KOCC **Landing Construction Cost** 21099 CCF

Helicopter Landing Construction

Landings will be constructed at the time the temp road is constructed. Natural openings will be used where possible.
Approximately 1/2 acre in size. Approximately 0 landings will be needed.

	Cost/UM	# Days	Hrs	Cost	
Falling landing area	$250.00	0		$0.00	
Clearing area	$500.00	0		$0.00	
Shaping Landing Area (Excavator or cat & dump truck)	$200.00	0	0	$0.00	
Reshaping of road surfaces (2 hours/ landing)	$500.00		0	$0.00	included in Temp RD Cost
				$0.00	
			$/CCF	**$0.00**	

Ground Based Landing Construction

Landings will be constructed at the time the temp road is constructed. Natural openings will be used where possible.
Approximately 1/4 acre in size. Approximately 5 landings (rest are shared cable landings) will be needed. Most will be on existing landings

	Cost/UM	# Days	Hrs	Cost	
Falling landing area	$250.00	1		$250.00	
Clearing area	$500.00	1		$500.00	
Shaping Landing Area (Loader or Cat)	$100.00		8	$800.00	
Reshaping of road surfaces (2 hours/ landing)	$500.00		0	$0.00	included in Temp RD Cost
				$1,550.00	
			$/CCF	**$0.07**	

Skyline Landing Construction All units will need to have landings constructed or reconstructed. Landings on system roads will be off road surface if possible.
Landings will be constructed at the time the temp road is constructed. Natural openings will be used where possible.
Approximately 1/4 acre in size. Approximately 158 landings will be needed with approximately 110 landings on system road. 48 are on other roads and need some amount of improvement.
Approximately 4 Landings can be constructed per day Landings along the ridge line will be used for both sides of the unit.

	Cost/UM	# Days	Hrs	Cost	
Additional Falling of landing area	$250.00	5		$1,250.00	
Clearing area	$500.00	5		$2,500.00	
Shaping Landing Area (Loader or Cat) 2 hrs/ landing	$100.00		100	$10,000.00	
Reshaping of road surfaces (1 hr per landing)	$500.00		110	$55,000.00	of system roads
				$68,750.00	
			$/CCF	**$3.26**	

Total Landing Construction Cost **$3.33** $/CCF

KOCC Sale Volume 21099 CCF

Road Name	new const	reconst	reopen	total ft	Subdivision	Travel Way	Rock Depth	CY Rock	Culverts			
T1			1450	1450	32 A,B,C	12	12	752	3	18"		
T2			816	816	32A	12	12	423				
T3	1083			1083	17B	12	12	562	1	18"		
T4			524	524	17B	12	6	126				
T5			777	777	17B	12	6	187				
T6	632			632	24	12	12	328				CY Rock
T7			1238	1238	26A,B	12	12	642			add first 200' as crushed	104
T7			1290	1290	26A,B	12	6	311				
T8			2276	2276	27	12	12	1180			add first 200' as crushed	104
T9			485	485	27	12	12	251				
T10	610			610	27	12	12	316				
T11			1212	1212	19B	12	6	292	2	18"	add first 200' as crushed	48
T12			2098	2098	18	12	12	1088			add first 200' as crushed	104
T13	312			312	17B	12	12	162	1	18"		
T14			250	250	14	12	12	40				359
T15			179	179	14	12	6	43				
	2637	0	12595	15232			Totals =	6702	7			
								1000	safety spurs and heli landings			
Miles	0.50	0.00	2.39	2.88								
							Total =	7702				

Average Rock Haul for pit run one way is 13.0 miles (Bonidu Pit 2900950 road)
Average Rock Haul for crushed one way is 0 miles, na

New construction - as shown in above table. Use cost of $45,000/mi from past district experience.

Reconstruction of existing grade includes some removal of timber , debris removal, drainage restoration, culvert placement, blading and shaping. Rock as shown in above table. Use cost of 70 % of new const

Reopening of existing grade includes some removal of brush, debris removal, drainage restoration, pit run and/or crushed rock placement as shown in above table, blading and shaping Use cost of 50 % of new const

Clearing limits will not exceed 16 feet unless otherwise designated.

New construction temp 0.5 miles			
0.5 miles X	$	45,000	$22,500
crushed x	$	0	$0.00
Reconstruction of temp rd 0.00miles			
0 miles x	$	31,500	$0
Reopening of temp rd 2.39 miles			
2.39 miles x	$	22,500	$53,775
Total =			$76,275

Estimated CY of Rock Needed

Temp. roads	Pit Run	Crushed	
All	6702	359	
other	1000		safety spurs and heli landings
Total	7702		

		18"	24"	36"
Culverts	$450/culvert	$3,150.00		

7 culverts may be needed as relief culverts (18")
Placement of the culverts will be determined as described in Sensitive Construction of temp roads (C5.1, Option 1)

Rock Haul

		yards	loads	$/load	Cost	$/load =	26 miles RTrip, 18.8 @ 20 mph, 7.2 @ 40 mph = 67 min RTrip
	Pit Run	6,702	670	$205.00	$137,391.00		round to 75 minutes
safety spurs and heli landings	Pit Run	1,000	100	$205.00	$20,500.00		1 load every 1.25 hours
	Crushed	359	36	$400.00	$14,360.00		dump + excavator (half time) = $164/hr
							$164 x 1.25 hours = $205/load
				Total	$172,251.00		

Close Temp Roads - includes culvert removal, barrier placement, scarification for rehab, ~14inches. Seeding and fert is included in the erosion control appraisal:
Approximately 1000 feet per day estimated.
Allow 16 days to use shovel to close roads at $1500/day includes pr and r etc $24,000

total $275,676.00

cost per CCl **$13.07**

Erosion Control - **KOCC** 21099 CCF

		# Landing	Acres			
Ground based acres	58.9	5	1.25			ground landings are also shared with cable and counted as cable
Skyline acres	272.2	158	39.5	40.75	ac	
Helicopter acres	0	0	0			

Skid Roads; ground based expect up to 15% of the acreage to be disturbed . Approximately 10% of this acreage will require

seed and fert...	0.15	57.9	0.1			0.9	ac	use 10% of length
	Length	Width	Sq FT/ Ac					
Temp Roads:	9858	14	43560	0.1		0.3	ac	
					Total ac	41.9	seed and fert ac	use 10% of length

Seed and fertilize: one person can seed and fert 2.2 ac/day;

Acres	Ac/Day	Days	$/Day		
41.9	2.2	19	150	$2,856.82	labor

materials and equipment; 41.9 ac x $175/ ac =

Ac	$/Ac		
41.9	175	$7,332.50	materials and equipment seed and fert

scarify skid roads: district experience on recent sales shows scarification cost to be $100/ac over entire sale acreage

Ac	$/Ac		
57.9	100	$5,790.00	scarification

Total $15,979.32

21% overhead:	1.21	$15,979.32	$19,334.98

Cost/ CCF **$0.92**

Estimated Purchaser Cost:

The total estimated purchaser cost is estimated at $18,508.20 or $313.70 per acre for the 59 acres. This was estimated by the following and calculated on the spread sheet below.

Covering and re-piling of the landing piles with one laborer at $19.92 at 5 hour per day for 59 days for covering, restacking and slash pull back is $5,876.40. One Loader with operator at $95.00 per hour for 120 hours is $11,400. Pile covering, chain saw fuel, 2 cycle oil and bar oil is estimated at $463.00. With 16 rolls of visqueen at $26.00 per roll for $416.00, 6 gallons saw fuel at $4.00 a gallon for $20.00, 1-6/2.6 fl oz of 2 cycle mix at $14.00 per 6 for $14.00 and 1 gallons of bar oil at $13.00 per gallon for $13.00.

Directional felling for was calculated at $306.80 (*See worksheet 3*)

Olympic National Forest KV/BD Cost Estimation Sheet (Pile Burning Work Conducted by Forest/Slash Prepped by Purchaser)

Sale Unit	KOCC	Treatment Type		Total Acres Treated	59.2

Personnel Costs

Permanent Employees with Benefits				Admin time		Pile Burning			Other		Days Per	Per Diem	Total
Grade	# Needed	$/HR	OT $/HR	Base Hrs	OT Hrs	Base Hrs	OT Hrs		Base Hrs	OT Hrs	Person	Rate	
GS-12		$39.87	$40.07										$0.00
GS-11	1	$33.26	$40.07	8		8							$532.16
GS-09	2	$27.49	$40.07	8		12							$1,099.60
GS-07	2	$22.48	$33.72	16		10	5				5	$61.00	$2,116.16
GS-06	2	$20.23	$30.35	15		40	10				5	$61.00	$3,442.30
GS-05	2	$18.14	$27.21			40	10				5	$61.00	$2,605.40
GS-04		$16.22	$24.33										$0.00
GS-03		$14.45	$21.68										$0.00
Totals				**47**	**0**	**110**	**25**		**0**	**0**	**15**		**$9,795.62**

Vehicle Costs

Vehicle		Mileage	Hourly								Total
Type	Number	Rate	Rate	Mileage	Hours	Mileage	Hours		Mileage	Hours	
Type 3	E391		$27.00				40				$1,080.00
Type 6	E692	$1.13				600					$678.00
6 Pack	1778	$0.50				600					$300.00
Patrol		$0.60									$0.00
Patrol		$0.60									$0.00
Battalion		$0.45									$0.00
Battalion	7746	$0.45									$0.00
Division		$0.40				400					$160.00
Totals				**0**	**0**	**1600**	**40**		**0**	**0**	**$2,218.00**

Total Project Costs

Admin Costs	Pile Burning Costs		Other Costs + Supplies	Per Diem Totals
$2,032.18	$8,151.44		$910.00	$1,830.00

Sale Size (acres)	Cost/treated acre	Cost/ acre 2017	Total 2017
59.2	$218.30	$237.09	$14,035.73

Total Cost 2014
$12,923.62

Supplies

Item	Cost/Unit	# Units	Total
Torch Fuel	$5.00	50	$250.00
Fusee			$0.00
Signage			$0.00
Propane	$1.50	440	$660.00
			$0.00
Totals			**$910.00**

Treatment Types: DF=Directional Falling; MLS=Machine Lop and Scatter; HLS=Hand Lop and Scatter; HP=Hand Pile and Cover; MP=Machine Pile and Cover; PB=Pile Burning; A=Admin; M=Fuels Monitoring

Pay Rates based on Seattle area locality at step 5.

Work Sheet 1

USDA - FOREST SERVICE — REPORT OF TIMBER SALE — R6-FS-2400-17 (04/10)
Stewardship: N — APPRAISAL SUMMARY CCF — Version 1421 (TEA 06-14)

Region: 06	Sale Name: KOCC	Appraisal Date:	06/30/14
Forest: 09 Olympic	Sale Number: 95410	Base Period Ending:	03/31/14
District: 05 Soleduck	Appraise to: Beaver	Competition Factor:	20%
Salvage: N	Appraiser: McNealy	Essential KV Cost:	0

SELLING PRICES	1	2	3	4	5	6	7	Average	Total
1. Species	D-fir	W Hem	Alder						
2. Species Code	205	263	350						
3. Product/Unit	01-03	01-03	01-03						
4. Volume	6,688	13,185	1,226						21,099
5. Base Period Price	110.68	30.11	65.13					57.68	
6. Base Period Index	234.55	200.53	88.40					204.80	
7. Current Index	221.64	199.72	88.40					200.20	
8. Rapid Market Adj	10.40							3.30	
9. Market Adj BP Price	108.17	29.30	65.13					56.38	
10. Unusual Adjustment	10.00	10.00	10.00					10.00	
11. GBCv-Nonsaw Adj									
12. Product Quality Adj	4.97	6.12	-15.00					4.53	
13. Adj Base Period Price	123.14	45.42	60.13					70.91	1,496,142.40

COSTS	Zone Avg Cost/UM	Est Sale Cost/UM	Adj to BP Cost
14. Stump to Truck	116.53	207.54	-91.01
15. Haul/Scale	30.71	23.43	7.28
16. Road Maintenance	10.87	12.64	-1.77
17. Contract	6.28	3.32	2.96
18. Development & Other	5.77	16.40	-10.63
19. Road Const & Recon		4.19	-4.19
20. Total (lines 14-19)	170.16	267.52	-97.36

ROADS	Km	Miles	Cost
Specified Road Con			
Specified Road Rec	1.19	.74	88,329
Temporary Road Con	4.64	2.88	275,676
Haul Miles		20	

DEPOSITS:	Br Disp/UM	Rd Mtc/UM	C(T)5.213#
	1.52	6.34	

ADVERTISED RATES	1	2	3	4	5	6	7	Average	Total
21. Predicted Bid Rate	25.78	-51.94	-37.23					-26.45	-558,056.24
22. Competition Adjustment	5.16	-10.39	-7.45					-5.29	-111,615.77
23. Property Value									
24. Indicated Adv Rate	20.62	-41.55	-29.78					-21.16	-446,440.47
25. Base Rate	3.00	3.00	1.00					2.88	60,845.00
26. Adjustment	-17.62	44.55	30.78					24.04	507,285.47
27. Advertised Rate	3.00	3.00	1.00					2.88	60,845.00

CCF to MBF Rate Factors:	1.8871	1.8753	2.0231					1.8870	
CCF to MBF Volume Factors:	.5299	.5333	.4943					.5299	
MBF to CCF Index Factors:	.52	.52	.52						
CCF Base Index for A(T)5a:									
CCF Wtd Avg Del Log Price:	351.30	317.00	355.97						
MBF Volume:	3,544	7,031	606						11,181
Total Tons Removed:	19,611	42,649	3,862						66,122

Net CCF to Tons Conversion Factor for C8.3#(Option 1) or K-I.3.1#: 3.1339 DEPOSITS/Ton BD: .49 RM: 2.02