschdale		I-077
220	Remove Roadside Signs	\$500.00	I-077
	Total	\$13,078,050.77	

Table A4 State Furnished Materials

Item Code	Item Description	Quantity	Amount
066021	Railroad inspection	LS	\$10,000
066061	CHP enhanced enforcement	LS	\$700,000
066063	Traffic management plan	LS	\$100,000
066105	Resident engineer's office	LS	\$100,000
066561	Sign panel and hardware	LS	\$30,000
066843A	Model 500 CMS system	LS	\$60,000
066886	Incandescent lamps	EA	\$30
066889	Electrical materials - furnished by others	LS	\$200
066889A	Truckee-Donner PUD	LS	\$50,000
	Total		\$1,050,230

Table A5 Right of Way Costs

Right of Way Cost	Amount	Cost Code
New Right of Way	\$289,000	I-051
Temporary Construction Easements	\$0	I-052
Utility Relocations	\$140,000	I-053
Total	\$429,000	