



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
CLEAR CONNECTION
Sale FG-341-2024-W01015-01

District: Forest Grove

Date: September 19, 2023

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,598,664.05	\$9,780.40	\$2,608,444.45
		Project Work:	(\$199,700.00)
		Advertised Value:	\$2,408,744.45



Timber Sale Appraisal
CLEAR CONNECTION
Sale FG-341-2024-W01015-01

District: Forest Grove

Date: September 19, 2023

Timber Description

Location: Portions of section 17, T4N, R5W, W.M. Columbia County, OR.

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	23	0	98
Western Hemlock / Fir	12	0	98
Alder (Red)	17	0	95
Maple	14	0	95

Volume by Grade	2S	3S	4S	Camprun	Total
Douglas - Fir	4,697	1,162	0	0	5,859
Western Hemlock / Fir	0	0	9	0	9
Alder (Red)	0	0	0	53	53
Maple	0	0	0	27	27
Total	4,697	1,162	9	80	5,948

Comments: LOCAL POND VALUES, JUNE 2023

WESTERN REDCEDAR AND OTHER CEDARS:

STUMPAGE PRICE = POND VALUE - DOUG-FIR LOGGING COST

\$822.01 = \$1,151 - \$328.99

NOBLE FIR AND OTHER CONIFERS:

STUMPAGE PRICE = POND VALUE - WESTERN HEMLOCK LOGGING COST

\$204.23 = \$562.00 - \$357.77

BRANDING AND PAINTING ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$5.00/GAL

HAULING COST ALLOWANCE = \$1,250/DAY

OTHER COSTS (WITH PROFIT & RISK ADDED): N/A

OTHER COSTS (NO PROFIT & RISK ADDED):

EQUIPMENT CLEANING: 3 PIECES @ \$1,000/PIECE = \$3,000

MACHINE TIME TO BLOCK/WATERBAR ROADS AND SKID TRAILS:

30 HOURS X \$150/HOUR = \$4,500

TOTAL OTHER COSTS (NO P&R) = \$7,500

SLASH TREATMENT: 50 ACRES X \$250/ACRE = \$12,500

ROAD MAINTENANCE (INCLUDES SPOT ROCKING, GRADING, & ROLLING):

MOVE IN: \$1,580.37

GENERAL ROAD MAINT: 12.65 miles X \$2,354.05 = \$29,778.73

TOTAL ROAD MAINTENANCE: \$31,359.10 / 5,948 MBF = \$5.27/MBF



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Logging Conditions

Combination#: 1	Douglas - Fir	100.00%
	Western Hemlock / Fir	100.00%
	Alder (Red)	100.00%
	Maple	100.00%
Logging System:	Shovel	Process: Harvester Head Delimbing
yarding distance:	Short (400 ft)	downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	14	bd. ft / load: 4600
cost / mbf:	\$155.28	
machines:	Forwarder	
	Harvester	



"STEWARDSHIP IN FORESTRY"

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Logging Costs

Operating Seasons: 2.00	Profit Risk: 10%
Project Costs: \$199,700.00	Other Costs (P/R): \$0.00
Slash Disposal: \$12,500.00	Other Costs: \$0.00

Miles of Road

Road Maintenance: \$5.27

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	2.0	4.6
Western Hemlock / Fir	\$0.00	2.0	4.0
Alder (Red)	\$0.00	3.0	3.5
Maple	\$0.00	3.0	3.5



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal CLEAR CONNECTION Sale FG-341-2024-W01015-01

District: Forest Grove

Date: September 19, 2023

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$155.28	\$5.38	\$1.48	\$138.59	\$0.00	\$30.07	\$2.10	\$2.00	\$0.00	\$334.90
Western Hemlock / Fir									
\$155.28	\$5.38	\$1.48	\$159.38	\$0.00	\$32.15	\$2.10	\$2.00	\$0.00	\$357.77
Alder (Red)									
\$155.28	\$5.53	\$1.48	\$125.00	\$0.00	\$28.73	\$2.10	\$2.00	\$0.00	\$320.12
Maple									
\$155.28	\$5.53	\$1.48	\$125.00	\$0.00	\$28.73	\$2.10	\$2.00	\$0.00	\$320.12

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$778.12	\$443.22	\$0.00
Western Hemlock / Fir	\$0.00	\$562.00	\$204.23	\$0.00
Alder (Red)	\$0.00	\$493.00	\$172.88	\$0.00
Maple	\$0.00	\$343.00	\$22.88	\$0.00



Timber Sale Appraisal
CLEAR CONNECTION
Sale FG-341-2024-W01015-01

District: Forest Grove

Date: September 19, 2023

Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00
Maple	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	5,859	\$443.22	\$2,596,825.98
Western Hemlock / Fir	9	\$204.23	\$1,838.07
Alder (Red)	53	\$172.88	\$9,162.64
Maple	27	\$22.88	\$617.76

Gross Timber Sale Value

Recovery: \$2,608,444.45

Prepared By: SHAMUS SMITH

Phone: 503-357-2191

TIMBER SALE SUMMARY
Clear Connection
#FG-341-2024-W01015-01

1. **Location:** Portions of Sections 17, T4N, R5W, W.M., Columbia County, Oregon.
2. **Type of Sale:** The Timber Sale Area consists of one 117 acre Modified Clearcut. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF; 100% Columbia County.
4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS Pro software.
5. **Cruise:** The Timber Sale was cruised by ODF Cruisers in July of 2023. For more information, see Cruise Report.
6. **Timber Description:** The Timber Sale Area consists of a well-stocked, 76-84 year-old stand of Douglas-fir with minor components of western hemlock, red alder, and bigleaf maple. This timber stand has an average of 222 ft² of basal area, an average Douglas-fir DBH of 23 inches. The estimated average net Douglas-fir volume is approximately 50.1 MBF per acre.
7. **Topography and Logging Method:** Slopes within the Timber Sale Area range from 5% to 35% with variable aspects. The Timber Sale Area is 100% ground-based yarding. The average horizontal skid trail length is 400 feet and the maximum is approximately 800 feet.
8. **Access:**
Sale Advertisement Route Due to Blockage:
Access to the Timber Sale Area is on surfaced all-weather roads. From Forest Grove, travel north on Highway 47 through Banks then merge onto Highway 26 westbound and continue for approximately 11.5 miles to Timber Road. Turn right on Timber Road and proceed north for approximately 5.1 miles to Clear Creek Road. Turn left on Clear Creek Road and proceed for 0.5 miles to the Weyerhaeuser gate. Proceed right to Columbia River Mainline. Turn left onto Columbia River Mainline and proceed 0.3 miles to a road intersection. Turn right at the intersection onto an unnamed road and proceed for 0.6 miles to a road intersection. Turn left at the intersection onto an unnamed road and proceed for 1.2 miles to a road intersection. Turn right at the intersection onto an unnamed road and proceed for 2.3 miles to Pit Road. Turn right on Pit Road and follow for 0.4 miles to access the western portion of the Timber Sale Area. There are two gates along this route that will require a key which can be obtained from the Forest Grove District Office.

Haul Route Directions:

Access to the Timber Sale Area is on surfaced all-weather roads. From Forest Grove, travel north on Highway 47 through Banks then merge onto Highway 26 westbound and continue for approximately 20 miles to McGregor Road, which is just before mile marker 29. Turn right on McGregor Road and continue for approximately 8 miles to Eastside Grade. Turn left onto Eastside Grade and continue for 2.5 miles to the road block in the northwest corner of Section 17, as shown on Exhibit A. The remainder of the haul route follows the new construction road to Eastside Grade to the northwest portion of the Timber Sale Area.

9. Projects:

Project No. 1: Rocked Road Construction	\$15,923.87
Project No. 2: Road Improvement	\$138,193.01
Project No. 3: Road Vacating	\$45,583.12

Total Credit for all Projects	\$199,700.00
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PROJECT COST SUMMARY SHEET

Timber Sale: Clear Connection
Sale Number: FG-341-2024-W001015-01

PROJECT NO. 1: ROCKED ROAD CONSTRUCTION

	Road Segment	Length	Cost
	C to D	7+40	\$15,372.88
		7+40 stations	
		0.14 miles	
Total Rock =			
	cy	1½" - 0	
	529 cy	4" - 0	
	12 cy	Large Riprap	
		Move-in =	\$550.83
		TOTAL PROJECT COST =	\$15,923.71

PROJECT NO. 2: ROAD IMPROVEMENT

	Road Segment	Length	Cost
	A to B	493+75	\$26,351.87
	B to C	18+40	\$2,236.61
	D to E	50+75	\$3,010.50
	E to F	66+00	\$57,667.03
	G to H	12+20	\$15,585.14
	I to J	20+50	\$18,820.22
	K to L	13+40	\$9,739.97
		675+00 stations	
		12.78 miles	
Total Rock =			
	144 cy	1½" - 0	
	5,511 cy	4" - 0	
	12 cy	Riprap	
		Move-in =	\$4,780.32
		TOTAL PROJECT COST =	\$138,191.66

PROJECT NO. 3: ROAD VACATING

	Road Segment	Length	Cost
	V1 to V2	2+75	\$7,397.62
	V3 to V4	29+65	\$36,610.15
		32+40 stations	
		0.61 miles	
Total Rock =			
	100 cy	Riprap	
		Move-in =	\$1,576.86
		TOTAL PROJECT COST =	\$45,584.62
		TOTAL CREDITS =	\$199,700.00

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Clear Connection	Sale Number:	FG-341-2024-W001015-01
Road Segment:	A to B	Improvement:	493+75 stations 9.35 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	1.50	ac @	\$1,692.00	per acre =	\$2,538.00
Clean culvert inlet & outlet, scatter waste	2	ea @	\$27.50	per ea =	\$55.00
Construct settling pond	6	ea @	\$27.50	per ea =	\$165.00
Grade, ditch, & roll	493.75	sta @	\$39.65	per sta =	\$19,577.19

TOTAL IMPROVEMENT COSTS = \$22,335.19

CULVERTS

Culverts and Bands					
24" Diameter	30	lf @	\$31.90	per lf =	\$957.00
30" Diameter	40	lf @	\$42.95	per lf =	\$1,718.00
Markers & Stakes					
Culvert markers	3	ea @	\$12.00	per ea =	\$36.00
Additional Installation Cost					
Repair culvert outlet at: 445+85, 452+95, 468+40	1.50	hrs @	\$192.50	per hr =	\$288.75

TOTAL CULVERT COSTS = \$2,999.75

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$8.53	\$2.24	\$0.55	24	\$271.68
				Subtotal =	24	\$271.68

Totals	All Rock =	24
	1½" - 0	24

TOTAL ROCK COSTS = \$271.68

EROSION CONTROL

Grass seed & fertilizer	1.50	ac @	\$467.50	per ac =	\$701.25
Straw mulch bale	4	ea @	\$11.00	per ea =	\$44.00

TOTAL EROSION CONTROL COSTS = \$745.25

TOTAL PROJECT COST = \$26,351.87

SUMMARY OF CONSTRUCTION COST

Timber Sale: Clear Connection
 Road Segment: B to C

Sale Number: FG-341-2024-W001015-01
 Improvement: 18+40 stations
0.35 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter) 0.22 ac @ \$1,692.00 per acre = \$372.24
 Grade, ditch, & roll 18.40 sta @ \$39.65 per sta = \$729.56

TOTAL IMPROVEMENT COSTS = \$1,101.80

CULVERTS

Culverts and Bands
 18" Diameter 30 lf @ \$22.05 per lf = \$661.50
 Markers & Stakes
 Culvert markers 3 ea @ \$12.00 per ea = \$36.00
 Additional Installation Cost
 Repair culvert inlet at: 8+30, 11+95 1 hrs @ \$192.50 per hr = \$192.50

TOTAL CULVERT COSTS = \$890.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$8.53	\$2.75	\$0.55	12	\$141.96
				Subtotal =	12	\$141.96

Totals

All Rock =	12
1½" - 0	12

TOTAL ROCK COSTS = \$141.96

EROSION CONTROL

Grass seed & fertilizer 0.22 ac @ \$467.50 per ac = \$102.85

TOTAL EROSION CONTROL COSTS = \$102.85

TOTAL PROJECT COST = \$2,236.61

SUMMARY OF CONSTRUCTION COST

Timber Sale: Clear Connection
 Road Segment: C to D

Sale Number: FG-341-2024-W001015-01
 Construction: 7+40 stations
0.14 miles

PROJECT NO. 1: ROCKED ROAD CONSTRUCTION

CONSTRUCTION

Clearing & grubbing (scatter)	0.85	ac @	\$1,692.00 per ac =	\$1,438.20
Balanced road construction	7.40	sta @	\$120.00 per sta =	\$888.00
Forest Road Gate				
20' Gate Construction & Installation	1	ea @	\$5,236.00 per ea =	\$5,236.00
Construct tank trap	1	ea @	\$55.00 per ea =	\$55.00
Grade, ditch, & roll	7.40	sta @	\$39.65 per sta =	\$293.41

TOTAL CONSTRUCTION COSTS = \$7,910.61

CULVERTS

Culverts and Bands				
18" Diameter	30	lf @	\$22.05 per lf =	\$661.50
Markers & Stakes				
Culvert markers	1	ea @	\$12.00 per ea =	\$12.00

TOTAL CULVERT COSTS = \$673.50

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Base rock	4" - 0	\$1.18	\$9.46	\$1.35	481	\$5,767.19
Junction	4" - 0	\$1.18	\$9.46	\$1.35	48	\$575.52
Blocking Boulders	36" - 24"	\$2.05	\$14.06	\$1.35	12	\$209.56
				Subtotal =	541	\$6,552.27

Totals	All Rock =	541
	4" - 0	529
	36" - 24"	12

TOTAL ROCK COSTS = \$6,552.27

EROSION CONTROL

Grass seed & fertilizer	0.43	ac @	\$550.00 per ac =	\$236.50
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TOTAL EROSION CONTROL COSTS = \$236.50

TOTAL PROJECT COST = \$15,372.88

SUMMARY OF CONSTRUCTION COST

Timber Sale:	<u>Clear Connection</u>	Sale Number:	<u>FG-341-2024-W001015-01</u>
Road Segment:	<u>D to E</u>	Improvement:	<u>50+75</u> stations
			<u>0.96</u> miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT				
Clearing & grubbing (scatter)	0.59	ac @	\$1,692.00 per acre =	\$998.28
Grade, ditch, & roll	50.75	sta @	\$39.65 per sta =	\$2,012.23
TOTAL IMPROVEMENT COSTS =				<u>\$3,010.51</u>
TOTAL PROJECT COST =				<u><u>\$3,010.51</u></u>

SUMMARY OF CONSTRUCTION COST

Timber Sale: Clear Connection
Road Segment: E to F

Sale Number: FG-341-2024-W001015-01
Improvement: 66+00 stations
1.25 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.76	ac @	\$2,199.60	per acre =	\$1,671.69
Oversize pile relocation	500	cy @	\$8.15	per cy =	\$4,075.00
Haul oversize pile	500	cy @	\$0.76	per cy=	\$380.00
Tank trap removal	3	ea @	\$60.50	per sta =	\$181.50
Clean culvert inlet & outlet, scatter waste	2	ea @	\$27.50	per ea =	\$55.00
Construct settling pond	6	ea @	\$27.50	per ea =	\$165.00
Improve turnout	4	ea @	\$36.30	per ea =	\$145.20
Grade, ditch, & roll	66.00	sta @	\$39.65	per sta =	\$2,616.90

TOTAL IMPROVEMENT COSTS = \$9,290.29

CULVERTS

Culverts and Bands					
18" Diameter	180	lf @	\$22.05	per lf =	\$3,969.00
24" Diameter	60	lf @	\$31.90	per lf =	\$1,914.00
Markers & Stakes					
Culvert markers	9	ea @	\$12.00	per ea =	\$108.00

TOTAL CULVERT COSTS = \$5,991.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$8.53	\$5.94	\$0.55	96	\$1,441.92
Energy dissipator	24" - 12"	\$2.05	\$16.91	\$1.75	12	\$248.52
				Subtotal =	108	\$1,690.44
Surfacing rock						
Surfacing rock	4" - 0	\$1.18	\$11.27	\$1.35	2,772	\$38,253.60
Junction	4" - 0	\$1.18	\$11.27	\$1.35	72	\$993.60
Turnout	4" - 0	\$1.18	\$11.27	\$1.35	76	\$1,048.80
				Subtotal =	2,920	\$40,296.00

Totals	All Rock =	3,028
	1½" - 0	96
	4" - 0	2,920
	24" - 12"	12

TOTAL ROCK COSTS = \$41,986.44

EROSION CONTROL

Grass seed & fertilizer	0.76	ac @	\$467.50	per ac =	\$355.30
Straw mulch bale	4	ea @	\$11.00	per ea =	\$44.00

TOTAL EROSION CONTROL COSTS = \$399.30

TOTAL PROJECT COST = \$57,667.03

SUMMARY OF CONSTRUCTION COST

Timber Sale: Clear Connection
Road Segment: G to H

Sale Number: FG-341-2024-W001015-01
Improvement: 12+20 stations
0.23 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.15	ac @	\$2,199.60	per acre =	\$329.94
Clean culvert inlet & outlet, scatter waste	2	ea @	\$27.50	per ea =	\$55.00
Improve turnout	1	ea @	\$36.30	per ea =	\$36.30
Construct turnaround	1	ea @	\$90.75	per ea =	\$90.75
Improve landing	1	ea @	\$121.00	per ea =	\$121.00
Excavate, place and & compact fill	250	cy @	\$10.80	per cy =	\$2,700.00
Grade, ditch, & roll	12.20	sta @	\$39.65	per sta =	\$483.73

TOTAL IMPROVEMENT COSTS = \$3,816.72

CULVERTS

Culverts and Bands					
24" Diameter	30	lf @	\$22.05	per lf =	\$661.50
Markers & Stakes					
Culvert markers	3	ea @	\$12.00	per ea =	\$36.00

TOTAL CULVERT COSTS = \$697.50

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$8.53	\$5.85	\$0.55	12	\$179.16
Subtotal =					12	\$179.16
Surfacing rock						
Surfacing rock	4" - 0	\$1.18	\$11.21	\$1.35	647	\$8,889.78
Turnout	4" - 0	\$1.18	\$11.21	\$1.35	24	\$329.76
Turnaround	4" - 0	\$1.18	\$11.21	\$1.35	20	\$274.80
Landing	4" - 0	\$1.18	\$11.21	\$1.35	95	\$1,305.30
Subtotal =					786	\$10,799.64

Totals	All Rock =	798
	1½" - 0	12
	4" - 0	786

TOTAL ROCK COSTS = \$10,978.80

EROSION CONTROL

Grass seed & fertilizer	0.15	ac @	\$467.50	per ac =	\$70.12
Straw mulch bale	2	ea @	\$11.00	per ea =	\$22.00

TOTAL EROSION CONTROL COSTS = \$92.12

TOTAL PROJECT COST = \$15,585.14

SUMMARY OF CONSTRUCTION COST

Timber Sale: Clear Connection
Road Segment: I to J

Sale Number: FG-341-2024-W001015-01
Improvement: 20+50 stations
0.39 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.24	ac @	\$2,538.00	per acre =	\$609.12
Improve turnout	1	ea @	\$36.30	per ea =	\$36.30
Construct turnaround	1	ea @	\$90.75	per ea =	\$90.75
Improve landing	1	ea @	\$121.00	per ea =	\$121.00
Grade, ditch, & roll	20.50	sta @	\$39.65	per sta =	\$812.82

TOTAL IMPROVEMENT COSTS = \$1,669.99

CULVERTS

Markers & Stakes					
Culvert markers	1	ea @	\$12.00	per ea =	\$12.00
Additional Installation Cost					
Repair culvert outlet at: 20+00	0.5	hrs @	\$192.50	per hr =	\$96.25

TOTAL CULVERT COSTS = \$108.25

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	4" - 0	\$1.18	\$11.45	\$1.35	1,087	\$15,196.26
Turnout	4" - 0	\$1.18	\$11.45	\$1.35	24	\$335.52
Turnaround	4" - 0	\$1.18	\$11.45	\$1.35	20	\$279.60
Landing	4" - 0	\$1.18	\$11.45	\$1.35	80	\$1,118.40
Subtotal =					1,211	\$16,929.78

Totals

All Rock =	1,211
4" - 0	1,211

TOTAL ROCK COSTS = \$16,929.78

EROSION CONTROL

Grass seed & fertilizer	0.24	ac @	\$467.50	per ac =	\$112.20
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TOTAL EROSION CONTROL COSTS = \$112.20

TOTAL PROJECT COST = \$18,820.22

SUMMARY OF CONSTRUCTION COST

Timber Sale: Clear Connection
 Road Segment: K to L

Sale Number: FG-341-2024-W001015-01
 Improvement: 13+40 stations
0.25 miles

PROJECT NO. 2: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.16	ac @	\$1,692.00	per acre =	\$270.72
Improve turnout	1	ea @	\$36.30	per ea =	\$36.30
Grade, ditch, & roll	13.40	sta @	\$39.65	per sta =	\$531.31

TOTAL IMPROVEMENT COSTS = \$838.33

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	4" - 0	\$1.18	\$12.33	\$1.35	563	\$8,366.18
Junction	4" - 0	\$1.18	\$12.33	\$1.35	12	\$178.32
Turnout	4" - 0	\$1.18	\$12.33	\$1.35	19	\$282.34
Subtotal =					594	\$8,826.84

Totals

All Rock =	594
4" - 0	594

TOTAL ROCK COSTS = \$8,826.84

EROSION CONTROL

Grass seed & fertilizer	0.16	ac @	\$467.50	per ac =	\$74.80
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TOTAL EROSION CONTROL COSTS = \$74.80

TOTAL PROJECT COST = \$9,739.97

SUMMARY OF CONSTRUCTION COST

Timber Sale: _____ Timber Sale: _____
 Road Segment: _____ V1 to V2 _____

Sale Number: FG-341-2024-W001015-01
 Vacating: 2+75 stations
0.05 miles

PROJECT NO. 3: ROAD VACATING

Coffer dam installation	2	ea @	\$750.00	per ac =	\$1,500.00
Silt fence installation	170	ft @	\$4.75	per ac =	\$807.50
Existing fill removal End-haul(0+75)					
Excavate & load	265	cy @	\$1.69	per cy =	\$447.85
Haul waste area No. 2	345	cy @	\$0.23	per cy =	\$79.35
Compact waste area	345	cy @	\$0.35	per cy =	\$120.75
Existing fill removal End-haul(1+90)					
Excavate & load	204	cy @	\$1.94	per cy =	\$395.76
Haul waste area No. 1	265	cy @	\$1.16	per cy =	\$307.40
Compact waste area	265	cy @	\$0.35	per cy =	\$92.75
Existing waste area removal End-haul(1+90)					
Excavate & load	150	cy @	\$1.69	per cy =	\$253.50
Haul waste area No. 1	195	cy @	\$1.16	per cy =	\$226.20
Compact waste area	195	cy @	\$0.35	per cy =	\$68.25
Stream channel widening	2	hrs @	\$225.00	per hr =	\$450.00
Construct ditchout	1	ea @	\$30.25	per cy =	\$30.25
Construct waterbar	1	ea @	\$30.25	per ea =	\$30.25
Straw mulch (bale)	9	ea @	\$11.00	per ea =	\$99.00
Grass seed and fertilizer	0.35	ac @	\$550.00	per ac =	\$192.50

TOTAL VACATE COST= \$5,101.31

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Rock						
Bank Armoring	36" - 24"	\$2.05	\$17.06	\$3.85	100	\$2,296.31
				Subtotal =	100	\$2,296.31

Totals	All Rock =	100
	Large Riprap	100

TOTAL ROCK COSTS = \$2,296.31

TOTAL PROJECT COST = \$7,397.62

SUMMARY OF CONSTRUCTION COST

Timber Sale:	Timber Sale:	Sale Number:	FG-341-2024-W001015-01
Road Segment:	V3 to V4	Vacating:	29+65 stations 0.56 miles

PROJECT NO. 3: ROAD VACATING

Construct tank trap	1	ea @	\$60.50	per ea =	\$60.50
Rip dirt road surface	5.45	sta @	\$27.50	per sta =	\$149.88
Rip rocked road surface	11.55	sta @	\$55.00	per sta =	\$635.25
Sidecast pullback (0+00 to 5+45)	2422	cy @	\$2.33	per cy =	\$5,643.26
Sidecast pullback (6+65 to 12+45)	4511	cy @	\$2.33	per cy =	\$10,510.63
Sidecast pullback (20+10 to 27+00)	3067	cy @	\$2.33	per cy =	\$7,146.11
Oversize pile relocation	500	cy @	\$8.15	per cy =	\$4,075.00
Fill removal End-haul (16+50)					
Excavate & load	714	cy @	\$1.94	per cy =	\$1,385.16
Haul to waste area No. 3	928	cy @	\$0.72	per cy =	\$668.16
Compact waste area	928	cy @	\$0.35	per cy =	\$324.80
Fill removal End-haul (22+00 & 22+80)					
Excavate & load	300	cy @	\$1.94	per cy =	\$582.00
Haul to waste area No. 4	390	cy @	\$0.79	per cy =	\$308.10
Compact waste area	390	cy @	\$0.35	per cy =	\$136.50
Stream channel widening	3	hrs @	\$225.00	per hr =	\$675.00
Remove existing culverts	7	ea @	\$165.00	per ea =	\$1,155.00
Grass seed and fertilizer	2.48	ac @	\$550.00	per ac =	\$1,364.00
Straw mulch (acre)	2.48	ac @	\$660.00	per ac =	\$1,636.80
Straw mulch (bale)	14	ea @	\$11.00	per ea =	\$154.00

TOTAL PROJECT COST = \$36,610.15

SUMMARY OF CONSTRUCTION COST

Timber Sale: Clear Connection

Sale Number: FG-341-2024-W001015-01

PROJECT Nos. 1, 2 & 3 MOVE-IN, WITHIN AREA MOVE, & CLEANING COSTS

Equipment	Total
Grader	\$444.75
Roller (smooth/grid) & Compactor	\$425.41
Excavator (Med.) - Equipment Cleaning	\$1,440.77
Excavator (Large) - Equipment Cleaning	\$1,951.64
Dozer (Large) - Equipment Cleaning	\$1,912.64
Dump Truck (10cy +)	\$381.24
Water Truck (2,500 Gal)	\$350.96
TOTAL MOVE-IN COSTS =	\$6,908.02

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Clear Connection
Sale Number: FG-341-2024-W001015-01
Stockpile Name: Lower Rock Creek Stockpile

1 1/2" - 0: 144 cy (truck measure)
Total truck yardage: 144 cy

Move-in

Move in loader					\$976.61
Move in Dump Trucks					<u>\$123.00</u>
				Subtotal =	<u>\$1,099.61</u>
				Per CY =	<u>\$7.63/cy</u>

1 1/2"-0 Base Cost

Load dump truck	<u>\$0.90</u>	/ cy x	<u>144</u>	cy =	<u>\$129.60</u>
				Subtotal =	<u>\$129.60</u>
				Per CY =	<u>\$0.90</u>

1 1/2"-0 Cost = **\$8.53/cy**

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Clear Connection
Sale Number: FG-341-2024-W001015-01
Stockpile Name: West Mac Stockpile

4" - 0: 6,040 cy (truck measure)
Riprap: 12 cy (truck measure)
Boulders: 112 cy (truck measure)
Total truck yardage: 6,164 cy

Move-in

Move in excavator					\$935.07
Move in loader					\$832.68
Move in Dump Trucks					\$100.32
				Subtotal =	\$1,868.07
				Per CY =	\$0.30/cy

4"-0 Base Cost

Load dump truck	\$0.90	/ cy x	6,040	cy =	\$5,436.00
				Subtotal =	\$5,436.00
				Per CY =	\$0.88

Riprap (24" - 12") Base Cost

Load dump truck	\$1.75	/ cy x	12	cy =	\$21.00
				Subtotal =	\$21.00
				Per CY =	\$1.75

Boulders (36" - 24") Base Cost

Load dump truck	\$1.75	/ cy x	112	cy =	\$196.00
				Subtotal =	\$196.00
				Per CY =	\$1.75

4"-0 Cost =	<u>\$1.18/cy</u>
Riprap Cost =	<u>\$2.05/cy</u>
Blocking Boulder Cost =	<u>\$2.05/cy</u>

CRUISE REPORT
Clear Connection
#FG-341-2024-W001015-01

1. LOCATION:

Portions of Sections 17, T4N, R5W, W.M., Columbia County, Oregon.

2. CRUISE DESIGN:

The timber cruise was designed using an estimated coefficient of variation (CV) of 60%, average stand diameter of 22 inches, sampling error (SE) of 9% and a minimum of 100 grade trees.

3. SAMPLING METHOD:

The Timber Sale Area was cruised in July of 2023 with 27 variable radius grade plots using a 40 BAF prism. Plots were laid out 6 chain x 5 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS:

150 trees were measured and graded producing a standard error of 6.2% on the Douglas-fir Basal Area and 8.2% on the Douglas-fir Net Board Foot Volume.

5. TREE MEASUREMENT AND GRADING:

All sample trees were measured and graded following the Official Log Scaling and Grading Rules as adopted by the NW Log Rules Advisory Group. 40 foot segments were favored.

- a) **Height Standards:** Total tree heights were measured to the nearest foot. Bole heights were calculated to a six inch top.
- b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.
- c) **Form Factors:** Measured for each grade tree using a form point of 16 feet.

6. DATA PROCESSING:

- a) **Volumes and Statistics:** Cruise estimates and sampling statistics were derived from SuperAce 2008 cruise software.
- b) **Deductions:** The following percent volume deductions are by species to account for the hidden defect and breakage. For conifers two percent was deducted. For hardwoods five percent was deducted.

7. CRUISERS: The sale was cruised by Shamus Smith

Prepared by: Shamus Smith 8-10-2023

Reviewed by: Mark Savage 8-10-2023
Date

TC PSTATS				PROJECT STATISTICS					PAGE	1	
				PROJECT		CONNECT			DATE	8/2/2023	
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt
04N	05	17	U1	00MC		117.00		27	151	S	W
			PLOTS	TREES	TREES	ESTIMATED TOTAL TREES		PERCENT SAMPLE TREES			
TOTAL			27	151	5.6						
CRUISE			27	151	5.6	9,394		1.6			
DBH COUNT											
REFOREST											
COUNT											
BLANKS											
100 %											
STAND SUMMARY											
SAMPLE TREES			TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			144	71.2	23.4	137	44.1	213.3	51,169	51,101	10,543
DOUG FIR-S			1	.3	29.0	145	0.3	1.5			
R ALDER			2	2.0	16.5	94	0.7	3.0	478	478	108
BL MAPLE			2	2.7	14.3	79	0.8	3.0	240	240	84
WR CEDAR			1	2.2	11.0	44	0.4	1.5	67	67	27
WHEMLOCK			1	1.9	12.0	58	0.4	1.5	75	75	28
TOTAL			151	80.3	22.6	130	47.1	223.7	52,029	51,961	10,789
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF		SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15
DOUG FIR		60.5	5.0	958	1,008	1,059					
DOUG FIR-S											
R ALDER		11.8	11.0	214	240	266					
BL MAPLE		37.2	34.8	62	95	128					
WR CEDAR											
WHEMLOCK											
TOTAL		64.7	5.3	916	967	1,017	167		42	19	
CL	68.1	COEFF		SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15
DOUG FIR		53.9	4.5	194	203	212					
DOUG FIR-S											
R ALDER		16.3	15.3	46	54	63					
BL MAPLE		32.2	30.2	23	33	43					
WR CEDAR											
WHEMLOCK											
TOTAL		58.0	4.7	186	195	204	134		34	15	
CL	68.1	COEFF		TREES/ACRE					# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15
DOUG FIR		47.6	9.3	65	71	78					
DOUG FIR-S		519.6	101.9		0	1					
R ALDER		519.6	101.9		2	4					
BL MAPLE		368.4	72.2	1	3	5					
WR CEDAR		519.6	101.9		2	5					
WHEMLOCK		519.6	101.9		2	4					
TOTAL		47.3	9.3	73	80	88	93		23	10	
CL	68.1	COEFF		BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15
DOUG FIR		31.6	6.2	200	213	227					
DOUG FIR-S		519.6	101.9		1	3					
R ALDER		519.6	101.9		3	6					
BL MAPLE		360.3	70.6	1	3	5					

TC PSTATS				PROJECT STATISTICS				PAGE	2	
				PROJECT		CONNECT		DATE	8/2/2023	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
04N	05	17	UI	00MC		117.00	27	151	S	W
CL	68.1		COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
WR CEDAR			519.6	101.9		1	3			
WHEMLOCK			519.6	101.9		1	3			
TOTAL			<i>31.5</i>	<i>6.2</i>	<i>210</i>	<i>224</i>	<i>238</i>	<i>41</i>	<i>10</i>	<i>5</i>
CL	68.1		COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR			41.8	8.2	46,917	51,101	55,285			
DOUG FIR-S										
R ALDER			519.6	101.9		478	964			
BL MAPLE			361.0	70.8	70	240	410			
WR CEDAR			519.6	101.9		67	136			
WHEMLOCK			519.6	101.9		75	152			
TOTAL			<i>42.5</i>	<i>8.3</i>	<i>47,634</i>	<i>51,961</i>	<i>56,289</i>	<i>75</i>	<i>19</i>	<i>8</i>
CL	68.1		COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR			37.2	7.3	9,773	10,543	11,312			
DOUG FIR-S										
R ALDER			519.6	101.9		108	217			
BL MAPLE			360.4	70.7	25	84	143			
WR CEDAR			519.6	101.9		27	54			
WHEMLOCK			519.6	101.9		28	56			
TOTAL			<i>38.0</i>	<i>7.4</i>	<i>9,985</i>	<i>10,789</i>	<i>11,592</i>	<i>60</i>	<i>15</i>	<i>7</i>

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
<div>T04N R05W S17 Ty00MC117.00</div>				Project:		CONNECT										Page		1			
				Acres		117.00										Date		8/2/2023			
																Time		3:39:46PM			
S T	So rt	Gr ad	%	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
			Net BdFt	Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
			4-5	6-11	12-16	17+		12-20	21-30	31-35	36-99										
DF		CU														8	18		0.00	.5	
DF		2M	80	.2	41,031	40,966	4,793			35	65				100	40	17	475	2.28	86.3	
DF		3M	17	.0	8,977	8,974	1,050		89	10	1	1		3	96	39	9	118	0.79	76.0	
DF		4M	3		1,161	1,161	136		100			14	45	15	26	27	6	36	0.38	31.9	
DF Totals			98	.1	51,169	51,101	5,979		18	29	53	0	1	1	98	37	12	263	1.45	194.6	
RA		CR	100		478	478	56		61	39			9	12	79	33	9	119	0.81	4.0	
RA Totals			1		478	478	56		61	39			9	12	79	33	9	119	0.81	4.0	
WH		4M	100		75	75	9		100				100			30	6	40	0.49	1.9	
WH Totals			0		75	75	9		100				100			30	6	40	0.49	1.9	
RC		4M	100		67	67	8		100				100			28	6	30	0.43	2.2	
RC Totals			0		67	67	8		100				100			28	6	30	0.43	2.2	
BM		CR	100		240	240	28		100					100		39	8	90	0.81	2.7	
BM Totals			0		240	240	28		100					100		39	8	90	0.81	2.7	
Totals				0.1	52,029	51,961	6,079		19	29	52	0	1	1	97	37	12	253	1.41	205.4	

TC		PSTNDSUM											Stand Table Summary											Page		1			
																								Date:		8/2/2023			
T04N R05W S17 Ty00MC					117.00					Project					CONNECT					Time:					3:39:47PM				
										Acres					117.00					Grown Year:									
S	T				Tot						Average Log			Net			Net			Totals									
		DBH	Sample Trees	FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF													
DF		11	1	85	86	2.245	1.48	2.24	14.8	60.0	.95	33	135	111	39	16													
DF		13	4	87	105	6.429	5.93	11.25	16.0	64.3	5.13	180	723	600	211	85													
DF		14	3	86	107	4.158	4.44	6.93	20.1	88.0	3.96	139	610	464	163	71													
DF		16	1	88	104	1.061	1.48	2.12	24.0	100.0	1.45	51	212	170	60	25													
DF		17	4	87	118	3.760	5.93	8.46	27.6	117.8	6.64	233	996	777	273	117													
DF		18	6	87	131	5.030	8.89	11.74	32.2	137.1	10.77	378	1,610	1,260	442	188													
DF		20	7	87	133	4.753	10.37	12.90	35.7	156.3	13.13	461	2,017	1,536	539	236													
DF		21	1	88	142	.616	1.48	1.85	39.9	196.7	2.10	74	363	246	86	43													
DF		22	12	87	143	6.734	17.78	20.20	42.1	196.4	24.26	851	3,968	2,839	996	464													
DF		23	5	86	140	2.567	7.41	7.19	48.5	216.4	9.93	348	1,556	1,161	408	182													
DF		24	15	87	142	7.074	22.22	21.22	50.6	235.1	30.59	1,073	4,989	3,578	1,256	584													
DF		25	7	86	149	3.042	10.37	9.56	54.9	256.4	14.96	525	2,451	1,751	614	287													
DF		26	10	87	154	4.018	14.81	13.26	58.5	287.6	22.12	776	3,813	2,588	908	446													
DF		27	4	88	151	1.490	5.93	4.47	68.1	336.7	8.67	304	1,505	1,015	356	176													
DF		28	19	87	158	6.583	28.15	21.48	70.7	360.5	43.27	1,518	7,743	5,063	1,777	906													
DF		29	6	88	157	1.938	8.89	5.49	73.1	378.2	11.44	401	2,077	1,339	470	243													
DF		30	9	86	167	2.716	13.33	9.96	74.8	385.5	21.25	745	3,839	2,486	872	449													
DF		31	5	85	154	1.413	7.41	4.52	84.8	408.8	10.93	384	1,849	1,279	449	216													
DF		32	10	85	152	2.653	14.81	8.22	92.6	455.2	21.71	762	3,743	2,540	891	438													
DF		33	1	83	134	.249	1.48	.75	91.0	416.7	1.94	68	312	227	80	36													
DF		34	4	85	162	.940	5.93	3.29	98.7	503.6	9.25	325	1,657	1,083	380	194													
DF		36	4	86	173	.838	5.93	3.14	109.1	592.0	9.77	343	1,861	1,143	401	218													
DF		38	2	86	165	.376	2.96	1.32	126.9	687.1	4.76	167	905	557	195	106													
DF		39	1	86	172	.179	1.48	.54	154.6	863.3	2.36	83	463	276	97	54													
DF		40	1	84	170	.170	1.48	.51	157.5	863.3	2.29	80	440	268	94	51													
DF		42	2	84	164	.308	2.96	.92	172.7	918.3	4.55	160	848	532	187	99													
DF		43	1	83	159	.147	1.48	.59	135.8	710.0	2.27	80	417	266	93	49													
DF		Totals	145	87	137	71.487	214.81	194.13	54.3	263.2	300.46	10,543	51,101	35,154	12,335	5,979													
RA		16	1	89	89	1.061	1.48	2.12	24.0	110.0	1.40	51	233	164	60	27													
RA		17	1	90	100	.940	1.48	1.88	30.2	130.0	1.56	57	244	183	67	29													
RA		Totals	2	89	94	2.001	2.96	4.00	26.9	119.4	2.96	108	478	347	126	56													
BM		13	1	78	67	1.607	1.48	1.61	25.4	70.0	1.08	41	113	127	48	13													
BM		16	1	77	96	1.061	1.48	1.06	40.4	120.0	1.13	43	127	133	50	15													
BM		Totals	2	78	79	2.668	2.96	2.67	31.3	89.9	2.22	84	240	259	98	28													
WH		12	1	76	58	1.886	1.48	1.89	14.7	40.0	.89	28	75	104	33	9													
WH		Totals	1	76	58	1.886	1.48	1.89	14.7	40.0	.89	28	75	104	33	9													
RC		11	1	84	44	2.245	1.48	2.24	12.0	30.0	.63	27	67	74	31	8													
RC		Totals	1	84	44	2.245	1.48	2.24	12.0	30.0	.63	27	67	74	31	8													
Totals			151	86	130	80.287	223.70	204.93	52.6	253.6	307.16	10,789	51,961	35,938	12,623	6,079													

TC		PLOGSTVB		Log Stock Table - MBF															
T04N R05W S17 Ty00MC117.00				Project: Acres		CONNECT 117.00		Page Date Time		1 8/2/2023 3:39:45PM									
S T Spp	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches												
							2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+	
DF		2M 40	4,801		4,793	80.2				420	777	1729	1416	392	58				
DF		3M 12	10		10	.2					10								
DF		3M 32	18		18	.3			18										
DF		3M 34	12		12	.2			12										
DF		3M 36	24		24	.4			24										
DF		3M 38	14		14	.2			14										
DF		3M 40	972		972	16.3			94 331	442 48	33 22								
DF		4M 14	2		2	.0			2										
DF		4M 16	6		6	.1			6										
DF		4M 18	4		4	.1			4										
DF		4M 20	9		9	.1			9										
DF		4M 22	3		3	.1			3										
DF		4M 24	18		18	.3			18										
DF		4M 26	12		12	.2			12										
DF		4M 28	12		12	.2			12										
DF		4M 30	17		17	.3			17										
DF		4M 32	8		8	.1			8										
DF		4M 34	12		12	.2			12										
DF		4M 38	5		5	.1			5										
DF		4M 40	30		30	.5			22	8									
DF		Totals	5,987		5,979	98.3			290 331	451 469	811 1761	1416 392	58						
RA		CR 22	5		5	8.9			5										
RA		CR 32	7		7	11.8			7										
RA		CR 40	44		44	79.3				22 22									
RA		Totals	56		56	.9			12	22 22									
WH		4M 30	9		9	100.0			9										
WH		Totals	9		9	.1			9										
RC		4M 28	8		8	100.0			8										
RC		Totals	8		8	.1			8										
BM		CR 38	13		13	46.9			13										
BM		CR 40	15		15	53.1			15										
BM		Totals	28		28	.5			13 15										
Total		All Species	6,087		6,079	100.0			331 346	473 491	811 1761	1416 392	58						

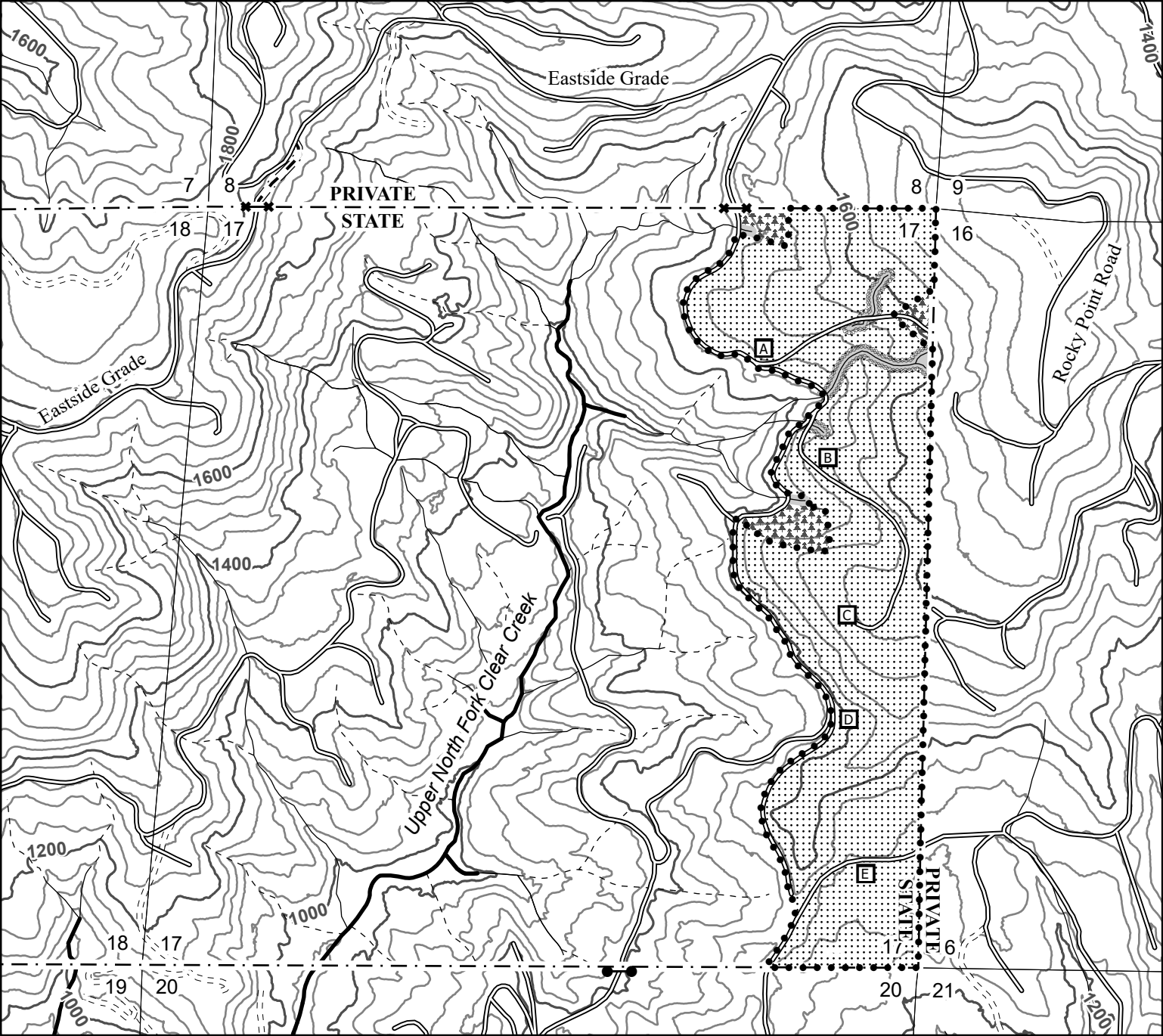
VOLUME SUMMARY
(Shown in MBF)
Clear Connection
FG-341-2024-W01015-01
August 2023

Timber Sale Area: Modified Clearcut (117 Acres)

SPECIES		2 SAW	3 SAW	4 SAW	CAMP RUN	TOTAL
Douglas-fir	Cruise Volume	4,793	1,050	136	0	5,979
	Hidden D&B (2%)	(96)	(21)	(3)	(0)	(120)
	NET TOTAL	4,697	1,029	133	0	5,859
	% of Total	80	18	2	0	
Western Hemlock	Cruise Volume	0	0	9	0	9
	Hidden D&B (2%)	(0)	(0)	(0)	(0)	(0)
	NET TOTAL	0	0	9	0	9
	% of Total	0	0	100	0	
Red Alder	Cruise Volume	0	0	0	56	56
	Hidden D&B (5%)	(0)	(0)	(0)	(3)	(3)
	NET TOTAL	0	0	0	53	53
	% of Total	0	0	0	100	
Bigleaf Maple	Cruise Volume	0	0	0	28	28
	Hidden D&B (5%)	(0)	(0)	(0)	(1)	(1)
	NET TOTAL	0	0	0	27	27
	% of Total	0	0	0	100	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	CAMP RUN	TOTAL
Douglas-fir	4,697	1,029	133	0	5,859
Western Hemlock	0	0	9	0	9
Red Alder	0	0	0	53	53
Bigleaf Maple	0	0	0	27	27
Total	4,697	1,029	142	80	5,948



- Legend**
- • Timber Sale Boundary
 - Posted Stream Buffer Boundary
 - └─┐ ODF Ownership Boundary
 - Right-of-Way Boundary
 - Surfaced Road
 - - - Unsurfaced Road
 - - - New Road Construction
 - Type-F Stream
 - Type-N Stream - Perennial
 - - - Type-N Stream - Seasonal
 - Stream Buffer
 - Tractor Yarding Area
 - Tractor Landing
 - Green Tree Retention Area
 - Gate
 - Road Block
 - Section Lines
 - 40 Foot Contour Band
 - 200 Foot Contour Band

LOGGING PLAN

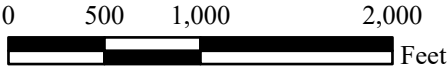
FOR TIMBER SALE CONTRACT #FG-341-2024-W01015-01
CLEAR CONNECTION
PORTIONS OF SECTIONS 17, T4N, R5W, W.M.,
COLUMBIA COUNTY, OREGON

Forest Grove District GIS
September, 2023

This product is for informational use and may not be
suitable for legal, engineering, or surveying purposes.

1:12,000

1 inch = 1,000 feet



APPROXIMATE NET ACRES = 117