"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Windy William
Sale 341-08-29

District: **Forest Grove** **Date:** **October 04, 2007**

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$1,202,978.31	$73,150.35	$1,276,128.66
		Project Work:	$(178,970.00)
		Advertised Value:	$1,097,158.66

"STEWARDSHIP IN FORESTRY"

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Windy William
Sale 341-08-29

District: **Forest Grove** **Date:** **October 04, 2007**

timber description

Location: Portions of Sections 9 and 10, T1S, R6W, W.M., Washington County, Oregon.

Stand Stocking: 20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	16	0	98
Western Hemlock / Fir	15	0	98
Alder (Red)	15	0	95

Volume by Grade	2S	3S	4S	Camprur	Total
Douglas - Fir	1,836	1,938	313	0	4,087
Western Hemlock / Fir	25	45	5	0	75
Alder (Red)	0	0	0	161	161
Total	1,861	1,983	318	161	4,323

comments: Pond Values Used: 3rd Quarter Calendar Year 2007.

Western redcedar Stumpage Price = Pond Value minus Logging Cost
$799/MBF = $1,000/MBF - $201/MBF

HAULING
Hauling costs equivalent to $700 daily truck cost.

Other Costs (Profit and Risk to be added):
Brand and Paint: $1/MBF x 4,323/MBF = $4,323
206 trees will be topped in Area I @ $50/Tree = $10,300
TOTAL Other Costs (Profit and Risk to be added) = $14,623

OTHER COSTS (No Profit and Risk added):
Blocking and Waterbarring of skid roads: 6 hours @ $110/hr = $660
Slash Disposal:
20 hours of equipment time for Slash treatment @ $110/hour = $2,200
TOTAL Other Costs (No Profit and Risk added) = $2,860

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District: **Forest Grove** **Date:** **October 04, 2007**

logging conditions

combination#: 1

	Douglas - Fir	32.86%
	Western Hemlock / Fir	30.00%
	Alder (Red)	30.43%

yarding distance: Short (400 ft) **downhill yarding:** No
logging system: Shovel **Process**: Manual Delimbing
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 10.0 **bd. ft / load:** 4,500
cost / mbf: $55.66

machines: Shovel Logger

combination#: 2

	Douglas - Fir	67.14%
	Western Hemlock / Fir	70.00%
	Alder (Red)	69.57%

yarding distance: Long (1,500 ft) **downhill yarding:** No
logging system: Cable: Medium Tower >40 - <70 **Process**: Stroke Delimber
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 8.0 **bd. ft / load:** 4,500
cost / mbf: $92.89

machines: Log Loader (A)
Stroke Delimber (A)
Tower Yarder (Medium)

"STEWARDSHIP IN FORESTRY"

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Windy William
Sale 341-08-29

District: **Forest Grove** **Date:** **October 04, 2007**

logging costs

Operating Seasons:	2.00	**Profit Risk:**	15.00%
Project Costs:	$178,970.00	**Other Costs (P/R):**	$14,623.00
Slash Disposal:	$0.00	**Other Costs:**	$2,860.00

Miles of Road

Road Maintenance: $0.00

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	2.0	19.0	0.0

Hauling Costs

Species	$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	$0.00	2.0	4.5
Western Hemlock / Fir	$0.00	2.0	4.5
Alder (Red)	$0.00	2.0	3.8

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Windy William
Sale 341-08-29

District: **Forest Grove** **Date:** **October 04, 2007**

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
$80.66	$17.97	$2.03	$68.98	$3.38	$25.95	$0.00	$2.00	$0.66	$201.63
Western Hemlock / Fir									
$81.72	$17.97	$2.03	$68.98	$3.38	$26.11	$0.00	$2.00	$0.66	$202.85
Alder (Red)									
$81.56	$18.50	$2.03	$84.09	$3.38	$28.43	$0.00	$2.00	$0.66	$220.65

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$493.26	$291.63	$0.00
Western Hemlock / Fir	$0.00	$350.67	$147.82	$0.00
Alder (Red)	$0.00	$675.00	$454.35	$0.00

"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Windy William
Sale 341-08-29

District: **Forest Grove** **Date:** **October 04, 2007**

summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	4,087	$291.63	$1,191,891.81
Western Hemlock / Fir	75	$147.82	$11,086.50
Alder (Red)	161	$454.35	$73,150.35

Gross Timber Sale Value

Recovery: $1,276,128.66

Prepared by: J. Sandmann **Phone:** 503-359-7473

PROJECT COST SUMMARY SHEET

Timber Sale: **Windy William**

CONSTRUCTION **Project No. 1**

Road Segment	Length	Cost
G-H	6 + 50	$2,106.45
I-J	13 + 50	$3,538.82
K-L	5 + 00	$1,102.09
M-N	9 + 00	$2,162.73
O-P	1 + 00	$220.91
Q-R	0 + 75	$168.42
S-T	2 + 25	$4,808.18
	38 + 00 stations	
	0.72 miles	

SUBTOTAL CONSTRUCTION **$14,107.60**

IMPROVEMENTS **Project No. 1**

Road Segment	Length	Cost
A-B	73 + 00	$11,007.71
B-C	37 + 90	$2,391.85
C-D	46 + 00	$3,805.07
D-E	19 + 20	$1,892.92
E-F	72 + 00	$6,172.71
	248 + 10 stations	
	4.70 miles	

SUBTOTAL IMPROVEMENTS **$25,270.26**

SURFACING **Project No. 2**

Road Segment	Amount	Type	Cost
A-B	1,935 cy	3" - 0	$21,970.62
B-C	986 cy	3" - 0	$12,528.25
C-D	1,231 cy	3" - 0	$15,682.94
D-E	489 cy	3" - 0	$6,566.78
E-F	1,820 cy	3" - 0	$26,419.14
G-H	422 cy	3" - 0	$6,524.12
I-J	832 cy	3" - 0	$10,458.24
K-L	338 cy	3" - 0	$4,275.70
M-N	640 cy	3" - 0	$8,102.40
O-P	56 cy	3" - 0	$705.04
Q-R	42 cy	6" - 0	$521.64
S-T	1,771 cy	6" - 0	$21,970.62
Totals:	8,749 cy	3" - 0	
	1,813 cy	6" - 0	

SUBTOTAL SURFACING **$135,725.49**

SPECIAL PROJECTS

Project No. 3	Install metal gate	$562.12
Project No. 4	Grass seed and fertilize	$1,147.14
areas of disturbed soil.		

SUBTOTAL SPECIAL PROJECTS **$1,709.26**

MOVE IN **$2,155.23**

TOTAL ALL PROJECTS **$178,967.84**

TOTAL CREDITS **$178,970.00**

SUMMARY OF CONSTRUCTION COST

Timber Sale: **Windy William** Road: **A to B**

Construction - 0+00 stations, 0.00 miles

Improvement - 73+00 stations, 1.38 miles

CLEARING AND GRUBBING -

Scattering	4.68 acres @	$464.00	per acre =	$2,173.21		
			TOTAL CLEARING AND GRUBBING			**$2,173.21**

EXCAVATION -

Road	0.00	sta @	$90.00	per sta =	$0.00	
Landing	0.00	sta @	$90.00	per sta =	$0.00	
Grade and roll (outslope)	1.19	mi @	$900.00	per mi =	$1,073.70	
Grade, ditch and roll	0.19	mi @	$1,200.00	per mi =	$226.80	
Drift	0.00	sta @	$150.00	per sta =	$0.00	
Endhaul						
Excavate & Load	-	cy @	$1.72	per cy =	$0.00	
Haul	-	cy @	$2.05	per cy =	$0.00	
Compact Waste Area	-	cy @	$0.25	per cy =	$0.00	
				TOTAL	EXCAVATION	**$1,300.50**

CULVERTS - MATERIALS & INSTALLATION

Culverts

258	LF of 18"	$4,386.00	102	LF of 24"	$2,448.00
0	LF of 30"	$0.00	0	LF of 36"	$0.00
0	LF of 42"	$0.00	0	LF of 48"	$0.00
0	LF of 54"	$0.00	0	LF of 60"	$0.00
		$4,386.00			$2,448.00

Half Rounds

40	LF of 21"	$500.00	0	LF of 30"	$0.00
0	LF of 36"	$0.00	0	LF of 42"	$0.00
0	LF of 48"	$0.00	0	LF of 54"	$0.00
0	LF of 60"	$0.00	0	LF of 66"	$0.00
		$500.00			$0.00

Culvert Stakes

20	stakes	$200.00

TOTAL CULVERTS **$7,534.00**

SURFACING-

6 " deep = 23 cy/sta

Subgrade	1,679	cy of	3" - 0"	@	$13.97	per cy =	$23,455.63
Curve Widening	56	cy of	3" - 0"	@	$13.97	per cy =	$782.32
Turnouts	200	cy of	3" - 0"	@	$13.97	per cy =	$2,794.00
Landing	0	cy of	3" - 0"	@	$13.97	per cy =	$0.00
Junction	0	cy of	3" - 0"	@	$13.97	per cy =	$0.00
Misclaneous	0	cy of	24" - 12"	@	$13.97	per cy =	$0.00
Total =	1935					TOTAL	SURFACING **$27,031.95**

SPECIAL PROJECTS

Grass seed and fertilize areas of disturbed soil.	1.37 acres x $180 / acre	$246.60
Project 3, Install gate at point A 0+00		$562.12
		$0.00
		$0.00
	TOTAL SPECIAL PROJECTS	**$808.72**

TOTAL COST = $38,848.38

SUMMARY OF CONSTRUCTION COST

Timber Sale: **Windy William** Road: **B to C**

Construction - 0+00 stations
0.00 miles

Improvement - 37+90 stations
0.72 miles

CLEARING AND GRUBBING -

Scattering	2.44 acres @		$464.00	per acre =	$1,133.85	
				TOTAL CLEARING AND GRUBBING		**$1,133.85**

EXCAVATION -

Road	0.00	sta @	$90.00	per sta =	$0.00	
Landing	0.00	sta @	$90.00	per sta =	$0.00	
Grade and roll (outslope)	0.72	mi @	$900.00	per mi =	$648.00	
Grade, ditch and roll	0.00	mi @	$1,200.00	per mi =	$0.00	
Drift	0.00	sta @	$150.00	per sta =	$0.00	
Endhaul						
Excavate & Load	-	cy @	$1.72	per cy =	$0.00	
Haul	-	cy @	$2.05	per cy =	$0.00	
Compact Waste Area	-	cy @	$0.25	per cy =	$0.00	
				TOTAL	EXCAVATION	**$648.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

30	LF of 18"	$510.00	0	LF of 24"	$0.00
0	LF of 30"	$0.00	0	LF of 36"	$0.00
0	LF of 42"	$0.00	0	LF of 48"	$0.00
0	LF of 54"	$0.00	0	LF of 60"	$0.00
		$510.00			$0.00

Half Rounds

0	LF of 21"	$0.00	0	LF of 30"	$0.00
0	LF of 36"	$0.00	0	LF of 42"	$0.00
0	LF of 48"	$0.00	0	LF of 54"	$0.00
0	LF of 60"	$0.00	0	LF of 66"	$0.00
		$0.00			$0.00

Culvert Stakes

10 stakes $100.00

TOTAL CULVERTS **$610.00**

SURFACING-

6 " deep = 23 cy/sta

Subgrade	872	cy of	3" - 0"	@	$12.71	per cy =	$11,079.31
Curve Widening	14	cy of	3" - 0"	@	$12.71	per cy =	$177.94
Turnouts	100	cy of	3" - 0"	@	$12.71	per cy =	$1,271.00
Landing	0	cy of	3" - 0"	@	$12.71	per cy =	$0.00
Junction	0	cy of	3" - 0"	@	$12.71	per cy =	$0.00
Misclaneous	0	cy of	24" - 12"	@	$12.71	per cy =	$0.00
Total =	986					TOTAL	SURFACING **$12,528.25**

SPECIAL PROJECTS

Grass seed and fertilize areas of disturbed soil.	0.87 acres x $180 / acre	$156.60
		$0.00
		$0.00
		$0.00
	TOTAL SPECIAL PROJECTS	**$156.60**

TOTAL COST = $15,076.70

SUMMARY OF CONSTRUCTION COST

Timber Sale: **Windy William** Road: **C to D**

Construction - 0+00 stations
0.00 miles

Improvement - 46+00 stations
0.87 miles

CLEARING AND GRUBBING -

Scattering	2.95 acres @	$464.00	per acre =	$1,370.07		
			TOTAL CLEARING AND GRUBBING			**$1,370.07**

EXCAVATION -

Road	0.00	sta @	$90.00	per sta =	$0.00	
Landing	2.00	sta @	$90.00	per sta =	$180.00	
Grade and roll (outslope)	0.87	mi @	$900.00	per mi =	$783.00	
Grade, ditch and roll	0.00	mi @	$1,200.00	per mi =	$0.00	
Drift	0.00	sta @	$150.00	per sta =	$0.00	
Endhaul						
Excavate & Load	-	cy @	$1.72	per cy =	$0.00	
Haul	-	cy @	$2.05	per cy =	$0.00	
Compact Waste Area	-	cy @	$0.25	per cy =	$0.00	
				TOTAL	EXCAVATION	**$963.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

66	LF of 18"	$1,122.00	0	LF of 24"	$0.00
0	LF of 30"	$0.00	0	LF of 36"	$0.00
0	LF of 42"	$0.00	0	LF of 48"	$0.00
0	LF of 54"	$0.00	0	LF of 60"	$0.00
		$1,122.00			$0.00

Half Rounds

20	LF of 21"	$250.00	0	LF of 30"	$0.00
0	LF of 36"	$0.00	0	LF of 42"	$0.00
0	LF of 48"	$0.00	0	LF of 54"	$0.00
0	LF of 60"	$0.00	0	LF of 66"	$0.00
		$250.00			$0.00

Culvert Stakes

10 stakes $100.00

TOTAL CULVERTS **$1,472.00**

SURFACING-

6 " deep = 23 cy/sta

Subgrade	1,058	cy of	3" - 0"	@	$12.74	per cy =	$13,478.92	
Curve Widening	7	cy of	3" - 0"	@	$12.74	per cy =	$89.18	
Turnouts	120	cy of	3" - 0"	@	$12.74	per cy =	$1,528.80	
Landing	46	cy of	3" - 0"	@	$12.74	per cy =	$586.04	
Junction	0	cy of	3" - 0"	@	$12.74	per cy =	$0.00	
Misclaneous	0	cy of	24" - 12"	@	$12.74	per cy =	$0.00	
Total =	1231					TOTAL	SURFACING	**$15,682.94**

SPECIAL PROJECTS

Grass seed and fertilize areas of disturbed soil.	1.05 acres x $180 / acre	$189.00	
		$0.00	
		$0.00	
		$0.00	
	TOTAL SPECIAL PROJECTS		**$189.00**

TOTAL COST = $19,677.01

SUMMARY OF CONSTRUCTION COST

Timber Sale: **Windy William** Road: **D to E**

Construction - 0+00 stations
0.00 miles

Improvement - 19+20 stations
0.36 miles

CLEARING AND GRUBBING -

Scattering	1.22 acres @	$464.00	per acre =	$566.92		
			TOTAL CLEARING AND GRUBBING			**$566.92**

EXCAVATION -

Road	0.00	sta @	$90.00	per sta =	$0.00	
Landing	0.00	sta @	$90.00	per sta =	$0.00	
Grade and roll (outslope)	0.36	mi @	$900.00	per mi =	$324.00	
Grade, ditch and roll	0.00	mi @	$1,200.00	per mi =	$0.00	
Drift	0.00	sta @	$150.00	per sta =	$0.00	
Endhaul						
Excavate & Load	-	cy @	$1.72	per cy =	$0.00	
Haul	-	cy @	$2.05	per cy =	$0.00	
Compact Waste Area	-	cy @	$0.25	per cy =	$0.00	
				TOTAL	EXCAVATION	**$324.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

60	LF of 18"	$972.00	0	LF of 24"	$0.00
0	LF of 30"	$0.00	0	LF of 36"	$0.00
0	LF of 42"	$0.00	0	LF of 48"	$0.00
0	LF of 54"	$0.00	0	LF of 60"	$0.00
		$972.00			$0.00

Half Rounds

0	LF of 21"	$0.00	0	LF of 30"	$0.00
0	LF of 36"	$0.00	0	LF of 42"	$0.00
0	LF of 48"	$0.00	0	LF of 54"	$0.00
0	LF of 60"	$0.00	0	LF of 66"	$0.00
		$0.00			$0.00

Culvert Stakes

3 stakes $30.00

TOTAL CULVERTS **$1,002.00**

SURFACING-

6 " deep = 23 cy/sta

Subgrade	442	cy of	3" - 0"	@	$13.44	per cy =	$5,935.10
Curve Widening	7	cy of	3" - 0"	@	$13.44	per cy =	$94.08
Turnouts	40	cy of	3" - 0"	@	$13.44	per cy =	$537.60
Landing	0	cy of	3" - 0"	@	$13.44	per cy =	$0.00
Junction	0	cy of	3" - 0"	@	$13.44	per cy =	$0.00
Misclaneous	0	cy of	24" - 12"	@	$13.44	per cy =	$0.00
Total =	489					TOTAL SURFACING	**$6,566.78**

SPECIAL PROJECTS

Grass seed and fertilize areas of disturbed soil.	0.44 acres x $180 / acre	$79.20	
		$0.00	
		$0.00	
		$0.00	
	TOTAL SPECIAL PROJECTS		**$79.20**

TOTAL COST = $8,538.90

SUMMARY OF CONSTRUCTION COST

Timber Sale: **Windy William** Road: **E to F**

Construction - 0+00 stations, 0.00 miles

Improvement - 72+00 stations, 1.36 miles

CLEARING AND GRUBBING -

Scattering	4.62 acres @	$464.00	per acre =	$2,141.71	
			TOTAL CLEARING AND GRUBBING		**$2,141.71**

EXCAVATION -

Road	0.00	sta @	$90.00	per sta =	$0.00
Landing	0.00	sta @	$90.00	per sta =	$0.00
Grade and roll (outslope)	1.36	mi @	$900.00	per mi =	$1,224.00
Grade, ditch and roll	0.00	mi @	$1,200.00	per mi =	$0.00
Drift	0.00	sta @	$150.00	per sta =	$0.00
Endhaul					
Excavate & Load	-	cy @	$1.72	per cy =	$0.00
Haul	-	cy @	$2.05	per cy =	$0.00
Compact Waste Area	-	cy @	$0.25	per cy =	$0.00
				TOTAL EXCAVATION	**$1,224.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

120	LF of 18"	$2,040.00	0	LF of 24"	$0.00
0	LF of 30"	$0.00	0	LF of 36"	$0.00
0	LF of 42"	$0.00	0	LF of 48"	$0.00
0	LF of 54"	$0.00	0	LF of 60"	$0.00
		$2,040.00			$0.00

Half Rounds

20	LF of 21"	$250.00	20	LF of 30"	$327.00
0	LF of 36"	$0.00	0	LF of 42"	$0.00
0	LF of 48"	$0.00	0	LF of 54"	$0.00
0	LF of 60"	$0.00	0	LF of 66"	$0.00
		$250.00			$327.00

Culvert Stakes

19 stakes $190.00

TOTAL CULVERTS **$2,807.00**

SURFACING-

6 " deep = 23 cy/sta

Subgrade	1,599	cy of	3" - 0"	@	$14.52	per cy =	$23,210.22
Curve Widening	21	cy of	3" - 0"	@	$14.52	per cy =	$304.92
Turnouts	200	cy of	3" - 0"	@	$14.52	per cy =	$2,904.00
Landing	0	cy of	3" - 0"	@	$14.52	per cy =	$0.00
Junction	0	cy of	3" - 0"	@	$14.52	per cy =	$0.00
Misclaneous	0	cy of	24" - 12"	@	$14.52	per cy =	$0.00
Total =	1820					TOTAL SURFACING	**$26,419.14**

SPECIAL PROJECTS

Grass seed and fertilize areas of disturbed soil.	1.73 acres x $180 / acre	$311.40
		$0.00
		$0.00
		$0.00
	TOTAL SPECIAL PROJECTS	**$311.40**

TOTAL COST = $32,903.25

SUMMARY OF CONSTRUCTION COST

Timber Sale: **Windy William** Road: **G to H**

Construction - 6+50 stations
0.12 miles

Improvement - 0+00 stations
0.00 miles

CLEARING AND GRUBBING -

Scattering	0.73 acres @	$882.00	per acre =	$641.45		
			TOTAL CLEARING AND GRUBBING			**$641.45**

EXCAVATION -

Road	6.50	sta @	$90.00	per sta =	$585.00	
Landing	1.00	sta @	$90.00	per sta =	$90.00	
Grade and roll (outslope)	0.00	mi @	$900.00	per mi =	$0.00	
Grade, ditch and roll	0.12	mi @	$1,200.00	per mi =	$144.00	
Drift	1.00	sta @	$150.00	per sta =	$150.00	
Endhaul						
Excavate & Load	-	cy @	$1.72	per cy =	$0.00	
Haul	-	cy @	$2.05	per cy =	$0.00	
Compact Waste Area	-	cy @	$0.25	per cy =	$0.00	
				TOTAL	EXCAVATION	**$969.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

30	LF of 18"	$486.00	0	LF of 24"	$0.00
0	LF of 30"	$0.00	0	LF of 36"	$0.00
0	LF of 42"	$0.00	0	LF of 48"	$0.00
0	LF of 54"	$0.00	0	LF of 60"	$0.00
		$486.00			$0.00

Half Rounds

0	LF of 21"	$0.00	0	LF of 30"	$0.00
0	LF of 36"	$0.00	0	LF of 42"	$0.00
0	LF of 48"	$0.00	0	LF of 54"	$0.00
0	LF of 60"	$0.00	0	LF of 66"	$0.00
		$0.00			$0.00

Culvert Stakes

1 stakes $10.00

TOTAL CULVERTS **$496.00**

SURFACING-

10 " deep = 56 cy/sta

Subgrade	364	cy of	3" - 0"	@	$15.46	per cy =	$5,627.44
Curve Widening	0	cy of	3" - 0"	@	$15.46	per cy =	$0.00
Turnouts	0	cy of	3" - 0"	@	$15.46	per cy =	$0.00
Landing	58	cy of	3" - 0"	@	$15.46	per cy =	$896.68
Junction	0	cy of	3" - 0"	@	$15.46	per cy =	$0.00
Misclaneous	0	cy of	24" - 12"	@	$15.46	per cy =	$0.00
Total =	422					TOTAL SURFACING	**$6,524.12**

SPECIAL PROJECTS

Grass seed and fertilize areas of disturbed soil.	0.15 acres x $180 / acre	$27.00	
		$0.00	
		$0.00	
		$0.00	
	TOTAL SPECIAL PROJECTS		**$27.00**

TOTAL COST = $8,657.57

SUMMARY OF CONSTRUCTION COST

Timber Sale: **Windy William** Road: **I to J**

Construction - 13+50 stations
0.26 miles

Improvement - 0+00 stations
0.00 miles

CLEARING AND GRUBBING -

Scattering	1.58 acres @	$882.00	per acre =	$1,389.82		
			TOTAL CLEARING AND GRUBBING			**$1,389.82**

EXCAVATION -

Road	13.50	sta @	$90.00	per sta =	$1,215.00	
Landing	0.00	sta @	$90.00	per sta =	$0.00	
Grade and roll (outslope)	0.00	mi @	$900.00	per mi =	$0.00	
Grade, ditch and roll	0.26	mi @	$1,200.00	per mi =	$312.00	
Drift	0.00	sta @	$150.00	per sta =	$0.00	
Endhaul						
Excavate & Load	-	cy @	$1.72	per cy =	$0.00	
Haul	-	cy @	$2.05	per cy =	$0.00	
Compact Waste Area	-	cy @	$0.25	per cy =	$0.00	
				TOTAL	EXCAVATION	**$1,527.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

36	LF of 18"	$612.00	0	LF of 24"	$0.00
0	LF of 30"	$0.00	0	LF of 36"	$0.00
0	LF of 42"	$0.00	0	LF of 48"	$0.00
0	LF of 54"	$0.00	0	LF of 60"	$0.00
		$612.00			$0.00

Half Rounds

0	LF of 21"	$0.00	0	LF of 30"	$0.00
0	LF of 36"	$0.00	0	LF of 42"	$0.00
0	LF of 48"	$0.00	0	LF of 54"	$0.00
0	LF of 60"	$0.00	0	LF of 66"	$0.00
		$0.00			$0.00

Culvert Stakes

1 stakes $10.00

TOTAL CULVERTS **$622.00**

SURFACING-

10 " deep = 56 cy/sta

Subgrade	756	cy of	3" - 0"	@	$12.57	per cy =	$9,502.92	
Curve Widening	20	cy of	3" - 0"	@	$12.57	per cy =	$251.40	
Turnouts	56	cy of	3" - 0"	@	$12.57	per cy =	$703.92	
Landing	0	cy of	3" - 0"	@	$12.57	per cy =	$0.00	
Junction	0	cy of	3" - 0"	@	$12.57	per cy =	$0.00	
Misclaneous	0	cy of	24" - 12"	@	$12.57	per cy =	$0.00	
Total =	832					TOTAL	SURFACING	**$10,458.24**

SPECIAL PROJECTS

Grass seed and fertilize areas of disturbed soil.	0.31 acres x $180 / acre	$55.80	
		$0.00	
		$0.00	
		$0.00	
	TOTAL SPECIAL PROJECTS		**$55.80**

TOTAL COST = $14,052.86

SUMMARY OF CONSTRUCTION COST

Timber Sale: **Windy William** Road: **K to L**

Construction - 5+00 stations
0.09 miles

Improvement - 0+00 stations
0.00 miles

CLEARING AND GRUBBING -

Scattering	0.55 acres @		$882.00	per acre =	$481.09	
				TOTAL CLEARING AND GRUBBING		**$481.09**

EXCAVATION -

Road	5.00	sta @	$90.00	per sta =	$450.00	
Landing	1.00	sta @	$90.00	per sta =	$90.00	
Grade and roll (outslope)	0.09	mi @	$900.00	per mi =	$81.00	
Grade, ditch and roll	0.00	mi @	$1,200.00	per mi =	$0.00	
Drift	0.00	sta @	$150.00	per sta =	$0.00	
Endhaul						
Excavate & Load	-	cy @	$1.72	per cy =	$0.00	
Haul	-	cy @	$2.05	per cy =	$0.00	
Compact Waste Area	-	cy @	$0.25	per cy =	$0.00	
				TOTAL	EXCAVATION	**$621.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

0	LF of 18"	$0.00	0	LF of 24"	$0.00
0	LF of 30"	$0.00	0	LF of 36"	$0.00
0	LF of 42"	$0.00	0	LF of 48"	$0.00
0	LF of 54"	$0.00	0	LF of 60"	$0.00
		$0.00			$0.00

Half Rounds

0	LF of 21"	$0.00	0	LF of 30"	$0.00
0	LF of 36"	$0.00	0	LF of 42"	$0.00
0	LF of 48"	$0.00	0	LF of 54"	$0.00
0	LF of 60"	$0.00	0	LF of 66"	$0.00
		$0.00			$0.00

Culvert Stakes

0 stakes $0.00

TOTAL CULVERTS **$0.00**

SURFACING-

10 " deep = 56 cy/sta

Subgrade	280	cy of	3" - 0"	@	$12.65	per cy =	$3,542.00
Curve Widening	0	cy of	3" - 0"	@	$12.65	per cy =	$0.00
Turnouts	0	cy of	3" - 0"	@	$12.65	per cy =	$0.00
Landing	58	cy of	3" - 0"	@	$12.65	per cy =	$733.70
Junction	0	cy of	3" - 0"	@	$12.65	per cy =	$0.00
Misclaneous	0	cy of	24" - 12"	@	$12.65	per cy =	$0.00
Total =	338					TOTAL SURFACING	**$4,275.70**

SPECIAL PROJECTS

Grass seed and fertilize areas of disturbed soil.	0.11 acres x $180 / acre	$19.80
		$0.00
		$0.00
		$0.00
	TOTAL SPECIAL PROJECTS	**$19.80**

TOTAL COST = $5,397.59

SUMMARY OF CONSTRUCTION COST

Timber Sale: **Windy William** Road: **M to N**

Construction - 9+00 stations
0.17 miles

Improvement - 0+00 stations
0.00 miles

CLEARING AND GRUBBING -

Scattering	1.03 acres @	$882.00	per acre =	$908.73		
			TOTAL CLEARING AND GRUBBING			**$908.73**

EXCAVATION -

Road	9.00	sta @	$90.00	per sta =	$810.00	
Landing	1.00	sta @	$90.00	per sta =	$90.00	
Grade and roll (outslope)	0.00	mi @	$900.00	per mi =	$0.00	
Grade, ditch and roll	0.17	mi @	$1,200.00	per mi =	$204.00	
Drift	1.00	sta @	$150.00	per sta =	$150.00	
Endhaul						
Excavate & Load	-	cy @	$1.72	per cy =	$0.00	
Haul	-	cy @	$2.05	per cy =	$0.00	
Compact Waste Area	-	cy @	$0.25	per cy =	$0.00	
				TOTAL	EXCAVATION	**$1,254.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

0	LF of 18"	$0.00	0 LF of 24"	$0.00
0	LF of 30"	$0.00	0 LF of 36"	$0.00
0	LF of 42"	$0.00	0 LF of 48"	$0.00
0	LF of 54"	$0.00	0 LF of 60"	$0.00
		$0.00		$0.00

Half Rounds

0	LF of 21"	$0.00	0 LF of 30"	$0.00
0	LF of 36"	$0.00	0 LF of 42"	$0.00
0	LF of 48"	$0.00	0 LF of 54"	$0.00
0	LF of 60"	$0.00	0 LF of 66"	$0.00
		$0.00		$0.00

Culvert Stakes

0 stakes $0.00

TOTAL CULVERTS **$0.00**

SURFACING-

10 " deep = 56 cy/sta

Subgrade	504	cy of	3" - 0"	@	$12.66	per cy =	$6,380.64
Curve Widening	50	cy of	3" - 0"	@	$12.66	per cy =	$633.00
Turnouts	28	cy of	3" - 0"	@	$12.66	per cy =	$354.48
Landing	58	cy of	3" - 0"	@	$12.66	per cy =	$734.28
Junction	0	cy of	3" - 0"	@	$12.66	per cy =	$0.00
Misclaneous	0	cy of	24" - 12"	@	$12.66	per cy =	$0.00
Total =	640					TOTAL SURFACING	**$8,102.40**

SPECIAL PROJECTS

Grass seed and fertilize areas of disturbed soil.	0.21 acres x $180 / acre	$37.80	
		$0.00	
		$0.00	
		$0.00	
	TOTAL SPECIAL PROJECTS		**$37.80**

TOTAL COST = $10,302.93

SUMMARY OF CONSTRUCTION COST

Timber Sale: **Windy William** Road: **O to P**

Construction - 1+00 stations
0.02 miles

Improvement - 0+00 stations
0.00 miles

CLEARING AND GRUBBING -

Scattering	0.12 acres @	$882.00	per acre =	$106.91		
			TOTAL CLEARING AND GRUBBING			**$106.91**

EXCAVATION -

Road	1.00	sta @	$90.00	per sta =	$90.00	
Landing	0.00	sta @	$90.00	per sta =	$0.00	
Grade and roll (outslope)	0.00	mi @	$900.00	per mi =	$0.00	
Grade, ditch and roll	0.02	mi @	$1,200.00	per mi =	$24.00	
Drift	0.00	sta @	$150.00	per sta =	$0.00	
Endhaul						
Excavate & Load	-	cy @	$1.72	per cy =	$0.00	
Haul	-	cy @	$2.05	per cy =	$0.00	
Compact Waste Area	-	cy @	$0.25	per cy =	$0.00	
				TOTAL	EXCAVATION	**$114.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts					
0	LF of 18"	$0.00	0	LF of 24"	$0.00
0	LF of 30"	$0.00	0	LF of 36"	$0.00
0	LF of 42"	$0.00	0	LF of 48"	$0.00
0	LF of 54"	$0.00	0	LF of 60"	$0.00
		$0.00			$0.00
Half Rounds					
0	LF of 21"	$0.00	0	LF of 30"	$0.00
0	LF of 36"	$0.00	0	LF of 42"	$0.00
0	LF of 48"	$0.00	0	LF of 54"	$0.00
0	LF of 60"	$0.00	0	LF of 66"	$0.00
		$0.00			$0.00
Culvert Stakes					
0	stakes	$0.00			
				TOTAL CULVERTS	**$0.00**

SURFACING-

10 " deep = 56 cy/sta

Subgrade	56	cy of	3" - 0"	@	$12.59	per cy =	$705.04
Curve Widening	0	cy of	3" - 0"	@	$12.59	per cy =	$0.00
Turnouts	0	cy of	3" - 0"	@	$12.59	per cy =	$0.00
Landing	0	cy of	3" - 0"	@	$12.59	per cy =	$0.00
Junction	0	cy of	3" - 0"	@	$12.59	per cy =	$0.00
Misclaneous	0	cy of	24" - 12"	@	$12.59	per cy =	$0.00
Total =	56					TOTAL SURFACING	**$705.04**

SPECIAL PROJECTS

Grass seed and fertilize areas of disturbed soil.	0.02 acres x $180 / acre	$4.14	
		$0.00	
		$0.00	
		$0.00	
	TOTAL SPECIAL PROJECTS		**$4.14**

TOTAL COST = $930.09

SUMMARY OF CONSTRUCTION COST

Timber Sale: **Windy William** Road: **Q to R**

Construction - 0+75 stations
0.04 miles

Improvement - 0+00 stations
0.00 miles

CLEARING AND GRUBBING -

Scattering	0.06 acres @	$882.00	per acre =	$52.92		
			TOTAL CLEARING AND GRUBBING			**$52.92**

EXCAVATION -

Road	0.75	sta @	$90.00	per sta =	$67.50	
Landing	0.00	sta @	$90.00	per sta =	$0.00	
Grade and roll (outslope)	0.00	mi @	$900.00	per mi =	$0.00	
Grade, ditch and roll	0.04	mi @	$1,200.00	per mi =	$48.00	
Drift	0.00	sta @	$150.00	per sta =	$0.00	
Endhaul						
Excavate & Load	-	cy @	$1.72	per cy =	$0.00	
Haul	-	cy @	$2.05	per cy =	$0.00	
Compact Waste Area	-	cy @	$0.25	per cy =	$0.00	
				TOTAL	EXCAVATION	**$115.50**

CULVERTS - MATERIALS & INSTALLATION

Culverts

0 LF of 18"	$0.00	0 LF of 24"	$0.00	
0 LF of 30"	$0.00	0 LF of 36"	$0.00	
0 LF of 42"	$0.00	0 LF of 48"	$0.00	
0 LF of 54"	$0.00	0 LF of 60"	$0.00	
	$0.00		$0.00	

Half Rounds

0 LF of 21"	$0.00	0 LF of 30"	$0.00	
0 LF of 36"	$0.00	0 LF of 42"	$0.00	
0 LF of 48"	$0.00	0 LF of 54"	$0.00	
0 LF of 60"	$0.00	0 LF of 66"	$0.00	
	$0.00		$0.00	

Culvert Stakes

0 stakes	$0.00	TOTAL CULVERTS	**$0.00**

SURFACING-

10 " deep = 56 cy/sta

Subgrade	42	cy of	6" - 0"	@	$12.42	per cy =	$521.64	
Curve Widening	0	cy of	6" - 0"	@	$12.42	per cy =	$0.00	
Turnouts	0	cy of	6" - 0"	@	$12.42	per cy =	$0.00	
Junction	0	cy of	6" - 0"	@	$12.42	per cy =	$0.00	
Misclaneous	0	cy of	24" - 12"	@	$12.42	per cy =	$0.00	
Total =	42					TOTAL	SURFACING	**$521.64**

SPECIAL PROJECTS

Grass seed and fertilize areas of disturbed soil.	0.02 acres x $180 / acre	$3.60	
		$0.00	
		$0.00	
		$0.00	
	TOTAL SPECIAL PROJECTS		**$3.60**

TOTAL COST = $693.66

SUMMARY OF CONSTRUCTION COST

Timber Sale: **Windy William** Road: **S to T**

Construction - 2+25 stations
0.01 miles

Improvement - 0+00 stations
0.00 miles

CLEARING AND GRUBBING -

Scattering	1.24 acres @	$882.00	per acre =	$1,093.68		
			TOTAL CLEARING AND GRUBBING			**$1,093.68**

EXCAVATION -

Road	2.25	sta @	$90.00	per sta =	$202.50	
Landing	0.00	sta @	$90.00	per sta =	$0.00	
Grade and roll (outslope)	0.00	mi @	$900.00	per mi =	$0.00	
Grade, ditch and roll	0.01	mi @	$1,200.00	per mi =	$12.00	
Drift	0.00	sta @	$150.00	per sta =	$0.00	
Rock Processing Area	35000.00	ft² @	$0.10	per ft² =	$3,500.00	
Endhaul						
Excavate & Load	-	cy @	$1.72	per cy =	$0.00	
Haul	-	cy @	$2.05	per cy =	$0.00	
Compact Waste Area	-	cy @	$0.25	per cy =	$0.00	
				TOTAL	EXCAVATION	**$3,714.50**

CULVERTS - MATERIALS & INSTALLATION

Culverts

0 LF of 18"	$0.00	0 LF of 24"	$0.00	
0 LF of 30"	$0.00	0 LF of 36"	$0.00	
0 LF of 42"	$0.00	0 LF of 48"	$0.00	
0 LF of 54"	$0.00	0 LF of 60"	$0.00	
	$0.00		$0.00	

Half Rounds

0 LF of 21"	$0.00	0 LF of 30"	$0.00	
0 LF of 36"	$0.00	0 LF of 42"	$0.00	
0 LF of 48"	$0.00	0 LF of 54"	$0.00	
0 LF of 60"	$0.00	0 LF of 66"	$0.00	
	$0.00		$0.00	

Culvert Stakes

0 stakes	$0.00	TOTAL CULVERTS	**$0.00**

SURFACING-

10 " deep = 56 cy/sta

Subgrade	126	cy of	6" - 0"	@	$12.22	per cy =	$1,539.72
Curve Widening	0	cy of	6" - 0"	@	$12.22	per cy =	$0.00
Turnouts	0	cy of	6" - 0"	@	$12.22	per cy =	$0.00
Processing Area	1,645	cy of	6" - 0"	@	$12.42	per cy =	$20,430.90
Landing	0	cy of	6" - 0"	@	$12.22	per cy =	$0.00
Junction	0	cy of	6" - 0"	@	$12.22	per cy =	$0.00
Misclaneous	0	cy of	24" - 12"	@	$12.22	per cy =	$0.00
Total =	1771					TOTAL SURFACING	**$21,970.62**

SPECIAL PROJECTS

Grass seed and fertilize areas of disturbed soil.	0.09 acres x $180 / acre	$16.20	
		$0.00	
		$0.00	
		$0.00	
		TOTAL SPECIAL PROJECTS	**$16.20**

TOTAL COST = $26,795.00

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Timber Sale: **Windy William**

Pit Name: Windy Pit

Swell:	1.25	1-1/2"-0 (trk measure)	cy
Shrinkage:	1.16	3"-0 (trk measure)	8,749 cy
Drill Pct.:	100%	Pit Run (trk measure)	1,813 cy
		Total Truck Yardage:	10,562 cy
		Total In Place Yardage:	8,450 cy

Scalp & Clear Overburden:	$150.00	/hr	x	10	hr	=	$1,500.00
Drill & Shoot:	$2.50	/cy	x	8,749	cy	=	$21,872.50
Push Rock (2)	$1.90	/cy	x	10,985	cy	=	$20,871.50
Oversize Reduction:	$4.50	/cy	x	1,859	cy	=	$8,365.50
Load Crusher:	$0.70	/cy	x	0	cy	=	$0.00
Crushing (1-1/2" - 0):	$2.60	/cy	x	0	cy	=	$0.00
Crushing (3" - 0):	$2.60	/cy	x	8,749	cy	=	$22,747.40
Screening	$0.75	/cy	x	0	cy	=	$0.00
Waste Reject	$0.85	/cy	x	0	cy	=	$0.00
Build and Shape Stockpile:	$0.65	/cy	x	0	cy	=	$0.00
Load Dump Truck:	$0.70	/cy	x	10,562	cy	=	$7,393.40
Hauling to processing site	$4.17	/cy	x	10,562	cy	=	$44,043.54
						Subtotal	**$82,750.30**

Move in Crusher (stage2)						$1,597.00
Set up Crusher (stage 2)						$1,598.00
Move in and set up Drill and Compressor						$279.00
Move in Screening Plant						$0.00
Move in Excavator						$465.00
Move in D-8						$435.00
Move in Loaders						$395.00
Clean Up Pit						$300.00
Gradation Tests ($65/2000 cy)	$65.00	cy/2000cy x	6	tests		$390.00
Change Gradation						$0.00
					Subtotal	**$5,459.00**

BASE COST $8.35/cy

TOTAL PRODUCTION COST $88,209.30

MOBILIZATION COST SUMMARY

Timber Sale: **Windy William**

MILEAGE FACTORS

Distance	Factor	Distance	Factor
0-25	0.58	55	1.07
30	0.66	60	1.15
35	0.74	65	1.23
40	0.82	70	1.31
45	0.91	75	1.40
50	1.00	80	1.48

MILEAGE FACTOR = 1.00

No.	EQUIPMENT DESCRIPTION	Base Cost	Move in Cost	Within Area Move ($/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
0	Drill & Compressor	$279	$0.00						$0.00
1	Graders	$303	$303.00	$7.33	0	0	0	$0.00	$303.00
0	Loader (1.5 - 2.5 cy)	$262	$0.00	$8.42	0	0	0	$0.00	$0.00
1	Loader (3 cy +)	$394	$394.49	$9.56	0	0	0	$0.00	$394.49
1	Rollers & Compactors	$225	$225.02	$14.25	0	0	0	$0.00	$225.02
1	Excavators	$463	$463.40	$36.60	0	0	0	$0.00	$463.40
0	Large Backhoes	$225	$0.00	$5.53	0	0	0	$0.00	$0.00
0	Small backhoes	$225	$0.00	$4.84	0	0	0	$0.00	$0.00
1	Tractors (D5 - D7)	$404	$404.46	$18.47	0	0	0	$0.00	$404.46
0	Tractors (D8)	$433	$0.00	$25.53	0	0	0	$0.00	$0.00
2	Dump Truck (12 cy)	$144	$288.00	$2.88	0	0	0	$0.00	$288.00
0	Belly Dump	$158	$0.00	$3.68	0	0	0	$0.00	$0.00
1	Water Truck (3000 gal)	$77	$76.86	$2.88	0	0	0	$0.00	$76.86

TOTAL MOBILIZATION COSTS = $2,155.23

ROCK COST COMPUTATIONS

Timber Sale: **Windy William**

Road: **Pit to Processing Area**

HAULING TIME

Road Speed Time Factors:

50 mph x	0.00	miles per round trip =	0.00 min
40 mph x	0.00	miles per round trip =	0.00 min
35 mph x	0.00	miles per round trip =	0.00 min
30 mph x	0.00	miles per round trip =	0.00 min
25 mph x	0.00	miles per round trip =	0.00 min
20 mph x	0.37	miles per round trip =	1.11 min
15 mph x	3.70	miles per round trip =	14.80 min
10 mph x	0.00	miles per round trip =	0.00 min
5 mph x	0.10	miles per round trip =	1.20 min
Total Distance	4.17	miles	

TOTAL HAUL TIME = 17.11 min

LOADING DELAY 5.00 min

DUMPING DELAY 2.00 min

(Dump or spread time can vary from 0.2 to 2.0 minute. Use least time for spreading; use greater time when excessive manuevering is required.)

Subtotal Cycle Time = 24.11 min

EFFICIENCY ADJUSTMENTS

Operator efficiency correction= 75%

Job efficiency correction= 75%

TOTAL CYCLE TIME = 42.86 min

TRUCK HAULING CAPACITY = 12 cy

TRUCK OPERATING COST = $70.00/hr

HAULING COST = $4.17/cy

METAL GATE INSTALLATION

Timber Sale: **Windy William**

Road: **Project Number 3**

HAULING COST

Road Speed Time Factors:

50 mph x	19.54	miles per round trip =	23.45 min
40 mph x	16.30	miles per round trip =	24.45 min
25 mph x	18.00	miles per round trip =	43.20 min
20 mph x	4.20	miles per round trip =	12.60 min
15 mph x	4.20	miles per round trip =	16.80 min
5 mph x	0.10	miles per round trip =	1.20 min
Total Distance	62.34	miles Total Haul	121.70 min

HAUL COST = 121.7 min x $75.00 hour = **$152.12**

MATERIAL COST

Concrete	3 yrds x $95.00 per yard =	$285.00
Metal Gate	Supplied by STATE	$0.00

MATERIAL COST = **$285.00**

INSTILLATION COST

Excavator	1 hour x $125.00 hour =	$125.00

INSTILLATION COST = **$125.00**

HAULING COST =	$152.12/cy
MATERIAL COST =	$285.00/cy
INSTILLATION COST =	$125.00/cy
TOTAL GATE COST =	**$562.12/cy**

TIMBER SALE SUMMARY
Windy William
341-08-29

1. **Type of Sale:** Area 1 is modified clearcut. Area 2 is R/W. This is a recovery, sealed-bid auction.

2. **Revenue Distribution:** 100% BOF, Washington County, Oregon

3. **Sale Acreage:** Area 1 is 103 acres, and Area 2 R/W is 5 acres, both determined using ArcGIS. 6 acres of stream buffer, 3 acres of green tree retention, and 2 acres of road improvement were removed from the 119 gross acre measurement.

4. **Volume (Less 2% Defect) MBF:**

Species	2 Saw	3 Saw	4 Saw	Camprun	Volume
Douglas-fir	1836	1938	313	0	4087 MBF
Hem/fir	25	45	5	0	75 MBF
Alder and other hardwoods	0	0	0	161	161 MBF

5. **Cruise Data:** Area 1 was variable plot cruised using a 40 BAF and full plots, along with additional supplemental plots taken at a 40 BAF. Area 2 R/W volume was established based on volume per acre estimates from Area 1.Take trees and saw grades were assigned based on the height, diameter, and damage measurements provided by the SLI cruise. Data from SLI plots and supplemental plots were combined using the Superace 2004 program. Conifer and hardwood merchantable heights were estimated to the nearest foot. Diameters were measured outside bark at breast height to the nearest inch. All trees were graded favoring 40 foot segments. Conifer and hardwood merchantable tops were calculated in SuperAce 2004 to 6 inches and 7 inches, respectively, or 25% of DBH inside bark. Volumes were computed using the Super Ace program. Two percent of the conifer and 5% of the hardwood volume was subtracted from the computed volumes to account for hidden defect and breakage.

Cruise statistics for Area 1 yielded a CV 43% and an SE 8.9%.

6. **Timber Description:** The stand is composed of moderately stocked to over-stocked Douglas-fir. The average take DBH is 16 inches. Estimated volume per acre averaged 39.98 MBF of Douglas-fir, other conifers, and hardwoods.

7. **Topography and Logging Method:** The timber sale is 30% ground-based and 70% cable-based yarding, with slopes ranging from 10-70%; aspects are varied. Elevation ranges from 2000 to 2400 feet.

8. Access: From Pike Road (Yamhill), continue on the Turner Mainline to N. Fork Trask River Road. Continue to Williams Road to the Timber sale area.

9. Projects:

Project No. 1 consists of constructing 0.72 miles of road costing $14,107.60 and improving 4.7 miles of road costing $25,270.26 for sale access.
Project No. 2 consists of surfacing 5.42 miles of road with 8,626 cubic yards of three-inch minus, costing $135,725.49.
Project No. 3 consists of gate installation at Point "A", costing 562.12
Project No. 4 consists of grass seeding and fertilization in areas of disturbed soil costing $1147.14.

Move in cost is $2155.00.

Total credit for all projects is $178,970.00.

CRUISE REPORT
Windy William
341-08-29

1. Acreage Calculation: Area 1 is 103 acres. Area 2 R/W is 5 acres. Six acres of stream buffer, three acres of green tree retention, and two acres of road improvement were removed from the 119 gross acre measurement.

2. Cruise Method: Area 1 was variable plot cruised using a 40 BAF and full plots, along with nine supplemental plots taken using a 40 BAF. Area 2 R/W volume was estimated using Area 1 volume per acre. Take trees and saw grades were assigned based on the height, diameter, and damage measurements provided by the SLI cruise and field data collection. Data from plots within each area, as well as the supplemental plots were combined using the Superace 2004 program.

3. Sampling Intensity:

Area 1	Estimated	Actual Take
CV	45%	43%
SE	9%	8.9%
No. of Plots	30	24

4. Form Factors: Form factors were assigned based on adjacent cruise data, and reconnaissance of the timber sale area.

5. Height Standards: Conifer and hardwood merchantable heights were estimated to the nearest foot using the SuperAce 2004 program.

6. Diameter Standards: Diameters were measured outside bark at breast height to the nearest inch.

7. Grading System: All trees were graded favoring 40 foot segments.

8. Merchantable Top: Conifer and hardwood merchantable tops were calculated in SuperAce 2004 (according to form factor to height calculations in the program) to 6 inches and 7 inches, respectively, or 25% of DBH inside bark.

9. Computation Procedures: Volumes were computed using the Super Ace program. Volume for Area 2 was established based on volume per acre estimates from Area 1.

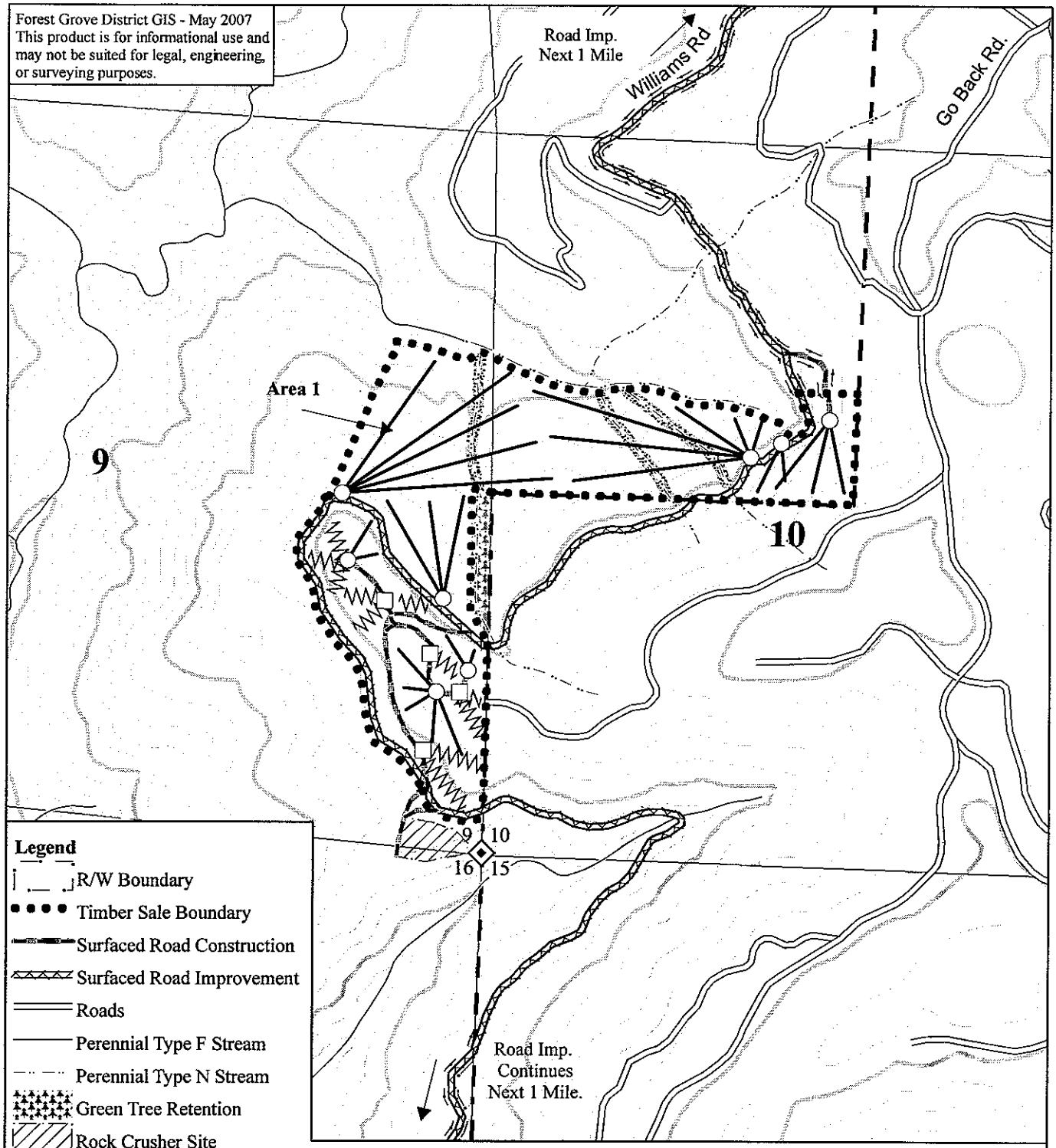
10. Deductions: Two percent of the conifer and the five percent of the hardwood volume was subtracted from the computed volumes to account for hidden defect and breakage.

11. Cruisers: The sale was cruised by SLI in 2003 and 2004, and supplemental plots were taken by J. Sandmann in May 2007. Office calculations were prepared by J. Sandmann in June 2007.

12. Signatures:

Preparer: J. Sandmann 9/6/2007
J. Sandmann Date

Unit Forester: Erik Marcy 9/6/07
Erik Marcy Date



Legend

- R/W Boundary
- Timber Sale Boundary
- Surfaced Road Construction
- Surfaced Road Improvement
- Roads
- Perennial Type F Stream
- Perennial Type N Stream
- Green Tree Retention
- Rock Crusher Site
- Stream Buffer
- ODF Ownership
- PLS Lines
- Ground Landing
- Cable Landing
- Cable Setting
- Skid Trail

LOGGING PLAN MAP
Timber Sale Contract No. 341-08-29
Windy William
Portions of Sections 9 and 10
T01S, R06W, W.M.
Washington County, OR

N

1,000 500 0 1,000 Feet

Scale 1:12,000; 1" = 1,000'

APPROXIMATE NET ACREAGE		
AREA 1	(MC)	103
AREA 2	(R/W)	5
TOTAL		108