



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Fox Ridge
Sale TL-341-2022-W00854-01

District: Tillamook

Date: October 26, 2021

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$625,871.08	\$121,070.21	\$746,941.29
		Project Work:	(\$307,580.00)
		Advertised Value:	\$439,361.29



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Timber Description

Location: Section(s) 6 of T1S R7W, Section(s) 30, 31 of T1N R7W W.M.

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	21	0	90
Western Hemlock / Fir	19	0	100
Alder (Red)	15	0	90

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	1,458	508	0	0	0	0	1,966
Western Hemlock / Fir	194	55	0	0	0	0	249
Alder (Red)	0	0	166	157	36	260	619
Total	1,652	563	166	157	36	260	2,834

Comments: Additional Costs – Fox Ridge
Pond Values Used: October 2021
Region: Astoria, Forest Grove, and Tillamook

Western red cedar and other cedars stumpage price = \$1,577.00/MBF - \$502.09/MBF = \$1,074.91/ MBF

Pulp (Conifer and Hardwood) Price = \$ 2.50/ Ton

BRAND AND PAINT ALLOWANCE = \$2.00/ MBF

FUEL COST ALLOWANCE = \$3.00/ Gallon

HAULING COST ALLOWANCE

Hauling cost equivalent to \$950 daily truck cost

\$95.00/hr x 10 hr. = \$950

Other costs with profit and risk to be added:

Lift and Tailhold Trees (Unit 1 & Unit 2): 11 Trees x Cost \$400 = \$4,400

Slash management landing 8, 9 and 10: 10hrs x Cost \$50 = \$500

TOTAL Other costs with profit and risk to be added = \$4,900

Other Costs with No Profit and Risk Added:

Move-in Machine Cleaning: \$1,000/machine x 2 machines x 2 seasons = \$4,000

Slash piling and sorting (Cable Settings): \$5/ac x 160ac. = \$800

Heliport Construction: \$500/unit x 2 unit = \$1,000

Ditch Cleaning and Bank Sluff Removal:

Mobilization: two times – dump truck w/ tilt bed & small excavator: \$900 x 2 = \$1,800

Small excavator (Cat 312 or equivalent): 40 hours @ \$135/ hour = \$5,400

Dump truck: 40 hours @ \$90/ hour = \$3,600

TOTAL Other Costs no Profit and Risk added = \$16,600

ROAD MAINTENANCE:

Spot Rocking: 20cy/MMBF/mile x 2.834 MMBF x \$12/cy x 4.65 miles /2,834MBF = \$1.12/MBF

Interim Grading: \$1,150/mile x 4.65 miles x 1 times/ 2,834 MBF = \$1.89/MBF

Final Maintenance Grading: \$1,500/mile x 4.65 miles/ 2,834 MBF = \$2.46/MBF

Final Maintenance Compaction: \$950/mile x 3 miles/ 2,834MBF = \$1.01/MBF

Total Road Maintenance: = \$6.48/MBF



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Logging Conditions

Combination#: 1	Douglas - Fir	16.43%
	Western Hemlock / Fir	16.00%
	Alder (Red)	16.58%
Logging System:	Cable: Large Tower >=70	Process: Harvester Head Delimbing
yarding distance:	Long (1,500 ft)	downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	6	bd. ft / load: 4600
cost / mbf:	\$289.14	
machines:	Log Loader (A)	
	Forwarder	
	Harvester	
	Tower Yarder (Large)	
Combination#: 2	Douglas - Fir	49.43%
	Western Hemlock / Fir	52.00%
	Alder (Red)	48.49%
Logging System:	Cable: Large Tower >=70	Process: Harvester Head Delimbing
yarding distance:	Medium (800 ft)	downhill yarding: No
tree size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	10	bd. ft / load: 4100
cost / mbf:	\$194.64	
machines:	Log Loader (A)	
	Forwarder	
	Harvester	
	Tower Yarder (Large)	
Combination#: 3	Douglas - Fir	22.57%
	Western Hemlock / Fir	23.00%
	Alder (Red)	22.42%
Logging System:	Cable: Large Tower >=70	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:	12	bd. ft / load: 4600
cost / mbf:	\$144.57	
machines:	Log Loader (A)	
	Forwarder	
	Harvester	
	Tower Yarder (Large)	
Combination#: 4	Douglas - Fir	11.57%
	Western Hemlock / Fir	9.00%
	Alder (Red)	12.51%
Logging System:	Cable: Large Tower >=70	Process: Harvester Head Delimbing
yarding distance:	Long (1,500 ft)	downhill yarding: Yes
tree size:	Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	4	bd. ft / load: 4100

cost / mbf: \$608.26

machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Large)



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Logging Costs

Operating Seasons: 2.00	Profit Risk: 30%
Project Costs: \$307,580.00	Other Costs (P/R): \$4,900.00
Slash Disposal: \$0.00	Other Costs: \$16,600.00

Miles of Road

Road Maintenance: \$6.48

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	4.3
Western Hemlock / Fir	\$0.00	2.0	4.5
Alder (Red)	\$0.00	2.0	4.0



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$246.70	\$7.13	\$3.10	\$121.52	\$1.73	\$114.05	\$0.00	\$2.00	\$5.86	\$502.09
Western Hemlock / Fir									
\$235.47	\$6.48	\$3.10	\$105.56	\$1.73	\$105.70	\$0.00	\$2.00	\$5.86	\$465.90
Alder (Red)									
\$250.83	\$7.13	\$3.10	\$130.62	\$1.73	\$118.02	\$0.00	\$2.00	\$5.86	\$519.29

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$802.82	\$300.73	\$0.00
Western Hemlock / Fir	\$0.00	\$605.00	\$139.10	\$0.00
Alder (Red)	\$0.00	\$714.88	\$195.59	\$0.00



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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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	1,966	\$300.73	\$591,235.18
Western Hemlock / Fir	249	\$139.10	\$34,635.90
Alder (Red)	619	\$195.59	\$121,070.21

Gross Timber Sale Value

Recovery: \$746,941.29

Prepared By: Nathan Atchison

Phone: 503-815-7031



PROJECT SUMMARY SHEET

Sale: Fox Ridge

CONSTRUCTION

Point	C to D	3+45	stations =	\$7,682.83
Point	G to H	8+05	stations =	\$14,437.88
Point	K to L	10+45	stations =	\$33,514.58
SUBTOTAL CONSTRUCTION				\$55,635.29

IMPROVEMENT

Point	A to B	325+35	stations =	\$178,489.70
Point	E to F	78+10	stations =	\$20,755.85
SUBTOTAL IMPROVEMENT				\$199,245.55

RECONSTRUCTION

Point	I to J	4+40	stations =	\$2,323.98
SUBTOTAL RECONSTRUCTION				\$2,323.98

SPECIAL PROJECTS

Stockpile	1000	A to B(293+00)	1.5"-0"	\$14,500.00
Stockpile	1000	A to B(352+95)	1.5"-0"	\$13,370.00
Stockpile	1000	Point R	1.5"-0"	\$16,570.00
Clear Creek Pit Work		10 hours Excavator & Off Highway Dump		\$3,500.00
SUBTOTAL SPECIAL PROJECTS				\$47,940.00

MOVE IN

\$2,435.18

GRAND TOTAL

\$307,580.00

SUMMARY OF CONSTRUCTION COST

Sale:	Fox Ridge			Road:	A to B		
Construction -		0+00	stations	Improvement -		325+35	stations
		0.00	miles			6.16	miles
Reconstruction -		0+00	stations			0.00	miles

CULVERTS - MATERIALS & INSTALLATION

Culverts		50	LF of 18"	\$1,000.00	
				\$1,000.00	
Culvert Stakes & Markers		1	markers	\$8.00	
TOTAL CULVERTS					\$1,008.00

ROCK					
0+00 to	270+25	9,220	cy. of	Crushed	@ \$17.92 per c.y. = \$165,222.40
Culvert Backfill	192+35	30	cy. of	Crushed	@ \$14.71 per c.y. = \$441.30
Energy Dissipator	192+35	5	cy. of	Rip Rap	@ \$14.71 per c.y. = \$73.55
Spot Rock	170+25 - 325+3	200	cy. of	Crushed	@ \$15.02 per c.y. = \$3,004.00
TOTAL ROCK					\$168,741.25

SPECIAL PROJECTS					
Construct/Clean Ditchlines-No Endhaul	3.10	stations @	\$80.00	per station	\$248.00
Construct/Clean Ditchlines-Endhaul	8.75	stations @	\$105.00	per station	\$918.75
Construct waste areas -	1.00	hours @	\$200.00	per hour	\$200.00
Construct ditchouts -	2.00	@	\$80.00	each	\$160.00
Grade and shape road -	325.35	stations @	\$22.00	per station	\$7,157.70
Grass seed and fertilize -	0.20	acres @	\$280.00	per acre	\$56.00
TOTAL SPECIAL PROJECTS					\$8,740.45
GRAND TOTAL					\$178,489.70

SUMMARY OF CONSTRUCTION COST

Sale: Fox Ridge			Road: C to D		
Construction -			Improvement -		
	<u>3+45</u>	stations		<u>0+00</u>	stations
	<u>0.07</u>	miles		<u>0.00</u>	miles
Reconstruction -					
	<u>0+00</u>	stations		<u>0+00</u>	stations
	<u>0.00</u>	miles		<u>0.00</u>	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist.</u> <u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>		<u>Drill & Shoot</u>	<u>Endhaul</u>		
0+00		3+45	16%		Ditch	\$189	=			\$500	\$1,152.05
										TOTAL	\$1,152.05

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>											
		50	LF of 18"			\$1,000.00					
						\$1,000.00					
<u>Culvert Stakes & Markers</u>											
		1	markers			\$8.00					
										TOTAL CULVERTS	\$1,008.00

ROCK

0+00 to	3+45	180	cy. of	Jawrun	@	\$16.03 per c.y.=	\$2,885.40	
Approach Rock	0+00	30	cy. of	Jawrun	@	\$16.01 per c.y.=	\$480.30	
Landing Rock	3+45	100	cy. of	Pitrun	@	\$15.76 per c.y.=	\$1,576.00	
							TOTAL ROCK	\$4,941.70

SPECIAL PROJECTS

Construct Landing	2.00	hours @	\$200.00	per hour	\$400.00
Grade and shape road -	3.45	stations @	\$22.00	per station	\$75.90
Roll subgrade w/ vibratory roller prior to rocking -	3.45	stations @	\$17.50	per station	\$60.38
Grass seed and fertilize -	0.16	acres @	\$280.00	per acre	\$44.80
TOTAL SPECIAL PROJECTS					\$581.08
GRAND TOTAL					\$7,682.83

SUMMARY OF CONSTRUCTION COST

Sale: **Fox Ridge**

Road: **E to F**

Construction -	0+00	stations	Improvement -	78+10	stations	Reconstruction -	0+00	stations
	0.00	miles		1.48	miles		0.00	miles

ROCK

Spot Rock	As Directed	700	cy. of	Crushed	@	\$16.16 per c.y.=	\$11,312.00
Landing Rock	23+75	30	cy. of	Pitrun	@	\$15.79 per c.y.=	\$473.70
Landing Rock	46+70	80	cy. of	Pitrun	@	\$16.09 per c.y.=	\$1,287.20
Truck Turnaround	38+00	100	cy. of	Pitrun	@	\$15.98 per c.y.=	\$1,598.00
TOTAL ROCK							\$14,670.90

SPECIAL PROJECTS

Waste Area Construction	2.00	hours @	\$200.00	per hour	\$400.00
Truck Turnaround 38+00	2.00	hours @	\$200.00	per hour	\$400.00
Construct Landing 23+75 -	1.00	hours @	\$200.00	per hour	\$200.00
Construct Jump Up Landing 46+70	3.00	hours @	\$200.00	per hour	\$600.00
Endhaul material	4.00	hours @	\$350.00	per hour	\$1,400.00
Grade and shape road -	78.10	stations @	\$22.00	per station	\$1,718.20
Roll subgrade	78.10	stations @	\$17.50	per station	\$1,366.75

TOTAL SPECIAL PROJECTS	\$6,084.95
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GRAND TOTAL	\$20,755.85
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SUMMARY OF CONSTRUCTION COST

Sale: **Fox Ridge**

Road: **G to H**

Construction -	8+05	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.15	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist.</u> <u>To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>		<u>Drill & Shoot</u>	<u>Endhaul</u>
0+00		4+15	10%		Ditch	\$178	=		\$738.70
4+15		8+05	25%		Ditch	\$274	=		\$1,068.60
TOTAL									\$1,807.30

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	50	LF of 18"	<u>\$1,000.00</u>
			\$1,000.00
<u>Culvert Stakes & Markers</u>			
	1	markers	\$8.00

TOTAL CULVERTS	\$1,008.00
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ROCK

0+00 to	8+05	490	cy. of	Jawrun	@	\$15.79 per c.y.=	\$7,737.10
Approach Rock	0+00	30	cy. of	Jawrun	@	\$15.73 per c.y.=	\$471.90
Landing Rock	8+05	100	cy. of	Pitrun	@	\$15.64 per c.y.=	\$1,564.00
TOTAL ROCK							\$9,773.00

SPECIAL PROJECTS

Stockpile Area Construction	5.00	hours @	\$200.00	per hour	\$1,000.00
Construct Landing -	2.00	hours @	\$200.00	per hour	\$400.00
Grade and shape road -	8.05	stations @	\$22.00	per station	\$177.10
Roll subgrade	8.05	stations @	\$17.50	per station	\$140.88
Grass seed and fertilize -	0.47	acres @	\$280.00	per acre	\$131.60
			TOTAL SPECIAL PROJECTS		\$1,849.58

GRAND TOTAL	\$14,437.88
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SUMMARY OF CONSTRUCTION COST

Sale:			Fox Ridge			Road:			I to J								
Construction -			0+00 stations			Improvement -			0+00 stations			Reconstruction -			4+40 stations		
			0.00 miles						0.00 miles						0.08 miles		
RECONSTRUCTION: CLEARING AND GRUBBING -																	
Scattering						0.333 acres @			\$1,275.00 per acre =			\$424.58					
TOTAL CLEARING AND GRUBBING												424.58					
ROCK																	
Approach Rock			0+00			30 cy. of			Jawrun @			\$16.44 per c.y.=			\$493.20		
TOTAL ROCK												493.20					
SPECIAL PROJECTS																	
Construct Landing						3.00 hours @			\$200.00 per hour			\$600.00					
Reshape and repair road						3.00 hours @			\$180.00 per hour			\$540.00					
Grade and shape road -						4.40 stations @			\$22.00 per station			\$96.80					
Roll subgrade						4.40 stations @			\$17.50 per station			\$77.00					
Grass seed and fertilize -						0.33 acres @			\$280.00 per acre			\$92.40					
TOTAL SPECIAL PROJECTS												1,406.20					
GRAND TOTAL												2,323.98					

SUMMARY OF CONSTRUCTION COST

Sale: **Fox Ridge**

Road: **K to L**

Construction -	$\frac{10+45}{0.20}$	stations miles	Improvement -	$\frac{0+00}{0.00}$	stations miles	Reconstruction -	$\frac{0+00}{0.00}$	stations miles
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CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

[illegible]

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	60	LF of 18"	\$1,200.00
			<u>\$1,200.00</u>
<u>Culvert Stakes & Markers</u>			
	2	markers	\$16.00

TOTAL CULVERTS	\$1,216.00
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ROCK

0+00	to	10+45	590	cy. of	Jawrun	@	\$16.49 per c.y.=	\$9,729.10
1+30	to	7+65	120	cy. of	Crushed	@	\$16.68 per c.y.=	\$2,001.60
Approach Rock		0+00	30	cy. of	Crushed	@	\$16.42 per c.y.=	\$492.60
Corner Widening		0+00 to 1+30	20	cy. of	Jawrun	@	\$16.63 per c.y.=	\$332.60
Culvert Backfill		20yd/Culvert	40	cy. of	Crushed	@	\$16.78 per c.y.=	\$671.20
Energy Dissipator		5yd/Culvert	10	cy. of	Rip Rap	@	\$15.98 per c.y.=	\$159.80
Turnaround/Landing Rock		6+00	140	cy. of	Jawrun	@	\$16.70 per c.y.=	\$2,338.00
Landing Rock		10+45	100	cy. of	Pitrun	@	\$16.55 per c.y.=	\$1,655.00
TOTAL ROCK								\$17,379.90

SPECIAL PROJECTS

Construct Landing 10+45	4.00	hours @	\$200.00	per hour	\$800.00
Construct Landing 6+00	3.00	hours @	\$350.00	per hour	\$1,050.00
Grade and shape road -	10.45	stations @	\$22.00	per station	\$229.90
Roll subgrade w/ vibratory roller prior to rocking -	10.45	stations @	\$17.50	per station	\$182.88
Remove large stumps -	4.00	lump sum @	\$200.00		\$800.00
Grass seed and fertilize -	0.48	acres @	\$280.00	per acre	\$134.40
TOTAL SPECIAL PROJECTS					\$3,197.18
GRAND TOTAL					\$33,514.58

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Clear Creek	Location:	Sec. 15 , T1S, R7W, W.M.
Sale:	Fox Ridge	Road:	15375 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	15375 c.y.
Drill Pct.:	75%	In Place Total:	10982 c.y.

Drill & Shoot:	\$3.25	/cu.yd.	x	8237	cu.yds.	=	\$26,770.25
Rip Rock:	\$3.00	/cu.yd.	x	2745	cu.yds.	=	\$8,235.00
Push Rock:	\$1.00	/cu.yd.	x	15375	cu.yds.	=	\$15,375.00
Load Crusher:	\$1.00	/cu.yd.	x	15375	cu.yds.	=	\$15,375.00
Crush Rock(1 1/2"-0"):	\$4.50	/cu.yd.	x	13340	cu.yds.	=	\$60,030.00
Crush Rock(4"-0"):	\$3.50	/cu.yd.	x	1510	cu.yds.	=	\$5,285.00
Load Dump Truck:	\$1.00	/cu.yd.	x	15375	cu.yds.	=	\$15,375.00

Subtotal \$146,445.25

Move In/Set-up Crusher	1	@	\$5,175.00	=	\$5,175.00
Move In and set up Drill and Compressor	1	@	\$317.50	=	\$317.50
Move in Roller and Compactor	1	@	\$280.00	=	\$280.00
Move in Grader	1	@	\$270.83	=	\$270.83
Move in D-8	1	@	\$505.00	=	\$505.00
Move in Loader	1	@	\$325.00	=	\$325.00
Move in Excavator	1	@	\$440.00	=	\$440.00
Move in Trucks	4	@	\$92.08	=	\$368.32
			Subtotal		\$7,681.65

Base Cost= \$10.02 Per Cu.Yd. TOTAL PRODUCTION COSTS \$154,126.90

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base/load Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B 0 27025 (Crushed)	4.70	3.20	10.02	17.92	9220	\$165,222.40
A to B Culvert Backfill (Crushed)	3.79	0.90	10.02	14.71	30	\$441.30
A to B Energy Dissipator (Rip Rap)	3.79	0.90	10.02	14.71	5	\$73.55
A to B Spot Rock (Crushed)	1.80	3.20	10.02	15.02	200	\$3,004.00
C to D 0 345 (Jawrun)	4.31	1.70	10.02	16.03	180	\$2,885.40
C to D Approach Rock (Jawrun)	4.29	1.70	10.02	16.01	30	\$480.30
C to D Landing Rock (Pitrun)	4.24	1.50	10.02	15.76	100	\$1,576.00
E to F Spot Rock (Crushed)	4.44	1.70	10.02	16.16	700	\$11,312.00
E to F Landing Rock (Pitrun)	4.27	1.50	10.02	15.79	30	\$473.70
E to F Landing Rock (Pitrun)	4.57	1.50	10.02	16.09	80	\$1,287.20
E to F Truck Turnaround (Pitrun)	4.46	1.50	10.02	15.98	100	\$1,598.00
G to H 0 805 (Jawrun)	4.07	1.70	10.02	15.79	490	\$7,737.10
G to H Approach Rock (Jawrun)	4.01	1.70	10.02	15.73	30	\$471.90
G to H Landing Rock (Pitrun)	4.12	1.50	10.02	15.64	100	\$1,564.00
I to J Approach Rock (Jawrun)	4.72	1.70	10.02	16.44	30	\$493.20
K to L 0 1045 (Jawrun)	4.97	1.50	10.02	16.49	590	\$9,729.10
K to L 130 765 (Crushed)	4.96	1.70	10.02	16.68	120	\$2,001.60
K to L Approach Rock (Crushed)	4.90	1.50	10.02	16.42	30	\$492.60
K to L Corner Widening (Jawrun)	4.91	1.70	10.02	16.63	20	\$332.60
K to L Culvert Backfill (Crushed)	5.06	1.70	10.02	16.78	40	\$671.20
K to L Energy Dissipator (Rip Rap)	5.06	0.90	10.02	15.98	10	\$159.80
K to L Turnaround/Landing Rock (Jawrun)	4.98	1.70	10.02	16.70	140	\$2,338.00
K to L Landing Rock (Pitrun)	5.03	1.50	10.02	16.55	100	\$1,655.00
Stockpile A to B(293+00)	3.48	1.00	10.02	14.50	1000	\$14,500.00
Stockpile A to B(352+95)	2.35	1.00	10.02	13.37	1000	\$13,370.00
Stockpile Point R	5.55	1.00	10.02	16.57	1000	\$16,570.00
				Total C.Y.	15375	Sub Total \$260,439.95

TOTAL ROCKING COSTS \$260,439.95

Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Fox Ridge**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
32.5	Pavement	30
0.0	Main Lines	7
0.0	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Graders	\$270.83		\$3.65	0.00	4.80	4.8	\$17.52	\$288.35
1	Excavators (Large)	\$440.00	1	\$44.80	0.00	4.80	4.8	\$215.04	\$655.04
1	Tractors (D6)	\$465.42	2	\$7.10	0.00	4.80	4.8	\$34.08	\$499.50
2	Dump Truck (Off Hiway)	\$822.50	1	\$4.75	0.00	4.80	4.8	\$45.60	\$868.10
1	Water Truck (2500 Gal)	\$110.51		\$2.85	0.00	4.80	4.8	\$13.68	\$124.19

	TOTAL MOVE-IN COSTS:	\$2,435.18
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OREGON DEPARTMENT OF FORESTRY CRUISE REPORT *Fox Ridge*

1. Type of Sale

Regeneration harvest, Recovery.

2. Legal Description

Section(s) 6 of T1S R7W, Section(s) 30, 31 of T1N R7W W.M.

3. Sale Acreage

Sale acreage was determined by GPS and orthophotographs along with GIS.

	ACRES	
	<u>Gross</u>	<u>Net</u>
Unit 1 (Modified Clearcut)	89	69
Unit 2 (Modified Clearcut)	122	91
Total Acres	211	160

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

Used for calculating the advertised volume.

Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. Cruising Procedures

A. Cruise Method

Units 1 and 2 were cruised utilizing a 300' x 300' grid.

All timber sale units were cruised with a variable plot sampling method. All conifers 8" DBH and greater, and all hardwoods 10" DBH and greater, were recorded on all plots. Each plot recorded the following data: species, diameter at breast height (DBH), bole height, form factor, and grade. Merchantable heights were recorded at 6" and 7" outside bark diameters for conifer and hardwoods, respectively.

B. Plot size

Point of observation was 4.0'. Form factor was measured at 16.0'.

Unit	BAF
1	33.61
2	27.78

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Log lengths favored 40-foot lengths.

5. Computation Procedure

Cruise data was entered into SuperAce for computation of basal area, advertised volume, volume summary, log stock table, and stand table summary for each species and type. Cruise plots were cruised from September to October of 2021. Plots landing in riparian areas or areas excluded from the timber sale harvest areas were removed from computation procedures.

Net sale acreage was used for volume calculation.

Cruise Statistics (Board Foot Volumes)			
Unit	Number of Plots	SE (%)	CV (%)
1	34	11.1	64.5
2	37	7.5	45.5
Total	71	9.3 (avg.)	55.0 (avg.)

6. Hidden Defect and Breakage

A 4% reduction was applied to Douglas-fir for both areas. A 15% reduction was applied to Red alder in Unit 1 and a 20% reduction was applied to Red alder volumes in Unit 2. Hardwoods showed evidence of being sprayed through past practices and damage due to ice and wind storm winter of 2021. This tends to result in short boles and multiple tops.

7. Timber Description

Unit 1 is approximately 73 years old and is a predominantly Douglas-fir dominated stand with minor red alder component, as well as minor amounts of Western Hemlock. Sitka Spruce will be reserved in the unit as a leave species. A winter weather event in January of 2021 resulted in patches of ice damage in the stand mostly affecting the red alder.

Unit 2 is approximately 70 years old and is dominated by Douglas-fir with a minor red alder component, all other species will be left as leave species. This includes a minor amount of big leaf maple, and scattered other miscellaneous conifers. The maple, Sitka spruce, and Western Red Cedar will be retained on the landscape as reserve trees.

Both units were hit by the ice storm during the winter of 2021 and hidden defect was added to the volume summary to account for any further damage not seen during cruising.

Both units are within the 1933 (Tillamook) and 1939 (Saddle Mountain) fire boundaries.
The sale is comprised of multiple merchantable species, please see the table below:

Unit #	Species	DBH	Merchantable Bole Height (feet)	Merchantable top (inches inside bark)
1	Douglas-fir	22.4	87	5
1	Red alder	15.8	46	6
1	Western hemlock	19.3	58	5
2	Douglas-fir	20.3	69	5
2	Red alder	14.6	36	6

Above data derived from Statistics (type) report using SuperAce 2008, developed by Atterbury consultants, Inc.

8. Cruiser Names/Dates

The timber sale was cruised by the Marketing Unit of the Tillamook District from September to October of 2021.

9. Revenue Distribution

FDF: 100%

Tax Code: 902: 100%

Deed Numbers: 159

10. Attachments

Volume Summaries

Stand Tables (2)

Log Stock Tables (2)

Species, Sort, Grade Tables (2)

Logging Plan (1)

11. Stand and Log Stock Tables Species Key

DF – Douglas-fir take

RA – Red alder take

SS – Sitka spruce take

WH – Western hemlock take

SL – Sitka spruce leave

BL -- Big Leaf Maple leave

RL – Western Red cedar leave

Prepared by: Nathan Atchison

Date: 10/30/2021

TC TSTATS				STATISTICS				PAGE	1											
				PROJECT	FOXR			DATE	10/25/2021											
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt										
01S	07W	06	UNIT 1	0100	69.00		34	195	S	W										
													TREES	ESTIMATED TOTAL		PERCENT SAMPLE				
											PLOTS	TREES	PER PLOT		TREES		TREES			
TOTAL		34	195	5.7																
CRUISE		17	102	6.0		7,000		1.5												
DBH COUNT																				
REFOREST																				
COUNT		17	93	5.5																
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		51	33.2	22.4	87	19.2	90.9	17,022	16,988	3,760	3,760									
R ALDER		31	55.0	15.8	46	18.9	75.1	4,399	4,382	1,433	1,433									
WHEMLOCK		16	11.1	19.3	58	5.2	22.7	3,745	3,679	878	878									
SS-LEAVE		3	1.9	17.0	38	0.7	3.0	176	171	70	70									
OTH CONF-1		1	.2	27.0	98	0.2	1.0													
TOTAL		102	101.5	18.7	61	44.6	192.8	25,343	25,220	6,142	6,142									
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		62.1	8.7	675	739	804														
R ALDER		63.4	11.4	72	82	91														
WHEMLOCK		65.0	16.8	555	666	778														
SS-LEAVE		45.7	31.6	71	103	136														
OTH CONF-1																				
TOTAL		95.0	9.4	455	502	549	360		90	40										
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	7.5	146	158	170														
R ALDER		54.6	9.8	26	29	32														
WHEMLOCK		64.4	16.6	132	158	184														
SS-LEAVE		44.9	31.1	29	43	56														
OTH CONF-1																				
TOTAL		83.2	8.2	104	114	123	277		69	31										
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		127.5	21.9	26	33	40														
R ALDER		113.2	19.4	44	55	66														
WHEMLOCK		295.8	50.7	5	11	17														
SS-LEAVE		406.1	69.6	1	2	3														
OTH CONF-1		583.1	99.9	0	0	0														
TOTAL		64.5	11.1	90	101	113	166		42	18										
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		96.9	16.6	76	91	106														
R ALDER		106.2	18.2	61	75	89														
WHEMLOCK		229.4	39.3	14	23	32														
SS-LEAVE		429.3	73.6	1	3	5														
OTH CONF-1		583.1	99.9	0	1	2														
TOTAL		48.6	8.3	177	193	209	94		24	10										

TC TSTATS				STATISTICS				PAGE	2
				PROJECT	FOXR				
								DATE	10/25/2021
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
01S	07W	06	UNIT 1	0100	69.00	34	195	S	W
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
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		91.2	15.6	14,333	16,988	19,644			
R ALDER		124.6	21.3	3,446	4,382	5,317			
WHEMLOCK		235.2	40.3	2,196	3,679	5,162			
SS-LEAVE		449.1	77.0	39	171	302			
OTH CONF-1									
TOTAL		64.5	11.1	22,431	25,220	28,010	166	42	18
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		93.0	15.9	3,161	3,760	4,359			
R ALDER		118.8	20.4	1,141	1,433	1,725			
WHEMLOCK		231.0	39.6	530	878	1,226			
SS-LEAVE		449.2	77.0	16	70	124			
OTH CONF-1									
TOTAL		59.2	10.1	5,518	6,142	6,765	140	35	16

TC TLOGSTVB				Log Stock Table - MBF																								
				Project: FOXR																								
T01S R07W S06 T0100												T01S R07W S06 T0100																
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1																			
01S	07W	06	UNIT 1	0100	69.00	34	195	Date	10/25/2021																			
									Time	1:36:31PM																		
Spp	S	So	Gr	Log	T	rt	de	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		CO	2	12					7		7	.6																
DF		CO	2	16					4		4	.3					4											
DF		CO	2	24					12		12	1.0																
DF		CO	2	40					896	.2	894	76.2					165		120	302	226		80					
DF		CO	3	24					5		5	.5								5								
DF		CO	3	25					1		1	.1				1												
DF		CO	3	26					1		1	.1				1												
DF		CO	3	27					1		1	.1				1												
DF		CO	3	29					2		2	.1				2												
DF		CO	3	30					4		4	.3				2												
DF		CO	3	31					2		2	.1				2												
DF		CO	3	37					3		3	.2				3												
DF		CO	3	39					3		3	.2																
DF		CO	3	40					189	.2	188	16.1				27	39	110	6	6								
DF		CO	4	12					1		1	.1				1	1											
DF		CO	4	15					0		0	.0					0											
DF		CO	4	16					1		1	.1					1											
DF		CO	4	17					2		2	.1				1	1											
DF		CO	4	18					5		5	.4		3	2	1												
DF		CO	4	19					1		1	.1			1													
DF		CO	4	20					2		2	.2		1	1													
DF		CO	4	21					1		1	.1					1											
DF		CO	4	22					1		1	.1					1											
DF		CO	4	23					3		3	.2		1			2											
DF		CO	4	25					1		1	.1			1													
DF		CO	4	26					3		3	.3		3														
DF		CO	4	27					3		3	.3		3														
DF		CO	4	29					4		4	.4		4														
DF		CO	4	36					9		9	.7		9														
DF		CO	4	38					3		3	.2		3														
DF		CO	4	40					5		5	.4		5														
DF		Totals							1,175		1,172	67.4		32	40	50	115	170	130	308	226	100						
RA		H	2	20					10		10	3.4					10											
RA		H	3	22					8		8	2.5					8											
RA		H	3	23					3		3	.9			3													
RA		H	3	28					13		13	4.2					13											
RA		H	3	40					18	6.7	17	5.5					17											
RA		H	4	18					3		3	1.0			3													
RA		H	4	20					17		17	5.5			3			14										
RA		H	4	25					2		2	.7			2													
RA		H	4	28					25		25	8.4			7		18											
RA		H	4	29					3		3	1.1			3													
RA		H	4	31					6		6	1.9			6													
RA		H	4	34					8		8	2.6			8													
RA		H	4	35					6		6	2.0			6													
RA		H	4	36					6		6	1.9			6													
RA		H	4	40					176		176	58.4			89	67	20											
RA		Totals							304		302	17.4			135	67	76	10	14									
WH		CO	2	28					9		9	3.4							9									

TC TLOGSTVB				Log Stock Table - MBF																
				Project: FOXR																
T01S R07W S06 T0100										T01S R07W S06 T0100										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	2											
01S	07W	06	UNIT 1	0100	69.00	34	195	Date	10/25/2021											
										Time	1:36:31PM									
Spp	T	So	Gr	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+
WH		CO	2	36	12	5.6	12	4.6								12				
WH		CO	2	40	182	2.1	178	70.3					13	33	47	74	12			
WH		CO	3	19	1		1	.3				1								
WH		CO	3	40	44		44	17.4			11	7	21	5						
WH		CO	4	16	4		4	1.7		4										
WH		CO	4	21	1		1	.3				1								
WH		CO	4	22	1		1	.5			1									
WH		CO	4	29	1		1	.5			1									
WH		CO	4	31	2		2	.8		2										
WH		Totals			258	1.8	254	14.6		7	14	8	22	18	33	68	74	12		
SL		CO	3	26	3		3	27.1				3								
SL		CO	3	40	9	3.9	9	72.9				4	5							
SL		Totals			12	2.9	12	.7			7		5							
Total All Species					1,749		1,740	100.0		38	189	133	217	199	177	375	300	111		

TC		Stand Table Summary																			
TSTNDSUM		Project FOXR																			
T01S R07W S06 T0100										T01S R07W S06 T0100											
Twp	Rge	Sec	Tract	Type				Acres		Plots	Sample Trees			Page: 1							
01S	07W	06	UNIT 1	0100				69.00		34	195			Date: 10/25/2021							
																Time: 1:36:32PM					
S Spc	T	Sample		FF	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	Totals							
		DBH	Trees	16'	Tot				Net Cu.Ft.	Net Bd.Ft.		Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF					
DF		12	1	89	49	2.270	1.78	2.27	14.3	40.0	.93	33	91	64	22	6					
DF		13	1	89	82	1.935	1.78	3.87	13.5	55.0	1.49	52	213	103	36	15					
DF		15	2	89	89	2.906	3.57	5.81	19.9	82.5	3.30	116	480	228	80	33					
DF		16	2	91	109	2.554	3.57	5.11	27.1	115.0	3.95	139	587	273	96	41					
DF		18	3	89	96	3.027	5.35	6.05	31.2	116.7	5.38	189	706	371	130	49					
DF		19	4	90	111	3.623	7.13	8.15	35.2	143.3	8.17	287	1,168	564	198	81					
DF		20	1	88	92	.817	1.78	1.63	38.4	140.0	1.79	63	229	124	43	16					
DF		22	2	86	118	1.351	3.57	3.38	43.6	180.0	4.20	147	608	290	102	42					
DF		23	3	86	121	1.854	5.35	4.94	46.8	203.7	6.60	231	1,007	455	160	70					
DF		24	3	89	116	1.703	5.35	4.54	48.3	216.2	6.25	219	982	431	151	68					
DF		25	2	85	119	1.046	3.57	2.62	55.5	238.0	4.13	145	623	285	100	43					
DF		26	3	88	126	1.451	5.35	3.87	63.9	295.0	7.04	247	1,141	486	171	79					
DF		27	5	88	123	2.242	8.92	6.73	60.1	278.7	11.52	404	1,875	795	279	129					
DF		28	3	88	126	1.251	5.35	3.34	73.8	345.0	7.02	246	1,151	484	170	79					
DF		29	1	91	127	.389	1.78	1.17	73.1	363.3	2.43	85	424	168	59	29					
DF		30	2	88	123	.727	3.57	2.18	73.7	353.3	4.58	161	770	316	111	53					
DF		31	7	89	120	2.382	12.48	6.80	81.5	395.0	15.80	554	2,688	1,090	382	185					
DF		32	1	84	85	.319	1.78	.96	48.4	220.0	1.32	46	211	91	32	15					
DF		33	1	90	131	.300	1.78	.90	96.4	513.3	2.48	87	462	171	60	32					
DF		34	1	83	103	.283	1.78	.85	64.0	316.7	1.55	54	269	107	37	19					
DF		35	1	82	152	.267	1.78	.80	113.2	563.3	2.58	91	451	178	63	31					
DF		37	1	85	135	.239	1.78	.48	155.1	755.0	2.11	74	361	146	51	25					
DF		39	1	89	136	.215	1.78	.64	138.3	763.3	2.54	89	492	175	62	34					
DF		Totals		51	88	106			33.152	90.94	77.09			48.8	220.4	107.17	3,760	16,988	7,395	2,595	1,172
RA		11	2	84	90	7.344	4.85	7.34	18.7	70.0	3.77	137	514	260	95	35					
RA		13	3	83	73	7.888	7.27	7.89	21.7	76.7	4.70	171	605	324	118	42					
RA		14	4	80	67	9.068	9.69	9.07	22.5	62.5	5.60	204	567	387	141	39					
RA		15	3	79	73	5.925	7.27	7.90	20.0	72.5	4.35	158	573	300	109	40					
RA		16	5	78	65	8.678	12.12	6.94	33.2	100.0	6.33	230	694	437	159	48					
RA		17	2	75	55	3.075	4.85	3.08	23.5	75.0	1.99	72	231	137	50	16					
RA		18	4	70	64	5.486	9.69	6.86	23.7	66.0	4.47	163	453	309	112	31					
RA		19	2	72	63	2.462	4.85	3.69	22.8	70.0	2.31	84	258	160	58	18					
RA		20	1	84	83	1.111	2.42	2.22	29.7	120.0	1.81	66	267	125	46	18					
RA		21	2	66	56	2.015	4.85	2.02	18.4	40.0	1.02	37	81	70	26	6					
RA		25	1	85	57	.711	2.42	.71	64.7	90.0	1.26	46	64	87	32	4					
RA		26	1	75	59	.657	2.42	.66	53.5	70.0	.97	35	46	67	24	3					
RA		27	1	67	45	.610	2.42	.61	48.9	50.0	.82	30	30	57	21	2					
RA		Totals		31	78	69			55.029	75.13	58.98			24.3	74.3	39.41	1,433	4,382	2,720	989	302
WH		9	1	72	20	3.217	1.42	3.22	4.6	20.0	.48	15	64	33	10	4					
WH		11	1	78	82	2.153	1.42	2.15	17.1	60.0	1.18	37	129	81	25	9					
WH		16	1	83	93	1.018	1.42	2.04	24.7	90.0	1.61	50	183	111	35	13					
WH		20	1	85	113	.651	1.42	1.30	46.7	190.0	1.95	61	248	134	42	17					
WH		22	1	88	106	.538	1.42	1.08	54.4	225.0	1.88	59	242	129	40	17					
WH		23	1	88	99	.493	1.42	.99	59.5	235.0	1.87	59	231	129	40	16					
WH		24	1	83	71	.452	1.42	.90	43.3	160.0	1.25	39	145	87	27	10					
WH		25	1	91	126	.417	1.42	1.25	56.3	280.0	2.25	70	350	155	49	24					
WH		28	1	82	114	.332	1.42	.66	86.5	355.0	1.84	58	236	127	40	16					
WH		29	3	84	116	.929	4.26	2.17	86.9	388.6	6.03	188	843	416	130	58					
WH		30	1	85	114	.289	1.42	.58	105.0	480.0	1.95	61	278	134	42	19					
WH		31	1	88	106	.271	1.42	.54	113.1	485.0	1.96	61	263	135	42	18					
WH		34	1	83	114	.225	1.42	.45	126.2	475.0	1.82	57	214	126	39	15					

TC		TSTNDSUM													Stand Table Summary												
													Project FOXR														
T01S R07W S06 T0100													T01S R07W S06 T0100														
Twp		Rge		Sec		Tract		Type			Acres		Plots		Sample Trees			Page:		2							
01S		07W		06		UNIT 1		0100			69.00		34		195			Date:		10/25/2021							
													Time:		1:36:32PM												
S Spc	T	Sample		Av		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net		Net Bd.Ft. Acre	T o t a l s												
		DBH	Trees	FF 16'	Ht Tot				Net Cu.Ft.	Net Bd.Ft.		Tons	Cunits		MBF												
WH		41	1	75	126	.155	1.42	.46	136.7	543.3	2.03	64	253	140	44	17											
WH		Totals	16	80	76	11.141	22.74	17.79	49.3	206.7	28.10	878	3,679	1,939	606	254											
SL		14	1	78	52	.925	.99	.92	20.5	50.0	.49	19	46	34	13	3											
SL		19	1	81	68	.502	.99	.50	54.5	140.0	.71	27	70	49	19	5											
SL		20	1	83	56	.453	.99	.45	52.5	120.0	.62	24	54	43	16	4											
SL		Totals	3	80	57	1.880	2.97	1.88	37.3	90.9	1.82	70	171	126	48	12											
OC		27	1	90	111	.249	.99																				
OC		Totals	1	90	111	.249	.99																				
Totals		102		82	82	101.451	192.76	155.75	39.4	161.9	176.51	6142	25,220	12,179	4,238	1,740											

TC TSTATS				STATISTICS				PAGE	1			
				PROJECT	FOXR	DATE 10/25/2021						
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
01N	07W	31	UNIT 2	0100	91.00	37	228	S	W			
				TREES	ESTIMATED	PERCENT						
				PER PLOT	TOTAL	SAMPLE						
					TREES	TREES						
TOTAL			37	228	6.2							
CRUISE			25	137	5.5	10,384	1.3					
DBH COUNT												
REFOREST												
COUNT			12	73	6.1							
BLANKS												
100 %												
STAND SUMMARY												
SAMPLE			TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
TREES			/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
R ALDER			59	75.3	14.6	36	23.0	87.8	5,021	4,964	1,755	1,755
DOUG FIR			63	31.1	20.3	69	15.5	69.8	9,675	9,629	2,462	2,462
BL-LEAVE			9	5.2	17.1	32	2.0	8.3	693	688		
SS-LEAVE			2	1.2	18.4	37	0.5	2.3	79	79	36	36
RC-LEAVE			2	.6	22.0	57	0.3	1.5	114	114	44	44
OTH CONF-1			1	.2	24.0	32	0.2	.8				
OTH CONF-2			1	.5	16.0	66	0.2	.8				
TOTAL			137	114.1	16.6	45	42.0	171.2	15,583	15,475	4,297	4,297
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		
R ALDER			60.9	7.9	70	76	82					
DOUG FIR			80.8	10.2	450	500	551					
BL-LEAVE			94.6	33.4	127	190	253					
SS-LEAVE			115.7	108.3		110	229					
RC-LEAVE					200	200	200					
OTH CONF-1												
OTH CONF-2												
TOTAL			124.0	10.6	250	280	309	614	153	68		
CL:	68.1 %	COEFF	SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
R ALDER			55.0	7.2	27	29	31					
DOUG FIR			65.3	8.2	110	120	130					
BL-LEAVE												
SS-LEAVE			119.9	112.2		52	109					
RC-LEAVE					77	77	77					
OTH CONF-1												
OTH CONF-2												
TOTAL			104.3	8.9	63	69	76	434	109	48		
CL:	68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		
R ALDER			88.5	14.5	64	75	86					
DOUG FIR			123.4	20.3	25	31	37					
BL-LEAVE			294.2	48.3	3	5	8					
SS-LEAVE			371.0	60.9	0	1	2					
RC-LEAVE			424.1	69.7	0	1	1					
OTH CONF-1			608.3	99.9	0	0	0					
OTH CONF-2			608.3	99.9	0	1	1					
TOTAL			44.3	7.3	106	114	122	78	20	9		
CL:	68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15		

TC TSTATS				STATISTICS				PAGE	2
				PROJECT	FOXR				
								DATE	10/25/2021
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
01N	07W	31	UNIT 2	0100	91.00	37	228	S	W
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
R ALDER		83.5	13.7	76	88	100			
DOUG FIR		99.1	16.3	58	70	81			
BL-LEAVE		284.4	46.7	4	8	12			
SS-LEAVE		341.3	56.1	1	2	4			
RC-LEAVE		424.1	69.7	0	2	3			
OTH CONF-1		608.3	99.9	0	1	2			
OTH CONF-2		608.3	99.9	0	1	2			
TOTAL		26.9	4.4	164	171	179	29	7	3
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
R ALDER		88.9	14.6	4,240	4,964	5,689			
DOUG FIR		96.6	15.9	8,102	9,629	11,157			
BL-LEAVE		273.4	44.9	379	688	997			
SS-LEAVE		375.4	61.7	30	79	128			
RC-LEAVE		424.1	69.7	35	114	193			
OTH CONF-1									
OTH CONF-2									
TOTAL		45.5	7.5	14,318	15,475	16,632	83	21	9
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
R ALDER		88.6	14.6	1,499	1,755	2,010			
DOUG FIR		97.9	16.1	2,066	2,462	2,858			
BL-LEAVE									
SS-LEAVE		383.7	63.0	13	36	59			
RC-LEAVE		424.1	69.7	13	44	74			
OTH CONF-1									
OTH CONF-2									
TOTAL		45.5	7.5	3,975	4,297	4,618	83	21	9

TC TLOGSTVB				Log Stock Table - MBF																
				Project: FOXR																
T01N R07W S31 T0100										T01N R07W S31 T0100										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	2											
01N	07W	31	UNIT 2	0100	91.00	37	222	Date	10/25/2021											
										Time	2:37:42PM									
S Spp	So	Gr	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	CO	4	28	5		5	.6		5											
DF	CO	4	29	1		1	.1			1										
DF	CO	4	30	1		1	.1		1											
DF	CO	4	32	3		3	.4		2		2									
DF	CO	4	34	4		4	.4			4										
DF	CO	4	36	9		9	1.0		9											
DF	CO	4	37	1		1	.1		1											
DF	CO	4	39	4		4	.5		4											
DF	CO	4	40	4		4	.4		4											
DF	Totals			880		876	62.2		37	62	38	112	145	108	195	118	61			
BL	H	2	14	10		10	16.6						4			7				
BL	H	2	22	7		7	11.6							7						
BL	H	4	16	3		3	4.1							3						
BL	H	4	18	7		7	11.9			3	2	3								
BL	H	4	32	7		7	12.0				7									
BL	H	4	40	28	1.5	27	43.9				10	18								
BL	Totals			63		63	4.4			3	19	21	4	10		7				
SL	CO	3	40	6		6	76.9						6							
SL	CO	4	16	2		2	23.1			2										
SL	Totals			7		7	.5			2			6							
RL	CO	3	40	9		9	90.0					9								
RL	CO	4	15	1		1	10.0		1											
RL	Totals			10		10	.7		1			9								
Total All Species				1,418		1,408	100.0		38	248	194	252	171	125	195	125	61			

TC		TSTNDSUM													Stand Table Summary																
															Project FOXR																
T01N R07W S31 T0100															T01N R07W S31 T0100																
Twp		Rge		Sec		Tract		Type			Acres		Plots		Sample Trees			Page:		1											
01N		07W		31		UNIT 2		0100			91.00		37		222			Date:		10/25/2021											
																		Time:		2:37:43PM											
S		Sample			Av					Average Log			Net		Net		Totals														
T		DBH		Trees		FF		Ht		Trees/		BA/		Logs		Net		Net		Tons		Cunits		MBF							
Sp		T		DBH		Trees		16'		Tot		Acre		Acre		Acre		Cu.Ft.		Bd.Ft.		Acre		Acre		Bd.Ft.					
DF		11		1		88		53		1.679		1.11		1.68		12.3		40.0		.59		21		67		53		19		6	
DF		12		1		83		67		1.411		1.11		1.41		19.6		60.0		.79		28		85		72		25		8	
DF		13		4		79		59		4.810		4.43		6.01		15.9		50.0		2.72		95		301		247		87		27	
DF		14		2		81		69		2.074		2.22		2.07		25.3		70.0		1.49		52		145		136		48		13	
DF		15		1		83		50		.903		1.11		.90		23.5		40.0		.61		21		36		55		19		3	
DF		16		2		83		71		1.588		2.22		2.38		25.1		80.0		1.70		60		191		155		54		17	
DF		17		2		82		82		1.406		2.22		2.81		24.5		80.0		1.97		69		225		179		63		20	
DF		18		2		82		99		1.254		2.22		2.51		31.6		107.5		2.25		79		270		205		72		25	
DF		19		2		80		90		1.126		2.22		2.25		31.4		102.5		2.01		71		231		183		64		21	
DF		20		2		87		90		1.016		2.22		2.03		36.5		130.0		2.11		74		264		192		67		24	
DF		21		3		84		96		1.382		3.33		2.76		42.3		146.7		3.33		117		405		303		106		37	
DF		22		6		84		97		2.519		6.65		4.62		47.2		182.7		6.22		218		844		566		199		77	
DF		23		6		84		93		2.305		6.65		4.99		43.5		163.1		6.19		217		814		563		198		74	
DF		24		5		82		121		1.764		5.54		5.29		44.9		183.3		6.78		238		970		617		216		88	
DF		25		3		81		119		.975		3.33		2.28		58.2		225.7		3.78		133		514		344		121		47	
DF		26		4		81		128		1.202		4.43		2.71		65.1		264.4		5.02		176		715		457		160		65	
DF		27		2		73		135		.558		2.22		1.67		56.7		186.7		2.70		95		312		246		86		28	
DF		28		2		87		112		.518		2.22		1.30		70.0		306.0		2.58		91		397		235		83		36	
DF		29		2		81		127		.483		2.22		1.45		65.4		258.3		2.70		95		375		246		86		34	
DF		30		2		87		139		.452		2.22		1.35		78.4		401.7		3.03		106		544		276		97		50	
DF		31		3		83		121		.634		3.33		1.69		82.5		356.2		3.98		140		603		362		127		55	
DF		32		1		90		131		.198		1.11		.60		90.4		466.7		1.53		54		278		140		49		25	
DF		33		1		82		112		.187		1.11		.37		101.1		425.0		1.08		38		159		98		34		14	
DF		34		1		89		122		.176		1.11		.53		95.4		470.0		1.43		50		248		131		46		23	
DF		36		2		84		127		.314		2.22		.63		130.7		640.0		2.34		82		401		213		75		37	
DF		38		1		85		134		.141		1.11		.42		103.0		560.0		1.24		43		236		113		40		22	
DF		Totals		63		82		88		31.076		69.83		56.73		43.4		169.7		70.15		2,462		9,629		6,384		2,240		876	
RA		10		3		73		46		8.190		4.47		5.46		6.3		35.0		.94		34		191		86		31		17	
RA		11		4		75		57		9.024		5.96		9.02		13.4		42.5		3.32		121		384		302		110		35	
RA		12		4		74		35		7.583		5.96		7.58		11.4		32.5		2.40		87		246		218		79		22	
RA		13		7		79		69		11.307		10.42		14.54		17.5		52.2		6.98		254		759		635		231		69	
RA		14		6		82		57		8.357		8.93		11.14		16.4		52.5		5.03		183		585		457		166		53	
RA		15		7		80		58		8.493		10.42		10.92		23.2		60.0		6.95		253		655		633		230		60	
RA		16		5		80		63		5.332		7.44		7.46		24.6		74.3		5.05		184		554		460		167		50	
RA		17		5		81		46		4.723		7.44		4.72		23.8		56.0		3.09		113		264		282		102		24	
RA		18		4		81		71		3.370		5.96		4.21		33.8		110.0		3.92		142		463		356		130		42	
RA		19		6		79		62		4.537		8.93		5.29		39.8		104.3		5.79		211		552		527		192		50	
RA		20		2		77		35		1.365		2.98		.68		46.4		90.0		.87		32		61		79		29		6	
RA		21		1		68		37		.619		1.49		.62		23.6		30.0		.40		15		19		36		13		2	
RA		23		3		78		44		1.548		4.47		1.55		54.9		113.3		2.34		85		175		213		77		16	
RA		24		1		80		56		.474		1.49		.47		43.0		70.0		.56		20		33		51		19		3	
RA		28		1		83		48		.348		1.49		.35		64.9		60.0		.62		23		21		57		21		2	
RA		Totals		59		78		55		75.269		87.84		84.03		20.9		59.1		48.26		1,755		4,964		4,392		1,597		452	
BL		10		1		69		27		1.682		.92		1.68				20.0						34						3	
BL		15		1		86		46		.748		.92		.75				110.0						82						7	
BL		18		1		72		64		.519		.92		1.04				70.0						73						7	
BL		19		2		80		63		.932		1.84		.93				220.0						205						19	
BL		20		2		76		47		.841		1.84		.84				115.0						97						9	
BL		25		1		88		77		.269		.92		.54				315.0						170						15	
BL		29		1		85		31		.200		.92		.20				140.0						28						3	

TC TSTNDSUM				Stand Table Summary												
Project								FOXR								
T01N R07W S31 T0100										T01N R07W S31 T0100						
Twp	Rge	Sec	Tract	Type				Acres	Plots	Sample Trees			Page: 2			
01N	07W	31	UNIT 2	0100				91.00	37	222			Date: 10/25/2021			
													Time: 2:37:43PM			
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.		Net Bd.Ft.	Tons	Cunits	MBF		
BL		Totals	9	76	46	5.192	8.26	5.98	115.0		688	63				
RL		22	2	77	67	.569	1.50	1.14	38.4	100.0	1.03	44	114	94	40	10
RL		Totals	2	77	67	.569	1.50	1.14	38.4	100.0	1.03	44	114	94	40	10
SL		15	1	82	40	.918	1.13	.92	7.9	20.0	.19	7	18	17	7	2
SL		26	1	81	61	.305	1.13	.31	95.2	200.0	.76	29	61	69	26	6
SL		Totals	2	82	45	1.223	2.25	1.22	29.7	65.0	0.94	36	79	86	33	7
OC		16	1	87	79	.538	.75									
OC		24	1	75	38	.239	.75									
OC		Totals	2	83	66	.777	1.50									
Totals			137	79	64	114.106	171.18	149.10	28.8	103.8	120.39	4297	15,475	10,956	3,910	1,408



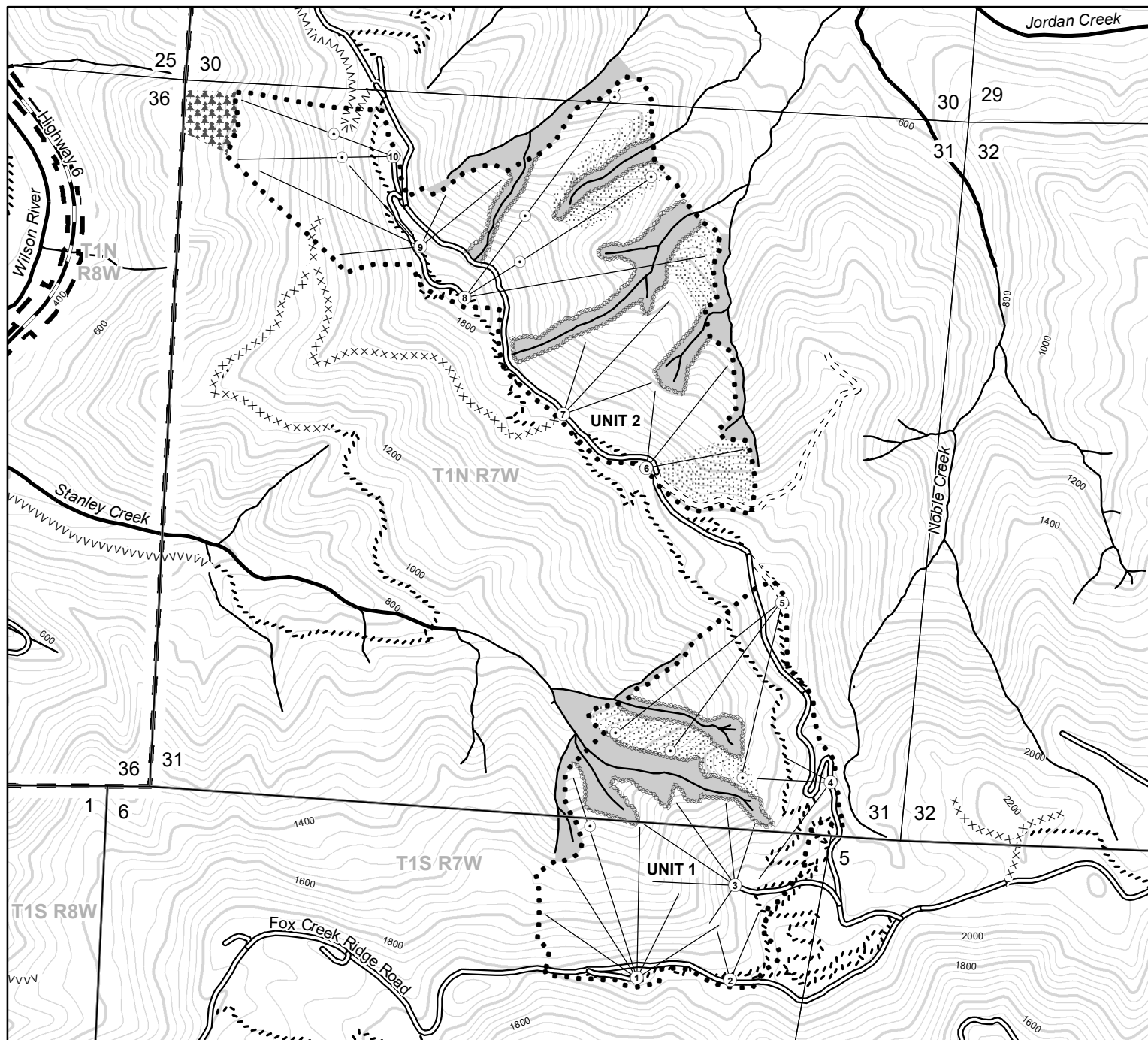
Fox Ridge

Volume Summary

Unit 1-Harvest Type					
69 acres					
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Hidden D&B	Net Sale MBF
Douglas-fir	17.0	1172	4%		1125
Hemlock	3.7	254	2%		249
Spruce		0	1%		0
Maple		0	1%		0
Alder	4.4	302	15%		257
TOTAL	25.0	1728			1631

Unit 2-Harvest Type					
91 acres					
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Hidden D&B	Net Sale MBF
Douglas-fir	9.6	876	4%		841
Hemlock	0.0	0	2%		0
Spruce	0.0	0	2%		0
Maple		0	6%		0
Alder	5.0	452	20%		361
TOTAL	14.6	1328			1203

TOTAL SALE VOLUME				160	acres
SPECIES	Cruised Net (MBF)		Net Sale (MBF)		
Douglas-fir	2048		1966		
Hemlock	254		249		
Spruce	0		0		
Maple	0		0		
Red Alder	754		619		
TOTAL	3056		2834		



Legend

- Lift Trees
- Cable Landing
- Cable Logging
- Cable Logging (Haulback)
- Property Line
- Riparian Boundary
- Timber Sale Boundary
- Green Tree Retention
- Riparian Buffer
- Recreation Trail
- Highways
- Surfaced Road
- Unsurfaced Road
- xxxx Blocked Road
- vvvv Abandoned Road
- Type-F Stream
- Type-N Stream
- 200' Contour
- 40' Contour

LOGGING PLAN

FOR TIMBER SALE CONTRACT
TL-341-2022-W00854-01
FOX RIDGE
PORTIONS OF SECTIONS 6, T1S, R7W
& 30, 31, T1N, R7W, W.M.
TILLAMOOK COUNTY, OREGON

Tillamook District GIS
November, 2021

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



NET ACRES

	HAULBACK		
	CABLE	CABLE	TOTAL
UNIT 1	63	6	69
UNIT 2	77	14	91
TOTAL	140	20	160