
Appendix D: Cost Estimates

**EBMUD "Fossil" Trail
Engineer's Estimate**

July 9, 2021

ITEM No.	BEEES NUMBER	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
1	120090	CONSTRUCTION AREA SIGNS	LS	1	\$13,000	\$13,000
2	70030	LEAD COMPLIANCE PLAN	LS	1	\$3,000	\$3,000
3	130300	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	LS	1	\$5,000	\$5,000
4	130100	CONSTRUCTION SITE MANAGEMENT	LS	1	\$100,000	\$100,000
5	130200	WATER POLLUTION CONTROL	LS	1	\$3,000	\$3,000
6	160102	CLEARING AND GRUBBING	LS	1	\$100,000	\$100,000
7	170101	DEVELOP WATER SUPPLY	LS	1	\$5,000	\$5,000
8		SIGNAGE	LS	1	\$30,000	\$30,000
9	190101	ROADWAY EXCAVATION	CY	88,456	\$30	\$2,653,680
10		CLASS 1 TRAIL	MILE	23.6	\$465,000	\$10,974,000
11		MIDBLOCK CROSSING	EA	28	\$35,600	\$996,800
12		HAWK SYSTEM	EA	2	\$200,000	\$400,000
13		CANAL CROSSING	EA	1	\$280,000	\$280,000
14		DRAINAGE (8%)	LS	1	\$1,245,100	\$1,245,100
SUBTOTAL =						\$16,808,580
CONSTRUCTION SUBTOTAL						
MINOR ITEMS (10%)						\$1,680,860
MOBILIZATION (10%)						\$1,680,860
CONTINGENCY (30%)						\$6,051,090
SUBTOTAL =						\$26,221,390
CONSTRUCTION TOTAL						
ENGINEERING (15%)						\$3,933,210
ENVIRONMENTAL (10%)						\$2,622,140
CONSTRUCTION MANAGEMENT (15%)						\$3,933,210
SUBTOTAL =						\$10,488,560
GRAND TOTAL						
GRAND TOTAL =						\$36,709,950

ASSUMPTIONS:

UTILITY RELOCATION IS NOT ACCOUNTED FOR
 TRAIL LIGHTTINT NOT ACCOUNTED FOR
 ASSUMES NO R/W ACQUISITION
 SOME EXISTING CANAL AND CREEK CROSSINGS CAN BE USED FOR TRAIL

**Old Luther Pass Road
Engineer's Estimate**

July 9, 2021

ITEM No.	BEES NUMBER	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
1	120090	CONSTRUCTION AREA SIGNS	LS	1	\$13,000	\$13,000
2	70030	LEAD COMPLIANCE PLAN	LS	1	\$3,000	\$3,000
3	130300	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	LS	1	\$5,000	\$5,000
4	130100	CONSTRUCTION SITE MANAGEMENT	LS	1	\$15,000	\$15,000
5	130200	WATER POLLUTION CONTROL	LS	1	\$3,000	\$3,000
6	160102	CLEARING AND GRUBBING	LS	1	\$10,000	\$10,000
7	170101	DEVELOP WATER SUPPLY	LS	1	\$5,000	\$5,000
8		SIGNAGE	LS	1	\$5,000	\$5,000
9	190101	ROADWAY EXCAVATION	CY	8,110	\$30	\$243,300
10	390132	CLASS 1 TRAIL	MILE	2.16	\$290,000	\$626,400
11		DRAINAGE (8%)	LS	1	\$74,300	\$74,300
					SUBTOTAL =	\$928,700
CONSTRUCTION SUBTOTAL						
					MINOR ITEMS (10%)	\$92,870
					MOBILIZATION (10%)	\$92,870
					CONTINGENCY (30%)	\$334,340
					SUBTOTAL =	\$1,448,780
CONSTRUCTION TOTAL						
					ENGINEERING (15%)	\$217,320
					ENVIRONMENTAL (10%)	\$144,880
					CONSTRUCTION MANAGEMENT (15%)	\$217,320
					SUBTOTAL =	\$579,520
GRAND TOTAL						
					GRAND TOTAL =	\$2,028,300

ASSUMPTIONS:

TRAIL LIGHTING NOT INCLUDED
 TRAIL LIGHTINT NOT ACCOUNTED FOR
 ASSUMES NO R/W ACQUISITION

**Sierra Railroad Rails to Trails (Phase 1)
Engineer's Estimate**

July 9, 2021

ITEM No.	BEES NUMBER	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
1	120090	CONSTRUCTION AREA SIGNS	LS	1	\$5,000	\$5,000
2	70030	LEAD COMPLIANCE PLAN	LS	1	\$3,000	\$3,000
3	130300	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	LS	1	\$5,000	\$5,000
4	130100	CONSTRUCTION SITE MANAGEMENT	LS	1	\$15,000	\$15,000
5	130200	WATER POLLUTION CONTROL	LS	1	\$3,000	\$3,000
6	160102	CLEARING AND GRUBBING	LS	1	\$20,000	\$20,000
7	170101	DEVELOP WATER SUPPLY	LS	1	\$5,000	\$5,000
8		SIGNAGE	LS	1	\$5,000	\$5,000
9		REMOVE TRACKS	LF	19,325	\$30	\$579,750
10		REMOVE BALLAST	CY	8,589	\$30	\$257,670
11	190101	ROADWAY EXCAVATION	CY	6,150	\$30	\$184,500
12		CLASS 1 TRAIL	MILE	3.66	\$465,000	\$1,701,900
13		MIDBLOCK CROSSING	EA	6	\$26,000	\$156,000
14		DRAINAGE (8%)	LS	1	\$235,300	\$235,300
SUBTOTAL =						\$3,176,120
CONSTRUCTION SUBTOTAL						
MINOR ITEMS (10%)						\$317,620
MOBILIZATION (10%)						\$317,620
CONTINGENCY (30%)						\$1,143,410
SUBTOTAL =						\$4,954,770
CONSTRUCTION TOTAL						
ENGINEERING (15%)						\$743,220
ENVIRONMENTAL (10%)						\$495,480
CONSTRUCTION MANAGEMENT (15%)						\$743,220
SUBTOTAL =						\$1,981,920
GRAND TOTAL						
GRAND TOTAL =						\$6,936,690

ASSUMPTIONS:

UTILITY RELOCATION IS NOT ACCOUNTED FOR
 TRAIL LIGHTING IS NOT ACCOUNTED FOR
 ASSUMES NO R/W ACQUISITION
 EXISTING RAILROAD BRIDGE WILL BE CONVERTED TO A PEDESTRIAN BRIDGE
 10' WIDE TRAIL WITH 2' AND 6' SHOULDER
 WAYFINDING SIGNS ASSUMED 1 PER QUARTER MILE.

**Sierra Railroad Rails to Trails (Phase 2)
Engineer's Estimate**

July 9, 2021

ITEM No.	BEES NUMBER	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL	
1	120090	CONSTRUCTION AREA SIGNS	LS	1	\$13,000	\$13,000	
2	70030	LEAD COMPLIANCE PLAN	LS	1	\$3,000	\$3,000	
3	130300	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	LS	1	\$5,000	\$5,000	
4	130100	CONSTRUCTION SITE MANAGEMENT	LS	1	\$15,000	\$15,000	
5	130200	WATER POLLUTION CONTROL	LS	1	\$3,000	\$3,000	
6	160102	CLEARING AND GRUBBING	LS	1	\$10,000	\$10,000	
7	170101	DEVELOP WATER SUPPLY	LS	1	\$5,000	\$5,000	
8		SIGNAGE	LS	1	\$5,000	\$5,000	
9		REMOVE TRACKS	LF	17,741	\$30	\$532,230	
10		REMOVE BALLAST	CY	7,885	\$30	\$236,550	
11		REMOVE CONCRETE PANEL	SQYD	408	\$75	\$30,600	
12	190101	ROADWAY EXCAVATION	CY	5,814	\$30	\$174,420	
13		CLASS 1 TRAIL	MILE	3.36	\$465,000	\$1,562,400	
14		MIDBLOCK CROSSING	EA	10	\$26,000	\$260,000	
15		PEDESTRIAN BRIDGE	EA	1	\$750,000	\$750,000	
16		DRAINAGE (8%)	LS	1	\$288,500	\$288,500	
SUBTOTAL =						\$3,893,700	
CONSTRUCTION SUBTOTAL							
						MINOR ITEMS (10%)	\$389,370
						MOBILIZATION (10%)	\$389,370
						CONTINGENCY (30%)	\$1,401,740
SUBTOTAL =						\$6,074,180	
CONSTRUCTION TOTAL							
						ENGINEERING (15%)	\$911,130
						ENVIRONMENTAL (10%)	\$607,420
						CONSTRUCTION MANAGEMENT (15%)	\$911,130
SUBTOTAL =						\$2,429,680	
GRAND TOTAL							
GRAND TOTAL =						\$8,503,860	

ASSUMPTIONS:

UTILITY RELOCATION IS NOT ACCOUNTED FOR
 TRAIL LIGHTING IS NOT ACCOUNTED FOR
 ASSUMES NO R/W ACQUISITION
 RAILROAD BRIDGE REMOVAL IS NOT ACCOUNTED FOR
 10' WIDE TRAIL WITH 2' AND 6' SHOULDER
 WAYFINDING SIGNS ASSUMED 1 PER QUARTER MILE.

**SR-49 Angels Camp to Calaveras Farigrounds
Engineer's Estimate**

July 12, 2021

ITEM No.	BEES NUMBER	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL	
1	120090	CONSTRUCTION AREA SIGNS	LS	1	\$13,000	\$13,000	
2	70030	LEAD COMPLIANCE PLAN	LS	1	\$3,000	\$3,000	
3	130300	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	LS	1	\$5,000	\$5,000	
4	130100	CONSTRUCTION SITE MANAGEMENT	LS	1	\$15,000	\$15,000	
5	130200	WATER POLLUTION CONTROL	LS	1	\$3,000	\$3,000	
6	160102	CLEARING AND GRUBBING	LS	1	\$10,000	\$10,000	
7	170101	DEVELOP WATER SUPPLY	LS	1	\$5,000	\$5,000	
8	120100	TRAFFIC CONTROL SYSTEM	LS	1	\$30,000	\$30,000	
9		SIGNAGE	LS	1	\$5,000	\$5,000	
10	731780	REMOVE CONCRETE SIDEWALK	SQYD	256	\$70	\$17,920	
11	600017	REMOVE RETAINING WALL	LF	1,250	\$150	\$187,500	
12	190101	ROADWAY EXCAVATION	CY	15,186	\$30	\$455,580	
13	390132	CLASS 1 TRAIL	MILE	1.91	\$31,000	\$59,210	
14	475010	RETAINING WALL (MASONRY WALL)	SF	20,000	\$30	\$600,000	
15		TRAIL CROSSING	EA	10	\$21,000	\$210,000	
16		DRAINAGE (8%)	LS	1	\$129,600	\$129,600	
SUBTOTAL =						\$1,748,810	
CONSTRUCTION SUBTOTAL							
						MINOR ITEMS (10%)	\$174,890
						MOBILIZATION (10%)	\$174,890
						CONTINGENCY (30%)	\$629,580
SUBTOTAL =						\$2,728,170	
CONSTRUCTION TOTAL							
						RIGHT-OF-WAY	\$2,200,000
						ENGINEERING (15%)	\$409,230
						ENVIRONMENTAL (10%)	\$272,820
						CONSTRUCTION MANAGEMENT (15%)	\$409,230
SUBTOTAL =						\$3,291,280	
GRAND TOTAL							
GRAND TOTAL =						\$6,019,450	

ASSUMPTIONS:

UTILITY RELOCATION IS NOT ACCOUNTED FOR
 TRAIL LIGHTING IS NOT ACCOUNTED FOR
 DOES NOT INCLUDE IMPACTS TO PRIVATE PROPERTY IMPROVEMENTS FROM RETAINING WALL
 BRIDGE WIDENING NEAR INTERSECTION OF SR49 & VALLECITO RD IS NOT ACCOUNTED FOR
 5'X15' CROSS-SECTIONAL ROADWAY EXCAVATION ALONG 2000 LF OF ROADWAY
 REMOVAL OF 5' TALL EXISTING RETAINING WALL FOR 2000 LF
 ADDITION OF NEW 10' TALL RETAINING WALL FOR 2000 LF
 \$15/SF FOR RIGHT OF WAY ACQUISITION
 10' WIDE TRAIL WITH 2' SHOULDERS
 WAYFINDING SIGNS ASSUMED 1 PER QUARTER MILE.

**SR-89/Markleeville Bike Lanes
Engineer's Estimate**

July 12, 2021

ITEM No.	BEES NUMBER	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
1	120090	CONSTRUCTION AREA SIGNS	LS	1	\$13,000	\$13,000
2	70030	LEAD COMPLIANCE PLAN	LS	1	\$3,000	\$3,000
3	130300	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	LS	1	\$5,000	\$5,000
4	130100	CONSTRUCTION SITE MANAGEMENT	LS	1	\$15,000	\$15,000
5	130200	WATER POLLUTION CONTROL	LS	1	\$3,000	\$3,000
6	160102	CLEARING AND GRUBBING	LS	1	\$10,000	\$10,000
7	170101	DEVELOP WATER SUPPLY	LS	1	\$5,000	\$5,000
8	120100	TRAFFIC CONTROL SYSTEM	LS	1	\$30,000	\$30,000
9		SIGNAGE	LS	1	\$5,000	\$5,000
10	190101	ROADWAY EXCAVATION	CY	10,058	\$30	\$301,740
11	398100	REMOVE ASPHALT CONCRETE DIKE	LF	6,000	\$2	\$12,000
12	394073	HOT MIX ASPHALT DIKE (TYPE A)	LF	6,000	\$2	\$12,000
13	390132	CLASS 2 TRAIL	MILE	3.41	\$270,000	\$920,700
14		WIDEN BRIDGE	SF	800	\$500	\$400,000
15		RESTRIPING	LF	5,280	\$20	\$105,600
16	832007	MIDWEST GUARDRAIL SYSTEM (WOOD POST)	LF	500	\$40	\$20,000
17		DRAINAGE (15%)	LS	1	\$279,200	\$279,200
SUBTOTAL =						\$2,140,240
CONSTRUCTION SUBTOTAL						
MINOR ITEMS (10%)						\$214,030
MOBILIZATION (10%)						\$214,030
CONTINGENCY (30%)						\$770,490
SUBTOTAL =						\$3,338,790
CONSTRUCTION TOTAL						
ENGINEERING (15%)						\$500,820
ENVIRONMENTAL (10%)						\$333,880
CONSTRUCTION MANAGEMENT (15%)						\$500,820
SUBTOTAL =						\$1,335,520
GRAND TOTAL						
GRAND TOTAL =						\$4,674,310

ASSUMPTIONS:

UTILITY RELOCATIONS IS NOT ACCOUNTED FOR
 TRAIL LIGHTING NOT INCLUDED
 ASYMMETRICAL CROSS SECTIONS AND REALIGNMENT TO AVOID INSTALLING RETAINING WALLS
 RESTRIPING ASSUMES 3 STRIPES AND SLURRY SEAL FOR ENTIRE ROADWAY WIDTH FOR 1 MILE
 DRAINAGE ESTIMATE INCLUDES MISCELLANEOUS DRAINAGE ITEMS AND 4 CULVERT EXTENSIONS
 8' PAVED SHOULDERS DIVIDED FROM TRAVEL LANES BY STRIPING USED AS BIKE LANES

INTERREGIONAL BIKE PLAN TYPICAL SECTION

