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## Appendix F. Contracting

When developing and administering trail construction contracts, many factors need to be considered to effectively convey project intent and facilitate a fair and effective bid or cost submittal process from contractors. These factors include the following:

- Quantification of the work to be performed;
- Development of accurate cost estimates;
- Development of maps and drawings identifying work locations, materials and project designs;
- Development of detailed descriptions and specifications of work to be performed
- Ensuring contractor qualifications;
- Ensuring contractors have a complete understanding of the work to be performed prior to bid or cost submittals; and
- Provisions for effective project oversight and inspection to ensure contract plans and specifications are followed.

Once you have decided to have your trail project performed by a contractor, it is very important to notify and work with your administrative staff to ensure that the contract is developed, prepared, and administered properly. Contracting can be complicated especially with the private sector. Contracts must comply with State contracting law and departmental contracting procedures to avoid costly delays, change orders, legal action, poor contractor performance, or Board of Control claims.

There are two basic approaches to contracting a trail construction project: contracting with a government or non-profit labor source, such as the California Conservation Corps, or contracting with a for-profit, private sector trail contractor. Government labor forces are usually youth corps that are affiliated with national, state, county, or local government agencies. Due to 2015's SB204, non-profit youth conservation corps are now eligible for non-competitive contracting similar to a government agency. For the purposes of this appendices, government and non-profit contracts are treated the same. Private sector trail contractors are licensed contractors that specialize in trail construction projects. State of California contracting law prohibits competition between government and private sector contractors. Therefore, choose the type of contractor prior to developing the contract. Both contracting processes are similar (develop trail construction prescriptions, work logs, cost estimates, work descriptions and specifications, and working drawings), but they differ in terms of contract advertising, itemized bid sheets, contractor qualifications, mandatory bid showings, insurance, bonding, contract language, and contract oversight requirements.

With each of these contracts there are standard contract forms that are required when preparing contracts. Since these forms frequently change, they will not be addressed in this appendix. Work closely with administrative staff to ensure that the most current forms and contracting processes are used. The focus of this appendix is on those documents that are essential to both types of trail construction contracts.

For the purposes of illustrating and supporting the discussion on various contract documents, abbreviated samples of these documents will be inserted into the text. Full digital copies of these documents can be found on the Department’s intranet.

Prior to developing a contract, a number of tasks must be accomplished, including trail layout and flagging, and development of construction prescriptions, work logs, and cost estimates. (See Figures F.1, F.2, F.3.) In addition, all environmental documents and permits must be approved and obtained.

Work Logs for the project are included in the contract to identify the location, the type and dimensions of each trail feature or structure, and the types of materials to be used.

Trail: <u>Redwood Creek Trail</u> Date: <u>May 12, 2012</u>														
Segment <u>Reroute</u> Land Unit: <u>Prairie Creek Redwoods State Park</u>														
Begin Feet	End Feet	Action	Feature	Feature Attribute	Tread Width	Medialized	Accessible	Wood/Plastic	Size/Qty			Units	Comment	Total
									L	H	W			
1478			Junction										Existing trail and new reroute, previously Miwok trail junction	
1478		relocate	Sign, trail	Metal					1.0			ea	to new Miwok trail junction at 1748'	1.0
1478	1569	Perform	Trio Tread Maintenance	0	5				91.0			lin ft		91.0
1478	1800	Install	Trail Hardening Aggregate Surfacing	Distance >1300'<1800'		X			322.0	0.5	5.0	cu ft	Haul from trailhead on existing trail scarify soil with dozer first, move some soil to outside edge of trail where it can be mixed in with the top layer of aggregate. On new trail save some excavated soil to mix in with top layer of aggregate.	805.0
1569	2057	Perform	Trail Brushing Construction	Heavy	5				488.0			lin ft		488.0
1569	2057	Perform	Trail Clearing Stob Removal	Heavy	5				488.0			lin ft		488.0
1569	1775	Perform	Trail Construction	Hillslope <20%	5				206.0			lin ft		206.0
1699		Excavate	Soil	soil soft		X			12.0	2.0	8.0	cu ft	Excavate soil for bridge abutment, use mini excavator	192.0
1699		Export	Soil from Drainage X	Distance <100		X			12.0	2.0	8.0	cu ft		192.0
1699		Construct	Retaining Wall Rock Multi Tier						20.0	2.0	1.0	cu ft		40.0
1699		Import	Rock Wall Rock	Distance >1300'<1800'		X			20.0	2.0	1.0	cu ft		40.0
1699		Construct	Bridge	Galvanized Steel I Beam					28.0			lin ft		28.0
1727		Excavate	Soil	soil soft		X			12.0	2.0	8.0	cu ft		192.0
1727		Export	Soil from Drainage X	Distance <100		X			12.0	2.0	8.0	cu ft		192.0
1727		Construct	Retaining Wall Rock Multi Tier						20.0	2.0	1.0	cu ft		40.0
1727		Import	Rock Wall Rock	Distance >1300'<1800'		X			20.0	2.0	1.0	cu ft		40.0
1748			Trail Junction										New Miwok Trail Junction Location	
1748		Install	Sign Trail	Metal					1.0			ea	Miwok & Redwood Creek Trail Location & Distance Info.	1.0
1775	1831	Construct	Trail Construction	Hillslope >20%<40%	5				56.0			lin ft		56.0
1800	2500	Install	Trail Hardening Aggregate Surfacing	Distance >1800'<2500'		X			700.0	0.5	5.0	cu ft	Haul from trailhead on existing trail. On new trail save some excavated soil to mix in with top layer of aggregate.	1750.0
1810		Remove	Down Tree Removal Chain Saw	Tree dia. 4'-6'					1.0			ea		1.0
1818		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					5.0			ea		5.0
1831		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					1.0			ea		1.0
1831	2037	Construct	Trail Construction	Hillslope >40%<60%	5				206.0			lin ft		206.0

Figure F.1 – Sample Trail Work Log

A sorted and subtotaled Work Log is then used to develop a Bid Sheet. At this point, the contract documents need to be tailored into either a government labor force or private sector contract. It is extremely important to thoroughly develop the trail prescriptions and quantify the associated volume of work because they will be the basis for the contractors’ bid.

Trail: <u>Redwood Creek Trail</u> Date: <u>May 12, 2012</u>														
Segment <u>Reroute</u> Land Unit: <u>Prairie Creek Redwoods State Park</u>														
Begin Feet	End Feet	Action	Feature	Feature Attribute	Tread Width	Mechanized	Accessible	Wood Planks	Size/Qty			Units	Comment	Total
									L	H	W			
2266		Construct	Armored Swale Crossing						12.0	1.0	8.0	cu ft		96.0
2764		Construct	Armored Swale Crossing						16.0	1.0	8.0	cu ft		128.0
3497		Construct	Armored Swale Crossing						12.0	1.0	8.0	cu ft		96.0
3580		Construct	Armored Swale Crossing						16.0	1.0	8.0	cu ft		128.0
3611		Construct	Armored Swale Crossing						16.0	1.0	8.0	cu ft		128.0
6369		Construct	Armored Swale Crossing						12.0	1.0	8.0	cu ft		96.0
6519		Construct	Armored Swale Crossing						12.0	1.0	8.0	cu ft		96.0
		Construct	Armored Swale Crossing											768.0
2315		Construct	Bridge	Fiberglass I Beam					16.0			lin ft		16.0
3534		Construct	Bridge	Fiberglass I Beam					24.0			lin ft		24.0
4123		Construct	Bridge	Fiberglass I Beam					24.0			lin ft		24.0
4979		Construct	Bridge	Fiberglass I Beam					16.0			lin ft		16.0
1699		Construct	Bridge	Galvanized Steel I Beam					28.0			lin ft		28.0
6108		Construct	Bridge	Galvanized Steel I Beam					32.0			lin ft		32.0
1818		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					5.0			ea		5.0
1831		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					1.0			ea		1.0
1852		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					1.0			ea		1.0
1879		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					1.0			ea		1.0
1911		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					1.0			ea		1.0
1957		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					1.0			ea		1.0
1963		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					1.0			ea		1.0
1971		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					2.0			ea		2.0
2865		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					2.0			ea		2.0
3656		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					4.0			ea		4.0
3685		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					3.0			ea		3.0
3713		Remove	Down Tree Removal Chain Saw	Tree dia. 1'-3'					1.0			ea		1.0

Figure F.2 – Sample of a Sorted Trail Work Log

**F.1. Government Labor Force Contracts**

As previously mentioned, most government labor force contracts are with a youth corps that is attached to or affiliated with a government agency or non-profit organization. However, it could also be with a government agency that has trail crews such as the National Park Service, California State Parks, or a regional park agency. When contracting with a government agency, the project does not have to be advertised in the contract register nor undergo a competitive bid process. Generally, the agency can be selected and the terms of the contract negotiated directly through a fairly simple contracting process. It should be noted that the Department currently has master agreements with some governmental and non-profit labor forces. These master agreements contain most of the forms in this appendix. Some of the basic documents that should be included in government labor force contracts include:

- Contract Summary
- Trail Work Log
- Trail Project Work Specifications and Description
- Trail Feature and Structure Diagrams
- Daily Work Record

- Spike Camp Specifications and Requirements (if applicable)
- Spike Camp Bear Management Plan (if applicable)
- Wildfire Prevention Plan (if applicable)
- Required Tool and Equipment Checklist (if applicable)
- Project Location Maps

The Contract Summary is a listing of all the construction activities the contractor will be performing or being reimbursed for under the contract. The information is taken from the Cost Estimating Worksheet and does not include the material, equipment operation, in-house staff, tool replacement, planning, environmental compliance, survey, or permitting costs. (See Figure F.4.) The Contract Summary identifies the total quantity of each construction activity, the production rate for those activities, the unit of measurement, the pay rate, and the total reimbursement for that activity. (See Figures F.4 and F.5.) Most government contracts reimburse the contractor for labor and crew operations and the contracting agency provides the materials and specialized tools and equipment. However, these contracts can also include reimbursement for the materials and specialized tools and equipment. (See Figure F.5.) It is important to note that the production rates identified in this exhibit are the basis for reimbursement. The contractor is paid for the volume of work produced. It is also important to note that the contractor is also paid for the time spent hiking between the worksite and trailhead. If spike camp operations are required, the contractor is also reimbursed for spike camp operations including the cost of setting up and breaking down the camp, camp cook, and supervisor overtime costs related to spike camp supervision. Vehicle costs are also reimbursable if these costs are not already built into the contractor's hourly reimbursement rate.

At the end of each Contract Summary there should be a statement that allows for an increase or decrease in the units of work listed in the summary. This statement is intended to keep the reimbursement rates constant regardless of the actual amount of trail construction. An example of this statement is provided below.

*The foregoing quantities are approximate only, given solely as a basis for the preparation of the anticipated work. The Department of Parks and Recreation does not expressly or by implication agree that the actual amount of work will correspond directly therewith. The Department of Parks and Recreation reserves the right to increase or decrease the amount of any item or eliminate any item or items as maybe necessary or advisable by the Department's representative. Such changes shall not affect the unit price of that item or any other item.*

Contract specifications and work descriptions must also be developed for every construction activity on the Contract Summary. These descriptions help define the work, how it is to be performed, and how contractors will be compensated. Working drawings for each construction activity should be included with the specifications and

work descriptions to be referenced by the contractor during construction. (See Figures F.6 and F.7.) A full list of specification descriptions [can be accessed here](#).

With a government labor force contract the contracting agency's representative is responsible for providing daily project oversight and project coordination. This may include providing all the construction materials and specialized tools and equipment. The contracting agency's representative is also responsible for providing training to the contractor's trail crew and measuring, inspecting, and documenting the work produced by the contractor.

Because the contractor's pay is based on work completed, it is important to record all work completed on a daily basis. Since the contract reimburses the contractor on the basis of how much product they produce it is important that those quantities are captured before they are obliterated or buried. Examples include rock excavation, soil excavation, soil export, rock import, and retaining wall and abutment foundations buried below grade. If these items are not captured as they are produced it becomes difficult if not impossible to quantify them at a later date. It is good practice to have the contracting agency's representative and the contractor sign the Daily Work Record verifying the quantities of work produced and recorded. A trail feature list is used by the contracting agency's representative to ensure that each trail feature or structure is correctly measured and quantified. (See Figures F.8 and F.9.) Daily work record and trail features list [can be accessed here](#).

If the contract requires a spike camp, additional contract documents are required, including a Spike Camp Specifications, Bear Management Plan, and a Wildfire Prevention Plan, to ensure that the spike camp operation does not impact park resources. These documents are attached to the contract as an exhibit. (See Figures F.10, F.11, F.12, and F.13.) A Bear Management Plan can be accessed in Appendix M and a Wildfire Prevention Plan can be accessed in Appendix R.

Spike Camp documents can be accessed below:

[Trail Cook Contract](#)  
[Spike Camp Specifications](#)

Spike Camp Overhead Costs (Food & Camp Supplies)	30.50		weeks	@	\$750.00	=		\$22,875.00	
Cook Contract	7.65		month	@	\$4,800.00	=		\$36,720.00	
Non Commercial Per Diem	0.00		Day	@	\$40.00	=		\$0.00	
Spike Camp Overhead Costs for Non Commercial Per Diem Camp	0.00		weeks	@	\$150.00	=		\$0.00	
<b>Vehicle Cost (If vehicles are used place number of months used in box adjacent to vehicle)</b>									
Crew Van	0.00		month	@	\$1,500.00	=		\$0.00	
CCV	8.00		month	@	\$1,800.00	=		\$14,400.00	
Pickup 4x4	8.00		month	@	\$1,620.00	=		\$12,960.00	
Pickup 4x4 with Utility Box	0.00		month	@	\$1,650.00	=		\$0.00	
1 Ton Stake side Truck	0.00		month	@	\$1,740.00	=		\$0.00	
2.5 Ton Stake side Truck	3.00		month	@	\$2,160.00	=		\$6,480.00	
4 Yard Dump Truck	0.00		month	@	\$2,640.00	=		\$0.00	
							<b>Materials &amp; Equip. Operation Sub Total</b>	\$298,962.93	
							<b>Tax on Materials &amp; Equip. Cost</b>	\$24,664.44	
<b>Trail Crew Management Information</b>									
							<b>Materials &amp; Equip. Operation Total</b>	\$323,627.37	
Crew Size (number of workers)	12								
Work Day Hours ( 8 or 10 hour days)	10								
Number of Crew Work Days Each Week	4								
Total Crew Work Days	122.02					<b>Crew Labor Sub Total</b>		\$235,673.82	
Total Crew Work Weeks	30.50					<b>Camp Setup</b>		\$4,320.00	
Cost Per Crew Day	2,160								
Average Daily Hiking Time on Project Display in increments of 15 minutes at .25 hours (ex .25, .50, .75, 1.00, 1.25, 1.50)			<b>Hiking Time</b>					\$23,567.38	
			<b>Crew Labor Total</b>					\$263,561.20	
	1.00								
			<b>Sub Total Tr. Equip. Operator Cost</b>					\$6,871.53	
			<b>Trail Equip. Operator Hiking Time</b>					\$687.15	
			<b>Total Trail Equipment Operator Cost</b>					\$7,558.68	
		<b>Sub Total Supervision Cost</b>					\$34,507.26		
		<b>Supervision Hiking Time</b>					\$3,450.73		
		<b>Total Supervision Cost</b>					\$37,957.98		
		<b>C1 / Crew Supervisor Overtime</b>					\$23,837.65		
		<b>Tool &amp; Equipment Replacement</b>						\$19,696.29	

Figure F.3 – Sample Cost Estimate Worksheet

<b>EXHIBIT C</b>					
<b>CONTRACT SUMMARY</b>					
<p>The Fortuna Center, California Conservation Corps hereby agrees to furnish all labor, standard hand tools and transportation for the proposed work project, Redwood Creek Trail Reroute at Prairie Creek Redwoods State Park. The following rate of payment includes CCC supervision and all other related CCC training educational expenses. Corps member hourly rate for each unit rate of payment shall be \$18.00.</p>					
<b>Trail Construction Activity</b>	<b>Totals</b>	<b>Hourly Production Rate</b>	<b>Unit</b>	<b>Rate of Pay</b>	<b>Labor Cost</b>
Trail Brushing const. (light)	324	120	lin ft	\$18.00	\$48.60
Trail Brushing const. (heavy)	5,007	30	lin ft	\$18.00	\$3,004.20
Trail Brushing const. (extra heavy)	250	20	lin ft	\$18.00	\$225.00
Clearing, tree& stob removal, light	324	80	lin ft	\$18.00	\$72.90
Clearing, tree& stob removal, heavy	5,257	20	lin ft	\$18.00	\$4,731.30
Down Tree Removal 1'- 3' chainsaw	70	2	hr/ea	\$18.00	\$2,520.00
Trip Maintenance 5' tread	91	16	lin ft	\$18.00	\$102.38
Trail Construction 5' tread <20%	607	3.9	lin ft	\$18.00	\$2,801.54
Trail Construction 5' tread >20%<40%	695	2.0	lin ft	\$18.00	\$6,255.00
Trail Construction 5' tread >40%<60%	2,228	1.3	lin ft	\$18.00	\$30,849.23
Trail Construction 5' tread >60%<90%	2,053	0.9	lin ft	\$18.00	\$41,060.00
Crushed Rock specified Lift >300'<800'	580	23.75	cu ft	\$18.00	\$439.58
Crushed Rock specified Lift >800'<1300'	1,250	11.88	cu ft	\$18.00	\$1,893.94
Crushed Rock specified Lift >1300'<1800'	2,055	5.94	cu ft	\$18.00	\$6,227.27
Crushed Rock specified Lift >1800'<2500'	3,500	2.97	cu ft	\$18.00	\$21,212.12
Crushed Rock specified Lift >2500'<3200'	3,500	2.3	cu ft	\$18.00	\$27,391.30
Crushed Rock specified Lift >3200'<3900'	3,500	1.8	cu ft	\$18.00	\$35,000.00
Armored Swale Crossing	768	1	cu ft	\$18.00	\$13,824.00
Dry Stone Single Tier Crib or Causeway Wall	108	2	cu ft	\$18.00	\$972.00
Dry Stone Multi Tier Structural Wall	80	1	cu ft	\$18.00	\$1,440.00
Soldier Pile Retaining Wall	30	1.5	sq ft	\$18.00	\$360.00
Plastic Wood Cribbed (Interlocking)Retaining Wall	40	1	sq ft	\$18.00	\$720.00
Import Rock > 800'< 1300'	96	13.84	cu ft	\$18.00	\$124.86
Import Rock > 1300'< 1800'	176	9.96	cu ft	\$18.00	\$318.07
Import Rock > 1800'< 2500'	96	7.17	cu ft	\$18.00	\$241.00
Import Rock > 2500'< 3200'	128	5.59	cu ft	\$18.00	\$412.16
Import Rock > 3200'< 3900'	466	4.36	cu ft	\$18.00	\$1,923.85
Galvanized Steel Stringer Design Bridge (2 ea)	60	0.175	lin ft	\$18.00	\$6,171.43
Fiber Glass I Beam Stringer Design Bridge (4 ea)	80	0.25	lin ft	\$18.00	\$5,760.00
Hand Transport Bridge Materials	640	Estimated Person Hrs.	hrs.	\$18.00	\$11,520.00
Equestrian Puncheon 5' wide	20	0.70	lin ft	\$18.00	\$514.29
Export Soil < 100' )	3,348	30	cu ft	\$18.00	\$2,008.80
Export Soil > 200' < 300' )	3,000	10	cu ft	\$18.00	\$5,400.00
Install Trail Signs (metal)	1	1	ea	\$18.00	\$18.00
Hiking Time	1,309	Estimated Person Hrs.	hrs.	\$18.00	\$23,562.00
Spike Camp Setup & Breakdown		2 crew days			\$4,320.00
Spike Camp Overhead Costs (Food & Camp Supplies)	30.50		weeks	\$750	\$22,875.00
Cook Contract	7.63		month	\$4,800	\$36,624.00
CCV	8		month	\$1,800	\$14,400.00
Pickup 4x4	8		month	\$1,620	\$12,960.00
C1 Supervision Overtime	488		hrs.	\$48.84	\$23,833.92
<b>Total Contract Reimbursement</b>					<b>\$374,138</b>

**Figure F.4 – Sample Contract Summary Sheet without Material Costs**

<b>EXHIBIT C</b>					
<b>CONTRACT SUMMARY</b>					
<p>The Fortuna Center, California Conservation Corps hereby agrees to furnish all labor, tools, materials, equipment and transportation for the proposed work project, Redwood Creek Trail Reroute at Prairie Creek Redwoods State Park. The following rate of payment includes CCC supervision and all other related CCC training educational expenses. Corps member hourly rate for each unit rate of payment shall be \$18.00.</p>					
<b>Trail Construction Activity</b>	<b>Totals</b>	<b>Hourly Production Rate</b>	<b>Unit</b>	<b>Rate of Pay</b>	<b>Labor Cost</b>
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Trail Brushing const. (heavy)	5,007	30	lin ft	\$18.00	\$3,004.20
Trail Brushing const. (extra heavy)	250	20	lin ft	\$18.00	\$225.00
Clearing, tree& stob removal, light	324	80	lin ft	\$18.00	\$72.90
Clearing, tree& stob removal, heavy	5,257	20	lin ft	\$18.00	\$4,731.30
Down Tree Removal 1'- 3' chainsaw	70	2	hr/ea	\$18.00	\$2,520.00
Trio Maintenance 5' tread	91	16	lin ft	\$18.00	\$102.38
Trail Construction 5' tread <20%	607	3.9	lin ft	\$18.00	\$2,801.54
Trail Construction 5' tread >20%<40%	695	2.0	lin ft	\$18.00	\$6,255.00
Trail Construction 5' tread >40%<60%	2,228	1.3	lin ft	\$18.00	\$30,849.23
Trail Construction 5' tread >60%<90%	2,053	0.9	lin ft	\$18.00	\$41,060.00
Crushed Rock specified Lift >300'<800'	580	23.75	cu ft	\$18.00	\$439.58
Crushed Rock specified Lift >800'<1300'	1,250	11.88	cu ft	\$18.00	\$1,893.94
Crushed Rock specified Lift >1300'<1800'	2,055	5.94	cu ft	\$18.00	\$6,227.27
Crushed Rock specified Lift >1800'<2500'	3,500	2.97	cu ft	\$18.00	\$21,212.12
Crushed Rock specified Lift >2500'<3200'	3,500	2.3	cu ft	\$18.00	\$27,391.30
Crushed Rock specified Lift >3200'<3900'	3,500	1.8	cu ft	\$18.00	\$35,000.00
Armored Swale Crossing	768	1	cu ft	\$18.00	\$13,824.00
Dry Stone Single Tier Crib or Causeway Wall	108	2	cu ft	\$18.00	\$972.00
Dry Stone Multi Tier Structural Wall	80	1	cu ft	\$18.00	\$1,440.00
Soldier Pile Retaining Wall	30	1.5	sq ft	\$18.00	\$360.00
Plastic Wood Cribbed (Interlocking)Retaining Wall	40	1	sq ft	\$18.00	\$720.00
Import Rock > 800'< 1300'	96	13.84	cu ft	\$18.00	\$124.86
Import Rock > 1300'< 1800'	176	9.96	cu ft	\$18.00	\$318.07
Import Rock > 1800'< 2500'	96	7.17	cu ft	\$18.00	\$241.00
Import Rock > 2500'< 3200'	128	5.59	cu ft	\$18.00	\$412.16
Import Rock > 3200'< 3900'	466	4.36	cu ft	\$18.00	\$1,923.85
Galvanized Steel Stringer Design Bridge (2 ea)	60	0.175	lin ft	\$18.00	\$6,171.43
Fiber Glass I Beam Stringer Design Bridge (4 ea)	80	0.25	lin ft	\$18.00	\$5,760.00
Hand Transport Bridge Materials	640	Estimated Person Hrs.	hrs.	\$18.00	\$11,520.00
Equestrian Puncheon 5' wide	20	0.70	lin ft	\$18.00	\$514.29
Export Soil < 100' )	3,348	30	cu ft	\$18.00	\$2,008.80
Export Soil > 200' < 300' )	3,000	10	cu ft	\$18.00	\$5,400.00
Install Trail Signs (metal)	1	1	ea	\$18.00	\$18.00
Hiking Time	1,309	Estimated Person Hrs.	hrs.	\$18.00	\$23,562.00
Spike Camp Setup & Breakdown		2 crew days			\$4,320.00
Spike Camp Overhead Costs (Food & Camp Supplies)	30.50		weeks	\$750	\$22,875.00
Cook Contract	7.63		month	\$4,800	\$36,624.00
CCV	8		month	\$1,800	\$14,400.00
Pickup 4x4	8		month	\$1,620	\$12,960.00
C1 Supervision Overtime	488		hrs.	\$48.84	\$23,833.92
<b>Materials &amp; Trail Equip. Operation Cost</b>					\$230,303.00
<b>Tool and Equipment Replacement Cost</b>					\$19,696.00
<b>Total Contract Reimbursement</b>					<b>\$624,136.74</b>

Figure F.5 – Sample Contract Summary Sheet including Material Costs

## CALIFORNIA STATE PARKS TRAIL PROJECT SPECIFICATION DESCRIPTIONS

### **Trail Brushing Construction**

This includes the removal of all brush within the travelway (2' beyond the top of the cutbank to 2' below the outboard hinge). The brushing limits will vary depending on the size of the designed trail bed, percent of hillslope and the user group. Removal includes the stashing of cut brush off the travelway and out of sight. Any brush limbs projecting into the brushing limits will be severed at their axis and no stobs shall be permitted. Levels of brushing (light, medium, heavy and extra heavy) are based upon designed trail width and brush density. Unit of payment is by lineal foot. (Refer to trail brushing drawings in the specification diagrams.)

### **Trail Brushing Maintenance**

Brushing maintenance is the removal of living or dead vegetation from within the brushing limits (1.5' beyond the inboard and outboard hinges of the trail or 1.5' beyond the outside edges of the trail bed on flat ground). Brushing maintenance removal limits are based on the trails classification and design standards.

Removal includes the stashing of cut brush off the travelway and out of sight. Any brush limbs projecting into the brushing limits will be severed at their axis and no stobs shall be permitted. Levels of brushing (light, medium and heavy) are based upon designed trail width and brush density. Unit of payment is by lineal foot. (Refer to trail brushing drawings in the specification diagrams.)

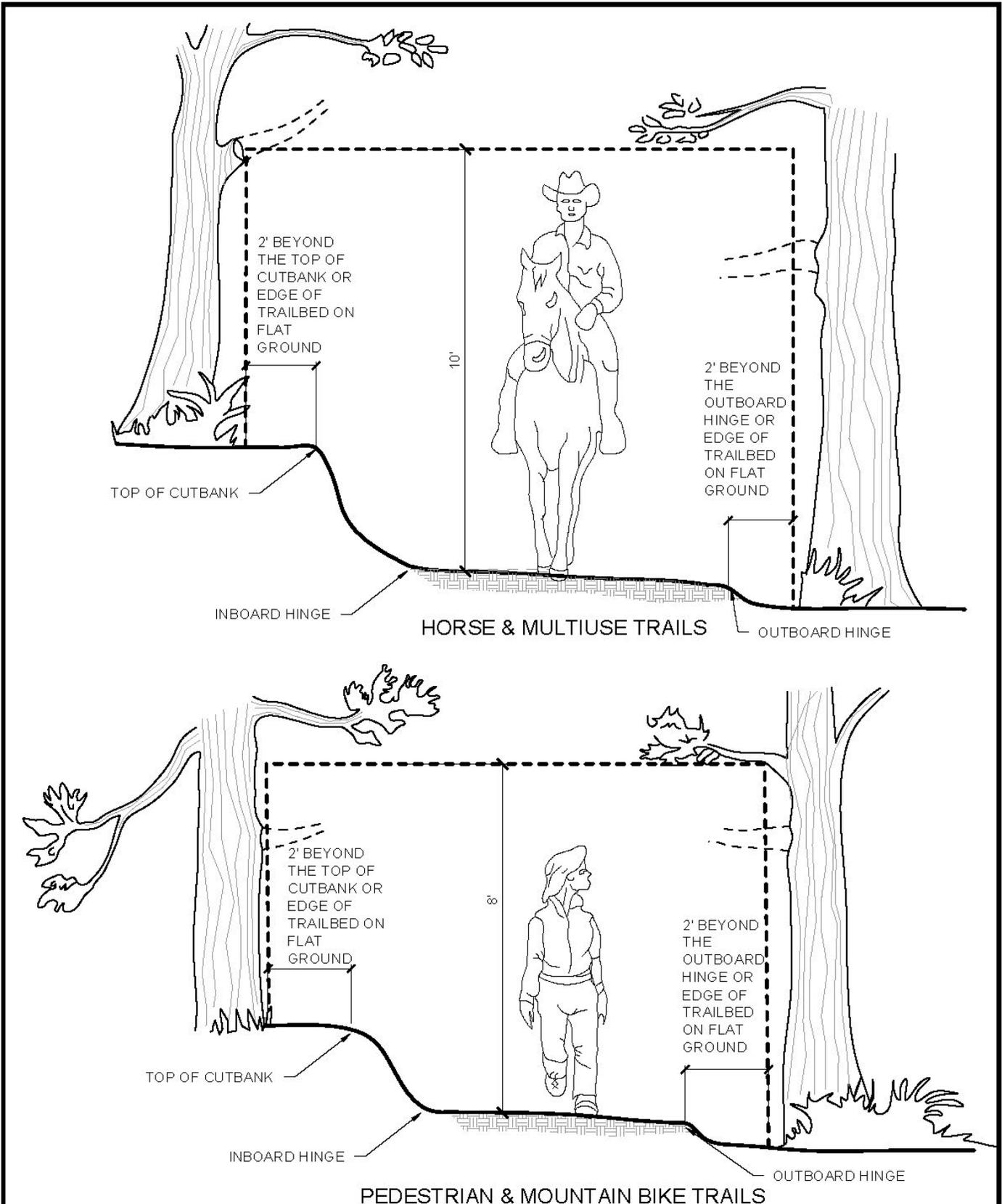
### **Clearing, Tree and Stobber Removal Construction**

Removal of small trees, stumps of dead or felled trees and stobs of large brush within the travelway (2' beyond the top of the cutbank to 2' below the outboard hinge). Removal includes the root structure of the trees and brush and the stashing of all debris off the travelway out of sight. Any tree limbs projecting into the clearing limits will be severed at their axis and no stobs shall be permitted. Levels of clearing (light, medium, heavy and extra heavy) are based upon designed trail width, tree and stump density and tree size. Unit of payment is by lineal foot. (Refer to clearing and grubbing drawings in the specification diagrams.)

### **Down Tree Removal**

The logging out and removal of trees lying across the intended travelway. Work includes the sawing out of down trees within the designed clearing limits and removing the sawn sections of tree out of the travelway (2' beyond the top of the cutbank to 2' below the outboard hinge). Sawn sections shall be stashed out of sight or placed perpendicular to the trail against the remaining sawn log. Unit of payment is based on the removal of each individual tree or log. Cost varies based on use of power tools or hand powered

**Figure F.6 – Sample Specification Descriptions**



**Figure F.7 – Sample Working Drawing**

**CLEARING AND BRUSHING TRAVELWAY**

CALIFORNIA STATE PARKS

NOT TO SCALE





Mechanized Yes (X) or No Accessible Yes(X) or No Wood (W) or Plastic (P) Lumber						
Feature	Feature Attributes	Mech	Acc	W/P	Action	Required Comment Column Unit Sub-Identifiers
Abutment - Wood Cribbed					Construct/Reconstruct/ Remove	sq. ft record total length and height of both facers and both wings
Abutment - Plastic Wood Cribbed					Construct/Reconstruct/ Remove	sq. ft record total length and height of both facers and both wings
Abutment - Concrete					Construct/Reconstruct/ Remove	sq. ft/ cu. ft. record sq ft and cu ft of facers and wings
Abutment - Rock Dry Stone					Construct/Reconstruct/ Remove	cu. ft. record length, height and width of both facers and both wings
Abutment - Rock Masonry					Construct/Reconstruct/ Remove	cu. ft. record length, height and width of both facers and both wings
Abutment - Trestle Wood					Construct/Reconstruct/ Remove	ea record single or double trestle, height of trestle, dimensions of concrete pad, sq. ft. & cu. ft.
Abutment - Trestle All Weather Steel					Construct/Reconstruct/ Remove	ea record height of trestle, dimensions of concrete pad
Abutment - Trestle Galvanized Steel					Construct/Reconstruct/ Remove	ea record height of trestle, dimensions of concrete pad
Armored Drain Dip/Grade Reversal					Construct/Reconstruct/ Remove	cu. ft. Record cubic volume (length height and width of rock structure.
Armored Stream Crossing					Construct/Reconstruct/ Remove	cu. ft. Record cubic volume (length height and width of rock structure.
Armored Swale Crossing					Construct/Reconstruct/ Remove	cu. ft. Record cubic volume (length height and width of rock structure.
Asphalt Removal	distance hauled <300', >300'<800', >800'<1300', >1300' <1800, >1800'<2500'	X			Remove	sq. ft record mech./non mech., distance <300',>300'<800', >800'<1300',>1300'<1800',>1800'<2500'
Bench			X		Install/Remove	ea record type of bench, wood slab, wood slab accessible,
Boardwalk - Diamond Pier					Construct/Reconstruct/ Remove	lin. ft. record total length of boardwalk
Boardwalk - Helical Anchor					Construct/Reconstruct/ Remove	lin. ft. record total length of boardwalk
Boardwalk - Mud Sill Fiberglass					Construct/Reconstruct/ Remove	lin. ft. record total length of boardwalk
Boardwalk - Mud Sill Wood					Construct/Reconstruct/ Remove	lin. ft. record total length of boardwalk
Boardwalk - Post and Pier					Construct/Reconstruct/ Remove	lin. ft. record total length of boardwalk
Bridge - FRP I Beam					Construct/Reconstruct/ Remove	lin. ft. record total length of bridge
Bridge - FRP Low Profile I Beam					Construct/Reconstruct/ Remove	lin. ft. record total length of bridge
Bridge - Gluelam					Construct/Reconstruct/ Remove	lin. ft. record total length of bridge
Bridge - Milled Wood					Construct/Reconstruct/ Remove	lin. ft. record total length of bridge
Bridge - Pipe					Construct/Reconstruct/ Remove	lin. ft. record total length of bridge
Bridge - All Weather Steel I Beam					Construct/Reconstruct/ Remove	lin. ft. record total length of bridge
Causeway	distance hauled <300', >300'<800', >800'<1300', >1300' <1800, >1800'<2500'	X	X		Construct/Reconstruct/ Remove	cu. ft. Record Length, height and width of trail section covered

Figure F.9 – Trail Feature Reference Sheet

## **Spike Camp Specifications**

This section pertains to the set up of spike camps and operations of spike camps related to backcountry trail projects. For general spike camp guidelines refer to the California State Park's Trail Handbook "Trail Camps".

### **SET UP**

The North Coast Redwoods shall be responsible for the spike camp equipment and set up at Prairie Redwoods State Park.

### **EQUIPMENT**

#### **Kitchen Equipment**

Spike camp equipment will consist of, but in not limited to; a water purification system (to be located by State Park Representative); at least one wall tent for the cook site, a rain fly set up over thy kitchen facilities for coverage of food preparation, cooking and eating; 2 cook stoves with capabilities for a least 7 separate burners; ice chests capable of food storage for at least 1 week supply of food for a 20 person camp operation; pots, pans, dishes and eating utensils for a 20 person camp operation; 1 jungle can set up for hot water or an equivalent set up for continuous hot water production. (See attached list.)

#### **Bear Proof Food Containers**

The North Coast Redwoods District shall be responsible for providing acceptable containers for bear proof storage of food and other bear attractants. All employees, visitors or any persons residing in the spike camp facility must comply with the "Spike Camp Bear Management Plan" attached to this section.

#### **Non Kitchen Spike Camp Equipment**

Items such as sleeping tents, library tents, auxiliary rain flies for cover, etc., shall be provided by the North Coast Redwoods District for its employees and the Fortuna Center for its employees. Placement of such items shall be pre-approved by the State Parks Representative.

#### **Location**

The North Coast Redwoods District shall be responsible for the location and placement of the spike camp kitchen, sleeping and latrine areas. This selection process will take into account input from the Fortuna Center Representative for crew size, corpsmember safety, community atmosphere, etc.

***Figure F.10 – Sample Spike Camp Specifications***

### Garbage

Garbage shall be treated as food items in the respect of Bear Management and must be secured in the same fashion as any foodstuff or other bear attractant. Timely disposal of garbage shall be the responsibility of the North Coast Redwoods District.

### Breaking Camp and Camp Clean Up

The breaking of camp and camp clean-up shall be the responsibility of the Fortuna Center Crews under the direction of the North Coast Redwoods District Representative. Refer to the Spike Camp Guidelines attached.

### Food and Food Preparation Cook

The Fortuna Center shall provide and pay for a cook at the Prairie Redwoods State Park Spike Camp operation. The cook will be available at the spike camp from breakfast on the first work day of each week to the dinner of the last workday of the week. The CCC work crews shall be responsible for their own kitchen duties on the non-work days such as weekends and holidays. Individual cooks shall be responsible for meal preparation and kitchen clean up during their tour of duty. The Fortuna Center shall provide 8 hours of corpsmember time daily for the assistance of food preparation by the contract cooks.

### Food

The Fortuna Center shall be responsible for the purchase of foodstuffs and miscellaneous kitchen supplies such as wax paper, lunch bags, oil, bleach, dish detergent, scouring pads, etc. for the operation of the kitchen facilities at Prairie Creek Redwoods State Park (see attached list). The North Coast Redwoods District shall be responsible for the transportation of the foodstuffs to the spike camp at Prairie Creek Redwoods State Park.

### Supervision and Responsibility

The North Coast Redwoods District shall be responsible for the overall operation of the spike camp. The Fortuna Center shall be responsible for corpsmember supervision during all hours of the spike camp operation.

**Figure F.11 – Sample Spike Camp Setup and Operations Specifications**

## Spike Camp Bear Management Plan

To reduce bear conflicts at Spike Camps and to provide a safe environment for the people and bear, the following plan of action for the crew and park staff will be implemented. Five areas need to be addressed to compliment Bear Management Program:

1. Training
2. Food and Garbage Storage
3. Dealing with Bear Sightings
4. Problem Bears
5. Compliance

### TRAINING

Prior to Spike Camp "set up," training will be provided by park staff to DPR technical supervisors, crew supervisors and crews. This training will be part of the back country orientation meeting between the District's roads, trails and resource (RTR) supervisor, the supervising environmental scientist, the supervising ranger and the designated bear management program coordinator. This session will include the five areas listed above and expanded on in this plan.

A formal bear sensitivity training for backcountry trail crew members will be held at the Spike Camp. The training will be given by the bear management coordinator and or the supervising environmental scientist. An informal onsite bear orientation will be given by the RTR supervisor along with other camp procedures upon arrival of crew members at the campground.

Formal bear sensitivity training will include these special points in slide show format:

1. Food Storage
2. Kitchen Guard
3. Bear Habituation
4. Accidental Feeding
5. Intentional Feeding
6. Dispatching
7. Bear Ecology
8. Bear Conditioning
9. Result of Habituation and Conditioning

### FOOD AND GARBAGE STORAGE

The following steps must be taken to properly store all food attractants (i.e., soap, toothpaste, shampoo, etc.) and garbage.

Food and garbage, at all times, will be secured in bear proof storage boxes and guarded by kitchen personnel.

No personal food, attractants or garbage shall be left unattended unless contained in bear proof storage boxes.



**Figure F.12 – Sample Spike Camp Bear Management Plan**

## Wildfire Prevention Plan

Unless specifically trained with CDF approved basic 32 wildland fire fighter training and placed on resource response lists, members of a trail crew are not fire fighting personnel. They do not have the training or the equipment to undertake initial attack fire response actions. For these reasons, the scope of the fire plan shall be limited to identifying means of preventing fires, and extinguishing small fires that might be caused by construction activities.

### **Prevention:**

There is no substitute for common sense in preventing wildland fires. Considering issues such as fuel loads, weather conditions and visitor activities should be second nature to the trail crew in evaluating the risk of fire and its relation to their activities. Specifically, the trail crew must cease operations when their activities present a significant risk of wildland fire. Typically, guidelines for these conditions will be issued and communicated by the relevant Fire Suppression Authority having jurisdiction over the trail project area. This authority may be Federal, State, County or local. The trail project coordinator should initiate contact with the relevant fire agency to ensure that this communication occurs.

Specific wildland fire prevention measures should include the following:

All mechanized and power equipment on a project site must be equipped with an appropriately rated and sized fire extinguisher. This includes all chainsaws, generators, gas powered drills, camp stoves, anything that burns a liquid or gas fuel. Fire extinguishers must be inspected and tested at prescribed intervals, and all personnel trained in their proper use. All equipment and tools must be used and maintained in a fire safe condition. This includes clearing any flammable wood or brush debris from engine compartments, and ensuring that all power equipment is equipped with turbo charger or a functional spark arrester as required. Besides spill containment, fueling operations must be carried out in a fire safe manner, which could include a grounding wire on large fuel tanks and moving power tools away from the fueling area before re-starting.

All vehicles and mechanized equipment must also be equipped with basic hand tools, such as a shovel and axe or pulaski. These tools should be dedicated for this purpose, not simply a part of the trail tool complement. These will be used to extinguish very small fires that can be safely attacked with untrained personnel. It is essential that the personnel attacking the fire monitor conditions and be prepared to abandon their efforts at the first hint that they are unable to contain the fire safely. At that point the fire becomes an emergency to be responded to by the appropriate fire agency, and the role of the trail crew is to provide for their own safety, most likely by communicating the emergency in

**Figure F.13 – Sample Wildfire Prevention Plan**

Project Location maps are also part of the contract document. These maps are required to provide the contractor with both a general and specific location of the project. (See Figure F.14.)

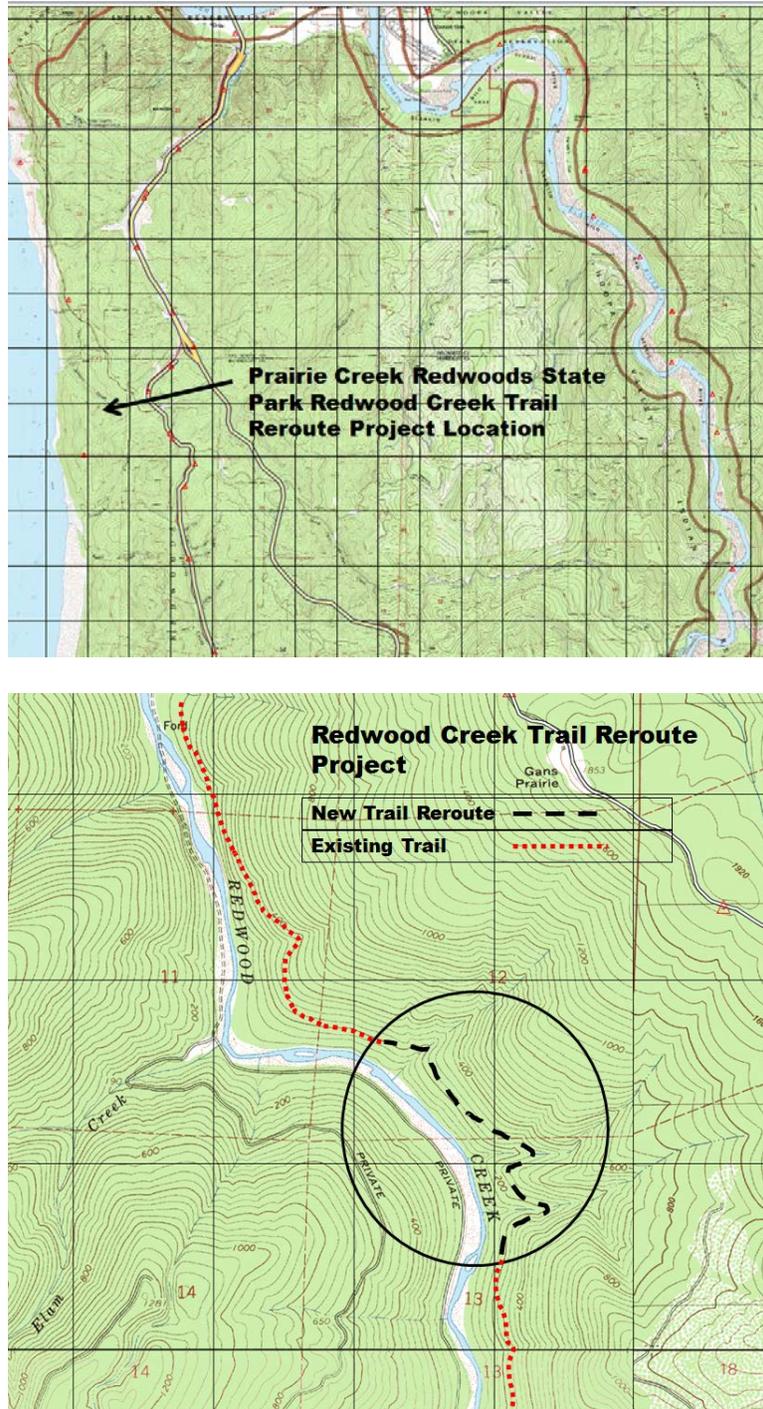


Figure F.14 – Sample Project Location Maps

## F.2. Private Contractor Contracts

Trail construction contracts put out to bid for private sector contractors are competitively awarded to the “lowest responsible bidder.” The contract will be awarded to the bidder that meets all the minimum qualifications and submits the lowest bid for the contract.

When preparing a private sector contract, it is important to put the contract out to bid well in advance of the project start date. Time is needed to advertise, schedule the bid showing, review and open bid packages, verify contractor qualifications and experience, obtain contract approvals, and allow the contractor the opportunity to purchase or secure all of the tools, equipment and materials they will need for the project. With a private sector contract you must advertise the contract. (See Figure F.15.)

A contract bid package must also be developed. Some of the basic contract documents that should be included with a private sector trail contract bid package include:

- Contractor Experience Form
- Mandatory Contract Bid Showing Sign In Sheet
- Bid Form
- Project Schedule
- Trail Work Log
- Trail Project Work Specifications/Descriptions
- Trail Feature/Structure Diagrams
- Daily Work Record
- Spike Camp Specifications (as applicable)
- Spike Camp Bear Management Plan (as applicable)
- Fire Plan (as applicable)
- Project Location Maps

Because there are a lot of documents to be developed and processed, it is important to work closely with administrative staff on private sector contracts. The trail program manager should be responsible for developing and preparing the information needed for the contract, which is a substantial amount of work, but the sample contract documents included in this appendix will expedite the development of these documents.

Trail construction contractors vary greatly in experience and expertise including ability to manage projects and quality of work produced. It is imperative that minimum requirements be established such as required licensing and work experience, for competitive bid contracts. In addition, past work performance and safety record must also be evaluated. Minimum requirements are identified in the bid documents. (See Figures F.16 and F.17.) A sample Contract Experience Form [can be accessed here](#).

## **Redwood Creek Trail Reroute Contract Advertising Information**

### Contract Number

C0837031

### Contract Title

Redwood Creek Trail reroute

### Prepared By:

Stephen Fisher

North Coast Redwoods District

6-5-2012

### Location

Humboldt County

Prairie Creek Redwoods State Park

Near Orick, CA approximately 1 hour travel from Eureka, CA and approximately 0.45 hour travel from Crescent City, CA.

### Description

California State Parks is rerouting the Redwood Creek trail in Prairie Creek Redwoods State Park. This reroute is approximately 1 mile in length and will require hand crew trail tread construction, rock excavation; rock retaining wall, armored swale crossing, soldier pile retaining wall, equestrian puncheon and bridge construction. The project is in a remote location with steep, uneven terrain.

### Engineering Estimate

\$951,510.00

### Estimated Project Duration

11 months from 6/1/2013 to 10/1/2014 – No work between 12/1/2013 and 5/1/2014 due to poor weather conditions.

### License required

A

### Experience Required

This contract requires a minimum of one hundred and four (104) weeks experience of successfully and safely performing new trail construction using hand crews. For the purpose of this documentation, forty hours of actual trail construction work is equal to one week of experience. This experience shall include a minimum of 26 weeks experience performing rock excavation, dry stone single and multi-tier retaining wall construction and bridge construction.

### Mandatory Bid Showing

Date: Tuesday, 8/5/2012

Time: 10:00 A.M.

Location: Prairie Creek Redwoods State Park Visitor Center, Newton B. Drury Parkway, approx. 5 miles North of Orick, CA.

**Figure F.15 – Sample of Project Advertisement**

**Section 00100  
Supplemental  
Instructions to Bidders**

**1.0 Contractor Performance Qualification**

A California "A" contractor's license is required to Bid this Contract and through the completion of the project. All contractors and subcontractors shall be properly licensed by the Contractor's State Licensing Board and possess the necessary license classifications for the work they perform under this project. The contractor or company (licensee) submitting a bid shall have a minimum of 104 weeks performing trail construction projects and have a good performance and safety record. For the purpose of this qualification, each week shall equal a minimum of forty hours of trail construction work. Routine trail maintenance activities such as brushing, clearing, waterbar maintenance, removal of debris around trail structures and trio maintenance DO NOT qualify for experience under this provision. Work qualified under this provision may include new trail tread construction, trail reconstruction, single and multi-tier rock retaining wall construction, multi-tier wood and plastic wood retaining wall construction, soldier pile retaining wall construction, armored drain swale construction, boardwalk or puncheon construction and trail bridge construction. This experience shall include a minimum of 26 weeks experience performing rock excavation, dry stone single and multi-tier retaining wall construction and bridge construction. The contractor upon submission of a bid shall submit a "Contractor Trail Construction Project Experience" form, filled out completely. The form should list all trail construction related work. The form shall be filled out completely; any information left blank shall result in disqualification. The State shall conduct a project performance and OSHA safety review of each Contractor's experience submission prior to opening the cost bid.

**2.0 Submission Requirements**

The Bidder shall submit their bid in two (2) separate envelopes, one marked COST and one marked EVALUATION. These two (2) envelopes will then be placed into the bid envelope and submitted to the address listed in the Notice to Contractors by the date and time indicated.

The COST envelope is to enclose the Public Works Bid Form, Bidder's Bond, Non-collusion Affidavit, DVBE Compliance Certification and Documentation, Small Business Preference and Certification Request (if applicable) and the California Contract code 10162 Questionnaire. The EVALUATION envelope is to enclose the Contractor Trail Construction Project Experience form.

The EVALUATION envelope will be opened first. Only those bidders who meet the minimum qualifications as described above under contractor performance evaluation will have their cost envelope opened. The contractor as indicated on the bid form must qualify at the time of bid submission in order to have their cost envelope opened. The contract will be awarded to the bidder deemed qualified AND with the lowest cost bid.

**Figure F.16 – Sample Supplemental Instruction to Bidders**

Page 1 of \_\_\_\_\_ Contractor: \_\_\_\_\_  
License Number: \_\_\_\_\_

**REDWOOD CREEK TRAIL PROJECT  
CONTRACTOR EXPERIENCE FORM**

A California "A" contractor's license is required to Bid this Contract and through the completion of the project. All contractors and subcontractors shall be properly licensed by the Contractor's State Licensing Board and possess the necessary license classifications for the work they perform under this project. This contract requires a minimum of one hundred and four (104) weeks experience of successfully and safely performing new trail construction using hand crews. For the purpose of this documentation, forty hours of actual trail construction work is equal to one week of experience. This experience shall include a minimum of 26 weeks experience performing rock excavation, dry stone single and multi-tier retaining wall construction and bridge construction. **FILL THIS FORM OUT COMPLETELY AND CONFIRM ADDRESSES AND PHONE NUMBERS. ANY INFORMATION LEFT BLANK OR OUTDATED CONTACT INFORMATION MAY RESULT IN DISQUALIFICATION OF CONTRACT BID.**

Note: Name listed for each reference should include agency, group or individuals for whom work was performed. Current phone numbers must be listed for project supervisor (or other person) familiar with the day-to-day trail construction operation.

**Reference #1**

Name: \_\_\_\_\_ Begin Date: \_\_\_\_\_ End Date: \_\_\_\_\_  
Address: \_\_\_\_\_ Hours per day: \_\_\_\_\_  
\_\_\_\_\_ Project Supervisor: \_\_\_\_\_  
\_\_\_\_\_ Phone: \_\_\_\_\_

Brief description of work:  
\_\_\_\_\_

Quantity of performing rock excavation, dry stone single and multi-tier retaining wall construction and bridge construction: \_\_\_\_\_  
\_\_\_\_\_

**Reference #2**

Name: \_\_\_\_\_ Begin Date: \_\_\_\_\_ End Date: \_\_\_\_\_  
Address: \_\_\_\_\_ Hours per day: \_\_\_\_\_  
\_\_\_\_\_ Project Supervisor: \_\_\_\_\_  
\_\_\_\_\_ Phone: \_\_\_\_\_

Brief description of work:  
\_\_\_\_\_

Quantity of performing rock excavation, dry stone single and multi-tier retaining wall construction and bridge construction: \_\_\_\_\_  
\_\_\_\_\_

**Figure F.17 – Sample Contractor Experience Forms**

Note that a bid is not opened until it is determined that the bidder has met the minimum qualifications. If the contractor does not meet the minimum qualifications, the bid is rejected and left unopened. Bid evaluation is normally assigned to the trail program manager. It is important for this person to call all submitted references to verify the contractor’s work experience and performance. The bidder’s license should also be verified with the Contractors State License Board to determine if the contractor is properly licensed and in good standing. Additionally, contact the Department of General Services to determine if the contractor has any past or current contract violations, and OSHA for past or current safety violations and/or citations.

Most trail construction projects are greatly influenced by the specific terrain, environmental conditions and logistics of that project. Trail projects are far too complicated to estimate without seeing the proposed trail alignment prior to preparing a bid. Therefore, a mandatory site visit (“bid showing”) must be required for all contractors bidding on the project. This requirement along with the bid showing location, date, and time are identified in the advertisement in the contract register. Contractors must attend the entire bid showing and fill out the sign-in sheet to be eligible to bid on the contract in the State Contract Register. (See Figure F.18.).

The bid form for a private sector trail construction contract is similar to the one used for government contractors except it does not have production rates. (See Figure F.19.)

<b>Mandatory Trail Construction Bid Showing Sign In Sheet</b>					
<p><b>NOTICE:</b> This is a MANDATORY bid showing. The only firms eligible to submit a bid for this project will be the firms listed below, whose representatives stay for the full site inspection. Any person who signs this attendance sheet certifies under penalty of perjury that he/she is a current employee of the firm listed below and duly authorized to represent the firm</p>					
<p>PROJECT TITLE: Redwood Creek Trail Reroute Project</p>		<p>DATE: <u>August 5, 2012</u></p>	<p>TIME: <u>10:00 AM</u></p>		
NAME/TITLE (PLEASE PRINT)	COMPANY NAME STREET ADDRESS CITY, STATE, ZIP CODE	PHONE NUMBER/ E-MAIL ADDRESS	LICENSE NUMBER/ CLASS	BIDDING AS PRIME (YES/NO)	SIGNATURE
		Phone:			In:
		E-mail:			Out:
		Phone			In:
		E-mail:			Out:
		Phone			In:
		E-mail:			Out:
		Phone			In:
		E-mail:			Out:

**Figure F.18 – Sample Mandatory Bid Showing Sign-In Sheet**

<b>CONTRACT BID FORM</b>				
<p>The bidder hereby proposes to furnish all tools, equipment and materials specified in the Attached contract documents to perform the Redwood Creek Trail Reroute at Prairie Creek Redwoods State Park, Humboldt County, California complete and ready for use in accordance with the contract documents attached hereto for the following stipulated sums which shall include qualified personnel, all applicable taxes and other expenses.</p>				
Trail Construction Items	Item Totals	Unit	Item Unit Cost	Total Item Cost
Trail Brushing const. (light)	324	lin ft		\$0.00
Trail Brushing const. (heavy)	5,007	lin ft		\$0.00
Trail Brushing const. (extra heavy)	250	lin ft		\$0.00
Clearing, tree& stob removal, light	324	lin ft		\$0.00
Clearing, tree& stob removal, heavy	5,257	lin ft		\$0.00
Down Tree Removal 1'- 3' chainsaw	70	hr/ea		\$0.00
Trio Maintenance 5' tread	91	lin ft		\$0.00
Trail Construction 5' tread <20%	607	lin ft		\$0.00
Trail Construction 5' tread >20%<40%	695	lin ft		\$0.00
Trail Construction 5' tread >40%<60%	2,228	lin ft		\$0.00
Trail Construction 5' tread >60%<90%	2,053	lin ft		\$0.00
Crushed Rock specified Lift >300'<800'	580	cu ft		\$0.00
Crushed Rock specified Lift >800'<1300'	1,250	cu ft		\$0.00
Crushed Rock specified Lift >1300'<1800'	2,055	cu ft		\$0.00
Crushed Rock specified Lift >1800'<2500'	3,500	cu ft		\$0.00
Crushed Rock specified Lift >2500'<3200'	3,500	cu ft		\$0.00
Crushed Rock specified Lift >3200'<3900'	3,500	cu ft		\$0.00
Armored Swale Crossing	768	cu ft		\$0.00
Dry Stone Single Tier Crib or Causeway Wall	108	cu ft		\$0.00
Dry Stone Multi Tier Structural Wall	80	cu ft		\$0.00
Soldier Pile Retaining Wall	30	sq ft		\$0.00
Plastic Wood Cribbed (Interlocking)Retaining Wall	40	sq ft		\$0.00
Import Rock > 800'< 1300'	96	cu ft		\$0.00
Import Rock > 1300'< 1800'	176	cu ft		\$0.00
Import Rock > 1800'< 2500'	96	cu ft		\$0.00
Import Rock > 2500'< 3200'	128	cu ft		\$0.00
Import Rock > 3200'< 3900'	466	cu ft		\$0.00
Galvanized Steel Stringer Design Bridge	28	lin ft		\$0.00
Galvanized Steel Stringer Design Bridge	32	lin ft		\$0.00
Fiber Glass I Beam Stringer Design Bridge	16	lin ft		\$0.00
Fiber Glass I Beam Stringer Design Bridge	16	lin ft		\$0.00
Fiber Glass I Beam Stringer Design Bridge	24	lin ft		\$0.00
Fiber Glass I Beam Stringer Design Bridge	24	lin ft		\$0.00
Equestrian Puncheon 5' wide	20	lin ft		\$0.00
Export Soil < 100' )	3,348	cu ft		\$0.00
Export Soil > 200' < 300' )	3,000	cu ft		\$0.00
Install Trail Signs (metal)	1	ea		\$0.00
<b>Total Bid</b>				<b>\$0</b>
	<b>Words</b>			<b>Figures</b>
<p>In case of a discrepancy between the item unit cost and the item total cost , the item unit cost shall prevail; however, if the amount set forth as an item unit cost is ambiguous, unintelligible or uncertain for any cause, or is omitted, the amount set forth in the "Item Total Cost" column shall be divided by the estimated totals needed for the item and the price thus obtained shall be the item unit cost. In case of discrepancy between the stipulated totals and the actual sum of the totals, the actual sum of all item totals shall prevail.</p>				
<p>The foregoing quantities are approximate only, being given solely as the basis for the preparation and comparisons of bids, and the State does not expressly or by implication, agree that the actual amount of work will correspond therewith. The State reserves the right to increase or decrease the amount of any item or eliminate any item or items as may be deemed necessary or advisable by the State's Representative. Such changes shall not affect the unit price of that or any item.</p>				
SUBMIT BID FORM IN DUPLICATE				

**Figure F.19 – Sample Private Sector Contract Bid Form**

Hourly production rates are not used on this bid form. The contractor identifies the unit cost for each trail construction item that includes the costs of labor, materials, tools, equipment, travel, lodging, insurance, bonding, etc. It also includes the profit margin. The cost per item and total item cost are used to establish the amount of compensation to the contractor. Having clearly defined unit costs for every trail construction item is essential to avoid costly change orders.

The contractor must also include with the bid a project schedule to ensure that the contractor has identified the major tasks to be performed, the time required to complete each major task, and the logical progression of work. The schedule also provides a critical path to monitor the performance of the contractor. (See Figure F.20.)

Other items that need to be included in the contract document would be the trail work log, trail project specifications/descriptions, trail feature/structure diagrams, daily work record, spike camp specifications, bear management plan, wildfire prevention plan, and project location maps. All of these items would be the same as those developed for the government contractor with the exception of the daily work record.

For private sector contracts, the Daily Work Record is slightly modified to record the total person hours instead of crew hours, and to include the proper signatures. It is used to identify and quantify work completed. It is also used to monitor the production of the contractor and evaluate their progress. Finally, the data from this form can be used to establish production rates for private sector trail contractors. This information is useful in estimating future private trail contractor construction costs.

The role of contracting agencies' representatives in private sector contracts is different than government labor force contracts. The contracting agencies' representative does not perform any work or train or assist the private contractor. Their role is to clarify the contract, inspect the work performed by the contractor, approve completed work that meets the specifications and working drawings, reject completed work that does not meet these requirements, record and quantify the completed work, and obtain the required signatures on the Daily Work Record. Unless otherwise specified in the contract, they do not provide any tools, equipment, or materials to the contractor. However, park staff must be present any time the contractor is working on-site.

Because these are competitive bid contracts, the conditions set forth in the contract bid documents cannot be altered after the contract has been awarded without violating the competitive bid process. For example, if one of the contractor's powered toters breaks down, the contractor may not use the agency's toter because the use of agency equipment was not identified in the bid documents. Similarly, the agency cannot provide labor or building materials, or approve the substitution of significantly different building materials. The contracting agency's representative must remain neutral and strictly adhere to the contract.



Because the contract can't be substantively changed after it is bid, it needs to be comprehensive and explicit. Plans and specifications should depict accurate locations, measurements, and quantities. Parameters that are unknown or subject to change should be identified. In the event there is a need to increase or decrease a line item, the following documents can be used:

- (Contract Bulletin) For changes that are minor and do not affect the schedule or cost of the project. This document remains in the district's project files and does not become a part of the agreement or subsequent amendments. (See Figure F.21.)
- (Contract Field Order) For changes that are substantial, exceed the contract monetary amount or affect the project schedule. This document must accompany the amended contract for processing. (See Figure F.22.)

DISTRIBUTION: Original - Contractor Copies - District	State of California - The Resources Agency DEPARTMENT OF PARKS AND RECREATION	CONTRACT NO. <hr/> CONTRACT DATE <hr/> PROJECT NO.
<h2 style="margin: 0;">CONTRACT BULLETIN</h2> <p style="margin: 0;">No. _____</p>		
DISTRICT NAME		PARK UNIT NAME
PROJECT NAME		
PROJECT LOCATION		
CONTRACTOR NAME		
CONTRACTOR ADDRESS		CITY/STATE/ZIP CODE
DESCRIPTION OF CHANGE <i>(that does not affect the critical path schedule or cost of the project)</i>		
<p><i>Contractor waives any claim for further adjustments of the contract amount and contract time related to the above-described change in the work.</i></p>		
DISTRICT REPRESENTATIVE RECOMMENDATION SIGNATURE      DATE	CONTRACTOR REPRESENTATIVE ACCEPTANCE SIGNATURE      DATE	
▶	▶	
DISTRICT REPRESENTATIVE NAME <i>(print or type)</i>	CONTRACTOR REPRESENTATIVE NAME <i>(print or type)</i>	
DISTRICT PROJECT MANAGER REVIEW/RECOMMENDATION SIGNATURE	TITLE	
▶		

**Figure F.21 – Sample Contract Bulletin (DPR 538A)**

DISTRIBUTION: Original - Contractor Copies - District	State of California - The Resources Agency DEPARTMENT OF PARKS AND RECREATION	CONTRACT NO. <hr/> CONTRACT DATE <hr/> PROJECT NO.
<h2 style="margin: 0;">CONTRACT FIELD ORDER</h2> <p style="margin: 0;">No. _____</p>		
<p><b>Note: This Field Order will be superseded by a Change Order/Amendment that will include the scope of the change in the work, and any actual adjustment of the contract amount and the contract time, if applicable.</b></p>		
DISTRICT NAME		PARK UNIT NAME
PROJECT NAME		
PROJECT LOCATION		
CONTRACTOR NAME		
CONTRACTOR ADDRESS		CITY/STATE/ZIP CODE
DESCRIPTION OF CHANGE		
ESTIMATED ADJUSTMENT OF CONTRACT AMOUNT		ESTIMATED ADJUSTMENT OF CONTRACT TIME
DISTRICT REPRESENTATIVE SIGNATURE _____ DATE _____ ▶		CONTRACTOR REPRESENTATIVE SIGNATURE _____ DATE _____ ▶
DISTRICT REPRESENTATIVE NAME ( <i>print or type</i> )		CONTRACTOR REPRESENTATIVE NAME ( <i>print or type</i> )
TITLE		TITLE

**Figure F.22 – Sample Contract Field Order (DPR 538B)**