



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Camp View
Sale FG-341-2017-32-

District: Forest Grove

Date: March 02, 2017

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,584,652.20	\$52,487.75	\$2,637,139.95
		Project Work:	(\$253,910.00)
		Advertised Value:	\$2,383,229.95



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District: Forest Grove

Date: March 02, 2017

Timber Description

Location: Portions of Sections 2, 7, 8, 17, and 18, T1N, R6W, W.M., Tillamook County, Oregon.

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	18	0	98
Alder (Red)	14	0	95

Volume by Grade	2S	3S	4S	Camprun	Total
Douglas - Fir	3,628	2,539	341	0	6,508
Alder (Red)	0	0	0	175	175
Total	3,628	2,539	341	175	6,683

Comments: Pond Values Used: 4th Quarter Calendar Year 2016 + Local Pond Values December 2016.

Western Hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Cost:
 $\$259.57/\text{MBF} = \$499.19/\text{MBF} - \$239.62/\text{MBF}$

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
 $\$976.57/\text{MBF} = \$1,216.19/\text{MBF} - \$239.62/\text{MBF}$

SCALING COST ALLOWANCE = \$5.00/MBF

BRANDING AND PAINTING COST ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$3.00/Gallon

HAULING COST ALLOWANCE

Hauling costs equivalent to \$780 daily truck cost.

Other Costs (with Profit & Risk to be added):

Intermediate Supports/Tail Rigging: 10 @ \$200 each = \$2,000

TOTAL Other Costs (with Profit & Risk to be added) = \$2,000

Other Costs (No Profit & Risk added):

Block/Waterbar Roads/Skid Trails: 5 hrs x \$150/hour = \$750

Pile Landing Slash: 20 hrs x \$150/hour = \$3,000

Mechanical Site-Prep: 25 acres @ \$150/acre = \$3,750

Equipment Cleaning: 3 pieces x \$1,000/piece = \$3,000

TOTAL Other Costs (No Profit & Risk added) = \$10,500

ROAD MAINTENANCE

Move-in: \$4,000

General Road Maintenance: 8 miles x \$1,200/mile = \$9,600

TOTAL Road Maintenance: \$13,600/6,683 MBF = \$2.04/MBF



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Logging Conditions

Combination#: 1 Douglas - Fir 61.78%
 Alder (Red) 80.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Stroke Delimber
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 7 **bd. ft / load:** 4600
cost / mbf: \$186.34
machines: Log Loader (A)
 Stroke Delimber (A)
 Tower Yarder (Medium)

Combination#: 2 Douglas - Fir 38.22%
 Alder (Red) 20.00%

Logging System: Shovel **Process:** Stroke Delimber
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 8 **bd. ft / load:** 4600
cost / mbf: \$86.19
machines: Stroke Delimber (B)



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District: Forest Grove

Date: March 02, 2017

Logging Costs

Operating Seasons: 1.00	Profit Risk: 10%
Project Costs: \$253,910.00	Other Costs (P/R): \$2,000.00
Slash Disposal: \$0.00	Other Costs: \$10,500.00

Miles of Road

Road Maintenance: \$2.04

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	3.0	4.5
Alder (Red)	\$0.00	2.0	3.0



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Camp View
Sale FG-341-2017-32-

District: Forest Grove

Date: March 02, 2017

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling / Brand & Paint	Other	Total
Douglas - Fir									
\$148.07	\$2.08	\$0.66	\$58.94	\$0.30	\$21.00	\$0.00	\$7.00	\$1.57	\$239.62
Alder (Red)									
\$166.31	\$2.14	\$0.66	\$136.50	\$0.30	\$30.59	\$0.00	\$7.00	\$1.57	\$345.07

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$636.77	\$397.15	\$0.00
Alder (Red)	\$0.00	\$645.00	\$299.93	\$0.00



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Timber Sale Appraisal Camp View

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District: Forest Grove

Date: March 02, 2017

Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	6,508	\$397.15	\$2,584,652.20
Alder (Red)	175	\$299.93	\$52,487.75

Gross Timber Sale Value

Recovery: \$2,637,139.95

Prepared By: Kenton Burns

Phone: 503-359-7477

TIMBER SALE SUMMARY
Camp View
Contract No. 341-17-32

1. **Location:** Portions of Sections 2, 7, 8, 17 & 18, T1N, R6W, W.M., Tillamook County, Oregon.
2. **Type of Sale:** This timber sale is four areas equal to 161 net acres of Modified Clearcut. Area 1 is 68 acres, Area 2 is 93 acres, Area 3 is less than 1 acre of right-of-way, and Area 4 is a special project area of less than 1 acre. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF, Tillamook County, (Tax Code 56-1.)
4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.
5. **Cruise:** The Timber Sale was cruised by ODF Cruisers in October of 2016. For more information see Cruise Report.
6. **Volume Summary:**

AREA 1: MC (68 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	Cruise Volume	1,775	1,130	120	0	3,025
	Hidden D&B (2%)	(36)	(23)	(2)	()	(61)
	NET TOTAL	1,739	1,107	118	0	2,964
	% of Total	59	37	4	0	

AREA 2: MC (93 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir	Cruise Volume	1,928	1,461	228	0	3,617
	Hidden D&B (2%)	(39)	(29)	(5)	()	(72)
	NET TOTAL	1,889	1,432	223	0	3,545
	% of Total	53	40	6	0	
Red Alder	Cruise Volume	0	0	0	179	179
	Hidden D&B (2%)	()	()	()	(4)	(4)
	NET TOTAL	0	0	0	175	175
	% of Total	0	0	0	100	

SALE TOTAL

SPECIES		2 SAW	3 SAW	4 SAW	CR	TOTAL
Douglas-fir & Red Alder		3,628	2,539	341	175	6,683

Because of their small size, Areas 3 and 4 were not cruised and their volumes are not included in the Volume Summary.

7. **Timber Description:** Areas 1 and 2 consist of over-stocked 60 year old Douglas-fir stands with minor amounts of western hemlock, western redcedar, and hardwoods. Area 1 has an average of 260 ft² of Douglas-fir basal area, an average Douglas-fir DBH of 18 inches, and an estimated average net Douglas-fir volume of approximately 44 MBF per acre. Area 2 has an average of 234 ft² of Douglas-fir basal area, an average Douglas-fir DBH of 17 inches, and an estimated average net Douglas-fir volume of approximately 39 MBF per acre.
8. **Topography and Logging Method:** Slopes within the sale areas range from 10% to 80%, and variable in aspect. The timber sale is 37% ground-based yarding and 63% cable yarding. Area 1 is 40% cable yarding, 60% ground-based yarding. Area 2 is 80% cable yarding and 20% ground-based yarding. The average cable corridor length is 600 feet and the average horizontal skid trail length is approximately 200 feet and the maximum is approximately 650 feet.
9. **Access:** All access to the Timber Sale Area is on surfaced all-weather roads. From Forest Grove travel west on Highway 8 to its intersection with Highway 6. Proceed west onto Highway 6 for approximately 14.3 miles to the South Fork Wilson River Road. Turn left and continue south 2.8 miles to the C-Line Road. Turn right and continue approximately 1.5 miles to Lyda Road. Turn right on Lyda Road and proceed for approximately 800 feet to the first spur on the right. Continue down this spur for approximately 1400 feet to the first spur on the left, which leads to the eastern corner of Area 1.

10. Projects:

Project No. 1: Road Construction and Improvement	\$50,249.62
Project No. 2: Road Surfacing	\$38,187.11
Project No. 3: Grass Seed, Fertilize, and Mulch	\$2,559.54
Project No. 4: Install Type F Crossing and Staging Area	\$153,339.45
Move in and equipment cleaning;	\$9,574.28

Total Credit for all Projects (rounded)	\$253,910.00
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PROJECT COST SUMMARY SHEETTimber Sale: Camp ViewSale Number: 341-17-32**PROJECT NO. 1: ROAD CONSTRUCTION AND IMPROVEMENT****CONSTRUCTION**

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
F to G	17+10	\$27,393.86
I to J	27+70	\$12,108.54
	44+80 stations	
	0.85 miles	

SUBTOTAL CONSTRUCTION = \$39,502.40**IMPROVEMENTS**

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to B	40+65	\$4,714.53
C to D	28+15	\$4,047.35
E to F	9+00	\$1,070.38
H to I	5+75	\$914.96
	83+55 stations	
	1.58 miles	

SUBTOTAL IMPROVEMENTS = \$10,747.22**TOTAL PROJECT NO. 1 COST = \$50,249.62****PROJECT NO. 2: SURFACING**

<u>Road Segment</u>	<u>Rock Amount</u>	<u>Rock Type</u>	<u>Cost</u>
A to B	48 cy	1 1/2" - 0	\$396.48
	1,457 cy	4" - 0	\$5,929.99
C to D	24 cy	1 1/2" - 0	\$202.80
	1,386 cy	4" - 0	\$5,904.36
E to F	531 cy	4" - 0	\$2,224.89
F to G	146 cy	1 1/2" - 0	\$1,267.99
	1,499 cy	4" - 0	\$6,713.28
H to I	242 cy	4" - 0	\$1,055.12
I to J	36 cy	1 1/2" - 0	\$322.56
	2,278 cy	4" - 0	\$13,668.00
	114 cy	Pit-run	\$501.64
Total	254 cy	1 1/2" - 0	
	7,393 cy	4" - 0	
	114 cy	Pit-run	

TOTAL PROJECT NO. 2 COST = \$38,187.11**PROJECT NO. 3 GRASS SEED, FERTILIZE, & MULCH****TOTAL PROJECT NO. 3 COST = \$2,559.54****PROJECT NO. 4 INSTALL TYPE F CROSSING AND STAGING AREA CONSTRUCTION**

<u>Point</u>	<u>Rock Amount</u>	<u>Rock Type</u>	<u>Cost</u>
Point K	86 cy	1 1/2" - 0	\$532.75
	30 cy	48" - 36"	\$112.50
Total	86 cy	1 1/2" - 0	
	30 cy	48" - 36"	

TOTAL PROJECT NO. 4 COST = \$153,339.45**MOVE-IN, WITHIN AREA MOVE & EQUIPMENT CLEANING**

Grader	\$912.26
Loader	\$861.67
Roller (smooth/grid) & Compactor	\$592.94
Excavators - Equipment Cleaning	\$4,140.04
Dozer - Equipment Cleaning	\$2,114.60
Dump Trucks	\$768.60
Water Truck	\$184.17

TOTAL MOVE-IN & EQUIPMENT CLEANING COST = \$9,574.28**TOTAL CREDITS \$253,910.00**

SUMMARY OF CONSTRUCTION COST

Timber Sale: Camp View Sale Number: 341-17-32
Road Segment: A to B Improvement: 40+65 stations
0.77 miles

PROJECT NO. 1

EXCAVATION

Clearing & grubbing (scatter)	0.47	ac @	\$1,078.00	per acre =	\$506.66
Clean ditch & scatter waste material	40.65	sta @	\$12.41	per sta =	\$504.47
Clean culvert inlet & outlet	10	ea @	\$25.00	per ea =	\$250.00
Grade, ditch, & roll	40.65	sta @	\$36.00	per sta =	\$1,463.40
Remove existing culvert and backfill	1.00	ea @	\$150.00	per sta =	\$150.00
Install Gate	1	ea @	\$600.00	per ea =	\$600.00
TOTAL EXCAVATION COSTS =					\$3,474.53

CULVERTS - MATERIALS & INSTALLATION

Culverts

60 LF of 18" \$1,200.00

Culvert Markers

4 markers \$40.00

TOTAL CULVERT COSTS = \$1,240.00

PROJECT NO. 1 TOTAL COST = \$4,714.53

PROJECT NO. 2:

SURFACING

	6 " deep =	31 cy/sta			
A to B	1,261	cy of	4" - 0	@	\$4.07 per cy = \$5,132.27
Turnouts (5)	70	cy of	4" - 0	@	\$4.07 per cy = \$284.90
Junctions	36	cy of	4" - 0	@	\$4.07 per cy = \$146.52
Roadside Landing	90	cy of	4" - 0	@	\$4.07 per cy = \$366.30
Culvert bedding	48	cy of	1 1/2" - 0	@	\$8.26 per cy = \$396.48
Rock Total =	1,505				
	48	cy of	1 1/2" - 0		\$8.26 per cy = \$396.48
	1,457	cy of	4" - 0		\$4.07 per cy = \$5,929.99

PROJECT NO. 2 TOTAL COST = \$6,326.47

PROJECT NO. 3:

Grass seed & fertilizer	0.01	acres	@	\$425.00	per acre = \$4.25
Mulch	2	bales	@	\$8.00	per bale = \$16.00

PROJECT NO. 3 TOTAL COST = \$20.25

TOTAL COST = \$11,061.25

SUMMARY OF CONSTRUCTION COST

Timber Sale: Camp View
Road Segment: C to D

Sale Number: 341-17-32
Improvement: 28+15 stations
0.53 miles

PROJECT NO. 1

EXCAVATION

Clearing & grubbing (scatter)	0.65	ac @	\$1,078.00	per acre =	\$700.70
Road widening and ditch reestablishment	28.15	sta @	\$55.00	per sta =	\$1,548.25
Clean culvert inlet & outlet	7	ea @	\$25.00	per ea =	\$175.00
Grade, ditch, & roll	28.15	sta @	\$36.00	per sta =	\$1,013.40
TOTAL EXCAVATION COSTS =					\$3,437.35

CULVERTS - MATERIALS & INSTALLATION

Culverts

30 LF of 18" \$600.00

Culvert Markers

1 markers \$10.00

TOTAL CULVERT COSTS = \$610.00

PROJECT NO. 1 TOTAL COST = \$4,047.35

PROJECT NO. 2:

SURFACING

8 " deep = 42 cy/sta

C to D	1,183	cy of	4" - 0	@	\$4.26	per cy =	\$5,039.58
Turnouts (3)	57	cy of	4" - 0	@	\$4.26	per cy =	\$242.82
Turnaround	14	cy of	4" - 0	@	\$4.26	per cy =	\$59.64
Junction	12	cy of	4" - 0	@	\$4.26	per cy =	\$51.12
Landing	120	cy of	4" - 0	@	\$4.26	per cy =	\$511.20
Culvert bedding	24	cy of	1 1/2" - 0	@	\$8.45	per cy =	\$202.80
Rock Total =	1,410						
	24	cy of	1 1/2" - 0		\$8.45	per cy =	\$202.80
	1,386	cy of	4" - 0		\$4.26	per cy =	\$5,904.36

PROJECT NO. 2 TOTAL COST = \$6,107.16

PROJECT NO. 3:

Grass seed & fertilizer	0.65	acres	@	\$425.00	per acre =	\$276.25
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PROJECT NO. 3 TOTAL COST = \$276.25

TOTAL COST = \$10,430.76

SUMMARY OF CONSTRUCTION COST

Timber Sale: Camp View
 Road Segment: E to F

Sale Number: 341-17-32
 Improvement: 9+00 stations
0.17 miles

PROJECT NO. 1

EXCAVATION

Clearing & grubbing (scatter)	0.21	ac @	\$1,078.00	per acre =	\$226.38
Road widening and ditch reestablishment	9.00	sta @	\$55.00	per sta =	\$495.00
Clean culvert inlet & outlet	1	ea @	\$25.00	per ea =	\$25.00
Grade, ditch, & roll	9.00	sta @	\$36.00	per sta =	\$324.00
					<u>TOTAL EXCAVATION COSTS = \$1,070.38</u>

PROJECT NO. 1 TOTAL COST = \$1,070.38

PROJECT NO. 2:

SURFACING

		8 " deep =	42 cy/sta				
E to F	378	cy of	4" - 0	@	\$4.19	per cy =	\$1,583.82
Turnouts (1)	19	cy of	4" - 0	@	\$4.19	per cy =	\$79.61
Turnaround	14	cy of	4" - 0	@	\$4.19	per cy =	\$58.66
Landing	120	cy of	4" - 0	@	\$4.19	per cy =	\$502.80
Rock Total =	531						
	531	cy of	4" - 0		\$4.19	per cy =	\$2,224.89

PROJECT NO. 2 TOTAL COST = \$2,224.89

PROJECT NO. 3:

Grass seed & fertilizer	0.21	acres	@	\$425.00	per acre =	\$89.25
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PROJECT NO. 3 TOTAL COST = \$89.25

TOTAL COST = \$3,384.52

SUMMARY OF CONSTRUCTION COST

Timber Sale: Camp View Sale Number: 341-17-32
Road Segment: F to G Construction: 17+10 stations
0.32 miles

PROJECT NO. 1

EXCAVATION

Clearing & grubbing (scatter)	1.97	ac @	\$1,185.80	per acre =	\$2,336.03
Clearing & grubbing (Point A Waste Area)	0.34	ac @	\$1,185.80	per acre =	\$404.94
Clearing & grubbing (Waste Area)	0.09	ac @	\$1,185.80	per acre =	\$106.17
End Haul Stumps (0+00 to 9+75)	1.12	ac @	\$819.85	per acre =	\$918.24
End Haul Stumps (9+75 to 17+10)	0.85	ac @	\$922.99	per acre =	\$784.55
Drift Road Construction	17.10	sta @	\$180.00	per sta =	\$3,078.00
End-haul to Point A					
Excavate & load	2,553	cy @	\$1.64	per cy =	\$4,186.92
Haul	2,961	cy @	\$3.36	per cy =	\$9,950.58
Compact waste area	2,961	cy @	\$0.30	per cy =	\$888.45
End-haul to Waste Area					
Excavate & load	1,216	cy @	\$1.64	per cy =	\$1,994.24
Haul	1,411	cy @	\$0.66	per cy =	\$930.97
Compact waste area	1,411	cy @	\$0.30	per cy =	\$423.17
Turnouts	2	ea @	\$66.00	per ea =	\$132.00
Roadside landing	2	ea @	\$165.00	per ea =	\$330.00
Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	17.10	sta @	\$36.00	per sta =	\$615.60

TOTAL EXCAVATION COSTS = \$27,393.86

PROJECT NO. 1 TOTAL COST = \$27,393.86

PROJECT NO. 2:

SURFACING

		9 " deep =	47 cy/sta			
		12 " deep =	65 cy/sta			
Base Rock (0+00 to 9+75)	458	cy of	4" - 0	@	\$4.48	per cy = \$2,052.96
Base Rock (9+75 to 17+10)	497	cy of	4" - 0	@	\$4.48	per cy = \$2,227.68
Traction rock 3" of 1 1/2"-0"	146	cy of	1 1/2" - 0	@	\$8.67	per cy = \$1,267.99
Turnouts (2)	58	cy of	4" - 0	@	\$4.48	per cy = \$259.84
Turnaround	20	cy of	4" - 0	@	\$4.48	per cy = \$89.60
Landing	180	cy of	4" - 0	@	\$4.48	per cy = \$806.40
Roadside landing	285	cy of	4" - 0	@	\$4.48	per cy = \$1,276.80
Rock Total =	1,645					
	146	cy of	1 1/2" - 0		\$8.67	per cy = \$1,267.99
	1,499	cy of	4" - 0		\$4.48	per cy = \$6,713.28

PROJECT NO. 2 TOTAL COST = \$7,981.27

PROJECT NO. 3:

Grass seed & fertilizer	0.99	acres	@	\$425.00	per acre =	\$418.63
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PROJECT NO. 3 TOTAL COST = \$418.63

TOTAL COST = \$35,793.76

SUMMARY OF CONSTRUCTION COST

Timber Sale: Camp View
 Road Segment: H to I

Sale Number: 341-17-32
 Improvement: 5+75 stations
0.11 miles

PROJECT NO. 1

EXCAVATION

Clearing & grubbing (scatter)	0.07	ac @	\$1,078.00	per acre =	\$75.46
Road widening and ditch reestablishment	5.75	sta @	\$110.00	per sta =	\$632.50
Grade, ditch, & roll	5.75	sta @	\$36.00	per sta =	\$207.00
					<u>TOTAL EXCAVATION COSTS = \$914.96</u>

PROJECT NO. 1 TOTAL COST = \$914.96

PROJECT NO. 2:

SURFACING

	8 " deep =	42 cy/sta			
H to I	242	cy of "	@	\$4.36	per cy = \$1,055.12
Rock Total =	242				
	242	cy of 4" - 0		\$4.36	per cy = \$1,055.12

PROJECT NO. 2 TOTAL COST = \$1,055.12

PROJECT NO. 3:

Grass seed & fertilizer	0.07	acres	@	\$425.00	per acre = \$29.75
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PROJECT NO. 3 TOTAL COST = \$29.75

TOTAL COST = \$1,999.83

SUMMARY OF CONSTRUCTION COST

Timber Sale:	<u>Camp View</u>	Sale Number:	<u>341-17-32</u>
Road Segment:	<u>I to J</u>	Construction:	<u>27+70</u> stations
			<u>0.52</u> miles

PROJECT NO. 1

EXCAVATION

Clearing & grubbing (scatter)	3.18	ac @	\$1,185.80	per acre =	\$3,770.85
Clearing & grubbing (end-haul)	0.20	ac @	\$243.84	per acre =	\$48.99
Balanced road construction	27.70	sta @	\$110.00	per sta =	\$3,047.00
Turnouts	3	ea @	\$66.00	per ea =	\$198.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
Roadside landing	2	ea @	\$165.00	per ea =	\$330.00
Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	27.70	sta @	\$36.00	per sta =	\$997.20

TOTAL EXCAVATION COSTS = \$8,788.54

CULVERTS - MATERIALS & INSTALLATION

Culverts

120 LF of 18"	\$2,400.00
30 LF of 24"	\$870.00

Culvert Markers

5 markers	\$50.00
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TOTAL CULVERT COSTS = \$3,320.00

PROJECT NO. 1 TOTAL COST = \$12,108.54

PROJECT NO. 2:

SURFACING	12" deep =	65 cy/sta				
I to J	1,801	cy of	4" - 0	@	\$6.00	per cy = \$10,806.00
Turnouts (3)	87	cy of	4" - 0	@	\$6.00	per cy = \$522.00
Turnaround	20	cy of	4" - 0	@	\$6.00	per cy = \$120.00
Landing	180	cy of	4" - 0	@	\$6.00	per cy = \$1,080.00
Roadside Landings	190	cy of	4" - 0	@	\$6.00	per cy = \$1,140.00
Culvert bedding	36	cy of	1 1/2" - 0	@	\$8.96	per cy = \$322.56
Subgrade reinforcement	114	cy of	Pit-run	@	\$4.41	per cy = \$501.64
Rock Total =	2,428					
	36	cy of	1 1/2" - 0		\$8.96	per cy = \$322.56
	2,278	cy of	4" - 0		\$6.00	per cy = \$13,668.00
	114	cy of	Pit-run		\$4.41	per cy = \$501.64

PROJECT NO. 2 TOTAL COST = \$14,492.20

PROJECT NO. 3:

Grass seed & fertilizer	1.59	acres	@	\$425.00	per acre =	\$675.75
Mulch	6	bales	@	\$8.00	per bale =	\$48.00

PROJECT NO. 3 TOTAL COST = \$723.75

TOTAL COST = \$27,324.49

SUMMARY OF CONSTRUCTION COST

Timber Sale: Camp View Sale Number: 341-17-32
 Point : K

PROJECT NO. 3:

Grass seed & fertilizer	0.42	acres	@	\$425.00	per acre =	\$178.98
Mulch	0.42	acres	@	\$600.00	per bale =	\$252.68

PROJECT NO. 3 TOTAL COST = \$431.66

PROJECT NO. 4

EXCAVATION

Clearing & grubbing (scatter)	0.49	ac @	\$1,078.00	per acre =	\$528.22
Rehab Staging Area	0.42	ac @	\$1,078.00	per acre =	\$453.98
Parking area construction	1	ea @	\$255.00	per ea =	\$255.00
Grade, ditch, & roll	1	ea @	\$75.00	per ea =	\$75.00

TOTAL EXCAVATION COSTS = \$1,312.20

SURFACING

10 " deep

Parking Area Surface	86	cy of	1 1/2" - 0	@	\$6.20	per cy =	\$532.75
Boulders	30	cy of	48" - 36"	@	\$3.75	per cy =	\$112.50
Rock Total =	116						
	86	cy of	1 1/2" - 0		\$6.20	per cy =	\$532.74
	30	cy of	48" - 36"		\$3.75	per cy =	\$112.50

PROJECT NO. 4 TOTAL COST = \$1,957.45

TOTAL COST = \$2,389.11

SUMMARY OF CONSTRUCTION COST

Timber Sale: Camp View Sale Number: 341-17-32
Road Segment: Point L Improvement: 1+50 stations
0.03 miles

PROJECT NO. 4

EXCAVATION

Fill Excavation & Construction

Salvage existing road surfacing	155	cy @	\$1.78	per cy =	\$275.90
Excavate existing culvert & fill	5,051	cy @	\$1.64	per cy =	\$8,283.88
Haul suitable material to staging area	4,474	cy @	\$0.49	per cy =	\$2,192.18
End-haul material to waste area	2,093	cy @	\$2.51	per cy =	\$5,252.59
Load material @ staging area	4,474	cy @	\$0.80	per cy =	\$3,579.06
Haul fill material from staging area	4,474	cy @	\$0.49	per cy =	\$2,192.18
Place fill & rock	4,474	cy @	\$2.40	per cy =	\$10,737.19
Compact fill	4,474	cy @	\$0.50	per cy =	\$2,236.91
Compact waste area	2,093	cy @	\$0.30	per cy =	\$627.80
Dewatering	7	days @	\$150.00	per day =	\$1,050.00
Remove culvert from State land					\$187.00
Grade, ditch, & roll	1.50	sta @	\$40.50	per sta =	\$60.75
TOTAL EXCAVATION COSTS =					\$36,675.44

CULVERTS - MATERIALS & ASSEMBLY

Culvert

19.25' x 12.33' Bolt-A-Plate 107 lf @ \$672.80 per lf = \$71,989.60

Additional Installation Cost

Excavator	50	hrs @	\$175.00	per hr =	\$8,750.00
Assemble	50	hrs @	\$120.00	per hr =	\$6,000.00
Engineering Fees					\$8,000.00

TOTAL CULVERT COSTS = \$94,739.60

ROCK

Culvert bedding rock	130	cy of	1 1/2" - 0	@	\$4.60	per cy =	\$598.00
Culvert seeding rock	170	cy of	Pit-run	@	\$12.60	per cy =	\$2,142.00
Base rock	200	cy of	3" - 0	@	\$6.20	per cy =	\$1,240.00
Surfacing rock	200	cy of	1 1/2" - 0	@	\$6.20	per cy =	\$1,240.00
Culvert backfill	213	cy of	1 1/2" - 0	@	\$4.60	per cy =	\$979.80
Rock Total =	913						
	543	cy of	1 1/2" - 0				
	200	cy of	3" - 0				
	170	cy of	Pit-run				

TOTAL ROCK COSTS = \$6,199.80

PROFIT & RISK (10%) = \$13,767.15

PROJECT NO. 4 TOTAL COST = \$151,382.00

PROJECT NO. 3:

Grass seed	0.60	acres	@	\$350.00	per acre =	\$210.00
Mulch	0.60	acres	@	\$600.00	per bale =	\$360.00

PROJECT NO. 3 TOTAL COST = \$570.00

TOTAL COST = \$151,952.00

CRUISE REPORT
Camp View
341-17-32

1. LOCATION: Portions of Sections 2, 7, 8, 17, and 18, T1N, R6W, W.M., Tillamook County, Oregon.

2. CRUISE DESIGN:

Pre-cruise evaluation indicated that the stand's average DBH is approximately 17 inches and its Coefficient of Variation is about 55%. For sales of this size and approximate value, ODF cruise standards require a Sampling Error of 9% at a 68% confidence level, and a minimum sample size of 100 graded trees. The cruise design chosen for this sale is a variable radius sample plot using a 40 BAF prism and employing a combination of count and measure plots at a ratio of 1 measured plot to 1 count plots.

3. SAMPLING METHOD:

The Timber Sale Area was cruised in October, 2016. Sale Areas 1 & 2 were sampled with 24 variable radius grade plots and 23 variable radius count plots using a 40 BAF prism. Plots were laid out on an 8 chain x 4 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS

155 trees were measured and graded producing a cumulative Sampling Error of 5.5% on the Basal Area and 5.4% on the Board Foot Volume.

5. TREE MEASUREMENT AND GRADING:

All sample trees were measured and graded following Columbia River Log Scale grade rules and favored 40 foot segments.

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** were measured for each grade tree using a form point of 16 feet.

5. DATA PROCESSING

a) **Volumes and Statistics,** Cruise estimates and sampling statistics, were derived from Super Ace 2008 cruise software

b) **Deductions:** Two percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage.

6. Cruisers: The sale was cruised by ODF cruiser Kenton Burns.

Prepared by: Kenton Burns

Date 11/01/2016

Reviewed by: Eric Foucht

Date 11/02/2016

TC PSTATS			PROJECT STATISTICS						PAGE	1		
			PROJECT		CAMPVIEW		DATE 10/25/2016					
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
01N	06	08	00A1	00MC		161.00	47	305	S	W		
T1N	R6W	08	00A2	00MC								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			47	305	6.5							
CRUISE			24	155	6.5	25,997	.6					
DBH COUNT												
REFOREST												
COUNT			23	150	6.5							
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-T			148	145.9	17.5	117	58.5	245.0	41,911	41,250	10,037	10,037
R ALDER-T			6	9.7	14.5	81	2.9	11.1	1,177	1,114	319	319
WHEMLOCK-L			1	5.8	9.0	54	0.9	2.6	174	174	41	41
TOTAL			155	161.5	17.1	113	62.5	258.7	43,262	42,539	10,397	10,397
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-T			65.6	5.4	405	428	451					
R ALDER-T			54.2	24.1	102	135	168					
WHEMLOCK-L												
TOTAL			68.1	5.5	391	414	436	185	46	21		
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-T			62.2	5.1	98	103	108					
R ALDER-T			50.8	22.6	30	39	48					
WHEMLOCK-L												
TOTAL			64.4	5.2	95	100	105	166	41	18		
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-T			44.9	6.5	136	146	155					
R ALDER-T			222.5	32.4	7	10	13					
WHEMLOCK-L			506.5	73.8	2	6	10					
TOTAL			41.6	6.1	152	161	171	69	17	8		
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-T			37.6	5.5	232	245	258					
R ALDER-T			209.2	30.5	8	11	15					
WHEMLOCK-L			506.5	73.8	1	3	4					
TOTAL			34.1	5.0	246	259	272	46	12	5		
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-T			37.3	5.4	39,006	41,250	43,495					
R ALDER-T			207.9	30.3	777	1,114	1,452					
WHEMLOCK-L			506.5	73.8	46	174	303					
TOTAL			34.7	5.1	40,388	42,539	44,690	48	12	5		
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-T			37.3	5.4	9,491	10,037	10,582					
R ALDER-T			206.7	30.1	223	319	416					

PROJECT STATISTICS								PAGE	2	
TC PSTATS				PROJECT CAMPVIEW				DATE	10/25/2016	
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
01N	06	08	00A1	00MC	161.00	47	305	S	W	
T1N	R6W	08	00A2	00MC						
CL	68.1		COEFF	NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK-L			506.5	73.8	11	41	72			
TOTAL			34.6	5.0	9,873	10,397	10,921	48	12	5

Species, Sort Grade - Board Foot Volumes (Type)													Page 1						
Project: CMPVWFIN													Date 10/26/2016 Time 3:26:34PM						
T01N R06W S08 T00MC													T01N R06W S08 T00MC						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt										
01N	06W	08	00A1	00MC	68.00	20	62	S	W										
S So Gr T rt ad Spp		% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
		Def%	Gross	Net	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf			
DF		CU													13 11		0.00	8.6	
DF		2M	58	1.8	26,589	26,104	1,775		72 28		6	1	92	39 14	287	1.74	91.0		
DF		3M	38	.5	16,701	16,613	1,130	100			3	8	89	39 8	90	0.59	183.8		
DF		4M	4	1.5	1,798	1,771	120	100			57	43		20 6	24	0.31	74.2		
DF Totals			100	1.3	45,089	44,489	3,025	41	42	16	2	6	4	88	34 9	124	0.88	357.6	
Type Totals				1.3	45,089	44,489	3,025	41	42	16	2	6	4	88	34 9	124	0.88	357.6	

T		Species, Sort Grade - Board Foot Volumes (Type)										Page		1							
TSPCSTGR		Project: CMPVWFIN										Date		10/26/2016							
												Time		3:26:34PM							
TT1N RR6W S08 T00MC										TT1N RR6W S08 T00MC											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
T1N	R6W	08	00A2	00MC	93.00	27	93	S	W												
S So Gr Spp T rt ad		% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre			
		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													23	7		0.00	5.9		
DF		2M	53	1.9	21,138	20,730	1,928			70	30	3	2		95	39	14	298	1.84	69.6	
DF		3M	40	1.5	15,941	15,705	1,461			99	1			4	4	92	39	8	96	0.62	163.9
DF		4M	7	2.4	2,508	2,448	228			100		39	61			22	6	28	0.33	87.3	
DF	Totals		95	1.8	39,588	38,882	3,616			46	38	16	4	7	1	88	34	9	119	0.86	326.6
RA		CU														17	5		0.00	4.1	
RA		CR	100	5.3	2,038	1,929	179			86	14		13	45		42	30	8	73	0.71	26.3
RA	Totals		5	5.3	2,038	1,929	179			86	14		13	45		42	28	8	64	0.65	30.3
WH		4M	100		302	302	28			100				100			26	6	30	0.27	10.1
WH	Totals		1		302	302	28			100				100			26	6	30	0.27	10.1
Type Totals				1.9	41,927	41,114	3,824			49	36	15	4	9	1	85	33	9	112	0.83	367.0

TC TLOGSTVB

Log Stock Table - MBF

Project: CMPVWFIN

T01N R06W S08 T00MC

T01N R06W S08 T00M

Twp Rge Sec Tract
01N 06W 08 00A1

Type Acres Plots Sample Trees
00MC 68.00 20 62

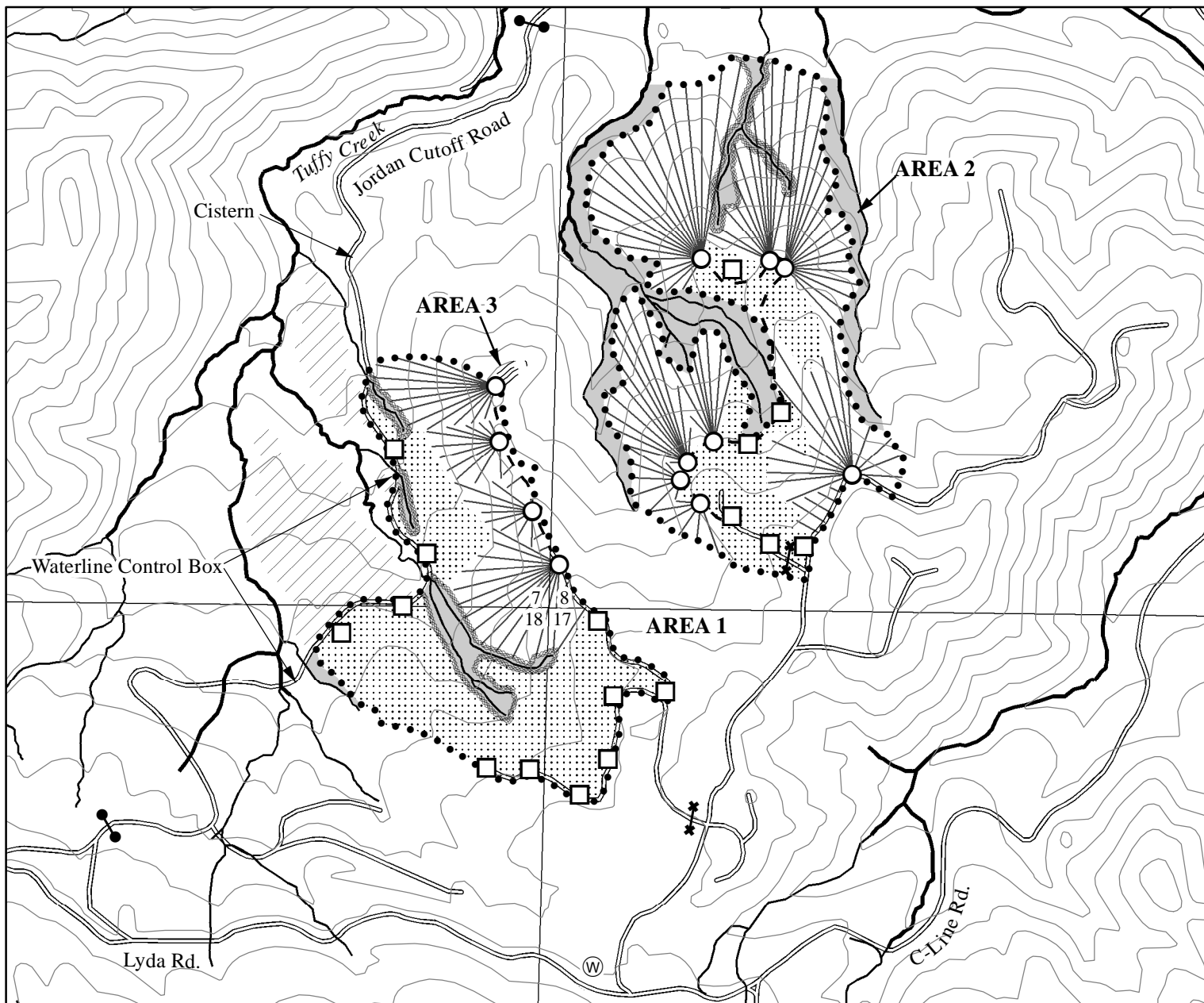
Page 1
Date 1/12/2017
Time 3:12:45PM

Spp	T	S rt	So de	Gr Len	Log	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				CU	10																
DF				CU	12																
DF				CU	20																
DF				2M	24	14	20.0	11	.4						11						
DF				2M	26	27		27	.9						27						
DF				2M	28	30	12.0	26	.9						26						
DF				2M	30	47	5.8	44	1.5						15		29				
DF				2M	32	28	5.3	26	.9						26						
DF				2M	40	1,663	1.4	1,641	54.2						645	364	511	120			
DF				3M	30	32	3.0	31	1.0				5	27							
DF				3M	32	48		48	1.6			48									
DF				3M	34	41		41	1.3			41									
DF				3M	36	37		37	1.2			10	27								
DF				3M	38	47		47	1.6			47									
DF				3M	40	931	.5	926	30.6			241	423	262							
DF				4M	12	2		2	.1			2									
DF				4M	14	8		8	.3			8									
DF				4M	16	28	6.4	27	.9			21	5								
DF				4M	18	6		6	.2			6									
DF				4M	20	26		26	.9			26									
DF				4M	24	4		4	.1			4									
DF				4M	26	22		22	.7			22									
DF				4M	28	12		12	.4			12									
DF				4M	30	13		13	.4			13									
DF				Totals		3,066	1.3	3,025	100.0			502	460	288	697	418	540	120			
Total All Species						3,066	1.3	3,025	100.0			502	460	288	697	418	540	120			

TC TLOGSTVB				Log Stock Table - MBF																
				Project: CMPVWFIN																
TT1N RR6W S08 T00M										TT1N RR6W S08 T00M										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1											
T1N	R6W	08	00A2	00MC	93.00	27	93	Date	1/12/2017											
										Time	3:12:45PM									
S So Gr Log				Gross	%	Net	%	Net Volume by Scaling Diameter in Inches												
Spp	T	rt	de	Len	MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CU	9																	
DF		CU	25																	
DF		2M	16		13		13	.4							13					
DF		2M	20		39	3.0	37	1.0							20	18				
DF		2M	26		24		24	.7								24				
DF		2M	28		18	14.3	15	.4								15				
DF		2M	40		1,872	1.8	1,838	50.8					563		552	630	93			
DF		3M	26		19	11.1	17	.5					17							
DF		3M	28		2		2	.1				2								
DF		3M	30		44	11.9	39	1.1				19	21							
DF		3M	32		27	8.5	25	.7			17	8								
DF		3M	34		28		28	.8			28									
DF		3M	36		53		53	1.5			53									
DF		3M	38		41		41	1.1			41									
DF		3M	40		1,268	1.0	1,256	34.7			273	428	540	15						
DF		4M	12		4		4	.1			4									
DF		4M	14		7		7	.2			7									
DF		4M	16		22		22	.6			22									
DF		4M	18		6		6	.2			6									
DF		4M	20		52	3.5	50	1.4			35	16								
DF		4M	22		31	12.3	27	.8			27									
DF		4M	24		38		38	1.1			38									
DF		4M	26		28		28	.8			28									
DF		4M	28		6		6	.2			6									
DF		4M	30		40		40	1.1			40									
DF		Totals			3,682	1.8	3,616	94.6			624	472	577	578	585	687	93			
RA		CU	16																	
RA		CU	18																	
RA		CR	20		24		24	13.2			4		19							
RA		CR	24		25	11.1	22	12.5					22							
RA		CR	26		37	3.7	36	20.0			11				25					
RA		CR	30		23		23	12.6			23									
RA		CR	36		15		15	8.1			15									
RA		CR	40		66	9.0	60	33.6				30	30							
RA		Totals			190	5.3	179	4.7			53	30	72		25					
WH		4M	26		28		28	100.0			28									
WH		Totals			28		28	.7			28									
Total All Species					3,899	1.9	3,824	100.0			705	502	649	578	609	687	93			

Stand Table Summary																
Project CMPVWFIN																
T01N R06W S08 T00MC													T01N R06W S08 T00MC			
Twp	Rge	Sec	Tract	Type			Acres	Plots	Sample Trees			Page:	1			
01N	06W	08	00A1	00MC			68.00	20	62			Date:	01/12/20			
													Time:	3:12:44PM		
S Spc	T	Sample		FF	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s		
		DBH	Trees	16'	Tot				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DF		9	1	89	82	9.492	4.19	9.49	9.3	50.0	2.51	88	475	171	60	32
DF		10	1	79	97	7.689	4.19	7.69	14.8	60.0	3.25	114	461	221	78	31
DF		12	4	83	112	21.358	16.77	42.72	12.9	46.3	15.71	551	1,976	1,068	375	134
DF		13	1	85	91	4.550	4.19	9.10	13.5	55.0	3.51	123	500	239	84	34
DF		14	5	85	116	19.614	20.97	39.23	19.5	84.0	21.84	766	3,295	1,485	521	224
DF		15	2	83	117	6.834	8.39	13.67	23.0	95.0	8.95	314	1,299	609	214	88
DF		16	2	88	119	6.007	8.39	12.01	25.1	107.5	8.59	301	1,291	584	205	88
DF		17	1	81	120	2.660	4.19	7.98	20.8	80.0	4.74	166	639	322	113	43
DF		18	3	87	127	7.119	12.58	21.36	25.1	101.1	15.26	535	2,159	1,037	364	147
DF		19	8	84	127	17.039	33.55	46.86	30.0	117.3	40.09	1,407	5,495	2,726	956	374
DF		20	3	86	141	5.767	12.58	17.30	33.7	141.1	16.63	584	2,441	1,131	397	166
DF		21	8	84	135	13.948	33.55	41.84	36.1	150.8	43.01	1,509	6,311	2,925	1,026	429
DF		22	3	83	132	4.766	12.58	14.30	38.8	156.7	15.82	555	2,240	1,076	378	152
DF		23	2	77	115	2.907	8.39	5.81	40.9	137.5	6.78	238	799	461	162	54
DF		24	4	83	137	5.339	16.77	16.02	47.4	195.8	21.66	760	3,137	1,473	517	213
DF		25	3	82	143	3.691	12.58	11.07	54.3	228.9	17.13	601	2,534	1,165	409	172
DF		26	2	82	144	2.275	8.39	6.82	49.0	221.7	9.54	335	1,513	649	228	103
DF		27	5	81	149	5.273	20.97	15.82	64.5	270.0	29.08	1,020	4,272	1,977	694	290
DF		28	1	82	144	.981	4.19	2.94	65.0	276.7	5.45	191	814	370	130	55
DF		30	1	86	146	.854	4.19	2.56	80.3	396.7	5.87	206	1,017	399	140	69
DF		31	1	80	146	.800	4.19	2.40	83.5	373.3	5.71	200	896	388	136	61
DF		34	1	79	155	.665	4.19	2.00	103.7	463.3	5.90	207	925	401	141	63
DF		Totals	62	84	120	149.627	260.00	348.99	30.9	127.5	306.99	10,771	44,489	20,875	7,325	3,025
Totals		62	84	120	149.627	260.00	348.99	30.9	127.5	306.99	10771	44,489	20,875	7,325	3,025	

Stand Table Summary																
Project CMPVWFIN																
TT1N RR6W S08 T00MC												TT1N RR6W S08 T00M				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
T1N	R6W	08	00A2	00MC	93.00	27	93	Date:	01/12/20							
								Time:	3:12:44PM							
Spc	S T	Av						Average Log		Net		Net	T o t a l s			
		Sample DBH	FF Trees	Ht 16'	Tot	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF
DF		10	2	79	84	9.981	5.44	9.98	10.7	45.0	3.05	107	449	284	100	42
DF		11	5	82	86	20.621	13.61	24.75	13.7	50.0	9.64	338	1,237	896	314	115
DF		12	2	84	105	6.931	5.44	13.86	12.5	45.0	4.93	173	624	459	161	58
DF		13	6	84	102	17.717	16.33	35.43	15.1	56.7	15.23	534	2,008	1,417	497	187
DF		14	5	86	113	12.730	13.61	25.46	19.6	83.0	14.26	500	2,113	1,326	465	197
DF		15	4	83	114	8.872	10.89	22.18	17.3	71.0	10.91	383	1,575	1,015	356	146
DF		16	4	87	122	7.797	10.89	19.49	22.2	98.0	12.36	434	1,910	1,149	403	178
DF		17	1	82	121	1.727	2.72	3.45	30.9	120.0	3.04	107	414	283	99	39
DF		18	5	87	119	7.701	13.61	18.48	29.8	120.0	15.67	550	2,218	1,457	511	206
DF		19	4	84	132	5.529	10.89	16.59	28.0	105.8	13.25	465	1,756	1,232	432	163
DF		20	9	84	137	11.228	24.50	33.68	32.5	137.0	31.23	1,096	4,616	2,904	1,019	429
DF		21	3	83	136	3.395	8.17	10.18	36.0	146.7	10.44	366	1,494	971	341	139
DF		22	8	82	129	8.248	21.77	23.71	38.7	152.6	26.17	918	3,619	2,434	854	337
DF		23	4	85	147	3.773	10.89	11.32	45.8	199.2	14.77	518	2,255	1,374	482	210
DF		24	4	82	138	3.465	10.89	10.40	45.6	188.3	13.51	474	1,958	1,257	441	182
DF		25	4	82	142	3.194	10.89	9.58	53.5	227.5	14.61	513	2,180	1,359	477	203
DF		26	5	83	138	3.691	13.61	11.07	56.7	233.3	17.89	628	2,584	1,664	584	240
DF		27	4	82	152	2.738	10.89	8.90	61.6	260.8	15.62	548	2,321	1,452	510	216
DF		28	3	78	141	1.910	8.17	6.37	55.3	229.0	10.02	352	1,458	932	327	136
DF		29	1	83	140	.593	2.72	1.78	71.1	316.7	3.61	127	564	335	118	52
DF		31	1	78	143	.519	2.72	1.56	81.0	350.0	3.60	126	545	335	117	51
DF		34	1	75	140	.432	2.72	1.30	95.3	393.3	3.52	123	509	327	115	47
DF		35	1	75	138	.407	2.72	1.22	97.4	390.0	3.39	119	477	315	111	44
DF	Totals		86	83	115	143.201	234.07	320.75	29.6	121.2	270.73	9,499	38,882	25,178	8,834	3,616
RA	11	1	80	72	4.864	3.21	4.86	13.9	50.0	1.86	68	243	173	63	23	
RA	14	1	85	81	3.003	3.21	6.01	15.0	60.0	2.47	90	360	230	84	34	
RA	15	2	79	84	5.231	6.42	7.85	24.1	73.3	5.19	189	575	483	176	54	
RA	16	1	92	80	2.299	3.21	4.60	21.4	80.0	2.71	99	368	252	92	34	
RA	20	1	80	101	1.471	3.21	2.94	36.8	130.0	2.97	108	383	277	101	36	
RA	Totals		6	82	81	16.868	19.26	26.26	21.1	73.5	15.21	553	1,929	1,414	514	179
WH	9	1	86	54	10.060	4.44	10.06	7.1	30.0	2.28	71	302	212	66	28	
WH	Totals		1	86	54	10.060	4.44	10.06	7.1	30.0	2.28	71	302	212	66	28
Totals			93	83	108	170.129	257.78	357.07	28.4	115.1	288.22	10124	41,114	26,805	9,415	3,824



Legend

- Timber Sale Boundary
- Roads
- - New Construction
- Right of Way Boundary
- Type F Stream
- Type N Stream
- ▒ Stream Buffer
- ▒▒ Stream Buffer Boundary
- ▒▒▒ Reforested Area
- ▒▒▒ Tractor Yarding Area
- ▒▒▒ Cable Yarding Area
- Cable Landing
- Tractor Landing
- 40 Ft. Contours
- ▒ ODF Ownership Boundary
- ▒ Section Line
- ✕✕ Blockage
- Gate
- Ⓜ

LOGGING PLAN

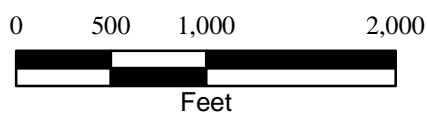
FOR TIMBER SALE CONTRACT # 341-17-32
CAMP VIEW
PORTIONS OF SECTIONS 2, 7, 8, 17, & 18, T1N, R6W W.M.
TILLAMOOK, OREGON.

Forest Grove District GIS
December, 2016

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 TRACTOR CABLE

	TRACTOR	CABLE
AREA 1	41	27
AREA 2	19	74
AREA 3	>1	0
AREA 4	>1	0
TOTAL	60	101