



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Hamlet 8
Sale AT-341-2021-W00828-01

District: Astoria

Date: July 28, 2020

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$896,634.71	\$27,261.36	\$923,896.07
		Project Work:	(\$192,168.00)
		Advertised Value:	\$731,728.07



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Timber Description

Location: Portions of Sections 1, 12, and 24 of T4N, R9W, and Portions of Sections 6, 7, 8, 18, and 19 of T4N, R8W, W.M., Clatsop County, Oregon.

Stand Stocking: 40%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	12	0	97
Western Hemlock / Fir	13	0	96
Sitka Spruce	19	0	95
Alder (Red)	11	0	95

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	199	1,638	0	0	0	0	1,837
Western Hemlock / Fir	120	981	0	0	0	0	1,101
Sitka Spruce	3	6	0	0	0	0	9
Red Cedar	0	0	0	0	0	0	0
Alder (Red)	0	0	60	28	2	72	162
Total	322	2,625	60	28	2	72	3,109

Comments: Pond Values Used: Local Pond Values, June, 2020.

Expected Log Markets: Mist, Banks, North Plains, Tillamook, Wauna, Forest Grove, Warrenton, Longview, WA, and Chehalis, WA.

PRICING:

Western Red Cedar and other Cedars stumpage = pond value - (Douglas-fir) logging cost.

\$842.04/MBF = \$1,118/mbf - \$275.96/MBF

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

Machine Washing for Invasive Weed Compliance = \$2,000

Ditch Filters:

20 bales of straw @ \$12.06/bale = \$241.20

4 hours of labor @ \$45/hr = \$180

Install and Remove Temporary Stream Crossing w/Log Loader (4 sites in Units 1 and 4):

8 Hrs w/C325 Log Loader @ \$145/hr = \$1,160

8 Hrs Labor @ \$45/hr = \$360

12 Straw Bales @ \$12.06/bale = \$144.72

Total = \$1,664.72

Line Pull (approximately 2 acres in Unit 6):

8 Hours labor @ \$45/hr = \$360

Waterbar and Block Unsurfaced Roads:

12 hours w/C315 Excavator @ \$114/hr = \$1,368

Traffic control Hamlet County Road:

40 hours flagger @ \$45/hr = \$1,800.00

TOTAL Other Costs (with Profit & Risk to be added): \$7,613.92

Other Costs (No Profit & Risk added):

None.

ROAD MAINTENANCE

(See attached Road Maintenance Cost Summary Sheet)

TOTAL Road Maintenance: \$33,256/3,109 MBF = \$10.7/MBF



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Logging Conditions

Combination#: 1	Douglas - Fir	38.00%	
	Western Hemlock / Fir	38.00%	
	Sitka Spruce	38.00%	
	Alder (Red)	38.00%	
Logging System:	Cable: Medium Tower >40 - <70		Process: Manual Falling/Delimbing
yarding distance:	Medium (800 ft)		downhill yarding: No
tree size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
loads / day:	8		bd. ft / load: 4100
cost / mbf:	\$201.22		
machines:	Log Loader (A) Tower Yarder (Medium)		
Combination#: 2	Douglas - Fir	61.00%	
	Western Hemlock / Fir	61.00%	
	Sitka Spruce	61.00%	
	Alder (Red)	61.00%	
Logging System:	Track Skidder		Process: Manual Delimbing
yarding distance:	Medium (800 ft)		downhill yarding: No
tree size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
loads / day:	7		bd. ft / load: 4000
cost / mbf:	\$117.64		
machines:	Feller Buncher w/ Delimber		
Combination#: 3	Douglas - Fir	1.00%	
	Western Hemlock / Fir	1.00%	
	Sitka Spruce	1.00%	
	Alder (Red)	1.00%	
Logging System:	Shovel		Process: Manual Delimbing
yarding distance:	Short (400 ft)		downhill yarding: No
tree size:	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
loads / day:	8		bd. ft / load: 4100
cost / mbf:	\$101.45		
machines:	Shovel Logger		



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Logging Costs

Operating Seasons: 3.00

Profit Risk: 12%

Project Costs: \$192,168.00

Other Costs (P/R): \$7,613.92

Slash Disposal: \$0.00

Other Costs: \$0.00

Miles of Road

Road Maintenance: \$10.70

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	4.2
Western Hemlock / Fir	\$0.00	3.0	4.0
Sitka Spruce	\$0.00	3.0	4.5
Alder (Red)	\$0.00	2.0	3.5



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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									
\$149.24	\$11.02	\$4.24	\$77.66	\$2.45	\$29.35	\$0.00	\$2.00	\$0.00	\$275.96
Western Hemlock / Fir									
\$149.24	\$11.13	\$4.24	\$82.34	\$2.45	\$29.93	\$0.00	\$2.00	\$0.00	\$281.33
Sitka Spruce									
\$149.24	\$11.24	\$4.24	\$73.89	\$2.45	\$28.93	\$0.00	\$2.00	\$0.00	\$271.99
Alder (Red)									
\$149.24	\$11.24	\$4.24	\$142.50	\$2.45	\$37.16	\$0.00	\$2.00	\$0.00	\$348.83

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$634.36	\$358.40	\$0.00
Western Hemlock / Fir	\$0.00	\$496.18	\$214.85	\$0.00
Sitka Spruce	\$0.00	\$461.33	\$189.34	\$0.00
Alder (Red)	\$0.00	\$517.11	\$168.28	\$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
Sitka Spruce	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	1,837	\$358.40	\$658,380.80
Western Hemlock / Fir	1,101	\$214.85	\$236,549.85
Sitka Spruce	9	\$189.34	\$1,704.06
Alder (Red)	162	\$168.28	\$27,261.36

Gross Timber Sale Value

Recovery: \$923,896.07

Prepared By: Justin Bush

Phone: 503-325-5451

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale: Hamlet 8
Date: July 21, 2020
By: Justin Bush *FL*

MBF: 3,109.00
\$/MBF: \$10.70

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
Interim Operations	Grader 14G	\$875	1	12	\$113	\$2,231
	Dump Truck 12CY	\$184	1	8	\$89	\$896
	Rubber Tired Backhoe	\$875	1	5	\$94	\$1,345
	Vibratory Roller	\$875	1	8	\$87	\$1,571
Final Road Maintenance	Grader 14G	\$875	1	71	\$113	\$8,898
	Dump Truck 12CY	\$184	2	16	\$89	\$1,792
	FE Loader C966	\$875	1	8	\$94	\$1,627
	Vibratory Roller	\$875	1	71	\$87	\$7,052
	Water Truck 2,500 gallon	\$214	1	36	\$101	\$3,850
	Excavator C315*	\$1,810	1	16	\$114	\$3,634
	Labor			8	\$45	\$360
Total						\$33,256

*Assumed two moves due to scattered nature of road maintenance.

Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	2.5	3.0	1.2	10

Final Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	1.5	13.3	8.9	71
Vibratory Roller	1.5	13.3	8.9	71

Process and compact: All crushed rock roads
Hill Road 0.7 Miles
Fall Creek Road 0.3 Miles
Section 8 Road 1.3 Miles
Cole Mountain Road 2.0 Miles
Progeny Ridge Road 1 Mile
Cole Mountain Ridge Road 2.3 Miles
Spur 13 Road 0.3 Miles
Seuss Alley Road 1.5 Miles
Unnamed Spurs 3.9 Miles
Grade & Process Total = 13.3

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Hamlet 8

Project No. 1: ROAD CONSTRUCTION:

	<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
Surfaced	5A to 5B, 5C to 5D, and 5E to 5F	30.55	0.58	\$61,905
Unsurfaced	1A to 1B, 4A to 4B, 4C to 4D, 6A to 6B, 6C to 6D, and 7A to 7B	32.15	0.61	\$17,472
	Road Maint.			\$8,078.77
	Move-In			\$5,974.97
TOTALS		62.70	1.19	\$93,430

Project No. 2: ROAD IMPROVEMENT:

	<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
	l1 to l2, l3 to l4, l5 to l6, l7 to l8	343.1	6.50	\$74,488.15
	l9 to l10, l11 to l12, l13 to l14, l15 to l16, l17 to l18, l19 to l20, l21 to l22, l23 to l24, l25 to l26, and l27 to l28			
	Road Maint.			\$7,581.27
	Move-In			\$5,607.03
TOTALS			6.50	\$87,676

SPECIAL PROJECTS (Move-In and Road Maint. are included separately as needed, for each Special Project):

	<u>Description</u>	<u>Length (Mile)</u>	<u>Cost</u>
	Proj. 3 Road Vacating	0.1	\$1,290.00
	Proj. 4 Stream Enhancement		\$9,772.00
TOTAL			\$11,062

GRAND TOTAL **\$192,168**

Compiled By: Cole Hatcher *FL*

Date: 01/19/2020

Move In and Maintenance Calculator for Construction and Improvement

SALE NAME: Hamlet 8

Project No. 1: ROAD CONSTRUCTION:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Length/Mile</u>	<u>Cost</u>
Surfaced	5A to 5B, 5C to 5D, and 5E to 5F	30.55	0.58	\$61,905
Unsurfaced	1A to 1B, 4A to 4B, 4C to 4D, 6A to 6B, 6C to 6D, and 7A to 7B	32.15	0.61	\$17,472
	TOTALS	62.70	1.19	\$79,376

Project No. 2: ROAD IMPROVEMENT:

	<u>Road segment</u>	<u>Length/Sta</u>	<u>Length/Mile</u>	<u>Cost</u>
	I1 to I2, I3 to I4, I5 to I6, I7 to I8	343.10	6.50	\$74,488
	I9 to I10, I11 to I12, I13 to I14,			
	I15 to I16, I17 to I18, I19 to I20,			
	I21 to I22, I23 to I24, I25 to I26, and I27 to I28			
	TOTALS	343.10	6.50	\$74,488

MOVE IN (Construction & Improvement Only)

	<u>Equipment</u>	<u>Length/Mile</u>	<u>Cost</u>
	Vibratory Roller		\$875.00
	D8 Dozer		\$1,581.00
	C330 Excavator		\$1,581.00
	C315 Excavator		\$905.00
	C966 Front End Loader (x2)		\$1,750.00
	14G Grader		\$875.00
	Water Truck		\$214.00
	Off Highway Dump Truck		\$870.00
	Highway Dump Truck (x3)		\$552.00
	Highway Dump Truck w/ pup trailer (x2)		\$430.00
	Project No.1 (partial moves)		
	Excavator (C315) (1 move)		\$318.00
	Excavator (C330) (2 moves)		\$758.00
	Vibratory Roller (3 moves)		\$873.00
	TOTAL		\$11,582.00

ROAD MAINTENANCE (Construction & Improvement Only)

	<u>Length/Mile</u>	<u>Cost</u>
Final Road Maintenance	8.06	\$15,660.04
TOTAL		\$15,660.04

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Hamlet 8 NEW CONSTRUCTION: 62.70 STATIONS 1.19 MILES
ROAD: 1A to 1B (1.5), 4A to 4B (1.5), 4C to 4D (1.5), 5A to 5B (26.7), 5C to 5D(2.0), IMPROVEMENT: STATIONS 0.00 MILES
5E to 5F (1.86), 6A to 6B (14.5), 6C to 6D (2.65) and 7A to 7B (10.5)

CLEARING & GRUBBING						
Method	Acres/amount	x	Rate	=	Cost	
1A to 1B Scatter outside of right of way	0.14	x	\$1,503.00	=	\$210.42	
4A to 4B Scatter outside of right of way	0.14	x	\$1,503.00	=	\$210.42	
4C to 4D Scatter outside of right of way	0.14	x	\$1,503.00	=	\$210.42	
5A to 5B Scatter outside of right of way	2.76	x	\$1,503.00	=	\$4,148.28	
0+65-2+55 End-haul debris in full bench sections (6.7 Sta.)						
11+35-13+50 (C330)/(\$/hr)	12.00	x	\$175.00	=	\$2,100.00	
18+05-19+10 (Off Hwy.D.Truck)/(\$/hr)	12.00	x	\$143.00	=	\$1,716.00	
20+40-22+00						
5C to 5D Scatter outside of right of way	0.19	x	\$1,503.00	=	\$285.57	
5E to 5F Scatter outside of right of way	0.17	x	\$1,503.00	=	\$255.51	
6A to 6B Scatter outside of right of way	1.50	x	\$1,503.00	=	\$2,254.50	
3+70-4+30 End-haul debris in full bench sections (1.5 Sta.)						
5+20-6+10 (C330)/(\$/hr)	4.00	x	\$175.00	=	\$700.00	
(Off Hwy.D.Truck)/(\$/hr)	4.00	x	\$143.00	=	\$572.00	
6C to 6D Scatter outside of right of way	0.25	x	\$1,503.00	=	\$375.75	
7A to 7B Scatter outside of right of way	0.96	x	\$1,503.00	=	\$1,442.88	
SUB TOTAL FOR CLEARING & GRUBBING						\$14,482

EXCAVATION						
Material	Cy/amount	x	Rate	=	Cost	
1A to 1B Drift earth up to 200' (\$/sta)	1.5	x	\$214.00	=	\$321.00	
		x	\$438.00	=	\$0.00	
4A to 4B Drift earth up to 200' (\$/sta)	1.5	x	\$214.00	=	\$321.00	
		x	\$438.00	=	\$0.00	
4C to 4D Drift earth up to 200' (\$/sta)	1.5	x	\$214.00	=	\$321.00	
		x	\$438.00	=	\$0.00	
5A to 5B Additional ripping w/C330 (\$/hr)	8.0	x	\$175.00	=	\$1,400.00	
Small Hydraulic Rock Drill (\$/hr)	8.0	x	\$253.00	=	\$2,024.00	
Explosives for Boulders (\$/day)	1.0	x	\$562.00	=	\$562.00	
Common drift (> 50% slopes) (\$/cy)	1,300.0	x	\$2.36	=	\$3,068.52	
Roadside landing construction (\$/ldg)	5.0	x	\$328.50	=	\$1,642.50	
Landing construction (\$/ldg)	1.0	x	\$438.00	=	\$438.00	
End-haul excavation (loading and haul up to 5,000') (\$/cy)	1,700.0	x	\$4.50	=	\$7,643.20	
Embankment compaction (\$/cy)	3,000.0	x	\$0.79	=	\$2,360.40	
Waste material compaction (\$/cy)	1,400.0	x	\$0.45	=	\$629.44	
Cut slope rounding (\$/sta)	10.4	x	\$49.00	=	\$507.15	
5C to 5D Drift earth up to 200' (\$/sta)	2.0	x	\$214.00	=	\$428.00	
Landing construction (\$/ldg)	1.0	x	\$438.00	=	\$438.00	
5E to 5F Drift earth up to 200' (\$/sta)	1.9	x	\$214.00	=	\$395.90	
Landing construction (\$/ldg)	1.0	x	\$438.00	=	\$438.00	
6A to 6B Common drift (<= 50% slopes) (\$/cy)	1,400.0	x	\$2.02	=	\$2,832.48	
End-haul excavation (loading and haul up to 5,000') (\$/cy)	600.0	x	\$4.50	=	\$2,697.60	
		x	\$438.00	=	\$0.00	
Embankment compaction (\$/cy)	2,000.0	x	\$0.79	=	\$1,573.60	
Cut slope rounding (\$/sta)	3.6	x	\$49.00	=	\$176.40	
Install Waterbars w/ 315 (\$/hr)	4.0	x	\$114.00	=	\$456.00	
6C to 6D Drift earth up to 200' (\$/sta)	2.65	x	\$214.00	=	\$567.10	
Landing construction (\$/ldg)	1	x	\$438.00	=	\$438.00	
7A to 7B Balanced construction (\$/sta)	10.5	x	\$138.00	=	\$1,449.00	
Install Waterbars w/ 315 (\$/hr)	3.0	x	\$114.00	=	\$342.00	
SUB TOTAL FOR EXCAVATION						\$33,470

CULVERT MATERIALS AND INSTALLATION									
Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
5A to 5B				\$0.00					\$0.00
23+00	18" CPP	35	\$21.95	\$768.25					\$0.00
				\$0.00					\$0.00
Other/miscellaneous:					Description	Quantity	Rate	Cost	
Culvert stakes & markers:					6' X 2½" white fiberglass posts.	1	\$23.00	\$23.00	
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION								\$791	

Subtotal of Clearing, Exc., Culv. **\$48,743**

SURFACING		Subgrade prep:		Description		Stations/ amount	x	Rate/ sta/amt	Cost
				Grade and Shape 14' Outslopped: 1A to 1B, 4A to 4B, 4C to 4D, 6A to 6B, 6C to 6D, 7A to 7B		32.15	x	\$20.63	\$663.25
				Grade, Shape, and Ditch 16": 5A to 5B, 5C to 5D, 5E to 5F		30.55	x	\$27.91	\$852.65
				Subgrade Compaction: 1A to 1B, 4A to 4B, 4C to 4D, 5A to 5B, 5C to 5D, 5E to 5F, 6A to 6B, 6C to 6D, 7A to 7B		62.70	x	\$22.69	\$1,422.66

ROAD SEGMENT		1A to 1B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per load	1A to 1B	0+00 to 1+50 Number of loads	3			
Junction Rock	4"-0" crushed	0+00	N/A	11	1A to 1B	loads	3	33	\$8.41	\$278
Total Rock for Road Segment:										
ROAD SEGMENT		4A to 4B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per load	4A to 4B	0+00 to 1+50 Number of loads	3	33	\$8.41	\$278
Junction Rock	4"-0" crushed	0+00	N/A	11	4A to 4B	loads	3	33	\$8.41	\$278
Total Rock for Road Segment:										
ROAD SEGMENT		4C to 4D		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per load	4C to 4D	0+00 to 1+50 Number of loads	3	33	\$8.41	\$278
Junction Rock	4"-0" crushed	0+00	N/A	11	4C to 4D	loads	3	33	\$8.41	\$278
Total Rock for Road Segment:										
ROAD SEGMENT		5A to 5B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per station Junctions TO's	5A to 5B	0+00 to 26+70 Number of stations Junctions TO's	26.70 2 2	1,683 44 44	\$8.41 \$8.41 \$8.41	\$14,154 \$370 \$370
Base Rock	4"-0" crushed	0+00 to 26+70	10	station	5A to 5B	stations	26.70	1,683	\$8.41	\$14,154
Junction Rock	4"-0" crushed	0+00, 11+00	N/A	Junctions	5A to 5B	Junctions	2	44	\$8.41	\$370
Turnouts	4"-0" crushed	14+75, 23+95	N/A	TO	5A to 5B	TO's	2	44	\$8.41	\$370
Turnarounds	4"-0" crushed	6+00, 10+75, 16+25, 25+30 4+25, 8+50, 17+10, 20+10, 24+45, 26+70	N/A	TA	5A to 5B	TA's	4	132	\$8.41	\$1,110
Landings	6"-0" pit run		N/A	Landing	5A to 5B	Landings	6	330	\$8.62	\$2,845
Total Rock for Road Segment:										
ROAD SEGMENT		5C to 5D		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per station Junctions Landing	5C to 5D	0+00 to 2+00 Number of stations Junctions Landings	2.00 1 1	126 22 55	\$8.41 \$8.41 \$8.62	\$1,060 \$185 \$474
Base Rock	4"-0" crushed	0+00 to 2+00	N/A	station	5C to 5D	stations	2.00	126	\$8.41	\$1,060
Junction Rock	4"-0" crushed	0+00	N/A	Junctions	5C to 5D	Junctions	1	22	\$8.41	\$185
Landings	6"-0" pit run	2+00	N/A	Landing	5C to 5D	Landings	1	55	\$8.62	\$474
Total Rock for Road Segment:										
								203		\$1,719

ROAD SEGMENT		5E to 5F		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)		Rate/ Sta./ amt.		Cost		
Application	Rock Size and Type	Location	Depth of Rock (inches)	5E to 5F		0+00 to 1+85		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost				
				Volume per station	Number of Junctions	Volume per station	Number of Junctions							
Base Rock	4"-0" crushed	0+00 to 1+85	N/A	63	stations	1.85	117		\$980					
Junction Rock	4"-0" crushed	0+00	N/A	22	Junctions	1	22		\$185					
Landings	6"-0" pit run	1+85	N/A	55	Landing	1	55		\$474					
Total Rock for Road Segment:				5E to 5F		194				\$1,639				
ROAD SEGMENT		6A to 6B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)		Rate/ Sta./ amt.		Cost		
Application	Rock Size and Type	Location	Depth of Rock (inches)	6A to 6B		0+00 to 14+50		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost				
				Volume per station	Number of Junctions	Volume per station	Number of Junctions							
Base Rock	4"-0" crushed	0+00 to 1+00	N/A	63	stations	1	63		\$530					
Junction Rock	4"-0" crushed	0+00	N/A	22	Junctions	1	22		\$185					
Total Rock for Road Segment:				6A to 6B		85				\$715				
ROAD SEGMENT		7A to 7B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)		Rate/ Sta./ amt.		Cost		
Application	Rock Size and Type	Location	Depth of Rock (inches)	7A to 7B		0+00 to 10+50		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost				
				Volume per station	Number of Junctions	Volume per station	Number of Junctions							
Base Rock	4"-0" crushed	0+00 to 1+00	N/A	63	stations	1	63		\$530					
Junction Rock	4"-0" crushed	0+00	N/A	22	Junctions	1	22		\$185					
Total Rock for Road Segment:				7A to 7B		85				\$715				
Processing:												No.sta	Rate/sta	Cost
Water, Process & Compact Base Rock (4"-0"):												30.55	\$63.48	\$1,939.31
SUB TOTAL FOR SURFACING												2,899		\$29,347
SPECIAL PROJECTS												Total		
Description												Cy/Amount	Rate	Cost
pit-run development												440	\$2.92	\$1,285.86
SUB TOTAL FOR SPECIAL PROJECTS												2,899		\$1,286
Subtotal of Surfacing & Spec. Proj.														\$30,633
Subtotal of Clearing, Exc., Culv.														\$48,743
GRAND TOTAL														\$79,376

Compiled By: Cole Hatcher

Date: 01/19/2020

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Hamlet 8
NEW CONSTRUCTION: STATIONS 0.00 MILES
ROAD: 11 to 12 (34.75), 13 to 14(25.75), 15 to 16 (6.70), 17 to 18 (2.80), 19 to 110 (16.45), 111 to 112 (53.95), 113 to 114 (5.20), 115 to 116 (16.55), 117 to 118(29.05), 119 to 120 (0.85), 121 to 122 (18.45), 123 to 124 (86.80), 125 to 126 (6.8) and 127 to 128 (37.00)
IMPROVEMENT: 343.10 STATIONS 6.50 MILES
POINTS:

CLEARING & GRUBBING	Method	Acres/amount	x	Rate	=	Cost
SUB TOTAL FOR CLEARING & GRUBBING						
\$0						

EXCAVATION	Material	Cy/amount	x	Rate	=	Cost
11 to 12	Rock Ditch Filters w/C315 (\$/hr)	6.0	x	\$114.00	=	\$684.00
15 to 16	Build Turnaround w/C315 (\$/hr)	2.0	x	\$114.00	=	\$228.00
	Clean Inlets/Outlets w/C315 (\$/hr)	1.0	x	\$114.00	=	\$114.00
17 to 18	Build Turnaround w/C315 (\$/hr)	2.0	x	\$114.00	=	\$228.00
111 to 112	Additional ditch work w/ 14G (\$/hr) (18+45 to 53+95)	5.0	x	\$113.00	=	\$565.00
117 to 118	Clean Inlets/Outlets w/C315 (\$/hr)	1.0	x	\$114.00	=	\$114.00 *see cost sheet
	Build Turnaround w/C315 (\$/hr)	2.0	x	\$114.00	=	\$228.00
121 to 122	Excave Ditchouts w/C315 (\$/hr)	1.0	x	\$114.00	=	\$114.00
	Build Turnaround w/C315 (\$/hr)	2.0	x	\$114.00	=	\$228.00
123 to 124	Clean Inlets/Outlets w/C315 (\$/hr)	1.0	x	\$114.00	=	\$114.00
	Repair Inlets w/C315 (\$/hr)	1.0	x	\$114.00	=	\$114.00
	Improve Junction (Sta. 71+55)	8.0	x	\$114.00	=	\$912.00
127 to 128	Rock Ditch Filters w/C315 (\$/hr)	2.00	x	\$114.00	=	\$228.00
	Clean Outlets w/C315 (\$/hr)	1.00	x	\$114.00	=	\$114.00
SUB TOTAL FOR EXCAVATION						
\$3,985						

CULVERT MATERIALS AND INSTALLATION	Location	Dialtype	Lineal ft.	Rate	Cost	Location	Dialtype	Lineal ft.	Rate	Cost
15 to 16	6+60	18" CPP	30	\$21.95	\$658.50	123 to 124	18" CPP	50	\$21.95	\$1,097.50
						71+95	24" CPP	30	\$30.39	\$911.70
17 to 18	0+00	18" CPP	30	\$21.95	\$658.50	82+25	18" CPP	30	\$21.95	\$658.50
						86+80				
115 to 116	0+00	18" CPP	30	\$21.95	\$658.50	127 to 128	18" CPP	30	\$21.95	\$658.50
						20+20				
121 to 122	2+20	18" CPP	35	\$21.95	\$768.25					

Other/miscellaneous:	Description	Quantity	Rate	Cost
Culvert stakes & markers:	6" X 2 1/2" white fiberglass posts.	21	\$23.00	\$483.00
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION				
Subtotal of Clearing, Exc., Culv.				\$6,553
				\$10,538

SURFACING										
Subgrade prep:			Description		Stations/ amount		Rate/ sta/amt		Cost	
All "I" Segments			Grade, Shape and Ditch 16'		343.10		x		\$9,575.92	
All "I" Segments			Subgrade Compaction		343.10		x		\$7,784.94	
125 to 126			Sod removal and scatter on site		6.80		x		\$246.70	
ROAD SEGMENT										
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.	Rate/ Sta./ amt.	Cost	TOTAL VOLUME (CY)	
				11 to 12	Volume (CY) per station					0+00 to 34+75 Number of stations
Surfacing	1 1/2"-0" crushed	0+00 to 34+75	2	station	13	34.75	\$4.67	\$2,108	452	
Junctions	1 1/2"-0" crushed	0+00, 22+55, 34+40	2	junction	11	3	\$4.67	\$154	33	
Rock Ditch Filters	6"-4" pit run	5+60, 8+90, 14+50, 17+85, 22+05	N/A	3 filter series	11	(see instructions)	\$8.62	\$853	99	
Turnouts	1 1/2"-0" crushed	15+35, 21+15, 25+75	2	turnout	11	2	\$4.67	\$103	22	
Total Rock for Road Segment:				11 to 12					606	\$3,218
ROAD SEGMENT										
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.	Rate/ Sta./ amt.	Cost	TOTAL VOLUME (CY)	
				13 to 14	Volume (CY) per load					0+00 to 25+75 Number of loads
Leveling Rock	4"-0" crushed		N/A	load	11	6	\$8.18	\$540	66	
Junctions	1 1/2"-0" crushed	0+00	N/A	junction	22	1	\$4.67	\$103	22	
Turnouts	4"-0" crushed	4+60	N/A	turnout	11	1	\$8.41	\$93	11	
Turnout/Turnaround	4"-0" crushed	12+70	N/A	TOTTA	44	1	\$8.41	\$370	44	
Total Rock for Road Segment:				13 to 14					143	\$1,105
ROAD SEGMENT										
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.	Rate/ Sta./ amt.	Cost	TOTAL VOLUME (CY)	
				15 to 16	Volume (CY) per load					0+00 to 8+70 Number of loads
Leveling Rock	4"-0" crushed		N/A	load	11	7	\$8.41	\$648	77	
Junctions	4"-0" crushed	0+00	N/A	junction	11	1	\$8.41	\$93	11	
Turnaround	4"-0" crushed	4+10	N/A	turnaround	22	1	\$8.41	\$185	22	
Culvert Bedding and Backfill	3/4"-0" crushed	6+60	N/A	culvert	33	1	\$6.43	\$212	33	
Landings	6"-0" pit run	8+70	N/A	Landing	44	1	\$8.62	\$379	44	
Total Rock for Road Segment:				15 to 16					187	\$1,516
ROAD SEGMENT										
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.	Rate/ Sta./ amt.	Cost	TOTAL VOLUME (CY)	
				17 to 18	Volume (CY) per load					0+00 to 2+80 Number of loads
Leveling Rock	4"-0" crushed		N/A	load	11	2	\$8.41	\$185	22	
Culvert Bedding and Backfill	3/4"-0" crushed	0+00	N/A	culvert	33	1	\$6.43	\$212	33	
Junctions	4"-0" crushed	0+00	N/A	junction	11	1	\$8.41	\$93	11	
Turnaround	4"-0" crushed	1+65	N/A	turnaround	22	1	\$8.41	\$185	22	
Landings	6"-0" pit run	2+80	N/A	Landing	44	1	\$8.62	\$379	44	
Total Rock for Road Segment:				17 to 18					132	\$1,054
ROAD SEGMENT										
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.	Rate/ Sta./ amt.	Cost	TOTAL VOLUME (CY)	
				19 to 110	Volume (CY) per load					0+00 to 16+45 Number of loads
Leveling Rock	4"-0" crushed		N/A	load	11	3	\$8.41	\$278	33	
Junctions	1 1/2"-0" crushed	0+00	N/A	junction	11	1	\$4.67	\$51	11	
Junctions	4"-0" crushed	5+40	N/A	junction	11	1	\$8.41	\$93	11	
Turnouts	4"-0" crushed	1+25, 2+90, 11+15	N/A	turnout	11	3	\$8.41	\$278	33	
Turnaround	4"-0" crushed	15+65	N/A	turnaround	11	1	\$8.41	\$93	11	
Landings	6"-0" pit run	16+45	N/A	Landing	44	1	\$8.62	\$379	44	
Total Rock for Road Segment:				19 to 110					143	\$1,171

ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	111 to 112	Number of	0+00 to 53+95			
Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	8	88	\$4.67	\$411
Leveling Rock	4"-0" crushed		N/A	load	11	loads	3	33	\$8.41	\$278
Junctions	1 1/2"-0" crushed	0+00, 18+25	N/A	junction	11	junctions	2	22	\$4.67	\$103
Turnouts	1 1/2"-0" crushed	5+45, 8+90, 16+00	2	turnout	11	turnout	3	33	\$4.67	\$154
Turnouts	4"-0" crushed	22+40, 28+10, 34+65, 39+75	N/A	turnout	11	turnout	4	44	\$8.41	\$370
Junctions	4"-0" crushed	45+75	N/A	junction	11	junctions	1	11	\$8.41	\$93
Surfacing	4"-0" crushed	47+40 to 53+95	10	station	63	stations	6.55	413	\$8.41	\$3,470
Turnouts	4"-0" crushed	48+05	N/A	turnout	22	turnout	1	22	\$8.41	\$185
Turnaround	4"-0" crushed	51+30	N/A	turnaround	22	turnaround	1	22	\$8.41	\$185
Total Rock for Road Segment:				111 to 112				688		\$5,248
ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	113 to 114	Number of	0+00 to 5+20			
Leveling Rock	4"-0" crushed		N/A	load	11	loads	2	22	\$8.41	\$185
Junctions	4"-0" crushed	5+20	N/A	junction	11	junctions	1	11	\$8.41	\$93
Total Rock for Road Segment:				113 to 114				33		\$278
ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	115 to 116	Number of	0+00 to 16+55			
Leveling Rock	4"-0" crushed		N/A	load	11	loads	8	88	\$8.41	\$740
Junctions	4"-0" crushed	0+00	N/A	junction	11	junctions	1	11	\$8.41	\$93
Culvert Bedding and Backfill	3/4"-0" crushed	0+00	N/A	culvert	33	culverts	1	33	\$6.43	\$212
Turnaround	4"-0" crushed	5+75, 9+55	N/A	turnaround	11	turnaround	2	22	\$8.41	\$185
Turnouts	4"-0" crushed	13+40	N/A	turnout	11	turnout	1	11	\$8.41	\$93
Total Rock for Road Segment:				115 to 116				165		\$1,322
ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	117 to 118	Number of	0+00 to 29+05			
Leveling Rock	4"-0" crushed		N/A	load	11	loads	6	66	\$8.41	\$555
Junctions	1 1/2"-0" crushed	0+00	N/A	junction	22	junctions	1	22	\$4.67	\$103
Junctions	4"-0" crushed	26+50	N/A	junction	11	junctions	1	11	\$8.41	\$93
Turnouts	4"-0" crushed	7+35, 12+00	N/A	turnout	11	turnout	2	22	\$8.41	\$185
Turnaround	4"-0" crushed	13+75	N/A	turnaround	22	turnaround	1	22	\$8.41	\$185
Landings	6"-0" pit run	29+05	N/A	Landing	44	Landings	1	44	\$8.62	\$379
Total Rock for Road Segment:				117 to 118				187		\$1,500
ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	119 to 120	Number of	0+00 to 0+85			
Leveling Rock	4"-0" crushed		N/A	load	11	loads	2	22	\$8.41	\$185
Junctions	4"-0" crushed	0+00	N/A	junction	11	junctions	1	11	\$8.41	\$93
Landings	6"-0" pit run	0+85	N/A	Landing	44	Landings	1	44	\$8.62	\$379
Total Rock for Road Segment:				119 to 120				77		\$657
ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per	121 to 122	Number of	0+00 to 18+45			
Leveling Rock	4"-0" crushed		N/A	load	11	loads	3	33	\$8.41	\$278
Junctions	1 1/2"-0" crushed	0+00	N/A	junction	11	junctions	1	11	\$4.67	\$51
Culvert Bedding and Backfill	3/4"-0" crushed	2+20	N/A	culvert	33	culverts	1	33	\$6.43	\$212
Turnouts	4"-0" crushed	2+90, 10+90	4	turnout	11	turnout	2	22	\$8.41	\$185
Turnaround	4"-0" crushed	7+00	4	turnaround	22	turnaround	1	22	\$8.41	\$185
Junctions	4"-0" crushed	15+85	4	load	11	loads	2	22	\$8.41	\$185
Total Rock for Road Segment:				121 to 122				143		\$1,096

ROAD SEGMENT												
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost		
				123 to 124	123 to 124 Volume (CY) per	0+00 to 86+80	Number of					
Leveling Rock	1 1/2"-0" crushed		N/A	load	11	loads	12	132	\$4.67	\$616		
Leveling Rock	4"-0" crushed		N/A	load	11	loads	3	33	\$8.41	\$278		
Junctions	1 1/2"-0" crushed	0+00, 30+70, 49+45, 50+25, 65+10, 70+65	2	junction	11	junctions	7	77	\$4.67	\$359		
Turnouts	1 1/2"-0" crushed	2+90, 10+90	2	turnout	11	turnout	2	22	\$4.67	\$103		
Junctions	4"-0" crushed	71+95	10	junction	63	junctions	1	63	\$8.41	\$530		
Culvert Bedding and Backfill	3/4"-0" crushed	71+95, 82+25, 86+70	N/A	load	11	(see instructions)	11	121	\$6.43	\$778		
Turnouts	4"-0" crushed	73+50, 83+20	N/A	turnout	11	turnout	2	22	\$8.41	\$185		
Surface Reinforcement	4"-0" crushed	82+70 to 83+70	4	station	25	stations	1	25	\$8.41	\$210		
Total Rock for Road Segment:										\$3,058		
ROAD SEGMENT												
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost		
				125 to 126	125 to 126 Volume (CY) per	0+00 to 6+80	Number of					
Leveling Rock	4"-0" crushed		N/A	load	11	loads	2	22	\$8.41	\$185		
Total Rock for Road Segment:										\$185		
ROAD SEGMENT												
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost		
				127 to 128	127 to 128 Volume (CY) per	0+00 to 37+00	Number of					
Leveling Rock	4"-0" crushed		N/A	load	11	loads	12	132	\$8.41	\$1,110		
Junctions	4"-0" crushed	0+00, 22+60, 28+35	2	junction	11	junctions	3	33	\$8.41	\$278		
Turnouts	4"-0" crushed	6+00, 13+55, 17+50	2	turnout	11	turnout	3	33	\$8.41	\$278		
Rock Ditch Filters	6"-4" pit run	9+40, 10+45	N/A	3 filter series	11	3 filter series	2	22	\$8.62	\$190		
Culvert Bedding and Backfill	3/4"-0" crushed	20+20	N/A	culvert	33	culverts	1	33	\$6.43	\$212		
Turnaround	4"-0" crushed	37+00	N/A	turnaround	11	turnaround	1	11	\$8.41	\$93		
Total Rock for Road Segment:										\$2,159		
SUB TOTAL FOR SURFACING											\$62,954	
Processing:										No. sta	Rate/sta	Cost
Water, Process & Compact:										343.10	\$63.48	\$21,780

Projects Road Maintenance Cost Summary

Sale: Hamlet 8
Date: 19-Jan-20
By: Cole Hatcher

Type	Equipment/Rationale			Hours	Rate	Cost
Project Work	Grader 14G			43	\$113	\$4,857
Final Haul	Dump Truck 12CY			21	\$89	\$1,913
Road	FE Loader C966			9	\$94	\$808
Maintenance	Vibratory Roller			43	\$87	\$3,740
	Water Truck 2,500 gallon			43	\$101	\$4,342
Total						\$15,660

Production Rates	Miles/day	Distance(miles)	Days
Grader	1.5	8.06	5.4
Vibratory Roller	1.5	8.06	5.4

NOTE:	*Cole Mountain Road	3.23	Miles
	Progeny Ridge Road	0.35	Miles
	Fall Creek Road	0.30	Miles
	Hill Road	2.03	Miles
	*Cole Mountain Ridge Road	1.76	Miles
	*Hamlet Stockpile Road	0.39	Miles
	TOTAL=	8.06	Miles

***Parts of project road maintenance are shared with East Summit Combination timber sale**

CRUSHED ROCK COST

SALE NAME:	Hamlet 8
PROJECT:	No. 2
Stockpile:	Upper Hamlet Stockpile

MATERIAL: 3/4"-0"

DATE: 06/08/2020
BY: C. Hatcher

[illegible]

ROCK HAUL:

Truck type: D20 No. trucks: 2
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$4.74	/cy
Load:	\$0.60	/cy
Spread:	\$1.08	/cy

Truck type: D12 No. trucks: 3
 Delay min.: 6 Efficiency: 85%

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 736

CRUSHED ROCK HAUL COSTS 286 cy @ \$6.43 /cy

CRUSHED ROCK COST

SALE NAME:	Hamlet 8
PROJECT:	No. 2
QUARRY:	Lower Hamlet Stockpile

MATERIAL: 1 1/2" - 0"

DATE: 06/08/2020
BY: C Hatcher

[illegible]

ROCK HAUL:

Truck type: D20 No. trucks: 2
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$3.40	/cy
Load:	\$0.48	/cy
Spread:	\$0.78	/cy

Truck type: D12 No. trucks: 3
 Delay min.: 6 Efficiency: 85%

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 1,027

PIT RUN ROCK HAUL COSTS

947 cy @ \$4.67 /cy

CRUSHED ROCK COST

SALE NAME:	Hamlet 8
PROJECT:	No. 1 and 2
QUARRY:	Cole Mountain Stockpile

MATERIAL: 4"-0"

DATE: 06/08/2020
BY: C. Hatcher

[illegible]

ROCK HAUL:

Truck type: D20 No. trucks:
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$6.01	/cy
Load:	\$0.84	/cy
Spread:	\$1.56	/cy

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 525

PIT RUN ROCK HAUL COSTS	4,170 cy @	\$8.41 /cy
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PIT RUN ROCK COST

SALE NAME:	Hamlet 8
PROJECT:	No. 1 and 2
QUARRY:	Cole Mountain Quarry

MATERIAL: Pit-Run, Riprap

DATE: 06/08/2020
BY: C. Hatcher

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES							Total Haul
			50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	
I1 to I2	34.75	99		0.10	0.30	0.80	1.60	1.30	0.35	4.45
I5 to I6	8.70	44		0.10	0.30	0.80	1.75	1.50	0.43	4.88
I7 to I8	2.80	44		0.10	0.30	0.80	1.75	1.55	0.45	4.95
I9 to I10	16.45	44		0.10	0.30	0.73	1.45	1.30	0.40	4.28
I17 to I18	29.05	44		0.10	0.50	0.60	1.04	0.90	0.30	3.44
I19 to I20	0.85	44		0.10	0.50	0.60	1.09	0.90	0.33	3.52
I27 to I28	37.00	22		0.10	0.30	0.40	0.66	0.60	0.30	2.36
5A to 5B	26.70	330		0.10	0.20	0.50	1.25	1.55	0.50	4.10
5C to 5D	2.00	55		0.10	0.20	0.45	1.20	1.40	0.48	3.83
5E to 5F	1.85	55		0.10	0.20	0.44	1.25	1.55	0.50	4.04
TOTAL	160.15	781								AVERAGE HAUL
	STA./NO.	CU. YD.								HAUL
CUBIC YARD WEIGHTED HAUL				0.1	0.3	0.6	1.3	1.4	0.4	4.10
									Average Round Trip Distance (miles)	8.21

ROCK HAUL:

Truck type: D20 No. trucks:
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$6.21	/cy
Load:	\$0.84	/cy
Spread:	\$1.56	/cy

Truck type: D12 No. trucks: 5
 Delay min.: 6 Efficiency: 85%

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 508

PIT RUN ROCK HAUL COSTS

781 cy @ \$8.62 /cy

Hamlet 8
Vacate Roads:
V1 to V2

Work Description	Move-In	Waterbars	C330	C315	D24 trk	D10/12 trk	D-8	Labor	Straw- bales	Seed-lbs
V1 (Sta.0+00)										
Move-in C315 Excavator	1.00									
Walk machine to end of project				1.00						
Remove culvert (4+00)				1.00						
Construct waterbars (0+00 to 7+70)		4								
V2 (Sta. 7+70)										
Total Quantity (Waterbars, Hours, or Move-in):	1.00	4.00	0.00	2.00	0	0	0	0	0	0
Rates	\$905.00	\$39.34	\$155.00	\$114.00	\$127.00	\$99.00	\$158.00	\$45.00	\$12.06	\$1.80
Total Dollars	\$905	\$157	\$0	\$228	\$0	\$0	\$0	\$0	\$0	\$0

Total Cost

\$1,290

Hamlet 8
Stream Enhancement

Location	Site	Number of Key Pieces	Smaller Pieces (tops)	Placement method	Helper/ Labor	Rate/Hr.	Hours	\$/Location	Number of Straw Bales	\$/Bale	Cost per Site
SE1-SE2	1	4	4	Ground based	\$45	\$175	4	\$880	2	\$12.06	\$904.12
SE1-SE2	2	4	4	Ground based	\$45	\$175	4	\$880	2	\$12.06	\$904.12
SE3-SE4	3	4	4	Ground based	\$45	\$175	4	\$880	2	\$12.06	\$904.12
SE3-SE4	4	4	4	Ground based	\$45	\$175	4	\$880	2	\$12.06	\$904.12
SE3-SE4	5	4	4	Ground based	\$45	\$175	4	\$880	2	\$12.06	\$904.12
SE3-SE4	6	4	4	Ground based	\$45	\$175	4	\$880	2	\$12.06	\$904.12
SE3-SE4	7	4	4	Ground based	\$45	\$175	4	\$880	2	\$12.06	\$904.12
SE5-SE6	8	4	4	Ground based	\$45	\$175	4	\$880	2	\$12.06	\$904.12
SE5-SE6	9	4	4	Ground based	\$45	\$175	4	\$880	2	\$12.06	\$904.12

18

Move-in: C330 Excavator (2 x 1/2): Assume moving between stream enhancement sites coincides with road projects.

Grass Seed: \$1.80 per lb. 30 lbs.

Subtotal	\$8,137
Move-in	\$1,581
Seed	\$54

Ground Based = C 330 excavator

Project Total **\$9,772**

Hamlet 8 TIMBER CRUISE REPORT FY 2021

1. Sale Area Location: Portions of Sections 1, 12 & 24, T4N, R9W, and Portions of Sections 6, 7, 8, 18 & 19 of T4N, R8W, W.M., Clatsop County, OR.

2. **Fund Distribution:** BOF: 99.94% CSL: 0.06%

BOF Tax Codes: 8-01: 0.18%
10-02: 42.36%
10-04: 2.82%
10-14: 54.58%

3. **Sale Acreage by Unit:**

Unit	Harvest Type	Gross Acres	Stream Buffer Acres	Existing R/W Acres	New R/W Acres	Unit 6 Thinning-Optional Acres	Net Acres	Survey Method
1	Partial Cut	83	18	4	<1	--	61	GIS
2	R/W*	--	--	--	--	--	7	GIS
2	Out-of-Unit R/W	<1	--	--	--	--	<1	GIS
3	Partial Cut	6	0	1	0	--	5	GIS
4	Partial Cut	40	5	4	<1	--	31	GIS
5	Partial Cut	164	25	4	4	--	131	GIS
6	Partial Cut	47	2	1	2	6	36	GIS
7	Partial Cut	63	4	1	1	--	57	GIS
TOTALS		403	54	15	--	6	328	

*R/W acres interior to units were included in the reported Gross Acres for each unit.

4. **Cruisers and Cruise Dates:**

Units were cruised by Avery Petersen, Kevin Berry, Justin Bush, Michele Huffman, and John Choate in July of 2020.

5. **Cruise Method and Computation:**

Units 1, 3, & 5: These partial cut units were cruised together as a variable plot cruise utilizing a Relaskop with a 33.61 BAF. A total of 53 plots were sampled on a 14 by 3 chain spacing. Lines were cruised on an azimuth of 4°/184° in Unit 1, 36°/216° in Unit 3, and 360°/180° in Unit 5. The planned count to grade ratio was 1:1, resulting in 27 grade plots and 26 count plots*.

Unit 4, 6, & 7: These partial cut units were cruised together as a variable plot cruise utilizing a Relaskop and a 33.61 BAF. The leave stand will have an average Basal Area of 140 sq. ft., and an SDI of approximately 35%. A total of 73 plots were sampled on an 8 x 2.5 chain spacing. Lines were cruised on an azimuth of 228°/48° in Unit 4, 360°/180° in Unit 6, and 254°/74° in Unit 7. The planned count to grade ratio was 1:1. No plots were located in the Thinning Optional (6 acres) portion of Unit 6. The final result was 36 grade plots and 37 count plots**.

Unit 2: (R/W) consists of six new spur roads and four landings. Cruise data for Unit 2 was obtained from the the combined A135 and A467 cruises and acreages have been adjusted accordingly.

*The reported numbers of cruise and grade plots vary from those indicated in the SuperACE reports for both the A135 Statistics and the A135_LEAVE Statistics due to measuring a snag on one count plot. The number of reported count and grade plots for the A135_TAKE Statistics vary from those indicated in the SuperACE reports due to recording 12 blank plots where the basal area did not meet the thinning specifications and no take trees were designated.

**The reported numbers of cruise and grade plots vary from those indicated in the SuperACE reports for both the A467 Statistics and the A467_LEAVE Statistics due to recording one blank plot, measuring snags on seven count plots, and measuring a hemlock on one count plot. The reported numbers of count and grade plots for the A467_TAKE Statistics vary from those indicated in the SuperACE reports due to recording 11 additional blank plots where the basal area did not meet the thinning specifications and no take trees were designated.

Data was collected on Allegro 2 data collectors and downloaded to the Atterbury SuperACE 2008 program for computing. See the attached Cruise Design for more details on the cruise method. The cruise calculations were processed in the Astoria District office.

UNIT	CRUISE	TRACT	TYPE	ACRES
1, 3, & 5	HAM8	A135	00PC	197
2	HAM8	A2_R/W	00MC	7
4, 6, & 7	HAM8	A467	00PC	124

6. Timber Description:

Units 1, 3, and 5 are partial cuts units consisting of 197 acres approximately 25 to 54 years old. The stand consists of Douglas-fir, western hemlock, red alder, and minor components of Sitka spruce. Average take Douglas-fir is 12 inches DBH and 45 feet to a merchantable top. Average take western hemlock is 12 inches DBH and 66 feet to a merchantable top. Average take red alder is 10 inches DBH and 28 feet to a merchantable top. Average net volume to be harvested per acre is 8 MBF. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point. The target basal area is 130 to 150 and the target SDI is 35%.

Units 4, 6, and 7 are partial cut units consisting of 124 acres approximately 24 to 48 years old. The stand consists of Douglas-fir, western hemlock, red alder, and minor components of Sitka spruce. Average take Douglas-fir is 13 inches DBH and 55 feet to a merchantable top. Average take western hemlock is 14 inches DBH and 67 feet to a merchantable top. Average take red alder is 11 inches DBH and 51 feet to a merchantable top. Average net volume to be harvested per acre is 10 MBF. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point. The target basal area is 130 to 150 and the target SDI is 35%.

Unit 2 R/W is similar to the timber descriptions above with the addition of Sitka spruce. Average net volume to be harvested per acre is 29 MBF.

7. Statistical Analysis and Stand Summary

Statistics for Stand B.F. volumes*

Unit	Estimated CV	Target SE%	Actual CV	Actual SE%
1, 3, & 5	40.0%	11.0%	55.7%	7.6%
4, 6, & 7	35.0%	13%	40.7%	4.8%

*Statistics are based upon combined Take and Leave trees.

8. Take Volumes by Species and Log Grade for All Sale Units by MBF:

Volumes by Species and Grade for All Sale Areas: (MBF) Volumes do not include "in-growth."

Conifer

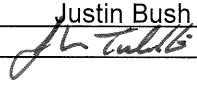
Species	DBH	Net Vol.	2 Saw	3 Saw	4 Saw	% D & B	% Sale
Douglas-fir	12"	1,837	199	1,379	259	3.0%	59%
Western hemlock	13"	1,101	120	905	76	2.2%	35%
Sitka spruce	19"	9	3	5	1	2.2%	<1%
TOTALS		2,947	322	2,289	336		

Hardwood

Species	DBH	Net Vol.	12"+	10"-11"	8"-9"	6"-7"	% D & B	% Sale
Red alder	11"	162	2	28	60	72	0.1%	5%
TOTALS		162	2	28	60	72		

TOTAL VOLUME	3,109 MBF
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9. Approvals:

Prepared by: Justin Bush
Unit Forester Approval: 

Date: 07/20/2020
Date: 7/30/2020

- 10. Attachments:** Cruise Design and Maps (7 pages)
Volume Reports (4 pages)
Statistics Reports (11 pages)
Stand Table Summary (2 pages)
Log Stock Table (3 pages)

CRUISE DESIGN ASTORIA DISTRICT

Sale Name: Hamlet 8 **Unit(s)** 1, 3, & 5

Harvest Type: (PC) "Automark Thinning"

Approx. Cruise Acres: 201 **Estimated CV%** 40 Net BF/Acre **SE% Objective** 11 Net BF/Acre

Planned Sale Volume : 1,149 MBF **Estimated Sale Area Value/Acre:** \$2000/Acre

A. Cruise Goals: (a) Grade minimum 50 conifer and 10 hardwood trees
(b) Sample 58 cruise plots (1 grade/1 count); (c) Other goals (X Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes.

B. Cruise Design:

1. Plot Cruises: BAF 33.6 (Full point; Half point) (circle one)
Cruise Line Direction(s) Unit 1: 4°/184°, Unit 3: 36°/216°, Unit 5: 360°/180°
Cruise Line Spacing 14 (chains)
Cruise Plot Spacing 3 (chains)
Grade/Count Ratio 1:1

Basal Area leave target is 140 sq. ft. Cruiser needs to select 4 leave trees per plot. Cruise all take and leave trees. Take plots as marked on cruise map. Do not record snags under 12" in diameter. Do not take plots in stream buffers. Stream buffers are 25' non-posted. Map out non-thinnable areas larger than 1 acre, but do not drop plots. All cedar will be reserved. Record all snags as SN.

C. Tree Measurements:

- 1. Diameter:** Minimum DBH to cruise is 8" for conifers and 8" for hardwoods.
Record dbh to nearest 1/2" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- 2. Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. Top Cruise Diameter (TCD):** Minimum top outside bark is 7" for conifers and 7" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh.
- 4. Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.
- 5. Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each

merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree.

6. Species, Sort, and Grade Codes:

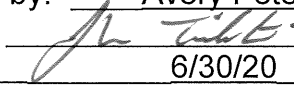
- A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple); SN (Snag). For "leave trees", add an "L" to the species code (such as DL, HL, CL, etc.)
- B. Sort: Use code "1" (Domestic).
- C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull
Hardwoods: Alder Grades: 12" + = 1 Sawmill; 10"-12" = 2 Sawmill; 10"-8" = 3 Sawmill; and 8"-6" 4 Sawmill, 0 = Cull.

7. **Deductions**: Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. **Standard Field Procedures: Plot Type Cruises**: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at inter-visible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.

9. **Cruising Equipment**: Relaskop, Rangefinder, Logger's Tape (with dbh on back), Compass, Allegro II Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.

10. **Attachments**: A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Avery Petersen
Approved by: 
Date: 6/30/20

TIMBER CRUISE

OF TIMBER SALE CONTRACT

NO. AT-341-2021-W00828-01

HAMLET 8 (UNITS 1, 3, & 5)

PORTIONS OF SECTIONS 6 & 7 OF T4N, R8W,
AND PORTIONS OF SECTIONS 1 & 12 OF
T4N, R9W, W.M., CLATSOP COUNTY, OREGON

Unit 3 AZ 36 and 216

Cruise Line Spacing 14 Chains (924 feet)

Plot Spacing 3 Chains (198 feet)

Unit 1 AZ 4 and 184

Cruise Line Spacing 14 Chains (924 feet)

Plot Spacing 3 Chains (198 feet)

Unit 5 AZ 360 and 180

Cruise Line Spacing 14 Chains (924 feet)

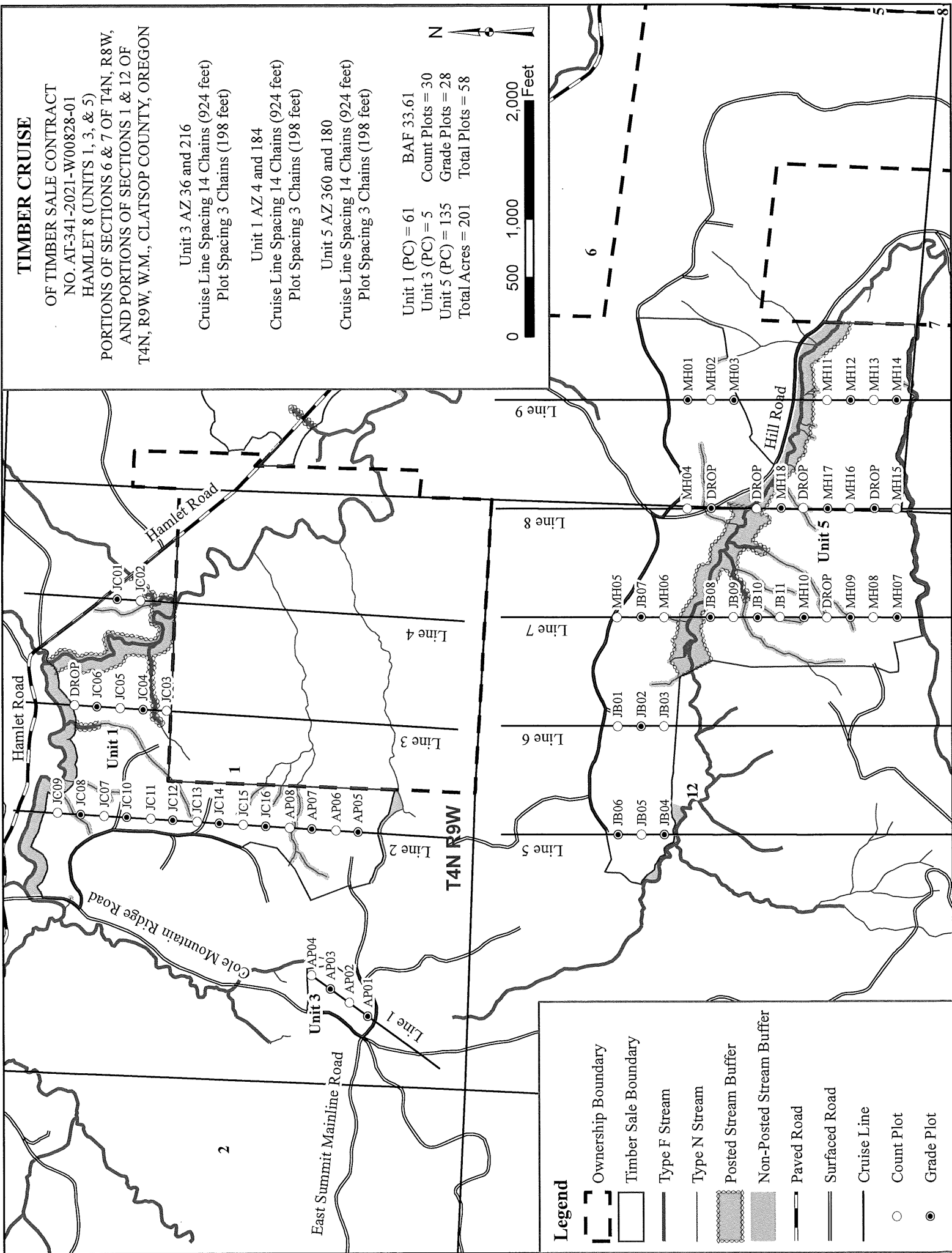
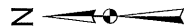
Plot Spacing 3 Chains (198 feet)

Unit 1 (PC) = 61 BAF 33.61

Unit 3 (PC) = 5 Count Plots = 30

Unit 5 (PC) = 135 Grade Plots = 28

Total Acres = 201 Total Plots = 58



Legend

- Ownership Boundary
- Timber Sale Boundary
- Type F Stream
- Type N Stream
- Posted Stream Buffer
- Non-Posted Stream Buffer
- Paved Road
- Surfaced Road
- Cruise Line
- Count Plot
- Grade Plot

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Hamlet 8

Units 4, 6 & 7

Harvest Type: Partial Cut - Moderate

Approx. Cruise Acres: 128 **Estimated CV%** 35 Net BF/Acre **SE% Objective** 13 Net BF/Acre

Planned Sale Volume : 758 MBF **Estimated Sale Area Value/Acre:** \$2,000/Acre

A. Cruise Goals: (a) Grade minimum 160 conifer and 10 hardwood trees
(b) Sample 75 cruise plots (38 grade/ 37 count); (c) Other goals (X Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes.

B. Cruise Design:

1. Plot Cruises: BAF 33.61 (Full point)
Cruise Line Directions Unit 4: 228°/48°, Unit 6: 360°/180°, Unit 7: 254°/74°
Cruise Line Spacing 8 (chains) 528 (Feet)
Cruise Plot Spacing 2.5 (chains) 165 (Feet)
Grade/Count Ratio 1:1

Take plots as marked on cruise map. Do not record snags under 12" in diameter. Do not take plots in stream buffers. Type N stream buffers are 25' non-posted. Map out non-thinnable areas larger than one acre, but do not drop plots. All cedar will be reserved. Record all snags as SN.

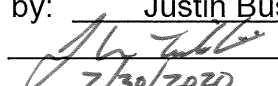
Residual Basal Area target is 140 sq. ft. Cruiser shall select 4 leave trees per plot. Cruise all take and leave trees.

DO NOT RECORD 12', 22' and 32' (for Hardwoods). DO NOT RECORD 22' lengths for conifer.

C. Tree Measurements:

- 1. Diameter:** Minimum DBH to cruise is 8" for conifers and 8" for hardwoods.
Record dbh to nearest 1/2" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- 2. Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. Top Cruise Diameter (TCD):** Minimum top outside bark is 7" for conifers and 7" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 20" dbh and 40% of dob @ FP for conifer trees > 20" dbh. All hardwood will be measured to a G.
- 4. Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in “standard” log lengths in general use, such as 32’ and 40’ lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12’; for hardwoods, it’s 8’. Maximum segment length is 40’. One foot of trim is assumed for each merch segment. Do not use “double dash” (--) feature on the data recorder except for the top segment of the tree. Hardwoods shall be recorded in 8’ and 10’ multiples.
6. **Species, Sort, and Grade Codes:**
- A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple); SN (Snag). For “leave trees”, add an “L” to the species code (such as DL, HL, CL, etc.)
- B. Sort: Use code “1” (Domestic).
- C. Grade: 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; 0 = Cull
Hardwoods: Alder Grades: 12” + = 1 Sawmill; 10”-12” = 2 Sawmill; 10”-8” = 3 Sawmill; and 8”-6” 4 Sawmill, 0 = Cull.
7. **Deductions:** Estimate visible defect or damage as a “length deduction” (most often), or as a “diameter deduction,” as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a “per tree” basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.
8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at inter-visible points, not to exceed 100’ apart. On “measure/grade” plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.
9. **Cruising Equipment:** Relaskop, Rangefinder, Logger’s Tape (with dbh on back), Compass, Allegro II Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.
10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Justin Bush
Approved by: 
Date: 7/30/2020

TIMBER CRUISE

OF TIMBER SALE CONTRACT

NO. AT-341-2021-W00828-01

HAMLET 8 (UNITS 4, 6, & 7)

PORTIONS OF SECTIONS 1, 12, AND 24 OF
T4N, R9W, AND PORTIONS OF SECTIONS

6, 7, 8, 18, AND 19 OF T4N, R8W, W.M.,
CLATSOP COUNTY, OREGON

Approximate Net Acres = 127

BAF = 33.61

Line Spacing = 8 ch. (528 ft.)

Plot Spacing = 2.5 ch. (165 ft.)

Grade Plots = 38

Count Plots = 37

Cruise Line Direction:

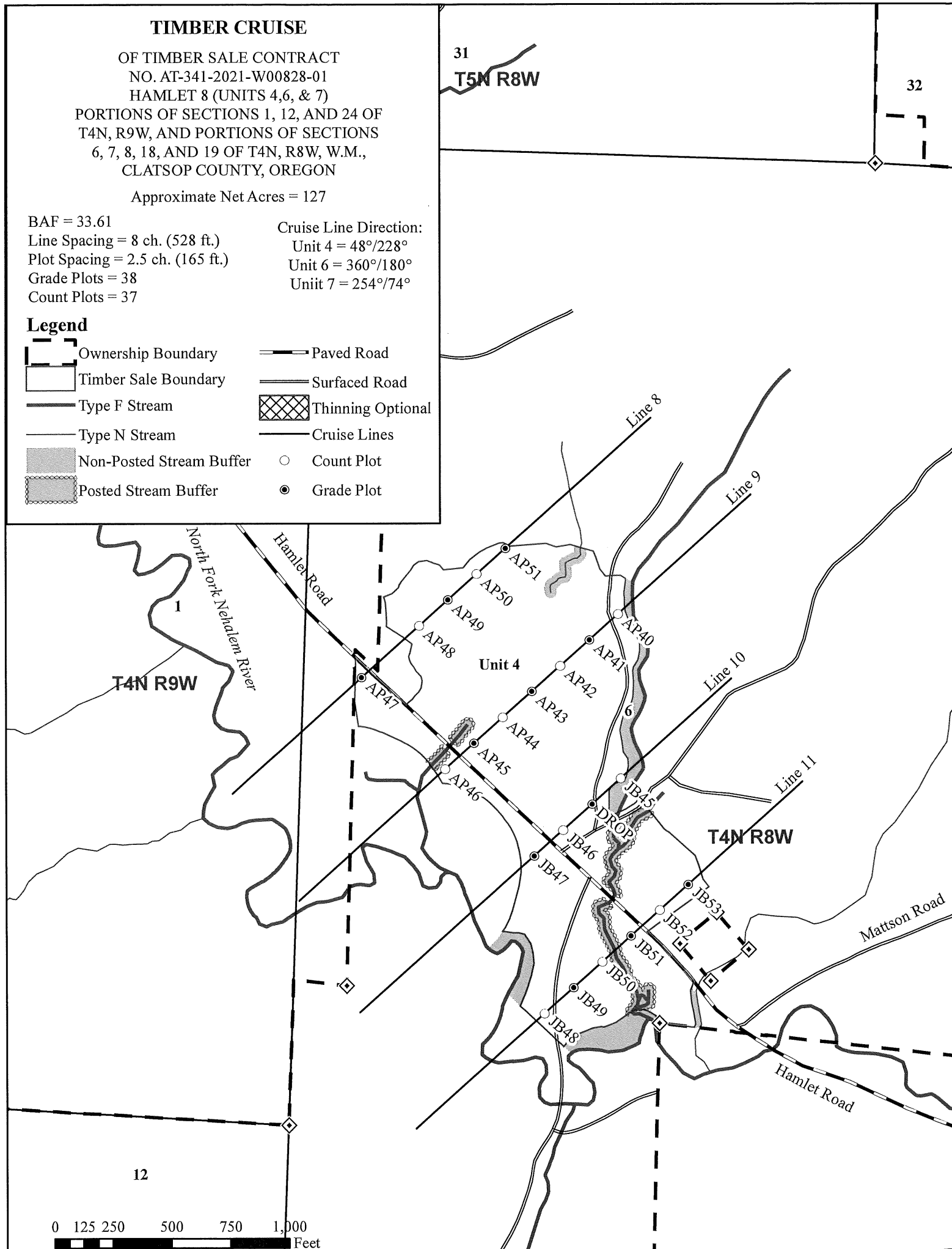
Unit 4 = 48°/228°

Unit 6 = 360°/180°

Unit 7 = 254°/74°

Legend

	Ownership Boundary		Paved Road
	Timber Sale Boundary		Surfaced Road
	Type F Stream		Thinning Optional
	Type N Stream		Cruise Lines
	Non-Posted Stream Buffer		Count Plot
	Posted Stream Buffer		Grade Plot



TIMBER CRUISE

OF TIMBER SALE CONTRACT
NO. AT-341-2021-W00828-01
HAMLET 8 (UNITS 4, 6, & 7)
PORTIONS OF SECTIONS 1, 12, AND 24 OF
T4N, R9W, AND PORTIONS OF SECTIONS
6, 7, 8, 18, AND 19 OF T4N, R8W, W.M.,
CLATSOP COUNTY, OREGON

Approximate Net Acres = 127

BAF = 33.61

Line Spacing = 8 ch. (528 ft.)

Plot Spacing = 2.5 ch. (165 ft.)

Grade Plots = 38

Count Plots = 37

Cruise Line Direction:

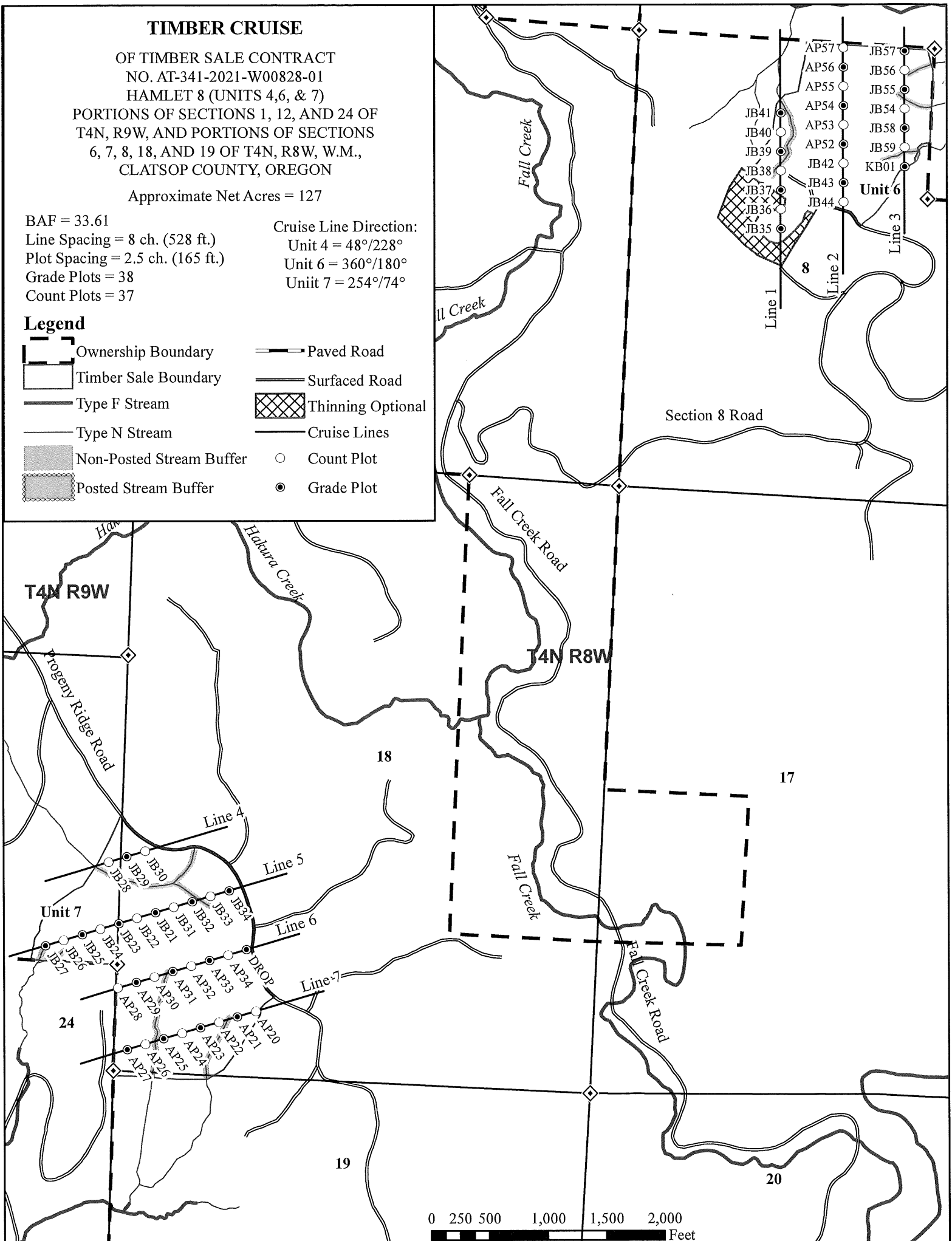
Unit 4 = 48°/228°

Unit 6 = 360°/180°

Unit 7 = 254°/74°

Legend

- | | | | |
|--|--------------------------|--|-------------------|
| | Ownership Boundary | | Paved Road |
| | Timber Sale Boundary | | Surfaced Road |
| | Type F Stream | | Thinning Optional |
| | Type N Stream | | Cruise Lines |
| | Non-Posted Stream Buffer | | Count Plot |
| | Posted Stream Buffer | | Grade Plot |



Species, Sort Grade - Board Foot Volumes (Project)

T04N R08W S12 Ty00PC	197.00
T04N R08W S12 Ty00MC	7.00
T04N R08W S12 Ty00PC	124.00

Project: HAM8
Acres 328.00

Page 1
Date 7/20/2020
Time 8:20:08AM

Spp	So Gr T rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of 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						
D	DOCU		100.0	20												17	9		0.00	.5
D	DO2S	10	4.2	633	607	199			87	13	18	12	13	57		32	14	222	1.69	2.7
D	DO3S	75	2.0	4,291	4,204	1,379		100			1	3	14	82		37	7	75	0.57	56.3
D	DO4S	15	4.7	827	789	259		1	99		56	33	11			21	6	26	0.39	30.2
D Totals		59	3.0	5,771	5,600	1,837		0	89	9	1	11	8	13	68	31	7	62	0.56	89.7
A	DO1S	1	3.1	6	6	2		100				22		78		36	13	212	1.52	.0
A	DO2S	17	.1	86	86	28		100				3		97		38	11	166	1.12	.5
A	DO3S	37		182	182	60		100			1	1		98		39	7	72	0.46	2.5
A	DO4S	45	.2	219	219	72		100			32	1		67		26	6	38	0.46	5.7
A Totals		5	.1	493	492	162.161		99	1		14	2		84		30	7	56	0.51	8.8
H	DOCU		100.0	12												8	16		0.00	.2
H	DO2S	10	1.0	371	367	120			85	15	0		1	99		40	14	281	1.69	1.3
H	DO3S	83	2.1	2,817	2,758	905		100			1	1	21	77		37	8	84	0.58	32.7
H	DO4S	7		233	233	76		100			48	52				21	6	25	0.35	9.3
H Totals		35	2.2	3,432	3,358	1,101		89	9	2	4	5	18	74		33	8	77	0.59	43.5
S	DO2S	29	.8	8	8	3			23	77		12		88		33	15	395	3.04	.0
S	DO3S	63	3.1	17	17	5		17	12	71	4	1	6	88		36	11	252	1.92	.1
S	DO4S	8		2	2	1		100			8	92				24	7	34	0.46	.1
S Totals		0	2.2	27	27	9		18	15	67	3	12	4	81		30	10	181	1.61	.1
Totals			2.5	9,724	9,477	3,109 3,108		0	89	9	2	8	7	14	71	32	7	67	0.57	142.1

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)												Page 1					
Project: HAM8														Date	7/20/2020				
														Time	8:08:06AM				
T04N R08W S12 T00PC										T04N R08W S12 T00PC									
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees				CuFt	BdFt							
04N	08W	12	A135_TAKE	00PC	197.00	53	57				1	W							
S So Gr T rt ad Spp			%	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent Net Board Foot Volume								Average Log		Logs Per /Acre	
			Net BdFt					Log Scale Dia.				Log Length				Ln Dia	Bd		CF/ Lf
D	DO	2S	10	5.1	451	428	84	72 28				42	28	31	25 14	185 1.68	2.3		
D	DO	3S	70	2.2	3,058	2,991	589	100				3	2	13 83	37 7	68 0.53	43.8		
D	DO	4S	20	6.9	914	850	168	100				51	32	17	21 6	28 0.39	30.9		
D Totals			51	3.5	4,422	4,269	841	90 7 3				16	11	15 58	30 7	55 0.52	77.0		
H	DO	2S	4	179		179	35	100				100				40 15	360 1.98	.5	
H	DO	3S	89	2.1	3,514	3,441	678	100				2 25 73				37 8	81 0.55	42.3	
H	DO	4S	7	263		263	52	100				52	48			21 6	24 0.34	10.8	
H Totals			46	1.9	3,956	3,883	765	95 5				3	5	22 70	33 7	72 0.54	53.6		
A			DO	4S	283		283	56	100				19				27 6	43 0.47	6.5
A Totals			3	283		283	56	100				19				27 6	43 0.47	6.5	
Type Totals				2.6	8,661	8,435	1,662	93 6 1				10	8	18 64	31 7	62 0.52	137.1		

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1								
Project: HAM8												Date	7/20/2020							
												Time	8:08:19AM							
T04N R08W S12 T00PC										T04N R08W S12 T00PC										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
04N	08W	12	A467_TAKE	00PC	124.00	73	69	1	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		
							Log Scale Dia.				Log Length				Ln	Dia	Bd		CF/ Lf	
			4-5	6-11	12-16		17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf					
D	DO	CU		00.0	52					17	9		0.00		1.3					
D	DO	2S	9	4.0	718	689	85		100				100	40	14	269	1.75	2.6		
D	DO	3S	81	1.9	5,798	5,685	705	100		4	14	82		38	7	79	0.59	72.0		
D	DO	4S	10		636	636	79	2	98	67	33			20	6	24	0.37	27.0		
D Totals		70	2.7	7,204	7,010	869	0	90	10	6	6	11	76	33	7	68	0.59	102.9		
H		DO	CU		00.0	29								7	17		0.00	.4		
H	DO	2S	21	1.1	494	489	61		79	21			100	40	13	249	1.55	2.0		
H	DO	3S	71	2.1	1,619	1,585	197	100		3		9	89	38	8	95	0.68	16.7		
H	DO	4S	8		173	173	21	100		36	64			21	6	26	0.38	6.5		
H Totals		22	3.0	2,316	2,247	279	78	17	5	5	5	6	84	33	8	88	0.71	25.5		
A	DO	2S	27		206	206	25	100					100	38	11	170	1.13	1.2		
A	DO	3S	61		459	459	57	100					100	39	7	72	0.45	6.4		
A	DO	4S	12		87	87	11	100		100				20	6	23	0.41	3.8		
A Totals		8		752	752	93	100			12			88	32	7	66	0.53	11.4		
Type Totals				2.6	10,272	10,010	1,241	0	88	11	1	6	6	9	79	33	7	72	0.60	139.8

T		TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page		1						
				Project: HAM8										Date		7/20/2020						
														Time		8:20:44AM						
T04N R08W S12 T00MC										T04N R08W S12 T00MC												
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt													
04N	08W	12	A2_R/W	00MC	7.00	126	400	1	W													
S So Gr T rt ad Spp			% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre			
								Log Scale Dia.				Log Length				Ln	Dia	Bd		CF/ Ft Lf		
										4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf	
D	DO	CU		00.0	26													17	9		0.00	.6
D	DO	2S	23	1.9	4,255	4,172	29					88	12	3	1	3	93	38	13	238	1.56	17.5
D	DO	3S	67	1.4	12,297	12,122	85			100				1	2	15	82	37	8	94	0.70	129.4
D	DO	4S	10	1.7	1,796	1,765	12			3	97			47	49	4		21	6	27	0.41	65.5
D Totals			62	1.7	18,373	18,059	126			0	77	20	3	6	7	11	76	32	8	85	0.72	213.1
H	DO	CU		00.0	49													18	11		0.00	.8
H	DO	2S	42	2.1	3,585	3,510	25					79	21	0		4	96	39	14	281	1.74	12.5
H	DO	3S	52	1.4	4,395	4,334	30			100				1	3	21	76	37	8	93	0.68	46.7
H	DO	4S	6		440	440	3			100				61	39			20	6	26	0.41	16.9
H Totals			28	2.2	8,469	8,284	58			58	33	9		4	3	13	80	33	9	108	0.84	76.9
A	DO	1S	14	3.1	270	262	2			100					22		78	36	13	212	1.52	1.2
A	DO	2S	22	1.4	387	382	3			100					30		70	35	10	135	1.00	2.8
A	DO	3S	22		398	398	3			100				11	30		59	32	8	75	0.67	5.3
A	DO	4S	42	2.1	746	730	5			100				24	21		56	28	6	40	0.44	18.1
A Totals			6	1.6	1,801	1,772	12			85	15			12	25		63	30	7	65	0.61	27.5
S	DO	2S	29	.8	373	370	3			23	77				12		88	33	15	395	3.04	.9
S	DO	3S	63	3.1	806	781	5			17	12	71		4	1	6	88	36	11	252	1.92	3.1
S	DO	4S	8		98	98	1			100				8	92			24	7	34	0.46	2.9
S Totals			4	2.2	1,277	1,249	9			18	15	67		3	12	4	81	30	10	181	1.61	6.9
Type Totals				1.9	29,920	29,363	206			0	69	23	7	5	7	11	77	32	8	91	0.76	324.3

TC PSTATS		PROJECT STATISTICS							PAGE	1		
		PROJECT HAM8							DATE	7/17/2020		
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
04N	08	12	A135 TAKE	00PC	328.00	252	1,086	1	W			
04N	08W	12	A2_R/W	00MC								
04N	08W	12	A467 TAKE	00PC								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			252	1086	4.3							
CRUISE			122	525	4.3	29,411	1.8					
DBH COUNT												
REFOREST												
COUNT			105	488	4.6							
BLANKS			25									
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			316	59.7	12.4	50	14.3	50.4	5,771	5,600	1,582	1,577
WHEMLOCK			139	22.5	12.8	67	5.6	20.2	3,432	3,358	856	854
R ALDER			33	7.2	10.7	39	1.4	4.5	493	492	135	135
S SPRUCE			18	.1	18.6	42	0.0	.2	27	27	7	7
SNAG			19	.1	11.7	69	0.0	.1				
TOTAL			525	89.7	12.4	53	21.4	75.4	9,724	9,477	2,580	2,572
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			73.3	4.1	172	180	187					
WHEMLOCK			69.4	5.9	260	276	292					
R ALDER			76.6	13.3	103	119	135					
S SPRUCE			139.1	33.7	682	1,029	1,376					
SNAG												
TOTAL			150.7	6.6	209	224	239	906	227	101		
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			172.4	10.9	53	60	66					
WHEMLOCK			478.5	30.1	16	22	29					
R ALDER			520.1	32.7	5	7	10					
S SPRUCE			541.3	34.1	0	0	0					
SNAG			449.9	28.3	0	0	0					
TOTAL			169.3	10.7	80	90	99	1,144	286	127		
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			160.9	10.1	45	50	56					
WHEMLOCK			436.6	27.5	15	20	26					
R ALDER			453.7	28.6	3	5	6					
S SPRUCE			530.7	33.4	0	0	0					
SNAG			406.4	25.6	0	0	0					
TOTAL			158.7	10.0	68	75	83	1,005	251	112		
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			154.6	9.7	5,055	5,600	6,145					
WHEMLOCK			452.0	28.5	2,403	3,358	4,314					
R ALDER			442.2	27.8	355	492	629					
S SPRUCE			556.3	35.0	17	27	36					
SNAG												
TOTAL			183.7	11.6	8,381	9,477	10,573	1,348	337	150		

TC PSTATS				PROJECT STATISTICS				PAGE	2
				PROJECT HAM8				DATE	7/17/2020
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08	12	A135 TAKE	00PC	328.00	252	1,086	1	W
04N	08W	12	A2_R/W	00MC					
04N	08W	12	A467 TAKE	00PC					

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT HAM8				DATE	7/16/2020		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
04N	08W	12	A135	00PC	197.00	53	325	1	W		
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL		53	325	6.1							
CRUISE		28	165	5.9	37,225	.4					
DBH COUNT											
REFOREST											
COUNT		25	145	5.8							
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
DOUGLEAV		60	64.5	15.5	67	21.4	84.3	11,312	11,203	3,133	3,133
DOUG FIR		35	55.1	11.9	45	12.4	42.8	4,422	4,269	1,210	1,210
HEMLEAV		25	18.7	17.7	78	7.6	32.1	5,294	5,169	1,347	1,336
WHEMLOCK		18	27.9	12.3	66	6.5	22.8	3,956	3,883	965	965
SPRUCELV		15	5.0	22.5	47	2.9	13.7	1,917	1,870	496	496
ALDRLEAV		6	10.3	12.5	46	2.5	8.7	875	849	255	255
R ALDER		4	6.5	10.3	28	1.2	3.8	283	283	84	84
SNAG		2	1.0	14.9	67	0.3	1.3				
TOTAL		165	189.0	14.3	59	55.5	209.5	28,059	27,526	7,490	7,479
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	
DOUGLEAV		34.7	4.5	188	197	206					
DOUG FIR		89.5	15.1	87	102	118					
HEMLEAV		42.9	8.8	296	324	352					
WHEMLOCK		62.0	15.0	141	166	190					
SPRUCELV		122.7	32.8	822	1,223	1,623					
ALDRLEAV		53.2	23.7	70	92	113					
R ALDER		40.0	22.9	39	50	61					
SNAG											
TOTAL		196.8	15.3	234	276	318		1,547	387	172	
CL: 68.1 %		COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0		VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUGLEAV		86.6	11.9	57	64	72					
DOUG FIR		102.4	14.1	47	55	63					
HEMLEAV		185.6	25.5	14	19	23					
WHEMLOCK		277.3	38.1	17	28	38					
SPRUCELV		308.5	42.3	3	5	7					
ALDRLEAV		315.2	43.3	6	10	15					
R ALDER		379.7	52.1	3	7	10					
SNAG		514.5	70.6	0	1	2					
TOTAL		54.1	7.4	175	189	203		117	29	13	
CL: 68.1 %		COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0		VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUGLEAV		81.8	11.2	75	84	94					
DOUG FIR		101.4	13.9	37	43	49					
HEMLEAV		178.0	24.4	24	32	40					
WHEMLOCK		269.9	37.0	14	23	31					
SPRUCELV		256.6	35.2	9	14	19					
ALDRLEAV		292.1	40.1	5	9	12					
R ALDER		331.4	45.5	2	4	6					

TC TSTATS				STATISTICS				PAGE	2
				PROJECT HAM8				DATE	7/16/2020
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	12	A135	00PC	197.00	53	325	1	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
SNAG		509.8	70.0	0	1	2			
TOTAL		41.9	5.7	197	210	222	70	18	8
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV		82.2	11.3	9,940	11,203	12,467			
DOUG FIR		102.8	14.1	3,667	4,269	4,871			
HEMLEAV		186.0	25.5	3,849	5,169	6,488			
WHEMLOCK		276.6	38.0	2,409	3,883	5,357			
SPRUCELV		273.2	37.5	1,169	1,870	2,571			
ALDRLEAV		322.3	44.2	474	849	1,225			
R ALDER		344.6	47.3	149	283	417			
SNAG									
TOTAL		55.7	7.6	25,423	27,526	29,629	124	31	14

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT HAM8				DATE 7/16/2020		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	08W	12	A135 TAKE	00PC	197.00	53	107	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	53	107	2.0							
CRUISE	21	57	2.7		17,638		.3			
DBH COUNT										
REFOREST										
COUNT	20	50	2.5							
BLANKS	12									
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
DOUG FIR	35	55.1	11.9	45	12.4	42.8	4,422	4,269	1,210	1,210
WHEMLOCK	18	27.9	12.3	66	6.5	22.8	3,956	3,883	965	965
R ALDER	4	6.5	10.3	28	1.2	3.8	283	283	84	84
TOTAL	57	89.5	11.9	50	20.1	69.4	8,661	8,435	2,260	2,260
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	89.5	15.1	87	102	118					
WHEMLOCK	62.0	15.0	141	166	190					
R ALDER	40.0	22.9	39	50	61					
TOTAL	82.3	10.9	106	119	132		270	68	30	
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	102.4	14.1	47	55	63					
WHEMLOCK	277.3	38.1	17	28	38					
R ALDER	379.7	52.1	3	7	10					
TOTAL	94.8	13.0	78	90	101		359	90	40	
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	101.4	13.9	37	43	49					
WHEMLOCK	269.9	37.0	14	23	31					
R ALDER	331.4	45.5	2	4	6					
TOTAL	95.4	15.1	60	69	79		363	91	40	
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	102.8	14.1	3,667	4,269	4,871					
WHEMLOCK	276.6	38.0	2,409	3,883	5,357					
R ALDER	344.6	47.3	149	283	417					
TOTAL	126.0	17.3	6,976	8,435	9,893		634	158	70	

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT HAM8				DATE 7/16/2020		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	08W	12	A135 LEAVE	00PC	197.00	53	218	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	53	218	4.1							
CRUISE	28	108	3.9		19,586		.6			
DBH COUNT										
REFOREST										
COUNT	25	105	4.2							
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
DOUGLEAV	60	64.5	15.5	67	21.4	84.3	11,312	11,203	3,133	3,133
HEMLEAV	25	18.7	17.7	78	7.6	32.1	5,294	5,169	1,347	1,336
SPRUCELV	15	5.0	22.5	47	2.9	13.7	1,917	1,870	496	496
ALDRLEAV	6	10.3	12.5	46	2.5	8.7	875	849	255	255
SNAG	2	1.0	14.9	67	0.3	1.3				
TOTAL	108	99.4	16.1	66	34.9	140.1	19,398	19,091	5,230	5,219
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	
DOUGLEAV	34.7	4.5	188	197	206					
HEMLEAV	42.9	8.8	296	324	352					
SPRUCELV	122.7	32.8	822	1,223	1,623					
ALDRLEAV	53.2	23.7	70	92	113					
SNAG										
TOTAL	182.0	17.5	296	359	422		1,322	331	147	
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUGLEAV	86.6	11.9	57	64	72					
HEMLEAV	185.6	25.5	14	19	23					
SPRUCELV	308.5	42.3	3	5	7					
ALDRLEAV	315.2	43.3	6	10	15					
SNAG	514.5	70.6	0	1	2					
TOTAL	36.2	5.0	94	99	104		52	13	6	
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUGLEAV	81.8	11.2	75	84	94					
HEMLEAV	178.0	24.4	24	32	40					
SPRUCELV	256.6	35.2	9	14	19					
ALDRLEAV	292.1	40.1	5	9	12					
SNAG	509.8	70.0	0	1	2					
TOTAL	24.5	3.4	135	140	145		24	6	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	
DOUGLEAV	82.2	11.3	9,940	11,203	12,467					
HEMLEAV	186.0	25.5	3,849	5,169	6,488					
SPRUCELV	273.2	37.5	1,169	1,870	2,571					
ALDRLEAV	322.3	44.2	474	849	1,225					
SNAG										
TOTAL	33.1	4.5	18,224	19,091	19,958		44	11	5	

TC TSTATS				STATISTICS				PAGE 1		
				PROJECT HAM8				DATE 7/16/2020		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	08W	12	A2 R/W	00MC	7.00	126	812	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	126	812	6.4							
CRUISE	72	399	5.5		1,306		30.5			
DBH COUNT										
REFOREST										
COUNT	53	340	6.4							
BLANKS	1									
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
DOUG FIR	233	118.9	14.6	61	36.1	138.1	18,373	18,059	4,999	4,992
WHEMLOCK	103	36.9	15.8	72	12.6	50.2	8,469	8,284	2,163	2,148
R ALDER	26	18.7	12.1	46	4.3	14.9	1,801	1,772	498	498
S SPRUCE	18	5.2	18.6	42	2.3	9.8	1,277	1,249	338	338
SNAG	19	6.8	11.7	69	1.5	5.1				
TOTAL	399	186.6	14.6	61	57.0	218.1	29,920	29,363	7,998	7,977
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	68.2	4.5	190	199	208					
WHEMLOCK	66.4	6.5	286	306	326					
R ALDER	74.7	14.9	110	129	148					
S SPRUCE	139.1	33.7	682	1,029	1,376					
SNAG										
TOTAL	151.3	7.6	231	250	269		915	229	102	
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	73.5	6.5	111	119	127					
WHEMLOCK	194.0	17.3	31	37	43					
R ALDER	239.3	21.3	15	19	23					
S SPRUCE	376.9	33.5	3	5	7					
SNAG	310.8	27.7	5	7	9					
TOTAL	37.9	3.4	180	187	193		57	14	6	
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	69.7	6.2	129	138	147					
WHEMLOCK	179.7	16.0	42	50	58					
R ALDER	220.7	19.6	12	15	18					
S SPRUCE	369.2	32.9	7	10	13					
SNAG	279.1	24.8	4	5	6					
TOTAL	34.5	3.1	211	218	225		47	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	69.8	6.2	16,936	18,059	19,181					
WHEMLOCK	185.3	16.5	6,918	8,284	9,651					
R ALDER	229.3	20.4	1,410	1,772	2,133					
S SPRUCE	387.7	34.5	818	1,249	1,680					
SNAG										
TOTAL	46.9	4.2	28,139	29,363	30,588		88	22	10	

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT HAM8				DATE	7/17/2020		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
04N	08W	12	A467	00PC	124.00	73	487	1	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
TOTAL		73	487	6.7							
CRUISE		44	234	5.3	23,637		1.0				
DBH COUNT											
REFOREST											
COUNT		28	195	7.0							
BLANKS		1									
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	
DOUGLEAV		90	55.5	17.1	75	21.4	88.4	13,106	12,942	3,506	3,506
DOUG FIR		48	63.7	12.9	55	16.0	57.6	7,204	7,010	1,978	1,965
HEMLEAV		42	17.3	18.6	77	7.6	32.7	5,600	5,493	1,445	1,434
WHEMLOCK		18	13.1	14.1	67	3.8	14.3	2,316	2,247	609	604
ALDRLEAV		13	12.7	12.9	52	3.2	11.5	1,604	1,575	436	436
SNAG		17	10.9	11.5	69	2.3	7.8				
SPRUCELV		3	9.7	11.4	35	2.0	6.9	539	539	175	175
R ALDER		3	7.6	11.1	51	1.5	5.1	752	752	196	196
TOTAL		234	190.6	14.7	63	58.5	224.2	31,122	30,559	8,345	8,316
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		
DOUGLEAV		59.2	6.2	252	269	285					
DOUG FIR		75.4	10.9	126	142	157					
HEMLEAV		61.6	9.5	358	395	433					
WHEMLOCK		59.8	14.5	182	213	244					
ALDRLEAV		65.6	18.9	139	172	204					
SNAG											
SPRUCELV		39.7	27.5	46	63	81					
R ALDER		57.5	39.8	74	123	172					
TOTAL		81.9	5.3	219	232	244	268	67	30		
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV		63.0	7.4	51	56	60					
DOUG FIR		88.2	10.3	57	64	70					
HEMLEAV		133.8	15.6	15	17	20					
WHEMLOCK		256.4	30.0	9	13	17					
ALDRLEAV		205.8	24.1	10	13	16					
SNAG		243.2	28.4	8	11	14					
SPRUCELV		527.1	61.6	4	10	16					
R ALDER		330.7	38.7	5	8	11					
TOTAL		35.6	4.2	183	191	199	51	13	6		
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUGLEAV		60.9	7.1	82	88	95					
DOUG FIR		83.4	9.8	52	58	63					
HEMLEAV		128.2	15.0	28	33	38					
WHEMLOCK		274.5	32.1	10	14	19					
ALDRLEAV		213.4	24.9	9	12	14					
SNAG		220.8	25.8	6	8	10					
SPRUCELV		525.4	61.4	3	7	11					

TC TSTATS				STATISTICS				PAGE	2
				PROJECT HAM8				DATE	7/17/2020
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	08W	12	A467	00PC	124.00	73	487	1	W
CL: 68.1 %				BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
R ALDER		325.7	38.1	3	5	7			
TOTAL		28.8	3.4	217	224	232	33	8	4
CL: 68.1 %				NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUGLEAV		60.5	7.1	12,027	12,942	13,858			
DOUG FIR		86.0	10.1	6,305	7,010	7,716			
HEMLEAV		130.5	15.3	4,655	5,493	6,331			
WHEMLOCK		271.4	31.7	1,534	2,247	2,960			
ALDRLEAV		225.2	26.3	1,160	1,575	1,990			
SNAG									
SPRUCELV		526.3	61.5	207	539	871			
R ALDER		325.9	38.1	466	752	1,039			
TOTAL		40.7	4.8	29,106	30,559	32,013	66	17	7

TC TSTATS				STATISTICS				PAGE 1			
				PROJECT HAM8				DATE 7/17/2020			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
04N	08W	12	A467 TAKE	00PC	124.00	73	167	1	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TREES	SAMPLE					
						TREES					
TOTAL		73	167	2.3							
CRUISE		29	69	2.4	10,467	.7					
DBH COUNT											
REFOREST											
COUNT		32	98	3.1							
BLANKS		12									
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	
DOUG FIR		48	63.7	12.9	55	16.0	57.6	7,204	7,010	1,978	1,965
WHEMLOCK		18	13.1	14.1	67	3.8	14.3	2,316	2,247	609	604
R ALDER		3	7.6	11.1	51	1.5	5.1	752	752	196	196
TOTAL		69	84.4	12.9	57	21.4	76.9	10,272	10,010	2,783	2,764
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		75.4	10.9	126	142	157					
WHEMLOCK		59.8	14.5	182	213	244					
R ALDER		57.5	39.8	74	123	172					
TOTAL		71.8	8.6	146	160	173	206	52	23		
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		88.2	10.3	57	64	70					
WHEMLOCK		256.4	30.0	9	13	17					
R ALDER		330.7	38.7	5	8	11					
TOTAL		67.4	7.9	78	84	91	181	45	20		
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		83.4	9.8	52	58	63					
WHEMLOCK		274.5	32.1	10	14	19					
R ALDER		325.7	38.1	3	5	7					
TOTAL		68.1	8.0	71	77	83	185	46	21		
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		86.0	10.1	6,305	7,010	7,716					
WHEMLOCK		271.4	31.7	1,534	2,247	2,960					
R ALDER		325.9	38.1	466	752	1,039					
TOTAL		77.4	9.1	9,103	10,010	10,916	239	60	27		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT HAM8				DATE	7/17/2020	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
04N	08W	12	A467 LEAVE	00PC	124.00		73	320	1	W
				TREES	ESTIMATED		PERCENT			
				PER PLOT	TOTAL		SAMPLE			
					TREES		TREES			
TOTAL		73	320	4.4						
CRUISE		44	165	3.8	13,170		1.3			
DBH COUNT										
REFOREST										
COUNT		28	117	4.2						
BLANKS		1								
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
DOUGLEAV		90	55.5	17.1	75	21.4	88.4	13,106	12,942	3,506
HEMLEAV		42	17.3	18.6	77	7.6	32.7	5,600	5,493	1,445
ALDRLEAV		13	12.7	12.9	52	3.2	11.5	1,604	1,575	436
SNAG		17	10.9	11.5	69	2.3	7.8			
SPRUCELV		3	9.7	11.4	35	2.0	6.9	539	539	175
TOTAL		165	106.2	15.9	68	36.9	147.3	20,850	20,550	5,562
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	
DOUGLEAV		59.2	6.2	252	269	285				
HEMLEAV		61.6	9.5	358	395	433				
ALDRLEAV		65.6	18.9	139	172	204				
SNAG										
SPRUCELV		39.7	27.5	46	63	81				
TOTAL		78.8	6.1	246	262	278	248	62	28	
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUGLEAV		63.0	7.4	51	56	60				
HEMLEAV		133.8	15.6	15	17	20				
ALDRLEAV		205.8	24.1	10	13	16				
SNAG		243.2	28.4	8	11	14				
SPRUCELV		527.1	61.6	4	10	16				
TOTAL		38.9	4.5	101	106	111	60	15	7	
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUGLEAV		60.9	7.1	82	88	95				
HEMLEAV		128.2	15.0	28	33	38				
ALDRLEAV		213.4	24.9	9	12	14				
SNAG		220.8	25.8	6	8	10				
SPRUCELV		525.4	61.4	3	7	11				
TOTAL		15.5	1.8	145	147	150	10	2	1	
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUGLEAV		60.5	7.1	12,027	12,942	13,858				
HEMLEAV		130.5	15.3	4,655	5,493	6,331				
ALDRLEAV		225.2	26.3	1,160	1,575	1,990				
SNAG										
SPRUCELV		526.3	61.5	207	539	871				
TOTAL		29.6	3.5	19,838	20,550	21,262	35	9	4	

TC		PSTNDSUM		Stand Table Summary										Page		1	
														Date:		7/20/2020	
T04N R08W S12 Ty00PC197.00 T04N R08W S12 Ty00MC7.00 T04N R08W S12 Ty00PC124.00				ProjectHAM8 Acres328.00										Time:		8:20:23AM	
														Grown Year:			
S Spec	T	DBH	Sample Trees	Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s			
				FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
D		8	2	91	68	1.335	.47	1.33	10.0	50.0		13	67		44	22	
D		9	11	86	65	7.175	3.17	7.17	10.6	43.5		76	312		249	102	
D		10	11	87	70	5.811	3.17	5.83	13.2	51.4		77	300		252	98	
D		11	33	86	91	15.789	10.42	22.30	13.7	49.8		306	1,111		1,003	364	
D		12	28	88	86	8.939	7.02	14.21	15.5	55.5		220	788		723	259	
D		13	29	87	72	6.554	6.04	10.80	15.2	47.6		164	514		539	169	
D		14	31	87	87	6.861	7.33	12.16	19.9	68.2		242	829		794	272	
D		15	23	84	106	1.673	2.05	3.36	24.1	85.5		81	287		266	94	
D		16	32	87	106	.921	1.29	2.20	24.3	89.3		53	197		175	64	
D		17	31	85	79	1.262	1.99	2.06	29.8	92.1		61	190		201	62	
D		18	30	86	83	.963	1.70	1.67	33.2	105.0		55	175		182	57	
D		19	18	87	95	.703	1.38	1.64	31.7	105.0		52	172		171	57	
D		20	7	85	90	.571	1.25	1.14	38.2	136.9		44	156		143	51	
D		21	9	86	119	.230	.55	.66	38.7	137.9		26	91		84	30	
D		22	13	86	111	.667	1.76	1.81	40.6	151.2		73	273		240	90	
D		23	4	85	98	.266	.77	.79	37.2	159.1		30	126		97	41	
D		24	1	88	121	.004	.01	.01	50.0	216.7		1	3		2	1	
D		26	2	85	140	.007	.03	.02	64.7	273.3		1	6		4	2	
D		28	1	85	145	.003	.01	.01	75.0	320.0		1	3		2	1	
D		Totals	316	87	82	59.733	50.41	89.18	17.7	62.8		1,577	5,600		5,171	1,837	
H		9	4	89	80	3.303	1.46	4.95	9.3	33.3		46	165		152	54	
H		10	4	88	92	1.906	1.04	3.24	10.5	39.4		34	128		111	42	
H		11	9	91	126	3.166	2.09	6.32	15.9	67.8		100	428		329	140	
H		12	7	88	121	2.800	2.20	5.60	19.5	79.9		109	447		358	147	
H		13	18	87	116	4.565	4.21	9.12	19.0	77.7		173	709		568	233	
H		14	11	86	101	3.030	3.24	6.06	22.8	81.0		138	491		452	161	
H		15	10	89	109	1.739	2.13	3.49	23.7	97.1		83	339		271	111	
H		16	10	88	103	.489	.68	.98	31.4	116.6		31	114		101	37	
H		17	9	91	99	.244	.38	.49	34.3	127.1		17	63		56	21	
H		18	17	86	105	.592	1.05	1.38	35.0	128.7		48	177		158	58	
H		19	4	87	100	.021	.04	.05	34.8	121.0		2	6		6	2	
H		20	9	86	96	.175	.38	.37	34.8	126.1		13	47		43	15	
H		21	9	88	109	.333	.80	.98	40.1	170.4		39	167		129	55	
H		22	1	89	94	.004	.01	.01	55.5	215.0		0	2		1	1	
H		23	3	84	92	.011	.03	.02	58.3	210.0		1	4		4	1	
H		24	2	92	100	.007	.02	.02	57.2	250.0		1	4		3	1	
H		25	2	87	124	.006	.02	.02	60.2	260.0		1	5		4	2	
H		26	3	85	107	.008	.03	.02	63.4	248.7		1	6		5	2	
H		27	2	82	99	.078	.31	.16	85.5	305.0		13	48		44	16	
H		28	2	83	85	.005	.02	.01	77.0	242.5		1	2		2	1	
H		29	1	88	135	.002	.01	.01	89.0	443.3		1	3		2	1	
H		30	1	89	82	.002	.01	.00	91.0	360.0		0	1		1	0	
H		37	1	54	99	.001	.01	.00	64.5	210.0		0	1		1	0	
H		Totals	139	88	107	22.487	20.18	43.31	19.7	77.5		854	3,358		2,800	1,101	
A		8	2	87	17	1.671	.58	1.67	4.0	20.0		7	33		22	11	
A		9	4	87	79	1.526	.67	1.53	13.9	59.5		21	91		70	30	
A		10	4	86	72	1.114	.61	1.14	15.7	58.4		18	66		58	22	
A		11	3	86	112	1.004	.66	2.01	14.9	54.7		30	110		98	36	
A		12	2	87	91	.031	.02	.05	19.3	66.7		1	3		3	1	
A		13	7	87	55	1.305	1.20	1.34	21.8	60.5		29	81		96	27	
A		14	1	86	37	.011	.01	.01	18.0	30.0		0	0		1	0	
A		15	1	86	103	.010	.01	.02	25.0	95.0		0	2		2	1	

TC		PSTNDSUM		Stand Table Summary								Page		2					
														Date:		7/20/2020			
T04N R08W S12 Ty00PC				197.00		Project				HAM8				Time:		8:20:23AM			
T04N R08W S12 Ty00MC				7.00		Acres				328.00				Grown Year:					
T04N R08W S12 Ty00PC				124.00															
S Spc	T	Tot			Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Net		T o t a l s					
		DBH	Sample Trees	FF 16'				Av Ht	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF			
A		16	5	87	83	.494	.69	.99	26.8	99.0		26	98		87	32			
A		17	1	86	93	.008	.01	.02	30.5	115.0		0	2		2	1			
A		18	2	87	100	.014	.02	.03	37.8	127.5		1	3		3	1			
A		21	1	87	104	.005	.01	.01	56.5	215.0		1	2		2	1			
A		Totals	33	87	64	7.192	4.52	8.80	15.4	55.9		135	492		443	161			
S		10	2	84	64	.042	.02	.04	14.5	50.0		1	2		2	1			
S		11	1	83	56	.025	.02	.03	9.0	30.0		0	1		1	0			
S		16	1	89	63	.008	.01	.02	22.0	80.0		0	1		1	0			
S		17	1	89	51	.007	.01	.01	35.0	60.0		0	0		1	0			
S		18	1	88	54	.006	.01	.01	40.0	90.0		0	1		1	0			
S		23	1	83	49	.004	.01	.00	63.0	80.0		0	0		1	0			
S		24	1	83	64	.004	.01	.01	49.0	130.0		0	1		1	0			
S		25	1	82	111	.003	.01	.01	55.0	216.7		1	2		2	1			
S		31	1	80	68	.002	.01	.00	85.0	230.0		0	1		1	0			
S		32	1	83	121	.002	.01	.01	95.3	420.0		1	3		2	1			
S		34	1	89	82	.002	.01	.00	121.5	505.0		0	2		1	1			
S		36	1	83	64	.002	.01	.00	108.5	365.0		0	1		1	0			
S		41	1	76	69	.001	.01	.00	150.0	460.0		0	1		1	0			
S		45	2	77	103	.002	.02	.01	196.2	776.0		1	4		3	1			
S		52	1	82	141	.001	.01	.00	280.3	1466.7		1	3		2	1			
S		56	1	82	125	.001	.01	.00	297.0	1480.0		1	3		2	1			
S		Totals	18	84	65	.112	.21	.15	49.1	181.0		7	27		24	9			
SN		9	4	88	83	.052	.02												
SN		10	2	88	65	.021	.01												
SN		11	1	89	84	.009	.01												
SN		12	1	89	30	.007	.01												
SN		13	4	89	69	.025	.02												
SN		14	3	88	49	.016	.02												
SN		15	1	89	25	.005	.01												
SN		16	1	89	100	.004	.01												
SN		17	1	88	60	.004	.01												
SN		18	1	88	50	.003	.01												
SN		Totals	19	88	69	.145	.11												
Totals			525	87	87	89.669	75.43	141.45	18.2	67.0		2,572	9,477		8,438	3,108			

TC PLOGSTVB				Log Stock Table - MBF																			
T04N R08W S12 Ty00PC 197.00 T04N R08W S12 Ty00MC 7.00 T04N R08W S12 Ty00PC 124.00				Project: HAM8				Acres 328.00				Page 1				Date 7/20/2020				Time 8:19:55AM			
Spp	S T	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+				
D		DO	CU	17	7	100.0																	
D		DO	2S	16	0	12.5	0	.0					0										
D		DO	2S	20	39	7.2	36	1.9						20	16								
D		DO	2S	24	24		24	1.3							24								
D		DO	2S	32	28	6.5	26	1.4					26										
D		DO	2S	34	0		0	.0					0										
D		DO	2S	40	117	3.4	113	6.1					51	57	5								
D		DO	3S	20	16		16	.9					16										
D		DO	3S	24	16	16.5	13	.7				13											
D		DO	3S	28	18		18	1.0				17	0										
D		DO	3S	30	15	13.1	13	.7			3	10	0										
D		DO	3S	32	150	6.6	140	7.6			113	18	10										
D		DO	3S	34	48	3.1	46	2.5			32	13	1										
D		DO	3S	36	98		98	5.3			97	1	0										
D		DO	3S	38	132		132	7.2			130	0	1										
D		DO	3S	40	916	1.3	903	49.2			351	360	193										
D		DO	4S	14	7		7	.4					7										
D		DO	4S	16	81	6.5	76	4.1		2	63	0	11										
D		DO	4S	18	22		22	1.2			22	0											
D		DO	4S	20	39		39	2.1			39	0											
D		DO	4S	24	48		48	2.6			48												
D		DO	4S	26	23		23	1.2			23												
D		DO	4S	28	3		3	.2		0	3												
D		DO	4S	30	12		12	.7			12												
D		DO	4S	32	18	20.0	15	.8			15												
D		DO	4S	34	18	20.0	15	.8			15												
D		Totals			1,893	3.0	1,837	59.1		2	965	432	239	78	77	44							
A		DO	1S	28	0	5.9	0	.2					0										
A		DO	1S	38	0		0	.3					0										
A		DO	1S	40	1	3.2	1	.6					0	1									
A		DO	2S	28	0		0	.3					0										
A		DO	2S	30	0	9.1	0	.2					0										
A		DO	2S	38	26		26	16.3					26										
A		DO	2S	40	1		1	.6					1										
A		DO	3S	18	0		0	.1			0												

TC PLOGSTVB			Log Stock Table - MBF																
T04N R08W S12 Ty00PC 197.00 T04N R08W S12 Ty00MC 7.00 T04N R08W S12 Ty00PC 124.00							Project: HAM8 Acres 328.00							Page 2 Date 7/20/2020 Time 8:19:55AM					
S T Spp	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Sp	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+	
A	DO	3S	20	0		0	.1				0								
A	DO	3S	28	0		0	.1				0								
A	DO	3S	30	1		1	.4				1								
A	DO	3S	38	28		28	17.6			28									
A	DO	3S	40	30		30	18.7				30								
A	DO	4S	14	11		11	6.8			11									
A	DO	4S	16	0		0	.1			0									
A	DO	4S	18	0		0	.2			0									
A	DO	4S	20	11		11	7.1			11									
A	DO	4S	30	1	9.4	1	.7			1									
A	DO	4S	36	34		34	20.9			34									
A	DO	4S	38	2		2	1.0			2									
A	DO	4S	40	12		12	7.7			12									
A	Totals			162		161	5.2			100	31	28	1	1					
H	DO	CU	7	4	100.0														
H	DO	CU	8	0	100.0														
H	DO	CU	24	0	100.0														
H	DO	2S	18	0	11.1	0	.0					0							
H	DO	2S	32	1	4.5	1	.1					1		0					
H	DO	2S	40	121		119	10.8					57	44	17	1				
H	DO	3S	20	6		6	.5				6								
H	DO	3S	24	0		0	.0			0	0	0							
H	DO	3S	26	0		0	.0					0							
H	DO	3S	28	11		11	1.0			0	11								
H	DO	3S	30	0		0	.0			0	0								
H	DO	3S	32	175	5.6	165	15.0			150	2	13							
H	DO	3S	34	28		28	2.6			28									
H	DO	3S	36	19		19	1.7			19	0	0							
H	DO	3S	38	4		4	.4			4									
H	DO	3S	40	680	1.4	671	60.9			79	394	198							
H	DO	4S	14	9		9	.8			9									
H	DO	4S	16	12		12	1.1			12	0								
H	DO	4S	18	12		12	1.1			12	0								
H	DO	4S	20	3		3	.3			3	0								
H	DO	4S	24	14		14	1.3			14									
H	DO	4S	26	0		0	.0			0									

TC PLOGSTVB				Log Stock Table - MBF																
T04N R08W S12 Ty00PC197.00 T04N R08W S12 Ty00MC7.00 T04N R08W S12 Ty00PC124.00				Project: HAM8 Acres328.00										Page 3 Date 7/20/2020 Time 8:19:55AM						
S T Spp	So rt	Gr 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+	
H	DO	4S	28	25		25	2.3			25										
H	DO	4S	30	0		0	.0			0										
H	Totals			1,126	2.2	1,101	35.4			356	414	211	58	44	17	1				
S	DO	2S	24	0		0	3.7						0							
S	DO	2S	40	2		2	26.0						0		1	1		1		
S	DO	3S	12	0		0	.3							0						
S	DO	3S	16	0	5.0	0	1.6				0		0	0						
S	DO	3S	20	0		0	.7								0					
S	DO	3S	26	0	7.7	0	.8													
S	DO	3S	32	0		0	4.0							0	0					
S	DO	3S	36	0	13.3	0	3.9									0				
S	DO	3S	40	5	2.4	4	51.3			1	0			0		1	1	1		
S	DO	4S	12	0		0	.3				0									
S	DO	4S	16	0		0	.4				0									
S	DO	4S	24	0		0	4.4			0										
S	DO	4S	26	0		0	2.8			0										
S	Totals			9	2.2	9	.3			1	0	0	1	0	1	2	1	2		
Total	All Species			3,189	2.5	3,108	100.0		2	1422	877	478	138	122	62	3	1	2		

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT

NO. AT-341-2021-W00828-01

HAMLET 8

PORTIONS OF SECTIONS 1, 12, AND 24 OF
T4N, R9W, AND PORTIONS OF SECTIONS
6, 7, 8, 18, AND 19 OF T4N, R8W, W.M.,
CLATSOP COUNTY, OREGON

Approximate Net Acres	Logging Method	
	Ground	Cable
Unit 1 (PC) = 61	79%	21%
Unit 2 (R/W) = 7	100%	0%
Unit 3 (PC) = 5	100%	0%
Unit 4 (PC) = 31	100%	0%
Unit 5 (PC) = 131	47%	53%
Unit 6 (PC) = 36	64%	36%
Unit 7 (PC) = 57	46%	54%
Total = 328	62%	38%



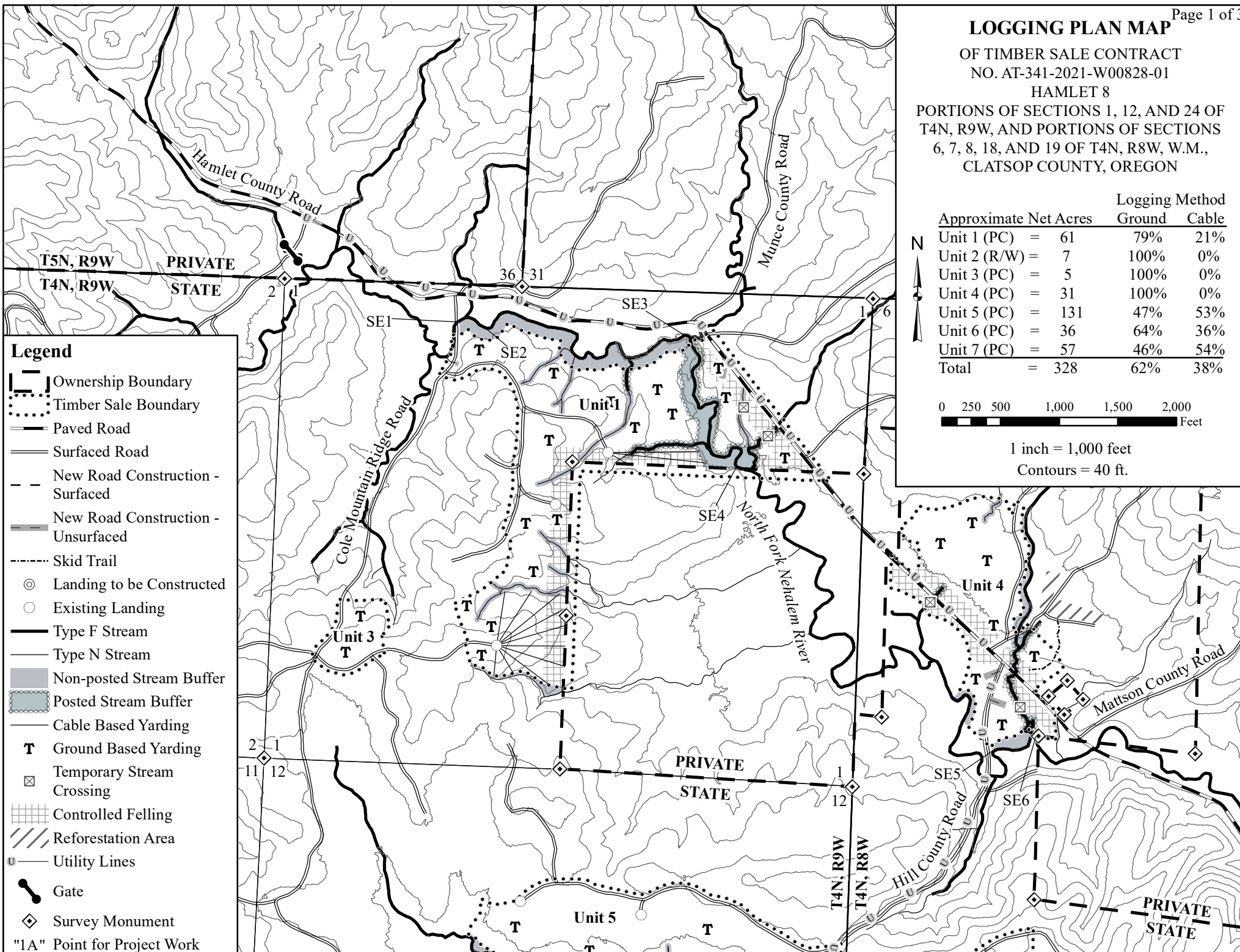
0 250 500 1,000 1,500 2,000
Feet

1 inch = 1,000 feet

Contours = 40 ft.

Legend

- Ownership Boundary
- Timber Sale Boundary
- Paved Road
- Surfaced Road
- New Road Construction - Surfaced
- New Road Construction - Unsurfaced
- Skid Trail
- Landing to be Constructed
- Existing Landing
- Type F Stream
- Type N Stream
- Non-posted Stream Buffer
- Posted Stream Buffer
- Cable Based Yarding
- Ground Based Yarding
- Temporary Stream Crossing
- Controlled Felling
- Reforestation Area
- Utility Lines
- Gate
- Survey Monument
- "1A" Point for Project Work



NO. AT-341-2021-W00828-01

PORTIONS OF SECTIONS 1, 12, AND 24 OF
T4N, R9W, AND PORTIONS OF SECTIONS
6, 7, 8, 18, AND 19 OF T4N, R8W, W.M.,
CLATSOP COUNTY, OREGON

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Unit 5 (PC) = 131	47%	53%
Unit 6 (PC) = 36	64%	36%
Unit 7 (PC) = 57	46%	54%
Total = 328	62%	38%

A scale bar labeled "Feet" with markings at 0, 250, 500, 1,000, 1,500, and 2,000. The bar is black with white tick marks and numbers.

1 inch = 1,000 feet

Countours = 40 ft.

Legend

-  Ownership Boundary
-  Timber Sale Boundary
-  Paved Road
-  Surfaced Road
-  New Road Construction - Surfaced
-  New Road Construction - Unsurfaced
-  Landing to be Constructed
-  Existing Landing
-  Type F Stream
-  Type N Stream
-  Non-posted Stream Buffer
-  Posted Stream Buffer
-  Thinning Optional
-  Operationally Restricted
-  Controlled Felling
-  Ground Based Yarding
-  Cable Based Yarding
-  Line Pull
-  Utility Lines
-  Survey Monument

LOGGING PLAN MAP

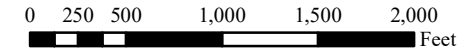
OF TIMBER SALE CONTRACT

NO. AT-341-2021-W00828-01

HAMLET 8

PORTIONS OF SECTIONS 1, 12, AND 24 OF
T4N, R9W, AND PORTIONS OF SECTIONS
6, 7, 8, 18, AND 19 OF T4N, R8W, W.M.,
CLATSOP COUNTY, OREGON

Approximate Net Acres	Logging Method	
	Ground	Cable
Unit 1 (PC) = 61	79%	21%
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Unit 5 (PC) = 131	47%	53%
Unit 6 (PC) = 36	64%	36%
Unit 7 (PC) = 57	46%	54%
Total = 328	62%	38%



1 inch = 1,000 feet

Contours = 40 ft.

Legend

- Ownership Boundary
- Timber Sale Boundary
- Paved Road
- Surfaced Road
- New Road Construction - Surfaced
- New Road Construction - Unsurfaced
- Landing to be Constructed
- Existing Landing
- Type F Stream
- Type N Stream
- Non-posted Stream Buffer
- Posted Stream Buffer
- Controlled Felling
- Reforestation Area
- T Ground Based Yarding
- Cable Based Yarding
- Survey Monument

