

District: Astoria

Date: July 07, 2008

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,030,244.49	\$329,629.10	\$2,359,873.59
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Project Work:	\$(557,985.00)
		Advertised Value:	\$1,801,888.59

7/7/08



"STEWARDSHIP IN FORESTRY"

District: Astoria

Date:

July 07, 2008

timber description

Location: Portions of Sections 16, 17, 20, 21, 28, 29, & 32, T6N, R7W, W.M., Clatsop County,

Oregon.

Stand Stocking:

100%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	20	0	97
Western Hemlock / Fir	18	0	96
Sitka Spruce	32	0	96
Red Cedar	24	0	96
Alder (Red)	16	0	95

Volume by Grade	28	38	48	Camprur	Total
Douglas - Fir	4,377	916	218	0	5,511
Western Hemlock / Fir	2,511	1,213	220	0	3,944
Sitka Spruce	109	51	0	0	160
Red Cedar	1	0	0	0	1
Alder (Red)	0	0	0	794	794
Total	6,998	2,180	438	794	10,410



"STEWARDSHIP IN FORESTRY"

District: Astoria

Date: July 07, 2008

comments: Pond Values Used: 2nd Quarter Calendar Year 2008.

Log Markets: Mist, Clatskanie, Tillamook, Forest Grove.

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$4.50/Gallon

HAULING COST ALLOWANCE
Hauling costs equivalent to \$700 daily truck cost.

Other Costs (with Profit & Risk to be added):
100% Branding and Painting: \$1MBF x 10,410 MBF = \$10,410
Additional log loader piling: 3 Hours x \$85/hr x 12 landings
=\$3,060
Area 2: Use of dump truck to haul slash to waste area 20 hrs. x \$59/hr. = \$1,180
Additional shovel time to load slash - 10 hrs. x \$87.50 =\$875
Burning Slash Piles at Swede Quarry: 0.10 Ac.X\$1,980 = \$198
TOTAL Other Costs (with Profit & Risk to be added) = \$15,723

Other Costs (No Profit & Risk added): Excavator Slash Piling: 115.5 hrs x \$120/hr = \$13,860 Excavator move-in: $$945 \times 2 = $1,890$ TOTAL Other Costs (No Profit & Risk added) = \$15,750

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"STEWARDSHIP IN FORESTRY"

Astoria

Timber Sale Appraisal Rising Tide Sale 341-09-25

Date:

July 07, 2008

logging conditions

combination#: 1

District:

Douglas - Fir

38.00%

Western Hemlock / Fir

38.00%

Sitka Spruce Red Cedar

38.00% 38.00%

Alder (Red)

38.00%

logging system:

yarding distance: Medium (800 ft) Cable: Large Tower >=70 downhill yarding:

Process: Stroke Delimber

tree size:

Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day:

bd. ft / load:

cost / mbf:

\$119.58

machines:

Log Loader (A) Stroke Delimber (A)

Tower Yarder (Large)

combination#: 2

Douglas - Fir

35.00%

Western Hemlock / Fir Sitka Spruce

35.00% 35.00%

Red Cedar Alder (Red) 35.00% 35.00%

varding distance: Short (400 ft)

downhill yarding:

Process: Manual Delimbing

logging system: tree size:

Shovel

Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day:

10.0

bd. ft / load:

4.000

cost / mbf:

\$62.62

machines:

Shovel Logger

combination#: 3

Douglas - Fir

27.00%

Western Hemlock / Fir Sitka Spruce

27.00% 27.00%

Red Cedar Alder (Red) 27.00% 27.00%

yarding distance: Medium (800 ft)

downhill yarding:

logging system: tree size:

Cable: Medium Tower >40 - <70 Process: Manual Delimbing

Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF bd. ft / load:

4,000

loads / day:

8.0

cost / mbf:

\$108.13

machines:

Log Loader (A)

Tower Yarder (Medium)

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"STEWARDSHIP IN FORESTRY"

Astoria

District:

Timber Sale Appraisal Rising Tide Sale 341-09-25

Date:

July 07, 2008

logging costs

Operating Seasons:

3.00

Profit Risk:

14.00%

Project Costs:

\$557,985.00

Other Costs (P/R):

\$15,723.00

Slash Disposal:

\$0.00

Other Costs:

\$15,750.00

Miles of Road

Road Maintenance:

\$3.13

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

Hauling Costs

Species	\$/MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.0
Western Hemlock / Fir	\$0.00	2.0	3.8
Sitka Spruce	\$0.00	1.0	4.5
Red Cedar	\$0.00	2.0	3.8
Alder (Red)	\$0.00	2.0	3.3

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District: Astoria

Date:

July 07, 2008

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas -	Fir					7 -0-7			
\$96.55	\$3.22	\$1.26	\$52.71	\$1.51	\$21.74	\$0.00	\$5.00	\$1.51	\$183.50
Western F	lemlock /	Fir	***						
\$96.55	\$3.26	\$1.26	\$84.02	\$1.51	\$26.12	\$0.00	\$5.00	\$1.51	\$219.23
Sitka Spru	ice								
\$96.55	\$3.26	\$1.26	\$141.91	\$1.51	\$34.23	\$0.00	\$5.00	\$1.51	\$285.23
Red Ceda	7								
\$96.55	\$3.26	\$1.26	\$84.02	\$1.51	\$26.12	\$0.00	\$5.00	\$1.51	\$219.23
Alder (Red									
\$96.55	\$3.29	\$1.26	\$97.69	\$1.51	\$28.04	\$0.00	\$5.00	\$1.51	\$234.85

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$465.34	\$281.84	\$0.00
Western Hemlock / Fir	\$0.00	\$336.45	\$117.22	\$0.00
Sitka Spruce	\$0:00	\$371.81	\$86.58	\$0.00
Red Cedar	\$0.00	\$1,075.00	\$855.77	\$0.00
Alder (Red)	\$0.00	\$650.00	\$415.15	\$0.00



"STEWARDSHIP IN FORESTRY"

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Date:

July 07, 2008

summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	5,511	\$281.84	\$1,553,220.24
Western Hemlock / Fir	3,944	\$117.22	\$462,315.68
Sitka Spruce	160	\$86.58	\$13,852.80
Red Cedar	1	\$855.77	\$855.77
Alder (Red)	794	\$415.15	\$329,629.10

Gross Timber Sale Value

Recovery:

\$2,359,873.59

Prepared by: Ty Williams

Phone: 503-325-5451

SUMMARY OF ALL PROJECT COSTS

SALE NAME:	Rising Tide		_		
NEW CONST	RUCTION:				
Project No. 1	Road segment	Length/Sta		Cost	
Dirt Roads	1A-1B & 1C-1D.	24.25		\$8,479	
Surfaced Roads	A-B, 2A-2B, 3A-3B,	37.0	•	\$33,785	
	4A-4B, 4C-4D, 4E-4F,		_		
	4G-4H, and 4I-4J.		-		
Project No. 2	K-L	5.1	- -	\$10,075	
Project No. 3	<u>C-D, E-F, G-H, & I</u> -J.	69.5	<u>.</u> -	\$108,875	
	TOTALS	135.85	2,6 mi.	• .	\$161,214
ROAD IMPRO	VEMENT:				
	Road segment	Length/Sta		Cost	
Project No. 1	[1-12, 12-13, 15-16,	381.89		\$108,992	
	I7-I8, I9A-I9, I9-I10		-		
	117-118, & 119-120.		- -		
Project No. 3	<u>19-111, 112-113, 114-115,</u>	74.5	- -	\$58,410	
	<u>& (15-)16.</u>	·	-		
	TOTALS	456.34	8.6 mi.		\$167,402
SPECIAL PRO	DJECTS:				
Project No. 4	Tidewater Loop Quarry Develo	pment and F	Rock Crushi	ng _	\$122,250
Project No. 5	Road Vacating			-	\$52,658
Project No. 6	Roadside Brushing			_	\$28,191
Project No. 7	Stream Enhancement			_	\$5,432
Project Work I	Road Maintenance			_	\$7,608
MOVE IN:	<u>Equipment</u>			<u>Cost</u>	
	Dozer (D8) x 3		-	\$3,600	
	Dump Trucks (12 cy x 4)		-	\$556	
	Dump Trucks (20 cy x 3)		-	\$492	
	F E Loader (C966) Grader (14G)		-	\$664 \$664	
	Vibratory Roller		-	\$664	
	Vibratory Grid Roller		-	\$664	
	Air Track Drill		- -	\$138	
	Brush Cutter		_	\$274	
	Rubber Tire Skidder (C518)		=	\$612	
	Water Truck (2,500 gallon)		-	\$162	
	Excavator (C330) x 3		-	\$3,600	040.000
	TOTAL				\$13,230



Project No. 1

SALE NAME: ROAD:	Rising Tide 1A to 1B (18	8.0) and 10	Rising Tide (Field Design) 1A to 1B (18.0) and 1C to 1D (6.25)	(Dirt)	EW CONS	EW CONSTRUCTION: IMPROVEMENT:	24.25	24.25 STATIONS STATIONS	0.46	0.46 MILES 0.00 MILES
CLEARING & GRUBBING	SRUBBING					4		7.0		
	Scotter Outside of DAM	toide of DA		Acres/amount	× >	Kate 442 00	1 1	COSI \$2 542 40		
	ocaliei oc	A lo opici	•	2:7	<	\$1,14C	1	(5) (5) (5)		
					_		_			
SUB TOTAL FOR CLEARING & GRU	OR CLEARII	NG & GRU	BBING						\$2,512	
EXCAVATION										
	Material			Sta/amount	×	Rate	H	Cost		
	Common (24.25	×	\$162.00	11	\$3,928.50		
	Landing Construction	onstruction	\$\$/landing	4	×	\$332.00	H	\$1,328.00		
	Sta. 16+25 (1A to 1B)	(1A to 1B)	, 1B,							
	Sta. 3+40 ((1C to 1D),	1D.							
					-					
					_					
SUB TOTAL FOR EXCAVATION	OR EXCAVA	TION							\$5,257	
CULVERT MATERIALS AND INSTAL CULVERT MATERIALS AND INSTAL	TERIALS AN Location	ID INSTALI Dia/type	LATION Lineal ft.	Rate	Cost	No. bands	Rate	Cost		
							•			

						- -				
				Description		Quantity	Rate	Cost		
	Other/miscellaneous:	ellaneous:	Grade 14' outslop			24.25	\$15.67	\$380.00		
			Waterbar and block	ock		24.25	\$13.63	\$330.53		
SUB TOTAL FOR CULVERT MATERI	OR CULVER		ALS & INSTALLATION	NOIL					\$711	
							Subtotal		¢8 479	

AME	Rising Tide (Field Design)		(Surfaced)	NEW CO	NEW CONSTRUCTION:	8.7	8.75 STATIONS	0.17 MILES
ROAD: 3A-3 4G	3A-3B (1.7), 3C, 4C-4D (1.6), 4E t 4G to 4H (2.3), and 4I to 4J (1.4)	to 4F (1.75),		=	IMPROVEMENT:		STATIONS	0:00 MILES
CLEARING & GRUBBING	BING		tal located on A	;	-	,	+000	
	Method		Acies/allibulii	×	Late 1, 1, 10, 00	ı	COSI	
SCB	Scatter Outside of R/W		8.0	×	\$1,142.00	11	\$913.60	
SUB TOTAL FOR C	SUB TOTAL FOR CLEARING & GRUBBING				-			\$914
EXCAVATION							-	
	Material		Sta/amount	×	Rate	13	Cost	
S	Common (Drift Earth up to 200') \$\$/sta	\$\$/sta.	8.75	×	\$162.00	II	\$1,417.50	
Lan	Landing Construction \$\$/landing		5	×	\$332.00	II	\$1,660.00	
3B,	3B, 3C, 4D, 4F, and 4H							
SUB TOTAL FOR EXCAVATION	XCAVATION							\$3.078
CULVERT MATERI	CULVERT MATERIALS AND INSTALLATION				-			
	Location Dia/type	Lineal ft.	Rate	Cost	No. bands	Rate	Cost	
				\$0.00	•			
				\$0.00				
				\$0.00				
	_				-		-	
						í	•	
ŧ	Other/miscellaneous:		Description		Quantity nrs	Zare	Cost	
					_		_	
SUB TOTAL FOR C	SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION	STALLATION						0\$
						Subtotal		\$3,991

0.54 MILES	0.00 MILES
28.25 STATIONS	STATIONS
NEW CONSTRUCTION:	IMPROVEMENT:
Rising Tide (Designed Roads)	A to B (3.7), 2A to 2B (.75), and 4A to 4B (23.8)
Rising Tide	A to B (3.7), 2A to 2
SALE NAME:	ROADS:

CLEAKING & GRUBBING					
Method	Acres/amount		Rate	11	Cost
Scatter Outside of R/W	1.1	×	\$1,142.00	11	\$1,256.20
SHE TOTAL FOR CLEARING & GRIBBING					

EXCAVATION						
Material	Cy/amount/station		Rate	11	Cost	
Common drift excavation \$\$/cy	1,059	×	\$1.50		\$1,588.50	
Embankment comapaction \$\$/cy	1,279	×	\$0.60	[]	\$767.40	
Truck End Haul	856	×	\$3.40	ıı	\$2,910.40	
Cut Slope Rounding	6	×	\$37.00	11	\$333.00	
Wast material compaction	856	×	\$0.30	ıı	\$256.80	
Road prism drilling and shooting (2A to 2B)	200	×	\$5.80	"	\$2,900.00	
Landing Construction 2B, Sta 4+30 (4A-4B), and Sta 9+25	9+25					
(4A-4B),	ო	×	\$332.00	II	\$996.00	
SUB TOTAL FOR EXCAVATION						\$9,752

Location	n Dia/type	Lineal ft.	Rate	Cost	No. bands	Rate	Cost	
				\$0.00				
				\$0.00				
				\$0.00				
				\$0.00				
				\$0.00				
				\$0.00			•	
				\$0.00				
				\$0.00			*****	
			Description	•	Quantity	Rate	Cost	
Other/m	Other/miscellaneous:	Install Gate at Point B:	Excavator		4	\$138.00	\$552.00	
			Labor		4	\$37.00	\$148.00	
Culverts	Culvert stakes & markers:						\$0.00	
S INTERIOR TO THE STATE OF THE	COT MATERIAL & 9	WOLTA! LATION						\$700
SOD IOIAL PONCOLV		X III O I VIII VIII VIII VIII VIII VIII						3

Project No. 1 New Road Construction

Perior P		SALE NAME:	Rising Tide	0 130 07 07 10	AC (35) OC 4	ř.	NEW CO!	NEW CONSTRUCTION:	61.25	61.25 STATIONS	1.16 MILES	MILES	
Subgrade prepty Subgrade prepty Subgrade prepty Subgrade prepty Subgrade prepty Subgrade companion S		ROAD:	4A-4B (23.8), 4C-4D	(1.6), 4E-4F (1.75)	4G-4H (2.3), 4	35 (1.7), -4J (1.4)		TACVEIMENT.	200	Significan	200		
Page	SURFACING	S. Proposition of the state of		Description					Stations/ amount	>	Rate/	Cost	
Singrade Compaction State		onnôi ana hi ah	Grade, Shape and	Ditch 16					37.00	×	\$21.20	\$784.40	
Population Pop			Subgrade Compac	ction					37.00	×	\$17.24	\$637.88	
Part Steel	ROAD SEGMENT	A-8			POINT	TO POINT	Sta. t	o Sta.				•	
Pock Size				Depth of		4-B	0+00 to	03+70	TOTAL	Rate/	ţ		
Annaly Controlled Control	Application	Rock Size		Rock	nioA	ne (CY)	Nun	nber	VOLUME	Sta./	ì		
72Organized A-B 10 station 3-A station 3-D station		and Type	Location	(inches)	‱.	#	-		(25)	amr.	7010		
Table Controlled Controll	Base Rock	4"-0" Crushed	A-8	10	station	40	Stations	3.70	7007	20.03	9/01		
Cartering Cart	Traction Rock	1 1/2"-0" Stockpile	0+00 to 3+70	2	station	11	stations	3.70	4.	52.0	54.45		
Total	Turnout	1 1/2"-0" Stockpile		2	turnout	20	turnours	-	OL PE	93.51	CEA		
24.2B Polyth of State State Polyth of State State Foot State Foot State State Cost Acade Cost Acade Cost State) urmout	4 -0 Crusned		ء اع	Incluin	47	turiouts	-	177	5.5	100	6906	
2A.2B Powner of the control Powner of the control of t	Total Rock for Road &			A-8					2/2			2962	
Rock Size Poption of TS Strain COVIDINE Strain Covid Strain Strain of Type Covid Strain Covid Strain Covid Strain Strain of Type Covid Strain Covid Strain Strain of Strain Covid Strain Covid Strain Strain of Type Strain of Type Strain of Type Strain of Type	RCAD SEGMENT	2A-2B			POINT	TO POINT	Sta. c	o Sta.					
Pock Size Pock Size Point Pock Size Point Pock Size Pock Size Point				Depth of	2.	4-2B	0+00 to	o 0+75	TOTAL	Ratei	Cost		
Total	Application	Rock Size	:	Rock	NoV	me (GY)	Nun	ıber	VOLUME	Sta./			
Columbia 274 24 24 24 24 24 24 2		and Type	Location	(inches)	883—		0	2	100	49.51	475		
6-Ur Pit-run 2B NA landing 80 landings 1 50 \$3.51 \$17B 84-3B Location Depth of control of cont	base Rock	1"-O" Charbaile	27-47	0 6	innetion	24	inctions	- T	24	\$3.63	\$87		
\$4.3B POINT TO POINT \$51.4 to \$1.9 to \$1.0 to	ounction.	alldwools of 1	Ç 6	NIA	Palond	1,00	Papalage		202	A3.54	#176		
Sta.5B POINT TO POINT Sta. to Sta. Cost Cost Rock Size Popth of Front (inches) POINT TO POINT CHOD to 1+70 TOTAL (CY) Rafe (CY) Rafe (CY) Rafe (CY) Rafe (CY) Sta. for Sta. Sta. for Sta. for Sta. COLUME Sta. for S	T-4-1 Dook for Dood 8		5 D	AC VC	Idiidiig	8	landings	_	8 8	2	2	887	
Fock Size	I OTHE ROCK TO! ROAD	. 8		77.47	11.00		* ***	770	3			2	
Proceedings	ROAD SEGMEN!	3A-3B			Z Y	- E	31a. t	o ota:		:			
Rock Size Rock Size Volume (CY) Number VOLUME Station				Depth of	ĸ	q-3B	0+00 to	0.1+70	IOIAL	Kate	Cost		
Control of the cont	Application	Rock Size		Rock	Volu	me (CY)	Nun	nber	VOLUME	Sta./			
Columbia	0	and Lype	Location	(incines)	≋	% [O Charles		217	44 10 €4 10	\$463		
G*-O* Pit-run 3B N/A landing 80 landings 1 215 \$4.19 \$335 4A-4B Point To Point State to Sta TO/AL Rate \$4.19 \$335 4A-4B Point To Point AA-4B O+00 to 23+80 TO/ALME Rate State Cost Rock Size Execution (Inches) Point To Point Minimise Avoid Mi	Base Rock	UDI-III 0- 0	02-AC	2 (Stateon	8 2	TA's	2 -	20	54.15	\$101		
4A-4B POINT TO POINT Star to Star 215 Total Reck Size Rock Size Point of Crushed Point TO Point	1 uin-Around	IIII-IIL 0-0	38	NIA	Cipael	08	Springe	-	1 &	\$4 19	\$335		
4A-4B POINT TO POINT Star to Star. TOTAL Rate/star Cost Rock Size and Type Location (Inches) Volume(CY) Number Star/star Cost 1**-0" Crushed 4A-4B 10 stations 53.51 \$4.511 1**-0" Crushed 4A-4B 10 turnout 13 stations 23.80 1.285 \$3.51 \$4.511 1**-0" Crushed 2 turnout 10 turnout 24 turnouts 3 30 \$3.51 \$453 1**-0" Crushed 4B, 4C, 4E, 10 turnout 24 turnouts 3 72 \$3.51 \$421 1**-0" Crushed 4B, 4C, 4E, 10 junction 24 \$3.51 \$421 4**-0" Crushed 4G, 4I 10 junction 24 \$3.51 \$421 6**-0" Pit-run 4+30, 9+25 N/A landings 50 landings 2 100 \$4.19 \$419	Total Book for Bood S		3	34.3R	Billiplier	3	- Garana	-	2/15	2		688	
Rock Size	DOM NOCK IN TOWN			7000	TIMOR	TO COMIT	4 613	e Sta					
Rock Size Fock Size Volume GN Per (Inches) Volume GN Per (Inches) Volume GN Per (Inches) Cost Cost 4"-0" Crushed 4A-4B 10 station 54 stations 54 stations 54 \$3.51 \$4,511 7"-0" Stockpile 0+00 to 23+80 2 station 13 stations 23.80 309 \$3.51 \$1,086 7"-0" Stockpile 0+00 to 23+80 2 turnout 10 turnout 24 turnouts 3 30 \$3.51 \$105 1"-0" Crushed 4B, 4C, 4E, 10 10 TA 24 TA's 1 24 \$3.51 \$84 1"-0" Crushed 4B, 4C, 4E, 10 junction 24 junctions 5 120 \$3.51 \$421 6"-0" Pit-run 4+30, 9+25 N/A landing 50 landings 2 100 \$4.19 \$419	NOAD GOORIEN	GENT		Danth of		0.4R	0+U	23+R0	TOTAL	Pate/			
Procession (inches) perm perm perm perm perm perm perm perm		Dank Star		Post I	1 traite	ma ICVI	Menn	other	VOLUME	Staf	Cast		
TC. Crushed 4A-4B 10 station 54 stations 23.80 1.285 \$3.51 \$4,511 1.2-C* Stockpile 0+00 to 23+80 2 station 13 stations 23.80 309 \$3.51 \$1,086 1.2-C* Stockpile 2 turnout 24 turnouts 3 72 \$3.51 \$106 1*-O* Crushed 4B, 4C, 4E 10 TA 24 TA's 1 24 \$3.51 \$84 1*-O* Crushed 4B, 4C, 4E 10 junction 24 junctions 5 120 \$3.51 \$420 6*-O* Pit-run 4+30, 9+25 N/A landing 50 landings 2 100 \$4.19 \$419	Application	and Type	Location	finchest	nic.	nic (w.)	C .	31	(67)	amt.			
??O* Stockpile O+O0 to 23+80 2 station 13 stations 23.80 309 \$3.51 \$1.086 ??O* Stockpile 2 turnout 10 turnout 24 turnouts 3 72 \$3.51 \$105 4"-O" Crushed 4B, 4C, 4E, 10 TA 24 TA's 1 24 \$3.51 \$84 4"-O" Crushed 4B, 4C, 4E, 10 junction 24 junctions 5 120 \$3.51 \$423 6"-O" Pit-run 4+30, 9+25 N/A landing 50 landings 2 100 \$4.19 \$419	Base Rock	4"-0" Crushed	4A-4B	10	<u></u>		stations	23.80	1,285	\$3.51	\$4,511		
12"-O" Stockpile 2 turmout 10 turmouts 3 30 \$3.51 \$105 4"-O" Crushed 4B, 4C, 4E, 10 TA 24 TA'S 1 24 \$3.51 \$84 4"-O" Crushed 4B, 4C, 4E, 10 Junction 24 Junctions 5 120 \$3.51 \$84 6"-O" Pit-run 4+30, 9+25 N/A landing 50 landings 2 100 \$4.19 \$419	Traction Rock	1 1/2"-0" Stockpile	0+00 to 23+80	2	station	13	stations	23.80	309	\$3.51	\$1,086		
1*-O" Crushed 4B, 4C, 4E, 4C, 4E, 4C, 4E, 4D 10 tumout 24 tumouts 3 72 \$3.51 \$253 1*-O" Crushed 4B, 4C, 4E, 4D, 9+25 10 junction 24 \$3.51 \$84 1*-O" Crushed 4G, 4I 10 junction 24 \$3.51 \$421 6*-O" Pit-run 4+30, 9+25 N/A landing 50 landings 2 100 \$4.19 \$419 4A-4B 1941 1941 1941 1941 1941 1941	Turnoute	1 1/2"-0" Stockpile	╀	2	turnout	10	turnouts	3	30	\$3.51	\$105		
1*-O* Crushed 4B, 4C, 4E, 4C, 4E, 4C, 4E, 4I 10 TA 24 TA's 1 24 \$3.51 \$84 1*-O* Crushed 4B, 4C, 4E, 4I 10 junction 24 junctions 5 120 \$3.51 \$421 6*-O* Pit-run 4+30, 9+25 N/A landing 50 landings 2 100 \$4.19 \$419 4A-4B 4A-4B 1941 1941 1941 1941 1941	Turnoute	4"-0" Crushed		10	turnout	24	turnouts	6	72	\$3.51	\$253		
4°-0" Crushed 50 Iandings 2 100 \$4.19 \$419 6"-0" Pit-run 4+30, 9+25 N/A Ianding 50 Iandings 2 100 \$4.19 \$419	Turn-Arounds	4"-0" Crushed		10	TA	24	TA's	-	24	\$3.51	\$84		
6"-0" Pit-run 4+30, 9+25 N/A landing 50 landings 2 100 \$4.19 \$419 \$419 419	Junction	4"-0" Crushed		10	junction	24	junctions	5	120	\$3.51	\$421		
4A-4B	Landing	6"-0" Pit-run	4+30.9+25	N/A	anding	20	landings	2	100	\$4.19	\$419		
	Total Rock for Road S			4A-4B	3				1.941			\$6,880	

ROAD SEGMENT	4C-4D			TOP OF THE	POINT	Sta. to Sta.	Sta					
			Depth of	4C-4D	4D	0+00 to 1+60	1+60	TOTAL	Rate/	tic		
Annitonian	Rock Size		Rock	Volume (CY)	(CX)	Number	ber	VOLUME	Sta./	į		
Application	and Type	Location	(inches)	pet		of		(63)	amt.			
Base Rock	6"-0" Pit-run	4C-4D	12	station	65	stations	1.60	104	\$4.19	\$436		
Landing	6"-0" Pit-run	4D	N/A	landing	50	landings	1	90	\$4.19	\$210		
Total Rock for Road Segment	gment:		4C-4D					154			\$645	
ROAD SEGMENT	4E-4F			POINT TO POINT	2 POINT	Sta. to Sta.	Sta					
			Depth of	4E-4F	4F	0+00 to 1+75	1+75	TOTAL	Rate/	1		
	Rock Size		Rock	Volume (CY)	ECX1	Number	ber	VOLUME	Sta.!	Local		
Application	and Type	Location	(inches)	bed		of		(60)	amt			
Base Rock	6"-0" Pit-run	4E to 4F	12	station		stations	1.75	114	\$4.19	\$477		
Landing	6"-0" Pit-run	2F	N/A	landing	20	landings	_	20	\$4.19	\$210		
Total Rock for Road Segment:			4E-4F					164			\$686	
ROAD SEGMENT	4G-4H			POINT TO POINT	POINT	Sta. to Sta.	Sta.				-	
			Depth of	4G-4H	4H	0+00 to 2+30	2+30	TOTAL	Rate/			
	Rock Size		Rock	Volume (CY)	(CC)	Number	ber	VOLUME	Sta./	ison		
Application	and Type	Location	(inches)	per		ţ		(3)	amt.			
Base Rock	6"-0" Pit-run	4G-4H	12	station	65	stations	2.30	150	\$4.19	\$626		
Turn-Arounds	6"-0" Pit-run		12	TA	24	TA's	1	24	\$4.19	\$101		
Landing	6"-0" Pit-run	2F	N/A	landing	80	landings	1	80	\$4.19	\$335		
Total Rock for Road Segment	gment:		4G-4H					254			\$1,062	
ROAD SEGMENT	1419 1419			POINT TO POINT	POINT	Sta. to Sta.	.Sta.					
			Depth of	∩4-l4 	f†	0+00 to 1+40	1+40	TOTAL	Rate/	, in		
Application	Rock Size	Posttion	Rock	Volume (CY)	(CY)	Number	mber	VOLUME	Sta./	į		•
Base Rock	6"-0" Pit-run	41-4	12	station	65	stations	1.40	91	\$4.19	\$381		
Total Rock for Road Segment:			41-47					91			\$381	
		Processina:		Description					No.sta	Rate/sta	Cost	
		,	Water, Process &	Compact Crush	& Compact Crushed Rock:(2 lifts)				27,50	\$48.23	\$1,326	
			Water, Process & Compact Crushed Rock: (2nd lift)	Compact Crush	ned Rock:(2nd lift	û			27.50	\$48.23	\$1,326	
			Process traction r	rock					27.50	\$48.23	\$1,326	
			Compact Pit run F	Rock					9.5	\$50.55	\$480	
	SUB TOTAL FOR SURFACING	FACING										\$17,485

SPECIAL PROJECTS			
	Description	Cost	
	Seed and Mulch Waste Area 0.3acresx\$1000	\$300	
	Straw 1acresX\$10/bale	\$300	
SUB TOTAL FOR SPECIAL PROJECTS			\$600
GRAND TOTAL			\$33,785

Jasen McCoy Compiled By:

Date: 03/31/2008

	: Rising Tide			•	NEW CO	NSTRUCTION:	5.10	STATIONS	0.10 MI
AD:	Tidewater Roa	d		-	I.F	MPROVEMENT:		STATIONS	MI
NTS:	KtoL								
EARING 8	GRUBBING			1.0		l Data I	<u> </u>	01	
	Method Scatter outside			Acres/amount 0.53	X	Rate	= =	Cost \$605.26	
	Scaller culside	OI R/VV		0.53	x x	\$1,142	<u> </u>	\$000.20	
				+	X		<u> </u>		
					^		- L		
R TOTAL	FOR CLEARING	2 & GRUBBIN	ıc						\$605
TOTAL	FOR OLDARIN	& GKODDII							Ψ000
AVATIO	N								
	Materia	1		Cy/amount	x	Rate	= I	Cost	
	Drift Common		fills	418	X	\$1.50	= 1	\$627.00	
	Drift Common			129	x	\$1.50	=	\$193.50	
	24"-6" free dra			206	x	\$9.16	=	\$1,886.96	
	Embankment (624	x	\$0.60	. = 1	\$374.40	1
	Sidecast Pullba		sta)	1.20	x	\$309	=	\$370.80	
	15' ditch at out				x	\$138	=	\$69.00	1
				115	x	\$1.90	=	\$218.50	
	Utilize salvage	d aggregate a	s Sub Reinf.	115	x	\$1.82	=	\$209.30	1
	Geotextile 6 1/	2 oz woven x	16' wide	180	x	\$1.50	=	\$270,00	
	Place fill armor	and free drain	n material (hrs)	4	x	\$138	=	\$552.00	
					x		=		
TOTAL	EOD EYCAVAT	ON			*				\$4,771
TOTAL	Aggregate Salvage (1.50 sta) Utilize salvaged aggregate as Sub Re Geotextile 6 1/2 oz woven x 16' wide Place fill armor and free drain materia CR EXCAVATION TERIALS AND INSTALLATION Dia/type Lineal ft Re 18 40 \$17								φ4,771
VEDT M	ATEDIAL C AND	INICTALLATI	ON						
ocation		Itilize salvaged aggregate as Sub Rei Sectextile 6 1/2 oz woven x 16' wide Place fill armor and free drain material PREXCAVATION ERIALS AND INSTALLATION Dia/type Lineal ft Rat 18 40 \$17.		Cost	Location	Dia/type	Lineal ft.	Rate I	Cost
1+03				\$705.60	Location	Dia/type	Littedial	Rate	Cost
2+60				\$705.60					
2100	10	40	\$17.04	ψ/03.00				-	
	+	TERIALS AND INSTALLATION Dia/type Lineal ft. Rate 18 40 \$17.6							
		FERIALS AND INSTALLATION Dia/type Lineal ft Rate 18 40 \$17.6						*	
		 	+						
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		<u> </u>	+						
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		,							
				Description		Quantity	Rate	Cost	
	Other/miscella	neous:		Description		Quantity	Rate	Cost	
	Other/miscella	neous:							
	Other/miscella Culvert stakes		2 1/2" x 6' C	Description arsonite post (Inst	alled)	Quantity	Rate \$18.00	Cost \$36.00	
			2 1/2" x 6" C		alled)				
		& markers:		arsonite post (Inst	alled)				\$1,447

Subgrade prep:	Grade, Shape Subgrade Cor						amount 5.10	×	sta/amt \$21.20	Cost \$108,12	
			10				0.10	X	1 321.20 L	φ (UO, 1.2.	
	Subgrade Co.	трасиоп					5.40		647.04	607.00	
							5.10	x	\$17.24	\$87.92	
KtoL			POINT TO		Sta. to						
		Depth of	K to		0+00 to		TOTAL	Rate/	Cost		
Rock Size		Rock	Volume		Numi		VOLUME	Sta.J		I	
and Type	Location	(inches)	per		ia .		(CY)	amt.	2005	I	
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	-	-4	curve	10/4	cuives			\$5.14 *	*	1	
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		<u> </u>						ФЭ. 10	\$9∠	\$2.106	
		V IO F	POINT TO	POINT	Sta to	Sta	140			φ2, 100	
•		Death of	1011110	2.0041.403.000			TOTAL	Ratel		i	
Bock Site			Voluma	(CV)	Name	ASP.			Cost	l	
	Location									i	
						<u> </u>			\$0	i	
			station		stations		0			i	
-							ŏ				
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		N/A	TA		TA's	·	Ö		\$0	l	
•		N/A	junction		junctions		0		\$0	i	
ent:		0					0			\$0	
0			POINT TO	POINT	Sta. to	Sta.				i	
		Depth of						Rate/	Cost	l	
Rock Size		Rock	Volume	(CY)				Sta.J	3030	i	
and Type	Location	(inches)			***************************************		(CY)	amt		l	
										i	
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			Landing		Landings				\$0	j	
ent:		0								, \$ 0	
	D		Description				1 4 66 L	Nio oto	1 Detector	l Coot	
	riocessing:	Mater Dre		20t 4" ()"	Cruehod (hea	lifte\:					
fron draining roots											
iree draining rock		vvales, Pro	cess & Comp	ACL I TO	Crusned (drie	milj.	<u> </u>	0.10	340.23	⊅ 240	
			949.gs	AT OT	42.gg			Enfail	<u> </u>		
SUB TOTAL FOR	SURFACING					<u> </u>			i		\$3
OOD TOTAL TOT	TOOK ASING		2.0	020				1-10			
SPECIAL PROJE	ECTS										
			D _f	escription			1	Cost			
			Seeding and	Mulching	i			\$211.00	i		
					-				,		
		'							•		
SUB TOTAL FOR	R SPECIAL PRO	OJECTS									5
	 										\$3
								Subtota	al of Clearing,	Exc.,Culv.	\$6
GRAND TOTAL											\$10,
	4"-0" Stockpile 4"-0" Stockpile 4"-0" Stockpile 1"-0" Stockpile 1"-0" Stockpile 1"-0" Stockpile 1"-0" Stockpile 24"-6" Riprap 24"-6" Riprap 24"-6" Riprap ent: C Rock Size and Type ent: C Rock Size and Type ent: Sub TOTAL FOR SPECIAL PROJE	4"-0" Stockpile 4"-0" Stockpile 4"-0" Stockpile 1"-0" Stockpile 1"-0" Stockpile 1"-0" Stockpile 1"-0" Stockpile 24"-6" Riprap 24"-6" Riprap 24"-6" Riprap 24"-6" Riprap ent: 0 Rock Size and Type Location ent: Processing: free draining rock SUB TOTAL FOR SURFACING SPECIAL PROJECTS	#"-0" Stockpile 10 10 4"-0" Stockpile 10 10 4"-0" Stockpile 10 10 11"-0" Stockpile 4 4 1"-0" Stockpile 4 4 1"-0" Stockpile 4 4 1"-0" Stockpile 4 4 24"-6" Riprap 24"-6" Riprap 24"-6" Riprap 24"-6" Riprap 24"-6" Riprap 24"-6" Riprap 4 4 4 4 4 4 4 4 4	4"-0" Stockpile	4"-0" Stockpile	4"-0" Stockpile	4"-0" Stockpile	4"-0" Stockpile	4"-0" Stockpile	4"-0" Stockpile	#**G** Stockpile

SALE NAME: ROAD:	Tidewater Loop)	-		NSTRUCTION: _ MPROVEMENT: _		STATIONS	0.27	MILES
POINTS: CLEARING &	C-D (Project N	(0, 3)								1
LEARING &	Method			Acres/amount	x	Rate	=	Cost		
	Scatter outside		\$/ac\	1.40	x	\$1,142.00	=	\$1,598.80		
	ocalter outside	TIGHT OF WAY	φιασχ	1.40	x	Ψ1, 142.00	=	Ψ1,330.00		
				 	x		=			
				<u> </u>	^		_			
SUB TOTAL I	FOR CLEARING	& GRUBBIN	ıg						\$1,599	
OD TOTAL	ORCELLATIO	G GINOLDIII							Ψ1,000	_
XCAVATION	J									1
	Material			Cy/amount	x	Rate	=	l Cost		1
	Common Drift t	o Fills < 50%	slopes (\$/cv)	1,710	x	\$1.50	=	\$2,565.00		
	Common Haul			170	x	\$1.60	=	\$272.00		
	Embankment C			1,880	x	\$0.60	=	\$1,128.00		1
	Cut slope round		,	6.5	x	\$37.00	=	\$240.50		
	Develop Stream		/h.r.)	1	x	\$138.00	=	\$138.00		1
	-1 hour large			'	x	\$100.00	=	 		1
	- i nour large	C CAUGITAIOI			x		=			l
	End-haul to wa	eto area /¢/e		680.00	X	\$1.60	=	\$1,088.00		l
				680.00		\$0.30	_	\$204.00		1
	Waste material	compaction	(\$ /69)	600.00	X	\$0.50	_	\$204.00		1
	786-1		-1- 44:40)	1	X	\$30.00	- =	\$30.00		į .
	Waterbar acros	ss spur road (sta 14+10)	1	x	\$30.00	=	\$30.00		ļ l
UB TOTAL I	FOR EXCAVATE	ON							\$5,666]
NUMBER TRA	TERIALS AND	INCTALLATI	ON							1
				I Cost II	Location	I Dioffuno I	Lincal #	l Boto I	Cont	1
Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft	Rate	Cost	1
4+82	24" CPP	40	\$24.64	\$985.60				<u> </u>		1
9+20	72" ALCSP	55		\$9,622.00						4
	12 gauge		447.04	4705.00						4
11+00	18" CPP	40	\$17.64	\$705.60						1
	1									4
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				Description		Quantity	Rate	Cost		
	Other/miscellar	neous:								
						1				
	Culvert stakes	& markers:	Install 6" X 2	.5" White fiberglas	ss post	2	\$18.00	\$36.00		
	- In oil clares	a	o.caii o 7/2		poor	 	¥ 10.00	400.00		
	** See 72" CMI	P Installation	Cost Sheet					1		
	Occ 12 OWN	anotaliation!	COSt Officer							
LIB TOTAL	FOR CULVERT	MATERIALS	2 INSTALLAT	TION		*			\$11,349	
CO IOIALI	OKCOLVERI	HICH ENIMES	G INTO I ALLA	1011			0.44-4-1-40	Youring Eve Cult	Ø11,348	J

Stream Crossing - 6' diameter pipe Tidewater Loop Road Point C to D

Rising Tide Sale Name:

\$2,918 \$5,993 \$172 \$233 \$100 \$107 \$6,497 \$100 Total \$536 **Erosion Control** \$/Acre Acres 0.200 \$116 \$109 \$86 \$50 \$/ff. S. Bushnell Culvert ĭ 55 ď 7 2 Labor \$352 9.5 5 Ė 3/13/08 Tamper 5. 4.5 \$ 2 Pump 96\$ 9 9 8 Buggy \$20 웂 0 Gdr 14G Cat 966 Roller \$144 Date: \$72 S **Equipment Hours** \$74 \$0 0 06\$ **26** 0 Hammer Dmp Tr 0.5 0.5 0.5 0.5 5 *** 17 \$15 \$15 \$2,277 0330 16.5 \$138 0.5 0.5 5 10 **QT** BC₹ 463 463 <u>ღ</u> 2 2 37 ო 37 Straw Bales (10 bales @\$10/bale) Place culvert \ tamp flanks (c.rock) ** 72" Aluminized Steel Culvert (12 ga) Sub total Seeding and Mulching: Build culvert bed (crushed rock) ** Place Fill Armor/ Free Draining Fill De-watering (w/pump) (24hrs/day) Backfill culvert w / crushed rock ** Sub total Culvert Material Cost: Construction Phase Embedded Riprap (Dissipator) Unload and move cmp to site Project site & Waste area Seed culvert wonsite cobble Neoprene Gasket 12" wide Total Hours Step Beveling (both ends) Remove Waste Material Sub total Hourly rates: Excavate Culvert Bed Remaining Backfill * Equipment Rates: Fill Compaction 72" x 12" band

Fotal Installation Cost:

1) Cost to build road segment C to D is on a Summary of Construction Costs sheet. Notes:

2) * Remaining backfill composed of drifted material from surrounding road construction. Costed for on Summary of Construction. 3) Mobilization costs are in the Move-In portion of the SUMMARY OF ALL PROJECT COSTS.

\$9,622

- 4) ** Crushed rock source is Tidewater Loop Quarry
- Fiprap comes from the Old Tidewater Loop Quarry.
 *** All rock haul is costed for on haul sheets.

SALE NAME:	Rising Tide			_		ONSTRUCTION:		33 STATIONS	0.08
ROAD:	Tidewater Loo	Р		_		IMPROVEMENT: _		STATIONS	
POINTS: CLEARING &	E to F								
CLEARING &	Method			Acres/amount	v	I Data I	_	I Const	
	Scatter outsid	e right of way	,	0.51	X X	Rate \$1,142.00	=	Cost \$582,42	
	Occitor octors	o ngia: or way		0.01	x	Ψ1, 142.00	=	\$302,42	
				1	x		=		
				•					
SUB TOTAL F	OR CLEARING	3 & GRUBBI	NG						\$582

EXCAVATION									
	Material			Cy/amount	x	Rate	=	Cost	
	Common drift	to fills > 50%	slopes (\$/cy)	419	x	\$1.50	=	\$628.50	
	Common hauf			54	x	\$3.40	=	\$183.60	
	Embankment :			473	x	\$0.60	=	\$283.80	
	Cut slope rour	nding 0+60 to	2+80 (\$/sta)	2.2	x	\$37.00	=	\$81.40	
					X		. =		
	End-haul to wa			48	x	\$3.40	=	\$163.20	
	Waste materia	al compaction	n (\$/cy)	48	x	\$0.30	=	\$14.40	
					x		=		
					x		=		
	<u> </u>				x		=		
					×		=		
SUB TOTAL F	OR EXCAVAT	ION							\$1,355
	TERIALS AND								
Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft	Rate	Cost
2+80	18" CPP	32	\$17.64	\$564.48					
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				Description		Quantity	Rate	l Cost	
	Other/miscella	neous:		Decomption		- againity	Nuic	- 0031	
	2					+			
	Culvert stakes	& markers	Install 6" X 2 5	"White fiberglass	post	1 1	\$18.00	\$18.00	
					p-50	 	ψ10.00	Ψ10.00	
			-			<u> </u>		l	
SUB TOTAL F	OR CULVERT	MATERIALS	8 & INSTALLAT	ION					\$582
							Subtotal	of Clearing, Exc. Culv	\$2.520

SALE NAME: ROAD: POINTS:	Rising Tide G to H (12.2 st	ations)		_ _	NEW C	ONSTRUCTION: IMPROVEMENT:	12.20	STATIONS	0.23 MIL
LEARING &	GRUBBING								
	Method			Acres/amount	х	Rate	=	Cost	
	Scatter outside	of right of wa	у	1.54	X	\$1,142.00	=	\$1,758.68	
					X		=		
					х		=		
UB TOTAL F	OR CLEARING	& GRUBBIN	G						\$1,759
XCAVATION									
	Material			Cy/amount	x	Rate	=	Cost	
	Common drift <	:50% slopes (S/cy)	2,272.00	χ	\$1.50	=	\$3,408.00	. 1
	End-hauf excav	ation (\$/cy)	4.4	643.00	X	\$3.40	=	\$2,186.20	
	Embankment c		cy)	2,384.00	x	\$0.60	=	\$1,430,40	
	Cut slope round			7.50	x	\$37.00	=	\$277.50	
	Waste material			560.00	x	\$0.30	=	\$168.00	
		· · · · · ·			x		=		İ
					x		=		
					X		=		
					X		=		
					X		=		
					x		=		
UB TOTAL F	OR EXCAVATI	ON							\$7,470
Location	18" CPP 34 \$17.			I Cost II	Looption	1 Diatura I	l incel fi	I Data I	04
4+65				Cost \$599.76	Location	Dia/type	Lineal ft.	Rate	Cost
7+20				\$705.60				_	
9+20		ALS AND INSTALLATION bia/type							
9720		90		\$10,686.00					
	12 gauge								
				 					
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				Description		Quantity	Rate	Cost	
	Other/miscellar	eone.	**See 48" C	MP Installation shee	<u></u>	Quantity	rate	COSL	
	Saleminocella		000 70 0	an motulation stice	/L	+ +			
						+			[
			· · · · · · · · · · · · · · · · · · ·			+		 	
	Culvert stakes	& markere	Inetali 6" Y 3	2.5" White fiberglass	noet	2	\$18.00	\$36.00	
	CRIVELL STRIKES	a mainers.	moten O A Z	vviille libergidss	μυσι	4	φ10.UU	\$30.00	
						1		L	
IIR TOTAL	OR CULVERT	MATERIALS	2 INSTALLAT	TION					\$10,007
	GOEVEIVI	EINAEO	- IIIVIAHA				Cubintal	Searing Eye Culy	\$12,027 \$21,256
							Suntatal of (Jeanno Eyo Cilil	577 75K

Location:

G to H, Station 9+20

Cullen Bangs 03/14/2008

Materials	Quantity			\$	Total
48" x 90' ALCSP, 12 gauge	90	ft	\$	61.05	\$5,495
Step Bevel Inlet	1		\$	75.00	\$75
Culvert Bands	2		\$	60.00	\$120
Neoprene Gasket	2		\$	26.99	\$54
Pipe delivery	1		()	250.00	\$250
24"-6" Riprap - Fill Armor and free draining fill	920	су			**
4"-0" Crushed Rock for Road		су			
1 1/2"-0" Crushed Rock for	100	су			**
Bedding/Backfill					
1 1/2"-0" Crushed Rock for Road		су			**
10 oz. non-woven Fabric, 8' wide	420	ft		\$2.22	\$932

\$6,926

Equipment/Lab	or Costs	Quantity	\$/Hr.	Hours	Total
Excavator, Large	9				
	Operating	1	\$138.00	20	\$2,760
	Stand-By	1	\$82.80	1	\$83
Dump Truck					
	Operating				\$0
	Stand-By				\$0
Vibratory Roller					
	Operating	1	\$72.00	7	\$504
					\$0
Front-End Loade	r, Medium				
	Operating				\$0
	Stand-By				\$0
Road Grader, La	irge				
	Operating				\$0
	Stand-By				\$0
Hand Held Tamp	er				İ
	Operating	1	\$9.00	6	\$54
	Stand-By				\$0
Water Pump					
	Operating	1	\$9.00	5	\$45
Laborer		2	\$37.00	8.5	\$315

\$3,760

Equipment/Labor Costs:

For culvert installation, construction of free draining fill and fill armoring Costs for construction of remaining fill included in summary of construction

Project Total

\$10,686

^{**} Cost included in summary of construction

D:	Rising Tide			-		ONSTRUCTION:		STATIONS	0.73 [
	Tidewater Loop			_	ı	MPROVEMENT:		STATIONS	
ITS:	1 to J (38.67 sta	itions)							
ARING &	GRUBBING			1 4 1		1 5.6 1	1		
	Method Scatter outside	riable afternation	(C(a)	Acres/amount 4.53	X	Rate	=	Cost	
	Scaller outside	right of way	(arac)	4,53	X	\$1,142.00		\$5,173.26	
					X		≂		
					X		#		
TOTAL	FOR CLEARING	2. CDI IDDI	ıc					-	ØE 470
TOTAL	FOR CLEARING	a GRUBBII	10						\$5,173
VATIO	N								
	Material			Cy/amount	x	Rate I	=	l Cost	-
	Common Drift to		slopes (\$/cv)	2,568	X	\$1.50	=	\$3,852.00	
	Common Haul t			2,104	x	\$3.40	=	\$7,153.60	
	Embankment C			4,672.00	x	\$0.60	=	\$2,803.20	
	Cut slope round			12.00	X	\$37.00	=	\$444.00	
		(4)			X	100.00	=	• • • • • • • • • • • • • • • • • • • 	i
					x		=		
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TOTA:	FOR EXCAVATION	ON							644.050
UIAL	FOR EXCAVALL	<u> </u>							\$14,253
CDT M	ATERIALS AND	MCTALLAT	ON						
eation	Dia/type			I 000t II	lti	1 0:- 4: 1	Line and St	1 5-4- 1	01
+70	18" CPP	Lineal ft. 40	Rate \$17.64	Cost \$705.60	Location	Dia/type	Lineal ft	Rate	Cost
+70 +70	18" CPP		\$17.64						
		34		\$599.76					
2+65	18" CPP	34	\$17.64	\$599.76					
3+25	18" CPP	34	\$17.64	\$599.76					
3+65	18" CPP	50	\$17.64	\$882.00					
								<u></u>	
				L					
	1								
								[
								i	
]]	
				Description		Quantity	Rate	Cost	
	Other/miscellan	eous:	Dissipator ∝	Description	2+65)	Quantity 1.00	Rate \$138.00	Cost \$138,00	
	Other/miscellan	eous:	Dissipator co	Description Instruction (0+70, 1	2+65)	Quantity 1.00	Rate \$138.00	Cost \$138.00	
				onstruction (0+70, 1		1.00	\$138.00	\$138.00	
	Other/miscellan			Description onstruction (0+70, 1					
				onstruction (0+70, 1		1.00	\$138.00	\$138.00	

Properties Pro	Description Grade, Shape and Ditch 16° Subgrade Compaction Install 6.5 oz. X 16° wide, woven geolextile fabric (3+80 to 13+25 C to D) (\$\(\)\$
Stato State Cost	woven fabric
Number Vol. UME Sta. Cost	Ponth of
Stations 14.3 701 \$3.51 \$2,459	
Tile	
Tos 2 38 45.57 433	6
Curves	0
Curves	6
Stations	o 0
fills	"
Filis	4
Tos 2 20 \$3.51 \$70	4
Curves	+
Curves	5 0 T =
fills	
Filis	-
1,886 Sta to Sta to Sta to Sta to Sta to Sta to Sta to Sta to O+00 to 4+33	N/A
1,886 1,886	
Star to Sta Cost Cost 0+00 to 4+33 TOTAL Rates Cost stations 4,33 212 \$3.51 \$745 turnouts 1 19 \$3.51 \$745 junctions 2 20 \$3.51 \$76 junctions 2 20 \$3.51 \$70 stations 4,33 95 \$3.51 \$70 junctions 2 20 \$3.51 \$70 Stations to 12+20 TOTAL Rate Cost of (CY) amt \$2 \$40 thru-cut 1 4 \$3.51 \$40 thru-cut 1 4 \$3.51 \$40 thru-cut 1 4 \$3.51 \$40 turnouts 3 66 \$3.51 \$40 turnouts 3 30 \$3.51 \$105 turnouts 3 30 \$3.51 \$105 turnouts <	C to D
Unctions 12.20 53.51 \$745 \$140 \$10.00 \$150	
Stations VOLUME S18.1 stations 4.33 212 \$3.51 \$745 turnouts 1 19 \$3.51 \$745 junctions 2 20 \$3.51 \$734 turnouts 1 10 \$3.51 \$735 junctions 2 20 \$3.51 \$70 Stations 12.20 598 \$3.51 \$404 thru-cut 1 14 \$3.51 \$404 turnouts 2 30 \$3.51 \$404 turnouts 2 30 \$3.51 \$404 turnouts 2 30 \$3.51 \$404 turnouts 3 66 \$3.51 \$404 turnouts 3 66 \$3.51 \$405 turnouts 3 30 \$3.51 \$105 turnouts 2 30 \$3.51 \$105 turnouts 3 30 \$3.51 \$3.05 turnouts 3 30 \$3.51 \$3.51 turnouts 4 4 5 5 5 turnouts 5 30 \$3.51 \$3.51 turnouts 7 4 5 5 5 turnouts 7 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turnouts 8 5 5 5 turn	<u> </u>
Stations 4.33 212 \$3.51 \$745 turnouts 1 19 \$3.51 \$67 junctions 2 20 \$3.51 \$73 turnouts 1 10 \$3.51 \$70 junctions 2 20 \$3.51 \$70 junctions 2 20 \$3.51 \$70 junctions 2 20 \$3.51 \$70 junctions 2 376 \$3.51 \$70 thru-cut 1 14 \$3.51 \$49 turnouts 3 66 \$3.51 \$710 turnouts 3 66 \$3.51 \$710 turnouts 3 66 \$3.51 \$710 turnouts 3 30 \$3.51 \$710 turnouts 3 3	fuches)
turnouts	
junctions	
Stations	
Turnouts 1 10 \$3.51 \$3.50 Junctions 2 20 \$3.51 \$70 Star to Sta	
Unretions 2 20 \$3.51 \$7.0	-
State to Sta Order Fate Sta Cost 0HOD to 12+20 TOTAL Rate/ anti-cost Cost volumber \$12.20 598 \$3.51 \$2.098 fills 1.00 14 \$3.51 \$404 curves 6 115 \$3.51 \$404 turnouts 3 66 \$3.51 \$49 turnouts 3 66 \$3.51 \$49 turnouts 3 66 \$3.51 \$49 turnouts 3 66 \$3.51 \$105 stations 12.20 268 \$3.51 \$105 turnouts 3 66 \$3.51 \$105 turnouts 6 \$3.51 \$105 turnouts 3 30 \$3.51 \$105 junctions 2 30 \$3.51 \$105 junctions 2 30 \$3.51 \$105 culvert 1 920 \$3.57 \$3.441 <td>4 Jur</td>	4 Jur
OHOD to 12+20 TOTAL Rate/ Sta./ Cost Number VOLUNE Sta./ Cost stations 12.20 598 \$3.51 \$2.098 fills 1.00 14 \$3.51 \$404 turnouts 6 115 \$3.51 \$404 turnouts 3 66 \$3.51 \$49 turnouts 3 66 \$3.51 \$49 stations 12.20 268 \$3.51 \$105 stations 12.20 268 \$3.51 \$105 stations 12.20 268 \$3.51 \$105 turnouts 3 66 \$3.51 \$105 turnouts 6 51 \$3.51 \$105 turnouts 3 30 \$3.51 \$105 junctions 2 30 \$3.51 \$105 culvert 1 920 \$3.74 \$3.441 fills 1 920 \$3.74	
e (CY) Number of stations	Depth of
49 stations 12.20 598 \$3.51 \$2,098 14 fills 1.00 14 \$3.51 \$49 14 thru-cut 1 14 \$3.51 \$404 22 turnouts 3 66 \$3.51 \$49 22 stations 2 30 \$3.51 \$105 5 fills 1 5 \$3.51 \$105 5 fills 1 5 \$3.51 \$105 5 fills 1 5 \$3.51 \$105 5 thru-cut 1 5 \$3.51 \$18 10 turnouts 3 30 \$3.51 \$105 10 turnouts 3 30 \$3.51 \$105 10 \$3.51 \$3.51 \$3.05 20 \$3.51 \$3.51 \$3.05 20 \$3.51 \$3.51 \$3.44	Rock Ve
14 fills 1.00 14 \$3.51 \$49 14 thru-cut 1 14 \$3.51 \$404 22 turnouts 3 66 \$3.51 \$49 22 stations 2 30 \$3.51 \$49 5 fills 1 5 \$3.51 \$105 5 fills 1 5 \$3.51 \$105 5 fills 1 5 \$3.51 \$18 6 51 \$3.51 \$18 \$179 10 turnouts 3 30 \$3.51 \$105 10 turnouts 3 30 \$3.51 \$105 10 sinctions 2 30 \$3.51 \$305 20 fills 1 920 \$3.57 \$3.54	
curves 6 115 \$3.51 \$404 14 thru-cut 1 14 \$3.51 \$49 22 turnouts 3 66 \$3.51 \$49 22 stations 2 30 \$3.51 \$105 5 fills 1 5 \$3.51 \$105 5 fills 1 5 \$3.51 \$18 5 thru-cut 1 5 \$3.51 \$18 10 turnouts 3 30 \$3.51 \$105 iunctions 2 30 \$3.51 \$105 culvert 1 100 \$3.51 \$3.60 920 fills 1 920 \$3.74 \$3.41	
14 thru-cut 1 14 \$3.51 \$49 22 turnouts 3 66 \$3.51 \$232 junctions 2 30 \$3.51 \$105 22 stations 12.20 268 \$3.51 \$105 5 fills 1 5 \$3.51 \$18 5 thru-cut 1 5 \$3.51 \$18 10 turnouts 3 30 \$3.51 \$105 1 junctions 2 30 \$3.51 \$105 2 30 \$3.51 \$3.05 \$3.51 \$3.05 2 30 \$3.51 \$3.05 \$3.51 \$3.05 2 30 \$3.51 \$3.51 \$3.51 \$3.51 3 50 \$3.51 \$3.51 \$3.51	6
22 turnouts 3 66 \$3.51 \$232 junctions 2 30 \$3.51 \$105 22 stations 12.20 268 \$3.51 \$105 5 fills 1 5 \$3.51 \$18 5 thru-cut 1 5 \$3.51 \$18 10 turnouts 3 30 \$3.51 \$105 junctions 2 30 \$3.51 \$105 culvert 1 100 \$3.51 \$3.05 920 fills 1 920 \$3.74 \$3.41	
Junctions 2 30 \$3.51 \$105	-
22 stations 12.20 268 \$3.51 \$942 5 fills 1 5 \$3.51 \$18 5 thru-cut 1 5 \$3.51 \$18 10 turnouts 3 30 \$3.51 \$16 10 turnouts 2 30 \$3.51 \$105 culvert 1 100 \$3.51 \$3.05 920 fills 1 0.246 \$3.74 \$3.441	
5 fills 1 5 \$3.51 \$18 5 thru-cut 1 5 \$3.51 \$179 10 turnouts 3 30 \$3.51 \$18 10 turnouts 2 30 \$3.51 \$105 2 30 \$3.51 \$105 2 30 \$3.51 \$105 300 \$3.51 \$3.51 \$3.51 30 \$3.51 \$3.51 \$3.51 30 \$3.51 \$3.51 \$3.54	<u> </u> -
curves 6 51 \$3.51 \$179 5 thru-cut 1 5 \$3.51 \$18 10 turnouts 3 30 \$3.51 \$105 junctions 2 30 \$3.51 \$105 culvert 1 100 \$3.51 \$3.05 920 fills 1 920 \$3.74 \$3,441	
5 thru-cut 1 5 \$3.51 \$18 10 turnouts 3 30 \$3.51 \$105 junctions 2 30 \$3.51 \$105 culvert 1 100 \$3.51 \$351 920 fills 1 920 \$3.74 \$3,441	4
10 turnouts 3 30 \$3.51 \$105	+
1 1 1 1 1 1 1 1 1 1	1 7
culvert	
920 fills 1 920 \$3.74 \$3,441	t
3700	

ROAD SEGMENT	Lot			POINT TO POINT	POINT	Sta. to Sta.	Sta.					
			Depth of	.tb.	_	0+00 to 38+67	38+67	TOTAL	Rate/	į		
	Rock Size		Rock	Volume (CY)	(63)	Numb	7er	VOLUME	Sta./	Z COS		
Application	and Type	Location	(inches)	pet		ō		(62)	amt.			
Base Rock	4"-0" Crushed	0+00 to 38+67	6	station	49	stations	38.67	1,895	\$3.51	\$6,651		
Turnouts	4"-0" Crushed	2+30, 11+35, 14+25, 18+40, 23+70, 28+50, 31+60, 36+10	0	turnout	22	turnout	8	176	\$3.51	\$618		
Curve Widening	4"-0" Crushed	1	6	curve		carves	8	192	\$3.51	\$674		
Fill Widening	4"-0" Crushed	-	6	₽	ı	fills	_	34	\$3.51	\$119		
Junctions	4"-0" Crushed	,	6	junction	10	junctions	2	20	\$3.51	\$70		
Surfacing	1 1/2"-0" Stockpile	L	4	station	22	stations	38.67	851	\$3.51	\$2,986		
Turnouts	1 1/2"-0" Stockpile	2+30, 11+35, 14+25, 18+40, 23+70, 28+50, 31+60, 36+10	4	turnouf	10	turnout	8	80	\$3.51	\$281		
Curve Widening	1 1/2"-0" Stockpile		4	curve	1	curves	8	98	\$3.51	\$302		
Fill Widening	1 1/2"-0" Stockpile	1	4	III.		fills	,	16	\$3.51	\$56		
Junctions	1 1/2"-0" Stockpile	•	4	junction	10	junctions	2	20	\$3.51	\$70		
Dissipator	24"-6" Riprap							20	\$3.74	\$75		
Total Rock for Road Segment:			l to J					3,390			\$11,902	
		Processing.		Description					No sta	Rate/sta	Ç.	
		•	Water, Proc	Water, Process & Compact 4"-0" Base First Lift:	act 4"-0" Ba	se First Lift:			69.50	\$48.23	\$3,352	
		1	Water, Proc	sess & Compa	act 4"-0" Ba	Water, Process & Compact 4"-0" Base Second Lift	ft		69.50	\$48.23	\$3,352	
		•	Water, Proc	sess & Compa	act 1 1/2"-0	Water, Process & Compact 1 1/2"-0" Surfacing Rock	ock		69.50	\$48.23	\$3,352	
		1		24"-6" rr	e:-0br	4".0"	1 1/2"-0"		Total			
	SUB TOTAL FOR SURFACING	SURFACING		1,496		4,227	2,176		7,898			\$43,445

SPECIAL PROJECTS			
	Description	Cost	
	3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
SUB TOTAL FOR SPECIAL PROJECTS			\$0
		Subtotal of Surfacing & Spec. Proj.	\$43,445
		Subtotal of Clearing, Exc., Culv.	\$65,430
GRAND TOTAL			\$108,875

J. Long, C. Bangs, S. Bushnell, D. Mellison, J. McCoy

Compiled By:

Date: 03/31/08

Project No. 1 Road Improvement

State Column State Sta		SALE NAME: ROAD:	Rising Tide 11-12 (70+22), 12-13 (59+92), IS-IE	(21+10), 17-18 (3+95)		NEW CONSTRUCTION: IMPROVEMENT:	38	0.00 STATIONS 381.89 STATIONS	7.23	0.00 MILES 7.23 MILES
Figure 2 Part Par			18A-19 (3+00), 19-110	(SU+OU), II,	118 (118+6U), 119-12(00+00		,			
Contacte Contacte	SURFACING	o chocked		Josephine				Stations/	>	Rate/ cta/amt	ţ
State of the part of the par		Subgrade prep.	The second of the second	Jesci puoi			- turblings	201 00	<>	\$24.20	\$8.096.07
Couple C			Surfacing Rock Proc	sessing and	Compaction (Subgra	ade Level	(bu)	381.89	· ×	\$17.24	\$6,583.78
State Continent Continen									_		
Coursied Coursied	ROAD SEGMENT	11 to 12 14d	lewater Road		POSINT TO POIL	12	Sta. to Sta.				
Figure Control Contr				Depth of	11 to 12 Tidewater 6	Soad	0+00 to 33+37, 38+47 to 70+22	TOTAL	Rate/	Cost	
State Control Contro	Application	Rock Size		Rock	Volume (CY)		Number	VOLUME	Stell		
The It of Televanter Road Televanter Road	Subgrade Laveling	4"-0" Shocknile	Location	lincnes)	station		stations	100	S3.14	\$314	
Contacted Cont	Total Book for Boad Se	acment.	14 to	7 Tidewater				100			\$314
Coupled Coup	DOM NOW OF THE PARTY OF THE PAR		- [000000	POINT TO POI		Sta. to Sta.				
State State State Course State Course State Course State S				Depth of	12 to 13 Tidewater I	Road	0+00 to 59+92	TOTAL	Rate	1000	
Considered Con		Rock Size		Rock	Volume (CY)		Number	VOLUME	Sta./	į	
Stockpile 12 to 13	Аррисацоп	and Type		(Inches)	ber	****	of	(CX)	amt.		
Standard 16 20 20 23 21 21 21 21 21 21 21	Subgrade Leveling	1"-0" Stockpile		N/A			-	100	\$3.14	\$314	
State		1 1/2"-0" Stockpile		3		9		303	\$3.51	\$1,063	
State Considered Consider		1 1/2"-0" Stockpile	1+97	K/Z		8	\perp	8	\$3.51	\$211	
Consideration Control	Turnouts	1 1/2"-0" Stockpile		3		7		7	\$3.51	\$74	
Crushed 6 Station 33 Stations 19 624 83.51 St. 192	Removed Culv. Backfill	1 1/2"-0" Stockpile						24	\$3.51	\$84	
Crushed 6 Furmoutt 14 Furmoutt 14 Furmoutt 15 Culverts 3 36 53.51 51.84		4"-0" Crushed		9		83		624	\$3.51	\$2,192	
Figure Counting	Turnouts	4"-0" Crushed		9		4		42	\$3.51	\$147	
Figure 12-10 Titlewater Road 12-10	Removed Cutv. Backfill	4"-0" Crushed	!			1		24	53.51	\$84	
State Course Co	Dissipator Rock	7~ I	~	¥N.	culvert	7 2	╛	307	42.74	CC 14	64 203
Course	Lotal Rock for Road of	- 83	- 133	o i loewalei	KUAU BANNIT TA BAN	40	Con en 2012	1,204			200
Characteristics Froct Volume (CV) Volume (CV) State Cost 4 Type Location Inchest Volume (CV) Volume (CV) Said	ACAD SESIMENT	-183	ICMAICE COOP	Denth of	IS to IS Tidestator	2	0+10 to 21+10	****	Tated		
df Type Locardion (Inches) per of GCY) ant \$351 \$351 O' Crushed E to I6 N/A station 22 stations 21.10 464 \$3.51 \$1629 O' Crushed E to I6 4 turnotion 10 turnouts 4 464 \$3.51 \$1629 O' Crushed E to I6 A turnotion 10 junctions 1 464 \$3.51 \$3.61 \$3.61 \$3.51 \$3.60 \$3.51 \$3.6		Rock Size		Rock	Volume (CY	3	Number	VOLUME	Stal	Cost	
O' Crushed E5 to 16 N/A station 22 stations 2.2 stations 2.2 stations 2.2 stations 2.1 6.2 8.3.51 \$3.51 \$1.629 O' Crushed 15 to 16 4 turnorloun 10 turnouns 1 10 \$3.51 \$1.629 O' Crushed 15 to 16 N/A junction 10 junctions 1 10 \$3.51	Application	and Type	•	(Inches)	per		of	(CX)	amt.		
O' Crushed E to 16 4 station 22 stations 21:10 464 \$3:51 \$1620 O' Crushed 15 to 16 A turnout 10 turnouts 4 40 \$3:51 \$	Subgrade Leveling	11/2"-0" Crushed		N/A			\perp	ğ	\$3.51	\$351	
O' Crushed E to 16 A turnout 10 turnouts 4 433.51 \$3.40 O' Crushed 15 to 16 N/A Junction 10 junctions 11 junctions 11 junctions 11 junctions 11 junctions 12 \$3.51 \$3.52 \$3.52 \$3.52 \$3.51 \$3.52	Surface Rock	1 1/2"-0" Crushed		4		77	4	464	\$3.51	\$1,629	
O' Crushed IS to I6 N/A Junction 10 \$3.51 \$4.50 O' Crushed IS to I6 A curver N/A curvers 10 \$3.51 \$1.55 O' Crushed IS to I6 N/A curver N/A curver 0	Turnouts	1 1/2"-0" Crushed		4		0	turnouts 4	40	\$3.51	\$140	
Of Crushed Of Crushed A culver NAA culver culver NAA culver culver A culver	Junctions	1 1/2"-0" Crushed		Ψ,		0.5	Junctions	2 2	53.51	\$30	
Stockpile 14-72 kg, 24-45 NIA dissipator 14 NIA dissipator 14 NIA dissipator 14 NIA dissipator 14 NIA dissipator 14 NIA dissipator 15 NIA dissipator 15 NIA District 15	Curve Widening	1 1/2"-0" Crushed		4		≨ §		9 8	90.01	9100	
Crushed	Culvert Bedding	1 1/2"-U" Stockpile		AN N		2 5		86	\$3.74 \$3.74	875	
Of Stockpile 2+80 N/A culvert 50 culverts 1 50 On Fill Crushed 2+80 10 fill 24 fills 1 50 On Fill O' Crushed 2+80 10 fill 24 fills 1 24 On Fill O' Crushed 2+80 N/A fill 90 fills 1 60 On Fill O' Crushed 10+40 N/A fill 60 fills 1 50 On Fill O' Crushed 10+40 N/A fill 70 fills 1 70 On Fill O' Crushed 10+40 N/A fill 70 fills 1 70 On Fill O' Crushed 10+40 N/A fill 74 fills 1 70 On Fill O' Crushed 15+40 N/A fill 110 fills 1 10 On Fill O' Crushed 15+40	Energy Dissipators	S"-O" Dit-rin	2+80	Z/N		2 9		40	1		
Crushed 2+80 10 fill 50 fills 1 24 fills 1 24 fills 1 24 fills 1 24 fills 1 60 fills 1 60 fills 1 60 fills 1 7 fills 1 7 60 fills 1	Culvert Bending	1 1/2"-f" Shocknile		W.N.		1 2	culverts 1	20			On Fill Sheets
O" Crushed 2+80 A fill 24 fills 1 24 On Fill P" Riprago 2+80 N/A fill 90 fills 1 90 On Fill O" Stockpile 10+40 N/A culverf 50 culverfs 50 culverfs 00 Fill O" Stockpile 10+40 N/A fill 70 fills 1 70 On Fill O" Stockpile 10+40 N/A fill 110 fills 1 24 On Fill O" Stockpile 15+40 N/A fill 110 N Fill On Fill O" Stockpile 15+40 N/A fill 110 On Fill O" Stockpile 15+40 N/A fill 1 70 On Fill O" Stockpile 15+40 N/A fill 1 70 On Fill O" Stockpile 15+40 N/A fill 1 7 On Fill O" Crushed <	Base Rock	4"-0" Crushed		10		120	fills 1	20			On Fill Sheets'
6" Riprago 2+80 NIA fill 90 filis 1 90 On Fill 2" Shockpile 10+40 NIA fill 60 fills 1 60 On Fill 2" Shockpile 10+40 NIA fill 24 fills 1 70 On Fill 2" Crushed 10+40 NIA fill 110 fills 1 24 On Fill 2" Stockpile 15+40 NIA fill 110 fills 1 10 On Fill 2" Ripago 15+40 NIA fills 1 10 On Fill On Fill 2" Ripago 15+40 NIA fills 1 10 On Fill 2" Crushed 15+40 NIA fills 1 1 0 On Fill 0" Crushed 15+40 NIA fills 1 0 0 Fill 0" Crushed 15+40 NIA fill 0 0 Fill	Surface Rock	1 1/2"-0" Crushed		4		54	fills 1	24			On Fill Sheets1
Of Piltrum 10+40 NIA fill 60 fills 1 60 fill 0n Fill Coulseled 10+40 NIA cullwelt 50 cullwelts 1 50 cullwelt 0n Fill Crushed 10+40 4 fill 24 fill 1 24 fill 0n Fill O' Crushed 10+40 N/A fill 110 fills 1 24 fill 0n Fill O' Stockchile 15+40 N/A fill 110 fills 1 140 fill 0n Fill O' Stockchile 15+40 N/A fill 1 24 fill 0n Fill O' Stockchile 15+40 N/A fill 1 35 fill fill O' Stockchile 15+40 N/A fill 1 37 fill fill O' Stockchile 15+40 N/A fill 1 37 fill fill fill	Fill Armor/Dissipator	24"-6" Riprap		ΝΑ		06	fills 1	06			On Fill Sheets'
Or Fill Stockpile 10+40 NIA culvert 50 culverts 1 50 On Fill Charles Crushed 10-40 10 fill 70 fills 1 70 On Fill On Fill Charles 0 Fill Charles 0 <td< td=""><td>Fill Construction</td><td>6" -0" Pit-run</td><td></td><td>NA</td><td></td><td>93</td><td>fills 1</td><td>09</td><td></td><td></td><td>On Fill Sheets'</td></td<>	Fill Construction	6" -0" Pit-run		NA		93	fills 1	09			On Fill Sheets'
Crushed 10+40 10 fill 70 fills 1 70 0n Fill O' Crushed 10+40 4 fill 24 fills 1 24 On Fill O' Stockpile 15+40 NI/A fill 110 On Fill O' Stockpile 15+40 NI/A Stockpile 36 On Fill O' Riprap 15+40 NI/A Stockpile 324 On Fill O' Riprap 15+40 NI/A Stockpile On Fill On Fill O' Crushed 15+40 NI/A On Fill On Fill On Fill		1 1/2"-0" Stockpile		A/A		8	culverts 1	20			On Fill Sheets'
Or Crushed 10+40 A fill 24 fills 1 24 On Fill Of Rightstap 10+40 N/A fill 110 On Fill On Fill Of Single Size (Single Size (Size		4"-0" Crushed		10		2	fills	20			On Fill Sheets'
Of Riprago 104-40 N/A fill 110 On Hill O" Stockpile 15-40 N/A 15 On Fill O" Stockpile 15-40 N/A 36 On Fill OR Stockpile 15-40 N/A 324 On Fill O' Crushed 15-40 N/A 37 On Fill O' Crushed 15-40 N/A 20 On Fill		1 1/2"-0" Crushed		4		74	fills 1	24			On Fill Sheets
Of StockClie 15+40 NA 15 On Fill Fignate 15+40 NIA 324 On Fill Crushed 15+40 NIA 37 On Fill Crushed 15+40 NIA On Fill On Fill O' Crushed 15+40 NIA On Fill On Fill		24"-6" Riprap		ΑN		10	fills 1	110			On Fill Sheets
Brightap 15440 N/A On Fill "Riprag 15440 N/A 0n Fill Crushed 15440 N/A 0n Fill O" Crushed 15440 N/A 0n Fill		1 1/2"-0" Stockpile		Y.			The second secon	2,5			On Fill Sheets
O'Riprap 15+40 N/A On Pill Crushed 15+40 N/A On Fill O'Crushed 15+40 N/A On Fill O'Crushed 15+40 N/A On Fill		24"-6" Riprap		YN.	-			38			Ēį
Crushed 15+40 N/A 3/ O'Crushed 15+40 N/A 20	Fill Armor	24"-6" Riprap		¥N.				324			≣ 8
O' Crushed 15+40 IVA	Base Rock	4"-0" Crushed		W.				7 6			On Fill Sheets
	Surface Rock	1 1/Z"-0" Crushed	15+40	YN.				707			CIBALIO III IO

ROAD SEGMENT	I7 to 18 Tide	idewater Loop		POINT TO POINT	OINT	Sta. to Sta	tta.					-
			Depth of	I7 to I8 Tidewater Loop	er Loop	0+00 to 3+95	+95	TOTAL	Rate/	ž		
	Rock Size		Rock	Volume (CY)	 K	Number	je.	VOLUME	Sta.			
	and Type	Location	(inches)	Det		6		20	amt.			
-	1 1/2"-0" Stockpile	17 to 18	N/A					50	\$3.51	\$70		
F	1 1/2"-0" Stockpile	17 to 18	Ϋ́	station	22	stations	3.95	87	\$3.51	\$302		
-	1 1/2"-O" Shockpile		A/N	culvert	20	Culvert	-	20	\$3.51	\$70		
Total Bock for Boad Segment	nent		7 to 18 Tidewater Loop	Ι.				127			\$445	
	04 44 to	Tidonator con		BOINT TO POINT	DINT	Sta to Sta	142					
ŀ		Calanci mont	Daniel as	Consolidation of Act	tor Loon	5 ct 00-0	Q.	TOTAL	Dated			
			io invian	ISO IO IS I IDENTICAL POOR	LOOP IN	20.00	3		7.75	Cost		
	Rock Size		YOCK	урашиюх		NEWS			ceic			
	and Type	Location	(Inches)	per		Jo		وع	amt.			
-	1 1/2"-0" Stockpile		Ϋ́́					20	\$3,51	\$70		
Total Rock for Road Segment	nent.	9A to	19A to 19 Tidewater Loop	r Loop				70			\$20	
	D to the safe	Ticlewater non		TAICE OT TAICE	CINT	Sta to Sta	-					
H		estates and p	Double of	10 to 140 Tidescater Loop	torion	00+09 of 00+0	0	TOTAL	Dated			
			nepru c	B IO IIO I IGEWA	doon lai	5050	3		200	Cost		
	Rock Size		Rock	Volume (CY)	 F:	Number		VOLUME	StaJ			
	and Type	Location	(inches)	per		Jo		5	amt.			
Г	1 1/2"-O" Shocknile	19 to 130	Ψ/N					200	\$3.51	\$702		
Total Dook for Dood Sogment	Jant.	2 40	19 to 110 Tidewater 1 opn	- foon				200			\$702	
	200000000000000000000000000000000000000	8	O DECIMAL	THE PARTY TO DOUGH	*****							
	14 to 18 St	8 SWede Koda		TO E	CINI	201.105	200					
			Depth of	117 to I18 Swede Road	e Road	0+00 to 118+80	8+80	TOTAL	Ratel			
				21 - 11 - 12	153	N. I.		11711 TC.	;	5		
	HOCK SIZE		MOCK	vi aumox	-	IACELICA:	5		Ceic			
	and Type	Location	(Inches)	per		Þ			amt.			
Suborade Leveling	1"-0" Stocknije	117 to 118	Ϋ́					250	\$3.14	\$785		
ł	4" O' Chocknito	07 TO 40 00 TO	·	chation	-	chations	26.40	290	\$3.14	4912		
1	OLOCADIO O- I	01.02.01.00.00	2,1	Stations	- 5	2000	2		27.00	100		
-	1"-0" Stockpile	11/10/18	N/A	turnout	10	turnouts	-	2	43.14	9		
_	4"-0" Stockpile	1+70 (Fish Pipe)	တ	station	49	stations	_	64	\$3.14	\$154		
F	4".O" Chockwile	1+70 /Fish Ding)	0	15	14	filla	-	14	£3.14	775		
7	4 -U Stockbille	1+10 (LISH FIDE)	ŝ		1		+	2 8	3 8	1 0		
	1"-0" Stockpile	1+70 (Fish Pipe)	4	station	22	stations	-	7.7	\$3.14	698		
Ľ	1"-0" Stocknile	1+70 (Fish Pipe)	7	J	9	#IIIS	_	ဖ	\$3.14	\$19		
ľ	4"-O" Stockrile	1+70 (Fish Pine)	AIA	Cultyart	146	Staving		146	\$3.14	\$458		
+	allowania a-	(ad		1104100	2 5	3],	2	21.00	100		
	24"-6" Riprap	1+70 (Fish Pipe)	N/A	ĮĮĮ	112	fills	_	112	\$7.06	\$/81		
-	24"-6" Riprap	3+00	N/A	panino	10	culverts	-	2	\$7.06	\$71		
ľ	4" O" Chookerile	3+00	AVA	tayling	S,	charte	-	۶	P1 83	5		
Cotal Deals for Dead Security		1	17 to 149 Sundo Dood	1	-	200		S			43 307	
500		78	apawo oll v	TOEST TO DOING	*****						10000	
RCAL SECUREN	112 10 171	Veccuell Road		200/V(C) 04 04	700	O100 of 00 to	Ī	14770	7770			
			TO BINGE	I I S ID IZO WODGEII ROSO	בוו צממח	O-01 00+0	-	1	Raio	tses		
	Rock Size		Rock	Volume (CY)	ξ.	Number		VOLUME	Stal			
	and Ame	Incation	· iinches	Ten		to		S C S C	amt			
	1" O" Cholonilo	UUTU	NIA I	acitouri	20	innotione	,	00	V1 65	cy,		
+	allowoods n- I	- 1		direction	22	Julicuolis	-	3 8			*	
Total Rock for Road Segment:	nent:	119 to	119 to I20 Wooden Road	Road				2			\$63	
								-		-		
		Processing:		Description					No.sta	Rate/sta	Cost	
		•	Water Pro	Water Process & Compact Crished Rock	riished Rock				70.37	\$48.23	\$3,394	
			1000	o tandimo o coco	Tool Police							
												770
ธ	SUB TOTAL FOR SURFACING	SURFACING										\$29,914
S	SPECIAL PROJECTS	3TS										
					Description			_	Cost			
K	24-11-12		2007	Tall A second and a second	Total Paris			<u> </u>	2700	_		
	₽	ACCIDITION OF STATE O	C = > 1000	CHESIDATORY A DISS.	והשלכות			-	0//6			

\$108,992

\$1,793

GRAND TOTAL

Construct Dissipaters W/Excavator @\$138hr. x 0.5/dissipator x 4 dissipators 5 hours Labor @\$37/hour Develop riprap rock at Old Tidewater Pit for Box Culvert on IS-I6. 360cy x \$3.70/cy SUB TOTAL FOR SPECIAL PROJECTS

SUMMARY OF CONSTRUCTION COSTS FILL COSTS/X-DRAINS

SALE NAME:	Rising Lide			INE VV CO	NSTRUCTION:	•	STATIONS		MILES
ROAD:	Tidewater I	.oop Road		IM	IPROVEMENT:		STATIONS		MILES
POINTS:	12-13, 15-16,		18				•		
				Project No. 1 Rd.	. Improvement				
CULVERT MA	TERIALS AN	D INSTALL						***************************************	
Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
12-13					15-16	<u> </u>			
4+97	18/CPP	36	\$17.64	\$635.04	15+40	Concrete	20	Fill Sheet	\$38,560.00
9+88	18/CPP	40	\$17.64	\$705.60	20+05	18/CPP	40	\$17.64	\$705.60
15+63	18/CPP	40	\$17.64	\$705.60					
					17-18				
15-16					0+90	18/CPP	30	\$17.64	\$529.20
0+00	18/CPP	40	\$17.64	\$705.60					
2+80	24/ALCSP	60	Fill Sheet	\$6,871.52	117-118				
10+40	24/ALCSP	60	Fill Sheet	\$7,973.32	1+70	96/ALCSP	50	Fill Sheet	\$17,888.00
14+78	18/CPP	40	\$17.64	\$705.60	3+00	18/CPP	30	\$17.64	\$529.20
									*
				Description		Quantity	Rate	Cost	
		cellaneous:							
, С	ulvert stakes	& markers:	22 Culvert Ma	rkers @\$18.00 ea	-	22	\$18.00	\$396.00	
			,						
									\$76,910
SUB TOTAL F	OR CULVER	T MATERIA	ALS & INSTALL	ATION					Ψ10,91 <u>0</u>
				ATION	Lower	1			ψ7 O ₁ Θ T O
ROCKING	Subgrade p	orep:	Description		Stations	×	Rate/sta	Cost	ψ7 0 , 0 10
ROCKING Grading Fills	Subgrade p	orep: 3.65 per lift=	Description =\$47.30 x 2 sta		2.00	×	\$47.30	\$94.60	¥70,510
ROCKING 'Grading Fills 'Vibratory Rolle	Subgrade p 2 lifts @\$23 er 2 lifts @\$2	orep: 3.65 per lift=	Description			-			¥70,910
ROCKING Grading Fills	Subgrade p 2 lifts @\$23 er 2 lifts @\$2	orep: 3.65 per lift=	Description =\$47.30 x 2 sta		2.00	×	\$47.30	\$94.60	¥70,910
ROCKING 'Grading Fills 'Vibratory Rolle	Subgrade p 2 lifts @\$23 er 2 lifts @\$2	orep: 3.65 per lift=	Description =\$47.30 x 2 sta		2.00	×	\$47.30	\$94.60	ψ70,910
ROCKING 'Grading Fills 'Vibratory Rolle	Subgrade p 2 lifts @\$23 er 2 lifts @\$2	orep: 3.65 per lift=	Description =\$47.30 x 2 sta		2.00	×	\$47.30	\$94.60	¥70,510
ROCKING 'Grading Fills 'Vibratory Rolle	Subgrade p 2 lifts @\$23 er 2 lifts @\$2 ed rock only	orep: 3.65 per lift: 1.78 per lift:	Description =\$47.30 x 2 sta = \$43.56 per st		2.00	×	\$47.30 \$43.56	\$94.60 \$87.12	¥70,510
ROCKING Grading Fills Vibratory Rolle	Subgrade p 2 lifts @\$23 er 2 lifts @\$2	orep: 3.65 per lift: 1.78 per lift:	Description =\$47.30 x 2 sta = \$43.56 per st Description	ation	2.00	x x	\$47.30 \$43.56 Rate/sta	\$94.60 \$87.12 Cost	¥70,510
ROCKING Grading Fills Vibratory Rolle	Subgrade p 2 lifts @\$23 er 2 lifts @\$2 ed rock only	orep: 3.65 per lift: 1.78 per lift:	Description =\$47.30 x 2 sta = \$43.56 per st Description		2.00	×	\$47.30 \$43.56	\$94.60 \$87.12	¥70,510
ROCKING 'Grading Fills 'Vibratory Rolle	Subgrade p 2 lifts @\$23 er 2 lifts @\$2 ed rock only	orep: 3.65 per lift: 1.78 per lift:	Description =\$47.30 x 2 sta = \$43.56 per st Description	ation	2.00	x x	\$47.30 \$43.56 Rate/sta	\$94.60 \$87.12 Cost	¥70,510
ROCKING Grading Fills Vibratory Rolle	Subgrade p 2 lifts @\$23 er 2 lifts @\$2 ed rock only	orep: 3.65 per lift: 1.78 per lift:	Description =\$47.30 x 2 sta = \$43.56 per st Description	ation	2.00	x x	\$47.30 \$43.56 Rate/sta	\$94.60 \$87.12 Cost	¥70,510
ROCKING *Grading Fills *Vibratory Rolle *4"-0" crushe	Subgrade p 2 lifts @\$23 er 2 lifts @\$2 ed rock only	orep: 3.65 per lift: 1.78 per lift:	Description =\$47.30 x 2 sta = \$43.56 per st Description	ation	2.00	x x	\$47.30 \$43.56 Rate/sta	\$94.60 \$87.12 Cost	
ROCKING *Grading Fills *Vibratory Rolle *4"-0" crushe	Subgrade p 2 lifts @\$23 er 2 lifts @\$2 ed rock only	orep: 3.65 per lift: 1.78 per lift:	Description =\$47.30 x 2 sta = \$43.56 per st Description	ation	2.00	x x	\$47.30 \$43.56 Rate/sta	\$94.60 \$87.12 Cost	
ROCKING *Grading Fills *Vibratory Rolle *4"-0" crushe	Subgrade p 2 lifts @\$23 er 2 lifts @\$2 ed rock only	orep: 3.65 per lift: 1.78 per lift:	Description =\$47.30 x 2 sta = \$43.56 per st Description	ation	2.00	x x	\$47.30 \$43.56 Rate/sta	\$94.60 \$87.12 Cost	\$375
*Vibratory Rolle	Subgrade p 2 lifts @\$23 er 2 lifts @\$2 ed rock only	orep: 3.65 per lift: 1.78 per lift:	Description =\$47.30 x 2 sta = \$43.56 per st Description	ation	2.00	x x	\$47.30 \$43.56 Rate/sta	\$94.60 \$87.12 Cost	

Lanny Freeman 04/30/2008

Segment:	15 to 16	Station:	2+80	
Fill:	1	Height:	11	

Materials	Quantity		\$	Total
24"x60', 14ga, ALCSP	60		\$24.40	\$1,464.00
Bevel Inlet End	1		\$24.00	\$24.00
24"-6" Riprap Armor	80	су	\$3.90	\$312.00
1 1/2"-0" Crushed Rock for	50	су	\$3.38	\$169.00
Bedding/Backfill				
24"-6" Dissipator Rock	10	су	\$3.90	\$39.00
6"-0" pit-run fill reconstruction	40	су	\$4.19	\$167.60
1 1/2"-0" Crushed Rock for	24	су	\$3.38	\$81.12
4"-0" Crushed Rock for Road	50	су	\$3.38	\$169.00
Erosion Control	0.05	ac	\$1,532.00	\$76.60
Mulch, seed and fert.				3

\$2,502.32

Equipment/Lab	or Costs	Quantity	\$/Hr.	Hours	Total
Excavator, Large	Э				
	Operating	1	\$138.00	10	\$1,380.00
	Stand-By	1	\$82.80	2	\$165.60
Dump Truck					
•	Operating	2	\$73.00	8	\$1,168.00
	Stand-By	2	\$43.80	4	\$350.40
Vibratory Roller					
	Operating	1	\$72.00	4	\$288.00
	Stand-By	1	\$43.20	2	\$86.40
Front-End Loade	er, Medium		-		
	Operating	1	\$74.00	5	\$370.00
	Stand-By	1	\$44.40	3	\$133.20
Hand Held Tam	per				
	Operating	1	\$9.00	4	\$36.00
	Stand-By	1	\$5.40	4	\$21.60
Laborer		1	\$37.00	10	\$370.00

\$4,369.20

Project Total

\$6,872

^{*} Rock Cost shown on the Road Improvement cost sheet.

L. Freeman 04/30/2008

 Segment:
 15 to I6
 Station:
 10+40

 Fill:
 2
 Height:
 12

Materials	Quantity		\$	Total
24"x60', 14ga, ALCSP	60		\$24.40	\$1,464.00
Bevel Inlet End	1		\$24.00	\$24.00
24"-6" Riprap Armor	100	су	\$3.90	\$390.00
1 1/2"-0" Crushed Rock for	50	су	\$3.38	\$169.00
Bedding/Backfill				
24"-6" Dissipator Rock	10	су	\$3.90	\$39.00
6"-0" pit-run fill reconstruction	60	су	\$4.19	\$251.40
1 1/2"-0" Surfacing Rock	24	су	\$3.38	\$81.12
4"-0" Crushed Rock for Road	70	су	\$3.38	\$236.60
Erosion Control	0.05	ac	\$1,532.00	\$76.60
Mulch, seed and fert.				

\$2,731.72

Equipment/Lab	or Costs	Quantity	\$/Hr.	Hours	Total
Excavator, Large	е				
	Operating	1	\$138.00	12	\$1,656.00
	Stand-By	1	\$82.80	2	\$165.60
Dump Truck					
	Operating	2	\$73.00	10	\$1,460.00
	Stand-By	2	\$43.80	4	\$350.40
Vibratory Roller			:		
	Operating	1	\$72.00	6	\$432.00
	Stand-By	1 [\$43.20	4	\$172.80
Front-End Loade	er, Medium		. 1.		
	Operating	1	\$74.00	6	\$444.00
	Stand-By	1	\$44.40	3	\$133.20
Hand Held Tam	per				
	Operating	1	\$9.00	4	\$36.00
	Stand-By	1	\$5.40	4	\$21.60
Laborer		1	\$37.00	10	\$370.00

\$5,241.60

Project Total

\$7,973

^{*} Rock Cost shown on the Road Improvement cost sheet.

Prepared by: d.mellison

Project: No. 1

Project Type: Type F Stream Crossing Station 15+40 15 to 16

Date: 3/25/08

Phase I: Fill, Culvert Removal and Disposal

Qty.	Equipment/Activity	Qty (Cy)	(\$/Cy)	Hours	(\$/Hr)	Cost (\$)
1	C330 Excavator w/ 2 cy bucket (Site Exc and sort)	501		8	\$138.00	\$1,104.00
	Sorting and stockpiling cobble	34		2	\$138.00	\$276.00
	12 yard Dump Truck (Culvert Disposal)			3	\$73.00	\$219.00
	Load and Haul Waste material	347	\$3.55			\$1,231.85
		<u> </u>				\$2,830.85

Phase II: Development of Footings, Channel and De-watering

Qty.	Equipment/Activity	Qty (Cy)	(\$/Cy)	Hours	(\$/Hr)	Cost (\$)
	Assisting Contractor's Engineer/ staking site			6	\$42.00	\$252.00
1	C330 Excavator w/ 2 cy bucket (set footings)			6	\$138.00	\$828.00
	Load, haul, dump footing mat. (11/2"-0") Cr. Rock	15	\$3.51			\$52.65
	24"-6" Rip Rap under 11/2"-0" crushed footings	36	\$4.35			\$156.60
2	Laborer			6	\$37.00	\$444.00
1	Water Pump			24	\$10.00	\$240.00
	Dig Sump to pump from (C330)			1	\$138.00	\$138.00
	Water Pump labor			9	\$37.00	\$333.00
	Footing Fabric	50	\$2.50			\$125.00
1	Hand Held Tamper			6	\$8.00	\$48.00
						\$2,617.25

Phase III: Install box segments

Qty.	Equipment/Activity	Qty	(\$/Qty)	Hours	(\$/Hr)	Cost (\$)
2	Unloading box culvert components (C330's)			5	\$138.00	\$1,380.00
2	Setting Components (C330)			3	\$138.00	\$828.00
	Labor unloading and setting box culvert components			8	\$37.00	\$296.00
	Joint Grouting (sacks)	45	\$21.09			\$949.05
2	Joint grouting labor		·	5	\$37.00	\$370.00
1	Portable grout mixer			8	\$4.00	\$32.00
1	Concrete Open Bottom Slab Culvert (E-80 loading),					\$18,000.00
	12' x 10' x 20'					\$21,855.05

Phase IV: Approach Backfills and Riprap/cobble placement

Qty.	Equipment/Activity	Qty	(\$/Qty)	Hours	(\$/Hr)	Cost (\$)
	Backfill with Borrow Material	100	\$3.55			\$355.00
	Utilize suitable excavated material to backfill	120		4	\$138.00	\$552.00
1	Hand Held Tamper			8	\$8.00	\$64.00
	Labor			8	\$37.00	\$296.00
	Fill Armor and channel ripraping	324	\$4.35			\$1,409.40
	Spread Cobble	34		2	\$138.00	\$276.00
1	Small tractor to aide in cobble placement			3	\$94.00	\$282.00
	Armor/Riprap placement, Channel Development			12	\$138.00	\$1,656.00
	1.000					\$4 890 40

Phase V: Surfacing and Mulching

Qty.	Equipment	Qty (Cy)	(\$/Cy)	Unit	(\$/Unit)	Cost (\$)
	4"-0" Base Rock (\$/cy)	37	\$3.51			\$129.87
	1 1/2"-0" Surface Rock (\$/cy)	20	\$3.51			\$70.20
	Processing Crushed Rock			1	\$94.84	\$94.84
	Straw Mulch w/Seed Application EC mix (\$/ac.)			0.04	\$619	\$24.76
						\$319.67

Miscellaneous Costs

Qty.	Equipment Equipment	Qty.	\$	Ft.	(\$/Ft.)	Cost (\$)
2	Mobilization, extra excavator		\$1,030			\$1,030.00
1	Waste area clean up, small tractor (\$/hr)	2	\$94.00			\$188.00
	Engineering Fees			"""		\$5,000.00
	· · · · · · · · · · · · · · · · · · ·					\$6,218.00

Total Project Cost = \$38,731.22

Type F Replacement & Road Improvement Point 117 to Point 118 Swede Road

Rising Tide Sale Name:

Date:

3/10/08

	ΔIΛ				Equip	Equipment Hours	nrs				Labor	Culvert		Erosion Contro	ol Total
Construction Phase	BCY	C330	Hammer Dmp	Dmp Tr	Gdr 14G	Cat 966	Roller	Buggy	Pump	Tamper		Ft \$/ft.	\vdash	Acres \$/Acre	69
Unload, move cmp to site, and band		4									9				
Fill and Culvert Excavation	455	6.5	3	6.5											
De-watering (w/pump) (24hrs/day)									10		4				
Build culvert bed (crushed rock) **	56	1.5		***		***				2	2				
Place culvert \ tamp flanks (c.rock) **	09	2		**		***				2	2				
Backfill culvert w / crushed rock **	09	2		***		***				2	2	_			
Remaining Backfill *	198	4		3		3				4	4				
Fill Compaction					0.5		2								
Remove Waste Material	257	4		3.5											
Seed culvert wonsite cobble	26	က						4			8				
Embedded Riprap (Dissipator)	12	-		* *				-			2				
Develop and Place Riprap/Fill Armor	100	8		***											
Haul Away Old Culvert				1.5											
Total Hours		36	3	14.5	0.5	3	2	5	10	10	30				
Equipment Rates:		\$138	\$15	\$73	\$30	\$74	\$72	\$20	6\$	6\$	\$37				
Sub total Hourly rates:	:	\$4,968	\$45	\$1,059	\$45	\$222	\$144	\$100	06\$	\$90	\$1,110				\$7,873
96" Aluminized Steel Culvert (10 ga)												50 \$176	92		\$8,800
96" x 26" band												2 \$278	18		\$556
Step Beveling (both ends)												2 \$124	24		\$248
96" Neoprene Gasket 12" Wide												2 \$52	5		\$104
Sub total Culvert Material Cost:															\$9,708
Sub total Seeding and Mulching:															
Project site & Waste area													0.200	963\$ 00	\$107
Straw Bales (20 bales @\$10/bale)															\$200

Total Installation Cost;

Notes:

1) Cost to improve road segment 117 to 118 is on a Summary of Construction Costs sheet.

* Remaining backfill composed of material from excavated fill.
 Old culvert is to be disposed of off of State Lands.

4) Mobilization costs are in the Move-In portion of the SUMMARY OF ALL PROJECT COSTS. 5) ** 1"-0" crushed backfill and bedding rock located at the Swede Rd Stockpile. 6) Riprap rock is located at the Swede Rd Quarry. 7) ***Rock haul included on the Summary of Construction

\$17,888

Project No. 3 Road Improvement

	SALE NAME:	Rising Tide				NEW CONSTRUCTION:	RUCTION:	0.00	0.00 STATIONS	0.00	0.00 MILES
	ROAD:	19-111 (28+75), 112- and 115-116 (7+00)		<u> 113 (22+80), 114-115 (15+90)</u>	.((IMPRO	IMPROVEMENT:_	74.45	STATIONS	1.41	MILES
SURFACING								Stations/		Rate/	
	Subgrade prep:		Description					amount	×	sta/amt	Cost
		Grade, Shape and I	Ditch					74.45	×	\$21.20	\$1,578.34
		Surfacing Rock Processing and Compaction (Subgrade Leveling)	cessing and	Compaction (St	ubgrade Lev	(gujle		74.45	×	\$17.24	\$1,283.52
	1 1 1 1			THING OF THINGS	THOO	40 44 440	1				
ROAD SEGMEN	011 1100 61	is to 11 Hoewatel Coop		2 200	LOUE	0.00	210		ı		
			Depth of	19 to 111 Tidewater Loop	water Loop	0+00 to 28+75	28+75	TOTAL	Rate/	2004	
44	Rock Size		Rock	Volume (CY)	63	Number	jer –	VOLUME	Sta./	1	
чррисаноп	and Type	Location	(inches)	per		to		(63)	amt.		
Subgrade Leveling	1 1/2"-0" Crushed		A/N					250	\$3.51	\$878	
Culvert Beddina	1 1/2"-0" Stockpile	10+25	ΑŅ	culvert	20	culverts	-	20	\$3.51	\$70	
Fill Construction	6" -0" Pit-run		A/N	Till the second	40	fills	-	40		\$0	On Fill Sheets
Culvert Redding	1 1/2"-0" Stockpile		A/N	culvert	40	culverts	-	04		\$	
Base Rock	4"-0" Crushed		10	Į Į	40	fills	-	40		\$0	On Fill Sheets*
Surface Rock	1 1/2"-0" Crushed		4	W .	24	fills	1	24		\$	õ
Fill Armor/Dissipator	24"-6" Riprap	11+80	ΑN	E E	20	fills	-	20		0\$	On Fill
Fill Construction	6" -0" Pit-run	24+75	A/N	III	80	fills	1	80			E H
Culvert Bedding	1 1/2"-0" Stockpile		A/N	culvert	06	culverts	-	06		\$	On Fill Sheets'
Base Rock	4"-0" Crushed		10	III.	80	fills	1	8		0\$	on Fill
Surface Rock	1 1/2"-0" Crushed	24+75	4	III.	36	fills	_	36		0\$	On Fill Sheets*
Fill Armor/Dissipator	24"-6" Riprap	24+75	N/A	[]JJ	170	SIII	1	170		\$0	On Fill Sheets*
Total Rock for Road S	Segment:	19 to 11	11 Tidewater	doo7				920			\$948
ROAD SEGMENT	112 to 113 Tie	112 to 113 Tidewater Loop		POINT TO POINT	POINT	Sta. to Sta.	Sta				
			Depth of	112 to I13 Tidewater Loop	water Loop	0+00 to 22+80	22+80	TOTAL	Rate/		
15.00	Rock Size		Rock	Volume (CY)	(CY)	Number	ier .	VOLUME	Sta./	1805	
чррисапри	andType	Location	(inches)	bei		10		<u>و</u>	amt.		
Subgrade Leveling	1 1/2"-0" Crushed	112 to 113	A/A					100	\$3.51	\$351	
Surface Rock	1 1/2"-0" Crushed	112 to 113	4	station	22	stations	22.80	502	\$3.51	\$1,761	
Turnouts	1 1/2"-0" Crushed	112 to 113	4	turnout	10	furnouts	3	30	\$3.51	\$105	
Junctions	1 1/2"-0" Crushed	112 to 113	A/N	junction	10	junctions	1	10	\$3.51	\$35	
Curve Widening	1 1/2"-0" Crushed	112 to 113	N/A	curve	N/A	carves	N/A	30	\$3.51	\$105	
Culvert Bedding	1 1/2"-0" Stockpile	13+00, 16+35	A/N	culvert	40	culverts	2	80	\$3.51	\$281	
Culvert Bedding	1 1/2"-0" Stockpile	4+00	A/A	culvert	20	culverts	1	20	\$3.51	\$70	
Energy Dissipators	24"-6" Riprap	13+00	A/N	dissipator	20	dissipators	-	20	\$3.74	\$75	
Fill Construction	6" -0" Pit-run	0+20	ΑN	IJ.	20	fills	-	20		\$	On Fill Sheets
Culvert Bedding	1 1/2"-0" Stockpile		A/N	culvert	4	culverts	<u>_</u>	6		0\$	\$0 On Fill Sheets*
Base Rock	4"-0" Crushed	0+20	10	IIIJ	40	fills	-	40		\$0	On Fill Sheets'
Surface Rock	1 1/2"-0" Crushed	0+20	4	III3	24	fills	-	24		Q	On Fill Sheets*
Fill Armor/Dissipator	24"-6" Riprap	0+20	A/N	IIJ	8	fills	-	90		0\$	On Fill Sheets
Fill Construction	6" -0" Pit-run	5+05	ΑΝ	III.	20	fills	-	20		0\$	On Fill Sheets'
Culvert Bedding	1 1/2"-0" Stockpile		N/A	culvert	9	culverts	1	09		\$0	\$0 On Fill Sheets*
Base Rock	4"-0" Crushed	20+9	10	IIIJ	70	fills	1	70		\$0	On Fill Sheets'

Surface Rock	1 1/2"-0" Crushed	5+05	4	iii	24	SIII3	1	24		\$	\$0 On Fill Sheets*	
Fill Armor/Dissipator	24"-6" Riprap	5+05	N/A	EII	70	EIIIs	-	70		⊗	\$0 On Fill Sheets*	
Fill Construction	6" -0" Pit-run	8+45	N/A	III.	40	fills	-	40		0\$	\$0 On Fill Sheets*	
Culvert Bedding	1 1/2"-0" Stockpile	8+45	N/A	culvert	09	culverts	1	90		\$0	On Fill Sheets*	
Base Rock	4"-0" Crushed	8+45	10	E E	9	fills	1	9		\$0	On Fill Sheets*	
Surface Rock	1 1/2"-0" Crushed	8+45	4	III.	24	IIIs	-	24		0\$	On Fill Sheets*	
Fill Armor/Dissipator	24"-6" Riprap	8+45	W/A	fiii]	20	fills	1	20		\$0	On Fill Sheets*	
Fill Construction	6" -0" Pit-run	22+50	N/A	[III]	20	fills	+	20		\$0	On Fill Sheets*	
Culvert Bedding	1 1/2"-0" Stockpile	22+50	N/A	culvert	40	culverts	1	40		80	On Fill Sheets*	
Base Rock	4"-0" Crushed	22+50	10	IIII	40	ellis.	1	40		0\$	\$0 On Fill Sheets*	
Surface Rock	1 1/2"-0" Crushed	22+50	4	₽	24	lills	1	24		0\$	\$0 On Fill Sheets*	
Fill Armor/Dissipator	24"-6" Riprap	22+50	N/A	#	20	SIIIS	-	20		O\$	\$0 On Fill Sheets*	
Total Rock for Road Segment:	Segment:	112 to	112 to I13 Tidewater	8				1,628			\$2,783	
ROAD SEGMENT	114 to 115 Tidewater Loop	water Loop		POINT TO POINT	2 POINT	Sta. to Sta.	Sta.					
			Depth of	114 to 115 Tidewater Loop	lewater Loop	0+00 to 15+90	2+90	TOTAL	Rate/	77.	~~~~	
	Rock Size		Rock	Volume (CY)	e (CY)	Number	er	VOLUME	Sta./	Soci		
Application	and Type	Location	(inches)	Jed	Je.	of		(CX)	amt.		<i>,</i> ,,,,,,,,	
Subgrade Leveling	1 1/2"-0" Stockpile	114 to 115	N/A					100	\$3.51	\$351		
Total Rock for Road Segment	Segment:	114 to	14 to I15 Tidewater Loop	r Loop				100			\$351	
ROAD SEGMENT	115 to 116 Tidewater Loop	water Loop		POINT TO POINT	D POINT	Sta. to Sta.	Sta.					
			Depth of	115 to 116 Tidewater Loop	lewater Loop	0+00 to 7+00	2+00	TOTAL	Rate/	Acat.		
Application	Rock Size		Rock	Yolume (CY)	e (CY)	Number	10	VOLUME	Sta.	igno		
Cubarada Lougina	4 4 7" O" Stocknile	15 to 118	(Inches)	٦	Dec	Io		300	43 51	470		
Subglade Levelling	1 1/2 -0 Stucypile	0110101		-				2 2	10.00	*	_	
Total Rock for Road Segment:	Segment:	115 to	115 to 116 I idewater Loop	ır Loop				707			0/#	
	Δ.	Processing:		Description					No.sta	Rate/sta	Cost	\$8,114
	•		Water, Pro	Process & Compact Crushed Rock	t Crushed Ro	ck:			22.80	\$48.23	\$1,100	
	SUB TOTAL FOR SURFACING	URFACING										
	SPECIAL PROJECTS	è			Docoringion				<u> </u>			
	and the state of t	@ 101/Custon @	0400hr v 0 E	A v retoning	dioninatore			ı	8778	_		
	Construct Dissipaters VV/Excavator (0.51.36/1).	S VV/Excavator (w	4 Solif. A C.O	x 0.5/dissipator x 4 dissipators	dissipators			ı	94.0			•••
	5 hours Labor @\$37/hour	/hour						11	\$185			•••••

Description		Cost
ers W/Excavator @\$138hr. x 0.5/dissipator x 4 dissipators	H	\$276
5 hours Labor @\$37/hour	11	\$185
	H	
	II	
FOR SPECIAL PROJECTS		

GRAND TOTAL

\$58,410

\$461

SUMMARY OF CONSTRUCTION COSTS FILL COSTS/X-DRAINS

SALE NAME: Rising Tide

NEW CONSTRUCTION: _____STATIONS _____MILES

ROAD:	Tidewater L			IMI	PROVEMENT:		STATIONS		MILES
POINTS:	19-111, 112-1	113					•		
				Project No. 3 Roa	d Improveme	nt			
CULVERT MA	TERIALS AN	D INSTALL	ATION		······································				
Location	Dia/type		Rate	Cost	Location	Dia/type	Lineal ft.	Rate I	Cost
I9-i11					I12-I13	,,			
10+25	18/CPP	30	\$17.64	\$529.20	5+05	24/ALCSP	50	Fill Sheet	\$7,032.22
11+80	24/ALCSP		Fill Sheet	\$5,310.72	8+45	36/ALCSP	60	Fill Sheet	\$6,753.72
24+75	36/ALCSP		Fill Sheet	\$14,086.08	13+00	18/CPP	35	\$17.64	\$617.40
	00,7 (200)			* 1	16+35	18/CPP	30	\$17.64	\$529.20
l12-l13					22+50	24/ALCSP	35	Fill Sheet	\$4,595.72
0+50	24/ALCSP	50	Fill Sheet	\$8,004.42					
4+00	18/CPP	30	\$17.64	\$529.20					
					.!-				
				Description		Quantity	Rate	Cost	
	Other/mis	cellaneous:		•					
(Culvert stakes	& markers:	8 Culvert Mar	kers @\$18.00 ea.		9	\$18.00	\$162.00	
UB TOTAL F	FOR CULVER	T MATERIA	LS & INSTALI	_ation					\$48,15
ROCKING	Cubarada		Description		Stations	l v	Rate/sta	Cost	
Creding IO I	Subgrade p			05, 8+45, 22+50	6.00	X	\$70.95	\$425.70	
	5 per lift=\$70.9			00, 0.40, 22.00	0.00	┤	ψ10.00	Ψ+20.10	
			\$65.34 per fill	(stations)	6.00	×	\$65.34	\$392.04	
ibratory rtom	er o into tegue i	.70 per mit-	φοσ.σ - per im	(Stations)	0.00	_ ^	ψ00.04	ψ332.07	
					·	-			
	Processing	:	Description			sta	Rate/sta	Cost	
		Grade, Cor	mbaction (0)48	.23 per lift x's 3 lifts	=\$96.46	6.00	\$144.69	l \$868.14	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			.23 per lift x's 3 lifts -113 0+50, 5+05, 8+		6.00	\$144.69	\$868.14	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			.23 per lift x's 3 lifts -113 0+50, 5+05, 8+		6.00	\$144.69	\$868.14	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					6.00	\$144.69	\$868.14	
ROCKING	,					6.00	\$144.69	\$868.14	\$1,68
ROCKING						6.00	\$144.69	\$868.14	\$1,68
ROCKING						6.00	\$144.69	\$868.14	
						6.00	\$144.69	\$868.14	-
ROCKING SUB TOTAL						6.00	\$144.69	\$868.14	
UB TOTAL		19-111 11+8	30, 24+75, 112	-113 0+50, 5+05, 8+		6.00	\$144.69	\$868.14	
SUB TOTAL	By: L. Fre	19-111 11+8				6.00	\$144.69	\$868.14	\$1,686 \$49,836

L. Freeman 04/30/2008

Segment: 19 to I11	Station:	11+80
Fill: 3	Height:	8

Materials	Quantity		\$	Total
24"x50', 14ga, ALCSP	50		\$24.40	\$1,220.00
Bevel Inlet End	1		\$24.00	\$24.00
24"-6" Riprap Armor	40	су	\$3.90	\$156.00
1 1/2"-0" Cr. bedding/backfull	40	су	\$3.38	\$135.20
24"-6" Dissipator Rock	10	су	\$3.90	\$39.00
6"-0" pit-run fill reconstruction	40	су	\$4.19	\$167.60
1 1/2"-0" Surfacing Rock	24	су	\$3.38	\$81.12
4"-0" Crushed Rock for Road	40	су	\$3.38	\$135.20
Erosion Control	0.05	ac	\$1,532.00	\$76.60
Mulch, seed and fert.				

4" 10"

\$2,034.72

Equipment/Labor Costs		Quantity	\$/Hr.	Hours	Total
Excavator, Large	Excavator, Large				
	Operating	1	\$138.00	6	\$828.00
	Stand-By	1	\$82.80	2	\$165.60
Dump Truck					
	Operating	2	\$73.00	6	\$876.00
	Stand-By	2	\$43.80	2	\$175.20
Vibratory Roller			·		
	Operating	1	\$72.00	4	\$288.00
	Stand-By	1	\$43.20	2	\$86.40
Front-End Loade	er, Medium				
	Operating	1	\$74.00	5	\$370.00
	Stand-By	1 1	\$44.40	3	\$133.20
Hand Held Tam	Hand Held Tamper				
·	Operating	1 1	\$9.00	4	\$36.00
	Stand-By	1 1	\$5.40	4	\$21.60
Laborer		1	\$37.00	8	\$296.00

\$3,276.00

Project Total

\$5,311

^{*} Rock Cost shown on the Road Improvement cost sheet.

L. Freeman 04/30/2008

 Segment:
 19 to I11
 Station:
 24+75

 Fill:
 4
 Height:
 16

Materials	Quantity		\$	Total
36"x80', 14ga, ALCSP	80		\$37.00	\$2,960.00
Bevel Inlet End	1		\$36.00	\$36.00
24"-6" Riprap Fill Armor	160	су	\$3.90	\$624.00
24"-6" Dissipator Rock	10	су	\$3.90	\$39.00
1 1/2"-0" Cr. bedding/backfull		су	\$3.38	\$304.20
6"-0" Pit-run fill reconstruction	80	су	\$4.19	\$335.20
1 1/2"-0" Surfacing Rock	36	су	\$3.38	\$121.68
4"-0" Crushed Rock for Road	80	су	\$3.38	\$270.40
Erosion Control	0.1	ac	\$1,532.00	\$153.20
Mulch, seed and fert.				

4" 10"

\$4,843.68

Equipment/Labor Costs		Quantity		\$/Hr.	Hours	Total
Excavator, Large	Excavator, Large					
	Operating	1		\$138.00	20	\$2,760.00
	Stand-By	1 1		\$82.80	4	\$331.20
Dump Truck						
	Operating	2		\$73.00	20	\$2,920.00
	Stand-By	2		\$43.80	4	\$350.40
Rubber Tire Skid	d					
er	Operating	1	\Box	\$72.00	10	\$720.00
	Stand-By	1 1		\$43.20	4	\$172.80
Vibratory Roller						
	Operating	1		\$72.00	4	\$288.00
	Stand-By	1	\neg	\$43.20	4	\$172.80
Front-End Loade	er, Medium					
	Operating	1		\$74.00	8	\$592.00
	Stand-By	1	\neg	\$44.40	4	\$177.60
Hand Held Tam	per					
	Operating	1		\$9.00	6	\$54.00
	Stand-By	1	一	\$5.40	4	\$21.60
Water Pump			一			
	Operating	1	一	\$9.00	10	\$90.00
Laborer		1		\$37.00	16	\$592.00

\$9,242.40

Project Total

\$14,086

^{*} Rock Cost shown on the Road Improvement cost sheet.

L. Freeman 04/30/2008

Segment:	112 to 113	Station:	0+50	
Fill:	5	Height:	9	_

Materials	Quantity		\$	Total
24"x50', 14ga, ALCSP	50		\$24.40	\$1,220.00
Bevel Inlet End	1		\$24.00	\$24.00
24"-6" Riprap Armor	50	су	\$3.90	\$195.00
1 1/2"-0" Crushed Rock for	40	су	\$3.38	\$135.20
Bedding/Backfill				
24"-6" Dissipator Rock	10	су	\$3.90	\$39.00
6"-0" pit-run fill reconstruction		су	\$4.19	\$209.50
1 1/2"-0" Crushed Top Course		су	\$3.38	\$81.12
4"-0" Crushed Rock for Road	40	СУ	\$3.38	\$135.20
Erosion Control	0.05	ac	\$1,532.00	\$76.60
Mulch, seed and fert.				

4" 10"

\$2,115.62

Equipment/Labor Costs		Quantity	\$/Hr.	Hours	Total	
Excavator, Larg	Excavator, Large					
	Operating	1 1	\$138.00	12	\$1,656.00	
	Stand-By	1 1	\$82.80	3	\$248.40	
Dump Truck						
	Operating	2	\$73.00	12	\$1,752.00	
	Stand-By	2	\$43.80	2	\$175.20	
Vibratory Roller	I.					
	Operating	1	\$72.00	5	\$360.00	
	Stand-By	1 1	\$43.20	2	\$86.40	
Front-End Load	er, Medium					
	Operating	1	\$74.00	5	\$370.00	
	Stand-By	1	\$44.40	3	\$133.20	
Hand Held Tam	per					
	Operating	1	\$9.00	6	\$54.00	
	Stand-By	1	\$5.40	4	\$21.60	
Water Pump						
	Operating	2	\$9.00	8	\$144.00	
Laborer		2	\$37.00	12	\$888.00	

\$5,888.80

Project Total

\$8,004

^{*} Rock Cost shown on the Road Improvement cost sheet.

Fill Reconstruction Cost Estimate

L. Freeman 04/30/2008

 Segment:
 I12 to I13
 Station:
 5+05

 Fill:
 6
 Height:
 10

Materials	Quantity		\$	Total
24"x50', 14ga, ALCSP	50		\$24.40	\$1,220.00
Bevel Inlet End	1		\$24.00	\$24.00
24"-6" Riprap Armor	60	су	\$3.90	\$234.00
1 1/2"-0" Crushed Rock for	60	су	\$3.38	\$202.80
Bedding/Backfill				
24"-6" Dissipator Rock	10	су	\$3.90	\$39.00
6"-0" pit-run fill reconstruction	50	су	\$4.19	\$209.50
1 1/2"-0" Surfacing Rock	24	су	\$3.38	\$81.12
4"-0" Crushed Rock for Road	70	су	\$3.38	\$236.60
Erosion Control	0.1	ac	\$1,532.00	\$153.20
Mulch, seed and fert.				

4" 10"

\$2,400.22

Equipment/Lab	or Costs	Quantity	\$/Hr.	Hours	Total
Excavator, Large	9				
	Operating		\$138.00	10	\$1,380.00
	Stand-By	1	\$82.80	2	\$165.60
Dump Truck					·
	Operating	2	\$73.00	10	\$1,460.00
	Stand-By	2	\$43.80	2	\$175.20
Vibratory Roller					
	Operating	1	\$72.00	5	\$360.00
	Stand-By	1	\$43.20	2	\$86.40
Front-End Loade	er, Medium				
	Operating	1	\$74.00	5	\$370.00
	Stand-By	1	\$44.40	3	\$133.20
Hand Held Tam	per				
	Operating	1	\$9.00	4	\$36.00
	Stand-By	1	\$5.40	4	\$21.60
Laborer		1	\$37.00	12	\$444.00

\$4,632.00

Project Total

\$7,032

^{*} Rock Cost shown on the Road Improvement cost sheet.

Fill Reconstruction Cost Estimate

L. Freeman 04/30/2008

Segment:	I12 to I13	Station:	8+45
Fill:	7	Height:	5

Materials	Quantity		\$	Total
36"x60', 14ga, ALCSP	60		\$37.00	\$2,220.00
Bevel Inlet End	1		\$36.00	\$36.00
24"-6" Riprap Armor	20	су	\$3.90	\$78.00
1 1/2"-0" Crushed Rock for	60	су	\$3.38	\$202.80
Bedding/Backfill				
6"-0" pit-run fill reconstruction		су	\$4.19	\$167.60
1 1/2"-0" Crushed Top Course		су	\$3.38	\$81.12
4"-0" Crushed Rock for Road	60	СУ	\$3.38	\$202.80
Erosion Control	0.1	ac	\$1,532.00	\$153.20
Mulch, seed and fert.				·

4" 10"

\$3,141.52

Equipment/Lab	Quantity	\$/Hr.	Hours	Total	
Excavator, Larg	е				
	Operating		\$138.00	8	\$1,104.00
	Stand-By	1	\$82.80	2	\$165.60
Dump Truck					
	Operating	2	\$73.00	8	\$1,168.00
	Stand-By	2	\$43.80	2	\$175.20
Vibratory Roller					
	Operating	1	\$72.00	3	\$216.00
	Stand-By	1	\$43.20	2	\$86.40
Front-End Load	er, Medium				
	Operating	1	\$74.00	3	\$222.00
	Stand-By	1	\$44.40	3	\$133.20
Hand Held Tam	per				
	Operating	1 1	\$9.00	3	\$27.00
	Stand-By	1 1	\$5.40	2	\$10.80
Water Pump					
	Operating	1	\$9.00	5	\$45.00
Laborer		1	\$37.00	7	\$259.00

\$3,612.20

Project Total

\$6,754

^{*} Rock Cost shown on the Road Improvement cost sheet.

Fill Reconstruction Cost Estimate

L. Freeman 04/30/2008

 Segment:
 I12 to I13
 Station:
 22+50

 Fill:
 8
 Height:
 6

Materials	Quantity		\$	Total
24"x 35', 14ga, ALCSP	35		\$24.40	\$854.00
Bevel Inlet End	1		\$24.00	\$24.00
24"-6" Riprap Armor	20	су	\$3.90	\$78.00
1 1/2"-0" Crushed Rock for	40	су	\$3.38	\$135.20
Bedding/Backfill				
6"-0" pit-run fill reconstruction		су	\$4.19	\$83.80
1 1/2"-0" Crushed Top Course		су	\$3.38	\$81.12
4"-0" Crushed Rock for Road	40	су	\$3.38	\$135.20
Erosion Control	0.05	ac	\$1,532.00	\$76.60
Mulch, seed and fert.				

4" 10"

\$1,467.92

Equipment/Lab	Quantity	\$/Hr.	Hours	Total	
Excavator, Large	Э				
	Operating		\$138.00	7	\$966.00
	Stand-By	1 1	\$82.80	2	\$165.60
Dump Truck					
	Operating	2	\$73.00	7	\$1,022.00
	Stand-By	2	\$43.80	2	\$175.20
Vibratory Roller					
	Operating	1 1	\$72.00	3	\$216.00
	Stand-By	1 1	\$43.20	2	\$86.40
Front-End Loade	er, Medium				
	Operating	1	\$74.00	3	\$222.00
	Stand-By	1	\$44.40	2	\$88.80
Hand Held Tam	per				
	Operating	1	\$9.00	3	\$27.00
	Stand-By	1 1	\$5.40	2	\$10.80
Laborer		1	\$37.00	4	\$148.00

\$3,127.80

Project Total

\$4,596

^{*} Rock Cost shown on the Road Improvement cost sheet.

	RY OF ROC ROJECT NO.	CK DEVELOI	PMENT AN		G COSTS ber Sale Name:	Risina Tida			
Quarry:	Tidewater L			- '"''	ber dale Hallie.	Swell:			
		tion 21, T6N, F	27W		_	Shrink:	16%		
County:	Clatsop				_	OH IIII			
By:	C.Bangs				– ₁	oading Hopper:	Yes		
Date:	03/25/2008					.caag rropper			
					_				
					STOCKPILE		TRUCK MEAS		TOTAL
	ROCK SIZE	REJECT	GRADATI	ON	CU. YDS.		CU. YDS.		CU. YDS.
	3/4"-0"		CR					***	
	1-1/2"-0"	20%	CR			_	2,625	-	2,625
	4"-0"	20%	CR	-		_	7,129	_	7,129
	6"-0"		PR	-		-	1,758	_	1,758
	24"-6"		RR	-		-	2,162	_	2,162
	36"		RR	-		-	· · · · · · · · · · · · · · · · · · ·	_	
				-				_	
	TOTAL CU	UBIC YARDS	OF ROCK	•			13,674		13,674
1) MOR	ILIZATION	& CET HD.							
1) MOD	ILIZATION	C SEI UI.							
EQUIPM	ENT	QUANTITY	RATE	COST	EQUIPMENT		QUANTITY	RATE	COST
3 Stage C		1	\$2,694	\$2,694					
Screening	Plants	3	\$515	\$1,546					
D8 Cat		2	\$1,200	\$2,400					
Loader		2	\$688	\$1,376					
Excavator	7	1	\$1,200	\$1,200					
Dump Tru	ıcks	1	\$139	\$139					
Loading F	lopper	1	\$515	\$515					
					<u> </u>		<u> </u>	L	
	SUB TOTA	L FOR MOBI	LIZATION						\$9,870
		IO GEO LIB			W. 1270		B. (BB.)	000m	
	EQUIPMEN				TIMES		RATE	COST	
	3 Stage Cru			-	1	_	\$3,205	\$3,205	
	Screening P			-	1	-	\$273 . \$273	\$819 \$273	
	Loading Hop			-		.	1	\$273 \$507	
	Original Cal	ibration		-	1	-	\$507	\$307	
				-		-			
				-	_	-			
				_		-	ı		
	SUB TOTA	L FOR SET U	P COSTS					\$4,804	
	502 1011							4 1,00	
	TOTAL M	OBILIZATIO	N & SET U	P COSTS					\$14,674
2) CLEA	ARING & GI					l	1 1		
	DESCRIPT				QUANTITY		RATE	COST	
		, Haul to Waste		_	8.0	hr	\$138	\$1,104	
	Slash and S	stumps (1 truck	, 1 exc.)	_	4.0	hr	\$73	\$292	
•	Pile & Burn	Slash and Stur	mps(1 exc)	- -	8.0	hr	\$138	\$1,104	
	NA	رون دیگار دوران دوران دوران دوران دوران دوران دوران دوران دوران دوران دوران دوران دوران دوران دوران دوران دورا	h	_			0400	Ø170	
	-	Truck for the	purning of	_	1.0	ea ea	\$162	\$162	
	the Clearing	Debus		_		<u> </u>			
	TOTALO	LEARING &	CDHDDINA	COSTS					\$2,662
	TOTALCI	GEARING &	GVODDIM	1 (0313					\$2,002

MATERIAI	DESCRIPTION	J		QUANTITY	UNIT	RATE	COST	
	Removal (drift)	<u> </u>		5,000	bcy	\$1.50	\$7,500	
	B1/			4.000	1	00.00	4, .,,	
	Removal (excava at waste area)	ate, load		1,000	bcy	\$2.60	\$2,600	
riadi, spreac	at waste area)					····	-	
Overburden	Removal (excava	ate, load	_	2,400	bcy	*	*Cost included in	
haul for borr	ow material)						fill reconstruction	worksheets
Overburden	Embankment			6,000	bcy	\$0.30	\$1,800	
	and shaping)		-	0,000	DO _j	Ψ0.00	7 *1,500	
							_	
TOTAL EX	CAVATION C	OSTS						\$11
VELOP ROCK	<u> </u>							
	-		METHOD	%	QUANTITY	RATE	COST	
ROCK	SUMMARY							
Туре	Cu. yd. Vol. W		Ripping	100%	13,674	\$2.20	\$30,083	
crushed	9,754	71%	Drill & shoot		220	\$2.30	4	
pit run	1,758	13%	Oversize red	2%	230	\$5.80	\$1,335	
rip rap Total	2,162 13,674	16%	Pre-Screening	50%	4,877	\$2.00	\$9,754	
	1,951	14.3%						
reject								Ø 4 1
reject TOTAL RO	CK DEVELOP	MENT (COSTS					\$41
TOTAL RO	OCK DEVELOP	MENT	COSTS					\$41
TOTAL ROLLIBRATION &	ÖCK DEVELÖP & TESTING	MENT	COSTS	.,,	270	A MIDOM	L: goom	<u>\$41</u>
TOTAL ROLLIBRATION &	ÖCK DEVELÖP & TESTING	MENT	COSTS	.,,,	NO.	\$/TEST	COST	\$41
TOTAL RO LIBRATION & DESCRIPTION Calibrate	ÖCK DEVELÖP & TESTING	PMENT (COSTS		NO.	\$/TEST \$507.00	COST \$507	\$41
LIBRATION & DESCRIPTI Calibrate Calibrate	ÖCK DEVELÖP & TESTING	MENT	COSTS		1	\$507.00	\$507	\$ 41
TOTAL RO LIBRATION & DESCRIPTION Calibrate	ÖCK DEVELÖP & TESTING	PMENT	COSTS	.,,				\$41
TOTAL RO LIBRATION & DESCRIPTI Calibrate Calibrate Test	ÖCK DEVELÖP & TESTING	PMENT	COSTS		1	\$507.00	\$507	\$41
TOTAL RO LIBRATION & DESCRIPTI Calibrate Calibrate Test	ÖCK DEVELÖP & TESTING	PMENT	COSTS	.,	1	\$507.00	\$507	\$ 41
LIBRATION & DESCRIPT Calibrate Calibrate Test Test	ÖCK DEVELÖP & TESTING			.,,	1	\$507.00	\$507	
TOTAL RO LIBRATION & DESCRIPTI Calibrate Calibrate Test Test TOTAL CA	OCK DEVELOP TESTING TON ALIBRATION 8				1	\$507.00	\$507	
LIBRATION & DESCRIPT Calibrate Calibrate Test Test	OCK DEVELOP TESTING TON ALIBRATION 8		– – NG COSTS	.,,.	6	\$507.00	\$507	
TOTAL RO LIBRATION & DESCRIPTI Calibrate Calibrate Test Test TOTAL CA	DCK DEVELOP TESTING TON ALIBRATION &				1	\$507.00	\$507	\$41

TOTAL FEEDING & LOADING COSTS

\$10,723

7) ROCK CRUSHING

	ROCK SIZE	ROCK TYPE	CU. YD. QUANTITY	CRUSHER TYPE	HOURLY PRODUCTION	RATE CU. YD.	TOTAL COST
-	3/4"-0"	crushed		3 stage w/s			
	1-1/2"-0"	crushed	2,625	3 stage w/s	100	\$3.89	\$10,211
	4"-0"	crushed	7,129	2 stage w/s	120	\$2.89	\$20,615
					:		
					·		

TOTAL ROCK CRUSHING COSTS

\$30,826

8) STOC	KPILING								
,	STOCKPILE	SITE PREPA	ARATION						
	Equipment	Hours	Rate	Total					
	Dozer	1	\$132.00	\$132.00	Rock	for Floor (CY)	\$/CY Haul	Total	
	Compactor		\$72.00						
	Grader		\$90.00						
	Excavator		\$138.00						
	Ī				\$132.00				
	SUB TOTAL							\$132	
	HAUL & STO	CKPILF		1	# of				
	STOCKPILE		Ī	SIZE	TRUCKS	CU. YDS.	RATE	COST	
1.								_	
2.									
3.									
4									
5.									
6	·								
	SUB TOTAL	·							
	TOTAL STO	CKPILING	COSTS						\$132
									
9) MISC	ELLANEOUS	COSTS							
	DESCRIPTION	N						COST	
	Load, Haul, a	nd Spread th	e reject materi	al at the waste	area.			\$5,755	
		\$3.78/CY	1,951	CY		•			
	Final Quarry [Nev Access	Road Const	Waterbarring,	Drainage			\$2,500	
				ning waste area		•		+- 1	
						•			
	Develop acce							\$528	
	(4 hrs @ \$132	2/hr w/ D8 ca	t)						

10) GRAND TOTAL:		\$122,250
	\$/Cubic Yard	\$12.53
Footnotes:		

\$528

\$9,311

Drift and spread 400cy Pit run to facilitate rock removal. (4 hrs @ \$132/hr w/D8 cat)

TOTAL MISCELLANEOUS COSTS

Project #5 Vac	eating Cost Summary	. 10 /
	I otal A	ppraised Cost
Mobilization	\$	2,658.00
V1 to V2	\$	8,451.00
V2 to V3	\$	7,701.00
V4 to V5	\$	3,084.00
V6 to V7	\$	29,705.00
V8 to V9	\$	1,059.00
Grand Total of Vacating	\$	52,658

MOVE IN:

Road Segment	Description	Equipment	Cost
V1 to V2	Move from work on I2 to I3 and A to B		
	1 hour	Dozer (D8)	\$ 120.00
	1 hour	Excavator (C330)	\$ 138.00
V2 to V3	Mobilize after Area 4 logging is completed.		
	full mobilization cost	Dozer (D8)	\$ 1,200.00
	full mobilization cost	Excavator (C330)	\$ 1,200.00

TOTAL \$ 2,658.00

Rising Tide

Tidewater Loop Vacating. Project No. 5 Vacating. V1 to V2

Location/Description	330#1	330#2	D-8 CAT	10CY Truck #1	10 CY Truck #2	10CY Truck #1 10 CY Truck #2 Front End Loader	Grader	Laborer	Straw	Seed	Lowboy Transport
0+00 to 15+80 Waterbar/Block Road	3										
4+30 Remove Culvert/Fill Develop 5' stream channel	5		S.					ო	10	5	
10+20 Remove Culvert/Fill Restore natural contours				,				T	ro.	10	
11+00 Develop Waste Area for woody debris	-										
13+00 Remove Culvert/Fill Develop 4' Stream Channel	ĸ		ß					7	5	15	
13+40 to 15+00 Slide embankment removal and cleanup	4		4	4				4	15	30	
13+70 Remove Culvert/Fill Develop stream channel to natural contours	8 s							4	15	SS .	
15+30 Remove gate and accessories Transport to Point 4B	2			ຕ							
15+80 Point V2 - pullback fill slopes widen stream channel	ဧ							2	10	15	
Development of waste areas Sloping, compacting, mulching	2							2	10	5	
	32 \$ 4,416.00	ဝ [']	14 \$1,848.00	, 7 \$ 511.00	, o ,		o '	18 \$ 666.00	75 \$ 750.00	130 \$ 260.00	0

Rising Tide

Tidewater Loop Vacating. Project No. 5 Vacating. V2 to V3

Location/Description	330#1	330#2	D-8 CAT	10 CY Truck #	10 CY Truck #1 10 CY Truck #2 10 CY Truck #3 Front End Loader Grader	10 CY Truck #3	Front End Loade	Grader	Laborer	Straw	Seed	Lowboy Transport
0+00 to 31+00 Waterbar/Block Road	4								:			
0+00 - Point V2 Pullback fill slopes, widen stream channel	ო 								2	10	10	
11+10 to 12+60 Outslope and road fill removal. establish positive drainage across rd, prism	- S											
17+90 Remove Culvertifill Develop 9' stream channel, natural contours	S SIIS		S						ဗ	10	15	
19+15 Remove Culvert/fill Develop 6' stream channel, natural contours	S SI		ß						e	10	25	
19+50 to 2/1+30 Sidecast pullback	4								ო	ω	ស៊	
26+40 to 27+00 Remove road fill to establish drainage	-											-
29+40 Remove Culvertifiil Restore natural contours	S		ιo						2	15	20	
30+00 to 31+00 Sidecast pullback	ო								2	5	10	
		,										
	32	o ,	15 \$ 1,980.00	0 \$, O 9	0 %	0 9	ي ٥٠	15	58 \$580.00	85 \$ 170.00	0

Rising Tide

Tidewater Loop Vacating. Project No. 5 Vacating. V4 to V5

Location/Description	330#1	330#2	D-8 CAT	10 CY Truck #1	10 CY Truck #2	D-8 CAT 10 CY Truck #1 10 CY Truck #2 Front End Loader Grader		Laborer	Straw	Seed	Lowboy Transport	ŧ
0+00 to 3+30 Block road, remove road fill, outslope	4			4				2	10	16		
0+00 to 3+30 Salvage rock	2			2								
2+50 Remove Culvert/fill. Restore to natural contours. Develop minimum 10' stream channel	4			4				3	10	15		
Development of waste areas Sloping, compacting, mulching	7							4	8	12		
	12 8 1656 00	o '	O '	10	, O	0	0 1	9 8 333.00	28 280.00	42.5	0	Τ.
	-		•			•			1	•	•	

Total Estimated Cost

\$ 3,084.00

Tidewater Loop Vacating. Project No. 5 Vacating. V6 to V7

Location/Description	330#1	330#2	D-8 CAT	10 CY Truck #1	10 CY Truck #2	Off Road Truck	10 CY Truck #2 Off Road Truck Front End Loader	Grader	L,aborer	Straw	paeS	Lowboy Transport
0+00 to 10+30 Waterbar/Block Road	-											
0+00 to 10+30 Salvage rock	ø			9	ဖ							
2+00 to 3+70 Sidecast pullback	4								2	æ	10	
3+70 Remove Culvertfill Develop 8' stream channel, natural contours	20	20		ω	ω				4	20	30	
5+40 Remove Culvert/fill Develop 10' stream channel, natural contours	- 30 - 30	30		30	SS.	30			4	20	30	
5+40 to 10+30 Sidecast pullback	12			4					ဖ	20	30	
Development of waste areas Sloping, compacting, mulching	4								ო	10	15	

Rising Tide

Tidewater Loop Vacating. Project No. 5 Vacating. V8 to V9

Land Clearing

Windrowing/piling debris within R/W	\$560.00 acre
Scatter outside of R/W (w/excavator or cat):	\$840.00 acre
Piling, Burning	\$1,720.00 acre
Chipping/Scatterring	\$1,980.00 acre
Hauling clearing debris	Need cost appraisal

Roadside Brushing

Light Brushing (alder, salmonberry)	\$980.00 /mile
Medium Brushing (mixed brush, conifers)	\$1,100.00 /mile
Heavy Brushing (dense conifer reproduction)	\$1,300.00 /mile

Earth Excavation

Low use/risk, Field Design Construction	
Low use (field design) spur road construction	\$117.00 /station
Low use (field design) landing construction	\$270.00 /landing

High/Medium use, Full Design Construction		
Common excavation, drift up to 200'	\$1.35	/bcy
End Haul up to 5000' (excavation, load, haul up to 5,000')	\$2.75	/bcy
Embankment compaction (w/compaction equipment)	\$0.40	/bcy
Cut slope rounding	\$27.00	/station
Rock Drilling and shooting (road prism)	\$3.50	/bcy
Production rock drilling and shooting (quarries)	\$1.90	/bcy
Develop/rip/push pit run rock	\$1.85	/bcy
Develop/rip/push/sort riprap rock	\$2.60	/lcy
Screen quarry rock w/portable screening plant	\$2.60	/lcy

Road Vacating		
Sidecast Pullback (<20'VD) w/materials placed	\$220.00	/station
Sidecast Pullback (<20'VD) w/materials hauled	\$335.00	/station
Sidecast Pullback (>20'VD) w/materials placed	\$2.25-\$4.45	/bcy
Sidecast Pullback (>20'VD) w/materials hauled	\$3.35-\$6.70	/bcy
Embankment Excavation	\$2.25-\$6.70	/bcy

Erosion Control

Straw	\$4.50	/bale
Grass Seed, EC Mix (Ryes, fescue, clover)	1.10	/pound
Grass Seed, NS Mix (Ryes, clovers, orchard, trefoil)	\$1.60	/pound
Fertilizer 16-20-0	\$0.25	/pound
Hydro-seeding EC (1400# fiber, 100# seed, 50# tack, 100# fert)	\$950.00	/acre
Hydro-seeding NS (1500# fiber, 100# seed, 50# tack, 200# fert)	\$1,150.00	/acre
Hand Seeding, EC Mix (100# seed, 200# fert)	\$400.00	/acre
Hand Seeding, NC Mix (100# seed, 200# fert)	\$450.00	/acre
Straw Mulch Application (machine blower @ 2" depth)	\$945.00	/acre
Straw Mulch w/Seed Application EC mix	\$1,195.00	/acre
Straw Mulch w/Seed Application NS mix	\$1,245.00	/acre

Culvert Materials

Round corrugated pipe. Prices per foot include delivery, bands and installation. *Indicates price is for materials only, does not include installation.* Costs do not include special installation techniques such as backfilling or bedding with crushed rock, tamping or rip rap dissipators. CMP rates are for galvanized steel (G) and aluminized coated steel (AC).

Diameter

CPP Double Wall

CMP 16 ga

CMP 16 ga

CMP 14 ga

CMP 14 ga

	\$9.70	\$12.30	G	\$14.50	G
	\$6.45	\$8.60	G	\$10.05	G
15"		\$14.10	AC	\$16.40	AC
		\$9.90	AC	\$11.05	AC
	\$11.00	\$14.00	G	\$17.00	G
40"	\$7.50	\$ 9.70	G	\$11.80	G
18"		\$15.90	AC	\$19.15	AC
1		\$10.20	AC	\$13.50	AC
	\$16.30	\$18.40	G	\$22.20	G
	\$11. 4 5	\$12.80	G	\$15.50	G
24"		\$20.90	AC	\$25.10	AC
		\$14.70	AC	\$17.80	AC
	\$34.45	\$29.00	G	\$33.55	G
l	\$24.70	\$20.40	G	\$23.60	G
36"		\$32.90	AC	\$38.20	AC
		\$23.50	AC	\$27.20	AC
	\$71.60	\$38.40	G	\$34.30	G
1 4011	\$48.60	\$27.10	G	\$28.45	G
48"		\$43.00	AC	\$45.75	AC
		\$31.15	AC	\$32.75	AC

Add-on Costs:

Pipe end treatments, such as beveling	\$25.00
6' x 2-1/2" white fibreglass (Carsonite) I beam posts	\$14.10/stake, includes installation

^{***}Special installation materials such as crushed bedding rock, crushed backfill rock, riprap armor rock and/or riprap rock dissipators.

Geotextile Fabrics

Subgrade stabilization, separation, reinforcement ~ 12' width	\$1.25	/lf
Subgrade stabilization, separation, reinforcement ~ 16' width	\$1.70	/lf
10oz. Non-woven filtration cloth (free draining fill construction)	\$2.00	/sq yd
4.5oz. Non-woven filtration cloth	\$0.75	/sq yd

Note: Above rates include installation, decrease rates 20% for material cost only

Road Subgrade Prep.

Grading

Width	Ditch type	\$/Station
14 & 16ft	Outslope	\$11.20
16 ft	3 ft V ditch, Pull ditch material & Incorperate into Subgrade	\$15.20
20 ft	3 ft V ditch, Pull ditch material & Incorperate into Subgrade	\$16.90
14 & 16ft	No Ditch, Waterbar Road	\$9.75

Compaction

Width	\$/Station
16 ft	\$12.50
20 ft	\$15.63

Waste Ditch Material

Application	Equipment	\$/Station
Scatter	Small Backhoe	\$7.50
Load & Haul	Small Backhoe & Dump Truck	\$14.00

Road Surfacing

	Application	Material	Equipment	Rate
	New	Crushed rock	Vibratory Roller, Grader (14G)	15.50/sta.
П	New/improve	Crushed rock	Vibratory Roller, Grader (14G), Water Truck	\$37.00/sta./lift

New/improve	Pit run rock	Vibratory Grid Roller	\$38.75/sta.

Equipment Rates

	T	Hourly Rate	
Brush Cutter	Hourly Rate w/Operator	Equipment	Mobilization
Medium	\$80.00		\$225.00
Backhoe			2005.00
Small 4x4 (C580)	\$65.00		\$225.00
Compaction Equipment			
Vibratory Roller	\$75.00		\$540.00
Vibratory Grid Roller	\$75.00		\$540.00
Rubber Tire Skidder (C518)	\$60.00		\$520.00
Hand Held Tamper	****	\$6.00	
Hydraulic Tamper Attachment		\$8.00	
Drill and Compressor			
Air Track (2" - 3-1/2" hole)	\$115.00		\$540.00
Hydraulic (3-1/2" - 6" hole)	\$225.00	***	\$980.00
Jack Hammer		\$9.00	
Ba-a-a			
Dozers Small (D6)	\$80,00		\$540.00
Medium (D7)	\$90.00		\$540.00 \$560.00
Large (D8)	\$120.00		\$980.00
Large (Bo)	V120.00	··	ψ300.00
Excavators			
Small 1cy (C315)	\$85.00		\$540.00
Medium 1-1/2cy (C325)	\$115.00		\$900.00
Large 4-1/2 cy (C330)	\$130.00		\$980.00
Front End Loaders			
Small 2-1/2cy (C944)	\$60.00		\$520.00
Medium 3-1/2cy (C966)	\$75.00		\$540.00
Large 4-1/2cy (C980)	\$90.00		\$560.00
Graders (200)	070.00		4500.00
Medium (12G)	\$70.00		\$520.00
Large (14G)	\$80.00		\$540.00
Trucks			
10-12cy Highway Dump Truck	\$57.00		\$114.00
20cy Highway Dump Truck w/Trailer	\$67.00		\$134.00
25cy Off-Road Dump Truck	\$95.00		\$540.00
Water Truck (1,500 gal)	\$57.00		\$114.00
Water Truck (2,500 gal)	\$67.00		\$132.00
Lowboy (5 axle)	\$80.00		\$160.00
Lowboy (9 axle)	\$95.00		\$190.00
Tilt Bed Truck and Trailer (40,000#)	\$75.00	***************************************	\$150.00
Pick-up Truck	\$40.00		\$60.00
	•		
Miscellaneous			
Hydro-seeder	\$90.00		\$180.00
Mulch Chopper/Blower	\$65.00		\$130.00
Pump	0405 22	\$6.00	6000 00
Scraper	\$105.00		\$900.00

Project No. 6 Rising Tide Brushing

Cost	\$790.80	\$6,017.83	\$1,115.10	\$3,969.00	\$378.00	\$566.74	\$556.92	\$790.80	\$329.50	\$1,304.10	\$680.68	\$189.00	\$1,080.76	\$593.10	\$3,094.00	\$1,054.00	\$3,031.40	\$527.20	\$464.10	\$1,185.75	\$472.50
Cost/Mile	1,318.00	1,547.00	1,890.00	1,890.00	1,890.00	1,318.00	1,547.00	1,318.00	1,318.00	1,890.00	1,547.00	1,890.00	1,318.00	1,318.00	1,547.00	2,635.00	1,318.00	1,318.00	1,547.00	2,635.00	1,890.00
Brush Type		M	Н	Н	Н	7	M	7	7	Н	M	Н	7	7	M	HA	7	7	М	НΛ	т
Length (Miles)	0.6	3.89	0.59	2.10	0.20	0.43	0.36	09:0	0.25	0.69	0.44	0.10	0.82	0.45	2.00	0.40	2.30	0.40	0.30	0.45	0.25
Name	Ebsen/Tidewater	Ebsen/Tidewater	Ebsen/Tidewater	Hamilton	TL70 (pit rd)	Tidewater Loop	08 T.L	Tidewater Loop	06TL	067L	TL9010	TL9020	1L110	Tidewater Loop	Tidewater Loop	ıı	Swede	Wooden	и	=	0EOW
Segment	B1-B2	=	=	B3	B4	B5-B6	B7	B8-B9	B10	=	B11	B12	B13	B14-B15	B16-B17	=	B18-B19	B20-B21	=	=	B22

	0.00	
L = Lignt brushing, red alder, salmonberry	\$1,318.00 / mile	E E
M = Medium brushing (mixed brush & conifer reproduction)	\$1,547.00 / mile	mile
H = Heavy brushing (dense conifer reproduction and saplings)	\$1,890.00 / mile	mile
VH = Very Heavy	\$2,635.00 / mile	mile
(1-14-08)		

Total Project Cost \$28,191

17.62

Total Miles

X/jewell_unit/timber sales/2008/rising tide/pre sale/projects/Project6_rising tide brushing

Rising Tide Project No. 7 Stream Enhancement

					Number of		
Location	Site	No. Tops	Number of Logs	\$/Tree*	Straw Bales	\$/Bale	Cost per Site
SE1	₩.	င	3	\$225.00	2	\$10.00	\$695.00
SE2	2	5	5	\$225.00	2	\$10.00	\$1,145.00
SE3	က	5	2	\$225.00	2	\$10.00	\$1,145.00
SE4	4	4	4	\$225.00	2	\$10.00	\$920.00
						Subtotal	\$3,905
Grass Seed 40lbs. @\$1.40 lb=\$56.00 Labor 10 hrs. @\$37.00 hrs.=370.0	40lbs. @\$1.4 hrs. @\$37.00	rass Seed 40lbs. @\$1.40 lb=\$56.00 Labor 10 hrs. @\$37.00 hrs.=370.00				Seed Labor	\$56 \$370
*\$/Tree includes t	ransportation co	*\$/Tree includes transportation cost of tree up to 1 mile.			Excava	Excavator Move-In	\$1,101
					ā	Project Total	\$5.432

CRUSHED ROCK COST

 SALE NAME:
 Rising Tide
 DATE:
 03/24/2008

 PROJECT:
 No. 1 and 3
 ROCK TYPE:
 Crushed
 BY:
 J. Long

 QUARRY:
 Tidewater Loop Quarry

Road	C4-4:	Cubic					AY HAUL IN				Tota
Segment	Stations	Yards	50 MPH	30	MPH	25 MPH	20 MPH		10 MPH		
Ā-B	3.70	275		Ī			1.00	1.30	0.60	0.30	3.20
Ç-D	14.30	1,329					1.00	1.00	0.23	0.10	2.33
E-F	4.33	376					0.58	1.00	0.20	0.10	1.8
G-H	12.20	1,326					0.30	0.17	0.10	0.10	0.67
l-J	38.67	3,370						0.40	0.20	0.10	0.70
4A-4B	23.80	1,841					1.50	0.70	0.50	0.10	2.80
12-13	59.92	1,098					2.00	1.20	0.50	0.10	3.80
15-16	21.10	1,044					1.50	0.60	0.50	0.10	2.70
17-18	3.95	127					1.00	0.60	0.30	0.10	2.00
I9A-I9	3.00	20					1.00	0.50	0.30	0.10	1.90
19-110	50.00	200					1.40	0.50	0.30	0.10	2.30
19-111	28.75	580	-				0.80	0.40	0.20	0.10	1.50
l12-l13	22.80	1,218					0.50	0.40	0.20	0.10	1.20
l14-l15	15.90	100							0.10	0.10	0.20
115-116	7.00	20								0.10	0.10
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.,,							<u> </u>				4
				↓							4
											43.4
OTAL	309.42	12,924									AVER/
	STA./NO.	•									HAL
UBIC YARD	WEIGHTED	HAUL				1	0.79	0.60	0.30 ance (miles)	0.10	1.7

ROCK HAUL:

Truck type:	D20	No. trucks: _	1		
Delay min.:	8	Efficiency:	85%	Ave haul: \$2.33 Load: \$0.45	/cy /cv
			_		•
Truck type:	D12	No. trucks:	3	Spread: \$0.73	/cy
Delay min.:	6	Efficiency:	85%		
Truck type:	D10	No. trucks: _		Production: cy/day =	1,073
Delay min.:	5	Efficiency:	85%		

\$3.51 /cy

CRUSHED ROCK HAUL COSTS 12,924 cy @

CRUSHED ROCK COST

Rising Tide Nos. 1, 2, and 3 SALE NAME: DATE: _ 03/24/2008 PROJECT: Nos. 1, 2, and 5
QUARRY: Swede and County Stockpiles ROCK TYPE: Crushed J. Long BY: ___

Road	Otation	Cubic			ONE W	AY HAUL IN	MILES			Total
Segment	Stations	Yards	50 MPH	30 MPH			15 MPH	10 MPH	5 MPH	
2A-2B	0.75	24	2					0.20	0.10	2.50
K-L	5.10	466	2	1	1	0.63	0.20	0.10	0.10	5.03
I1-I2	65.12	100		1		0.68	0.20	0.20	0.15	2.23
12-13	59.92	100		1	1	1.20	0.20	0.20	0.15	3.75
l17-l18	118.80	807					0.10	0.10	0.10	0.30
I19-I20	60.00	20			1	0.10	0.15	0.10	0.05	1.40
		<u>.</u>								

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OTAL	309.69	1,517								AVERAG
UDIO VADE	STA./NO.		0.05		0.20	0.22	0.44		0.44	HAUL
UBIC YARL	WEIGHTED	MAUL	0.65	0.44	0.39	0.32	0.14 nd Trip Dista	0.11	0.11 4.31	2.16

### **ROCK HAUL:**

Truck type:	D20	No. trucks:	2		
Delay min.:	8	Efficiency:	85%	Ave haul: \$1.97	/cy
-				Load: \$0.45	/cy
Truck type:	D12	No. trucks:		Spread: \$0.73	/cy
Delay min.:	6	Efficiency:	85%	•	
Truck type:	D10	No. trucks:	2	Production: cy/day =	1,359
Delay min.:	5	Efficiency:	85%	•	

CRUSHED ROCK HAUL COSTS 1,517 cy @

\$3.14 /cy

SALE NAME:	Rising Tide			DATE:	03/24/2008
PROJECT:	Nos. 1 and 3	ROCK TYPE:	Riprap	BY:	J. Long
QUARRY:	Tidewater Loop	_		_	

Road Segment I1-I2	Stations	Cubic										_
Segment	Stations						ONE V	VAY HAUL IN	MILES			Total
11-12		Yards	50	MPH	30	MPH		1 20 MPH		10 MPH	5 MPH	Haul
	59.92	36						2.00	1.20	0.50	0.10	3.80
15-16	21.10	220						1.50	0.60	0.50	0.10	2.70
19-111	28.75	220						0.80	0.40	0.20	0.10	1.50
112-113	22.80	190						0.50	0.40	0.20	0.10	1.20
C-D	14.80	556						1.00	1.00	0.23	0.10	2.33
G-H	12.20	920						0.30	0.17	0.10	0.10	0.67
I-J	38.67	20							0.40	0.20	0.10	0.70
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TOTAL	400 04	2.162	ł									AVERAGE
TOTAL	198.24 STA./NO.	2,162	1									HAUL
	STA./NO. J WEIGHTED							0.70	0.49	0.20	0.10	1.49
ICHOLO VADO	WEIGHIED	HAUL	I				l		nd Trip Dista		2.97	1.43

### ROCK HAUL:

Truck type:	D12	No. trucks:				
Delay min.:	6	Efficiency:	85%	Ave haul:	\$2.46	/cy
•		·		Load:	\$1.29	/cy
Truck type:	D10	No. trucks:	2	Develop:		/cy
Delay min	5	Efficiency:	85%	_		_

Production: cy/day = 475

RIP RAP ROCK HAUL COSTS

2,162 cy @ \$3.74 /cy

### PIT RUN ROCK COST

SALE NAME: _____ Rising Tide DATE: 03/24/2008 PROJECT: Nos. 1 and 3 ROCK TYPE: Pit-Run BY: J. Long Tidewater Loop Quarry QUARRY:

Road	1	Cubic	ı				ONE W	AY HAUL IN	MILEO			1
Segment	Stations	Yards	50	моні	30	моы		20 MPH		10 MDUI	5 MPH	Total Haul
3A-3B	1.70	215	30	IVIETI	30	MILTI	23 141-1	1.50	1.00	0.50	0.10	3.10
4A-4B	27.50	100	<b>-</b>					1.50	0.70	0.50	0.10	
4C-4D	1.60	154	<del>                                     </del>					1.50	0.70	0.50	0.10	2.80
4E-4F	1.75	164						1.50	0.80	0.50	0.10	3.00 2.90
4G-4H	2.30	254						1.50	0.70	0.50	0.10	2.80
4I-4J	1.40	91		-				1.50	0.70	0.50	0.10	2.60
15-16	21.10	100	ļ					1.50	0.60	0.50	0.10	2.70
19-111	28.75	120						0.80	0.60	0.50		
112-113	22.80										0.10	1.50
112-113	22.80	160						0.50	0.40	0.20	0.10	1.20
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OTAL	108.90	1,358	ł			l			l			AVERAC
JIAL		1,330	ł			l			l			
1010 1/4	STA./NO.							,,,				HAUL
JBIC YARD	WEIGHTED	HAUL						1.32	0.70	0.44	0.10	2.56
							,	Average Rour	nd Trip Dista	nce (miles)	5.12	

### ROCK HAUL:

Truck type:_	D20	No. trucks:	2			
Delay min.:	8	Efficiency:	85%	Ave haul:	\$2.95	/cy
				Load:	\$0.45	/cy
Truck type:	D12	No. trucks:		Spread:	\$0.78	/cy
Delay min.:	6	Efficiency:	85%			
			_			
Truck type:	D10	No. trucks: _	2	Production: cy/day :	=	904
Delay min.:	5	Efficiency:	85%			

PIT RUN ROCK HAUL COSTS 1,358 cy @ \$4.19 /cy

### PIT RUN ROCK COST

SALE NAME:	Rising Tide			DATE:	03/24/2008
PROJECT:	No. 1	ROCK TYPE:	Pit-Run	BY: ¯	J. Long
QUARRY:	Swede Quarry	_		_	*****

Road	T	Cubic	I				Ο	VE W	AY H	AUL IN	I MIII	FS	<del></del>				Total
Segment	Stations	Yards	50	MPH	30	MPH	25	MPH	20	MPH	15	MPH	10	мен	5 N	ЛРН	Haul
2A-2B	0.75	77											0.	10	0.10	)	0.20
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TOTAL	0.75 STA./NO.	77															AVERAGE
	STA./NO.	CU. YD.															HAUL
CUBIC YARD	WEIGHTED	HAUL												10	0.10		0.20
ADIO IVIA		- IAUL	<u> </u>	I		ļ		A	verag	e Rou	nd Tri	p Dista			0.40		U.2U

### ROCK HAUL:

Truck type:	D20	No. trucks:			
Delay min.:	8	Efficiency:	85%	Ave haul: \$1.0	)4 /cy
				Load: \$0.7	'8 /cy
Truck type:	D12	No. trucks:	1	Spread: \$1.4	6 /cy
Delay min.:	6	Efficiency:	85%		
Truck type:	D10	No. trucks:		Production: cy/day =	562
Delay min.:	5	Efficiency:	85%		

PIT RUN ROCK HAUL COSTS 77 cy @ \$3.28 /cy

SALE NAME:		Rising Tide	;					DATE:	03/24	/2008
PROJECT:		K to L		ROCK T	YPE:	Riprap		BY:	d.me	llison
QUARRY:	Т	idewater Lo	ор				•	-		
										•
Road Segment	Stations	Cubic Yards	SO MOH	30 MDH		AY HAUL IN	MILES 15 MPH	10 MDHÌ	s MDH	Total Haul
K to L	5+10	276	1	0	1	1.93	0.40	0.20	0.20	4.03
RUL	0.10	210				1.00	0.40	0.20	0.20	4.00
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TOTAL		276								AVERAGE
1017L	STA./NO.	CU. YD								HAUL
CUBIC YARD	WEIGHTE	HAUL	0.50	0.20	0.60	1.93	0.40	0.20	0.20	4.03
							nd Trip Dista		8.06	<u></u>
		·······						•		

# ROCK HAUL:

Truck type:	D12	No. trucks:				
Delay min.:	6	Efficiency:	85%	Ave haul:	\$4.45	/cy
				Load:	\$1.01	/cy
Truck type:	D10	No. trucks:	4	Develop:	\$3.70	/cy
Delay min.:	5	Efficiency:	85%	•		

Production: cy/day = 524

RIP RAP ROCK HAUL COSTS

276 cy @ \$9.16 /cy

SALE NAME:		Rising Tide	<del>)</del>							DATE:	03/2	24/2008
PROJECT:		117 to 118		-	R	OCK T	YPE:	Riprap		BY:	S. E	Bushnell
QUARRY:	Swe	ede Road Q	uarry					· · · · · · · · · · · · · · · · · · ·	•	•		
,												
Road	Station	Cubic						AY HAUL IN				Total
Segment	Station	Yards	50	MPH	30	MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MP	H Haul
117 to 118	1+50	112						1.00	0.50	0.40	0.20	2.10
I17 to I18	3+00	10						1.00	0.50	0.40	0.20	2.10
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TOTAL		122										AVERAGE
	STA./NO.											HAUL
CUBIC YARD								1.00	0.50	0.40	0.20	2.10
							A	verage Rou	nd Trip Dista	nce (miles)	4.20	

### **ROCK HAUL:**

Truck type:_ D12 No. trucks: Delay min.: 6 Efficiency: 85% Ave haul: \$2.95 /cy Load: \$0.41 /cy Truck type:_ No. trucks: D10 Develop: \$3.70 /cy Delay min.: Efficiency: 85%

Production: cy/day = 594

RIP RAP ROCK HAUL COSTS

122 cy @ \$7.06 /cy

SALE NAME:		Rising Tide	•					DATE:	02/22	2/2008
PROJECT:	Hamilt	on Ck. Trib.	Type F	ROCK	TYPE:	Rip Rap			d.me	
QUARRY:	. T	idewater Lo	ор	_			_	•		
j										-
	·				. Cı	ıbic Yards				
Segment	Stations	Dissapator		Footings				Misc	Total	
Type F	<u> </u>		387	30					417	]
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					<b>-</b>					
Grand Total			387	30		·······			417	1
Road		Cubic	1		ONE	WAY HAUL II	MILES			ı Total
Segment	Stations	Yards	50 MPH	30 MPH		PH 20 MPH		I 10 MPHI	5 MPH	
Type F		417	30 Wil 11	30 1911 11	20 10	2.90	0.24	0.10	0.10	3.34
7,700		<u> </u>				2.00	0.2.1	<u> </u>	0.10	0.01
		<del></del>			<del> </del>					1
									***************************************	1
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					l					1
									*******	1
					<u> </u>					
I TOTAL		417			1					AVERAGE
TOTAL	STA./NO.									AVERAGE
CUBIC YARD						2.90	0.24	0.10	0.10	HAUL 3.34
COBIC TARD	WEIGHTEL	THOL			<u> </u>	Average Rou			6.68	3.34
	***************************************			···	<del></del>	Average Nou	ind The Diste	ince (miles)	0.00	
ROCK HAUL:										
	Truck type	: D12	No. trucks:	3						
	Delay min.		Efficiency:		•	Ave	haul: \$3.	34 /cy		
	•		•					01 /cy		
	Truck type		No. trucks:			Dev	elop:			
	Delay min.	: 5	Efficiency:		•					

Production: cy/day = 524

RIP RAP ROCK HAUL COSTS 417 cy @ \$4.35 /cy

# Road Maintenance after completion of Projects

Rising Tide 20-Mar-08 J. Long Sale: Date: By:

Cost	\$2,880	\$584	\$592	\$2,304	\$1,248		
Rate	06\$	\$73	\$74	\$72	\$78		
Hours	32	∞	∞	32	16		
			•••				
Equipment/Rationale	Grader 14G	Dump Truck 12CY	FE Loader C966	Vibratory Roller	ĕ		
Type		Final Haul	Road	Maintenance	Il Route		Total

Days	3.2	3.2	
Distance(miles)	4.8	4.8	
Miles/day	1.5	1.5	

Production Rates Grader Vibratory Roller

\$7,608

Road Maintenance Cost Summary

10,410 \$3.13

MBF: \$\$/MBF:

Rising Tide	07-Apr-08	J. McCoy
Sale:	Date:	By:

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost		Product	Production Rates	
Progressive	Grader 14G	\$570	_	9	06\$	006\$	Production Rates	Miles/day	Distance(miles)	Days
Operations	Dump Truck 12CY x 2	\$357	7	20	\$73	\$2,920	Grader	2.5	2.4	1.0
1st Entry	FE Loader C966	\$570	_	9	\$74	\$740				
Progressive	Grader 14G	\$570	-	10	06\$	\$300	Production Rates	Miles/day	Distance(miles)	Days
Operations	Dump Truck 12CY x 2	\$357	7	20	\$73	\$2,920	Grader	2.5	2.4	1.0
2nd Entry	FE Loader C966	\$570	<del></del>	6	\$74	\$740				
Final Road	Grader 14G	\$570	-	89	06\$	\$5,400	Production Rates	Miles/day	Distance(miles)	Days
Maintenance	Dump Truck 12CY x 3	\$357	ო	45	\$73	\$9,855	Grader	1.5	8.0	5.3
	FE Loader C966	\$570	-	20	\$74	\$1,480	Vibratory Roller*	1.5	5.4	3.6
	Vibratory Roller	\$570	_	9	\$72	\$2,880				
	Water Truck 2,500 gallon	\$139	Υ-	40	\$78	\$3,120				
	Labor			20	\$37	\$740				
Total							\$32,595			

*Final Road Maintenance Only

x:\Jewell Unit\Timber Sales\2008\Rising Tide\projects\Road Maint.Harvest

# Rising Tide TIMBER CRUISE REPORT FY 2008

**Sale Area Location:** Areas 1, 2, 3, 4, 5 R/W, and 6 R/W are located in portions of Sections 16, 17, 20, 21, 28, 29, and 32, T6N, R7W, W.M., Clatsop County, Oregon.

2. Fund Distribution:

**BOF 100%** 

Tax Code

8-01 (100%)

3. Sale Acreage by Area:

Area	Treatment	Gross Acres	Existing R/W	New R/W	Non- Timber land	GTRA	Stream Buffer	Net Acres	Survey Method
1	Modified Clearcut	74.2	5.7	2.6	1.6	0	0.3	64.0	GIS
2	Modified Clearcut	55.3	0.3	0.2	0	2.0	0.8	52.0	GIS
3	Modified Clearcut	46.3	1.0	0.3	0	0	1.0	44.0	GIS
4	Modified Clearcut	83.0	5.8	2.9	0	0	4.3	70.0	GIS
5 R/W	In-Sale Right-of-way	6.0	0	0	0	0	0	6.0	GIS
6 R/W	Outside-Sale Right-of-way	8.0	0	0	0	0	0	8.0	GIS
TOTALS		272.8	12.8	6.0	1.6	2.0	6.4	244	

**4. Cruisers and Cruise Dates:** Areas 1, 2, 3, and 4 were cruised by Derek Bangs, Jon Long, Peter Stone, Jasen McCoy, Lanny Freeman, Dave Wolfgram, and Ty Williams, February 14, 2008.

# 5. Cruise Method and Computation:

Areas 1, 2, 3, and 4 are modified clearcut units and were variable plot cruised using a 40 BAF. These plots are located on a 3 chain by 9 chain grid, with every third plot measured and graded. A total of 94 plots were sampled, with 31 measured and graded plots, and 63 count plots. Cedar is a reserve species, and were recorded as "leave" trees.

<u>Area 5 In-Sale R/W</u> The right-of-way volume within the harvest areas was calculated by multiplying the R/W acreage and the average volume per acre from the plots in Areas 1 through 4. In-sale right-of-way totals 6 acres.

<u>Area 6 Outside-Sale R/W</u> The right-of-way volume outside the harvest areas was calculated by multiplying the R/W acreage and the average volume per acre from the plots in Areas 1 through 4. Outside-sale right-of-way totals 8 acres.

All cruisers used Corvallis MicroTechnology (CMT) and/or Allegro data collectors, and were downloaded to the Atterbury <u>Super A.C.E.</u> program in District for computing. See the attached <u>Cruise Design</u> for more details on the cruise method. The cruise calculations were processed in the Astoria district office.

AREA	CRUISE	TRACT	TYPE	ACRES
1, 2, 3, and 4	06N07W SEC 20	AREAS1234	TAKE	230
5 R/W	06N07W SEC 20	AREA 5	R/W	6
6 R/W	06N07W SEC 20	AREA 6	R/W	8

**6. Timber Description** Areas 1, 2, 3, and 4 are modified clearcut units, approximately 50 to 70 year-old, consisting of Douglas-fir, western hemlock, red alder, sitka spruce, and cedar. The average Douglas-fir tree size to be harvested is 20 inches DBH, with an average height of 66 feet to a merchantable top (6 inch d.i.b.). The

average hemlock tree size is 18 inches DBH and 75 feet to a merchantable top (6 inch d.i.b.). The average alder tree size is 15.4 inches DBH and 46 feet to a merchantable top (6 inch d.i.b.). The average volume per acre to be harvested (net) is 42.5 MBF.

<u>Area 5 and 6 R/W</u> is similar to the timber description mentioned above for Areas 1, 2, 3, and 4. The average volume (net) is approximately 44 MBF/acre.

### 7. Statistical Analysis and Stand Summary: (See "Statistics" - Type Reports, attached)

Statistics for Stand B.F. volumes

Area	Estimated CV	Target SE%	Actual CV	Actual SE%
1, 2, 3, 4 (MC)	50%	8%	40.8%	4.2%

**8. Volumes by Species and Log Grade:** (See "Species, Sort, Grade - Type and Project Reports, attached, of individual sale areas and combined areas and two cruise types). Volumes by Species and Grade for All Sale Areas: (MBF) Volumes do not include "in-growth."

Species	DBH	Net Vol.	2 Saw	3Saw	4 Saw	CampRun	% D & B	% Sale
Douglas-fir	20"	5,511	4,377	916	218	0	3%	53%
Hemlock/True-Fir	18"	3,944	2,511	1,213	220	0	2%	38%
Alder	16"	794	0	0	0	794	1%	7%
Spruce	32"	160	109	51	0	0	3%	1%
Cedar	24"	1	1	0	0	0	<1%	<1%
TOTALS		10,410	6,998	2,180	438	794		

9.	Approva	s:
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Prepared by: Jasen McCoy Date: February 25, 2008

Unit Forester Approval: 4 (18)

Date: April 2008

10. Attachments:

Cruise Design - 2 pages Cruise Maps- 2 pages Volume Reports - 4 pages Statistics Reports - 3 pages Log Stock Tables - 3 pages

X:\Jewell_Unit\Timber Sales\2008\Rising Tide\Pre-sale\CruiseReport.doc

# CRUISE DESIGN ASTORIA DISTRICT

Sale Name: Rising Tide	_Area(s) <u>1, 2, 3, and 4</u>
Harvest Type: (MC) "Modified Clearcut"	
Approx. Cruise Acres: 231 Estimated CV% 50 Net BF	SE% Objective 8 Net BF
Planned Sale Volume : _7,500 MBF	lue/Acre: <u>\$12,700/Ac</u> ( 46 MBF/Ac.)
A. <u>Cruise Goals</u> : (a) Grade minimum <u>150</u> conifer: (b) Sample <u>97</u> cruise plots ( <u>32</u> grade/ <u>65</u> count); (c) Oth "automark" thinning standards; <u>X</u> Determine log grades for Determine snag and leave tree species and sizes.	<del>-</del>
B. Cruise Design:  1. Plot Cruises: BAF 40 (Full point; Half point) (circle one)  Cruise Line Direction(s) AZ= 90° (West/East Cruise Line Spacing 9 (chains)  Cruise Plot Spacing 3 (chains)  Grade/Count Ratio 1/2	

All merch. Cedar (8" or >) and marked wildlife trees are leave trees and are recorded as leave trees. Record Alder as camprun. Record snags (SN) as cull and estimate height and top diameter. Do not take plots in buffers.

### C. Tree Measurements:

- **1. Diameter:** Minimum DBH to cruise is _8" for conifers and _10" for hardwoods. Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- **2. Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. Top Cruise Diameter (TCD): Minimum top outside bark is <u>7"</u> for conifers and <u>7"</u> for hardwoods or <u>40</u> % of dob at 16' form point. Generally, use 7" outside bark for trees < 18" dbh and 40% of dob @ FP for trees > 18" dbh.
- **4. Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

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

Cruise Design by: _	Jasen McCoy	
Approved by:		
Date:	1/18/08	
<del></del>		

TC	PSPCSTGR		$\mathbf{S}_{1}$	pecies,	Sort G	rade - Boar	d Fo	ot V	lum	es (P	roject	)						
T7	T6N RR7W S2 T6N RR7W S2 T6N RR7W S2	0 TyR/	W	6.00 8.00 30.00		Project: Acres	RS	NTII 244.(								Page Date Time	3/11/2( 7:51:4	08
		%				†	Per	ent of	Net Bo	oard Fo	oot Volu	me				Average	e Log	Logs
	S So Gr	Net	Bd. F	t. per Acre	<del>)</del>	Total			de Dia.			Log I	ength		Ln	Bd	CF/	Per
Spp	_	BdFt	Def%	Gross	Net	Net MBF	4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	Ft	Lf	/Acre
Н	DOCU														9		0.00	7.9
Н	DO2S	63	2.6	10,559	10,289	2,510		4	65	31		3	41	57	36	285	1.81	36.1
Н	DO3S	31	.3	4,985	4,971	1,213		90	10		0	2	54	44	35	94	0.77	53.0
Н	DO4S	6		901	901	220	3	97			35	30	16	19	23	31	0.43	28.7
Н	Totals	38	1.7	16,445	16,161	3,943	0	36	44	20	2	4	43	51	31	129	1.05	125.7
A A	DOCU DOCR	100	.6	3,274	3,255	794		70	23	7	10	26	40	24	6 28	86	0.00 0.89	3.9 38.0
A	Totals	8	.6	3,274	3,255	794		70	23	7	10	26	40	24	26	78	0.87	41.9
D D D D	DOCU DO2S DO3S DO4S	79 17 4	3.3 .7 .6	18,549 3,784 895	17,940 3,756 890	4,377 916 217		1 92 100	41 8 0	58	2 28	0 11 55	31 31 17	69 56	13 37 34 23	396 80 34	0.00 2.35 0.77 0.51	4.3 45.3 47.0 26.2
D	Totals	53	2.8	23,228	22,586	5,511		20	34	46	1	4	30	64	32	184	1.39	122.8
0 0 0	DO2S DO3S DO4S	74 10 16		2 0 0	2 0 0	0 0 0	100	100	100		100	100	100		32 16 23	230 30 10	2.59 0.75 0.43	.0 .0 .0
C	Totals	0		2	2	. 0	15	10	75		10	15	75		23	46	0.91	.0
S S S	DOCU DO2S DO3S	68 32	3.8	466 207	448 207	109 51		27	11	100 61	3	68	64 1	36 27	10 36 32	720 226	0.00 4.27 2.09	.2 .6 .9
S	Totals	2	2.7	673	656	160		9	4	88	1	22	44	33	30	371	2.91	1.8
NF NF NF	DOCU DO2S DO3S	83 17		3 1 3	3 1	1 0		100	100				100	100	10 40 32 27	360 70	0.00 1.88 0.88	.0 .0 .0
																<u>.</u>		
Tot	ais		2.2	43,626	42,663	10,410	0	30	36	34	2	6	36	56	31	146	1.19	292.2

T '	TSPCSTG	ìR			Species,	Sort G	Grade - Boar			olur	nes (7	Гуре)				F	Page	1	
						Projec	t: RSN	NTID	Œ								Date Γime	3/11/2 7:42:5	2008 52AM
TT61 Tw T61	_		Sec	Tract AREAS		Туре			Plots 94		_	ole Trees	5	C:	CuFt	BdF W	Ft		TTAKE
_	<del></del>		%	T	_	_	<u> </u>	Pe	rcent N	let Bo	ard Fo	oot Volu	ıme			Av	erage L	_og	Logs
Spp	S So		Net BdFt	Bd. Def%	. Ft. per Acı Gross	re Net	Total Net MBF	4-5	Log Sca 6-11			1 ~	g Len 21-30	•	36-99	Ln Ft	Bd Ft	CF/ Lf	Per /Acre
D	DO	CU						<b></b>				-				13		0.00	4.3
D	DO	2S	79	3.3	18,510	17,899	4,117		1	41	58		0	30	70	37	396	2.35	45.2
D	DO	38	17	.7	3,782	3,754	863		91	9		2	11	31	56	34	80	0.77	46.9
D	DO	48	4	.6	897	892	205		100			28	55	17	1	23	34	0.51	26.3
D	Totals		53	2.8	23,189	22,545	5,185		20	34	46	1	4	30	65	32	184	1.39	122.7
Н	DO	CU														9		0.00	7.9
Н	DO	28	63	2.6	10,521	10,250	2,357		4	65	31		2	40	57	36	284	1.81	36.0
Н	DO	3\$	31	.3	4,984	4,970	1,143		90	10			2	55	44	35	94	0.77	53.1
Н	DO	48	6		894	894	206	3	3 97			35	30	16	19	23	31	0.43	28.6
Н	Totals		38	1.7	16,399	16,114	3,706	0	36	45	19	2	4	43	51	31	128	1.05	125.5
A	DO	CU														6		0.00	3.9
Α	DO	CR	100	.6	3,280	3,261	750		70	23	7	10	25	40	24	28	86	0.89	38.1
A	Totals		8	.6	3,280	3,261	750		70	23	7	10	25	40	24	26	78	0.87	42.0
s	DO	CU														10		0.00	.2
S	DO	28	68	3.8	466	448	103				100			64	36	36	720	4.27	.6
S	DO	38	32		208	208	48		28	10	62		72		28	32	227	2.09	.9
S	Totals		2	2.7	674	656	151	$\vdash$	9	3	88	+	23	44	34	30	371	2.90	1.8
Tyne	Totals			2.2	43,542	42,576	9,793	0	30	37	34	2	6	36	56	31	146	1.19	292.0

т 1	TSPCSTG	FR.			Species	, Sort G Projec	rade - Boai t: RSN	d Fo		olu:	mes (T	ype)	-			1	Page Date Fime	3/11/2 7:42:	
TT6N Tw _l T6N			Sec	Tract AREA 5		Type R/W			Plot		Sampl 2	e Tree 07	s	C 1	CuFt	TTO Bd1 W		7W S20	TR/W
			%					Per	cent ì	Vet B	oard Fo	ot Vol	ume			Av	erage l	Log	_
Spp	s _{So}	Gr ad	Net BdFt		Ft. per A Gross	cre Net	Total Net MBF	L: 4-5	og Sc 6-11			Lo ₂	g Lei 21-30	_	36-99	Ln Ft	Bd Ft	CF/ Lf	Logs Per /Acre
D	DO	CU														13		0.00	4.4
D	DO	2S	80	3.0	19,195	18,621	112		1	40	59		0	35	65	37	400	2.38	46.5
D	DO	3S	16	.7	3,811	3,784	23		92	8		2	13	31	55	34	79	0.78	47.8
D	DO	<b>4S</b>	4	.6	857	852	5		98	2		28	55	17		23	34	0.51	25.0
D	Totals		53	2.5	23,863	23,257	140		19	33	47	1	4	34	61	32	188	1.42	123.8
Н	DO	CU														9		0.00	7.8
H	DO.	28	64	2.3	11,184	10,923	66		4	59	37	ļ	3	49	48	35	292	1.86	37.4
Н	DO	38	30	.3	5,007	4,992	30		91	9		0	4	53	43	35	95	0.79	52.5
Н	DO	4\$	6		1,012	1,012	6	3	97			33	28	22	17	23	32	0.45	31.3
H	Totals		38	1.6	17,203	16,927	102	0	35	<b>4</b> 1	24	2	5	49	45	30	131	1.07	129.0
A	DO	CU														6		0.00	3.8
A	DO	CR	100	.6	3,177	3,158	19		67	26	7	10	34	32	25	29	85	0.88	37.0
A	Totals		7	.6	3,177	3,158	19		67	26	7	10	34	32	25	27	77	0.86	40.8
s	DO	CU														10		0.00	,2
S	DO	<b>2S</b>	69	3.8	466	448	3				100			64	36	36	720	4.27	.6
S	DO	3S	31		199	199	1		14	32	54	54	11	22	14	30	217	2.11	.9
S	Totals	÷	1	2.7	665	647	4		4	10	86	17	3	51	29	29	366	2.94	1.8
С	DO	28	74		27	27	0			100				100		32	230	2.59	.1
C	DO	38	10		3	3	0		100			100				16	30	0.75	.1
C	DO	48	16		5	5	0	100					100			23	10	0.43	.5
С	Totals		0		35	35	0	15	10	75	_	10	15	75		23	46	0.91	.8
NF	DO	CU														10		0.00	.1
NF	DO	28	83		49	49	0			100					100	40	360	1.88	.1
NF	DO	3\$	17		9	9	0		100					100		32	70	0.88	,1
NF	Totals		0		58	58	0		16	84				16	84	27	143	1.26	.4
Туре Т	otals			2.0	45,001	44,083	264	0	29	35	36	2	6	40	52	31	149	1.21	296.5

T ?	FSPCSTG	FR			Species	, Sort G Projec	rade - Boai t: RSN	d Fo		oluı	nes (T	Гуре)				1	Page Date Time	3/11/2 7:41:	
TT6N Tw T6N			Sec	Tract AREA 6		Type R/W			Plot 94		_	le Tree :07	s	C 1	uFt	TTC BdI W		7W S20	TR/W
			%					Per	cent l	Vet B	oard Fo	ot Vol	ume			Av	erage l	Log	Logs
Spp	s _{So} T _{rt}	Gr ad	Net BdFt		Ft. per A Gross	cre Net	Total Net MBF	Lo 4-5	og Sc 6-11			Log	g Lei 21-30	_	36-99	Ln Ft	Bd Ft	CF/ Lf	Logs Per /Acre
D	DO	CU											-			13		0.00	4.4
D	DO	28	80	3.0	19,195	18,621	149		1	40	59		0	35	65	37	400	2.38	46.5
D	DO	38	16	.7	3,811	3,784	30		92	8		2	13	31	55	34	79	0.78	47.8
D	DO	<b>4</b> S	4	.6	857	852	7		98	2		28	55	17		23	34	0.51	25.0
D	Totals		53	2.5	23,863	23,257	186		19	33	47	1	4	34	61	32	188	1.42	123.8
Н	DO	CU														9		0.00	7.8
H	DO	28	64	2.3	11,184	10,923	87		4	59	37		3	49	48	35	292	1.86	37.4
Н	DO	38	30	.3	5,007	4,992	40		91	9		0	4	53	43	35	95	0.79	52.5
Н	DO	48	6		1,012	1,012	8	3	97			33	28	22	17	23	32	0.45	31.3
Н	Totals		38	1.6	17,203	16,927	135	0	35	41	24	2	5	49	45	30	131	1.07	129.0
A	DO	CU														6		0.00	3.8
A	DO	CR	100	.6	3,177	3,158	25		67	26	7	10	34	32	25	29	85	0.88	37.0
A	Totals		7	.6	3,177	3,158	25		67	26	7	10	34	32	25	27	77	0.86	40.8
S	DO	CU														10		0.00	.2
S	DO	28	69	3.8	466	448	4				100			64	36	36	720	4.27	.6
S	DO	3S	31		199	199	2		14	32	54	54	11	22	14	30	217	2.11	.9
S	Totals		1	2.7	665	647	5		4	10	86	17	3	51	29	29	366	2.94	1.8
С	DO	<b>2</b> S	74		. 27	27	0			100				100		32	230	2.59	ı.i
C	DO	38	10		3	3	0		100			100				16	30	0.75	.1
C	DO	<b>4</b> S	16		5	5	0	100					100			23	10	0.43	.5
С	Totals		0		35	35	0	15	10	75		10	15	75		23	46	0.91	.8
NF	DO	CU														10		0.00	.1
NF	DO	28	83		49	49	0			100	-				100	40	360	1.88	.1
NF	DO	38	17		9	9	0		100					100		32	70	0.88	.1
NF	Totals		0		58	58	0		16	84				16	84	27	143	1.26	.4
Type T	Totals			2.0	45,001	44,083	353	0	29	35	36	2	6	40	52	31	149	1.21	296.5

TC PS	TATS					)JECT : ROJECT		ISTICS NTIDE			PAGE DATE	1 3/11/2008
WP	RGE	SC	TRACT		TYPE		A	CRES	PLOTS	TREES	CuFt	BdFt
T6N	R7	20	AREAS 1	2 3	TAKE	•		230.00	94	641	1	W
						TREES		ESTIMATED TOTAL		PERCENT SAMPLE		
		]	PLOTS	TREES		PER PLOT		TREES		TREES		
TOT	AL		94	641		6.8						
CRU	ISE		31	195		6.3		32,480		.6		
DBH	COUNT							•				
REFO	OREST											
COU	NT		63	446		7.1						
BLA	NKS											
100 %	V ₀											
					STA	ND SUMI	MARY					
		SA	MPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
		-	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOU	G FIR		85	62.0	20.3	66		140.0	23,189	22,545	5,503	5,503
WHE	MLOCK		76	53.6	18.1	75		96.2	16,399	16,114	4,063	4,063
R AL	DER		31	24.9	15.4	46		32.3	3,280	3,261	949	949
	RUCE		3	.7	31.9	80		3.8	674	656	156	156
TOT	`AL		195	141.2	18.8	66		272.3	43,542	42,576	10,671	10,671
CON	68							THIN THE SAI	MPLE ERRO	OR .		
CL	68.1				HE VOLU	ME WILL SAMPL		-		OF TREES	REQ. 10	INF. POP.
CL SD:	68		COEFF	T OF 100 T	HE VOLU	SAMPL	E TREI	ES - BF		-	• •	
CL SD: DOU	68.1 1.0		COEFF VAR.%	T OF 100 T S.E.%	HE VOLU	<b>SAMPL</b> OW	E TREI	ES - BF HIGH		OF TREES	• •	
CL SD: DOU	68.1 1.0 G FIR EMLOCK		COEFF VAR.% 72.8 72.3 68.6	S.E.% 7.9 8.3 12.3	HE VOLU	SAMPL OW 566	E TREI AVG 615	ES - BF HIGH 663		OF TREES	• •	
CL SD: DOU WHE R AL S SPI	68.1 1.0 G FIR EMLOCK DER RUCE		COEFF VAR.% 72.8 72.3 68.6 66.3	S.E.% 7.9 8.3 12.3 45.9	HE VOLU	SAMPL OW 566 381 145 583	E TREI AVG 615 415 165 1,077	ES - BF HIGH 663 450 186 1,571		F OF TREES	10	1:
CL SD: DOU WHE R AL	68.1 1.0 G FIR EMLOCK DER RUCE		COEFF VAR.% 72.8 72.3 68.6	S.E.% 7.9 8.3 12.3	HE VOLU	SAMPL OW 566 381 145	E TREE AVG 615 415 165	ES - BF HIGH 663 450 186		OF TREES	• •	1:
CL SD: DOU WHE R AL S SPI	68.1 1.0 G FIR EMLOCK DER RUCE		COEFF VAR.% 72.8 72.3 68.6 66.3	S.E.% 7.9 8.3 12.3 45.9	HE VOLU	SAMPL OW 566 381 145 583	E TREI AVG 615 415 165 1,077 473	ES - BF HIGH 663 450 186 1,571	#	F OF TREES	10 71	1;
CL SD: DOU WHE R AL S SPI TOT CL SD:	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.%	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.%	HE VOLU	SAMPL OW 566 381 145 583 444 TREES/	AVG 615 415 165 1,077 473 ACRE AVG	ES - BF HIGH 663 450 186 1,571 501	#	FOF TREES 5	10 71	32 INF. POP.
CL SD: DOU WHE R AL S SPI TOT CL SD: DOU	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.%	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.% 10.1	HE VOLU	SAMPL OW 566 381 145 583 444 TREES/ OW 56	E TREI AVG 615 415 165 1,077 473 ACRE AVG 62	ES - BF HIGH 663 450 186 1,571 501 HIGH	#	OF TREES 5  286  FOF PLOTS	10 71 REO.	32 INF. POP.
CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.% 10.1 10.6	HE VOLU	SAMPL OW 566 381 145 583 444 TREES/ OW 56 48	E TREI AVG 615 415 165 1,077 473 ACRE AVG 62 54	ES - BF HIGH 663 450 186 1,571 501 HIGH 68 59	#	OF TREES 5  286  FOF PLOTS	10 71 REO.	32 INF. POP.
CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL	68.1 1.0 G FIR EMLOCK DER RUCE FAL 68.1 1.0 G FIR EMLOCK DER		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.% 10.1 10.6 23.1	HE VOLU	SAMPL OW 566 381 145 583 444 TREES/ OW 56 48 19	E TREI AVG 615 415 165 1,077 473 ACRE AVG 62 54 25	ES - BF HIGH 663 450 186 1,571 501 HIGH 68 59 31	#	OF TREES 5  286  FOF PLOTS	10 71 REO.	32 INF. POP.
CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0	S.E.% 7.9 8.3 12.3 45.9 6.1  S.E.% 10.1 10.6 23.1 35.6	HE VOLU	SAMPL OW 566 381 145 583 444 TREES/ OW 56 48 19 0	E TREI AVG 615 415 1,077 473 ACRE AVG 62 54 25 1	ES - BF HIGH 663 450 186 1,571 501 HIGH 68 59 31 1	#	286  FOF PLOTS 5	71 REO. 10	32 INF. POP. 13
CL SD: DOU WHE R AL S SP! TOT CL SD: DOU WHE R AL S SP!	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER EMLOCK DER RUCE CAL		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.% 10.1 10.6 23.1	HE VOLU	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135	E TREI AVG 615 415 165 1,077 473 ACRE AVG 62 54 25 1 141	ES - BF HIGH 663 450 186 1,571 501 HIGH 68 59 31 1 147	#	286 FOF PLOTS 5	71 REO. 10	32 INF. POP. 13
CL SD: DOU WHE R AL S SPI DOU WHE R AL S SPI TOT	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 IG FIR EMLOCK DER RUCE AL		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0 COEFF	S.E.%  7.9 8.3 12.3 45.9 6.1  S.E.% 10.1 10.6 23.1 35.6 4.2	L.	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135 BASAL	E TREI AVG 615 415 165 1,077 473 ACRE AVG 62 54 25 1 141 AREA/	ES - BF HIGH 663 450 186 1,571 501 HIGH 68 59 31 1 147	#	286 FOF PLOTS  67 FOF PLOTS	71 REO. 10  17 REO.	32 INF. POP. 1: INF. POP.
CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD:	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 IG FIR EMLOCK DER RUCE AL 68.1 1.0		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0 COEFF VAR.%	S.E.%  7.9 8.3 12.3 45.9 6.1  S.E.%  10.1 10.6 23.1 35.6 4.2  S.E.%	L.	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135 BASAL OW	E TREI AVG 615 415 165 1,077 473 ACRE AVG 62 54 25 1 141 AREA/ AVG	ES - BF HIGH 663 450 186 1,571 501  HIGH 68 59 31 1 147  ACRE HIGH	#	286 FOF PLOTS 5	71 REO. 10	3. INF. POP. 1. INF. POP.
CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD:	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0 COEFF VAR.%	S.E.%  7.9 8.3 12.3 45.9 6.1  S.E.% 10.1 10.6 23.1 35.6 4.2	L.	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135 BASAL	E TREI AVG 615 415 165 1,077 473 ACRE AVG 62 54 25 1 141 AREA/	ES - BF HIGH 663 450 186 1,571 501 HIGH 68 59 31 1 147	#	286 FOF PLOTS  67 FOF PLOTS	71 REO. 10  17 REO.	32 INF. POP. 1: INF. POP.
CL SD: DOU WHE R AL S SPI TOT  CL SD: DOU WHE R AL S SPI TOT  CL SD: DOU WHE SD: DOU WHE	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 IG FIR EMLOCK DER RUCE AL 68.1 1.0		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0 COEFF VAR.%	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.% 10.1 10.6 23.1 35.6 4.2 S.E.% 9.6	L.	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135 BASAL OW 127	E TREI AVG 615 415 165 1,077 473 ACRE AVG 62 54 25 1 141 AREA/ AVG 140	ES - BF HIGH 663 450 186 1,571 501  HIGH 68 59 31 1 147  ACRE HIGH 153	#	286 FOF PLOTS  67 FOF PLOTS	71 REO. 10  17 REO.	32 INF. POP. 1: INF. POP.
CL SD: DOU WHE R AL S SPI TOT  CL SD: DOU WHE R AL S SPI TOT  CL SD: DOU WHE R AL S RI S SPI R AL S SPI R AL	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0 COEFF VAR.%	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.% 10.1 10.6 23.1 35.6 4.2 S.E.% 9.6 10.4	L.	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135 BASAL OW 127 86	E TREI AVG 615 415 165 1,077 473 ACRE AVG 62 54 25 1 141 AREA/ AVG 140 96	ES - BF HIGH 663 450 186 1,571 501  HIGH 68 59 31 1 147  ACRE HIGH 153 106	#	286 FOF PLOTS  67 FOF PLOTS	71 REO. 10  17 REO.	32 INF. POP. 1: INF. POP.
CL SD: DOU WHE R AL S SPI TOT  CL SD: DOU WHE R AL S SPI TOT  CL SD: DOU WHE R AL S RI S SPI R AL S SPI R AL	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE TAL RUCE TAL RUCE TAL RUCE TAL RUCE TAL RUCE RUCE RUCE RUCE RUCE RUCE RUCE RUCE		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0 COEFF VAR.% 93.3 101.2 209.4	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.% 10.1 10.6 23.1 35.6 4.2 S.E.% 9.6 10.4 21.6	L.	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135  BASAL OW 127 86 25	E TREI AVG 615 415 165 1,077 473 ACRE AVG 62 54 25 1 141 AREA/ AVG 140 96 32	ES - BF HIGH 663 450 186 1,571 501  HIGH 68 59 31 1 147  ACRE HIGH 153 106 39	#	286 FOF PLOTS  67 FOF PLOTS	71 REO. 10  17 REO.	3. INF. POP. 1. INF. POP.
CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT TOT CL SD: DOU WHE R AL S SPI TOT	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK CAL 68.1		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0 COEFF VAR.% 93.3 101.2 209.4 344.8	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.% 10.1 10.6 23.1 35.6 4.2 S.E.% 9.6 10.4 21.6 35.5	L.	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135 BASAL OW 127 86 25 2 262	E TREI  AVG 615 415 165 1,077 473  ACRE AVG 62 54 25 1 141  AREA/ AVG 140 96 32 4 272	ES - BF HIGH 663 450 186 1,571 501  HIGH 68 59 31 1 147  ACRE HIGH 153 106 39 5 283	#	# OF TREES 5  286  # OF PLOTS 5  67  # OF PLOTS 5	71 REO. 10  17 REO. 10	3. INF. POP. 1. INF. POP. 1.
CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: CL CL CCL CCL CCL CCL CCL CCL CCL CCL	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE TAL RUCE TAL RUCE TAL RUCE TAL RUCE TAL RUCE RUCE RUCE RUCE RUCE RUCE RUCE RUCE		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0 COEFF VAR.% 93.3 101.2 209.4 344.8 36.8	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.% 10.1 10.6 23.1 35.6 4.2 S.E.% 9.6 10.4 21.6 35.5	L L	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135  BASAL OW 127 86 25 2	E TREI  AVG 615 415 165 1,077 473  ACRE AVG 62 54 25 1 141  AREA/ AVG 140 96 32 4 272	ES - BF HIGH 663 450 186 1,571 501  HIGH 68 59 31 1 147  ACRE HIGH 153 106 39 5 283	#	286 FOF PLOTS 5  67 FOF PLOTS 5	71 REO. 10  17 REO. 10	3. INF. POP. 1. INF. POP.
CL SD: DOU WHE R AL S SPI TOT  CL SD: DOU WHE R AL S SPI TOT  CL SD: CL SD: CL SD: CL SD: CL SD: CL SD:	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE CAL 68.1		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0 COEFF VAR.% 93.3 101.2 209.4 344.8 36.8 COEFF	S.E.%  7.9 8.3 12.3 45.9 6.1  S.E.% 10.1 10.6 23.1 35.6 4.2  S.E.% 9.6 10.4 21.6 35.5 3.8	L L	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135  BASAL OW 127 86 25 2 262  NET BF	E TREI AVG 615 415 165 1,077 473 ACRE AVG 62 54 25 1 141 AREA/ AVG 140 96 32 4 272	ES - BF HIGH 663 450 186 1,571 501  HIGH 68 59 31 1 147  ACRE HIGH 153 106 39 5 283	#	# OF TREES 5  286 # OF PLOTS 5  67 # OF PLOTS 5	71 REO. 10  17 REO. 10  13 REO.	3.2 INF. POP. 1: INF. POP.
CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE CAL 68.1 1.0 G FIR EMLOCK DER RUCE CAL 68.1 1.0 G FIR EMLOCK DER RUCE CAL 68.1 1.0 G FIR EMLOCK DER RUCE CAL 68.1 1.0		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0 COEFF VAR.% 93.3 101.2 209.4 344.8 36.8 COEFF VAR.%	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.% 10.1 10.6 23.1 35.6 4.2 S.E.% 9.6 10.4 21.6 35.5 3.8 S.E.% 9.6 10.7	L L	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135  BASAL OW 127 86 25 2 262  NET BF OW 20,390	E TREI AVG 615 415 165 1,077 473 ACRE AVG 62 54 25 1 141 AREA/ AVG 140 96 32 4 272 VACRE AVG	ES - BF HIGH 663 450 186 1,571 501  HIGH 68 59 31 1 147  ACRE HIGH 153 106 39 5 283  HIGH	#	# OF TREES 5  286 # OF PLOTS 5  67 # OF PLOTS 5	71 REO. 10  17 REO. 10  13 REO.	32 INF. POP. 1: INF. POP. 1:
CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0 COEFF VAR.% 93.3 101.2 209.4 344.8 36.8 COEFF VAR.%	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.% 10.1 10.6 23.1 35.6 4.2 S.E.% 9.6 10.4 21.6 35.5 3.8 S.E.% 9.6 10.7 21.7	L L	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135  BASAL OW 127 86 25 2 262  NET BF OW 20,390 14,394 2,552	E TREI  AVG 615 415 165 1,077 473  ACRE AVG 62 54 25 1 141  AREA/ AVG 140 96 32 4 272  VACRE AVG 22,545 16,114 3,261	ES - BF HIGH 663 450 186 1,571 501  HIGH 68 59 31 1 147  ACRE HIGH 153 106 39 5 283  HIGH 24,700 17,834 3,970	#	# OF TREES 5  286 # OF PLOTS 5  67 # OF PLOTS 5	71 REO. 10  17 REO. 10  13 REO.	3.2 INF. POP. 1: INF. POP.
CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT CL SD: DOU WHE R AL S SPI TOT	68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1 1.0 G FIR EMLOCK DER RUCE AL 68.1		COEFF VAR.% 72.8 72.3 68.6 66.3 84.6 COEFF VAR.% 97.9 103.0 224.1 345.0 41.0 COEFF VAR.% 93.3 101.2 209.4 344.8 36.8 COEFF VAR.%	S.E.% 7.9 8.3 12.3 45.9 6.1 S.E.% 10.1 10.6 23.1 35.6 4.2 S.E.% 9.6 10.4 21.6 35.5 3.8 S.E.% 9.6 10.7	L L	SAMPL OW 566 381 145 583 444  TREES/ OW 56 48 19 0 135  BASAL OW 127 86 25 2 262  NET BF OW 20,390 14,394 2,552 415	E TREI  AVG 615 415 165 1,077 473  ACRE AVG 62 54 25 1 141  AREA/ AVG 140 96 32 4 272  VACRE AVG 22,545 16,114	ES - BF HIGH 663 450 186 1,571 501  HIGH 68 59 31 1 147  ACRE HIGH 153 106 39 5 283  HIGH 24,700 17,834	#	# OF TREES 5  286 # OF PLOTS 5  67 # OF PLOTS 5	71 REO. 10  17 REO. 10  13 REO.	32 INF. POP. 13 INF. POP. 13

	TATS					OJECT S ROJECT		STICS NTIDE			PAGE DATE	1 3/11/2008
TWP	RGE	SC	TRACT		TYPE		AC	CRES	PLOTS	TREES	CuFt	BdFt
T6N	R7	20	AREA 5		R/W			6.00	94	666	1	W
						TREES		ESTIMATED TOTAL		PERCENT SAMPLE		
		P	LOTS	TREES		PER PLOT		TREES		TREES		
TOTA	AL		94	666		7.1						
CRU	ISE		32	207		6.5		863		24.0		
	COUNT											
	DREST											
COU.			62	450		7.3						
100 %												
100 /					STA	AND SUMI	MARY					
		SA	MPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
		T	REES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOU	G FIR		91	62.6	20.6	66		144.7	23,863	23,257	5,644	5,644
	MLOCK		78	54.8	18.3	74		100.4	17,203	16,927	4,214	4,214
R AL			32	24.9	15.5	45		32.8	3,177	3,158	935	935
	RUCE CEDAR		3 2	.7 .7	31.9 15.4	80 29		3.8 .9	665 35	647 35	153 16	153 16
NOB			1	.1	24.0	85	4	, <del>9</del> 0 .4	58	58	14	16
TOT			207	143.8	19.0	65		283.0	45,001	44,083	10,976	10.976
CL SD:	68.1 1.0		COEFF VAR,%	S.E.%	1	<b>SAMPL</b> LOW	E TREE AVG	S - BF HIGH	1	# OF TREES 5	REQ.	INF. POP.
	G FIR		73.6	7.7		582	630	679		<u>J</u>	10	15
WHE												
. ,	MILOUK		78.8	8.9		410	450	490				
R AL			78.8 72.4	12.8		410 139	450 159	490 180				
R AL S SPI	DER RUCE		72.4 68.2	12.8 47.2			159 1,063	180 1,565				
R AL S SPI WR C	DER RUCE CEDAR		72.4	12.8		139	159	180				
R AL S SPI	DER RUCE CEDAR FIR		72.4 68.2	12.8 47.2		139	159 1,063	180 1,565		300	<i>75</i>	33
R AL S SPI WR O NOB	DER RUCE CEDAR FIR AL		72.4 68.2 130.9	12.8 47.2 122.6		139 562	159 1,063 135 490	180 1,565 301		<i>300</i> # OF PLOTS		33 INF. POP.
R AL S SPI WR C NOB TOT	DER RUCE CEDAR FIR AL		72.4 68.2 130.9 86.7	12.8 47.2 122.6 6.0 S.E.%		139 562 <i>461</i> TREES/	159 1,063 135 <i>490</i> <b>ACRE</b> AVG	180 1,565 301	····			
R AL S SPH WR C NOB TOT CL SD: DOU	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5	12.8 47.2 122.6 6.0 S.E.%		139 562 461 TREES/ LOW 56	159 1,063 135 490 ACRE AVG 63	180 1,565 301 <i>520</i> HIGH	····	# OF PLOTS	REQ.	INF. POP.
R AL S SPI WR C NOB TOT CL SD: DOU WHE	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4	1	139 562 461 TREES/ LOW 56 49	159 1,063 135 490 ACRE AVG 63 55	180 1,565 301 <i>520</i> HIGH 69 60	····	# OF PLOTS	REQ.	INF. POP.
R AL S SPI WR C NOB TOT CL SD: DOU WHE R AL	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4	12.8 47.2 122.6 6.0 S.E.%		139 562 461 TREES/ LOW 56	159 1,063 135 490 ACRE AVG 63	180 1,565 301 <i>520</i> HIGH	····	# OF PLOTS	REQ.	INF. POP.
R AL S SPI WR C NOB TOT CL SD: DOU WHE R AL S SPI	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1		139 562 461 TREES/ LOW 56 49 19	159 1,063 135 490 ACRE AVG 63 55 25	180 1,565 301 520 HIGH 69 60 31	····	# OF PLOTS	REQ.	INF. POP.
R AL S SPH WR C NOB TOT CL SD: DOU WHE R AL S SPH WR C NOB	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9		139 562 461 TREES/ LOW 56 49 19 0 0	159 1,063 135 490 ACRE AVG 63 55 25 1 1 0	180 1,565 301 520 HIGH 69 60 31 1	;	# OF PLOTS 5	REQ.	INF. POP. 15
R AL S SPH WR C NOB TOT CL SD: DOU WHE R AL S SPH WR C	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0		139 562 461 TREES/ LOW 56 49 19 0	159 1,063 135 490 ACRE AVG 63 55 25 1	180 1,565 301 520 HIGH 69 60 31 1	;	# OF PLOTS	REQ.	INF. POP.
R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C NOB TOT	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR AL		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5 37.9 COEFF	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9 3.9		139 562 461 TREES/ LOW 56 49 19 0 0 0 138 BASAL	159 1,063 135 490 ACRE AVG 63 55 25 1 0 144 AREA/A	180 1,565 301 520 HIGH 69 60 31 1 0 149		# OF PLOTS 5  57 # OF PLOTS	REQ. 10 14 REQ.	INF. POP.  15  6  INF. POP.
R AL S SPI WR C NOB TOT CL SD: DOU WHE R AL S SPI WR C NOB TOT CL SD:	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR AL 68.1 1.0		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5 37.9 COEFF VAR.%	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9 3.9 S.E.%		139 562 461 TREES/ LOW 56 49 19 0 0 0 138 BASAL	159 1,063 135 490  ACRE AVG 63 55 25 1 0 144  AREA/A	180 1,565 301 520 HIGH 69 60 31 1 0 149 ACRE HIGH		# OF PLOTS 5	REQ. 10	INF. POP.  15  6  INF. POP.
R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C NOB TOT  CL SD: DOU	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR AL		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5 37.9 COEFF	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9 3.9		139 562 461 TREES/ LOW 56 49 19 0 0 0 138 BASAL	159 1,063 135 490 ACRE AVG 63 55 25 1 0 144 AREA/A	180 1,565 301 520 HIGH 69 60 31 1 0 149		# OF PLOTS 5  57 # OF PLOTS	REQ. 10 14 REQ.	INF. POP. 15
R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C NOB TOT  CL SD: DOU	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5 37.9 COEFF VAR.%	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9 3.9 S.E.%		139 562 461 TREES/ LOW 56 49 19 0 0 138 BASAL LOW 131 90 26	159 1,063 135 490  ACRE AVG 63 55 25 1 0 144  AREA/A AVG 145	180 1,565 301 520 HIGH 69 60 31 1 0 149 ACRE HIGH 158		# OF PLOTS 5  57 # OF PLOTS	REQ. 10 14 REQ.	INF. POP.  15  6  INF. POP.
R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5 37.9 COEFF VAR.% 89.5 98.7 208.7 377.3	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9 3.9 S.E.% 9.2 10.2 21.5 38.9		139 562 461 TREES/ LOW 56 49 19 0 0 138 BASAL LOW 131 90 26 2	159 1,063 135 490 ACRE AVG 63 55 25 1 1 0 144 AREA/A AVG 145 100 33 4	180 1,565 301 520 HIGH 69 60 31 1 0 149 ACRE HIGH 158 111 40 5		# OF PLOTS 5  57 # OF PLOTS	REQ. 10 14 REQ.	INF. POP.  15  6  INF. POP.
R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SP! WR C	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR AL		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5 37.9 COEFF VAR.% 89.5 98.7 208.7 377.3 681.9	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9 3.9 S.E.% 9.2 10.2 21.5 38.9 70.3		139 562 461 TREES/ LOW 56 49 19 0 0 138 BASAL LOW 131 90 26 2 0	159 1,063 135 490 ACRE AVG 63 55 25 1 1 0 144 AREA/A AVG 145 100 33 4 1	180 1,565 301 520 HIGH 69 60 31 1 0 149 ACRE HIGH 158 111 40 5		# OF PLOTS 5  57 # OF PLOTS	REQ. 10 14 REQ.	INF. POP.  15  6  INF. POP.
R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C NOB TOT	DER RUCE CEDAR FIR 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR EMLOCK DER RUCE CEDAR FIR		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5 37.9 COEFF VAR.% 89.5 98.7 208.7 377.3 681.9 969.5	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9 3.9 S.E.% 9.2 10.2 21.5 38.9 70.3 99.9		139 562 461 TREES/ LOW 56 49 19 0 0 138 BASAL LOW 131 90 26 2 0 0	159 1,063 135 490 ACRE AVG 63 55 25 1 1 0 144 AREA/A AVG 145 100 33 4 1 0	180 1,565 301 520 HIGH 69 60 31 1 0 149 ACRE HIGH 158 111 40 5 1		FOF PLOTS  57  FOF PLOTS  5	REQ. 10 14 REO. 10	INF. POP. 15  6  INF. POP. 15
R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C NOB TOT	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR EMLOCK DER RUCE CEDAR FIR EMLOCK DER RUCE CEDAR FIR EMLOCK DER RUCE CEDAR FIR FIR FIR FIR FIR		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5 37.9 COEFF VAR.% 89.5 98.7 208.7 377.3 681.9 969.5 32.0	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9 3.9 S.E.% 9.2 10.2 21.5 38.9 70.3		139 562 461 TREES/ LOW 56 49 19 0 0 138 BASAL LOW 131 90 26 2 0 0 274	159 1,063 1,063 135  490  ACRE AVG 63 55 25 1 1 0 144  AREA/A AVG 145 100 33 4 1 0 283	180 1,565 301 520 HIGH 69 60 31 1 0 149 ACRE HIGH 158 111 40 5	ī	# OF PLOTS 5  57 # OF PLOTS 5	14 REQ. 10	INF. POP.  15  6  INF. POP.  15
R AL S SPI WR C NOB TOT CL SD: DOU WHE R AL S SPI WR C NOB TOT CL SD: DOU WHE R AL S SPI WR C TOT CL CL CL CL CL CL	DER RUCE CEDAR FIR 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR 4AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR EMLOCK DER RUCE CEDAR FIR EMLOCK DER RUCE CEDAR FIR 68.1 1.0 68.1 68.1		72.4 68.2 130.9  86.7  COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5 37.9  COEFF VAR.% 89.5 98.7 208.7 377.3 681.9 969.5 32.0  COEFF	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9 3.9 S.E.% 9.2 10.2 21.5 38.9 70.3 99.9 3.3		139 562 461 TREES/ LOW 56 49 19 0 0 138 BASAL LOW 131 90 26 2 0 0 274 NET BF	159 1,063 135 490 ACRE AVG 63 55 25 1 1 0 144 AREA/A AVG 145 100 33 4 1 0 283	180 1,565 301 520 HIGH 69 60 31 1 0 149 ACRE HIGH 158 111 40 5 1 1 292	ī	# OF PLOTS 5  57 # OF PLOTS 5	REQ. 10  14  REQ. 10  10  REQ.	INF. POP.  15  6  INF. POP.  15  5  INF. POP.
R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C SD: CL SD: CL SD: CL SD: CL SD: CL SD: CL SD: CL SD: CL SD:	DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR AL 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR EMLOCK DER RUCE CEDAR FIR EMLOCK DER RUCE CEDAR FIR EMLOCK DER RUCE CEDAR FIR FIR FIR FIR FIR		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5 37.9 COEFF VAR.% 89.5 98.7 208.7 377.3 681.9 969.5 32.0	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9 3.9 S.E.% 9.2 10.2 21.5 38.9 70.3 99.9		139 562 461 TREES/ LOW 56 49 19 0 0 138 BASAL LOW 131 90 26 2 0 0 274 NET BE	159 1,063 1,063 135  490  ACRE AVG 63 55 25 1 1 0 144  AREA/A AVG 145 100 33 4 1 0 283	180 1,565 301 520 HIGH 69 60 31 1 0 149 ACRE HIGH 158 111 40 5 1	ī	# OF PLOTS 5  57 # OF PLOTS 5	14 REQ. 10	INF. POP.  15  6  INF. POP.  15
R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI CL SD: DOU WHE R AL S SPI CL SD: DOU WHE R AL S SPI WR C NOB TOT  CL SD: DOU WHE R AL S SPI WR C NOB TOT  CL SD: DOU DOU DOU DOU DOU DOU DOU DOU DOU DOU	DER RUCE CEDAR FIR AL  68.1  1.0 G FIR EMLOCK DER RUCE CEDAR FIR AL  68.1  1.0 G FIR EMLOCK DER RUCE CEDAR FIR AL  68.1  1.0 G FIR EMLOCK DER RUCE CEDAR FIR AL  68.1  1.0 68.1		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5 37.9 COEFF VAR.% 89.5 98.7 208.7 377.3 681.9 969.5 32.0 COEFF VAR.%	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9 3.9 S.E.% 9.2 10.2 21.5 38.9 70.3 99.9 3.3		139 562 461 TREES/ LOW 56 49 19 0 0 138 BASAL LOW 131 90 26 2 0 0 274 NET BE	159 1,063 135 490 ACRE AVG 63 55 25 1 1 0 144 AREA/A AVG 145 100 33 4 1 0 283	180 1,565 301 520 HIGH 69 60 31 1 0 149 ACRE HIGH 158 111 40 5 1 1 292	ī	# OF PLOTS 5  57 # OF PLOTS 5	REQ. 10  14  REQ. 10  10  REQ.	INF. POP.  15  6  INF. POP.  15  5  INF. POP.
R AL S SPI WR C NOB TOT CL SD: DOU WHE R AL S SPI WR C NOB TOT CL SD: DOU WHE R AL S SPI WR C NOB TOT CL SD: DOU WHE R AL S SPI WR C NOB TOT CL SD: DOU WHE R AL S SPI WR C NOB TOT CL S SPI R AL S SPI WR C NOB TOT CL S SPI R AL S SPI WR C NOB TOT CL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SPI R AL S SP	DER RUCE CEDAR FIR 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR 68.1 1.0 G FIR EMLOCK DER RUCE CEDAR FIR 68.1 1.0 G FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR FIR CEDAR CEDAR FIR CEDAR CEDAR FIR CEDAR CEDAR FIR CEDAR CEDAR CEDAR FIR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CEDAR CE		72.4 68.2 130.9 86.7 COEFF VAR.% 95.5 101.2 224.4 377.5 815.4 969.5 37.9 COEFF VAR.% 89.5 98.7 208.7 377.3 681.9 969.5 32.0 COEFF VAR.% 88.9	12.8 47.2 122.6 6.0 S.E.% 9.8 10.4 23.1 38.9 84.0 99.9 3.9 S.E.% 9.2 10.2 21.5 38.9 70.3 99.9 3.3		139 562 461 TREES/ LOW 56 49 19 0 0 138 BASAL LOW 131 90 26 2 0 0 274 NET BE	159 1,063 135 490 ACRE AVG 63 55 25 1 1 0 144 AREA/A AVG 145 100 33 4 1 0 283 VACRE AVG 23,257	180 1,565 301 520 HIGH 69 60 31 1 0 149 ACRE HIGH 158 111 40 5 1 1 292 HIGH 25,387	ī	# OF PLOTS 5  57 # OF PLOTS 5	REQ. 10  14  REQ. 10  10  REQ.	INF. POP.  15  6  INF. POP.  15  5  INF. POP.

TC PS1	TATS				PROJECT PROJECT		ISTICS NTIDE			PAGE DATE 3	<b>2</b> 3/11/2008
TWP	RGE	SC	TRACT	TYP	E	A	CRES	PLOTS	TREES	CuFt	BdFt
T6N	R7	20	AREA 5	R/W			6.00	94	666	1	W
CL	68.1		COEFF		NET :	BF/ACRE	***************************************		# OF PLOT	S REQ.	INF. POP.
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH		5	10	15
WR C	EDAR		833.0	85.8	5	35	66				
NOB	FIR		969.5	99.9	0	58	116				
тот	AL		37.0	3.8	42,404	44,083	45,762		55	14	6

TC PLOGSTVB	Log Stock Table - MBF	
TT6N RR7W S20 TyR/W 6.0 TT6N RR7W S20 TyR/W 8.0 TT6N RR7W S20 TyTAK 230.0	Acres 0.00	Page 1 Date 3/11/2008 Time 7:43:40AM

1.1.6N	R	R7W S20	J IyT/	AK 230	.00										······································	1 ime		45:40AM
	s			Gross	Def	Net	%					1		eter in l				
-	T	rt de		<del></del>	%	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39 40+
H		DO 2S		1		1									1			
H		DO 2S			10.5	27								27				
H		DO 28			2.5	35						Ì			35			
H		DO 28			2.7	987	25.0					62	296	196	137	238	58	
H		DO 2S				32	.8							32				
Н		DO 2S	40	1,464	2.4	1,429	36.2					40	333	529	346	182		
Н		DO 3S	14	0		0	.0			[			0					
Н		DO 3S	24	11		11	.3				4		6					
Н		DO 38	27	6		6	.1				5	0						
Н	1	DO 3S	28	0		0	.0			0	٠							
H		DO 3S	30	6		6	.1			6								
н		DO 38	31	6		6	.2				6							
Н		DO 3S	32	619		618	15.7			144	134	259	81					
H		DO 38	33	15		15	.4			15								
Н		DO 3S	34	7		7	.2			7								
H		DO 38	35	15		15	.4				15							
Н		DO 35	36	32	5.9	30	.8			26	4	0						
Н		DO 38	38	16		16	.4			8	7							
H		DO 38	40	483		483	12.3			96	161	190	20	17				
Н		DO 48	12	8		8	.2			8								
Н		DO 49	15	8		8	.2		4	3								
Н		DO 45	16	28		28	.7		3	12	9	4						
Н		DO 45	17	0		0	.0				0							
Н		DO 45	19	10		10	.2			4	6							
H		DO 48	20	23		23	.6			23								
Н		DO 49	21	8		8	.2			5	3							
H		DO 45	22	17		17	.4			17						1		
H		DO 45	24	24		24	.6			24								
H		DO 49	26	12		12	.3			12								
H		DO 45	28	5		5	.1			5								1
H		DO 45	32	35		35	l			35								
Н		DO 49	3 40	42		42	1.1			42								
Н		Tota		4,013		3,943			7	493	356	555	735	801	519	420	58	
A		DO C		l .		7						7				}		
Α		DO C		1		40				28	3	9				-		
A		DO C		1		34				13				21				
A		DO C	R 21	. 5		5	.6			5								

TC PLOGSTVB		Log Stock Table - MBF	
TT6N RR7W S20 TyR/W TT6N RR7W S20 TyR/W TT6N RR7W S20 TyTAK	6.00 8.00 230.00	Project: RSNTIDE Acres 0.00	Page 2 Date 3/11/2008 Time 7:43:40AM

S	S So Gr Log Gross Def Net % Net Volume by Scaling Diameter in Inches																
Spp T				%	MBF	Spc	2-3	4-5	6-7	8-9	10-11				20-23	24-29	30-39 40+
Α	DO CF	22	6		6	.8				6							
A	DO CE	24	17		17	2.1			1		14	1		1			
A	DO CF	25	11	25.0	8	1.0			. 8								
A	DO CF	26	39		39	4.9			16	0	23						
A	DO CE	28	40		40	5.0			14				26				ļ
A	DO CF	29	0		0	.0				0							
A	DO CF	30	90		90	11.3			10	4	49		26				ļ.
A	DO CF	32	314		314	39.5			34	45	102	79	30	24			
A	DO CF	36	11		11	1.4			11								
A	DO CE	40	184		182	23.0			43	51	57			32			
A	Total	s	799		794	7.6			184	109	261	81	102	57			
D	DO 2S	28	9		9	.2					9						
D	DO 2S	32	1,294	1.4	1,276	23.2						214	107	581	257	117	
D	DO 2S	34	61		61	1.1							40	22			
D	DO 2S	40	3,161	4.1	3,030	55.0					54	336	626	875	758	381	
D	DO 3S	16	8		8	.1					8						
D	DO 3S	20	10		10	.2					10						
D	DO 3S	21	18		18					4	14						
D	DO 3S	22	5		5	.1			5	0							
D	DO 3S	24	24		24	.4				11	14						
D	DO 3S	26	33		33	.6			5	27							
D	DO 3S	30	24		24	.4				15	9						
D	DO 3S	32	233	2.5	227	4.1			89	84	55						
D	DO 3S	34	53		53	.1,0			22		31						
D	DO 3S	36	39		39	.7			20	9	1	10					
D	DO 3S	38	30		30	.5			20	10							
D	DO 3S	40	447		446	8.1			145	140	92	68					
D	DO 4S	12	2		2	.0			2				******				
D	DO 4S	13	3		3	.1			3								
D	DO 4S	16	33		33	.6			25	7		0					
D	DO 4S	18	10		10	.2				4	5						
D	DO 4S				2				1		0						
D	DO 4S	20	12		12	.2			3	5	5						
D	DO 4S	22	. 11		11	.2			6	5							
D	DO 4S	24	55		55	l			50		6						
D	DO 4S				6	.1			6								
Ð	DO 4S			4.3	28	l			28			i					

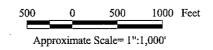
TC PLO	OGSTVB	٠				Log	Stock	Table	- MB	F							
TT6N	RR7W S20 RR7W S20 RR7W S20	TyR/	W 8	.00 .00 .00		Proj Acre		RSI	NTIDE 0	.00					Page Date Time	3/1	3 1/2008 43:40AM
s	. ~ ~ .			Def	Net	%		1	Net Volume by Scaling Diameter in Inches							······	
Spp T	rt de	Len	MBF	%	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39 40+
D	DO 4S	29	6		6	.1			6								
D	DO 4S	30	13		13	.2			13								! 
D	DO 4S	32	36		36	.7			36								
D	Total	ls	5,668	2.8	5,511	52.9			485	322	313	628	773	1478	1015	498	
С	DO 2S	32	0		0	74.9							0	*			
С	DO 3S	16	0		0	9.8			. 0								
С	DO 4S	23	0		0	15.3	0										
С	Total	ls	0		0	.0	0		0				0		<u> </u>		
S	DO 2S	32	70		70	43.8									24	46	
S	DO 2S	40	44	10.0	39	24.6								39			
s	DO 3S	20	2		2	.9									2		
S	DO 3S	22	5		5	3.2						5					
S	DO 3S	24	29		29	18.4									29		
S	DO 3S	32	1		1	.4						1					
S	DO 3S	36	7		7	4.6					7						
S	DO 3S	40	7		7	4.1			ļ	7							
S	Tota	ls	164	2.7	160	1.5				7	7	6		39	55	46	
NF	DO 2S	40	1		1	83.7				<del></del>			1				
NF	DO 3S	32	0		0	16.3				0							
NF	Tota	ls	1		1	.0				0			1				
Total	All Spec	ies	10,645	2.2	10,410	100.0	0	7	1161	794	1135	1450	1677	2093	1490	601	

### LEGEND Timber Sale Boundary Landings To Be Constructed Paved Road Surfaced Existing Road New Construction Road Property Line Known Land Survey Corner Type F Stream Type N Stream Posted Stream Buffer Reforestation Area Buffer Zone Controlled Felling Green Tree Retention Area Seasonally Restricted Road Tractor Logging Area Cable Logging Area

# **Logging Plan**

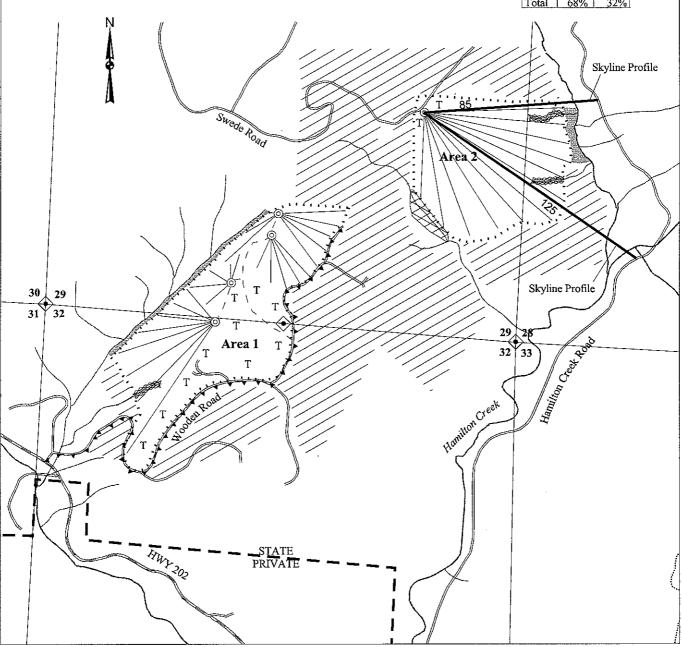
OF TIMBER SALE CONTRACT NO. 341-09-25 RISING TIDE PORTIONS OF SECTIONS

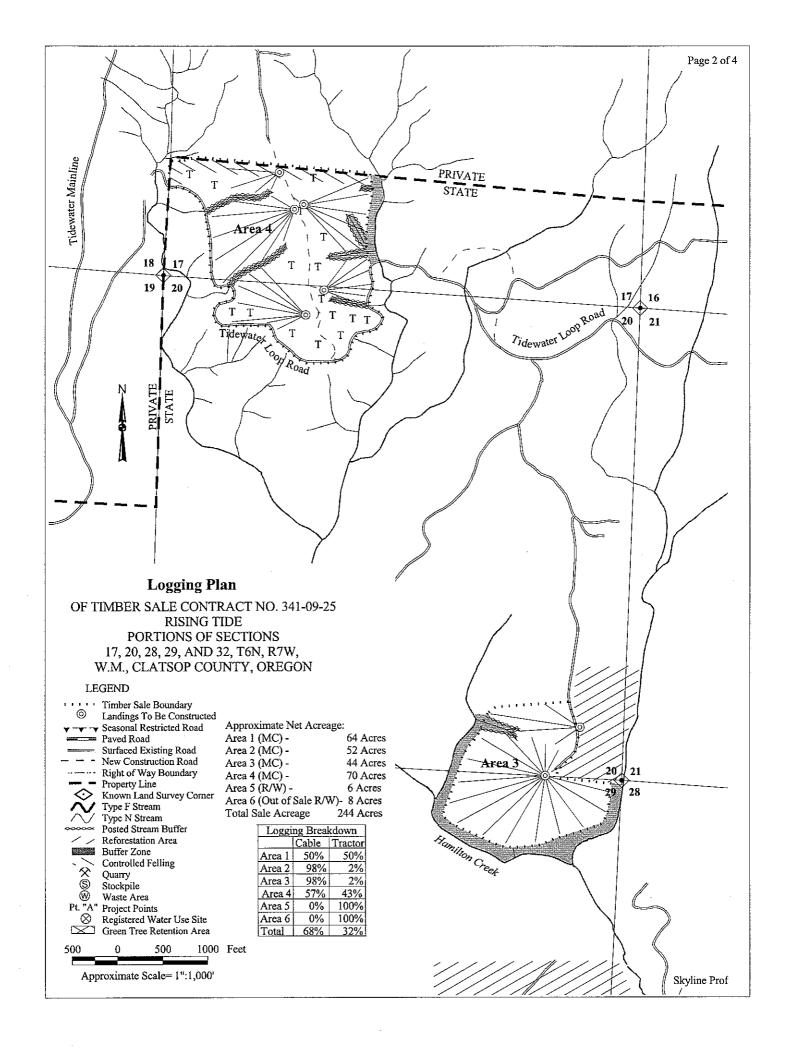
17, 20, 28, 29, AND 32, T6N, R7W, W.M., CLATSOP COUNTY, OREGON



Area 1 (MC) -	64 Acres
Area 2 (MC) -	52 Acres
Area 3 (MC) -	44 Acres
Area 4 (MC) -	70 Acres
Area 5 (R/W) -	6 Acres
Area 6 (Out of Sale R/W)-	8 Acres
Total Sale Acreage 2	44 Acres

Logging Breakdown								
	Cable	Tractor						
Area 1	50%	50%						
Area 2	98%	2%						
Area 3	98%	2%						
Area 4	57%	43%						
Area 5	0%	100%						
Area 6	0%	100%						
Total	68%	32%						





### LEGEND

Timber Sale Boundary

Landings To Be Constructed

Paved Road

Surfaced Existing Road

New Construction RoadProperty Line

Type F Stream
Type N Stream

Posted Stream Buffer

Reforestation Area

Buffer Zone
Controlled Felling

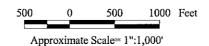
Green Tree Retention Area Seasonally Restricted Road

T Tractor Logging Area
Cable Logging Area

# Logging Plan

OF TIMBER SALE CONTRACT NO. 341-09-25 RISING TIDE PORTIONS OF SECTIONS

17, 20, 28, 29, AND 32, T6N, R7W, W.M., CLATSOP COUNTY, OREGON



Approximate Net Acreage:

Area 1 (MC) - 64 Acres Area 2 (MC) - 52 Acres

Area 2 (MC) - 52 Acres Area 3 (MC) - 44 Acres

Area 4 (MC) - 70 Acres Area 5 (R/W) - 6 Acres

Area 6 (Out of Sale R/W)- 8 Acres
Total Sale Acreage 244 Acres

Logging Breakdown									
	Cable	Tractor							
Area 1	50%	50%							
Area 2	98%	2%							
Area 3	98%	2%							
Area 4	57%	43%							
Area 5	0%	100%							
Area 6	0%	100%							
Total	2007	270/							

