



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary White Creek Sale 341-03-25

District: Tillamook

Date: 10/3/02

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$330,359.25	\$20,795.48	\$351,154.73
		Project Work	(\$137,838.00)
		Advertised Value	\$213,316.73



Timber Sale Appraisal Timber Description White Creek Sale 341-03-25

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: T01N, R08W, Sections 29,30,31,32,33

Date: 10/3/02

Stand Stocking: 60%

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

Volume by Grade	Douglas - Fir	Alder (Red)	Total
3S	1,046	0	1,046
4S	163	0	163
Camprun	0	74	74
Total	1,209	74	1,283

Comments: Pond Values Used: 3rd Quarter 2002

Road Maintenance: Total = \$ 7.70

Grading - 10 miles X 1 gradings X 500/mile / 1,283MBF = \$3.90

Surfacing - \$15/cy X 1.3MMBF X 10 miles X 25 cy/mile / 1,283MBF = \$3.80

Other Cost (plus profit and risk): Total = \$2,566

Brand and paint: \$2.00MBF X 1,283mbf = \$2,566

Hardwood Pond Value of \$500 obtained from Northwest Hardwoods on September 5, 2002.



Timber Sale Appraisal Logging Conditions White Creek Sale 341-03-25

"STEWARDSHIP IN FORESTRY"

Combination#: 1 Douglas - Fir 90.00%
 Alder (Red) 90.00%

Yarding Distance: Medium (800 ft) **Downhill Yarding:** No
Logging System: Cable: Small Tower <=40 **Process:** Manual Delimiting
Tree Size: Small / Thinning 9in (70 Bft/tree), 20+ logs/MBF
Loads/Day: 6 **Bd. Ft./Load:** 3,400
Cost/MBF: \$126.38

Machines:
 Log Loader (A)
 Tower Yarder (Small)

Combination#: 2 Douglas - Fir 10.00%
 Alder (Red) 10.00%

Yarding Distance: Short (400 ft) **Downhill Yarding:** Yes
Logging System: Track Skidder **Process:** Manual Falling/Delimiting
Tree Size: Small / Thinning 9in (70 Bft/tree), 20+ logs/MBF
Loads/Day: 9 **Bd. Ft./Load:** 3,400
Cost/MBF: \$106.71

Machines:
 Log Loader (B)
 Track Skidder



Timber Sale Appraisal Logging Costs White Creek Sale 341-03-25

"STEWARDSHIP IN FORESTRY"

Date: 10/3/02

Operating Seasons: 1.0

Profit & Risk: 15%

Project Costs: \$137,838

Other Costs (P/R): \$2,566

Slash Disposal: \$0

Other Costs: \$0

Road Maintenance: \$7.70

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	\$0.00	2.0	3.2
Alder (Red)	\$0.00	3.0	2.8

Local Pond Values

Date	Species	Grade	Value
10/3/02	Alder (Red)	Camprun	\$500.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Breakdown White Creek Sale 341-03-25

Costs	Douglas - Fir	Alder (Red)
Logging	124.41	124.41
Road Maintenance	8.11	8.11
Fire Protection	2.11	2.11
Hauling	69.16	53.79
Other (P/R appl.)	2.00	2.00
Profit & Risk	30.87	28.56
Slash Disposal	0.00	0.00
Scaling	2.00	0.00
Other	0.00	0.00
Total	238.66	218.98

Amortization	0.00	0.00
Pond Value	511.91	500.00
Stumpage	273.25	281.02
Amortized	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary White Creek Sale 341-03-25

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	1,209.00	74.00
Value	273.25	281.02
Total	330,359.25	20,795.48

Gross Timber Sale Value

Recovery \$351,154.73

Prepared by: John Pine

Date: 10/3/02

District: Tillamook

Phone: (503) 842-2545

PROJECT SUMMARY SHEET

Sale: WHITE CREEK

CONSTRUCTION

Point O to P 3+35 stations = \$1,575.70

SUBTOTAL CONSTRUCTION \$1,575.70

IMPROVEMENT

Point V to B 94+65 stations = \$16,687.47
Point C to D 21+30 stations = \$10,550.48
Point E to F 3+20 stations = \$1,630.44
Point G to H 4+05 stations = \$1,792.41
Point I to J 20+20 stations = \$7,969.35
Point J to K 31+80 stations = \$2,141.75
Point K to L 14+10 stations = \$8,120.61
Point J to M 4+20 stations = \$1,679.17
Point J to N 4+70 stations = \$2,040.18
Point O to P 7+90 stations = \$3,715.83
Point Q to R 8+80 stations = \$3,163.57
Point S to T 2+45 stations = \$885.75
Point B to U 2+85 stations = \$1,106.99
Point A to V 465+60 stations = \$72,825.66

SUBTOTAL IMPROVEMENT \$134,309.66

SPECIAL PROJECTS

Remove Culverts From STATE land \$795.54
SUBTOTAL SPECIAL PROJECTS \$795.54

MOVE IN \$1,156.71

GRAND TOTAL **\$137,837.61**

SUMMARY OF CONSTRUCTION COST

Sale:	WHITE CREEK				Road: V to B								
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		Improvement -	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">94+65</td> <td style="text-align: left;">stations</td> </tr> <tr> <td style="text-align: right; border-top: 1px solid black;">1.79</td> <td style="text-align: left; border-top: 1px solid black;">miles</td> </tr> </table>	94+65	stations	1.79	miles	
0+00	stations												
0.00	miles												
94+65	stations												
1.79	miles												
CLEARING AND GRUBBING -													
Side cast	0.00 acres	@	\$540.00 per acre =	\$0.00									
Widening	0.00 acres	@	\$540.00 per acre =	\$0.00									
Scattering	3.48 acres	@	\$815.00 per acre =	\$2,833.42									
Piling	0.00 acres	@	\$905.00 per acre =	\$0.00									
Endhaul	0.00 acres	@	\$1,500.00 per acre =	\$0.00									
			TOTAL CLEARING AND GRUBBING		\$2,833.42								
EXCAVATION -													
				TOTAL EXCAVATION	\$0.00								
ENDHAUL -													
				TOTAL ENDHAUL	\$0.00								
CULVERTS - MATERIALS & INSTALLATION													
Culverts													
0	LF of 18"		\$0.00										
0	LF of 30"		\$0.00	26	LF of 24" \$461.50								
0	LF of 42"		\$0.00	0	LF of 36" \$0.00								
0	LF of 54"		\$0.00	0	LF of 48" \$0.00								
0	LF of 54"		\$0.00	0	LF of 60" \$0.00								
			\$0.00		\$461.50								
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								
			\$0.00		\$0.00								
Culvert Stakes & Markers													
0	stakes		\$0.00										
1	markers		\$6.00										
			\$6.00										
				TOTAL CULVERTS	\$467.50								
SURFACING-													
35+80 to 54+95	230	cy. of	CRUSHED	@	\$18.22 per c.y.= \$4,198.84								
Place @ 42+30 culvert outlet	10	cy. of	RIPRAP	@	\$5.33 per c.y.= \$53.30								
Fill ditch from 78+20 to 88+45	74	cy. of	RIPRAP	@	\$3.68 per c.y.= \$272.55								
Spot rock	200	cy. of	CRUSHED	@	\$18.22 per c.y.= \$3,644.38								
					TOTAL SURFACING								
					\$8,169.07								
SPECIAL PROJECTS													
Construct waste area #1 -			2.00 hours	@	\$130.00 per hour \$260.00								
Pull ditch and endhaul waste material -			94.65 stations	@	\$14.00 per station \$1,325.10								
Grade and shape road -			94.65 stations	@	\$17.40 per station \$1,646.91								
Roll subgrade w/ vibratory roller prior to rocking -			19.15 stations	@	\$11.00 per station \$210.85								
Roll graded and shaped road w/ vibratory roller -			75.50 stations	@	\$11.00 per station \$830.50								
Construct waste area @ 56+70 RT. -			2.00 hours	@	\$130.00 per hour \$260.00								
Grass seed and fertilize -			3.71 acres	@	\$180.00 per acre \$667.11								
Mulch (@ culvert areas) -			0.017 acres	@	\$1,000.00 per acre \$17.22								
					TOTAL SPECIAL PROJECTS								
					\$5,217.49								

GRAND TOTAL **\$16,687.47**

SUMMARY OF CONSTRUCTION COST

Sale:	<u>WHITE CREEK</u>				Road:	<u>C to D</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles				Improvement -	<u>21+30</u> stations <u>0.40</u> miles
CLEARING AND GRUBBING -						
Side cast	0.00 acres	@	\$540.00	per acre =		\$0.00
Widening	0.00 acres	@	\$540.00	per acre =		\$0.00
Scattering	1.47 acres	@	\$815.00	per acre =		\$1,195.56
Piling	0.00 acres	@	\$905.00	per acre =		\$0.00
Endhaul	0.00 acres	@	\$1,500.00	per acre =		\$0.00
				TOTAL CLEARING AND GRUBBING		\$1,195.56
EXCAVATION -						
Road Earthwork	0+00	to	21+30	21.3 sta. @	\$65.00 per sta. =	\$1,384.50
					TOTAL EXCAVATION	\$1,384.50
ENDHAUL -						
					TOTAL ENDHAUL	\$0.00
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
			<u>\$0.00</u>			<u>\$0.00</u>
	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
			<u>\$0.00</u>			<u>\$0.00</u>
	Culvert Stakes & Markers					
	0	stakes	\$0.00			
	0	markers	\$0.00			
			<u>\$0.00</u>			
					TOTAL CULVERTS	\$0.00
SURFACING-						
0+00	to	21+30	1,158 cy. of	PIT-RUN	@	\$6.25 per c.y.= \$7,240.02
					TOTAL SURFACING	\$7,240.02
SPECIAL PROJECTS						
Construct waste area #3 -			1.00 hours @	\$130.00 per hour		\$130.00
Grade and shape road -			21.30 stations @	\$9.75 per station		\$207.68
Roll subgrade w/ vibratory roller prior to rocking -			21.30 stations @	\$11.00 per station		\$234.30
Grass seed and fertilize -			0.88 acres @	\$180.00 per acre		\$158.43
					TOTAL SPECIAL PROJECTS	\$730.40
					GRAND TOTAL	\$10,550.48

SUMMARY OF CONSTRUCTION COST

Sale:	<u>WHITE CREEK</u>		Road:	<u>E to F</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles		Improvement -	<u>3+20</u> stations <u>0.06</u> miles
CLEARING AND GRUBBING -				
Side cast	0.00 acres @	\$540.00 per acre =		\$0.00
Widening	0.00 acres @	\$540.00 per acre =		\$0.00
Scattering	0.22 acres @	\$815.00 per acre =		\$179.61
Piling	0.00 acres @	\$905.00 per acre =		\$0.00
Endhaul	0.00 acres @	\$1,500.00 per acre =		\$0.00
		TOTAL CLEARING AND GRUBBING		\$179.61
EXCAVATION -				
Road Earthwork	0+00 to 3+20	3.2 sta. @	\$65.00 per sta. =	\$208.00
			TOTAL EXCAVATION	\$208.00
ENDHAUL -				
			TOTAL ENDHAUL	\$0.00
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
		\$0.00		\$0.00
	Culvert Stakes & Markers			
	0 stakes	\$0.00		
	0 markers	\$0.00		
		\$0.00	TOTAL CULVERTS	\$0.00
SURFACING-				
0+00 to 3+20	184 cy. of	PIT-RUN @	\$6.28 per c.y.=	\$1,152.63
			TOTAL SURFACING	\$1,152.63
SPECIAL PROJECTS				
Grade and shape road -	3.20 stations @	\$9.75 per station		\$31.20
Roll subgrade w/ vibratory roller prior to rocking -	3.20 stations @	\$11.00 per station		\$35.20
Grass seed and fertilize -	0.13 acres @	\$180.00 per acre		\$23.80
		TOTAL SPECIAL PROJECTS		\$90.20
		GRAND TOTAL		\$1,630.44

SUMMARY OF CONSTRUCTION COST

Sale:	<u>WHITE CREEK</u>		Road:	<u>G to H</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles		Improvement -	<u>4+05</u> stations <u>0.08</u> miles
CLEARING AND GRUBBING -				
Side cast		0.00 acres @	\$540.00 per acre =	\$0.00
Widening		0.00 acres @	\$540.00 per acre =	\$0.00
Scattering		0.28 acres @	\$815.00 per acre =	\$227.32
Piling		0.00 acres @	\$905.00 per acre =	\$0.00
Endhaul		0.00 acres @	\$1,500.00 per acre =	\$0.00
			TOTAL CLEARING AND GRUBBING	\$227.32
EXCAVATION -				
Road Earthwork	0+00 to 4+05	4.1 sta. @	\$65.00 per sta. =	\$263.25
			TOTAL EXCAVATION	\$263.25
ENDHAUL -				
			TOTAL ENDHAUL	\$0.00
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"	<u>\$0.00</u>	0 LF of 60" <u>\$0.00</u>
			\$0.00	\$0.00
	Half Rounds			
	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
	Culvert Stakes & Markers			
	0	stakes	\$0.00	
	0	markers	<u>\$0.00</u>	
			\$0.00	
			TOTAL CULVERTS	\$0.00
SURFACING-				
0+00 to 4+05	304	cy. of	PIT-RUN @	\$3.90 per c.y.= \$1,187.67
				TOTAL SURFACING
				\$1,187.67
SPECIAL PROJECTS				
Grade and shape road -		4.05 stations @	\$9.75 per station	\$39.49
Roll subgrade w/ vibratory roller prior to rocking -		4.05 stations @	\$11.00 per station	\$44.55
Grass seed and fertilize -		0.17 acres @	\$180.00 per acre	\$30.12
			TOTAL SPECIAL PROJECTS	\$114.16
GRAND TOTAL				\$1,792.41

SUMMARY OF CONSTRUCTION COST

Sale:	<u>WHITE CREEK</u>			Road: <u>I to J</u>
Construction -	0+00 stations <u>0.00</u> miles			Improvement - <u>20+20</u> stations <u>0.38</u> miles
CLEARING AND GRUBBING -				
Side cast	0.00 acres @	\$540.00 per acre =	\$0.00	
Widening	0.00 acres @	\$540.00 per acre =	\$0.00	
Scattering	1.39 acres @	\$815.00 per acre =	\$1,133.82	
Piling	0.00 acres @	\$905.00 per acre =	\$0.00	
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00	
		TOTAL CLEARING AND GRUBBING	\$1,133.82	
EXCAVATION -				
			<u>TOTAL EXCAVATION</u>	\$0.00
ENDHAUL -				
			<u>TOTAL ENDHAUL</u>	\$0.00
CULVERTS - MATERIALS & INSTALLATION				
	Culverts			
	0	LF of 18"	\$0.00	0
	0	LF of 30"	\$0.00	0
	0	LF of 42"	\$0.00	0
	0	LF of 54"	\$0.00	0
			<u>\$0.00</u>	<u>\$0.00</u>
	Half Rounds			
	0	LF of 21"	\$0.00	0
	0	LF of 36"	\$0.00	0
			<u>\$0.00</u>	<u>\$0.00</u>
	Culvert Stakes & Markers			
	0	stakes	\$0.00	
	0	markers	\$0.00	
			<u>\$0.00</u>	
			TOTAL CULVERTS	\$0.00
SURFACING-				
0+00 to 20+20	1,452	cy. of	PIT-RUN	@ \$4.14 per c.y.= \$6,010.21
Place @ 0+00 culvert outlet	30	cy. of	RIPRAP	@ \$5.53 per c.y.= \$166.04
				<u>TOTAL SURFACING</u>
				\$6,176.24
SPECIAL PROJECTS				
Cut off stump flush with ground @ 5+30	1.00	hour @	\$25.00 per hour	\$25.00
Grade and shape road -	20.20	stations @	\$14.20 per station	\$286.84
Roll subgrade w/ vibratory roller prior to rocking -	20.20	stations @	\$11.00 per station	\$222.20
Grass seed and fertilize -	0.83	acres @	\$180.00 per acre	\$150.25
			TOTAL SPECIAL PROJECTS	\$659.29
			GRAND TOTAL	\$7,969.35

SUMMARY OF CONSTRUCTION COST

Sale: WHITE CREEK Road: J to K

Construction - 0+00 stations Improvement - 31+80 stations
0.00 miles 0.60 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00
Widening	0.00 acres @	\$540.00 per acre =	\$0.00
Scattering	1.17 acres @	\$815.00 per acre =	\$951.96
Piling	0.00 acres @	\$905.00 per acre =	\$0.00
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00
TOTAL CLEARING AND GRUBBING			\$951.96

EXCAVATION -

Pullback	20+30 to 21+15	76 cy @	\$1.40 per cy =	\$106.40
Widening	20+60 to 21+15	30 cy @	\$1.40 per cy =	\$42.00
Spread and Compact		106 cy @	\$0.35 per cy =	\$37.10

TOTAL EXCAVATION \$185.50

ENDHAUL -

Pullback	20+30 to 21+15	76 cy @	\$1.57 per cy =	\$119.21
Widening	20+60 to 21+15	30 cy @	\$1.57 per cy =	\$47.06

TOTAL ENDHAUL \$166.27

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
			<u>\$0.00</u>		<u>\$0.00</u>
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
			<u>\$0.00</u>		<u>\$0.00</u>
Culvert Stakes & Markers		0 stakes	\$0.00		
		0 markers	\$0.00		
			<u>\$0.00</u>		
TOTAL CULVERTS					\$0.00

SURFACING-	20+20 to 52+00	0 cy. of	PIT-RUN	@	\$0.00 per c.y.=	\$0.00
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TOTAL SURFACING \$0.00

SPECIAL PROJECTS

Grade and shape road -	31.80 stations @	\$13.70 per station	\$435.66
Roll graded and shaped road w/ vibratory roller -	31.80 stations @	\$11.00 per station	\$349.80
Grass seed and fertilize -	0.29 acres @	\$180.00 per acre	\$52.56
TOTAL SPECIAL PROJECTS			\$838.02

GRAND TOTAL \$2,141.75

SUMMARY OF CONSTRUCTION COST

Sale: WHITE CREEK Road: K to L

Construction - 0+00 stations Improvement - 14+10 stations
0.00 miles 0.27 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00
Widening	0.00 acres @	\$540.00 per acre =	\$0.00
Scattering	0.97 acres @	\$815.00 per acre =	\$791.43
Piling	0.00 acres @	\$905.00 per acre =	\$0.00
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00
		<u>TOTAL CLEARING AND GRUBBING</u>	\$791.43

EXCAVATION -

Road Earthwork 52+00 to 66+10 14.1 sta. @ \$65.00 per sta. = \$916.50

TOTAL EXCAVATION **\$916.50**

ENDHAUL -

TOTAL ENDHAUL **\$0.00**

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
	<u>\$0.00</u>		<u>\$0.00</u>

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
	<u>\$0.00</u>		<u>\$0.00</u>

Culvert Stakes & Markers

0 stakes	\$0.00
0 markers	\$0.00
	<u>\$0.00</u>

TOTAL CULVERTS **\$0.00**

SURFACING-

52+00 to 66+10 1,026 cy. of PIT-RUN @ \$5.80 per c.y.= \$5,950.24

TOTAL SURFACING **\$5,950.24**

SPECIAL PROJECTS

Construct waste area #2 -	0.50 hours @	\$130.00 per hour	\$65.00
Grade and shape road -	14.10 stations @	\$9.75 per station	\$137.48
Roll subgrade w/ vibratory roller prior to rocking -	14.10 stations @	\$11.00 per station	\$155.10
Grass seed and fertilize -	0.58 acres @	\$180.00 per acre	\$104.88

TOTAL SPECIAL PROJECTS **\$462.45**

GRAND TOTAL **\$8,120.61**

SUMMARY OF CONSTRUCTION COST

Sale: WHITE CREEK

Road: J to M

Construction - 0+00 stations
0.00 miles

Improvement - 4+20 stations
0.08 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00
Widening	0.00 acres @	\$540.00 per acre =	\$0.00
Scattering	0.15 acres @	\$815.00 per acre =	\$125.73
Piling	0.00 acres @	\$905.00 per acre =	\$0.00
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00
TOTAL CLEARING AND GRUBBING			\$125.73

EXCAVATION -

TOTAL EXCAVATION \$0.00

ENDHAUL -

TOTAL ENDHAUL \$0.00

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
<u>\$0.00</u>			<u>\$0.00</u>		

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
<u>\$0.00</u>			<u>\$0.00</u>		

Culvert Stakes & Markers

0	stakes	\$0.00
0	markers	\$0.00
<u>\$0.00</u>		

TOTAL CULVERTS \$0.00

SURFACING-

0+00 to 4+20 315 cy. of PIT-RUN @ \$4.64 per c.y.= \$1,459.34

TOTAL SURFACING \$1,459.34

SPECIAL PROJECTS

Grade and shape road -	4.20 stations @	\$9.75 per station	\$40.95
Roll subgrade w/ vibratory roller prior to rocking -	4.20 stations @	\$11.00 per station	\$46.20
Grass seed and fertilize -	0.04 acres @	\$180.00 per acre	\$6.94

TOTAL SPECIAL PROJECTS \$94.09

GRAND TOTAL \$1,679.17

SUMMARY OF CONSTRUCTION COST

Sale: WHITE CREEK

Road: J to N

Construction - 0+00 stations
0.00 miles

Improvement - 4+70 stations
0.09 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00
Widening	0.00 acres @	\$540.00 per acre =	\$0.00
Scattering	0.17 acres @	\$815.00 per acre =	\$140.70
Piling	0.00 acres @	\$905.00 per acre =	\$0.00
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00
TOTAL CLEARING AND GRUBBING			\$140.70

EXCAVATION -

Widening	0+00 to +40	50 cy @	\$1.40 per cy =	\$70.00
Spread and Compact		50 cy @	\$0.35 per cy =	\$17.50
TOTAL EXCAVATION				\$87.50

ENDHAUL -

Widening	0+00 to +40	50.00 cy @	\$1.57 per cy =	\$78.43
TOTAL ENDHAUL				\$78.43

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
		<u>\$0.00</u>			<u>\$0.00</u>
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
		<u>\$0.00</u>			<u>\$0.00</u>
Culvert Stakes & Markers					
0	stakes	\$0.00			
0	markers	\$0.00			
		<u>\$0.00</u>			
TOTAL CULVERTS					\$0.00

SURFACING-

0+00 to 4+70	350 cy. of	PIT-RUN	@	\$4.65 per c.y.=	\$1,628.26
TOTAL SURFACING					\$1,628.26

SPECIAL PROJECTS

Grade and shape road -	4.70 stations @	\$9.75 per station	\$45.83
Roll subgrade w/ vibratory roller prior to rocking -	4.70 stations @	\$11.00 per station	\$51.70
Grass seed and fertilize -	0.04 acres @	\$180.00 per acre	\$7.77
TOTAL SPECIAL PROJECTS			\$105.29

GRAND TOTAL **\$2,040.18**

SUMMARY OF CONSTRUCTION COST

Sale: WHITE CREEK Road: O to P

Construction - 3+35 stations Improvement - 7+90 stations
0.06 miles 0.15 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00
Widening	0.00 acres @	\$540.00 per acre =	\$0.00
Scattering	1.03 acres @	\$815.00 per acre =	\$841.94
Piling	0.00 acres @	\$905.00 per acre =	\$0.00
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00
TOTAL CLEARING AND GRUBBING			\$841.94

EXCAVATION -

Road Earthwork	0+00 to 7+90	7.9 sta. @	\$65.00 per sta. =	\$513.50
Road Earthwork	7+90 to 11+25	3.4 sta. @	\$100.00 per sta. =	\$335.00

TOTAL EXCAVATION \$848.50

ENDHAUL -

TOTAL ENDHAUL \$0.00

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
		\$0.00			\$0.00
Culvert Stakes & Markers					
0	stakes	\$0.00			
0	markers	\$0.00			
		\$0.00			
TOTAL CULVERTS					\$0.00

SURFACING-	0+00 to 11+25	828 cy. of	PIT-RUN	@	\$3.91 per c.y.=	\$3,237.49
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TOTAL SURFACING \$3,237.49

SPECIAL PROJECTS

Grade and shape road -	11.25 stations @	\$9.75 per station	\$109.69
Roll subgrade w/ vibratory roller prior to rocking -	11.25 stations @	\$11.00 per station	\$123.75
Grass seed and fertilize -	0.72 acres @	\$180.00 per acre	\$130.17
TOTAL SPECIAL PROJECTS			\$363.60

GRAND TOTAL \$5,291.53

SUMMARY OF CONSTRUCTION COST

Sale: WHITE CREEK Road: Q to R

Construction - 0+00 stations Improvement - 8+80 stations
0.00 miles 0.17 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00
Widening	0.00 acres @	\$540.00 per acre =	\$0.00
Scattering	0.61 acres @	\$815.00 per acre =	\$493.94
Piling	0.00 acres @	\$905.00 per acre =	\$0.00
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00
TOTAL CLEARING AND GRUBBING			\$493.94

EXCAVATION -

Road Earthwork 0+00 to 8+80 8.8 sta. @ \$65.00 per sta. = \$572.00

TOTAL EXCAVATION \$572.00

ENDHAUL -

TOTAL ENDHAUL \$0.00

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
	<u>\$0.00</u>		<u>\$0.00</u>

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
	<u>\$0.00</u>		<u>\$0.00</u>

Culvert Stakes & Markers

0 stakes	\$0.00
0 markers	\$0.00
	<u>\$0.00</u>

TOTAL CULVERTS \$0.00

SURFACING-

0+00 to 8+80 492 cy. of PIT-RUN @ \$3.76 per c.y.= \$1,849.57

TOTAL SURFACING \$1,849.57

SPECIAL PROJECTS

Grade and shape road -	8.80 stations @	\$9.75 per station	\$85.80
Roll subgrade w/ vibratory roller prior to rocking -	8.80 stations @	\$11.00 per station	\$96.80
Grass seed and fertilize -	0.36 acres @	\$180.00 per acre	\$65.45

TOTAL SPECIAL PROJECTS \$248.05

GRAND TOTAL \$3,163.57

SUMMARY OF CONSTRUCTION COST

Sale: WHITE CREEK Road: S to T

Construction - 0+00 stations Improvement - 2+45 stations
0.00 miles 0.05 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00
Widening	0.00 acres @	\$540.00 per acre =	\$0.00
Scattering	0.17 acres @	\$815.00 per acre =	\$137.52
Piling	0.00 acres @	\$905.00 per acre =	\$0.00
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00
TOTAL CLEARING AND GRUBBING			\$137.52

EXCAVATION -

Road Earthwork	0+00 to 2+45	2.5 sta. @	\$50.00 per sta. =	\$122.50
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TOTAL EXCAVATION \$122.50

ENDHAUL -

TOTAL ENDHAUL \$0.00

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
<u>\$0.00</u>			<u>\$0.00</u>		

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
<u>\$0.00</u>			<u>\$0.00</u>		

Culvert Stakes & Markers

0	stakes	\$0.00
0	markers	\$0.00
<u>\$0.00</u>		

TOTAL CULVERTS \$0.00

SURFACING-

0+00 to 2+45	145 cy. of	PIT-RUN	@	\$3.85 per c.y.=	\$556.67
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TOTAL SURFACING \$556.67

SPECIAL PROJECTS

Grade and shape road -	2.45 stations @	\$9.75 per station	\$23.89
Roll subgrade w/ vibratory roller prior to rocking -	2.45 stations @	\$11.00 per station	\$26.95
Grass seed and fertilize -	0.10 acres @	\$180.00 per acre	\$18.22

TOTAL SPECIAL PROJECTS \$69.06

GRAND TOTAL \$885.75

SUMMARY OF CONSTRUCTION COST

Sale: WHITE CREEK Road: B to U

Construction - 0+00 stations Improvement - 2+85 stations
0.00 miles 0.05 miles

CLEARING AND GRUBBING -

Side cast	0.00 acres @	\$540.00 per acre =	\$0.00
Widening	0.00 acres @	\$540.00 per acre =	\$0.00
Scattering	0.26 acres @	\$815.00 per acre =	\$213.29
Piling	0.00 acres @	\$905.00 per acre =	\$0.00
Endhaul	0.00 acres @	\$1,500.00 per acre =	\$0.00
TOTAL CLEARING AND GRUBBING			\$213.29

EXCAVATION -

Road Earthwork	0+00 to 2+85	2.9 sta. @	\$65.00 per sta. =	\$185.25
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TOTAL EXCAVATION \$185.25

ENDHAUL -

TOTAL ENDHAUL \$0.00

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
	<u>\$0.00</u>		<u>\$0.00</u>

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
	<u>\$0.00</u>		<u>\$0.00</u>

Culvert Stakes & Markers

0 stakes	\$0.00
0 markers	\$0.00
	<u>\$0.00</u>

TOTAL CULVERTS \$0.00

SURFACING-

0+00 to 2+85	148 cy. of	PIT-RUN @	\$4.16 per c.y.=	\$616.33
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TOTAL SURFACING \$616.33

SPECIAL PROJECTS

Grade and shape road -	2.85 stations @	\$9.75 per station	\$27.79
Roll subgrade w/ vibratory roller prior to rocking -	2.85 stations @	\$11.00 per station	\$31.35
Grass seed and fertilize -	0.18 acres @	\$180.00 per acre	\$32.98

TOTAL SPECIAL PROJECTS \$92.11

GRAND TOTAL \$1,106.99

SUMMARY OF CONSTRUCTION COST

Sale:	<u>WHITE CREEK</u>		Road:	<u>A to V</u>								
Construction -	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="border-bottom: 1px solid black;">0+00</td> <td style="border-bottom: 1px solid black;">stations</td> </tr> <tr> <td style="border-bottom: 1px solid black;">0.00</td> <td style="border-bottom: 1px solid black;">miles</td> </tr> </table>	0+00	stations	0.00	miles		Improvement -	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="border-bottom: 1px solid black;">465+60</td> <td style="border-bottom: 1px solid black;">stations</td> </tr> <tr> <td style="border-bottom: 1px solid black;">8.82</td> <td style="border-bottom: 1px solid black;">miles</td> </tr> </table>	465+60	stations	8.82	miles
0+00	stations											
0.00	miles											
465+60	stations											
8.82	miles											
CLEARING AND GRUBBING -												
Side cast		0.00 acres @	\$540.00 per acre =	\$0.00								
Widening		0.00 acres @	\$540.00 per acre =	\$0.00								
Scattering		0.20 acres @	\$815.00 per acre =	\$163.00								
Piling		0.00 acres @	\$905.00 per acre =	\$0.00								
Endhaul		0.00 acres @	\$1,500.00 per acre =	\$0.00								
			TOTAL CLEARING AND GRUBBING	\$163.00								
EXCAVATION -												
Pullback	459+80 to 460+30	89 cy @	\$1.40 per cy =	\$124.60								
Widening	458+80 to 460+30	80 cy @	\$1.40 per cy =	\$112.00								
Bench for Riprap	413+35 to 413+55	20 cy @	\$1.40 per cy =	\$28.00								
Widening	210+70 to 211+35	22 cy @	\$1.40 per cy =	\$30.80								
Spread and Compact		211 cy @	\$0.35 per cy =	\$73.85								
			TOTAL EXCAVATION	\$369.25								
ENDHAUL -												
Pullback	459+80 to 460+30	89 cy @	\$1.96 per cy =	\$174.85								
Widening	458+80 to 460+30	80 cy @	\$1.96 per cy =	\$157.17								
Widening	210+70 to 211+35	22 cy @	\$1.41 per cy =	\$30.92								
			TOTAL ENDHAUL	\$362.94								
CULVERTS - MATERIALS & INSTALLATION												
	Culverts											
	390	LF of 18"	\$5,752.50	72 LF of 24"	\$1,278.00							
	0	LF of 30"	\$0.00	90 LF of 36"	\$2,365.29							
	0	LF of 42"	\$0.00	0 LF of 48"	\$0.00							
	0	LF of 54"	\$0.00	0 LF of 60"	\$0.00							
			\$5,752.50		\$3,643.29							
	Half Rounds											
	10	LF of 21"	\$114.00	0 LF of 30"	\$0.00							
	0	LF of 36"	\$0.00	0 LF of 42"	\$0.00							
			\$114.00		\$0.00							
	Culvert Stakes & Markers											
	2 stakes		\$16.00									
	16 markers		\$96.00									
			\$112.00									
				TOTAL CULVERTS	\$9,621.79							
SURFACING-												
458+80 to 460+30	33 cy. of	CRUSHED @	\$17.90 per c.y.=	\$590.64								
Spot rock (@ locations marked)	330 cy. of	CRUSHED @	\$15.23 per c.y.=	\$5,024.62								
Fill ditch from 208+10 to 209+20	20 cy. of	PITRUN @	\$7.01 per cy =	\$140.14								
209+20 energy dissipator	10 cy. of	RIPRAP @	\$8.31 per cy =	\$83.07								
0+00 to 136+60	3679 cy. of	CRUSHED @	\$12.71 per c.y.=	\$46,758.94								
413+45 as directed	70 cy. of	RIPRAP @	\$7.90 per c.y.=	\$552.73								
413+45 as directed	30 cy. of	RIPRAP @	\$6.60 per c.y.=	\$197.89								
				TOTAL SURFACING	\$53,348.03							
SPECIAL PROJECTS												
Reestablish ditchline from 54+50 to 55+70 -	0.50 hour @		\$130.00 per hour =	\$65.00								
Construct 175 lineal feet of trapezoidal creek channel to realign creek (57+25)	175 LF @		\$3.25 per LF =	\$568.75								
Place riprap at outfall for energy dissipation @ 78+55 -	10 cy. @		\$8.74 per c.y.=	\$87.44								
Place riprap to block access @ 129+80 -	10 cy. @		\$8.07 per c.y.=	\$80.68								
Place Riprap along back side of ditch (130+60 to 133+75) -	20 cy. @		\$8.03 per c.y.=	\$160.63								
Place pit-run to stabilize embankment @ 144+00 -	30 cy. @		\$7.84 per c.y.=	\$235.23								
Pull ditch and endhaul waste material (213+40 to 215+10) -	1.70 stations @		\$20.00 per station =	\$34.00								
Place pit-run to stabilize embankment @ 221+35 -	30 cy. @		\$9.77 per c.y.=	\$292.99								
Place riprap to protect bridge abutment from scour @ 256+40 -	20 cy. @		\$10.59 per c.y.=	\$211.81								
Onsite riprap to repair rdwy edge @ 355+20 -	1 cy. @		\$15.00 per c.y.=	\$15.00								
Pull ditch and endhaul waste material (410+20 to 413+70) -	3.50 stations @		\$20.00 per station =	\$70.00								
Roll subgrade w/ vibratory roller prior to rocking (0+00 to 136+60) -	136.60 stations @		\$11.00 per station =	\$1,502.60								
Grade and shape road (0+00 to 136+60) -	136.60 stations @		\$17.40 per station =	\$2,376.84								
Roll subgrade w/ vibratory roller prior to rocking (@ locations marked) -	37.55 stations @		\$11.00 per station =	\$413.05								
Grade and shape road (@ locations marked) -	37.55 stations @		\$17.40 per station =	\$653.37								
Mulch all disturbed soil -	1.86 acres @		\$1,000.00 per acre	\$1,858.50								
Grass seed and fertilize all disturbed soil -	1.86 acres @		\$180.00 per acre	\$334.57								
				TOTAL SPECIAL PROJECTS	\$8,960.65							

GRAND TOTAL **\$72,825.66**

PIT RUN ROCK DEVELOPMENT COST SUMMARY

Pit:	PIT-RUN #1	Location:	SE 1/4, NW 1/4, Section 30, T1N, R8W, W.M.
Sale:	WHITE CREEK	Road:	1341 c.y.
Swell:	1.30	Stockpile Base:	c.y.
Shrinkage	1.16	Total Truck Loads:	1341 c.y.
Drill Pct.:	0%	In Place Total:	1032 c.y.

Pit Development					\$520.00
Strip rock:	\$1.50 /cu.yd.	x	1032 cu.yds.	=	\$1,547.69
Load Dump Truck:	\$0.60 /cu.yd.	x	1341 cu.yds.	=	\$804.80
				Subtotal	\$2,872.49

Within Area Move of Large Excavator -					55.07
Within Area Move of Trucks -					7.01
				Subtotal	\$62.07

TOTAL PRODUCTION COSTS	\$2,934.57
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Base Cost= \$2.19 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
C-D	\$3.17	\$0.90	\$2.19	\$6.25	1158	\$7,240.02
E-F	\$3.19	\$0.90	\$2.19	\$6.28	184	\$1,152.63
			Total C.Y.		1341	Sub Total \$8,392.65

TOTAL ROCKING COSTS	\$8,392.65
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PIT RUN ROCK DEVELOPMENT COST SUMMARY

Pit:	<u>PIT-RUN #2</u>	Location:	<u>SE 1/4, NE 1/4, Section 31, T1N, R8W, W.M.</u>
Sale:	<u>WHITE CREEK</u>	Road:	<u>5274 c.y.</u>
Swell:	<u>1.30</u>	Stockpile Base:	<u> c.y.</u>
Shrinkage:	<u>1.16</u>	Total Truck Loads:	<u>5274 c.y.</u>
Drill Pct.:	<u>0%</u>	In Place Total:	<u>4057 c.y.</u>

Pit Development		\$1,300.00
Strip rock:	<u>\$1.50 /cu.yd.</u> x <u>4057 cu.yds.</u>	= \$6,085.93
Load Dump Truck:	<u>\$0.60 /cu.yd.</u> x <u>5274 cu.yds.</u>	= \$3,164.68
Subtotal		\$10,550.61

Within Area Move of Large Excavator -	44.80
Within Area Move of Trucks -	5.70
Subtotal	\$50.50

TOTAL PRODUCTION COSTS	\$10,601.11
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Base Cost= \$2.01 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
G-H	\$0.99	\$0.90	\$2.01	\$3.90	304	\$1,187.67
I-J	\$1.23	\$0.90	\$2.01	\$4.14	1452	\$6,010.21
K-L	\$2.89	\$0.90	\$2.01	\$5.80	1026	\$5,950.24
J-M	\$1.73	\$0.90	\$2.01	\$4.64	315	\$1,459.34
J-N	\$1.74	\$0.90	\$2.01	\$4.65	350	\$1,628.26
O-P	\$1.00	\$0.90	\$2.01	\$3.91	828	\$3,237.49
V-B (Riprap 42+30)	\$1.12	\$2.20	\$2.01	\$5.33	10	\$53.30
I-J (Riprap 0+00)	\$1.32	\$2.20	\$2.01	\$5.53	30	\$166.04
Q-R	\$0.85	\$0.90	\$2.01	\$3.76	492	\$1,849.57
S-T	\$0.94	\$0.90	\$2.01	\$3.85	145	\$556.67
B-U	\$1.25	\$0.90	\$2.01	\$4.16	148	\$616.33
V-B (Ditch fill)	\$0.77	\$0.90	\$2.01	\$3.68	74	\$272.55
A-V (Riprap 413+45)	\$2.39	\$3.50	\$2.01	\$7.90	70	\$552.73
A-V (Pit-run 413+45)	\$2.39	\$2.20	\$2.01	\$6.60	30	\$197.89
Total C.Y.					5274	Sub Total \$23,738.29

TOTAL ROCKING COSTS	\$23,738.29
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PIT RUN ROCK DEVELOPMENT COST SUMMARY

Pit: <u>PIT-RUN #3</u>	Location: <u>SW 1/4, NE 1/4, Section 34, T1N, R9W, W.M.</u>	
Sale: <u>WHITE CREEK</u>	Road: <u>150 c.y.</u>	
Swell: <u>1.30</u>	Stockpile Base: <u>c.y.</u>	
Shrinkage: <u>1.16</u>	Total Truck Loads: <u>150 c.y.</u>	
Drill Pct.: <u>0%</u>	In Place Total: <u>115 c.y.</u>	

Pit Development	\$260.00
Strip rock: <u>\$1.50 /cu.yd.</u> x <u>115 cu.yds.</u> =	<u>\$173.08</u>
Load Dump Truck: <u>\$0.60 /cu.yd.</u> x <u>150 cu.yds.</u> =	<u>\$90.00</u>
Subtotal	<u>\$523.08</u>

Within Area Move of Large Excavator -	44.80
Within Area Move of Trucks -	5.70
Subtotal	<u>\$50.50</u>

TOTAL PRODUCTION COSTS	\$573.58
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Base Cost= \$3.82 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 V (Bridge abutment protection @ 256+40)	\$3.77	\$3.00	\$3.82	\$10.59	20	<u>\$211.81</u>
A to V (Pit-run stabization @ 221+35)	\$3.74	\$2.20	\$3.82	\$9.77	30	<u>\$292.99</u>
A-V (Fill ditch from 208+10 to 209+20)	\$2.28	\$0.90	\$3.82	\$7.01	20	<u>\$140.14</u>
A-V (Riprap energy dissipater @ 209+20)	\$2.28	\$2.20	\$3.82	\$8.31	10	<u>\$83.07</u>
A to V (Pit-run to stabilize embankment @ 144+00)	\$1.82	\$2.20	\$3.82	\$7.84	30	<u>\$235.23</u>
A to V (Riprap along back side of ditch, 130+60 to 133+75)	\$2.01	\$2.20	\$3.82	\$8.03	20	<u>\$160.63</u>
A to V (Riprap to block access @ 129+80)	\$2.04	\$2.20	\$3.82	\$8.07	10	<u>\$80.68</u>
A to V (Riprap energy dissipator at outfall @ 78+55)	\$2.72	\$2.20	\$3.82	\$8.74	10	<u>\$87.44</u>

Total C.Y.	150	Sub Total	\$1,291.99
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TOTAL ROCKING COSTS	\$1,291.99
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CRUSHED ROCK PIT DEVELOPMENT COST SUMMARY

Pit: <u>COMMERCIAL SOURCE</u>	Location: <u>TILLAMOOK COUNTY</u>
Sale: <u>WHITE CREEK</u>	Road: <u>4473 c.y.</u>
Swell: <u>1.30</u>	Stockpile: <u> c.y.</u>
Shrinkage: <u>1.16</u>	Total Truck Loads: <u>4473 c.y.</u>
Drill Pct.: <u>0%</u>	In Place Total: <u>3440 c.y.</u>

Road Brushing: 0 acres @ \$905.00 per acre = \$0.00
 Clear and grub 0 acres @ \$815.00 per acre = \$0.00

0 hours @ \$130.00 per hour = \$0.00

Drill & Shoot: \$2.10 /cu.yd. x 0 cu.yds. = \$0.00
 Push Rock: \$0.60 /cu.yd. x 0 cu.yds. = \$0.00
 Load crusher: \$0.60 /cu.yd. x 0 cu.yds. = \$0.00
 Crushing \$2.30 /cu.yd. x 0 cu.yds. = \$0.00
 Load Dump Truck: \$0.60 /cu.yd. x 0 cu.yds. = \$0.00

Subtotal \$0.00

Purchase Rock from Commercial Source \$34,662.04

\$0.00
 \$0.00
 \$0.00
 \$0.00
 \$0.00
 \$0.00
 \$0.00

Subtotal \$34,662.04

TOTAL PRODUCTION COSTS \$34,662.04

Base Cost= \$7.75 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
V to B	\$9.44	\$1.03	\$7.75	\$18.22	430	\$7,843.22
A to V (458+80 to 460+30)	\$9.25	\$0.90	\$7.75	\$17.90	33	\$590.64
A to V (Spot rock @ locations marked)	\$6.58	\$0.90	\$7.75	\$15.23	330	\$5,024.62
A to V (0+00 to 136+60)	\$3.92	\$1.03	\$7.75	\$12.71	3679	\$46,758.94
					4473	
						Subtotal <u>\$60,217.42</u>

TOTAL ROCKING COSTS \$60,217.42

MOVE-IN CALCULATIONS

Sale: **WHITE CREEK**

LOWBOY HAUL (One Way)		
DISTANCE	ROADWAY	AVE SPEED (MPH)
7.0	Highway	45
7.0	Main Lines (Off Road)	15
1.9	Pulling Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
0	Drill & Compressor	\$0.00		\$46.00	0	0	0	\$0.00	\$0.00
1	Brush Cutter	\$149.33		\$4.00	0	0	0	\$0.00	\$149.33
1	Graders	\$70.32		\$3.65	0	0	0	\$0.00	\$70.32
0	Loader (Small)	\$0.00	1	\$3.55	0	0	0	\$0.00	\$0.00
0	Loader (Med. & Large)	\$0.00	1	\$9.00	0	0	0	\$0.00	\$0.00
1	Rollers & Compactors	\$149.33		\$5.00	0	0	0	\$0.00	\$149.33
0	Excavators (Small)	\$0.00		\$22.00	0	0	0	\$0.00	\$0.00
0	Excavators (Med.)	\$0.00		\$35.50	0	0	0	\$0.00	\$0.00
1	Excavators (Large)	\$318.78	1	\$44.80	0	0.8	0.8	\$35.84	\$354.62
0	Rubber Tired Backhoes/Skidders	\$0.00		\$3.00	0	0	0	\$0.00	\$0.00
0	Tractors (D6)	\$0.00	2	\$7.10	0	0	0	\$0.00	\$0.00
0	Tractors (D7)	\$0.00	2	\$11.30	0	0	0	\$0.00	\$0.00
1	Tractor (D8)	\$294.88	2	\$15.10	0	3.5	3.5	\$52.85	\$347.73
2	Dump Truck (10 cy +)	\$85.37		\$2.85	0	0	0	\$0.00	\$85.37
0	Dump Truck (Off Hiway)	\$0.00	1	\$4.75	0	0	0	\$0.00	\$0.00
0	Water Truck (1500 Gal)	\$0.00		\$2.85	0	0	0	\$0.00	\$0.00
0	Water Truck (2500 Gal)	\$0.00		\$2.85	0	0	0	\$0.00	\$0.00
0	Jaw	\$1,066.00							
0	2-Stage Crusher	\$1,597.00							
0	3-Stage Crusher	\$2,489.00							

TOTAL MOVE-IN COSTS: \$1,156.71

REMOVE CULVERTS FROM STATE LANDS COST SHEET

SALE: WHITE CREEK

Point to Point	Number of Culverts
A to B	3
A to V	9

TOTAL CULVERTS	<u>12</u>
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Load culverts @ 0.25 hrs/culvert =	3.00 hrs
Move Backhoe between culverts =	<u>3.00 hrs</u>
Subtotal loading time =	6.00 hrs
Driving and unloading time =	1.50 hrs
Total project time =	<u>7.50 hrs</u>

15.00 hours labor @ \$33.07/hour =	\$496.05
7.50 hours with Dump Truck @ \$24.46/hour =	\$183.45
7.50 hours with trailer @ \$5.00/hour =	\$37.50
6.00 hours with Backhoe @ \$13.09/hour =	\$78.54

Grand Total	\$795.54
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OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

White Creek

"STEWARDSHIP IN FORESTRY"

1. **Type of Sale:** Clearcut, Recovery
2. **Legal Description:** Sections 29, 30, 31, 32, and 33, T1N, R8W, W.M. Tillamook County, Oregon.
3. **Sale Acreage:** The sale boundaries were plotted on a digital orthophotograph and the acreage was calculated with GIS.

ACREAGES			
Area	Sale	Total	Net
1	77	85	74
2	41	41	39
3	18	17	17
4	13	16	12
5	6	6	6
6	9	11	9
Total	164	176	157

Sale acres: Area within the Timber Sale Boundary signs.

Total acres: Sale acres; plus green tree retention acres outside the sale boundary; less roads and riparian areas classified as Special Stewardship in LMCS inside the sale boundary. For accomplishment reporting - clearcut (regeneration) harvest.

Net acres: less green tree retention, roads, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary. For calculating the advertised volume.

4. **Cruising Procedures:**

A: Cruise Method:

A total of 83 plots were taken in the sale area; 39 in Area 1, 19 in Area 2, 9 in Area 3, 7 in Area 4, 4 in Area 5, and 5 in Area 6. Cruise lines and plots were placed to obtain equal sampling intensities per sale area. All trees and snags were recorded by diameter class. Diameters were measured to the nearest inch, heights to the nearest foot. Trees less than 9" DBH were not sampled. On 31 plots all sample trees were measured and graded. On intervening plots, tree count by diameter and species was recorded. The cruise had a coefficient of variation of 45.9 and a SE% of 5.0 for net board feet/acre.

B: Plot size

A 20 BAF was used for Douglas-fir. A 10 BAF was used for other species and snags. Trees were sighted at 4.5'.

C: Grading System: Douglas-fir was measured and graded to a 6" top favoring 40 foot log lengths using Columbia River rules. Alder was measured to an 8" top and graded camprun.

5. **Computation Procedure:** Plot data was entered into SuperAce for computation of basal area, V-BAR, stand tables and diameters. These data were entered into the Volume Summary Worksheet to compute sale volumes.
6. **Defect and Breakage:** A 5% reduction for defect and breakage was applied to the volume.
7. **Timber Description:** The sale area contains 36 to 55 year old Douglas-fir with scattered hemlock, spruce and patches of alder. This area was burned in the 1933 and 1939 Tillamook fires. The majority of the alder was treated with herbicides about 35 years ago to reduce competition with Douglas-fir. The surviving alder trees have poorly formed crowns and short boles. The Douglas-fir has severe symptoms of Swiss Needle Cast and tree growth has slowed.
8. **Cruiser Names/Dates:** Bob Shaver, John Pine, May 2002.
9. **Revenue Distribution:**
100% FDF
Tax Code: 56
Deed Numbers: 161
99% Rehabilitation Obligated.
10. **Attachments:**
Volume Summary
Logging Plan

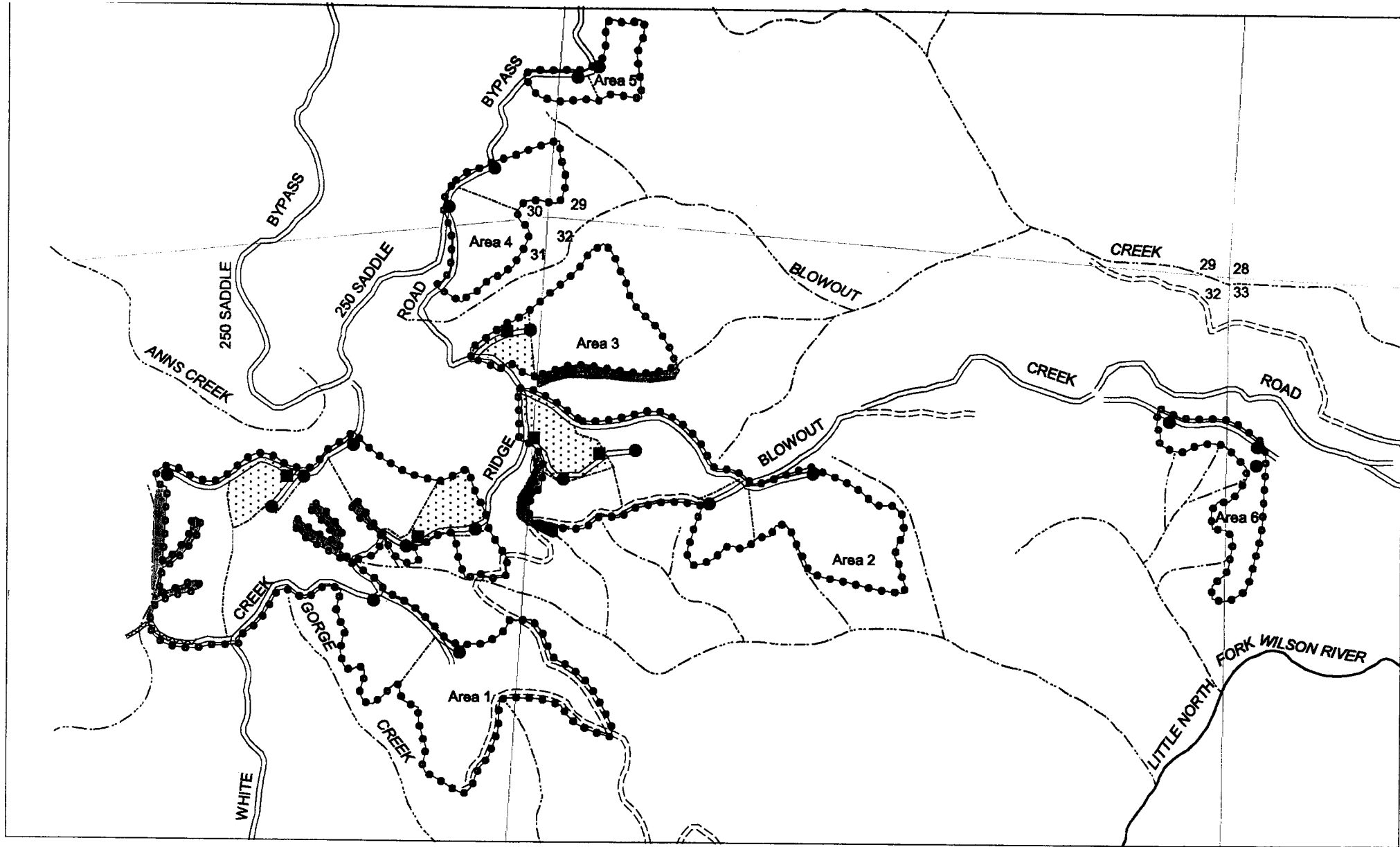
White Creek

Volume Summary

Area 5							
6 acres							
SPECIES	QMD	Basal Area	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	13.2	120	106	12.7	76.2	5%	72
Red Alder	11.3	13	50	0.7	4.2	5%	4
TOTAL							76

Area 6							
9 acres							
SPECIES	QMD	Basal Area	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	11.8	156	63	9.8	88.2	5%	84
TOTAL							84

TOTAL SALE VOLUME 154 net harvest acres				
SPECIES	QMD	MBF	D&B	Net Vol. (MBF)
Douglas-fir	12.2	1273	5%	1209
Red Alder	13.3	78	5%	74
TOTAL		1351		1283



- Cable landing
- Tractor landing
- Cable yarding
- ▨ Ground yarding
- Buffer
- - - Setting boundary
- · · Area boundary
- · · Sale boundary
- Type-F stream
- · - Type-N stream
- == Surfaced road
- - - Unsurfaced road
- State highway
- County road
- Non-project road
- · - Swing road
- - - Abandoned road
- ○ ○ OHV trail

LOGGING PLAN
 Timbersale contract 341-03-25
 White Creek
 Sections 29, 30, 31, 32, and 33
 T1N, R8W, W. M.
 Tillamook County, OR



Area	Acres	
	Sale	Net
1	77	74
2	41	39
3	18	17
4	13	12
5	6	6
6	9	9
Total	164	157

OREGON DEPARTMENT OF FORESTRY

WRITTEN PLAN

WHITE CREEK

Protected Waters: Kilchis, South Fork Kilchis, Sam Downs Creek, type F streams.

Location: Sections 23, 26, 27, 32 and 33, T1N, R9W, W.M. Tillamook County.

Activity: Road improvement and repair, road rocking, Riprap placement and culvert installation within 100 feet of type F stream.

Protection Measures: No in stream activity conducted prior to July 1st or after September 15th without prior approval. Work will be performed only during dry weather periods and low water stream flows. Machine activity in the stream will be kept to a minimum. Water will be diverted around the work area to avoid producing stream sediment. Disturbance of existing vegetation will be kept to a minimum. Waste material will be end-hauled to stable locations marked in the field. All disturbed areas will be grass seeded, mulched to minimize erosion.

Prepared by: Blake Lettenmaier
Road Specialist

Date: January 15, 2002

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OREGON DEPARTMENT OF FORESTRY
WRITTEN PLAN

SALE NAME: **White Creek**

PROTECTED RESOURCE: **No High Risk Sites were identified on the sale areas. If active landslides and slumps, slopes steeper than 80%, headwalls or draws steeper than 70% are found that constitute a High Risk Site, the following protection measures will apply.**

LOCATION: **Portions of Sections 29, 30, 31, 32, and 33, T1N, R8W, W.M., Tillamook County, Oregon.**

ACTIVITY: **Cable yarding across High Risk Sites.**

PROTECTION MEASURES:

YARDING:

- Logs will have at least one end suspended when yarding across high risk sites.
- Soil gouging will be limited to a depth of 1 foot (measured perpendicular to the slope) when yarding across high risk sites.

PREPARED BY: Steve Langer
 Forester, South Unit
 June 25, 2002