

Appendix A: Bibliography

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Appendix B: Cost Estimate

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

BASIS OF ESTIMATE

PROJECT INFORMATION

Project: NPS - Big Spring Historic District - CLR
Park: Big Spring Historic District
Park Alpha: OZAR
PMIS Number: 216961
Estimate Date: 7/8/2016 - V1.0
Prepared By: Stan Pszczolkowski
Company: ACC Cost Consultants, LLC
Address: 8060 SW Pfaffle St., Suite 110
City, State Zip: Tigard, Oregon 97223
Phone: 503-718-0075

BACKGROUND SUPPORTING MATERIAL (Scope of Work):

This Cultural Landscape Report (CLR) identifies characteristics and features that convey the historic significance and character of Big Spring Historic District and provides a plan for the long-term preservation and stewardship of the landscape. The report provides park management with a comprehensive understanding of the physical evolution of the park's buildings, structures, roads, trails, and vegetation, and provides managers with guidance for care of these features. Treatment recommendations include repair of vegetation and views, improvements to trails and trailheads, provision of accessibility to key buildings and structures, and repair of small scale landscape features.

SOURCE OF COST DATA:

Source of cost data is based on ACC's work history along with ACC's database of past and current projects. The Means City Cost Index adjusts for location factor and pricing. Future phase's pricing will involve contacting local suppliers and vendors for price checks. This estimate is formulated on the estimator's professional judgment and experience. This estimate makes no warranty, expressed or implied, that the quantities, bids or the negotiated cost of the work will not vary from the estimator's opinion of probable construction cost.

ESTIMATE ASSUMPTIONS:

The cost estimate is based on the 95% CLR/EA dated July 2016 and the recommended treatments within the CLR/EA. For planning purposes, the estimate assumes the mid-point of construction as 24 months from the date of this report. Escalation is assumed at a rate of 3% per year.

MAJOR CHANGES FROM PREVIOUS ESTIMATE:

N/A

**United States Department of the Interior
National Park Service
Class C Construction Cost Estimate
BASIS OF ESTIMATE**

PROJECT INFORMATION

Project: NPS - Big Spring Historic District - CLR
Park: Big Spring Historic District
Park Alpha: OZAR
PMIS Number: 216961
Estimate Date: 7/8/2016 - V1.0

DESCRIPTION OF MARK-UP & ADD-ONS:

Location Factor:	<u>-5.70%</u>	per RS Means, closest city index is Poplar Bluff. Index is 94.3. Location factor = - 5.7
Remoteness Factor:	<u>5.00%</u>	Site is 50 miles from published commercial center. Assume 1%/10 miles
Wage Rate Factor:	<u>0.00%</u>	Based on the RS Means Location Factor, labor is based on Union Wages. Since the % factor accounts for the Labor component no adjustment to be made.
State & Local Taxes:	<u>2.86%</u>	Per Tax Rate Schedule (State 4.225% + County 1.5% = 5.725%) - Assume for estimating purpose Sales Tax on Materials only. Materials = 50% of cost, thus 5.725% x .5 = 2.8625% (Verify)
Design Contingency:	<u>25.00%</u>	Per NPS Handbook, typical range is 15 to 30%. This is Pre-Design level estimate allow 25%
Standard. General Conditions:	<u>20.00%</u>	Per NPS Handbook, typical range is 4 to 20%. This is Pre-Design level estimate allow 20%
Government General Conditions:	<u>7.50%</u>	Per NPS Handbook, typical range is 5 to 10%. This is Pre-Design level estimate allow 7.5%
Historic Preservation Factor:	<u>10.00%</u>	Per NPS Handbook, typical range is 0 to 10%. This is Pre-Design level estimate allow 10%
Contractor Overhead:	<u>15.00%</u>	Per NPS Handbook, typical range is 10 to 25%. This is Pre-Design level estimate allow 15%
Contractor Profit:	<u>10.00%</u>	Per NPS Handbook, typical range is 10 to 25%. This is Pre-Design level estimate allow 10%
Bonds and Permits:	<u>2.50%</u>	Per NPS Handbook, typical range is 1 to 3%. This is Pre-Design level estimate allow 2.5%
Contracting Method Adjustment:	<u>5.00%</u>	Allowance, very procurement method
Annual Inflation Escalation Factor:	<u>3.00%</u>	Projected annual inflation rate.
Time Until Project Midpoint (Months)	<u>24</u>	Number of months from estimate (or data) date until the projects midpoint of construction.

OTHER COMMENTS:

This estimate is for direct construction cost only. It does not include furnishings & equipment, architect and engineer design fees, consultant fees, inspection and testing fees, plan check fees, hazardous material testing and removal, financing costs, nor any other normally associated development costs. This estimate assumes a sole-source general contractor. This is a probable cost estimate based on in-progress documentation provided by the architect. The actual bid documents will vary from this estimate due to document completion, detailing, specification, addendum, etc. The estimator has no control over

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

PROJECT INFORMATION

Project: NPS - Big Spring Historic District - CLR

Park: Big Spring Historic District

Park Alpha: OZAR

PMIS Number: 216961

Estimate Date: 7/8/2016 - V1.0

the cost or availability of labor, equipment, materials, over market conditions or contractor's method of pricing, contractor's construction logistics and scheduling.

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

Project: NPS - Big Spring Historic District - CLR
Park: Big Spring Historic District
Alpha: OZAR
PMIS: 216961

Estimate By: Stan Pszczolkowski
Date: 7/8/2016 - V1.0

Reviewed By: SJP
Date: 07/08/16

Item No.	Description	Quantity	Unit	Cost/Unit	Total
1	Asset / Project Element 1	1	VALUE	\$1,589,508	\$1,589,508
2	Asset / Project Element 2	-	Unit	#DIV/0!	\$0
3	Asset / Project Element 3	-	Unit	#DIV/0!	\$0
4	Asset / Project Element 4	-	Unit	#DIV/0!	\$0
5	Asset / Project Element 5	-	Unit	#DIV/0!	\$0
6	Asset / Project Element 6	-	Unit	#DIV/0!	\$0
7	Asset / Project Element 7	-	Unit	#DIV/0!	\$0
8	Asset / Project Element 8	-	Unit	#DIV/0!	\$0
9	Asset / Project Element 9	-	Unit	#DIV/0!	\$0
10	Asset / Project Element 10	-	Unit	#DIV/0!	\$0
11	Asset / Project Element 11	-	Unit	#DIV/0!	\$0
12	Asset / Project Element 12	-	Unit	#DIV/0!	\$0
13	Not Used	-	Unit	#DIV/0!	\$0
14	Not Used	-	Unit	#DIV/0!	\$0
15	Not Used	-	Unit	#DIV/0!	\$0
16	Not Used	-	Unit	#DIV/0!	\$0
17	Not Used	-	Unit	#DIV/0!	\$0
18	Not Used	-	Unit	#DIV/0!	\$0
Subtotal Direct Construction Costs					\$1,589,508
Value of Government Furnished Property (GFP) Included in Direct Cost (see footnote)*					\$0
Direct Cost Subtotal without GFP					\$1,589,508
	Published Location Factor	-5.70%			-\$90,602
	Remoteness Factor	5.00%			\$79,475
	Federal Wage Rate Factor	0.00%			\$0
	State & Local Taxes	2.86%			\$45,500
	Design Contingency	25.00%			\$397,377
Total Direct Construction Costs					\$2,021,258
	Standard General Conditions	20.00%			\$404,252
	Government General Conditions	7.50%			\$151,594
	Historic Preservation Factor	10.00%			\$202,126
Subtotal NET Construction Cost					\$2,779,230
	Overhead	15.00%			\$416,884
	Profit	10.00%			\$277,923
Estimated NET Construction Cost					\$3,474,037
	Bonds & Permits	2.50%			\$86,851
	Contracting Method Adjustment	5.00%			\$173,702
	Inflation Escalation	24	Months	3.00%	\$227,437
Total Estimated NET Cost of Construction					\$3,962,026

* 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.

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate
LINE ITEM COST SUMMARY

Project: NPS - Big Spring Historic District - CLR
Park: Big Spring Historic District
Park Alpha: OZAR
PMIS Number: 216961

Estimate By: Stan Pszczolkowski
Date: 7/8/2016 - V1.0
Reviewed By: SJP
Date: 07/08/16

Summary Item 1 Asset / Project Element 1

Total Cost: \$1,589,508

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G50-A	Vegetation Thinning and Removal					
Level 3 Code	Clear forest to reveal CCC Camp. establish grasses	0.5	Acre	\$ 5,000.00	\$2,500	
Level 3 Code	Clear forest to meadow, north of Big Spring	0.5	Acre	\$ 5,000.00	\$2,500	
Level 3 Code	Remove vegetation from dikes	1	Acre	\$ 4,000.00	\$4,000	
Level 3 Code	Clear vegetation at Rocky Ridge Trail to provide overlook	1500	Sf	\$ 1.50	\$2,250	thin underbrush
Level 3 Code	Dining Lodge Vegetation to Remove					
Level 3 Code	Remove trees at parking area	2	Ea	\$ 500.00	\$1,000	
Level 3 Code	Thin vegetation at slope to provide view of river	5000	Sf	\$ 0.55	\$2,750	tree thinning/limbing and
Level 3 Code	Thin vegetation at Latrine	5000	Sf	\$ 0.55	\$2,750	tree thinning/limbing and
Level 3 Code	Cabins Vegetation to Remove					
Level 3 Code	Thin vegetation to provide views	2	Acre	\$ 5,000.00	\$10,000	tree thinning/limbing and
Level 3 Code	Big Spring Trail Vegetation to Thin/Remove	0.5	Acre	\$ 5,000.00	\$2,500	tree limbing and shrub
Level 3 Code	Mobilization / Erosion Control / Layout / Misc.	1	Ls	\$ 4,537.50	\$4,538	
Level 3 Code	Description	0	Unit	\$ -	\$0	
	SUBTOTAL	1	VALUE	\$ 34,787.50	\$34,788	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G50-B	Site Accessibility					
Level 3 Code	Provide Accessible access to Peavine Pavilion	45	Lf	\$ 61.75	\$2,779	5' concrete walk from parking to pavilion
Level 3 Code	Provide Accessible access to Big Spring Pavilion	60	Lf	\$ 61.75	\$3,705	5' concrete walk from parking to pavilion
Level 3 Code	Provide Accessible access to Dining Lodge	270	Lf	\$ 458.00	\$123,660	requires repaving walk with stone material (10 wide) and regreeding to building threshold
Level 3 Code	Provide Accessible access to Museum	35	Lf	\$ 49.40	\$1,729	4' concrete walk from parking

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate
LINE ITEM COST SUMMARY

Project: NPS - Big Spring Historic District - CLR
Park: Big Spring Historic District
Park Alpha: OZAR
PMIS Number: 2-16961

Estimate By: Stan Pszczolkowski
Date: 7/8/2016 - V1.0
Reviewed By: SJP
Date: 07/08/16

Summary Item 1 Asset / Project Element 1					Total Cost:
Level 3 Code	Provide Accessible access to Cabin 409				\$1,589,508
Level 3 Code	Ramp to Cabin 409	20	Lf	\$ 405.00	\$8,100
Level 3 Code	Accessible Parking, Cabin 409	400	Sf	\$ 5.88	\$2,350
Level 3 Code	Provide Accessible access to Cabin 410				
Level 3 Code	Ramp to Cabin 410	30	Lf	\$ 405.00	\$12,150
Level 3 Code	Accessible Parking, Cabin 410	400	Sf	\$ 5.88	\$2,350
Level 3 Code	Provide Accessible access to Cabin 413				
Level 3 Code	Ramp to Cabin 413	50	Lf	\$ 405.00	\$20,250
Level 3 Code	Accessible Parking, Cabin 413	500	Sf	\$ 5.65	\$2,825
Level 3 Code	Mobilization / Erosion Control / Layout / Misc.	1	Ls	\$ 22,487.22	\$22,487
Level 3 Code	Description	0	Unit	\$ -	\$0
SUBTOTAL					\$202,385
					\$ 202,384.97
					VALUE

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G50-C Trail Work						
Level 3 Code	Maintain trails. Re-surface	116160	LF	\$ 2.25	\$261,360	assume 3' wide surface, crushed stone
Level 3 Code	Repair trails. Re-place water bars with stone block	1000	Lf	\$ 60.00	\$60,000	stone 12"x6"
Level 3 Code	New trail to Quarry	250	Lf	\$ 12.75	\$3,188	assume 3' wide surface, crushed stone
Level 3 Code	Repair (reset) stone steps at Rocky Ridge Trail	30	Lf	\$ 100.00	\$3,000	Reset of ex stone, 24"x12" typ
Level 3 Code	Repair steps to cabins					
Level 3 Code	Remove concrete steps and walk	100	Sf	\$ 6.00	\$600	20' x 5' conc walk; 8 conc
Level 3 Code	Replace steps with stone	8	Ea	\$ 300.00	\$2,400	36"x 6" typ wide stone

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate
LINE ITEM COST SUMMARY

Project: NPS - Big Spring Historic District - CLR
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Park Alpha: OZAR
PMIS Number: 216961

Estimate By: Stan Pszczolkowski
Date: 7/8/2016 - V1.0
Reviewed By: SJP
Date: 07/08/16

Summary Item 1 Asset / Project Element 1					Total Cost:
Level 3 Code	Repair Spring Branch Trail			Lf	\$ 125.00
Level 3 Code	Replace wall at Big Spring	40		Lf	\$ 80.00
Level 3 Code	Repair stone trail and steps	100		Lf	\$ 110.00
Level 3 Code	Repair stone abutments	250		Ls	\$ 37,104.75
Level 3 Code	Mobilization / Erosion Control / Layout / Misc.	1		Unit	\$ -
Level 3 Code	Description	0			
SUBTOTAL					\$ 408,152.25
					\$ 408,152

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G50-D	Road & Walk Improvements					
Level 3 Code	Gravel pull-out at Entrance	800	Sf	\$ 4.50	\$3,600	
Level 3 Code	New walkway, north side of parking area	650	Lf	\$ 24.00	\$15,600	crushed fines, 6' wide
Level 3 Code	Mobilization / Erosion Control / Layout / Misc.	1	Ls	\$ 2,880.00	\$2,880	
Level 3 Code	Description	0	Unit	\$ -	\$0	
SUBTOTAL					\$ 22,080.00	
					\$ 22,080	

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G50-E	Structures					
Level 3 Code	Relocate NPS Restroom	1	Ls	\$ 10,000.00	\$10,000	Prefab RR north of Big Spring, move to Campground
Level 3 Code	Relocate Craft Cabin foundations	1000	Sf	\$ 20.00	\$20,000	Single-story, 1000sf. North of Big Spring, move to Admin (2 miles)
	utilities / connections	1	Ls	\$ 5,000.00	\$5,000	
	site repair / walks / access	1	Ls	\$ 5,000.00	\$5,000	
Level 3 Code	Replace footbridges, 4' x 30'	3	Ea	\$ 6,000.00	\$6,000	hand-turned wood timbers
					\$90,000	

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate
LINE ITEM COST SUMMARY

Project: NPS - Big Spring Historic District - CLR
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Park Alpha: OZAR
PMIS Number: 2-16961

Estimate By: Stan Pszczolkowski
Date: 7/8/2016 - V1.0
Reviewed By: SJP
Date: 07/08/16

Summary Item 1 Asset / Project Element 1				Total Cost:	\$1,589,508
Level 3 Code	Repair boat launch	1	Ls	\$ 67,500.00	wood and stone dock/pier to accommodate single motorcraft, appx. 1500sf
Level 3 Code	Regrade drainage swales at entrance	2500	Sf	\$ 3.50	remove excess soil, re-seed
Level 3 Code	Mobilization / Erosion Control / Layout / Misc.	1	Ls	\$ 26,531.25	
Level 3 Code	Description	0	Unit	\$ -	
SUBTOTAL				VALUE \$ 238,781.25	
					\$238,781

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G50-F Small Scale Features						
Level 3 Code	Repair stone drinking fountains	7	Ea	\$ 2,000.00		reset and replace missing stone; repair metal fittings
Level 3 Code	Install new entrance sign	1	Ea	\$ 5,000.00	\$14,000	wood and metal, 60"x48"
Level 3 Code	Repair Small Scale Features at Entrance				\$5,000	
Level 3 Code	Replace missing fence	1	Ea	\$ 700.00	\$700	8' wood fence, 3 rail
Level 3 Code	Repair north gate	1	Ea	\$ 500.00	\$500	8' wood gate, 3 rail
Level 3 Code	Repair setting at Cabins					
Level 3 Code	Re-grade picnic areas	5000	Sf	\$ 5.00	\$25,000	
Level 3 Code	Remove n/c retaining walls	290	Lf	\$ 15.00	\$4,350	6x10 wood
Level 3 Code	Install new retaining walls - stone	510	Lf	\$ 220.00	\$112,200	cut stone masonry walls, 12" wide, 3' Ht typ
Level 3 Code	Repair stone steps	300	Lf	\$ 100.00	\$30,000	Reset, replace stones as needed; 36" wide steps typ.
Level 3 Code	Replace handrails	300	Lf	\$ 115.00	\$34,500	Remove ex. wood handrails, replace w/ metal
Level 3 Code	Repair setting at Dining Lodge and Museum					
Level 3 Code	Remove n/c wayside exhibits	1	Ls	\$ 3,500.00	\$3,500	6 metal interpretive stations (36x48"); 2 benches; 500 sf conc paving; 4 wood posts (12x12, 6'Ht)

United States Department of the Interior
National Park Service
Class C Construction Cost Estimate
LINE ITEM COST SUMMARY

Project: NPS - Big Spring Historic District - CLR
Park: Big Spring Historic District
Park Alpha: OZAR
PMIS Number: 2-16961

Estimate By: Stan Pszczolkowski
Date: 7/8/2016 - V1.0
Reviewed By: SJP
Date: 07/08/16

Summary Item 1 Asset / Project Element 1					Total Cost:
Level 3 Code	Remove parking lot lighting	1	Ls	\$ 2,900.00	\$2,900
Level 3 Code	Install new outdoor lighting, base, pole, circuit, led light	1	Ls	\$ 4,000.00	\$4,000
Level 3 Code	Replace playground equipment				
Level 3 Code	Swingset (4 seat)	1	Ls	\$ 5,000.00	\$5,000
Level 3 Code	Slide	1	Ls	\$ 8,500.00	\$8,500
Level 3 Code	Spring riders	3	Ls	\$ 1,700.00	\$5,100
Level 3 Code	Mobilization / Erosion Control / Layout / Misc.	1	Ls	\$ 38,287.50	\$38,288
Level 3 Code	Description	0	Unit	\$ -	\$0
SUBTOTAL					\$293,537.50
					\$293,538

Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
G50-G New Vegetation						
Level 3 Code	Vegetation backdrop at Entrance					
Level 3 Code	Plant additional trees, east side entrance station	10	ea	\$ 325.00	\$3,250	
Level 3 Code	Replant grass at road edge	800	sf	\$ 2.00	\$1,600	
Level 3 Code	Vegetation at Dining Lodge					
Level 3 Code	New plantings in front of Lodge and in traffic circle	3600	sf	\$ 10.00	\$36,000	shrubs and groundcovers
Level 3 Code	New vegetation at Cabins	1.5	acre	\$ 196,000.00	\$294,000	ornamental trees, shrubs, and groundcovers
Level 3 Code	Restore Landscape Features at Keepers Quarters					
Level 3 Code	Install foundation plantings	1500	sf	\$ 3.75	\$5,625	perennials, small shrubs
Level 3 Code	Restore lawn	3000	sf	\$ 2.00	\$6,000	
Level 3 Code	Mobilization / Erosion Control / Layout / Misc.	1	Ls	\$ 43,309.38	\$43,309	
Level 3 Code	Description	0	Unit	\$ -	\$0	
SUBTOTAL					\$ 389,784.38	
					\$389,784	

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

LINE ITEM COST SUMMARY

Project:	NPS - Big Spring Historic District - CLR	Estimate By:	Stan Pszczolkowski
Park:	Big Spring Historic District	Date:	7/8/2016 - V1.0
Park Alpha:	OZAR	Reviewed By:	SJP
PMIS Number:	2-16961	Date:	07/08/16

Summary Item 1 Asset / Project Element 1					Total Cost:	\$1,589,508
Uniformat II WBS Code	Description	Quantity	Unit	Cost/Unit	Total Cost	Remarks
TOTAL COST - Asset / Project Element 1		1	VALUE	#####	\$1,589,508	

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Appendix C: FMSS

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Cultural Landscape Feature to FMSS Data Crosswalk

Cultural Landscape Inventory					Other CR Inventories												FMSS Data (existing & proposed)									
Landscape Characteristic	CLR Feature Name	Feature Contribution*	IDLCS Number / LCS Structure Number	LCS Name	In FMSS?	Asset	Description	Asset Code	Facility Type	Classification	Legacy WBS/Sub	Spec Template Description			QTY	UM										
Natural Systems																										
	Big Spring	Contributing			N																					
	Big Spring branch	Contributing			N																					
	Chubb Hollow	Contributing			N																					
Spatial Organization / Topography / Views																										
	Views to river and natural areas	Contributing	N/A	N/A	N																					
	Clustered development	Contributing	N/A	N/A	N																					
Archeological Sites																										
	Chubb Hollow Archeological Site	Contributing			N			7200 - Maintained Archeological Sites																		
	Spring Valley Dalton Site	Contributing			N			7200 - Maintained Archeological Sites																		
	Quartzite Site	Contributing			N			7200 - Maintained Archeological Sites																		
	Peavine Road Site	Contributing			N			7200 - Maintained Archeological Sites																		
	Gnat Alley Site	Contributing			N			7200 - Maintained Archeological Sites																		
	Cherty Branch Site	Contributing			N			7200 - Maintained Archeological Sites																		
	Camp Haines	Contributing			N			7200 - Maintained Archeological Sites																		
	CCC Camp Ruin	Contributing	HS-702 through HS-710		N			7200 - Maintained Archeological Sites																		
	CCC Dump and Incinerator	Contributing	HS-432B		N			7200 - Maintained Archeological Sites																		
	CCC Rock Quarry	Contributing	HS-700		N			7200 - Maintained Archeological Sites																		
	CCC Powder Magazine	Contributing	HS-701		N			7200 - Maintained Archeological Sites																		
	Fire Tower Rock Quarry	Contributing	HS-1404E		N			7200 - Maintained Archeological Sites																		
	Fire Tower Privy Sites #1 and #2	Contributing	HS-1404C; HS-1404D		N			7200 - Maintained Archeological Sites																		
	Fire Tower Radio Shed Site	Contributing	HS-1404G		N			7200 - Maintained Archeological Sites																		
Circulation																										
	Vehicular																									
	Peavine Road / State Highway 103	Contributing			Y	78578	4-22 Peavine Rd RT 0010	1100	1110																	
	Boat Ramp Road	Non-Contributing			Y	78590	4-132 Big Spring Boat Launch Rd RT 0115	1100	1110																	
	Boat Ramp Parking	Non-Contributing			Y	78749	4-132 Big Spring Boat Launch Rd Parking RT 0913	1300	1310																	
	Boat Ramp				Y	102095	Big Spring Boat Launch #1 RT 0803	1300	1310																	
	Boat Ramp				Y	102096	Big Spring Boat Launch #2 RT 0804	1300	1310																	

Cultural Landscape Feature to FMSS Data Crosswalk

Landscape Characteristic	Cultural Landscape Inventory				FMSS Data (existing & proposed)										
	CLR Feature Name	Feature Contribution*	IDLCS Number / LCS Structure Number	LCS Name	In FMSS?	Asset	Description	Asset Code	Facility Type	Classification	Legacy WBS/Sub	Spec Template Description		QTY	UM
	Big Spring Picnic Area Loop Drive	Non-Contributing			Y	78589	4-131 Big Spring Picnic Area Loops Rd RT 0114	1100	1110						
	Big Spring Picnic Area Loop Drive Parking	Non-Contributing			Y	102107	Big Spring Picnic Area Loop Rd Parking B RT 0912B								
					Y	102108	Big Spring Picnic Area Loop Rd Parking C RT 0912C								
					Y	102109	Big Spring Picnic Area Loop Rd Parking D RT 0912D								
					Y	102110	Big Spring Picnic Area Loop Rd Parking E RT 0912E								
	Chubb Hollow Road	Contributing			Y	78591	4-134 Chubb Hollow Rd RT 0111	1100	1110						
	Campground Drive	Contributing			Y	78594	4-217 Big Spring Group Camp Rd RT 0116	1100	1110						
					Y	78603	4-444 Big Spring Fire Cache Rd RT 0405	1100	1130						
					Y	78804	4-444 Big Spring Fire Cache Rd Parking RT 0975	1300	1320						
	Maintenance Area Drive	Contributing			Y	78604	4-450 Big Spring Maintenance Access Rd RT 0402	1100	1110						
	Maintenance Area Parking	Non-Contributing			Y	78805	4-450 Big Spring Maint Access Rd Parking RT 0976	1300	1320						
	Parking Area at Museum and Dining Lodge				Y	78746	4-133 Big Spring Lodge Rd Parking RT 910	1300	1310						
	Campground Drive?				Y	78936	4-134 Chubb Hollow Rd (unpaved portion) RT 0703	1100	1120						
					Y	80583	4-134 Chubb Hollow Parking A RT 0959	1300	1310						
					Y	78783	4-134 Chubb Hollow Parking B RT 0987	1300	1320						
	Fire Tower Road				Y	78994	4-447 Big Spring Lookout Tower Rd RT 0447	1100	1120						
	Cabin Road	Contributing	HS-401B		Y	79063	4-218 Big Spring Cabin Rd RT 0112	1100	1110						
	Cabin Road Parking	Contributing			Y	79064	4-218 Big Spring Cabin Rd Parking	1300	1320						
	May/Winters Driveway	Contributing			N										
	State Highway Z	Contributing			N										
	Ebb and Flow Road	Contributing			N										
	County Road Z-206	Contributing			N										
	County Road Z-204	Contributing			N										
	Service Road at Entrance	Contributing			N										
	Pedestrian														
	Spring Branch Trail	Contributing				78324	LC BS Big Spring Trail System HS-425A	2100	2130						
	Rocky Ridge Trail	Contributing				78324	LC BS Big Spring Trail System HS-425A	2100	2130						
	Spring Valley Trail	Contributing				78324	LC BS Big Spring Trail System HS-425A	2100	2130						
	Chubb Hollow Trail	Contributing			Y	78336	LC BS Big Spring Chubb Hollow Trail	2100	2130						
	Upper Chubb Hollow Trail	Contributing				78336	LC BS Big Spring Chubb Hollow Trail	2100	2130						
	Lower Chubb Hollow Trail	Contributing				78336	LC BS Big Spring Chubb Hollow Trail	2100	2130						
	Footbridge					340617	Walkable Structure, Footbridge, 40 LF, 4 FT	2100	2130	STRCTURE /	Walkable Structu	G2030	G203099	320	SF
	Footbridge					340619	Walkable Structure, Footbridge, 8 LF, 4 FT, 2 EA.	2100	2130	STRCTURE /	Walkable Structu	G2030	G203099	64	SF
	Footbridge					340623	Walkable Structure, Footbridge, 34 LF, 4 FT	2100	2130	STRCTURE /	Walkable Structu	G2030	G203099	136	SF
	Footbridge					340625	Walkable Structure, Footbridge, 19 LF, 4 FT	2100	2130	STRCTURE /	Walkable Structu	G2030	G203099	76	SF
	Footbridge					340636	Walkable Structure, Footbridge, 20 LF, 4 FT, 1 EA.	2100	2130	STRCTURE /	Walkable Structu	G2030	G203099	80	SF
	Footbridge					340637	Walkable Structure, Footbridge, 7 LF, 4 FT, 1 EA.	2100	2130	STRCTURE /	Walkable Structu	G2030	G203099	28	SF
	Chubb Hollow Footbridge	Contributing (Foundation only)	HS-456			409092	Walkable Structure, Footbridge, 60 LF, 4 FT, 1 EA.	2100	2130	STRCTURE /	Walkable Structu	G2030	G203099	240	SF
	Footbridge					409110	Walkable Structure, Footbridge, 34 LF, 4 FT, 1 EA.	2100	2130	STRCTURE /	Walkable Structu	G2030	G203099	136	SF
						340635	WALKS, STEPS, TERRACES, FOOTBRIDGES PARENT	2100	2130						
						78340	LC BS Big Spring East Loop Ozark Trail	2100	2130						
						336938	Walkable Structure, Footbridge, 5 LF, 4 FT	2100	2130	STRCTURE /	Walkable Structu	G2030	G203099	20	SF
						336947	Walkable Structure, Stairs, .5 LF, 4 FT	2100	2130	STRCTURE /	Walkable Structu	G2030	G203099	14	SF

Cultural Landscape Feature to FMSS Data Crosswalk

Cultural Landscape Inventory					Other CR Inventories											FMSS Data (existing & proposed)									
Landscape Characteristic	CLR Feature Name	Feature Contribution*	IDLCS Number / LCS Structure Number	LCS Name	In FMSS?	Asset	Description	Asset Code	Facility Type	Classification	Legacy WBS/Sub	Spec Template Description		QTY	UM										
						336957	Walkable Structure, Stairs, .5 LF, 4 FT	2100	2130	STRCTURE / V	Walkable Structu	G2030	G203099	20	SF										
						336896	TRAIL SURFACE PARENT	2100	2130																
	Cabin Path System and Stairs	Contributing				336933	WALKS, STEPS, TERRACES & FOOTBRIDGES PARENT	2100	2130																
	Stone Walk at Dining Lodge	Contributing																							
Constructed Water Features																									
	Big Spring Stone Dike #3	Contributing																							
	Big Spring Stone Dike #5	Contributing																							
	Stone Abutments	Contributing																							
	Entrance Drainage Ditches	Contributing																							
Vegetation																									
					Y	79174	LC BS Big Spring Area Landscape	3100	3110																
					Y	1482788	Land Surface	3100	3110	SURFACE / LA	Land Surface			3,267,000	SF										
					Y	341282	Wall, Retaining, 200.0 FT, 4.5 FT	3100	3110	STRCTURE / V	Wall			900	SF										
Buildings and Structures																									
	Cabin #401	Contributing	HS-401			70883	LC BS Big Spring Rental Cabin HS-401	4100	4129																
	Cabin #402	Contributing	HS-402			70884	LC BS Big Spring Rental Cabin HS-402	4100	4129																
	Cabin #403	Contributing	HS-403			70885	LC BS Big Spring Rental Cabin HS-403	4100	4129																
	Cabin #404	Contributing	HS-404			70886	LC BS Big Spring Rental Cabin HS-404	4100	4129																
	Cabin #405	Contributing	HS-405			70887	LC BS Big Spring Rental Cabin HS-405	4100	4129																
	Cabin #406	Contributing	HS-406			70888	LC BS Big Spring Rental Cabin HS-406	4100	4129																
	Cabin #407	Contributing	HS-407			70889	LC BS Big Spring Rental Cabin HS-407	4100	4129																
	Cabin #408	Contributing	HS-408			70890	LC BS Big Spring Rental Cabin HS-408	4100	4129																
	Cabin #409	Contributing	HS-409			70891	LC BS Big Spring Rental Cabin HS-409	4100	4129																
	Cabin #410	Contributing	HS-410			70892	LC BS Big Spring Rental Cabin HS-410	4100	4129																
	Cabin #411	Contributing	HS-411			70893	LC BS Big Spring Rental Cabin HS-411	4100	4129																
	Cabin #412	Contributing	HS-412			70895	LC BS Big Spring Rental Cabin HS-412	4100	4129																
	Cabin #413	Contributing	HS-413			70896	LC BS Big Spring Rental Cabin HS-413	4100	4129																
	Cabin #414	Contributing	HS-414			70897	LC BS Big Spring Rental Cabin HS-414	4100	4129																
	Cabin #415	Contributing	HS-415			70898	LC BS Big Spring Rental Cabin HS-415	4100	4129																
	Cabin #416 / Lower Current District Maintenance Office	Contributing	HS-416			70899	LC BS Lower Current District Ranger Office HS-416	4100	4110																
	Maintenance Shop	Contributing	HS-417			70900	LC BS Big Spring Maintenance Shop HS-417	4100	4160																
	Maintenance Storage Building	Contributing	HS-418			70902	LC BS Big Spring Electrician Shop HS-418	4100	4160																
	Maintenance Garage	Contributing	HS-419			70903	LC BS Big Spring Carpenter Shop HS-419	4100	4160																
	Museum Building	Contributing	HS-420			70905	LC BS Big Spring Interpretation Office HS-420	4100	4110																
	Dining Lodge and Help's Quarters	Contributing	HS-422			70910	LC BS Big Spring Dining Lodge HS-422	4100	4129																
	Dining Lodge Retaining Wall and Fountain	Contributing	HS-422A																						

Cultural Landscape Feature to FMSS Data Crosswalk

[illegible]

Cultural Landscape Feature to FMSS Data Crosswalk - Treatment Summary

CLR Treatment Project Component Task / FMSS Work Order	Priority	*CLR Treatment Task Component / FMSS Task	FMSS Asset Type (ASSET CODE)	FMSS Location (Parent Locations)	FMSS Asset (Asset Number)	**FMSS Work Type / Sub-Type
Study Area						
Task 1. Thin vegetation for views, clear for park-like look	1	Task 1.1 Remove overgrown vegetation and fallen timber from around buildings	3100-Maintained Landscapes		LC BS Big Spring Area Landscape (79174)	
		Task 1.2 Thin vegetation to create views around Cabins, Dining Lodge (HS-422)				
		Task 1.3 Thin vegetation to create view of Big Spring from Spring Branch Trail				
Task 2. Provide visitor access to CCC Camp Ruins	3	Task 2.1 Verify extents of CCC Camp	7200-Maintained Archeological Sites			
		Task 2.3 Provide trail along old roadbed to CCC Camp				
Task 3. Provide trail to the CCC Quarry	2	3.1 Create trail along old road to CCC	7200-Maintained Archeological Sites			
		3.2 Remove vegetation at the CCC Rock Quarry if it threatens the resource				
Task 4. Repair Trails	1	4.1. Remove vegetation and large debris that covers contributing trails	2100-Trails		LC BS Big Spring Trail System HS-425A (78324)	
		4.2 Resurface trails as needed				
		4.3 Replace steps and water bars with materials that match historic				
		4.4 Repair stone steps at Rocky Ridge Trail and provide overlook				

Cultural Landscape Feature to FMSS Data Crosswalk - Treatment Summary

CLR Treatment Project Component Task / FMSS Work Order	Priority	*CLR Treatment Task Component / FMSS Task	FMSS Asset Type (ASSET CODE)	FMSS Location (Parent Locations)	FMSS Asset (Asset Number)	**FMSS Work Type / Sub- Type
Task 5. Repair Trails in Poor Condition		5.0 Monitor and repair trails that are 2 in poor condition, prioritized as follows:	2100-Trails		LC BS Big Spring Trail System HS-425A (78324)	
		3 5.1 Long Bay Loop				
		3 5.2 Chilton Trail, and parking area				
		3 5.3 Kinnard Loop				
		3 5.4 Chilton Loop and overlook				
		3 5.5 Tatum Trail				
		3 5.6 McSpadden Trail				
		3 5.7 Water Hollow Trail				
Task 6. Repair/replace footbridges	2	6.1 When replacement of footbridges is needed, replace materials with historically appropriate	2100-Trails			
Task 7. Provide Accessible Access to Peavine and Big Spring Pavilions	1	7.1 Provide universally accessible access to Big Spring Pavilion (HS- 428)	4100-Buildings		LC BS Big Spring Shelter House HS-425 (70914)	
		7.2 Provide universally accessible access to Peavine Pavilion (HS-425)			LC BS Peavine Shelter House HS-428 (70920)	
Task 8. Repair setting at May/ Winters Quarters (HS-444)	3	8.1 Replant missing foundation plantings	3100-Maintained Landscapes			
		8.2 Re-seed lawn				
		8.3 Reset wildlife fencing around				

Cultural Landscape Feature to FMSS Data Crosswalk - Treatment Summary

CLR Treatment Project Component Task / FMSS Work Order	Priority	*CLR Treatment Task Component / FMSS Task	FMSS Asset Type (ASSET CODE)	FMSS Location (Parent Locations)	FMSS Asset (Asset Number)	**FMSS Work Type / Sub-Type
Task 9. Repair stone drinking fountains	1	9.1 Reset and replace stone as needed, repair metal fittings to working condition				
Task 10. Conduct additional research	1 to 3	10.1 Complete update to HSR for Dining Lodge (HS-422)				
		10.2 Complete HSR for Cabins				
		10.3 Conduct additional archeological research, including documenting the extents of the CCC Camps.				
Task 11. Install new entrance sign	1	11.1 Design new sign to be compatible with setting and to improve wayfinding at intersection of State Highway Z and Peavine Road				
Core Development Area						
Task 1. Repair Entrance	2	1.1 Replant vegetation backdrop	3100-Maintained Landscapes			
		1.2 Repair northern gate				
		1.3 Regrade swales for drainage				
		1.4 Repair grass at road edge				
		1.5 Provide gravel pull-out at Entrance Building (HS-432)				
		1.6 Replace missing wood gate at Entrance Building				

Cultural Landscape Feature to FMSS Data Crosswalk - Treatment Summary

CLR Treatment Project Component Task / FMSS Work Order	Priority	*CLR Treatment Task Component / FMSS Task	FMSS Asset Type (ASSET CODE)	FMSS Location (Parent Locations)	FMSS Asset (Asset Number)	**FMSS Work Type / Sub-Type
Task 2. Provide Accessible Access to Dining Lodge (HS-422)	1	2.1 Design drawings for a compatible ramp into the building and building study for entrance door/threshold			LC BS Big Spring Dining Lodge HS-422 (70910)	
		2.2 Repave both walkways to the Dining Lodge in matching material				
Task 3. Repair Dining Lodge Setting	1	3.1 Remove overgrown vegetation on slope above and below Dining Lodge (HS-422), to provide view to river	3100-Maintained Landscapes			
		3.2 Replant vegetation in front of Dining Lodge (groundcovers)				
		3.3 Remove wood handrail at staircase and replace				
		3.4 Remove non contributing waysides and pedestrian lights				
		3.5 Repair steps and trail to Cabins, remove concrete				
		3.6 Replace boat launch with compatible design				
Task 4. Repair Parking Area and Setting	2	4.1. Remove trees at parking area damaging curb				
		4.2 Add walkway at north edge of parking area, connecting Museum (HS-420) and Dining Lodge (HS-422)				
		4.3 Remove non contributing parking lights and replace with compatible				
		4.4 Remove non contributing waysides, markers, benches, and concrete paving				

Cultural Landscape Feature to FMSS Data Crosswalk - Treatment Summary

CLR Treatment Project Component Task / FMSS Work Order	Priority	*CLR Treatment Task Component / FMSS Task	FMSS Asset Type (ASSET CODE)	FMSS Location (Parent Locations)	FMSS Asset (Asset Number)	**FMSS Work Type / Sub-Type
Task 5. Provide Accessible Access to Museum (HS-420)	1	5.1 Design drawings for a compatible ramp into the building and building study for entrance door/threshold			LC BS Big Spring Interpretation Office HS-420 (70905)	
Task 6. Provide Accessible Access to Cabins #409 (HS-409), #410 (HS-410), and #413 (HS-413).	1	6.1 Building studies for threshold and door width requirements, and interior access needs.			LC BS Big Spring Rental Cabin HS-409 (70891); LC BS Big Spring Rental Cabin HS-410 (70892); LC BS Big Spring Rental Cabin HS-413 (70896)	
		6.2 Design drawings for a compatible ramp/access to the building and design of accessible parking space(s).			LC BS Big Spring Rental Cabin HS-409 (70891); LC BS Big Spring Rental Cabin HS-410 (70892); LC BS Big Spring Rental Cabin HS-413 (70896)	
Task 7. Repair Cabin Setting	1 to 2	7.1 Thin vegetation to provide views	3100-Maintained Landscapes			
		7.2 Establish vegetation around Cabins in naturalistic groupings				
		7.3 Repair stone steps				
		7.4 Remove non contributing retaining walls and replace with compatible material				
		7.5 Regrade picnic areas to blend with setting				
Big Spring Character Area						
Task 1. Repair Spring Branch Trail	1	1.1 Reset stone steps	2100-Trails		LC BS Big Spring Trail System HS-425A (78324)	
		1.2 Thin veg to provide view of spring from trail				

Cultural Landscape Feature to FMSS Data Crosswalk - Treatment Summary

CLR Treatment Project Component Task / FMSS Work Order	Priority	*CLR Treatment Task Component / FMSS Task	FMSS Asset Type (ASSET CODE)	FMSS Location (Parent Locations)	FMSS Asset (Asset Number)	**FMSS Work Type / Sub-Type
Task 2. Replace Playground Equipment	1	2.1 Replace equipment in-kind				
Task 3. Relocate Buildings from Playfield	2	3.1 Relocate Big Spring Latrine (476)	4100-Buildings		LC BS Big Spring Heated Restroom #476 (76650)	
		3.2 Relocate Big Spring Craft Cabin (458)			LC BS Big Spring Quilting Cabin 458 (76492)	
Task 4. Repair Vegetation	2	4.1. Remove woody vegetation from north field and restore grasses	3100-Maintained Landscapes			
		4.2 Provide view of Big Spring branch from picnic area and playground				
Task 5. Protect Dikes	3	5.1 Remove woody vegetation from the Big Spring Stone Dikes that is damaging the resource				

** FM - facility maintenance

DM - deferred maintenance. Work that is overdue or needs to be performed immediately due to deficiencies or problems (stabilization needs, deterioration, etc.)

PM - preventative maintenance to be developed by park staff based on recurring maintenance required. Regularly scheduled minor maintenance (weeding, mowing, etc.)

Asset record to be assigned by park staff

RM (maintenance between 1 and 10 year cycles such as tree pruning) may be identified in all three CL documents, but most detail is in a PMP.



Big Spring Historic District
Ozark National Scenic Riverways
Cultural Landscape Report and Environmental Assessment
2016