Timber Sale Appraisal
Stones Throw

Sale TL-341-2020-W00754-01

District: Tillamook

Date: August 08, 2019

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$1,394,249.81	$450,224.26	$1,844,474.07
		Project Work:	($600,300.00)
		Advertised Value:	$1,244,174.07

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District: Tillamook **Date: August 08, 2019**

Timber Description

Location: Section(s) 12, 13, 14, 24, 25 of T1S R8W, Section(s) 19, 30 of T1S R7W W.M. Tillamook County, Oregon.

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	17	0	95
Western Hemlock / Fir	29	0	95
Sitka Spruce	18	0	95
Alder (Red)	15	0	90
Maple	10	0	90

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	Camprun	Total
Douglas - Fir	2,372	2,422	0	0	0	0	0	4,794
Western Hemlock / Fir	193	64	0	0	0	0	0	257
Sitka Spruce	21	83	0	0	0	0	0	104
Alder (Red)	0	0	441	365	739	931	0	2,476
Maple	0	0	0	0	0	0	111	111
Total	2,586	2,569	441	365	739	931	111	7,742

Comments: Pond Values Used: August 2019
Region: Astoria, Forest Grove, and Tillamook

Western Red Cedar and Other Cedars Stumpage Price = Pond Value – Logging Cost
$1,049.00/MBF - $396.56/MBF = $652.44/ MBF

Pulp (Conifer and Hardwood) Price = $ 2.5/ Ton

BRAND AND PAINT ALLOWANCE = $2.00/ MBF
FUEL COST ALLOWANCE = $3.00/ Gallon
HAULING COST ALLOWANCE
Hauling cost equivalent to $950 daily truck cost
($95.00/hr x 10 hr. = $950)

Other Costs with Profit and Risk to be added:
Truck Assist (Area 1): 345 MBF x $17/MBF= $5,865

Snag Creation Area/Ac Snag Cost
Area 1 46x10= $460.00
Area 2 156x10= $1,560.00
Area 3 194x10= $1,940.00
Area 4 216x10= $2,160.00
TOTAL Other Costs with profit and Risk to be added = $11,985

Other Costs with No Profit and Risk Added:

Non-Project Rd. 1: 8+23 sta. $175/sta. = $1,440
Non-Project Rd. 2: 6+66 sta. $135/sta. = $900
Non-Project Rd. 3: 3+43 sta. $175/sta. = $600
Non-Project Rd. 4: 4+83 sta. $115/sta. = $560

Move-in Guyline Dozer (Area 1, & 2) : $1,000 x 2 machines = $2,000
Move-in Tailhold Dozer (Area 1 & 2): $1,000 x 1 machine = $1,000
Move-in Machine Cleaning: $1,000/machine x 4 machines x 1 seasons = $4,000
Slash piling and sorting (Cable Settings): $5/ac x 306/ac. = $1,530
Heliport Construction: $500 x 4 areas = $2,000
Road blocking $50/block x 4 roads = $200
Move-in North Fork seasonal area Loader (Area 3): $1,000 x 1 machine = $1,000
Area 3 mobile dump truck end haul slash: 16 hr x $90.00= $1,440

Ditch Cleaning and Bank Sluff Removal:
Mobilization: three times – dump truck w/ tilt bed & small excavator: $900 x 3 = $2,700
Small excavator (Cat 312 or equivalent): 40 hours @ $135/ hour = $5,400
Dump truck: 40 hours @ $90/ hour = $3,600

TOTAL Other Costs no Profit and Risk added = $28,370.00

ROAD MAINTENANCE:
Spot Rocking: 20cy/MMBF/mile x 7.742 MMBF x $8/cy x 5 miles / 7,742 MBF= $0.8/MBF
Interim Grading: $1,200/ mile x 5 miles x 3 times/ 7,742 MBF = $2.32/MBF
Final Maintenance Grading: $1,500 x 5 miles/ 7,742 MBF = $0.97/MBF
Final Maintenance Compaction: $950/mile x 5 miles/ 7,742 MBF = $0.61/ MBF

Total Road Maintenance: $4.7/MBF
$4.7 x 7,742 MBF = $92,659.77

Logging Conditions

Combination#: 1

Douglas - Fir	22.45%
Western Hemlock / Fir	33.86%
Sitka Spruce	34.15%
Alder (Red)	15.28%
Maple	20.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 5.5 **bd. ft / load:** 4200
cost / mbf: $336.81
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

Combination#: 2

Douglas - Fir	59.17%
Western Hemlock / Fir	38.52%
Sitka Spruce	37.54%
Alder (Red)	67.74%
Maple	71.00%

Logging System: Cable: Large Tower >=70 **Process:** Harvester Head Delimbing
yarding distance: Long (1,500 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 7.2 **bd. ft / load:** 4000
cost / mbf: $277.10
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Large)

Combination#: 3

Douglas - Fir	18.38%
Western Hemlock / Fir	27.62%
Sitka Spruce	28.31%
Alder (Red)	16.98%
Maple	9.00%

Logging System: Shovel **Process:** Harvester Head Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 9 **bd. ft / load:** 4300
cost / mbf: $138.09
machines: Forwarder
Harvester

District: Tillamook **Date: August 08, 2019**

Logging Costs

Operating Seasons:	2.00	**Profit Risk:**	5%
Project Costs:	$600,300.00	**Other Costs (P/R):**	$11,985.00
Slash Disposal:	$0.00	**Other Costs:**	$28,370.00

Miles of Road

Road Maintenance: $4.70

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

Hauling Costs

Species	$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	$95.00	3.0	4.0
Western Hemlock / Fir	$95.00	1.0	4.2
Sitka Spruce	$95.00	1.0	4.2
Alder (Red)	$80.00	3.0	4.2
Maple	$80.00	1.0	4.2

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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$264.95	$4.94	$1.13	$99.75	$1.55	$18.62	$0.00	$2.00	$3.66	$396.60
Western Hemlock / Fir									
$258.92	$4.94	$1.13	$99.75	$1.55	$18.31	$0.00	$2.00	$3.66	$390.26
Sitka Spruce									
$258.14	$4.94	$1.13	$99.75	$1.55	$18.28	$0.00	$2.00	$3.66	$389.45
Alder (Red)									
$262.62	$5.17	$1.13	$88.00	$1.55	$17.92	$0.00	$2.00	$3.66	$382.05
Maple									
$276.53	$5.17	$1.13	$88.00	$1.55	$18.62	$0.00	$2.00	$3.66	$396.66

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$676.43	$279.83	$0.00
Western Hemlock / Fir	$0.00	$547.77	$157.51	$0.00
Sitka Spruce	$0.00	$507.38	$117.93	$0.00
Alder (Red)	$0.00	$562.57	$180.52	$0.00
Maple	$0.00	$426.00	$29.34	$0.00

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District: Tillamook **Date: August 08, 2019**

Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	4,794	$279.83	$1,341,505.02
Western Hemlock / Fir	257	$157.51	$40,480.07
Sitka Spruce	104	$117.93	$12,264.72
Alder (Red)	2,476	$180.52	$446,967.52
Maple	111	$29.34	$3,256.74

Gross Timber Sale Value

Recovery: $1,844,474.07

Prepared By: Nathan Atchison **Phone:** 503-815-7063

"STEWARDSHIP IN FORESTRY"

PROJECT SUMMARY SHEET

Sale: Stones Throw

CONSTRUCTION

Point	E to F	3+60	stations =	$976.60
Point	G to H	1+95	stations =	$502.06
Point	I to J	7+10	stations =	$1,788.25
Point	K to L	14+00	stations =	$15,924.70
Point	M to N	3+60	stations =	$1,831.50
Point	Q to R	15+35	stations =	$23,178.93
Point	S to T	4+80	stations =	$1,398.40
Point	U to V	36+20	stations =	$71,443.36
Point	W to X	5+45	stations =	$6,596.88
Point	Y to Z	1+55	stations =	$3,099.13
Point	AA to BB	2+35	stations =	$4,449.83
Point	CC to DD	5+50	stations =	$8,685.85
Point	EE to FF	1+40	stations =	$13,811.90
Point	KK to LL	2+50	stations =	$5,056.45
Point	MM to NN	12+50	stations =	$17,243.40
Point	OO to PP	20+10	stations =	$21,286.56
Point	QQ to RR	3+30	stations =	$4,533.25
			SUBTOTAL CONSTRUCTION	**$201,807.05**

IMPROVEMENT

Point	A to B	171+60	stations =	$124,103.50
Point	C to D	39+20	stations =	$10,906.20
Point	O to P	29+00	stations =	$7,738.40
Point	U to V	15+90	stations =	$19,779.22
Point	GG to HH	30+70	stations =	$2,227.65
Point	II to JJ	30+00	stations =	$32,931.88
Point	OO to PP	49+50	stations =	$46,366.49
			SUBTOTAL IMPROVEMENT	**$244,053.34**

RECONSTRUCTION

Point	G to H	3+80	stations =	$1,334.67
Point	U to V	9+45	stations =	$11,755.57
Point	II to JJ	37+60	stations =	$62,651.50
			SUBTOTAL RECONSTRUCTION	**$75,741.74**

SPECIAL PROJECTS

Brush	33.5	miles of road	$29,875.00
Project 2 - Construct 2,000 CY Stockpile			$29,040.00
Project 3 - Pave N.F. Trask Junction Approach			$16,060.00
		SUBTOTAL SPECIAL PROJECTS	**$74,975.00**

MOVE IN **$3,722.87**

GRAND TOTAL **$600,300.00**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **A to B**

Construction -	0+00	stations	Improvement -	171+60	stations	Reconstruction -	0+00	stations
	0.00	miles		3.25	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

R/W Clearing					3.50	acres	@	$1,200.00	per acre =	$4,200.00
R/W Brush End-Haul - excavator/offroad DT					8.000	hours	@	$310.00	per hour =	$2,480.00
									TOTAL CLEARING AND GRUBBING	**$6,680.00**

ROCK

45+40 to	118+20	2,010	cy. of	Crushed		@	$32.93	per c.y.=	$66,189.30
118+20 to	171+60	2,120	cy. of	Crushed		@	$18.70	per c.y.=	$39,644.00
Spot Rock(0+00 to 45+40	As Directed	200	cy. of	Crushed		@	$10.00	per c.y.=	$2,000.00
225ft Shoofly	45+40	70	cy. of	Crushed		@	$10.00	per c.y.=	$700.00
Intersection Widening	45+40	50	cy. of	Crushed		@	$32.93	per c.y.=	$1,646.50
Intersection Widening	171+60	40	cy. of	Crushed		@	$18.25	per c.y.=	$730.00
								TOTAL ROCK	**$110,909.80**

SPECIAL PROJECTS

Grade and shape road -	171.60	stations	@	$22.00	per station	$3,775.20
Roll subgrade w/ vibratory roller-45+40-171+60	126.20	stations	@	$17.50	per station	$2,208.50
Grass seed and fertilize -	0.50	acres	@	$280.00	per acre	$140.00
Mulching -	0.500	acres	@	$780.00	per acre	$390.00
					TOTAL SPECIAL PROJECTS	**$6,513.70**

GRAND TOTAL **$124,103.50**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **C to D**

Construction -	0+00	stations	Improvement -	39+20	stations	Reconstruction -	0+00	stations
	0.00	miles		0.74	miles		0.00	miles

ROCK

0+00	to	19+60	680	cy. of	Jaw Run	@	$14.18	per c.y.=	$9,642.40	
Spot Rock(19+60 to 39+20		As Directed	30	cy. of	Jaw Run	@	$13.38	per c.y.=	$401.40	
									TOTAL ROCK	**$10,043.80**

SPECIAL PROJECTS

Grade and shape road -			39.20	stations @		$22.00	per station	$862.40
							TOTAL SPECIAL PROJECTS	**$862.40**

GRAND TOTAL **$10,906.20**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **E to F**

Construction -	3+60	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.07	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station				
0+00		3+60	20%			$174	=		$626.40	
								TOTAL		**$626.40**

SPECIAL PROJECTS

Landing Construction	1.00	hours @	$180.00	per hour	$180.00	
Grade and shape road -	3.60	stations @	$22.00	per station	$79.20	
Roll subgrade	3.60	stations @	$17.50	per station	$63.00	
Grass seed and fertilize -	0.10	acres @	$280.00	per acre	$28.00	
				TOTAL SPECIAL PROJECTS		**$350.20**

GRAND TOTAL **$976.60**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **G to H**

Construction -	1+95	stations	Improvement -	0+00	stations	Reconstruction -	3+80	stations
	0.04	miles		0.00	miles		0.07	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
3+80		5+75	20%			$174	=	$339.30	
								TOTAL	**$339.30**

RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	0.500	acres @	$1,275.00	per acre =	$637.50	
				TOTAL CLEARING AND GRUBBING		**$637.50**

RECONSTRUCTION: EXCAVATION -

Road Earthwork	3.80	sta. @	$100.00	per sta. =	$380.00	
				TOTAL EXCAVATION		**$380.00**

SPECIAL PROJECTS

Landing Construction	1.00	hours @	$180.00	per hour	$180.00	
Grade and shape road -	5.75	stations @	$22.00	per station	$126.50	
Roll subgrade	5.75	stations @	$17.50	per station	$100.63	
Grass seed and fertilize -	0.26	acres @	$280.00	per acre	$72.80	
				TOTAL SPECIAL PROJECTS		**$479.93**

GRAND TOTAL **$1,836.73**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **I to J**

Construction -	7+10	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.13	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station					
0+00		7+10	20%			$174	=			$1,235.40	
									TOTAL		**$1,235.40**

SPECIAL PROJECTS

Construct Landing	1.00	hours @	$180.00	per hour	$180.00	
Grade and shape road -	7.10	stations @	$22.00	per station	$156.20	
Roll subgrade	7.10	stations @	$17.50	per station	$124.25	
Grass seed and fertilize -	0.33	acres @	$280.00	per acre	$92.40	
				TOTAL SPECIAL PROJECTS		**$552.85**

GRAND TOTAL **$1,788.25**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **K to L**

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

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station				
0+00		14+00	20%			$174	=		$2,436.00	
								TOTAL		**$2,436.00**

ROCK

0+00	to	14+00	810	cy. of	Jaw-Run	@	$13.71	per c.y.=	$11,105.10	
Landing Rock		14+00	100	cy. of	Jaw-Run	@	$13.71	per c.y.=	$1,371.00	
								TOTAL ROCK		**$12,476.10**

SPECIAL PROJECTS

Construct Landing -	1.00	@	$370.00	each	$370.00
Grade and shape road -	14.00	stations @	$22.00	per station	$308.00
Roll subgrade w/ vibratory roller prior to rocking -	14.00	stations @	$17.50	per station	$245.00
Grass seed and fertilize -	0.32	acres @	$280.00	per acre	$89.60
				TOTAL SPECIAL PROJECTS	**$1,012.60**

GRAND TOTAL **$15,924.70**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **M to N**

Construction -	3+60	stations	Improvement -		stations	Reconstruction -	0+00	stations
	0.07	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station				
0+00		3+60	30%			$239	=		$860.40	
								TOTAL		**$860.40**

ROCK

Approach Rock	0+00	30	cy. of	Jawrun		@	$13.71	per c.y.=	$411.30	
								TOTAL ROCK		**$411.30**

SPECIAL PROJECTS

Construct Landing -	1.00	@	$370.00	each	$370.00	
Grade and shape road -	3.60	stations @	$22.00	per station	$79.20	
Roll subgrade w/ vibratory roller prior to rocking -	3.60	stations @	$17.50	per station	$63.00	
Grass seed and fertilize -	0.17	acres @	$280.00	per acre	$47.60	
				TOTAL SPECIAL PROJECTS		**$559.80**

GRAND TOTAL **$1,831.50**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **O to P**

Construction -	0+00	stations	Improvement -	29+00	stations	Reconstruction -	0+00	stations
	0.00	miles		0.55	miles		0.00	miles

ROCK

0+00	to	14+00	480	cy. of	Jaw Run	@	$13.89	per c.y.=	$6,667.20		
Spot Rock(14+00 to 29+00		As Directed	30	cy. of	Jawrun	@	$14.44	per c.y.=	$433.20		
									TOTAL ROCK		**$7,100.40**

SPECIAL PROJECTS

Grade and shape road -			29.00	stations @		$22.00	per station	$638.00	
							TOTAL SPECIAL PROJECTS		**$638.00**

GRAND TOTAL **$7,738.40**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **Q to R**

Construction -			Improvement -			Reconstruction -		
	15+35	stations		0+00	stations		0+00	stations
	0.29	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		15+35	25%			$206	=	$3,162.10	
								TOTAL	**$3,162.10**

ROCK

0+00	to	15+35	990	cy. of	Jawrun	@	$15.48	per c.y.=	$15,325.20	
Traction Rock		As Needed	140	cy. of	Crushed	@	$17.62	per c.y.=	$2,466.80	
Intersection Widening		0+00	30	cy. of	Jawrun	@	$15.35	per c.y.=	$460.50	
Landing Rock		15+35	50	cy. of	Jawrun	@	$15.64	per c.y.=	$782.00	
									TOTAL ROCK	**$19,034.50**

SPECIAL PROJECTS

Construct Landing	1.00	hours @	$180.00	per hour	$180.00
Grade and shape road -	15.35	stations @	$22.00	per station	$337.70
Roll subgrade w/ vibratory roller prior to rocking -	15.35	stations @	$17.50	per station	$268.63
Grass seed and fertilize -	0.70	acres @	$280.00	per acre	$196.00
				TOTAL SPECIAL PROJECTS	**$982.33**

GRAND TOTAL **$23,178.93**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **S to T**

Construction -	4+80	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.09	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station				
0+00		4+80	35%			$239	=		$1,147.20	
									TOTAL	**$1,147.20**

ROCK

Approach rock	0+00	0	cy. of	Jawrun		@	$0.00	per c.y.=	$0.00	
									TOTAL ROCK	**$0.00**

SPECIAL PROJECTS

Grade and shape road -	4.80	stations @	$22.00	per station	$105.60	
Roll subgrade w/ vibratory roller prior to rocking -	4.80	stations @	$17.50	per station	$84.00	
Grass seed and fertilize -	0.22	acres @	$280.00	per acre	$61.60	
				TOTAL SPECIAL PROJECTS		**$251.20**

GRAND TOTAL **$1,398.40**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **U to V**

Construction -	36+20	stations	Improvement -	15+90	stations	Reconstruction -	9+45	stations
	0.69	miles		0.30	miles		0.18	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	Endhaul		
25+35		28+15	15%		Ditch	$189		=	$529.20
28+15		29+00	15%		Ditch	$189	$1,130.35	=	$1,291.00
29+00		30+60	30%		Ditch	$320	$2,127.71	=	$2,639.71
30+60		31+20	43%		Ditch	$413	$797.89	=	$1,045.69
31+20		32+90	67%		Ditch	$3,375		=	$5,737.50
32+90		34+05	44%		Ditch	$413	$1,529.29	=	$2,004.24
34+05		35+90	31%		Ditch	$320		=	$592.00
35+90		36+55	31%		Ditch	$320		=	$208.00
36+55		37+35	6%		Ditch	$165		=	$132.00
37+35		38+95	20%		Ditch	$228		=	$364.80
38+95		39+95	10%		Ditch	$178		=	$178.00
39+95		41+85	22%		Ditch	$228		=	$433.20
41+85		43+00	13%		Ditch	$178		=	$204.70
43+00		44+60	45%		Ditch	$459		=	$734.40
44+60		45+95	30%		Ditch	$320		=	$432.00
45+95		47+40	15%		Ditch	$189		=	$274.05
47+40		50+45	44%		Ditch	$413		=	$1,259.65
50+45		51+10	12%		Ditch	$178		=	$115.70
51+10		52+40	27%		Ditch	$274		=	$356.20
52+40		53+70	44%		Ditch	$413		=	$536.90
53+70		55+40	67%		Ditch	$3,375		=	$5,737.50
55+40		58+25	37%		Ditch	$320		=	$912.00
58+25		61+55	18%		Ditch	$210		=	$693.00
								TOTAL	**$26,411.44**

CULVERTS - MATERIALS & INSTALLATION

Culverts				
	150	LF of 18"	$3,000.00	
	60	LF of 48"	$3,300.00	
			$3,000.00	
Culvert Stakes & Markers				
	6	markers	$48.00	
			TOTAL CULVERTS	**$6,348.00**

ROCK

0+00	to	25+35	900	cy. of	Jawrun	@	$14.86	per c.y.=	$13,374.00
25+35	to	43+40	1,100	cy. of	Jawrun	@	$15.27	per c.y.=	$16,797.00
Intersection Widening		0+00	30	cy. of	Jawrun	@	$14.62	per c.y.=	$438.60
Energy Dissipator		5yds/culvert	25	cy. of	Rip Rap	@	$10.72	per c.y.=	$268.00
Curve Widening		36+80	15	cy. of	Jawrun	@	$15.32	per c.y.=	$229.80
Curve Widening		38+60	15	cy. of	Jawrun	@	$15.35	per c.y.=	$230.25
Curve Widening		41+85	15	cy. of	Jawrun	@	$15.41	per c.y.=	$231.15
Landing Rock		43+20	100	cy. of	Jawrun	@	$15.44	per c.y.=	$1,544.00
Traction Rock		As Needed	80	cy. of	Crushed	@	$18.12	per c.y.=	$1,449.60
Fill		16+45	1,500	cy. of	Pit-Run	@	$14.93	per c.y.=	$22,395.00
								TOTAL ROCK	**$56,957.40**

SPECIAL PROJECTS

Construct Curve Widenings	2.00	hours @	$180.00	per hour	$360.00
Construct Landings	4.00	hours @	$180.00	per hour	$720.00
Construct waste areas -	11.00	hours @	$180.00	per hour	$1,980.00
Construct ditchouts -	4.00	@	$60.00	each	$240.00
Reconstruct Fill at Station 16+45 and Endhaul	16.00	hours @	$361.88	per hour	$5,790.08
Grade and shape road -	61.55	stations @	$22.00	per station	$1,354.10
Roll subgrade w/ vibratory roller prior to rocking -	61.55	stations @	$17.50	per station	$1,077.13
Remove large stumps -	5.00	lump sum @	$200.00		$1,000.00
Grass seed and fertilize -	1.25	acres @	$280.00	per acre	$350.00
Mulching -	0.500	acres @	$780.00	per acre	$390.00
				TOTAL SPECIAL PROJECTS	**$13,261.31**

GRAND TOTAL **$102,978.15**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **W to X**

Construction -	5+45	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.10	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		0+20				$69	=	$13.80	
								TOTAL	**$13.80**

ROCK

0+00	to	5+45	320	cy. of	Jawrun	@	$14.79	per c.y.=	$4,732.80	
Intersection Widening		0+00	30	cy. of	Jawrun	@	$14.75	per c.y.=	$442.50	
Landing Rock		5+45	50	cy. of	Jawrun	@	$14.85	per c.y.=	$742.50	
									TOTAL ROCK	**$5,917.80**

SPECIAL PROJECTS

Construct Landing	1.00	hours @	$180.00	per hour	$180.00
Grade and shape road -	5.45	stations @	$22.00	per station	$119.90
Roll subgrade w/ vibratory roller prior to rocking -	5.45	stations @	$17.50	per station	$95.38
Remove large stumps -	1.00	lump sum @	$200.00		$200.00
Grass seed and fertilize -	0.25	acres @	$280.00	per acre	$70.00
				TOTAL SPECIAL PROJECTS	**$665.28**

GRAND TOTAL **$6,596.88**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **Y to Z**

Construction -	1+55	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.03	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		1+55	20%			$174	=	$269.70	
							TOTAL		**$269.70**

ROCK

0+00	to	1+55	90	cy. of	Jawrun	@	$15.11	per c.y.=	$1,359.90
Intersection Widening		0+00	30	cy. of	Jawrun	@	$15.09	per c.y.=	$452.70
Landing Rock		1+55	50	cy. of	Jawrun	@	$15.12	per c.y.=	$756.00
								TOTAL ROCK	**$2,568.60**

SPECIAL PROJECTS

Construct Landing	1.00	hours @	$180.00	per hour	$180.00
Grade and shape road -	1.55	stations @	$22.00	per station	$34.10
Roll subgrade w/ vibratory roller prior to rocking -	1.55	stations @	$17.50	per station	$27.13
Grass seed and fertilize -	0.07	acres @	$280.00	per acre	$19.60
				TOTAL SPECIAL PROJECTS	**$260.83**

GRAND TOTAL **$3,099.13**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **AA to BB**

Construction -	2+35	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.04	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		2+35	15%			$134	=	$314.90	
								TOTAL	**$314.90**

ROCK

0+00	to	2+35	160	cy. of	Jawrun	@	$15.13	per c.y.=	$2,420.80	
Intersection Widening		0+00	30	cy. of	Jawrun	@	$15.10	per c.y.=	$453.00	
Landing Rock		2+35	50	cy. of	Jawrun	@	$15.15	per c.y.=	$757.50	
									TOTAL ROCK	**$3,631.30**

SPECIAL PROJECTS

Construct Landing	1.00	hours @	$180.00	per hour	$180.00
Grade and shape road -	2.35	stations @	$22.00	per station	$51.70
Roll subgrade w/ vibratory roller prior to rocking -	2.35	stations @	$17.50	per station	$41.13
Remove large stumps -	1.00	lump sum @	$200.00		$200.00
Grass seed and fertilize -	0.11	acres @	$280.00	per acre	$30.80
				TOTAL SPECIAL PROJECTS	**$503.63**

GRAND TOTAL **$4,449.83**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **CC to DD**

Construction -	5+50	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.10	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		5+50	25%			$206	=	$1,133.00	
								TOTAL	**$1,133.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts								
	30	LF of 18"	$600.00		0	LF of 24"	$0.00	
			$600.00				$0.00	
Culvert Stakes & Markers								
	1	markers	$8.00					
							TOTAL CULVERTS	**$608.00**

ROCK

0+00 to	5+50	330	cy. of	Jawrun	@	$15.17	per c.y.=	$5,006.10
Intersection Widening	0+00	30	cy. of	Jawrun	@	$15.13	per c.y.=	$453.90
Landing Rock	5+50	50	cy. of	Jawrun	@	$15.23	per c.y.=	$761.50
Energy Dissipator	4+80	5	cy. of	Riprap	@	$11.22	per c.y.=	$56.10
							TOTAL ROCK	**$6,277.60**

SPECIAL PROJECTS

Landing Construction	1.00	hours @	$180.00	per hour	$180.00
Grade and shape road -	5.50	stations @	$22.00	per station	$121.00
Roll subgrade w/ vibratory roller prior to rocking -	5.50	stations @	$17.50	per station	$96.25
Remove large stumps -	1.00	lump sum @	$200.00		$200.00
Grass seed and fertilize -	0.25	acres @	$280.00	per acre	$70.00
				TOTAL SPECIAL PROJECTS	**$667.25**

GRAND TOTAL **$8,685.85**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **EE to FF**

Construction -	1+40	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.03	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	Endhaul Drill & Shoot		
0+00		1+40	45%			$336	$8,558.00	=	$9,028.40
								TOTAL	**$9,028.40**

ROCK

0+00	to	1+40	80	cy. of	Jawrun	@	$15.28	per c.y.=	$1,222.40	
Landing Rock		1+40	100	cy. of	Jawrun	@	$15.29	per c.y.=	$1,529.00	
									TOTAL ROCK	**$2,751.40**

SPECIAL PROJECTS

Construct Landing	2.00	hours @	$180.00	per hour	$360.00	
Grade and shape road -	1.40	stations @	$22.00	per station	$30.80	
Roll subgrade w/ vibratory roller prior to rocking -	1.40	stations @	$17.50	per station	$24.50	
Remove large stumps -	8.00	lump sum @	$200.00		$1,600.00	
Grass seed and fertilize -	0.06	acres @	$280.00	per acre	$16.80	
				TOTAL SPECIAL PROJECTS		**$2,032.10**

GRAND TOTAL **$13,811.90**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **GG to HH**

Construction -	0+00	stations	Improvement -	30+70	stations	Reconstruction -	0+00	stations
	0.00	miles		0.58	miles		0.00	miles

ROCK

Spot Rock	As Directed	70	cy. of	Jawrun	@	$14.50	per c.y.=	$1,015.00	
							TOTAL ROCK		**$1,015.00**

SPECIAL PROJECTS

Grade and shape road -	30.70	stations @	$22.00	per station	$675.40		
Roll subgrade w/ vibratory roller prior to rocking -	30.70	stations @	$17.50	per station	$537.25		
					TOTAL SPECIAL PROJECTS		**$1,212.65**

GRAND TOTAL **$2,227.65**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **II to JJ**

Construction -	0+00	stations	Improvement -	30+00	stations	Reconstruction -	37+60	stations
	0.00	miles		0.57	miles		0.71	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Roadside Brushing	0.00	miles @	$0.00	per mile =	$0.00	
Side cast	0.000	acres @	$860.00	per acre =	$0.00	
Widening	0.000	acres @	$860.00	per acre =	$0.00	
Alder/Stump Grub & End Haul	2.600	acres @	$1,500.00	per acre =	$3,900.00	
Piling	0.00	acres @	$1,185.00	per acre =	$0.00	
				TOTAL CLEARING AND GRUBBING		**$3,900.00**

RECONSTRUCTION: EXCAVATION -

Road Earthwork	37.60	sta. @	$175.00	per sta. =	$6,580.00	
Pullback	0	cy. @	$2.00	per c.y.=	$0.00	
Widening	2546	cy. @	$2.00	per c.y.=	$5,092.00	
Remove outside berm	0	cy. @	$2.00	per c.y.=	$0.00	
Slope Stabilization Prep.	0	cy. @	$2.00	per c.y.=	$0.00	
Full Bench		cy. @	$2.50	per c.y.=	$0.00	
Widening/Full Bench		cy. @	$2.50	per c.y.=	$0.00	
				TOTAL EXCAVATION		**$11,672.00**

RECONSTRUCTION: ENDHAUL -

Widening	37+30	to	40+00	325	cy. @	$1.78	per c.y.=	$578.50
Widening	42+60	to	45+55	533	cy. @	$1.78	per c.y.=	$948.74
Widening	46+30	to	55+00	1572	cy. @	$1.78	per c.y.=	$2,798.16
Widening	57+00	to	58+60	116	cy. @	$1.78	per c.y.=	$206.48
Spread & compact				2546	cy. @	$0.50	per c.y.=	$1,273.00
							TOTAL ENDHAUL	**$5,804.88**

CULVERTS - MATERIALS & INSTALLATION

Culverts

30	LF of 18"	$600.00	0	LF of 24"	$0.00
		$600.00			$0.00

Culvert Stakes & Markers

1 markers $8.00

TOTAL CULVERTS **$608.00**

ROCK

0+00 to	30+00	1,030	cy. of	Jaw Run	@	$13.73	per c.y.=	$14,141.90
30+00 to	67+60	2,810	cy. of	Jaw Run	@	$15.85	per c.y.=	$44,538.50
Landing Rock	67+60	100	cy. of	Jaw Run	@	$15.85	per c.y.=	$1,585.00
Landing Rock	61+00	100	cy. of	Jaw Run	@	$15.85	per c.y.=	$1,585.00
Landing Rock	46+10	100	cy. of	Jaw Run	@	$15.56	per c.y.=	$1,556.00
Landing Rock	43+80	50	cy. of	Jaw Run	@	$15.56	per c.y.=	$778.00
							TOTAL ROCK	**$64,184.40**

SPECIAL PROJECTS

Waste Area/Landing Construction (Non-Endhaul Landings)	10.00	hours @	$200.00	per hour	$2,000.00
Waste Area/Landing Construction (Endhaul Landing 43+80)	6.00	hours @	$285.00	per hour	$1,710.00
Construct ditchouts -	5.00	@	$60.00	each	$300.00
Construct Ditchlines	15.90	stations @	$105.00	per station	$1,669.50
Construct Large Turnaround at station 58+70	1.00	hours @	$180.00	per hour	$180.00
Grade and shape road -	67.60	stations @	$22.00	per station	$1,487.20
Roll subgrade w/ vibratory roller prior to rocking -	67.60	stations @	$17.50	per station	$1,183.00
Remove large stumps -	2.00	lump sum @	$200.00		$400.00
Grass seed and fertilize -	1.73	acres @	$280.00	per acre	$484.40
				TOTAL SPECIAL PROJECTS	**$9,414.10**

GRAND TOTAL **$95,583.38**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **KK to LL**

Construction -	2+50	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.05	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		2+50	10%			$113	=	$282.50	
								TOTAL	**$282.50**

ROCK

0+00	to	2+50	140	cy. of	Jawrun	@	$15.79	per c.y.=	$2,210.60	
Intersection Widening		0+00	30	cy. of	Jawrun	@	$15.76	per c.y.=	$472.80	
Landing Rock		2+50	100	cy. of	Jawrun	@	$15.81	per c.y.=	$1,581.00	
									TOTAL ROCK	**$4,264.40**

SPECIAL PROJECTS

Construct Landing	1.00	hours @	$180.00	per hour	$180.00
Grade and shape road -	2.50	stations @	$22.00	per station	$55.00
Roll subgrade w/ vibratory roller prior to rocking -	2.50	stations @	$17.50	per station	$43.75
Remove large stumps -	1.00	lump sum @	$200.00		$200.00
Grass seed and fertilize -	0.11	acres @	$280.00	per acre	$30.80
				TOTAL SPECIAL PROJECTS	**$509.55**

GRAND TOTAL **$5,056.45**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **MM to NN**

Construction -	12+50	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.24	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
0+00		1+50	2%		Ditch	$152	=	$228.00	
1+50		3+65	25%		Ditch	$274	=	$589.10	
3+65		8+80	10%		Ditch	$178	=	$916.70	
8+80		12+50	10%			$113	=	$418.10	
								TOTAL	**$2,151.90**

CULVERTS - MATERIALS & INSTALLATION

Culverts									
		30	LF of 18"	$600.00		0	LF of 24"	$0.00	
				$600.00				$0.00	
Culvert Stakes & Markers									
		1	markers	$8.00					
								TOTAL CULVERTS	**$608.00**

ROCK

0+00	to	12+50	730	cy. of	Jawrun	@	$15.91	per c.y.=	$11,614.30
Energy Dissipator		5+65	5	cy. of	Rip Rap	@	$11.17	per c.y.=	$55.85
Landing Rock		12+50	100	cy. of	Jawrun	@	$16.00	per c.y.=	$1,600.00
								TOTAL ROCK	**$13,270.15**

SPECIAL PROJECTS

Construct Landing	2.00	hours @	$180.00	per hour	$360.00
Grade and shape road -	12.50	stations @	$22.00	per station	$275.00
Roll subgrade w/ vibratory roller prior to rocking -	12.50	stations @	$17.50	per station	$218.75
Remove large stumps -	1.00	lump sum @	$200.00		$200.00
Grass seed and fertilize -	0.57	acres @	$280.00	per acre	$159.60
				TOTAL SPECIAL PROJECTS	**$1,213.35**

GRAND TOTAL **$17,243.40**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **OO to PP**

Construction -	20+10	stations	Improvement -	49+50	stations	Reconstruction -	0+00	stations
	0.38	miles		0.94	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station			
49+50		65+65	10%			$113	=	$1,824.95	
65+60		68+40	10%		Ditch	$178	=	$498.40	
68+40		69+60	10%			$113	=	$135.60	
								TOTAL	**$2,458.95**

ROCK

0+00	to	49+50	1,700	cy. of	Jawrun	@	$16.86	per c.y.=	$28,662.00
49+50	to	69+60	1,580	cy. of	Jawrun	@	$16.14	per c.y.=	$25,501.20
Landing Rock		53+30	100	cy. of	Jawrun	@	$16.02	per c.y.=	$1,602.00
Landing Rock		58+70	70	cy. of	Jawrun	@	$16.13	per c.y.=	$1,129.10
Landing Rock		69+60	100	cy. of	Jawrun	@	$16.33	per c.y.=	$1,633.00
Traction Rock		As Needed	50	cy. of	Crushed	@	$19.60	per c.y.=	$980.00
								TOTAL ROCK	**$59,507.30**

SPECIAL PROJECTS

Construct Landings	6.00	hours @	$180.00	per hour	$1,080.00
Grade and shape road -	69.60	stations @	$22.00	per station	$1,531.20
Roll subgrade w/ vibratory roller prior to rocking -	69.60	stations @	$17.50	per station	$1,218.00
Remove large stumps -	8.00	lump sum @	$200.00		$1,600.00
Grass seed and fertilize -	0.92	acres @	$280.00	per acre	$257.60
				TOTAL SPECIAL PROJECTS	**$5,686.80**

GRAND TOTAL **$67,653.05**

SUMMARY OF CONSTRUCTION COST

Sale: **Stones Throw** Road: **QQ to RR**

Construction -	3+30	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.06	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station				
0+00		3+30	5%			$93	=		$306.90	
								TOTAL		**$306.90**

ROCK

0+00	to	3+30	200	cy. of	Jawrun	@	$14.69	per c.y.=	$2,938.00	
Landing Rock		3+30	50	cy. of	Jawrun	@	$14.72	per c.y.=	$736.00	
								TOTAL ROCK		**$3,674.00**

SPECIAL PROJECTS

Construct Landing	1.00	hours @	$180.00	per hour	$180.00
Grade and shape road -	3.30	stations @	$22.00	per station	$72.60
Roll subgrade w/ vibratory roller prior to rocking -	3.30	stations @	$17.50	per station	$57.75
Remove large stumps -	1.00	lump sum @	$200.00		$200.00
Grass seed and fertilize -	0.15	acres @	$280.00	per acre	$42.00
				TOTAL SPECIAL PROJECTS	**$552.35**

GRAND TOTAL **$4,533.25**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Jordan Creek Stockpile	Location:	Sec. 29, T1N, R7W, W.M.
Sale:	**Stones Throw**	Road:	270 c.y.
Swell:	1.40	Stockpile:	c.y.
Shirinkage	1.16	Total Truck Loads:	270 c.y.
Drill Pct.:	0%	In Place Total:	193 c.y.

Load Dump Truck:	$1.00	/cu.yd.	x	270	cu.yds. =	$270.00
					Subtotal	$270.00
Move in Loader	1	@		$668.21	=	$668.21
Move in Trucks	3	@		$170.81	=	$512.43
					Subtotal	$1,180.64
					TOTAL PRODUCTION COSTS	$1,450.64

Base Cost= $5.37 Per Cu.Yd.

Road Segment	Haul Cost $/cu.yd.	Proc Cost $/cu.yd.	Base Cost. $/cu.yd.	Cost $/cu.yd.	Number Cu. Yds		ROCK COST
A to B Spot Rock(0+00 to 45+40) (Crus	3.49	1.50	5.37	10.36	200		$2,072.00
A to B 225ft Shoofly (Crushed)	3.59	3.20	5.37	12.16	70		$851.20
				Total C.Y.	270	Sub Total	$2,923.20
						TOTAL ROCKING COSTS	$2,923.20

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Clear Creek	Location:	NW 1/4 Sec. 15, T1S, R7W, W.M.
Sale:	**Stones Throw**	Road & Stockpile:	4430 c.y.
Swell:	1.40		c.y.
Shirinkage	1.16	Total Truck Loads:	4430 c.y.
Drill Pct.:	0%	In Place Total:	3164 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.							$800.00
Rip Rock (20% of Vol.):	$3.00	/cu.yd.	x	886	cu.yds.	=	$2,658.00
Push Rock:	$1.00	/cu.yd.	x	4430	cu.yds.	=	$4,430.00
Load Crusher:	$1.00	/cu.yd.	x	4430	cu.yds.	=	$4,430.00
Crush Rock:	$4.25	/cu.yd.	x	4430	cu.yds.	=	$18,827.50
Load Dump Truck:	$1.00	/cu.yd.	x	4430	cu.yds.	=	$4,430.00
Oversize Reduction:	$6.00	/cu.yd.	x	310	cu.yds.	=	$1,860.00
					Subtotal		$37,435.50

Move In/Set-up Crusher					$3,697.00
Move in Rock Hammer	1	@	$1,375.00	=	$1,375.00
Move in Loader (within area)	1	@	$60.00	=	$60.00
Move in Excavator (within area)	1	@	$100.00	=	$100.00
Move in Trucks	5	@	$307.00	=	$1,535.00
			Subtotal		$6,767.00
			TOTAL PRODUCTION COSTS		$44,202.50

Base Cost= $9.98 Per Cu.Yd.

Road Segment	Haul Cost $/cu.yd.	Proc Cost $/cu.yd.	Base Cost. $/cu.yd.	Cost $/cu.yd.	Number Cu. Yds		ROCK COST
A to B 11820 17160 (Crushed)	5.52	3.20	9.98	18.70	2120		$39,644.00
A to B Intersection Widening (Crushed)	5.07	3.20	9.98	18.25	40		$730.00
Stockpile Construction	3.54	1.00	9.98	14.52	2000		$29,040.00
Q to R Traction Rock (Crushed)	5.94	1.70	9.98	17.62	140		$2,466.80
U to V Traction Rock (Crushed)	6.44	1.70	9.98	18.12	80		$1,449.60
OO to PP Traction Rock As Needed (Crushe	7.92	1.70	9.98	19.60	50		$980.00
				Total C.Y.	4430	Sub Total	$74,310.40
					TOTAL ROCKING COSTS		$74,310.40

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Commercial	Location:	Sec. 21 , T1S, R10W, W.M.	
Sale:	**Stones Throw**		Road:	2060 c.y.
Swell:	1.40		Stockpile:	c.y.
Shirinkage	1.16		Total Truck Loads:	2060 c.y.
Drill Pct.:	40%		In Place Total:	1471 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.

Drill & Shoot:	$3.25	/cu.yd.	x	0 cu.yds.	=	$0.00
Rip Rock:	$3.00	/cu.yd.	x	0 cu.yds.	=	$0.00
Load Crusher:	$1.00	/cu.yd.	x	0 cu.yds.	=	$0.00
Crush Rock:	$2.50	/cu.yd.	x	0 cu.yds.	=	$0.00
Load Dump Truck:	$1.00	/cu.yd.	x	0 cu.yds.	=	$0.00
				Subtotal		$0.00

Move In/Set-up Crusher					$0.00
Move In and set up Drill and Compressor	0	@	$673.71	=	$0.00
Move in Roller and Compactor	0	@	$474.50	=	$0.00
Move in Grader	0	@	$636.31	=	$0.00
Move in D-8	0	@	$835.21	=	$0.00
Move in Loader	0	@	$668.21	=	$0.00
Move in Excavator	0	@	$783.21	=	$0.00
Move in Trucks	0	@	$170.81	=	$0.00
Move in Water Truck	0	@	$170.81	=	$0.00
Change Gradation					
				Subtotal	$0.00

TOTAL PRODUCTION COSTS	$0.00

Base Cost= $0.00 Per Cu.Yd.

Road Segment	Haul Cost $/cu.yd.	Proc Cost $/cu.yd.	Base Cost. $/cu.yd.	Cost $/cu.yd.	Number Cu. Yds		ROCK COST
A to B 4540 11820 (Crushed)	0.00	0.00	0.00	32.93	2010		$66,189.30
A to B Intersection Widening (Crushed)	0.00	0.00	0.00	32.93	50		$1,646.50
				Total C.Y.	2060	Sub Total	$67,835.80

TOTAL ROCKING COSTS	$67,835.80

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Jaw Run	Location:	Sec. 16 , T1S, R7W, W.M.		
Sale:	**Stones Throw**		Road:		17500 c.y.
Swell:	1.40		Stockpile:		c.y.
Shirinkage	1.16		Total Truck Loads:		17500 c.y.
Drill Pct.:	75%		In Place Total:		12500 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.							$4,800.00
Drill & Shoot:	$3.25	/cu.yd.	x	9375	cu.yds.	=	$30,468.75
Rip Rock:	$3.00	/cu.yd.	x	3125	cu.yds.	=	$9,375.00
Load Crusher:	$1.00	/cu.yd.	x	17500	cu.yds.	=	$17,500.00
Crush Rock:	$4.00	/cu.yd.	x	17500	cu.yds.	=	$70,000.00
Load Dump Truck:	$1.00	/cu.yd.	x	17500	cu.yds.	=	$17,500.00
					Subtotal		$149,643.75

Move In/Set-up Crusher					$2,016.00
Move In and set up Drill and Compressor	1	@	$673.71	=	$673.71
Move in Roller and Compactor	1	@	$474.50	=	$474.50
Move in Grader	1	@	$636.31	=	$636.31
Move in D-8	1	@	$835.21	=	$835.21
Move in Loader	1	@	$668.21	=	$668.21
Move in Excavator	1	@	$783.21	=	$783.21
Move in Trucks	4	@	$170.81	=	$683.24
				Subtotal	$6,770.39
			TOTAL PRODUCTION COSTS		$156,414.14

Base Cost= $8.94 Per Cu.Yd.

Road Segment	Haul Cost $/cu.yd.	Proc Cost $/cu.yd.	Base/load Cost. $/cu.yd.	Cost $/cu.yd.	Number Cu. Yds	ROCK COST
C to D 0 1960 (Jaw Run)	3.54	1.70	8.94	14.18	680	$9,642.40
C to D Spot Rock(19+60 to 39+20) (Jaw	3.54	0.90	8.94	13.38	30	$401.40
E to F Approach Rock (Jawrun)	3.38	1.70	8.94	14.02	0	$0.00
G to H Approach Rock (Jawrun)	3.30	1.70	8.94	13.94	0	$0.00
I to J Approach Rock (Jawrun)	3.24	1.70	8.94	13.88	0	$0.00
K to L 0 1400 (Jaw-Run)	3.07	1.70	8.94	13.71	810	$11,105.10
K to L Landing Rock (Jaw-Run)	3.07	1.70	8.94	13.71	100	$1,371.00
M to N Approach Rock (Jawrun)	3.07	1.70	8.94	13.71	30	$411.30
O to P 0 1400 (Jaw Run)	3.25	1.70	8.94	13.89	480	$6,667.20
O to P Spot Rock(14+00 to 29+00) (Jaw	4.60	0.90	8.94	14.44	30	$433.20
Q to R 0 1535 (Jawrun)	4.84	1.70	8.94	15.48	990	$15,325.20
Q to R Intersection Widening (Jawrun)	4.71	1.70	8.94	15.35	30	$460.50
Q to R Landing Rock (Jawrun)	5.00	1.70	8.94	15.64	50	$782.00
S to T Approach rock (Jawrun)	4.57	1.70	8.94	15.21	0	$0.00
U to V 0 2535 (Jawrun)	4.22	1.70	8.94	14.86	900	$13,374.00
U to V 2535 4340 (Jawrun)	4.63	1.70	8.94	15.27	1100	$16,797.00
U to V Intersection Widening (Jawrun)	3.98	1.70	8.94	14.62	30	$438.60
U to V Energy Dissipator (Rip Rap)	4.78	1.00	4.94	10.72	25	$268.00
U to V Curve Widening (Jawrun)	4.68	1.70	8.94	15.32	15	$229.80
U to V Curve Widening (Jawrun)	4.71	1.70	8.94	15.35	15	$230.25
U to V Curve Widening (Jawrun)	4.77	1.70	8.94	15.41	15	$231.15
U to V Landing Rock (Jawrun)	4.80	1.70	8.94	15.44	100	$1,544.00
U to V Fill (Pit-Run)	4.29	1.70	8.94	14.93	1500	$22,395.00
W to X 0 545 (Jawrun)	4.15	1.70	8.94	14.79	320	$4,732.80
W to X Intersection Widening (Jawrun)	4.11	1.70	8.94	14.75	30	$442.50
W to X Landing Rock (Jawrun)	4.21	1.70	8.94	14.85	50	$742.50
Y to Z 0 155 (Jawrun)	4.47	1.70	8.94	15.11	90	$1,359.90
Y to Z Intersection Widening (Jawrun)	4.45	1.70	8.94	15.09	30	$452.70
Y to Z Landing Rock (Jawrun)	4.48	1.70	8.94	15.12	50	$756.00
AA to BB 0 235 (Jawrun)	4.49	1.70	8.94	15.13	160	$2,420.80
AA to BB Intersection Widening (Jawrun)	4.46	1.70	8.94	15.10	30	$453.00
AA to BB Landing Rock (Jawrun)	4.51	1.70	8.94	15.15	50	$757.50
CC to DD 0 550 (Jawrun)	4.53	1.70	8.94	15.17	330	$5,006.10
CC to DD Intersection Widening (Jawrun)	4.49	1.70	8.94	15.13	30	$453.90
CC to DD Landing Rock (Jawrun)	4.59	1.70	8.94	15.23	50	$761.50
CC to DD Energy Dissipator (Riprap)	4.58	1.70	4.94	11.22	5	$56.10
EE to FF 0 140 (Jawrun)	4.64	1.70	8.94	15.28	80	$1,222.40
EE to FF Landing Rock (Jawrun)	4.65	1.70	8.94	15.29	100	$1,529.00
GG to HH Spot Rock (Jawrun)	4.66	0.90	8.94	14.50	70	$1,015.00
II to JJ 0 3000 (Jaw Run)	3.09	1.70	8.94	13.73	1030	$14,141.90
II to JJ 3000 6760 (Jaw Run)	5.21	1.70	8.94	15.85	2810	$44,538.50
II to JJ Landing Rock 6760 (Jaw Run)	5.21	1.70	8.94	15.85	100	$1,585.00
II to JJ Landing Rock 6100 (Jaw Run)	5.21	1.70	8.94	15.85	100	$1,585.00
II to JJ Landing Rock 4610 (Jaw Run)	4.92	1.70	8.94	15.56	100	$1,556.00
II to JJ Landing Rock 4380 (Jaw Run)	4.92	1.70	8.94	15.56	50	$778.00
KK to LL 0 250 (Jawrun)	5.15	1.70	8.94	15.79	140	$2,210.60
KK to LL Intersection Widening 0 (Jawru	5.12	1.70	8.94	15.76	30	$472.80
KK to LL Landing Rock 250 (Jawrun)	5.17	1.70	8.94	15.81	100	$1,581.00
MM to NN 0 1250 (Jawrun)	5.27	1.70	8.94	15.91	730	$11,614.30
MM to NN Energy Dissipator 565 (Rip Ra	5.23	1.00	4.94	11.17	5	$55.85
MM to NN Landing Rock 1250 (Jawrun)	5.36	1.70	8.94	16.00	100	$1,600.00
OO to PP 0 4950 (Jawrun)	6.22	1.70	8.94	16.86	1700	$28,662.00
OO to PP 4950 6960 (Jawrun)	5.50	1.70	8.94	16.14	1580	$25,501.20
OO to PP Landing Rock 5330 (Jawrun)	5.38	1.70	8.94	16.02	100	$1,602.00
OO to PP Landing Rock 5870 (Jawrun)	5.49	1.70	8.94	16.13	70	$1,129.10
OO to PP Landing Rock 6960 (Jawrun)	5.69	1.70	8.94	16.33	100	$1,633.00
QQ to RR 0 330 (Jawrun)	4.05	1.70	8.94	14.69	200	$2,938.00
QQ to RR Landing Rock 330 (Jawrun)	4.08	1.70	8.94	14.72	50	$736.00
				Total C.Y.	17500	Sub Total $268,189.05
					15965	
				TOTAL ROCKING COSTS		$268,189.05

Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Stones Throw**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
26.0	Pavement	30
5.0	Main Lines	7
3.0	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move ($/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
	Drill & Compressor	$0.00		$46.00	0.00	0.00	0	$0.00	$0.00
1	Brush Cutter	$534.50		$4.00	0.00	25.00	50	$200.00	$734.50
	Graders	$0.00		$3.65	0.00	0.00	0	$0.00	$0.00
	Loader (Large)	$0.00	1	$9.00	0.00	0.00	0	$0.00	$0.00
	Rollers (smooth/grid) & Compactors	$0.00		$5.00	0.00	0.00	0	$0.00	$0.00
	Excavators (Small)	$0.00		$22.00	0.00	0.00	0	$0.00	$0.00
	Excavators (Med.)	$0.00		$35.50	0.00	0.00	0	$0.00	$0.00
1	Excavators (Large)	$783.21	1	$44.80	0.00	6.00	6	$268.80	$1,052.01
	Tired Backhoes/Skidders	$0.00		$3.00	0.00	0.00	0	$0.00	$0.00
	Tractors (D6)	$0.00	2	$7.10	0.00	0.00	0	$0.00	$0.00
	Tractors (D7)	$0.00	2	$11.30	0.00	0.00	0	$0.00	$0.00
1	Tractor (D8)	$842.75	2	$15.10	0.00	6.00	6	$90.60	$933.35
	Dump Truck (10 cy +)	$0.00		$2.85	0.00	0.00	0	$0.00	$0.00
1	Dump Truck (Off Hiway)	$756.46	1	$4.75	0.00	6.00	6	$28.50	$784.96
	Water Truck (1500 Gal)	$0.00		$2.85	0.00	0.00	0	$0.00	$0.00
1	Water Truck (2500 Gal)	$200.95		$2.85	0.00	6.00	6	$17.10	$218.05
					TOTAL MOVE-IN COSTS:				$3,722.87

OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT
Stones Throw

1. Type of Sale
Regeneration harvest, Recovery

2. Legal Description
Section(s) 12, 13, 14, 24, 25 of T1S R8W, Section(s) 19, 30 of T1S R7W W.M. Tillamook County, Oregon.

3. Sale Acreage
Sale acreage was determined by GPS and orthophotographs along with GIS.

	ACRES	
	Gross	Net
Area 1 (Modified Clearcut)	83	65
Area 2 (Modified Clearcut)	120	98
Area 3 (Modified Clearcut)	118	97
Area 4 (Modified Clearcut)	140	108
Total Acres	461	368

Gross Acres
Area within the Timber Sale Boundary signs

Net acres
Used for calculating the advertised volume.
Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. Cruising Procedures

A. Cruise Method
All units were cruised using a 700’ x 175’ grid. The timber sale areas were cruised with a variable plot sampling method. All conifers 8” DBH and greater and all hardwoods 10” DBH and greater were recorded on all plots. Every plot recorded species, diameter, height, form factor and grade. Merchantable heights were recorded to 6” and 7” outside bark for conifers and hardwoods, respectively.

B. Plot size
Point of observation was 4.0’. Form factor was measured at 16.0’.

Area	BAF
1	40
2	40
3	33.61

4	33.61

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Log lengths favored 40’ lengths.

5. Computation Procedure

Cruise data was entered into SuperAce for computation of basal area, advertised volume, volume summary, log stock table, and stand table for each species and type. Cruise volumes were grown forward to the approximate auction date for Stones Throw. Plots landing in riparian management areas or areas excluded from the timber sale harvest areas were removed from computation procedures.

Net sale acreage was used for volume calculation.

Cruise Statistics (Board Foot Volumes)			
Area	Number of Plots	SE (%)	CV (%)
1	22	10.6	48.4
2	37	7.2	43.6
3	30	9.6	51.6
4	25	7.8	38.2
Total	114	8.8 (avg.)	45.5 (avg.)

6. Hidden Defect and Breakage

A 1% reduction was applied to conifers and a 2% reduction to hardwood volumes for hidden defect and breakage.

7. Timber Description

Area 1 is a Red Alder stand with a large component of Douglas-fir that was seeded in 1958-59 and is found clumped on ridges and scattered throughout the stand. No other management activities have been completed on the area. The Douglas-fir is showing signs of SNC.

Area 2 Approximately 52 acres of the lower slopes of Area 2 is comprised of a mix of Douglas –fir and Red Alder with scattered pockets of Western Hemlock and Sitka Spruce. This stand was naturally seeded and then was aerially seeded with Douglas-fir in 1955-56. The Douglas-fir is showing signs of SNC. This portion of the sale has had no prior management.

In 1995, approximately 55 acres located on the upper slopes of the unit were harvested (Potato Thin Sale-Area 1) removing the alder and thinning the conifer. The resulting

stand has pockets of thinned Douglas-fir and large openings (approximately 27 acres) that currently contain dense salmonberry. The Douglas-fir is showing signs of SNC.

Area 3 is a Red Alder stand with a large component of Douglas-fir that was seeded in 1958-59 and is found clumped on ridges and scattered throughout the stand. Approximately 3 acres of Area 3 was thinned adjacent to road in 1997 (Megan Falls). The Douglas-fir is showing signs of SNC.

Area 4 is comprised of Douglas-fir and Red Alder. The Douglas-fir is found mainly on the ridges and upper ½ of the slopes, with Red Alder adjacent to the riparian areas on the lower ½ of the slope. This stand was seeded with Douglas-fir between 1963 and 1964. Approximately 20 acres were thinned in 2000 (Ziggy Bob) along the west side of the ridge. The Douglas-fir is showing signs of SNC.

The stand is comprised of multiple merchantable species, please see the table below:

Sale Area	Species	DBH	Merchantable Bole Height (feet)	Merchantable top (inches inside bark)
1	Douglas-fir	17	63	5
1	Western Hemlock	36	80	5
1	Red alder	14	42	6
2	Douglas-fir	17	67	5
2	Western Hemlock	25	81	5
2	Sitka Spruce	22	50	5
2	Red alder	17	52	6
3	Douglas-fir	19	67	5
3	Sitka Spruce	14	10	5
3	Red alder	14	38	6
4	Douglas-fir	16	68	5
4	Western Hemlock	25	78	5
4	Red alder	16	46	6
4	Big leaf maple	10	32	6

Above date derived from Statistics (type) report using SuperAce 2008, developed by Atterbury consultants, Inc.

8. Cruiser /Dates

The timber sale area was cruised by the Tillamook District Marketing Unit in 2017 and grown forward to October 2019.

9. Revenue Distribution

FDF 100%

Tax Code: 901 – 53.8%
902 – 46.2%

Deed Numbers: 230, 169, 161

10. Attachments

Volume Summary

Stand Table

Log Stock Tables

Logging Plan

11. Stand and Log Stock Tables Species Key

BM – Big leaf maple take
DF – Douglas-fir take
OC – Other conifer
RA – Red alder take
SS – Sitka Spruce
WH – Western hemlock take
RC – Western red cedar take

FI TSTNDSUM

Stand Table Summary

Project **123STONE**

T01S R08W S13 TSALE

T01S R08W S13 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01S	08W	13	GROWA1	SALE	65.00	22	110

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Date: 07/17/201
Time: 2:56:16PM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		9		82	28	4.057	1.83	4.12	4.8	21.0	.56	20	87	37	13	6
DF		11		77	62	5.432	3.66	5.52	14.7	36.8	2.31	81	203	150	53	13
DF		12		82	37	2.282	1.83	2.32	11.2	31.5	.74	26	73	48	17	5
DF		13		81	92	3.889	3.66	5.93	19.8	70.1	3.34	117	415	217	76	27
DF		14		83	64	5.030	5.49	8.52	15.6	50.4	3.80	133	430	247	87	28
DF		15		83	76	2.921	3.66	5.94	17.4	60.4	2.94	103	359	191	67	23
DF		16		86	71	1.284	1.83	2.61	19.4	68.3	1.44	51	178	94	33	12
DF		17		84	88	2.274	3.66	4.62	25.5	94.6	3.36	118	437	219	77	28
DF		18		85	96	4.057	7.33	9.27	27.5	100.4	7.28	255	931	473	166	61
DF		19		84	99	3.642	7.33	8.32	32.4	113.3	7.69	270	943	500	175	61
DF		20		85	99	1.643	3.66	3.34	33.9	126.1	3.23	113	421	210	74	27
DF		21		85	115	2.236	5.49	4.54	42.0	169.9	5.43	191	772	353	124	50
DF		22		86	105	3.395	9.16	8.97	40.0	159.3	10.22	359	1,428	665	233	93
DF		24		81	121	1.141	3.66	2.90	39.2	163.9	3.24	114	475	210	74	31
DF		25		85	119	1.052	3.66	3.21	49.5	210.2	4.53	159	674	294	103	44
DF		26		84	133	.972	3.66	2.96	59.7	271.5	5.04	177	805	328	115	52
DF		28		84	117	.838	3.66	2.56	61.4	273.2	4.47	157	698	291	102	45
DF		29		83	109	.391	1.83	1.19	61.3	248.7	2.08	73	296	135	47	19
DF		30		80	128	.365	1.83	1.11	74.6	308.3	2.37	83	343	154	54	22
DF		34		84	126	.284	1.83	.87	95.1	469.4	2.35	82	407	153	54	26
DF		Totals		83	82	47.188	78.76	88.81	30.2	116.8	76.41	2,681	10,374	4,967	1,743	674
RA		8		94	48	9.956	3.61	10.04	5.6	32.3	1.54	56	324	100	37	21
RA		9		87	48	7.867	3.61	7.93	7.7	37.7	1.68	61	299	109	40	19
RA		10		84	35	3.186	1.80	3.21	8.2	32.3	.72	26	104	47	17	7
RA		11		79	56	13.165	9.02	18.58	9.4	32.3	4.81	175	601	313	114	39
RA		12		80	93	13.275	10.82	20.07	14.5	56.3	7.98	290	1,130	519	189	73
RA		13		82	69	18.852	18.04	24.70	16.7	63.8	11.36	413	1,577	739	269	103
RA		14		81	68	6.502	7.21	8.19	19.2	71.1	4.32	157	583	281	102	38
RA		15		75	71	8.496	10.82	11.42	16.9	62.0	5.31	193	708	345	126	46
RA		16		81	68	7.467	10.82	15.05	18.0	72.7	7.45	271	1,095	485	176	71
RA		17		83	69	3.307	5.41	6.67	21.6	82.6	3.97	144	551	258	94	36
RA		18		85	88	2.950	5.41	5.95	28.1	115.0	4.59	167	684	298	108	44
RA		19		79	52	3.530	7.21	6.23	19.5	72.4	3.35	122	451	218	79	29
RA		20		79	71	3.983	9.02	8.03	29.6	101.3	6.54	238	813	425	155	53
RA		21		82	66	.722	1.80	1.46	29.6	102.4	1.19	43	149	77	28	10
RA		22		79	71	3.291	9.02	6.64	35.0	126.1	6.39	233	837	416	151	54
RA		23		86	65	.602	1.80	.61	56.2	301.8	.94	34	183	61	22	12
RA		26		80	70	.471	1.80	.48	55.1	129.3	.72	26	61	47	17	4
RA		31		68	72	.354	1.80	.36	29.0	53.9	.28	10	19	19	7	1
RA		Totals		82	66	107.978	119.04	155.60	17.1	65.4	73.15	2,660	10,169	4,755	1,729	661
WH		37		79	93	.248	1.83	.50	140.9	492.8	2.27	71	248	148	46	16
WH		Totals		79	93	.248	1.83	.50	140.9	492.8	2.27	71	248	148	46	16
Totals				82	71	155.414	199.63	244.92	22.1	84.9	151.84	5412	20,792	9,869	3,518	1,351

FI TLOGSTVB

Log Stock Table - MBF

Project: 123STONE

T01S R08W S13 TSALE

T01S R08W S13 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01S	08W	13	GROWA1	SALE	65.00	22	110

Page 1
Date 7/17/2019
Time 2:56:15PM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	2	30	17		17	2.6						11		7				
DF		CO	2	32	28		28	4.2						9	7	13				
DF		CO	2	36	16		16	2.4								16				
DF		CO	2	40	328		328	48.7						132	66	112	19			
DF		CO	3	26	5	9.1	5	.7					5							
DF		CO	3	28	1		1	.1				1								
DF		CO	3	32	56		56	8.3				36	15	4						
DF		CO	3	40	115	.4	115	17.0			14	23	61	17						
DF		CO	4	12	1		1	.1		1										
DF		CO	4	13	0		0	.1		0										
DF		CO	4	14	1		1	.1		1										
DF		CO	4	17	2		2	.3		2										
DF		CO	4	18	1		1	.1		1										
DF		CO	4	19	6		6	.8		6										
DF		CO	4	20	7		7	1.1		1		3	4							
DF		CO	4	21	5		5	.7		5										
DF		CO	4	22	2		2	.3		2										
DF		CO	4	23	2		2	.3			2									
DF		CO	4	24	12		12	1.8		5		7								
DF		CO	4	25	6		6	.8		4	1									
DF		CO	4	27	6		6	.9		6										
DF		CO	4	28	2		2	.4		2										
DF		CO	4	29	7		7	1.0		7										
DF		CO	4	33	7		7	1.1		7										
DF		CO	4	34	5		5	.7		5										
DF		CO	4	35	2		2	.3			2									
DF		CO	4	36	3		3	.4		3										
DF		CO	4	37	7		7	1.0		7										
DF		CO	4	38	7		7	1.1		7										
DF		CO	4	39	5		5	.8		5										
DF		CO	4	40	10		10	1.5		10										
DF		CO	4	41	2		2	.4		2										
DF		Totals			675		674	49.9		89	20	70	84	173	73	147	19			
RA		H	2	18	18		18	2.7						9	9					
RA		H	2	24	13		13	2.0						13						
RA		H	2	26	11		11	1.7						11						
RA		H	2	28	47		47	7.1						23	11	13				
RA		H	2	30	8		8	1.3						8						
RA		H	2	32	9		9	1.4						9						
RA		H	3	12	5		5	.8						5						
RA		H	3	14	14		14	2.1						6	7					
RA		H	3	16	7		7	1.0							7					
RA		H	3	18	15		15	2.3						15						
RA		H	3	20	9	11.1	8	1.2							8					
RA		H	3	24	32		32	4.8					20			12				
RA		H	3	26	7		7	1.1						7						
RA		H	3	28	10	5.9	9	1.4						9						
RA		H	3	30	10		10	1.5					10							
RA		H	3	32	56		56	8.4					47	9						
RA		H	4	13	2		2	.4			2									

FI TLOGSTVB

Log Stock Table - MBF

Project: 123STONE

T01S R08W S13 TSALE

T01S R08W S13 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01S	08W	13	GROWA1	SALE	65.00	22	110

Page 2
Date 7/17/2019
Time 2:56:15PM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches: 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
RA		H	4	14	1		1	.2			1									
RA		H	4	15	6		6	.9			2	4								
RA		H	4	16	7		7	1.1			2	6								
RA		H	4	17	6		6	.8			6									
RA		H	4	18	7		7	1.1			7									
RA		H	4	19	6		6	.8			6									
RA		H	4	20	24		24	3.6			7	8				8				
RA		H	4	21	23		23	3.4			17	6								
RA		H	4	22	9		9	1.3			9									
RA		H	4	23	26		26	3.9			26									
RA		H	4	25	6		6	.9			6									
RA		H	4	26	4		4	.6			4									
RA		H	4	27	15		15	2.3			10	5								
RA		H	4	28	3		3	.5			3									
RA		H	4	29	11		11	1.6			11									
RA		H	4	30	23		23	3.5			17	6								
RA		H	4	31	5		5	.8			5									
RA		H	4	32	79	2.3	77	11.7			21	56								
RA		H	4	33	13		13	2.0			3	10								
RA		H	4	34	18		18	2.7			18									
RA		H	4	35	15		15	2.3			15									
RA		H	4	36	8	16.7	7	1.0			7									
RA		H	4	37	9		9	1.4			9									
RA		H	4	38	8		8	1.2			8									
RA		H	4	39	16	9.6	15	2.2			15									
RA		H	4	40	46	1.5	46	6.9			10	36								
RA		Totals			668	1.1	661	48.9			248	135	76	126	51	25				
WH		CO	2	40	15		15	91.3									15			
WH		CO	3	38	1		1	8.7				1								
WH		Totals			16		16	1.2				1					15			
Total All Species					1,359		1,351	100.0		89	267	207	161	298	124	172	33			

FI TSTNDSUM

Stand Table Summary

Project **123STONE**

T01S R08W S13 TSALE

T01S R08W S13 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01S	08W	13	GROWA2	SALE	98.00	37	102

Page: 1
Date: 06/28/201
Time: 6:55:55AM

Spc	ST	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		8		86	53	5.329	1.91	5.44	5.3	31.8	.81	29	173	80	28	17
DF		9		81	64	12.632	5.73	12.90	8.8	35.4	3.25	114	456	319	112	45
DF		11		89	103	2.819	1.91	5.76	10.9	47.8	1.78	63	275	175	61	27
DF		12		80	93	4.737	3.82	7.26	16.2	56.6	3.36	118	411	329	115	40
DF		13		82	88	2.018	1.91	4.12	14.3	47.8	1.68	59	197	164	58	19
DF		14		79	115	3.480	3.82	7.11	19.1	66.3	3.87	136	472	380	133	46
DF		15		82	96	7.579	9.55	13.93	23.0	84.9	9.14	321	1,183	895	314	116
DF		16		82	101	2.664	3.82	5.44	24.4	92.9	3.78	133	505	371	130	50
DF		17		92	106	1.180	1.91	2.41	32.3	127.4	2.22	78	307	218	76	30
DF		18		80	100	2.105	3.82	4.30	32.6	103.5	4.00	140	445	392	137	44
DF		19		83	97	3.779	7.64	9.65	27.1	96.6	7.46	262	932	731	257	91
DF		20		86	116	2.558	5.73	6.97	34.6	136.7	6.87	241	952	674	236	93
DF		21		84	129	.773	1.91	2.37	36.8	152.1	2.49	87	360	244	85	35
DF		22		84	109	2.114	5.73	5.76	36.8	155.2	6.04	212	894	592	208	88
DF		23		85	116	2.579	7.64	7.90	40.3	172.5	9.07	318	1,363	889	312	134
DF		24		83	105	.592	1.91	1.21	61.0	217.6	2.10	74	263	206	72	26
DF		25		84	139	.546	1.91	1.67	56.1	222.9	2.67	94	373	262	92	37
DF		26		80	112	.505	1.91	1.03	47.0	185.7	1.38	48	191	135	47	19
DF		27		85	114	.936	3.82	2.39	67.7	282.3	4.61	162	674	452	159	66
DF		30		86	134	1.516	7.64	4.64	77.4	383.0	10.24	359	1,779	1,003	352	174
DF		31		85	126	1.420	7.64	3.99	85.2	390.8	9.67	339	1,558	948	333	153
DF		32		83	134	.333	1.91	1.02	85.6	389.2	2.49	87	397	244	86	39
DF		33		84	141	.313	1.91	.96	97.1	463.5	2.66	93	445	260	91	44
DF		34		78	115	.590	3.82	1.51	100.4	397.0	4.31	151	598	422	148	59
DF		35		83	133	1.114	7.64	3.13	110.6	507.5	9.86	346	1,587	966	339	156
DF		36		80	132	.526	3.82	1.61	108.8	505.9	5.00	175	816	490	172	80
DF		37		82	152	.249	1.91	.76	132.4	661.6	2.88	101	505	282	99	49
DF		Totals		83	94	64.985	112.72	125.23	34.7	144.6	123.71	4,341	18,111	12,124	4,254	1,775
RA		12		83	89	5.838	4.76	2.95	10.3	64.9	.84	30	192	82	30	19
RA		14		81	64	8.578	9.51	13.00	16.4	61.3	5.87	213	797	575	209	78
RA		15		85	76	11.208	14.27	22.65	16.9	73.0	10.49	382	1,655	1,028	374	162
RA		16		90	81	4.926	7.13	9.95	20.7	92.0	5.66	206	916	554	202	90
RA		17		76	80	2.909	4.76	4.41	15.1	64.9	1.83	67	286	180	65	28
RA		18		89	82	1.297	2.38	2.62	30.2	119.0	2.18	79	312	213	78	31
RA		19		50	59	1.164	2.38	1.16	67.7	320.3	2.19	79	373	215	77	37
RA		20		94	73	1.051	2.38	2.12	31.9	156.9	1.86	68	333	183	66	33
RA		21		83	53	.953	2.38	1.93	24.7	92.0	1.31	48	177	128	47	17
RA		22		58	77	2.605	7.13	4.39	15.7	43.3	1.89	69	190	186	68	19
RA		23		68	84	1.589	4.76	3.21	34.1	121.7	3.01	110	391	295	107	38
RA		26		50	88	.622	2.38	1.26	17.2	59.5	.59	22	75	58	21	7
RA		28		94	73	.577	2.38	1.17	56.0	238.1	1.79	65	277	176	64	27
RA		29		50	53	.536	2.38	.54	36.4	54.1	.54	20	29	53	19	3
RA		Totals		80	76	43.852	68.97	71.36	20.4	84.1	40.06	1,457	6,003	3,926	1,428	588
WH		15		76	79	1.033	1.34	2.11	19.3	60.1	1.30	41	127	127	40	12
WH		21		94	130	.581	1.34	1.78	38.4	196.7	2.19	68	350	215	67	34
WH		23		88	94	.480	1.34	1.47	31.9	149.4	1.50	47	220	147	46	22
WH		26		90	92	.372	1.34	.76	67.5	284.1	1.64	51	216	161	50	21
WH		30		83	112	.276	1.34	.85	67.6	291.4	1.83	57	247	179	56	24
WH		36		82	120	.190	1.34	.58	105.6	462.6	1.96	61	269	193	60	26
WH		37		84	115	.179	1.34	.55	109.3	462.6	1.92	60	254	188	59	25
WH		39		81	120	.322	2.67	.99	121.7	573.7	3.84	120	566	376	118	55

FI TSTNDSUM

Stand Table Summary

Project **123STONE**

T01S R08W S13 TSALE

T01S R08W S13 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01S	**08W**	**13**	**GROWA2**	**SALE**	98.00	37	102

Date: **06/28/201**

Time: **6:55:55AM**

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
WH		Totals		84	102	3.435	12.03	9.08	55.7	247.5	16.19	506	2,248	1,587	496	220
SS		14		63	66	1.456	1.64	1.46	55.4	244.2	2.13	81	356	209	79	35
SS		28		89	88	.783	3.28	2.00	41.4	247.0	2.13	83	493	209	81	48
SS		37		78	64	.220	1.64	.45	105.7	316.9	1.22	47	142	120	47	14
SS		Totals		73	73	2.459	6.56	3.90	54.0	254.0	5.48	211	991	537	207	97
Totals				82	87	114.731	200.28	209.58	31.1	130.5	185.45	6514	27,353	18,174	6,384	2,681

FI TLOGSTVB

Log Stock Table - MBF

Project: 123STONE

T01S R08W S13 TSALE

T01S R08W S13 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01S	08W	13	GROWA2	SALE	98.00	37	102

Page 1
Date 6/28/2019
Time 6:55:54AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	2	24	19	13.1	17	.9										17		
DF		CO	2	32	190	.7	189	10.6						19	17	21	82	50		
DF		CO	2	40	893	1.5	880	49.6						98	215	267	240	60		
DF		CO	3	20	9		9	.5								9				
DF		CO	3	23	4		4	.2				2	2							
DF		CO	3	28	6		6	.4				6								
DF		CO	3	30	18		18	1.0				9			8					
DF		CO	3	31	2		2	.1				2								
DF		CO	3	32	43	1.6	43	2.4				35	8							
DF		CO	3	33	4		4	.3			2	2								
DF		CO	3	35	3		3	.2				3								
DF		CO	3	36	3		3	.2			3									
DF		CO	3	39	6		6	.3				6								
DF		CO	3	40	393	.5	391	22.0			74	115	154	12	36					
DF		CO	4	13	1		1	.0		1										
DF		CO	4	16	1		1	.1		1										
DF		CO	4	17	2		2	.1		2										
DF		CO	4	18	13		13	.7		10	3									
DF		CO	4	19	6		6	.3		5		2								
DF		CO	4	20	2		2	.1				2								
DF		CO	4	21	2		2	.1		2										
DF		CO	4	22	6		6	.4		6										
DF		CO	4	23	10		10	.6		9		1								
DF		CO	4	25	17		17	1.0		17										
DF		CO	4	28	13		13	.8		13										
DF		CO	4	29	6		6	.3		6										
DF		CO	4	30	23		23	1.3		21	2									
DF		CO	4	32	5		5	.3		5										
DF		CO	4	35	18		18	1.0		18										
DF		CO	4	37	6		6	.4		6										
DF		CO	4	39	4		4	.3		4										
DF		CO	4	40	64		64	3.6		25	39									
DF		Totals			1,795	1.1	1,775	66.2		151	124	186	164	129	277	296	322	127		
RA		*	*	32	37		37	6.2			37									
RA		H	2	14	6		6	1.0						6						
RA		H	2	16	39		39	6.7						16			23			
RA		H	2	18	16	6.2	15	2.6							15					
RA		H	2	28	53		53	9.0						25	28					
RA		H	2	38	26		26	4.5						26						
RA		H	3	18	32		32	5.5					18	14						
RA		H	3	20	20		20	3.4						20						
RA		H	3	30	23		23	3.9							23					
RA		H	3	32	52		52	8.9					52							
RA		H	3	38	28		28	4.8					28							
RA		H	3	40	56		56	9.6					56							
RA		H	4	14	6		6	1.0			6									
RA		H	4	15	7		7	1.2			7									
RA		H	4	16	22	10.5	20	3.3			13	7								
RA		H	4	17	4		4	.7			4									
RA		H	4	19	9		9	1.6			1	8								

FI TLOGSTVB

Log Stock Table - MBF

Project: 123STONE

T01S R08W S13 TSALE

T01S R08W S13 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01S	08W	13	GROWA2	SALE	98.00	37	102

Page 2
Date 6/28/2019
Time 6:55:54AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
RA		H	4	20	2		2	.3			2									
RA		H	4	21	4		4	.7			4									
RA		H	4	22	9		9	1.5			9									
RA		H	4	24	5		5	.8			5									
RA		H	4	25	16		16	2.8			7	9								
RA		H	4	26	7		7	1.3			7									
RA		H	4	28	5		5	.8				5								
RA		H	4	30	22	9.1	20	3.4					20							
RA		H	4	32	15		15	2.6			3	13								
RA		H	4	33	4		4	.7			4									
RA		H	4	36	33		33	5.5			33									
RA		H	4	38	17	39.4	11	1.8			11									
RA		H	4	39	5		5	.9			5									
RA		H	4	40	18		18	3.1				18								
RA		Totals			601	2.0	588	21.9			157	60	175	107	66		23			
WH		CO	2	22	13		13	6.0								13				
WH		CO	2	40	148	.7	147	66.6							23	45	20	59		
WH		CO	3	22	1		1	.4				1								
WH		CO	3	30	11		11	4.9						5		5				
WH		CO	3	32	10		10	4.6				10								
WH		CO	3	36	10		10	4.4			2		7							
WH		CO	3	40	21		21	9.6					10		12					
WH		CO	4	13	2		2	.7						2						
WH		CO	4	14	1		1	.3				1								
WH		CO	4	15	1		1	.7		1		0								
WH		CO	4	23	2		2	1.0		2										
WH		CO	4	25	2		2	.9		2										
WH		Totals			221		220	8.2		5	2	12	18	5	35	63	20	59		
SS		*	*	32	35		35	35.9			35									
SS		CO	2	12	21		21	21.6									21			
SS		CO	3	18	16		16	16.7									16			
SS		CO	4	18	1		1	1.5					1							
SS		CO	4	23	10		10	10.1								10				
SS		CO	4	24	1		1	1.3			1									
SS		CO	4	32	15	14.8	13	12.9									13			
SS		Totals			99	2.2	97	3.6			36		1			10	50			
Total All Species					2,716	1.3	2,681	100.0		156	319	257	359	242	378	369	414	186		

FI TSTNDSUM

Stand Table Summary

Project **123STONE**

T01S R08W S24 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01S	08W	24	GROWA3	SALE	97.00	30	82

T01S R08W S24 TSALE

Page: 1
Date: 06/28/201
Time: 6:54:15AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
RA		9		84	42	9.710	4.26	9.79	5.9	27.3	1.59	58	267	154	56	26
RA		10		81	32	7.416	4.26	7.48	7.4	27.0	1.52	55	202	148	54	20
RA		11		77	37	12.557	8.52	12.66	10.1	30.0	3.51	128	379	341	124	37
RA		12		82	59	18.026	14.92	18.18	18.0	57.0	9.00	327	1,036	873	317	100
RA		13		82	58	17.554	17.05	19.91	19.1	57.5	10.44	380	1,145	1,013	368	111
RA		14		82	58	13.386	14.92	15.41	22.1	61.9	9.38	341	954	910	331	93
RA		15		79	64	8.240	10.65	9.97	27.5	75.5	7.55	275	753	732	266	73
RA		16		81	67	5.794	8.52	8.76	27.9	77.3	6.72	245	677	652	237	66
RA		17		78	77	5.132	8.52	10.35	25.5	79.5	7.27	264	823	705	256	80
RA		18		82	85	3.434	6.39	6.92	32.0	102.4	6.09	221	709	590	215	69
RA		20		78	68	2.054	4.26	4.14	28.8	75.5	3.29	119	313	319	116	30
RA		22		89	51	.841	2.13	.85	53.1	97.0	1.24	45	82	120	44	8
RA		24		87	77	1.402	4.26	2.83	49.0	177.9	3.81	139	503	370	134	49
RA		26		86	71	.593	2.13	1.20	52.6	161.7	1.73	63	194	168	61	19
RA		27		74	79	.549	2.13	1.11	67.7	172.5	2.06	75	191	200	73	19
RA		Totals		81	56	106.690	112.93	129.56	21.1	63.5	75.20	2,734	8,227	7,294	2,652	798
DF		10		82	50	6.219	3.52	6.32	8.7	36.8	1.57	55	233	152	53	23
DF		13		45	92	1.840	1.76	1.87	28.6	42.1	1.53	54	79	148	52	8
DF		14		82	78	1.586	1.76	3.23	16.6	57.9	1.53	54	187	148	52	18
DF		17		83	86	1.076	1.76	2.19	26.6	94.7	1.66	58	207	161	57	20
DF		18		84	91	1.975	3.52	4.02	29.4	105.0	3.37	118	422	327	115	41
DF		19		92	110	.861	1.76	2.63	26.9	108.8	2.01	71	286	195	69	28
DF		20		75	106	2.332	5.29	4.74	39.6	115.8	5.36	188	549	520	182	53
DF		21		81	107	2.115	5.29	4.30	46.5	156.1	5.70	200	672	553	194	65
DF		22		81	103	3.915	10.57	7.96	49.2	164.4	11.17	392	1,309	1,084	380	127
DF		24		86	110	.540	1.76	1.10	62.6	257.9	1.96	69	283	190	67	27
DF		27		85	124	.920	3.52	2.81	54.6	233.3	4.37	153	655	423	149	64
DF		28		84	112	.838	3.52	2.12	66.7	274.1	4.03	141	581	391	137	56
DF		30		80	113	.703	3.52	2.14	64.9	249.2	3.97	139	534	385	135	52
DF		34		80	120	.286	1.76	.87	86.4	361.4	2.14	75	315	208	73	31
DF		Totals		79	88	25.206	49.35	46.30	38.2	136.3	50.36	1,767	6,311	4,885	1,714	612
SS		10		78	17	3.966	2.30	4.03	5.7	21.5	.60	23	87	58	22	8
SS		Totals		78	17	3.966	2.30	4.03	5.7	21.5	0.60	23	87	58	22	8
Totals				81	61	135.862	164.57	179.89	25.2	81.3	126.15	4524	14,625	12,237	4,389	1,419

FI TLOGSTVB

Log Stock Table - MBF

Project: 123STONE

T01S R08W S24 TSALE

T01S R08W S24 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01S	08W	24	GROWA3	SALE	97.00	30	82

Page 1
Date 6/28/2019
Time 6:54:15AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
RA		H	2	40	87	2.1	85	10.6						41		44				
RA		H	3	40	82	3.3	79	9.9						62		17				
RA		H	4	12	4		4	.5			4									
RA		H	4	14	10		10	1.2			10									
RA		H	4	15	1		1	.2				1								
RA		H	4	17	25		25	3.1			25									
RA		H	4	18	20		20	2.5			20									
RA		H	4	19	2		2	.3			2									
RA		H	4	20	12		12	1.5					12							
RA		H	4	21	12		12	1.5			12									
RA		H	4	22	5		5	.7			5									
RA		H	4	23	16		16	2.0			16									
RA		H	4	24	23		23	2.8			23									
RA		H	4	25	2		2	.2			2									
RA		H	4	26	4		4	.5			4									
RA		H	4	29	3		3	.4			3									
RA		H	4	30	14		14	1.8			14									
RA		H	4	31	11		11	1.4			11									
RA		H	4	32	35		35	4.4			20		15							
RA		H	4	33	39		39	4.9			39									
RA		H	4	34	34	5.8	32	4.0			32									
RA		H	4	35	23		23	2.9			23									
RA		H	4	37	28		28	3.5			28									
RA		H	4	38	28		28	3.5			28									
RA		H	4	39	12	16.7	10	1.3			10									
RA		H	4	40	277	.4	276	34.6			81	195								
RA		Totals			808	1.2	798	56.3			410	197	90	41	61					
DF		CO	2	40	219	.4	218	35.6						92	60	66				
DF		CO	3	32	6		6	1.0				6								
DF		CO	3	40	252	1.9	248	40.5			27	21	60	36		81	23			
DF		CO	4	12	1		1	.1			1									
DF		CO	4	13	1		1	.1				1								
DF		CO	4	15	8		8	1.2		8										
DF		CO	4	16	2		2	.3		1		1								
DF		CO	4	24	10		10	1.6		10										
DF		CO	4	26	5		5	.9		3	2									
DF		CO	4	27	3		3	.5		3										
DF		CO	4	32	8		8	1.3		2				6						
DF		CO	4	34	17		17	2.8		17										
DF		CO	4	36	8		8	1.2		8										
DF		CO	4	40	81	3.2	79	12.8		3	15	10	24	7	19					
DF		Totals			620	1.3	612	43.2		54	45	39	85	141	79	148	23			
SS		CO	4	12	8		8	100.0				8								
SS		Totals			8		8	.6				8								
Total All Species					1,437	1.3	1,419	100.0		54	455	244	174	181	140	148	23			

FI TSTNDSUM

Stand Table Summary

Project **123STONE**

T01S R07W S19 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01S	07W	19	GROWA4	SALE	108.00	25	78

T01S R07W S19 TSALE

Date: 06/28/201

Time: 6:51:46AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		8		94	43	6.883	2.47	7.05	5.1	32.0	1.01	36	225	110	38	24
DF		9		86	84	10.877	4.95	11.14	10.6	42.6	3.38	118	475	365	128	51
DF		10		81	82	4.405	2.47	4.51	14.2	42.6	1.83	64	192	197	69	21
DF		11		88	90	3.641	2.47	7.46	10.1	48.0	2.14	75	358	231	81	39
DF		13		90	102	5.213	4.95	10.68	15.0	66.6	4.57	161	711	494	173	77
DF		15		85	105	13.706	17.31	28.07	22.6	87.6	18.07	634	2,458	1,951	685	265
DF		16		78	97	6.883	9.89	10.57	25.6	94.2	7.70	270	995	832	292	108
DF		17		86	105	12.195	19.78	29.65	25.0	97.6	21.12	741	2,895	2,281	800	313
DF		18		86	113	4.079	7.42	11.14	26.5	107.9	8.40	295	1,202	907	318	130
DF		19		83	100	1.220	2.47	2.50	37.8	127.9	2.70	95	320	291	102	35
DF		20		82	103	3.304	7.42	7.89	34.6	114.2	7.78	273	902	840	295	97
DF		21		87	99	.999	2.47	2.05	43.4	159.9	2.53	89	327	273	96	35
DF		22		83	106	3.641	9.89	9.32	40.7	152.4	10.82	380	1,421	1,169	410	153
DF		23		85	97	1.666	4.95	4.26	41.9	149.2	5.09	179	636	549	193	69
DF		24		84	109	2.294	7.42	5.48	49.8	204.1	7.77	273	1,119	840	295	121
DF		25		83	125	.705	2.47	2.17	49.5	202.5	3.05	107	439	330	116	47
DF		26		83	127	.652	2.47	2.00	55.6	238.1	3.17	111	477	343	120	51
DF		31		83	115	.917	4.95	2.82	70.9	326.9	5.69	200	921	614	216	99
DF		32		84	117	.430	2.47	1.32	80.5	316.3	3.03	106	418	327	115	45
DF		Totals		85	95	83.711	118.70	160.06	26.3	103.0	119.86	4,206	16,489	12,945	4,542	1,781
RA		11		69	64	10.822	7.43	3.65	8.2	21.7	.83	30	79	89	32	9
RA		12		81	87	9.094	7.43	18.40	11.0	41.6	5.57	202	765	601	219	83
RA		13		66	89	2.583	2.48	2.61	16.6	54.3	1.19	43	142	129	47	15
RA		14		83	62	2.227	2.48	2.25	28.1	76.0	1.74	63	171	188	68	18
RA		16		68	61	5.115	7.43	3.45	18.1	43.4	1.72	63	150	186	68	16
RA		17		89	77	1.510	2.48	3.06	26.6	103.1	2.24	81	315	241	88	34
RA		18		83	71	2.694	4.95	5.45	22.4	89.5	3.36	122	488	363	132	53
RA		19		86	74	2.418	4.95	4.89	29.7	119.4	4.00	145	584	432	157	63
RA		20		75	53	1.091	2.48	1.10	12.4	32.6	.38	14	36	41	15	4
RA		21		73	84	.990	2.48	2.00	36.5	103.1	2.01	73	206	217	79	22
RA		22		89	64	.902	2.48	1.82	35.9	135.6	1.80	66	248	195	71	27
RA		23		73	69	.825	2.48	1.67	42.9	119.4	1.97	72	199	213	77	22
RA		25		91	72	1.397	4.95	2.83	54.1	230.6	4.21	153	652	454	165	70
RA		27		50	93	.646	2.48	1.31	18.7	76.0	.67	24	99	72	26	11
RA		28		89	66	.599	2.48	1.21	57.7	195.3	1.92	70	237	208	75	26
RA		40		50	70	.287	2.48	.58	34.8	97.7	.56	20	57	60	22	6
RA		Totals		76	72	43.201	61.91	56.29	22.1	78.7	34.16	1,242	4,428	3,689	1,341	478
BM		9		87	35	6.590	3.03	6.67	5.5	21.7	.96	36	145	104	39	16
BM		10		82	72	10.675	6.06	10.80	13.3	59.7	3.80	143	645	410	155	70
BM		15		86	64	2.372	3.03	2.40	29.9	108.5	1.90	72	260	205	77	28
BM		Totals		84	59	19.637	12.11	19.87	12.6	52.8	6.66	251	1,050	719	271	113
WH		26		90	90	.378	1.36	.77	67.2	275.8	1.66	52	213	179	56	23
WH		Totals		90	90	.378	1.36	.77	67.2	275.8	1.66	52	213	179	56	23
Totals				82	84	146.927	194.08	236.99	24.3	93.6	162.33	5751	22,181	17,532	6,211	2,395

FI TLOGSTVB

Log Stock Table - MBF

Project: 123STONE

T01S R07W S19 TSALE

T01S R07W S19 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01S	07W	19	GROWA4	SALE	108.00	25	78

Page 1
Date 6/28/2019
Time 6:51:45AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	2	22	12		12	.7								12				
DF		CO	2	32	118		118	6.6						85			33			
DF		CO	2	36	65		65	3.6						65						
DF		CO	2	40	512	1.3	506	28.4						181	184	69	72			
DF		CO	3	24	11		11	.6						11						
DF		CO	3	28	7		7	.4				7								
DF		CO	3	32	22		22	1.2				22								
DF		CO	3	36	8		8	.4			8									
DF		CO	3	38	7		7	.4			7									
DF		CO	3	40	624	1.7	613	34.4				251	294	38	30					
DF		CO	4	12	2		2	.1		2										
DF		CO	4	14	5		5	.3		2		4								
DF		CO	4	15	21		21	1.2		20	1									
DF		CO	4	19	4		4	.2		4										
DF		CO	4	20	10		10	.6		3			7							
DF		CO	4	21	2		2	.1		2										
DF		CO	4	22	14		14	.8		5		9								
DF		CO	4	24	31		31	1.8		31										
DF		CO	4	25	4		4	.3		2	2									
DF		CO	4	26	2		2	.1			2									
DF		CO	4	28	17		17	.9		4			13							
DF		CO	4	29	3		3	.2		3										
DF		CO	4	31	7		7	.4		7										
DF		CO	4	33	8		8	.5		8										
DF		CO	4	34	14		14	.8		14										
DF		CO	4	35	9		9	.5		9										
DF		CO	4	36	8		8	.5		8										
DF		CO	4	37	42		42	2.4		42										
DF		CO	4	38	10		10	.5		10										
DF		CO	4	39	7		7	.4		7										
DF		CO	4	40	182		182	10.2		106	76									
DF		CO	4	41	10		10	.5		10										
DF		Totals			1,798		1,781	74.3		299	96	293	314	379	214	80	105			
RA		H	2	18	14		14	3.0						14						
RA		H	2	24	59		59	12.3						24			35			
RA		H	2	26	33		33	6.9							33					
RA		H	2	30	18		18	3.7						18						
RA		H	2	32	43		43	9.0						19	25					
RA		H	2	40	55	2.6	54	11.3							54					
RA		H	3	30	8		8	1.8					8							
RA		H	3	32	54		54	11.3					20	34						
RA		H	4	14	9		9	1.8			9									
RA		H	4	15	1		1	.1			1									
RA		H	4	16	1		1	.3			1									
RA		H	4	18	2		2	.3			2									
RA		H	4	19	7		7	1.5			7									
RA		H	4	20	6		6	1.3			6									
RA		H	4	21	9		9	1.8			9									
RA		H	4	22	42		42	8.9			14	29								
RA		H	4	23	11		11	2.3			11									

FI TLOGSTVB

Log Stock Table - MBF

Project: 123STONE

T01S R07W S19 TSALE

T01S R07W S19 TSALE

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
01S	07W	19	GROWA4	SALE	108.00	25	78

Page 2
Date 6/28/2019
Time 6:51:45AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches: 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
RA		H	4	24	7		7	1.4			7									
RA		H	4	26	5		5	1.1			5									
RA		H	4	29	10		10	2.2			10									
RA		H	4	30	15		15	3.2			15									
RA		H	4	32	25		25	5.3				25								
RA		H	4	35	4		4	.9			4									
RA		H	4	36	10		10	2.0			10									
RA		H	4	38	12		12	2.5			12									
RA		H	4	40	18		18	3.9			18									
RA		Totals			480		478	20.0			141	54	28	109	112		35			
BM		H	4	19	16		16	13.8			16									
BM		H	4	32	32		32	27.9			32									
BM		H	4	34	28		28	24.8				28								
BM		H	4	36	38		38	33.5			38									
BM		Totals			113		113	4.7			85	28								
WH		CO	2	40	21		21	92.0								21				
WH		CO	4	36	2		2	8.0		2										
WH		Totals			23		23	1.0		2						21				
Total All Species					2,414		2,395	100.0		301	322	375	343	488	326	102	140			

"STEWARDSHIP IN FORESTRY"

Stones Throw

Volume Summary

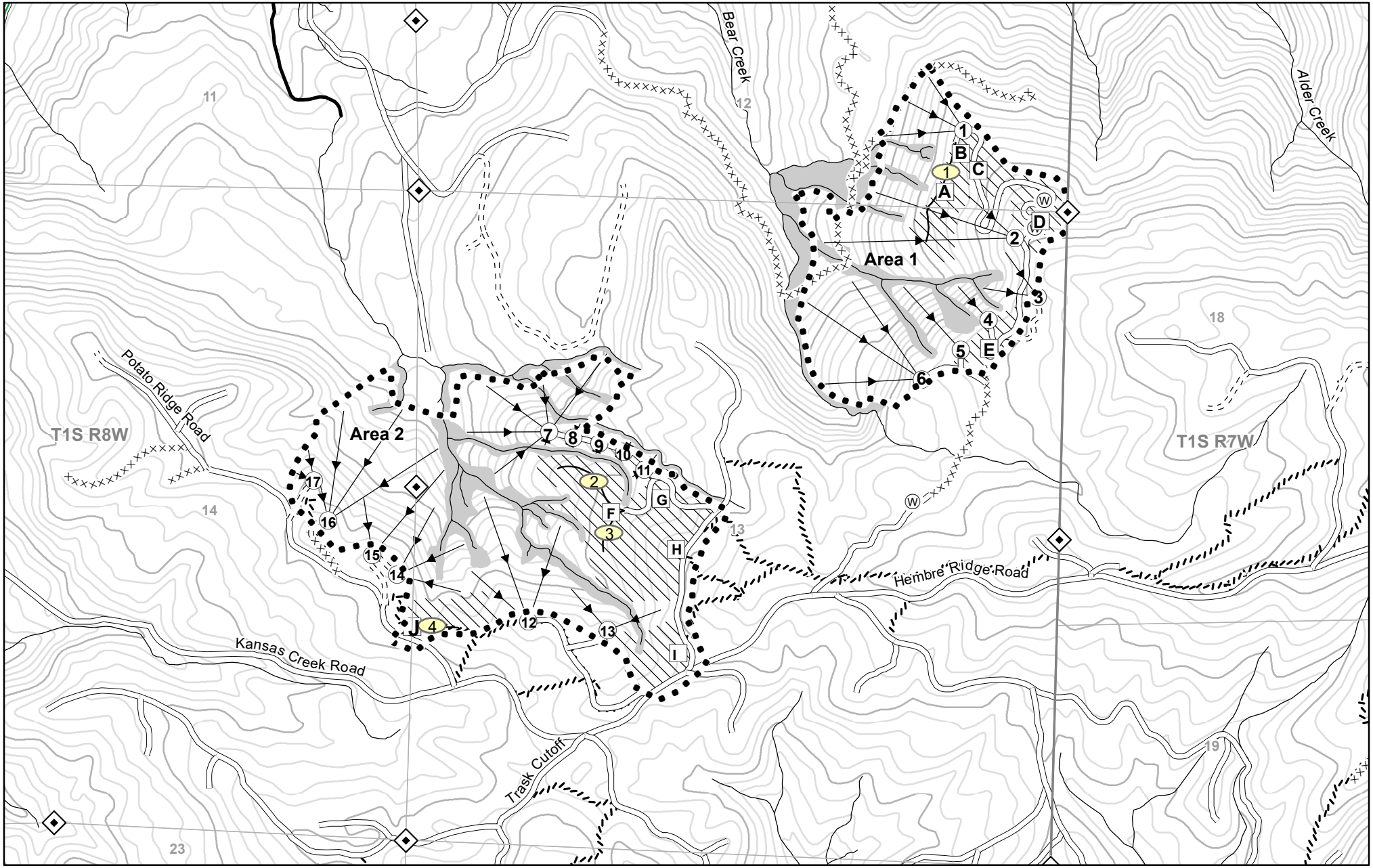
Area 1-Harvest Type				
		65 acres		
	Cruised Net	Cruised Net	Hidden	Net Sale
SPECIES	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	10	674	1%	668
Maple		0	2%	0
Spruce		0	1%	0
Western Hemlock	0	16	1%	16
Alder	10	661	2%	648
TOTAL	20.79	1351		1331

Areas 2-Harvest Type				
		98 acres		
	Cruised Net	Cruised Net	Hidden	Net Sale
SPECIES	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	18	1775	1%	1757
Maple		0	2%	0
Spruce	1	97	1%	96
Western Hemlock	2	220	1%	218
Alder	6	588	2%	577
TOTAL	27.35	2681		2648

Areas 3-Harvest Type				
		97 acres		
	Cruised Net	Cruised Net	Hidden	Net Sale
SPECIES	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	6	612	1%	606
Maple		0	2%	0
Spruce	0.1	8	1%	8
Western Hemlock		0	1%	0
Alder	8	798	2%	782
TOTAL	14.62	1418		1396

Areas 4-Harvest Type				
		108 acres		
	Cruised Net	Cruised Net	Hidden	Net Sale
SPECIES	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	16.5	1781	1%	1763
Maple	1.1	113	2%	111
Spruce		0	1%	0
Western Hemlock	0.2	23	1%	23
Alder	4.4	478	2%	469
TOTAL	22.2	2395		2366

TOTAL SALE VOLUME	368 acres	
SPECIES	Cruised Net (MBF)	Net Sale (MBF)
Douglas-fir	4842	4794
Big Leaf Maple	113	111
Spruce	105	104
Western Hemlock	259	257
Red Alder	2526	2476
TOTAL	7845	7742



Rock source
Stock pile
Waste area
Bridge
Gate
Survey corner
Helicopter landing zone
Domestic Water Intake

Buffer
Cable yarding
Ground yarding
Cable corridor
Ground Landing
Yarder Landing

Sale boundary
Ownership boundary
Fish stream
Non-fish stream
Unsurfaced road
Surfaced road
Paved road
Abandoned road

Non-project road
Blocked road
OHV trail
200' Contour
40' Contour

LOGGING PLAN

Timber Sale Contract No.
TL-341-2020-W00754-01
STONES THROW

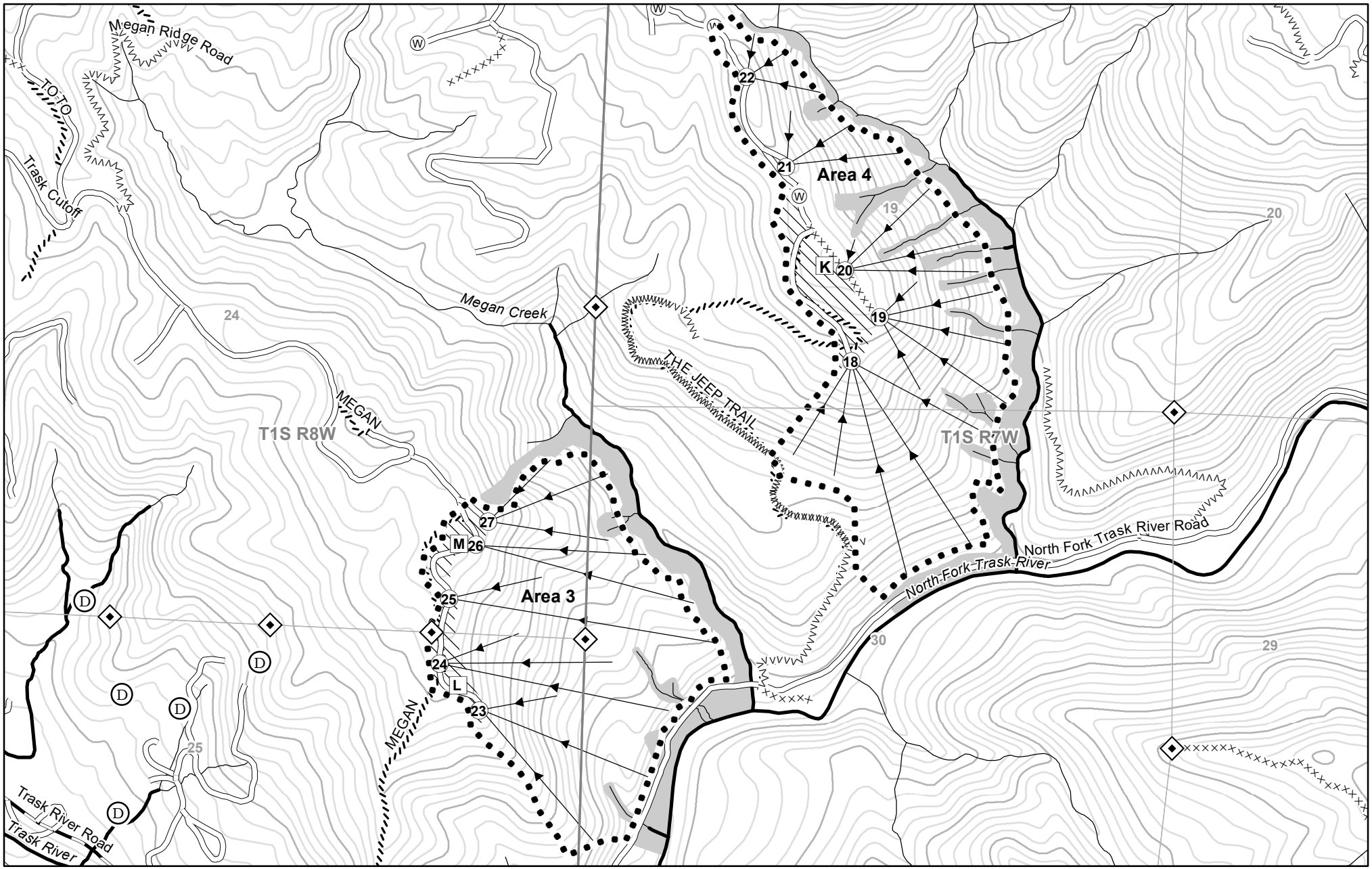
Portions of Sections
12, 13, 14, 24, 25 of T1S R8W,
& Sections 19, 30 of T1S R7W,
W.M. Tillamook County, Oregon

N

1,000 0 1,000 Feet

Area	Type of Operation	Acres Gross	Net
1	Modified Clearcut	83	65
2	Modified Clearcut	120	98
3	Modified Clearcut	118	97
4	Modified Clearcut	140	108
Total		461	368

Tillamook District GIS
07/17/2019
This product is for informational use and may not have been prepared or suitable for legal, engineering, or surveying purposes.



Rock source
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Survey corner
Helicopter landing zone
Domestic Water Intake

Buffer
Seasonal Restriction Area
Cable yarding
Ground yarding
Cable corridor
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