



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Toll Shanty Sale 341-07-63

District: Tillamook

Date: 12/12/06

	Conifer	Hardwood	Total
<b>Gross Timber Sale Value</b>	\$275,968.17	\$56,890.65	\$332,858.82
		<b>Project Work</b>	(\$122,760.00)
		<b>Advertised Value</b>	\$210,098.82



# Timber Sale Appraisal Timber Description Toll Shanty Sale 341-07-63

"STEWARDSHIP IN FORESTRY"

**District:** Tillamook

**Location:** Portions of Sections 31 and 32, T1S, R7W, and Portions of Sections 4 and 5, T2S, R7W, W.M., Tillamook County, Oregon.

**Date:** 12/12/06

**Stand Stocking:** 20%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	13	0	95
Alder (Red)	14	0	90

Volume by Grade	Douglas - Fir	Alder (Red)	Total
2S	112	0	112
2S 12"+	0	12	12
3S	1,037	0	1,037
3S 10" - 11"	0	82	82
4S	464	0	464
4S 8" - 9"	0	253	253
<b>Total</b>	<b>1,613</b>	<b>347</b>	<b>1,960</b>

**Comments:** Pond Values Used: 3rd Quarter Calendar Year 2006.

Western Red Cedar Stumpage Price = Pond Value minus logging costs.

\$650/MBF = \$1000/MBF - \$350/MBF

Red Alder Grades are diameter grades: 2S = 12" and greater, 3S = 10" and 11",  
and 4S = 8" and 9".

#### HAULING

Hauling costs adjusted to make equivalent to \$700 daily truck cost.

\$700 - % Profit & Risk ( $\$700 / 1.12$ ) = \$625 Daily Truck Cost.

Hauling Cost Calculation Douglas-fir:

\$625 Daily Truck Cost / (2 trips per day x 3.5 MBF per load) = \$89.29/MBF Hauling Cost.

Hauling Cost Calculation Red Alder:

\$625 Daily Truck Cost / (3 trips per day x 2.8 MBF per load) = \$74.41/MBF Hauling Cost.

Other Costs (Profit & Risk to be added):

Branding and Paint: \$2/MBF x 1960 MBF = \$3,920

Swing Road (Area 3): \$35/MBF x 528 MBF = \$18,480

TOTAL Other Costs (Profit and Risk to be added) = \$22,400

Other Costs (No Profit and Risk):

Landing Rock (Pit run): 5 Ldg x 20 CY/Ldg x \$6/CY = \$600

Trask Public Safety Road Fee: \$25/MBF x 1960 MBF = \$49,000

Removal of barriers blocking access: \$75 per barrier removal x 3 barriers = \$225

Slash Piling and sorting: \$110/hr/50acre x 154 cable harvest acres = \$339

Tank Trap Installation (Road Closure): \$75/Tank Trap x 4 Tank Traps = \$300

Water Bar Installation: 5 Hours x \$90/hour = \$450

Initial Move-in Costs: \$700

Non-project roads:

NP #1: \$100/sta x 4.3 stations = \$430

NP #2: \$140/sta x 13.4 stations = \$1,876

NP #3: \$100/sta x 7.4 stations = \$740

NP #4: \$140/sta x 7.9 stations = \$1,106

(TOTAL Non-Project Roads = \$4,152)

Recreation Costs:

OHV Trail Clearing - \$40/sta x 50 stations = \$2,000

OHV Trail Blocking - \$125/hr x 10 hours = \$1,250

OHV Dips - \$75 each x 20 = \$1,500

OHV Trail Filter Construction - \$75 each x 6 filters = \$450

(TOTAL Recreation Costs = \$5,200)

TOTAL Other Costs (No Profit and Risk) = \$60,966

ROAD MAINTENANCE COSTS = \$2.61/mbf

Surfacing - ( $\$6/\text{cy} \times 2 \text{ mmbf} \times 3 \text{ miles} \times 12 \text{ cy/mbf/mi}$ ) / 1960 mbf = \$0.22/mbf

Grading - Interim: ( $\$250 \times 3 \text{ miles} \times 1 \text{ gradings}$ ) / 1960 mbf = \$0.38/mbf

Final: ( $\$500 \times 3 \text{ miles}$ ) / 1960 mbf = \$0.76/mbf

Compaction - ( $158 \text{ stations} \times \$11/\text{sta}$ ) / 1960 mbf = \$0.89/mbf

Final maintenance Move in Costs: \$700 / 1960 mbf = \$0.36/mbf



# Timber Sale Appraisal

## Logging Conditions

### Toll Shanty

### Sale 341-07-63

"STEWARDSHIP IN FORESTRY"

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<b>Combination#:</b> 1	Douglas - Fir	20.78%	
	Alder (Red)	14.27%	
<b>Yarding Distance:</b>	Short (400 ft)		<b>Downhill Yarding:</b> Yes
<b>Logging System:</b>	Track Skidder		<b>Process:</b> Feller Buncher
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
<b>Loads/Day:</b>	10		<b>Bd. Ft./Load:</b> 3,500
<b>Cost/MBF:</b>	\$100.54		
<b>Machines:</b>	Feller Buncher w/ Delimber Log Loader (B) Stroke Delimber (B) Track Skidder		
<b>Combination#:</b> 2	Douglas - Fir	16.17%	
	Alder (Red)	11.10%	
<b>Yarding Distance:</b>	Short (400 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Small Tower <=40		<b>Process:</b> Stroke Delimber
<b>Tree Size:</b>	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
<b>Loads/Day:</b>	5		<b>Bd. Ft./Load:</b> 3,500
<b>Cost/MBF:</b>	\$158.44		
<b>Machines:</b>	Log Loader (A) Stroke Delimber (A) Tower Yarder (Small)		
<b>Combination#:</b> 3	Douglas - Fir	63.05%	
	Alder (Red)	74.64%	
<b>Yarding Distance:</b>	Medium (800 ft)		<b>Downhill Yarding:</b> No
<b>Logging System:</b>	Cable: Large Tower >=70		<b>Process:</b> Stroke Delimber
<b>Tree Size:</b>	Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF		
<b>Loads/Day:</b>	6		<b>Bd. Ft./Load:</b> 3,500
<b>Cost/MBF:</b>	\$178.32		
<b>Machines:</b>	Log Loader (A) Stroke Delimber (A) Tower Yarder (Large)		



# Timber Sale Appraisal Logging Costs Toll Shanty Sale 341-07-63

"STEWARDSHIP IN FORESTRY"

Date: 12/12/06

Operating Seasons: 3.0

Profit & Risk: 12%

Project Costs: \$122,760

Other Costs (P/R): \$22,400

Slash Disposal: \$0

Other Costs: \$60,966

Road Maintenance: \$2.61

Miles of Road			
Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

### Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$89.29	2.0	3.5
Alder (Red)	\$74.41	3.0	2.8

### Local Pond Values

Date	Species	Grade	Value
12/12/06	Douglas - Fir	2S	\$580.00
12/12/06	Douglas - Fir	3S	\$515.00
12/12/06	Douglas - Fir	4S	\$475.00
12/12/06	Alder (Red)	2S 12"+	\$705.00
12/12/06	Alder (Red)	3S 10" - 11"	\$580.00
12/12/06	Alder (Red)	4S 8" - 9"	\$455.00



# Timber Sale Appraisal Logging Costs Breakdown Toll Shanty Sale 341-07-63

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Alder (Red)
<b>Logging</b>	158.94	165.02
<b>Road Maintenance</b>	2.75	2.90
<b>Fire Protection</b>	4.15	4.15
<b>Hauling</b>	93.99	82.68
<b>Other (P/R appl.)</b>	11.43	11.43
<b>Profit &amp; Risk</b>	32.55	31.94
<b>Slash Disposal</b>	0.00	0.00
<b>Scaling</b>	2.00	0.00
<b>Other</b>	31.11	31.11
<b>Total</b>	336.92	329.23

<b>Amortization</b>	0.00	0.00
<b>Pond Value</b>	508.01	493.18
<b>Stumpage</b>	171.09	163.95
<b>Amortized</b>	0.00	0.00



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary Toll Shanty Sale 341-07-63

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## Amortized

	Douglas - Fir	Alder (Red)
MBF	0.00	0.00
Value	0.00	0.00
Total	0.00	0.00

## Unamortized

	Douglas - Fir	Alder (Red)
MBF	1,613.00	347.00
Value	171.09	163.95
Total	275,968.17	56,890.65

## Gross Timber Sale Value

**Recovery \$332,858.82**

Prepared by: John Pine

Date: 12/12/06

District: Tillamook

Phone: (503) 842-2545



## PROJECT SUMMARY SHEET

Sale: Toll Shanty

### CONSTRUCTION

Point	G to H	16+80	stations =	\$15,842.98
Point	I to J	4+20	stations =	\$4,028.08
<b>SUBTOTAL CONSTRUCTION</b>				<b>\$19,871.06</b>

### RECONSTRUCTION

Point	A to B	10+30	stations =	\$9,044.51
Point	C to D	12+00	stations =	\$8,555.32
Point	E to F	1+00	stations =	\$497.52
Point	M to N	1+00	stations =	\$1,387.42
Point	O to P	1+00	stations =	\$953.74
Point	Q to R	1+00	stations =	\$953.74
<b>SUBTOTAL IMPROVEMENT</b>				<b>\$21,392.25</b>

### MOVE IN

#### Bridge Replacement

S to T	5+00	stations =	\$	80,070.20
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<b>GRAND TOTAL</b>	<b>\$122,759.62</b>
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**Bridge Cost Estimate  
Point S to T  
Jones Creek**

Materials	Quantity	\$	Total
2 piece Modular steel bridge			\$ 44,000.00
LU 80 L/500			
16' running surface x 56'			
Weathered steel guardrail			
Galv. Corr. Deck W/Wood			
Galv. Sheet Wall Piling Backwall (4)			\$ 800.00
Precast Concrete footing			
24"x 24"x 18' long precast concrete bridge sills			\$ 3,400.00
36"-12" Riprap Armor	240 cy		\$ 2,640.00
24"-12" Riprap for Footing	60 cy		\$ 600.00
3"-0" crushed rock for Base Approach	100 cy		\$ 700.00
1 1/2"-0" Crushed Rock for Footings	40 cy		\$ 208.00
1 1/2"-0" Crushed Rock for Approach Surfacing	100 cy		\$ 520.00
Erosion Control			\$ 800.00
Mulch, Seed & Fertilizer/Silt Fence			
<b>Total</b>			<b>\$ 53,668.00</b>

Equipment/Labor Cost	Quantity	\$/Hr.	Hours	Total
Excavators, Large				
Operating	2	\$ 140.00	20	\$ 5,600.00
Standby	2	\$ 85.00	10	\$ 1,700.00
Dump Trucks				
Operating	2	\$ 70.00	20	\$ 2,800.00
Standby	2	\$ 40.00	10	\$ 800.00
				\$ -
Vibratory Roller				
Operating	1	\$ 80.00	2	\$ 160.00
Standby	1	\$ 40.00	2	\$ 80.00
				\$ -
				\$ -
Front End Loader				
Operating	1	\$ 80.00	4	\$ 320.00
Standby	1	\$ 40.00	4	\$ 160.00
				\$ -
Handheld Tamper				
Operating	1	\$ 10.00	4	\$ 40.00
Standby	1	\$ 5.00	4	\$ 20.00
Engineering (Site Plans & Drawings)				\$ 4,000.00
Laborers/Welder		\$ 28.00	24	\$ 672.00
Equipment Move-in				\$ 2,000.00
<b>Total</b>				<b>\$ 18,352.00</b>
Subtotal				\$ 72,020.00
15% Profit & Risk				\$ 8,050.20
<b>TOTAL BRIDGE COST</b>				<b>\$ 80,070.20</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll Shanty</u>		Road: <u>A to B</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles		Improvement - <span style="float: right;"><u>10+30</u> stations <u>0.20</u> miles</span>
<b>CLEARING AND GRUBBING -</b>			
Side cast	0.041 acres @	\$660.00 per acre =	\$27.06
Widening	0.166 acres @	\$660.00 per acre =	\$109.56
Scattering	0.240 acres @	\$980.00 per acre =	\$235.20
		<b>TOTAL CLEARING AND GRUBBING</b>	<b>\$371.82</b>
<b>EXCAVATION -</b>			
Road Earthwork	10.30 sta. @	\$120.00 per sta. =	\$1,236.00
Pullback	120 cy. @	\$1.40 per c.y. =	\$168.00
Widening	484 cy. @	\$1.40 per c.y. =	\$677.60
		<b>TOTAL EXCAVATION</b>	<b>\$2,081.60</b>
<b>ENDHAUL -</b>			
Pullback	1+80 to 2+70 120 cy. @	\$0.93 per c.y. =	\$111.60
Widening	1+80 to 3+70 190 cy. @	\$0.93 per c.y. =	\$176.70
Widening	4+40 to 6+60 294 cy. @	\$0.93 per c.y. =	\$273.42
Spread & compact	604 cy. @	\$0.25 per c.y. =	\$151.00
		<b>TOTAL ENDHAUL</b>	<b>\$712.72</b>
<b>CULVERTS - MATERIALS &amp; INSTALLATION</b>			
<u>Culverts</u>			
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
0 LF of 66"	\$0.00	0 LF of 72"	\$0.00
	\$510.00		\$0.00
<u>Half Rounds</u>			
0 LF of 21"	\$0.00	0 LF of 30"	\$0.00
0 LF of 36"	\$0.00	0 LF of 42"	\$0.00
	\$0.00		\$0.00
<u>Culvert Stakes &amp; Markers</u>			
0 stakes	\$0.00		
1 markers	\$8.00		
	\$8.00		
		<b>TOTAL CULVERTS</b>	<b>\$518.00</b>
<b>ROCK</b>			
0+00 to 10+30 681 cy. of Pit-Run @		\$6.52 per c.y. =	\$4,440.12
		<b>TOTAL ROCK</b>	<b>\$4,440.12</b>
<b>SPECIAL PROJECTS</b>			
Grade and shape road	10.30 stations @	\$15.50 per station	\$159.65
Remove large stumps and end haul	4.00 lump sum @	\$130.00	\$520.00
Grass seed and fertilize	0.45 acres @	\$220.00 per acre	\$99.00
Mulching	0.236 acres @	\$600.00 per acre	\$141.60
		<b>TOTAL SPECIAL PROJECTS</b>	<b>\$920.25</b>
		<b>GRAND TOTAL</b>	<b>\$9,044.51</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll Shanty</u>					Road: <u>C to D</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles					<u>12+00</u> stations <u>0.23</u> miles
CLEARING AND GRUBBING -						
Scattering		0.390	acres @	\$980.00	per acre =	<u>\$382.20</u>
					TOTAL CLEARING AND GRUBBING	
						<b>\$382.20</b>
EXCAVATION -						
Road Earthwork		12.00	sta. @	\$65.00	per sta. =	<u>\$780.00</u>
					TOTAL EXCAVATION	
						<b>\$780.00</b>
 CULVERTS - MATERIALS & INSTALLATION						
	<u>Culverts</u>					
	40 LF of 18"	\$680.00			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 LF of 66"	<u>\$0.00</u>			0 LF of 72"	<u>\$0.00</u>
		\$680.00				\$0.00
	<u>Half Rounds</u>					
	0 LF of 21"	\$0.00			0 LF of 30"	\$0.00
	0 LF of 36"	<u>\$0.00</u>			0 LF of 42"	<u>\$0.00</u>
		\$0.00				\$0.00
	<u>Culvert Stakes &amp; Markers</u>					
	0 stakes	\$0.00				
	1 markers	<u>\$8.00</u>				
		\$8.00				
					TOTAL CULVERTS	<b>\$688.00</b>
ROCK						
0+00 to 12+00	818 cy. of Pit-Run		@	\$7.34	per c.y. =	<u>\$6,004.12</u>
					TOTAL ROCK	
						<b>\$6,004.12</b>
 SPECIAL PROJECTS						
Grade and shape road -		12.00	stations @	\$15.50	per station	\$186.00
Roll subgrade w/ vibratory roller prior to rocking -		12.00	stations @	\$13.20	per station	\$158.40
Remove large stumps and haul -		1.00	lump sum @	\$130.00		\$130.00
Grass seed and fertilize -		0.28	acres @	\$220.00	per acre	\$61.60
Muiching -		0.275	acres @	\$600.00	per acre	\$165.00
					TOTAL SPECIAL PROJECTS	
						<b>\$701.00</b>
					<b>GRAND TOTAL</b>	<b>\$8,555.32</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll Shanty</u>		Road: <u>E to F</u>								
Construction -	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">0+00</td> <td style="text-align: left;">stations</td> </tr> <tr> <td style="text-align: right; border-top: 1px solid black;">0.00</td> <td style="text-align: left; border-top: 1px solid black;">miles</td> </tr> </table>	0+00	stations	0.00	miles		<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">1+00</td> <td style="text-align: left;">stations</td> </tr> <tr> <td style="text-align: right; border-top: 1px solid black;">0.02</td> <td style="text-align: left; border-top: 1px solid black;">miles</td> </tr> </table>	1+00	stations	0.02	miles
0+00	stations										
0.00	miles										
1+00	stations										
0.02	miles										
CLEARING AND GRUBBING - Scattering	0.010 acres @	\$980.00 per acre =	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">\$9.80</td> </tr> <tr> <td style="text-align: right; border-top: 1px solid black;">TOTAL CLEARING AND GRUBBING</td> </tr> </table>	\$9.80	TOTAL CLEARING AND GRUBBING						
\$9.80											
TOTAL CLEARING AND GRUBBING											
EXCAVATION -			<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right; border-top: 1px solid black;">TOTAL EXCAVATION</td> <td style="text-align: right; border-top: 1px solid black;">\$0.00</td> </tr> </table>	TOTAL EXCAVATION	\$0.00						
TOTAL EXCAVATION	\$0.00										
 CULVERTS - MATERIALS & INSTALLATION											
	<u>Culverts</u>										
	0 LF of 18"	\$0.00									
	0 LF of 30"	\$0.00									
	0 LF of 42"	\$0.00									
	0 LF of 54"	\$0.00									
	0 LF of 66"	\$0.00									
		\$0.00									
	<u>Half Rounds</u>										
	0 LF of 21"	\$0.00									
	0 LF of 36"	\$0.00									
		\$0.00									
	<u>Culvert Stakes &amp; Markers</u>										
	0 stakes	\$0.00									
	0 markers	\$0.00									
		\$0.00									
			<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right; border-top: 1px solid black;">TOTAL CULVERTS</td> <td style="text-align: right; border-top: 1px solid black;">\$0.00</td> </tr> </table>	TOTAL CULVERTS	\$0.00						
TOTAL CULVERTS	\$0.00										
ROCK 0+00 to	1+00	62 cy. of Pit-Run	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">@</td> <td style="text-align: right;">\$7.11 per c.y. =</td> <td style="text-align: right;">\$440.82</td> </tr> <tr> <td></td> <td></td> <td style="text-align: right; border-top: 1px solid black;">TOTAL ROCK</td> </tr> </table>	@	\$7.11 per c.y. =	\$440.82			TOTAL ROCK		
@	\$7.11 per c.y. =	\$440.82									
		TOTAL ROCK									
			\$440.82								
 SPECIAL PROJECTS											
Grade and shape road -	1.00 stations @	\$15.50 per station	\$15.50								
Roll subgrade w/ vibratory roller prior to rocking -	1.00 stations @	\$13.20 per station	\$13.20								
Grass seed and fertilize -	0.02 acres @	\$220.00 per acre	\$4.40								
Mulching -	0.023 acres @	\$600.00 per acre	\$13.80								
			TOTAL SPECIAL PROJECTS								
			\$46.90								
		<b>GRAND TOTAL</b>	<b>\$497.52</b>								

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll Shanty</u>		Road:	<u>G to H</u>
Construction -	<u>16+80</u> stations <u>0.32</u> miles		Improvement -	<u>0+00</u> stations <u>0.00</u> miles
CLEARING AND GRUBBING -				
Scattering	1.540 acres @		\$980.00 per acre =	<u>\$1,509.20</u>
			TOTAL CLEARING AND GRUBBING	<b>\$1,509.20</b>
EXCAVATION -				
Road Earthwork	16.80 sta. @		\$140.00 per sta. =	<u>\$2,352.00</u>
			TOTAL EXCAVATION	<b>\$2,352.00</b>
 CULVERTS - MATERIALS & INSTALLATION				
	<u>Culverts</u>			
	40 LF of 18"	\$680.00	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 LF of 66"	<u>\$0.00</u>	0 LF of 72"	<u>\$0.00</u>
		\$680.00		\$0.00
	<u>Half Rounds</u>			
	0 LF of 21"	\$0.00	0 LF of 30"	\$0.00
	0 LF of 36"	<u>\$0.00</u>	0 LF of 42"	<u>\$0.00</u>
		\$0.00		\$0.00
	<u>Culvert Stakes &amp; Markers</u>			
	0 stakes	\$0.00		
	1 markers	<u>\$8.00</u>		
		\$8.00		
			TOTAL CULVERTS	<b>\$688.00</b>
 ROCK				
0+00 to	16+80	1,169 cy. of	Pit-Run @	\$8.18 per c.y. = <u>\$9,562.42</u>
				TOTAL ROCK
				<b>\$9,562.42</b>
 SPECIAL PROJECTS				
Grade and shape road -	16.80 stations @	\$15.50 per station		\$260.40
Roll subgrade w/ vibratory roller prior to rocking -	16.80 stations @	\$13.20 per station		\$221.76
Remove large stumps and end haul -	6.00 lump sum @	\$130.00		\$780.00
Grass seed and fertilize -	1.08 acres @	\$220.00 per acre		\$237.60
Mulching -	0.386 acres @	\$600.00 per acre		\$231.60
			TOTAL SPECIAL PROJECTS	<b>\$1,731.36</b>
<b>GRAND TOTAL</b>				<b>\$15,842.98</b>

## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll Shanty</u>		Road: <u>I to J</u>
Construction -	<u>4+20</u> stations <u>0.08</u> miles		<u>0+00</u> stations <u>0.00</u> miles
CLEARING AND GRUBBING - Scattering	0.390 acres @	\$980.00 per acre =	<u>\$382.20</u>
		TOTAL CLEARING AND GRUBBING	<b>\$382.20</b>
EXCAVATION - Road Earthwork	4.20 sta. @	\$140.00 per sta. =	<u>\$588.00</u>
		TOTAL EXCAVATION	<b>\$588.00</b>
 CULVERTS - MATERIALS & INSTALLATION			
	<u>Culverts</u>		
	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 LF of 66"	<u>\$0.00</u>	0 LF of 72" <u>\$0.00</u>
		\$0.00	\$0.00
	<u>Half Rounds</u>		
	0 LF of 21"	\$0.00	0 LF of 30" \$0.00
	0 LF of 36"	<u>\$0.00</u>	0 LF of 42" <u>\$0.00</u>
		\$0.00	\$0.00
	<u>Culvert Stakes &amp; Markers</u>		
	0 stakes	\$0.00	
	0 markers	<u>\$0.00</u>	
		\$0.00	
			TOTAL CULVERTS <b>\$0.00</b>
ROCK 0+00 to 4+20	313 cy. of Pit-Run	@ \$8.18 per c.y. =	<u>\$2,560.34</u>
			TOTAL ROCK <b>\$2,560.34</b>
 SPECIAL PROJECTS			
Grade and shape road -	4.20 stations @	\$15.50 per station	\$65.10
Roll subgrade w/ vibratory roller prior to rocking -	4.20 stations @	\$13.20 per station	\$55.44
Remove large stumps and end haul -	2.00 lump sum @	\$130.00	\$260.00
Grass seed and fertilize -	0.27 acres @	\$220.00 per acre	\$59.40
Mulching -	0.096 acres @	\$600.00 per acre	\$57.60
		TOTAL SPECIAL PROJECTS	<b>\$497.54</b>
		<b>GRAND TOTAL</b>	<b>\$4,028.08</b>



## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll Shanty</u>		Road:	<u>0 to P</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles		Improvement -	<u>1+00</u> stations <u>0.02</u> miles
 CLEARING AND GRUBBING - Scattering		0.092 acres @	\$980.00 per acre =	<u>\$90.16</u>
			TOTAL CLEARING AND GRUBBING	<b>\$90.16</b>
 EXCAVATION - Road Earthwork		1.00 sta. @	\$100.00 per sta. =	<u>\$100.00</u>
			TOTAL EXCAVATION	<b>\$100.00</b>
 CULVERTS - MATERIALS & INSTALLATION				
	<u>Culverts</u>			
	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 LF of 66"	\$0.00	0 LF of 72"	\$0.00
		<u>\$0.00</u>		<u>\$0.00</u>
	<u>Havf Rounds</u>			
	0 LF of 21"	\$0.00	0 LF of 30"	\$0.00
	0 LF of 36"	\$0.00	0 LF of 42"	\$0.00
		<u>\$0.00</u>		<u>\$0.00</u>
	<u>Culvert Stakes &amp; Markers</u>			
	0 stakes	\$0.00		
	0 markers	\$0.00		
		<u>\$0.00</u>		
			TOTAL CULVERTS	<b>\$0.00</b>
 ROCK				
0+00 to 1+00	82 cy. of	Pit-Run	@ \$8.74 per c.y. =	<u>\$716.68</u>
			TOTAL ROCK	<b>\$716.68</b>
 SPECIAL PROJECTS				
Grade and shape road -	1.00 stations @	\$15.50 per station	\$15.50	
Roll subgrade w/ vibratory roller prior to rocking -	1.00 stations @	\$13.20 per station	\$13.20	
Grass seed and fertilize -	0.02 acres @	\$220.00 per acre	\$4.40	
Mulching -	0.023 acres @	\$600.00 per acre	\$13.80	
			TOTAL SPECIAL PROJECTS	<b>\$46.90</b>
			<b>GRAND TOTAL</b>	<b>\$953.74</b>



## SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll Shanty</u>				Road: <u>Q to R</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles				Improvement - <u>1+00</u> stations <u>0.02</u> miles
 CLEARING AND GRUBBING - Scattering		0.092 acres @		\$980.00 per acre =	<u>\$90.16</u> TOTAL CLEARING AND GRUBBING
					<b>\$90.16</b>
 EXCAVATION - Road Earthwork		1.00 sta. @		\$100.00 per sta. =	<u>\$100.00</u> TOTAL EXCAVATION
					<b>\$100.00</b>
 CULVERTS - MATERIALS & INSTALLATION					
	<u>Culverts</u>				
	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 LF of 66"	<u>\$0.00</u>		0 LF of 72"	<u>\$0.00</u>
		\$0.00			\$0.00
	<u>Havf Rounds</u>				
	0 LF of 21"	\$0.00		0 LF of 30"	\$0.00
	0 LF of 36"	<u>\$0.00</u>		0 LF of 42"	<u>\$0.00</u>
		\$0.00			\$0.00
	<u>Culvert Stakes &amp; Markers</u>				
	0 stakes	\$0.00			
	0 markers	<u>\$0.00</u>			
		\$0.00			
				TOTAL CULVERTS	<b>\$0.00</b>
 ROCK					
0+00 to 1+00	82 cy. of Pit Run		@	\$8.74 per c.y. =	<u>\$716.68</u> TOTAL ROCK
					<b>\$716.68</b>
 SPECIAL PROJECTS					
Grade and shape road -	1.00 stations @	\$15.50	per station	\$15.50	
Roll subgrade w/ vibratory roller prior to rocking -	1.00 stations @	\$13.20	per station	\$13.20	
Grass seed and fertilize -	0.02 acres @	\$220.00	per acre	\$4.40	
Mulching -	0.023 acres @	\$600.00	per acre	\$13.80	
				TOTAL SPECIAL PROJECTS	<b>\$46.90</b>
				<b>GRAND TOTAL</b>	<b>\$953.74</b>

## ROCK DEVELOPMENT COST SUMMARY

Pit:	Pit Run	Location:	Sec.9, T2S, R7W, W.M.
Sale:	<b>Toll Shanty</b>	Road:	3289 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	3289 c.y.
Drill Pct.:	50%	In Place Total:	2349 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.	\$1,400.00
Drill & Shoot:	\$2.50 /cu.yd. x 1175 cu.yds. = \$2,937.50
Rip Rock	\$1.90 /cu.yd. x 1174 cu.yds. = \$2,230.60
Load Dump Truck:	\$0.70 /cu.yd. x 3289 cu.yds. = \$2,302.30
Subtotal	\$8,870.40

Move In and set up Drill and Compressor	1	@	\$329.02	=	\$329.02
Move in Roller and Compactor	1	@	\$329.02	=	\$329.02
Move in Grader	1	@	\$150.87	=	\$150.87
Move in Loader	1	@	\$356.23	=	\$356.23
Move in Trucks	5	@	\$102.24	=	\$511.20
Subtotal					\$1,676.34

TOTAL PRODUCTION COSTS \$10,546.74

Base Cost= \$3.21 Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A to B	\$2.21	\$1.10	\$3.21	\$6.52	681	\$4,440.12
C to D	\$3.03	\$1.10	\$3.21	\$7.34	818	\$6,004.12
E to F	\$2.80	\$1.10	\$3.21	\$7.11	62	\$440.82
G to H	\$3.87	\$1.10	\$3.21	\$8.18	1169	\$9,562.42
I to J	\$3.87	\$1.10	\$3.21	\$8.18	313	\$2,560.34
M to N	\$1.95	\$1.10	\$3.21	\$6.26	82	\$513.32
O to P	\$4.43	\$1.10	\$3.21	\$8.74	82	\$716.68
Q to R	\$4.43	\$1.10	\$3.21	\$8.74	82	\$716.68
Total C.Y.					3289	Sub Total \$24,954.50

TOTAL ROCKING COSTS	\$24,954.50
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## Move-In Calculations

Sale: Toll Shanty

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
26.0	Highway	37
8.0	Main Lines	11
4.0	Steep Grades	5

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
0	Drill & Compressor	\$0.00		\$46.00	0.00	0.00	0	\$0.00	\$0.00
0	Brush Cutter	\$0.00		\$4.00	0.00	0.00	0	\$0.00	\$0.00
0	Graders	\$0.00		\$3.65	0.00	4.00	4	\$0.00	\$0.00
0	Loader (Small)	\$0.00	1	\$3.55	0.00	0.00	0	\$0.00	\$0.00
0	Loader (Med. & Large)	\$0.00	1	\$9.00	0.00	0.00	0	\$0.00	\$0.00
0	Rollers (smooth/grid) & Compactors	\$0.00		\$5.00	0.00	2.00	2	\$0.00	\$0.00
0	Excavators (Small)	\$0.00		\$22.00	0.00	0.00	0	\$0.00	\$0.00
0	Excavators (Med.)	\$0.00		\$35.50	0.00	0.00	0	\$0.00	\$0.00
1	Excavators (Large)	\$524.44	1	\$44.80	0.00	4.00	4	\$179.20	\$703.64
0	Tired Backhoes/Skidlers	\$0.00		\$3.00	0.00	0.00	0	\$0.00	\$0.00
0	Tractors (D6)	\$0.00	2	\$7.10	0.00	0.00	0	\$0.00	\$0.00
1	Tractors (D7)	\$471.36	2	\$11.30	0.00	0.00	0	\$0.00	\$471.36
0	Tractor (D8)	\$0.00	2	\$15.10	0.00	0.00	0	\$0.00	\$0.00
2	Dump Truck (10 cy +)	\$251.11		\$2.85	0.00	0.00	0	\$0.00	\$251.11
0	Dump Truck (Off Hiway)	\$0.00	1	\$4.75	0.00	0.00	0	\$0.00	\$0.00
0	Water Truck (1500 Gal)	\$0.00		\$2.85	0.00	0.00	0	\$0.00	\$0.00
0	Water Truck (2500 Gal)	\$0.00		\$2.85	0.00	0.00	0	\$0.00	\$0.00
<b>TOTAL MOVE-IN COSTS:</b>								<b>\$1,426.11</b>	



## OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

### Toll Shanty

1. **Type of Sale:** Conifer – Recovery  
Hardwood – Cash/Lump Sum
2. **Legal Description:** Portions of Sections 31 and 32, T1S, R7W, and Portions of Sections 4 and 5, T2S, R7W, W.M., Tillamook County, Oregon.
3. **Sale Acreage:** The sale boundary was plotted on a digital orthophotograph and the acreage was calculated with GIS.

Area	Harvest Type	Sale	Net
1	Modified Clearcut	79	76
2	Retention Cut	4	4
3	Modified Clearcut	71	71
4	Modified Clearcut	41	38
<b>Total</b>		195	189

Sale Acres

Area within the Timber Sale Boundary signs

Net acres for calculating the advertised volume

Sale acres, less green tree retention, less roads, and less riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. **Cruising Procedures:**
  - A. **Cruise Method:** Cruise lines were established at different bearings for each area to obtain representative sampling throughout the sale areas. Variable radius full point plots taken with the target of one plot per four acres. A total of 45 plots were taken. On every plot, tree count by species and diameter was recorded, and alder was graded. On every other plot, all trees were measured and graded, and Douglas-fir form was measured. Diameters were recorded to the nearest 1", heights to the nearest foot. Diameters were taken at 4.5' above the ground on the uphill side. Conifers with diameters of 8" or larger and hardwoods with diameters of 10" or larger were recorded. Overall, the cruise had a coefficient of variation of 35 and a SE% of 5.2 for the net board feet/acre.
  - B. **Plot size:** All plots were variable radius full point plots. For all areas, a BAF of 20 was used for hardwoods and a BAF of 27.78 was used for conifers. The point of tree observation was 4.5 feet.

- C. **Grading System:** Tree heights were measured to a 6" merchantable top for conifers and 8" for hardwoods. Douglas-fir was graded using Columbia River rules favoring a 40' log. Alder was graded to the top end diameter for determining sort while still favoring a 40' log. Grades are as follows: 2S = 12" and greater, 3S = 10" and 11", and 4S = 8" and 9".
5. **Computation Procedures:** Plot data was entered into SuperAce for computation of stand tables. Take and leave trees were determined and SuperAce was rerun to compute basal area, V-BAR, stand tables and diameters. This data was entered into a volume summary worksheet to compute sale volumes.
6. **Defect and Breakage:** A 5% defect and breakage reduction was applied to conifers and a 10% reduction to hardwood volumes.
7. **Timber Description:** The sale contains 45 year old Douglas-fir with symptoms of Swiss Needle Cast and scattered patches of red alder concentrated mainly in the riparian areas. The sale area has had an active fire history with portions of the sale burning in the Tillamook fire of 1933, the Saddle Mountain fire of 1939, and the North Fork/Elk Horn fire of 1951. The area was seeded in 1952-53, and then reseeded in 1961-62. The average DBH for the Take Douglas fir and red alder is 13 and 14 inches, respectively. The bole length for Take Douglas fir and red alder is 47 and 27 feet, respectively.
8. **Cruiser Names / Dates:** South Unit staff, January 2006.
9. **Revenue Distribution:**  
100% FDF  
Tax Code: 9-1 (70%), 9-2 (30%)  
Deed Numbers: 161, 231, 169
10. **Appendices:**  
- Volume Summary  
- Logging Plan



"STEWARDSHIP IN FORESTRY"

## Toll Shanty

### Volume Summary

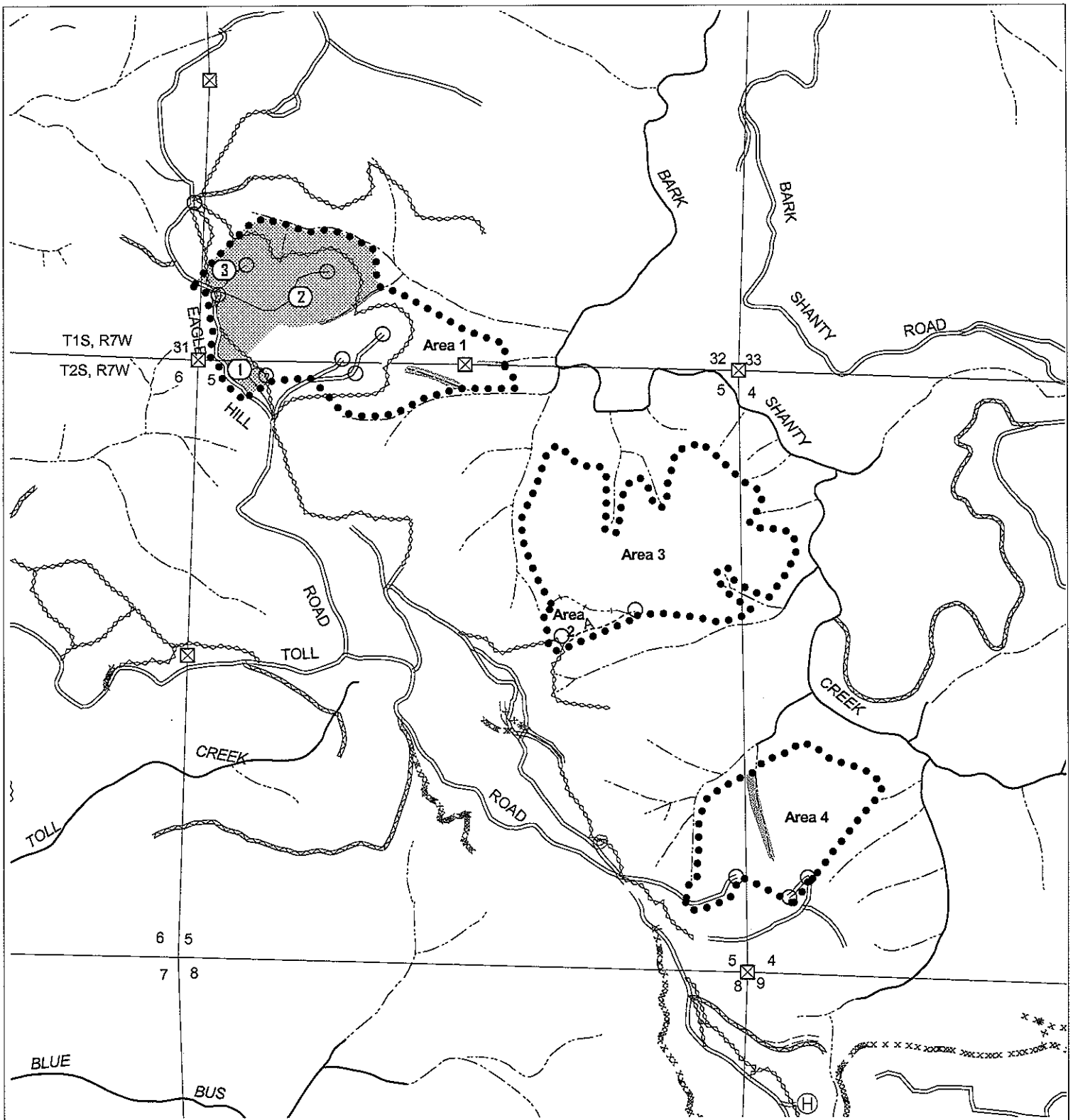
Area 1 Modified Clearcut						
76 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	95	108	10.3	783	5%	744
Alder	34	48	1.6	122	10%	110
<b>TOTAL</b>			11.9	905		854

Area 2 Retention Cut						
4 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Alder	39	54	2.1	8	10%	7
<b>TOTAL</b>			2.1	8		7

Area 3 Modified Clearcut						
71 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	76	97	7.4	525	5%	499
Alder	39	54	2.1	149	10%	134
<b>TOTAL</b>			9.5	674		633

Area 4 Modified Clearcut						
38 acres						
SPECIES	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	95	107	10.2	388	5%	369
Alder	36	77	2.8	106	10%	95
<b>TOTAL</b>			13.0	494		464

TOTAL SALE VOLUME			
SPECIES	Gross Vol. (MBF)		Net Vol. (MBF)
Douglas-fir	1696		1613
Alder	385		347
<b>TOTAL</b>	2081		1960



- Landing
- Ⓧ Domestic water supply intake
- Ⓜ Helicopter landing zone
- Ⓣ Truck turn-around
- ⊠ Survey corner
- ▭ Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- ▧ Downhill yarding
- ▦ Buffer
- ▨ Non-required thinning
- - - Area boundary
- Sale boundary
- - - Ownership boundary
- Perennial Type-F stream
- - - Perennial Type-N stream
- == Surfaced road
- === Unsurfaced road
- State/Federal highway
- County road
- ② Non-project road
- . A . - Swing road
- × × × Blocked road
- OHV trail
- - - Non-motorized trail
- T T Transmission line

**LOGGING PLAN**  
 Timber Sale Contract No. 341-07-63  
 Toll Shanty  
 Portions of Sections 31 and 32,  
 T1S, R7W, and  
 Sections 4 and 5,  
 T2S, R7W, W. M.  
 Tillamook County, Oregon

1000 0 1000 Feet

Area	Type of Operation	Acres	
		Gross	Net
1	Modified clearcut	79	75
2	Retention cut	4	4
3	Modified clearcut	71	71
4	Modified clearcut	41	38
<b>Total</b>		<b>195</b>	<b>189</b>

Tillamook District GIS  
 4-11-2006  
 This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.

