

## ***Appendix F: COST ESTIMATE***

The cost estimate was developed using unit costs based on:

- Direct experience and knowledge
- Recent bid history of similar items and projects
- Vendor quotes from recent projects for similar items where applicable
- Recent Contractor quotes for similar items where applicable
- Other historical cost information that is available.
- All removed timber requires hazardous waste disposal.

General Conditions, Quality Control Costs, Contractor's and Subcontractor's Profit, Field Overhead, Home Office Overhead, Mobilization and Demobilization are included in the prices. Estimated costs are based on current prices and no escalation is included.

This cost estimate is an opinion of construction cost made by the consultant. In providing opinions of construction cost, it is recognized that neither the client nor the consultant has control over the costs of labor, equipment, or materials, or over contractors' methods of determining prices or bidding. This opinion of construction cost is based on the consultant's reasonable professional judgment and experience and does not constitute a warranty, expressed or implied, that contractors' bids or negotiated prices of the work will not vary from the client's budget or from any opinion of cost prepared by the consultant.

**APPENDIX F: OPINION OF PROBABLE PROJECT COST  
Seawall and Revetment Summary Table**

<b>Location:</b>	Morro Bay, CA					<b>Estimated Range of Probable Cost</b>	
<b>Item</b>	<b>Priority</b>	<b>Condition</b>	<b>Length (ft)</b>	<b>Description</b>	<b>Total</b>	<b>-30%</b>	<b>50%</b>
Geotechnical Study	Short	N/A	N/A	Further investigation required	\$ 300,000	\$ 210,000	\$ 450,000
Seawall 1 Study	Short	Fair/Study	87	Further investigation required	\$ 235,000	\$ 164,500	\$ 352,500
Seawall 2	Mid	Critical	84	Rebuild Seawall	\$ 754,644	\$ 528,251	\$ 1,131,966
Seawall 3	Mid	Critical	213	Rebuild Seawall	\$ 2,233,011	\$ 1,563,108	\$ 3,349,517
Revetment 1	Long	Fair	740	Add Rock and Refurbish	\$ 4,052,507	\$ 2,836,755	\$ 6,078,760
Revetment 2	Mid	Poor	2414	Add Rock, Refurbish, and Rebuild	\$ 10,182,160	\$ 7,127,512	\$ 15,273,240
Revetment 3	Short	Serious	136	Rebuild Revetment	\$ 1,166,649	\$ 816,655	\$ 1,749,974
Revetment 4	Short	Serious	518	Refurbish and Rebuild Revetment	\$ 3,096,446	\$ 2,167,512	\$ 4,644,668
Revetment 5	Long	Fair	223	Add Rock and Refurbish	\$ 1,341,964	\$ 939,375	\$ 2,012,946
Revetment 6	Long	Fair	49	Refurbish Revetment	\$ 488,221	\$ 341,755	\$ 732,331
Revetment 7	Mid	Poor	56	Refurbish Revetment	\$ 520,647	\$ 364,453	\$ 780,971
Revetment 8	Mid	Poor	68	Refurbish Revetment	\$ 598,922	\$ 419,246	\$ 898,383
Revetment 9	Priority	Critical	93	Refurbish and Rebuild Revetment	\$ 724,959	\$ 507,471	\$ 1,087,439
Revetment 10	Short	Serious	81	Rebuild Revetment	\$ 759,616	\$ 531,731	\$ 1,139,425
Revetment 11	Mid	Poor	51	Rebuild Revetment	\$ 538,834	\$ 377,184	\$ 808,251
Revetment 12	Long	Fair	1810	Refurbish Revetment	\$ 9,427,999	\$ 6,599,599	\$ 14,141,999
<b>Total</b>					<b>\$ 36,421,579</b>	<b>\$ 25,495,105</b>	<b>\$ 54,632,369</b>

<b>Alternative Item</b>	<b>Priority</b>	<b>Condition</b>	<b>Length (ft)</b>	<b>Description</b>	<b>Total</b>	<b>-30%</b>	<b>50%</b>
Seawall 2 Option	Mid	Critical	84	Replace with New Revetment	\$ 706,948	\$ 494,864	\$ 1,060,423
Seawall 3 Option	Mid	Critical	213	Replace with New Revetment	\$ 1,326,209	\$ 928,346	\$ 1,989,313
<b>Total</b>					<b>\$ 2,033,157</b>	<b>\$ 1,423,210</b>	<b>\$ 3,049,736</b>

THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

Estimate Accuracy, Class 5 Conceptual	
-30%	50%



<b>Seawall 2: Rebuild</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 88,540
2	Mobilization/Demobilization	\$ 90,000
3	Demolition	\$ 35,400
4	Excavate	\$ 37,200
5	Place Concrete Footing	\$ 69,000
6	Place Concrete Wall	\$ 56,000
7	Backfill	\$ 47,200
<b>SUBTOTAL</b>		<b>\$ 423,340</b>
	Geotechnical Investigation	\$ 90,000
	Engineering	\$ 50,801
	Compliance, Permitting, & Environmental Studies	\$ 63,501
	Contractor Overhead & Profit	\$ 63,501
	Construction Support	\$ 12,700
	Construction Management	\$ 50,801
<b>SUBTOTAL</b>		<b>\$ 331,304</b>
<b>TOTAL</b>		<b>\$ 754,644</b>

<b>Seawall 2: Replace with Revetment</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 74,030
2	Mobilization/Demobilization	\$ 20,000
3	Demolish Existing Wall	\$ 35,400
4	Build	\$ 287,956
<b>SUBTOTAL</b>		<b>\$ 417,386</b>
	Geotechnical Investigation	\$ 60,000
	Engineering	\$ 41,739
	Compliance, Permitting, & Environmental Studies	\$ 62,608
	Contractor Overhead & Profit	\$ 62,608
	Construction Support	\$ 12,522
	Construction Management	\$ 50,086
<b>SUBTOTAL</b>		<b>\$ 289,562</b>
<b>TOTAL</b>		<b>\$ 706,948</b>

<b>Seawall 3: Rebuild</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 146,580
2	Mobilization/Demobilization	\$ 160,000
3	Demolish Existing Wall	\$ 53,511
4	Excavate	\$ 30,075
5	Install Sheet Piles	\$ 371,850
6	Install Pile Cap	\$ 282,400
7	Backfill	\$ 57,200
8	AC Paving	\$ 142,340
<b>SUBTOTAL</b>		<b>\$ 1,243,956</b>
	Geotechnical Investigation	\$ 280,000
	Engineering	\$ 149,275
	Compliance, Permitting, & Environmental Studies	\$ 186,593
	Contractor Overhead & Profit	\$ 186,593
	Construction Support	\$ 37,319
	Construction Management	\$ 149,275
<b>SUBTOTAL</b>		<b>\$ 989,055</b>
<b>TOTAL</b>		<b>\$ 2,233,011</b>

<b>Seawall 3: Replace with Revetment</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 88,540
2	Mobilization/Demobilization	\$ 20,000
3	Demolish Existing Wall	\$ 40,100
4	Build	\$ 668,269
<b>SUBTOTAL</b>		<b>\$ 816,909</b>
	Geotechnical Investigation	\$ 60,000
	Engineering	\$ 81,691
	Compliance, Permitting, & Environmental Studies	\$ 122,536
	Contractor Overhead & Profit	\$ 122,536
	Construction Support	\$ 24,507
	Construction Management	\$ 98,029
<b>SUBTOTAL</b>		<b>\$ 509,300</b>
<b>TOTAL</b>		<b>\$ 1,326,209</b>

<b>Revetment 1</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 204,620
2	Mobilization/Demobilization	\$ 80,000
3	Add Rock	\$ 1,708,084
4	Refurbish	\$ 607,953
5	Improvements to Surface Drainage	\$ 13,864
<b>SUBTOTAL</b>		<b>\$ 2,614,520</b>
	Geotechnical Investigation	\$ -
	Engineering	\$ 261,452
	Compliance, Permitting, & Environmental Studies	\$ 392,178
	Contractor Overhead & Profit	\$ 392,178
	Construction Support	\$ 78,436
	Construction Management	\$ 313,742
<b>SUBTOTAL</b>		<b>\$ 1,437,986</b>
<b>TOTAL</b>		<b>\$ 4,052,507</b>

<b>Revetment 2</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 465,800
2	Mobilization/Demobilization	\$ 80,000
3	Add Rock	\$ 3,438,367
4	Refurbish	\$ 298,860
5	Rebuild	\$ 2,809,328
6	Improvement to Surface Drainage	\$ 49,535
<b>SUBTOTAL</b>		<b>\$ 6,546,555</b>
	Geotechnical Investigation	\$ 35,000
	Engineering	\$ 654,655
	Compliance, Permitting, & Environmental Studies	\$ 981,983
	Contractor Overhead & Profit	\$ 981,983
	Construction Support	\$ 196,397
	Construction Management	\$ 785,587
<b>SUBTOTAL</b>		<b>\$ 3,635,605</b>
<b>TOTAL</b>		<b>\$ 10,182,160</b>

<b>Revetment 3</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 148,902
2	Mobilization/Demobilization	\$ 80,000
3	Rebuild	\$ 477,586
4	Improvement to Surface Drainage	\$ 7,480
<b>SUBTOTAL</b>		<b>\$ 713,967</b>
	Geotechnical Investigation	\$ 60,000
	Engineering	\$ 71,397
	Compliance, Permitting, & Environmental Studies	\$ 107,095
	Contractor Overhead & Profit	\$ 107,095
	Construction Support	\$ 21,419
	Construction Management	\$ 85,676
<b>SUBTOTAL</b>		<b>\$ 452,682</b>
<b>TOTAL</b>		<b>\$ 1,166,649</b>

<b>Revetment 4</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 117,560
2	Mobilization/Demobilization	\$ 80,000
3	Refurbish	\$ 554,669
4	Rebuild	\$ 1,206,768
<b>SUBTOTAL</b>		<b>\$ 1,958,997</b>
	Geotechnical Investigation	\$ 60,000
	Engineering	\$ 195,900
	Compliance, Permitting, & Environmental Studies	\$ 293,850
	Contractor Overhead & Profit	\$ 293,850
	Construction Support	\$ 58,770
	Construction Management	\$ 235,080
<b>SUBTOTAL</b>		<b>\$ 1,137,448</b>
<b>TOTAL</b>		<b>\$ 3,096,446</b>

<b>Revetment 5</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 103,050
2	Mobilization/Demobilization	\$ 80,000
3	Add Rock	\$ 262,184
4	Refurbish	\$ 420,549
<b>SUBTOTAL</b>		<b>\$ 865,783</b>
	Geotechnical Investigation	\$ -
	Engineering	\$ 86,578
	Compliance, Permitting, & Environmental Studies	\$ 129,867
	Contractor Overhead & Profit	\$ 129,867
	Construction Support	\$ 25,973
	Construction Management	\$ 103,894
<b>SUBTOTAL</b>		<b>\$ 476,181</b>
<b>TOTAL</b>		<b>\$ 1,341,964</b>

<b>Revetment 6</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 88,540
2	Mobilization/Demobilization	\$ 80,000
3	Refurbish	\$ 146,441
<b>SUBTOTAL</b>		<b>\$ 314,981</b>
	Geotechnical Investigation	\$ -
	Engineering	\$ 31,498
	Compliance, Permitting, & Environmental Studies	\$ 47,247
	Contractor Overhead & Profit	\$ 47,247
	Construction Support	\$ 9,449
	Construction Management	\$ 37,798
<b>SUBTOTAL</b>		<b>\$ 173,240</b>
<b>TOTAL</b>		<b>\$ 488,221</b>

<b>Revetment 7</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 88,540
2	Mobilization/Demobilization	\$ 80,000
3	Refurbish	\$ 167,361
<b>SUBTOTAL</b>		<b>\$ 335,901</b>
	Geotechnical Investigation	\$ -
	Engineering	\$ 33,590
	Compliance, Permitting, & Environmental Studies	\$ 50,385
	Contractor Overhead & Profit	\$ 50,385
	Construction Support	\$ 10,077
	Construction Management	\$ 40,308
<b>SUBTOTAL</b>		<b>\$ 184,746</b>
<b>TOTAL</b>		<b>\$ 520,647</b>

<b>Revetment 8</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 88,540
2	Mobilization/Demobilization	\$ 80,000
3	Refurbish	\$ 217,862
<b>SUBTOTAL</b>		<b>\$ 386,402</b>
	Geotechnical Investigation	\$ -
	Engineering	\$ 38,640
	Compliance, Permitting, & Environmental Studies	\$ 57,960
	Contractor Overhead & Profit	\$ 57,960
	Construction Support	\$ 11,592
	Construction Management	\$ 46,368
<b>SUBTOTAL</b>		<b>\$ 212,521</b>
<b>TOTAL</b>		<b>\$ 598,922</b>

<b>Revetment 9</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 103,050
2	Mobilization/Demobilization	\$ 80,000
3	Refurbish	\$ 179,316
4	Rebuild	\$ 105,350
<b>SUBTOTAL</b>		<b>\$ 467,716</b>
	Geotechnical Investigation	\$ -
	Engineering	\$ 46,772
	Compliance, Permitting, & Environmental Studies	\$ 70,157
	Contractor Overhead & Profit	\$ 70,157
	Construction Support	\$ 14,031
	Construction Management	\$ 56,126
<b>SUBTOTAL</b>		<b>\$ 257,244</b>
<b>TOTAL</b>		<b>\$ 724,959</b>

<b>Revetment 10</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 103,050
2	Mobilization/Demobilization	\$ 80,000
3	Rebuild	\$ 284,444
<b>SUBTOTAL</b>		<b>\$ 467,494</b>
	Geotechnical Investigation	\$ 35,000
	Engineering	\$ 46,749
	Compliance, Permitting, & Environmental Studies	\$ 70,124
	Contractor Overhead & Profit	\$ 70,124
	Construction Support	\$ 14,025
	Construction Management	\$ 56,099
<b>SUBTOTAL</b>		<b>\$ 292,122</b>
<b>TOTAL</b>		<b>\$ 759,616</b>

<b>Revetment 11</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 88,540
2	Mobilization/Demobilization	\$ 80,000
3	Rebuild	\$ 179,095
<b>SUBTOTAL</b>		<b>\$ 347,635</b>
	Geotechnical Investigation	\$ -
	Engineering	\$ 34,763
	Compliance, Permitting, & Environmental Studies	\$ 52,145
	Contractor Overhead & Profit	\$ 52,145
	Construction Support	\$ 10,429
	Construction Management	\$ 41,716
<b>SUBTOTAL</b>		<b>\$ 191,199</b>
<b>TOTAL</b>		<b>\$ 538,834</b>

<b>Revetment 12</b>		
<b>Task No.</b>	<b>Description</b>	<b>Total</b>
1	General Conditions	\$ 610,900
2	Mobilization/Demobilization	\$ 80,000
3	Refurbish	\$ 5,379,472
4	Improvement to Surface Drainage	\$ 12,208
<b>SUBTOTAL</b>		<b>\$ 6,082,580</b>
	Geotechnical Investigation	\$ -
	Engineering	\$ 608,258
	Compliance, Permitting, & Environmental Studies	\$ 912,387
	Contractor Overhead & Profit	\$ 912,387
	Construction Support	\$ 182,477
	Construction Management	\$ 729,910
<b>SUBTOTAL</b>		<b>\$ 3,345,419</b>
<b>TOTAL</b>		<b>\$ 9,427,999</b>