

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate

BASIS OF ESTIMATE

PROJECT INFORMATION

Project: Oso Comida Trailhead Improvements
Park: Bear Arbor NRA
Park Alpha: BEAR
PMIS Number: XXXXXX
Estimate Date: 12/16/2010
Prepared By: YtB
Company: NPS Bear Arbor NRA
Address: 123 Bruin Meadows Rd.
City, State Zip: Grizzly Hollow, CA 96023
Phone: (555) 123-4567

BACKGROUND SUPPORTING MATERIAL (Scope of Work):

Field Recon meeting with park Supt. and FM Staff. Marked-up Overlay Sketch on 1962 plans of current improvements. Letter from congress requesting R&R of existing trailhead. Public Scoping Meeting minutes and sketches developed during informal design brainstorming sessions with park Supt., FM Chief and RMS staff. --- Estimate is based on replacing existing pit toilets with new precast vault toilets,. Excising social trails will be obliterated after new walk connections and channelizing fence is installed. Revegetation of trails will be by park volunteers, YCC etc. 50 new paved parking spaces will be provided with four accessible spaces (2 van). A treated soil hard surfaced accessible trail connection will be constructed for the first 550 feet of trail to the Bruin Meadows overlook.

SOURCE OF COST DATA:

Majority of cost are based on RS Means 2010 Facilities Construction Cost Data, 25th Annual Edition. Parking lot costs are based on actual, in-park FHWA road project on Bruin Meadows road adjacent to site - adjusted down by -23% to remove remoteness & location factors. Precast vault toilet assembly material price is based on 2010 GSA annual contract.

ESTIMATE ASSUMPTIONS:

Estimate assumes that all improvements will be constructed as a single project during one construction season. East half of existing dirt parking area and trailhead will remain in operation until new paved lot and walk connections are completed. 2nd half of existing lot will be available for contractor lay down/equipment area, but contractor's labor force must park at maintenance yard 5 miles away and be shuttled into site. Shuttle costs and additional portable toilet cost impacts are included in Government Special Conditions.

MAJOR CHANGES FROM PREVIOUS ESTIMATE:

Previous PMIS estimate did not include trail hardening or channelizing fence.

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DESCRIPTION OF MARK-UP & ADD-ONS:

Location Factor:	<u>6.30%</u>	Closest RS Means market Center is Redding CA; CCI=106.3
Remoteness Factor:	<u>13.0%</u>	Site is 130 miles from published commercial center. Good state highway access to site. Minor traffic impacts.
Federal Wage Rate Factor:	<u>3.7%</u>	Compared local county Davis-Bacon wage rates to location adjusted RS Means wages for the trades anticipated.
State & Local Taxes:	<u>8.25%</u>	6% State Sales Tax plus 2.25% county and regional transportation district taxes. See Comment Below
Design Contingency:	<u>30.0%</u>	Preliminary Design (PD) documents are available. Relatively simple scope but not completely defined warrants a 30% contingency.
Standard. General Conditions:	<u>10.0%</u>	Relatively simple heavy/civil construction project with few if any additional trades. Job-site indirect costs should be minimal.
Government General Conditions:	<u>12.0%</u>	Higher than normal; Includes impacts associated with shuttling crews and maintaining public access to existing trail.
Historic Preservation Factor:	<u>3.00%</u>	Project is adjacent to a historical bridge and several cultural sites that will require protection/modification to plan.
Contractor Overhead:	<u>8.50%</u>	Normal mid-range for Small to medium sized Heavy/Civil contractor in this area
Contractor Profit:	<u>10.0%</u>	Economic downturn is easing and we anticipate modest increase in contractor profit by 2013 project date
Bonds and Permits:	<u>2.00%</u>	Standard to high range for low volume but established Heavy/Civil contractors
Contracting Method Adjustment:	<u>15.0%</u>	Preliminary indications are that negotiated sole-source SBA Section 8a or SDV procurement will be utilized.
Annual Inflation Escalation Factor:	<u>3.60%</u>	Anticipate easing of economic downturn will trigger mild inflation
Time Until Project Midpoint (Months)	<u>44</u>	RS Means data date of January 2010 until August 2013.

OTHER COMMENTS:

Considerable discussions regarding the need for a wet comfort station needed to resolve a potential increase in scope. **Sales and use tax only applied to materials, assumed to be 40% of direct cost at this estimate stage. Discussions have been underway regarding changing facility to a full wet comfort station if additional funding can be secured.**

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Date: 12/16/10

Reviewed By: BBB
Date: 12/17/10

Item No.	Description	Quantity	Unit	Cost/Unit	Total
1	Remove existing pit toilets	1	LS	\$5,438	\$5,438
2	Construct new 4-stall vault toilet facility	1	EA	\$63,145	\$63,145
3	Construct 50 space paved parking lot	50	Spaces	\$3,925	\$196,235
4	Rehabilitate existing 5-table picnic area	5	EA	\$6,000	\$30,000
5	Construct new trail connection with fence	1	LS	\$36,090	\$36,090
6	Remove & Reclaim existing parking and trails	1	LS	\$19,798	\$19,798
Subtotal Direct Construction Costs					\$350,704
Value of Government Furnished Property (GFP) Included in Direct Cost (see footnote)*					\$0
Direct Cost Subtotal without GFP					\$350,704
	Published Location Factor	6.30%			\$22,094
	Remoteness Factor	13.00%			\$45,592
	Federal Wage Rate Factor	3.70%			\$12,976
	State & Local Taxes - on 40% of Direct Cost	8.25%		Formula Modified >>>	\$11,573
	Design Contingency	30.00%			\$105,211
Total Direct Construction Costs					\$548,151
	Standard General Conditions	10.00%			\$54,815
	Government General Conditions	12.00%			\$65,778
	Historic Preservation Factor	3.00%			\$16,445
Subtotal NET Construction Cost					\$685,188
	Overhead	8.50%			\$58,241
	Profit	10.00%			\$68,519
Estimated NET Construction Cost					\$811,948
	Bonds & Permits	2.00%			\$16,239
	Contracting Method Adjustment	15.00%			\$121,792
	Inflation Escalation	44	Months	3.60%	\$131,537
Total Estimated NET Cost of Construction					\$1,081,517

* GFP costs are only used when the Government pre-purchases items, or provides other materials out of Government inventory, to be installed by contractor. Adjustments and Markup on GFP only include Inflation Escalation; No other adjustment factors or O&P markup have been applied.

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Estimate By: YtB
Date: 12/16/10
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Summary Item 1 Remove existting pit toilets

Total Cost: \$5,438

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
F20	SELECTIVE BUILDING DEMOLITION					
F2020	Pump & Flush existing pits	1	LS	\$ 500.00	\$500	
F2010	Demo structures- haul to dump; Means Crew B-30	1	Day	\$ 3,988.00	\$3,988	
F2010	Dump Fees	2	EA	\$ 350.00	\$700	
				\$ -	\$0	
SUBTOTAL SELECTIVE BUILDING DEMOLITION		1	LS	\$ 5,188.00	\$5,188	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G10	SITE PREPARATION					
G1030	Backfill & hand compact pits w/ soil from new vault	50	CY	\$ 4.99	\$250	
		0	Unit	\$ -	\$0	
		0	Unit	\$ -	\$0	
		0	Unit	\$ -	\$0	
SUBTOTAL SITE PREPARATION		1	VALUE	\$ 249.50	\$250	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - Remove existting pit toilets						
		1	LS	\$ 5,437.50	\$5,438	

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Summary Item 2 Construct new 4-stall vault toilet facility

Total Cost: \$63,145

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A10	FOUNDATIONS					
A1020	Furnish & Install 12" Crushed Aggregate Base	25	SY	\$ 24.68	\$617	
A1030	Fine grade vault subgrade	200	SF	\$ 0.50	\$100	
		0	Unit	\$ -	\$0	
SUBTOTAL FOUNDATIONS		1	VALUE	\$ 716.88	\$717	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
A20	BASEMENT CONSTRUCTION					
A2010	Excavate for Vault - sidecast	100	CY	\$ 3.91	\$391	
A2020	Set Precast Vault RSM-Crew A3I	0.5	Day	\$ 1,940.20	\$970	
A2020	Set Precast Vault - Additional Labor	2	Mday	\$ 435.00	\$870	
A2020	Purchase Precast Vault & Structure	2	EA	\$ 25,000.00	\$50,000	
A2020	Backfill & Compact Vault	25	CY	\$ 4.99	\$125	
A2010	Remove excess soil from site.	25	CY	\$ 30.00	\$750	
		0	Unit	\$ -	\$0	
		0	Unit	\$ -	\$0	
SUBTOTAL BASEMENT CONSTRUCTION		1	VALUE	\$ 53,105.85	\$53,106	

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Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B10	SUPERSTRUCTURE					
B1020	Erect Superstructure RSM Crew A3i	0.5	Day	\$ 3.91	\$2	
B1020	Additional Labor	2	Mday	\$ 435.00	\$870	
		0	Unit	\$ -	\$0	
SUBTOTAL SUPESTRUCTURE		1	LS	\$ 871.96	\$872	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
B20	EXTERIOR CLOSURE					
B2010	Caulking & Waterproofing	1	Allow	\$ 100.00	\$100	
B2020	Hang and adjust pre-furnished doors	1	LS	\$ 250.00	\$250	
B20XX	Touch-up & patch Precast structure	1	Allow	\$ 100.00	\$100	
		0	Unit	\$ -	\$0	
SUBTOTAL EXTERIOR CLOSURE		1	VALUE	\$ 44.00	\$450	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
D20	PLUMBING					
D2010	Install and adjust interior fixtures	1	Allow	\$ 250.00	\$250	
		0	Unit	\$ -	\$0	
		0	Unit	\$ -	\$0	
SUBTOTAL PLUMBING		1	VALUE	\$ 250.00	\$250	

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Total Cost: \$63,145

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G10	SITE PREPARATION					
G1030	Clean up & Fine grade around vault toilets	2500	SF	\$ 0.15	\$375	
G1030	Erosion Control	1	Allow	\$ 2,500.00	\$2,500	
		0	Unit	\$ -	\$0	
		0	Unit	\$ -	\$0	
SUBTOTAL SITE PREPARATION		1	VALUE	\$ 2,875.00	\$2,875	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G20	SITE IMPROVEMENTS					
G2030	Concrete flatwork	750	SF	\$ 6.50	\$4,875	
			Unit	\$ -	\$0	
			Unit	\$ -	\$0	
SUBTOTAL SITE IMPROVEMENTS		1	VALUE	\$ 4,875.00	\$4,875	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - Construct new 4-stall vault toilet facility						
		1	EA	\$ 63,144.68	\$63,145	

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Summary Item Construct 50 space paved parking lot

Total Cost: \$196,235

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G10	SITE PREPARATION					No grading or drainage plans available. Prices and quantities are conceptual place holders only..
G1010	Erosion Control	1	Allow	\$ 2,500.00	\$2,500	
G1010	Clear & Grub Parking Area	40000	SF	\$ 0.25	\$10,000	
G1010	Selective Tree Removal	10	EA	\$ 350.00	\$3,500	
G1020	Misc. site demolition	1	LS	\$ 1,500.00	\$1,500	
G1030	Onsite-Cut to Fill	1500	CY	\$ 3.81	\$5,715	
		0	Unit	\$ -	\$0	
SUBTOTAL SITE PREPARATION		1	LS	\$ 23,215.00	\$23,215	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks	
G20	SITE IMPROVEMENTS					Base and Paving costs are based on 2010 highway construction project adjacent to site FHWA prices reduced 23% to localize for later mark-up by location, wage & remoteness factors	
G2020	Subgrade Prep Parking Lot	4050	SY	\$ 0.75	\$3,038		
G2020	Furnish & Install 6" Roadbase	4050	SY	\$ 8.75	\$35,438		
G2020	Furnish & Install 3" Asphalt Paving	4050	SY	\$ 13.25	\$53,663		
G2020	Striping	46	Spaces	\$ 42.00	\$1,932		
G2020	Accessible spaces	4	EA	\$ 250.00	\$1,000		
G2020	Sign Allowance	1	Allow	\$ 2,500.00	\$2,500		
G2020	Curb & Gutter	1000	LF	\$ 22.50	\$22,500		
G2030	Pedestrian Sidewalks	3500	SF	\$ 6.50	\$22,750		
G2030	Handicap Ramps	2	EA	\$ 850.00	\$1,700		
G2040	Misc Site Furnishings	1	Allow	\$ 3,500.00	\$3,500		
G2050	Landscape Improvements	1	LS	\$ 20,000.00	\$20,000		
SUBTOTAL SITE IMPROVEMENTS		50	Spaces	\$ 3,360.39	\$168,020		

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Total Cost: \$196,235

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G30	SITE CIVIL/MECHANICAL UTILITIES					
G3030	Parking Lot Drainage Improvements	1	Allow	\$ 5,000.00	\$5,000	
		0	Unit	\$ -	\$0	
SUBTOTAL SITE CIVIL/MECHANICAL UTILITES		1	Allow	\$ 5,000.00	\$5,000	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - Construct 50 space paved parking lot						
		50	Spaces	\$ 3,924.69	\$196,235	

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Summary Item Rehabilitate existing 5-table picnic area

Total Cost: \$30,000

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G10	SITE PREPARATION					
G1010	Misc. Site Clearing	1	LS	\$ 2,500.00	\$2,500	
G1020	Remove Existing Picnic Tables & Grills	1	LS	\$ 2,500.00	\$2,500	
G1030	Fine Grade & Compact Subgrades	3500	SF	\$ 0.30	\$1,050	
Level 3 Code	Description	0	Unit	\$ -	\$0	
SUBTOTAL SITE PREPARATION		1	LS	\$ 6,050.00	\$6,050	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G20	SITE IMPROVEMENTS					
G2030	Furnish & Install Decomposed Granite DG	100	Tons	\$ 62.00	\$6,200	
G2030	Mix, spread, finegrade & compact organic binder	3500	SF	\$ 1.50	\$5,250	
G2040	Reinstall Site Furnishings	1	LS	\$ 10,000.00	\$10,000	
G2050	Misc. Landscape repairs & improvements	1	LS	\$ 2,500.00	\$2,500	
Level 3 Code	Description	0	Unit	\$ -	\$0	
SUBTOTAL SITE IMPROVEMENTS		5	EA	\$ 4,790.00	\$23,950	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - Rehabilitate existing 5-table picnic area						
		5	EA	\$ 6,000.00	\$30,000	

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Summary Item Construct new trail connection with fence

Total Cost: \$36,090

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G10	SITE PREPARATION					
G1010	Hand Clear New Trail Alignment	500	LF	\$ 5.00	\$2,500	
G1030	Hand Grade Trail	3000	SF	\$ 0.50	\$1,500	
		0	Unit	\$ -	\$0	
		0	Unit	\$ -	\$0	
SUBTOTAL SITE PREPARATION		500	LF	\$ 8.00	\$4,000	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G20	SITE IMPROVEMENTS					
G2030	Furnish & Install Decomposed Granite DG	70	Tons	\$ 62.00	\$4,340	
G2030	Mix, spread, finegrade & compact organic binder	3000	SF	\$ 1.50	\$4,500	
G2030	Pedestrian Sidewalks	1500	SF	\$ 6.50	\$9,750	
G2040	Install 3 rail fence	500	LF	\$ 22.00	\$11,000	
G2050	Misc. Landscape repairs & improvements	1	LS	\$ 2,500.00	\$2,500	
		0	Unit	\$ -	\$0	
SUBTOTAL SITE IMPROVEMENTS		1	LS	\$ 32,090.00	\$32,090	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - Construct new trail connection with fence						
		1	LS	\$ 36,090.00	\$36,090	

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Summary Item Remove & Reclaim existing parking and trails

Total Cost: \$19,798

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G10	SITE PREPARATION					
G1030	Scarify existing dirt parking lot	10000	SF	\$ 0.05	\$500	
G1030	Scarify Existing Trail 500' x 3'	1500	SF	\$ 0.12	\$173	
		0	Unit	\$ -	\$0	
		0	Unit	\$ -	\$0	
SUBTOTAL SITE PREPARATION		1	VALUE	\$ 672.50	\$673	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G20	SITE IMPROVEMENTS					
G2050	Soil amenders	11500	SF	\$ 0.25	\$2,875	
G2050	Place Barrier Rocks	1	Allow	\$ 2,500.00	\$2,500	
G2050	Install native shrubs	150	EA	\$ 45.00	\$6,750	
G2050	Install Selective Trees	20	EA	\$ 350.00	\$7,000	
		0	Unit	\$ -	\$0	
SUBTOTAL SITE IMPROVEMENTS		1	VALUE	\$ 19,125.00	\$19,125	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - Remove & Reclaim existing parking and tra						
		1	LS	\$ 19,797.50	\$19,798	