



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Cost Summary Clamson Sale 341-06-45

District: Tillamook

Date: 4/14/06

|                                    | Conifer      | Hardwood                | Total          |
|------------------------------------|--------------|-------------------------|----------------|
| <b>Gross Timber<br/>Sale Value</b> | \$613,765.40 | \$475,745.00            | \$1,089,510.40 |
|                                    |              | <b>Project Work</b>     | (\$192,353.00) |
|                                    |              | <b>Advertised Value</b> | \$897,157.40   |



# Timber Sale Appraisal Timber Description Clamson Sale 341-06-45

"STEWARDSHIP IN FORESTRY"

**District:** Tillamook

**Location:** Portions of Sections 1, 2 and 12, T2N, R9W, and portions of Sections 6 and 7, T2N, R8W, W.M., Tillamook County, Oregon.

**Date:** 4/14/06

**Stand Stocking:** 40%

| Species               | Avg. DBH | Amortized% | Recovery% |
|-----------------------|----------|------------|-----------|
| Douglas - Fir         | 14       | 0          | 95        |
| Western Hemlock / Fir | 12       | 0          | 95        |
| Alder (Red)           | 14       | 0          | 95        |

| Volume by Grade | Douglas - Fir | Western Hemlock / Fir | Alder (Red)  | Total        |
|-----------------|---------------|-----------------------|--------------|--------------|
| 2S              | 0             | 18                    | 0            | 18           |
| 3S              | 1,551         | 212                   | 0            | 1,763        |
| 3S 10" - 11"    | 0             | 0                     | 381          | 381          |
| 3S 12"+         | 0             | 0                     | 185          | 185          |
| 4S              | 589           | 110                   | 0            | 699          |
| 4S 8" - 9"      | 0             | 0                     | 1,134        | 1,134        |
| <b>Total</b>    | <b>2,140</b>  | <b>340</b>            | <b>1,700</b> | <b>4,180</b> |

**Comments:** Pond Values Used: 1st Quarter Calendar Year 2006.

Hauling costs adjusted to make equivalent to \$610 daily truck cost w/o P&R (P&R to be added).

Western Red Cedar Stumpage = Pond Value minus logging cost.  
 $\$656.65/\text{MBF} = \$985/\text{MBF} - \$328.35/\text{MBF}$

Alder Stumpage - 12"+ was graded as 3S because of short lengths and defect

Other Costs (Profit and Risk to be added):

Brand and Paint-  $\$2/\text{MBF} \times 4,180 \text{ MBF} = \$ 10,094$   
Slash piling and sorting: 315 acres clearcut cable harvest  
1 hour/ 50 acres x  $\$110/\text{hour} = \$ 693$   
Non-Project Road #1 - Swing Road -  $\$31.77/\text{MBF} \times 398 \text{ MBF} = \$12,644$

TOTAL Other Costs (Profit & Risk to be added): \$23,431

Other Costs (No Profit and Risk):

Non-Project Roads - (Seeding included):  
Non-Project Roads #1      10.5 Stations x  $\$160.00 = \$1,680$   
Non-Project Roads #2      5 Stations x  $\$160.00 = \$800$   
Non-Project Roads #3      5.5 Stations x  $\$100.00 = \$550$   
Road Vacation              36 Stations x  $\$176.42 = \$ 6,315$

Other:  
Approach Rock Pit Run      2 Stations x 50 cyds x  $\$7.00 = \$700$   
Landing Rock Pit Run      20 landings x 20 cyds x  $\$7.00/\text{cyd} = \$1,400$

TOTAL ADDITIONAL COSTS: \$ 11,445

ROAD MAINTENANCE:

Grading -2 times  
Maintenance  $\$500/\text{Mile} \times 6.5 \text{ miles} \times 2 \text{ gradings} / (4180) = \$1.56$

Reprocess w/final maintenance  
 $\$17.75 \text{ per Sta.} \times 343 \text{Sta.} / (4180) = \$1.46$

Maintenance rock (Includes move in)  
 $(\$7.00/\text{yard} \times 6.5 \text{ miles} \times 15 \text{ cy}/\text{MMBF}/\text{mile} \times 4\text{MMBF})/4180 = \$0.65$

TOTAL MAINTENANCE COST                      = \$3.67



# Timber Sale Appraisal

## Logging Conditions

### Clamson

### Sale 341-06-45

"STEWARDSHIP IN FORESTRY"

|                          |   |        |   |
|--------------------------|---|--------|---|
| <b>Combination#: 1</b>   | Douglas - Fir   | 77.46% |   |
|                          | Western Hemlock / Fir   | 67.45% |   |
|                          | Alder (Red)   | 74.40% |   |
| <b>Yarding Distance:</b> | Long (1,500 ft)   |        | <b>Downhill Yarding:</b> No               |
| <b>Logging System:</b>   | Cable: Large Tower >=70   |        | <b>Process:</b> Manual Delimiting         |
| <b>Tree Size:</b>        | Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF |        |   |
| <b>Loads/Day:</b>        | 4   |        | <b>Bd. Ft./Load:</b> 3,400                |
| <b>Cost/MBF:</b>         | \$232.03  |        |   |
| <b>Machines:</b>         |   |        |   |
|                          | Log Loader (A)  |        |   |
|                          | Tower Yarder (Large)  |        |   |
| <b>Combination#: 2</b>   | Douglas - Fir   | 22.54% |   |
|                          | Western Hemlock / Fir   | 32.55% |   |
|                          | Alder (Red)   | 25.60% |   |
| <b>Yarding Distance:</b> | Medium (800 ft)   |        | <b>Downhill Yarding:</b> Yes              |
| <b>Logging System:</b>   | Track Skidder   |        | <b>Process:</b> Manual Falling/Delimiting |
| <b>Tree Size:</b>        | Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF            |        |   |
| <b>Loads/Day:</b>        | 6   |        | <b>Bd. Ft./Load:</b> 3,400                |
| <b>Cost/MBF:</b>         | \$147.76  |        |   |
| <b>Machines:</b>         |   |        |   |
|                          | Log Loader (B)  |        |   |
|                          | Track Skidder   |        |   |



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal

## Logging Costs

### Clamson

### Sale 341-06-45

Date: 4/14/06

Operating Seasons: 1.6

Profit & Risk: 15%

Project Costs: \$192,353

Other Costs (P/R): \$23,431

Slash Disposal: \$0

Other Costs: \$11,445

| Miles of Road |                      |                 |       |
|---------------|----------------------|-----------------|-------|
| Dirt          | Rock<br>(Contractor) | Rock<br>(State) | Paved |
| 0.0           | 0.0                  | 0.0             | 0.0   |

Road Maintenance: \$3.67

#### Hauling Costs

| Species               | \$/MBF  | Trips/Day | MBF/Load |
|-----------------------|---------|-----------|----------|
| Douglas - Fir         | \$85.25 | 2.0       | 3.4      |
| Western Hemlock / Fir | \$60.35 | 3.0       | 3.2      |
| Alder (Red)           | \$64.40 | 3.0       | 3.0      |



# Timber Sale Appraisal Logging Costs Breakdown Clamson Sale 341-06-45

"STEWARDSHIP IN FORESTRY"

| Costs                    | Douglas - Fir | Western Hemlock / Fir | Alder (Red) |
|--------------------------|---------------|-----------------------|-------------|
| <b>Logging</b>           | 213.03        | 204.60                | 210.45      |
| <b>Road Maintenance</b>  | 3.86          | 3.86                  | 3.86        |
| <b>Fire Protection</b>   | 1.04          | 1.04                  | 1.04        |
| <b>Hauling</b>           | 89.74         | 63.53                 | 67.79       |
| <b>Other (P/R appl.)</b> | 5.61          | 5.61                  | 5.61        |
| <b>Profit &amp; Risk</b> | 46.99         | 41.80                 | 43.31       |
| <b>Slash Disposal</b>    | 0.00          | 0.00                  | 0.00        |
| <b>Scaling</b>           | 2.00          | 2.00                  | 0.00        |
| <b>Other</b>             | 2.74          | 2.74                  | 2.74        |
| <b>Total</b>             | 365.01        | 325.18                | 334.80      |

|                     |        |        |        |
|---------------------|--------|--------|--------|
| <b>Amortization</b> | 0.00   | 0.00   | 0.00   |
| <b>Pond Value</b>   | 638.99 | 405.91 | 614.65 |
| <b>Stumpage</b>     | 273.98 | 80.73  | 279.85 |
| <b>Amortized</b>    | 0.00   | 0.00   | 0.00   |



"STEWARDSHIP IN FORESTRY"

# Timber Sale Appraisal Summary Clamson Sale 341-06-45

**Amortized**

|       | Douglas - Fir | Westem<br>Hemlock / Fir | Alder (Red) |
|-------|---------------|-------------------------|-------------|
| MBF   | 0.00          | 0.00                    | 0.00        |
| Value | 0.00          | 0.00                    | 0.00        |
| Total | 0.00          | 0.00                    | 0.00        |

**Unamortized**

|       | Douglas - Fir | Westem<br>Hemlock / Fir | Alder (Red) |
|-------|---------------|-------------------------|-------------|
| MBF   | 2,140.00      | 340.00                  | 1,700.00    |
| Value | 273.98        | 80.73                   | 279.85      |
| Total | 586,317.20    | 27,448.20               | 475,745.00  |

**Gross Timber Sale Value**

**Recovery \$1,089,510.40**

Prepared by: Colleen Kiser

Date: 4/14/06

District: Tillamook

Phone: (503) 842-2545



## PROJECT SUMMARY SHEET

Sale: Clamson

### CONSTRUCTION

|                              |        |      |            |                    |
|------------------------------|--------|------|------------|--------------------|
| Point                        | C to D | 3+70 | stations = | \$8,436.01         |
| Point                        | I to J | 5+15 | stations = | \$6,344.63         |
| Point                        | K to L | 3+50 | stations = | \$3,432.76         |
| <b>SUBTOTAL CONSTRUCTION</b> |        |      |            | <b>\$18,213.40</b> |

### IMPROVEMENT

|                             |        |       |            |                    |
|-----------------------------|--------|-------|------------|--------------------|
| Point                       | E to F | 13+60 | stations = | \$12,374.96        |
| Point                       | G to H | 1+75  | stations = | \$2,971.62         |
| Point                       | I to J | 2+85  | stations = | \$3,511.10         |
| <b>SUBTOTAL IMPROVEMENT</b> |        |       |            | <b>\$18,857.68</b> |

### RECONSTRUCTION

|                             |        |        |            |                     |
|-----------------------------|--------|--------|------------|---------------------|
| Point                       | A to B | 118+50 | stations = | \$132,777.76        |
| Point                       | C to D | 8+25   | stations = | \$18,810.03         |
| <b>SUBTOTAL IMPROVEMENT</b> |        |        |            | <b>\$151,587.79</b> |

### MOVE IN

**\$3,694.16**

**GRAND TOTAL**

**\$192,353.03**



**SUMMARY OF CONSTRUCTION COST**

|                  |                             |                  |                               |
|------------------|-----------------------------|------------------|-------------------------------|
| Sale:            | <u>Clamson</u>              | Road:            | <u>A to B</u>                 |
| Reconstruction - | 0+00 stations<br>0.00 miles | Reconstruction - | 118+50 stations<br>2.24 miles |

|  |   |            |            |   |                                 |
|--|---|------------|------------|---|---------------------------------|
| CLEARING AND GRUBBING -  |   |            |            |   |                                 |
| Side cast  |   | 0.115      | acres @    | \$660.00  | per acre = \$75.90              |
| Scattering   |   | 5.030      | acres @    | \$980.00  | per acre = \$4,929.40           |
| Endhaul  |   | 0.860      | acres @    | \$1,500.00  | per acre = \$1,290.00           |
|  |   |            |            | <b>TOTAL CLEARING AND GRUBBING</b>                              |                                 |
|  |   |            |            |   | <b>\$6,295.30</b>               |
| EXCAVATION -   |   |            |            |   |                                 |
| Road Earthwork   |   | 109.65     | sta. @     | \$90.00   | per sta. = \$9,868.50           |
| Pullback   |   | 1540       | cy. @      | \$1.40  | per c.y. = \$2,156.00           |
| Loq Fill Removal (Crossing #1)   |   | 858        | cy. @      | \$1.28  | per c.y. = \$1,098.24           |
| Removal Of Loqs  |   | 6          | Hours @    | \$145.00  | per Hour = \$870.00             |
| Loq Fill Removal (Crossing #2)   |   | 1627       | cy. @      | \$1.28  | per c.y. = \$2,082.56           |
| Removal Of Loqs  |   | 4          | Hours @    | \$145.00  | per Hour = \$580.00             |
| Loq Stringer Removal (Crossing #3)   |   | 290        | cy. @      | \$1.28  | per c.y. = \$371.20             |
| Removal Of Loqs  |   | 6          | Hours @    | \$145.00  | per Hour = \$870.00             |
| Remove Buried Loqs in Subgrade (Sta. 31+35 & 32+65).   |   | 1.0        | Hours @    | \$145.00  | per Hour = \$145.00             |
| Remove Debris in Road (Sta. 113+25 - 115+50)   |   | 200.       | cy. @      | \$1.28  | per c.y. = \$256.00             |
| Removal Of Loqs & Stumps   |   | 2          | Hours @    | \$145.00  | per Hour = \$290.00             |
| Remove fill material for Free Drain Installation (Sta. 83+75 to 84+25)   |   | 407        | cy. @      | \$1.28  | per c.y. = \$520.96             |
| Reroute Sta. 101+70 - 105+60 (Common)  |   | 723        | cy. @      | \$1.40  | per c.y. = \$1,012.20           |
| Reroute Sta. 101+70 - 105+60 (Rippable Rock)   |   | 5449       | cy. @      | \$3.20  | per c.y. = \$17,436.80          |
| Reroute Sta. 101+70 - 105+60 (Solid)   |   | 1793       | cy. @      | \$4.90  | per c.y. = \$8,785.70           |
|  |   |            |            | <b>TOTAL EXCAVATION</b>   |                                 |
|  |   |            |            |   | <b>\$46,343.16</b>              |
| ENDHAUL -  |   |            |            |   |                                 |
| W.A. #1(Sta. 8+35):  | Pullback (Sta. 15+70 - 16+20, 17+70 - 18+50)                | 255        | cy. @      | \$1.32  | per c.y. = \$336.60             |
| W.A. #1(Sta. 8+35):  | Stream Crossing #2 Material                                 | 1355       | cy. @      | \$1.23  | per c.y. = \$1,666.65           |
| W.A. #2(Sta. 33+25):   | Pullback (Sta. 30+95 - 31+20 )                              | 56         | cy. @      | \$1.05  | per c.y. = \$58.80              |
| W.A. #2(Sta. 33+25):   | Pullback (Sta. 37+40 - 37+65, 40+30 - 41+00, 47+85 - 48+00) | 249        | cy. @      | \$1.35  | per c.y. = \$336.15             |
| W.A. #2(Sta. 33+25):   | Stream Crossing #3 Material                                 | 70         | cy. @      | \$1.19  | per c.y. = \$83.30              |
| W.A. #2(Sta. 33+25):   | Sluff & Loq Fills (Sta. 31+35, 32+65, & 41+00)              | 70         | cy. @      | \$1.17  | per c.y. = \$81.90              |
| W.A. #3 (Sta. 72+20):  | Pullback (Sta. 96+70 - 98+95)                               | 300        | cy. @      | \$2.07  | per c.y. = \$621.00             |
| W.A. #3 (Sta. 72+20):  | Free Drain (Sta. 83+75 - 84+25)                             | 285        | cy. @      | \$1.45  | per c.y. = \$413.25             |
| W.A. #4 (Switch Point):  | Pullback (Sta. 98+95 - 102+00)                              | 312        | cy. @      | \$1.94  | per c.y. = \$605.28             |
| W.A. #4 (Switch Point):  | Pullback (Sta. 108+95 - 109+45 & 116+60 - 117+75)           | 368        | cy. @      | \$1.40  | per c.y. = \$515.20             |
| W.A. #4 (Switch Point):  | Bank Sluff Removal (Sta. 113+25 - 115+50)                   | 200        | cy. @      | \$1.45  | per c.y. = \$290.00             |
| C to D Fill (Sta. 8+20 - 10+15):   | Switchback Excavation (Common Material)                     | 723        | cy. @      | \$1.64  | per c.y. = \$1,185.72           |
| Spread & compact (Fills)   |   | 3395       | cy. @      | \$0.45  | per c.y. = \$1,528.20           |
| Spread & compact (Waste Areas)   |   | 4243       | cy. @      | \$0.25  | per c.y. = \$1,060.75           |
|  |   |            |            | <b>TOTAL ENDHAUL</b>  |                                 |
|  |   |            |            |   | <b>\$8,782.80</b>               |
| CULVERTS - MATERIALS & INSTALLATION  |   |            |            |   |                                 |
|  | <u>Culverts</u>   |            |            |   |                                 |
|  | 72 LF of 18"  | \$1,224.00 |            | 0 LF of 24"   | \$0.00                          |
|  | 42 LF of 30"  | \$1,386.00 |            | 60 LF of 36"  | \$1,980.00                      |
|  | 0 LF of 42"   | \$0.00     |            | 2 36" Bands   | \$185.60                        |
|  | 0 LF of 54"   | \$0.00     |            | 36" Installation Costs  | \$350.00                        |
|  | 0 LF of 66"   | \$0.00     |            | 36" Beveled Inlet   | \$36.00                         |
|  |   | \$2,610.00 |            | 2 36" gaskets   | \$56.20                         |
|  |   |            |            |   | \$2,607.80                      |
|  | <u>Culvert Stakes &amp; Markers</u>                         |            |            |   |                                 |
|  | 5 markers   | \$40.00    |            |   |                                 |
|  |   |            |            | Transportation of 90"x 66' culvert: (see Culvert Move-In Sheet) | \$1,535.10                      |
|  |   |            |            | Installation of 90"x 60' culvert: 3 Laborers & Excavator 3 Hrs  | \$615.00                        |
|  |   |            |            | Bands for 90' culvert: 2 bands                                  | \$448.00                        |
|  |   |            |            | Gaskets for 90' culvert: 2 gaskets                              | \$138.80                        |
|  |   |            |            |   | \$2,736.90                      |
|  |   |            |            | <b>TOTAL CULVERTS</b>   |                                 |
|  |   |            |            |   | <b>\$7,994.70</b>               |
| ROCK   |   |            |            |   |                                 |
| 3+00 to 14+45  | 4+95 to 15+70   | 47         | cy. of     | Crushed   | @ \$7.31 per c.y. = \$343.57    |
| 38+40 to 38+40   | 39+65   | 30         | cy. of     | Crushed   | @ \$7.31 per c.y. = \$219.30    |
| Culvert Bedding/Backfill   | Sta. 4+00, 15+00, & 39+15                                   | 120        | cy. of     | Crushed   | @ \$7.03 per c.y. = \$210.90    |
| Fill Armor: Sta. 3+25 - 4+30, 14+85 - 15+15, & 39+00 - 39+30   |   | 285        | cy. of     | Crushed   | @ \$5.64 per c.y. = \$676.80    |
| Slope Stab./Energy Dis.: Sta. 3+25 - 4+30, 14+85 - 15+15, 39+00 - 39+30, 48+00 - 48+25, 74+00 - 74+50, 75+40 - 75+50, & 83+75 - 84+25                |   | 780        | cy. of     | Riprap  | @ \$5.03 per c.y. = \$3,923.40  |
| 0+00 to 86+00  | 86+00   | 6,077      | cy. of     | Pit-Run   | @ \$4.50 per c.y. = \$27,346.50 |
| 86+00 to 101+70  | 101+70  | 726        | cy. of     | Pit-Run   | @ \$3.65 per c.y. = \$2,649.90  |
| 101+70 to 101+70   | 118+50  | 800        | cy. of     | Pit-Run   | @ \$3.65 per c.y. = \$2,920.00  |
| Junctions: 0+00, 62+55, & 101+70   |   | 55         | cy. of     | Pit-Run   | @ \$4.38 per c.y. = \$240.90    |
| 100' Loaded Truck Turnaround Backfill (Sta. 3+25 - 4+30)   | 70+85   | 80         | cy. of     | Pit-Run   | @ \$4.16 per c.y. = \$332.80    |
| Free Draining Fill   | 83+75 - 84+25   | 175        | cy. of     | Pit-Run   | @ \$7.39 per c.y. = \$5,801.15  |
|  |   |            |            | 6" - 3" Drain Rock  | @ \$19.28 per c.y. = \$3,374.00 |
|  |   |            |            |   | \$49,603.87                     |
| SPECIAL PROJECTS   |   |            |            |   |                                 |
| Construct waste areas -  |   | 6.00       | hours @    | \$145.00  | per hour = \$870.00             |
| Construct ditchouts: Sta. 11+25, 12+90, 49+70, 62+55, 102+75, & Leadoff Ditch @ 82+55  |   | 6.00       | @          | \$25.00   | each = \$150.00                 |
| Subgrade Stabilization Prep. (Sta. 48+00 - 48+25, 74+00 - 74+50, 75+40 - 75+50)  |   | 4.00       | hours @    | \$145.00  | per hour = \$580.00             |
| Grade and shape road (ditched): 3+00 - 4+95, 14+45 - 15+70, 31+35 - 32+65, 38+40 - 39+65, & 82+55 - 84+25-   |   | 7.45       | stations @ | \$15.50   | per station = \$115.48          |
| Grade and shape road (outsloped)-  |   | 111.05     | stations @ | \$14.00   | per station = \$1,554.70        |
| Proof-Roll subgrade prior to rockinq   |   | 118.50     | stations @ | \$4.70  | per station = \$556.95          |
| Construct/Install rubber water diverter: Sta. 5+45 & 34+85   |   | 2.00       | @          | \$360.00  | each = \$720.00                 |
| Spread and Install woven subgrade fabric: Sta. 10+30 - 15+70, 37+65 - 39+65, 50+10 - 53+35   |   | 1650.00    | Sq. Yds. @ | \$0.95  | per sq. yd. = \$1,567.50        |
| Roll subgrade w/ vibratory roller prior to rockinq -   |   | 118.50     | stations @ | \$13.20   | per station = \$1,564.20        |
| Construct/Install road dip: Sta. 21+70, 42+10, 48+40, 53+65, 55+55, 60+50, 65+95, 68+40, 75+20, 78+05, 86+00, 93+40, 96+70, 105+60, 110+40, & 116+60 |   | 16.00      | @          | \$150.00  | each = \$2,400.00               |
| Construct a 100' turnaround (Sta. 70+85)   |   | 1.00       | Hour @     | \$145.00  | per Hour = \$145.00             |
| Construct Turnouts: Sta. 7+55, 18+85, 28+30, 33+25, 47+50, 56+55, 59+80, 81+35, 90+10, & 107+30  |   | 10.00      | @          | \$60.00   | each = \$600.00                 |
| Construct Turnaround: Sta. 118+50  |   | 1.00       | @          | \$75.00   | each = \$75.00                  |
| Install non-woven free drain fabric  |   | 170.00     | Sq. Yds. @ | \$0.95  | per sq. yd. = \$161.50          |
| Grass seed and fertilize -   |   | 4.08       | acres @    | \$220.00  | per acre = \$897.60             |
| Mulching (Sta. 0+00 - 86+00) -   |   | 3.000      | acres @    | \$600.00  | per acre = \$1,800.00           |
|  |   |            |            | <b>TOTAL SPECIAL PROJECTS</b>                                   |                                 |
|  |   |            |            |   | <b>\$13,757.93</b>              |
| <b>GRAND TOTAL</b>   |   |            |            |   | <b>\$132,777.76</b>             |

## SUMMARY OF CONSTRUCTION COST

| Sale:  | <u>Clamson</u>       | _____            | Road:               | <u>C to D</u>               | _____              |
|--|----------------------|------------------|---------------------|-----------------------------|--------------------|
| Construction -                                       | <u>3+70</u> stations |                  | Reconstruction -    | <u>8+25</u> stations        |                    |
|  | <u>0.07</u> miles    |                  |                     | <u>0.16</u> miles           |                    |
|  |                      |                  |                     |                             |                    |
| CLEARING AND GRUBBING -                              |                      |                  |                     |                             |                    |
| Scattering   |                      | 0.890 acres @    | \$980.00 per acre = | <u>\$872.20</u>             |                    |
|  |                      |                  |                     | TOTAL CLEARING AND GRUBBING | <b>\$872.20</b>    |
| EXCAVATION -   |                      |                  |                     |                             |                    |
| Common   |                      | 800 cy. @        | \$1.40 per c.y. =   | \$1,120.00                  |                    |
| Rippable   |                      | 4270 cy. @       | \$3.20 per c.y. =   | <u>\$13,664.00</u>          |                    |
|  |                      |                  |                     | TOTAL EXCAVATION            | <b>\$14,784.00</b> |
| ENDHAUL -  |                      |                  |                     |                             |                    |
| Spread & compact (Fill Material)                     |                      | 3845 cy. @       | \$0.45 per c.y. =   | <u>\$1,730.25</u>           |                    |
|  |                      |                  |                     | TOTAL ENDHAUL               | <b>\$1,730.25</b>  |
| ROCK   |                      |                  |                     |                             |                    |
| 0+00 to 11+95  | ✓ 541                | cy. of Pit-Run   | @                   | \$3.69 per c.y. =           | \$1,996.29         |
| Landing Sta. 11+95                                   | ✓ 52                 | cy. of Pit-Run   | @                   | \$3.37 per c.y. =           | <u>\$175.24</u>    |
|  |                      |                  |                     | TOTAL ROCK                  | <b>\$9,119.35</b>  |
|  |                      |                  |                     |                             |                    |
| SPECIAL PROJECTS                                     |                      |                  |                     |                             |                    |
| Construct ditchouts -                                |                      | 1.00 @           | \$25.00 each        | \$25.00                     |                    |
| Grade and shape road -                               |                      | 11.95 stations @ | \$14.00 per station | \$167.30                    |                    |
| Construct/install road dip -                         |                      | 1.00 @           | \$150.00 each       | \$150.00                    |                    |
| Roll subgrade w/ vibratory roller prior to rocking - |                      | 11.95 stations @ | \$13.20 per station | \$157.74                    |                    |
| Remove large stumps -                                |                      | 2.00 lump sum @  | \$75.00             | \$150.00                    |                    |
| Grass seed and fertilize -                           |                      | 0.41 acres @     | \$220.00 per acre   | <u>\$90.20</u>              |                    |
|  |                      |                  |                     | TOTAL SPECIAL PROJECTS      | <b>\$740.24</b>    |
| <b>GRAND TOTAL</b>                                   |                      |                  |                     |                             | <b>\$27,246.04</b> |

## SUMMARY OF CONSTRUCTION COST

|   |   |               |            |                                    |             |                   |                    |  |  |               |  |       |          |      |       |
|---|---|---------------|------------|------------------------------------|-------------|-------------------|--------------------|--|--|---------------|--|-------|----------|------|-------|
| Sale:   | <u>Clamson</u>  |               |            |                                    |             | Road:             | <u>E to F</u>      |  |  |               |  |       |          |      |       |
| Reconstruction -                                      | <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">0+00</td> <td style="text-align: center;">stations</td> </tr> <tr> <td style="text-align: center;">0.00</td> <td style="text-align: center;">miles</td> </tr> </table> | 0+00          | stations   | 0.00                               | miles       |                   |                    |  |  | Improvement - | <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">13+60</td> <td style="text-align: center;">stations</td> </tr> <tr> <td style="text-align: center;">0.26</td> <td style="text-align: center;">miles</td> </tr> </table> | 13+60 | stations | 0.26 | miles |
| 0+00  | stations  |               |            |                                    |             |                   |                    |  |  |               |  |       |          |      |       |
| 0.00  | miles   |               |            |                                    |             |                   |                    |  |  |               |  |       |          |      |       |
| 13+60   | stations  |               |            |                                    |             |                   |                    |  |  |               |  |       |          |      |       |
| 0.26  | miles   |               |            |                                    |             |                   |                    |  |  |               |  |       |          |      |       |
| <b>CLEARING AND GRUBBING -</b>                        |   |               |            |                                    |             |                   |                    |  |  |               |  |       |          |      |       |
| Scattering  |   | 0.780 acres @ | \$980.00   | per acre =                         | \$764.40    |                   |                    |  |  |               |  |       |          |      |       |
|   |   |               |            | <b>TOTAL CLEARING AND GRUBBING</b> |             |                   | <b>\$764.40</b>    |  |  |               |  |       |          |      |       |
| <b>EXCAVATION -</b>                                   |   |               |            |                                    |             |                   |                    |  |  |               |  |       |          |      |       |
| Road Earthwork (Sta. 0+00 - 12+45)                    |   | 12.45 sta. @  | \$90.00    | per sta. =                         | \$1,120.50  |                   |                    |  |  |               |  |       |          |      |       |
| Road Earthwork (Sta. 12+45 - 13+60)                   |   | 1.15 Hours @  | \$140.00   | per Hour =                         | \$161.00    |                   |                    |  |  |               |  |       |          |      |       |
| Load Fill Material (for Sta. 5+55 - 8+75)             |   | 1282 cy. @    | \$1.28     | per c.y. =                         | \$1,640.96  |                   |                    |  |  |               |  |       |          |      |       |
| Landing Construction                                  |   | 1 landing @   | \$250.00   | each =                             | \$250.00    |                   |                    |  |  |               |  |       |          |      |       |
|   |   |               |            | <b>TOTAL EXCAVATION</b>            |             |                   | <b>\$3,172.46</b>  |  |  |               |  |       |          |      |       |
| <b>ENDHAUL -</b>                                      |   |               |            |                                    |             |                   |                    |  |  |               |  |       |          |      |       |
| Fill Material (for Sta. 5+55 - 8+75)                  |   | 1282 cy. @    | \$1.25     | per c.y. =                         | \$1,602.50  |                   |                    |  |  |               |  |       |          |      |       |
| Spread & compact                                      |   | 1282 cy. @    | \$0.25     | per c.y. =                         | \$320.50    |                   |                    |  |  |               |  |       |          |      |       |
|   |   |               |            | <b>TOTAL ENDHAUL</b>               |             |                   | <b>\$1,923.00</b>  |  |  |               |  |       |          |      |       |
| <b>ROCK</b>   |   |               |            |                                    |             |                   |                    |  |  |               |  |       |          |      |       |
| 0+00 to   | 13+60   | 708           | cy. of     | Pit-Run                            | @           | \$6.91 per c.y. = | \$4,892.28         |  |  |               |  |       |          |      |       |
| Landing   | Sta. 13+60  | 52            | cy. of     | Pit-Run                            | @           | \$6.95 per c.y. = | \$361.40           |  |  |               |  |       |          |      |       |
| Junction  | Sta. 0+00 & 6+05  | 30            | cy. of     | Pit-Run                            | @           | \$6.77 per c.y. = | \$203.10           |  |  |               |  |       |          |      |       |
|   |   |               |            | <b>TOTAL ROCK</b>                  |             |                   | <b>\$5,456.78</b>  |  |  |               |  |       |          |      |       |
| <b>SPECIAL PROJECTS</b>                               |   |               |            |                                    |             |                   |                    |  |  |               |  |       |          |      |       |
| Grade and shape road -                                |   | 13.60         | stations @ | \$14.00                            | per station | \$190.40          |                    |  |  |               |  |       |          |      |       |
| Construct/Install rubber water diverter (Sta. 4+20) - |   | 1.00          | @          | \$360.00                           | each        | \$360.00          |                    |  |  |               |  |       |          |      |       |
| Construct a road dip (Sta. 12+45) -                   |   | 1.00          | @          | \$150.00                           | each        | \$150.00          |                    |  |  |               |  |       |          |      |       |
| Roli subgrade w/ vibratory roller prior to rocking -  |   | 13.60         | stations @ | \$13.20                            | per station | \$179.52          |                    |  |  |               |  |       |          |      |       |
| Remove large stumps -                                 |   | 1.00          | lump sum @ | \$75.00                            |             | \$75.00           |                    |  |  |               |  |       |          |      |       |
| Grass seed and fertilize -                            |   | 0.47          | acres @    | \$220.00                           | per acre    | \$103.40          |                    |  |  |               |  |       |          |      |       |
|   |   |               |            | <b>TOTAL SPECIAL PROJECTS</b>      |             |                   | <b>\$1,058.32</b>  |  |  |               |  |       |          |      |       |
| <b>GRAND TOTAL</b>                                    |   |               |            |                                    |             |                   | <b>\$12,374.96</b> |  |  |               |  |       |          |      |       |

## SUMMARY OF CONSTRUCTION COST

|  |   |                 |   |                             |                 |   |
|--|---|-----------------|---|-----------------------------|-----------------|---|
| Sale:  | <u>Clamson</u>                            |                 |   |                             |                 | Road: <u>G to H</u>                                     |
| Reconstruction -                                     | <u>0+00</u> stations<br><u>0.00</u> miles |                 |   |                             |                 | Improvement - <u>1+75</u> stations<br><u>0.03</u> miles |
| <br>   |   |                 |   |                             |                 |   |
| CLEARING AND GRUBBING -                              |   |                 |   |                             |                 |   |
| Scattering   |   | 0.100 acres @   |   | \$980.00 per acre =         | <u>\$98.00</u>  |   |
|  |   |                 |   | TOTAL CLEARING AND GRUBBING |                 | <b>\$98.00</b>  |
| <br>   |   |                 |   |                             |                 |   |
| EXCAVATION -   |   |                 |   |                             |                 |   |
| Road Earthwork                                       |   | 1.75 sta. @     |   | \$90.00 per sta. =          | \$157.50        |   |
| Construct Landing (Sta. 1+75)                        |   | 1 Landing @     |   | \$250.00 each =             | \$250.00        |   |
| Slash Removal (Excavator & Truck)                    |   | 3 Hours @       |   | \$215.00 per Hour =         | <u>\$645.00</u> |   |
|  |   |                 |   | TOTAL EXCAVATION            |                 | <b>\$1,052.50</b>                                       |
| <br>   |   |                 |   |                             |                 |   |
| ROCK   |   |                 |   |                             |                 |   |
| 0+00 to 1+75   | 80 cy. of                                 | Pit-Run         | @ | \$6.91 per c.y. =           | \$552.80        |   |
| Landing Sta. 1+75                                    | 52 cy. of                                 | Pit-Run         | @ | \$6.81 per c.y. =           | <u>\$354.12</u> |   |
|  |   |                 |   | TOTAL ROCK                  |                 | <b>\$906.92</b>   |
| <br>   |   |                 |   |                             |                 |   |
| SPECIAL PROJECTS                                     |   |                 |   |                             |                 |   |
| Remove Slash Pile @ 1+75 (Excavator & Truck) -       |   | 4.00 hours @    |   | \$215.00 per hour           | \$860.00        |   |
| Grade and shape road -                               |   | 1.75 stations @ |   | \$14.00 per station         | \$24.50         |   |
| Roll subgrade w/ vibratory roller prior to rocking - |   | 1.75 stations @ |   | \$13.20 per station         | \$23.10         |   |
| Grass seed and fertilize -                           |   | 0.03 acres @    |   | \$220.00 per acre           | \$6.60          |   |
|  |   |                 |   | TOTAL SPECIAL PROJECTS      |                 | <b>\$914.20</b>   |
| <b>GRAND TOTAL</b>                                   |   |                 |   |                             |                 | <b>\$2,971.62</b>                                       |

## SUMMARY OF CONSTRUCTION COST

|  |  |  |  |          |       |                             |  |      |          |      |       |
|--|--|--|--|----------|-------|-----------------------------|--|------|----------|------|-------|
| Sale:  | <b>Clamson</b>   |  | Road: <b>I to J</b>  |          |       |                             |  |      |          |      |       |
| Construction -   | <table border="0" style="margin: auto;"> <tr> <td style="text-align: right;">5+15</td> <td style="text-align: left;">stations</td> </tr> <tr> <td style="text-align: right; border-bottom: 1px solid black;">0.10</td> <td style="text-align: left; border-bottom: 1px solid black;">miles</td> </tr> </table> | 5+15                                   | stations   | 0.10     | miles |                             | <table border="0" style="margin: auto;"> <tr> <td style="text-align: right;">2+85</td> <td style="text-align: left;">stations</td> </tr> <tr> <td style="text-align: right; border-bottom: 1px solid black;">0.05</td> <td style="text-align: left; border-bottom: 1px solid black;">miles</td> </tr> </table> | 2+85 | stations | 0.05 | miles |
| 5+15   | stations   |  |  |          |       |                             |  |      |          |      |       |
| 0.10   | miles  |  |  |          |       |                             |  |      |          |      |       |
| 2+85   | stations   |  |  |          |       |                             |  |      |          |      |       |
| 0.05   | miles  |  |  |          |       |                             |  |      |          |      |       |
| CLEARING AND GRUBBING -<br>Scattering                  | 0.500 acres @  | \$980.00 per acre =                    | <table border="0" style="margin: auto;"> <tr> <td style="text-align: right;">\$490.00</td> <td style="width: 20px;"></td> </tr> <tr> <td style="text-align: right; border-bottom: 1px solid black;">TOTAL CLEARING AND GRUBBING</td> <td style="width: 20px;"></td> </tr> </table> | \$490.00 |       | TOTAL CLEARING AND GRUBBING |  |      |          |      |       |
| \$490.00   |  |  |  |          |       |                             |  |      |          |      |       |
| TOTAL CLEARING AND GRUBBING                            |  |  |  |          |       |                             |  |      |          |      |       |
| EXCAVATION -<br>Road Earthwork<br>Landing Construction | 5.15 sta. @<br>1 @   | \$140.00 per sta. =<br>\$250.00 Each = | <table border="0" style="margin: auto;"> <tr> <td style="text-align: right;">\$721.00</td> <td style="width: 20px;"></td> </tr> <tr> <td style="text-align: right; border-bottom: 1px solid black;">TOTAL EXCAVATION</td> <td style="width: 20px;"></td> </tr> </table>            | \$721.00 |       | TOTAL EXCAVATION            |  |      |          |      |       |
| \$721.00   |  |  |  |          |       |                             |  |      |          |      |       |
| TOTAL EXCAVATION                                       |  |  |  |          |       |                             |  |      |          |      |       |
| ENDHAUL -<br>Spread & compact Fill Material            | 5 Hours @  | \$75.00 per Hour =                     | <table border="0" style="margin: auto;"> <tr> <td style="text-align: right;">\$375.00</td> <td style="width: 20px;"></td> </tr> <tr> <td style="text-align: right; border-bottom: 1px solid black;">TOTAL ENDHAUL</td> <td style="width: 20px;"></td> </tr> </table>               | \$375.00 |       | TOTAL ENDHAUL               |  |      |          |      |       |
| \$375.00   |  |  |  |          |       |                             |  |      |          |      |       |
| TOTAL ENDHAUL  |  |  |  |          |       |                             |  |      |          |      |       |
| CULVERTS - MATERIALS & INSTALLATION                    |  |  |  |          |       |                             |  |      |          |      |       |
|  | <u>Culverts</u>  |  |  |          |       |                             |  |      |          |      |       |
|  | 0 LF of 18"  | \$0.00                                 | 90 LF of 24" \$2,160.00  |          |       |                             |  |      |          |      |       |
|  | <u>Culvert Stakes &amp; Markers</u>  |  |  |          |       |                             |  |      |          |      |       |
|  | 2 markers  | \$16.00                                | TOTAL CULVERTS   |          |       |                             |  |      |          |      |       |
|  |  | \$16.00                                | <b>\$2,176.00</b>  |          |       |                             |  |      |          |      |       |
| ROCK   |  |  |  |          |       |                             |  |      |          |      |       |
| 5+00 to 7+25   | ✓ 48 cy. of  | Crushed                                | @ \$6.92 per c.y. = \$332.16   |          |       |                             |  |      |          |      |       |
| Culvert Backfill 5+40 & 6+95                           | ✓ 40 cy. of  | Crushed                                | @ \$6.00 per c.y. = \$240.00   |          |       |                             |  |      |          |      |       |
| Fill Armor Sta. 5+30 - 5+50 & 6+85 - 7+05              | ✓ 70 cy. of  | Riprap                                 | @ \$5.50 per c.y. = \$385.00   |          |       |                             |  |      |          |      |       |
| 0+00 to 8+00   | ✓ 549 cy. of   | Pit-Run                                | @ \$6.73 per c.y. = \$3,694.77   |          |       |                             |  |      |          |      |       |
| Landing Sta. 8+00                                      | ✓ 70 cy. of  | Pit-Run                                | @ \$6.66 per c.y. = \$466.20   |          |       |                             |  |      |          |      |       |
| Junction Sta. 0+00                                     | ✓ 20 cy. of  | Pit-Run                                | @ \$6.42 per c.y. = \$128.40   |          |       |                             |  |      |          |      |       |
|  |  |  | TOTAL ROCK   |          |       |                             |  |      |          |      |       |
|  |  |  | <b>\$5,246.53</b>  |          |       |                             |  |      |          |      |       |
| SPECIAL PROJECTS                                       |  |  |  |          |       |                             |  |      |          |      |       |
| Grade and shape road -                                 | 8.00 stations @  | \$14.00 per station                    | \$112.00   |          |       |                             |  |      |          |      |       |
| Roll subgrade w/ vibratory roller prior to rocking -   | 8.00 stations @  | \$13.20 per station                    | \$105.60   |          |       |                             |  |      |          |      |       |
| Remove large stumps -                                  | 2.00 lump sum @  | \$75.00                                | \$150.00   |          |       |                             |  |      |          |      |       |
| Grass seed and fertilize -                             | 0.28 acres @   | \$220.00 per acre                      | \$61.60  |          |       |                             |  |      |          |      |       |
| Mulching -   | 0.280 acres @  | \$600.00 per acre                      | \$168.00   |          |       |                             |  |      |          |      |       |
|  |  |  | TOTAL SPECIAL PROJECTS   |          |       |                             |  |      |          |      |       |
|  |  |  | <b>\$597.20</b>  |          |       |                             |  |      |          |      |       |
| <b>GRAND TOTAL</b>                                     |  |  | <b>\$9,855.73</b>  |          |       |                             |  |      |          |      |       |

## SUMMARY OF CONSTRUCTION COST

|  |   |                 |         |   |                             |   |
|--|---|-----------------|---------|---|-----------------------------|---|
| Sale:  | <u>Clamson</u>                            |                 |         |   |                             | Road: <u>K to L</u>                                     |
| Construction -                                       | <u>3+50</u> stations<br><u>0.07</u> miles |                 |         |   |                             | Improvement - <u>0+00</u> stations<br><u>0.00</u> miles |
| <br>CLEARING AND GRUBBING -                          |   |                 |         |   |                             |   |
| Scattering   |   | 0.340 acres @   |         |   | \$980.00 per acre =         | <u>\$333.20</u>   |
|  |   |                 |         |   | TOTAL CLEARING AND GRUBBING |   |
|  |   |                 |         |   |                             | <b>\$333.20</b>   |
| <br>EXCAVATION -                                     |   |                 |         |   |                             |   |
| Road Earthwork                                       |   | 3.50 sta. @     |         |   | \$90.00 per sta. =          | <u>\$315.00</u>   |
| Construct Landing                                    |   | 1 @             |         |   | \$250.00 Each =             | <u>\$250.00</u>   |
|  |   |                 |         |   | TOTAL EXCAVATION            |   |
|  |   |                 |         |   |                             | <b>\$565.00</b>   |
| <br>ROCK   |   |                 |         |   |                             |   |
| 0+00 to  | 3+50                                      | √242 cy. of     | Pit-Run | @ | \$7.33 per c.y.=            | \$1,773.86  |
| Landing  | Sta. 3+50                                 | √70 cy. of      | Pit-Run | @ | \$7.25 per c.y.=            | \$507.50  |
| Junction   | Sta. 0+00                                 | √20 cy. of      | Pit-Run | @ | \$7.08 per c.y.=            | <u>\$141.60</u>   |
|  |   |                 |         |   | TOTAL ROCK                  |   |
|  |   |                 |         |   |                             | <b>\$2,422.96</b>                                       |
| <br>SPECIAL PROJECTS                                 |   |                 |         |   |                             |   |
| Grade and shape road -                               |   | 3.50 stations @ |         |   | \$14.00 per station         | \$49.00   |
| Roll subgrade w/ vibratory roller prior to rocking - |   | 3.50 stations @ |         |   | \$13.20 per station         | \$46.20   |
| Grass seed and fertilize -                           |   | 0.02 acres @    |         |   | \$220.00 per acre           | \$4.40  |
| Mulching -   |   | 0.020 acres @   |         |   | \$600.00 per acre           | <u>\$12.00</u>  |
|  |   |                 |         |   | TOTAL SPECIAL PROJECTS      |   |
|  |   |                 |         |   |                             | <b>\$111.60</b>   |
|  |   |                 |         |   | <b>GRAND TOTAL</b>          | <b>\$3,432.76</b>                                       |

## Move-In Calculations

Sale: Clamson

| LOWBOY HAUL (Round Trip) |              |                 |
|--------------------------|--------------|-----------------|
| DIST. (mi)               | ROADWAY      | AVE SPEED (mph) |
| 70.0                     | Highway      | 37              |
| 9.0                      | Main Lines   | 11              |
| 2.4                      | Steep Grades | 5               |

| No. | EQUIPMENT DESCRIPTION              | Move in Cost | Pilot Cars | Within Area Move (\$/mile) | Begin Mileage | End Mileage | Total Miles | Within Area Cost | Total Cost |
|-----|------------------------------------|--------------|------------|----------------------------|---------------|-------------|-------------|------------------|------------|
| 0   | Drill & Compressor                 | \$0.00       |            | \$46.00                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Brush Cutter                       | \$0.00       |            | \$4.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Graders                            | \$0.00       |            | \$3.65                     | 0.00          | 9.50        | 9.5         | \$0.00           | \$0.00     |
| 0   | Loader (Small)                     | \$0.00       | 1          | \$3.55                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Loader (Med. & Large)              | \$0.00       | 1          | \$9.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Rollers (smooth/grid) & Compactors | \$0.00       |            | \$5.00                     | 0.00          | 9.50        | 9.5         | \$0.00           | \$0.00     |
| 0   | Excavators (Small)                 | \$0.00       |            | \$22.00                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Excavators (Med.)                  | \$0.00       |            | \$35.50                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 2   | Excavators (Large)                 | \$1,529.96   | 1          | \$44.80                    | 0.00          | 4.25        | 4.25        | \$380.80         | \$1,910.76 |
| 0   | Tired Backhoes/Skidders            | \$0.00       |            | \$3.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Tractors (D6)                      | \$0.00       | 2          | \$7.10                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Tractors (D7)                      | \$0.00       | 2          | \$11.30                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 1   | Tractor (D8)                       | \$749.80     | 2          | \$15.10                    | 0.00          | 9.50        | 9.5         | \$143.45         | \$893.25   |
| 3   | Dump Truck (10 cy +)               | \$614.93     |            | \$2.85                     | 0.00          | 9.50        | 9.5         | \$81.23          | \$696.16   |
| 0   | Dump Truck (Off Hiway)             | \$0.00       | 1          | \$4.75                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 1   | Water Truck (1500 Gal)             | \$166.91     |            | \$2.85                     | 0.00          | 9.50        | 9.5         | \$27.08          | \$193.99   |
| 0   | Water Truck (2500 Gal)             | \$0.00       |            | \$2.85                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Jaw                                | \$1,066.00   |            |                            |               |             |             |                  |            |
| 0   | 2-Stage Crusher                    | \$1,597.00   |            |                            |               |             |             |                  |            |
| 0   | 3-Stage Crusher                    | \$2,489.00   |            |                            |               |             |             |                  |            |

|                             |                   |
|-----------------------------|-------------------|
| <b>TOTAL MOVE-IN COSTS:</b> | <b>\$3,694.16</b> |
|-----------------------------|-------------------|

## Move-In Calculations

Sale: Clamson (Lower Rocking)

| LOWBOY HAUL (Round Trip) |              |                 |
|--------------------------|--------------|-----------------|
| DIST. (mi)               | ROADWAY      | AVE SPEED (mph) |
| 70.0                     | Highway      | 37              |
| 9.0                      | Main Lines   | 11              |
| 2.4                      | Steep Grades | 5               |

| No. | EQUIPMENT DESCRIPTION              | Move in Cost | Pilot Cars | Within Area Move (\$/mile) | Begin Mileage | End Mileage | Total Miles | Within Area Cost | Total Cost |
|-----|------------------------------------|--------------|------------|----------------------------|---------------|-------------|-------------|------------------|------------|
| 0   | Drill & Compressor                 | \$0.00       |            | \$46.00                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Brush Cutter                       | \$0.00       |            | \$4.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 1   | Graders                            | \$238.22     |            | \$3.65                     | 0.00          | 9.50        | 9.5         | \$34.68          | \$272.90   |
| 1   | Loader (Small)                     | \$590.53     | 1          | \$3.55                     | 0.00          | 0.00        | 0           | \$0.00           | \$590.53   |
| 0   | Loader (Med. & Large)              | \$0.00       | 1          | \$9.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 1   | Rollers (smooth/grid) & Compactors | \$511.70     |            | \$5.00                     | 0.00          | 9.50        | 9.5         | \$47.50          | \$559.20   |
| 0   | Excavators (Small)                 | \$0.00       |            | \$22.00                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Excavators (Med.)                  | \$0.00       |            | \$35.50                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Excavators (Large)                 | \$0.00       | 1          | \$44.80                    | 0.00          | 4.25        | 4.25        | \$0.00           | \$0.00     |
| 0   | Tired Backhoes/Skidders            | \$0.00       |            | \$3.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Tractors (D6)                      | \$0.00       | 2          | \$7.10                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Tractors (D7)                      | \$0.00       | 2          | \$11.30                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Tractor (D8)                       | \$0.00       | 2          | \$15.10                    | 0.00          | 9.50        | 9.5         | \$0.00           | \$0.00     |
| 0   | Dump Truck (10 cy +)               | \$0.00       |            | \$2.85                     | 0.00          | 9.50        | 9.5         | \$0.00           | \$0.00     |
| 0   | Dump Truck (Off Hiway)             | \$0.00       | 1          | \$4.75                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 1   | Water Truck (1500 Gal)             | \$166.91     |            | \$2.85                     | 0.00          | 9.50        | 9.5         | \$27.08          | \$193.99   |
| 0   | Water Truck (2500 Gal)             | \$0.00       |            | \$2.85                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Jaw                                | \$1,066.00   |            |                            |               |             |             |                  |            |
| 0   | 2-Stage Crusher                    | \$1,597.00   |            |                            |               |             |             |                  |            |
| 0   | 3-Stage Crusher                    | \$2,489.00   |            |                            |               |             |             |                  |            |

|                             |                   |
|-----------------------------|-------------------|
| <b>TOTAL MOVE-IN COSTS:</b> | <b>\$1,616.62</b> |
|-----------------------------|-------------------|



## Move-In Calculations

Sale: Clamson (upper rocking)

| LOWBOY/HAUL (Round Trip) |              |                 |
|--------------------------|--------------|-----------------|
| DIST. (mi)               | ROADWAY      | AVE SPEED (mph) |
| 0.0                      | Highway      | 37              |
| 4.0                      | Main Lines   | 11              |
| 4.3                      | Steep Grades | 5               |

| No. | EQUIPMENT DESCRIPTION              | Move in Cost | Pilot Cars | Within Area Move (\$/mile) | Begin Mileage | End Mileage | Total Miles | Within Area Cost | Total Cost |
|-----|------------------------------------|--------------|------------|----------------------------|---------------|-------------|-------------|------------------|------------|
| 0   | Drill & Compressor                 | \$0.00       |            | \$46.00                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Brush Cutter                       | \$0.00       |            | \$4.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 1   | Graders                            | \$77.38      |            | \$3.65                     | 0.00          | 9.50        | 9.5         | \$34.68          | \$112.06   |
| 0   | Loader (Small)                     | \$0.00       | 1          | \$3.55                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Loader (Med. & Large)              | \$0.00       | 1          | \$9.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 1   | Rollers (smooth/grid) & Compactors | \$161.73     |            | \$5.00                     | 0.00          | 9.50        | 9.5         | \$47.50          | \$209.23   |
| 0   | Excavators (Small)                 | \$0.00       |            | \$22.00                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Excavators (Med.)                  | \$0.00       |            | \$35.50                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 1   | Excavators (Large)                 | \$297.25     | 1          | \$44.80                    | 0.00          | 4.25        | 4.25        | \$190.40         | \$487.65   |
| 0   | Tired Backhoes/Skidders            | \$0.00       |            | \$3.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Tractors (D6)                      | \$0.00       | 2          | \$7.10                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Tractors (D7)                      | \$0.00       | 2          | \$11.30                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 1   | Tractor (D8)                       | \$274.74     | 2          | \$15.10                    | 0.00          | 9.50        | 9.5         | \$143.45         | \$418.19   |
| 0   | Dump Truck (10 cy +)               | \$0.00       |            | \$2.85                     | 0.00          | 9.50        | 9.5         | \$0.00           | \$0.00     |
| 0   | Dump Truck (Off Hiway)             | \$0.00       | 1          | \$4.75                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 1   | Water Truck (1500 Gal)             | \$43.01      |            | \$2.85                     | 0.00          | 9.50        | 9.5         | \$27.08          | \$70.09    |
| 0   | Water Truck (2500 Gal)             | \$0.00       |            | \$2.85                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Jaw                                | \$1,066.00   |            |                            |               |             |             |                  |            |
| 0   | 2-Stage Crusher                    | \$1,597.00   |            |                            |               |             |             |                  |            |
| 0   | 3-Stage Crusher                    | \$2,489.00   |            |                            |               |             |             |                  |            |

|                             |                   |
|-----------------------------|-------------------|
| <b>TOTAL MOVE-IN COSTS:</b> | <b>\$1,297.22</b> |
|-----------------------------|-------------------|

## Culvert Move-In Calculations

Sale: Clamson

| LOWBOY HAUL (Round Trip) |              |                 |
|--------------------------|--------------|-----------------|
| DIST. (mi)               | ROADWAY      | AVE SPEED (mph) |
| 70.0                     | Highway      | 37              |
| 9.0                      | Main Lines   | 11              |
| 2.4                      | Steep Grades | 5               |

| No. | EQUIPMENT DESCRIPTION              | Move in Cost | Pilot Cars | Within Area Move (\$/mile) | Begin Mileage | End Mileage | Total Miles | Within Area Cost | Total Cost |
|-----|------------------------------------|--------------|------------|----------------------------|---------------|-------------|-------------|------------------|------------|
| 0   | Drill & Compressor                 | \$0.00       |            | \$46.00                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Brush Cutter                       | \$0.00       |            | \$4.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Graders                            | \$0.00       |            | \$3.65                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Loader (Small)                     | \$0.00       | 1          | \$3.55                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Loader (Med. & Large)              | \$0.00       | 1          | \$9.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Rollers (smooth/grid) & Compactors | \$0.00       |            | \$5.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Excavators (Small)                 | \$0.00       |            | \$22.00                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Excavators (Med.)                  | \$0.00       |            | \$35.50                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Excavators (Large)                 | \$0.00       | 1          | \$44.80                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 3   | Dump Truck with Tilt Bed Trailer   | \$1,535.10   |            | \$3.00                     | 0.00          | 0.00        | 0           | \$0.00           | \$1,535.10 |
| 0   | Tractors (D6)                      | \$0.00       | 2          | \$7.10                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Tractors (D7)                      | \$0.00       | 2          | \$11.30                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Tractor (D8)                       | \$0.00       | 2          | \$15.10                    | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Dump Truck (10 cy +)               | \$0.00       |            | \$2.85                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Dump Truck (Off Hiway)             | \$0.00       | 1          | \$4.75                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Water Truck (1500 Gal)             | \$0.00       |            | \$2.85                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Water Truck (2500 Gal)             | \$0.00       |            | \$2.85                     | 0.00          | 0.00        | 0           | \$0.00           | \$0.00     |
| 0   | Jaw                                | \$1,066.00   |            |                            |               |             |             |                  |            |
| 0   | 2-Stage Crusher                    | \$1,597.00   |            |                            |               |             |             |                  |            |
| 0   | 3-Stage Crusher                    | \$2,489.00   |            |                            |               |             |             |                  |            |

|                             |                   |
|-----------------------------|-------------------|
| <b>TOTAL MOVE-IN COSTS:</b> | <b>\$1,535.10</b> |
|-----------------------------|-------------------|

## DRAIN ROCK COST SUMMARY

|             |                |                    |                                 |
|-------------|----------------|--------------------|---------------------------------|
| Pit:        | Mohler Yard    | Location:          | NW 1/4 of Sec.5, T2N, R9W, W.M. |
| Sale:       | <b>Clamson</b> | Road:              | 175 c.y.                        |
| Swell:      | 1.40           | Stockpile:         | c.y.                            |
| Shrinkage   | 1.16           | Total Truck Loads: | 175 c.y.                        |
| Drill Pct.: | 0%             | In Place Total:    | 125 c.y.                        |
| Base Cost=  | \$8.85         | Per Cu.Yd.         |                                 |

| Road Segment              | Haul Cost<br>/cu.yd. | Placement Cost<br>/cu.yd. | Base Cst.<br>/cu.yd. | Cost<br>/cu.yd. | Number<br>Cu. Yds | ROCK<br>COST |
|---------------------------|----------------------|---------------------------|----------------------|-----------------|-------------------|--------------|
| A to B Free Draining Fill | \$9.83               | \$0.60                    | \$8.85               | \$19.28         | 175               | \$3,374.00   |
|                           |                      |                           |                      | Total C.Y.      | 175               | Sub Total    |
|                           |                      |                           |                      |                 |                   | \$3,374.00   |

|                     |            |
|---------------------|------------|
| TOTAL ROCKING COSTS | \$3,374.00 |
|---------------------|------------|

## STOCKPILE ROCK COST SUMMARY

|             |                   |                    |   |
|-------------|-------------------|--------------------|---|
| Pit:        | 2-1/2"-0" Crushed | Location:          | SE 1/4, SW 1/4 of Sec.4, T2N, R8W, W.M. |
| Sale:       | <b>Clamson</b>    | Road:              | 315 c.y.                                |
| Swell:      | 1.40              | Stockpile:         | c.y.                                    |
| Shrinkage:  | 1.16              | Total Truck Loads: | 315 c.y.                                |
| Drill Pct.: | 0%                | In Place Total:    | 225 c.y.                                |

Load Dump Truck: \$0.70 /cu.yd. x 315 cu.yds. = \$220.50

|                              |   |   |          |
|------------------------------|---|---|----------|
| Move in Roller and Compactor | (Within Area: 2 rollers, 2.17 Miles @ \$5/Mile)         | = | \$21.70  |
| Move in Grader               | (Within Area: 2.17 Miles @ 3.65/Mile)                   | = | \$7.92   |
| Move in Loader               | 1 @ \$590.53  | = | \$590.53 |
| Move in Trucks               | (Within Area: 3 Trucks, 2.17 Miles @ \$2.85/Mile/Truck) | = | \$18.55  |
| Move in Water Truck          | (Within Area: 2.17 Miles @ 2.85/Mile)                   | = | \$6.18   |
| TOTAL PRODUCTION COSTS       |   |   | \$865.38 |

Base Cost= \$2.75 Per Cu.Yd.

| Road Segment                     | Haul Cost /cu.yd. | Proc Cost /cu.yd. | Base Cst. /cu.yd. | Cost /cu.yd. | Number Cu. Yds | ROCK COST |           |            |
|----------------------------------|-------------------|-------------------|-------------------|--------------|----------------|-----------|-----------|------------|
| A to B: Sta. 3+00 - 4+95         | \$2.11            | \$2.45            | \$2.75            | \$7.31       | 47             | \$343.57  |           |            |
| A to B: Sta. 14+45 - 15+70       | \$2.11            | \$2.45            | \$2.75            | \$7.31       | 30             | \$219.30  |           |            |
| A to B: Sta. 38+40 - 39+65       | \$1.83            | \$2.45            | \$2.75            | \$7.03       | 30             | \$210.90  |           |            |
| A to B: Culvert Bedding/Backfill | \$1.99            | \$0.90            | \$2.75            | \$5.64       | 120            | \$676.80  |           |            |
| I to J: 5+00 - 7+25              | \$2.47            | \$1.70            | \$2.75            | \$6.92       | 48             | \$332.16  |           |            |
| I to J Bedding/Backfill          | \$2.35            | \$0.90            | \$2.75            | \$6.00       | 40             | \$240.00  |           |            |
|                                  |                   |                   |                   |              | Total C.Y.     | 315       | Sub Total | \$2,022.73 |

|                     |            |
|---------------------|------------|
| TOTAL ROCKING COSTS | \$2,022.73 |
|---------------------|------------|

## PIT-RUN ROCK DEVELOPMENT COST SUMMARY

|             |                        |                    |                                  |
|-------------|------------------------|--------------------|----------------------------------|
| Pit:        | Henry.Com Road Pit Run | Location:          | NE 1/4 of Sec.11, T2N, R9W, W.M. |
| Sale:       | <b>Clamson</b>         | Road:              | 922 c.y.                         |
| Swell:      | 1.40                   | Stockpile:         | c.y.                             |
| Shrinkage   | 1.16                   | Total Truck Loads: | 922 c.y.                         |
| Drill Pct.: | 0%                     | In Place Total:    | 659 c.y.                         |

|  |   |
|--|---|
| Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. | \$545.72                                  |
| Rip Rock   | \$3.20 /cu.yd. x 659 cu.yds. = \$2,108.80 |
| Load Dump Truck:   | \$0.70 /cu.yd. x 922 cu.yds. = \$645.40   |
| Subtotal   | \$3,299.92                                |

|                              |  |   |          |   |            |
|------------------------------|--|---|----------|---|------------|
| Move in Roller and Compactor | 2  | @ | \$161.73 | = | \$323.46   |
| Move in Grader               | 1  | @ | \$77.38  | = | \$77.38    |
| Move in D-8                  | 1  | @ | \$274.74 | = | \$274.74   |
| Move in Excavator            | 1  | @ | \$297.25 | = | \$297.25   |
| Move in Trucks               | (Within Area: 3 trucks: 6 Miles @ \$2.85/Mile) |   |          | = | \$51.30    |
| Move-In Water Truck          | (Within area: 6 Miles @ \$2.85/Mile)           |   |          | = | \$17.10    |
| Subtotal                     |  |   |          |   | \$1,041.23 |

TOTAL PRODUCTION COSTS \$4,341.15

Base Cost= \$4.71 Per Cu.Yd.

| Road Segment      | Haul Cost<br>/cu.yd. | Proc Cost<br>/cu.yd. | Base Cst.<br>/cu.yd. | Cost<br>/cu.yd. | Number<br>Cu. Yds | ROCK<br>COST         |
|-------------------|----------------------|----------------------|----------------------|-----------------|-------------------|----------------------|
| E to F            | \$1.10               | \$1.10               | \$4.71               | \$6.91          | 708               | \$4,892.28           |
| E to F: Landing   | \$1.14               | \$1.10               | \$4.71               | \$6.95          | 52                | \$361.40             |
| E to F: Junctions | \$0.96               | \$1.10               | \$4.71               | \$6.77          | 30                | \$203.10             |
| G to H            | \$1.10               | \$1.10               | \$4.71               | \$6.91          | 80                | \$552.80             |
| G to H: Landing   | \$1.00               | \$1.10               | \$4.71               | \$6.81          | 52                | \$354.12             |
|                   |                      |                      |                      |                 | Total C.Y. 922    | Sub Total \$6,363.70 |

TOTAL ROCKING COSTS \$6,363.70

## PIT-RUN ROCK DEVELOPMENT COST SUMMARY

|             |                      |                    |                                   |
|-------------|----------------------|--------------------|-----------------------------------|
| Pit:        | Clammer Road Pit Run | Location:          | SE 1/4 of Sec.12 , T2N, R9W, W.M. |
| Sale:       | <b>Clamson</b>       | Road:              | 1756 c.y.                         |
| Swell:      | 1.40                 | Stockpile:         | c.y.                              |
| Shrinkage   | 1.16                 | Total Truck Loads: | 1756 c.y.                         |
| Drill Pct.: | 0%                   | In Place Total:    | 1254 c.y.                         |

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. \$518.66

|                  |                |   |              |   |            |
|------------------|----------------|---|--------------|---|------------|
| Rip Rock         | \$3.20 /cu.yd. | x | 1254 cu.yds. | = | \$4,012.80 |
| Load Dump Truck: | \$0.70 /cu.yd. | x | 1756 cu.yds. | = | \$1,229.20 |
|                  |                |   | Subtotal     |   | \$5,760.66 |

|                              |   |   |   |
|------------------------------|---|---|---|
| Move in Roller and Compactor | (Within Area: 4.17 Miles @ \$5/Mile)              | = | \$20.85   |
| Move in Grader               | (Within Area: 4.17 Miles @ \$3.65/Mile)           | = | \$15.22   |
| Move in D-8                  | (Within Area: 4.17 Miles @ \$15.10/Mile)          | = | \$62.97   |
| Move in Excavator            | (Within Area: 4.17 Miles @ \$44.80/Mile)          | = | \$186.82  |
| Move in Trucks               | (Within Area: 3 Trucks: 4.17 Miles @ \$2.85/Mile) | = | \$35.65   |
|                              |   |   | Subtotal <span style="border-top: 1px solid black;">\$321.51</span> |

TOTAL PRODUCTION COSTS \$6,082.17

Base Cost= \$3.46 Per Cu.Yd.

| Road Segment                   | Haul Cost<br>/cu.yd. | Proc Cost<br>/cu.yd. | Base Cst.<br>/cu.yd. | Cost<br>/cu.yd. | Number<br>Cu. Yds | ROCK<br>COST  |
|--------------------------------|----------------------|----------------------|----------------------|-----------------|-------------------|---|
| A to B: Backfill (3+25 - 4+30) | \$3.03               | \$0.90               | \$3.46               | \$7.39          | 785               | \$5,801.15  |
| I to J                         | \$2.17               | \$1.10               | \$3.46               | \$6.73          | 549               | \$3,694.77  |
| I to J: Landing                | \$2.10               | \$1.10               | \$3.46               | \$6.66          | 70                | \$466.20  |
| I to J: Junction               | \$1.86               | \$1.10               | \$3.46               | \$6.42          | 20                | \$128.40  |
| K to L                         | \$2.77               | \$1.10               | \$3.46               | \$7.33          | 242               | \$1,773.86  |
| K to L: Landing                | \$2.69               | \$1.10               | \$3.46               | \$7.25          | 70                | \$507.50  |
| K to L: Junction               | \$2.52               | \$1.10               | \$3.46               | \$7.08          | 20                | \$141.60  |
|                                |                      |                      |                      | Total C.Y.      | 1756              | Sub Total <span style="border-top: 1px solid black;">\$12,513.48</span> |

|                            |                    |
|----------------------------|--------------------|
| <b>TOTAL ROCKING COSTS</b> | <b>\$12,513.48</b> |
|----------------------------|--------------------|

## PIT-RUN & RIPRAP ROCK DEVELOPMENT COST SUMMARY

|             |                                 |                    |                                   |
|-------------|---------------------------------|--------------------|-----------------------------------|
| Pit:        | A-B Switchback Pit Run & RipRap | Location:          | N 1/2 of Sec.1&2 , T2N, R9W, W.M. |
| Sale:       | <b>Clamson</b>                  | Pit-Run:           | 8331 c.y.                         |
| Swell:      | 1.40                            | RipRap:            | 1135 c.y.                         |
| Shrinkage   | 1.16                            | Total Truck Loads: | 9466 c.y.                         |
| Drill Pct.: | 0%                              | In Place Total:    | 6761 c.y.                         |

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. \$602.48

|               |                |   |              |   |             |
|---------------|----------------|---|--------------|---|-------------|
| Rip Rock      | \$3.20 /cu.yd. | x | 1431 cu.yds. | = | \$4,579.20  |
| Load RipRap:  | \$1.40 /cu.yd. | x | 1135 cu.yds. | = | \$1,589.00  |
| Load Pit-Run: | \$0.70 /cu.yd. | x | 8331 cu.yds. | = | \$5,831.70  |
|               |                |   | Subtotal     |   | \$12,602.38 |

|                              |   |   |   |   |            |
|------------------------------|---|---|---|---|------------|
| Move in Roller and Compactor | 2 | @ | \$511.70  | = | \$1,023.40 |
| Move in Grader               | 1 | @ | \$238.22  | = | \$238.22   |
| Move in D-8                  |   |   | (Within Area: 1.93 Miles @ \$15.10/Mile)          | = | \$29.14    |
| Move in Trucks               |   |   | (Within Area: 3 trucks: 1.93 Miles @ \$2.85/Mile) | = | \$16.50    |
| Move in Water Truck          | 1 | @ | \$166.91  | = | \$166.91   |
|                              |   |   | Subtotal  |   | \$1,474.17 |

TOTAL PRODUCTION COSTS \$14,076.55

|                    |        |            |
|--------------------|--------|------------|
| Pit-Run Base Cost= | \$1.43 | Per Cu.Yd. |
| RipRap Base Cost = | \$1.40 | Per Cu.Yd. |

| Road Segment                           | Haul Cost<br>/cu.yd. | Proc/Placement Cost<br>/cu.yd. | Base Cst.<br>/cu.yd. | Cost<br>/cu.yd. | Number<br>Cu. Yds | ROCK<br>COST          |
|--|----------------------|--------------------------------|----------------------|-----------------|-------------------|-----------------------|
| A to B: 0+00 - 86+00                   | \$1.97               | \$1.10                         | \$1.43               | \$4.50          | 6077              | \$27,346.50           |
| A to B: 86+00 - 101+70                 | \$1.12               | \$1.10                         | \$1.43               | \$3.65          | 726               | \$2,649.90            |
| A to B: 101+70 - 118+50                | \$1.12               | \$1.10                         | \$1.43               | \$3.65          | 800               | \$2,920.00            |
| A to B: Junctions                      | \$1.85               | \$1.10                         | \$1.43               | \$4.38          | 55                | \$240.90              |
| A to B: Loaded Truck Turnaround        | \$1.63               | \$1.10                         | \$1.43               | \$4.16          | 80                | \$332.80              |
| A to B: Fill Armor                     | \$2.69               | \$1.40                         | \$1.40               | \$5.49          | 285               | \$1,564.65            |
| A to B: Stabilization Wall/Energy Dis. | \$2.23               | \$1.40                         | \$1.40               | \$5.03          | 780               | \$3,923.40            |
| C to D                                 | \$1.16               | \$1.10                         | \$1.43               | \$3.69          | 541               | \$1,996.29            |
| C to D: Landing                        | \$0.84               | \$1.10                         | \$1.43               | \$3.37          | 52                | \$175.24              |
| I to J: Fill Armor                     | \$2.70               | \$1.40                         | \$1.40               | \$5.50          | 70                | \$385.00              |
|  |                      |                                |                      |                 | Total C.Y. 9466   | Sub Total \$41,534.68 |

TOTAL ROCKING COSTS \$41,534.68



# OREGON DEPARTMENT OF FORESTRY CRUISE REPORT

Clamson

1. **Type of Sale**

Regeneration harvest, Partial Cut - Conifer Recovery/Hardwood Cash

2. **Legal Description**

Sections 1, 2 and 12, T 2 N, R 9 W, and sections 6 and 7, T 2 N, R 8 W, W.M. Tillamook County, Oregon

3. **Sale Acreage**

|                            | ACRES       |            |
|----------------------------|-------------|------------|
|                            | <u>Sale</u> | <u>Net</u> |
| Area 1 (Modified Clearcut) | 236         | 172        |
| Area 2 (Modified Clearcut) | 219         | 193        |
| Area 3 (Retention Cut)     | 35          | 33         |
| Area 4 (Partial Cut)       | 49          | 49         |

Sale Acres

Area within the Timber Sale Boundary signs.

Net acres

*Used for calculating the advertised volume.*

Sale acres, less green tree retention, roads, utility, right-of-way, and less riparian areas inside the sale boundary.

4. **Cruising Procedures**

**A. Cruise Method**

A total of 78 variable radius plots were taken across the sale area. Plots were spaced on a rectangle grid 300 x 760. All conifers 8 inches DBH and greater and all hardwoods 10 inches DBH and greater were recorded on all plots. Species were recorded on all trees, and they were graded and measured for merchantable height, diameter, and form factor. For net board feet/acre, the coefficient of variation was 54.2% and the standard error was 6.1%.

**B. Plot size**

The basal area factor of 20 was used in all of the sale areas. The point of observation is 4.5 feet.



### **C. Grading System**

All trees were graded according to Columbia River Log Scaling and Grading Rules. Tree heights were recorded to a 7 inch top outside bark for hemlock, Sitka spruce; 6 inch top outside bark for Douglas-fir; 9 inches top outside bark for hardwoods; or three tenths (0.3) of DBH for all species, whichever was greater. Log lengths all favored 40 feet. Height and diameter measurement standards were to the nearest foot or inch respectively. All diameters were taken at a height of 4.5 feet. Conifers less than 20 board feet and hardwoods less than 30 board feet were not recorded.

### **5. Computation Procedure**

Plot data was entered into SuperAce for computation of basal area, stand tables, diameters, and volume to basal area ratio for each species and type. This data was then entered into the Volume Summary Worksheet to compute sale volumes.

### **6. Hidden Defect and Breakage**

A 5% deduction was applied to the conifer volume to account for defect and breakage and 15% on the hardwood volume to account for the defect found in sprayed alder and breakage.

### **7. Timber Description**

The sale areas burned in the 1933 Tillamook Fire and in the 1945 Wilson River Fire. A large portion of the sale was planted in 1958 and a smaller portion of this area was re-planted in 1965 and 1968. The remaining portions of the sale areas were naturally regenerated.

The majority of Area 1 has been commercially thinned in 1998. In all of the areas, the Douglas-fir has moderate Swiss needle cast (SNC) symptoms and poor live crown ratios resulting in slowed diameter and height growth. The alder components of these stands were aerially sprayed to release planted conifer in the 1970's resulting in alder trees with short boles and many limbs. There is also scattered hemlock, spruce, and cedar throughout the sale.

### **8. Cruiser Names/Dates**

Phillips/Wells/Zimmerlee/Hendricks/Moore/Winslow/Thurman/Kiser/Wilson, Sept. 2005 and Feb. 2006

### **9. Revenue Distribution**

FDF: 100%

Tax Code: 56-1  
Deed Numbers: 15, 230

10. **Attachments**

Stand Table  
Volume Summaries  
Logging Plan

TC TSTNDSUM

Stand Table Summary

Project CLAMSON

AREA 1

T02N R09W S31 TRVSD

T02N R09W S31 TRVSD

Twp Rge Sec Tract  
02N 09W 31 A1\_MC

Type Acres Plots Sample Trees  
RVSD 1.00 27 181

Page: 1  
Date: 04/06/201  
Time: 2:57:05PM

| S<br>SpC | T | DBH    | Sample<br>Trees | FF<br>16' | Ht<br>Tot | Trees/<br>Acre | BA/<br>Acre | Logs<br>Acre | Average Log   |               | Net<br>Tons/<br>Acre | Net<br>Cu.Ft.<br>Acre | Net<br>Bd.Ft.<br>Acre | Totals |        |     |
|----------|---|--------|-----------------|-----------|-----------|----------------|-------------|--------------|---------------|---------------|----------------------|-----------------------|-----------------------|--------|--------|-----|
|          |   |        |                 |           |           |                |             |              | Net<br>Cu.Ft. | Net<br>Bd.Ft. |                      |                       |                       | Tons   | Cunits | MBF |
| DF       |   | 9      | 2               | 86        | 49        | 3.214          | 1.48        | 3.21         | 7.6           | 29.6          | .69                  | 24                    | 95                    | 1      | 0      | 0   |
| DF       |   | 10     | 1               | 84        | 53        | 1.358          | .74         | 1.36         | 9.3           | 30.0          | .36                  | 13                    | 41                    | 0      | 0      | 0   |
| DF       |   | 11     | 5               | 82        | 88        | 5.544          | 3.70        | 8.83         | 11.5          | 46.4          | 2.91                 | 102                   | 410                   | 3      | 1      | 0   |
| DF       |   | 12     | 3               | 85        | 71        | 2.913          | 2.22        | 3.86         | 13.7          | 44.9          | 1.51                 | 53                    | 173                   | 2      | 1      | 0   |
| DF       |   | 13     | 9               | 84        | 83        | 7.202          | 6.67        | 11.99        | 15.5          | 56.0          | 5.31                 | 186                   | 671                   | 5      | 2      | 1   |
| DF       |   | 14     | 10              | 84        | 90        | 6.889          | 7.41        | 12.46        | 17.9          | 65.0          | 6.37                 | 223                   | 810                   | 6      | 2      | 1   |
| DF       |   | 15     | 5               | 85        | 83        | 3.030          | 3.70        | 5.47         | 19.4          | 69.2          | 3.02                 | 106                   | 378                   | 3      | 1      | 0   |
| DF       |   | 16     | 4               | 85        | 107       | 2.157          | 2.96        | 4.84         | 22.8          | 86.8          | 3.15                 | 111                   | 420                   | 3      | 1      | 0   |
| DF       |   | 17     | 7               | 83        | 95        | 3.330          | 5.19        | 6.66         | 25.6          | 92.8          | 4.86                 | 171                   | 618                   | 5      | 2      | 1   |
| DF       |   | 18     | 8               | 85        | 98        | 3.395          | 5.93        | 6.38         | 31.1          | 111.3         | 5.65                 | 198                   | 710                   | 6      | 2      | 1   |
| DF       |   | 19     | 4               | 84        | 96        | 1.513          | 2.96        | 3.40         | 30.2          | 108.9         | 2.92                 | 103                   | 370                   | 3      | 1      | 0   |
| DF       |   | Totals | 58              | 84        | 84        | 40.544         | 42.96       | 68.46        | 18.8          | 68.6          | 36.74                | 1,289                 | 4,696                 | 37     | 13     | 5   |
| RA       |   | 10     | 2               | 81        | 35        | 2.536          | 1.48        | 2.54         | 6.5           | 20.0          | .45                  | 16                    | 51                    | 0      | 0      | 0   |
| RA       |   | 11     | 5               | 79        | 50        | 5.595          | 3.70        | 5.60         | 9.3           | 34.0          | 1.43                 | 52                    | 190                   | 1      | 1      | 0   |
| RA       |   | 12     | 16              | 79        | 59        | 15.395         | 11.85       | 15.39        | 16.5          | 58.3          | 6.99                 | 254                   | 898                   | 7      | 3      | 1   |
| RA       |   | 13     | 7               | 78        | 68        | 5.591          | 5.19        | 6.39         | 19.3          | 66.2          | 3.40                 | 124                   | 424                   | 3      | 1      | 0   |
| RA       |   | 14     | 17              | 79        | 65        | 11.812         | 12.59       | 13.23        | 21.1          | 65.4          | 7.70                 | 280                   | 865                   | 8      | 3      | 1   |
| RA       |   | 15     | 9               | 79        | 57        | 5.444          | 6.67        | 5.44         | 24.1          | 62.1          | 3.60                 | 131                   | 338                   | 4      | 1      | 0   |
| RA       |   | 16     | 9               | 79        | 63        | 4.785          | 6.67        | 4.78         | 33.5          | 93.9          | 4.40                 | 160                   | 449                   | 4      | 2      | 0   |
| RA       |   | 17     | 6               | 79        | 60        | 2.811          | 4.44        | 3.31         | 27.9          | 91.3          | 2.54                 | 92                    | 302                   | 3      | 1      | 0   |
| RA       |   | 18     | 4               | 79        | 46        | 1.686          | 2.96        | 1.69         | 33.6          | 74.9          | 1.56                 | 57                    | 126                   | 2      | 1      | 0   |
| RA       |   | 19     | 7               | 78        | 57        | 2.647          | 5.19        | 2.65         | 40.7          | 113.2         | 2.97                 | 108                   | 300                   | 3      | 1      | 0   |
| RA       |   | 20     | 2               | 79        | 37        | .663           | 1.48        | .66          | 38.5          | 54.9          | .70                  | 26                    | 36                    | 1      | 0      | 0   |
| RA       |   | 21     | 1               | 80        | 28        | .311           | .74         | .31          | 32.0          | 40.0          | .27                  | 10                    | 12                    | 0      | 0      | 0   |
| RA       |   | 22     | 1               | 79        | 21        | .281           | .74         | .28          | 30.9          | 140.0         | .24                  | 9                     | 39                    | 0      | 0      | 0   |
| RA       |   | 25     | 1               | 78        | 45        | .216           | .74         | .22          | 64.2          | 190.0         | .38                  | 14                    | 41                    | 0      | 0      | 0   |
| RA       |   | 30     | 1               | 74        | 50        | .153           | .74         | .15          | 88.2          | 320.0         | .37                  | 13                    | 49                    | 0      | 0      | 0   |
| RA       |   | Totals | 88              | 79        | 58        | 59.924         | 65.19       | 62.64        | 21.5          | 65.8          | 36.99                | 1,345                 | 4,121                 | 37     | 13     | 4   |
| DL       |   | 20     | 2               | 82        | 96        | .704           | 1.48        | 1.41         | 35.9          | 110.2         | 1.39                 | 51                    | 155                   | 1      | 1      | 0   |
| DL       |   | 21     | 2               | 82        | 100       | .610           | 1.48        | 1.22         | 43.5          | 137.6         | 1.46                 | 53                    | 168                   | 1      | 1      | 0   |
| DL       |   | 24     | 1               | 85        | 109       | .234           | .74         | .47          | 59.5          | 225.0         | .76                  | 28                    | 105                   | 1      | 0      | 0   |
| DL       |   | 25     | 2               | 79        | 124       | .429           | 1.48        | 1.07         | 56.6          | 210.1         | 1.66                 | 61                    | 225                   | 2      | 1      | 0   |
| DL       |   | 26     | 1               | 86        | 138       | .198           | .74         | .59          | 59.6          | 273.3         | .97                  | 35                    | 162                   | 1      | 0      | 0   |
| DL       |   | 27     | 1               | 79        | 109       | .186           | .74         | .37          | 75.1          | 260.0         | .77                  | 28                    | 97                    | 1      | 0      | 0   |
| DL       |   | 29     | 1               | 79        | 113       | .161           | .74         | .32          | 90.1          | 280.0         | .80                  | 29                    | 90                    | 1      | 0      | 0   |
| DL       |   | 33     | 1               | 81        | 123       | .127           | .74         | .38          | 87.1          | 393.3         | .91                  | 33                    | 150                   | 1      | 0      | 0   |
| DL       |   | 35     | 1               | 86        | 112       | .110           | .74         | .22          | 109.6         | 480.0         | .66                  | 24                    | 106                   | 1      | 0      | 0   |
| DL       |   | Totals | 12              | 82        | 109       | 2.760          | 8.89        | 6.06         | 56.4          | 207.8         | 9.40                 | 342                   | 1,259                 | 9      | 3      | 1   |
| WH       |   | 11     | 3               | 85        | 89        | 3.411          | 2.22        | 5.70         | 10.3          | 40.0          | 1.88                 | 59                    | 228                   | 2      | 1      | 0   |
| WH       |   | 12     | 1               | 79        | 52        | .943           | .74         | .94          | 15.2          | 40.0          | .46                  | 14                    | 38                    | 0      | 0      | 0   |
| WH       |   | 13     | 1               | 82        | 74        | .768           | .74         | .77          | 23.8          | 70.0          | .58                  | 18                    | 54                    | 1      | 0      | 0   |
| WH       |   | 14     | 2               | 84        | 95        | 1.387          | 1.48        | 2.06         | 21.1          | 80.2          | 1.39                 | 43                    | 165                   | 1      | 0      | 0   |
| WH       |   | 15     | 1               | 87        | 106       | .604           | .74         | 1.21         | 23.8          | 100.0         | .92                  | 29                    | 121                   | 1      | 0      | 0   |
| WH       |   | 16     | 3               | 85        | 66        | 1.540          | 2.22        | 2.06         | 27.2          | 82.3          | 1.79                 | 56                    | 169                   | 2      | 1      | 0   |
| WH       |   | 18     | 2               | 85        | 99        | .829           | 1.48        | 1.66         | 31.4          | 115.0         | 1.67                 | 52                    | 191                   | 2      | 1      | 0   |
| WH       |   | 19     | 1               | 87        | 82        | .365           | .74         | .73          | 33.4          | 115.0         | .78                  | 24                    | 84                    | 1      | 0      | 0   |
| WH       |   | Totals | 14              | 84        | 83        | 9.846          | 10.37       | 15.12        | 19.6          | 69.4          | 9.47                 | 296                   | 1,049                 | 9      | 3      | 1   |
| WL       |   | 23     | 1               | 80        | 74        | .252           | .74         | .50          | 43.7          | 115.0         | .71                  | 22                    | 58                    | 1      | 0      | 0   |
| WL       |   | 24     | 2               | 85        | 108       | .486           | 1.48        | .97          | 62.9          | 247.7         | 1.96                 | 61                    | 241                   | 2      | 1      | 0   |

**Stand Table Summary**

**Project CLAMSON**

**T02N R09W S31 TRVSD**

**T02N R09W S31 TRVSD**

**Twp Rge Sec Tract**  
**02N 09W 31 A1\_MC**

**Type Acres Plots Sample Trees**  
**RVSD 1.00 27 181**

**Page: 2**  
**Date: 04/06/2001**  
**Time: 2:57:05PM**

| S<br>Spc | T | DBH    | Sample<br>Trees | FF<br>16' | Av<br>Ht<br>Tot | Trees/<br>Acre | BA/<br>Acre | Logs<br>Acre | Average Log   |               | Net<br>Tons/<br>Acre | Net<br>Cu.Ft.<br>Acre | Net<br>Bd.Ft.<br>Acre | Totals |        |     |
|----------|---|--------|-----------------|-----------|-----------------|----------------|-------------|--------------|---------------|---------------|----------------------|-----------------------|-----------------------|--------|--------|-----|
|          |   |        |                 |           |                 |                |             |              | Net<br>Cu.Ft. | Net<br>Bd.Ft. |                      |                       |                       | Tons   | Cunits | MBF |
| WL       |   | 25     | 3               | 81        | 136             | .655           | 2.22        | 1.97         | 51.0          | 212.3         | 3.21                 | 100                   | 417                   | 3      | 1      | 0   |
| WL       |   | 26     | 1               | 81        | 105             | .206           | .74         | .41          | 71.2          | 245.0         | .94                  | 29                    | 101                   | 1      | 0      | 0   |
| WL       |   | 30     | 1               | 81        | 108             | .154           | .74         | .31          | 97.1          | 330.0         | .96                  | 30                    | 102                   | 1      | 0      | 0   |
| WL       |   | Totals | 8               | 82        | 113             | 1.753          | 5.93        | 4.16         | 58.3          | 220.7         | 7.77                 | 243                   | 918                   | 8      | 2      | 1   |
| NF       |   | 22     | 1               | 89        | 102             | .281           | .74         | .56          | 50.6          | 210.0         | .68                  | 28                    | 118                   | 1      | 0      | 0   |
| NF       |   | Totals | 1               | 89        | 102             | .281           | .74         | .56          | 50.6          | 210.0         | 0.68                 | 28                    | 118                   | 1      | 0      | 0   |
| Totals   |   |        | 181             | 81        | 72              | 115.107        | 134.07      | 157.00       | 22.6          | 77.5          | 101.05               | 3543                  | 12,160                | 101    | 35     | 12  |

| TC TSTNDSUM         |     | Stand Table Summary |                 |           |                 |                |              |              |               |               |                      | T02N R09W S31 TRVSD   |                       |        |        |     |
|---------------------|-----|---------------------|-----------------|-----------|-----------------|----------------|--------------|--------------|---------------|---------------|----------------------|-----------------------|-----------------------|--------|--------|-----|
|                     |     | Project CLAMSON     |                 |           |                 |                |              |              |               |               |                      | T02N R09W S31 TRVSD   |                       |        |        |     |
|                     |     |                     |                 |           |                 |                |              |              |               |               |                      | Page: 1               |                       |        |        |     |
|                     |     |                     |                 |           |                 |                |              |              |               |               |                      | Date: 04/06/201       |                       |        |        |     |
|                     |     |                     |                 |           |                 |                |              |              |               |               |                      | Time: 9:53:55AM       |                       |        |        |     |
| T02N R09W S31 TRVSD |     |                     |                 |           |                 |                |              |              |               |               |                      |                       |                       |        |        |     |
| Twp                 | Rge | Sec                 | Tract           | Type      | Acres           | Plots          | Sample Trees |              |               |               |                      |                       |                       |        |        |     |
| 02N                 | 09W | 31                  | A2_MC           | RVSD      | 1.00            | 34             | 258          |              |               |               |                      |                       |                       |        |        |     |
| S<br>Spc            | T   | DBH                 | Sample<br>Trees | FF<br>16' | Av<br>Ht<br>Tot | Trees/<br>Acre | BA/<br>Acre  | Logs<br>Acre | Average Log   |               | Net<br>Tons/<br>Acre | Net<br>Cu.Ft.<br>Acre | Net<br>Bd.Ft.<br>Acre | Totals |        |     |
|                     |     |                     |                 |           |                 |                |              |              | Net<br>Cu.Ft. | Net<br>Bd.Ft. |                      |                       |                       | Tons   | Cunits | MBF |
| RA                  |     | 10                  | 7               | 81        | 34              | 7.283          | 4.12         | 7.28         | 6.4           | 22.8          | 1.28                 | 46                    | 166                   | 1      | 0      | 0   |
| RA                  |     | 11                  | 12              | 80        | 43              | 10.774         | 7.06         | 9.80         | 9.9           | 34.5          | 2.66                 | 97                    | 338                   | 3      | 1      | 0   |
| RA                  |     | 12                  | 15              | 79        | 57              | 11.260         | 8.82         | 11.26        | 16.3          | 51.2          | 5.06                 | 184                   | 577                   | 5      | 2      | 1   |
| RA                  |     | 13                  | 16              | 80        | 62              | 10.241         | 9.41         | 11.47        | 18.1          | 58.8          | 5.72                 | 208                   | 674                   | 6      | 2      | 1   |
| RA                  |     | 14                  | 25              | 80        | 68              | 13.920         | 14.71        | 15.02        | 22.4          | 70.2          | 9.25                 | 336                   | 1,054                 | 9      | 3      | 1   |
| RA                  |     | 15                  | 18              | 80        | 63              | 8.720          | 10.59        | 9.22         | 25.6          | 77.9          | 6.50                 | 236                   | 718                   | 6      | 2      | 1   |
| RA                  |     | 16                  | 18              | 80        | 75              | 7.744          | 10.59        | 9.80         | 26.7          | 87.0          | 7.21                 | 262                   | 853                   | 7      | 3      | 1   |
| RA                  |     | 17                  | 8               | 80        | 73              | 2.975          | 4.71         | 3.75         | 32.7          | 98.4          | 3.37                 | 122                   | 369                   | 3      | 1      | 0   |
| RA                  |     | 18                  | 5               | 80        | 59              | 1.692          | 2.94         | 2.04         | 32.0          | 94.4          | 1.80                 | 65                    | 193                   | 2      | 1      | 0   |
| RA                  |     | 19                  | 6               | 80        | 79              | 1.832          | 3.53         | 3.03         | 32.4          | 104.9         | 2.71                 | 98                    | 318                   | 3      | 1      | 0   |
| RA                  |     | 20                  | 6               | 80        | 66              | 1.654          | 3.53         | 2.21         | 40.6          | 120.0         | 2.47                 | 90                    | 265                   | 2      | 1      | 0   |
| RA                  |     | 21                  | 3               | 82        | 94              | .746           | 1.76         | 1.49         | 41.1          | 144.9         | 1.69                 | 61                    | 216                   | 2      | 1      | 0   |
| RA                  |     | 22                  | 5               | 80        | 55              | 1.148          | 2.94         | 1.15         | 49.2          | 156.2         | 1.56                 | 57                    | 180                   | 2      | 1      | 0   |
| RA                  |     | 23                  | 4               | 80        | 59              | .823           | 2.35         | 1.03         | 51.0          | 153.5         | 1.45                 | 53                    | 158                   | 1      | 1      | 0   |
| RA                  |     | 24                  | 2               | 80        | 54              | .374           | 1.18         | .56          | 48.6          | 156.7         | .75                  | 27                    | 88                    | 1      | 0      | 0   |
| RA                  |     | 25                  | 1               | 84        | 106             | .174           | .59          | .35          | 67.9          | 270.0         | .65                  | 24                    | 94                    | 1      | 0      | 0   |
| RA                  |     | 29                  | 1               | 82        | 104             | .129           | .59          | .26          | 84.0          | 385.0         | .60                  | 22                    | 99                    | 1      | 0      | 0   |
| RA                  |     | Totals              | 152             | 80        | 60              | 81.489         | 89.41        | 89.72        | 22.2          | 70.9          | 54.70                | 1,988                 | 6,360                 | 55     | 20     | 6   |
| DF                  |     | 8                   | 2               | 85        | 74              | 3.132          | 1.18         | 3.13         | 8.6           | 34.9          | .77                  | 27                    | 109                   | 1      | 0      | 0   |
| DF                  |     | 9                   | 2               | 85        | 64              | 2.523          | 1.18         | 2.52         | 8.7           | 35.2          | .63                  | 22                    | 89                    | 1      | 0      | 0   |
| DF                  |     | 10                  | 6               | 84        | 62              | 6.414          | 3.53         | 6.41         | 10.6          | 37.0          | 1.94                 | 68                    | 237                   | 2      | 1      | 0   |
| DF                  |     | 11                  | 6               | 81        | 67              | 5.345          | 3.53         | 7.05         | 11.2          | 38.4          | 2.24                 | 79                    | 271                   | 2      | 1      | 0   |
| DF                  |     | 12                  | 6               | 84        | 84              | 4.424          | 3.53         | 6.61         | 14.6          | 52.2          | 2.74                 | 96                    | 345                   | 3      | 1      | 0   |
| DF                  |     | 13                  | 8               | 85        | 88              | 5.200          | 4.71         | 9.09         | 14.4          | 51.9          | 3.75                 | 131                   | 472                   | 4      | 1      | 0   |
| DF                  |     | 14                  | 10              | 85        | 81              | 5.587          | 5.88         | 10.61        | 15.7          | 56.7          | 4.75                 | 166                   | 602                   | 5      | 2      | 1   |
| DF                  |     | 15                  | 6               | 83        | 105             | 2.985          | 3.53         | 5.97         | 20.3          | 77.5          | 3.44                 | 121                   | 463                   | 3      | 1      | 0   |
| DF                  |     | 16                  | 5               | 85        | 95              | 2.108          | 2.94         | 4.22         | 23.4          | 88.1          | 2.81                 | 98                    | 371                   | 3      | 1      | 0   |
| DF                  |     | 17                  | 2               | 87        | 113             | .748           | 1.18         | 1.50         | 30.5          | 140.0         | 1.30                 | 46                    | 209                   | 1      | 0      | 0   |
| DF                  |     | 18                  | 3               | 85        | 101             | 1.010          | 1.76         | 2.02         | 30.1          | 109.9         | 1.73                 | 61                    | 222                   | 2      | 1      | 0   |
| DF                  |     | 19                  | 2               | 86        | 105             | .608           | 1.18         | 1.51         | 29.4          | 111.8         | 1.26                 | 44                    | 169                   | 1      | 0      | 0   |
| DF                  |     | 21                  | 1               | 86        | 122             | .254           | .59          | .76          | 33.5          | 133.3         | .73                  | 26                    | 102                   | 1      | 0      | 0   |
| DF                  |     | Totals              | 59              | 84        | 80              | 40.338         | 34.71        | 61.40        | 16.0          | 59.6          | 28.09                | 985                   | 3,660                 | 28     | 10     | 4   |
| DL                  |     | 22                  | 1               | 84        | 99              | .227           | .59          | .45          | 45.9          | 145.0         | .58                  | 21                    | 66                    | 1      | 0      | 0   |
| DL                  |     | 23                  | 3               | 83        | 106             | .608           | 1.76         | 1.22         | 51.0          | 174.5         | 1.70                 | 62                    | 212                   | 2      | 1      | 0   |
| DL                  |     | 24                  | 2               | 86        | 106             | .386           | 1.18         | .97          | 47.1          | 191.8         | 1.25                 | 46                    | 185                   | 1      | 0      | 0   |
| DL                  |     | 25                  | 1               | 88        | 104             | .173           | .59          | .35          | 62.8          | 245.0         | .60                  | 22                    | 85                    | 1      | 0      | 0   |
| DL                  |     | 26                  | 1               | 88        | 107             | .163           | .59          | .33          | 70.0          | 290.0         | .63                  | 23                    | 95                    | 1      | 0      | 0   |
| DL                  |     | 27                  | 1               | 85        | 80              | .150           | .59          | .30          | 61.2          | 220.0         | .51                  | 18                    | 66                    | 1      | 0      | 0   |
| DL                  |     | 28                  | 1               | 86        | 97              | .138           | .59          | .28          | 77.0          | 305.0         | .58                  | 21                    | 84                    | 1      | 0      | 0   |
| DL                  |     | 29                  | 2               | 86        | 119             | .266           | 1.18         | .66          | 73.9          | 318.0         | 1.35                 | 49                    | 211                   | 1      | 0      | 0   |
| DL                  |     | 30                  | 1               | 86        | 53              | .121           | .59          | .12          | 94.0          | 240.0         | .31                  | 11                    | 29                    | 0      | 0      | 0   |
| DL                  |     | 32                  | 1               | 80        | 97              | .105           | .59          | .21          | 95.5          | 330.0         | .55                  | 20                    | 70                    | 1      | 0      | 0   |
| DL                  |     | 33                  | 1               | 72        | 122             | .099           | .59          | .30          | 77.7          | 240.0         | .63                  | 23                    | 71                    | 1      | 0      | 0   |
| DL                  |     | 35                  | 1               | 83        | 74              | .088           | .59          | .09          | 165.5         | 600.0         | .40                  | 15                    | 53                    | 0      | 0      | 0   |
| DL                  |     | 43                  | 1               | 85        | 146             | .057           | .59          | .17          | 170.1         | 880.0         | .80                  | 29                    | 151                   | 1      | 0      | 0   |
| DL                  |     | Totals              | 17              | 84        | 102             | 2.580          | 10.00        | 5.44         | 66.2          | 253.4         | 9.89                 | 360                   | 1,378                 | 10     | 4      | 1   |
| WL                  |     | 17                  | 2               | 86        | 86              | .738           | 1.18         | 1.48         | 26.6          | 94.9          | 1.26                 | 39                    | 140                   | 1      | 0      | 0   |
| WL                  |     | 18                  | 1               | 88        | 76              | .340           | .59          | .68          | 26.2          | 100.0         | .57                  | 18                    | 68                    | 1      | 0      | 0   |
| WL                  |     | 20                  | 1               | 85        | 63              | .270           | .59          | .54          | 25.5          | 110.0         | .44                  | 14                    | 59                    | 0      | 0      | 0   |
| WL                  |     | 21                  | 1               | 81        | 93              | .238           | .59          | .48          | 44.8          | 140.0         | .68                  | 21                    | 67                    | 1      | 0      | 0   |

**Stand Table Summary**

Project **CLAMSON**

**T02N R09W S31 TRVSD**

**T02N R09W S31 TRVSD**

Twp Rge Sec Tract  
**02N 09W 31 A2\_MC**

Type Acres Plots Sample Trees  
**RVSD 1.00 34 258**

Page: **2**  
 Date: **04/06/201**  
 Time: **9:53:55AM**

| Spc    | T | DBH    | Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log |            | Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals |        |     |
|--------|---|--------|-------|--------|-----------|-------------|----------|-----------|-------------|------------|------------|-----------------|-----------------|--------|--------|-----|
|        |   |        |       |        |           |             |          |           | Net Cu.Ft.  | Net Bd.Ft. |            |                 |                 | Tons   | Cunits | MBF |
| WL     |   | 23     | 1     | 87     | 89        | .204        | .59      | .41       | 52.3        | 205.0      | .68        | 21              | 84              | 1      | 0      | 0   |
| WL     |   | 25     | 1     | 84     | 108       | .170        | .59      | .51       | 44.4        | 193.3      | .72        | 23              | 99              | 1      | 0      | 0   |
| WL     |   | 27     | 1     | 85     | 105       | .148        | .59      | .30       | 79.5        | 325.0      | .75        | 24              | 96              | 1      | 0      | 0   |
| WL     |   | 28     | 1     | 79     | 113       | .141        | .59      | .28       | 86.7        | 340.0      | .78        | 24              | 96              | 1      | 0      | 0   |
| WL     |   | 32     | 1     | 80     | 109       | .107        | .59      | .21       | 89.4        | 370.0      | .61        | 19              | 79              | 1      | 0      | 0   |
| WL     |   | Totals | 10    | 85     | 88        | 2.354       | 5.88     | 4.88      | 41.6        | 161.3      | 6.50       | 203             | 787             | 6      | 2      | 1   |
| WH     |   | 9      | 2     | 83     | 43        | 2.820       | 1.18     | 2.82      | 6.1         | 25.2       | .55        | 17              | 71              | 1      | 0      | 0   |
| WH     |   | 10     | 2     | 82     | 44        | 2.192       | 1.18     | 2.19      | 8.4         | 30.0       | .57        | 18              | 66              | 1      | 0      | 0   |
| WH     |   | 11     | 1     | 81     | 75        | .908        | .59      | .91       | 15.8        | 60.0       | .46        | 14              | 54              | 0      | 0      | 0   |
| WH     |   | 13     | 2     | 85     | 63        | 1.327       | 1.18     | 1.33      | 20.9        | 65.0       | .89        | 28              | 86              | 1      | 0      | 0   |
| WH     |   | 14     | 4     | 83     | 87        | 2.163       | 2.35     | 3.78      | 19.7        | 74.3       | 2.38       | 74              | 281             | 2      | 1      | 0   |
| WH     |   | Totals | 11    | 83     | 59        | 9.410       | 6.47     | 11.03     | 13.8        | 50.6       | 4.85       | 152             | 558             | 5      | 2      | 1   |
| SS     |   | 14     | 1     | 71     | 28        | .535        | .59      | .53       | 13.3        | 30.0       | .18        | 7               | 16              | 0      | 0      | 0   |
| SS     |   | 20     | 1     | 69     | 38        | .270        | .59      | .27       | 42.5        | 40.0       | .30        | 11              | 11              | 0      | 0      | 0   |
| SS     |   | 22     | 2     | 82     | 49        | .452        | 1.18     | .45       | 60.5        | 65.0       | .71        | 27              | 29              | 1      | 0      | 0   |
| SS     |   | 28     | 1     | 80     | 69        | .138        | .59      | .28       | 65.0        | 140.0      | .46        | 18              | 39              | 0      | 0      | 0   |
| SS     |   | 30     | 1     | 80     | 76        | .120        | .59      | .24       | 67.4        | 260.0      | .42        | 16              | 62              | 0      | 0      | 0   |
| SS     |   | 32     | 3     | 79     | 92        | .316        | 1.76     | .74       | 85.9        | 288.6      | 1.65       | 63              | 213             | 2      | 1      | 0   |
| SS     |   | Totals | 9     | 76     | 52        | 1.830       | 5.29     | 2.51      | 57.1        | 147.4      | 3.73       | 143             | 370             | 4      | 1      | 0   |
| Totals |   |        | 258   | 81     | 67        | 138.001     | 151.76   | 174.98    | 21.9        | 74.9       | 107.77     | 3832            | 13,113          | 108    | 38     | 13  |

| Stand Table Summary |   |                        |              |        |           |             |          |              |             |                     |                 |                 |                 |        |        |     |    |    |
|---------------------|---|------------------------|--------------|--------|-----------|-------------|----------|--------------|-------------|---------------------|-----------------|-----------------|-----------------|--------|--------|-----|----|----|
| TC TSTNDSUM         |   | Project CLAMSON AREA 3 |              |        |           |             |          |              |             |                     |                 |                 |                 |        |        |     |    |    |
| T02N R09W S31 TRVSD |   |                        |              |        |           |             |          |              |             | T02N R09W S31 TRVSD |                 |                 |                 |        |        |     |    |    |
| Twp Rge Sec Tract   |   |                        |              | Type   |           | Acres       | Plots    | Sample Trees |             |                     | Page: 1         |                 |                 |        |        |     |    |    |
| 02N 09W 31 A3_RC    |   |                        |              | RVSD   |           | 1.00        | 6        | 62           |             |                     | Date: 04/06/201 |                 |                 |        |        |     |    |    |
| Time: 9:27:49AM     |   |                        |              |        |           |             |          |              |             |                     |                 |                 |                 |        |        |     |    |    |
| Spc                 | T | DBH                    | Sample Trees | FF 16' | Av Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre    | Average Log |                     | Net Tons/ Acre  | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals |        |     |    |    |
|                     |   |                        |              |        |           |             |          |              | Net Cu.Ft.  | Net Bd.Ft.          |                 |                 |                 | Tons   | Cunits | MBF |    |    |
| DF                  |   | 8                      | 1            | 84     | 64        | 9.089       | 3.33     | 9.09         | 7.5         | 30.0                | 1.95            | 68              | 273             | 2      | 1      | 0   |    |    |
| DF                  |   | 9                      | 2            | 85     | 42        | 14.297      | 6.67     | 14.30        | 6.9         | 24.8                | 2.79            | 98              | 355             | 3      | 1      | 0   |    |    |
| DF                  |   | 10                     | 5            | 86     | 62        | 30.123      | 16.67    | 36.00        | 9.1         | 34.9                | 9.37            | 329             | 1,255           | 9      | 3      | 1   |    |    |
| DF                  |   | 11                     | 6            | 85     | 74        | 29.259      | 20.00    | 43.70        | 11.1        | 42.2                | 13.77           | 484             | 1,842           | 14     | 5      | 2   |    |    |
| DF                  |   | 12                     | 5            | 84     | 79        | 20.829      | 16.67    | 28.97        | 14.9        | 52.7                | 12.28           | 431             | 1,528           | 12     | 4      | 2   |    |    |
| DF                  |   | 13                     | 8            | 85     | 90        | 29.127      | 26.67    | 51.02        | 14.8        | 54.8                | 21.61           | 755             | 2,796           | 22     | 8      | 3   |    |    |
| DF                  |   | 14                     | 10           | 86     | 85        | 31.562      | 33.33    | 63.12        | 15.7        | 57.9                | 28.39           | 994             | 3,655           | 28     | 10     | 4   |    |    |
| DF                  |   | 15                     | 6            | 89     | 101       | 16.568      | 20.00    | 33.14        | 22.0        | 95.6                | 20.81           | 730             | 3,169           | 21     | 7      | 3   |    |    |
| DF                  |   | 16                     | 1            | 84     | 88        | 2.329       | 3.33     | 4.66         | 22.3        | 70.0                | 2.94            | 104             | 326             | 3      | 1      | 0   |    |    |
| DF                  |   | Totals                 |              |        | 44        | 86          | 77       | 183.183      | 146.67      | 284.00              | 14.1            | 53.5            | 113.90          | 3,993  | 15,199 | 114 | 40 | 15 |
| DL                  |   | 15                     | 2            | 78     | 109       | 5.562       | 6.67     | 11.12        | 21.0        | 69.9                | 6.42            | 234             | 778             | 6      | 2      | 1   |    |    |
| DL                  |   | 16                     | 2            | 84     | 83        | 4.658       | 6.67     | 9.32         | 21.6        | 70.0                | 5.54            | 202             | 652             | 6      | 2      | 1   |    |    |
| DL                  |   | 17                     | 2            | 85     | 117       | 4.084       | 6.67     | 8.17         | 31.9        | 139.4               | 7.19            | 260             | 1,138           | 7      | 3      | 1   |    |    |
| DL                  |   | 18                     | 3            | 86     | 92        | 5.768       | 10.00    | 11.54        | 28.3        | 101.4               | 9.01            | 327             | 1,169           | 9      | 3      | 1   |    |    |
| DL                  |   | 19                     | 3            | 85     | 101       | 5.065       | 10.00    | 11.79        | 30.6        | 112.7               | 9.91            | 360             | 1,329           | 10     | 4      | 1   |    |    |
| DL                  |   | Totals                 |              |        | 12        | 83          | 100      | 25.138       | 40.00       | 51.93               | 26.6            | 97.5            | 38.07           | 1,383  | 5,066  | 38  | 14 | 5  |
| RA                  |   | 12                     | 1            | 85     | 39        | 4.106       | 3.33     | 4.11         | 11.9        | 40.0                | 1.35            | 49              | 164             | 1      | 0      | 0   |    |    |
| RA                  |   | 13                     | 2            | 80     | 74        | 6.911       | 6.67     | 6.91         | 25.4        | 70.0                | 4.85            | 176             | 484             | 5      | 2      | 0   |    |    |
| RA                  |   | 14                     | 1            | 79     | 55        | 3.353       | 3.33     | 3.35         | 19.1        | 40.0                | 1.77            | 64              | 134             | 2      | 1      | 0   |    |    |
| RA                  |   | 15                     | 1            | 80     | 86        | 2.716       | 3.33     | 2.72         | 36.8        | 110.0               | 2.75            | 100             | 299             | 3      | 1      | 0   |    |    |
| RA                  |   | Totals                 |              |        | 5         | 81          | 64       | 17.087       | 16.67       | 17.09               | 22.7            | 63.3            | 10.71           | 389    | 1,081  | 11  | 4  | 1  |
| SS                  |   | 14                     | 1            | 82     | 25        | 3.353       | 3.33     | 3.35         | 11.1        | 20.0                | .97             | 37              | 67              | 1      | 0      | 0   |    |    |
| SS                  |   | Totals                 |              |        | 1         | 82          | 25       | 3.353        | 3.33        | 3.35                | 11.1            | 20.0            | 0.97            | 37     | 67     | 1   | 0  | 0  |
| Totals              |   |                        |              |        | 62        | 85          | 78       | 228.761      | 206.67      | 356.37              | 16.3            | 60.1            | 163.65          | 5801   | 21,413 | 164 | 58 | 21 |

TC TSTNDSUM

Stand Table Summary

Project CLAMSON

AREA 4

T02N R09W S31 TRVSD

T02N R09W S31 TRVSD

Twp Rge Sec Tract  
02N 09W 31 A4\_PC

Type Acres Plots Sample Trees  
RVSD 1.00 12 94

Page: 1  
Date: 04/06/2001  
Time: 2:56:35PM

| Spc    | T      | DBH | Sample Trees | FF 16' | Ht Tot | Trees/ Acre | BA/ Acre | Logs Acre | Average Log |            | Net Tons/ Acre | Net Cu.Ft. Acre | Net Bd.Ft. Acre | Totals |        |     |
|--------|--------|-----|--------------|--------|--------|-------------|----------|-----------|-------------|------------|----------------|-----------------|-----------------|--------|--------|-----|
|        |        |     |              |        |        |             |          |           | Net Cu.Ft.  | Net Bd.Ft. |                |                 |                 | Tons   | Cunits | MBF |
| DL     |        | 18  | 3            | 85     | 88     | 2.809       | 5.00     | 5.62      | 29.4        | 106.5      | 4.54           | 165             | 598             | 5      | 2      | 1   |
| DL     |        | 19  | 8            | 86     | 79     | 6.774       | 13.33    | 13.55     | 28.7        | 97.5       | 10.67          | 388             | 1,321           | 11     | 4      | 1   |
| DL     |        | 20  | 3            | 85     | 108    | 2.254       | 5.00     | 4.51      | 41.6        | 154.8      | 5.15           | 187             | 698             | 5      | 2      | 1   |
| DL     |        | 21  | 4            | 86     | 88     | 2.766       | 6.67     | 5.53      | 38.6        | 135.0      | 5.87           | 214             | 747             | 6      | 2      | 1   |
| DL     |        | 23  | 2            | 85     | 92     | 1.171       | 3.33     | 2.34      | 48.0        | 178.1      | 3.09           | 112             | 417             | 3      | 1      | 0   |
| DL     |        | 24  | 2            | 86     | 101    | 1.048       | 3.33     | 2.10      | 56.7        | 229.7      | 3.27           | 119             | 481             | 3      | 1      | 0   |
| DL     |        | 25  | 1            | 85     | 85     | .489        | 1.67     | .98       | 54.6        | 195.0      | 1.47           | 53              | 191             | 1      | 1      | 0   |
| DL     |        | 26  | 1            | 84     | 78     | .452        | 1.67     | .90       | 55.6        | 195.0      | 1.38           | 50              | 176             | 1      | 1      | 0   |
| DL     |        | 29  | 1            | 86     | 113    | .358        | 1.67     | 1.08      | 59.2        | 260.0      | 1.75           | 64              | 280             | 2      | 1      | 0   |
| DL     |        | 30  | 1            | 87     | 112    | .340        | 1.67     | 1.02      | 64.1        | 293.3      | 1.79           | 65              | 299             | 2      | 1      | 0   |
| DL     |        | 31  | 1            | 81     | 98     | .318        | 1.67     | .95       | 52.3        | 216.7      | 1.37           | 50              | 207             | 1      | 0      | 0   |
| DL     | Totals |     | 27           | 86     | 89     | 18.778      | 45.00    | 38.57     | 38.1        | 140.4      | 40.36          | 1,468           | 5,414           | 40     | 15     | 5   |
| DF     |        | 10  | 1            | 80     | 98     | 3.182       | 1.67     | 3.18      | 14.8        | 60.0       | 1.35           | 47              | 191             | 1      | 0      | 0   |
| DF     |        | 11  | 1            | 79     | 96     | 2.436       | 1.67     | 4.87      | 9.6         | 40.0       | 1.34           | 47              | 195             | 1      | 0      | 0   |
| DF     |        | 12  | 1            | 87     | 89     | 2.122       | 1.67     | 4.24      | 11.1        | 45.0       | 1.34           | 47              | 191             | 1      | 0      | 0   |
| DF     |        | 13  | 3            | 87     | 79     | 5.515       | 5.00     | 9.19      | 14.5        | 54.3       | 3.80           | 133             | 499             | 4      | 1      | 0   |
| DF     |        | 14  | 3            | 85     | 90     | 4.793       | 5.00     | 9.59      | 16.1        | 60.0       | 4.39           | 154             | 575             | 4      | 2      | 1   |
| DF     |        | 15  | 5            | 87     | 91     | 7.016       | 8.33     | 12.67     | 20.9        | 79.0       | 7.55           | 265             | 1,001           | 8      | 3      | 1   |
| DF     |        | 16  | 4            | 86     | 100    | 4.731       | 6.67     | 9.46      | 24.2        | 93.8       | 6.52           | 229             | 887             | 7      | 2      | 1   |
| DF     |        | 17  | 5            | 85     | 89     | 5.264       | 8.33     | 10.53     | 25.1        | 88.8       | 7.55           | 265             | 935             | 8      | 3      | 1   |
| DF     |        | 18  | 1            | 87     | 99     | .975        | 1.67     | 1.95      | 29.9        | 110.0      | 1.66           | 58              | 215             | 2      | 1      | 0   |
| DF     |        | 19  | 1            | 87     | 103    | .883        | 1.67     | 1.77      | 34.7        | 120.0      | 1.75           | 61              | 212             | 2      | 1      | 0   |
| DF     | Totals |     | 25           | 85     | 91     | 36.918      | 41.67    | 67.46     | 19.4        | 72.7       | 37.24          | 1,307           | 4,901           | 37     | 13     | 5   |
| WL     |        | 16  | 2            | 86     | 94     | 2.272       | 3.33     | 4.54      | 25.5        | 97.5       | 3.70           | 116             | 443             | 4      | 1      | 0   |
| WL     |        | 18  | 5            | 86     | 90     | 4.740       | 8.33     | 9.48      | 30.3        | 112.1      | 9.21           | 288             | 1,063           | 9      | 3      | 1   |
| WL     |        | 19  | 4            | 86     | 81     | 3.351       | 6.67     | 5.86      | 33.0        | 112.9      | 6.19           | 193             | 661             | 6      | 2      | 1   |
| WL     |        | 20  | 5            | 87     | 85     | 3.907       | 8.33     | 7.81      | 34.5        | 122.1      | 8.62           | 269             | 954             | 9      | 3      | 1   |
| WL     |        | 21  | 1            | 84     | 94     | .727        | 1.67     | 1.45      | 42.8        | 145.0      | 1.99           | 62              | 211             | 2      | 1      | 0   |
| WL     |        | 22  | 4            | 85     | 85     | 2.509       | 6.67     | 5.02      | 45.0        | 164.2      | 7.22           | 226             | 824             | 7      | 2      | 1   |
| WL     |        | 23  | 1            | 86     | 92     | .583        | 1.67     | 1.17      | 53.1        | 210.0      | 1.98           | 62              | 245             | 2      | 1      | 0   |
| WL     |        | 30  | 1            | 88     | 88     | .340        | 1.67     | .68       | 89.7        | 370.0      | 1.95           | 61              | 251             | 2      | 1      | 0   |
| WL     | Totals |     | 23           | 86     | 87     | 18.429      | 38.33    | 36.01     | 35.5        | 129.2      | 40.87          | 1,277           | 4,652           | 41     | 13     | 5   |
| WH     |        | 9   | 1            | 81     | 26     | 3.773       | 1.67     | 3.77      | 5.4         | 20.0       | .65            | 20              | 75              | 1      | 0      | 0   |
| WH     |        | 11  | 1            | 82     | 76     | 2.620       | 1.67     | 2.62      | 15.8        | 60.0       | 1.33           | 42              | 157             | 1      | 0      | 0   |
| WH     |        | 12  | 3            | 84     | 92     | 6.301       | 5.00     | 12.60     | 11.7        | 46.7       | 4.73           | 148             | 589             | 5      | 1      | 1   |
| WH     |        | 14  | 2            | 84     | 69     | 3.305       | 3.33     | 4.98      | 17.6        | 56.6       | 2.81           | 88              | 282             | 3      | 1      | 0   |
| WH     |        | 15  | 1            | 84     | 82     | 1.288       | 1.67     | 2.58      | 19.4        | 70.0       | 1.60           | 50              | 180             | 2      | 0      | 0   |
| WH     |        | 17  | 2            | 87     | 73     | 2.054       | 3.33     | 3.07      | 30.1        | 96.6       | 2.97           | 93              | 297             | 3      | 1      | 0   |
| WH     |        | 22  | 1            | 89     | 85     | .631        | 1.67     | 1.26      | 44.4        | 160.0      | 1.79           | 56              | 202             | 2      | 1      | 0   |
| WH     | Totals |     | 11           | 84     | 71     | 19.972      | 18.33    | 30.89     | 16.1        | 57.7       | 15.88          | 496             | 1,783           | 16     | 5      | 2   |
| RA     |        | 12  | 1            | 81     | 58     | 2.053       | 1.67     | 2.05      | 15.9        | 50.0       | .90            | 33              | 103             | 1      | 0      | 0   |
| RA     |        | 13  | 1            | 75     | 70     | 1.781       | 1.67     | 1.78      | 24.1        | 70.0       | 1.18           | 43              | 125             | 1      | 0      | 0   |
| RA     |        | 14  | 1            | 80     | 80     | 1.537       | 1.67     | 1.54      | 30.7        | 70.0       | 1.30           | 47              | 108             | 1      | 0      | 0   |
| RA     |        | 15  | 3            | 78     | 53     | 4.039       | 5.00     | 4.04      | 23.5        | 80.0       | 2.61           | 95              | 323             | 3      | 1      | 0   |
| RA     |        | 17  | 1            | 79     | 56     | 1.070       | 1.67     | 1.07      | 34.7        | 80.0       | 1.02           | 37              | 86              | 1      | 0      | 0   |
| RA     |        | 20  | 1            | 83     | 60     | .779        | 1.67     | .78       | 47.5        | 160.0      | 1.02           | 37              | 125             | 1      | 0      | 0   |
| RA     | Totals |     | 8            | 79     | 61     | 11.259      | 13.33    | 11.26     | 25.9        | 77.1       | 8.02           | 292             | 868             | 8      | 3      | 1   |
| Totals |        |     | 94           | 84     | 83     | 105.356     | 156.67   | 184.19    | 26.3        | 95.7       | 142.38         | 4840            | 17,619          | 142    | 48     | 18  |





"STEWARDSHIP IN FORESTRY"

## Clamson

### Volume Summary

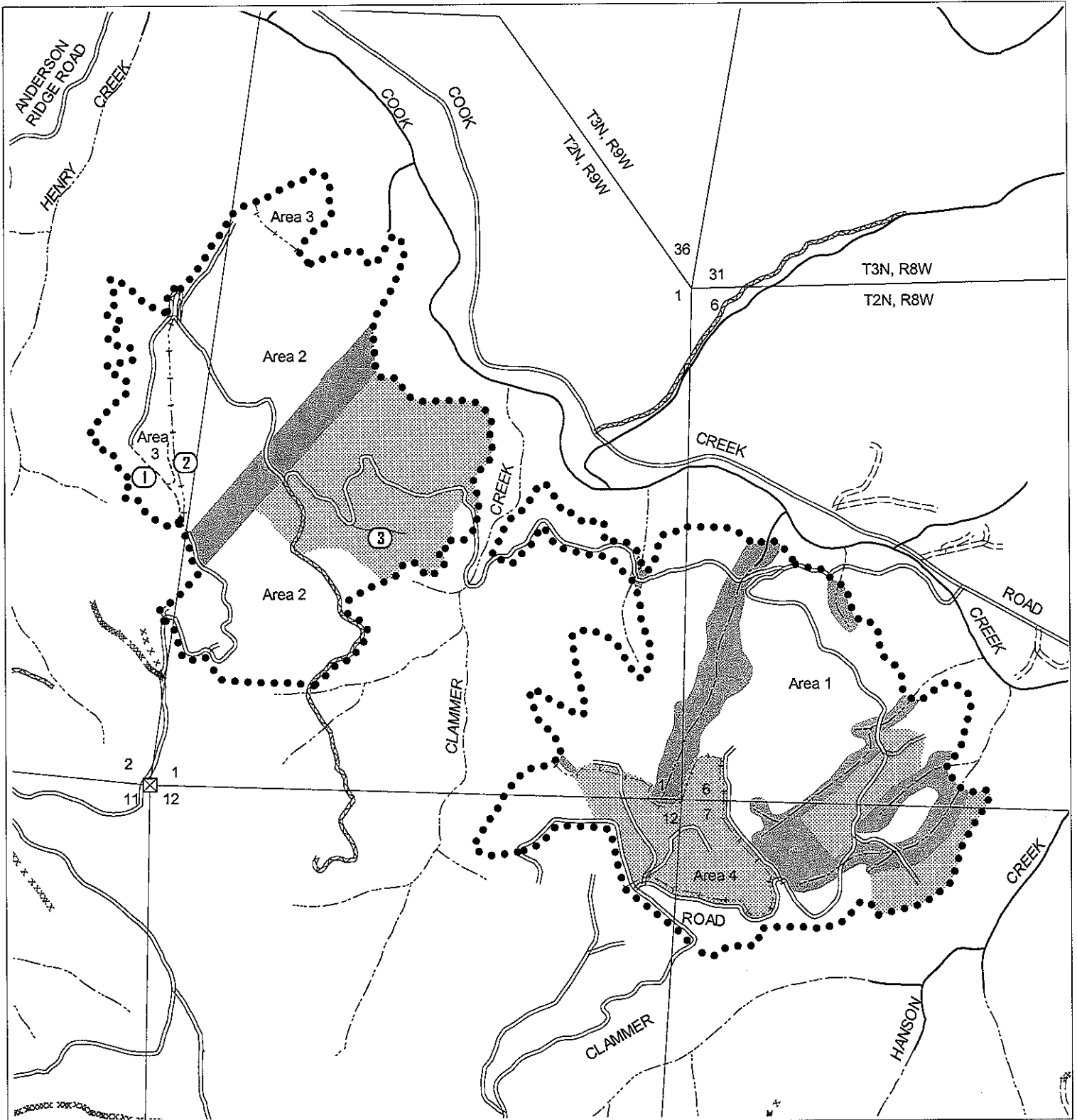
| Area 1          |                        |       |                 |               |       |                |
|-----------------|------------------------|-------|-----------------|---------------|-------|----------------|
| 172 acres       |                        |       |                 |               |       |                |
| SPECIES         | Basal Area<br>Per Acre | V-BAR | Vol/Acre<br>MBF | Volume<br>MBF | D & B | Net Vol<br>MBF |
| Douglas-fir     | 43                     | 109   | 4.7             | 806           | 5%    | 766            |
| Alder           | 65                     | 63    | 4.1             | 704           | 15%   | 599            |
| Western Hemlock | 10                     | 101   | 1.0             | 174           | 5%    | 165            |
| <b>TOTAL</b>    |                        |       |                 | 1684          |       | 1530           |

| Area 2          |                        |       |                 |               |       |                |
|-----------------|------------------------|-------|-----------------|---------------|-------|----------------|
| 193 acres       |                        |       |                 |               |       |                |
| SPECIES         | Basal Area<br>Per Acre | V-BAR | Vol/Acre<br>MBF | Volume<br>MBF | D & B | Net Vol<br>MBF |
| Douglas-fir     | 35                     | 105   | 3.7             | 709           | 5%    | 674            |
| Alder           | 89                     | 71    | 6.3             | 1220          | 15%   | 1037           |
| Western Hemlock | 6                      | 86    | 0.5             | 100           | 5%    | 95             |
| <b>TOTAL</b>    |                        |       |                 | 2028          |       | 1805           |

| Area 3          |                        |       |                 |               |       |                |
|-----------------|------------------------|-------|-----------------|---------------|-------|----------------|
| 33 acres        |                        |       |                 |               |       |                |
| SPECIES         | Basal Area<br>Per Acre | V-BAR | Vol/Acre<br>MBF | Volume<br>MBF | D & B | Net Vol<br>MBF |
| Douglas-fir     | 146                    | 103   | 15.0            | 496           | 5%    | 471            |
| Alder           | 16                     | 65    | 1.0             | 34            | 15%   | 29             |
| Western Hemlock | 0                      | 0     | 0.0             | 0             | 5%    | 0              |
| <b>TOTAL</b>    |                        |       |                 | 531           |       | 501            |

| Area 4          |                        |       |                 |               |       |                |
|-----------------|------------------------|-------|-----------------|---------------|-------|----------------|
| 49 acres        |                        |       |                 |               |       |                |
| SPECIES         | Basal Area<br>Per Acre | V-BAR | Vol/Acre<br>MBF | Volume<br>MBF | D & B | Net Vol<br>MBF |
| Douglas-fir     | 42                     | 117   | 4.9             | 241           | 5%    | 229            |
| Alder           | 13                     | 65    | 0.8             | 41            | 15%   | 35             |
| Western Hemlock | 18                     | 97    | 1.7             | 86            | 5%    | 80             |
| <b>TOTAL</b>    |                        |       |                 | 368           |       | 344            |

| TOTAL SALE VOLUME |             |                | 447 acres |
|-------------------|-------------|----------------|-----------|
| SPECIES           | Gross (MBF) | Net Vol. (MBF) |           |
| Douglas-fir       | 2252        | 2140           |           |
| Alder             | 2000        | 1700           |           |
| Western Hemlock   | 359         | 340            |           |
| <b>TOTAL</b>      | <b>4611</b> | <b>4180</b>    |           |



- Landing
- ⊕ Domestic water supply intake
- ⊕ Helicopter landing zone
- ⊕ Truck turn-around
- ⊗ Survey corner
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- ▧ Downhill yarding
- ▨ Buffer
- ▨ Non-required thinning
- - - - Area boundary
- Sale boundary
- Ownership boundary
- Perennial Type-F stream
- - - Perennial Type-N stream
- Surfaced road
- == Unsurfaced road
- State/Federal highway
- County road
- Non-project road
- - - Swing road
- Legacy road
- x x x Blocked road
- o o o OHV trail
- - - Non-motorized trail
- T T Transmission line

**LOGGING PLAN**

Timber Sale Contract No. 341-06-45  
 Clamson  
 Portions of Sections 1, 2 and 12,  
 T2N, R9W, and sections 6 and 7  
 T2N, R8W, W. M.  
 Tillamook County, Oregon

| Area         | Type of Operation | Acres      |            |
|--------------|-------------------|------------|------------|
|              |                   | Gross      | Net        |
| 1            | Modified clearcut | 236        | 172        |
| 2            | Modified clearcut | 219        | 193        |
| 3            | Retention cut     | 35         | 33         |
| 4            | Partial cut       | 49         | 49         |
| <b>Total</b> |                   | <b>539</b> | <b>447</b> |



Tillamook District GIS  
 03-14-2006

This product is for informational use and may not have been prepared for, or suitable for legal, engineering, or surveying purposes.

