



**Federal
Lands
Program**

Contract Administrator:
Dakota Truitt
Dakota.truitt@dnr.wa.gov
360-999-0013

Updated information is being provided for 2D Timber Sale #36-101213:

Documents amended:

Brief Description	Date	Completed By
The following updates have been made to the Notice of Sale: -Minimum bid adjusted for increased road costs: -Douglas-fir \$203.00/MBF (Est. Total value \$678,000.00) -Bid deposit updated \$67,800 -Bridge Installation at 8+75 on FS-2923060 increased to a 70' bridge, crane needed for mobilization and installation of bridge	09/17/2020	Dakota Truitt
The following updates have been made to the Road Plan: - Road costs increased by \$40,216 for installation costs of the 70' bridge - Bridge Installation Details Sheet added to road plan - Crane needed for mobilization and installation of bridge - 119 ft. of in-stream excavation upon installation of the bridge - Added Clause 7-45 Purchaser Supplies Bridge- State Reimbursed	09/17/2020	Chad Vandehey Justin Long



GOOD NEIGHBOR AUTHORITY TIMBER NOTICE OF SALE

SALE NAME: 2D

AGREEMENT NO: 36-101213

AUCTION: September 23rd, 2020 starting at 10:00 a.m., COUNTY: Clallam
Olympic Region Office, Forks, WA

SALE LOCATION: Sale located approximately 20 miles NE of Forks, WA.

PRODUCTS SOLD AND SALE AREA:

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags, blue special management tags, pink flagging, timber type changes, blazed property lines, and road FS-2923070 for Unit #1, except trees ringed in blue or orange paint with white FS Wildlife Tree/Snag tags.

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags, blue special management tags, pink flagging, and road FS-2923 for Unit #2, 3, 4, 11, and 12, except trees ringed in blue or orange paint with white FS Wildlife Tree/Snag tags.

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags and blue special management tags, and pink flagging for Unit #5, except trees ringed in blue or orange paint with white FS Wildlife Tree/Snag tags.

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags, blue special management tags, pink flagging, timber type changes, blazed property lines, and roads FS-2923060 for Units #6, 7, 8, 9, and 10, except trees ringed in blue or orange paint with white FS Wildlife Tree/Snag tags.

The above described products on part(s) of Sections 13, 14, 15 of Township 29N, Range 12 West, and Sections 5, 6, 7, 8, 18, 42 of Township 29N, Range 11W, containing 338 acres, more or less.

ESTIMATED SALE VOLUMES AND QUALITY:

Table with 8 columns: Species, Avg DBH, Total Take MBF, Price \$/MBF, and MBF by Grade (2S, 3S, 4S, UT). Rows include Douglas-fir, Western hemlock, Sitka spruce, Red alder, and Subtotal.

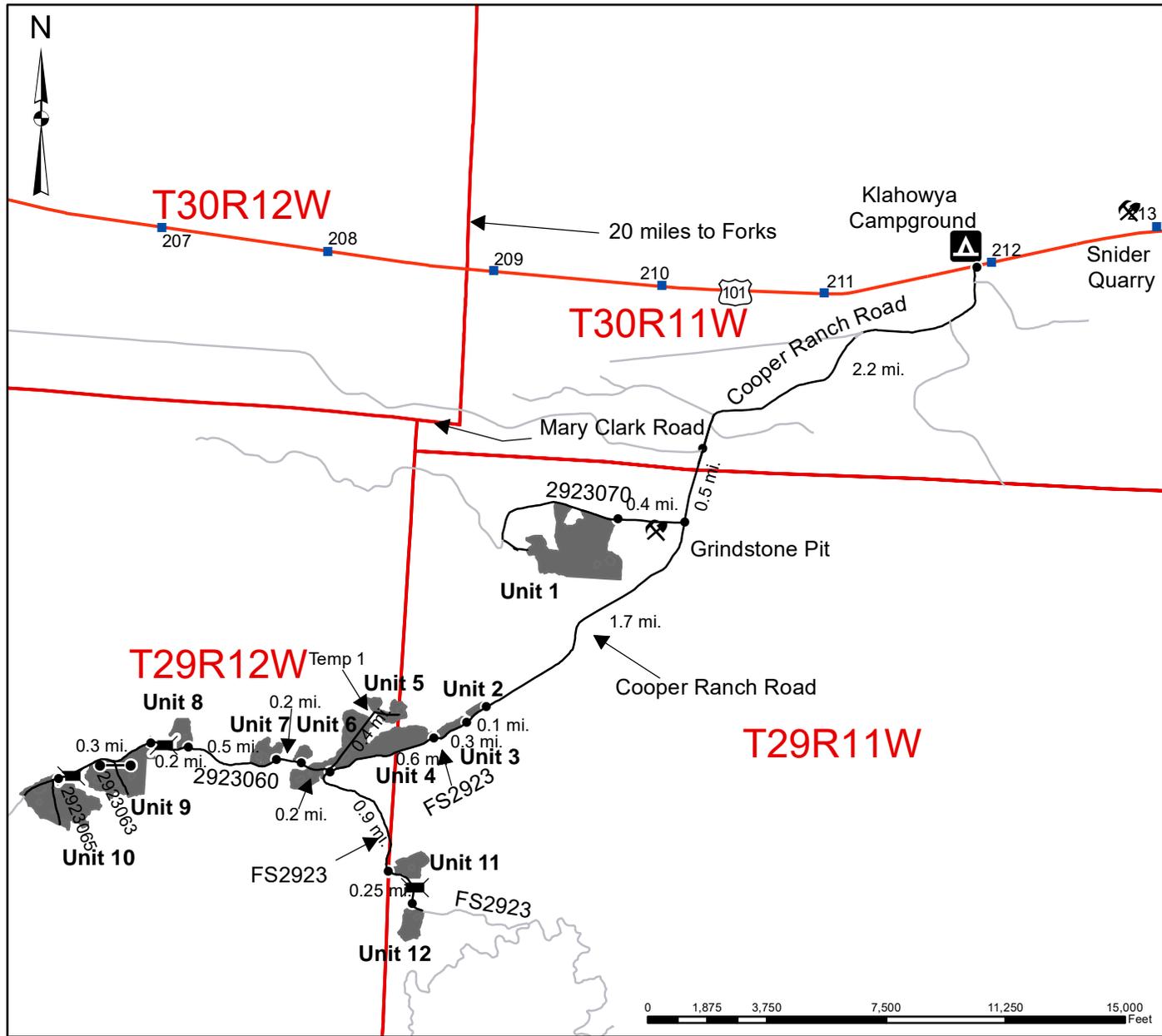
MINIMUM BID: Douglas-fir \$203.00/MBF (Est. Total value \$678,000.00)

BID METHOD: Sealed Bids

GOOD NEIGHBOR AUTHORITY DRIVING MAP

SALE NAME: 2D
 AGREEMENT #:36-101213

REGION: OLYMPIC NATIONAL FOREST
 COUNTY: CLALLAM



- | | | | |
|--|--------------------|--|--------------------------|
| | Bridge | | Haul |
| | Campground | | Haul route |
| | Distance Indicator | | Other Road |
| | Gate (AA1) | | U.S. |
| | Rockpit | | WSDOT - Milepost Markers |
| | | | Sale Area |
| | | | Survey - Township Lines |

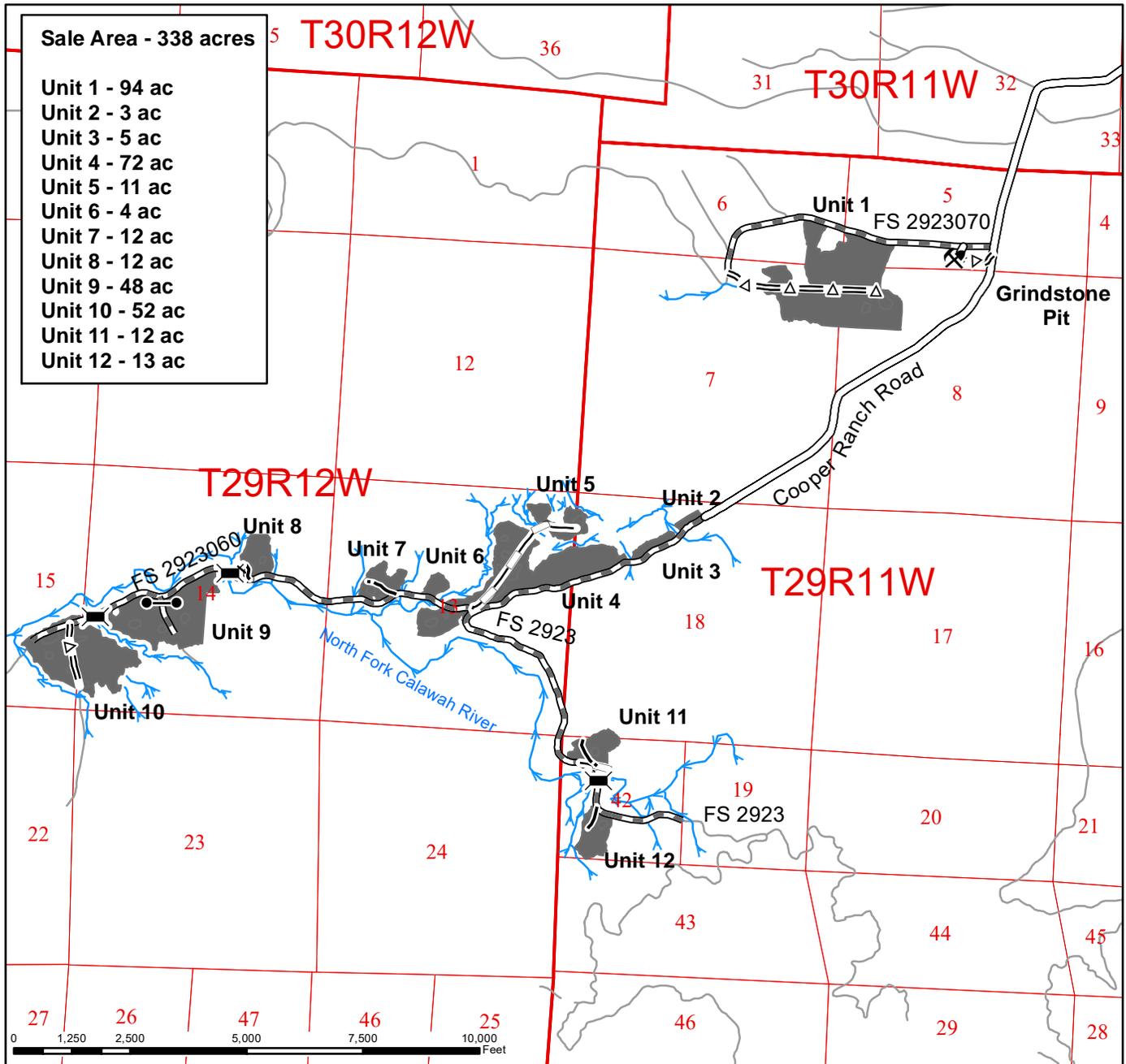
DIRECTIONS:

From Forks drive 20 miles N on HWY 101 and turn right onto Cooper Ranch Road. Follow Cooper Ranch Road for 2.2 miles and turn right to stay on Cooper Ranch Road at the Mark Clark Road intersection. Continue 0.5 miles to Grindstone pit on the left and for the 2923070 road. Turn right onto the 2923070 and continue 0.4 miles to Unit 1. For Unit 2 continue 1.7 miles on Cooper Ranch Road, past the 2923070 intersection. At the Reaume Ranch, Cooper Ranch Road (paved) becomes FS2923 (gravel) and Units 2, 3, 4, are on the right side of the road over the next mile. For Unit 5 turn onto the 2923060 intersection in Unit 4 and immediately turn right onto the Temp 1 road to walk in to Unit 5. For Unit 6- 10 continue on the 2923060 road. For Units 11 and 12 continue 0.9 miles past the 2923060 intersection. Unit 11 is on the left side of the road before the N. Fork Calawah Bridge. Continue 0.25 miles past Unit 11, over the bridge for Unit 12 on the right side of the road.

GOOD NEIGHBOR AUTHORITY VICINITY MAP

SALE NAME: 2D
 AGREEMENT #: 36-101213
 TOWNSHIP(S): T29R11W, T29R12W

REGION: OLYMPIC NATIONAL FOREST
 COUNTY: CLALLAM
 ELEVATION RGE: 580' - 1120'



Legend

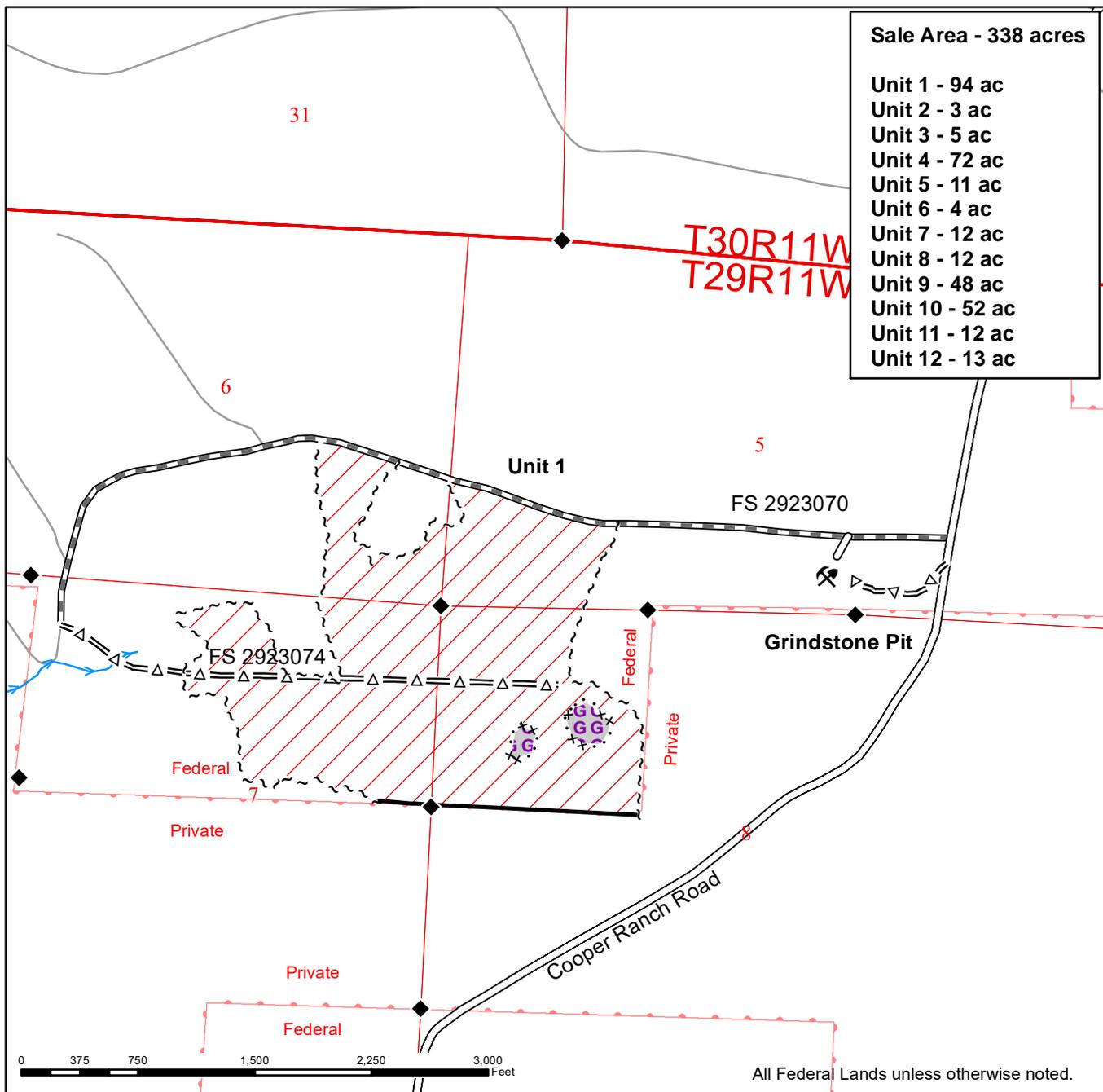
	Bridge		Existing Road		Streams		Survey - Township Lines
	Gate (AA1)		Optional Temporary Construction		Sale Area		Survey - Section Lines
	Rockpit		Optional Maintenance				
			Optional Temporary Reconstruction				
			Required Maintenance				

N

GOOD NEIGHBOR AUTHORITY TIMBER SALE MAP

SALE NAME: 2D
 AGREEMENT #: 36-101213
 TOWNSHIP(S): T29R11W, T29R12W

REGION: OLYMPIC NATIONAL FOREST
 COUNTY: CLALLAM
 ELEVATION RGE: 580' - 1120'



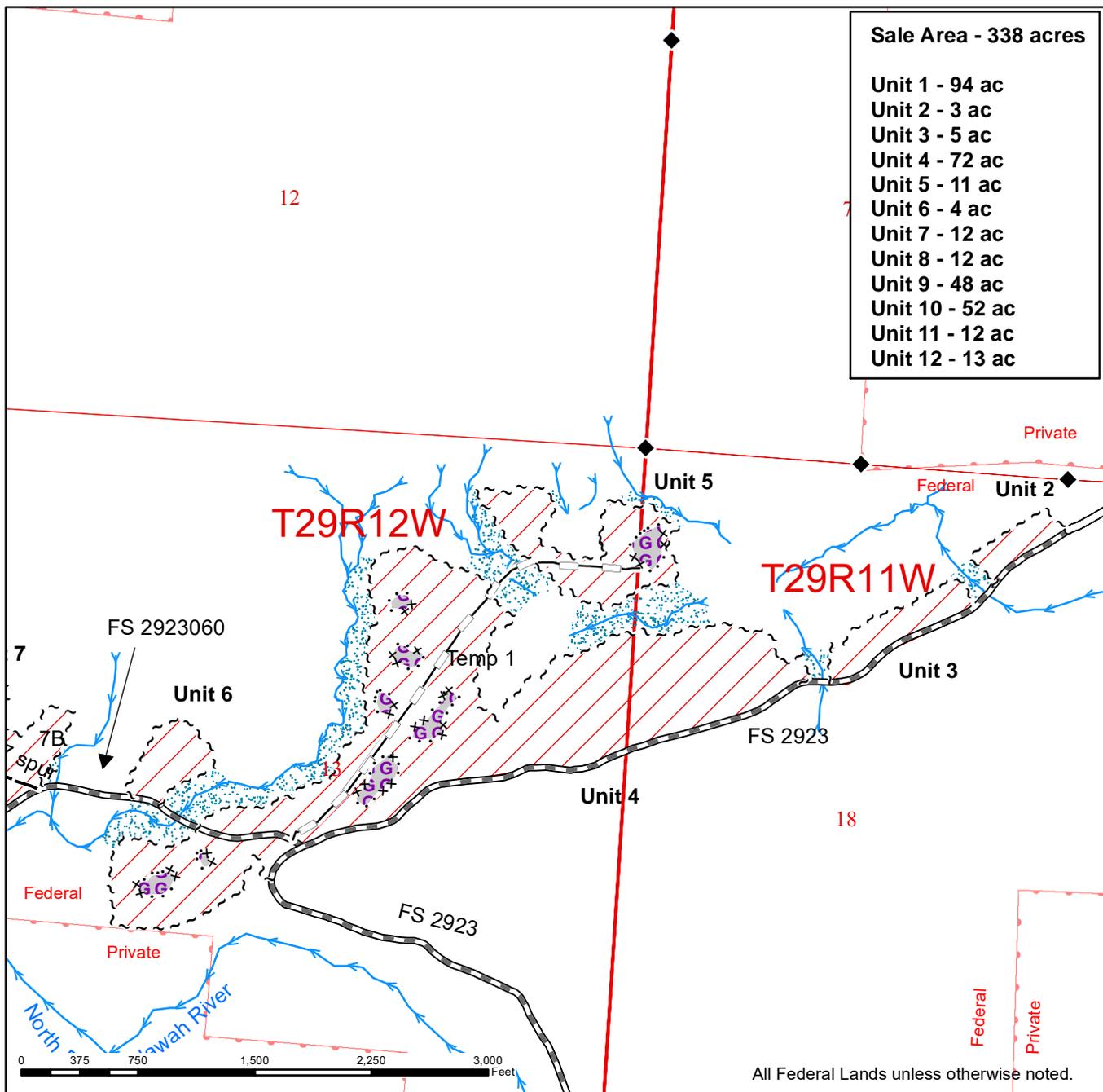
Legend

Sale Area	Timber Type Change	Bridge	Existing Road	Survey - Township Lines
Gaps	Sale Boundary Tags	Gate (AA1)	Optional Temporary Construction	Survey - Section Lines
Riparian Reserve	Special Management Tags	Rockpit	Optional Maintenance	U.S. Forest Service
Streams	Waste Area	Rockpit	Optional Temporary Reconstruction	Survey - Monumented Points
			Required Maintenance	

GOOD NEIGHBOR AUTHORITY TIMBER SALE MAP

SALE NAME: 2D
 AGREEMENT #: 36-101213
 TOWNSHIP(S): T29R11W, T29R12W

REGION: OLYMPIC NATIONAL FOREST
 COUNTY: CLALLAM
 ELEVATION RGE: 580' - 1120'



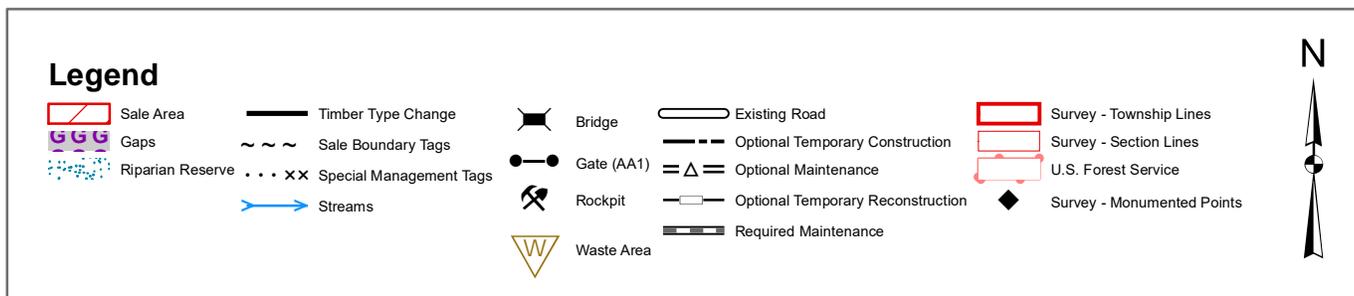
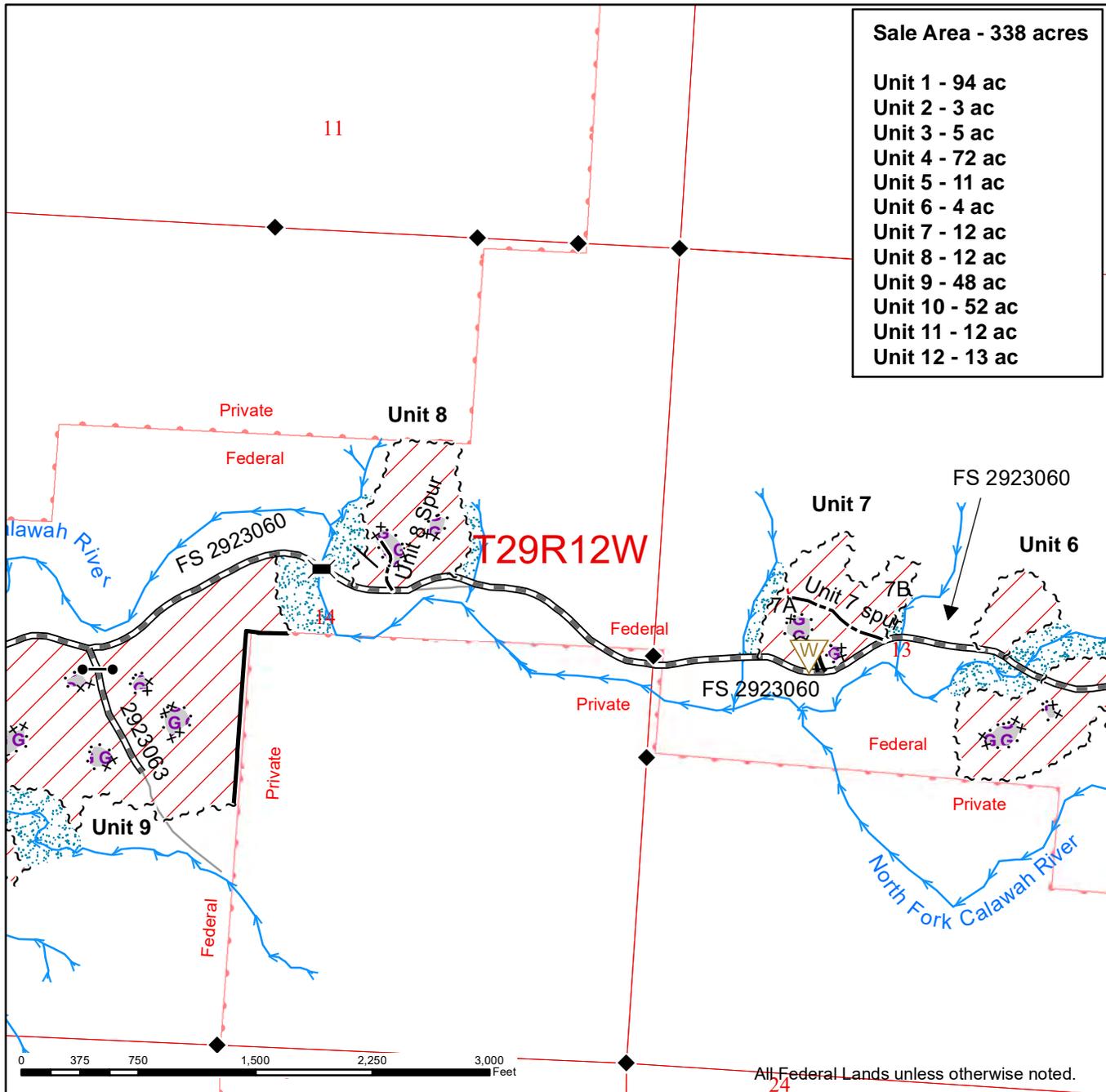
Legend

Sale Area	Timber Type Change	Bridge	Existing Road	Survey - Township Lines
Gaps	Sale Boundary Tags	Gate (AA1)	Optional Temporary Construction	Survey - Section Lines
Riparian Reserve	Special Management Tags	Rockpit	Optional Maintenance	U.S. Forest Service
Streams	Waste Area	Required Maintenance	Survey - Monumented Points	

GOOD NEIGHBOR AUTHORITY TIMBER SALE MAP

SALE NAME: 2D
 AGREEMENT #: 36-101213
 TOWNSHIP(S): T29R11W, T29R12W

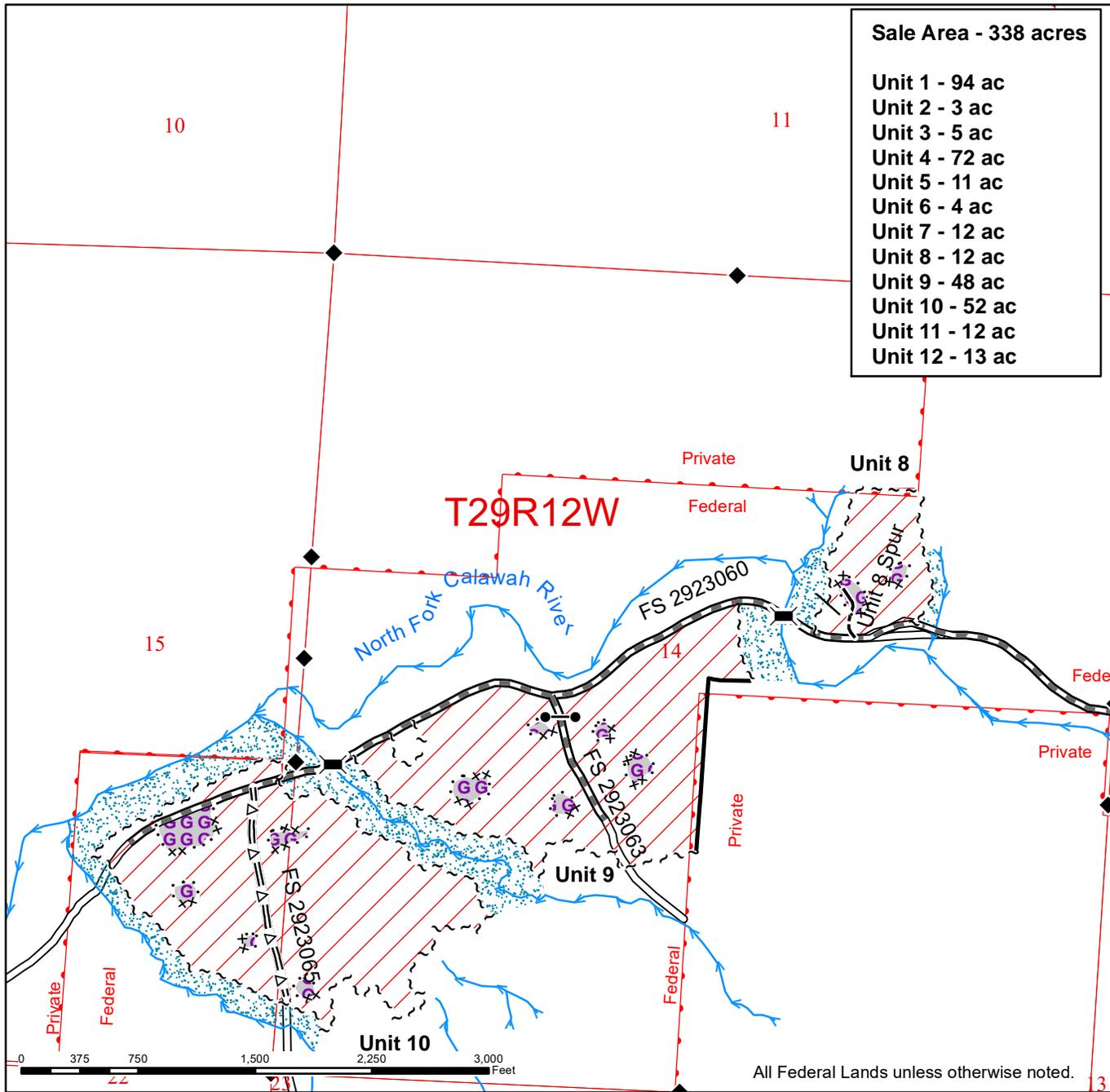
REGION: OLYMPIC NATIONAL FOREST
 COUNTY: CLALLAM
 ELEVATION RGE: 580' - 1120'



GOOD NEIGHBOR AUTHORITY TIMBER SALE MAP

SALE NAME: 2D
 AGREEMENT #: 36-101213
 TOWNSHIP(S): T29R11W, T29R12W

REGION: OLYMPIC NATIONAL FOREST
 COUNTY: CLALLAM
 ELEVATION RGE: 580' - 1120'

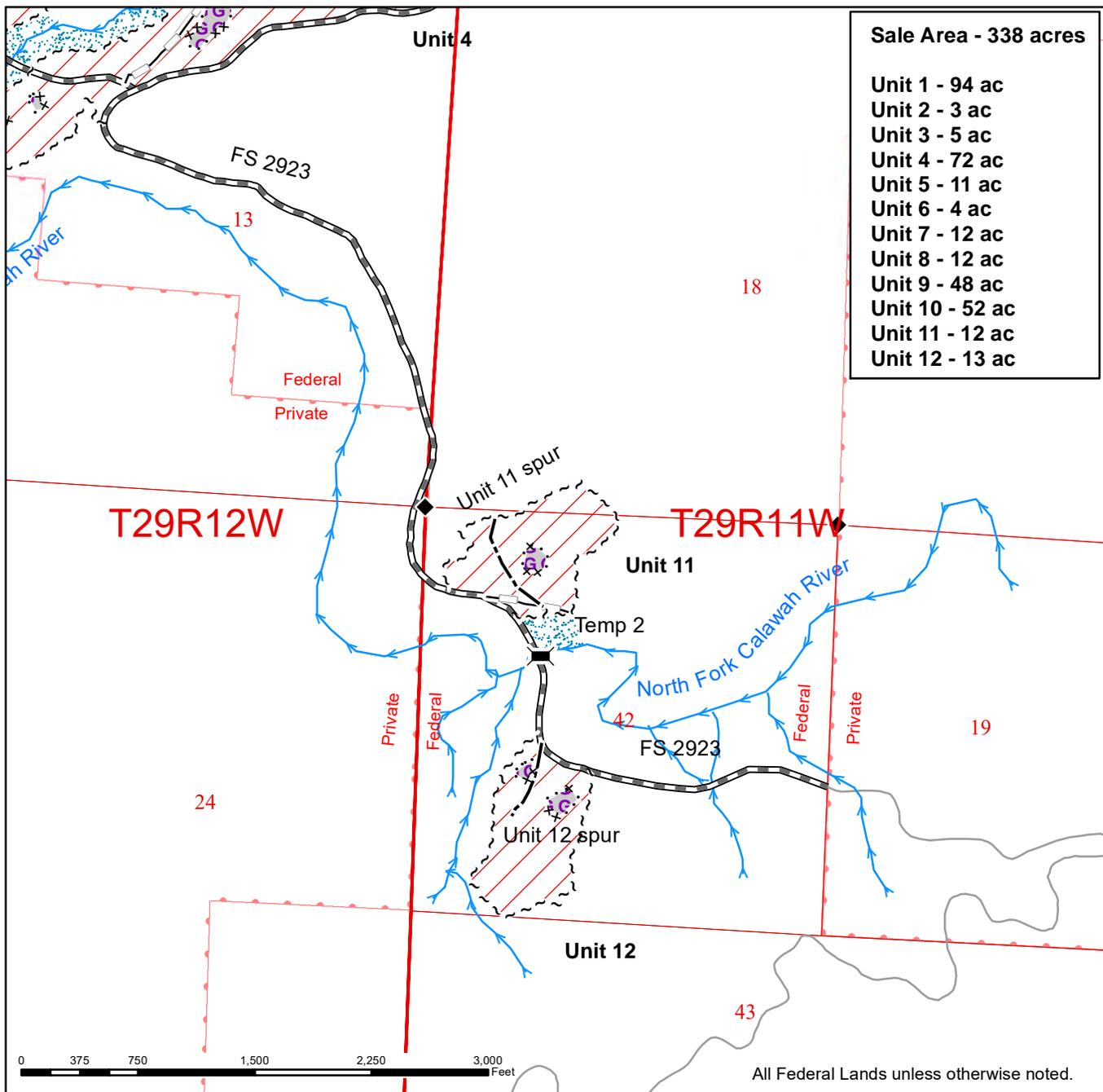


Legend

GOOD NEIGHBOR AUTHORITY TIMBER SALE MAP

SALE NAME: 2D
 AGREEMENT #: 36-101213
 TOWNSHIP(S): T29R11W, T29R12W

REGION: OLYMPIC NATIONAL FOREST
 COUNTY: CLALLAM
 ELEVATION RGE: 580' - 1120'



Sale Area - 338 acres

Unit 1	- 94 ac
Unit 2	- 3 ac
Unit 3	- 5 ac
Unit 4	- 72 ac
Unit 5	- 11 ac
Unit 6	- 4 ac
Unit 7	- 12 ac
Unit 8	- 12 ac
Unit 9	- 48 ac
Unit 10	- 52 ac
Unit 11	- 12 ac
Unit 12	- 13 ac

All Federal Lands unless otherwise noted.

Legend

Sale Area	Timber Type Change	Bridge	Existing Road	Survey - Township Lines
Gaps	Sale Boundary Tags	Gate (AA1)	Optional Temporary Construction	Survey - Section Lines
Riparian Reserve	Special Management Tags	Rockpit	Optional Maintenance	U.S. Forest Service
Streams	Waste Area	Rockpit	Optional Temporary Reconstruction	Survey - Monumented Points
			Required Maintenance	

**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

**BILL OF SALE AND CONTRACT FOR
GOOD NEIGHBOR AGREEMENT FOREST PRODUCTS**

Export Restricted MBF Scale AGREEMENT NO. 36-101213

SALE NAME: 2D

This Bill of Sale and Contract for Good Neighbor Agreement Forest Products (Contract) is entered into between the Washington State Department of Natural Resources (DNR), acting as the agent for the United States Department of Agriculture Forest Service (U.S. Forest Service) pursuant to the authority granted in 16 USC § 2113a, and [TBD] Purchaser, herein collectively referred to as the “Parties” or individually as a “Party.”

In consideration of the mutual covenants and agreements contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the State and Purchaser hereby agree to the following terms and conditions for the Contract.

SECTION G: GENERAL TERMS

G-001 Definitions

The following definitions apply throughout this contract;

Bill of Sale and Contract for Forest Products: The contract between the Purchaser and the State, which sets forth the procedures and obligations of the Purchaser in exchange for the right to remove forest products from the sale area.

Contract Administrator: DNR’s State Forester’s designee responsible for assuring that the contractual obligations of the Purchaser are met.

Forest Product: Any material derived from the forest for commercial use.

Purchaser: The company or individual that has entered into the Contract with the State for the right to harvest and remove forest products from the timber sale area.

Road Construction: Includes construction of new temporary roads, reconstruction and maintenance of existing forest roads, and associated work as authorized and described in the Road Plan.

State: The State of Washington represented by the Washington State Department of Natural Resources (Seller), acting under an agreement with the U.S. Forest Service to act as their agent in the selling of Forest Products from the timber sale area, located on

U.S. Forest Service land, under the Good Neighbor Authority in 16 USC § 2113a. The State is represented by the State Forester as designated on the contract signature page. Contractual obligations of the Purchaser under the Contract are enforced by the State Forester or the designated Contract Administrator.

Subcontractor: Individual or company employed by the Purchaser to perform a portion or all of the services required by the Contract. The Purchaser is responsible for independently negotiating, procuring and paying for all subcontracted services rendered.

United States Forest Service (U.S. Forest Service): An agency of the U.S. Department of Agriculture responsible for administering the nation's national forests.

G-010 Products Sold and Sale Area

Purchaser was the successful bidder on DATA MISSING and the sale was confirmed on _____. The State, as the U.S. Forest Service's agent, agrees to sell to Purchaser, and Purchaser agrees to purchase, cut, and remove the following forest products:

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags, blue special management tags, pink flagging, timber type changes, blazed property lines, and road FS-2923070 for Unit #1, except trees ringed in blue or orange paint with white FS Wildlife Tree/Snag tags.

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags, blue special management tags, pink flagging, and road FS-2923 for Unit #2, 3, 4, 11, and 12, except trees ringed in blue or orange paint with white FS Wildlife Tree/Snag tags.

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags and blue special management tags, and pink flagging for Unit #5, except trees ringed in blue or orange paint with white FS Wildlife Tree/Snag tags.

All timber as described for removal in Schedule B, bounded by white timber sale boundary tags, blue special management tags, pink flagging, timber type changes, blazed property lines, and roads FS-2923060 for Units #6, 7, 8, 9, and 10, except trees ringed in blue or orange paint with white FS Wildlife Tree/Snag tags.

The above described products, located on approximately [338] acres on part(s) of: [Sections 13, 14, 15 of Township 29N, Range 12 West, and Sections 5, 6, 7, 8, 18, 42 of Township 29N, Range 11W], in [Clallam County] as shown on the attached timber sale map and as designated on the sale area.

G-020 Inspection By Purchaser

Purchaser hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products being sold. Purchaser further warrants to the State that they enter this contract based solely upon their own judgment of the value

of the forest products, formed after their own examination and inspection of both the timber sale area and the forest products being sold. Purchaser also warrants to the State that they enter this contract without any reliance upon the volume estimates, acreage estimates, appraisals, pre-bid documentation, or any other representations by the State Department of Natural Resources or U.S. Forest Service.

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	Unit Name Crosswalk
B	Thinning Prescription

G-030 Contract Term

Unless terminated earlier as authorized under the Contract, Purchaser shall remove the forest products conveyed and complete all work required by this contract prior to **October 31st, 2023** (Termination Date), unless this termination date is adjusted pursuant to G-040, or extended pursuant to G-050, in which case the new Termination Date shall be as established by the State.

G-040 Contract Term Adjustment - No Payment

Purchaser may request an adjustment in the contract term due to an interruption or delay in operations. A request for an adjustment must be submitted in writing and received by the State within 30 days after the start of the interruption or delay and describe Purchaser's reason for seeking a contract term adjustment. The request must also indicate the actual or anticipated length of interruption or delay. The State may grant an adjustment without charge only if the cause for contract term adjustment is beyond Purchaser's control (force majeure). A force majeure includes, but is not limited to acts of God, acts of the public enemy, acts of the Government, labor disputes, fires, insurrections, floods; road and bridge failures that deny Purchaser access to, or out of, the sale area; access road closures imposed by a road owner; excessive suspensions as provided in clause G-220; and regulatory actions, that do not arise from Purchaser's failure to comply with the Contract and which will prevent timber harvest for a period of less than 6 months.

The State shall adjust the term of the Contract to provide for additional calendar days equal to the actual time lost for the period that such force majeure continues in effect. All other terms and conditions of the Contract shall remain in effect during periods of force majeure. Lack of funds on the part of Purchaser, adverse market conditions, state approval or assistance delays, and/or similar conditions shall not constitute force majeure.

G-050 Contract Term Extension – Payment

Extensions of this contract term may be granted only if, in the judgment of the State, Purchaser is acting in good faith and has diligently performed in accordance with contract provisions and the approved Plan of Operations. The term of this Contract may be extended for a reasonable time by the State, at the State's sole discretion, if all of the following conditions are satisfied:

- a. A written request for extension of the contract term must be received prior to the Termination Date of the Contract.
- b. Purchaser has completed all required roads and is in compliance with all contract and regulatory requirements (e.g., applicable Federal, state, and local laws).
- c. For the first extension, not to exceed 1 year, payment of at least 25 percent of the contract value based on the contract payment rate and advertised volume.

For the second extension, not to exceed 1 year, payment of at least 90 percent of the contract value based on the contract payment rate base and advertised volume.

The payments shall not include the initial deposit which shall be held until Purchaser has completed all obligations under this Contract.

- d. Payment of an amount based on 12 percent interest per annum on the unpaid portion of the timber value of the contract.

To determine the unpaid portion of the timber value of the contract, multiply the contract payment rate for each item by the remaining volume for each item based on the volumes from the Timber Notice of Sale. In addition, all cash deposits that can be used for timber payments, except the initial deposit, will be deducted from the unpaid portion of the contract.

- e. Payment of [INSERT UPON AWARD OF CONTRACT] per acre per annum for the acres on which an operating release has not been issued.
- f. In no event will the extension charge be less than \$500.00.
- g. Extension payments are non-refundable.

G-051 Contract Term Extension – Market Related Conditions

The term of this contract may be adjusted when a drastic reduction in wood product prices has occurred in accordance with 36 CFR 223.52 as determined by the U.S. Forest Service, and the Purchaser makes a written request for additional time to perform the

Contract. The Producer Price Index used to determine when a drastic reduction in price has occurred shall be the Softwood Lumber Commodity Index Series (Index Code 0811) as set forth in 36 CFR 223.52(b)(i). If the drastic reduction criteria specified in 36 CFR 223.52 are met for two consecutive calendar quarters, after Contract award date, the Contract Administrator will add one year to the Contract term upon Purchaser's written request. For each additional consecutive quarter such a drastic reduction occurs, the Contract Administrator will, upon written request, add an additional three months to the term during the operating season, except that no single three month addition shall extend the term of the Contract by more than one year. For each additional consecutive quarter such a drastic reduction occurs, the Contract Administrator will, upon written request, add an additional three months to the term during the operating season. The total amount of contract term addition is limited to the lesser of twice the length of the original Contract or three years. The Contract Administrator must receive Purchaser's written request for a market-related contract term addition before the expiration of this contract. Additional contract time may not be granted for those portions of the contract: (i) with a required completion date; where the U.S. Forest Service determines that the timber is in need of urgent removal; where timber deterioration or resource damage may result from delay; or (iv) where the timber is designated by diameter and delay may change the treatment as a result of trees growing into or out of the specified diameter ranges(s).

G-060 Exclusion of Warranties

The PARTIES AGREE that the IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE and ALL OTHER WARRANTIES EXPRESSED OR IMPLIED ARE EXCLUDED from this transaction and shall not apply to the goods sold. For example, THE FOLLOWING SPECIFIC MATTERS ARE NOT WARRANTED, and are EXCLUDED from this transaction:

- a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."
- c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.

- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.
- f. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies.
- g. Items contained in any other documents prepared for or by the State.

G-064 Permits

Purchaser is responsible for obtaining any permits not already obtained by the State or U.S. Forest Service that relate to Purchaser's operation. Any permits obtained by the State shall be transferred to Purchaser. Purchaser is responsible for all permits, amendments and renewals.

G-066 Termination Due to Governmental Regulatory Actions, Harm to the Environment or Administrative Appeal or Litigation

The State may terminate the Contract, in whole or in part, for any of the following reasons: (1) to prevent actual or potential harm to the environment including without limitation, harm to the land, water, air, habitat, animals, cave resources, or cultural resources; (2) to ensure consistency with U.S. Forest Service land and resource management plans; requirements for the timber sale imposed in any documents prepared pursuant to the National Environmental Policy Act of 1969, 42 USC 1531, et seq.; or compliance with any state or Federal law; (3) to conduct environmental analysis, including but not limited to, the Endangered Species Act of 1973, 16 USC 1531, et seq.; or (4) due to an existing or threatened administrative appeal or litigation involving the U.S. Forest Service or State that might affect or involve the timber sale, regardless of whether the Forest Service or State is required by an administrative or court order to terminate this Contract, or this Contract is named in such a proceeding.

In the event of termination for a reason stated above, Purchaser shall be entitled to a refund, or release of advanced deposits for timber cut but not removed from the sale area, and reimbursement of out-of-pocket expenses incurred as a direct result of the termination of operations; provided, however, that Purchaser shall not be entitled to any compensation provided herein when the Contract is terminated under this clause due to Purchaser's violation of any provision of the Contract. Out-of-pocket expenses do not include, lost profits, attorney's fees, replacement cost of timber, cost or expenses of running a sawmill or other processing facility, expectancy damages, or any other anticipatory expenses suffered by Purchaser.

G-066.1 Termination Due to Catastrophic Damage

The Contract may be terminated by the State, in whole or in part, or the Purchaser may request in writing that the Contract be terminated in whole or in part, if the value of timber remaining to be cut is diminished materially because of catastrophic damage caused by forces beyond the control of the Purchaser. Catastrophic damage is defined as a major change or damage to timber on the sale area, or access to the sale area, or a combination thereof: (a) caused by forces beyond the control of Purchaser, occurring within a 12 month period, including, but not limited to, wind, flood, earthquake, landslide, fire, forest pest epidemic (except as provided below), or other major natural phenomenon; and (b) affecting the value of any trees or products authorized for sale under the Contract estimated to total (i) either more than half of the estimated timber volume stated in Notice of Sale; or (ii) more than 8.6 MMBF or equivalent.

A forest pest epidemic shall not be considered catastrophic damage under this clause when the major change or damage to timber is caused by insect or disease that occurs after felling of the timber unless Purchaser is prevented from removing such timber for reasons that would qualify for a Contract Term Adjustment in G-040.

In the event of termination for the reasons stated above, Purchaser shall be entitled to a refund, or release of advanced deposits for timber cut but not removed from the sale area, and reimbursement of out-of-pocket expenses incurred as a direct result of termination of operations. Out-of-pocket expenses do not include, lost profits, attorney's fees, replacement cost of timber, cost or expenses of running a sawmill or other processing facility, expectancy damages, or any other anticipatory expenses suffered by Purchaser.

G-070 Limitation on Damage

In the event of a breach of any provision of this contract by the State, the exclusive remedy available to Purchaser will be limited to a return of the initial deposit and any unapplied payments; credit for unamortized improvements made by Purchaser; and payment of out-of-pocket expenses, but only under the circumstances where the Contract is terminated under G-066 or G-066.1 and the State is required to pay such out-of-pocket expenses. The State or U.S. Forest Service shall not be liable for any damages, whether direct, incidental or consequential.

G-080 Scope of State or U.S. Forest Service Advice

No advice by any agent, employee, or representative of the State or U.S. Forest Service regarding the method or manner of performing operations shall constitute a representation or warranty that said method, manner or result thereof will conform to the Contract or be suitable for Purchaser's purposes under the Contract. Purchaser's reliance on any State or U.S. Forest Service advice regarding the method or manner of performance shall not relieve Purchaser of any risk or obligation under the Contract. Purchaser retains the final responsibility for its operations under this contract and State

or U.S. Forest Service shall not be liable for any injuries resulting from Purchaser's reliance on any State or U.S. Forest Service advice regarding the method or manner of performance.

G-090 Sale Area Adjustment

The Parties may agree to adjustments in the sale area boundary due to the circumstances specified in G-066.1 or G-066. The State shall adjust the total contract price by subtracting from the total contract price an amount determined in the following manner: the State shall cause the timber sale area excluded from harvest due to the circumstances to be measured. The State shall reduce the total contract price by that calculated percentage. However, variations in species, value, costs, or other items pertaining to the affected sale area will be analyzed and included in the adjustment if deemed appropriate by the State. The State will further reduce the total contract price by the reasonable cost of unamortized roads Purchaser constructed but is unable to use for removing timber. A reduction in total contract price terminates all of the Purchaser's rights to purchase and remove the timber and all other interest in the affected sale area.

G-100 Forest Products Not Designated

Any forest products not designated for removal, which must be removed in the course of operations authorized by the State, shall be approved and designated by the Contract Administrator. Added forest products become a part of this contract and shall be paid for at the same rate and manner as other forest products under this Contract.

G-110 Title and Risk of Loss

Title. All right, title, and interest in, and to any timber, shall remain in the U.S. Forest Service, until it has been cut, measured, removed from the sale area, and paid for at which time title shall vest in Purchaser. Any right of Purchaser to cut and remove the timber from the sale area shall end at the time this Contract terminates. Any timber not removed by the termination date remains the property of the U.S. Forest Service.

Risk of Loss. If timber is destroyed or damaged by an “unexpected event” that significantly changes the nature of the timber, the party with title, right and interest to the timber shall bear the timber value loss resulting from such destruction or damage. An “unexpected event” is defined to mean fire, wind, flood, insects or disease, or any similar cause; except that such losses caused by insect or disease after felling of timber shall be borne by Purchaser, unless Purchaser is prevented from removing such timber for reasons that would qualify for a Contract Term Adjustment in G-040.

Except as provided above, Purchaser will not be obligated to remove and pay for destroyed timber for which the U.S. Forest Service holds title. If timber is damaged by an unexpected event, and the U.S. Forest Service holds title and risk of loss for the damaged timber, the Contract Administrator shall make an appraisal to determine for each species the difference between the appraised unit value of the timber immediately

prior to the value loss and the appraised unit value of timber after the loss. Current contract rates in effect at the time for the value loss shall be adjusted by differences to become the re-determined rates for the affected timber.

There shall be no obligation for the State to supply Federal timber, or for the Purchaser to accept and pay for other Federal timber, in lieu of that destroyed or damaged. Neither this contract provision, nor any other provision of the Contract, shall be construed to relieve Purchaser of liability for negligence resulting from its operations.

G-120 Responsibility for Work

All work, equipment, and materials necessary to perform this contract shall be the responsibility of Purchaser.

So far as practicable, Purchaser shall protect roads and other improvements (e.g., trails, telephone lines, ditches, fences) existing in the sale area. When Purchaser's operations are adjacent to properties of railway, telephone, or power companies, or other property, work shall not begin until Purchaser has identified actions necessary to prevent damage to such property. Purchaser shall cooperate with the owners of any underground or overhead utility lines in their removal and/or rearrangement operations in order that these operations may progress in a reasonable manner such that utility duplication rearrangement work may be reduced to a minimum, and services shall not be unnecessarily interrupted. In the event of interruption to utility services because of accidental breakage or as a result of lines being exposed or unsupported, Purchaser shall promptly notify the proper authority and shall cooperate with that authority in the restoration of service until the service is restored.

Any damage to roads and improvements, except as provided in clause G-121 or unless the State issues an operating release pursuant to clause G-280, shall be repaired promptly to the satisfaction of the State and at Purchaser's expense. Road is defined as the road bed, including but not limited to its component parts, such as subgrade, ditches, culverts, bridges, and cattle guards. Improvement is defined to include trails, telephone and utility lines, gates, fences, buildings or any other type of structure.

G-121 Exceptions

Exceptions to Purchaser's responsibility for repairs in clause G-120 shall be limited exclusively to the following:

1. Failure of (a) required improvements or roads designated in clause C-050, or (b) required or optional construction or reconstruction completed to the point that authorization to haul has been issued;
2. Caused by a single event from forces beyond the control of Purchaser, its employees, agents, or invitees, including independent contractors; and

3. Includes, but is not limited to natural disasters such as earthquakes, volcanic eruptions, landslides, and floods.

These exceptions shall not apply where road damage occurs due to Purchaser's failure to take reasonable precautions or to exercise sound forest engineering and construction practices.

The repair work identified by the State shall be promptly completed by Purchaser at an agreed price. If the Parties are unable to reach an agreement on price, Purchaser shall complete the repairs based on DNR's determination of the price. Purchaser shall be entitled to challenge the costs through the dispute resolution process in clause G-240. Nothing contained in clauses G-120 and G-121 shall be construed as relieving Purchaser of responsibility for, or damage resulting from, Purchaser's operations or negligence, nor shall Purchaser be relieved from full responsibility for making good any defective work or materials. Authorization to haul does not warrant that Purchaser built roads are free from material defect and the State may require additional work, at Purchaser's expense regardless of cost, to remedy deficiencies at any time.

G-140 Indemnity

To the fullest extent permitted by law, Purchaser shall indemnify, defend and hold harmless the State, U.S. Forest Service, agencies of the State or U.S. Forest Service, and all officials, agents and employees of the State or U.S. Forest, from and against all claims arising out of, or in any way whatsoever resulting from, the Contract. "Claim" as used in this Contract means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorneys' fees, attributable for bodily injury, sickness, disease or death, or injury to or destruction of tangible property including loss of use resulting therefrom brought against the State, including without limitation claims brought against the State by Purchaser's agents, employees, representatives, or any subcontractor or its employees. Purchaser expressly agrees to indemnify, defend, and hold harmless the State or U.S. Forest Service for any claim arising out of or incident to Purchaser's or any subcontractors' performance or failure to perform the Contract. Purchaser's obligation to indemnify, defend, and hold harmless the State or U.S. Forest Service shall not be eliminated or reduced by any actual or alleged concurrent negligence of the State, U.S. Forest Service, or their agents, agencies, employees and officials. Purchaser waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend and hold harmless State or U.S. Forest Service and its agencies, officials, agents or employees.

G-150 Insurance

Purchaser shall, at its cost and expense, buy and maintain insurance of the types and amounts listed below. Failure to buy and maintain the required insurance may result in a breach and/or termination of the contract at State's option. State may suspend Purchaser's operations until required insurance has been secured.

All insurance and surety bonds should be issued by companies admitted to do business within the State of Washington and have a rating of A-, Class VII or better in the most recently published edition of Best's Reports. If an insurer is not admitted, all insurance policies and procedures for issuing the insurance policies must comply with Chapter 48.15 RCW and 284-15 WAC.

The State of Washington, Department of Natural Resources Product Sales and Leasing Division in Olympia, WA shall be provided written notice before cancellation or non-renewal of any insurance referred to therein, in accord with the following specifications:

1. Insurers subject to Chapter 48.18 RCW (admitted and regulated by the Insurance Commissioner): The insurer shall give the State 45 days advance notice of cancellation or non-renewal. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.
2. Insurers subject to Chapter 48.15 RCW (surplus lines): The State shall be given 20 days advance notice of cancellation. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.

Before starting work, Purchaser shall furnish the State of Washington, Department of Natural Resources with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements specified in the contract. Insurance coverage shall be obtained by the Purchaser prior to operations commencing and continually maintained in full force until all contract obligations have been satisfied or an operating release has been signed by the State.

Purchaser shall include all subcontractors as insured under all required insurance policies, or shall furnish separate certificates of insurance and endorsements for each subcontractor. Subcontractor(s) must comply fully with all insurance requirements stated herein. Failure of subcontractor(s) to comply with insurance requirements does not limit Purchaser's liability or responsibility.

The State of Washington, Department of Natural Resources, U.S. Forest Service, its elected and appointed officials, agents and employees shall be named as an additional insured on all general liability, excess, umbrella, and property insurance policies.

All insurance provided in compliance with this contract shall be primary as to any other insurance or self-insurance programs afforded to or maintained by State. Purchaser waives all rights against State for recovery of damages to the extent these damages are covered by general liability or umbrella insurance maintained pursuant to this contract.

By requiring insurance herein, State does not represent that coverage and limits will be adequate to protect Purchaser and such coverage and limits shall not limit Purchaser's liability under the indemnities and reimbursements granted to State in this contract.

The limits of insurance, which may be increased as deemed necessary by State of Washington, Department of Natural Resources, shall not be less than as follows:

Commercial General Liability (CGL) Insurance. Purchaser shall maintain general liability (CGL) insurance, and commercial umbrella insurance with a limit of not less than \$1,000,000.00 per each occurrence. If such CGL insurance contains aggregate limits, the General Aggregate limit shall be at least twice the "each occurrence" limit. CGL insurance shall have products-completed operations aggregate limit of at least two times the "each occurrence" limit. CGL coverage shall include a Logging and Lumbering Endorsement (i.e. Logger's Broad-Form) to cover the events that include, but are not limited to, fire suppression expenses, accidental timber trespasses, and wildfire property damage with limits of not less than \$2,000,000.00 each occurrence.

CGL insurance shall be written on Insurance Services Office (ISO) occurrence form CG 00 01 (or a substitute form providing equivalent coverage). All insurance shall cover liability arising out of premises, operations, independent contractors, products completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another party assumed in a business contract), and contain separation of insured (cross liability) condition.

Employer's Liability "Stop Gap" Insurance. Purchaser shall buy employers liability insurance, and commercial umbrella liability insurance with limits not less than \$1,000,000.00 each accident for bodily injury by accident or \$1,000,000.00 each employee for bodily injury by disease.

Workers' Compensation Coverage. Purchaser shall comply with all State of Washington workers' compensation statutes and regulations. Workers' compensation coverage shall be provided for all employees of Purchaser and employees of any subcontractor or sub-subcontractor. Coverage shall include bodily injury (including death) by accident or disease, which exists out of or in connection with the performance of this contract. Except as prohibited by law, Purchaser waives all rights of subrogation against State for recovery of damages to the extent they are covered by workers' compensation, employer's liability, commercial general liability, or commercial umbrella liability insurance.

If Purchaser, subcontractor or sub-subcontractor fails to comply with all State of Washington workers' compensation statutes and regulations and State incurs fines or is required by law to provide benefits to or obtain coverage for such employees, Purchaser shall indemnify State. Indemnity shall include all fines, payment of benefits to Purchaser or subcontractor employees, or their heirs or legal representatives, and the cost of effecting coverage on behalf of such employees.

Business Auto Policy (BAP). Purchaser shall maintain business auto liability, and commercial umbrella liability insurance with a limit not less than \$1,000,000.00 per accident. Such insurance shall cover liability arising out of "Any Auto". Business auto

coverage shall be written on ISO form CA 00 01, or substitute liability form providing equivalent coverage. If necessary the policy shall be endorsed to provide contractual liability coverage and cover a "covered pollution cost or expense" as provided in the 1990 or later editions of CA 00 01. Purchaser waives all rights against State or U.S. Forest Service for the recovery of damages to the extent they are covered by business auto liability or commercial umbrella liability insurance.

G-152 Pollution Legal Liability

Pollution Legal Liability (or Contractor's Pollution Liability). Purchaser and/or contractor(s) shall at its cost and expense, buy and maintain insurance of the types and amounts listed below for coverage of pollution legal liability, including investigation and defense costs, for bodily injury and property damage, including loss of use of damaged property or of property that has been physically damaged or destroyed. Failure to buy and maintain the required insurance may result in a breach and/or termination of the contract at State's option. State may suspend Purchaser operations until required insurance has been secured. Insurance coverage shall be obtained by the Purchaser and/or contractor(s) prior to operations commencing and continually maintained in full force until all contract obligations have been satisfied or an operating release is signed by the State.

Such coverage must provide coverage for both on-site and off-site cleanup costs and cover gradual and sudden pollution, and includes in its scope of coverage, natural resource damage claims. The U.S. Forest Service, State of Washington, Department of Natural Resources, its elected and appointed officials, agents and employees shall be named as additional insured. Coverage shall be maintained in an amount of at least:

1. \$1,000,000 each occurrence for contractor's operations at the site(s) identified above, and
2. If the policy contains a general aggregate limit or policy limit, it shall be at least \$5,000,000.

Such insurance may be provided on an occurrence or claims-made basis. If such coverage is obtained as an endorsement to the CGL and is provided on a claims-made basis, the following additional conditions must be met:

- a. The Insurance Certificate must state that the insurer is covering hazardous substance removal.
- b. The policy must contain no retroactive date, or the retroactive date must precede abatement services.
- c. Coverage must be continuously maintained with the same insurance carrier throughout the entire term of the Contract.

- d. The extended reporting period (tail) must be purchased to cover a minimum of 36 months beyond completion of work.

G-160 Agents

The State's rights and duties will be exercised by the State Forester of the state of Washington. The State Forester will notify Purchaser in writing who is responsible for administering the Contract (Contract Administrator). The State Forester has sole authority to waive, modify, or amend the terms of this Contract in the manner prescribed in clause G-180. No agent, employee, or representative of the State or U.S. Forest Service has any authority to bind the State or U.S. Forest Service to any affirmation, representation, or warranty concerning the forest products conveyed beyond the terms of this contract. The Contract Administrator shall be the State's authorized agent for purposes of receipt of notices under G-200.

Purchaser is required to have a person on site during all operations who is authorized to receive instructions and notices from the State. Purchaser shall inform the State in writing who is authorized to receive instructions, and notices under G-200, from the State, and any limits to this person's authority.

G-170 Assignment of Rights; Delegation of Performance (Subcontracting)

No rights or interest in this Contract shall be assigned by Purchaser without the prior written permission of the State, which approval shall be at the sole discretion of the State. Such approval shall not relieve the Purchaser of his or her responsibilities or liabilities under the Contract and may be given only if the third party assignee (assignee) has not been debarred or suspended from bidding on the award of U.S. Forest Service timber sale contracts in accordance with 36 CFR § 223.130 through 36 CFR § 223.145 and: (a) the assignee acquiring the rights of the Purchaser is acceptable to the State under the conditions and requirements then in effect for similar GNA timber sales, and assumes in writing all of the obligations to the State under the terms of the Contract as to the uncompleted portion; or (b) the rights are acquired by the assignee in trust as security and subject to such conditions as may be necessary for the protection of the public interests. Any attempted assignment shall be void and ineffective for all purposes unless made in conformity with this paragraph.

Purchaser may perform any duty through a delegate (i.e., subcontractor), but Purchaser is not thereby relieved of any duty to perform or any liability under this contract. Any delegate shall be bound by the terms of the contract in the same manner as Purchaser.

G-180 Modifications

Waivers, modifications, or amendments of the terms of this Contract must be in writing and signed by Purchaser and the State.

- c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.
- d. If Purchaser's violation is a result of a failure to make a payment when due, in addition to a. and b. above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due.

G-220 State Suspends Operation

The Contract Administrator may suspend any operation of Purchaser under this Contract for any of the reasons stated in G-066, for any other reason as provided for in the Contract or, if deemed necessary in the public interest.

Purchaser shall be in breach of this Contract if the operation continues after the suspension notice or if the operation resumes without prior approval and notice from the Contract Administrator.

Purchaser may request a modification of a suspension within 30 days of the start of suspension through the dispute resolution process in clause G-240. If this process results in a finding that the suspension exceeded the time reasonably necessary to stop or prevent damage to the State or U.S. Forest Service, Purchaser is entitled to request a contract term adjustment under clause G-040.

If it reasonably appears that the damage that the State or U.S. Forest Service is suffering, or can reasonably be expected to suffer if the operation is allowed to continue, will prevent harvest for a period that will exceed 6 months, and Purchaser has complied with all terms and conditions of this contract, then the State may elect to terminate the Contract under G-066 just as if the harvest was prevented by a governmental statute, regulation, or order.

G-230 Unauthorized Activity

Any cutting, removal, or damage of forest products by Purchaser, its employees, agents, or invitees, including independent contractors, in a manner inconsistent with the terms of this Contract or Federal law, is unauthorized. Purchaser agrees to pay two times the current contract rates for any unauthorized cutting, removal or damage of forest products.

G-240 Dispute Resolution

The following procedures apply in the event of a dispute regarding interpretation or administration of this Contract. The Parties agree that these procedures must be followed before a lawsuit can be initiated against the State. Purchaser's failure to submit a request for resolution of a dispute under the procedures set forth shall relieve

the State of any obligations whatsoever arising under the Contract regarding the dispute. As used herein, a dispute means a demand or assertion by Purchaser seeking, as a legal right, the extension or adjustment of the term of the Contract, or any other relief under the Contract, including a claim for the payment of any money.

- a. In the event of a dispute, Purchaser must submit a written request to the State Forester for resolution of any dispute prior to seeking other relief. If the dispute involves a claim for money owed by the State, Purchaser shall submit with the written request a demand for the amount owed and any appropriate data necessary to establish that the amount requested accurately reflects what Purchaser claims is owing under the Contract for which the State is liable.
- b. The State Forester will issue a written decision on Purchaser's request within ten business days for matters not involving a claim for money. In the case of a claim by Purchaser for money owed under the Contract, the State Forester shall render a decision within 30 days, or notify Purchaser of the date when a decision will be issued. The State Forester's decision shall be final unless Purchaser submits a request under c.
- c. Within ten business days of receipt of the State Forester's decision, Purchaser may submit a written request for resolution of the dispute to the Department Supervisor of the Department of Natural Resources.
- d. Unless otherwise agreed, a conference will be held by the Department Supervisor within 30 calendar days of the receipt of Purchaser's request for review of the State Forester's written decision. Purchaser and the State Forester will have an opportunity to present their positions. The Department Supervisor will issue a decision within a reasonable time of being presented with both Parties' positions.

G-250 Compliance with All Laws

Purchaser is responsible for completing all operations in compliance with all applicable statutes, regulations and laws; and in compliance with all applicable requirements of the U.S. Forest Service, Decision Notice and Finding of No Significant Impact (DN), Olympic National Forest, North Fork Calawah Vegetation Management Environmental Assessment, including all applicable Mitigation Measures and Design Criteria in the DN Appendices, and applicable Best Management Practices contained in the Environmental Assessment. Failure to comply may result in suspension, and/or termination of this Contract.

G-260 Venue

This contract shall be governed by the laws of the State of Washington. In the event of a lawsuit involving this contract, venue shall be proper only in Thurston County Superior Court.

G-270 Equipment and Personal Property Left on U.S. Forest Service Land

All equipment and personal property owned or in the possession of Purchaser, its employees, agents, or invitees, including independent contractors, shall be removed from the sale area and other U.S. Forest Service land by the termination date of this contract. Any equipment or personal property remaining on U.S. Forest Service land 60 days after the expiration of the contract may be removed and disposed of by the State. Purchaser shall pay to the State all costs of moving, storing, and disposing of such personal property and equipment. The State and the U.S. Forest Service shall not be responsible for any damages to or loss of the personal property or equipment, or damage caused by the moving, storing or disposal of the personal property or equipment.

G-280 Operating Release

An operating release is a written document, signed by the State and Purchaser, indicating that Purchaser has been relieved of certain rights or responsibilities with regard to the entire, or a portion of, the Contract. Purchaser and State may agree to an operating release for this sale, or portion of this sale, prior to the Contract expiration, when all contract requirements pertaining to the release area have been satisfactorily completed. Upon issuance of a release, Purchaser's right to cut and remove forest products on the released area will terminate.

G-310 Road Use Authorization

Purchaser is authorized to use the following U.S. Forest Service roads, State roads, and roads for which the State has acquired easements and road use permits; Cooper Ranch Road (2065), FS2923, FS2923070, FS2923074, FS2923060, FS2923063, FS2923065, Unit 7 Spur, Unit 8 Spur, Temp 1, Temp 2, Unit 11 Spur, Unit 12 Spur, and all associated pit roads. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

The U.S. Forest Service shall have the right to use any road constructed by Purchaser during the term of the Contract for any and all purposes in connection with the protection and administration of the National Forest. Other parties, in connection with the logging of tributary National Forest timber, may use roads constructed by Purchaser when the Contract Administrator determines that such use will not materially interfere with Purchaser's Operations. The State may grant others the right to use the roads constructed by Purchaser during the term of the Contract if such uses are authorized by the U.S. Forest Service and will not materially interfere with Purchaser's operations.

G-320 Erosion Control

Reference Road Plan for revegetation measures. To reduce soil damage for cable operations and logging operations, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other mitigation

measures to be taken by the Purchaser, in addition to what is already required under this contract. |

G-330 Pre-work Conference

Purchaser shall arrange with the Contract Administrator to review this Contract and examine the sale area before beginning any operations. Purchaser shall furnish the State a written Plan of Operations at the pre-work conference that includes the Harvest Plan required in H-040, and sets forth planned periods for road construction and completion of all other contractual requirements. The State's written approval of the Plan of Operations is a prerequisite to commencement of Purchaser's operations. A revised Plan of Operations shall be submitted by Purchaser for the Contract Administrator's approval to accommodate a contract adjustment under G-040, a contract extension under G-050, or if determined necessary by the Contract Administrator. To the extent that the Plan of Operations is inconsistent with the Contract, the terms of the Contract shall prevail. State's acceptance and approval of Purchaser's Plan of Operations shall not be construed as any statement or warranty that the Plan of Operations is adequate for Purchaser's purposes or complies with applicable laws.

G-340 Preservation of Markers

Purchaser shall protect all survey monuments, witness corners, reference monuments, and bearing trees (hereinafter collectively referred to as "survey markers") against destruction, obliteration, or damage during operations performed under the Contract. If any survey markers are destroyed, obliterated, or damaged by such operations, Purchaser shall hire an appropriate county surveyor or registered land surveyor to reestablish or restore the survey markers at the same location, using surveying procedures in accordance with the *Manual of Instruction for the Survey of the Public Lands of the United States* as required by the U.S. Forest Service under federal law and the State under RCW 58.24, and shall record such survey in appropriate county records. The Contract Administrator may prescribe in writing additional requirements for protection of monuments, corners, and bearing trees.

G-370 Blocking Roads

Purchaser shall not block FS2923, FS2923070, and FS2923060 for more than 45 minutes unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

Purchaser agrees to comply with the terms and conditions of the attached:
Rayonier RUP #55-101419 |

G-396 County Hauling Permit

The hauling of forest products, rock or equipment may require a county road hauling permit. Purchaser is responsible for obtaining a permit and any costs associated with extra maintenance or repair levied by a county. Purchaser must provide the Contract Administrator with a copy of the executed permit.

G-430 Open Fires

Purchaser shall not set, or allow to be set by Purchaser's employees, agents, invitees and independent contractors, any open fire at any time of the year without first obtaining permission, in writing, from the Contract Administrator.

SECTION P: PAYMENTS AND SECURITIES

P-010 Initial Deposit and Periodic Payment Schedule

Purchaser paid [TO BE DETERMINED ON DAY OF SALE] as an initial deposit to the State, which will be maintained until Purchaser has completed all obligations under this Contract. Purchaser shall not be entitled to any interest earned on the initial deposit. However, all or a portion of the initial deposit may be applied as the final payment for the timber if the State determines that adequate security exists for the performance or fulfillment of any remaining obligations of the Purchaser under the Contract. If the Contract expires without Purchaser's payment of the full amount specified in P-021, the initial deposit will be immediately forfeited to the State, and will be offset against Purchaser's remaining balance due. Any excess initial deposit funds not needed to ensure full payment of the contract price, or not needed to complete any remaining obligations of the Purchaser existing after contract expiration, will be refunded to the Purchaser.

P-021 Payment for Forest Products

Purchaser agrees to pay the following rates per MBF Scribner net log scale for forest products conveyed and cut or removed from the sale area.

[TO BE DETERMINED ON DAY OF SALE]

Species that are conveyed but are not listed in the table above shall be paid for at a rate to be determined by the State.

[Utility logs, special cull and peelable cull logs of all species, included on loads of logs that are required to be removed and scaled per clause H-150 will be paid for on an adjusted gross scale basis at the rate of \$20.00 per MBF.]

P-040 Weighing and Scaling Costs

Purchaser agrees to pay for all scaling and weighing costs for logs and other products sold under this Contract. Purchaser also agrees to pay for all costs associated with the transmission and reporting of scale or weight data.

P-045 Guarantee of Payment

Purchaser will pay for forest products prior to cutting or will guarantee payment by posting an approved payment security. The amount of cash or payment security shall be determined by the State and shall equal or exceed the value of the cutting proposed by Purchaser.

P-052 Billing and Payment Procedure

The State will compute and forward to the Purchaser statements of charges provided for in the contract. Purchaser shall deliver payment to DNR's Forest Health and Resiliency Division in Olympia, WA on or before the date shown on the billing statement.

Payment will be based on the contract rate multiplied by the tons (tonnage contracts) or volume (mbf contracts) removed during the month or payment period. Included with the payment will be a summary report along with all related load tickets and the corresponding certified weight tickets for the payment period. The summary report will be generated using a computer spreadsheet and list the load tickets in ascending numerical order with the corresponding ticket number and weight or volume for each load.

P-070 Payment for Products: Damage, Theft, Loss or Mismatch

Forest products included in this agreement which are destroyed, damaged, stolen, lost, or mismatched shall be paid for by Purchaser on demand of the State. The rates contained in clause P-021 shall apply. If such material is not listed in P-021, the State shall establish the rates to be paid.

P-080 Payment Account Refund

Advance payments made under P-045 remaining on account above the value for the charges shall be returned to Purchaser within 30 days following the final report of charges. Interest shall accrue at the rate of five percent per month, or fraction thereof, on any balance owed after expiration of the thirty days.

P-090 Performance Security

Purchaser agrees to furnish, within 30 days of the confirmation date of the sale, security acceptable to the State in the amount of \$ ___ [INCLUDE ON EXECUTION OF CONTRACT]. The Security provided shall guarantee performance of all provisions of

this contract and payment of any damages caused by operations under this contract or resulting from Purchaser's noncompliance with any rule or law. Acceptable performance security may be in the form of a performance bond, irrevocable letter of credit, cash, savings or certificate of deposit account assignments, and must name the State as the obligee or beneficiary. A letter of credit must comply with Title 62A RCW, Article 62A.5 (Letters of Credit) Performance security must remain in full force over the duration of the contract length. Surety bonds issued shall conform to the issuance and rating requirements in clause G-150. The State shall retain the performance security until all contractual obligations of the Purchaser are satisfied. Purchaser shall not operate unless the performance security has been accepted by the State. If at any time the State decides that the security document or amount has become unsatisfactory, Purchaser agrees to suspend operations and, within 30 days of notification, to replace the security with one acceptable to the State or to supplement the amount of the existing security.

P-100 Performance Security Reduction

The State may reduce the amount of the performance security required under the Contract after an operating release has been issued if the State determines that adequate security exists for any remaining obligations of Purchaser.

SECTION L: LOG DEFINITIONS AND ACCOUNTABILITY

L-010 Forest Products Conveyed

Forest products conveyed are all logs or parts of logs described by the 'Products Sold and Sale Area' (G-010) clause meeting the removal requirements listed in the 'Required Removal of Forest Products' (H-150) clause.

L-020 Short Logs - Peeler Blocks

Logs or parts of logs which are removed from the sale area that fail to meet the minimum gross length requirements shall be scaled and graded as short logs or peeler blocks. Such material shall be paid for at the forest products rates specified in this contract.

L-040 Utility Logs

Utility logs are logs that meet the minimum utility log standards as described by the log scaling rules applicable for this contract.

L-060 Load Tickets

Purchaser shall complete and use load tickets as directed by the Contract Administrator and, if required, use other identification as directed by the State to ensure accounting of forest products removed from the sale area. A load ticket must be fixed, as designated

by the Contract Administrator, to each truck and trailer load prior to leaving the landing.

Purchaser shall account for all load tickets issued by the Contract Administrator and return unused tickets at termination of the contract, or as otherwise required by the Contract Administrator. Unused tickets not returned shall be subject to liquidated damages per clause D-030.

The State may also treat load tickets either not accounted for or not returned as lost forest products per clause P-070. All costs associated with computing the billings for lost forest products shall be borne by Purchaser.

L-070 Purchaser to Furnish Log Scale Information

Purchaser agrees to furnish the State with scaling information, supplied by a third party scaling organization showing the scale, count, and measure of forest products removed during each billing period unless the scale, count, and measure is performed by the State.

L-071 Log and Load Reporting Service

This contract requires the use of a State approved third party Log and Load Reporting Service (LLRS). Purchaser shall ensure log volume measurement data and/or load and weight data is received by the LLRS within one (1) business day of logs being measured or weighed. Purchaser agrees to pay the LLRS for log and load data supplied to the State.

If during the term of this contract, the State discontinues use of the LLRS, the State will notify the Purchaser in writing and the Purchaser will then be responsible to send log scale and/or weight information to the State.

L-080 Scaling Rules

Determination of volume and grade of any forest products shall be conducted by a state approved third party scaling organization and in accordance with the Westside log scaling and grading rules and Scribner Volume Table, revised July 1, 1972, contained in the Northwest Log Rules Eastside and Westside Log Scaling Handbook (developed and produced by the Northwest Log Rules Advisory Group) and in effect on the date of confirmation of this contract.

Special scaling specifications shall be noted on the State's Brand Designation form which is hereby incorporated to this contract by reference.

L-110 State Approval of Log Scaling and Weighing Locations

Forest Product measurement and weighing facilities required by this Contract must be approved by the State. Forest products sold under the Contract which require log scaling shall be scaled, measured, or counted by a State approved third party log scaling organization.

Prior to forest products being hauled, the Contract Administrator must authorize in writing the use of State approved measurement and/or weighing facilities that are at or enroute to final destinations. Forest products from this sale shall be measured or weighed at facilities, which are currently approved for use by the State and are currently authorized for this sale. The State reserves the right to verify load volume and weights with State employees or contractors at the State's own expense. The State reserves the right to revoke the authorization of previously approved measurement locations.

L-120 Long Log Taper Distribution

Forest products over 40 feet long plus trim shall be segment scaled and the lower segment diameters shall be determined using actual taper. In order to utilize taper rules for determining segment diameters for poles and pilings greater than 40 feet in length plus trim, Purchaser must request use of a Pole and Piling Scaling Specification Agreement on file in the region office. Approval for usage of a special Pole and Piling Scaling Specification Agreement may be granted at the sole discretion of the State.

Following State approval for usage of the Pole and Piling Scaling Specification Agreement, the Brand Designation form shall be amended to incorporate the long log taper rules. The volume reported by the scaling organization for forest products over 40 feet plus trim will be expanded by 5 percent and the additional 5 percent volume shall be billed to the purchaser at the contract rate.

L-130 Conversion Factors

Forest products removed from the sale area that are not measured in units specified in the 'Payment for Forest Products' clause of this contract shall be converted to board feet using Department of Natural Resources' standard conversion factors.

SECTION H: HARVESTING OPERATIONS

H-001 Operations Outside the Sale Boundaries

No operations shall occur outside the sale boundaries, as described within the contract, unless approved in writing by the State.

H-010 Cutting and Yarding Schedule

[Harvest activities, including landing and road construction, felling, skidding, yarding, and rehabilitation will not be permitted from November 1st through May 31st in summer only units, which includes the entire sale area.

Harvest operations must begin 2 hours after sunrise and end 2 hours before sunset for unit 5 from April 1st through September 23rd.]

H-011 Certification of Fallers and Yarder Operators

All persons engaged in the felling and yarding of timber must receive certification in writing from the Contract Administrator. Certification may be revoked when the Contract Administrator determines that non-compliance of leave tree selection criteria or cut tree selection criteria is occurring, or excessive damage to leave trees or skid trails is occurring.

Excessive damage for leave trees is defined in clause H-012.

Excessive skid trail damage is defined in clause H-016.

When leave tree damage exceeds the limits set forth in clause H-012, Purchaser shall be subject to liquidated damages (clause D-040).

H-012 Leave Tree Damage Definition

[Leave trees are trees required for retention within the sale area. Purchaser shall protect leave trees from being cut, damaged, or removed during operations.

Leave tree damage exists when more than 5 percent of the leave trees are damaged in a unit and when one or more of the following criteria occur as a result of Purchaser's operation, as determined by the Contract Administrator:

- a. A leave tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 144 square inches.
- b. A leave tree top is broken or the live crown ratio is reduced below 30 percent.
- c. A leave tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.]

If the Contract Administrator determines that a leave tree has been cut or damaged, the Purchaser may be required to pay liquidated damages for Excessive Leave Tree Damage as detailed in clause D-040.

H-016 Skid Trail Requirements

A skid trail is defined as an area that is used for more than three passes by any equipment.

Purchaser shall comply with the following during the yarding operation:

- a. A skid trail will not exceed 12 feet in width, including rub trees.
- b. Skid trails shall be no closer than 110 feet apart center to center, except where converging.
- c. Skid trails, skyline corridors, and roads shall not cover more than 20 percent of the total acreage on one unit.
- d. Location of the skid trails must be marked by Purchaser and approved by the Contract Administrator.
- e. Skid trails must be located outside of all no harvest buffers.
- f. Skid trails should be re-established at previous skid trail locations, except where existing skid trails are causing detrimental soil or hydrologic conditions that could be avoided with alternative skid trail locations.
- g. Except for rub trees, skid trails shall be felled and yarded prior to the felling of adjacent timber.
- h. Rub trees shall be left standing until all timber tributary to the skid trail has been removed.
- i. Excessive soil damage is not permitted. Excessive soil damage is described in clause H-017.
- j. Purchaser will not have more than two skid trails open to active skidding at any one time. All other skid trails used for skidding timber will be closed.
- k. Once a skid trail is closed, Purchaser will not reopen a skid trail unless approved in writing by the Contract Administrator.
- l. Skid trails will be water barred at the time of completion of yarding, if required by the Contract Administrator.
- m. Heavily impacted skid trails, including those subjected to multiple passes of heavy equipment, those lacking sufficient slash cover, and/or those running parallel to stream courses, will be decompacted to a depth of at least 12 inches and logging slash will be placed across the decompacted surface.
- n. Equipment exclusion zone of 30' from all harvest boundaries.

Purchaser shall not deviate from the requirements set forth in this clause without prior written approval from the Contract Administrator.

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended, in all or in part, by the Contract Administrator, for such periods as may be deemed necessary to avoid damage when soil rutting exceeds 12 inches as measured from the natural ground line, or when ground conditions are unfavorable.

To reduce soil damage, the Contract Administrator may require water bars to be constructed, native grass seed to be placed on exposed soils, or other mitigation measures to be taken by the Purchaser, in addition to what is already required under this Contract. All seed must be of species native to the Olympic peninsula, and must originate from the same seed zone (as defined by U.S. Forest Service) as the project site. All seed will be provided by the Forest Service. Suspended operations shall not resume unless approval to do so has been given, in writing, by the Contract Administrator.

H-025 Timing Requirements for Timber Removal

All timber must be removed within 30 days of being felled.

H-030 Timber Falling

Trees shall be felled and logs shall be bucked to obtain the greatest practicable utilization of forest products and other valuable materials conveyed.

H-035 Fall Trees Into Sale Area

Trees shall be felled into the sale area unless otherwise approved by the Contract Administrator.

H-040 Purchaser Harvest Plan

Purchaser shall, as part of the Plan of Operations, prepare an acceptable Harvest Plan for each operating season for planned units. The Harvest Plan shall address the harvest and haul operations and be presented to the Contract Administrator at the pre-work conference. The Harvest Plan shall be approved by the Contract Administrator prior to beginning the harvest operation. Purchaser shall not deviate from the Harvest Plan without prior written approval by the Contract Administrator.

H-050 Rub Trees

Trees designated for cutting along skid trails and cable corridors shall be left standing as rub trees until all timber that is tributary to the skid trail or cable corridor has been removed.

H-052 Branding and Painting

All timber shall be painted with a spot of highway yellow paint not less than three square inches in size, and branded on each end with a hammer brand approved by the State prior to removal from the sale area. Purchaser shall not use the brand pattern selected to mark timber for another source in violation of the requirements set forth in 36 CFR § 223.195.

H-060 Skid Trail Locations

Locations of skid trails must be marked by Purchaser and approved by the Contract Administrator prior to the felling of timber.

H-080 Snags Not to be Felled

Snags not required to be felled for safety reasons shall be left standing. Snags felled for safety reasons shall not be removed and must remain where felled.

H-110 Stump Height

Trees shall be cut as close to the ground as practicable and shall not exceed 12 inches in height measured on the uphill side, or 2 inches above the root collar, whichever is higher.

H-120 Harvesting Equipment

Forest products sold under this contract shall be felled by hand or mechanical means and yarded by ground based equipment on slopes of 35% or less and cable based equipment on slopes greater than 35%. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-131 Hauling Schedule

The hauling of forest products will not be permitted from November 1st to May 31st unless a Wet Weather agreement is authorized every year in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

1. Fall and yard away from all waters when possible.
2. A copy of the timber sale prospectus map and contract shall be present onsite during active operations.
3. Timber must be removed from the site and scaled within 30 days of felling operations. Tops and limbs will be redistributed in the unit to the satisfaction of the Contract Administrator.
4. Maintain legacy features wherever practical and safe, including remnant trees, snags, and large down woody debris.
5. Heavy equipment should operate on operationally-generated slash mats (limbs, tops, or otherwise unmerchantable material) to minimize soil compaction and long term soil disturbance. The slash mat will be as thick and continuous as practicable.
6. When practical, save topsoil on site from areas to be disturbed and replace over disturbed soil before replanting.
7. Immediately following their use, temporary roads, spur roads and landings will be “rehabilitated” by decompacting the road surface to a depth of 18 inches or greater. Rehabilitation will not occur during times of excessive wet conditions and/or when soil has reached saturation. Equipment will not travel across the decompacted surface. Native seed and mulch composed of certified weed free straw or onsite forest debris will be applied to the disturbed ground. Seed will be provided by the Forest Service.
8. Certified weed free straw bale catchments or silt fences will be located to intercept runoff from landings prior to reaching any road ditch or stream. Any sediment that is captured and deposited behind sediment catchments will be removed annually and deposited out on the forest floor to ensure it does not have a direct flow path to a system road ditch or stream.
9. Hazard trees that are felled along haul routes must be retained to add to large woody debris on the ground, unless otherwise approved by the Contract Administrator.
10. Coarse Woody Debris may be moved for access, however disturbance should be minimized. Large, old stumps will be kept intact and not uprooted wherever possible.

11. Trees felled in the vicinity of streams, wetlands, seeps, or springs will be felled away from aquatic features. Portions of trees falling into no-cut buffers will be left on the ground where they were felled.
12. Ground Based equipment will travel on operationally generated slash where possible. Yarding activities will be planned to make as few trips as possible.
13. Feller bunchers/ mechanical harvesters shall not operate like a skidder and travel while bearing the weight of trees except in some occasions at the ends of a skid trail where it may cause less disturbance than a skidder.
14. Areas of gouging or soil displacement resulting from logging systems will be treated to prevent rill and gully erosion and potential sediment delivery to stream courses. Off-road trails used for equipment fueling and servicing will be rehabilitated post use by moving the soil back to the natural contour of the hillslope (re-contour) and placing slash or vegetation on exposed mineral soils. Steep slopes will not be decompacted to prevent further soil disturbance. Erosion control treatment may include, but is not limited to, repositioning displaced soil to restore the hillslope contour of disturbed sites, creating small ditches or diversions to redirect surface water movement, seeding, and scattering slash material to disrupt flow and provide soil surface stability. Seed will be provided by the Forest Service.
15. No fuel storage or refueling will occur in riparian buffers.
16. Workers shall properly store and dispose of food and garbage while working on site to minimize nest predation by corvids.
17. Legacy snags marked with orange paint and snags greater than 30" DBH and at least 12' in height shall not be felled unless permitted by the Contract Administrator. If snags cannot be operated around safely a no-cut and equipment limitation zone buffer equal to 1.5 times the height of the snag shall be applied, including when those buffers encompass proposed gaps.
18. 30' Equipment Exclusion zone shall be applied to all harvest boundaries.
19. No landings directly on the FS 2923060 in Units 8, 9, and 10.

Permission to do otherwise must be granted in writing by the Contract Administrator. |

H-142 Wildlife Timing Restrictions

Harvest operations must begin 2 hours after sunrise and end 2 hours before sunset for Unit 5 from April 1st through September 23rd. |

H-150 Required Removal of Forest Products

Purchaser shall remove from the sale area and present for scaling or weighing all forest products conveyed in G-010 that meet the following minimum net scale dimensions:

Species	Net bd ft	Log length (ft)	Log dib
All	10	12	5

The State may treat failure to remove forest products left on the sale area that meet the above specifications as a breach of this Contract. At the State's option, forest products left on the sale area upon termination of the Contract that meet the above specifications may be scaled for volume or measured and converted to weight by the State or a third party scaling organization and billed to Purchaser at the contract payment rate. All costs associated with scaling, measuring and computing the billing will be borne by the Purchaser.

H-160 Mismatch

Mismatch is defined as forest products remaining on the sale area that would have met the specifications in clause H-150 if bucking lengths had been varied to include such products.

The State may treat mismatch as a breach of this Contract. At the State's option, forest products that are left on the sale area may be scaled for volume by the State or a third party scaling organization and billed to Purchaser at the contract payment rate. All costs associated with scaling and computing the billing will be borne by Purchaser.

H-170 Utility Log Removal

All utility logs shall be yarded concurrently with the yarding of other logs and shall be removed from the sale area.

H-190 Completion of Settings

Operations begun on any setting of the sale area shall be completed before any operation begins on subsequent settings unless otherwise authorized in writing by the Contract Administrator.

H-220 Protection of Residual or Adjacent Trees

Unless otherwise specified by this Contract, the Contract Administrator shall identify damaged adjacent or leave trees that shall be paid for according to clause G-230.

H-230 Tops and Limbs Outside the Sale Area

Tops and limbs outside the sale boundary area as a result of Purchaser's operation shall be removed concurrently with the yarding operation unless otherwise directed by the Contract Administrator.

H-240 Lop and Scatter

The tops of all felled trees shall be lopped and slash scattered away from leave trees.

H-260 Fall Leaners

Trees that have been pushed over in falling or skidding operations shall be felled.

SECTION C: CONSTRUCTION AND MAINTENANCE

C-040 Road Plan

Purchaser shall comply with all of the road construction, associated work provisions, and all other terms and conditions of the Road Plan for this sale, dated **June 15th, 2020** which is hereby made a part of this Contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform road maintenance and repair work at its own expense on FS2923, FS2923070, FS2923074, FS2923060, FS2923063, FS2923065, Temp 1, Temp 2, Unit 7 Spur, Unit 8 Spur, Unit 11 Spur, Unit 12 Spur, and all associated pit roads. All work shall be completed to the specifications detailed in the Road Plan.

C-080 Landing Locations Approved Prior to Construction

Landings shall be marked by Purchaser and approved by the Contract Administrator prior to construction.

C-090 Landing Location

Landings should be located where past landings were located, unless a new location would cause less resource effect or where no past landings were used to harvest the unit.

New landings will be located outside of all no harvest buffers and preferably not near riparian buffers. Avoid placing landings adjacent to streams, no-cut buffers, wet areas and unstable slopes.

Landings will be limited to the area needed for safe and efficient yarding and loading operations and have proper drainage.

C-140 Water Bars

Purchaser shall, as directed by the Contract Administrator, construct water bars across haul roads, skid trails and fire trails as necessary to control soil erosion and water pollution.

SECTION S: SITE PREPARATION AND PROTECTION

S-001 Emergency Response Plan

An Emergency Response Plan (ERP) shall be provided to the Contract Administrator containing but not limited to, a plan for the prevention and reporting of wildfires within the sale are; a communication plan for reporting wildfires; a description of fire prevention and control measures on the logging unit; and a list of qualified personnel and equipment available for implementing the plan. The ERP shall include the valid contact numbers for qualified personnel available for implementing the ERP, and the equipment available, and procedures for responding to, medical emergencies, fire, hazardous spills, forest practice violations and any unauthorized or unlawful activity occurring on, or in the vicinity of, the sale area. The Contract Administrator and the State shall be promptly notified whenever an incident occurs requiring an emergency response.

The ERP must be presented to the Contract Administrator for inspection and approval at the prework meeting and kept readily available to all personnel, including subcontractors, on site during active operations. Purchaser shall make any revisions to the ERP required by the Contract Administrator, either upon initial inspection or anytime thereafter, required for operations within the sale area during the Contract.

S-010 Fire Hazardous Conditions

Fire Precautionary Period. The fire precautionary period or “closed season” for this Contract is April 15 to October 15. The Contract Administrator may change the dates of the closed season by advance written notice. Required tools and equipment shall be kept in serviceable condition and immediately available for fire-fighting at all times during Purchaser’s Operations in Fire Precautionary Period.

Purchaser acknowledges that operations under this Contract may increase the risk of fire. Purchaser shall conduct all operations under this Contract following the requirements of WAC 332-24-005 and WAC 332-24-405 and further agrees to use the highest degree of care to prevent uncontrolled fires from starting. Purchaser shall, both independently and in cooperation with the U.S. Forest Service, take the highest degree of care to prevent fires resulting from Purchaser’s Operations. Purchaser shall furnish and maintain in good and serviceable conditions such wildland firefighting tools and equipment, and take such fire prevention measures as may be required by the U.S. Forest Service or the State to meet the fire protection requirements of the Contract and

the existing fire danger. The requirements shall not be less than are required under the laws of the State of Washington (i.e., WAC 332-24-401 through .411).

In the event of an uncontrolled fire, Purchaser shall immediately report the incident to the appropriate authorities specified in the ERP. Purchaser agrees to provide equipment and personnel working at the site to safely and effectively engage in first response fire suppression activity. Purchaser agrees to reimburse the State and U.S. Forest Service for the cost of fire suppression incurred as the result of the negligence or willful acts of its employees, agents, subcontractors, etc.

The Contract Administrator may require the Purchaser to suspend any or all of Purchaser's Operations when ignition conditions identified in the ERP are met, or when fire is within or threatening the Operational Area. Purchaser's failure to effectively engage in fire-safe operations is considered a breach and may result in suspension of operations.

S-030 Landing Debris Clean Up

[Landing debris shall be disposed of in a manner approved in writing by the Contract Administrator.]

S-035 Logging Debris Clean Up

[Slash and debris created from harvest activities shall be treated in a manner approved in writing by the Contract Administrator.]

S-040 Noxious Weed Control

[Purchaser shall thoroughly pressure wash all equipment prior to entry onto U.S. Forest Service land, to remove all contaminated soils, plant parts, seeds, vegetative matter, or other debris that could contain or hold seeds. Equipment shall be considered free of soil seed, and other such debris when a visual inspection does not disclose such material. The Contract Administrator reserves the right to also require the cleaning of equipment as required by this clause in cases where equipment is being moved onto nonfederal lands.

Purchaser shall notify the Contract Administrator in advance of moving all off-road logging and construction equipment onto U.S. Forest Service lands. Notification will include a location approved by the Contract Administrator where the equipment will be cleaned by the Purchaser, and made available for inspection by the State at a time agreed by the Parties. Only logging and construction equipment cleaned as required under this clause, and inspected by the Contract Administrator (or designee), will be allowed to operate on Federal lands within the sale area. All subsequent move-ins of equipment to the sale area shall be treated in the same manner as the initial move in. "Off-road equipment" includes all logging and construction machinery, except for log trucks, chip vans, pickup trucks or vehicles used to transport personnel on a daily basis.

All material (e.g. soil, gravel, sand borrow, mulch, aggregate, etc.) transported onto National Forest System land or incorporated into the work shall be certified weed-free, as determined by Forest Service Invasive Plant staff, or County Noxious Weed Control Board staff. Documentation of weed free status must be provided to the Contract Administrator. The contractor shall provide the Contract Administrator written notification of proposed material sources 14 days prior to use. If weed species are present in the proposed source, appropriate mitigation measures may allow conditional use of the source as required by the Contract Administrator.

All seed must be of species native to the Olympic peninsula, and must originate from the same seed zone (as defined by U.S. Forest Service) as the project site. Seed will be provided by the Forest Service.

S-050 Cessation of Operations for Low Humidity

During the "closed season", when the humidity is 30 percent or lower on the sale area, all operations must cease unless authority to continue is granted by the State in writing.

S-060 Pump Truck or Pump Trailer

Purchaser shall provide a fully functional pump truck or pump trailer equipped to meet the specifications of WAC 332-24-005 and WAC 332-24-405 during the "closed season" or as extended by the State and shall provide trained personnel to operate this equipment on the sale area during all operating periods.

S-120 Stream Protection

No timber shall be felled into, across, or yarded through any stream without written approval by the Contract Administrator.

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

Purchaser is responsible for understanding and complying with all applicable local, state, and Federal hazardous material/waste laws and regulations for operations conducted under this contract. Such regulations pertain to, but may not be limited to, hazardous material storage, handling and transport, personnel protection, release notification and emergency response, cleanup and waste disposal. Purchaser shall be responsible for restoring the site in the event of a spill.

b. Hazardous Materials Spill Prevention

All operations shall be conducted in a manner that prevents the release of hazardous materials, including petroleum products, into the environment (water, air or land). If the total oil or oil products storage exceeds 1320 gallons or if any single container exceeds a capacity of 660 gallons, the purchaser will prepare and provide the Contract Administrator a Spill Prevention Control and Counter measures Plan prior to commencing operations. The plan shall meet EPA requirements including certification by a registered professional engineer.

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 4 to 6 gallons of oil, coolant, solvent or contaminated water are available on site to quickly address potential spills from any piece of equipment at all times throughout active operations. Spill kit must also contain one or more oil-absorbing floating booms to contain a spill if it gets into a stream or other waterbody and plastic garbage bags for disposal of used pads and booms off-Forest. If large quantities of bulk fuel/other hazardous materials are stored on site, Purchaser must be able to effectively control a container leak and contain and recover a hazmat spill equal to the largest single on site storage container volume. (HAZWOPER reg. 29 CFR 1910.120 (j) (1) (vii)).

d. Hazardous Material Release Reporting

Releases of oil or hazardous materials to the environment must be reported according to the State Department of Ecology (ECY). It is the responsibility of the Purchaser to have all emergency contact information readily available and a means of remote communication for purposes of quick notification. In the event of a spill, the Purchaser is responsible for notifying the following:

Appropriate Department of Ecology regional office (contact information below).

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

(Island, King, Kitsap, San Juan, Skagit, Snohomish, and Whatcom counties)

ECY - Southwest Region:

1-360-407-6300

(Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, and Wahkiakum counties)

ECY - Central Region:

1-509-575-2490
(Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima counties)

ECY - Eastern Region:
1-509-329-3400
(Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman counties)

In addition to the above, Purchaser shall immediately notify the Contract Administrator if any leakage or spillage enters any stream, water course or area of open water.

S-131 Refuse Disposal

All Purchaser generated refuse shall be removed from state or U.S. Forest Service lands for proper disposal prior to termination of this contract. No refuse shall be burned, buried or abandoned on state or U.S. Forest Service lands. All refuse shall be transported in a manner such that it is in compliance with RCW 70.93 and all loads or loose materials shall be covered/secured such that these waste materials are properly contained during transport.

SECTION D: DAMAGES

D-010 Liquidated Damages

The clauses in the DAMAGES section of this contract provide for payments by Purchaser to the State for certain breaches of the terms of this contract. These payments are agreed to as liquidated damages and not as penalties. They are reasonable estimates of anticipated harm to the State caused by Purchaser's breach. These liquidated damages provisions are agreed to by the State and Purchaser with the understanding of the difficulty of proving loss and the inconvenience or infeasibility of obtaining an adequate remedy. These liquidated damages provisions provide greater certainty for the Purchaser by allowing the Purchaser to better assess its responsibilities under the contract.

D-020 Failure to Remove Forest Products

Purchaser's failure to remove all or part of the forest products sold in this agreement prior to the expiration of the contract term results in substantial injury to the State and the U.S. Forest Service. The value of the forest products sold at the time of breach is not readily ascertainable. Purchaser's failure to perform disrupts National Forest management plans and the state's role in implementing such plans, the actual cost of which is difficult to assess. A resale involves additional time and expense and is not an adequate remedy. Therefore, Purchaser agrees to pay the State as liquidated damages a sum calculated using the following formula:

$$LD = .35V-ID-P+C+A$$

Where:

- LD = Liquidated Damage value.
- V = The unremoved value at the date of breach of contract. The value is determined by subtracting the removal volume to date from the State's cruise volume multiplied by the contract bid rates.
- ID = Initial Deposit paid at date of contract that has not been applied to timber payments.
- P = Advance payments received but not yet applied to specific contract requirements.
- C = Charges assessed for contract requirements completed prior to breach of contract but not paid for.
- A = Administrative Fee = \$2,500.00.

The above formula reflects the Purchaser's forfeiture of the initial deposit in accordance with clause P-010 by deducting the initial deposit from the amount owed. In no event shall the liquidated damages be less than zero. Interest on the liquidated damage is owed from the date of breach until final payment, calculated using the following formula: Interest = $r \times LD \times N$.

Where:

- r = daily equivalent of an annual interest at current interest rate as established by WAC 332-100-030.
- LD = Liquidated damage value.
- N = Number of days from date of breach to date payment is received.

D-030 Inadequate Log Accountability

Removal of forest products from the sale area without adequate branding and/or valid load tickets attached to the load and scaling forest products in a location other than the facility approved by the State can result in substantial injury to the State or U.S. Forest Service. Failure to properly account for loads and scaling and/or weighing information can result in loss to the State or U.S. Forest Service. The potential loss from not having proper branding, ticketing, scaling and/or weighing location and accountability is not readily ascertainable. Purchaser's failure to perform results in a loss of log weight and scale accountability, increases the potential for unauthorized removal of forest products, and increases the State's administration costs, the actual costs of which are difficult to assess.

Enforcement actions for unauthorized removal of forest products for each improperly branded load, improperly ticketed load, lost or unaccounted for tickets, or use of a facility not authorized for this sale or improper submission of scaling data are

impractical, expensive, time consuming and are not an adequate remedy. Therefore, Purchaser agrees to pay the State, as liquidated damages, a sum of \$100 each time a load of logs does not have branding as required in the contract, \$250 each time a load of logs does not have a load ticket as required by the contract, \$250 each time a load ticket has not been filled out as required by the plan of operations, \$250 each time a load is weighed or scaled at a location not approved as required under this contract, \$250 each time a log ticket summary report is not submitted properly, and if a third party Log and Load Reporting Service is required, \$250 each time scaling or weight data is not properly submitted to the Log and Load Reporting Service per clause L-071, and \$250 each unused ticket that is not returned to the State, for any reason.

D-040 Leave Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-012, Leave Tree Damage Definition, the trees damaged result in substantial injury to the National Forest. The value of the damaged leave trees at the time of the breach is not readily ascertainable. Therefore, Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged trees in the sale area.

SECTION M: MISCELLANEOUS

M-010 Federal Endangered Species Act

The Federal Endangered Species Act of 1973 (ESA), 16 USC § 1531 et seq. prohibits a person from taking any Federally listed threatened or endangered species. Taking under the Federal ESA may include alteration of habitat. Neither this Contract, or the State's approval of Purchaser's Plan of Operations, is certification that Purchaser's operations under the plan are lawful under the ESA. Purchaser's compliance with the plan is not in lieu of compliance with any Federal requirements under the ESA or its implementing regulations.

M-020 Forest Resources Conservation and Shortage Relief Act of 1990

Purchaser must comply with the provisions of the Forest Resources Conservation and Shortage Relief Act of 1990 (Act), (16 USC 620 *et seq.*), and its implementing regulations (36 CFR § 223.185 *et seq.*), as the Act and rules now exist or are hereafter amended. Prior to award, during the life of this contract, and for a period of three years from the Contract Termination Date, Purchaser shall upon request furnish to the State and the U.S. Forest Service records showing the volume and geographic origin of unprocessed timber from private lands exported or sold for export by Purchaser or affiliates. Prior to delivering unprocessed timber to another party, Purchaser shall require each buyer, exchange, or recipient to execute an acceptable agreement that will: (i) identify the Federal origin of the timber; (ii) specify domestic processing for the timber involved; (iii) require the execution of such agreements between the parties to any subsequent transactions involving the timber; (iv) require that all hammer brands and/or yellow paint must remain on logs until they are either legally exported or

domestically processed, whichever is applicable; and (v) otherwise comply with the requirements of the Act, 16 USC 620(d). No later than 10 (ten) days following the execution of any such agreement between Purchaser and another party, Purchaser shall furnish to U. S. Forest Service a copy of each such agreement. Purchaser shall retain, for three years from the Termination Date, the records of all sales, exchanges, or dispositions of all timber. For breach of this Subsection, the State may terminate this contract and the U.S. Forest Service may take such other action as may be provided by statute or regulation, including the imposition of penalties. When the Contract is terminated by the State for a violation of the Act or rules under this clause, the State shall not be liable for any Claim submitted by Purchaser relating to the termination.

M-030 Debarment, Suspension, Ineligibility, and Exclusion.

Purchaser is a corporation organized and existing under the laws of the State of [insert State] and certifies by execution of the Contract that it is not, nor are its principals, presently debarred, suspended, proposed for debarment or suspension, declared ineligible, or excluded from participation in any transaction with the Federal government. Purchaser shall immediately notify the State without undue delay if it receives a notice from the Federal government that it or its principals are proposed for debarment or suspension, or are debarred, suspended, declared ineligible, or excluded from participating in a transaction with the Federal government.

Purchaser shall require all subcontractors to provide written certification that they are not debarred, suspended, ineligible, or excluded from participating in a transaction with the Federal government. (Execution of Department of Agriculture Form AD-1048 is sufficient to satisfy this requirement.) Purchaser shall maintain a file of certifications and provide a copy to the Contract Administrator upon request.

M-040 Certification Regarding Felony Conviction and Tax Delinquent Status.

Purchaser, by signature below, certifies that: (1) Neither the corporation or its principals have been convicted of a felony violation under any Federal law within the preceding 24 months of the effective date of the Contract; and (2) Neither the corporation or its principals have failed to file all Federal tax returns required during the three years preceding the Contract; have been convicted of a criminal offense under the Internal Revenue Code; or have been notified of any unpaid Federal tax assessment for which the liability remains unsatisfied, unless the assessment is the subject of an installment agreement or offer in compromise that has been approved by the Internal Revenue Service and is not in default.

M-050 Human Remains, Artifacts, and Other Cultural and Historic Items

In the event that human remains, burials, funerary items, sacred objects, object of cultural patrimony, prehistoric artifacts (i.e., arrowheads, spear points, motors, pestles, other ground stone tools, knives, scrapers, or flakes from the manufacture of tools, fire pits, peeled trees, etc.) or historic period artifacts or features (i.e., fragments of old

plates or ceramic vessels, weathered glass, dumps of old cans, cabins, root cellars, etc.) are found during project implementation, work on the site shall cease immediately to protect the find from further damage or disruption and the U.S. Forest Service Archeologist will be notified. No further work shall be allowed on the site until the Forest Archeologist has approved a plan for managing or preserving the remains or items.

M-060 Payment of Taxes

The State makes no representations concerning tax liability or consequences arising from the purchase of Federal timber under the Contract. It is Purchaser's sole responsibility to pay all taxes owed, including any forest excise taxes under RCW 84.33.

M-070 Non-Discrimination in Employment

In connection with the performance of work under this Contract, Purchaser agrees not to discriminate against any applicant for employment, employee, or independent contractor on the basis of race, color, national origin, sex, religion, age, disability, sexual orientation, or marital status. This shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment, layoff or termination; rates of pay, or other forms of compensation; and selection for training, including apprenticeship. Purchaser agrees to comply with all Federal and state laws governing non-discrimination in employment applicable to the work performed under the Contract.

M-080 Records

Purchaser shall maintain all reports, data, correspondence, other and information pertaining to this Contract for a period of 6 years, and provide copies to the State upon request.

M-090 Waiver

Any provision of the Contract that is determined to be invalid, void, or illegal shall in no way affect, impair, or invalidate any other provision of the Contract, such other provisions remaining in full force and effect.

M-100 Severability Clause

Any provision of the Contract that is determined to be invalid, void, or illegal shall in no way affect, impair, or invalidate any other provision of the Contract, such other provisions remaining in full force and effect.

M-110 Effective Date

This Contract shall be effective upon the date signed by the State of Washington, Department of Natural Resources.

IN WITNESS WHEREOF, the Parties hereto have entered into this contract.

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Print Name

State Forester

Date: _____

Date: _____

Address: _____

CORPORATE ACKNOWLEDGEMENT
(Required for both LLC and Inc. Entities)

STATE OF _____)

COUNTY OF _____)

On this _____ day of _____, 20____, before me personally
appeared _____

_____ to me known to be the
_____ of the corporation that
executed the within and foregoing instrument and acknowledged said instrument to be the free and
voluntary act and deed of the corporation, for the uses and purposes therein mentioned, and on
oath stated that (he/she was) (they were) authorized to execute said instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and
year first above written.

Notary Public in and for the State of

My appointment expires _____

2D

Schedule A – Unit Name Crosswalk

Schedule A serves as a general resource to help translate Timber Sale unit numbers to their corresponding NEPA stand ID number. Refer to the North Fork Calawah Vegetation Management Environmental Assessment and its supporting documents for official NEPA stand boundary locations.

2D Sale Unit Number	North Fork Calawah Vegetation Management Environmental Assessment - Stand Number
1	A100, B14
2	A107
3	A107
4	5, 84, 85, 140, A107
5	5, A107
6	5
7	5
8	7
9	25, 27, 29, 30
10	32, 26, 31
11	54
12	4

2D |
Schedule B - Thinning Prescription

Cut designated species to Basal Area Target in accordance with Table 1, starting at smallest diameter and working up to max DBH limits ensuring that smaller diameter trees are harvested first to meet target basal area requirements.

Table 1. 2D Thinning Prescriptions

Unit	Trees per Acre Target	Target Relative Density	Target Basal Area	Diameter Max Cut Limit. (DBH) (Min = 7")	Designated Cut Species (In order of preference)	No Cut
1	46	30	150	30"	WH, SS	DF, RC, RA, PSF, MA
2	10	7	34	N/A	Cut all RA	DF, RC, WH, PSF, SS, MA
3	42	37	220	34"	SS, Cut all RA	DF, RC, PSF, MA
4	48	30	150	30"	SS, DF, WH	RA, RC, PSF, MA
5	60	32	180	30"	WH, DF, SS, RA	RC, PSF, MA
6	74	32	140	N/A	RA, WH, DF	RC, PSF, SS, MA
7A (below road)	76	33	150	24"	RA, WH, DF, SS	RC, PSF, MA
7B (above road)	60	33	160	26"	RA, WH, DF	SS, MA, RC, PSF
8	72	33	150	24"	RA, DF	RC, WH, PSF, SS, MA
9	71	31	140	25"	WH, SS, DF	RA, RC, PSF, MA
10	55	30	140	25"	WH, SS, DF	RC, RA, PSF, MA
11	60	33	150	28"	WH, DF, RA	RC, PSF, SS, MA
12	80	30	120	25"	RA, DF, SS, WH	RC, PSF, MA

DF-Douglas-fir, WH-Western hemlock, SS-Sitka spruce, RC-Western redcedar,
PSF-Pacific silver fir, MA-Bigleaf Maple, RA-Red alder

Basal Area Target – Target of residual basal area to be left, excluding landings, temporary roads, skips, and gaps. All live conifers within the DBH limits, regardless of species, may be counted toward the leave target. Variability of +/- 40 square feet per acre within the treatment unit of the target is permitted, but the average for the unit needs to be within +/- 5% of Target Basal Area. Post-harvest basal area will be measured by the Contract Administrator using approximately two plots per acre.

Designated Cut Species – These are species to be removed if they are within the diameter limits. All other non-designated tree species are to be left, as are all trees outside of the diameter limits, including within gaps, and excepting on landings and temporary roads

DBH – Diameter Breast Height is 4.5 feet on the uphill side.

Right-of-Way – In areas of new construction 30 feet from centerline in right of way timber may be harvested. In areas of reconstruction 30' from centerline may be harvested, for a total of 60' width right-of-way removal. In areas of existing roads pre-haul maintenance, 15' from centerline may be harvested on either side of the existing road prism for a total of 30' width right-of-way.

Thinning is to be done from below, in general, leaving the largest diameter trees with the fullest crowns and removing smaller diameter trees of the designated species, which are in excess of the target basal area per acre. Only cut live trees. Leave hardwoods (vine maple, bigleaf maple, red alder, black cottonwood), unless where red alder is specifically included as a designated cut species.

Legacy snags marked with orange paint and snags greater than 30" DBH and at least 12' in height shall not be felled unless permitted by the Contract Administrator. If snags cannot be operated around safely a no-cut and equipment limitation zone buffer equal to 1.5 times the height of the snag shall be applied, including when those buffers encompass proposed gaps.

Structurally unique trees over 15" DBH, such as those with mistletoe brooms, broken tops, spike knots, cavities, and forked tops, will be favored as leave trees if available, though they should not be preferred over larger well-formed trees every time in a concentration such as a root rot pocket.

Gaps

All live trees without blue or orange paint, above the minimum diameter, under the maximum diameter limit, and of the permitted cut tree species will be removed from gaps. Trees over the diameter limits, no-cut species, or trees painted with blue or orange paint will be left in the gaps undamaged and undisturbed.

CERTIFICATION OF FALLERS AND YARDER OPERATORS – SEE CLAUSE H-011 OF THE CONTRACT.

The Contract Administrator and Faller/Harvester Operator will jointly review the take tree selection criteria as outlined in Schedule B of the contract.

In conjunction with the Contract Administrator, the Faller/Harvester Operator will mark a designated area as a test plot within the sale area boundary. Satisfactory thinning of the test plot completes the certification process. Certification may be revoked at any time by Contract Administrator if Contract Administrator determines that the prescription is not being implemented properly. |



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region:

Timber Sale Name:

Application Number:

EXCISE TAX APPLICABLE ACTIVITIES

Construction: **linear feet**
Road to be constructed (optional and required) but not abandoned

Reconstruction: **linear feet**
Road to be reconstructed (optional and required) but not abandoned

Abandonment: **linear feet**
Abandonment of existing roads not reconstructed under the contract

Decommission: **linear feet**
Road to be made undriveable but not officially abandoned.

Pre-Haul Maintenance: **linear feet**
Existing road to receive maintenance work (specifically required by the contract) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Optional Construction: **linear feet**
Optional roads to be constructed and then abandoned

Temporary Optional Reconstruction: **linear feet**
Optional roads to be reconstructed and then abandoned

New Abandonment: **linear feet**
Abandonment of roads constructed or reconstructed under the contract

All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale contract. The Department of Revenue bears responsibility for determining forest road excise taxes. The Department of Natural Resources developed this form to help estimate the impact of forest excise taxes. However, the information provided may not precisely calculate the actual amount of taxes due. The Department of Revenue is available for consultation by calling 1.800.548.8829.

(Revised 6/13)

Timber Sale Cruise Report 2D

Sale Name:

Sale Type: MBF SCALE

Region:

District:

Lead Cruiser: Dakota Truitt

Other Cruisers: Kevin Peterson, Matt Llobet

Cruise Narrative:

GNA Sale Name: 2D

Location: Located in the NF Calawah Basin off the Cooper Ranch Road, 2923, 2923-060, 2923-070

Cruise Design: B2C

BAF's= 54.44 and 40

Timber Quality:

Species present are WH, DF, SS, PSF, RC, BLM, RA

Timber ranges in age from 51 to 74

Major defect observed in DF is sweep, double top, and spike knots. Major defect observed in WH is root rot, spike knots, and butt rot. Major defect observed in SS is spike knots and bear damage. Major defect observed in RA is spike knot and double top.

Logging and Stand Conditions:

Ground-based harvest= 92% (310 acres)

Downhill cable harvest= 8% (28 acres)

Total Harvest Acres= 338

322 acres of thinning

16 acres of gaps

Conditions for cable harvest are steep, wet, and rocky. Conditions for ground harvest is wet, sensitive soils. Seasonal restrictions in place for Summer-only timber harvest.

General Remarks:

Thin from below prescriptions applied in all units.

See Schedule B in Timber Sale Contract Thinning Prescription

Timber Sale Notice Volume (MBF)

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WH	15.7			1,911.7	831.6	862.3	176.3	41.8
DF	16.5			1,550.3	542.2	773.7	203.5	31.2
SS	19.8			1,405.6	922.1	383.0	89.5	11.3
RA	12.7	3.0	40	363.6	10.7	129.1	199.1	24.4
ALL	16.2	3.0	40	5,231.3	2,306.4	2,148.1	668.3	108.2

Timber Sale Notice Weight (tons)

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
WH	16,969.4	6,650.2	7,773.3	1,862.1	684.1
DF	14,151.6	4,570.4	7,219.1	1,754.5	607.5
SS	10,227.6	5,946.6	3,324.5	768.8	187.6
RA	3,082.8	62.7	956.0	1,872.9	191.2
ALL	44,431.4	17,229.5	19,272.8	6,258.6	1,670.3

Timber Sale Overall Cruise Statistics (Cut + Leave Trees)

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
257.7	2.5	134.1	2.2	34,581	3.3

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
Unit 1	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	92.0		70	44	0
Unit 2	B1C: VR, 1 BAF (40) Measure/Count Plots, Sighting Ht = 0 ft	3.0		6	3	0
Unit 3	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	5.0		11	6	0
Unit 4	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	68.0		39	19	0
Unit 5	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	10.0		8	5	0
Unit 6	B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 0 ft	4.0		6	3	0
Unit 7	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	11.0		8	4	0
Unit 8	B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 0 ft	11.0		8	4	0
Unit 9	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	45.5		24	12	0
Unit 10	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht	49.0		25	13	0

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
	= 0 ft					
Unit 11	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	11.5		8	4	0
Unit 12	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	12.0		7	4	0
Unit 1 gaps	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	2.0		2	2	0
Unit 4 gaps	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	4.0		7	7	0
Unit 5 gaps	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	1.0		1	1	0
Unit 7 gaps	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	1.0		3	3	0
Unit 8 gaps	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	1.0		2	2	0
Unit 9 gaps	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	2.5		5	4	0
Unit 10 gaps	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	3.0		5	5	0
Unit 11 gaps	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	0.5		1	1	0
Unit 12 gaps	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	1.0		2	2	0
All		338.0		248	148	0

Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	13.2	40.0	1,524	6.8	4,381.1	515.1
DF	LIVE	2 SAW	HQ-B	14.1	38.0	80	0.0	189.1	27.2
DF	LIVE	3 SAW	Domestic	8.4	39.0	2,268	8.3	7,167.5	766.4
DF	LIVE	3 SAW	HQ-B	11.1	40.0	21	0.0	51.7	7.3
DF	LIVE	4 SAW	Domestic	5.4	30.0	602	2.6	1,754.6	203.3

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	UTILITY	Pulp	2.3	19.0	92	0.1	607.5	31.1
RA	LIVE	2 SAW	Domestic	16.1	27.0	32	2.2	62.7	10.7
RA	LIVE	3 SAW	Domestic	11.1	32.0	382	5.8	956.0	129.3
RA	LIVE	4 SAW	Domestic	6.7	29.0	589	3.0	1,872.8	199.1
RA	LIVE	CULL	Cull	5.0	6.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	Pulp	5.1	18.0	72	0.0	191.2	24.4
SS	LIVE	2 SAW	Domestic	14.9	38.0	2,728	3.8	5,946.7	922.0
SS	LIVE	3 SAW	Domestic	9.2	37.0	1,133	5.1	3,324.4	382.9
SS	LIVE	4 SAW	Domestic	5.8	24.0	265	1.4	768.9	89.6
SS	LIVE	CULL	Cull	12.4	8.0	0	100.0	0.0	0.0
SS	LIVE	UTILITY	Pulp	3.3	18.0	33	14.3	187.6	11.2
WH	LIVE	2 SAW	Domestic	13.7	37.0	2,460	7.7	6,650.1	831.5
WH	LIVE	3 SAW	Domestic	8.4	37.0	2,551	3.1	7,773.2	862.3
WH	LIVE	4 SAW	Domestic	5.9	26.0	521	1.2	1,862.2	176.3
WH	LIVE	CULL	Cull	5.9	8.0	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	2.9	21.0	123	0.0	683.9	41.7

Timber Sale Log Grade x Diameter Bin Summary

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.2	20.0	75	0.1	555.7	25.5
DF	5 - 11	LIVE	4 SAW	5.6	30.0	602	2.6	1,754.6	203.3
DF	5 - 11	LIVE	UTILITY	5.6	22.0	17	0.0	51.8	5.7
DF	5 - 11	LIVE	3 SAW	8.5	39.0	2,289	8.3	7,219.3	773.7
DF	12 - 19	LIVE	2 SAW	13.6	39.0	1,556	6.3	4,473.3	525.9
DF	20+	LIVE	2 SAW	20.1	40.0	48	10.0	96.9	16.4
RA	< 5	LIVE	UTILITY	4.2	32.0	11	0.0	42.6	3.6
RA	5 - 11	LIVE	CULL	5.0	6.0	0	100.0	0.0	0.0
RA	5 - 11	LIVE	UTILITY	5.4	17.0	62	0.0	148.7	20.8
RA	5 - 11	LIVE	4 SAW	6.8	30.0	589	3.0	1,872.8	199.1
RA	5 - 11	LIVE	3 SAW	10.8	33.0	336	5.3	845.5	113.5
RA	12 - 19	LIVE	3 SAW	14.1	28.0	47	8.8	110.5	15.8
RA	12 - 19	LIVE	2 SAW	16.1	27.0	32	2.2	62.7	10.7
SS	< 5	LIVE	UTILITY	2.1	18.0	15	0.0	129.6	5.2
SS	5 - 11	LIVE	4 SAW	5.8	25.0	265	1.4	768.9	89.6
SS	5 - 11	LIVE	UTILITY	6.6	20.0	18	23.8	58.0	6.0
SS	5 - 11	LIVE	CULL	7.9	7.0	0	100.0	0.0	0.0
SS	5 - 11	LIVE	3 SAW	9.1	38.0	1,133	5.1	3,324.4	382.9

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	12 - 19	LIVE	2 SAW	15.0	39.0	2,473	4.2	5,483.4	835.9
SS	20+	LIVE	2 SAW	22.2	37.0	255	0.0	463.2	86.1
SS	20+	LIVE	CULL	23.4	12.0	0	100.0	0.0	0.0
WH	< 5	LIVE	UTILITY	2.3	18.0	58	0.0	442.8	19.8
WH	5 - 11	LIVE	CULL	5.3	7.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	UTILITY	5.6	34.0	65	0.0	241.2	21.9
WH	5 - 11	LIVE	4 SAW	5.8	25.0	521	1.2	1,862.2	176.3
WH	5 - 11	LIVE	3 SAW	8.5	37.0	2,499	3.2	7,629.1	844.8
WH	12 - 19	LIVE	3 SAW	12.2	36.0	52	0.0	144.1	17.5
WH	12 - 19	LIVE	CULL	13.0	24.0	0	100.0	0.0	0.0
WH	12 - 19	LIVE	2 SAW	14.0	37.0	2,460	7.7	6,650.1	831.5

Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.2	20.0	75	0.1	555.7	25.5
DF	5 - 11	LIVE	Pulp	5.6	22.0	17	0.0	51.8	5.7
DF	5 - 11	LIVE	Domestic	7.2	35.0	2,869	7.2	8,922.1	969.8
DF	5 - 11	LIVE	HQ-B	11.1	40.0	21	0.0	51.7	7.3
DF	12 - 19	LIVE	Domestic	13.6	39.0	1,476	6.7	4,284.2	498.7
DF	12 - 19	LIVE	HQ-B	14.1	38.0	80	0.0	189.1	27.2
DF	20+	LIVE	Domestic	20.1	40.0	48	10.0	96.9	16.4
RA	< 5	LIVE	Pulp	4.2	32.0	11	0.0	42.6	3.6
RA	5 - 11	LIVE	Cull	5.0	6.0	0	100.0	0.0	0.0
RA	5 - 11	LIVE	Pulp	5.4	17.0	62	0.0	148.7	20.8
RA	5 - 11	LIVE	Domestic	7.6	31.0	925	3.8	2,718.3	312.7
RA	12 - 19	LIVE	Domestic	14.7	28.0	78	6.2	173.3	26.5
SS	< 5	LIVE	Pulp	2.1	18.0	15	0.0	129.6	5.2
SS	5 - 11	LIVE	Pulp	6.6	20.0	18	23.8	58.0	6.0
SS	5 - 11	LIVE	Domestic	7.5	32.0	1,398	4.4	4,093.3	472.5
SS	5 - 11	LIVE	Cull	7.9	7.0	0	100.0	0.0	0.0
SS	12 - 19	LIVE	Domestic	15.0	39.0	2,473	4.2	5,483.4	835.9
SS	20+	LIVE	Domestic	22.2	37.0	255	0.0	463.2	86.1
SS	20+	LIVE	Cull	23.4	12.0	0	100.0	0.0	0.0
WH	< 5	LIVE	Pulp	2.3	18.0	58	0.0	442.8	19.8
WH	5 - 11	LIVE	Cull	5.3	7.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	Pulp	5.6	34.0	65	0.0	241.2	21.9
WH	5 - 11	LIVE	Domestic	7.4	32.0	3,021	2.8	9,491.3	1,021.0

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	12 - 19	LIVE	Cull	13.0	24.0	0	100.0	0.0	0.0
WH	12 - 19	LIVE	Domestic	13.9	37.0	2,512	7.5	6,794.2	849.0

Cruise Unit Report Unit 1

Unit Sale Notice Volume (MBF): Unit 1

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WH	15.2			967.3	432.1	421.4	83.1	30.8
SS	20.4			274.1	182.9	80.6	5.7	4.9
ALL	15.9			1,241.4	614.9	502.0	88.8	35.7

Unit Sale Notice Weight (tons): Unit 1

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
WH	8,597.8	3,415.9	3,850.0	924.2	407.8
SS	1,872.8	1,059.6	696.8	53.7	62.6
ALL	10,470.6	4,475.5	4,546.8	977.9	470.4

Unit Cruise Design: Unit 1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	92.0		70	44	0

Unit Cruise Summary: Unit 1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF		74	1.8	0
SF		2	2.0	0
RC		2	1.0	0
WH	42	169	2.4	0
SS	10	71	1.0	0
ALL	52	318	4.5	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	98.3	67.0	10.5						
SF	108.9	0.0	0.0						

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RC	40.0	0.0	0.0						
WH	131.4	66.3	7.9	135.2	35.4	5.5	17,768	75.2	9.6
SS	55.2	137.9	16.5	159.6	30.7	9.7	8,812	141.3	19.1
ALL	246.9	38.1	4.6	142.4	34.1	4.7	35,160	51.1	6.6

Unit Summary: Unit 1

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	LEA	40	ALL	25.1	50	63			16.7	57.6	11.5		
RC	LIVE	LEA	1	ALL	18.6	23	29			0.6	1.1	0.3		
SF	LIVE	LEA	2	ALL	26.0	87	117			0.4	1.6	0.3		
SS	LIVE	CUT	10	ALL	17.7	26	30	2,979	11.3	10.9	18.7	4.4	1,872.8	274.0
SS	LIVE	LEA	22	ALL	30.4	40	48	5,833	11.3	7.3	36.6	6.6	3,667.6	536.7
WH	LIVE	CUT	42	ALL	14.3	27	32	10,514	9.8	69.7	77.8	20.6	8,597.8	967.3
WH	LIVE	LEA	35	ALL	21.5	43	54	7,255	9.8	21.3	53.7	11.6	5,932.5	667.4
ALL	LIVE	LEA	100	ALL	24.4	45	57	13,088	10.5	46.3	150.6	30.3	9,600.1	1,204.1
ALL	LIVE	CUT	52	ALL	14.8	27	32	13,493	10.1	80.6	96.5	25.0	10,470.6	1,241.3
ALL	ALL	ALL	152	ALL	18.9	34	41	26,581	10.3	126.9	247.1	55.3	20,070.7	2,445.4

Unit Stand Table: Unit 1

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	15	LIVE	LEA	1	15.0	85	108			0.6	0.8	0.2		
DF	17	LIVE	LEA	3	17.3	32	34			1.4	2.3	0.6		
DF	18	LIVE	LEA	4	17.9	40	50			1.8	3.1	0.7		
DF	19	LIVE	LEA	2	19.2	71	93			0.8	1.6	0.4		
DF	20	LIVE	LEA	2	19.9					0.7	1.6	0.3		
DF	21	LIVE	LEA	3	21.3	35	39			0.9	2.3	0.5		
DF	22	LIVE	LEA	1	21.9					0.3	0.8	0.2		
DF	23	LIVE	LEA	3	22.9	35	42			0.8	2.3	0.5		
DF	24	LIVE	LEA	9	24.0	31	39			2.2	7.0	1.4		
DF	25	LIVE	LEA	3	25.1	102	131			0.7	2.3	0.5		
DF	26	LIVE	LEA	3	26.0	58	74			0.6	2.3	0.5		
DF	27	LIVE	LEA	4	27.2	82	102			0.8	3.1	0.6		
DF	28	LIVE	LEA	7	28.0	71	88			1.3	5.4	1.0		
DF	29	LIVE	LEA	1	29.2					0.2	0.8	0.1		
DF	30	LIVE	LEA	7	30.0	57	77			1.1	5.4	1.0		

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	31	LIVE	LEA	2	30.6	54	73			0.3	1.6	0.3		
DF	32	LIVE	LEA	7	32.2	44	56			1.0	5.4	1.0		
DF	33	LIVE	LEA	1	33.2	122	151			0.1	0.8	0.1		
DF	35	LIVE	LEA	2	34.8	109	141			0.2	1.6	0.3		
DF	36	LIVE	LEA	1	36.2	105	157			0.1	0.8	0.1		
DF	37	LIVE	LEA	5	37.1	66	90			0.5	3.9	0.6		
DF	41	LIVE	LEA	1	41.5					0.1	0.8	0.1		
DF	44	LIVE	LEA	2	44.5	55	70			0.1	1.6	0.2		
RC	17	LIVE	LEA	1	16.7					0.4	0.6	0.1		
RC	21	LIVE	LEA	1	21.2	61	76			0.2	0.6	0.1		
SF	22	LIVE	LEA	1	22.4	81	108			0.3	0.8	0.2		
SF	32	LIVE	LEA	1	32.0	99	136			0.1	0.8	0.1		
SS	9	LIVE	CUT	1	9.2			124	11.3	1.7	0.8	0.3	78.0	11.4
SS	13	LIVE	CUT	1	13.0			124	11.3	0.8	0.8	0.2	78.0	11.4
SS	15	LIVE	CUT	2	14.7	70	80	147	20.8	1.3	1.6	0.4	134.7	13.5
SS	16	LIVE	CUT	5	15.9			621	11.3	2.8	3.9	1.0	390.2	57.1
SS	17	LIVE	CUT	1	17.5			124	11.3	0.5	0.8	0.2	78.0	11.4
SS	18	LIVE	CUT	2	18.1	32	41	213	6.9	0.9	1.6	0.4	145.5	19.6
SS	19	LIVE	CUT	1	18.8	99	86	139	1.4	0.4	0.8	0.2	91.7	12.8
SS	21	LIVE	CUT	1	21.0	86	93	116	1.6	0.3	0.8	0.2	82.0	10.6
SS	22	LIVE	CUT	1	22.5			124	11.3	0.3	0.8	0.2	78.0	11.4
SS	23	LIVE	CUT	1	23.5			124	11.3	0.3	0.8	0.2	78.0	11.4
SS	24	LIVE	CUT	2	23.8	43	55	252	6.6	0.5	1.6	0.3	158.8	23.2
SS	25	LIVE	CUT	1	25.0			124	11.3	0.2	0.8	0.2	78.0	11.4
SS	26	LIVE	CUT	1	26.5	102	131	126	30.4	0.2	0.8	0.2	66.0	11.6
SS	28	LIVE	CUT	2	28.2	100	128	317	15.5	0.4	1.6	0.3	159.9	29.1
SS	30	LIVE	CUT	2	30.1	53	61	304	4.9	0.3	1.6	0.3	175.8	27.9
SS	16	LIVE	LEA	1	16.0	61	76	65	0.0	0.6	0.8	0.2	59.6	5.9
SS	19	LIVE	LEA	1	19.3			107	11.3	0.4	0.8	0.2	74.3	9.8
SS	21	LIVE	LEA	1	20.8	88	93	106	1.6	0.3	0.8	0.2	78.8	9.7
SS	22	LIVE	LEA	1	22.4			107	11.3	0.3	0.8	0.2	74.3	9.8
SS	23	LIVE	LEA	3	23.0	27	34	317	7.9	0.8	2.3	0.5	221.5	29.1
SS	24	LIVE	LEA	2	24.1	50	51	245	5.2	0.5	1.6	0.3	163.8	22.6
SS	25	LIVE	LEA	2	25.0			213	11.3	0.5	1.6	0.3	148.5	19.6
SS	26	LIVE	LEA	2	26.1			213	11.3	0.4	1.6	0.3	148.6	19.6
SS	27	LIVE	LEA	4	27.2	23	29	449	8.9	0.8	3.1	0.6	304.4	41.3
SS	31	LIVE	LEA	1	30.7	94	121	134	9.6	0.2	0.8	0.1	80.9	12.3
SS	32	LIVE	LEA	1	31.7	104	124	149	4.1	0.1	0.8	0.1	93.3	13.7

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
SS	33	LIVE	LEA	3	33.0	30	36	341	7.8	0.4	2.3	0.4	227.0	31.4
SS	34	LIVE	LEA	2	34.2	100	129	298	4.8	0.2	1.6	0.3	179.9	27.4
SS	35	LIVE	LEA	1	35.0			107	11.3	0.1	0.8	0.1	74.3	9.8
SS	36	LIVE	LEA	2	36.1			213	11.3	0.2	1.6	0.3	148.6	19.6
SS	37	LIVE	LEA	3	37.3	76	93	499	2.6	0.3	2.3	0.4	271.0	45.9
SS	38	LIVE	LEA	1	37.9	85	108	41	62.6	0.1	0.8	0.1	25.1	3.8
SS	39	LIVE	LEA	1	39.0			107	11.3	0.1	0.8	0.1	74.2	9.8
SS	40	LIVE	LEA	1	40.5	124	144	204	0.0	0.1	0.8	0.1	107.3	18.8
SS	43	LIVE	LEA	3	42.9	64	82	417	3.2	0.2	2.3	0.4	244.3	38.3
SS	44	LIVE	LEA	2	44.2	52	67	216	24.5	0.1	1.6	0.2	132.5	19.9
SS	45	LIVE	LEA	1	45.0	110	142	108	43.2	0.1	0.8	0.1	51.9	9.9
SS	46	LIVE	LEA	1	46.0			107	11.3	0.1	0.8	0.1	74.3	9.8
SS	49	LIVE	LEA	2	48.8	55	71	293	4.4	0.1	1.6	0.2	169.6	27.0
SS	53	LIVE	LEA	3	53.3	72	92	456	6.3	0.2	2.3	0.3	259.5	42.0
SS	54	LIVE	LEA	1	54.5	130	169	217	0.0	0.0	0.8	0.1	105.6	19.9
SS	55	LIVE	LEA	1	55.5			107	11.3	0.0	0.8	0.1	74.3	9.8
WH	8	LIVE	CUT	6	8.3	8	9	594	9.9	12.4	4.7	1.6	497.2	54.6
WH	9	LIVE	CUT	2	8.8			211	9.8	3.6	1.6	0.5	173.2	19.4
WH	10	LIVE	CUT	5	10.0	37	41	493	7.8	7.1	3.9	1.2	394.2	45.3
WH	11	LIVE	CUT	3	11.0	29	34	210	7.5	3.6	2.3	0.7	191.8	19.3
WH	12	LIVE	CUT	4	12.0	25	30	334	9.0	4.0	3.1	0.9	281.8	30.7
WH	13	LIVE	CUT	3	13.1			317	9.8	2.5	2.3	0.6	259.7	29.2
WH	14	LIVE	CUT	5	14.2	18	18	568	7.5	3.5	3.9	1.0	444.0	52.3
WH	15	LIVE	CUT	11	14.9	12	15	1,133	8.4	7.1	8.6	2.2	934.1	104.2
WH	16	LIVE	CUT	10	16.0	52	58	1,161	10.0	5.6	7.8	1.9	952.6	106.8
WH	17	LIVE	CUT	17	17.0	50	62	1,546	15.4	8.4	13.2	3.2	1,281.9	142.2
WH	18	LIVE	CUT	7	18.0	44	54	722	8.6	3.1	5.4	1.3	628.6	66.4
WH	19	LIVE	CUT	10	18.9	24	31	1,061	9.4	4.0	7.8	1.8	898.3	97.6
WH	20	LIVE	CUT	4	20.0			423	9.8	1.4	3.1	0.7	346.3	38.9
WH	21	LIVE	CUT	5	21.0	73	91	675	9.3	1.6	3.9	0.8	517.3	62.1
WH	22	LIVE	CUT	2	22.0	51	58	299	3.7	0.6	1.6	0.3	204.9	27.5
WH	23	LIVE	CUT	4	22.7	42	56	452	9.4	1.1	3.1	0.7	365.2	41.6
WH	25	LIVE	CUT	1	24.8	100	126	315	0.0	0.5	1.6	0.3	226.8	29.0
WH	17	LIVE	LEA	5	17.1	16	20	465	8.0	2.4	3.9	0.9	410.7	42.7
WH	18	LIVE	LEA	4	18.2	57	71	357	5.4	1.7	3.1	0.7	331.7	32.8
WH	19	LIVE	LEA	8	19.2	40	49	778	9.3	3.1	6.2	1.4	662.9	71.6
WH	20	LIVE	LEA	6	20.0	41	51	536	17.7	2.1	4.7	1.0	454.4	49.3
WH	21	LIVE	LEA	6	21.1	29	37	629	6.3	1.9	4.7	1.0	513.0	57.9

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
WH	22	LIVE	LEA	9	22.0	59	74	949	7.3	2.7	7.0	1.5	780.0	87.3
WH	23	LIVE	LEA	13	22.9	49	62	1,509	5.2	3.5	10.1	2.1	1,181.2	138.8
WH	24	LIVE	LEA	4	23.8	67	87	468	3.2	1.0	3.1	0.6	372.7	43.1
WH	25	LIVE	LEA	5	25.1	51	64	556	5.3	1.1	3.9	0.8	440.4	51.2
WH	26	LIVE	LEA	4	25.9	46	60	467	4.6	0.8	3.1	0.6	359.6	43.0
WH	28	LIVE	LEA	2	27.7			186	9.8	0.4	1.6	0.3	161.4	17.1
WH	29	LIVE	LEA	1	29.0	97	107	171	0.9	0.2	0.8	0.1	103.1	15.7
WH	30	LIVE	LEA	1	30.0			93	9.8	0.2	0.8	0.1	80.7	8.5
WH	33	LIVE	LEA	1	33.1			93	9.8	0.1	0.8	0.1	80.7	8.5

Unit Log Grade Summary: Unit 1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	LIVE	2 SAW	16.4	40.0	1,988	0.0	1,059.6	182.9
SS	LIVE	3 SAW	9.8	38.0	876	7.6	696.8	80.6
SS	LIVE	4 SAW	6.7	20.0	62	7.2	53.7	5.7
SS	LIVE	CULL	12.4	8.0	0	100.0	0.0	0.0
SS	LIVE	UTILITY	5.0	22.0	53	27.7	62.6	4.9
WH	LIVE	2 SAW	13.6	38.0	4,696	11.4	3,415.9	432.1
WH	LIVE	3 SAW	8.5	37.0	4,580	4.3	3,850.0	421.4
WH	LIVE	4 SAW	6.1	26.0	903	2.0	924.2	83.1
WH	LIVE	CULL	5.9	8.0	0	100.0	0.0	0.0
WH	LIVE	UTILITY	3.4	20.0	335	0.0	407.8	30.8

Unit Log Sort Summary: Unit 1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	LIVE	Cull	12.4	8.0	0	100.0	0.0	0.0
SS	LIVE	Domestic	11.4	36.0	2,926	2.6	1,810.2	269.2
SS	LIVE	Pulp	5.0	22.0	53	27.7	62.6	4.9
WH	LIVE	Cull	5.9	8.0	0	100.0	0.0	0.0
WH	LIVE	Domestic	8.9	34.0	10,179	7.5	8,190.0	936.5
WH	LIVE	Pulp	3.4	20.0	335	0.0	407.8	30.8

Unit Log Grade x Sort Summary: Unit 1

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	LIVE	2 SAW	Domestic	16.4	40.0	1,988	0.0	1,059.6	182.9
SS	LIVE	3 SAW	Domestic	9.8	38.0	876	7.6	696.8	80.6

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	LIVE	4 SAW	Domestic	6.7	20.0	62	7.2	53.7	5.7
SS	LIVE	CULL	Cull	12.4	8.0	0	100.0	0.0	0.0
SS	LIVE	UTILITY	Pulp	5.0	22.0	53	27.7	62.6	4.9
WH	LIVE	2 SAW	Domestic	13.6	38.0	4,696	11.4	3,415.9	432.1
WH	LIVE	3 SAW	Domestic	8.5	37.0	4,580	4.3	3,850.0	421.4
WH	LIVE	4 SAW	Domestic	6.1	26.0	903	2.0	924.2	83.1
WH	LIVE	CULL	Cull	5.9	8.0	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	3.4	20.0	335	0.0	407.8	30.8

Unit Log Grade x Diameter Bin Summary: Unit 1

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	< 5	LIVE	UTILITY	2.2	22.0	5	0.0	15.2	0.4
SS	5 - 11	LIVE	4 SAW	6.7	20.0	62	7.2	53.7	5.7
SS	5 - 11	LIVE	UTILITY	7.3	22.0	48	29.6	47.5	4.4
SS	5 - 11	LIVE	CULL	7.9	7.0	0	100.0	0.0	0.0
SS	5 - 11	LIVE	3 SAW	9.8	38.0	876	7.6	696.8	80.6
SS	12 - 19	LIVE	2 SAW	15.5	40.0	1,404	0.0	770.1	129.1
SS	20+	LIVE	2 SAW	21.2	40.0	584	0.0	289.6	53.7
SS	20+	LIVE	CULL	23.4	12.0	0	100.0	0.0	0.0
WH	< 5	LIVE	UTILITY	2.8	17.0	96	0.0	166.6	8.9
WH	5 - 11	LIVE	CULL	5.3	7.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	UTILITY	5.6	34.0	238	0.0	241.2	21.9
WH	5 - 11	LIVE	4 SAW	6.1	26.0	903	2.0	924.2	83.1
WH	5 - 11	LIVE	3 SAW	8.4	37.0	4,389	4.5	3,705.9	403.8
WH	12 - 19	LIVE	3 SAW	12.2	36.0	191	0.0	144.1	17.5
WH	12 - 19	LIVE	CULL	13.0	24.0	0	100.0	0.0	0.0
WH	12 - 19	LIVE	2 SAW	13.6	38.0	4,696	11.4	3,415.9	432.1

Unit Log Sort x Diameter Bin Summary: Unit 1

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	< 5	LIVE	Pulp	2.2	22.0	5	0.0	15.2	0.4
SS	5 - 11	LIVE	Pulp	7.3	22.0	48	29.6	47.5	4.4
SS	5 - 11	LIVE	Cull	7.9	7.0	0	100.0	0.0	0.0
SS	5 - 11	LIVE	Domestic	9.0	34.0	938	7.6	750.5	86.3
SS	12 - 19	LIVE	Domestic	15.5	40.0	1,404	0.0	770.1	129.1
SS	20+	LIVE	Domestic	21.2	40.0	584	0.0	289.6	53.7
SS	20+	LIVE	Cull	23.4	12.0	0	100.0	0.0	0.0

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	< 5	LIVE	Pulp	2.8	17.0	96	0.0	166.6	8.9
WH	5 - 11	LIVE	Cull	5.3	7.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	Pulp	5.6	34.0	238	0.0	241.2	21.9
WH	5 - 11	LIVE	Domestic	7.5	33.0	5,292	4.1	4,630.1	486.9
WH	12 - 19	LIVE	Cull	13.0	24.0	0	100.0	0.0	0.0
WH	12 - 19	LIVE	Domestic	13.5	38.0	4,887	11.0	3,559.9	449.6

Cruise Unit Report Unit 2

Unit Sale Notice Volume (MBF): Unit 2

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
RA	15.9	3.0	40	77.6	10.7	37.8	24.1	5.0
ALL	15.9	3.0	40	77.6	10.7	37.8	24.1	5.0

Unit Sale Notice Weight (tons): Unit 2

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
RA	604.1	62.7	272.4	224.0	45.0
ALL	604.1	62.7	272.4	224.0	45.0

Unit Cruise Design: Unit 2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (40) Measure/Count Plots, Sighting Ht = 0 ft	3.0		6	3	0

Unit Cruise Summary: Unit 2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
SS		5	1.3	0
RA	18	32	5.3	3
ALL	18	37	6.2	3

Unit Cruise Statistics (Cut + Leave Trees): Unit 2

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	50.0	40.0	20.0						
RA	213.3	65.7	26.8	121.3	26.7	6.3	25,877	70.9	27.5
ALL	246.7	53.7	21.9	121.3	26.7	6.3	29,920	60.0	22.8

Unit Summary: Unit 2

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
RA	LIVE	CUT	18	ALL	14.7	33	40	25,877	3.8	181.0	213.3	55.6	604.1	77.6
SS	LIVE	LEA	2	ALL	24.8	11	11			9.9	33.3	6.7		
ALL	LIVE	CUT	18	ALL	14.7	33	40	25,877	3.8	181.0	213.3	55.6	604.1	77.6
ALL	LIVE	LEA	2	ALL	24.8	11	11			9.9	33.3	6.7		
ALL	ALL	ALL	20	ALL	15.4	32	38	25,877	3.8	190.9	246.6	62.3	604.1	77.6

Unit Stand Table: Unit 2

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
RA	9	LIVE	CUT	1	8.8			809	3.8	15.8	6.7	2.2	18.9	2.4
RA	10	LIVE	CUT	1	9.6			809	3.8	13.3	6.7	2.2	18.9	2.4
RA	11	LIVE	CUT	2	11.4			1,617	3.8	18.6	13.3	3.9	37.8	4.9
RA	12	LIVE	CUT	2	12.1	76	91	1,869	0.0	16.6	13.3	3.8	43.0	5.6
RA	13	LIVE	CUT	4	13.2	20	25	2,496	5.0	28.2	26.7	7.4	63.2	7.5
RA	14	LIVE	CUT	4	14.1	58	73	3,799	1.5	24.7	26.7	7.1	84.1	11.4
RA	15	LIVE	CUT	3	15.2	52	65	2,725	1.5	15.9	20.0	5.1	62.1	8.2
RA	16	LIVE	CUT	1	16.2			809	3.8	4.7	6.7	1.7	18.9	2.4
RA	17	LIVE	CUT	1	17.1			809	3.8	4.2	6.7	1.6	18.9	2.4
RA	18	LIVE	CUT	4	18.0	51	60	3,065	7.5	15.1	26.7	6.3	76.2	9.2
RA	19	LIVE	CUT	3	19.0	45	52	2,420	5.8	10.1	20.0	4.6	55.6	7.3
RA	21	LIVE	CUT	1	20.7	52	59	437	6.7	2.9	6.7	1.5	13.9	1.3
RA	22	LIVE	CUT	2	22.2	34	39	1,602	2.5	4.9	13.3	2.8	36.8	4.8
RA	23	LIVE	CUT	1	23.0	78	88	896	7.4	2.3	6.7	1.4	18.7	2.7
RA	25	LIVE	CUT	1	25.2	71	79	907	1.9	1.9	6.7	1.3	18.4	2.7
RA	28	LIVE	CUT	1	28.0			808	3.8	1.6	6.7	1.3	18.9	2.4
SS	12	LIVE	LEA	1	12.5					7.8	6.7	1.9		
SS	37	LIVE	LEA	1	36.6					0.9	6.7	1.1		
SS	50	LIVE	LEA	1	50.0	121	128			0.5	6.7	0.9		
SS	57	LIVE	LEA	1	57.0	125	132			0.4	6.7	0.9		
SS	62	LIVE	LEA	1	62.0					0.3	6.7	0.8		

Unit Log Grade Summary: Unit 2

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	2 SAW	16.1	27.0	3,567	2.2	62.7	10.7
RA	LIVE	3 SAW	11.7	31.0	12,605	4.6	272.4	37.8
RA	LIVE	4 SAW	7.4	33.0	8,035	1.9	224.0	24.1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	CULL	5.0	6.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	5.4	19.0	1,671	0.0	45.0	5.0

Unit Log Sort Summary: Unit 2

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	Cull	5.0	6.0	0	100.0	0.0	0.0
RA	LIVE	Domestic	9.5	32.0	24,206	3.4	559.1	72.6
RA	LIVE	Pulp	5.4	19.0	1,671	0.0	45.0	5.0

Unit Log Grade x Sort Summary: Unit 2

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	2 SAW	Domestic	16.1	27.0	3,567	2.2	62.7	10.7
RA	LIVE	3 SAW	Domestic	11.7	31.0	12,605	4.6	272.4	37.8
RA	LIVE	4 SAW	Domestic	7.4	33.0	8,035	1.9	224.0	24.1
RA	LIVE	CULL	Cull	5.0	6.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	Pulp	5.4	19.0	1,671	0.0	45.0	5.0

Unit Log Grade x Diameter Bin Summary: Unit 2

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 11	LIVE	CULL	5.0	6.0	0	100.0	0.0	0.0
RA	5 - 11	LIVE	UTILITY	5.4	19.0	1,671	0.0	45.0	5.0
RA	5 - 11	LIVE	4 SAW	7.4	33.0	8,035	1.9	224.0	24.1
RA	5 - 11	LIVE	3 SAW	10.8	32.0	8,292	3.0	187.5	24.9
RA	12 - 19	LIVE	3 SAW	14.5	27.0	4,313	7.7	84.9	12.9
RA	12 - 19	LIVE	2 SAW	16.1	27.0	3,567	2.2	62.7	10.7

Unit Log Sort x Diameter Bin Summary: Unit 2

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 11	LIVE	Cull	5.0	6.0	0	100.0	0.0	0.0
RA	5 - 11	LIVE	Pulp	5.4	19.0	1,671	0.0	45.0	5.0
RA	5 - 11	LIVE	Domestic	8.5	33.0	16,327	2.4	411.5	49.0
RA	12 - 19	LIVE	Domestic	15.1	27.0	7,879	5.3	147.6	23.6

Cruise Unit Report Unit 3

Unit Sale Notice Volume (MBF): Unit 3

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
SS	29.2			79.2	72.9	4.2	1.8	0.3
RA	12.4			14.3		3.7	9.2	1.4
ALL	18.1			93.5	72.9	7.9	11.0	1.7

Unit Sale Notice Weight (tons): Unit 3

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
SS	515.7	428.4	51.8	32.8	2.8
RA	125.7		31.6	87.5	6.7
ALL	641.4	428.4	83.3	120.3	9.4

Unit Cruise Design: Unit 3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	5.0		11	6	0

Unit Cruise Summary: Unit 3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RC		5	1.7	0
DF		4	1.3	0
MA		6	6.0	0
SS	4	52	4.7	0
RA	3	8	0.7	0
ALL	7	75	6.8	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 3

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RC	66.7	34.6	20.0						
DF	72.6	43.3	25.0						

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
MA	240.0	0.0	0.0						
SS	257.4	83.6	25.2	168.4	43.1	21.6	43,348	94.1	33.2
RA	29.1	195.3	58.9	98.2	12.3	7.1	2,855	195.7	59.3
ALL	346.2	57.7	17.4	161.3	39.7	15.0	55,849	70.1	23.0

Unit Summary: Unit 3

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	LEA	1	ALL	31.7	13	15			3.6	19.8	3.5		
MA	LIVE	LEA	6	ALL	21.2	69	83			8.9	21.8	4.7		
RA	LIVE	CUT	3	ALL	12.8	22	30	2,855	5.3	32.6	29.1	8.1	125.7	14.3
RC	LIVE	LEA	2	ALL	15.2	21	26			14.4	18.2	4.7		
SS	LIVE	CUT	4	ALL	24.8	14	15	15,839	1.2	28.0	94.0	18.9	515.7	79.2
SS	LIVE	LEA	16	ALL	44.3	55	60	27,509	1.2	15.3	163.3	24.5	895.6	137.5
ALL	LIVE	LEA	25	ALL	31.2	43	49	27,509	1.2	42.2	223.1	37.4	895.6	137.5
ALL	LIVE	CUT	7	ALL	19.3	18	23	18,694	1.8	60.6	123.1	27.0	641.4	93.5
ALL	ALL	ALL	32	ALL	24.9	28	34	46,203	1.4	102.8	346.2	64.4	1,537.0	231.0

Unit Stand Table: Unit 3

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	26	LIVE	LEA	1	26.3					1.3	5.0	1.0		
DF	30	LIVE	LEA	1	30.0					1.0	5.0	0.9		
DF	32	LIVE	LEA	1	31.7					0.9	5.0	0.9		
DF	48	LIVE	LEA	1	47.9	123	137			0.4	5.0	0.7		
MA	14	LIVE	LEA	1	14.3	68	88			3.3	3.6	1.0		
MA	16	LIVE	LEA	1	16.5	70	86			2.4	3.6	0.9		
MA	23	LIVE	LEA	1	22.6	71	81			1.3	3.6	0.8		
MA	29	LIVE	LEA	1	29.3	58	64			0.8	3.6	0.7		
MA	33	LIVE	LEA	1	32.7	73	80			0.6	3.6	0.6		
MA	36	LIVE	LEA	1	36.5	72	78			0.5	3.6	0.6		
RA	9	LIVE	CUT	1	9.2			357	5.3	7.9	3.6	1.2	15.7	1.8
RA	10	LIVE	CUT	1	10.5	48	76	308	5.6	6.0	3.6	1.1	15.0	1.5
RA	11	LIVE	CUT	1	10.9			357	5.3	5.6	3.6	1.1	15.7	1.8
RA	12	LIVE	CUT	1	12.2	56	72	394	5.4	4.5	3.6	1.0	15.4	2.0
RA	16	LIVE	CUT	1	15.9			357	5.3	2.6	3.6	0.9	15.7	1.8
RA	17	LIVE	CUT	2	16.7	34	41	725	5.1	4.8	7.3	1.8	32.5	3.6
RA	23	LIVE	CUT	1	22.7			357	5.3	1.3	3.6	0.8	15.7	1.8

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
RC	9	LIVE	LEA	1	9.3	19	23			7.7	3.6	1.2		
RC	11	LIVE	LEA	1	11.3	29	38			5.2	3.6	1.1		
RC	35	LIVE	LEA	2	35.1					1.1	7.3	1.2		
RC	36	LIVE	LEA	1	36.1					0.5	3.6	0.6		
SS	11	LIVE	CUT	1	11.2			834	1.2	7.2	4.9	1.5	27.1	4.2
SS	22	LIVE	CUT	1	21.7			834	1.2	1.9	4.9	1.1	27.1	4.2
SS	25	LIVE	CUT	3	25.2	23	26	2,182	0.9	4.3	14.8	3.0	76.0	10.9
SS	26	LIVE	CUT	3	25.9			2,501	1.2	4.1	14.8	2.9	81.4	12.5
SS	29	LIVE	CUT	4	28.9	18	20	3,089	2.2	4.3	19.8	3.7	104.8	15.4
SS	31	LIVE	CUT	1	31.0			834	1.2	0.9	4.9	0.9	27.1	4.2
SS	32	LIVE	CUT	2	31.9	62	69	2,132	0.5	1.8	9.9	1.8	61.1	10.7
SS	33	LIVE	CUT	4	32.8	27	30	3,434	0.8	3.4	19.8	3.5	111.0	17.2
SS	33	LIVE	LEA	1	33.5			827	1.2	0.8	4.9	0.9	25.3	4.1
SS	34	LIVE	LEA	2	34.2			1,654	1.2	1.5	9.9	1.7	50.7	8.3
SS	36	LIVE	LEA	3	35.7	80	87	3,121	3.3	2.1	14.8	2.5	86.9	15.6
SS	37	LIVE	LEA	1	37.2	133	145	1,078	15.1	0.7	4.9	0.8	32.2	5.4
SS	38	LIVE	LEA	1	38.3	122	132	1,257	0.0	0.6	4.9	0.8	30.2	6.3
SS	39	LIVE	LEA	1	39.3			827	1.2	0.6	4.9	0.8	25.3	4.1
SS	40	LIVE	LEA	1	39.7	127	137	1,069	16.4	0.6	4.9	0.8	32.3	5.3
SS	41	LIVE	LEA	2	41.3	62	73	1,355	9.4	1.1	9.9	1.5	53.8	6.8
SS	42	LIVE	LEA	2	42.2	54	60	1,276	8.7	1.0	9.9	1.5	50.6	6.4
SS	43	LIVE	LEA	2	42.9			1,654	1.2	1.0	9.9	1.5	50.7	8.3
SS	44	LIVE	LEA	1	43.8			827	1.2	0.5	4.9	0.7	25.3	4.1
SS	45	LIVE	LEA	1	45.0			827	1.2	0.4	4.9	0.7	25.3	4.1
SS	47	LIVE	LEA	2	46.8	68	77	1,726	0.6	0.8	9.9	1.4	53.5	8.6
SS	48	LIVE	LEA	1	48.0			827	1.2	0.4	4.9	0.7	25.3	4.1
SS	50	LIVE	LEA	1	49.6	121	131	720	0.5	0.4	4.9	0.7	26.8	3.6
SS	52	LIVE	LEA	1	52.4			828	1.2	0.3	4.9	0.7	25.4	4.1
SS	53	LIVE	LEA	1	52.8			827	1.2	0.3	4.9	0.7	25.3	4.1
SS	54	LIVE	LEA	1	54.3			828	1.2	0.3	4.9	0.7	25.4	4.1
SS	55	LIVE	LEA	1	55.5	132	142	717	11.1	0.3	4.9	0.7	28.0	3.6
SS	56	LIVE	LEA	1	56.0	126	135	754	1.1	0.3	4.9	0.7	27.1	3.8
SS	60	LIVE	LEA	1	60.5	124	130	1,084	13.5	0.2	4.9	0.6	31.2	5.4
SS	62	LIVE	LEA	1	61.8	136	143	1,182	0.0	0.2	4.9	0.6	30.7	5.9
SS	65	LIVE	LEA	2	65.0	130	141	1,194	4.7	0.4	9.9	1.2	55.6	6.0
SS	66	LIVE	LEA	1	66.0			827	1.2	0.2	4.9	0.6	25.3	4.1
SS	98	LIVE	LEA	1	98.0	132	221	225	12.3	0.1	4.9	0.5	27.5	1.1

Unit Log Grade Summary: Unit 3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	3 SAW	11.8	30.0	746	6.4	31.6	3.7
RA	LIVE	4 SAW	7.1	27.0	1,835	5.6	87.5	9.2
RA	LIVE	UTILITY	5.0	16.0	274	0.0	6.7	1.4
SS	LIVE	2 SAW	19.1	35.0	14,575	1.0	428.4	72.9
SS	LIVE	3 SAW	7.9	36.0	837	4.0	51.8	4.2
SS	LIVE	4 SAW	5.1	31.0	359	0.0	32.8	1.8
SS	LIVE	UTILITY	5.0	15.0	69	0.0	2.8	0.3

Unit Log Sort Summary: Unit 3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	Domestic	7.6	28.0	2,581	5.8	119.0	12.9
RA	LIVE	Pulp	5.0	16.0	274	0.0	6.7	1.4
SS	LIVE	Domestic	13.8	34.0	15,770	1.2	512.9	78.9
SS	LIVE	Pulp	5.0	15.0	69	0.0	2.8	0.3

Unit Log Grade x Sort Summary: Unit 3

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	3 SAW	Domestic	11.8	30.0	746	6.4	31.6	3.7
RA	LIVE	4 SAW	Domestic	7.1	27.0	1,835	5.6	87.5	9.2
RA	LIVE	UTILITY	Pulp	5.0	16.0	274	0.0	6.7	1.4
SS	LIVE	2 SAW	Domestic	19.1	35.0	14,575	1.0	428.4	72.9
SS	LIVE	3 SAW	Domestic	7.9	36.0	837	4.0	51.8	4.2
SS	LIVE	4 SAW	Domestic	5.1	31.0	359	0.0	32.8	1.8
SS	LIVE	UTILITY	Pulp	5.0	15.0	69	0.0	2.8	0.3

Unit Log Grade x Diameter Bin Summary: Unit 3

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 11	LIVE	UTILITY	5.0	16.0	274	0.0	6.7	1.4
RA	5 - 11	LIVE	4 SAW	7.1	27.0	1,835	5.6	87.5	9.2
RA	5 - 11	LIVE	3 SAW	11.8	30.0	746	6.4	31.6	3.7
SS	5 - 11	LIVE	UTILITY	5.0	15.0	69	0.0	2.8	0.3
SS	5 - 11	LIVE	4 SAW	5.1	31.0	359	0.0	32.8	1.8
SS	5 - 11	LIVE	3 SAW	7.9	36.0	837	4.0	51.8	4.2
SS	12 - 19	LIVE	2 SAW	17.3	36.0	8,101	1.8	254.7	40.5
SS	20+	LIVE	2 SAW	23.3	34.0	6,474	0.0	173.6	32.4

Unit Log Sort x Diameter Bin Summary: Unit 3

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 11	LIVE	Pulp	5.0	16.0	274	0.0	6.7	1.4
RA	5 - 11	LIVE	Domestic	7.6	28.0	2,581	5.8	119.0	12.9
SS	5 - 11	LIVE	Pulp	5.0	15.0	69	0.0	2.8	0.3
SS	5 - 11	LIVE	Domestic	6.4	33.0	1,196	2.8	84.5	6.0
SS	12 - 19	LIVE	Domestic	17.3	36.0	8,101	1.8	254.7	40.5
SS	20+	LIVE	Domestic	23.3	34.0	6,474	0.0	173.6	32.4

Cruise Unit Report Unit 4

Unit Sale Notice Volume (MBF): Unit 4

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
SS	18.4			475.0	321.2	116.3	36.3	1.2
DF	15.6			351.3	160.2	142.7	37.2	11.1
WH	18.1			185.1	110.8	62.6	10.9	0.8
ALL	17.1			1,011.4	592.2	321.6	84.5	13.1

Unit Sale Notice Weight (tons): Unit 4

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
SS	3,384.8	2,016.5	1,020.1	340.5	7.7
DF	3,359.9	1,219.6	1,579.4	332.5	228.4
WH	1,637.8	911.1	570.6	125.1	31.0
ALL	8,382.5	4,147.1	3,170.1	798.1	267.2

Unit Cruise Design: Unit 4

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	68.0		39	19	0

Unit Cruise Summary: Unit 4

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RA		14	2.8	0
RC		1	1.0	0
SS	14	71	1.8	0
DF	15	80	2.1	0
WH	8	26	0.7	0
ALL	37	192	4.9	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 4

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	112.0	63.9	28.6						
RC	40.0	0.0	0.0						
SS	99.1	101.5	16.3	151.6	38.6	10.3	15,028	108.6	19.3
DF	111.7	96.8	15.5	108.8	33.6	8.7	12,154	102.5	17.8
WH	36.3	213.1	34.1	130.0	17.6	6.2	4,719	213.8	34.7
ALL	262.5	37.6	6.0	129.1	36.6	6.0	33,887	52.5	8.5

Unit Summary: Unit 4

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	15	ALL	17.6	37	47	5,166	8.1	28.1	47.5	11.3	3,359.9	351.3
DF	LIVE	LEA	20	ALL	26.0	42	54	6,989	8.1	17.4	64.2	12.6	4,545.7	475.2
RA	LIVE	LEA	8	ALL	14.4	32	39			12.7	14.4	3.8		
RC	LIVE	LEA	1	ALL	39.6	94	121			0.1	1.0	0.2		
SS	LIVE	CUT	14	ALL	19.0	36	45	6,985	3.9	23.4	46.1	10.6	3,384.8	475.0
SS	LIVE	LEA	20	ALL	29.1	51	65	8,043	3.9	11.5	53.0	9.8	3,897.6	546.9
WH	LIVE	CUT	8	ALL	15.8	28	34	2,722	1.7	15.4	20.9	5.3	1,637.8	185.1
WH	LIVE	LEA	4	ALL	21.5	29	36	1,996	1.7	6.1	15.4	3.3	1,201.1	135.8
ALL	LIVE	CUT	37	ALL	17.7	35	43	14,873	5.0	66.9	114.5	27.2	8,382.5	1,011.4
ALL	LIVE	LEA	53	ALL	23.8	40	51	17,028	5.4	47.8	148.0	29.7	9,644.4	1,157.9
ALL	ALL	ALL	90	ALL	20.5	37	46	31,901	5.2	114.7	262.5	56.9	18,026.9	2,169.3

Unit Stand Table: Unit 4

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	1	8.3	38	53	104	0.0	3.7	1.4	0.5	50.4	7.1
DF	12	LIVE	CUT	1	11.6	58	72	120	4.5	1.9	1.4	0.4	81.1	8.1
DF	14	LIVE	CUT	1	13.9	63	78	91	5.5	1.3	1.4	0.4	84.7	6.2
DF	15	LIVE	CUT	1	14.6			152	8.1	1.2	1.4	0.4	98.8	10.3
DF	16	LIVE	CUT	1	16.2			152	8.1	1.0	1.4	0.3	98.8	10.3
DF	17	LIVE	CUT	5	17.1	34	43	772	8.9	4.4	7.0	1.7	509.3	52.5
DF	18	LIVE	CUT	4	18.1	84	106	709	5.6	3.1	5.6	1.3	440.5	48.2
DF	19	LIVE	CUT	5	19.1	44	55	663	15.3	3.5	7.0	1.6	487.1	45.1
DF	20	LIVE	CUT	5	20.1	30	37	795	6.6	3.2	7.0	1.6	496.8	54.0
DF	21	LIVE	CUT	2	20.8			304	8.1	1.2	2.8	0.6	197.6	20.7
DF	22	LIVE	CUT	3	22.1			456	8.1	1.6	4.2	0.9	296.5	31.0

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	23	LIVE	CUT	2	23.0	48	62	393	4.1	1.0	2.8	0.6	221.8	26.7
DF	25	LIVE	CUT	2	25.0			304	8.1	0.8	2.8	0.6	197.6	20.7
DF	26	LIVE	CUT	1	25.6			152	8.1	0.4	1.4	0.3	98.8	10.3
DF	21	LIVE	LEA	3	21.2	29	37	396	12.3	1.7	4.2	0.9	280.1	26.9
DF	22	LIVE	LEA	5	22.2	17	21	672	6.6	2.6	7.0	1.5	466.0	45.7
DF	23	LIVE	LEA	2	23.0	51	65	292	11.1	1.0	2.8	0.6	204.1	19.8
DF	24	LIVE	LEA	6	23.9	89	118	958	7.4	2.7	8.4	1.7	631.4	65.1
DF	25	LIVE	LEA	3	24.8	60	77	438	4.2	1.2	4.2	0.8	296.4	29.8
DF	26	LIVE	LEA	4	26.0	50	64	606	9.9	1.5	5.6	1.1	404.3	41.2
DF	27	LIVE	LEA	5	27.1	32	41	735	5.3	1.7	7.0	1.3	475.7	50.0
DF	29	LIVE	LEA	6	29.0	19	24	992	6.5	1.8	8.4	1.6	594.8	67.4
DF	30	LIVE	LEA	7	30.0	28	36	1,078	6.6	2.0	9.8	1.8	682.9	73.3
DF	31	LIVE	LEA	1	31.0	116	149	270	0.0	0.3	1.4	0.3	127.4	18.4
DF	33	LIVE	LEA	3	33.1			401	8.1	0.7	4.2	0.7	274.0	27.3
DF	34	LIVE	LEA	1	33.7	103	132	152	0.0	0.2	1.4	0.2	108.6	10.3
RA	11	LIVE	LEA	1	11.4	60	73			1.5	1.0	0.3		
RA	12	LIVE	LEA	2	12.3					2.5	2.1	0.6		
RA	13	LIVE	LEA	1	13.5	59	72			1.0	1.0	0.3		
RA	14	LIVE	LEA	2	14.0	22	27			1.9	2.1	0.5		
RA	15	LIVE	LEA	2	15.2	58	71			1.6	2.1	0.5		
RA	16	LIVE	LEA	3	16.2	57	70			2.2	3.1	0.8		
RA	17	LIVE	LEA	3	16.8					2.0	3.1	0.8		
RC	40	LIVE	LEA	1	39.6	94	121			0.1	1.0	0.2		
SS	12	LIVE	CUT	1	12.2	65	81	141	14.6	1.7	1.4	0.4	82.1	9.6
SS	14	LIVE	CUT	2	14.1			423	3.9	2.6	2.8	0.7	205.1	28.8
SS	16	LIVE	CUT	2	16.1	33	42	348	9.1	2.0	2.8	0.7	188.8	23.7
SS	17	LIVE	CUT	6	17.1	21	27	1,145	3.9	5.2	8.4	2.0	577.3	77.9
SS	18	LIVE	CUT	3	18.2	24	31	569	7.7	2.3	4.2	1.0	299.1	38.7
SS	19	LIVE	CUT	3	19.1	82	105	547	0.6	2.1	4.2	1.0	306.1	37.2
SS	20	LIVE	CUT	1	19.7	84	89	222	0.0	0.7	1.4	0.3	101.4	15.1
SS	21	LIVE	CUT	2	20.9	41	52	443	4.9	1.2	2.8	0.6	209.3	30.1
SS	22	LIVE	CUT	1	22.3	80	98	216	0.0	0.5	1.4	0.3	102.8	14.7
SS	23	LIVE	CUT	4	22.9	77	99	1,238	1.4	1.9	5.6	1.2	492.2	84.2
SS	24	LIVE	CUT	3	24.2			635	3.9	1.3	4.2	0.9	307.6	43.2
SS	26	LIVE	CUT	4	26.2	22	28	847	3.9	1.5	5.6	1.1	410.3	57.6
SS	28	LIVE	CUT	1	28.4			212	3.9	0.3	1.4	0.3	102.6	14.4
SS	21	LIVE	LEA	1	21.2	83	104	226	4.2	0.6	1.4	0.3	104.1	15.3
SS	22	LIVE	LEA	1	22.1	70	88	102	4.3	0.5	1.4	0.3	86.8	6.9

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
SS	23	LIVE	LEA	1	23.4			205	3.9	0.5	1.4	0.3	99.1	13.9
SS	24	LIVE	LEA	3	23.9	105	135	987	2.0	1.3	4.2	0.9	386.3	67.1
SS	25	LIVE	LEA	2	25.1			410	3.9	0.8	2.8	0.6	198.2	27.9
SS	26	LIVE	LEA	4	26.0	45	58	690	6.9	1.5	5.6	1.1	397.7	46.9
SS	27	LIVE	LEA	1	27.1			205	3.9	0.3	1.4	0.3	99.1	13.9
SS	28	LIVE	LEA	3	27.9	32	41	632	2.6	1.0	4.2	0.8	305.9	43.0
SS	29	LIVE	LEA	3	29.2	34	43	750	2.2	0.9	4.2	0.8	319.8	51.0
SS	30	LIVE	LEA	2	30.2	41	60	418	6.5	0.6	2.8	0.5	202.4	28.4
SS	31	LIVE	LEA	1	31.2	108	140	300	6.7	0.3	1.4	0.2	123.9	20.4
SS	32	LIVE	LEA	3	32.1	62	79	704	8.3	0.7	4.2	0.7	319.2	47.9
SS	33	LIVE	LEA	3	32.9	65	84	607	1.4	0.7	4.2	0.7	306.2	41.3
SS	34	LIVE	LEA	3	33.9	23	30	459	5.1	0.7	4.2	0.7	287.2	31.2
SS	35	LIVE	LEA	3	34.9	60	78	589	20.7	0.6	4.2	0.7	313.5	40.1
SS	39	LIVE	LEA	1	39.1			205	3.9	0.2	1.4	0.2	99.1	13.9
SS	42	LIVE	LEA	1	42.1	108	139	266	6.7	0.1	1.4	0.2	116.1	18.1
SS	46	LIVE	LEA	1	46.0	113	146	81	60.5	0.1	1.4	0.2	33.7	5.5
SS	68	LIVE	LEA	1	68.2			205	3.9	0.1	1.4	0.2	99.3	14.0
WH	11	LIVE	CUT	1	10.8			181	1.7	2.2	1.4	0.4	109.2	12.3
WH	12	LIVE	CUT	2	12.1			363	1.7	3.5	2.8	0.8	218.4	24.7
WH	14	LIVE	CUT	2	14.3	26	32	318	2.8	2.5	2.8	0.7	194.0	21.6
WH	15	LIVE	CUT	1	15.3	63	78	178	0.0	1.1	1.4	0.4	99.9	12.1
WH	16	LIVE	CUT	1	16.5			181	1.7	0.9	1.4	0.3	109.2	12.3
WH	18	LIVE	CUT	1	18.2	81	101	178	5.3	0.8	1.4	0.3	122.7	12.1
WH	19	LIVE	CUT	2	19.1	66	81	352	2.5	1.4	2.8	0.6	214.2	24.0
WH	20	LIVE	CUT	2	20.1	37	48	356	0.9	1.3	2.8	0.6	225.6	24.2
WH	21	LIVE	CUT	2	21.1	75	94	432	0.0	1.1	2.8	0.6	235.5	29.4
WH	22	LIVE	CUT	1	22.2			181	1.7	0.5	1.4	0.3	109.2	12.3
WH	17	LIVE	LEA	1	17.2			184	1.7	0.9	1.4	0.3	105.1	12.5
WH	19	LIVE	LEA	3	18.8	23	28	532	2.5	2.2	4.2	1.0	320.0	36.2
WH	21	LIVE	LEA	1	21.1	89	112	212	7.6	0.6	1.4	0.3	134.8	14.4
WH	23	LIVE	LEA	2	22.8	78	97	330	8.8	1.0	2.8	0.6	220.9	22.4
WH	24	LIVE	LEA	1	24.3			184	1.7	0.4	1.4	0.3	105.0	12.5
WH	26	LIVE	LEA	2	25.7			369	1.7	0.8	2.8	0.6	210.2	25.1
WH	29	LIVE	LEA	1	28.7			184	1.7	0.3	1.4	0.3	105.1	12.5

Unit Log Grade Summary: Unit 4

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	13.0	40.0	2,356	5.3	1,219.6	160.2
DF	LIVE	3 SAW	8.3	37.0	2,099	12.6	1,579.4	142.7
DF	LIVE	4 SAW	5.5	27.0	548	3.4	332.5	37.2
DF	LIVE	UTILITY	2.5	19.0	163	0.0	228.4	11.1
SS	LIVE	2 SAW	14.2	37.0	4,723	2.5	2,016.5	321.2
SS	LIVE	3 SAW	9.2	33.0	1,710	8.2	1,020.1	116.3
SS	LIVE	4 SAW	5.9	26.0	534	2.3	340.5	36.3
SS	LIVE	UTILITY	5.1	15.0	17	0.0	7.7	1.2
WH	LIVE	2 SAW	13.6	35.0	1,629	1.8	911.1	110.8
WH	LIVE	3 SAW	8.9	33.0	920	1.8	570.6	62.6
WH	LIVE	4 SAW	6.0	20.0	161	0.0	125.1	10.9
WH	LIVE	UTILITY	2.2	15.0	12	0.0	31.0	0.8

Unit Log Sort Summary: Unit 4

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	8.2	34.0	5,003	8.3	3,131.5	340.2
DF	LIVE	Pulp	2.5	19.0	163	0.0	228.4	11.1
SS	LIVE	Domestic	9.8	32.0	6,968	3.9	3,377.1	473.8
SS	LIVE	Pulp	5.1	15.0	17	0.0	7.7	1.2
WH	LIVE	Domestic	9.5	30.0	2,710	1.7	1,606.8	184.3
WH	LIVE	Pulp	2.2	15.0	12	0.0	31.0	0.8

Unit Log Grade x Sort Summary: Unit 4

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	13.0	40.0	2,356	5.3	1,219.6	160.2
DF	LIVE	3 SAW	Domestic	8.3	37.0	2,099	12.6	1,579.4	142.7
DF	LIVE	4 SAW	Domestic	5.5	27.0	548	3.4	332.5	37.2
DF	LIVE	UTILITY	Pulp	2.5	19.0	163	0.0	228.4	11.1
SS	LIVE	2 SAW	Domestic	14.2	37.0	4,723	2.5	2,016.5	321.2
SS	LIVE	3 SAW	Domestic	9.2	33.0	1,710	8.2	1,020.1	116.3
SS	LIVE	4 SAW	Domestic	5.9	26.0	534	2.3	340.5	36.3
SS	LIVE	UTILITY	Pulp	5.1	15.0	17	0.0	7.7	1.2
WH	LIVE	2 SAW	Domestic	13.6	35.0	1,629	1.8	911.1	110.8
WH	LIVE	3 SAW	Domestic	8.9	33.0	920	1.8	570.6	62.6
WH	LIVE	4 SAW	Domestic	6.0	20.0	161	0.0	125.1	10.9

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	LIVE	UTILITY	Pulp	2.2	15.0	12	0.0	31.0	0.8

Unit Log Grade x Diameter Bin Summary: Unit 4

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.4	18.0	124	0.0	201.2	8.4
DF	5 - 11	LIVE	UTILITY	5.2	23.0	39	0.0	27.2	2.6
DF	5 - 11	LIVE	4 SAW	5.5	27.0	548	3.4	332.5	37.2
DF	5 - 11	LIVE	3 SAW	8.3	37.0	2,099	12.6	1,579.4	142.7
DF	12 - 19	LIVE	2 SAW	13.0	40.0	2,356	5.3	1,219.6	160.2
SS	5 - 11	LIVE	UTILITY	5.1	15.0	17	0.0	7.7	1.2
SS	5 - 11	LIVE	4 SAW	5.9	26.0	534	2.3	340.5	36.3
SS	5 - 11	LIVE	3 SAW	9.2	33.0	1,710	8.2	1,020.1	116.3
SS	12 - 19	LIVE	2 SAW	14.2	37.0	4,723	2.5	2,016.5	321.2
WH	< 5	LIVE	UTILITY	2.2	15.0	12	0.0	31.0	0.8
WH	5 - 11	LIVE	4 SAW	6.0	20.0	161	0.0	125.1	10.9
WH	5 - 11	LIVE	3 SAW	8.9	33.0	920	1.8	570.6	62.6
WH	12 - 19	LIVE	2 SAW	13.6	35.0	1,629	1.8	911.1	110.8

Unit Log Sort x Diameter Bin Summary: Unit 4

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.4	18.0	124	0.0	201.2	8.4
DF	5 - 11	LIVE	Pulp	5.2	23.0	39	0.0	27.2	2.6
DF	5 - 11	LIVE	Domestic	7.1	32.0	2,647	10.9	1,911.9	180.0
DF	12 - 19	LIVE	Domestic	13.0	40.0	2,356	5.3	1,219.6	160.2
SS	5 - 11	LIVE	Pulp	5.1	15.0	17	0.0	7.7	1.2
SS	5 - 11	LIVE	Domestic	7.7	30.0	2,244	6.8	1,360.6	152.6
SS	12 - 19	LIVE	Domestic	14.2	37.0	4,723	2.5	2,016.5	321.2
WH	< 5	LIVE	Pulp	2.2	15.0	12	0.0	31.0	0.8
WH	5 - 11	LIVE	Domestic	7.8	28.0	1,081	1.6	695.7	73.5
WH	12 - 19	LIVE	Domestic	13.6	35.0	1,629	1.8	911.1	110.8

Cruise Unit Report Unit 5

Unit Sale Notice Volume (MBF): Unit 5

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	23.0			106.4	78.0	22.3	4.3	1.8
WH	18.9			98.5	59.9	32.4	6.1	0.1
ALL	20.6			204.9	137.9	54.7	10.4	1.9

Unit Sale Notice Weight (tons): Unit 5

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	882.1	636.8	185.1	34.8	25.5
WH	759.4	411.8	280.5	64.1	2.9
ALL	1,641.5	1,048.6	465.6	98.9	28.4

Unit Cruise Design: Unit 5

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	10.0		8	5	0

Unit Cruise Summary: Unit 5

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RA		7	3.5	0
SS		11	2.2	0
RC		2	1.0	0
DF	6	16	2.0	0
WH	6	10	1.3	0
ALL	12	46	5.8	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 5

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	140.0	20.2	14.3						
SS	119.8	122.0	54.5						

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RC	47.2	21.6	15.3						
DF	108.9	122.5	43.3	156.4	25.7	10.5	17,031	125.1	44.6
WH	68.1	175.0	61.9	180.9	25.2	10.3	12,311	176.8	62.7
ALL	298.6	42.2	14.9	165.8	25.9	7.5	49,518	49.6	16.7

Unit Summary: Unit 5

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	6	ALL	23.6	63	83	10,644	3.8	22.4	68.1	14.0	882.1	106.4
DF	LIVE	LEA	5	ALL	36.4	93	123	6,387	3.8	5.7	40.8	6.8	529.2	63.9
RA	LIVE	LEA	4	ALL	13.1	40	48			37.4	35.0	9.7		
RC	LIVE	LEA	2	ALL	15.7	53	66			8.8	11.8	3.0		
SS	LIVE	LEA	9	ALL	47.5	101	130			6.1	74.9	10.9		
WH	LIVE	CUT	6	ALL	19.9	67	81	9,848	1.0	25.2	54.4	12.2	759.4	98.5
WH	LIVE	LEA	1	ALL	39.9	64	81	2,462	1.0	1.6	13.6	2.2	189.9	24.6
ALL	LIVE	CUT	12	ALL	21.7	65	82	20,492	2.5	47.6	122.5	26.2	1,641.5	204.9
ALL	LIVE	LEA	21	ALL	23.3	54	67	8,849	3.0	59.6	176.1	32.6	719.1	88.5
ALL	ALL	ALL	33	ALL	22.6	59	74	29,341	2.7	107.2	298.6	58.8	2,360.6	293.4

Unit Stand Table: Unit 5

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	21	LIVE	CUT	3	21.1	63	85	2,729	4.2	8.4	20.4	4.5	255.2	27.3
DF	22	LIVE	CUT	1	22.2	95	121	1,243	0.0	2.5	6.8	1.4	88.7	12.4
DF	24	LIVE	CUT	2	23.7	103	140	1,961	3.3	4.4	13.6	2.8	177.1	19.6
DF	25	LIVE	CUT	1	25.4			1,064	3.8	1.9	6.8	1.4	88.2	10.6
DF	26	LIVE	CUT	1	26.3			1,064	3.8	1.8	6.8	1.3	88.2	10.6
DF	27	LIVE	CUT	1	27.2			1,064	3.8	1.7	6.8	1.3	88.2	10.6
DF	28	LIVE	CUT	1	28.3	108	139	1,517	6.7	1.6	6.8	1.3	96.3	15.2
DF	31	LIVE	LEA	1	30.8			663	3.8	1.3	6.8	1.2	74.2	6.6
DF	32	LIVE	LEA	1	32.1	115	148	1,173	0.0	1.2	6.8	1.2	85.1	11.7
DF	37	LIVE	LEA	1	36.8	123	158	1,235	0.0	0.9	6.8	1.1	92.7	12.4
DF	38	LIVE	LEA	1	38.4	114	165	646	11.5	0.8	6.8	1.1	80.9	6.5
DF	39	LIVE	LEA	1	39.5	127	163	1,264	0.0	0.8	6.8	1.1	95.7	12.6
DF	47	LIVE	LEA	1	46.8	135	175	1,405	0.0	0.6	6.8	1.0	100.7	14.1
RA	9	LIVE	LEA	1	8.8	44	52			11.8	5.0	1.7		
RA	13	LIVE	LEA	1	12.8	61	75			5.6	5.0	1.4		

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
RA	14	LIVE	LEA	2	14.4	39	48			8.8	10.0	2.6		
RA	15	LIVE	LEA	2	15.0	35	42			8.1	10.0	2.6		
RA	17	LIVE	LEA	1	17.5					3.0	5.0	1.2		
RC	11	LIVE	LEA	1	10.9	48	59			7.7	5.0	1.5		
RC	34	LIVE	LEA	1	34.2	89	114			1.1	6.8	1.2		
SS	35	LIVE	LEA	1	35.5	103	133			1.0	6.8	1.1		
SS	41	LIVE	LEA	1	41.2	112	145			0.7	6.8	1.1		
SS	43	LIVE	LEA	1	42.8	115	148			0.7	6.8	1.0		
SS	45	LIVE	LEA	2	45.1	59	76			1.2	13.6	2.0		
SS	47	LIVE	LEA	1	47.3	121	157			0.6	6.8	1.0		
SS	50	LIVE	LEA	1	49.7	124	161			0.5	6.8	1.0		
SS	55	LIVE	LEA	1	55.3	131	170			0.4	6.8	0.9		
SS	58	LIVE	LEA	1	58.1	135	175			0.4	6.8	0.9		
SS	62	LIVE	LEA	1	62.3	139	181			0.3	6.8	0.9		
SS	65	LIVE	LEA	1	64.6					0.3	6.8	0.8		
WH	12	LIVE	CUT	1	12.2	53	72	654	0.0	8.4	6.8	1.9	64.4	6.5
WH	19	LIVE	CUT	1	19.0	96	121	1,410	3.3	3.5	6.8	1.6	107.3	14.1
WH	21	LIVE	CUT	1	21.5	99	114	1,490	1.6	2.7	6.8	1.5	107.9	14.9
WH	22	LIVE	CUT	1	22.1			1,231	1.0	2.6	6.8	1.4	94.9	12.3
WH	23	LIVE	CUT	1	22.7	105	121	1,336	0.0	2.4	6.8	1.4	100.7	13.4
WH	24	LIVE	CUT	1	24.1	93	106	1,109	0.0	2.1	6.8	1.4	92.8	11.1
WH	25	LIVE	CUT	1	25.5	96	107	1,387	0.0	1.9	6.8	1.3	96.4	13.9
WH	27	LIVE	CUT	1	27.3			1,231	1.0	1.7	6.8	1.3	94.9	12.3
WH	38	LIVE	LEA	1	38.0	116	147	1,559	0.0	0.9	6.8	1.1	108.7	15.6
WH	42	LIVE	LEA	1	42.2			903	1.0	0.7	6.8	1.0	81.2	9.0

Unit Log Grade Summary: Unit 5

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	14.7	40.0	7,797	5.1	636.8	78.0
DF	LIVE	3 SAW	9.1	40.0	2,235	0.0	185.1	22.3
DF	LIVE	4 SAW	7.8	16.0	429	0.0	34.8	4.3
DF	LIVE	UTILITY	3.3	21.0	184	2.0	25.5	1.8
WH	LIVE	2 SAW	16.2	36.0	5,990	1.1	411.8	59.9
WH	LIVE	3 SAW	9.6	36.0	3,238	1.0	280.5	32.4
WH	LIVE	4 SAW	5.8	18.0	610	0.0	64.1	6.1
WH	LIVE	UTILITY	2.1	14.0	9	0.0	2.9	0.1

Unit Log Sort Summary: Unit 5

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	11.2	35.0	10,460	3.9	856.6	104.6
DF	LIVE	Pulp	3.3	21.0	184	2.0	25.5	1.8
WH	LIVE	Domestic	9.7	29.0	9,839	1.0	756.5	98.4
WH	LIVE	Pulp	2.1	14.0	9	0.0	2.9	0.1

Unit Log Grade x Sort Summary: Unit 5

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	14.7	40.0	7,797	5.1	636.8	78.0
DF	LIVE	3 SAW	Domestic	9.1	40.0	2,235	0.0	185.1	22.3
DF	LIVE	4 SAW	Domestic	7.8	16.0	429	0.0	34.8	4.3
DF	LIVE	UTILITY	Pulp	3.3	21.0	184	2.0	25.5	1.8
WH	LIVE	2 SAW	Domestic	16.2	36.0	5,990	1.1	411.8	59.9
WH	LIVE	3 SAW	Domestic	9.6	36.0	3,238	1.0	280.5	32.4
WH	LIVE	4 SAW	Domestic	5.8	18.0	610	0.0	64.1	6.1
WH	LIVE	UTILITY	Pulp	2.1	14.0	9	0.0	2.9	0.1

Unit Log Grade x Diameter Bin Summary: Unit 5

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	3.3	21.0	184	2.0	25.5	1.8
DF	5 - 11	LIVE	4 SAW	7.8	16.0	429	0.0	34.8	4.3
DF	5 - 11	LIVE	3 SAW	9.1	40.0	2,235	0.0	185.1	22.3
DF	12 - 19	LIVE	2 SAW	14.1	40.0	6,162	3.7	539.8	61.6
DF	20+	LIVE	2 SAW	20.1	40.0	1,636	10.0	96.9	16.4
WH	< 5	LIVE	UTILITY	2.1	14.0	9	0.0	2.9	0.1
WH	5 - 11	LIVE	4 SAW	5.8	18.0	610	0.0	64.1	6.1
WH	5 - 11	LIVE	3 SAW	9.6	36.0	3,238	1.0	280.5	32.4
WH	12 - 19	LIVE	2 SAW	16.2	36.0	5,990	1.1	411.8	59.9

Unit Log Sort x Diameter Bin Summary: Unit 5

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	3.3	21.0	184	2.0	25.5	1.8
DF	5 - 11	LIVE	Domestic	8.6	30.0	2,663	0.0	219.9	26.6
DF	12 - 19	LIVE	Domestic	14.1	40.0	6,162	3.7	539.8	61.6
DF	20+	LIVE	Domestic	20.1	40.0	1,636	10.0	96.9	16.4
WH	< 5	LIVE	Pulp	2.1	14.0	9	0.0	2.9	0.1

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	5 - 11	LIVE	Domestic	7.7	27.0	3,849	0.8	344.6	38.5
WH	12 - 19	LIVE	Domestic	16.2	36.0	5,990	1.1	411.8	59.9

Cruise Unit Report Unit 6

Unit Sale Notice Volume (MBF): Unit 6

Sp	QMD	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
RA	13.6			18.7	6.8	7.3	4.6
WH	11.7			11.5	11.1		0.4
DF	12.7			11.4	10.0	1.3	0.1
ALL	13.1			41.6	28.0	8.6	5.1

Unit Sale Notice Weight (tons): Unit 6

Sp	Tons by Grade			
	All	3 Saw	4 Saw	Utility
RA	190.4	52.8	84.3	53.3
WH	118.2	105.8		12.4
DF	93.1	80.4	11.3	1.4
ALL	401.7	239.0	95.6	67.2

Unit Cruise Design: Unit 6

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 0 ft	4.0		6	3	0

Unit Cruise Summary: Unit 6

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
SS		3	3.0	0
MA		3	1.5	0
DF	2	8	1.3	0
RA	6	10	1.7	0
WH	1	6	1.0	0
ALL	9	30	5.0	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 6

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	163.3	0.0	0.0						
MA	81.7	47.1	33.3						
DF	72.6	112.9	46.1	105.0	35.0	24.7	7,621	118.2	52.3
RA	90.7	82.0	33.5	73.7	42.1	17.2	6,683	92.1	37.6
WH	54.4	167.3	68.3	79.0	0.0	0.0	4,302	167.3	68.3
ALL	272.2	37.9	15.5	85.4	36.1	12.0	23,257	52.4	19.6

Unit Summary: Unit 6

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	2	ALL	14.6	54	70	2,858	3.1	23.4	27.2	7.1	93.1	11.4
DF	LIVE	LEA	4	ALL	29.7	66	111	4,763	3.1	9.4	45.4	8.3	155.1	19.1
MA	LIVE	LEA	2	ALL	15.0	20	33			22.2	27.2	7.0		
RA	LIVE	CUT	6	ALL	14.0	45	74	4,678	2.9	59.4	63.5	17.0	190.4	18.7
RA	LIVE	LEA	1	ALL	16.0	21	34	2,005	2.9	19.5	27.2	6.8	81.6	8.0
SS	LIVE	LEA	1	ALL	22.8	20	25			9.6	27.2	5.7		
WH	LIVE	CUT	1	ALL	13.5	16	25	2,868	0.0	36.5	36.3	9.9	118.2	11.5
WH	LIVE	LEA	1	ALL	15.5	37	60	1,434	0.0	13.8	18.1	4.6	59.1	5.7
ALL	LIVE	CUT	9	ALL	14.0	38	58	10,404	2.2	119.3	127.0	34.0	401.7	41.6
ALL	LIVE	LEA	9	ALL	18.9	29	47	8,202	2.5	74.5	145.1	32.4	295.8	32.8
ALL	ALL	ALL	18	ALL	16.0	35	54	18,606	2.3	193.8	272.1	66.4	697.5	74.4

Unit Stand Table: Unit 6

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	12	LIVE	CUT	1	11.6	55	74	717	7.9	12.4	9.1	2.7	25.4	2.9
DF	14	LIVE	CUT	1	14.2	72	88	1,188	0.0	8.2	9.1	2.4	36.7	4.8
DF	24	LIVE	CUT	1	24.2			953	3.1	2.8	9.1	1.8	31.0	3.8
DF	27	LIVE	LEA	1	27.1	67	136	200	78.4	2.3	9.1	1.7	11.8	0.8
DF	28	LIVE	LEA	2	28.2	49	69	1,995	2.7	4.2	18.2	3.4	67.5	8.0
DF	32	LIVE	LEA	1	31.7	97	147	1,470	0.0	1.7	9.1	1.6	40.5	5.9
DF	35	LIVE	LEA	1	35.4	82	155	1,098	4.1	1.3	9.1	1.5	35.2	4.4
MA	11	LIVE	LEA	1	10.9					14.0	9.1	2.7		
MA	18	LIVE	LEA	1	18.4	48	87			4.9	9.1	2.1		
MA	22	LIVE	LEA	1	22.1	59	92			3.4	9.1	1.9		
RA	9	LIVE	CUT	1	9.4	44	69	490	0.0	18.8	9.1	3.0	22.8	2.0

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
RA	14	LIVE	CUT	3	14.2	56	86	2,567	0.0	24.7	27.2	7.2	90.6	10.3
RA	17	LIVE	CUT	1	16.8	41	91	230	9.3	5.9	9.1	2.2	22.1	0.9
RA	18	LIVE	CUT	1	17.7			668	2.9	5.3	9.1	2.2	27.2	2.7
RA	19	LIVE	CUT	1	18.7	52	94	723	11.6	4.8	9.1	2.1	27.7	2.9
RA	15	LIVE	LEA	2	15.1	28	45	1,385	1.3	14.5	18.1	4.7	55.2	5.5
RA	18	LIVE	LEA	1	18.4			620	2.9	4.9	9.1	2.1	26.4	2.5
SS	19	LIVE	LEA	1	19.2					4.5	9.1	2.1		
SS	24	LIVE	LEA	1	23.8					2.9	9.1	1.9		
SS	28	LIVE	LEA	1	28.0	89	114			2.1	9.1	1.7		
WH	12	LIVE	CUT	2	11.7	24	38	1,434	0.0	24.3	18.2	5.3	59.1	5.7
WH	14	LIVE	CUT	1	14.4			717	0.0	8.0	9.1	2.4	29.6	2.9
WH	20	LIVE	CUT	1	20.3			717	0.0	4.0	9.1	2.0	29.5	2.9
WH	13	LIVE	LEA	1	12.9	51	82	713	0.0	10.0	9.1	2.5	30.7	2.9
WH	21	LIVE	LEA	1	21.0			721	0.0	3.8	9.1	2.0	28.4	2.9

Unit Log Grade Summary: Unit 6

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	7.5	40.0	2,511	3.6	80.4	10.0
DF	LIVE	4 SAW	5.6	24.0	322	0.0	11.3	1.3
DF	LIVE	UTILITY	2.5	14.0	25	0.0	1.4	0.1
RA	LIVE	3 SAW	11.2	30.0	1,711	6.1	52.8	6.8
RA	LIVE	4 SAW	8.1	36.0	1,817	1.5	84.3	7.3
RA	LIVE	UTILITY	4.7	28.0	1,150	0.0	53.3	4.6
WH	LIVE	3 SAW	6.8	36.0	2,771	0.0	105.8	11.1
WH	LIVE	UTILITY	2.6	14.0	97	0.0	12.4	0.4

Unit Log Sort Summary: Unit 6

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	6.9	35.0	2,833	3.2	91.7	11.3
DF	LIVE	Pulp	2.5	14.0	25	0.0	1.4	0.1
RA	LIVE	Domestic	9.2	34.0	3,528	3.8	137.1	14.1
RA	LIVE	Pulp	4.7	28.0	1,150	0.0	53.3	4.6
WH	LIVE	Domestic	6.8	36.0	2,771	0.0	105.8	11.1
WH	LIVE	Pulp	2.6	14.0	97	0.0	12.4	0.4

Unit Log Grade x Sort Summary: Unit 6

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	Domestic	7.5	40.0	2,511	3.6	80.4	10.0
DF	LIVE	4 SAW	Domestic	5.6	24.0	322	0.0	11.3	1.3
DF	LIVE	UTILITY	Pulp	2.5	14.0	25	0.0	1.4	0.1
RA	LIVE	3 SAW	Domestic	11.2	30.0	1,711	6.1	52.8	6.8
RA	LIVE	4 SAW	Domestic	8.1	36.0	1,817	1.5	84.3	7.3
RA	LIVE	UTILITY	Pulp	4.7	28.0	1,150	0.0	53.3	4.6
WH	LIVE	3 SAW	Domestic	6.8	36.0	2,771	0.0	105.8	11.1
WH	LIVE	UTILITY	Pulp	2.6	14.0	97	0.0	12.4	0.4

Unit Log Grade x Diameter Bin Summary: Unit 6

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.5	14.0	25	0.0	1.4	0.1
DF	5 - 11	LIVE	4 SAW	5.6	24.0	322	0.0	11.3	1.3
DF	5 - 11	LIVE	3 SAW	7.5	40.0	2,511	3.6	80.4	10.0
RA	< 5	LIVE	UTILITY	4.2	32.0	892	0.0	42.6	3.6
RA	5 - 11	LIVE	UTILITY	6.0	15.0	259	0.0	10.8	1.0
RA	5 - 11	LIVE	4 SAW	8.1	36.0	1,817	1.5	84.3	7.3
RA	5 - 11	LIVE	3 SAW	10.2	30.0	1,006	0.0	27.1	4.0
RA	12 - 19	LIVE	3 SAW	12.8	30.0	705	13.6	25.6	2.8
WH	< 5	LIVE	UTILITY	2.6	14.0	97	0.0	12.4	0.4
WH	5 - 11	LIVE	3 SAW	6.8	36.0	2,771	0.0	105.8	11.1

Unit Log Sort x Diameter Bin Summary: Unit 6

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.5	14.0	25	0.0	1.4	0.1
DF	5 - 11	LIVE	Domestic	6.9	35.0	2,833	3.2	91.7	11.3
RA	< 5	LIVE	Pulp	4.2	32.0	892	0.0	42.6	3.6
RA	5 - 11	LIVE	Pulp	6.0	15.0	259	0.0	10.8	1.0
RA	5 - 11	LIVE	Domestic	8.7	35.0	2,823	1.0	111.4	11.3
RA	12 - 19	LIVE	Domestic	12.8	30.0	705	13.6	25.6	2.8
WH	< 5	LIVE	Pulp	2.6	14.0	97	0.0	12.4	0.4
WH	5 - 11	LIVE	Domestic	6.8	36.0	2,771	0.0	105.8	11.1

Cruise Unit Report Unit 7

Unit Sale Notice Volume (MBF): Unit 7

Sp	QMD	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
DF	12.3			114.2	85.0	24.9	4.4
SS	11.3			54.1	31.6	21.1	1.4
RA	12.0			34.7	6.3	27.0	1.4
WH	11.7			8.0	6.5	1.3	0.2
ALL	11.8			211.0	129.3	74.4	7.3

Unit Sale Notice Weight (tons): Unit 7

Sp	Tons by Grade			
	All	3 Saw	4 Saw	Utility
DF	1,187.0	903.5	183.1	100.4
SS	401.8	233.6	146.3	21.9
RA	306.8	39.1	260.0	7.7
WH	83.4	64.2	12.8	6.4
ALL	1,979.0	1,240.3	602.3	136.5

Unit Cruise Design: Unit 7

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	11.0		8	4	0

Unit Cruise Summary: Unit 7

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	2	27	3.4	0
SS	3	11	1.4	0
RA	6	10	1.3	0
WH	1	5	0.6	0
ALL	12	53	6.6	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 7

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	183.7	108.5	38.4	95.3	1.6	1.1	17,517	108.5	38.4
SS	74.9	122.5	43.3	120.5	22.5	13.0	9,020	124.6	45.2
RA	50.0	164.2	58.1	90.2	39.2	16.0	4,508	168.8	60.2
WH	34.0	169.7	60.0	107.2	0.0	0.0	3,646	169.7	60.0
ALL	342.6	49.5	17.5	101.3	29.2	8.4	34,691	57.5	19.4

Unit Summary: Unit 7

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	2	ALL	14.5	12	15	10,380	18.1	95.0	108.9	28.6	1,187.0	114.2
DF	LIVE	LEA	2	ALL	24.3	18	25	7,136	18.1	23.2	74.9	15.2	816.1	78.5
RA	LIVE	CUT	6	ALL	12.0	50	60	3,156	2.7	44.6	35.0	10.1	306.8	34.7
RA	LIVE	LEA	3	ALL	13.0	59	72	1,353	2.7	16.3	15.0	4.2	131.5	14.9
SS	LIVE	CUT	3	ALL	11.2	28	35	4,920	0.0	59.7	40.8	12.2	401.8	54.1
SS	LIVE	LEA	3	ALL	21.1	36	46	4,100	0.0	14.0	34.0	7.4	334.8	45.1
WH	LIVE	CUT	1	ALL	11.7	64	79	729	4.8	9.1	6.8	2.0	83.4	8.0
WH	LIVE	LEA	3	ALL	14.8	33	41	2,917	4.8	22.8	27.2	7.1	333.7	32.1
ALL	LIVE	LEA	11	ALL	19.0	35	44	15,506	10.2	76.3	151.1	33.9	1,616.1	170.6
ALL	LIVE	CUT	12	ALL	13.0	27	33	19,185	11.2	208.4	191.5	52.9	1,979.0	211.0
ALL	ALL	ALL	23	ALL	14.9	29	36	34,691	10.8	284.7	342.6	86.8	3,595.1	381.6

Unit Stand Table: Unit 7

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	9	LIVE	CUT	2	8.9			1,298	18.1	31.2	13.6	4.6	148.4	14.3
DF	10	LIVE	CUT	1	10.2			649	18.1	12.0	6.8	2.1	74.2	7.1
DF	11	LIVE	CUT	2	11.5	33	41	1,290	19.1	18.9	13.6	4.0	145.2	14.2
DF	13	LIVE	CUT	1	13.3	71	89	656	16.2	7.1	6.8	1.9	77.4	7.2
DF	17	LIVE	CUT	1	17.5			649	18.1	4.1	6.8	1.6	74.2	7.1
DF	19	LIVE	CUT	1	19.4			649	18.1	3.3	6.8	1.5	74.2	7.1
DF	21	LIVE	CUT	2	21.0			1,297	18.1	5.6	13.6	3.0	148.4	14.3
DF	22	LIVE	CUT	1	22.1			649	18.1	2.6	6.8	1.4	74.2	7.1
DF	24	LIVE	CUT	2	24.1			1,298	18.1	4.3	13.6	2.8	148.4	14.3
DF	25	LIVE	CUT	2	24.8			1,298	18.1	4.1	13.6	2.7	148.4	14.3
DF	27	LIVE	CUT	1	27.2			649	18.1	1.7	6.8	1.3	74.2	7.1
DF	16	LIVE	LEA	1	15.7			592	18.1	5.1	6.8	1.7	71.7	6.5

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	18	LIVE	LEA	1	17.7	77	104	756	9.6	4.0	6.8	1.6	76.1	8.3
DF	22	LIVE	LEA	1	21.6			592	18.1	2.7	6.8	1.5	71.7	6.5
DF	27	LIVE	LEA	1	27.4			592	18.1	1.7	6.8	1.3	71.8	6.5
DF	28	LIVE	LEA	2	28.0			1,184	18.1	3.2	13.6	2.6	143.5	13.0
DF	29	LIVE	LEA	2	29.2			1,184	18.1	2.9	13.6	2.5	143.5	13.0
DF	30	LIVE	LEA	1	30.3			592	18.1	1.4	6.8	1.2	71.7	6.5
DF	31	LIVE	LEA	1	30.6			592	18.1	1.3	6.8	1.2	71.7	6.5
DF	33	LIVE	LEA	1	32.9	98	150	1,051	19.2	1.2	6.8	1.2	94.3	11.6
RA	10	LIVE	CUT	1	10.2	55	67	379	0.0	8.8	5.0	1.6	40.0	4.2
RA	11	LIVE	CUT	1	11.2	59	72	336	11.5	7.3	5.0	1.5	44.2	3.7
RA	12	LIVE	CUT	3	12.2	44	55	1,619	0.8	18.6	15.0	4.3	148.2	17.8
RA	13	LIVE	CUT	1	13.3	39	46	218	12.5	5.2	5.0	1.4	29.8	2.4
RA	14	LIVE	CUT	1	14.1	57	69	604	0.0	4.6	5.0	1.3	44.6	6.6
RA	12	LIVE	LEA	1	12.3	57	70	494	0.0	6.1	5.0	1.4	41.5	5.4
RA	13	LIVE	LEA	1	12.6	59	72	439	13.0	5.8	5.0	1.4	44.7	4.8
RA	14	LIVE	LEA	1	14.5	61	75	420	12.4	4.4	5.0	1.3	45.4	4.6
SS	8	LIVE	CUT	1	8.4	47	58	637	0.0	17.7	6.8	2.3	50.6	7.0
SS	10	LIVE	CUT	2	10.0			1,640	0.0	25.0	13.6	4.3	133.9	18.0
SS	13	LIVE	CUT	1	13.3	71	89	818	0.0	7.0	6.8	1.9	72.6	9.0
SS	15	LIVE	CUT	1	15.0			820	0.0	5.5	6.8	1.8	67.0	9.0
SS	17	LIVE	CUT	1	16.6	73	92	1,005	0.0	4.5	6.8	1.7	77.7	11.1
SS	13	LIVE	LEA	1	13.0			732	0.0	7.4	6.8	1.9	54.1	8.0
SS	25	LIVE	LEA	1	24.6	90	115	609	12.4	2.1	6.8	1.4	70.5	6.7
SS	27	LIVE	LEA	1	27.2	104	134	1,040	10.4	1.7	6.8	1.3	80.7	11.4
SS	29	LIVE	LEA	2	29.3	50	64	1,719	0.0	2.9	13.6	2.5	129.4	18.9
WH	12	LIVE	CUT	1	11.7	64	79	729	4.8	9.1	6.8	2.0	83.4	8.0
WH	9	LIVE	LEA	1	9.4			492	4.8	14.1	6.8	2.2	67.2	5.4
WH	20	LIVE	LEA	1	19.6	82	103	578	0.0	3.2	6.8	1.5	81.9	6.4
WH	21	LIVE	LEA	1	20.8	82	102	774	8.9	2.9	6.8	1.5	84.2	8.5
WH	23	LIVE	LEA	1	22.6	98	123	1,073	2.8	2.4	6.8	1.4	100.4	11.8

Unit Log Grade Summary: Unit 7

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	7.8	38.0	7,724	21.8	903.5	85.0
DF	LIVE	4 SAW	5.7	16.0	2,261	6.3	183.1	24.9
DF	LIVE	UTILITY	2.1	20.0	396	0.0	100.4	4.4
RA	LIVE	3 SAW	10.5	30.0	570	0.0	39.1	6.3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	4 SAW	6.9	30.0	2,458	3.4	260.0	27.0
RA	LIVE	UTILITY	5.0	14.0	128	0.0	7.7	1.4
SS	LIVE	3 SAW	9.6	40.0	2,871	0.0	233.6	31.6
SS	LIVE	4 SAW	5.4	29.0	1,922	0.0	146.3	21.1
SS	LIVE	UTILITY	2.1	16.0	126	0.0	21.9	1.4
WH	LIVE	3 SAW	7.6	36.0	592	0.0	64.2	6.5
WH	LIVE	4 SAW	5.5	16.0	118	23.5	12.8	1.3
WH	LIVE	UTILITY	2.0	17.0	18	0.0	6.4	0.2

Unit Log Sort Summary: Unit 7

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	6.7	27.0	9,984	18.7	1,086.6	109.8
DF	LIVE	Pulp	2.1	20.0	396	0.0	100.4	4.4
RA	LIVE	Domestic	7.2	30.0	3,028	2.8	299.1	33.3
RA	LIVE	Pulp	5.0	14.0	128	0.0	7.7	1.4
SS	LIVE	Domestic	6.6	32.0	4,794	0.0	379.9	52.7
SS	LIVE	Pulp	2.1	16.0	126	0.0	21.9	1.4
WH	LIVE	Domestic	6.6	26.0	711	4.9	77.0	7.8
WH	LIVE	Pulp	2.0	17.0	18	0.0	6.4	0.2

Unit Log Grade x Sort Summary: Unit 7

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	Domestic	7.8	38.0	7,724	21.8	903.5	85.0
DF	LIVE	4 SAW	Domestic	5.7	16.0	2,261	6.3	183.1	24.9
DF	LIVE	UTILITY	Pulp	2.1	20.0	396	0.0	100.4	4.4
RA	LIVE	3 SAW	Domestic	10.5	30.0	570	0.0	39.1	6.3
RA	LIVE	4 SAW	Domestic	6.9	30.0	2,458	3.4	260.0	27.0
RA	LIVE	UTILITY	Pulp	5.0	14.0	128	0.0	7.7	1.4
SS	LIVE	3 SAW	Domestic	9.6	40.0	2,871	0.0	233.6	31.6
SS	LIVE	4 SAW	Domestic	5.4	29.0	1,922	0.0	146.3	21.1
SS	LIVE	UTILITY	Pulp	2.1	16.0	126	0.0	21.9	1.4
WH	LIVE	3 SAW	Domestic	7.6	36.0	592	0.0	64.2	6.5
WH	LIVE	4 SAW	Domestic	5.5	16.0	118	23.5	12.8	1.3
WH	LIVE	UTILITY	Pulp	2.0	17.0	18	0.0	6.4	0.2

Unit Log Grade x Diameter Bin Summary: Unit 7

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	20.0	396	0.0	100.4	4.4
DF	5 - 11	LIVE	4 SAW	5.7	16.0	2,261	6.3	183.1	24.9
DF	5 - 11	LIVE	3 SAW	7.8	38.0	7,724	21.8	903.5	85.0
RA	5 - 11	LIVE	UTILITY	5.0	14.0	128	0.0	7.7	1.4
RA	5 - 11	LIVE	4 SAW	6.9	30.0	2,458	3.4	260.0	27.0
RA	5 - 11	LIVE	3 SAW	10.5	30.0	570	0.0	39.1	6.3
SS	< 5	LIVE	UTILITY	2.1	16.0	126	0.0	21.9	1.4
SS	5 - 11	LIVE	4 SAW	5.4	29.0	1,922	0.0	146.3	21.1
SS	5 - 11	LIVE	3 SAW	9.6	40.0	2,871	0.0	233.6	31.6
WH	< 5	LIVE	UTILITY	2.0	17.0	18	0.0	6.4	0.2
WH	5 - 11	LIVE	4 SAW	5.5	16.0	118	23.5	12.8	1.3
WH	5 - 11	LIVE	3 SAW	7.6	36.0	592	0.0	64.2	6.5

Unit Log Sort x Diameter Bin Summary: Unit 7

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	20.0	396	0.0	100.4	4.4
DF	5 - 11	LIVE	Domestic	6.7	27.0	9,984	18.7	1,086.6	109.8
RA	5 - 11	LIVE	Pulp	5.0	14.0	128	0.0	7.7	1.4
RA	5 - 11	LIVE	Domestic	7.2	30.0	3,028	2.8	299.1	33.3
SS	< 5	LIVE	Pulp	2.1	16.0	126	0.0	21.9	1.4
SS	5 - 11	LIVE	Domestic	6.6	32.0	4,794	0.0	379.9	52.7
WH	< 5	LIVE	Pulp	2.0	17.0	18	0.0	6.4	0.2
WH	5 - 11	LIVE	Domestic	6.6	26.0	711	4.9	77.0	7.8

Cruise Unit Report Unit 8

Unit Sale Notice Volume (MBF): Unit 8

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	13.8			148.5	23.7	98.2	25.4	1.3
RA	10.4			70.9		16.2	50.4	4.2
ALL	12.0			219.4	23.7	114.4	75.8	5.5

Unit Sale Notice Weight (tons): Unit 8

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	1,220.1	209.5	796.8	206.3	7.4
RA	538.3		106.6	406.8	24.9
ALL	1,758.4	209.5	903.4	613.1	32.3

Unit Cruise Design: Unit 8

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 0 ft	11.0		8	4	0

Unit Cruise Summary: Unit 8

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
SS		1	1.0	0
WH		2	1.0	0
DF	7	31	3.9	0
RA	5	14	1.8	0
ALL	12	48	6.0	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 8

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	54.4	0.0	0.0						
WH	54.4	0.0	0.0						
DF	211.0	50.6	17.9	132.3	37.1	14.0	27,905	62.7	22.7

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	95.3	132.3	46.8	86.1	31.1	13.9	8,201	135.9	48.8
ALL	326.6	23.6	8.3	117.9	39.2	11.3	38,513	45.8	14.1

Unit Summary: Unit 8

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	7	ALL	14.2	38	48	13,502	7.9	92.8	102.1	27.1	1,220.1	148.5
DF	LIVE	LEA	9	ALL	22.6	50	63	14,403	7.9	39.1	108.9	22.9	1,301.5	158.4
RA	LIVE	CUT	5	ALL	9.7	17	20	6,444	3.6	145.9	74.9	24.0	538.3	70.9
RA	LIVE	LEA	0	ALL	12.3			1,757	3.6	24.7	20.4	5.8	146.8	19.3
SS	LIVE	LEA	1	ALL	25.1	96	123			2.0	6.8	1.4		
WH	LIVE	LEA	1	ALL	19.3	36	46			6.7	13.6	3.1		
ALL	LIVE	CUT	12	ALL	11.7	25	31	19,946	6.5	238.7	177.0	51.1	1,758.4	219.4
ALL	LIVE	LEA	11	ALL	19.5	33	42	16,160	7.4	72.5	149.7	33.2	1,448.3	177.7
ALL	ALL	ALL	23	ALL	13.9	27	33	36,106	6.9	311.2	326.7	84.3	3,206.7	397.1

Unit Stand Table: Unit 8

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	1	8.2	71	89	1,540	0.0	18.6	6.8	2.4	87.3	16.9
DF	11	LIVE	CUT	2	11.1			1,800	7.9	20.1	13.6	4.1	162.7	19.8
DF	13	LIVE	CUT	3	13.0	25	32	2,724	8.5	22.3	20.4	5.7	245.7	30.0
DF	16	LIVE	CUT	1	15.6	82	104	995	0.0	5.1	6.8	1.7	80.4	10.9
DF	17	LIVE	CUT	2	17.0	41	52	1,385	22.0	8.6	13.6	3.3	165.6	15.2
DF	18	LIVE	CUT	2	18.2	81	103	1,625	6.3	7.5	13.6	3.2	164.0	17.9
DF	19	LIVE	CUT	1	19.0	85	108	733	1.9	3.5	6.8	1.6	70.4	8.1
DF	21	LIVE	CUT	1	20.8			900	7.9	2.9	6.8	1.5	81.3	9.9
DF	22	LIVE	CUT	1	21.8			900	7.9	2.6	6.8	1.5	81.3	9.9
DF	25	LIVE	CUT	1	24.8			900	7.9	2.0	6.8	1.4	81.3	9.9
DF	17	LIVE	LEA	1	16.6	90	114	967	10.8	4.5	6.8	1.7	83.4	10.6
DF	18	LIVE	LEA	1	17.8			898	7.9	3.9	6.8	1.6	78.4	9.9
DF	20	LIVE	LEA	2	20.1	81	103	1,588	3.1	6.2	13.6	3.0	156.9	17.5
DF	21	LIVE	LEA	2	20.9			1,797	7.9	5.7	13.6	3.0	156.7	19.8
DF	22	LIVE	LEA	2	22.1	43	55	1,482	10.6	5.1	13.6	2.9	157.1	16.3
DF	23	LIVE	LEA	1	22.8	88	111	747	16.8	2.4	6.8	1.4	79.0	8.2
DF	24	LIVE	LEA	1	24.0	99	126	1,222	1.7	2.2	6.8	1.4	91.6	13.4
DF	25	LIVE	LEA	1	24.6			898	7.9	2.1	6.8	1.4	78.3	9.9
DF	26	LIVE	LEA	2	26.1	43	55	1,821	5.8	3.7	13.6	2.7	158.9	20.0

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	29	LIVE	LEA	1	29.1	101	129	1,134	10.2	1.5	6.8	1.3	93.5	12.5
DF	31	LIVE	LEA	1	31.5			898	7.9	1.3	6.8	1.2	78.4	9.9
DF	40	LIVE	LEA	1	40.5	118	151	951	0.0	0.8	6.8	1.1	89.4	10.5
RA	8	LIVE	CUT	2	8.0			1,172	3.6	39.0	13.6	4.8	97.9	12.9
RA	9	LIVE	CUT	2	9.0	20	23	1,156	1.8	30.8	13.6	4.5	95.5	12.7
RA	10	LIVE	CUT	3	9.9	26	30	1,522	3.7	38.2	20.4	6.5	128.2	16.7
RA	11	LIVE	CUT	3	10.7	16	19	1,705	2.5	32.5	20.4	6.2	144.9	18.8
RA	14	LIVE	CUT	1	14.5	68	84	890	7.4	5.9	6.8	1.8	71.8	9.8
RA	11	LIVE	LEA	1	11.0			586	3.6	10.3	6.8	2.1	48.9	6.4
RA	12	LIVE	LEA	1	11.9			586	3.6	8.8	6.8	2.0	48.9	6.4
RA	15	LIVE	LEA	1	14.8			586	3.6	5.7	6.8	1.8	48.9	6.4
SS	25	LIVE	LEA	1	25.1	96	123			2.0	6.8	1.4		
WH	17	LIVE	LEA	1	17.3					4.2	6.8	1.6		
WH	22	LIVE	LEA	1	22.3	97	122			2.5	6.8	1.4		

Unit Log Grade Summary: Unit 8

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	12.6	30.0	2,153	4.9	209.5	23.7
DF	LIVE	3 SAW	8.2	37.0	8,923	9.0	796.8	98.2
DF	LIVE	4 SAW	5.5	29.0	2,307	6.6	206.3	25.4
DF	LIVE	UTILITY	5.0	14.0	118	0.0	7.4	1.3
RA	LIVE	3 SAW	11.0	30.0	1,475	9.6	106.6	16.2
RA	LIVE	4 SAW	6.7	28.0	4,584	1.8	406.8	50.4
RA	LIVE	UTILITY	5.0	13.0	384	0.0	24.9	4.2

Unit Log Sort Summary: Unit 8

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	7.5	33.0	13,384	7.9	1,212.7	147.2
DF	LIVE	Pulp	5.0	14.0	118	0.0	7.4	1.3
RA	LIVE	Domestic	7.1	28.0	6,060	3.8	513.4	66.7
RA	LIVE	Pulp	5.0	13.0	384	0.0	24.9	4.2

Unit Log Grade x Sort Summary: Unit 8

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	12.6	30.0	2,153	4.9	209.5	23.7
DF	LIVE	3 SAW	Domestic	8.2	37.0	8,923	9.0	796.8	98.2

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	4 SAW	Domestic	5.5	29.0	2,307	6.6	206.3	25.4
DF	LIVE	UTILITY	Pulp	5.0	14.0	118	0.0	7.4	1.3
RA	LIVE	3 SAW	Domestic	11.0	30.0	1,475	9.6	106.6	16.2
RA	LIVE	4 SAW	Domestic	6.7	28.0	4,584	1.8	406.8	50.4
RA	LIVE	UTILITY	Pulp	5.0	13.0	384	0.0	24.9	4.2

Unit Log Grade x Diameter Bin Summary: Unit 8

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	UTILITY	5.0	14.0	118	0.0	7.4	1.3
DF	5 - 11	LIVE	4 SAW	5.5	29.0	2,307	6.6	206.3	25.4
DF	5 - 11	LIVE	3 SAW	8.2	37.0	8,923	9.0	796.8	98.2
DF	12 - 19	LIVE	2 SAW	12.6	30.0	2,153	4.9	209.5	23.7
RA	5 - 11	LIVE	UTILITY	5.0	13.0	384	0.0	24.9	4.2
RA	5 - 11	LIVE	4 SAW	6.7	28.0	4,584	1.8	406.8	50.4
RA	5 - 11	LIVE	3 SAW	11.0	30.0	1,475	9.6	106.6	16.2

Unit Log Sort x Diameter Bin Summary: Unit 8

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	Pulp	5.0	14.0	118	0.0	7.4	1.3
DF	5 - 11	LIVE	Domestic	7.1	33.0	11,231	8.5	1,003.1	123.5
DF	12 - 19	LIVE	Domestic	12.6	30.0	2,153	4.9	209.5	23.7
RA	5 - 11	LIVE	Pulp	5.0	13.0	384	0.0	24.9	4.2
RA	5 - 11	LIVE	Domestic	7.1	28.0	6,060	3.8	513.4	66.7

Cruise Unit Report Unit 9

Unit Sale Notice Volume (MBF): Unit 9

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	15.6			282.7	82.1	152.0	44.4	4.3
WH	13.8			279.9	73.7	162.6	38.2	5.4
SS	17.6			68.0	32.5	27.4	7.7	0.5
ALL	15.1			630.7	188.3	342.0	90.2	10.2

Unit Sale Notice Weight (tons): Unit 9

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	2,615.0	784.0	1,397.7	349.4	84.0
WH	2,512.2	701.9	1,382.5	321.7	106.1
SS	555.3	250.6	232.9	64.1	7.7
ALL	5,682.5	1,736.5	3,013.1	735.1	197.7

Unit Cruise Design: Unit 9

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	45.5		24	12	0

Unit Cruise Summary: Unit 9

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RA		11	2.2	0
DF	12	50	2.1	0
WH	10	32	1.3	0
SS	5	16	0.7	0
ALL	27	109	4.5	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 9

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	88.0	98.5	44.1						

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	113.4	84.8	17.3	124.5	18.6	5.4	14,123	86.8	18.1
WH	72.6	166.5	34.0	159.5	18.2	5.8	11,580	167.5	34.5
SS	36.3	151.1	30.8	131.8	27.2	12.2	4,784	153.5	33.2
ALL	240.6	27.5	5.6	137.1	22.9	4.4	33,002	35.8	7.1

Unit Summary: Unit 9

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	12	ALL	16.1	47	63	6,214	5.7	35.3	49.9	12.4	2,615.0	282.7
DF	LIVE	LEA	14	ALL	21.6	45	54	7,909	5.7	25.0	63.5	13.7	3,328.2	359.8
RA	LIVE	CUT	0	ALL	15.1					1.3	1.7	0.4		
RA	LIVE	LEA	2	ALL	11.9	9	12			21.6	16.7	4.8		
SS	LIVE	CUT	5	ALL	17.6	75	94	1,495	4.9	6.7	11.3	2.7	555.3	68.0
SS	LIVE	LEA	6	ALL	23.2	54	63	3,289	4.9	8.5	25.0	5.2	1,221.6	149.7
WH	LIVE	CUT	10	ALL	14.5	48	68	6,152	4.3	33.6	38.6	10.1	2,512.2	279.9
WH	LIVE	LEA	10	ALL	19.9	69	83	5,428	4.3	15.8	34.0	7.6	2,216.7	247.0
ALL	LIVE	CUT	27	ALL	15.5	49	67	13,861	5.0	76.9	101.5	25.6	5,682.5	630.6
ALL	LIVE	LEA	32	ALL	19.0	40	49	16,626	5.1	70.9	139.2	31.3	6,766.5	756.5
ALL	ALL	ALL	59	ALL	17.3	45	58	30,487	5.1	147.8	240.7	56.9	12,449.0	1,387.1

Unit Stand Table: Unit 9

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	11	LIVE	CUT	1	11.2	76	117	365	1.8	3.3	2.3	0.7	124.7	16.6
DF	12	LIVE	CUT	1	12.5	80	114	346	1.5	2.7	2.3	0.6	127.7	15.7
DF	13	LIVE	CUT	1	13.4	71	98	280	0.0	2.3	2.3	0.6	108.1	12.8
DF	14	LIVE	CUT	5	14.1	28	38	1,326	5.0	10.4	11.3	3.0	576.8	60.3
DF	15	LIVE	CUT	1	15.1	91	120	323	3.3	1.8	2.3	0.6	130.1	14.7
DF	16	LIVE	CUT	3	15.8			847	5.7	5.0	6.8	1.7	356.6	38.6
DF	19	LIVE	CUT	4	19.0	70	85	1,130	5.6	4.6	9.1	2.1	487.7	51.4
DF	20	LIVE	CUT	2	20.3	91	108	584	8.0	2.0	4.5	1.0	239.7	26.6
DF	21	LIVE	CUT	1	20.7	79	94	166	27.5	1.0	2.3	0.5	107.0	7.6
DF	23	LIVE	CUT	2	23.2			565	5.7	1.5	4.5	0.9	237.8	25.7
DF	24	LIVE	CUT	1	24.1			283	5.7	0.7	2.3	0.5	118.9	12.9
DF	16	LIVE	LEA	3	16.1	28	36	831	6.5	4.8	6.8	1.7	348.9	37.8
DF	17	LIVE	LEA	1	17.3	92	115	306	7.3	1.4	2.3	0.5	122.0	13.9
DF	18	LIVE	LEA	1	17.6	90	112	319	0.0	1.3	2.3	0.5	121.3	14.5

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	19	LIVE	LEA	1	18.6			273	5.7	1.2	2.3	0.5	116.6	12.4
DF	20	LIVE	LEA	2	19.7			546	5.7	2.1	4.5	1.0	233.2	24.8
DF	21	LIVE	LEA	3	20.9	34	40	885	3.6	2.9	6.8	1.5	361.5	40.3
DF	22	LIVE	LEA	2	22.3	50	59	544	10.2	1.7	4.5	1.0	241.1	24.8
DF	23	LIVE	LEA	1	23.5	100	117	254	11.0	0.8	2.3	0.5	122.6	11.5
DF	24	LIVE	LEA	5	23.9	60	69	1,473	7.4	3.6	11.3	2.3	599.3	67.0
DF	25	LIVE	LEA	3	25.3	33	38	851	6.4	1.9	6.8	1.4	354.4	38.7
DF	26	LIVE	LEA	2	26.0	96	110	489	23.9	1.2	4.5	0.9	236.3	22.2
DF	28	LIVE	LEA	3	28.1	34	38	877	6.5	1.6	6.8	1.3	355.8	39.9
DF	31	LIVE	LEA	1	30.6	96	107	262	16.4	0.4	2.3	0.4	115.3	11.9
RA	15	LIVE	CUT	1	15.1					1.4	1.7	0.4		
RA	9	LIVE	LEA	1	9.1	32	49			3.7	1.7	0.6		
RA	11	LIVE	LEA	5	11.1					12.5	8.4	2.5		
RA	13	LIVE	LEA	1	13.5					1.7	1.7	0.5		
RA	14	LIVE	LEA	1	14.3	46	58			1.5	1.7	0.4		
RA	16	LIVE	LEA	1	15.7					1.2	1.7	0.4		
RA	17	LIVE	LEA	1	16.7					1.1	1.7	0.4		
SS	13	LIVE	CUT	1	13.1	67	90	284	0.0	2.4	2.3	0.6	106.1	12.9
SS	14	LIVE	CUT	1	14.4	68	89	293	0.0	2.0	2.3	0.6	104.4	13.3
SS	22	LIVE	CUT	1	22.1	70	81	232	0.0	0.8	2.3	0.5	95.7	10.5
SS	23	LIVE	CUT	1	23.5	109	126	437	0.0	0.8	2.3	0.5	133.6	19.9
SS	25	LIVE	CUT	1	24.6	91	104	249	23.4	0.7	2.3	0.5	115.4	11.3
SS	15	LIVE	LEA	1	14.8			260	4.9	1.9	2.3	0.6	102.1	11.8
SS	17	LIVE	LEA	1	17.3	99	122	347	0.0	1.4	2.3	0.5	122.4	15.8
SS	22	LIVE	LEA	1	21.6	103	121	368	3.7	0.9	2.3	0.5	119.3	16.7
SS	24	LIVE	LEA	1	24.1	111	127	418	0.0	0.7	2.3	0.5	125.4	19.0
SS	26	LIVE	LEA	2	26.2	54	61	579	12.6	1.2	4.5	0.9	223.4	26.4
SS	27	LIVE	LEA	1	26.7			260	4.9	0.6	2.3	0.4	102.1	11.8
SS	28	LIVE	LEA	1	28.4	97	109	286	8.9	0.5	2.3	0.4	109.4	13.0
SS	29	LIVE	LEA	1	29.3			260	4.9	0.5	2.3	0.4	102.1	11.8
SS	30	LIVE	LEA	1	30.0			260	4.9	0.5	2.3	0.4	102.1	11.8
SS	36	LIVE	LEA	1	36.1	105	115	250	25.3	0.3	2.3	0.4	113.2	11.4
WH	8	LIVE	CUT	1	8.3	44	90	290	0.0	6.0	2.3	0.8	123.1	13.2
WH	10	LIVE	CUT	1	10.5	60	88	355	0.0	3.8	2.3	0.7	120.8	16.1
WH	13	LIVE	CUT	1	13.1	91	121	443	0.0	2.4	2.3	0.6	162.3	20.2
WH	14	LIVE	CUT	4	14.1	24	31	1,542	5.1	8.4	9.1	2.4	604.0	70.2
WH	15	LIVE	CUT	1	15.2	87	110	329	8.0	1.8	2.3	0.6	149.4	15.0
WH	16	LIVE	CUT	3	15.9	30	37	1,090	5.4	4.9	6.8	1.7	447.4	49.6

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
WH	19	LIVE	CUT	2	19.0	52	62	711	3.8	2.3	4.5	1.0	305.3	32.4
WH	20	LIVE	CUT	3	20.2	62	73	1,023	7.0	3.1	6.8	1.5	446.0	46.5
WH	21	LIVE	CUT	1	21.0	99	115	369	0.0	0.9	2.3	0.5	153.8	16.8
WH	15	LIVE	LEA	1	15.5	97	122	435	0.0	1.7	2.3	0.6	157.4	19.8
WH	16	LIVE	LEA	3	15.8	58	72	1,022	2.2	5.0	6.8	1.7	427.3	46.5
WH	19	LIVE	LEA	1	18.6	98	117	362	6.9	1.2	2.3	0.5	152.0	16.5
WH	20	LIVE	LEA	1	19.6	101	119	353	0.0	1.1	2.3	0.5	152.3	16.1
WH	21	LIVE	LEA	1	20.9			338	4.3	1.0	2.3	0.5	144.2	15.4
WH	22	LIVE	LEA	2	22.0	103	119	795	2.6	1.7	4.5	1.0	303.7	36.2
WH	23	LIVE	LEA	2	23.1	50	58	692	2.2	1.6	4.5	0.9	291.4	31.5
WH	24	LIVE	LEA	1	23.7	104	119	398	0.0	0.7	2.3	0.5	150.5	18.1
WH	25	LIVE	LEA	2	24.8	53	60	694	3.9	1.3	4.5	0.9	293.6	31.6
WH	32	LIVE	LEA	1	31.6			338	4.3	0.4	2.3	0.4	144.3	15.4

Unit Log Grade Summary: Unit 9

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	12.7	40.0	1,804	12.0	784.0	82.1
DF	LIVE	3 SAW	8.2	40.0	3,340	3.7	1,397.7	152.0
DF	LIVE	4 SAW	5.0	32.0	975	0.0	349.4	44.4
DF	LIVE	UTILITY	2.1	21.0	95	0.0	84.0	4.3
SS	LIVE	2 SAW	15.4	40.0	713	8.8	250.6	32.5
SS	LIVE	3 SAW	8.8	40.0	603	1.2	232.9	27.4
SS	LIVE	4 SAW	5.0	26.0	168	0.0	64.1	7.7
SS	LIVE	UTILITY	2.1	13.0	10	0.0	7.7	0.5
WH	LIVE	2 SAW	13.7	40.0	1,620	7.0	701.9	73.7
WH	LIVE	3 SAW	8.2	40.0	3,574	4.2	1,382.5	162.6
WH	LIVE	4 SAW	5.2	27.0	839	0.0	321.7	38.2
WH	LIVE	UTILITY	2.0	24.0	119	0.0	106.1	5.4

Unit Log Sort Summary: Unit 9

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	7.6	37.0	6,119	5.8	2,531.0	278.4
DF	LIVE	Pulp	2.1	21.0	95	0.0	84.0	4.3
SS	LIVE	Domestic	8.3	34.0	1,485	4.9	547.6	67.6
SS	LIVE	Pulp	2.1	13.0	10	0.0	7.7	0.5
WH	LIVE	Domestic	7.5	35.0	6,033	4.4	2,406.1	274.5
WH	LIVE	Pulp	2.0	24.0	119	0.0	106.1	5.4

Unit Log Grade x Sort Summary: Unit 9

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	12.7	40.0	1,804	12.0	784.0	82.1
DF	LIVE	3 SAW	Domestic	8.2	40.0	3,340	3.7	1,397.7	152.0
DF	LIVE	4 SAW	Domestic	5.0	32.0	975	0.0	349.4	44.4
DF	LIVE	UTILITY	Pulp	2.1	21.0	95	0.0	84.0	4.3
SS	LIVE	2 SAW	Domestic	15.4	40.0	713	8.8	250.6	32.5
SS	LIVE	3 SAW	Domestic	8.8	40.0	603	1.2	232.9	27.4
SS	LIVE	4 SAW	Domestic	5.0	26.0	168	0.0	64.1	7.7
SS	LIVE	UTILITY	Pulp	2.1	13.0	10	0.0	7.7	0.5
WH	LIVE	2 SAW	Domestic	13.7	40.0	1,620	7.0	701.9	73.7
WH	LIVE	3 SAW	Domestic	8.2	40.0	3,574	4.2	1,382.5	162.6
WH	LIVE	4 SAW	Domestic	5.2	27.0	839	0.0	321.7	38.2
WH	LIVE	UTILITY	Pulp	2.0	24.0	119	0.0	106.1	5.4

Unit Log Grade x Diameter Bin Summary: Unit 9

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	21.0	95	0.0	84.0	4.3
DF	5 - 11	LIVE	4 SAW	5.0	32.0	975	0.0	349.4	44.4
DF	5 - 11	LIVE	3 SAW	8.2	40.0	3,340	3.7	1,397.7	152.0
DF	12 - 19	LIVE	2 SAW	12.7	40.0	1,804	12.0	784.0	82.1
SS	< 5	LIVE	UTILITY	2.1	13.0	10	0.0	7.7	0.5
SS	5 - 11	LIVE	4 SAW	5.0	26.0	168	0.0	64.1	7.7
SS	5 - 11	LIVE	3 SAW	8.8	40.0	603	1.2	232.9	27.4
SS	12 - 19	LIVE	2 SAW	15.4	40.0	713	8.8	250.6	32.5
WH	< 5	LIVE	UTILITY	2.0	24.0	119	0.0	106.1	5.4
WH	5 - 11	LIVE	4 SAW	5.2	27.0	839	0.0	321.7	38.2
WH	5 - 11	LIVE	3 SAW	8.2	40.0	3,574	4.2	1,382.5	162.6
WH	12 - 19	LIVE	2 SAW	13.7	40.0	1,620	7.0	701.9	73.7

Unit Log Sort x Diameter Bin Summary: Unit 9

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	21.0	95	0.0	84.0	4.3
DF	5 - 11	LIVE	Domestic	6.9	37.0	4,315	2.9	1,747.1	196.3
DF	12 - 19	LIVE	Domestic	12.7	40.0	1,804	12.0	784.0	82.1
SS	< 5	LIVE	Pulp	2.1	13.0	10	0.0	7.7	0.5
SS	5 - 11	LIVE	Domestic	6.9	33.0	771	1.0	297.0	35.1
SS	12 - 19	LIVE	Domestic	15.4	40.0	713	8.8	250.6	32.5

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	< 5	LIVE	Pulp	2.0	24.0	119	0.0	106.1	5.4
WH	5 - 11	LIVE	Domestic	6.9	35.0	4,413	3.4	1,704.2	200.8
WH	12 - 19	LIVE	Domestic	13.7	40.0	1,620	7.0	701.9	73.7

Cruise Unit Report Unit 10

Unit Sale Notice Volume (MBF): Unit 10

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	17.1			293.6	83.7	161.3	45.0	3.7
SS	20.4			158.1	120.6	35.0	1.5	1.0
WH	13.2			66.8		55.5	9.6	1.7
ALL	17.2			518.5	204.3	251.8	56.0	6.4

Unit Sale Notice Weight (tons): Unit 10

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	2,782.4	803.8	1,448.8	457.3	72.5
SS	1,352.0	961.0	356.1	8.3	26.7
WH	650.4		503.5	100.0	46.9
ALL	4,784.8	1,764.7	2,308.4	565.6	146.1

Unit Cruise Design: Unit 10

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	49.0		25	13	0

Unit Cruise Summary: Unit 10

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RA		1	1.0	0
DF	10	57	2.3	0
SS	5	31	1.2	0
WH	2	13	0.5	0
ALL	17	102	4.1	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 10

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	40.0	0.0	0.0						

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	124.1	72.2	14.4	119.6	16.4	5.2	14,851	74.1	15.3
SS	67.5	119.3	23.9	134.7	10.4	4.6	9,092	119.8	24.3
WH	28.3	201.1	40.2	125.3	46.6	32.9	3,547	206.4	52.0
ALL	221.5	34.2	6.8	125.0	18.4	4.5	27,690	38.8	8.2

Unit Summary: Unit 10

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	10	ALL	16.3	33	41	5,992	5.2	34.6	50.1	12.4	2,782.4	293.6
DF	LIVE	LEA	15	ALL	21.8	39	46	8,858	5.2	28.6	74.0	15.9	4,113.1	434.1
RA	LIVE	LEA	1	ALL	8.0	34	67			4.6	1.6	0.6		
SS	LIVE	CUT	5	ALL	15.9	25	30	3,226	10.4	17.4	24.0	6.0	1,352.0	158.1
SS	LIVE	LEA	11	ALL	22.0	45	53	5,866	10.4	16.5	43.6	9.3	2,458.1	287.4
WH	LIVE	CUT	2	ALL	14.8	32	43	1,364	0.0	9.1	10.9	2.8	650.4	66.9
WH	LIVE	LEA	5	ALL	25.4	58	66	2,183	0.0	5.0	17.4	3.5	1,040.7	107.0
ALL	LIVE	LEA	32	ALL	21.4	42	52	16,907	6.5	54.7	136.6	29.3	7,611.9	828.5
ALL	LIVE	CUT	17	ALL	16.0	31	38	10,582	6.2	61.1	85.0	21.2	4,784.8	518.6
ALL	ALL	ALL	49	ALL	18.7	36	45	27,489	6.4	115.8	221.6	50.5	12,396.7	1,347.1

Unit Stand Table: Unit 10

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	9	LIVE	CUT	1	8.9			261	5.2	5.0	2.2	0.7	121.0	12.8
DF	14	LIVE	CUT	4	14.3	17	23	996	5.7	7.8	8.7	2.3	474.3	48.8
DF	15	LIVE	CUT	4	14.6	61	80	1,150	1.2	7.4	8.7	2.3	495.9	56.3
DF	16	LIVE	CUT	2	15.8	46	59	579	6.9	3.2	4.4	1.1	253.3	28.4
DF	18	LIVE	CUT	2	18.2	43	53	516	6.6	2.4	4.4	1.0	241.4	25.3
DF	19	LIVE	CUT	3	19.1	30	36	805	3.4	3.3	6.5	1.5	367.5	39.4
DF	20	LIVE	CUT	1	19.8			261	5.2	1.0	2.2	0.5	121.0	12.8
DF	21	LIVE	CUT	1	21.4			261	5.2	0.9	2.2	0.5	121.0	12.8
DF	22	LIVE	CUT	1	22.4	78	91	221	1.1	0.8	2.2	0.5	107.8	10.8
DF	23	LIVE	CUT	1	22.7			261	5.2	0.8	2.2	0.5	121.0	12.8
DF	24	LIVE	CUT	3	23.8	60	69	683	11.3	2.1	6.5	1.3	358.2	33.5
DF	15	LIVE	LEA	1	15.1	81	106	257	7.5	1.8	2.2	0.6	122.7	12.6
DF	16	LIVE	LEA	2	16.1	41	53	539	6.8	3.1	4.4	1.1	241.0	26.4
DF	18	LIVE	LEA	1	17.8			258	5.2	1.3	2.2	0.5	121.4	12.6
DF	19	LIVE	LEA	2	19.0			516	5.2	2.2	4.4	1.0	242.9	25.3

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	20	LIVE	LEA	2	20.2	40	48	458	8.4	1.9	4.4	1.0	235.5	22.4
DF	21	LIVE	LEA	5	21.3	53	62	1,299	3.6	4.4	10.9	2.4	608.4	63.7
DF	22	LIVE	LEA	1	22.4			258	5.2	0.8	2.2	0.5	121.4	12.6
DF	23	LIVE	LEA	5	23.0	38	44	1,289	9.4	3.8	10.9	2.3	617.2	63.2
DF	24	LIVE	LEA	4	24.3	21	24	1,015	6.1	2.7	8.7	1.8	478.1	49.7
DF	25	LIVE	LEA	5	24.8	37	43	1,372	3.4	3.3	10.9	2.2	608.4	67.2
DF	26	LIVE	LEA	3	25.9	89	101	834	2.4	1.8	6.5	1.3	353.5	40.9
DF	27	LIVE	LEA	1	27.4			258	5.2	0.5	2.2	0.4	121.5	12.6
DF	28	LIVE	LEA	2	27.8	46	52	505	8.9	1.0	4.4	0.8	241.0	24.7
RA	8	LIVE	LEA	1	8.0	34	67			4.6	1.6	0.6		
SS	10	LIVE	CUT	1	9.8			293	10.4	4.2	2.2	0.7	122.9	14.4
SS	11	LIVE	CUT	1	11.4			293	10.4	3.1	2.2	0.6	122.9	14.4
SS	16	LIVE	CUT	1	15.8			293	10.4	1.6	2.2	0.5	122.9	14.4
SS	17	LIVE	CUT	2	16.8			587	10.4	2.8	4.4	1.1	245.8	28.7
SS	18	LIVE	CUT	1	18.0	91	112	323	0.0	1.2	2.2	0.5	125.6	15.8
SS	19	LIVE	CUT	1	18.9	87	105	292	0.0	1.1	2.2	0.5	121.0	14.3
SS	20	LIVE	CUT	1	20.1	96	114	324	0.0	1.0	2.2	0.5	127.2	15.9
SS	21	LIVE	CUT	1	21.4			293	10.4	0.9	2.2	0.5	122.9	14.4
SS	22	LIVE	CUT	1	22.1	89	103	255	27.3	0.8	2.2	0.5	120.8	12.5
SS	25	LIVE	CUT	1	24.8	90	102	273	21.5	0.7	2.2	0.4	119.9	13.4
SS	14	LIVE	LEA	1	14.1	59	77	195	8.5	2.0	2.2	0.6	93.9	9.5
SS	18	LIVE	LEA	1	18.5			293	10.4	1.2	2.2	0.5	125.3	14.4
SS	19	LIVE	LEA	1	19.1			293	10.4	1.1	2.2	0.5	125.3	14.4
SS	20	LIVE	LEA	3	20.2	32	38	881	9.5	2.9	6.5	1.5	379.0	43.2
SS	21	LIVE	LEA	1	21.4	88	103	306	0.0	0.9	2.2	0.5	121.2	15.0
SS	22	LIVE	LEA	2	22.3	45	53	582	5.5	1.6	4.4	0.9	246.3	28.5
SS	23	LIVE	LEA	1	23.4	86	98	305	0.0	0.7	2.2	0.5	117.5	14.9
SS	24	LIVE	LEA	3	24.2	31	35	919	6.9	2.1	6.5	1.3	376.8	45.0
SS	25	LIVE	LEA	4	24.8	50	57	1,292	7.1	2.6	8.7	1.8	509.1	63.3
SS	26	LIVE	LEA	1	26.2	98	111	278	19.4	0.6	2.2	0.4	127.7	13.6
SS	27	LIVE	LEA	1	27.5	93	104	286	12.9	0.5	2.2	0.4	123.5	14.0
SS	37	LIVE	LEA	1	37.2	86	94	237	18.6	0.3	2.2	0.4	112.4	11.6
WH	12	LIVE	CUT	2	11.9	25	34	456	0.0	5.6	4.4	1.3	238.8	22.3
WH	15	LIVE	CUT	1	14.8	85	109	363	0.0	1.8	2.2	0.6	151.5	17.8
WH	21	LIVE	CUT	1	21.4			273	0.0	0.9	2.2	0.5	130.1	13.4
WH	22	LIVE	CUT	1	22.0			273	0.0	0.8	2.2	0.5	130.1	13.4
WH	19	LIVE	LEA	1	18.9	90	107	262	3.8	1.1	2.2	0.5	139.5	12.8
WH	24	LIVE	LEA	1	24.1			254	0.0	0.7	2.2	0.4	120.4	12.4

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
WH	25	LIVE	LEA	1	25.0			254	0.0	0.6	2.2	0.4	120.4	12.4
WH	26	LIVE	LEA	1	26.5	97	109	288	7.8	0.6	2.2	0.4	138.6	14.1
WH	27	LIVE	LEA	1	26.8	91	102	225	20.9	0.6	2.2	0.4	131.5	11.0
WH	28	LIVE	LEA	1	27.6			254	0.0	0.5	2.2	0.4	120.3	12.4
WH	30	LIVE	LEA	1	30.2	100	111	365	0.0	0.4	2.2	0.4	139.7	17.9
WH	31	LIVE	LEA	1	31.4	91	100	281	8.6	0.4	2.2	0.4	130.4	13.8

Unit Log Grade Summary: Unit 10

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	13.7	40.0	1,708	8.9	803.8	83.7
DF	LIVE	3 SAW	9.1	40.0	3,291	4.5	1,448.8	161.3
DF	LIVE	4 SAW	5.3	36.0	917	0.6	457.3	45.0
DF	LIVE	UTILITY	2.1	18.0	76	0.0	72.5	3.7
SS	LIVE	2 SAW	13.7	40.0	2,462	13.2	961.0	120.6
SS	LIVE	3 SAW	7.0	40.0	715	0.0	356.1	35.0
SS	LIVE	4 SAW	5.0	13.0	30	0.0	8.3	1.5
SS	LIVE	UTILITY	2.1	17.0	20	0.0	26.7	1.0
WH	LIVE	3 SAW	7.9	40.0	1,134	0.0	503.5	55.5
WH	LIVE	4 SAW	5.5	40.0	196	0.0	100.0	9.6
WH	LIVE	UTILITY	2.0	20.0	34	0.0	46.9	1.7

Unit Log Sort Summary: Unit 10

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	8.2	39.0	5,916	5.2	2,709.9	289.9
DF	LIVE	Pulp	2.1	18.0	76	0.0	72.5	3.7
SS	LIVE	Domestic	9.8	37.0	3,206	10.5	1,325.3	157.1
SS	LIVE	Pulp	2.1	17.0	20	0.0	26.7	1.0
WH	LIVE	Domestic	7.3	40.0	1,330	0.0	603.5	65.1
WH	LIVE	Pulp	2.0	20.0	34	0.0	46.9	1.7

Unit Log Grade x Sort Summary: Unit 10

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	13.7	40.0	1,708	8.9	803.8	83.7
DF	LIVE	3 SAW	Domestic	9.1	40.0	3,291	4.5	1,448.8	161.3
DF	LIVE	4 SAW	Domestic	5.3	36.0	917	0.6	457.3	45.0
DF	LIVE	UTILITY	Pulp	2.1	18.0	76	0.0	72.5	3.7

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	LIVE	2 SAW	Domestic	13.7	40.0	2,462	13.2	961.0	120.6
SS	LIVE	3 SAW	Domestic	7.0	40.0	715	0.0	356.1	35.0
SS	LIVE	4 SAW	Domestic	5.0	13.0	30	0.0	8.3	1.5
SS	LIVE	UTILITY	Pulp	2.1	17.0	20	0.0	26.7	1.0
WH	LIVE	3 SAW	Domestic	7.9	40.0	1,134	0.0	503.5	55.5
WH	LIVE	4 SAW	Domestic	5.5	40.0	196	0.0	100.0	9.6
WH	LIVE	UTILITY	Pulp	2.0	20.0	34	0.0	46.9	1.7

Unit Log Grade x Diameter Bin Summary: Unit 10

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	18.0	76	0.0	72.5	3.7
DF	5 - 11	LIVE	4 SAW	5.3	36.0	917	0.6	457.3	45.0
DF	5 - 11	LIVE	3 SAW	9.1	40.0	3,291	4.5	1,448.8	161.3
DF	12 - 19	LIVE	2 SAW	13.7	40.0	1,708	8.9	803.8	83.7
SS	< 5	LIVE	UTILITY	2.1	17.0	20	0.0	26.7	1.0
SS	5 - 11	LIVE	4 SAW	5.0	13.0	30	0.0	8.3	1.5
SS	5 - 11	LIVE	3 SAW	7.0	40.0	715	0.0	356.1	35.0
SS	12 - 19	LIVE	2 SAW	13.7	40.0	2,462	13.2	961.0	120.6
WH	< 5	LIVE	UTILITY	2.0	20.0	34	0.0	46.9	1.7
WH	5 - 11	LIVE	4 SAW	5.5	40.0	196	0.0	100.0	9.6
WH	5 - 11	LIVE	3 SAW	7.9	40.0	1,134	0.0	503.5	55.5

Unit Log Sort x Diameter Bin Summary: Unit 10

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	18.0	76	0.0	72.5	3.7
DF	5 - 11	LIVE	Domestic	7.4	38.0	4,209	3.7	1,906.1	206.2
DF	12 - 19	LIVE	Domestic	13.7	40.0	1,708	8.9	803.8	83.7
SS	< 5	LIVE	Pulp	2.1	17.0	20	0.0	26.7	1.0
SS	5 - 11	LIVE	Domestic	6.7	35.0	745	0.0	364.4	36.5
SS	12 - 19	LIVE	Domestic	13.7	40.0	2,462	13.2	961.0	120.6
WH	< 5	LIVE	Pulp	2.0	20.0	34	0.0	46.9	1.7
WH	5 - 11	LIVE	Domestic	7.3	40.0	1,330	0.0	603.5	65.1

Cruise Unit Report Unit 11

Unit Sale Notice Volume (MBF): Unit 11

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WH	15.0			151.0	66.2	66.5	17.1	1.3
RA	12.3			64.0		35.3	24.2	4.5
DF	20.4			42.2	27.2	12.8	1.9	0.2
ALL	14.4			257.2	93.4	114.6	43.2	6.0

Unit Sale Notice Weight (tons): Unit 11

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
WH	1,426.3	526.3	647.6	212.1	40.4
RA	476.4		239.5	212.2	24.6
DF	306.6	189.1	94.7	14.6	8.2
ALL	2,209.3	715.4	981.8	438.9	73.2

Unit Cruise Design: Unit 11

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	11.5		8	4	0

Unit Cruise Summary: Unit 11

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	4	23	2.9	0
DF	2	15	1.9	0
RA	5	14	1.8	0
ALL	11	52	6.5	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 11

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	156.5	102.6	36.3	128.7	41.5	20.8	20,137	110.7	41.8
DF	102.1	96.4	34.1	179.6	23.3	16.5	18,336	99.2	37.9

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	70.0	85.0	30.1	111.2	35.4	15.8	7,785	92.1	34.0
ALL	328.6	38.3	13.5	140.8	34.2	10.3	46,258	51.3	17.0

Unit Summary: Unit 11

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	2	ALL	17.8	49	62	3,667	0.0	11.8	20.4	4.8	306.6	42.2
DF	LIVE	LEA	8	ALL	27.2	54	68	14,669	0.0	20.2	81.7	15.7	1,226.5	168.7
RA	LIVE	CUT	5	ALL	10.9	22	26	5,561	0.5	77.2	50.0	15.1	476.4	63.9
RA	LIVE	LEA	1	ALL	14.1	11	13	2,224	0.5	18.4	20.0	5.3	190.6	25.6
WH	LIVE	CUT	4	ALL	12.5	12	15	13,133	1.9	119.8	102.1	28.9	1,426.3	151.0
WH	LIVE	LEA	1	ALL	21.8	18	23	7,004	1.9	21.0	54.4	11.7	760.7	80.5
ALL	LIVE	CUT	11	ALL	12.3	18	22	22,361	1.2	208.8	172.5	48.8	2,209.3	257.1
ALL	LIVE	LEA	10	ALL	21.9	28	35	23,897	0.6	59.6	156.1	32.7	2,177.8	274.8
ALL	ALL	ALL	21	ALL	15.0	20	25	46,258	0.9	268.4	328.6	81.5	4,387.1	531.9

Unit Stand Table: Unit 11

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	15	LIVE	CUT	1	14.6			1,222	0.0	5.8	6.8	1.8	102.2	14.1
DF	18	LIVE	CUT	1	18.5	95	121	1,021	0.0	3.6	6.8	1.6	95.6	11.7
DF	23	LIVE	CUT	1	23.1	99	126	1,424	0.0	2.3	6.8	1.4	108.8	16.4
DF	18	LIVE	LEA	1	17.6			1,249	0.0	4.0	6.8	1.6	100.8	14.4
DF	21	LIVE	LEA	1	21.2			1,249	0.0	2.8	6.8	1.5	100.8	14.4
DF	24	LIVE	LEA	1	24.4	102	131	1,090	16.8	2.1	6.8	1.4	103.7	12.5
DF	26	LIVE	LEA	1	26.3	83	105	806	7.8	1.8	6.8	1.3	86.9	9.3
DF	29	LIVE	LEA	1	29.5			1,249	0.0	1.4	6.8	1.3	100.8	14.4
DF	31	LIVE	LEA	1	30.6			1,249	0.0	1.3	6.8	1.2	100.8	14.4
DF	32	LIVE	LEA	3	32.1	114	144	4,736	0.8	3.6	20.4	3.6	340.4	54.5
DF	33	LIVE	LEA	1	33.5	90	114	508	0.0	1.1	6.8	1.2	87.6	5.8
DF	35	LIVE	LEA	2	34.9	104	133	2,533	1.4	2.0	13.6	2.3	204.7	29.1
RA	8	LIVE	CUT	1	8.1			556	0.5	14.0	5.0	1.8	47.6	6.4
RA	9	LIVE	CUT	1	9.1			556	0.5	11.1	5.0	1.7	47.6	6.4
RA	10	LIVE	CUT	2	10.0	32	39	1,219	0.2	18.4	10.0	3.2	96.9	14.0
RA	11	LIVE	CUT	2	11.1	19	22	803	0.3	14.8	10.0	3.0	76.9	9.2
RA	12	LIVE	CUT	1	12.1			556	0.5	6.3	5.0	1.4	47.6	6.4
RA	15	LIVE	CUT	3	14.7	63	77	1,871	0.7	12.7	15.0	3.9	159.6	21.5
RA	12	LIVE	LEA	1	11.8			585	0.5	6.6	5.0	1.5	47.7	6.7

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
RA	13	LIVE	LEA	1	12.8			585	0.5	5.6	5.0	1.4	47.7	6.7
RA	16	LIVE	LEA	1	16.4	59	72	470	0.0	3.4	5.0	1.2	47.5	5.4
RA	18	LIVE	LEA	1	18.2			585	0.5	2.8	5.0	1.2	47.7	6.7
WH	8	LIVE	CUT	1	8.1			876	1.9	19.0	6.8	2.4	95.1	10.1
WH	9	LIVE	CUT	2	8.9			1,751	1.9	31.2	13.6	4.6	190.2	20.1
WH	10	LIVE	CUT	1	10.3			876	1.9	11.8	6.8	2.1	95.1	10.1
WH	11	LIVE	CUT	1	11.2	40	48	338	0.0	9.9	6.8	2.0	51.2	3.9
WH	13	LIVE	CUT	2	13.3			1,751	1.9	14.1	13.6	3.7	190.2	20.1
WH	15	LIVE	CUT	1	15.0			875	1.9	5.5	6.8	1.8	95.1	10.1
WH	16	LIVE	CUT	2	16.0	40	50	1,998	0.9	9.7	13.6	3.4	207.8	23.0
WH	17	LIVE	CUT	2	17.1	39	49	1,849	0.9	8.6	13.6	3.3	200.0	21.3
WH	18	LIVE	CUT	1	17.9			875	1.9	3.9	6.8	1.6	95.1	10.1
WH	19	LIVE	CUT	1	18.6	89	112	1,067	6.0	3.6	6.8	1.6	111.5	12.3
WH	20	LIVE	CUT	1	20.0			875	1.9	3.1	6.8	1.5	95.1	10.1
WH	18	LIVE	LEA	1	17.9	100	127	1,495	0.0	3.9	6.8	1.6	126.9	17.2
WH	19	LIVE	LEA	1	18.8			787	1.9	3.5	6.8	1.6	90.5	9.1
WH	21	LIVE	LEA	1	21.5			787	1.9	2.7	6.8	1.5	90.5	9.0
WH	22	LIVE	LEA	2	22.2			1,574	1.9	5.0	13.6	2.9	181.1	18.1
WH	24	LIVE	LEA	1	24.3			787	1.9	2.1	6.8	1.4	90.5	9.0
WH	25	LIVE	LEA	1	25.5			787	1.9	1.9	6.8	1.3	90.5	9.1
WH	26	LIVE	LEA	1	25.8			787	1.9	1.9	6.8	1.3	90.6	9.1

Unit Log Grade Summary: Unit 11

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	14.1	38.0	2,365	0.0	189.1	27.2
DF	LIVE	3 SAW	9.2	40.0	1,112	0.0	94.7	12.8
DF	LIVE	4 SAW	6.8	14.0	168	0.0	14.6	1.9
DF	LIVE	UTILITY	2.5	18.0	21	0.0	8.2	0.2
RA	LIVE	3 SAW	10.8	33.0	3,071	0.0	239.5	35.3
RA	LIVE	4 SAW	6.4	27.0	2,101	1.2	212.2	24.2
RA	LIVE	UTILITY	5.0	19.0	390	0.0	24.6	4.5
WH	LIVE	2 SAW	12.7	36.0	5,753	4.3	526.3	66.2
WH	LIVE	3 SAW	8.1	38.0	5,785	0.0	647.6	66.5
WH	LIVE	4 SAW	5.6	27.0	1,485	0.0	212.1	17.1
WH	LIVE	UTILITY	2.1	17.0	110	0.0	40.4	1.3

Unit Log Sort Summary: Unit 11

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	7.2	24.0	649	0.0	57.6	7.5
DF	LIVE	HQ-B	13.3	38.0	2,997	0.0	240.8	34.5
DF	LIVE	Pulp	2.5	18.0	21	0.0	8.2	0.2
RA	LIVE	Domestic	7.7	29.0	5,171	0.5	451.8	59.5
RA	LIVE	Pulp	5.0	19.0	390	0.0	24.6	4.5
WH	LIVE	Domestic	8.2	34.0	13,023	1.9	1,385.9	149.8
WH	LIVE	Pulp	2.1	17.0	110	0.0	40.4	1.3

Unit Log Grade x Sort Summary: Unit 11

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	HQ-B	14.1	38.0	2,365	0.0	189.1	27.2
DF	LIVE	3 SAW	Domestic	8.0	40.0	481	0.0	43.0	5.5
DF	LIVE	3 SAW	HQ-B	11.1	40.0	631	0.0	51.7	7.3
DF	LIVE	4 SAW	Domestic	6.8	14.0	168	0.0	14.6	1.9
DF	LIVE	UTILITY	Pulp	2.5	18.0	21	0.0	8.2	0.2
RA	LIVE	3 SAW	Domestic	10.8	33.0	3,071	0.0	239.5	35.3
RA	LIVE	4 SAW	Domestic	6.4	27.0	2,101	1.2	212.2	24.2
RA	LIVE	UTILITY	Pulp	5.0	19.0	390	0.0	24.6	4.5
WH	LIVE	2 SAW	Domestic	12.7	36.0	5,753	4.3	526.3	66.2
WH	LIVE	3 SAW	Domestic	8.1	38.0	5,785	0.0	647.6	66.5
WH	LIVE	4 SAW	Domestic	5.6	27.0	1,485	0.0	212.1	17.1
WH	LIVE	UTILITY	Pulp	2.1	17.0	110	0.0	40.4	1.3

Unit Log Grade x Diameter Bin Summary: Unit 11

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.5	18.0	21	0.0	8.2	0.2
DF	5 - 11	LIVE	4 SAW	6.8	14.0	168	0.0	14.6	1.9
DF	5 - 11	LIVE	3 SAW	9.2	40.0	1,112	0.0	94.7	12.8
DF	12 - 19	LIVE	2 SAW	14.1	38.0	2,365	0.0	189.1	27.2
RA	5 - 11	LIVE	UTILITY	5.0	19.0	390	0.0	24.6	4.5
RA	5 - 11	LIVE	4 SAW	6.4	27.0	2,101	1.2	212.2	24.2
RA	5 - 11	LIVE	3 SAW	10.8	33.0	3,071	0.0	239.5	35.3
WH	< 5	LIVE	UTILITY	2.1	17.0	110	0.0	40.4	1.3
WH	5 - 11	LIVE	4 SAW	5.6	27.0	1,485	0.0	212.1	17.1
WH	5 - 11	LIVE	3 SAW	8.1	38.0	5,785	0.0	647.6	66.5

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	12 - 19	LIVE	2 SAW	12.7	36.0	5,753	4.3	526.3	66.2

Unit Log Sort x Diameter Bin Summary: Unit 11

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.5	18.0	21	0.0	8.2	0.2
DF	5 - 11	LIVE	Domestic	7.2	24.0	649	0.0	57.6	7.5
DF	5 - 11	LIVE	HQ-B	11.1	40.0	631	0.0	51.7	7.3
DF	12 - 19	LIVE	HQ-B	14.1	38.0	2,365	0.0	189.1	27.2
RA	5 - 11	LIVE	Pulp	5.0	19.0	390	0.0	24.6	4.5
RA	5 - 11	LIVE	Domestic	7.7	29.0	5,171	0.5	451.8	59.5
WH	< 5	LIVE	Pulp	2.1	17.0	110	0.0	40.4	1.3
WH	5 - 11	LIVE	Domestic	7.0	33.0	7,270	0.0	859.6	83.6
WH	12 - 19	LIVE	Domestic	12.7	36.0	5,753	4.3	526.3	66.2

Cruise Unit Report Unit 12

Unit Sale Notice Volume (MBF): Unit 12

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
SS	17.2			52.8	14.6	34.9	2.8	0.5
RA	12.2			50.1		8.2	38.9	3.0
DF	15.6			26.6		21.5	4.8	0.3
ALL	14.0			129.4	14.6	64.6	46.5	3.7

Unit Sale Notice Weight (tons): Unit 12

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
RA	583.5		112.5	444.4	26.6
SS	371.0	110.1	232.5	17.2	11.1
DF	196.4		148.3	44.1	4.0
ALL	1,150.9	110.1	493.3	505.7	41.7

Unit Cruise Design: Unit 12

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	12.0		7	4	0

Unit Cruise Summary: Unit 12

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH		2	0.7	0
RC		1	1.0	0
DF	1	10	1.3	0
SS	3	6	0.8	0
RA	5	14	2.0	0
ALL	9	33	4.1	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 12

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	36.3	86.6	50.0						
RC	54.4	0.0	0.0						
DF	68.1	146.6	51.8	142.4	0.0	0.0	9,690	146.6	51.8
SS	40.8	282.8	100.0	188.5	10.4	6.0	7,696	283.0	100.2
RA	82.1	92.0	34.8	64.3	40.4	18.1	5,276	100.5	39.2
ALL	201.1	66.7	23.6	118.7	54.3	18.1	23,867	86.0	29.7

Unit Summary: Unit 12

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	1	ALL	17.2	46	58	2,215	0.0	9.6	15.6	3.8	196.4	26.6
DF	LIVE	LEA	5	ALL	18.5	49	61	8,859	0.0	33.3	62.2	14.5	785.5	106.3
RA	LIVE	CUT	5	ALL	13.0	26	33	4,174	10.1	70.4	64.9	18.0	583.5	50.1
RA	LIVE	LEA	0	ALL	15.2			1,102	10.1	13.6	17.1	4.4	154.1	13.2
RC	LIVE	LEA	1	ALL	13.3	38	68			8.1	7.8	2.1		
SS	LIVE	CUT	3	ALL	17.2	97	125	4,398	3.0	14.5	23.3	5.6	371.0	52.8
SS	LIVE	LEA	3	ALL	29.1	104	133	4,398	3.0	5.1	23.3	4.3	371.0	52.8
WH	LIVE	LEA	1	ALL	12.1	28	34			19.5	15.6	4.5		
ALL	LIVE	LEA	10	ALL	17.1	38	49	14,359	1.8	79.6	126.0	29.8	1,310.6	172.3
ALL	LIVE	CUT	9	ALL	14.2	39	50	10,787	5.3	94.5	103.8	27.4	1,150.9	129.5
ALL	ALL	ALL	19	ALL	15.6	38	49	25,146	3.3	174.1	229.8	57.2	2,461.5	301.8

Unit Stand Table: Unit 12

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	16	LIVE	CUT	1	15.6	75	95	1,108	0.0	5.9	7.8	2.0	98.2	13.3
DF	19	LIVE	CUT	1	19.5			1,107	0.0	3.8	7.8	1.8	98.2	13.3
DF	12	LIVE	LEA	1	11.8			1,034	0.0	10.2	7.8	2.3	87.8	12.4
DF	16	LIVE	LEA	1	15.9	76	96	969	2.6	5.6	7.8	1.9	89.7	11.6
DF	18	LIVE	LEA	1	18.5	85	107	1,015	0.0	4.2	7.8	1.8	99.4	12.2
DF	19	LIVE	LEA	1	19.0	86	109	966	0.0	3.9	7.8	1.8	100.3	11.6
DF	22	LIVE	LEA	1	21.7			1,034	0.0	3.0	7.8	1.7	87.8	12.4
DF	24	LIVE	LEA	2	24.3	103	127	2,807	5.2	4.8	15.6	3.2	232.6	33.7
DF	32	LIVE	LEA	1	31.9			1,034	0.0	1.4	7.8	1.4	87.8	12.4
RA	8	LIVE	CUT	1	8.4	52	63	475	0.0	14.8	5.7	2.0	44.1	5.7
RA	10	LIVE	CUT	1	9.8	47	57	327	6.3	10.9	5.7	1.8	43.2	3.9

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
RA	11	LIVE	CUT	1	10.8			367	10.1	9.0	5.7	1.7	51.4	4.4
RA	13	LIVE	CUT	2	12.9			735	10.1	12.6	11.4	3.2	102.7	8.8
RA	14	LIVE	CUT	1	13.7			367	10.1	5.6	5.7	1.5	51.4	4.4
RA	15	LIVE	CUT	1	15.5	60	73	541	6.8	4.4	5.7	1.5	59.0	6.5
RA	17	LIVE	CUT	1	17.5			500	10.1	4.7	7.8	1.9	69.9	6.0
RA	19	LIVE	CUT	1	19.1			367	10.1	2.9	5.7	1.3	51.4	4.4
RA	20	LIVE	CUT	2	19.8	50	77	494	22.8	5.3	11.4	2.6	110.5	5.9
RA	15	LIVE	LEA	2	14.8			735	10.1	9.5	11.4	3.0	102.7	8.8
RA	16	LIVE	LEA	1	16.0			367	10.1	4.1	5.7	1.4	51.4	4.4
RC	13	LIVE	LEA	1	13.3	38	68			8.1	7.8	2.1		
SS	14	LIVE	CUT	1	14.4	97	125	1,547	6.6	6.9	7.8	2.0	126.6	18.6
SS	15	LIVE	CUT	1	15.5	96	123	1,561	1.5	5.9	7.8	2.0	125.9	18.7
SS	29	LIVE	CUT	1	29.2	102	131	1,290	0.0	1.7	7.8	1.4	118.5	15.5
SS	24	LIVE	LEA	1	23.6	103	132	1,419	6.4	2.6	7.8	1.6	123.1	17.0
SS	31	LIVE	LEA	1	30.8	108	139	2,285	6.7	1.5	7.8	1.4	141.3	27.4
SS	38	LIVE	LEA	1	37.9	98	126	694	10.9	1.0	7.8	1.3	106.6	8.3
WH	11	LIVE	LEA	1	11.1	47	57			11.6	7.8	2.3		
WH	13	LIVE	LEA	1	13.3					8.1	7.8	2.1		

Unit Log Grade Summary: Unit 12

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	10.1	40.0	1,793	0.0	148.3	21.5
DF	LIVE	4 SAW	5.2	32.0	398	0.0	44.1	4.8
DF	LIVE	UTILITY	2.2	12.0	23	0.0	4.0	0.3
RA	LIVE	3 SAW	10.7	40.0	682	28.1	112.5	8.2
RA	LIVE	4 SAW	6.2	32.0	3,243	5.9	444.4	38.9
RA	LIVE	UTILITY	6.4	12.0	249	0.0	26.6	3.0
SS	LIVE	2 SAW	15.5	40.0	1,218	0.0	110.1	14.6
SS	LIVE	3 SAW	9.2	40.0	2,909	4.4	232.5	34.9
SS	LIVE	4 SAW	5.9	12.0	232	0.0	17.2	2.8
SS	LIVE	UTILITY	2.1	19.0	39	0.0	11.1	0.5

Unit Log Sort Summary: Unit 12

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	7.7	36.0	2,192	0.0	192.4	26.3
DF	LIVE	Pulp	2.2	12.0	23	0.0	4.0	0.3
RA	LIVE	Domestic	6.5	33.0	3,925	10.7	556.9	47.1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	Pulp	6.4	12.0	249	0.0	26.6	3.0
SS	LIVE	Domestic	8.6	31.0	4,359	3.0	359.9	52.3
SS	LIVE	Pulp	2.1	19.0	39	0.0	11.1	0.5

Unit Log Grade x Sort Summary: Unit 12

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	Domestic	10.1	40.0	1,793	0.0	148.3	21.5
DF	LIVE	4 SAW	Domestic	5.2	32.0	398	0.0	44.1	4.8
DF	LIVE	UTILITY	Pulp	2.2	12.0	23	0.0	4.0	0.3
RA	LIVE	3 SAW	Domestic	10.7	40.0	682	28.1	112.5	8.2
RA	LIVE	4 SAW	Domestic	6.2	32.0	3,243	5.9	444.4	38.9
RA	LIVE	UTILITY	Pulp	6.4	12.0	249	0.0	26.6	3.0
SS	LIVE	2 SAW	Domestic	15.5	40.0	1,218	0.0	110.1	14.6
SS	LIVE	3 SAW	Domestic	9.2	40.0	2,909	4.4	232.5	34.9
SS	LIVE	4 SAW	Domestic	5.9	12.0	232	0.0	17.2	2.8
SS	LIVE	UTILITY	Pulp	2.1	19.0	39	0.0	11.1	0.5

Unit Log Grade x Diameter Bin Summary: Unit 12

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.2	12.0	23	0.0	4.0	0.3
DF	5 - 11	LIVE	4 SAW	5.2	32.0	398	0.0	44.1	4.8
DF	5 - 11	LIVE	3 SAW	10.1	40.0	1,793	0.0	148.3	21.5
RA	5 - 11	LIVE	4 SAW	6.2	32.0	3,243	5.9	444.4	38.9
RA	5 - 11	LIVE	UTILITY	6.4	12.0	249	0.0	26.6	3.0
RA	5 - 11	LIVE	3 SAW	10.7	40.0	682	28.1	112.5	8.2
SS	< 5	LIVE	UTILITY	2.1	19.0	39	0.0	11.1	0.5
SS	5 - 11	LIVE	4 SAW	5.9	12.0	232	0.0	17.2	2.8
SS	5 - 11	LIVE	3 SAW	9.2	40.0	2,909	4.4	232.5	34.9
SS	12 - 19	LIVE	2 SAW	15.5	40.0	1,218	0.0	110.1	14.6

Unit Log Sort x Diameter Bin Summary: Unit 12

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.2	12.0	23	0.0	4.0	0.3
DF	5 - 11	LIVE	Domestic	7.7	36.0	2,192	0.0	192.4	26.3
RA	5 - 11	LIVE	Pulp	6.4	12.0	249	0.0	26.6	3.0
RA	5 - 11	LIVE	Domestic	6.5	33.0	3,925	10.7	556.9	47.1

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	< 5	LIVE	Pulp	2.1	19.0	39	0.0	11.1	0.5
SS	5 - 11	LIVE	Domestic	8.0	30.0	3,141	4.1	249.7	37.7
SS	12 - 19	LIVE	Domestic	15.5	40.0	1,218	0.0	110.1	14.6

Cruise Unit Report Unit 1 gaps

Unit Sale Notice Volume (MBF): Unit 1 gaps

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
SS	21.6			41.1	29.2	10.9	0.7	0.3
DF	20.5			19.4	13.8	5.0	0.5	0.1
WH	15.1			18.4	10.6	5.5	2.1	0.2
ALL	19.3			78.9	53.6	21.3	3.3	0.6

Unit Sale Notice Weight (tons): Unit 1 gaps

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
SS	292.8	177.1	102.7	5.3	7.7
WH	142.5	76.2	44.4	18.0	3.9
DF	138.3	90.6	39.7	4.3	3.7
ALL	573.6	343.9	186.7	27.6	15.4

Unit Cruise Design: Unit 1 gaps

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	2.0		2	2	0

Unit Cruise Summary: Unit 1 gaps

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
SS	5	6	3.0	0
DF	2	2	1.0	0
WH	2	2	1.0	0
ALL	9	10	5.0	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 1 gaps

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	163.3	47.1	33.3	151.0	20.8	9.3	24,658	51.5	34.6
DF	54.4	141.4	100.0	178.5	24.4	17.3	9,717	143.5	101.5

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	54.4	141.4	100.0	168.8	32.6	23.1	9,189	145.1	102.6
ALL	272.2	28.3	20.0	160.0	22.2	7.4	43,564	35.9	21.3

Unit Summary: Unit 1 gaps

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	2	ALL	20.5	89	113	9,717	0.0	23.8	54.4	12.0	138.3	19.4
SS	LIVE	CUT	5	ALL	21.6	73	93	20,548	0.0	53.5	136.1	29.3	292.8	41.1
SS	LIVE	LEA	1	ALL	33.0	99	127	4,110	0.0	4.6	27.2	4.7	58.6	8.2
WH	LIVE	CUT	2	ALL	15.1	70	86	9,189	0.0	43.8	54.4	14.0	142.5	18.4
ALL	LIVE	LEA	1	ALL	33.0	99	127	4,110	0.0	4.6	27.2	4.7	58.6	8.2
ALL	LIVE	CUT	9	ALL	19.3	75	94	39,454	0.0	121.1	244.9	55.3	573.6	78.9
ALL	ALL	ALL	10	ALL	19.9	76	96	43,564	0.0	125.7	272.1	60.0	632.2	87.1

Unit Stand Table: Unit 1 gaps

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	18	LIVE	CUT	1	18.0	83	105	4,021	0.0	15.4	27.2	6.4	64.1	8.0
DF	24	LIVE	CUT	1	24.3	100	128	5,696	0.0	8.4	27.2	5.5	74.2	11.4
SS	16	LIVE	CUT	1	15.7	59	74	2,693	0.0	20.2	27.2	6.9	45.3	5.4
SS	22	LIVE	CUT	1	22.5	77	98	4,249	0.0	9.9	27.2	5.7	58.4	8.5
SS	24	LIVE	CUT	1	24.0	81	103	4,202	0.0	8.7	27.2	5.6	60.8	8.4
SS	25	LIVE	CUT	1	25.0	83	106	4,407	0.0	8.0	27.2	5.4	62.7	8.8
SS	27	LIVE	CUT	1	27.5	88	113	4,996	0.0	6.6	27.2	5.2	65.5	10.0
SS	33	LIVE	LEA	1	33.0	99	127	4,110	0.0	4.6	27.2	4.7	58.6	8.2
WH	12	LIVE	CUT	1	12.0	63	78	3,535	0.0	34.6	27.2	7.9	57.7	7.1
WH	24	LIVE	CUT	1	23.6	95	119	5,654	0.0	9.0	27.2	5.6	84.8	11.3

Unit Log Grade Summary: Unit 1 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	13.8	40.0	6,916	0.0	90.6	13.8
DF	LIVE	3 SAW	7.9	40.0	2,492	0.0	39.7	5.0
DF	LIVE	4 SAW	8.0	16.0	254	0.0	4.3	0.5
DF	LIVE	UTILITY	2.3	17.0	56	0.0	3.7	0.1
SS	LIVE	2 SAW	16.7	40.0	14,606	0.0	177.1	29.2
SS	LIVE	3 SAW	9.0	38.0	5,436	0.0	102.7	10.9
SS	LIVE	4 SAW	5.4	16.0	344	0.0	5.3	0.7

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	LIVE	UTILITY	2.7	18.0	161	0.0	7.7	0.3
WH	LIVE	2 SAW	15.3	36.0	5,295	0.0	76.2	10.6
WH	LIVE	3 SAW	8.2	36.0	2,738	0.0	44.4	5.5
WH	LIVE	4 SAW	5.7	20.0	1,059	0.0	18.0	2.1
WH	LIVE	UTILITY	2.1	13.0	96	0.0	3.9	0.2

Unit Log Sort Summary: Unit 1 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	10.4	36.0	9,661	0.0	134.6	19.3
DF	LIVE	Pulp	2.3	17.0	56	0.0	3.7	0.1
SS	LIVE	Domestic	10.7	34.0	20,387	0.0	285.1	40.8
SS	LIVE	Pulp	2.7	18.0	161	0.0	7.7	0.3
WH	LIVE	Domestic	8.4	29.0	9,093	0.0	138.6	18.2
WH	LIVE	Pulp	2.1	13.0	96	0.0	3.9	0.2

Unit Log Grade x Sort Summary: Unit 1 gaps

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	13.8	40.0	6,916	0.0	90.6	13.8
DF	LIVE	3 SAW	Domestic	7.9	40.0	2,492	0.0	39.7	5.0
DF	LIVE	4 SAW	Domestic	8.0	16.0	254	0.0	4.3	0.5
DF	LIVE	UTILITY	Pulp	2.3	17.0	56	0.0	3.7	0.1
SS	LIVE	2 SAW	Domestic	16.7	40.0	14,606	0.0	177.1	29.2
SS	LIVE	3 SAW	Domestic	9.0	38.0	5,436	0.0	102.7	10.9
SS	LIVE	4 SAW	Domestic	5.4	16.0	344	0.0	5.3	0.7
SS	LIVE	UTILITY	Pulp	2.7	18.0	161	0.0	7.7	0.3
WH	LIVE	2 SAW	Domestic	15.3	36.0	5,295	0.0	76.2	10.6
WH	LIVE	3 SAW	Domestic	8.2	36.0	2,738	0.0	44.4	5.5
WH	LIVE	4 SAW	Domestic	5.7	20.0	1,059	0.0	18.0	2.1
WH	LIVE	UTILITY	Pulp	2.1	13.0	96	0.0	3.9	0.2

Unit Log Grade x Diameter Bin Summary: Unit 1 gaps

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.3	17.0	56	0.0	3.7	0.1
DF	5 - 11	LIVE	3 SAW	7.9	40.0	2,492	0.0	39.7	5.0
DF	5 - 11	LIVE	4 SAW	8.0	16.0	254	0.0	4.3	0.5
DF	12 - 19	LIVE	2 SAW	13.8	40.0	6,916	0.0	90.6	13.8

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	< 5	LIVE	UTILITY	2.7	18.0	161	0.0	7.7	0.3
SS	5 - 11	LIVE	4 SAW	5.4	16.0	344	0.0	5.3	0.7
SS	5 - 11	LIVE	3 SAW	9.0	38.0	5,436	0.0	102.7	10.9
SS	12 - 19	LIVE	2 SAW	16.7	40.0	14,606	0.0	177.1	29.2
WH	< 5	LIVE	UTILITY	2.1	13.0	96	0.0	3.9	0.2
WH	5 - 11	LIVE	4 SAW	5.7	20.0	1,059	0.0	18.0	2.1
WH	5 - 11	LIVE	3 SAW	8.2	36.0	2,738	0.0	44.4	5.5
WH	12 - 19	LIVE	2 SAW	15.3	36.0	5,295	0.0	76.2	10.6

Unit Log Sort x Diameter Bin Summary: Unit 1 gaps

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.3	17.0	56	0.0	3.7	0.1
DF	5 - 11	LIVE	Domestic	7.9	34.0	2,745	0.0	44.1	5.5
DF	12 - 19	LIVE	Domestic	13.8	40.0	6,916	0.0	90.6	13.8
SS	< 5	LIVE	Pulp	2.7	18.0	161	0.0	7.7	0.3
SS	5 - 11	LIVE	Domestic	8.0	32.0	5,780	0.0	107.9	11.6
SS	12 - 19	LIVE	Domestic	16.7	40.0	14,606	0.0	177.1	29.2
WH	< 5	LIVE	Pulp	2.1	13.0	96	0.0	3.9	0.2
WH	5 - 11	LIVE	Domestic	6.8	27.0	3,797	0.0	62.3	7.6
WH	12 - 19	LIVE	Domestic	15.3	36.0	5,295	0.0	76.2	10.6

Cruise Unit Report Unit 4 gaps

Unit Sale Notice Volume (MBF): Unit 4 gaps

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
SS	21.3			126.6	93.7	26.0	6.3	0.6
DF	23.0			26.6	18.9	5.3	0.5	1.9
WH	20.4			7.7	6.0	1.7		0.1
ALL	21.6			160.9	118.5	33.0	6.8	2.5

Unit Sale Notice Weight (tons): Unit 4 gaps

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
SS	896.0	558.4	261.9	54.3	21.4
DF	259.1	188.0	45.9	3.6	21.6
WH	78.1	55.3	21.1		1.8
ALL	1,233.2	801.7	328.9	57.9	44.7

Unit Cruise Design: Unit 4 gaps

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	4.0		7	7	0

Unit Cruise Summary: Unit 4 gaps

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
SS	12	26	3.7	0
DF	4	8	1.1	0
WH	1	2	0.3	0
ALL	17	36	5.1	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 4 gaps

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	202.2	50.9	19.2	176.9	35.7	10.3	35,774	62.2	21.8
DF	62.2	78.7	29.8	122.1	30.8	15.4	7,598	84.5	33.5

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	15.6	170.8	64.5	123.8	0.0	0.0	1,926	170.8	64.5
ALL	280.0	32.6	12.3	161.8	37.4	9.1	45,297	49.6	15.3

Unit Summary: Unit 4 gaps

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	4	ALL	23.5	54	69	6,648	8.2	18.1	54.4	11.2	259.1	26.6
DF	LIVE	LEA	0	ALL	32.6			950	8.2	1.3	7.8	1.4	37.0	3.8
SS	LIVE	CUT	12	ALL	20.4	42	54	31,646	3.1	78.8	178.9	39.6	896.0	126.6
SS	LIVE	LEA	1	ALL	32.3	21	27	4,128	3.1	4.1	23.3	4.1	116.9	16.5
WH	LIVE	CUT	1	ALL	22.1	45	56	1,926	0.0	5.8	15.6	3.3	78.1	7.7
ALL	LIVE	CUT	17	ALL	21.1	44	57	40,220	3.8	102.7	248.9	54.1	1,233.2	160.9
ALL	LIVE	LEA	1	ALL	32.4	16	21	5,078	4.1	5.4	31.1	5.5	153.9	20.3
ALL	ALL	ALL	18	ALL	21.8	43	55	45,298	3.8	108.1	280.0	59.6	1,387.1	181.2

Unit Stand Table: Unit 4 gaps

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	21	LIVE	CUT	2	20.7	42	53	1,768	14.0	6.6	15.5	3.4	72.3	7.1
DF	23	LIVE	CUT	1	23.5	100	128	1,368	1.5	2.6	7.8	1.6	40.6	5.5
DF	24	LIVE	CUT	2	24.1	90	115	1,612	6.7	4.9	15.5	3.2	72.2	6.4
DF	27	LIVE	CUT	2	27.0			1,899	8.2	3.9	15.5	3.0	74.0	7.6
DF	33	LIVE	LEA	1	32.6			950	8.2	1.3	7.8	1.4	37.0	3.8
SS	14	LIVE	CUT	2	14.1			2,752	3.1	14.3	15.6	4.1	77.9	11.0
SS	16	LIVE	CUT	1	16.2	67	85	929	4.5	5.4	7.8	1.9	29.4	3.7
SS	17	LIVE	CUT	2	17.4	33	42	2,219	1.9	9.4	15.6	3.7	67.4	8.9
SS	18	LIVE	CUT	1	18.5			1,376	3.1	4.2	7.8	1.8	39.0	5.5
SS	19	LIVE	CUT	1	18.6	97	125	1,438	0.0	4.1	7.8	1.8	40.7	5.8
SS	21	LIVE	CUT	3	21.0	55	70	3,974	4.3	9.7	23.3	5.1	111.9	15.9
SS	23	LIVE	CUT	4	23.0	52	66	6,455	2.0	10.7	31.1	6.5	167.5	25.8
SS	24	LIVE	CUT	4	24.0	80	102	6,808	2.1	9.9	31.1	6.4	172.6	27.2
SS	25	LIVE	CUT	2	25.1			2,752	3.1	4.5	15.6	3.1	77.9	11.0
SS	26	LIVE	CUT	3	26.1	61	78	2,942	7.5	6.3	23.3	4.6	111.7	11.8
SS	29	LIVE	LEA	1	29.4			1,859	3.1	1.6	7.8	1.4	41.2	7.4
SS	34	LIVE	LEA	2	34.1	36	45	2,269	5.0	2.4	15.5	2.7	75.7	9.1
WH	20	LIVE	CUT	1	20.4	77	96	963	0.0	3.4	7.8	1.7	39.1	3.9
WH	24	LIVE	CUT	1	24.3			963	0.0	2.4	7.8	1.6	39.0	3.9

Unit Log Grade Summary: Unit 4 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	13.9	40.0	4,728	10.4	188.0	18.9
DF	LIVE	3 SAW	8.8	40.0	1,333	3.2	45.9	5.3
DF	LIVE	4 SAW	7.0	17.0	122	0.0	3.6	0.5
DF	LIVE	UTILITY	3.9	22.0	464	0.0	21.6	1.9
SS	LIVE	2 SAW	15.3	40.0	23,415	2.7	558.4	93.7
SS	LIVE	3 SAW	9.4	40.0	6,502	5.0	261.9	26.0
SS	LIVE	4 SAW	6.8	21.0	1,578	0.0	54.3	6.3
SS	LIVE	UTILITY	2.1	21.0	151	0.0	21.4	0.6
WH	LIVE	2 SAW	13.7	36.0	1,494	0.0	55.3	6.0
WH	LIVE	3 SAW	6.4	39.0	418	0.0	21.1	1.7
WH	LIVE	UTILITY	2.0	13.0	14	0.0	1.8	0.1

Unit Log Sort Summary: Unit 4 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	11.2	37.0	6,184	8.8	237.5	24.7
DF	LIVE	Pulp	3.9	22.0	464	0.0	21.6	1.9
SS	LIVE	Domestic	11.0	34.0	31,495	3.1	874.6	126.0
SS	LIVE	Pulp	2.1	21.0	151	0.0	21.4	0.6
WH	LIVE	Domestic	10.1	38.0	1,912	0.0	76.3	7.6
WH	LIVE	Pulp	2.0	13.0	14	0.0	1.8	0.1

Unit Log Grade x Sort Summary: Unit 4 gaps

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	13.9	40.0	4,728	10.4	188.0	18.9
DF	LIVE	3 SAW	Domestic	8.8	40.0	1,333	3.2	45.9	5.3
DF	LIVE	4 SAW	Domestic	7.0	17.0	122	0.0	3.6	0.5
DF	LIVE	UTILITY	Pulp	3.9	22.0	464	0.0	21.6	1.9
SS	LIVE	2 SAW	Domestic	15.3	40.0	23,415	2.7	558.4	93.7
SS	LIVE	3 SAW	Domestic	9.4	40.0	6,502	5.0	261.9	26.0
SS	LIVE	4 SAW	Domestic	6.8	21.0	1,578	0.0	54.3	6.3
SS	LIVE	UTILITY	Pulp	2.1	21.0	151	0.0	21.4	0.6
WH	LIVE	2 SAW	Domestic	13.7	36.0	1,494	0.0	55.3	6.0
WH	LIVE	3 SAW	Domestic	6.4	39.0	418	0.0	21.1	1.7
WH	LIVE	UTILITY	Pulp	2.0	13.0	14	0.0	1.8	0.1

Unit Log Grade x Diameter Bin Summary: Unit 4 gaps

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	18.0	38	0.0	4.4	0.2
DF	5 - 11	LIVE	UTILITY	6.4	28.0	426	0.0	17.2	1.7
DF	5 - 11	LIVE	4 SAW	7.0	17.0	122	0.0	3.6	0.5
DF	5 - 11	LIVE	3 SAW	8.8	40.0	1,333	3.2	45.9	5.3
DF	12 - 19	LIVE	2 SAW	13.9	40.0	4,728	10.4	188.0	18.9
SS	< 5	LIVE	UTILITY	2.1	21.0	151	0.0	21.4	0.6
SS	5 - 11	LIVE	4 SAW	6.8	21.0	1,578	0.0	54.3	6.3
SS	5 - 11	LIVE	3 SAW	9.4	40.0	6,502	5.0	261.9	26.0
SS	12 - 19	LIVE	2 SAW	15.3	40.0	23,415	2.7	558.4	93.7
WH	< 5	LIVE	UTILITY	2.0	13.0	14	0.0	1.8	0.1
WH	5 - 11	LIVE	3 SAW	6.4	39.0	418	0.0	21.1	1.7
WH	12 - 19	LIVE	2 SAW	13.7	36.0	1,494	0.0	55.3	6.0

Unit Log Sort x Diameter Bin Summary: Unit 4 gaps

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	18.0	38	0.0	4.4	0.2
DF	5 - 11	LIVE	Pulp	6.4	28.0	426	0.0	17.2	1.7
DF	5 - 11	LIVE	Domestic	8.3	34.0	1,455	3.0	49.5	5.8
DF	12 - 19	LIVE	Domestic	13.9	40.0	4,728	10.4	188.0	18.9
SS	< 5	LIVE	Pulp	2.1	21.0	151	0.0	21.4	0.6
SS	5 - 11	LIVE	Domestic	8.2	31.0	8,081	4.1	316.2	32.3
SS	12 - 19	LIVE	Domestic	15.3	40.0	23,415	2.7	558.4	93.7
WH	< 5	LIVE	Pulp	2.0	13.0	14	0.0	1.8	0.1
WH	5 - 11	LIVE	Domestic	6.4	39.0	418	0.0	21.1	1.7
WH	12 - 19	LIVE	Domestic	13.7	36.0	1,494	0.0	55.3	6.0

Cruise Unit Report Unit 5 gaps

Unit Sale Notice Volume (MBF): Unit 5 gaps

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
RA	11.9			19.6		9.1	10.4	
DF	22.5			13.5	9.4	3.6	0.3	0.1
ALL	14.1			33.0	9.4	12.8	10.7	0.1

Unit Sale Notice Weight (tons): Unit 5 gaps

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
RA	146.1		59.5	86.6	
DF	133.6	93.7	33.4	2.5	4.0
ALL	279.7	93.7	92.9	89.1	4.0

Unit Cruise Design: Unit 5 gaps

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	1.0		1	1	0

Unit Cruise Summary: Unit 5 gaps

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
SS		1	1.0	0
RA	4	4	4.0	0
DF	2	2	2.0	0
ALL	6	7	7.0	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 5 gaps

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	54.4	0.0	0.0						
RA	160.0	0.0	0.0	122.2	26.0	13.0	19,550	26.0	13.0
DF	108.9	0.0	0.0	123.7	4.5	3.2	13,465	4.5	3.2
ALL	323.3	0.0	0.0	122.8	20.1	8.2	39,701	20.1	8.2

Unit Summary: Unit 5 gaps

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	2	ALL	22.5	92	117	13,465	6.3	39.4	108.9	23.0	133.6	13.5
RA	LIVE	CUT	4	ALL	11.9	57	70	19,550	3.7	207.2	160.0	46.4	146.1	19.6
SS	LIVE	LEA	1	ALL	62.3	139	181			2.6	54.4	6.9		
ALL	LIVE	CUT	6	ALL	14.1	63	78	33,015	4.8	246.6	268.9	69.4	279.7	33.1
ALL	LIVE	LEA	1	ALL	62.3	139	181			2.6	54.4	6.9		
ALL	ALL	ALL	7	ALL	15.4	63	79	33,015	4.8	249.2	323.3	76.3	279.7	33.1

Unit Stand Table: Unit 5 gaps

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	21	LIVE	CUT	1	21.4	89	113	6,518	5.7	21.8	54.5	11.8	65.2	6.5
DF	24	LIVE	CUT	1	23.7	96	122	6,947	6.9	17.8	54.5	11.2	68.4	6.9
RA	9	LIVE	CUT	1	8.8	44	53	3,409	0.0	94.7	40.0	13.5	23.4	3.4
RA	13	LIVE	CUT	1	12.8	61	75	4,297	3.0	44.8	40.0	11.2	36.9	4.3
RA	14	LIVE	CUT	1	14.3	77	95	6,205	8.9	35.9	40.0	10.6	45.4	6.2
RA	15	LIVE	CUT	1	15.0	69	85	5,639	0.0	32.6	40.0	10.3	40.3	5.6
SS	62	LIVE	LEA	1	62.3	139	181			2.6	54.4	6.9		

Unit Log Grade Summary: Unit 5 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	14.0	40.0	9,449	8.8	93.7	9.4
DF	LIVE	3 SAW	8.4	40.0	3,631	0.0	33.4	3.6
DF	LIVE	4 SAW	6.8	13.0	267	0.0	2.5	0.3
DF	LIVE	UTILITY	2.1	21.0	119	0.0	4.0	0.1
RA	LIVE	3 SAW	11.1	35.0	9,132	4.5	59.5	9.1
RA	LIVE	4 SAW	6.3	31.0	10,418	2.9	86.6	10.4

Unit Log Sort Summary: Unit 5 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	10.4	35.0	13,346	6.4	129.6	13.3
DF	LIVE	Pulp	2.1	21.0	119	0.0	4.0	0.1
RA	LIVE	Domestic	7.4	32.0	19,550	3.7	146.1	19.6

Unit Log Grade x Sort Summary: Unit 5 gaps

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	14.0	40.0	9,449	8.8	93.7	9.4
DF	LIVE	3 SAW	Domestic	8.4	40.0	3,631	0.0	33.4	3.6
DF	LIVE	4 SAW	Domestic	6.8	13.0	267	0.0	2.5	0.3
DF	LIVE	UTILITY	Pulp	2.1	21.0	119	0.0	4.0	0.1
RA	LIVE	3 SAW	Domestic	11.1	35.0	9,132	4.5	59.5	9.1
RA	LIVE	4 SAW	Domestic	6.3	31.0	10,418	2.9	86.6	10.4

Unit Log Grade x Diameter Bin Summary: Unit 5 gaps

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	21.0	119	0.0	4.0	0.1
DF	5 - 11	LIVE	4 SAW	6.8	13.0	267	0.0	2.5	0.3
DF	5 - 11	LIVE	3 SAW	8.4	40.0	3,631	0.0	33.4	3.6
DF	12 - 19	LIVE	2 SAW	14.0	40.0	9,449	8.8	93.7	9.4
RA	5 - 11	LIVE	4 SAW	6.3	31.0	10,418	2.9	86.6	10.4
RA	5 - 11	LIVE	3 SAW	11.1	35.0	9,132	4.5	59.5	9.1

Unit Log Sort x Diameter Bin Summary: Unit 5 gaps

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	21.0	119	0.0	4.0	0.1
DF	5 - 11	LIVE	Domestic	7.9	32.0	3,897	0.0	35.9	3.9
DF	12 - 19	LIVE	Domestic	14.0	40.0	9,449	8.8	93.7	9.4
RA	5 - 11	LIVE	Domestic	7.4	32.0	19,550	3.7	146.1	19.6

Cruise Unit Report Unit 7 gaps

Unit Sale Notice Volume (MBF): Unit 7 gaps

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	13.9			23.7	10.9	8.1	4.3	0.5
WH	20.8			9.5	7.4	2.0		0.1
SS	10.0			3.5			3.5	
ALL	13.1			36.8	18.3	10.1	7.8	0.5

Unit Sale Notice Weight (tons): Unit 7 gaps

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	194.6	75.2	69.1	38.4	11.8
WH	76.0	48.0	25.1		3.0
SS	29.8			29.8	
ALL	300.4	123.2	94.2	68.2	14.8

Unit Cruise Design: Unit 7 gaps

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	1.0		3	3	0

Unit Cruise Summary: Unit 7 gaps

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RA		1	1.0	0
DF	8	13	4.3	0
WH	1	3	1.0	0
SS	2	5	1.7	0
ALL	11	22	7.3	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 7 gaps

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	54.4	0.0	0.0						

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	235.9	135.2	78.1	130.8	30.2	10.7	30,864	138.6	78.8
WH	54.4	173.2	100.0	174.2	0.0	0.0	9,482	173.2	100.0
SS	90.7	34.6	20.0	65.1	3.7	2.6	5,910	34.8	20.2
ALL	399.2	67.3	38.8	121.4	37.5	11.3	48,458	77.0	40.5

Unit Summary: Unit 7 gaps

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	8	ALL	13.1	45	56	23,741	0.0	193.9	181.5	50.1	194.6	23.7
DF	LIVE	LEA	3	ALL	28.4	109	139	7,122	0.0	12.4	54.4	10.2	58.4	7.1
RA	LIVE	CUT	0	ALL	12.0	74				23.1	18.1	5.2		
SS	LIVE	CUT	2	ALL	11.1	34	41	3,546	0.0	81.0	54.4	16.3	29.8	3.5
SS	LIVE	LEA	0	ALL	28.2	56		2,364	0.0	8.4	36.3	6.8	19.9	2.4
WH	LIVE	CUT	1	ALL	16.1	73	20	9,482	0.0	38.5	54.4	13.6	76.0	9.5
ALL	LIVE	CUT	11	ALL	13.0	48	44	36,769	0.0	336.5	308.4	85.2	300.4	36.7
ALL	LIVE	LEA	3	ALL	28.3	88	83	9,486	0.0	20.8	90.7	17.0	78.3	9.5
ALL	ALL	ALL	14	ALL	14.3	50	47	46,255	0.0	357.3	399.1	102.2	378.7	46.2

Unit Stand Table: Unit 7 gaps

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	9	LIVE	CUT	2	8.9	23	29	3,941	0.0	83.2	36.3	12.1	32.1	3.9
DF	10	LIVE	CUT	1	10.2	53	66	1,439	0.0	32.0	18.2	5.7	14.6	1.4
DF	11	LIVE	CUT	1	11.5	60	74	1,686	0.0	25.2	18.2	5.4	15.8	1.7
DF	16	LIVE	CUT	1	15.7			2,374	0.0	13.5	18.2	4.6	19.5	2.4
DF	17	LIVE	CUT	1	17.5	81	103	2,433	0.0	10.9	18.2	4.3	20.7	2.4
DF	19	LIVE	CUT	1	19.4	87	111	2,802	0.0	8.8	18.2	4.1	21.9	2.8
DF	21	LIVE	CUT	1	21.1	92	117	2,825	0.0	7.5	18.2	4.0	23.0	2.8
DF	22	LIVE	CUT	2	21.8	94	120	6,240	0.0	13.9	36.3	7.8	47.1	6.2
DF	27	LIVE	LEA	1	27.4	107	137	2,287	0.0	4.4	18.1	3.5	19.2	2.3
DF	28	LIVE	LEA	1	27.8	108	138	2,336	0.0	4.3	18.1	3.4	19.3	2.3
DF	30	LIVE	LEA	1	30.3	112	144	2,499	0.0	3.6	18.1	3.3	19.9	2.5
RA	12	LIVE	CUT	1	12.0	74				23.0	18.1	5.2		
SS	10	LIVE	CUT	2	10.0	41	50	2,364	0.0	66.6	36.3	11.5	19.9	2.4
SS	15	LIVE	CUT	1	15.0			1,182	0.0	14.8	18.1	4.7	9.9	1.2
SS	27	LIVE	LEA	1	27.2	104		1,182	0.0	4.5	18.2	3.5	9.9	1.2
SS	29	LIVE	LEA	1	29.4			1,182	0.0	3.9	18.2	3.3	10.0	1.2

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
WH	12	LIVE	CUT	1	11.7	64		3,161	0.0	24.3	18.1	5.3	25.3	3.2
WH	21	LIVE	CUT	1	20.8	82	102	3,161	0.0	7.7	18.1	4.0	25.3	3.2
WH	23	LIVE	CUT	1	22.6	98		3,160	0.0	6.5	18.1	3.8	25.3	3.2

Unit Log Grade Summary: Unit 7 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	14.4	40.0	10,918	0.0	75.2	10.9
DF	LIVE	3 SAW	8.4	40.0	8,065	0.0	69.1	8.1
DF	LIVE	4 SAW	5.4	36.0	4,292	0.0	38.4	4.3
DF	LIVE	UTILITY	2.1	19.0	465	0.0	11.8	0.5
SS	LIVE	4 SAW	5.1	33.0	3,546	0.0	29.8	3.5
WH	LIVE	2 SAW	15.5	36.0	7,383	0.0	48.0	7.4
WH	LIVE	3 SAW	8.2	40.0	2,030	0.0	25.1	2.0
WH	LIVE	UTILITY	2.2	18.0	69	0.0	3.0	0.1

Unit Log Sort Summary: Unit 7 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	7.9	38.0	23,276	0.0	182.8	23.3
DF	LIVE	Pulp	2.1	19.0	465	0.0	11.8	0.5
SS	LIVE	Domestic	5.1	33.0	3,546	0.0	29.8	3.5
WH	LIVE	Domestic	11.9	38.0	9,413	0.0	73.0	9.4
WH	LIVE	Pulp	2.2	18.0	69	0.0	3.0	0.1

Unit Log Grade x Sort Summary: Unit 7 gaps

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	14.4	40.0	10,918	0.0	75.2	10.9
DF	LIVE	3 SAW	Domestic	8.4	40.0	8,065	0.0	69.1	8.1
DF	LIVE	4 SAW	Domestic	5.4	36.0	4,292	0.0	38.4	4.3
DF	LIVE	UTILITY	Pulp	2.1	19.0	465	0.0	11.8	0.5
SS	LIVE	4 SAW	Domestic	5.1	33.0	3,546	0.0	29.8	3.5
WH	LIVE	2 SAW	Domestic	15.5	36.0	7,383	0.0	48.0	7.4
WH	LIVE	3 SAW	Domestic	8.2	40.0	2,030	0.0	25.1	2.0
WH	LIVE	UTILITY	Pulp	2.2	18.0	69	0.0	3.0	0.1

Unit Log Grade x Diameter Bin Summary: Unit 7 gaps

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	19.0	465	0.0	11.8	0.5
DF	5 - 11	LIVE	4 SAW	5.4	36.0	4,292	0.0	38.4	4.3
DF	5 - 11	LIVE	3 SAW	8.4	40.0	8,065	0.0	69.1	8.1
DF	12 - 19	LIVE	2 SAW	14.4	40.0	10,918	0.0	75.2	10.9
SS	5 - 11	LIVE	4 SAW	5.1	33.0	3,546	0.0	29.8	3.5
WH	< 5	LIVE	UTILITY	2.2	18.0	69	0.0	3.0	0.1
WH	5 - 11	LIVE	3 SAW	8.2	40.0	2,030	0.0	25.1	2.0
WH	12 - 19	LIVE	2 SAW	15.5	36.0	7,383	0.0	48.0	7.4

Unit Log Sort x Diameter Bin Summary: Unit 7 gaps

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	19.0	465	0.0	11.8	0.5
DF	5 - 11	LIVE	Domestic	6.7	37.0	12,358	0.0	107.6	12.4
DF	12 - 19	LIVE	Domestic	14.4	40.0	10,918	0.0	75.2	10.9
SS	5 - 11	LIVE	Domestic	5.1	33.0	3,546	0.0	29.8	3.5
WH	< 5	LIVE	Pulp	2.2	18.0	69	0.0	3.0	0.1
WH	5 - 11	LIVE	Domestic	8.2	40.0	2,030	0.0	25.1	2.0
WH	12 - 19	LIVE	Domestic	15.5	36.0	7,383	0.0	48.0	7.4

Cruise Unit Report Unit 8 gaps

Unit Sale Notice Volume (MBF): Unit 8 gaps

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	15.0			31.4	8.2	16.6	5.9	0.7
WH	22.3			4.4	2.8	1.4	0.3	0.0
RA	10.0			3.3			3.3	
ALL	13.9			39.2	11.0	18.0	9.5	0.7

Unit Sale Notice Weight (tons): Unit 8 gaps

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	282.1	68.5	148.9	49.5	15.2
WH	40.8	25.4	11.2	3.2	1.0
RA	28.8			28.8	
ALL	351.7	93.8	160.1	81.6	16.2

Unit Cruise Design: Unit 8 gaps

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	1.0		2	2	0

Unit Cruise Summary: Unit 8 gaps

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	9	10	5.0	0
WH	1	1	0.5	0
RA	2	2	1.0	0
ALL	12	13	6.5	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 8 gaps

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	272.2	0.0	0.0	128.2	22.7	7.6	34,904	22.7	7.6
WH	27.2	141.4	100.0	163.0	0.0	0.0	4,436	141.4	100.0

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	54.4	141.4	100.0	61.4	6.3	4.5	3,344	141.6	100.1
ALL	353.9	10.9	7.7	120.6	31.7	9.2	42,684	33.5	12.0

Unit Summary: Unit 8 gaps

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	9	ALL	15.0	79	100	31,414	4.4	199.6	245.0	63.3	282.1	31.4
DF	LIVE	LEA	1	ALL	26.5	89	113	3,490	4.4	7.1	27.2	5.3	31.3	3.5
RA	LIVE	CUT	2	ALL	10.0	40	47	3,344	2.9	99.8	54.4	17.2	28.8	3.3
WH	LIVE	CUT	1	ALL	22.3	97	122	4,436	9.2	10.0	27.2	5.8	40.8	4.4
ALL	LIVE	CUT	12	ALL	13.9	67	84	39,194	4.9	309.4	326.6	86.3	351.7	39.1
ALL	LIVE	LEA	1	ALL	26.5	89	113	3,490	4.4	7.1	27.2	5.3	31.3	3.5
ALL	ALL	ALL	13	ALL	14.3	67	84	42,684	4.8	316.5	353.8	91.6	383.0	42.6

Unit Stand Table: Unit 8 gaps

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	1	8.2	71	89	3,563	0.0	74.2	27.2	9.5	29.6	3.6
DF	13	LIVE	CUT	1	13.2	79	100	3,953	9.2	28.6	27.2	7.5	30.2	4.0
DF	16	LIVE	CUT	1	15.6	82	104	3,220	0.0	20.5	27.2	6.9	30.4	3.2
DF	17	LIVE	CUT	1	16.6	90	114	4,111	7.7	18.1	27.2	6.7	33.5	4.1
DF	18	LIVE	CUT	1	18.4	85	108	3,641	5.7	14.7	27.2	6.3	31.9	3.6
DF	19	LIVE	CUT	1	19.0	85	108	2,710	1.0	13.8	27.2	6.2	30.7	2.7
DF	20	LIVE	CUT	1	20.4	76	96	2,555	1.4	12.0	27.2	6.0	28.4	2.6
DF	23	LIVE	CUT	1	22.8	88	111	2,688	11.7	9.6	27.2	5.7	31.7	2.7
DF	24	LIVE	CUT	1	24.0	99	126	4,974	1.4	8.7	27.2	5.6	35.6	5.0
DF	26	LIVE	LEA	1	26.5	89	113	3,490	3.9	7.1	27.2	5.3	31.3	3.5
RA	10	LIVE	CUT	2	10.0	40	47	3,344	2.9	99.7	54.4	17.2	28.8	3.3
WH	22	LIVE	CUT	1	22.3	97	122	4,436	9.2	10.0	27.2	5.8	40.8	4.4

Unit Log Grade Summary: Unit 8 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	13.8	40.0	8,227	5.2	68.5	8.2
DF	LIVE	3 SAW	9.2	40.0	16,613	4.1	148.9	16.6
DF	LIVE	4 SAW	5.8	36.0	5,900	4.7	49.5	5.9
DF	LIVE	UTILITY	2.2	24.0	674	0.0	15.2	0.7
RA	LIVE	4 SAW	6.0	30.0	3,344	2.9	28.8	3.3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	LIVE	2 SAW	15.3	36.0	2,760	14.1	25.4	2.8
WH	LIVE	3 SAW	10.9	36.0	1,375	0.0	11.2	1.4
WH	LIVE	4 SAW	6.8	22.0	271	0.0	3.2	0.3
WH	LIVE	UTILITY	2.0	18.0	30	0.0	1.0	0.0

Unit Log Sort Summary: Unit 8 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	8.0	38.0	30,740	4.5	266.9	30.7
DF	LIVE	Pulp	2.2	24.0	674	0.0	15.2	0.7
RA	LIVE	Domestic	6.0	30.0	3,344	2.9	28.8	3.3
WH	LIVE	Domestic	11.0	31.0	4,406	9.3	39.8	4.4
WH	LIVE	Pulp	2.0	18.0	30	0.0	1.0	0.0

Unit Log Grade x Sort Summary: Unit 8 gaps

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	13.8	40.0	8,227	5.2	68.5	8.2
DF	LIVE	3 SAW	Domestic	9.2	40.0	16,613	4.1	148.9	16.6
DF	LIVE	4 SAW	Domestic	5.8	36.0	5,900	4.7	49.5	5.9
DF	LIVE	UTILITY	Pulp	2.2	24.0	674	0.0	15.2	0.7
RA	LIVE	4 SAW	Domestic	6.0	30.0	3,344	2.9	28.8	3.3
WH	LIVE	2 SAW	Domestic	15.3	36.0	2,760	14.1	25.4	2.8
WH	LIVE	3 SAW	Domestic	10.9	36.0	1,375	0.0	11.2	1.4
WH	LIVE	4 SAW	Domestic	6.8	22.0	271	0.0	3.2	0.3
WH	LIVE	UTILITY	Pulp	2.0	18.0	30	0.0	1.0	0.0

Unit Log Grade x Diameter Bin Summary: Unit 8 gaps

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.2	24.0	674	0.0	15.2	0.7
DF	5 - 11	LIVE	4 SAW	5.8	36.0	5,900	4.7	49.5	5.9
DF	5 - 11	LIVE	3 SAW	9.2	40.0	16,613	4.1	148.9	16.6
DF	12 - 19	LIVE	2 SAW	13.8	40.0	8,227	5.2	68.5	8.2
RA	5 - 11	LIVE	4 SAW	6.0	30.0	3,344	2.9	28.8	3.3
WH	< 5	LIVE	UTILITY	2.0	18.0	30	0.0	1.0	0.0
WH	5 - 11	LIVE	4 SAW	6.8	22.0	271	0.0	3.2	0.3
WH	5 - 11	LIVE	3 SAW	10.9	36.0	1,375	0.0	11.2	1.4
WH	12 - 19	LIVE	2 SAW	15.3	36.0	2,760	14.1	25.4	2.8

Unit Log Sort x Diameter Bin Summary: Unit 8 gaps

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.2	24.0	674	0.0	15.2	0.7
DF	5 - 11	LIVE	Domestic	7.4	38.0	22,513	4.3	198.4	22.5
DF	12 - 19	LIVE	Domestic	13.8	40.0	8,227	5.2	68.5	8.2
RA	5 - 11	LIVE	Domestic	6.0	30.0	3,344	2.9	28.8	3.3
WH	< 5	LIVE	Pulp	2.0	18.0	30	0.0	1.0	0.0
WH	5 - 11	LIVE	Domestic	8.9	29.0	1,646	0.0	14.5	1.6
WH	12 - 19	LIVE	Domestic	15.3	36.0	2,760	14.1	25.4	2.8

Cruise Unit Report Unit 9 gaps

Unit Sale Notice Volume (MBF): Unit 9 gaps

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WH	21.2			78.5	51.7	21.6	4.7	0.4
DF	15.8			21.8		19.2	2.3	0.3
SS	22.5			17.1	13.5	2.5	1.1	0.1
ALL	19.1			117.4	65.2	43.3	8.0	0.8

Unit Sale Notice Weight (tons): Unit 9 gaps

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
WH	633.1	404.5	164.9	49.4	14.3
DF	187.8		162.8	18.8	6.2
SS	113.6	86.1	15.8	9.0	2.7
ALL	934.5	490.6	343.5	77.3	23.1

Unit Cruise Design: Unit 9 gaps

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	2.5		5	4	0

Unit Cruise Summary: Unit 9 gaps

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	7	17	3.4	0
SS	2	5	1.0	0
DF	4	6	1.2	0
ALL	13	28	5.6	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 9 gaps

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	185.1	82.1	36.7	192.2	17.7	6.7	35,575	84.0	37.3
SS	54.4	173.2	77.5	209.6	2.2	1.6	11,409	173.2	77.5

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	65.3	149.1	66.7	133.4	9.3	4.6	8,716	149.4	66.8
ALL	304.9	20.4	9.1	182.7	21.7	6.0	55,700	29.7	10.9

Unit Summary: Unit 9 gaps

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	4	ALL	17.5	67	85	8,716	4.0	39.1	65.3	15.6	187.8	21.8
SS	LIVE	CUT	2	ALL	20.3	57	74	6,845	1.7	14.5	32.7	7.2	113.6	17.1
SS	LIVE	LEA	2	ALL	25.1	110	141	4,564	1.7	6.3	21.8	4.3	75.8	11.4
WH	LIVE	CUT	7	ALL	16.3	27	35	31,390	2.5	112.7	163.3	40.5	633.1	78.5
WH	LIVE	LEA	0	ALL	27.8			4,185	2.5	5.2	21.8	4.1	84.4	10.5
ALL	LIVE	CUT	13	ALL	17.0	39	50	46,951	2.7	166.3	261.3	63.3	934.5	117.4
ALL	LIVE	LEA	2	ALL	26.4	60	77	8,749	2.1	11.5	43.6	8.4	160.2	21.9
ALL	ALL	ALL	15	ALL	17.7	40	52	55,700	2.6	177.8	304.9	71.7	1,094.7	139.3

Unit Stand Table: Unit 9 gaps

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	13	LIVE	CUT	1	13.4	71	89	1,279	0.0	11.1	10.9	3.0	27.7	3.2
DF	16	LIVE	CUT	1	16.0	84	106	1,419	8.1	7.8	10.9	2.7	31.1	3.5
DF	17	LIVE	CUT	1	17.3	92	117	1,527	7.3	6.7	10.9	2.6	33.3	3.8
DF	18	LIVE	CUT	1	17.6	90	114	1,585	0.0	6.4	10.9	2.6	33.1	4.0
DF	23	LIVE	CUT	1	23.3			1,453	4.0	3.7	10.9	2.3	31.3	3.6
DF	24	LIVE	CUT	1	23.8			1,453	4.0	3.5	10.9	2.2	31.3	3.6
SS	17	LIVE	CUT	1	17.3			2,282	1.7	6.7	10.9	2.6	37.9	5.7
SS	22	LIVE	CUT	1	21.6	103	133	2,246	3.3	4.3	10.9	2.3	37.0	5.6
SS	23	LIVE	CUT	1	23.5	109	141	2,317	0.0	3.6	10.9	2.2	38.8	5.8
SS	24	LIVE	LEA	1	24.1	111	143	2,427	0.0	3.4	10.9	2.2	38.3	6.1
SS	26	LIVE	LEA	1	26.2	108	139	2,137	16.8	2.9	10.9	2.1	37.5	5.3
WH	10	LIVE	CUT	1	10.5			2,093	2.5	18.1	10.9	3.4	42.2	5.2
WH	13	LIVE	CUT	1	13.1			2,093	2.5	11.6	10.9	3.0	42.2	5.2
WH	14	LIVE	CUT	2	14.2			4,186	2.5	19.8	21.8	5.8	84.4	10.5
WH	15	LIVE	CUT	1	15.5			2,093	2.5	8.3	10.9	2.8	42.2	5.2
WH	16	LIVE	CUT	3	15.8			6,278	2.5	24.1	32.7	8.2	126.6	15.7
WH	19	LIVE	CUT	1	18.7	100	126	1,929	3.7	5.7	10.9	2.5	42.5	4.8
WH	20	LIVE	CUT	2	20.5	95	121	3,843	6.4	9.5	21.8	4.8	81.3	9.6
WH	21	LIVE	CUT	1	21.0	99	125	2,331	0.0	4.5	10.9	2.4	42.7	5.8

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
WH	22	LIVE	CUT	1	21.8	102	129	2,163	1.7	4.2	10.9	2.3	43.0	5.4
WH	23	LIVE	CUT	1	23.2	101	128	2,104	0.0	3.7	10.9	2.3	42.1	5.3
WH	24	LIVE	CUT	1	23.7	104	131	2,278	0.0	3.6	10.9	2.2	43.8	5.7
WH	25	LIVE	LEA	1	25.1			2,092	2.5	3.2	10.9	2.2	42.2	5.2
WH	32	LIVE	LEA	1	31.6			2,093	2.5	2.0	10.9	1.9	42.2	5.2

Unit Log Grade Summary: Unit 9 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	8.9	40.0	7,670	4.6	162.8	19.2
DF	LIVE	4 SAW	5.0	30.0	920	0.0	18.8	2.3
DF	LIVE	UTILITY	2.0	19.0	126	0.0	6.2	0.3
SS	LIVE	2 SAW	14.8	40.0	5,394	2.1	86.1	13.5
SS	LIVE	3 SAW	10.5	40.0	982	0.0	15.8	2.5
SS	LIVE	4 SAW	7.3	23.0	433	0.0	9.0	1.1
SS	LIVE	UTILITY	2.1	22.0	36	0.0	2.7	0.1
WH	LIVE	2 SAW	14.8	36.0	20,691	3.7	404.5	51.7
WH	LIVE	3 SAW	10.3	35.0	8,655	0.0	164.9	21.6
WH	LIVE	4 SAW	6.8	23.0	1,866	0.0	49.4	4.7
WH	LIVE	UTILITY	2.3	18.0	178	0.0	14.3	0.4

Unit Log Sort Summary: Unit 9 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	7.8	37.0	8,590	4.1	181.6	21.5
DF	LIVE	Pulp	2.0	19.0	126	0.0	6.2	0.3
SS	LIVE	Domestic	11.5	34.0	6,809	1.7	110.9	17.0
SS	LIVE	Pulp	2.1	22.0	36	0.0	2.7	0.1
WH	LIVE	Domestic	10.9	32.0	31,212	2.5	618.8	78.0
WH	LIVE	Pulp	2.3	18.0	178	0.0	14.3	0.4

Unit Log Grade x Sort Summary: Unit 9 gaps

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	Domestic	8.9	40.0	7,670	4.6	162.8	19.2
DF	LIVE	4 SAW	Domestic	5.0	30.0	920	0.0	18.8	2.3
DF	LIVE	UTILITY	Pulp	2.0	19.0	126	0.0	6.2	0.3
SS	LIVE	2 SAW	Domestic	14.8	40.0	5,394	2.1	86.1	13.5
SS	LIVE	3 SAW	Domestic	10.5	40.0	982	0.0	15.8	2.5

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
SS	LIVE	4 SAW	Domestic	7.3	23.0	433	0.0	9.0	1.1
SS	LIVE	UTILITY	Pulp	2.1	22.0	36	0.0	2.7	0.1
WH	LIVE	2 SAW	Domestic	14.8	36.0	20,691	3.7	404.5	51.7
WH	LIVE	3 SAW	Domestic	10.3	35.0	8,655	0.0	164.9	21.6
WH	LIVE	4 SAW	Domestic	6.8	23.0	1,866	0.0	49.4	4.7
WH	LIVE	UTILITY	Pulp	2.3	18.0	178	0.0	14.3	0.4

Unit Log Grade x Diameter Bin Summary: Unit 9 gaps

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.0	19.0	126	0.0	6.2	0.3
DF	5 - 11	LIVE	4 SAW	5.0	30.0	920	0.0	18.8	2.3
DF	5 - 11	LIVE	3 SAW	8.9	40.0	7,670	4.6	162.8	19.2
SS	< 5	LIVE	UTILITY	2.1	22.0	36	0.0	2.7	0.1
SS	5 - 11	LIVE	4 SAW	7.3	23.0	433	0.0	9.0	1.1
SS	5 - 11	LIVE	3 SAW	10.5	40.0	982	0.0	15.8	2.5
SS	12 - 19	LIVE	2 SAW	14.8	40.0	5,394	2.1	86.1	13.5
WH	< 5	LIVE	UTILITY	2.3	18.0	178	0.0	14.3	0.4
WH	5 - 11	LIVE	4 SAW	6.8	23.0	1,866	0.0	49.4	4.7
WH	5 - 11	LIVE	3 SAW	10.3	35.0	8,655	0.0	164.9	21.6
WH	12 - 19	LIVE	2 SAW	14.8	36.0	20,691	3.7	404.5	51.7

Unit Log Sort x Diameter Bin Summary: Unit 9 gaps

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.0	19.0	126	0.0	6.2	0.3
DF	5 - 11	LIVE	Domestic	7.8	37.0	8,590	4.1	181.6	21.5
SS	< 5	LIVE	Pulp	2.1	22.0	36	0.0	2.7	0.1
SS	5 - 11	LIVE	Domestic	8.4	29.0	1,415	0.0	24.9	3.5
SS	12 - 19	LIVE	Domestic	14.8	40.0	5,394	2.1	86.1	13.5
WH	< 5	LIVE	Pulp	2.3	18.0	178	0.0	14.3	0.4
WH	5 - 11	LIVE	Domestic	8.6	29.0	10,521	0.0	214.3	26.3
WH	12 - 19	LIVE	Domestic	14.8	36.0	20,691	3.7	404.5	51.7

Cruise Unit Report Unit 10 gaps

Unit Sale Notice Volume (MBF): Unit 10 gaps

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
SS	21.6			56.0	41.0	13.6	1.0	0.5
DF	21.4			26.2	19.0	6.9		0.3
WH	11.8			4.4		3.4	0.9	0.1
ALL	19.0			86.6	60.0	23.9	1.9	0.9

Unit Sale Notice Weight (tons): Unit 10 gaps

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
SS	442.0	298.8	120.3	7.5	15.3
DF	239.3	165.5	62.6		11.2
WH	35.8		27.5	6.9	1.4
ALL	717.1	464.3	210.5	14.4	27.8

Unit Cruise Design: Unit 10 gaps

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	3.0		5	5	0

Unit Cruise Summary: Unit 10 gaps

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
SS	6	13	2.6	0
DF	1	8	1.6	0
WH	1	1	0.2	0
ALL	8	22	4.4	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 10 gaps

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	141.5	58.3	26.1	156.0	16.7	6.8	22,077	60.7	27.0
DF	87.1	156.9	70.2	133.7	0.0	0.0	11,648	156.9	70.2

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	10.9	223.6	100.0	134.3	0.0	0.0	1,462	223.6	100.0
ALL	239.5	47.1	21.1	146.9	16.5	5.8	35,187	49.9	21.9

Unit Summary: Unit 10 gaps

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	1	ALL	17.9	11	14	8,736	0.0	37.4	65.3	15.4	239.3	26.2
DF	LIVE	LEA	0	ALL	26.2			2,912	0.0	5.8	21.8	4.3	79.8	8.7
SS	LIVE	CUT	6	ALL	17.0	31	40	18,681	5.8	76.0	119.8	29.0	442.0	56.0
SS	LIVE	LEA	2	ALL	26.0	95	121	3,397	5.8	5.9	21.8	4.3	80.4	10.2
WH	LIVE	CUT	1	ALL	11.8	63	77	1,462	0.0	14.3	10.9	3.2	35.8	4.4
ALL	LIVE	LEA	2	ALL	26.1	48	61	6,309	3.2	11.7	43.6	8.6	160.2	18.9
ALL	LIVE	CUT	8	ALL	16.8	29	37	28,879	3.8	127.7	196.0	47.6	717.1	86.6
ALL	ALL	ALL	10	ALL	17.7	30	39	35,188	3.7	139.4	239.6	56.2	877.3	105.5

Unit Stand Table: Unit 10 gaps

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	14	LIVE	CUT	1	14.3			1,456	0.0	9.8	10.9	2.9	39.9	4.4
DF	16	LIVE	CUT	1	15.8			1,456	0.0	8.0	10.9	2.7	39.9	4.4
DF	19	LIVE	CUT	2	19.2			2,912	0.0	10.8	21.8	5.0	79.8	8.7
DF	21	LIVE	CUT	2	21.3	45	58	2,912	0.0	8.8	21.8	4.7	79.8	8.7
DF	25	LIVE	LEA	1	25.1			1,456	0.0	3.2	10.9	2.2	39.9	4.4
DF	27	LIVE	LEA	1	27.4			1,456	0.0	2.7	10.9	2.1	39.9	4.4
SS	10	LIVE	CUT	1	9.8			1,698	5.8	20.8	10.9	3.5	40.2	5.1
SS	11	LIVE	CUT	1	11.4			1,698	5.8	15.4	10.9	3.2	40.2	5.1
SS	18	LIVE	CUT	1	18.5			1,698	5.8	5.8	10.9	2.5	40.2	5.1
SS	19	LIVE	CUT	1	18.9	87	111	1,514	0.0	5.6	10.9	2.5	38.4	4.5
SS	20	LIVE	CUT	2	20.3	49	63	3,636	2.8	9.7	21.8	4.8	81.4	10.9
SS	22	LIVE	CUT	2	22.2	89	114	2,866	14.3	8.1	21.8	4.6	79.3	8.6
SS	23	LIVE	CUT	1	23.4	86	110	1,790	0.0	3.6	10.9	2.3	38.7	5.4
SS	25	LIVE	CUT	2	24.6	51	65	3,779	6.4	6.6	21.8	4.4	83.7	11.3
SS	25	LIVE	LEA	1	24.8	96	123	1,836	0.0	3.2	10.9	2.2	40.5	5.5
SS	27	LIVE	LEA	1	27.5	93	119	1,561	11.5	2.6	10.9	2.1	39.9	4.7
WH	12	LIVE	CUT	1	11.8	63	77	1,462	0.0	14.4	10.9	3.2	35.8	4.4

Unit Log Grade Summary: Unit 10 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	13.9	40.0	6,330	0.0	165.5	19.0
DF	LIVE	3 SAW	8.2	40.0	2,302	0.0	62.6	6.9
DF	LIVE	UTILITY	2.1	26.0	105	0.0	11.2	0.3
SS	LIVE	2 SAW	14.9	40.0	13,671	7.8	298.8	41.0
SS	LIVE	3 SAW	8.8	40.0	4,519	0.0	120.3	13.6
SS	LIVE	4 SAW	7.1	15.0	335	0.0	7.5	1.0
SS	LIVE	UTILITY	2.1	22.0	156	0.0	15.3	0.5
WH	LIVE	3 SAW	8.1	36.0	1,132	0.0	27.5	3.4
WH	LIVE	4 SAW	5.0	20.0	301	0.0	6.9	0.9
WH	LIVE	UTILITY	2.0	12.0	29	0.0	1.4	0.1

Unit Log Sort Summary: Unit 10 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	11.1	40.0	8,631	0.0	228.1	25.9
DF	LIVE	Pulp	2.1	26.0	105	0.0	11.2	0.3
SS	LIVE	Domestic	11.2	37.0	18,525	5.9	426.7	55.6
SS	LIVE	Pulp	2.1	22.0	156	0.0	15.3	0.5
WH	LIVE	Domestic	6.6	28.0	1,433	0.0	34.4	4.3
WH	LIVE	Pulp	2.0	12.0	29	0.0	1.4	0.1

Unit Log Grade x Sort Summary: Unit 10 gaps

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	13.9	40.0	6,330	0.0	165.5	19.0
DF	LIVE	3 SAW	Domestic	8.2	40.0	2,302	0.0	62.6	6.9
DF	LIVE	UTILITY	Pulp	2.1	26.0	105	0.0	11.2	0.3
SS	LIVE	2 SAW	Domestic	14.9	40.0	13,671	7.8	298.8	41.0
SS	LIVE	3 SAW	Domestic	8.8	40.0	4,519	0.0	120.3	13.6
SS	LIVE	4 SAW	Domestic	7.1	15.0	335	0.0	7.5	1.0
SS	LIVE	UTILITY	Pulp	2.1	22.0	156	0.0	15.3	0.5
WH	LIVE	3 SAW	Domestic	8.1	36.0	1,132	0.0	27.5	3.4
WH	LIVE	4 SAW	Domestic	5.0	20.0	301	0.0	6.9	0.9
WH	LIVE	UTILITY	Pulp	2.0	12.0	29	0.0	1.4	0.1

Unit Log Grade x Diameter Bin Summary: Unit 10 gaps

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.1	26.0	105	0.0	11.2	0.3
DF	5 - 11	LIVE	3 SAW	8.2	40.0	2,302	0.0	62.6	6.9
DF	12 - 19	LIVE	2 SAW	13.9	40.0	6,330	0.0	165.5	19.0
SS	< 5	LIVE	UTILITY	2.1	22.0	156	0.0	15.3	0.5
SS	5 - 11	LIVE	4 SAW	7.1	15.0	335	0.0	7.5	1.0
SS	5 - 11	LIVE	3 SAW	8.8	40.0	4,519	0.0	120.3	13.6
SS	12 - 19	LIVE	2 SAW	14.9	40.0	13,671	7.8	298.8	41.0
WH	< 5	LIVE	UTILITY	2.0	12.0	29	0.0	1.4	0.1
WH	5 - 11	LIVE	4 SAW	5.0	20.0	301	0.0	6.9	0.9
WH	5 - 11	LIVE	3 SAW	8.1	36.0	1,132	0.0	27.5	3.4

Unit Log Sort x Diameter Bin Summary: Unit 10 gaps

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.1	26.0	105	0.0	11.2	0.3
DF	5 - 11	LIVE	Domestic	8.2	40.0	2,302	0.0	62.6	6.9
DF	12 - 19	LIVE	Domestic	13.9	40.0	6,330	0.0	165.5	19.0
SS	< 5	LIVE	Pulp	2.1	22.0	156	0.0	15.3	0.5
SS	5 - 11	LIVE	Domestic	8.4	34.0	4,854	0.0	127.9	14.6
SS	12 - 19	LIVE	Domestic	14.9	40.0	13,671	7.8	298.8	41.0
WH	< 5	LIVE	Pulp	2.0	12.0	29	0.0	1.4	0.1
WH	5 - 11	LIVE	Domestic	6.6	28.0	1,433	0.0	34.4	4.3

Cruise Unit Report Unit 11 gaps

Unit Sale Notice Volume (MBF): Unit 11 gaps

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WH	14.2			12.5	7.3	3.3	1.8	0.1
RA	14.8			5.3		4.3	1.0	
ALL	14.4			17.8	7.3	7.6	2.8	0.1

Unit Sale Notice Weight (tons): Unit 11 gaps

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
WH	103.4	49.3	28.5	22.8	2.8
RA	38.5		28.9	9.6	
ALL	141.9	49.3	57.4	32.4	2.8

Unit Cruise Design: Unit 11 gaps

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	0.5		1	1	0

Unit Cruise Summary: Unit 11 gaps

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF		2	2.0	0
WH	3	3	3.0	0
RA	2	2	2.0	0
ALL	5	7	7.0	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 11 gaps

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	108.9	0.0	0.0						
WH	163.3	0.0	0.0	153.2	64.1	37.0	25,020	64.1	37.0
RA	80.0	0.0	0.0	132.0	24.4	17.3	10,563	24.4	17.3
ALL	352.2	0.0	0.0	146.2	49.4	22.1	51,505	49.4	22.1

Unit Summary: Unit 11 gaps

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	LEA	2	ALL	34.3	95	121			17.0	108.9	18.6		
RA	LIVE	CUT	2	ALL	14.8	65	80	10,563	0.0	67.0	80.0	20.8	38.5	5.3
WH	LIVE	CUT	3	ALL	14.2	64	79	25,020	0.0	148.5	163.3	43.3	103.4	12.5
ALL	LIVE	LEA	2	ALL	34.3	95	121			17.0	108.9	18.6		
ALL	LIVE	CUT	5	ALL	14.4	64	79	35,583	0.0	215.5	243.3	64.1	141.9	17.8
ALL	ALL	ALL	7	ALL	16.7	67	82	35,583	0.0	232.5	352.2	82.7	141.9	17.8

Unit Stand Table: Unit 11 gaps

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	33	LIVE	LEA	1	33.5	90	114			8.9	54.5	9.4		
DF	35	LIVE	LEA	1	35.1	100	128			8.1	54.5	9.2		
RA	15	LIVE	CUT	2	14.8	65	80	10,563	0.0	67.0	80.0	20.8	38.5	5.3
WH	11	LIVE	CUT	1	11.2	40	48	2,706	0.0	79.6	54.4	16.3	17.8	1.4
WH	16	LIVE	CUT	1	16.4	84	105	8,981	0.0	37.1	54.4	13.4	39.2	4.5
WH	18	LIVE	CUT	1	17.9	100	127	13,333	0.0	31.1	54.4	12.9	46.4	6.7

Unit Log Grade Summary: Unit 11 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	3 SAW	10.8	35.0	8,634	0.0	28.9	4.3
RA	LIVE	4 SAW	6.0	25.0	1,929	0.0	9.6	1.0
WH	LIVE	2 SAW	13.2	36.0	14,538	0.0	49.3	7.3
WH	LIVE	3 SAW	8.5	38.0	6,606	0.0	28.5	3.3
WH	LIVE	4 SAW	5.8	30.0	3,671	0.0	22.8	1.8
WH	LIVE	UTILITY	2.2	19.0	205	0.0	2.8	0.1

Unit Log Sort Summary: Unit 11 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	Domestic	8.4	30.0	10,563	0.0	38.5	5.3
WH	LIVE	Domestic	8.6	34.0	24,815	0.0	100.6	12.4
WH	LIVE	Pulp	2.2	19.0	205	0.0	2.8	0.1

Unit Log Grade x Sort Summary: Unit 11 gaps

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	3 SAW	Domestic	10.8	35.0	8,634	0.0	28.9	4.3
RA	LIVE	4 SAW	Domestic	6.0	25.0	1,929	0.0	9.6	1.0
WH	LIVE	2 SAW	Domestic	13.2	36.0	14,538	0.0	49.3	7.3
WH	LIVE	3 SAW	Domestic	8.5	38.0	6,606	0.0	28.5	3.3
WH	LIVE	4 SAW	Domestic	5.8	30.0	3,671	0.0	22.8	1.8
WH	LIVE	UTILITY	Pulp	2.2	19.0	205	0.0	2.8	0.1

Unit Log Grade x Diameter Bin Summary: Unit 11 gaps

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 11	LIVE	4 SAW	6.0	25.0	1,929	0.0	9.6	1.0
RA	5 - 11	LIVE	3 SAW	10.8	35.0	8,634	0.0	28.9	4.3
WH	< 5	LIVE	UTILITY	2.2	19.0	205	0.0	2.8	0.1
WH	5 - 11	LIVE	4 SAW	5.8	30.0	3,671	0.0	22.8	1.8
WH	5 - 11	LIVE	3 SAW	8.5	38.0	6,606	0.0	28.5	3.3
WH	12 - 19	LIVE	2 SAW	13.2	36.0	14,538	0.0	49.3	7.3

Unit Log Sort x Diameter Bin Summary: Unit 11 gaps

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 11	LIVE	Domestic	8.4	30.0	10,563	0.0	38.5	5.3
WH	< 5	LIVE	Pulp	2.2	19.0	205	0.0	2.8	0.1
WH	5 - 11	LIVE	Domestic	6.8	33.0	10,277	0.0	51.3	5.1
WH	12 - 19	LIVE	Domestic	13.2	36.0	14,538	0.0	49.3	7.3

Cruise Unit Report Unit 12 gaps

Unit Sale Notice Volume (MBF): Unit 12 gaps

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	23.7			10.8	7.1	3.2	0.5	0.1
WH	18.0			8.2	3.1	4.8	0.2	0.1
RA	13.4			5.1		1.4	3.3	0.3
ALL	16.8			24.1	10.2	9.4	4.0	0.4

Unit Sale Notice Weight (tons): Unit 12 gaps

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	74.2	46.1	22.0	4.0	2.0
WH	74.2	24.5	45.9	1.8	2.0
RA	44.2		13.1	28.7	2.4
ALL	192.6	70.5	81.1	34.6	6.4

Unit Cruise Design: Unit 12 gaps

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	1.0		2	2	0

Unit Cruise Summary: Unit 12 gaps

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	2	5	2.5	0
WH	2	2	1.0	0
RA	3	3	1.5	0
ALL	7	10	5.0	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 12 gaps

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	136.1	28.3	20.0	199.0	7.3	5.1	27,087	29.2	20.7
WH	54.4	141.4	100.0	151.4	14.5	10.2	8,244	142.2	100.5

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	60.0	141.4	100.0	84.4	38.9	22.4	5,062	146.7	102.5
ALL	250.5	12.2	8.6	161.2	35.1	13.3	40,392	37.2	15.8

Unit Summary: Unit 12 gaps

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	2	ALL	23.7	100	128	10,835	0.0	17.8	54.4	11.2	74.2	10.8
DF	LIVE	LEA	3	ALL	30.4	100	128	16,252	0.0	16.2	81.7	14.8	111.2	16.3
RA	LIVE	CUT	3	ALL	13.4	48	57	5,062	0.0	61.3	60.0	16.4	44.2	5.1
WH	LIVE	CUT	2	ALL	18.0	85	107	8,244	0.0	30.8	54.4	12.8	74.2	8.2
ALL	LIVE	CUT	7	ALL	16.8	67	83	24,141	0.0	109.9	168.8	40.4	192.6	24.1
ALL	LIVE	LEA	3	ALL	30.4	100	128	16,252	0.0	16.2	81.7	14.8	111.2	16.3
ALL	ALL	ALL	10	ALL	19.1	71	88	40,393	0.0	126.1	250.5	55.2	303.8	40.4

Unit Stand Table: Unit 12 gaps

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	23	LIVE	CUT	1	23.1	99	126	5,696	0.0	9.3	27.2	5.7	37.9	5.7
DF	24	LIVE	CUT	1	24.4	102	131	5,139	0.0	8.4	27.2	5.5	36.3	5.1
DF	26	LIVE	LEA	1	26.3	83	105	3,319	0.0	7.2	27.2	5.3	30.5	3.3
DF	32	LIVE	LEA	1	32.2	120	154	7,224	0.0	4.8	27.2	4.8	42.9	7.2
DF	35	LIVE	LEA	1	34.8	107	137	5,709	0.0	4.1	27.2	4.6	37.8	5.7
RA	11	LIVE	CUT	1	10.9	37	43	988	0.0	30.9	20.0	6.1	10.2	1.0
RA	15	LIVE	CUT	1	14.6	59	72	2,288	0.0	17.2	20.0	5.2	17.5	2.3
RA	16	LIVE	CUT	1	16.4	59	72	1,786	0.0	13.6	20.0	4.9	16.5	1.8
WH	17	LIVE	CUT	1	17.5	82	103	3,699	0.0	16.3	27.2	6.5	35.4	3.7
WH	19	LIVE	CUT	1	18.6	89	112	4,545	0.0	14.4	27.2	6.3	38.8	4.5

Unit Log Grade Summary: Unit 12 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	16.6	40.0	7,095	0.0	46.1	7.1
DF	LIVE	3 SAW	11.1	40.0	3,193	0.0	22.0	3.2
DF	LIVE	4 SAW	7.8	16.0	495	0.0	4.0	0.5
DF	LIVE	UTILITY	2.5	20.0	53	0.0	2.0	0.1
RA	LIVE	3 SAW	10.6	30.0	1,445	0.0	13.1	1.4
RA	LIVE	4 SAW	6.8	31.0	3,324	0.0	28.7	3.3
RA	LIVE	UTILITY	5.3	16.0	292	0.0	2.4	0.3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	LIVE	2 SAW	13.3	36.0	3,145	0.0	24.5	3.1
WH	LIVE	3 SAW	8.8	37.0	4,807	0.0	45.9	4.8
WH	LIVE	4 SAW	6.0	14.0	231	0.0	1.8	0.2
WH	LIVE	UTILITY	2.0	16.0	61	0.0	2.0	0.1

Unit Log Sort Summary: Unit 12 gaps

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	11.8	32.0	10,782	0.0	72.2	10.8
DF	LIVE	Pulp	2.5	20.0	53	0.0	2.0	0.1
RA	LIVE	Domestic	7.5	30.0	4,770	0.0	41.8	4.8
RA	LIVE	Pulp	5.3	16.0	292	0.0	2.4	0.3
WH	LIVE	Domestic	9.1	33.0	8,183	0.0	72.2	8.2
WH	LIVE	Pulp	2.0	16.0	61	0.0	2.0	0.1

Unit Log Grade x Sort Summary: Unit 12 gaps

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	16.6	40.0	7,095	0.0	46.1	7.1
DF	LIVE	3 SAW	Domestic	11.1	40.0	3,193	0.0	22.0	3.2
DF	LIVE	4 SAW	Domestic	7.8	16.0	495	0.0	4.0	0.5
DF	LIVE	UTILITY	Pulp	2.5	20.0	53	0.0	2.0	0.1
RA	LIVE	3 SAW	Domestic	10.6	30.0	1,445	0.0	13.1	1.4
RA	LIVE	4 SAW	Domestic	6.8	31.0	3,324	0.0	28.7	3.3
RA	LIVE	UTILITY	Pulp	5.3	16.0	292	0.0	2.4	0.3
WH	LIVE	2 SAW	Domestic	13.3	36.0	3,145	0.0	24.5	3.1
WH	LIVE	3 SAW	Domestic	8.8	37.0	4,807	0.0	45.9	4.8
WH	LIVE	4 SAW	Domestic	6.0	14.0	231	0.0	1.8	0.2
WH	LIVE	UTILITY	Pulp	2.0	16.0	61	0.0	2.0	0.1

Unit Log Grade x Diameter Bin Summary: Unit 12 gaps

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	UTILITY	2.5	20.0	53	0.0	2.0	0.1
DF	5 - 11	LIVE	4 SAW	7.8	16.0	495	0.0	4.0	0.5
DF	5 - 11	LIVE	3 SAW	11.1	40.0	3,193	0.0	22.0	3.2
DF	12 - 19	LIVE	2 SAW	16.6	40.0	7,095	0.0	46.1	7.1
RA	5 - 11	LIVE	UTILITY	5.3	16.0	292	0.0	2.4	0.3
RA	5 - 11	LIVE	4 SAW	6.8	31.0	3,324	0.0	28.7	3.3

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 11	LIVE	3 SAW	10.6	30.0	1,445	0.0	13.1	1.4
WH	< 5	LIVE	UTILITY	2.0	16.0	61	0.0	2.0	0.1
WH	5 - 11	LIVE	4 SAW	6.0	14.0	231	0.0	1.8	0.2
WH	5 - 11	LIVE	3 SAW	8.8	37.0	4,807	0.0	45.9	4.8
WH	12 - 19	LIVE	2 SAW	13.3	36.0	3,145	0.0	24.5	3.1

Unit Log Sort x Diameter Bin Summary: Unit 12 gaps

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	< 5	LIVE	Pulp	2.5	20.0	53	0.0	2.0	0.1
DF	5 - 11	LIVE	Domestic	9.4	28.0	3,687	0.0	26.1	3.7
DF	12 - 19	LIVE	Domestic	16.6	40.0	7,095	0.0	46.1	7.1
RA	5 - 11	LIVE	Pulp	5.3	16.0	292	0.0	2.4	0.3
RA	5 - 11	LIVE	Domestic	7.5	30.0	4,770	0.0	41.8	4.8
WH	< 5	LIVE	Pulp	2.0	16.0	61	0.0	2.0	0.1
WH	5 - 11	LIVE	Domestic	8.1	32.0	5,037	0.0	47.8	5.0
WH	12 - 19	LIVE	Domestic	13.3	36.0	3,145	0.0	24.5	3.1

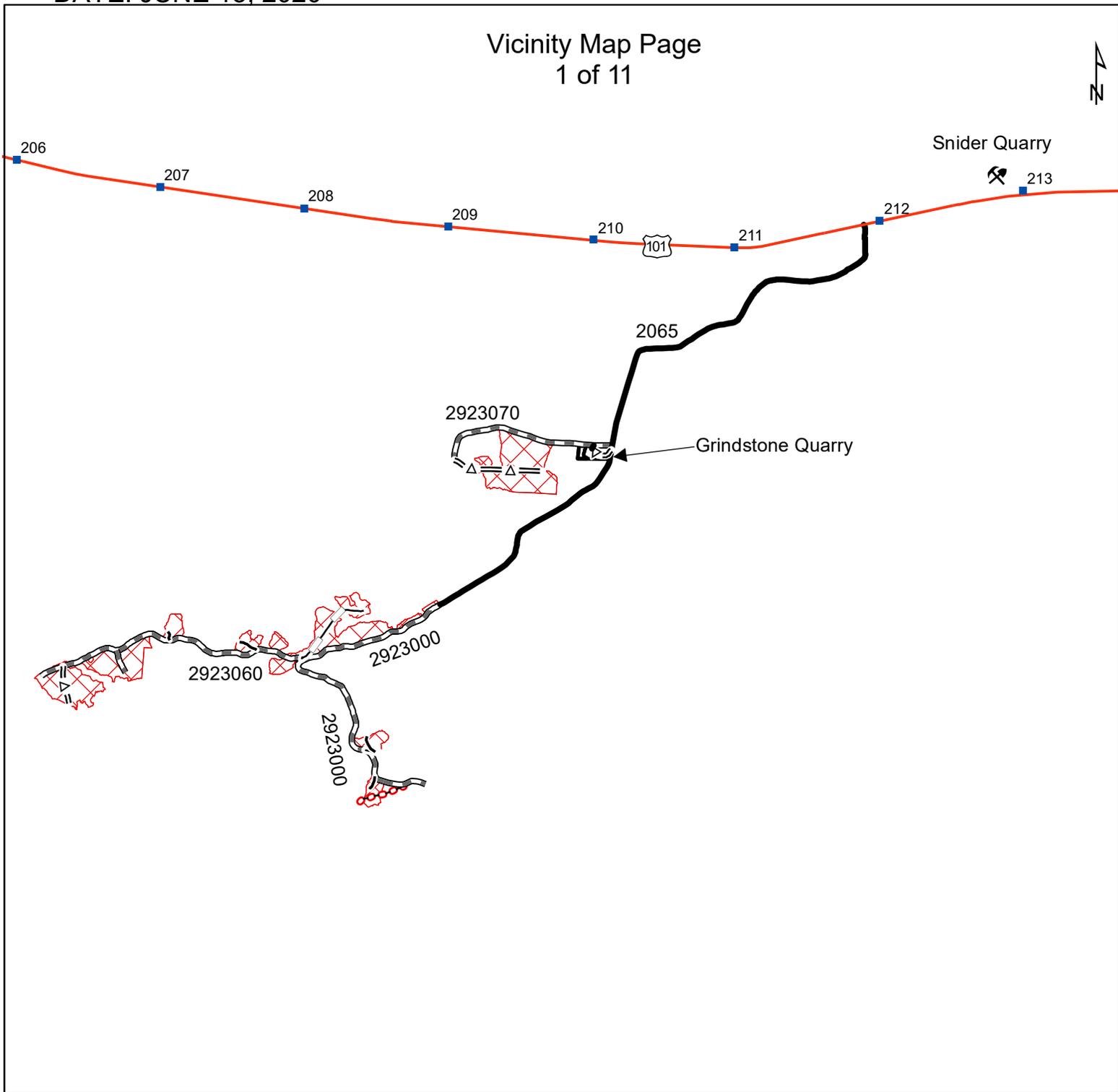
GOOD NEIGHBOR AUTHORITY
 OLYMPIC NATIONAL FOREST
 PACIFIC RANGER DISTRICT

2D TIMBER SALE ROAD PLAN
 CLALLAM COUNTY

AGREEMENT NO.: 36 - 101213

DATE: JUNE 15, 2020

Vicinity Map Page
 1 of 11



Legend

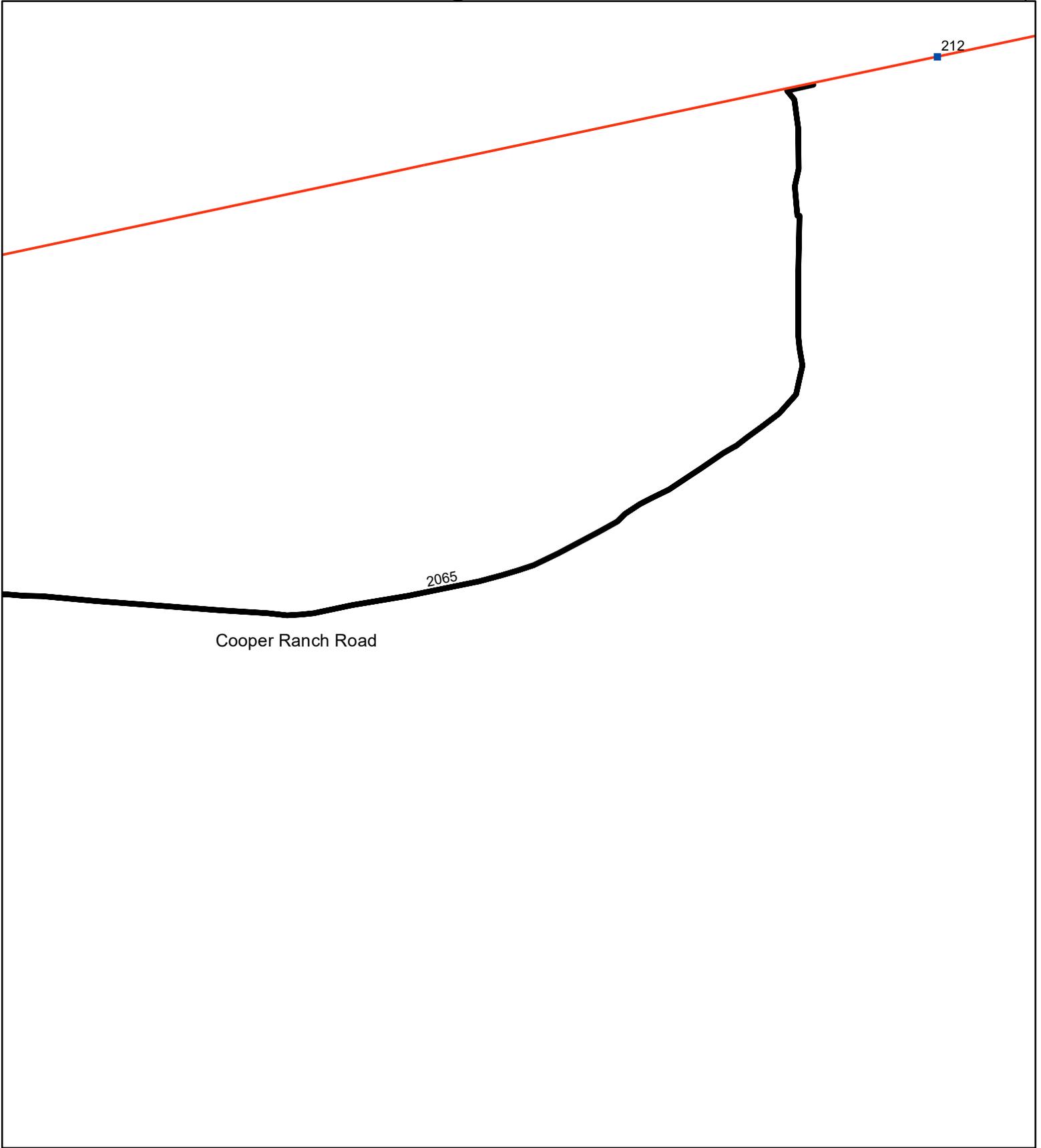


- | | | | |
|--------------------------|-----------------|-------------------------|----------------------|
| rockpit | U.S. | Optional Construction | Required Maintenance |
| WSDOT - Milepost Markers | County Road | Optional Maintenance | Pit Boundary |
| 101 | Decommissioning | Optional Reconstruction | Harvest Area_Project |

2D Timber Sale Detail Maps

Page 2 of 11

17
2



Legend

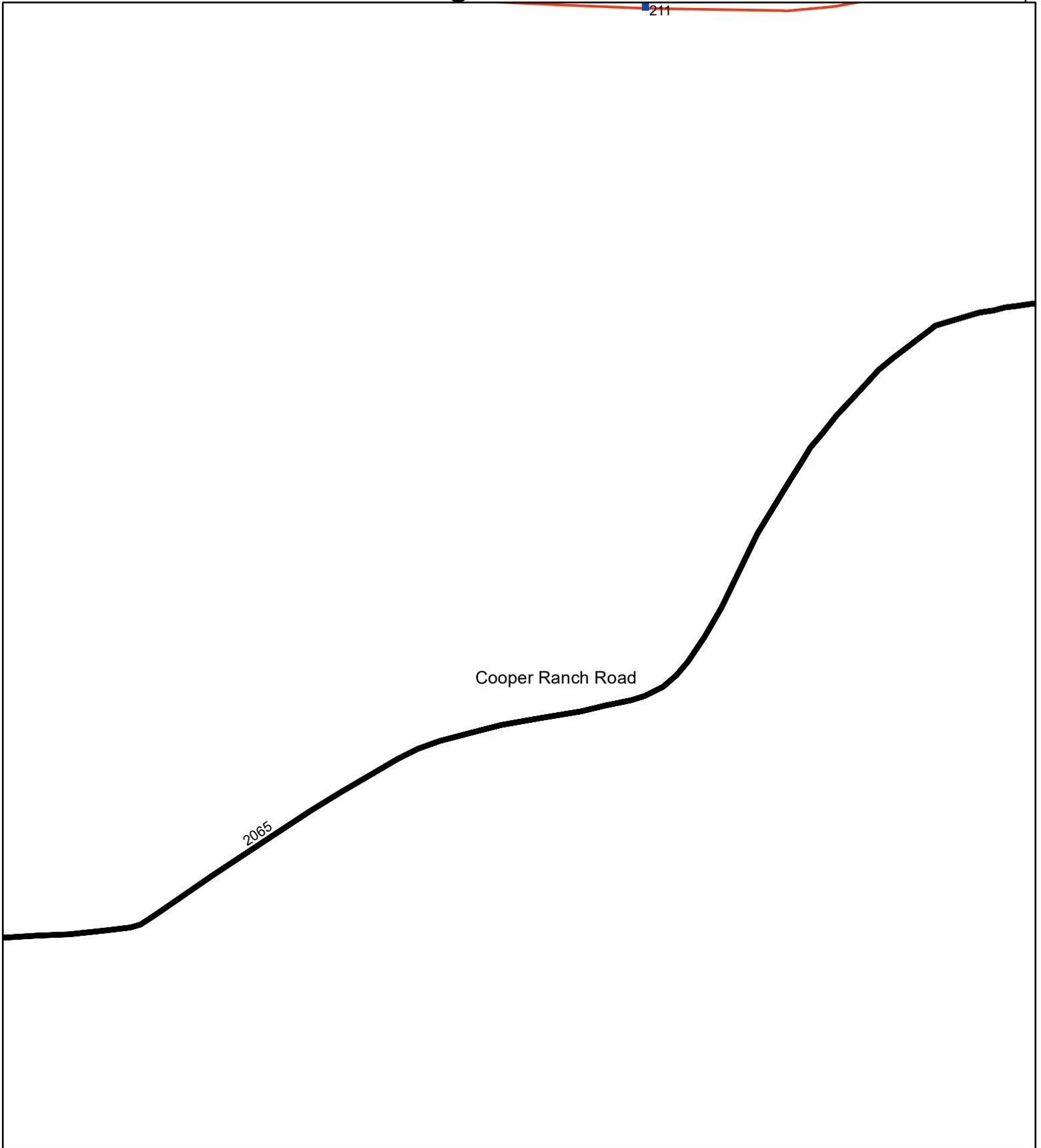
- WSDOT - Milepost Markers
- County Road
- U.S.

0 100 200 400 600 800 Feet



2D Timber Sale Detail Maps

17
27



Legend

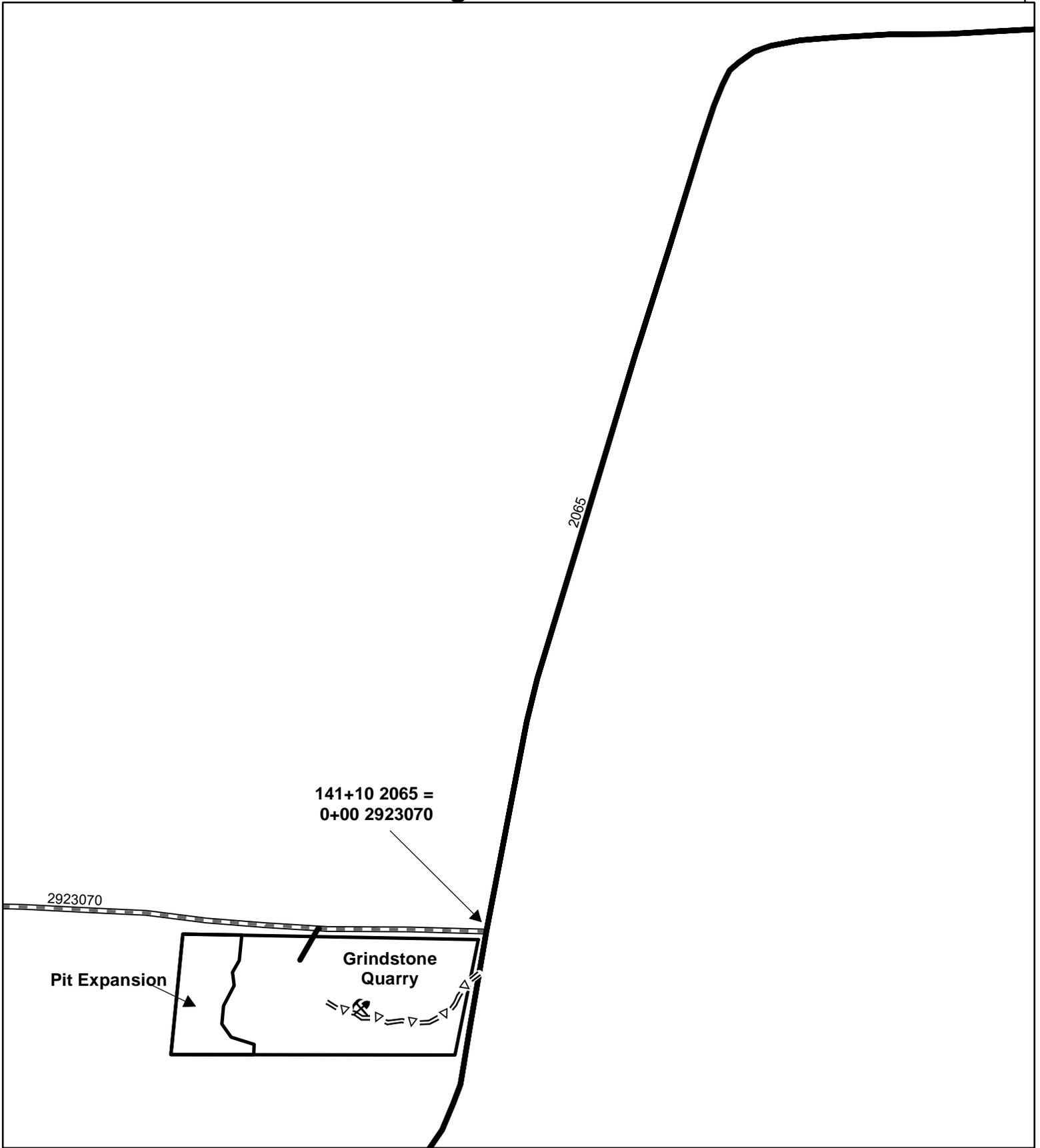
- WSDOT - Milepost Markers
- County Road
- U.S.

0 100 200 400 600 800 Feet



2D Timber Sale Detail Maps

17



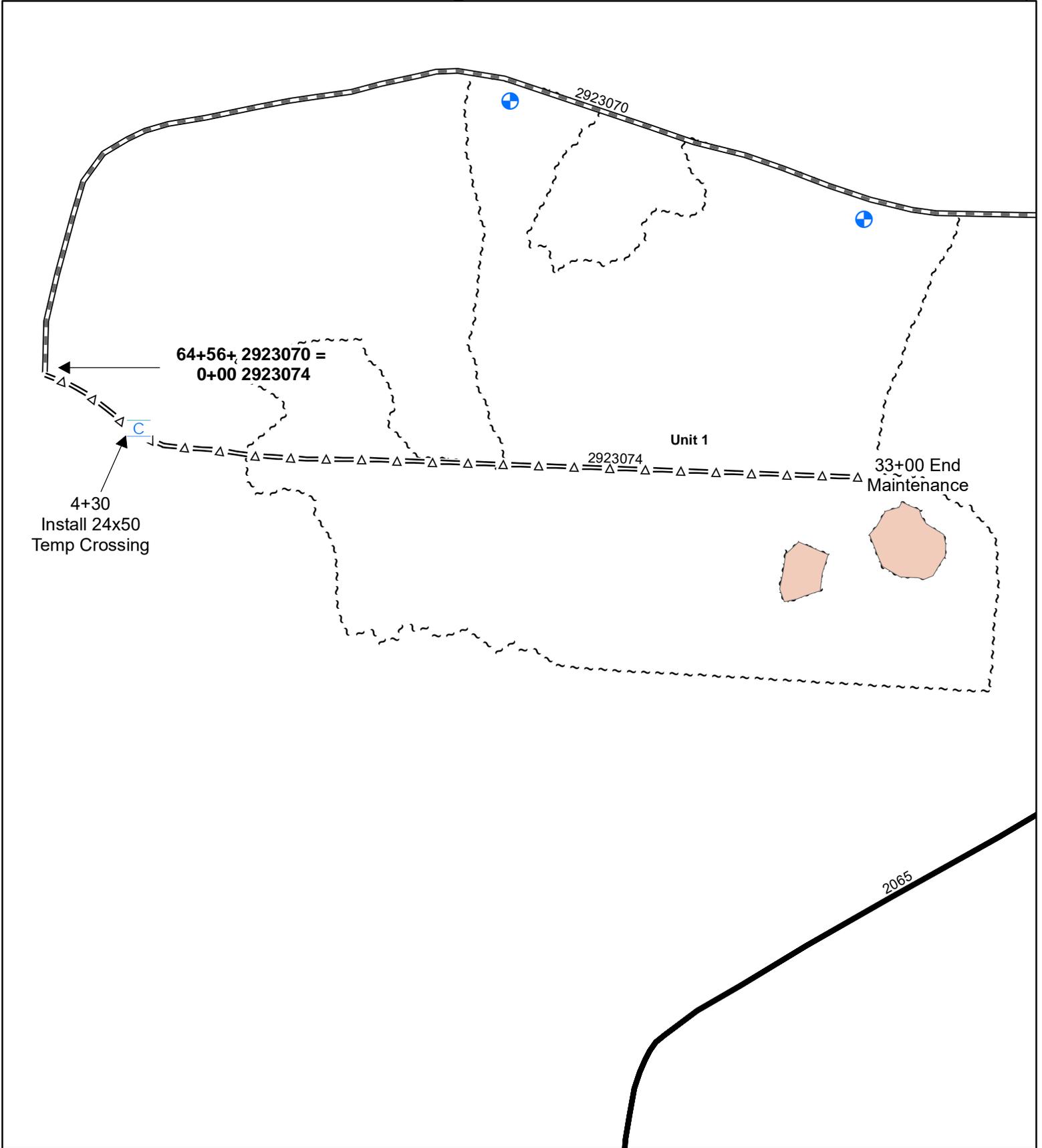
Legend

-  Rock Source
-  Optional Maintenance
-  Pit Boundary
-  County Road
-  Required Maintenance

0 100 200 400 600 800 Feet



2D Timber Sale Detail Maps



Legend



Landing



County Road



Required Maintenance



Harvest Boundary



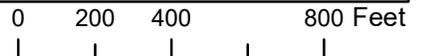
Install Cross Drain



Optional Maintenance

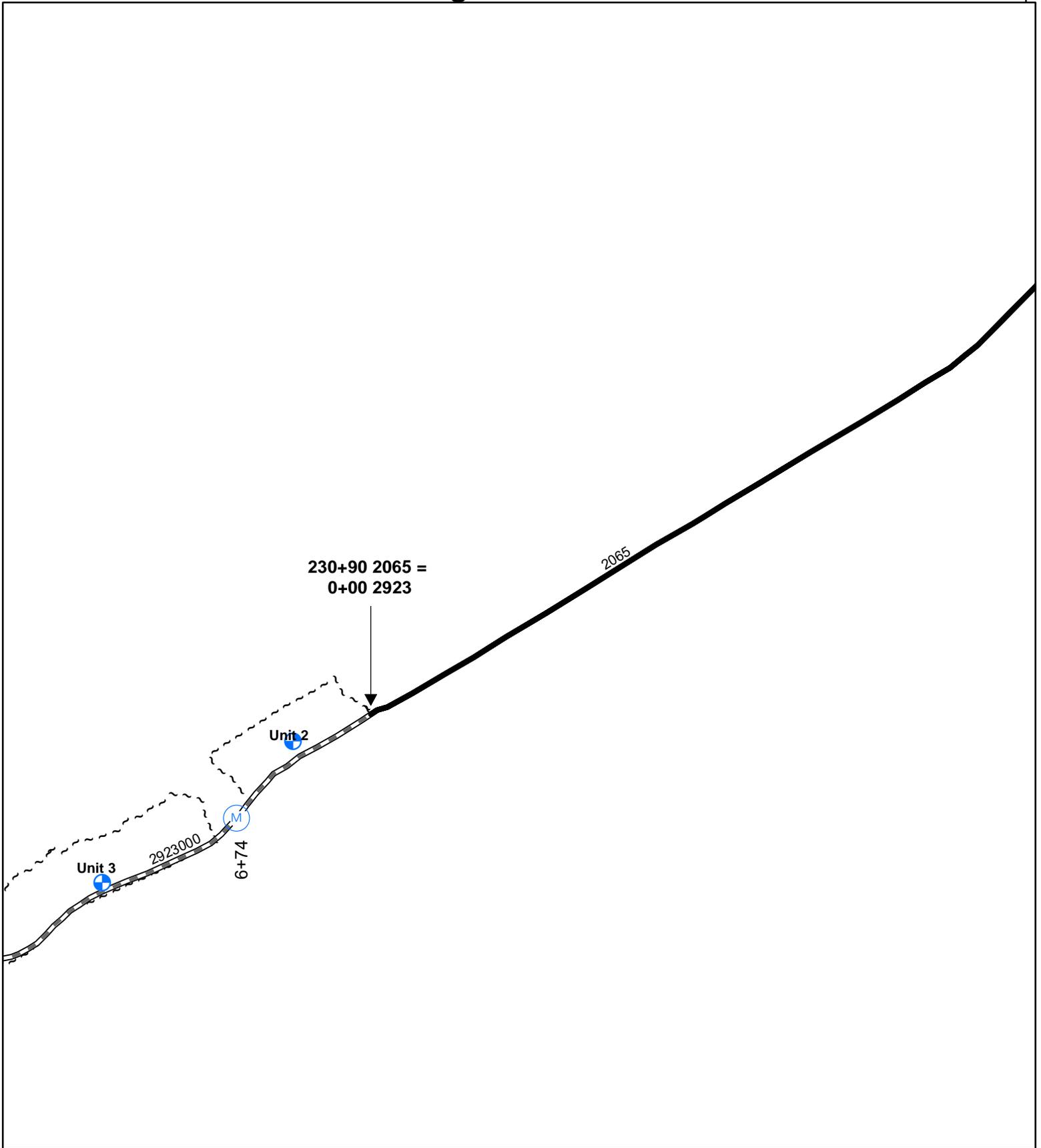


2D_gaps



2D Timber Sale Detail Maps

17
27



Legend

 Landing

 County Road

 Harvest Area_Project

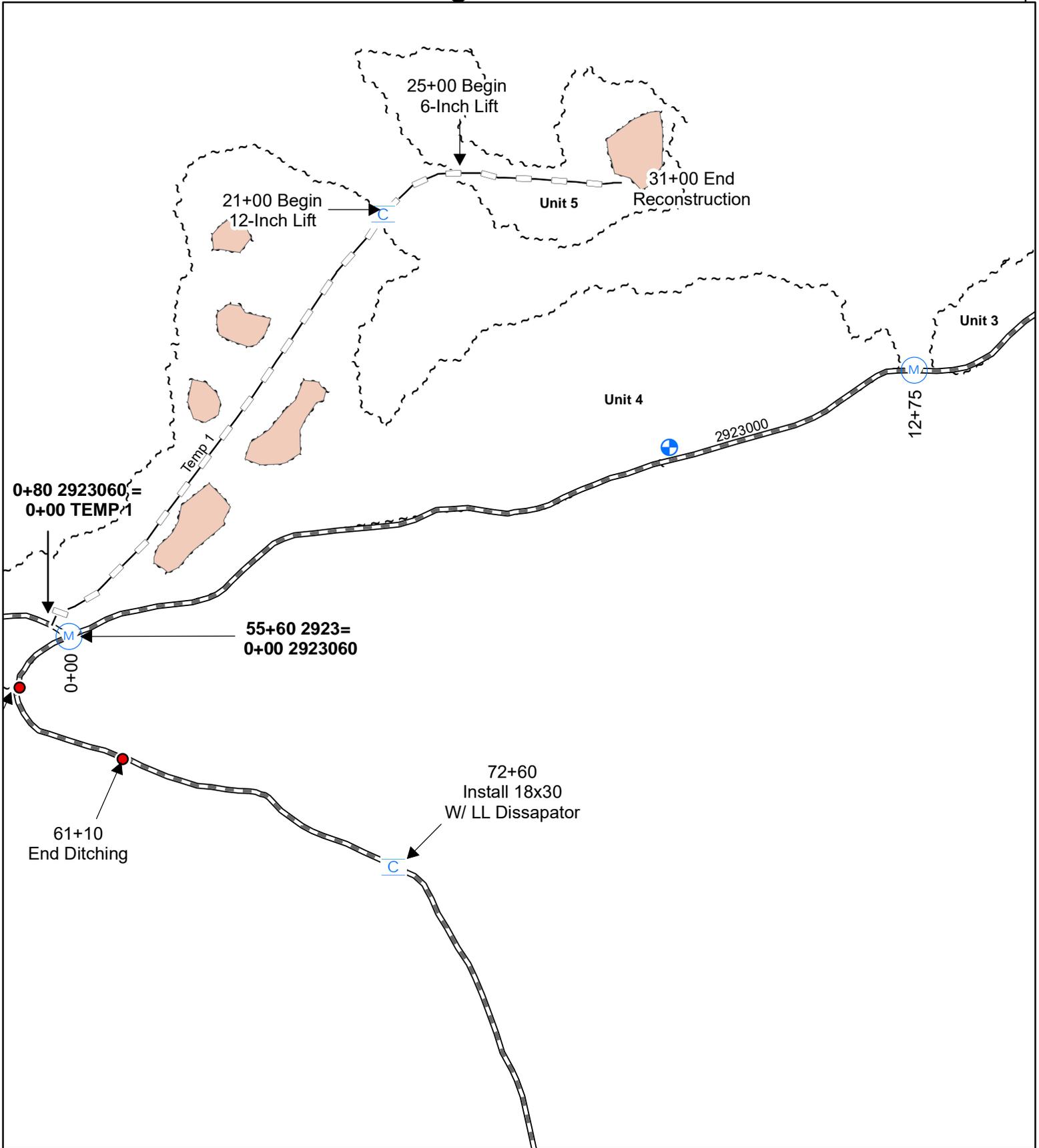
 Maintain Cross Drain

 Required Maintenance

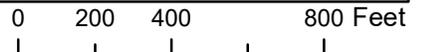
0 100 200 400 600 800 Feet



2D Timber Sale Detail Maps

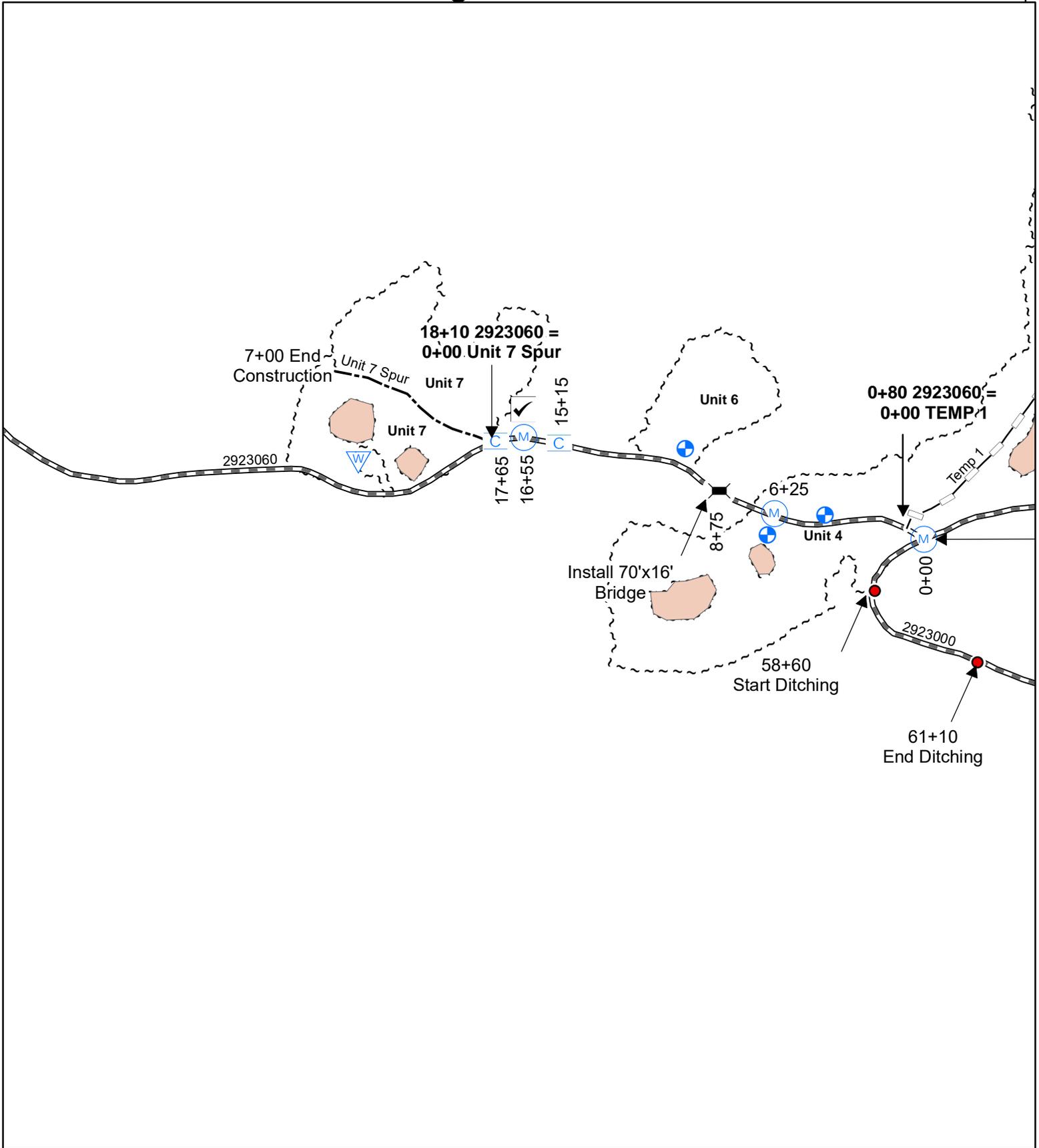


Legend



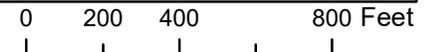
- Ditching
- Maintain Cross Drain
- Optional Reconstruction
- 2D_gaps
- Landing
- Install Cross Drain
- Required Maintenance
- Harvest Boundary

2D Timber Sale Detail Maps

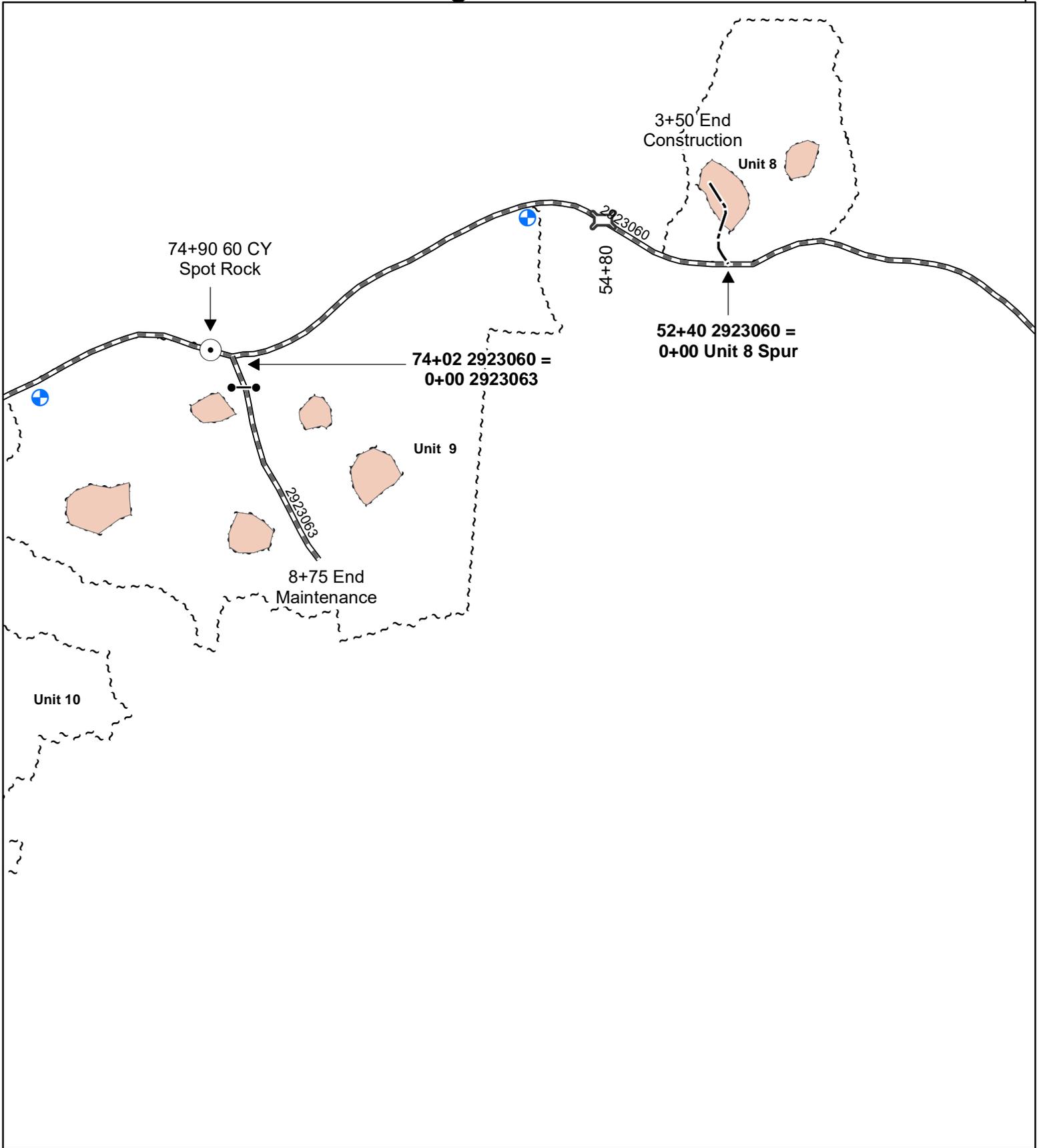


Legend

- | | | | | | | | | | |
|--|---------------------|--|----------------------|--|----------------|--|-------------------------|--|------------------|
| | Ditching | | Install Bridge | | Waste Area | | Optional Construction | | 2D_gaps |
| | Landing | | Maintain Cross Drain | | Sediment Traps | | Optional Reconstruction | | Harvest Boundary |
| | Install Cross Drain | | Required Maintenance | | | | | | |



2D Timber Sale Detail Maps

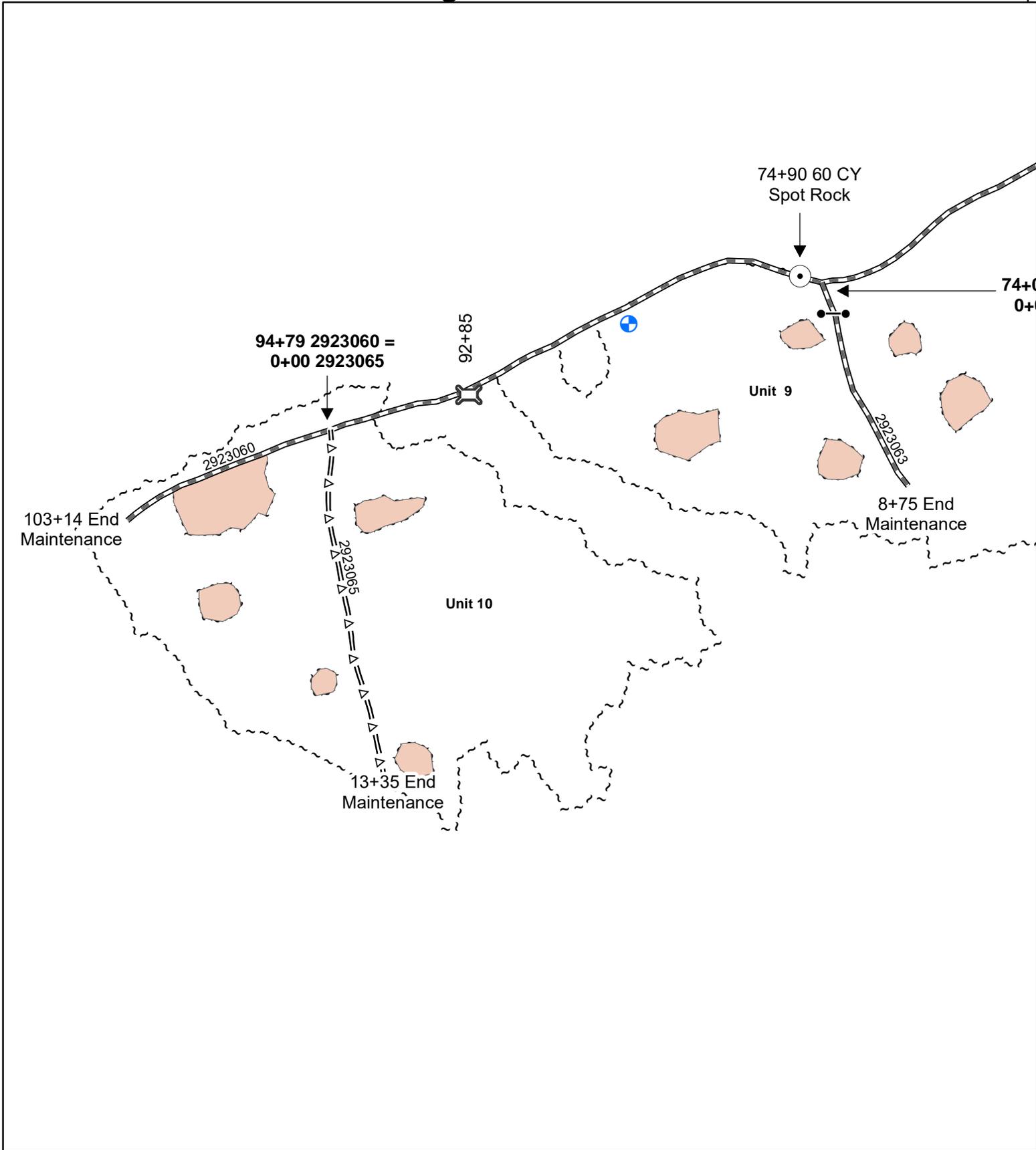


Legend

- Landing
- Gate
- Optional Construction
- 2D_gaps
- Spot Rock
- Required Maintenance
- Harvest Boundary
- Existing Bridge

0 200 400 800 Feet

2D Timber Sale Detail Maps

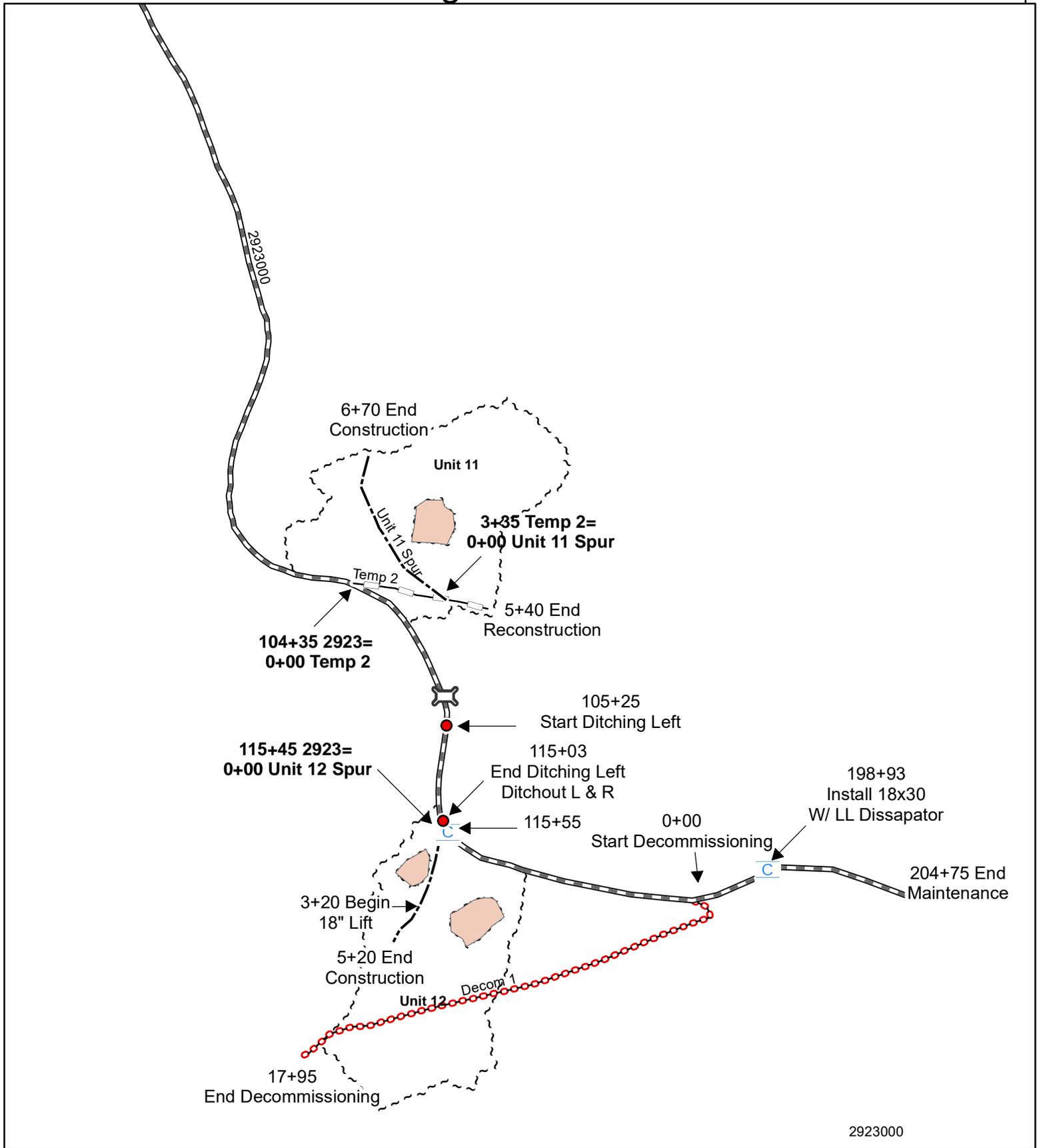


Legend

- Landing
- Gate
- Optional Maintenance
- 2D_gaps
- Existing Bridge
- Spot Rock
- Required Maintenance
- Harvest Boundary

0 200 400 800 Feet

2D Timber Sale Detail Maps



Legend

- Ditching
- Install Cross Drain
- Optional Construction
- Required Maintenance
- Harvest Boundary
- Existing Bridge
- Decommissioning
- Optional Reconstruction
- 2D_gaps

GOOD NEIGHBOR AUTHORITY
OLYMPIC NATIONAL FOREST
PACIFIC RANGER DISTRICT

2D TIMBER SALE ROAD PLAN
CLALLAM COUNTY

AGREEMENT NO.: 36-101213

STAFF ENGINEER: CHAD VANDEHEY

DATE: JUNE 15, 2020

DRAWN & COMPILED BY: CHAD VANDEHEY

SECTION 0 – SCOPE OF PROJECT

0-1 ROAD PLAN SCOPE

Clauses in this road plan apply to all road related work, including landings and rock source development, unless otherwise noted.

0-2 REQUIRED ROADS

The specified work on the following roads is required.

<u>Road</u>	<u>Stations</u>	<u>Type</u>	<u>Maintenance Class</u>
2923	0+00 to 204+75	Prehaul Maintenance	2
2923060	0+00 to 103+14	Prehaul Maintenance	2
2923063	0+00 to 8+75	Prehaul Maintenance	1
2923070	0+00 to 64+56	Prehaul Maintenance	2

0-3 OPTIONAL ROADS

The specified work on the following roads is not required. Any optional roads built by the Purchaser must meet all the specifications in the road plan.

<u>Road</u>	<u>Stations</u>	<u>Type</u>	<u>Maintenance Class</u>
2923065	0+00 to 13+35	Prehaul Maintenance	1
2923074	0+00 to 33+00	Prehaul Maintenance	1
Pit Road	0+00 to 7+15	Prehaul Maintenance	Non-System Road
Temp 1	0+00 to 31+00	Reconstruction	Non-System Road
Temp 2	0+00 to 5+40	Reconstruction	Non-System Road
Unit 7 Spur	0+00 to 7+00	Construction	Non-System Road
Unit 8 Spur	0+00 to 3+50	Construction	Non-System Road
Unit 11 Spur	0+00 to 6+70	Construction	Non-System Road
Unit 12 Spur	0+00 to 5+20	Construction	Non-System Road

0-4 CONSTRUCTION

This project includes, but is not limited to the following construction requirements:

- Clearing;
- Grubbing;
- Right-of-way debris disposal;
- Construct road in accordance to the TYPICAL SECTION SHEET;
- Excavation and/or embankment to subgrade;
- Compaction of embankment and subgrade as listed in the COMPACTION LIST.
- Turnaround and turnout construction;
- Construction of drivable dips as according to the DRIVABLE DIP DETAIL as listed in the CULVERT AND DRIANAGE LIST.
- Acquisition and installation of drainage structures as listed in the CULVERT AND DRAINAGE LIST;
- Acquisition and application of rock as listed in the ROCK LIST;
- Creating positive drainage using a combination of insloping, outsloping, and ditchouts as needed or as designated by the Contract Administrator.
- If overwintered, Culverts must be removed and roads must be waterbarred by September 30. Purchaser shall construct waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical distance of no more than 10 feet between waterbars or between natural drainage paths, and with a maximum spacing of 300 feet.
- Decommissioning according to CLAUSE 9-20 ROAD DECOMMISSIONING.

0-5 RECONSTRUCTION

This project includes, but is not limited to the following reconstruction requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
Temp 1	0+00 to 31+00	Reconstruct roads in accordance with the TYPICAL SECTION SHEET. Installation of Cross Drains and construction of drivable dips as according to the DRIVABLE DIP DETAIL as listed in the CULVERT AND DRIANAGE LIST. Acquisition of Rock and Select Fill as indicated in the ROCK LIST.
Temp 2	0+00 to 5+40	

0-6 PRE-HAUL MAINTENANCE

Pre-haul maintenance includes, but is not limited to.

- Purchaser shall perform maintenance in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS
- Cleaning culverts and catchbasins;
- Grading, shaping, and compacting

- Acquisition and application of rock as listed in the ROCK LIST;
- Roadside brushing and debris removal;
- Acquisition and installation of drainage structures as listed in the CULVERT LIST;
- Cleaning and reshaping ditches as shown in the table below;
- Obtain Bridge overload permits through the Forest Service for bridges located on the 2923060 and 2923 roads
- Design, purchase, and install a 70' bridge according to the 2923060 BRIDGE INSTALL DETAIL.

<u>Road</u>	<u>Comments</u>
2923	Construct Ditch according to Typical Section sheet from stations 58+60 to 61+10 and 105+25 to 115+03.

0-7 POST-HAUL MAINTENANCE

This project includes post-haul road maintenance listed in Clause 9-5 POST-HAUL MAINTENANCE9-5 .

0-8 CLOSURE

This project includes road closure listed in Clause 9-15 ROAD CLOSURE.

0-9 DECOMMISSIONING

This project includes decommissioning listed in Clause 9-20ROAD DECOMMISSIONING.

0-12 DEVELOP ROCK SOURCE

Purchaser may develop an existing rock source. Rock source development will involve Removing ballast rock for new construction and reconstruction, clearing, and stripping as indicated in the ROCK SOURCE DEVELOPMENT PLAN. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

0-13 STRUCTURES

Purchaser shall install one bridge. Requirements for these structures are listed in Section 7 STRUCTURES.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

If the Purchaser desires a change from this road plan including, but not limited to, relocation, extension, change in design, or adding roads; a revised road plan must be submitted in writing to the Contract Administrator for consideration. Before work begins, Purchaser shall obtain approval from the State for any submitted plan that changes the scope of work or environmental condition from the original road plan.

1-2 UNFORESEEN CONDITIONS

Quantities established in this road plan are minimum acceptable values. Additional quantities required by the state due to unforeseen conditions, or Purchaser's choice of construction season or techniques will be at the Purchaser's expense. Unforeseen conditions include, but are not limited to, solid subsurface rock, subsurface springs, saturated ground, and unstable soils.

1-3 ROAD DIMENSIONS

Purchaser shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan.

1-4 ROAD TOLERANCES

Purchaser shall perform road work within the tolerances listed below. The tolerance class for each road is listed on the TYPICAL SECTION SHEET.

<u>Tolerance Class</u>	<u>A</u>	<u>B</u>	<u>C</u>
Road and Subgrade Width (feet)	+1.5	+1.5	+2.0
Subgrade Elevation (feet +/-)	0.5	1.0	2.0
Centerline alignment (feet lt./rt.)	1.0	1.5	3.0

1-6 ORDER OF PRECEDENCE

Any conflict or inconsistency in the road plan will be resolved by giving the documents precedence in the following order:

1. Addenda.
2. Designs or Plans. On designs and plans, figured dimensions shall take precedence over scaled dimensions.
3. Road Plan Clauses.
4. Typical Section Sheet.
5. Standard Lists.
6. Standard Details.
7. Road Plan maps.

In case of any ambiguity or dispute over interpreting the road plan, the Contract Administrator's or designee's decision will be final.

1-7 TEMPORARY ROAD CLOSURE

Purchaser shall notify the Contract Administrator a minimum of 5 business days before the closure of any road. Construction may not close the following roads for more than the specified number of days unless approved by the Contract Administrator.

<u>Road</u>	<u>Number of Allowable Closed Days</u>
All Roads	1

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

Purchaser shall repair or replace all materials, roadway infrastructure, and road components damaged during road work or operation activities. The Contract Administrator will direct repairs and replacements. Repairs to structural materials must be made in accordance with the manufacturer's recommendation, and may not begin without written approval from the Contract Administrator.

1-9 DAMAGED METALLIC COATING

Any cut ends, or damaged galvanized or aluminized coating on existing or new bridge components, culverts, downspouts, and flumes must be cleaned and treated with a minimum of two coats of zinc rich paint or cold galvanizing compound.

1-10 WSDOT STANDARD SPECIFICATION REFERENCE

References in this road plan to "WSDOT Standard Specifications" mean the Washington State Department of Transportation's Standard Specifications for Road, Bridge, and Municipal Construction 2012 (M41-10).

SUBSECTION ROAD MARKING

1-15 ROAD MARKING

Purchaser shall perform road work in accordance with the state's marked location. All road work is marked as follows:

- Orange flags and Orange paint for centerline and points of interest.

1-18 REFERENCE POINT DAMAGE

Purchaser shall reset reference points (RPs) that were moved or damaged at any time during construction to their original locations. Excavation and embankment may not proceed on road segments controlled by said RPs until Purchaser resets all moved or damaged RPs.

SUBSECTION TIMING

1-20 COMPLETE BY DATE

Purchaser shall complete road work before timber haul.

1-21 HAUL APPROVAL

Purchaser shall not use roads under this road plan for any hauling other than timber cut on the right-of-way, without written approval from the Contract Administrator.

1-22 WORK NOTIFICATIONS

Purchaser shall notify the Contract Administrator a minimum of 14 calendar days before work begins.

1-23 ROAD WORK PHASE APPROVAL

Purchaser shall obtain written approval from the Contract Administrator upon completion of each of the following phases of road work:

- Subgrade construction and compaction
- Drainage installation
- Rock application and compaction

SUBSECTION RESTRICTIONS

1-25 ACTIVITY TIMING RESTRICTION

The specified activities are not allowed during the listed closure period(s) unless authorized in writing by the Contract Administrator. Restrictions for hauling forest products are specified in Contract Clause H-130 HAULING SCHEDULE.

<u>Activity</u>	<u>Closure Period</u>
All Road Work	November 1 st to May 30 th

The specified activities are only allowed during the listed period(s) unless authorized in writing by the Contract Administrator.

<u>Road</u>	<u>Stations</u>	<u>Activity</u>	<u>Operating Period</u>
2923060	8+75 (bridge installation)	Installation with no work in ordinary high water level	June 1 to October 31

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25

ACTIVITY TIMING RESTRICTION, Purchaser shall provide a maintenance plan to include further protection of federal resources. Purchaser shall obtain written approval from the Contract Administrator for the maintenance plan, and shall put preventative measures in place before operating during the closure period. Purchaser is required to maintain all haul roads at their own expense. If other operators are using, or desire to use these roads, a joint operating plan must be developed. All parties shall follow this plan.

1-29 SEDIMENT RESTRICTION

Purchaser shall not allow silt-bearing runoff to enter any streams.

1-30 CLOSURE TO PREVENT DAMAGE

In accordance with Contract Clause G-220 STATE SUSPENDS OPERATION, the Contract Administrator will suspend road work or hauling right-of-way timber, forest products, or rock under the following conditions:

- Wheel track rutting exceeds 6 inches on pit run roads.

- Wheel track rutting exceeds 2 inches on crushed rock roads.
- Wheel track rutting exceeds 8 inches on native surface roads.
- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, in the opinion of the Contract Administrator excessive road damage or rutting may occur.

Operations must stop unless authority to continue working or hauling is granted in writing by the Contract Administrator. In the event that surface or base stability problems persist, Purchaser shall cease operations, or perform corrective maintenance or repairs, subject to specifications within this road plan. Before and during any suspension, Purchaser shall protect the work from damage or deterioration.

1-31 SPEED LIMITS

Speeds are limited to 35 mph unless otherwise posted.

1-32 BRIDGE OR ASPHALT SURFACE RESTRICTION

The use of metal tracked equipment is not allowed on bridge or asphalt surfaces at any time. If Purchaser must run equipment on bridge or asphalt surfaces, then rubber tired equipment or other methods, approved in writing by Contract Administrator, must be used.

If tracked equipment is used on bridge or asphalt surfaces, Purchaser shall immediately cease all road construction and hauling operations. Purchaser shall remove any dirt, rock, or other material tracked or spilled on the bridge or asphalt surface(s) and have surface(s) evaluated by the Engineer or their designee for any damage caused by transporting equipment. Any damage to the surface(s) will be repaired, at the Purchaser's expense, as directed by the Contract Administrator.

1-33 SNOW PLOWING RESTRICTION

Snowplowing will be allowed after the execution of a SNOW PLOWING AGREEMENT, which is available from the Contact Administrator upon request. If damage occurs while plowing, further permission to plow may be revoked by the Contract Administrator.

SUBSECTION OTHER INFRASTRUCTURE

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

Purchaser shall immediately remove any mud, dirt, rock, or other material tracked or spilled on to county roads and state highways.

If additional damage to the surface, signs, guardrails, etc. occurs then the damage will be repaired, at the Purchaser's expense, as directed by the Contract Administrator when authorized by the county or WSDOT.

1-43 ROAD WORK AROUND UTILITIES

It is the Purchaser’s responsibility to identify any utilities not listed. Purchaser shall work in accordance with all applicable laws or rules concerning utilities. Purchaser is responsible for all notification, including “call before you dig”, and liabilities associated with the utilities and their rights-of-way.

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

Purchaser shall maintain all roads used under this contract in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS for the entire term of this contract. Maintenance is required even during periods of inactivity.

2-4 PASSAGE OF LIGHT VEHICLES

Purchaser shall maintain road(s) in a condition that will allow the passage of light administrative vehicles.

2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following road(s), Purchaser shall use a grader to shape the existing surface before timber haul. Purchaser shall accomplish all grading using a motor grader with a minimum of 175 horsepower.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
2923	0+00 to 204+75	Grade and Compact
2923060	0+00 to 103+14	Grade and Compact
2923063	0+00 to 8+75	Grade and Compact
2923065	0+00 to 13+35	Grade and Compact
2923070	0+00 to 64+56	Grade and Compact
2923074	0+00 to 33+00	Grade and Compact
Temp 1	0+00 to 31+00	Grade and Compact
Temp 2	0+00 to 5+40	Grade and Compact

2-6 CLEANING CULVERTS

Purchaser shall clean the inlets and outlets of all culverts before timber haul.

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

Purchaser shall clean ditches, headwalls, and catch basins. Work must be completed before timber haul and must be done in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL. Pulling ditch material across the road or mixing in with the road surface is not allowed.

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

SUBSECTION BRUSHING

3-1 BRUSHING

On the following road(s), Purchaser shall cut vegetative material up to 3 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Brushing must be achieved by mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
2923	0+00 to 204+75
2923060	0+00 to 103+14
2923063	0+00 to 8+75
2923065	0+00 to 13+35
2923070	0+00 to 64+56
2923074	0+00 to 33+00
Temp 1	0+00 to 31+00
Temp 2	0+00 to 5+40

3-2 BRUSHING RESTRICTION

Excavator buckets, log loaders and similar equipment may not be used for brushing unless otherwise approved in writing by the Contract Administrator.

SUBSECTION CLEARING

3-5 CLEARING

Purchaser shall fall all vegetative material larger than 2 inches DBH or over 5 feet high between the marked right-of-way boundaries and within waste and debris areas, or if not marked in the field, between the clearing limits specified on the TYPICAL SECTION SHEET. Clearing must be completed before starting excavation and embankment.

3-7 RIGHT-OF-WAY DECKING

Purchaser shall deck all right-of-way timber. Decks must be parallel to the road centerline and placed within the cleared right-of-way. Decks must be free of dirt, limbs, and other right-of-way debris, and removable by standard log loading equipment from the roadbed.

3-8 PROHIBITED DECKING AREAS

Purchaser shall not deck right-of-way timber in the following areas:

- Within the grubbing limits.
- Within 50 feet of any stream.
- Within 50 feet of any cross drain or drivable dip.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 45%.
- Against standing trees.

SUBSECTION GRUBBING

3-10 GRUBBING

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET and within waste and debris areas. Purchaser shall also remove stumps with undercut roots outside the grubbing limits.

SUBSECTION ORGANIC DEBRIS

3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all vegetative material not eligible for removal by Contract Clause G-010 PRODUCTS SOLD AND SALE AREA or G-011 RIGHT TO REMOVE FOREST PRODUCTS AND CONTRACT AREA, that is larger than one cubic foot in volume within the clearing limits as shown on the TYPICAL SECTION SHEET.

3-21 DISPOSAL COMPLETION

Purchaser shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Purchaser shall complete all disposal of organic debris, except by burning, before timber haul.

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

Waste areas for organic debris are located at areas approved in writing by the Contract Administrator.

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland, unless used to comply with the specifications detailed in the Riparian Strategy.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 45%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

Purchaser shall not bury organic debris unless otherwise stated in this plan.

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris in natural openings as directed by the Contract Administrator. Where natural openings are unavailable or restrictive, alternate debris disposal methods are subject to the written approval of the Contract Administrator.

SUBSECTION PILE

3-31 PILING AND SCATTERING

Right-of-way debris shall be scattered unless debris amounts are significant enough to produce piles a minimum of 4' tall by 6' wide. Debris piles shall be made to be burnable, clean, tight, and free of rock or soil. Piles shall be made no closer than 20 feet from standing timber, and no higher than 10 feet. Debris piles shall be placed within cleared right-of-way, or in natural openings, as designated by the Contract Administrator. Placement of debris piles outside of the right-of-way limits is subject to the written approval of the Contract Administrator. No piling within the Riparian Habitat Conservation Area (RHCA).

SECTION 4 – EXCAVATION

4-2 PIONEERING

Pioneering may not extend past construction that will be completed during the current construction season. Pioneering may not extend more than 1000 feet beyond completed construction unless approved in writing by the Contract Administrator. In addition, the following actions must be taken as pioneering progresses:

- Drainage must be provided on all uncompleted construction.
- Road pioneering operations may not undercut the final cut slope or restrict drainage.
- Culverts at live stream crossings must be installed during pioneering operations prior to embankment.

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment except as designed:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 15 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 12% in 100 feet.
- Maximum grade change for crest vertical curves is 10% in 100 feet.

4-4 SWITCHBACK STANDARDS

A switchback is defined as a curved segment of road between a beginning and end of the same curve, where the change of traffic travel direction is greater than 90 degrees. Purchaser shall follow these standards for switchbacks:

- Maximum adverse grades for switchbacks is 12%.
- Maximum favorable grades for switchbacks is 15%.
- Maximum transition grades entering and leaving switchbacks is a 5% grade change.
- Transition grades required to meet switchback grade limitations must be constructed on the tangents preceding and departing from the switchbacks.

4-5 CUT SLOPE RATIO

Purchaser shall construct excavation slopes no steeper than shown on the following table, unless construction staked or designed:

<u>Material Type</u>	<u>Excavation Slope Ratio</u>	<u>Excavation Slope Percent</u>
Common Earth (on side slopes up to 55%)	1:1	100
Common Earth (56% to 70% side slopes)	¾:1	133
Common Earth (on slopes over 70%)	½:1	200
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

4-6 EMBANKMENT SLOPE RATIO

Purchaser shall construct embankment slopes no steeper than shown on the following table, unless construction staked or designed:

<u>Material Type</u>	<u>Embankment Slope Ratio</u>	<u>Embankment Slope Percent</u>
Sandy Soils	2:1	50
Common Earth and Rounded Gravel	1½:1	67
Angular Rock	1¼:1	80

4-7 SHAPING CUT AND FILL SLOPE

Purchaser shall construct excavation and embankment slopes to a uniform line and left rough for easier revegetation.

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

- 6 feet for curves of 50 to 79 feet radius.
- 4 feet for curves of 80 to 100 feet radius.

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

- 2 feet for embankment heights at centerline of 2 to 6 feet.
- 4 feet for embankment heights at centerline of greater than 6 feet.

4-10 WIDEN THE EXISTING SUBGRADE

Purchaser shall widen the subgrade and fill slopes to the dimensions shown on the TYPICAL SECTION SHEET. If necessary, Purchaser shall reconstruct excavation slopes to provide sufficient width for the road surface and any ditches.

4-12 FULL BENCH CONSTRUCTION

Where side slopes exceed 45%, Purchaser shall use full bench construction for the entire subgrade width except as construction staked or designed. If designated, Purchaser shall end haul waste material to the location specified in Clause 4-37 WASTE AREA LOCATION.

SUBSECTION INTERSECTIONS, TURNOUTS AND TURNAROUNDS

4-21 TURNOUTS

Purchaser shall construct turnouts intervisible with a maximum distance of 1,000 feet between turnouts unless otherwise shown on drawings. Locations may be adjusted to fit the final subgrade alignment and sight distances. Minimum dimensions are shown on the TYPICAL SECTION SHEET.

4-22 TURNAROUNDS

Turnarounds must be no larger than 30 feet long and 30 feet wide. Locations are subject to written approval by the Contract Administrator.

SUBSECTION DITCH CONSTRUCTION

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

Purchaser shall construct and reconstruct ditches into the subgrade as specified on the TYPICAL SECTION SHEET. Ditches must be constructed concurrently with construction of the subgrade.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts, rolling dips, or ditchouts.

4-29 DITCHOUTS

Purchaser shall construct ditchouts as identified in the table below, as needed, and as directed by the Contract Administrator. Ditchouts must be constructed in a manner that diverts ditch water onto the forest floor and must have excavation backslopes no steeper than a 1:1 ratio. Locations may not be changed without written approval from the Contract Administrator. L or R denotes ditchout left or ditchout right.

<u>Road</u>	<u>Stations</u>	<u>L or R</u>
2923	115+03	L&R

SUBSECTION WASTE MATERIAL (DIRT)

4-35 WASTE MATERIAL DEFINITION

Waste material is defined as all dirt, rock, mud, or related material that is extraneous or unsuitable for construction material. Waste material, as used in Section 4 EXCAVATION, is not organic debris.

4-36 DISPOSAL OF WASTE MATERIAL

Purchaser may sidecast waste material on side slopes up to 55% if the waste material is compacted and free of organic debris. On side slopes greater than 55%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

4-37 WASTE AREA LOCATION

Purchaser shall deposit waste material in the listed designated areas. Additional waste areas may also be identified or approved by the Contract Administrator. The amount of material allowed in a waste area is at the discretion of the Contract Administrator.

<u>Road</u>	<u>Waste Area Location</u>	<u>Comments</u>
2923060	STA 23+21	Waste from Unit 7 Spur.

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser shall not deposit waste material in the following areas, except as otherwise specified in this plan:

- Within 20 feet of a cross drain culvert.
- Within 20 feet of any drivable dip.
- Within 100 feet of a live stream or wetland.
- Within a riparian management zone.
- Within a wetland management zone.
- On side slopes steeper than 55%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.

SUBSECTION BORROW

4-45 SELECT BORROW

Select borrow consists of granular material, either naturally occurring or processed, and contains no more than 5% clay, organic debris, or trash by volume. Select borrow material must be free of rocks greater than 6 inches in any dimension.

4-46 COMMON BORROW

Common borrow consists of soil, and/or aggregate that is non-plastic and contains no more than 5% clay, organic debris, or trash by volume. The material is considered non-plastic if the fines in the sample cannot be rolled, between the hand and a smooth surface, into a thread at any moisture content. Common borrow material must be free of rocks greater than 6 inches in any dimension.

4-47 BORROW MATERIAL

Borrow material may not contain more than 5% clay, organic debris, or trash by volume. Borrow material must be free of rocks greater than 6 inches in any dimension.

4-48 NATIVE MATERIAL

Native material consists of naturally occurring material that is free of organic debris, trash, and rocks greater than 6 inches in any dimension.

4-49 BORROW SOURCE

Purchaser shall obtain borrow material from borrow sources identified or approved by the Contract Administrator.

SUBSECTION SHAPING

4-55 ROAD SHAPING

Purchaser shall shape the subgrade and surface as shown on the TYPICAL SECTION SHEET. The subgrade and surface shape must ensure runoff in an even, un-concentrated manner, and must be uniform, firm, and rut-free. Purchaser shall accomplish all shaping using a motor grader with a minimum of 175 horsepower.

SUBSECTION COMPACTION

4-60 FILL COMPACTION

Purchaser shall compact all embankment and waste material in accordance with the COMPACTION LIST by routing equipment over the entire width of each lift. A plate compactor must be used for segments too narrow to accommodate equipment.

4-61 SUBGRADE COMPACTION

Purchaser shall compact constructed and reconstructed subgrades in accordance with the COMPACTION LIST by routing equipment over the entire width except ditch. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before timber haul.

4-63 EXISTING SURFACE COMPACTION

Purchaser shall compact maintained road surfaces in accordance with the COMPACTION LIST by routing equipment over the entire width.

SECTION 5 – DRAINAGE

5-1 REMOVAL OF SHOULDER BERMS

Purchaser shall remove berms from road shoulders, except as specified in Clause **Error! Reference source not found.**

SUBSECTION CULVERTS

5-5 CULVERTS

Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT AND DRAINAGE LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts must be new material and meet the specifications in Clauses 10-15 through 10-24.

5-7 USED CULVERT MATERIAL

On the following road(s), Purchaser may install used culverts. All other roads must have new culverts installed. Purchaser shall obtain approval from the Contract Administrator for the quality of the used culverts before installation.

<u>Road</u>	<u>Stations</u>
2923074	0+00 to 33+00
Pit Road	0+00 to 7+15
Temp 1	0+00 to 31+00
Temp 2	0+00 to 5+40
Unit 7 Spur	0+00 to 7+00
Unit 8 Spur	0+00 to 3+50
Unit 11 Spur	0+00 to 6+70
Unit 12 Spur	0+00 to 5+20

5-8 TEMPORARY STREAM CULVERT INSTALLATION

Purchaser shall install temporary culverts as shown in the SETTLING POND AND PUMP detail. Temporary stream culverts must be located in the natural channel of the stream. Temporary culverts must be removed upon completion of road use.

<u>Road</u>	<u>Stations</u>
2923074	4+30

5-12 UNUSED MATERIALS FOREST SERVICE PROPERTY

On required roads, any materials listed on the CULVERT AND DRAINAGE LIST and materials listed in Clause 5-13 CONTINGENCY CULVERTS that are not installed will become the property of the Forest Service. Purchaser shall stockpile materials as directed by the Contract Administrator.

5-13 CONTINGENCY CULVERTS

The following culverts will be supplied by the Purchaser and are available for installation as directed by the Contract Administrator.

<u>Road</u>	<u>Size</u>
On any portion of road used for timber or rock haul.	18" x 30' culvert
	18" x 30' culvert
	18" culvert band

SUBSECTION CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

Culvert, downspout, flume and energy dissipator installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings". Culverts shall be banded using lengths of no less than 10 feet, and no more than one length less than 16 feet. Shorter section of banded culvert shall be installed at the inlet end.

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Purchaser shall obtain written approval from the Contract Administrator for the installation of culverts 30 inches in diameter and over before backfilling.

5-17 CROSS DRAIN SKEW AND SLOPE

Cross drains, on road grades in excess of 3%, must be skewed at least 30 degrees from perpendicular to the road centerline, except where the cross drain is at the low point in the road culverts will not be skewed. Cross drain culverts must be installed at a slope steeper than the incoming ditch grade, but not less than 3% or more than 10%.

5-18 CULVERT DEPTH OF COVER

All culverts must be installed with a depth of cover of not less than 1 foot of compacted subgrade over the top of the culvert at the shallowest point. Stream crossing culverts must be installed with a depth of cover recommended by the culvert manufacturer for the type and size of the pipe.

SUBSECTION ENERGY DISSIPATERS

5-20 ENERGY DISSIPATERS

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT LIST that specify the placement of rock. Energy dissipater installation is subject to approval by the Contract Administrator.

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT LIST. Placement must be by zero-drop-height method only. No placement by end dumping or dropping of rock is allowed. LIGHT, LOOSE RIP RAP shall meet the specifications in Clause 6-50.

5-21 DOWNSPOUTS AND FLUMES

Downspouts and flumes longer than 10 feet must be staked on both sides at a maximum interval of 10 feet with heavy-duty steel posts, and fastened securely to the posts with No. 10 galvanized smooth wire.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

5-25 CATCH BASINS

Purchaser shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 2 feet wide and 4 feet long.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts, except for temporary culverts. Rock used for headwalls must be Light Loose Rip Rap. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. Placement must be with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed.

SUBSECTION SURFACE DRAINAGE

5-31 DRIVABLE DIP CONSTRUCTION

Purchaser shall construct rolling dips in accordance with the DRIVABLE DIP DETAIL and as specified on the CULVERT AND DRAINAGE LIST. Rolling dips must be installed concurrently with construction of the subgrade and must be maintained in an operable condition.

5-33 NATIVE SURFACE ROADS

If overwintered, native surface roads must be waterbarred by September 30. Purchaser shall construct waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical distance of no more than 10 feet

between waterbars or between natural drainage paths, and with a maximum spacing of 300 feet.

SECTION 6 – ROCK AND SURFACING

6-2 ROCK SOURCE ON FEDERAL LAND

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following source(s) on federal land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the rock source(s), a joint operating plan must be developed. All parties shall follow this plan. Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Grindstone quarry	T29NR11WS05	Ballast (B) and Light Loose Riprap (LLRP) only

6-5 ROCK FROM COMMERCIAL SOURCE

Rock used in accordance with the quantities on the ROCK LIST may be obtained from any commercial source at the Purchaser's expense. Rock sources are subject to written approval by the Contract Administrator before their use and shall be certified weed free from either the Forest Service or the Clallam County Weed Board

<u>Possible Source</u>	<u>Location</u>
Snider Quarry	213 East Snider Road, Beaver, WA, 98305. M.P. 212 Hwy 101

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

Purchaser shall conduct rock source development and use at the following sources, in accordance with the written ROCK SOURCE DEVELOPMENT PLAN prepared by the state and included in this road plan. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator. Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before starting any operations in the rock source.

<u>Source</u>	<u>Rock Type</u>
Grindstone Quarry	Ballast (B) and Light Loose Riprap (LLRP) only

6-12 ROCK SOURCE SPECIFICATIONS

Rock sources must be in accordance with the following specifications, unless otherwise specified in the ROCK SOURCE DEVELOPMENT PLAN:

- Pit walls may not be undermined or over steepened. The maximum slope of the walls must be consistent with recognized engineering standards for the type of material being excavated in accordance with the following table:

Material	Maximum Slope Ratio (Horiz. :Vert.)	Maximum Slope Percent
Sand	2:1	50
Gravel	1.5:1	67
Common Earth	1:1	100
Fractured Rock	0.5:1	200
Solid Rock	0:1	vertical

- Pit walls must be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The width of pit benches must be a minimum of 1.5 times the maximum length of the largest machine used.
- The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient.
- All operations must be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- All vehicle access to the top of the pit faces must be blocked by a rock berm at least 18 inches high.

6-13 ROCK EXPLORATION

Purchaser shall provide an excavator with operator for 6 hours of exploration of rock and other related work as directed by the Contract Administrator at the following site(s).

<u>Site</u>
Grindstone Quarry

6-23 ROCK GRADATION TYPES

Purchaser shall provide or manufacture rock in accordance with the types and amounts listed in the ROCK LIST. Rock must meet the following specifications for gradation and uniform quality. Purchaser shall provide a sieve analysis upon request from the Contract Administrator.

6-28 1 ¼-INCH MINUS CRUSHED ROCK

% Passing 1 ¼" square sieve	100%
% Passing 5/8" square sieve	55 - 75%
% Passing U.S. #4 sieve	20 - 50%

Of the fraction passing the No. 4 sieve, 40% to 60% must pass the No. 10 sieve.

6-41 SELECT PIT RUN ROCK

No more than 50 percent of the rock may be larger than 8 inches in any dimension and no rock may be larger than 12 inches in any dimension. Select Pit Run rock may not contain more than 5 percent by weight of organic debris, dirt, and trash. Rock may require processing to meet this specification.

6-43 QUARRY SPALLS

% Passing 8" square sieve	100%
% Passing 3" square sieve	40% maximum
% Passing 3/4" square sieve	10% maximum

Rock may not contain more than 5 percent vegetative debris or trash. All percentages are by weight.

6-50 LIGHT LOOSE RIP RAP

Light loose rip rap must consist of angular, hard, sound, and durable stone. It must be free from segregation, seams, cracks, and other defects tending to destroy its resistance to weather. Light loose rip rap must be free of rock fines, soil, organic debris or other extraneous material, and must meet the following requirements:

<u>Quantity</u>	<u>Approximate Size Range</u>
20% to 90%	500 lbs. to 1 ton (18" - 28")
15% to 80%	50 lbs. to 500 lbs. (8" - 18")
10% to 20%	3 inch to 50 lbs. (3" - 8")

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of specified rock depths, are defined as the compacted depth(s) using the compaction methods required in this road plan. Estimated quantities specified in the ROCK LIST are compacted yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction unless otherwise stated in Clause 6-75 OPTIONAL ROCK EXCEPTION.

6-56 ROCK MEASUREMENT BY TRUCK VOLUME

Measurement of rock is on a cubic yard truck measure basis. The Contract Administrator will measure each truck box before rock hauling. An average of such volumes for each truck will be used to tally the volume hauled. The Contract Administrator may periodically require that a load be flattened off and its volume calculated. Purchaser

shall maintain load tally sheets for each truck as shown in ROCK ACCOUNTABILITY DETAIL and shall give them to the Contract Administrator on a weekly basis during rocking operations.

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for completion of subgrade and drainage installations before rock application.

6-71 ROCK APPLICATION

Purchaser shall apply rock in accordance with the specifications and quantities shown on the ROCK LIST. Rock must be spread, shaped, and compacted full width concurrent with rock hauling operations. The Contract Administrator will direct locations for rock that is to be applied as spot patching. Road surfaces must be compacted in accordance with the COMPACTION LIST by routing equipment over the entire width.

6-73 ROCK FOR WIDENED PORTIONS

Purchaser shall apply rock to turnarounds, turnouts, and areas with curve widening to the same depth and specifications as the traveled way.

6-75 OPTIONAL ROCK EXCEPTION

On the following roads, Purchaser may place less rock than shown on the ROCK LIST, when approved in writing by the Contract Administrator.

If less rock is applied, Purchaser shall submit a written plan, for approval, describing how these roads will be constructed, used, maintained, and treated post-haul. Purchaser shall meet post-haul specifications in Section 9 POST-HAUL ROAD WORK, the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, or other conditions of the approved plan.

<u>Road</u>	<u>Stations</u>
Pit Road	0+00 to 7+15
Temp 1	0+00 to 31+00
Temp 2	0+00 to 5+40
Unit 7 Spur	0+00 to 7+00
Unit 8 Spur	0+00 to 3+50
Unit 11 Spur	0+00 to 6+70
Unit 12 Spur	0+00 to 5+20

6-103 TEMPORARY TRAFFIC CONTROL

Purchaser is responsible for protecting all applied striping from traffic until sufficiently dry. Purchaser shall immediately correct striping problems that impair traffic, such as improper alignment, broken equipment, or spilled materials.

Before starting work, Purchaser shall submit to the Contract Administrator, for approval, a traffic control plan describing temporary warning signs and other traffic control measures to be used by the Purchaser.

SECTION 7 – STRUCTURES

SUBSECTION SIGNS

7-1 SIGN INSTALLATION

Purchaser shall install and maintain the following road signs.

<u>Road</u>	<u>Station</u>	<u>Sign</u>
2065	0+50	Logging Operations Ahead (or similar)

7-5 STRUCTURE DEBRIS

Purchaser shall not allow debris from the installation or removal of structures to enter any stream. Components removed from existing structures(s) must be removed from federal land. Purchaser shall maintain a clean jobsite, with all materials stored away from the high water mark or other area presenting a risk of the materials entering a stream. Debris entering any stream must be removed immediately, and placed in the site(s) designated for stockpiling or disposal. Purchaser shall retrieve all material carried downstream from the jobsite.

7-6 STREAM CROSSING INSTALLATION

Purchaser shall install stream crossing structures in accordance with the manufacturer's requirements, and 2923060 BRIDGE INSTALL DETAIL.

7-7 BANK PROTECTION FOR STREAM CROSSING STRUCTURES

Purchaser shall design and construct bank protection to prevent the undermining of the structure. Purchaser must construct bank protection in accordance with the stream crossing, design, specifications, and details.

7-15 PRE-DESIGN WORK MEETING

Prior to any design work occurring, a pre-work conference call shall occur to review the Road Plan requirements for the design and manufacture of the structure.

7-16 DRAWING AND CALCULATION REVIEW FOR ACCEPTANCE

Purchaser shall prepare and submit three sets of complete design drawings and calculations for the superstructure and substructure including footings, foundation and bank protection. All drawings and calculations must be prepared, stamped, and signed by a Registered Professional Engineer licensed in the State of Washington. The superstructure must be designed by a Professional Engineer licensed in the state of

manufacture. Drawings can be in either electronic or hard copy form and must be no smaller than 11" X 17" sheets.

Bridge super structure design must include all shop detail plans for fabricating the steel. All welds and splices must be shown on the shop plans. No welded field splices will be allowed; all field splices must be bolted and explicitly designed. No welded splices will be allowed on girders, floor beams, or truss members without specific approval from the Engineer or designee. When used, shop splices are generally complete joint penetration (CJP) butt-welded splices that develop the full section strength of the adjoining materials. In general, splices must not be made for material lengths or spans under 60 feet, or for widths or depths under 12.5 feet, unless the Purchaser demonstrates that the material is not otherwise readily and commercially available.

Send submittals to:

Department of Natural Resources
Attn.: JUSTIN LONG
ENGINEERING DIVISION. 1111 WASHINGTON STREET SE
OLYMPIA WASHINGTON 98501
(360) 867-8412
Justin.Long@dnr.wa.gov

Reports and plans will be accepted or rejected within 10 working days of receipt of final drawing submittal. Delays in work because of the possibility of rejection, revision, and resubmittal of documents are deemed a risk of the Purchaser and may not be the basis for claims of additional compensation.

Materials may not be fabricated until the Engineer or designee has approved the plans. Changes are not allowed in any shop plan after approval unless approved in writing by the Engineer or designee.

7-17 STRUCTURE ACCEPTANCE

The Engineer or designee will inspect the structure upon delivery. Acceptance will be issued if the structure meets all specifications and certifications. Structures that are not accepted may not be installed.

7-18 INSTALLATION PRODUCTION SCHEDULE

Purchaser shall provide the Contract Administrator or their designee, with a production schedule showing projected completion dates for the following items before starting construction of the structure(s). Production schedule must include:

- construction staking
- dewatering
- excavation
- pile driving
- construction of forms and rebar

- concrete pouring
- placement of sills/abutments/footings/structure
- backfill compaction, rock application and compaction

7-19 INSTALLATION STAGE ACCEPTANCE

Purchaser shall ensure that all materials and procedures used during construction comply with the design. Purchaser shall obtain written approval from the State, after verification by the Lead Engineer or designee for each stage of construction, listed in Clause

7-18 INSTALLATION PRODUCTION SCHEDULE, before starting construction on the next stage. Purchaser shall notify the Contract Administrator in writing when each construction stage is complete.

7-20 INSTALLATION FINAL ACCEPTANCE

Purchaser shall notify the Contract Administrator in writing when each structure is complete. Within 15 working days of final construction acceptance Purchaser shall submit three complete sets of finalized plans. Any omissions to the plans are the responsibility of the Purchaser to correct and include in the finalized set of plans. Submit finalized plans to the same location stated in Clause 7-16 DRAWING AND CALCULATION REVIEW FOR ACCEPTANCE.

7-26 BEARING STRENGTH TESTING

For shallow foundations, Purchaser shall perform one of the following soil testing methods appropriate for the type of material encountered: standard penetration test, cone penetration test, or vane shear test. Bearing capacity test must be completed by an accredited and certified materials testing company. Bearing capacity test results must be submitted to the same location stated in Clause 7-16 DRAWING AND CALCULATION REVIEW FOR ACCEPTANCE. Purchaser shall excavate any unsuitable material present at foundation grade. State the basis of the capacity in AASHTO LRFD terminology, ex. Factored Bearing Resistance, as calculated on the basis of the field test. Factored Bearing Resistance shall consider the effect of footings on or adjacent to slopes in accordance with AASHTO LRFD design specifications. For piling foundations, Factored Bearing Capacity of the pile shall be stated in conjunction with the assumed driving resistance factor. As a minimum, a WEAP analysis is required, along with the driving resistance factor for a WEAP analysis.

7-45 PURCHASER SUPPLIED BRIDGE – STATE REIMBURSED

Purchaser shall design, provide, and construct each bridge listed below. Refer to 2923060 BRIDGE INSTALL DETAIL for details. Designs must include curbs and a full width, continuous deck with no gaps that allow water and sediment to drain from the bridge to the stream. Upon structure acceptance, the Purchaser shall submit an invoice to the State for the total cost of the structure including delivery. State shall reimburse Purchaser for the total cost of the structure including delivery.

Road	Station	Length (ft.)	W.B.S.R. ¹ (ft.)	Loading/Deflection Ratio	Type	Vert. Clear ² (ft.)	Hor. Align ³ (ft.)
2923060	8+75	70	14	HL-93	Steel	min 5'	P.P

¹W.B.S.R. = Width between shear rails.

²Vertical clearance shall be measured from 100 year flood level.

³Horizontal alignment: P.P. = on the attached plan/profile, C.S. = according to construction stakes on the ground.

7-47 PURCHASER SUPPLIED ABUTMENTS – STATE REIMBURSED

Purchaser shall provide pre-cast concrete abutment designs. Bridge abutments must be designed by an engineer licensed in the state of Washington. The abutment design includes, but is not limited to wing walls, steel reinforced concrete sills, and permanent, functional provisions for lifting. Abutments shall be designed to HL-93 Loading and U80 Owner-specified special vehicle(s).

Abutments shall be shown by calculation to perform within the calculated Factored Bearing Resistance (See clause 7-26).

Upon structure acceptance, the Purchaser shall submit an invoice to the State for the total cost of the abutments including delivery. State shall reimburse Purchaser for the total cost of the abutments including delivery.

7-52 TECHNICAL SPECIFICATIONS

Design: The bridge superstructure must be designed in accordance with AASHTO-LRFD Bridge Design Specifications, latest edition and any subsequent interim specifications. Design details not covered by the AASHTO specifications must be in accordance with other normally accepted structural design standards. Specifically note design standards for the curb/barrier system on the plan set.

Fabrication: The structural steel fabricating plant of origin must be certified under the AISC Quality Certification Program. Certification categories must include Simple and Major Steel Bridges.

Certification of Materials: Mill test certificates must be provided for the steel stringers and the bridge deck. Certified mill test reports for steel bridge stringers with specified values must include, in addition to other tests, the results of Charpy V-notch impact tests.

Welding: All welding must be completed by welders certified in accordance with the requirements and qualification tests of the American Welding Society for bridges (AWS D1.5).

7-53 BRIDGE INSTALLATION

Purchaser shall install bridges ensuring there is a full width, continuous deck with no gaps that allow water and sediment to drain from the bridge to the stream.

7-70 GATE CLOSURE

On the following road(s), Purchaser shall keep gates closed and locked except during periods of haul. All gates that remain open during haul must be locked or securely fastened in the open position. All gates must be closed at termination of use.

<u>Road</u>	<u>Station</u>
2923063	1+45

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL STRUCTURES

Sediment control shall be accomplished using sediment traps, silt fence, or other methods as approved in writing by the Contract Administrator.

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a 4 inch layer of Weed-free straw to all exposed soils within 50 feet of a stream or wetland. Soils must be covered before the first anticipated storm event.

SUBSECTION REVEGETATION

8-15 REVEGETATION

On the following road(s), Purchaser shall spread grass seed on all exposed soils resulting from road work activities. Other methods of covering must be approved in writing by the Contract Administrator.

<u>Road</u>	<u>Location</u>	<u>Qty (lbs)*</u>	<u>Type</u>	<u>Comments</u>
2923060	8+75	25/acre	Grass Seed	Apply During Bridge Installation
2923074	4+30	25/acre	Grass Seed	Apply During Culvert Removal
Decom 1	0+00 to 17+95	25/acre	Grass Seed	Apply During Decommissioning
Temp 1	0+00 to 31+00	25/acre	Grass Seed	Apply During Decommissioning
Temp 2	0+00 to 5+40	25/acre	Grass Seed	Apply During Decommissioning
Unit 7 Spur	0+00 to 7+00	25/acre	Grass Seed	Apply During Decommissioning

Unit 8 Spur	0+00 to 3+50	25/acre	Grass Seed	Apply During Decommissioning
Unit 11 Spur	0+00 to 6+70	25/acre	Grass Seed	Apply During Decommissioning
Unit 12 Spur	0+00 to 5+20	25/acre	Grass Seed	Apply During Decommissioning

*Quantities are estimates only. Actual quantities may vary and are the responsibility of the Purchaser.

8-16 REVEGETATION SUPPLY

The Forest Service shall provide the seed mixture.

8-17 REVEGETATION TIMING

Purchaser shall revegetate immediately after road work is completed unless alternative plan approved in writing by the Contract Administrator. Soils may not be allowed to sit exposed for longer than one month without receiving revegetation treatment unless otherwise approved in writing by the Contract Administrator.

8-18 PROTECTION FOR SEED

Purchaser shall provide a protective cover for seed if revegetation occurs between July 1 and March 31. The protective cover may consist of an even layer of straw or Contract Administrator approved alternative. Seed may not be allowed to sit exposed during any rain event.

8-19 ASSURANCE FOR SEEDED AREA

Purchaser shall ensure the growth of a uniform and dense crop (at least 50% coverage) of 3-inch tall grass. Purchaser shall reapply the grass seed in areas that have failed to germinate or have been damaged through any cause. Restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the grass seed at no addition cost to the state.

SUBSECTION SEED, FERTILIZER, AND MULCH

8-25 GRASS SEED

Native grass seed or seed mixes provided by the Olympic National Forest. Seed consisting of only grass species will be sown at 25 lbs/acre. Seed mixes that consist of native grass and forb species may also be provided by the Olympic National Forest, as appropriate. These will be spread evenly by the purchaser according to the label on the bag of seed provided.

SECTION 9 – POST-HAUL ROAD WORK

SUBSECTION STRUCTURES

9-1 EARTHEN BARRICADES

Purchaser shall construct barricades in accordance with the EARTHEN BARRICADE DETAIL.

<u>Road</u>	<u>Stations</u>
2923065	0+25
2923074	0+25
Decom 1	0+25
Temp 1	0+25
Temp 2	0+25
Unit 7 Spur	0+00
Unit 8 Spur	0+25
Unit 11 Spur	0+25
Unit 12 Spur	0+25

9-2 CULVERT REMOVAL FROM LIVE STREAM

On the following road(s), Purchaser shall remove existing culverts from live streams and leave the resulting channel open with excavation slope and excavated channel width as specified. Place excavated material in a waste area designated by the Contract Administrator.

<u>Road</u>	<u>Stations</u>	<u>Excavated Channel Width</u>	<u>Slope Ratio</u>	<u>Comments</u>
2923074	4+30	3 ft	1.5H:1V	Slope 1.5H:1V or match valley wall

9-3 CULVERT MATERIAL REMOVED FROM FEDERAL LAND

Culverts removed from roads become the property of the Purchaser and must be removed from Federal land.

9-5 POST-HAUL MAINTENANCE

Purchaser shall perform post-haul maintenance in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS on the following roads:

<u>Road</u>	<u>Stations</u>
2923	0+00 to 204+75
2923060	0+00 to 103+14
2923070	0+00 to 64+56
2923063	0+00 to 8+75

2923065	0+00 to 13+35
2923074	0+00 to 33+00

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface.

9-15 ROAD CLOSURE

Purchaser shall close the following roads at the termination of use.

<u>Road</u>	<u>Stations</u>
2923065	0+00 to 13+35
2923074	0+00 to 33+00

9-16 CLOSURE

At a minimum, closure consists of:

- Maintain road according to the FOREST ACCESS ROAD SPECIFICATIONS.
- Construct drivable waterbars according to the attached DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 30 feet between waterbars or between natural drainage paths and with a maximum spacing of 300 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must drain onto stable locations.
- Block roads with earthen barricades in accordance with the attached EARTHEN BARRICADE DETAIL.

SUBSECTION DECOMMISSIONING AND ABANDONMENT

9-20 ROAD DECOMMISSIONING

Purchaser shall decommission the following roads at the termination of use.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
Decom 1	0+00 to 17+95	Medium
Temp 1	0+00 to 31+00	Medium
Temp 2	0+00 to 5+40	Medium
Unit 7 Spur	0+00 to 7+00	Medium
Unit 8 Spur	0+00 to 3+50	Medium
Unit 11 Spur	0+00 to 6+70	Medium
Unit 12 Spur	0+00 to 5+20	Medium

9-23 MEDIUM DECOMMISSIONING

- Construct non-drivable waterbars in accordance with the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 100 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Block roads with earthen barricades in accordance with the attached EARTHEN BARRICADE DETAIL.
- Remove ditch cross drain culverts and leave the resulting trench open.
- Slope all trench walls and approach embankments no steeper than 1.5:1.
- Apply grass seed concurrently with abandonment and in accordance with Section 8 EROSION CONTROL.
- Cover, concurrently with decommissioning, all exposed soils within 100 feet of any live stream, with a 4-inch deep layer of straw.
- Scatter woody debris onto abandoned road surfaces.

SECTION 10 MATERIALS

10-6 GEOTEXTILE FOR TEMPORARY SILT FENCE

Geotextiles must meet the following minimum requirements for strength and property qualities, and must be designed by the manufacturer to be used for filtration. Woven slit-film geotextiles are not allowed. Material must be free of defects, cuts, and tears.

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Unsupported between posts
Apparent opening size	D 4751	No. 30 max., No. 100 min.
Water permittivity	D 4491	0.02 sec ⁻¹
Grab tensile strength	D 4632	180 lb in machine direction, 100lb in cross-machine direction
Grab tensile elongation	D 4632	30% max. at 180 lb or more
Ultraviolet stability	D 4355	70% retained after 500 hours of exposure

10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts must meet AASHTO M-294 specifications, or ASTM F-2648 specifications for recycled polyethylene. Culverts must be Type S – double walled with a corrugated exterior and smooth interior.

10-20 FLUME AND DOWNSPOUT

Downspouts and flumes must meet the AASHTO specification designated for the culvert. Plastic downspouts and flumes must be Type C – corrugated single walled pipe.

10-22 PLASTIC BAND

Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used. Couplings must be split coupling band. Split coupling bands must have a minimum of four corrugations, two on each side of the pipe joint.

**2D TIMBER SALE
SUMMARY - Road Development Costs**

GOOD NEIGHBOR AUTHORITY
OLYMPIC NATIONAL FOREST

PACIFIC RANGER DISTRICT
CLALLAM COUNTY WASHINGTON

Compiled By Justin Long

Agreement # 36-101213

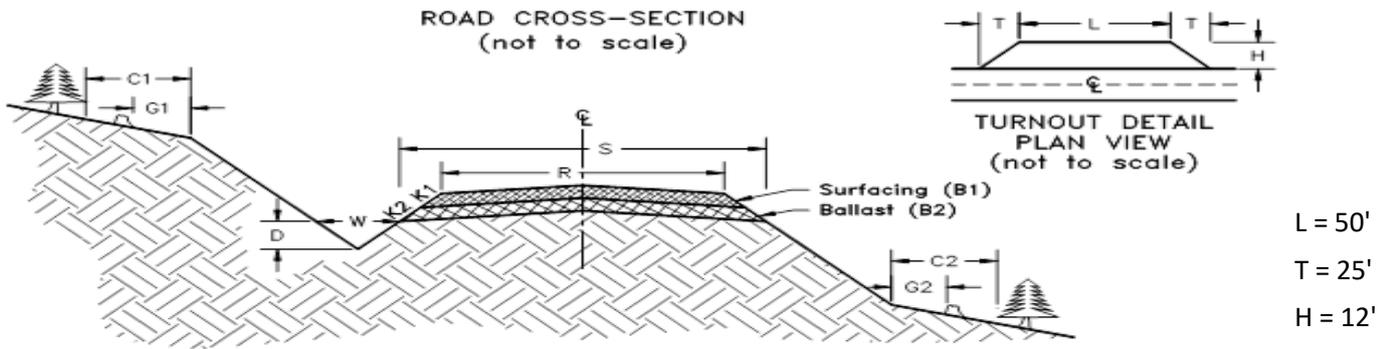
Date 3/20/2020

ROAD NUMBERS:

ROAD STANDARD:	Construction	Reconstruction	Maintenance
NUMBER OF STATIONS:	22+40	36+40	434+70
CLEARING & GRUBBING:	\$ 4,200.00	\$ 3,188.16	\$ -
EXCAVATION AND FILL:	\$ 11,315.01	\$ 5,778.42	\$ 4,599.00
ROAD & LANDING ROCK:	\$ 11,721.00	\$ 11,341.96	\$ 52,856.18
CULVERTS AND FLUMES:	\$ -	\$ 657.90	\$ 6,918.55
MISC. MAINTENANCE:	\$ 123.42	\$ 654.69	\$ 74,239.90
STRUCTURES:	\$ -	\$ -	
DECOMMISSIONING:	\$ 7,693.00	\$ -	\$ -
MANAGEMENT & OVERHEAD (10%)	\$ 3,505.24	\$ 2,162.11	\$ 13,861.36
MOBILIZATION:	\$ 1,160.00	\$ 1,160.00	\$ 1,160.00
POST HAUL MOBILIZATION:	\$ 783.33	\$ 783.33	\$ 783.33
COST PER STATION:	\$ 1,808.08	\$ 706.77	\$ 355.23
TOTAL COSTS:	\$ 40,501.00	\$ 25,726.58	\$ 154,418.33

TOTAL (All Roads):	\$220,645.92
SALE VOLUME MBF:	5,310.00
TOTAL \$/MBF:	\$41.55

TYPICAL SECTION SHEET



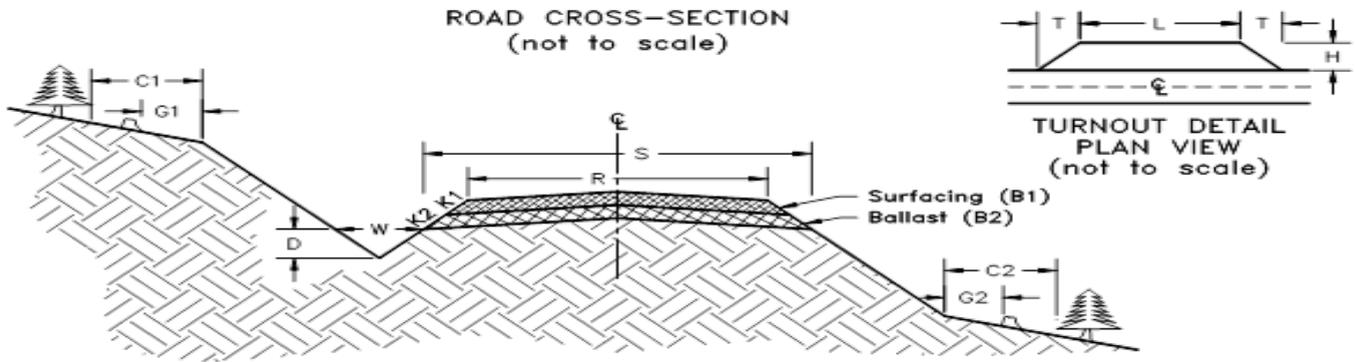
Road Name	Stations		Tolerance Class	Subgrade Width	Road Width	Ditch		Crown @ CL (in)	Grubbing Limits		Clearing Limits	
	From	To				Width	Depth		G1	G2	C1	C2
2923	0+00	204+75	-	-	-	-	-	-	-	-	-	-
2923060	0+00	103+14	-	-	-	-	-	-	-	-	-	-
2923063	0+00	8+75	-	-	-	-	-	-	-	-	-	-
2923065	0+00	13+35	-	-	-	-	-	-	-	-	-	-
2923070	0+00	64+56	-	-	-	-	-	-	-	-	-	-
2923074	0+00	33+00	-	-	-	-	-	-	-	-	-	-
Pit Road	0+00	7+15										
Temp 1	0+00	31+00	C	14	12	3	1	3	5	5	3	3
Temp 2	0+00	5+40	C	14	12	3	1	3	5	5	3	3
Unit 7 Spur	0+00	7+00	C	14	12	3	1	3	5	5	3	3
Unit 8 Spur	0+00	3+50	C	14	12	3	1	3	5	5	3	3
Unit 11 Spur	0+00	6+70	C	14	12	3	1	3	5	5	3	3
Unit 12 Spur	0+00	5+20	C	14	12	3	1	3	5	5	3	3

COMPACTION LIST

Page 1 of 1

Road Name	Stations		Type	Max. Depth per Lift (in.)	Equipment Type	Equipment Weight (pounds)	Minimum # of Passes	Maximum Operating Speed
	From	To						
All	-	-	Maintenance grading	-	Vibratory Smooth Drum	12000	3 Low Freq. Vibe on	3
All	-	-	Subgrade	-	Vibratory Smooth Drum	12000	3 Low Freq. Vibe on	3
All	-	-	Embankment	12	Vibratory Smooth Drum	12000	3 Low Freq. Vibe on	3
All	-	-	Fill	24	Vibratory Smooth Drum	12000	3 Low Freq. Vibe on	3
All	-	-	Rock	6	Vibratory Smooth Drum	12000	3 Low Freq. Vibe on	3
All	-	-	Waste Area	24	Excavator	20000	2	3

ROCK LIST
PAGE 1 OF 2



Rock Sources											
A	Grindstone Quarry										
C	Commercial Pit										
Road Name	Rock Type	Stations		Rock Slope		Compacted Depth (in)		C. Y./Sta	Number of Stations	C.Y. Needed	Rock Source
		From	To	K1	B2						
2923.00	S	0+00	204+75							300	C
Culvert Backfill	B									60	A,C
Armoring	LLRR									0	A,C
Energy Dissapator	LLRR									12	A,C
Landing Rock	B					50	3.00			150	A,C
2923060.00	S	0+00	103+14							260	C
Bridge Rock	S									10	C
Culvert Backfill	B									20	
Culvert Armoring	LLRR									4	
bridge Armoring	LLRR									150	A,C
Engineered Stream Material	B									150	A,C
Landing Rock	B					50	6.00			300	A,C
2923063.00	B	0+00	8+75								
Landing Rock	B					50	2.00			100	A,C
2923065.00	B	0+00	13+35	1.5:1	4	23	13.35			307	A,C
Landing Rock	B					50	2.00			100	A,C
2923070.00	S	0+00	64+56							150	C
Landing Rock	B					50	2.00			100	A,C
2300074.00	B	0+00	33+00	1.5:1	8	48	33.00			1584	A,C
Landing Rock	B					50	1.00			50	A,C

ROCK LIST
PAGE 2 OF 2

Rock Sources									
	A	North Fork Calawah Pit							
	C	Commercial Pit							
Road Name	Rock Type	Stations		Rock Slope	Compacted Depth (in)	C. Y./ Sta	Number of Stations	C.Y. Needed	Rock Source
		From	To	K1	B2				
Temp 1	B	0+00	21+00	1.5:1	6	35	21.00	735	A,C
Ballast	B	21+00	25+00	1.5:1	12	70	4.00	280	A,C
Ballast	B	25+00	31+00	1.5:1	6	35	6.00	210	A,C
Landing Rock	B					50	4.00	200	A,C
Temp 2	B	0+00	5+40					50	A,C
Unit 7 Spur	B	0+00	7+00	1.5:1	8	48	7.00	336	A,C
Landing Rock	B					50	2.00	100	A,C
Unit 8 Spur	B	0+00	3+50	1.5:1	8	48	3.50	168	A,C
Landing Rock	B					50	2.00	100	A,C
Unit 11 Spur	B	0+00	6+70	1.5:1	8	48	6.70	322	A,C
Landing Rock	B					50	2.00	100	A,C
Unit 12 Spur	B	0+00	3+20	1.5:1	8	48	3.20	154	A,C
Ballast	B	3+20	5+20	1.5:1	18	105	2.00	210	A,C
Landing Rock	B					50	2.00	100	A,C

Rock Type

B - Pit Run Ballast
S - 1 1/4" Crushed
LLRR - Light Loose Rip Rap

BALLAST ROCK TOTAL	5985 CUBIC YARDS
SURFACING ROCK TOTAL	710 CUBIC YARDS
LIGHT LOOSE RIP RAP TOTAL	16 CUBIC YARDS
TOTAL ROCK	6711 CUBIC YARDS

CULVERT AND DRAINAGE LIST

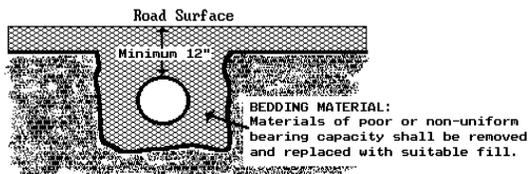
Page 1 of 1

Road	Location	Culvert Diameter (in.)	Length (feet)		Energy Dissapater (CY)				Backfill Material			Remarks		
			Culvert	Flume	Inlet	Outlet	Type	Source	cy	Type	Source			
2923	6+74													
	12+75													
	58+60 to 61+10												Ditch Reconstruction	
	72+60	18	30		2	2	LLRR	AC	20	SL	AC		Cross Drain	
	105+25 to 115+03												Ditch Reconstruction	
	115+03												DOL, DOR	
	115+55	24	50		2	2	LLRR	AC	20	SL	AC		Cross Drain	
198+93	18	30		2	2	LLRR	AC	20	SL	AC		Cross Drain		
2923060	0+00													
	6+25													
	8+75												Install 60x16 Bridge	
	15+15	18	30	20	1	1	LLRR	AC	10	SL	AC		Cross Drain	
	16+55												Construct Sediment Traps	
	16+60												Clean Inlet / Outlet	
	17+65	18	30	15	1	1	LLRR	AC	10	SL	AC		Cross Drain	
2923074	4+30	24	50								AC	NT	Temp Crossing	
Temp 1	21+00	18	30								AC	10	NT	Cross Drain

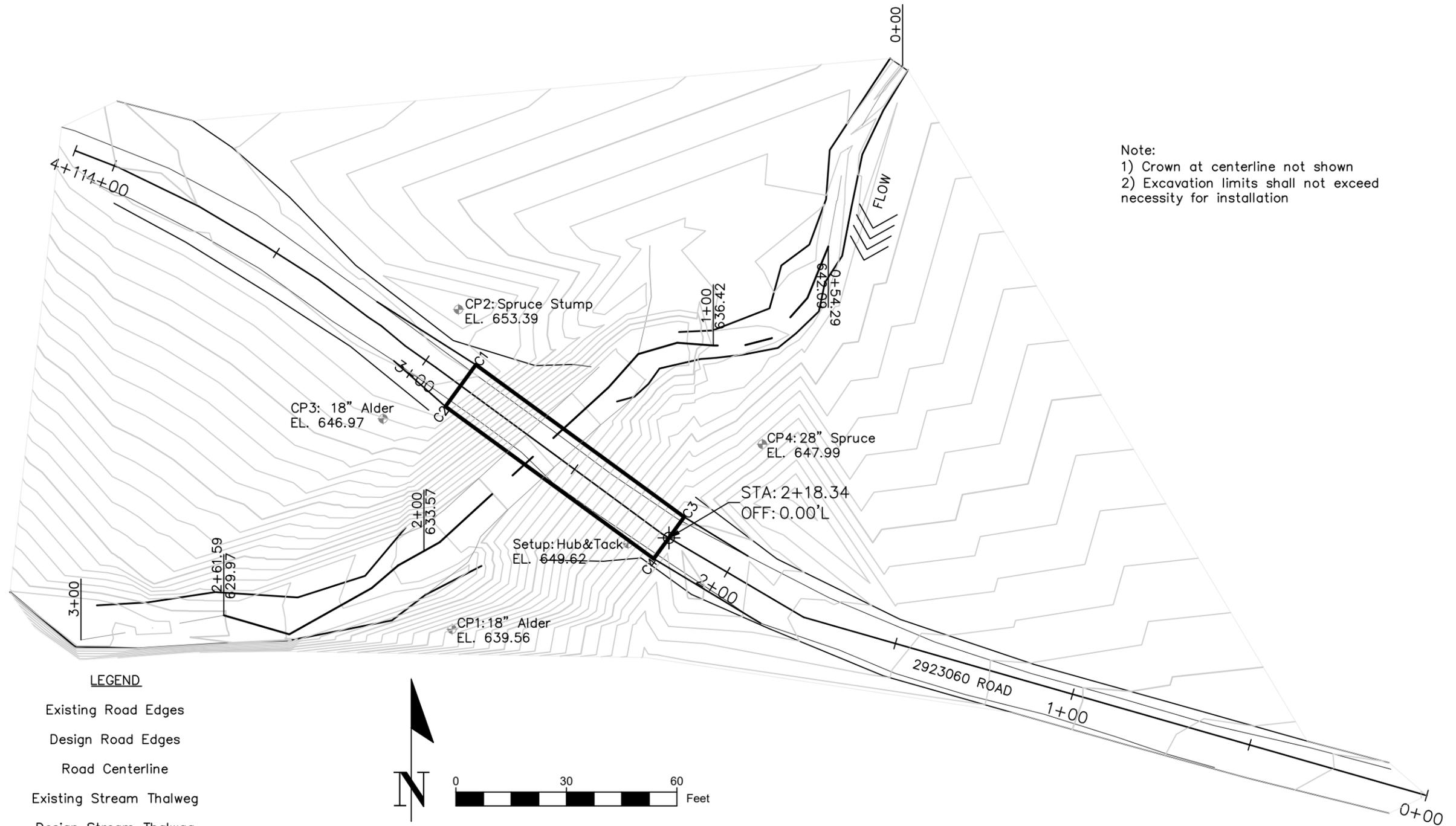
Key:

- SR - Shot Rock
- NT - Native (bank run)
- SL - Select Fill
- HLRR - Heavy Loose Rip Rap
- LLRR - Light Loose Rip Rap
- Flume - Half round pipe
- Downspout - Full round pipe
- DOL- Ditch Out Left
- DOR- Ditch Out Right

CULVERT BACKFILL AND BASE PREPARATION
(For culverts less than 36")



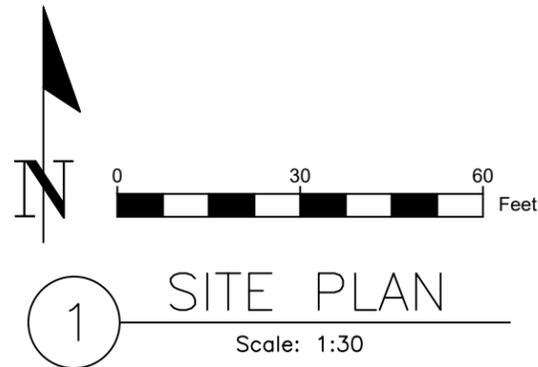
2923060 BRIDGE INSTALL DETAIL



Note:
 1) Crown at centerline not shown
 2) Excavation limits shall not exceed necessity for installation

LEGEND

-  Existing Road Edges
-  Design Road Edges
-  Road Centerline
-  Existing Stream Thalweg
-  Design Stream Thalweg
-  New Structure
-  Benchmark/Control Points



SITE PLAN

Scale: 1:30

BY	DATE	REVISIONS
CHAD VANDEHEY	9.16.2020	

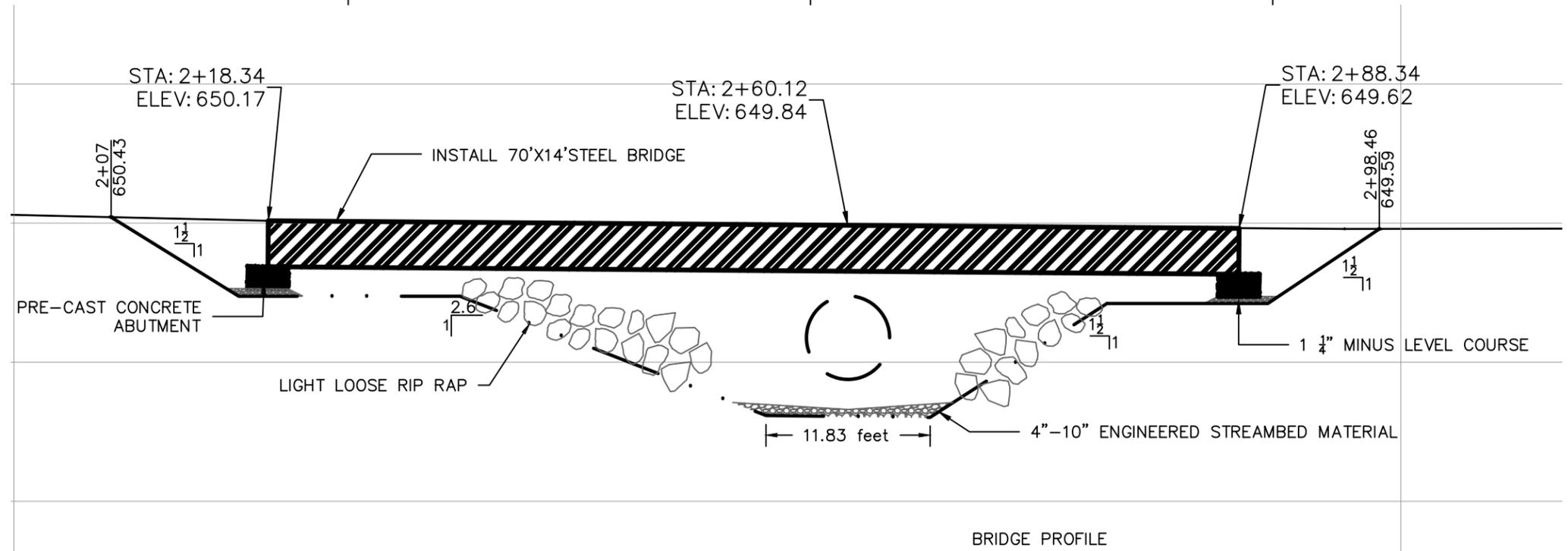
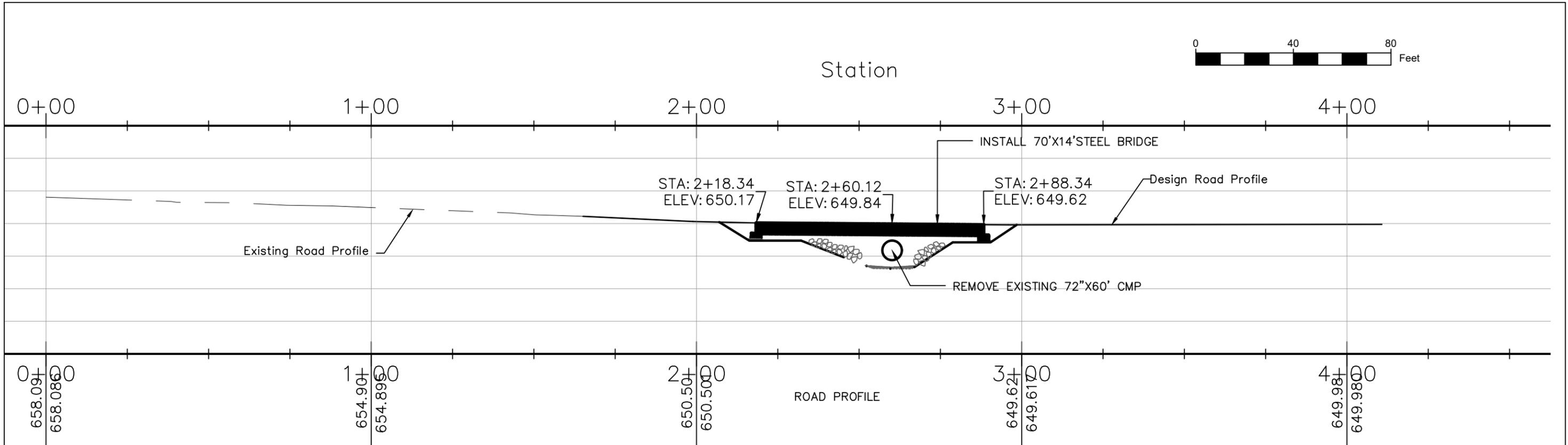


WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

SITE PLAN-2923060
 DRAWING TITLE: 70'x14' Steel Bridge
 LAND OWNER: USFS

SEC. TOWNSHIP RANGE: SEC. 13 T29N R12W
 LAT & LONG: N48.018 W124.193°
 DATE: 9/16/2020

SHEET
 1
 OF
 3



<A> Construct stream channel from STA 0+54 to STA 2+62 according to BRIDGE PROFILE and CHANNEL PROFILE sections. Apply 4"-10" Engineered Streambed Material to a depth of 1 foot if existing material is unsuitable.

 Extend 4"-10" Engineered Streambed Material to channel excavation Extents.

<C> Fill plunge pool to meet designed stream grade with 4"-10" Engineered Streambed Material.

<C> 1 1/4 Inch Minus Crushed Rock for leveling course.

<D> Place LIGHT LOOSE RIP RAP on excavated banks for armoring.

<E> Haul Waste Material to Waste Area Approx. 1/4 mile west on 2923060 RD

REV	BY	DATE

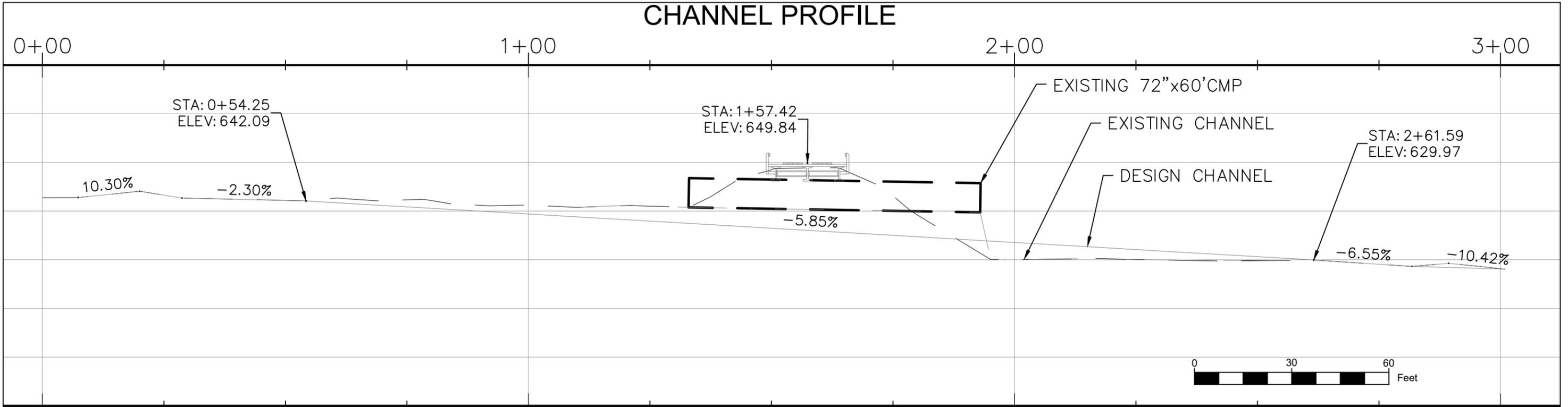


DRAWING TITLE: ROAD PROFILE-2923060
70'x14' Steel Bridge
LAND OWNER: USFS

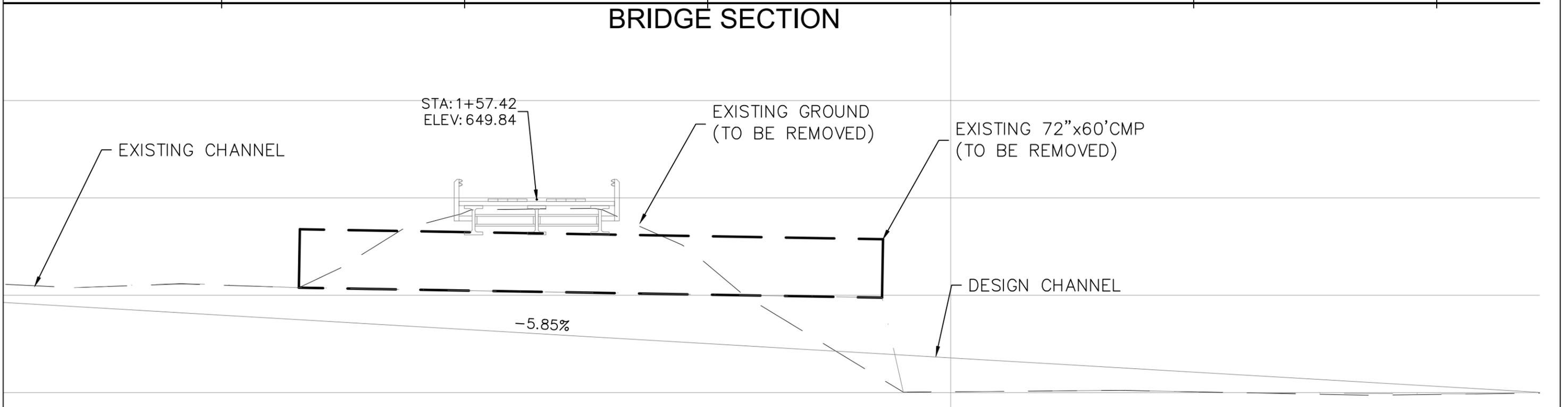
SEC. TOWNSHIP RANGE: SEC. 13 T29N R13W
LAT & LONG: N48.018 W124.193'
DATE: 09/16/2020

SHEET
2
OF
3

CHANNEL PROFILE



BRIDGE SECTION



<table border="1"> <thead> <tr> <th>1</th> <th>BY</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			1	BY	DATE										 <p>WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES</p>	<p>DRAWING TITLE: <u>CHANNEL PROFILE- 2923060</u> <u>70'x14' STEEL BRIDGE</u></p> <p>LAND OWNER: <u>USFS</u></p>	<p>SEC. TNSHP RANGE: <u>SEC. 13 T29N R12W</u></p> <p>LAT & LONG: <u>N48.018 W124.193'</u></p> <p>DATE: <u>9/16/2020</u></p>	<p>SHEET 3 OF 3</p>
1	BY	DATE																

CONTROL POINT INFORMATION					
SETUP ELEVATION 649.62					
FROM	TO	AZ(DEG)	HD(FT)	VD(FT)	
CP1	C1	85	71.92	13.94	
CP1	C2	92	60.35	13.94	
CP1	C3	26	69.96	10.61	
CP1	C4	19	58	10.61	
CP2	C1	287	15.71	-3.77	
CP2	C2	262	26.54	-3.77	
CP2	C3	317	83.16	-3.22	
CP2	C4	308	85.87	-3.22	
CP3	C1	30	29.12	2.65	
CP3	C2	11	17.25	2.65	
CP3	C3	342	85.96	3.4	
CP3	C4	333	82.7	3.4	
CP4	C1	165	80.7	1.63	
CP4	C2	173	86.63	1.63	
CP4	C3	223	28.98	2.18	
CP4	C4	226	42.8	2.18	

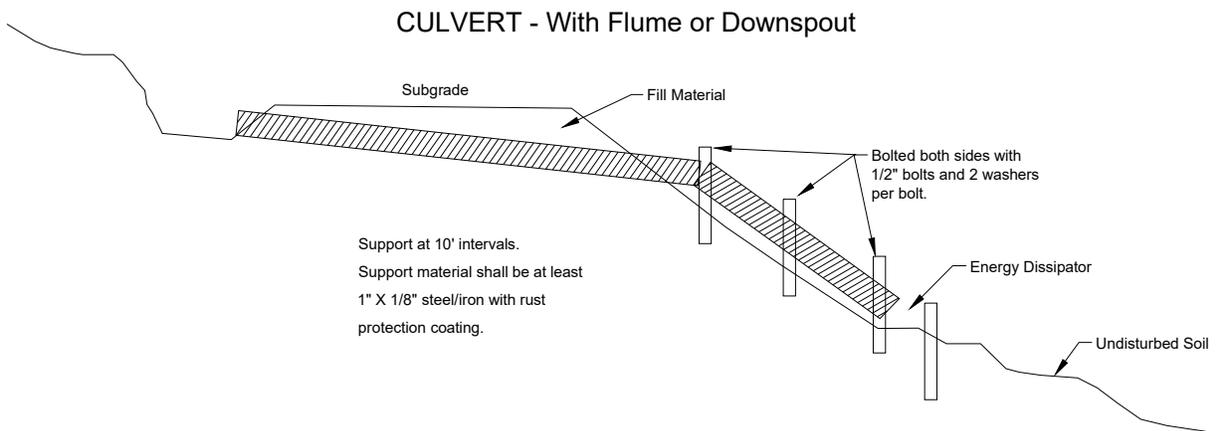
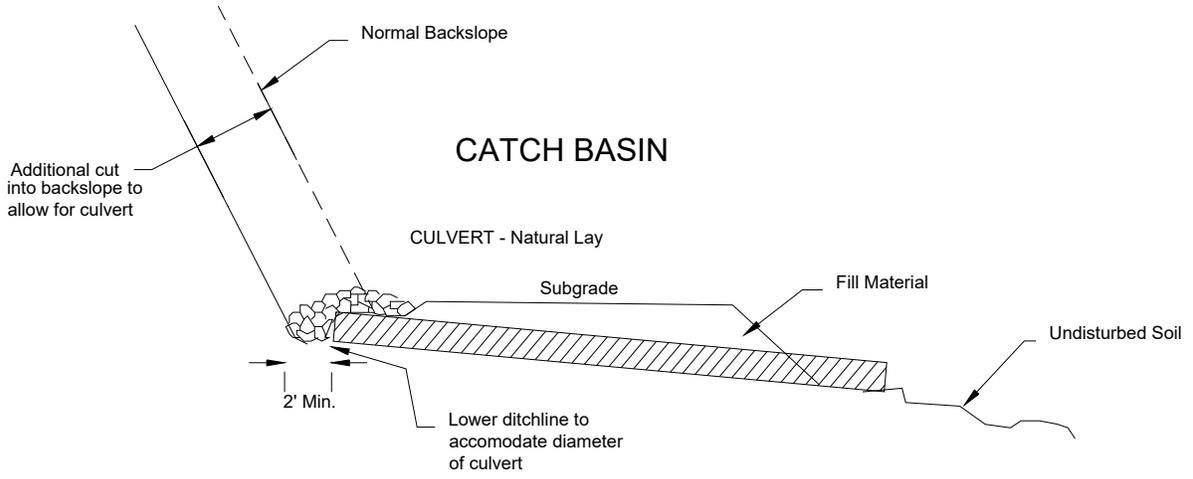
Rock Quantities*	
Light Loose Rip Rap	150 CY
1 1/4" Minus Crushed Rock	10 CY
4"-10" Engineered Streambed Material	150 CY
MIX:	
60% 4"-10" Streambed cobbels	
40% Streambed Sediment	

*= Engineer Estimates

Material*	
Cut	857 CY

CULVERT AND DRAINAGE SPECIFICATION DETAIL

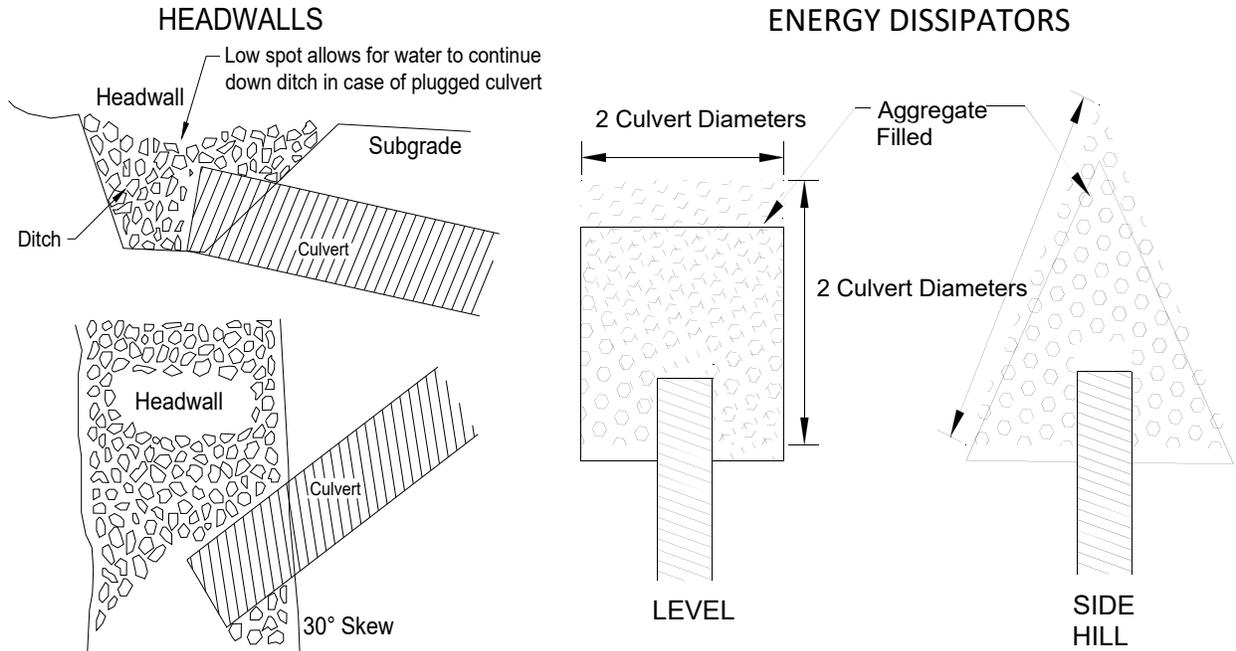
(Page 1 of 3)



CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 2 of 3)

Proper preparation of foundation and placement of bedding material shall precede the installation of all culvert pipe. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform dense unyielding base. The backfill material shall be placed so that the pipe is uniformly supported along the barrel.



Headwalls to be constructed of material that will resist erosion.

Dissipater Specifications:
Depth: 1 culvert diameter
Aggregate: as specified in the CULVERT LIST.

CULVERT AND DRAINAGE SPECIFICATION DETAIL

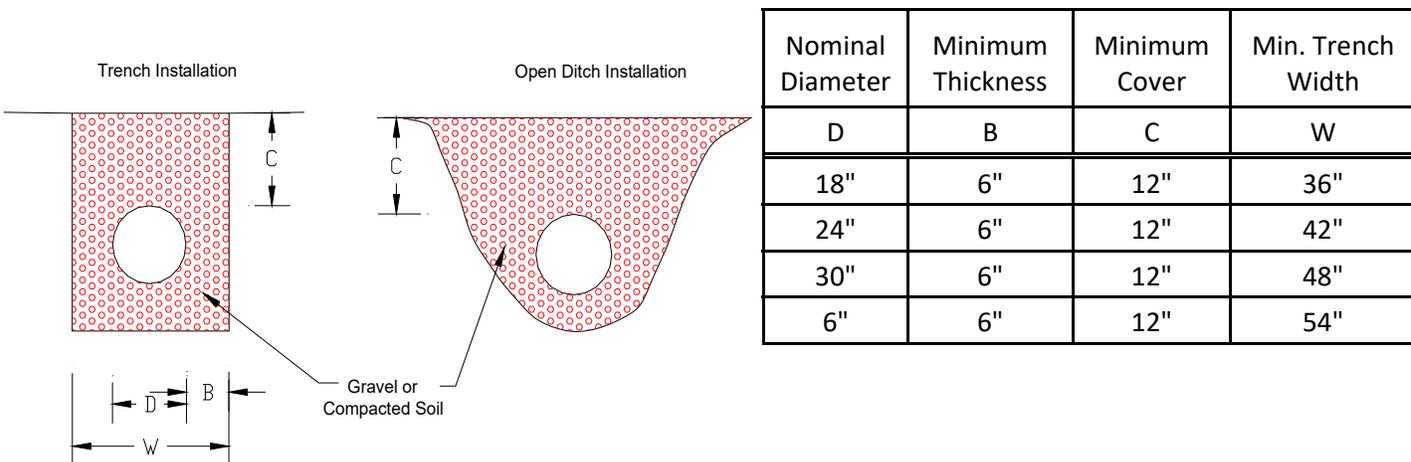
(Page 3 of 3)

POLYETHYLENE PIPE INSTALLATION

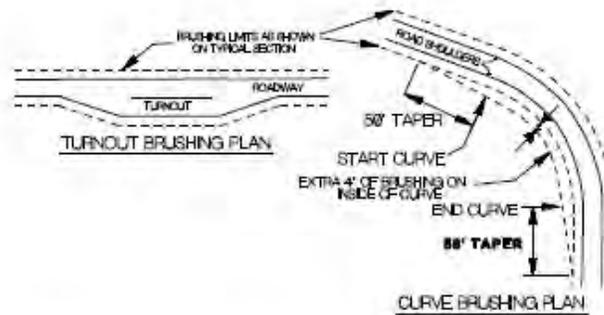
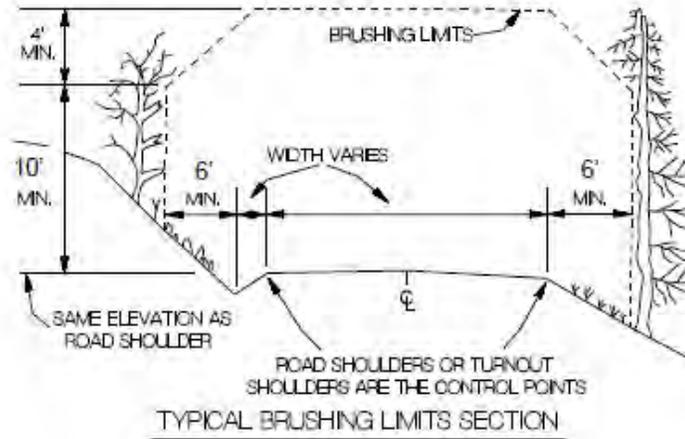
INSTALLATION REQUIREMENTS:

1. Crushed stone, gravel, or compacted soil backfill material shall be used as the bedding and envelope material around the culvert. The aggregate size shall not exceed 1/6 pipe diameter or 4" diameter, whichever is smaller.
2. The corrugated pipe shall be laid on grade, on a layer of bedding material as shown for the two types of installations. If native soil is used as the bedding and backfill material, it shall be well compacted in six inch layers under the haunches, around the sides and above the pipe to the recommended minimum height of cover.
3. Either crushed aggregate or flexible (asphalt) pavement may be laid as part of the minimum cover requirements.
4. Site conditions and availability of bedding materials often dictate the type of installation method used.
5. The load bearing capability of flexible conduits is dependent on the type of backfill material used and the degree of compaction achieved. Crushed stone and gravel backfill materials typically reach a compaction level of 90-95% AASHTO standard density without compaction. When native soils are used as backfill material, a compaction level of 85% is required. This minimum compaction can be achieved by either hand or mechanical tamping.

MINIMUM DIMENSIONS Trench or Open Ditch Installation

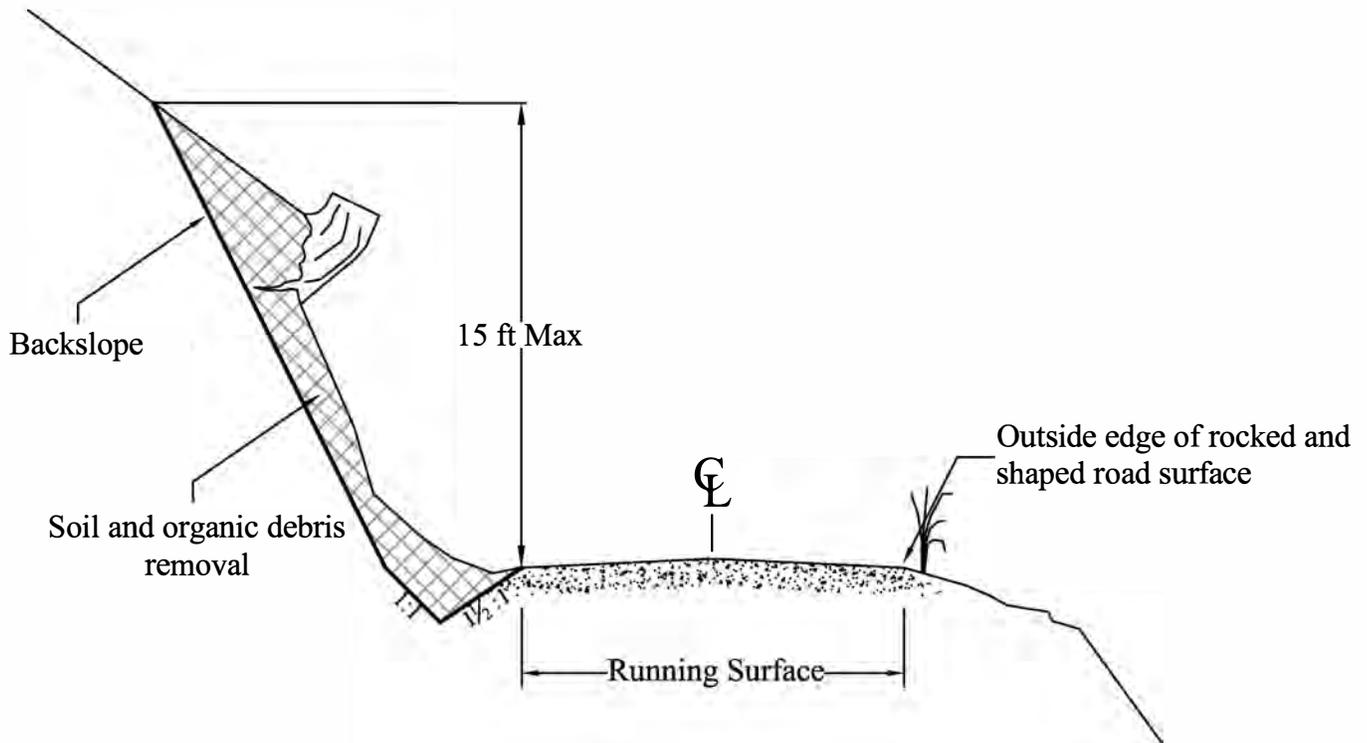


BRUSHING DETAIL



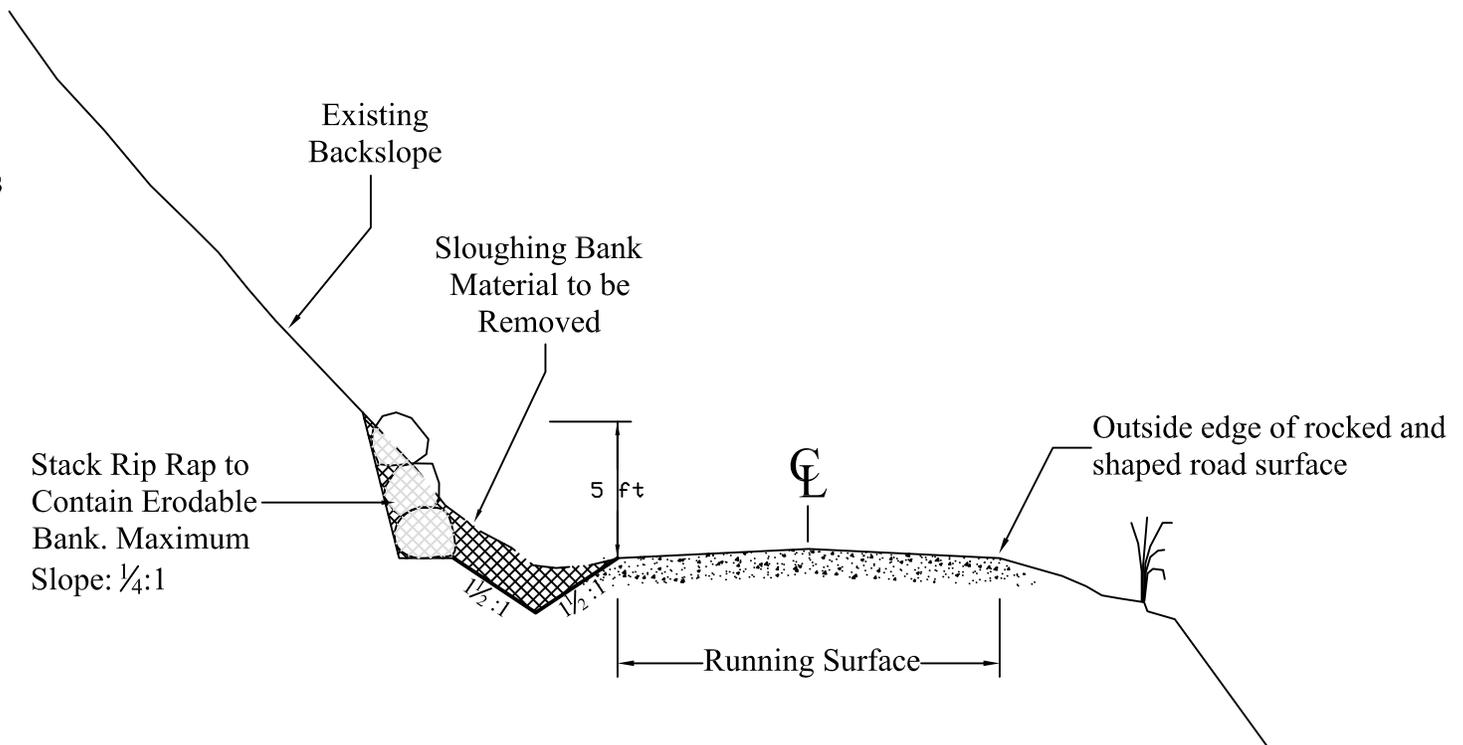
1. All vegetation within the brushing limits shall be cut to within 3 inches of the ground, unless otherwise directed by the Contract Administrator
2. All brush, trees, limbs, etc. shall be removed from the road surface, cut banks, culvert inlets/outlets, and ditch lines
3. All debris that may roll or move into the ditch line shall be removed and placed in a stable location

Ditch Cleaning Detail



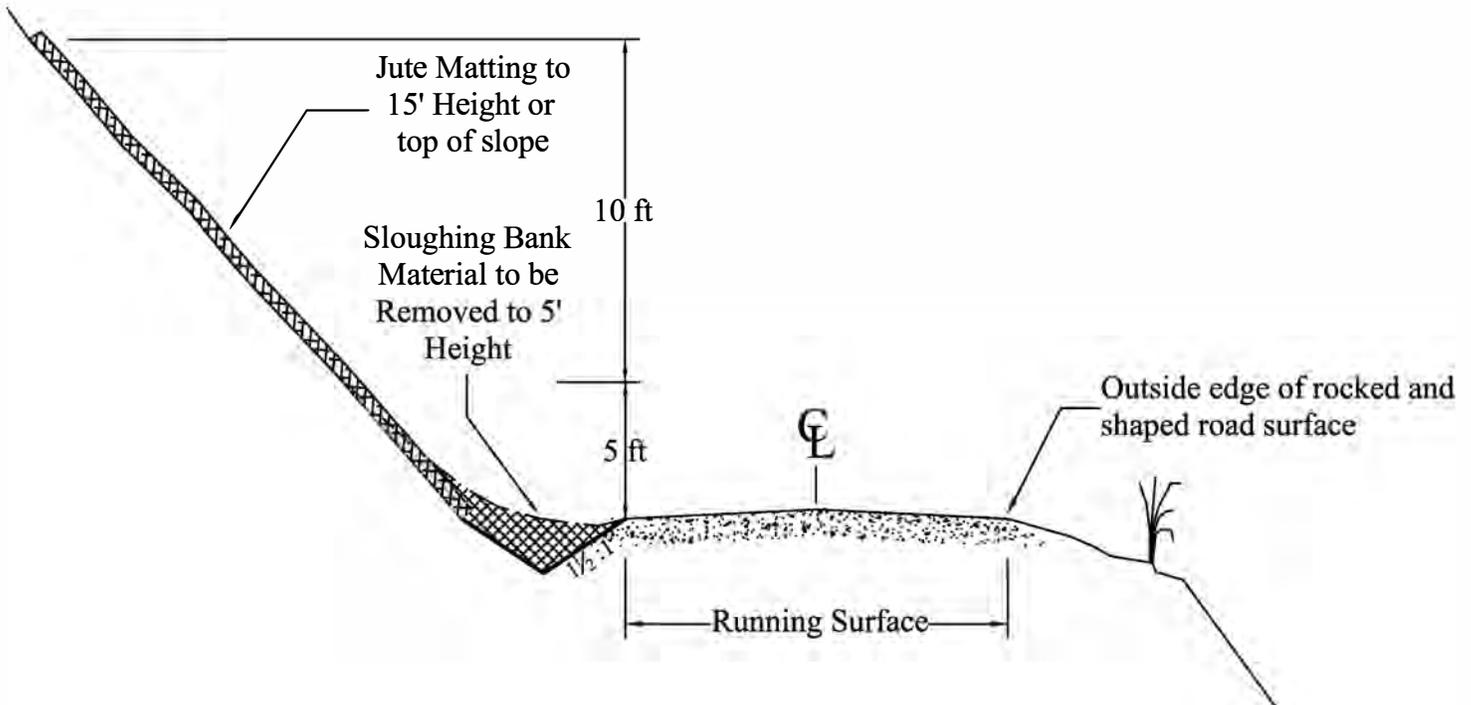
1. The backslope shall be no steeper than 1:1, unless the material is hardpan or solid rock, in which case it may be $\frac{1}{4}$:1.
2. If there is sufficient width for the ditch without affecting the cut bank, than removing bank material is not required.
3. Bank material above the ditch shall be removed to a maximum height of 15 feet, if needed to meet the requirements of this detail.
4. If there is insufficient width to clean or construct a ditch without disturbing more than 15 vertical feet of bank, the Contract Administrator may authorize changes to this plan in order to still meet the intent of having a ditch, while staying within the excavation limits already set.
5. Ditch cleaning or construction shall not shrink the running surface of the road.

Ditch Cleaning Detail



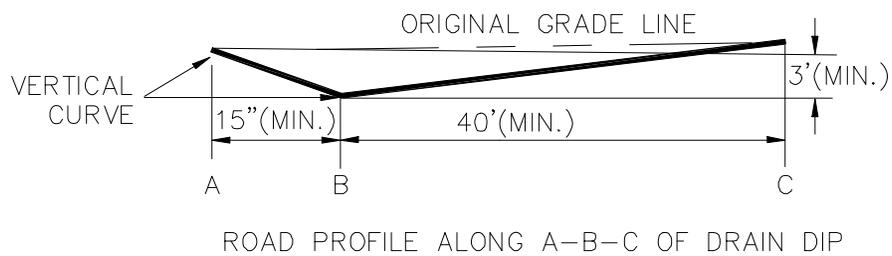
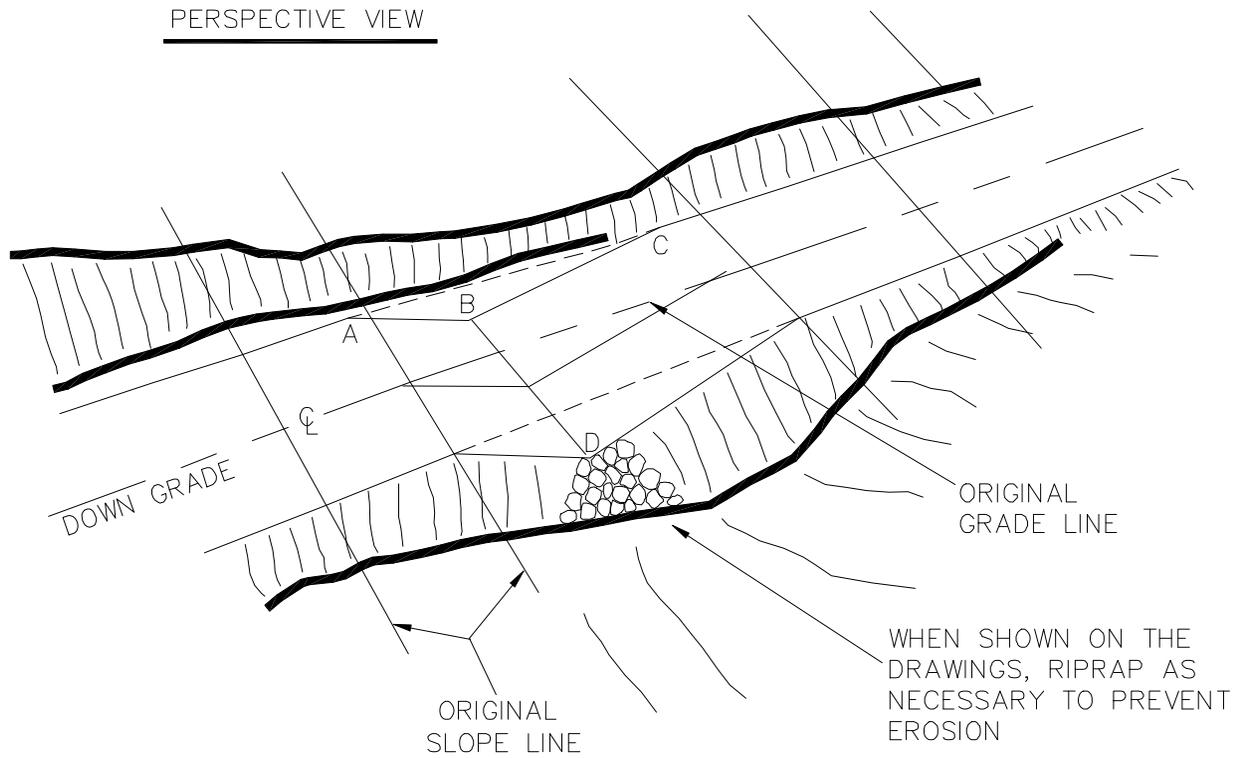
1. The ditch and cut bank shall be cleaned of excess soils and organic debris. Ditch depth shall be 2 feet from the edge of the running surface.
2. Additional material from the bank shall be removed to allow stacking of Rip Rap as shown.
3. Minimum height of Rip Rap above edge of road shall be 5 feet.
4. All waste materials shall be end-hauled. Grass seed in accordance with Road Plan clause 5.4-3.2
5. Ditch cleaning or construction shall not shrink the running surface of the road.

DITCH CLEANING DETAIL



1. The ditch and cut bank shall be cleaned of excess soils and organic debris. Ditch depth shall be 2 feet from the edge of the running surface.
2. The ditch and cut bank shall be cleaned to a height of 5 feet above the edge of the running surface.
3. Erosion control matting shall be installed on the cut slope above the ditch to a height of 15 feet above the edge of the running surface, or the top of the slope, whichever is higher. At the discretion of the Contract Administrator, erosion control matting may not be required where the cut slope is already heavily vegetated.
4. All waste materials shall be end-hauled. Grass seed in accordance with Road Plan clause 8-25.
5. Ditch cleaning or construction shall not shrink the running surface of the road.

DRIVABLE DIP DETAIL



- Notes: 1) Plan shown is for outsloped dip. Dips may be either insloped or outsloped.
- 2) When insloped, dips shall discharge into a culvert, drop inlet, or ditch out.
- 3) The minimum cross grade from "B" to "D" shall be 6%.
- 4) Skew line B-D to fit low point in draw if located in natural drain.
- 5) Preferred construction is to excavate entire dip. If embankment is used, it shall be rock.

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Page 1 of 2

Cuts and Fills

- Maintain slope lines as constructed. Remove slides from ditches and the roadway. Repair fill-failures, in accordance with Clause 4-6 EMBANKMENT SLOPE RATIO, with selected material or material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

- Grade and shape the road surface, turnouts, and shoulders to the original shape as directed, to provide a smooth, rut-free traveled surface and maintain surface water runoff in an even, unconcentrated manner.
- Blading shall not undercut the backslope or cut into geotextile fabric on the road.
- If required by the Contract Administrator, water shall be applied as necessary to control dust and retain fine surface rock.
- Surface material shall not be bladed off the roadway. Replace surface material when lost or worn away, or as directed by the Contract Administrator.
- Remove shoulder berms to facilitate drainage, except as marked or directed by the Contract Administrator.
- For roads with geotextile fabric: spread surface aggregate to fill in soft spots and wheel ruts (barrel spread) to prevent damage to the geotextile fabric.

Drainage

- Prevent silt bearing road surface and ditch runoff from delivering sediment to any streams or wetlands.
- Maintain drivable dips and drivable waterbars as needed to keep them functioning as intended.
- Maintain headwalls to the road shoulder level with material that will resist erosion.
- Maintain energy dissipators at culvert outlets with non-erodible material or rock.
- Keep ditches and culverts clear of obstructions and functioning as intended.
- Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This shall be done even during periods of inactivity.

Structures

- Repair culverts, bridges, gates, fences, cattle guards, signs, and other road structures as required because of purchaser use.

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Page 2 of 2

Preventative Maintenance

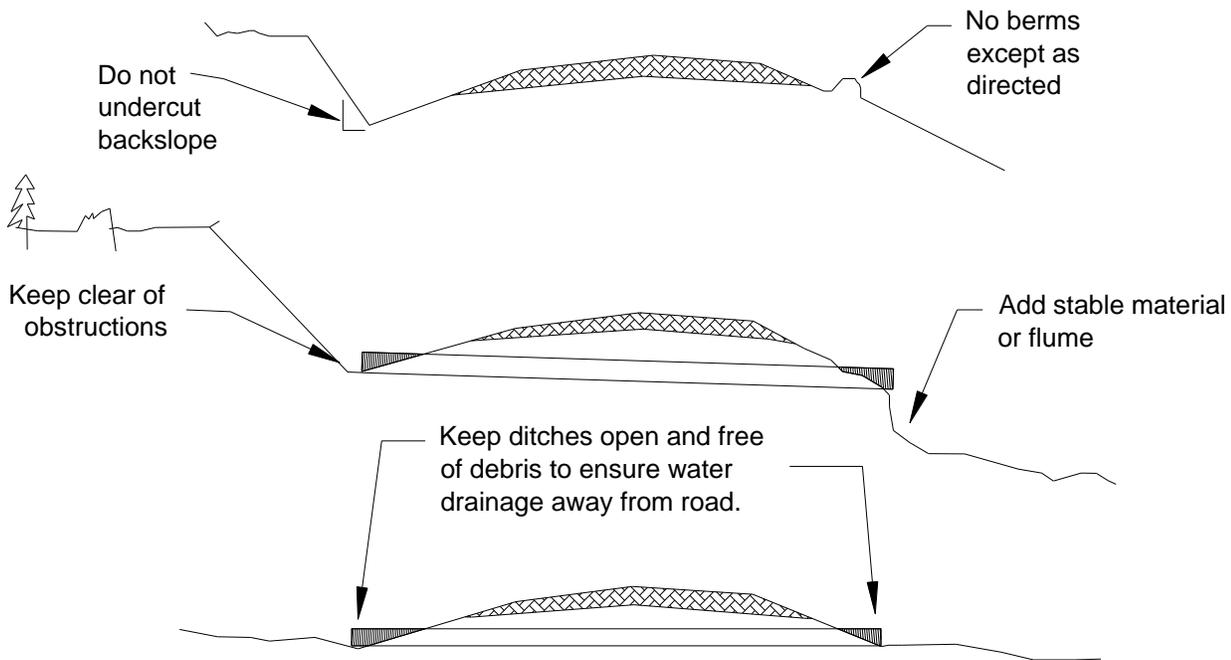
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

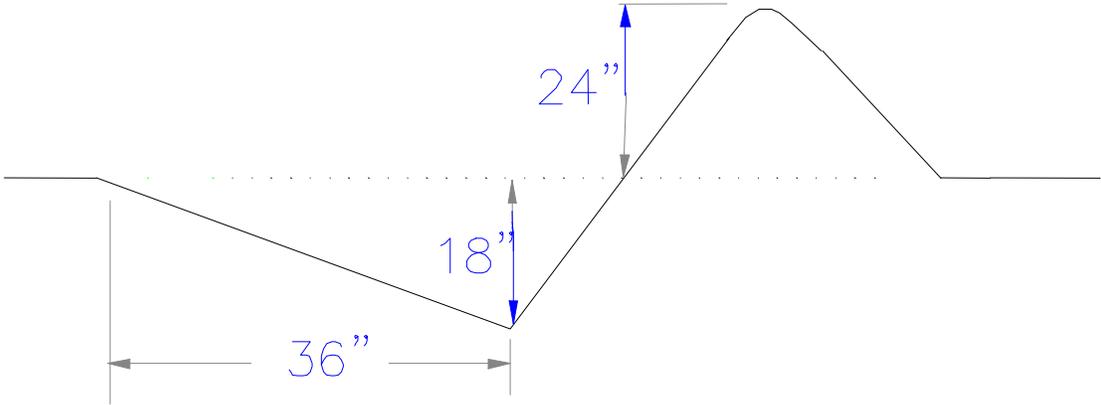
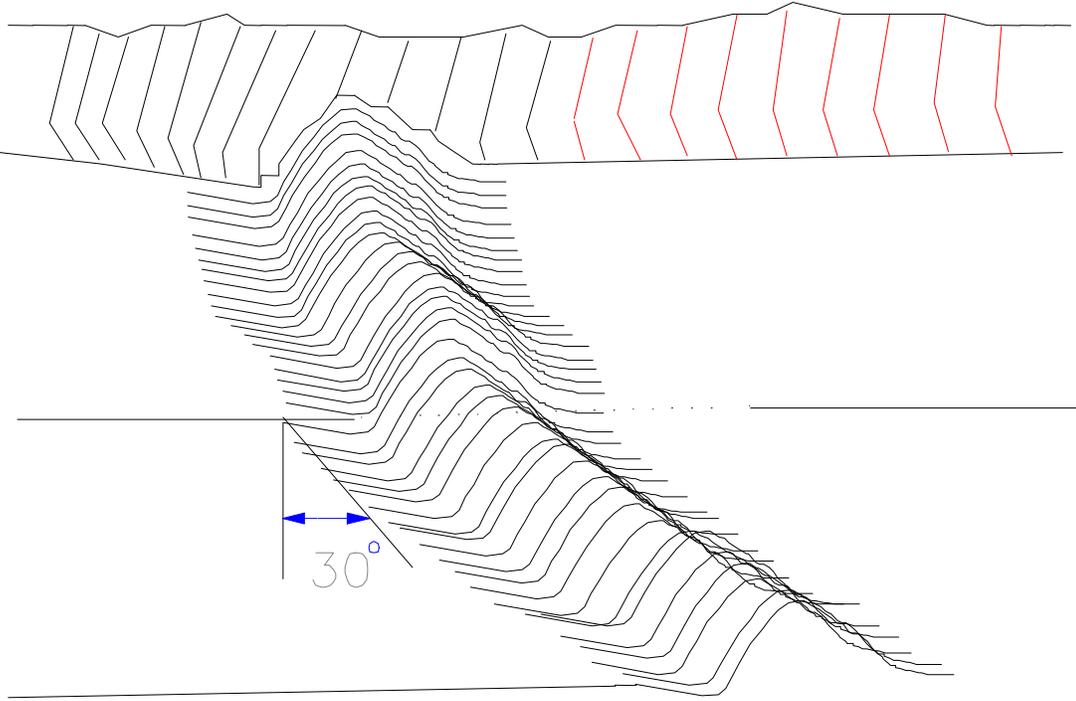
- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

Debris

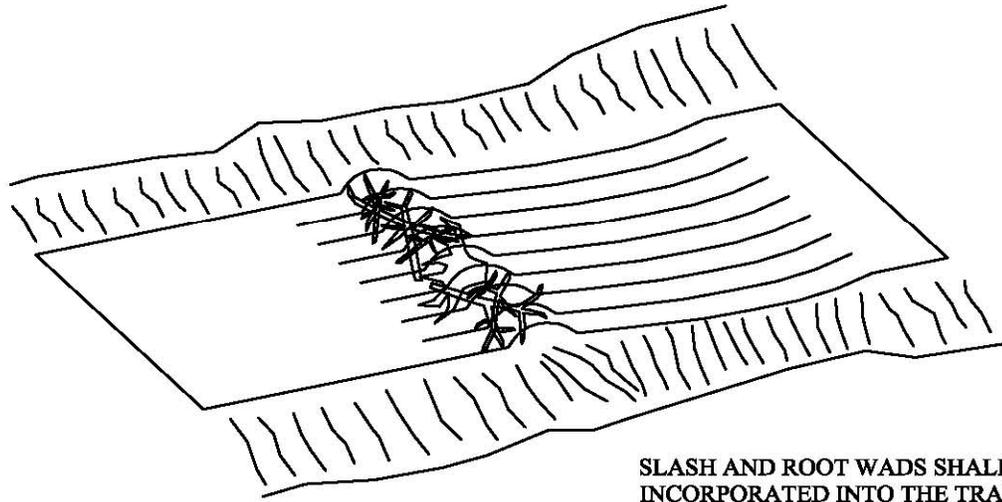
- Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.



NON-DRIVABLE WATER BAR DETAIL



BARRICADE DETAIL

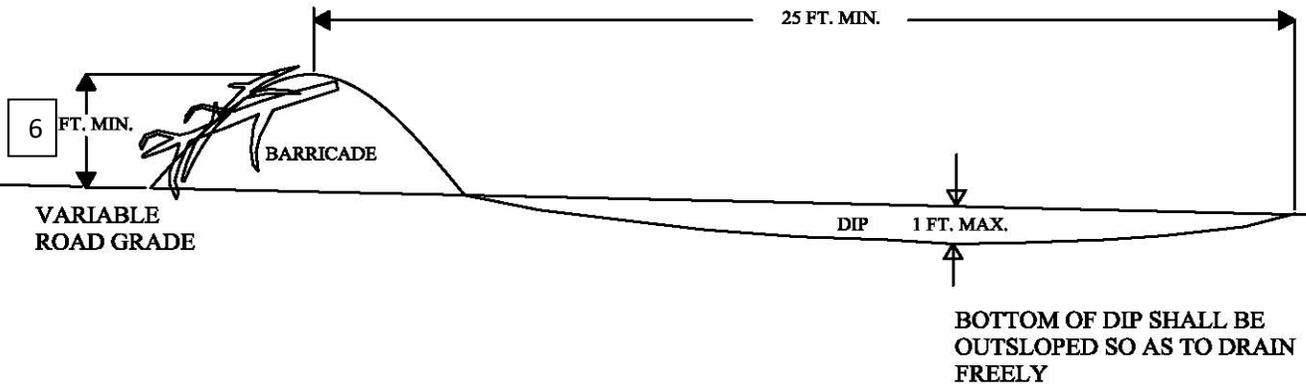


SLASH AND ROOT WADS SHALL BE INCORPORATED INTO THE TRAFFIC SIDE OF THE BARRICADE.

PLAN VIEW

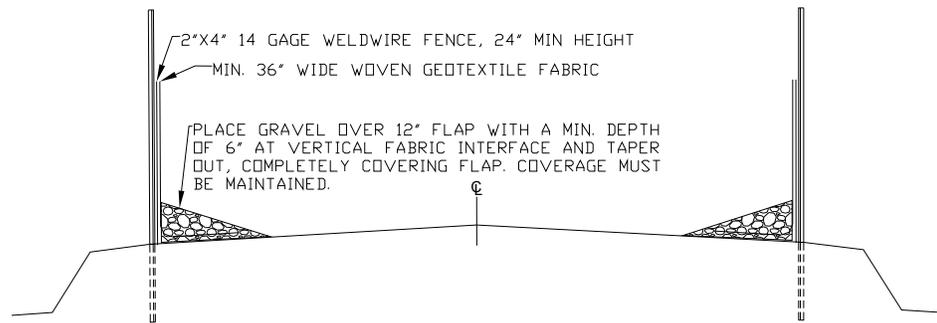
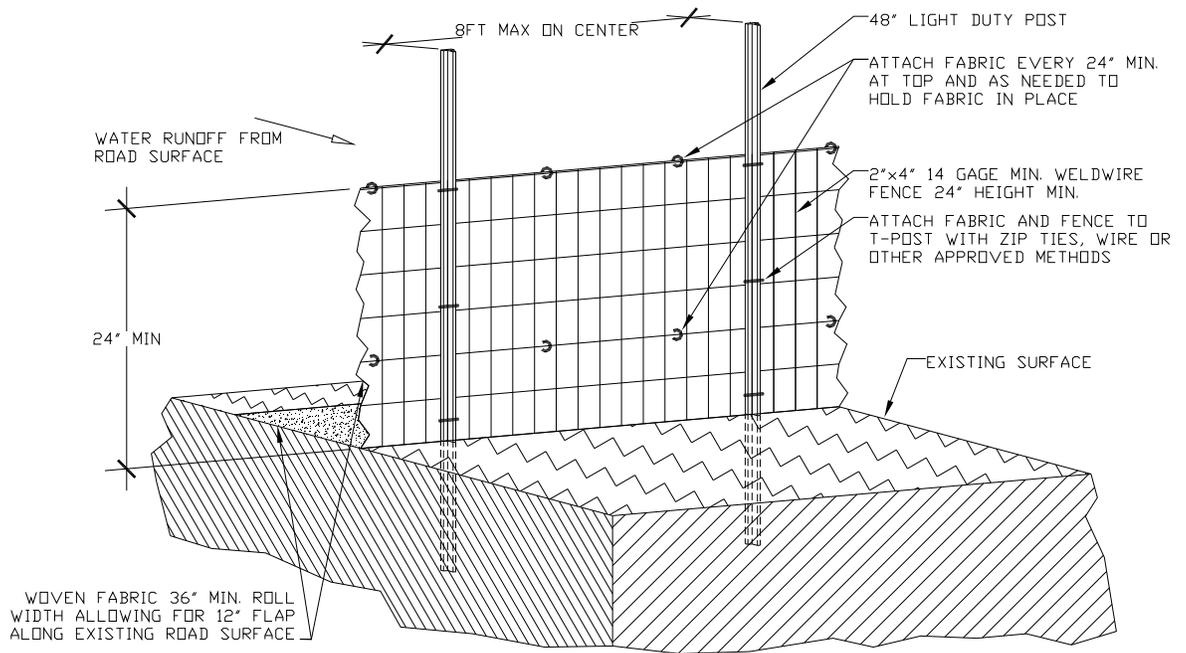
TRAFFIC SIDE
OF BARRICADE

CLOSED SIDE
OF BARRICADE



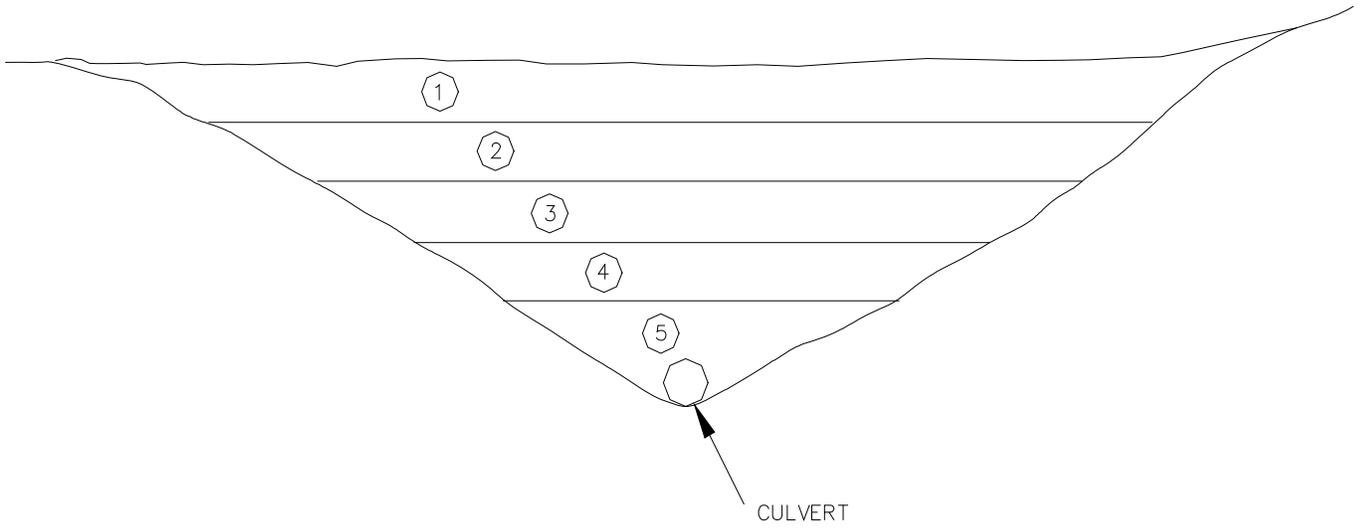
PROFILE VIEW

SILT FENCE DETAIL



1. Silt fence shall be installed with Contract Administrator approval prior to haul.
2. Silt fence shall be installed with a minimum of 6' of cover starting at fabric/weldwire and tapering toward road centerline. Coverage of fabric shall be maintained.
3. Light Duty T-Posts shall be placed on the down slope side of the fabric/weldwire. If conditions exist that a taller silt fence is required, such as splash, longer T-Posts, wider fabric rolls and taller fence maybe necessary or other methods as approved by the Contract Administrator.
4. When a silt fence is continued from another run, the end T-Posts shall be connected together and not overlapped.
5. If runoff of silt laden water flows around the sides and additional fence may be used, realignment of the fence, removal of built up sediment and/or other BMP's such as ditch filters shall be used until controlled. Until under control haul shall be suspended.
6. FABRIC SPECS - min tensile strength: 120lbs, min puncture strength: 50lbs, min tear strength: 40lbs, min burst strength: 200lbs, min permittivity: 0.1 sec-1, UV resistance: 70%.

FILL REMOVAL DETAIL



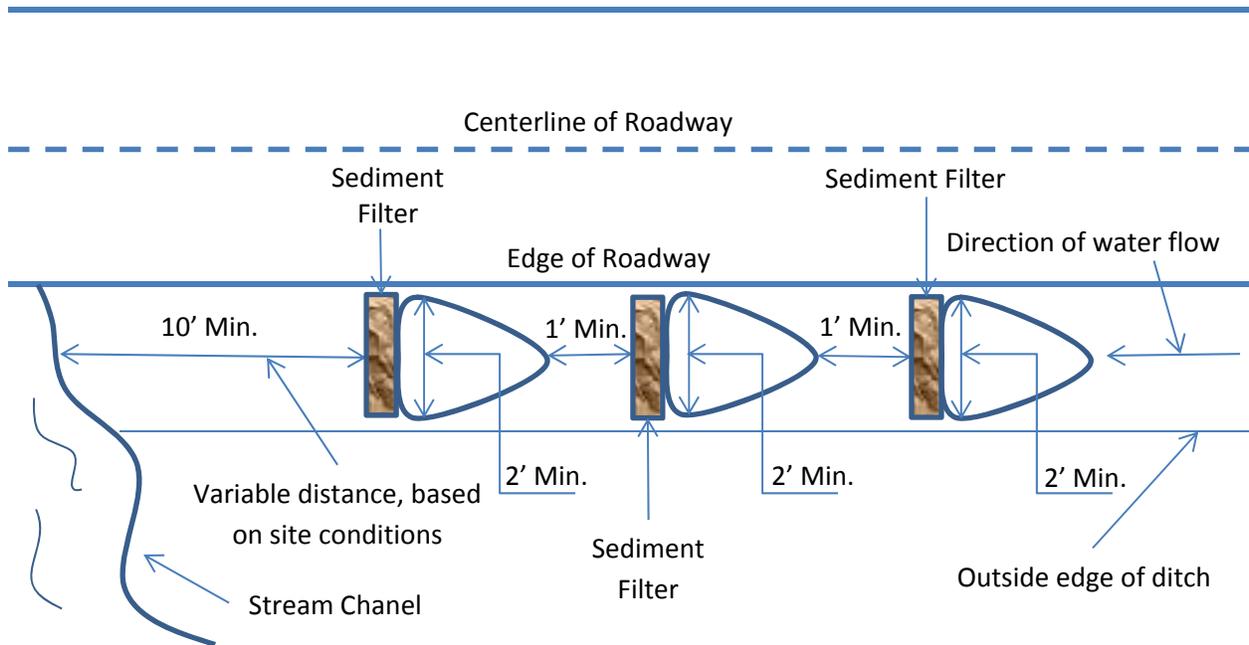
Remove fill in layers not to exceed 3 feet.

Channel slopes shall be according to 9-2 CULVERT REMOVAL
FROM LIVE STREAM

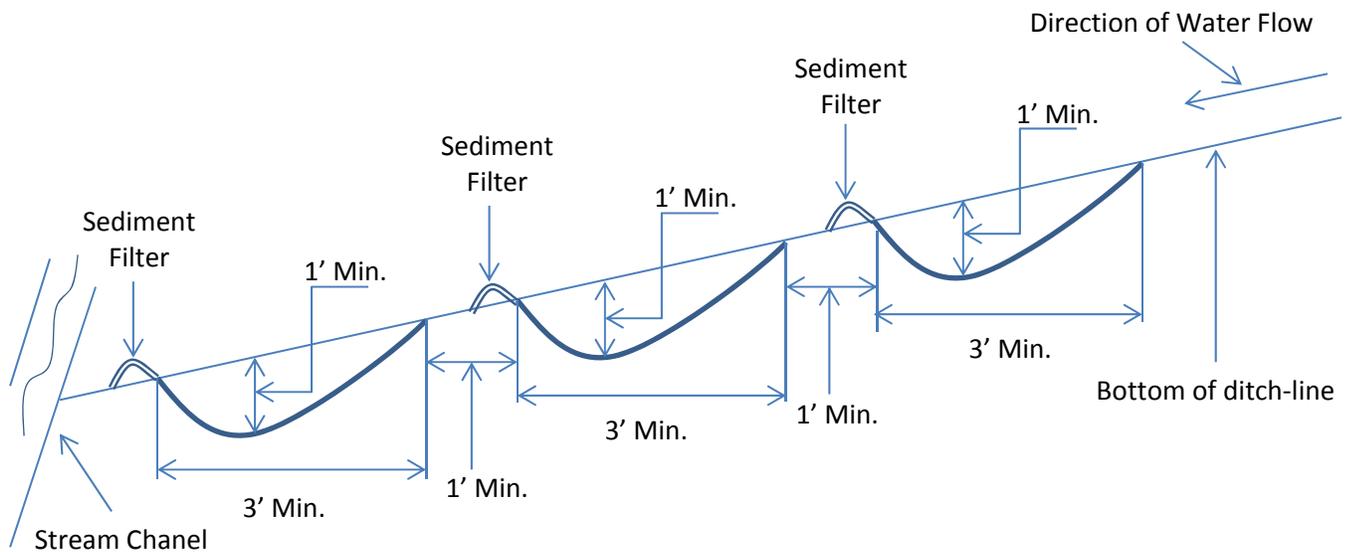
Stream bed width shall be according to 9-2 CULVERT REMOVAL
FROM LIVE STREAM

SEDIMENT TRAP DETAIL

Top View

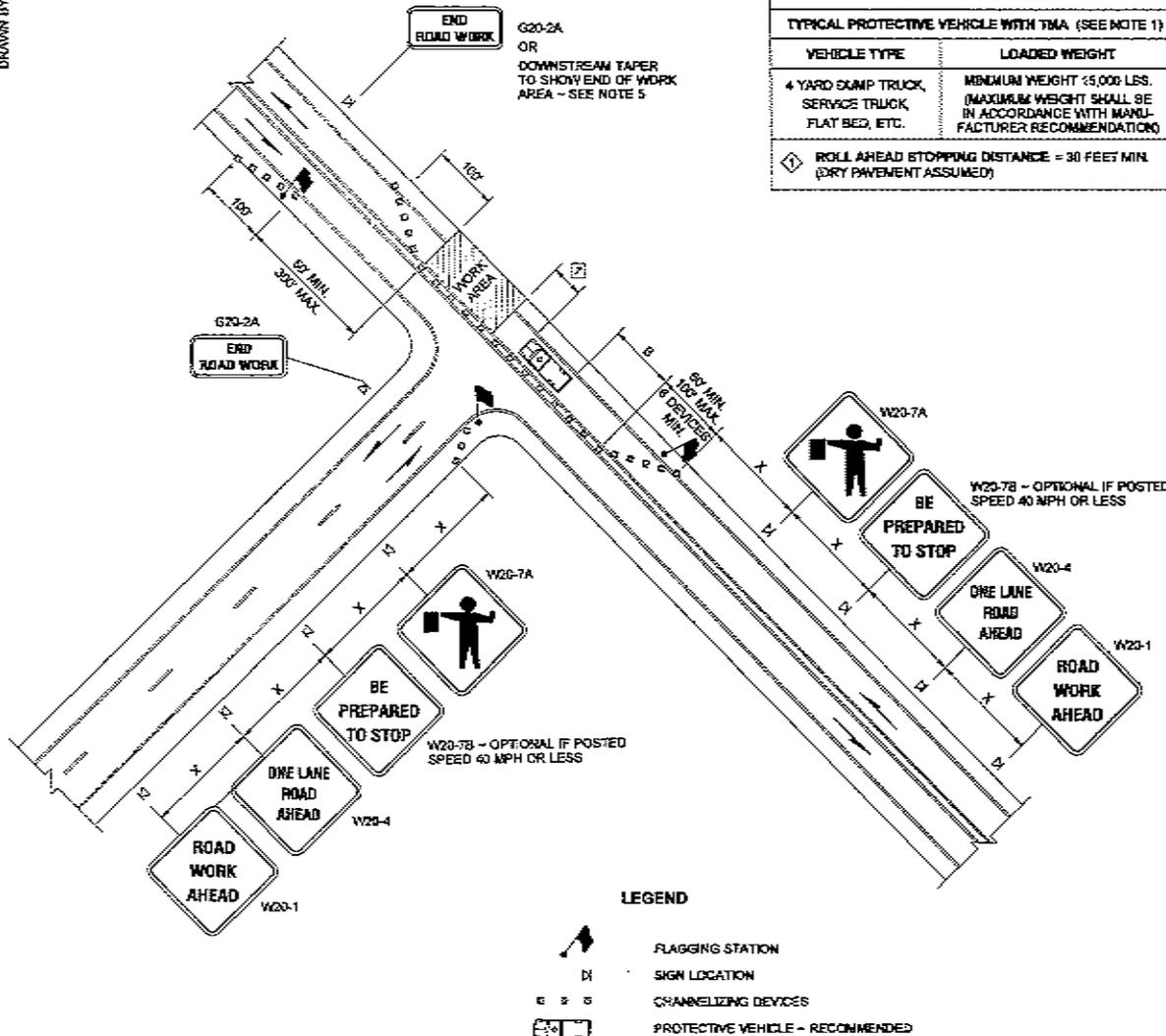


Profile View



LONGITUDINAL BUFFER SPACE = B									
POSTED SPEED (MPH)	25	30	35	40	45	50	55	60	65
LENGTH B (FEET)	155	230	250	305	360	425	435	570	645

BUFFER DATA	
TYPICAL PROTECTIVE VEHICLE WITH TMA (SEE NOTE 1)	
VEHICLE TYPE	LOADED WEIGHT
4 YARD DUMP TRUCK, SERVICE TRUCK, FLAT BED, ETC.	MINIMUM WEIGHT 25,000 LBS. (MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATION)
⚠ ROLL AHEAD STOPPING DISTANCE = 30 FEET MIN. (DRY PAVEMENT ASSUMED)	



NOTES

1. A Protective Vehicle is recommended regardless if a Truck Mounted Attenuator (TMA) is available; a work vehicle may be used. When no TMA is used, the Protective Vehicle shall be strategically located to shield workers, with a specific Roll-Ahead distance.
2. Night work requires additional roadway lighting at flagging stations. See WSDOT Standard Specifications for additional details.
3. Extend Channelizing Device taper across shoulder - recommended.
4. Sign sequence is the same for both directions of travel on the roadway.
5. Channelizing Device spacing for the downstream taper option shall be 20' O.C.
6. For signs size refer to Manual on Uniform Traffic Control Devices (MUTCD) and WSDOT Sign Fabrication Manual MS5-05.

SIGN SPACING = X {1}		
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	900' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

ALL SIGNS ARE BLACK ON ORANGE UNLESS DESIGNATED OTHERWISE

- (1) ALL SIGN SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS, AND DRIVEWAYS.
- (2) THIS SIGN SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

**FOR LOCAL AGENCY USE ONLY
NOT FOR USE ON STATE ROUTES**

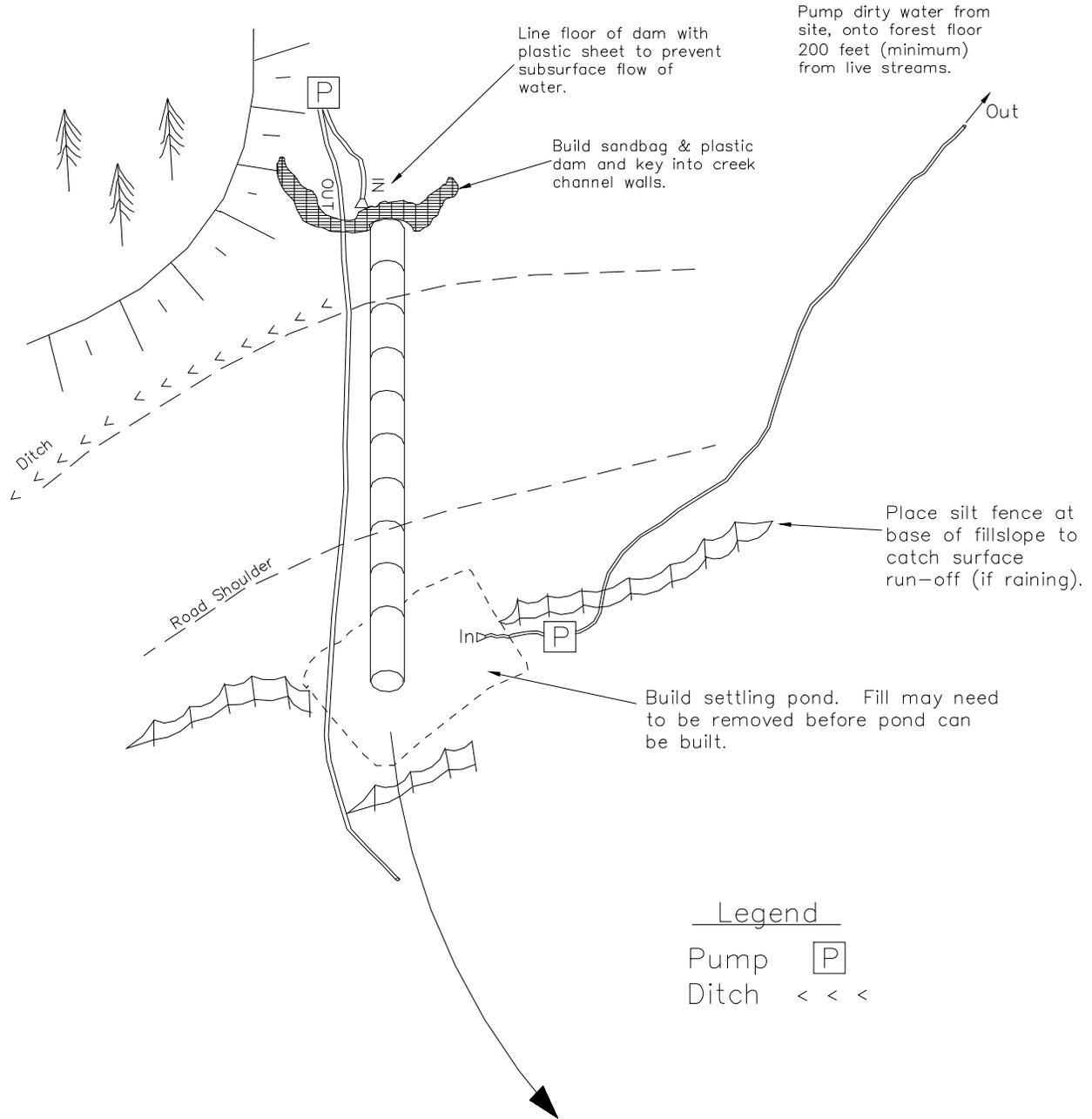


EXPIRES AUGUST 9, 2027

**LANE CLOSURE
WITH FLAGGER CONTROL
STANDARD PLAN K-20.40-00**

SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Ken L. Smith 02-15-07
STATE DESIGN ENGINEER DATE
Washington State Department of Transportation

SETTLING POND AND PUMP DETAIL



SALE/PROJECT NAME: 2D TIMBER SALE

CONTRACT #: 36-101213

ROAD NUMBER: 2923

Total road length (feet): 20475

Distance to Pit (feet) 14000

Distance to Snider Quarry 34320

Average Haul Speed (mph) 20

Truck Load/Unload Time (minutes) 12

Volume per Truck (CY) 10

PREHAUL MAINTENANCE

MISC. MAINTENANCE

Maintenance grading & compacting	205 Stations	\$21.00 Per Station	\$	4,299.05
Posthaul Grading and Compacting	205 Stations	21.00 Per Station	\$	4,299.05
Brushing (light)	204.75 Stations	\$32.40 Per Station	\$	6,633.90
Ditching	13.00 Stations	\$56.76 Per Station	\$	737.88
		Misc. Maintenance Total	\$	15,969.89

Excavation and Fill

Landing (medium)	0+03 @	255.5 each		\$766.50
		Excavation Total		\$766.50

ROCK

BALLAST

Load dump truck		150 CY @	\$ 0.83 per CY	\$ 125.00
Rock haul	Round Trip (feet) 68950	13 Hours @	\$ 100.00 per Hour	\$ 1,279.40
Process/Compacting Surfacing (6" Lift)		150 CY @	\$ 1.86 per CY	\$ 278.44

SURFACING

Snider Quarry Purchase Price		300.00 CY @	\$ 14.70 per CY	\$ 4,410.00
Rock Haul	Round Trip (feet) 109590	37 Hours @	\$ 100.00 per Hour	\$ 3,713.35
Process/Compacting Surfacing (6" Lift)		300.00 CY @	\$ 1.86 per CY	\$ 556.88

RIP RAP

Load dump truck		12 CY @	\$ 0.83 per CY	\$ 10.00
Rock haul	Round Trip (feet) 68950	1 Hours @	\$ 100.00 per Hour	\$ 102.35

Road Rock Total \$ 10,475.42

CULVERTS & FLUMES

18" Polyethylene, double wall		60 feet @	\$21.93 per foot	\$1,315.80
24" Polyethylene, double wall		50 feet @	\$34.43 per foot	\$1,721.50
Ditchout		2.00 each @	\$13.20 each	\$26.40

Culvert & Flume Total \$3,063.70

PREHAUL MAINTENANCE TOTAL \$ 30,275.51
\$/STA \$ 147.87

SALE/PROJECT NAME: 2D TIMBER SALE

CONTRACT #: 36-101213

ROAD NUMBER: 2923060

Total road length (feet): 10314

Distance to Pit (feet) 21000

Distance to Snider Quarry 29040

Average Haul Speed (mph) 20

Truck Load/Unload Time (minutes) 12

Volume per Truck (CY) 10

PREHAUL MAINTENANCE

MISC. MAINTENANCE

Maintenance grading & compacting	103 Stations	\$21.00 Per Station	\$	2,165.59
Posthaul Grading and Compacting	103 Stations	21.00 Per Station	\$	2,165.59
Brushing (light)	53.14 Stations	\$32.40 Per Station	\$	1,721.74
Brushing Meduim	50.00 Stations	\$56.70 Per Station	\$	2,835.00
Clean Inlet/Outlet	2.00 @	\$3.96 Per Culvert	\$	7.92
Bridge design / Install			\$	35,900.00
		Misc. Maintenance Total	\$	44,795.83

Excavation and Fill

Landing (medium)	6 @	255.5 each		\$1,533.00
		Excavation Total		\$1,533.00

ROCK

BALLAST

Load dump truck		470 CY @	\$	0.83 per CY	\$	391.67
Rock haul	Round Trip (feet) 62628	37 Hours @	\$	100.00 per Hour	\$	3,727.42
Process/Compacting Surfacing (6" Lift)		470 CY @	\$	1.86 per CY	\$	872.44
SURFACING						
Snider Quarry Purchase Price		270.00 CY @	\$	14.70 per CY	\$	3,969.00
Rock haul	Round Trip (feet) 78708	40 Hours @	\$	100.00 per Hour	\$	3,970.43
Process/Compacting Surfacing (6" Lift)		270.00 CY @	\$	1.86 per CY	\$	501.19
Stream Simulation Rock		150.00 CY @	\$	50.00 Per CY	\$	7,500.00
RIP RAP						
Load dump truck		154 CY @	\$	0.83 per CY	\$	391.67
Rock haul	Round Trip (feet) 62628	12 Hours @	\$	100.00 per Hour	\$	1,221.33
		Road Rock Total	\$		\$	22,545.14

Culverts And Flumes

18" Polyethylene, double wall	60 feet @	\$21.93 per foot		\$1,315.80
18" Single Wall Flume	35 feet @	\$21.93 per foot		\$767.55
24" Polyethylene, double wall	feet @	\$34.43 per foot		\$0.00
Sediment Traps	1.00 each @	\$50.00 each		\$50.00
		Culvert & Flume Total		\$2,133.35

PREHAUL MAINTENANCE TOTAL \$ 71,007.32
 \$/STA \$ 688.46

SALE/PROJECT NAME: 2D TIMBER SALE

CONTRACT #: 36-101213

ROAD NUMBER: 2923063

Total road length (feet): 875

Distance to Pit (feet) 23500

Average Haul Speed (mph) 20

Truck Load/Unload Time (minutes) 12

Volume per Truck (CY) 11

PREHAUL MAINTENANCE

MISC. MAINTENANCE

Brushing (light)	8.75 Stations	32.4 Per Station	\$	283.50
Maintenance grading & compacting	8.75 Stations	\$21.00 Per Station	\$	183.72
Posthaul Grading and Compacting	8.75 Stations	\$21.00 Per Station	\$	183.72
		Misc. Maintenance Total	\$	650.94

Excavation and Fill

Landing (medium)	0+02 @	255.5 each		\$511.00
		Excavation Total		\$511.00

ROCK

Load dump truck		100 CY @	\$	0.83 per CY	\$	83.33
Rock haul	Round Trip (feet) 48750	6 Hours @	\$	100.00 per Hour	\$	601.50
Process/Compacting Surfacing (6" Lift)		100 CY @	\$	1.86 per CY	\$	185.63
		Road Rock Total	\$			870.46

PREHAUL MAINTENANCE TOTAL \$ 2,032.40
\$/STA \$ 232.27

SALE/PROJECT NAME: 2D TIMBER SALE

CONTRACT #: 36-101213

ROAD NUMBER: 2923065

Total road length (feet): 1335

Distance to Pit (feet) 24000

Average Haul Speed (mph) 20

Truck Load/Unload Time (minutes) 12

Volume per Truck (CY) 11

PREHAUL MAINTENANCE

MISC. MAINTENANCE

Brushing (heavy)	13 Stations	97.2 Per Station	\$	1,297.62
Maintenance grading & compacting	13 Stations	\$21.00 Per Station	\$	280.30
Posthaul Grading	13 Stations	21 Per Station	\$	280.30
		Misc. Maintenance Total	\$	1,858.23

Excavation and Fill

Landing (medium)	0+02 @	255.5 each		\$511.00
		Excavation Total		\$511.00

ROCK

Load dump truck		407 CY @	\$	0.83 per CY	\$	339.21	
Rock haul	Round Trip (feet)	50670	25 Hours @	\$	100.00 per Hour	\$	2,515.68
Process/Compacting Surfacing (6" Lift)		407 CY @	\$	1.86 per CY	\$	755.59	

Road Rock Total \$ 3,610.47

PREHAUL MAINTENANCE TOTAL \$ 5,979.70

\$/STA \$ 447.92

SALE/PROJECT NAME: 2D TIMBER SALE

CONTRACT #: 36-101213

ROAD NUMBER: 2923070

Total road length (feet): 6456

Distance to Pit (feet) 0

Distance to Snider Quarry 15840

Average Haul Speed (mph) 20

Truck Load/Unload Time (minutes) 12

Volume per Truck (CY) 10

PREHAUL MAINTENANCE

MISC. MAINTENANCE

Maintenance grading & compacting	64.56 Stations	\$21.00 Per Station	\$1,355.54
Posthaul Grading and Compacting	64.56 Stations	\$21.00 Per Station	\$ 1,355.54
Brushing (medium)	64.56 Stations	\$56.70 Per Station	\$3,660.55
		Misc. Maintenance Total	\$6,371.63

Excavation and Fill

Landing (medium)	0+02 @	255.5 each	\$511.00
		Excavation Total	\$511.00

ROCK

BALLAST

Load dump truck		100 CY @	\$ 0.83 per CY	\$ 83.33
Rock haul	Round Trip (feet) 12912	3 Hours @	\$ 100.00 per Hour	\$ 322.27
Process/Compacting Surfacing (6" Lift)		100 CY @	\$ 1.86 per CY	\$ 185.63

SURFACING

Snider Quarry Purchase Price		150.00 CY @	\$ 14.70 per CY	\$ 2,205.00
Rock haul	Round Trip (feet) 31720	8 Hours @	\$ 100.00 per Hour	\$ 750.57
Process/Compacting Surfacing (6" Lift)		150.00 CY @	\$ 1.86 per CY	\$ 278.44

Road Rock Total \$ 3,825.24

PREHAUL MAINTENANCE TOTAL \$10,707.87
\$/STA \$ 165.86

SALE/PROJECT NAME: 2D TIMBER SALE

CONTRACT #: 36-101213

ROAD NUMBER: 2923074

Total road length (feet): 3300

Distance to Pit (feet) 7800

Average Haul Speed (mph) 15

Truck Load/Unload Time (minutes) 12

Volume per Truck (CY) 11

PREHAUL MAINTENANCE

MISC. MAINTENANCE

Brushing (heavy)	33 Stations	97.2 Per Station	\$	3,207.60
Maintenance grading & compacting	33 Stations	\$21.00 Per Station	\$	692.89
Posthaul Grading and Compacting]	33.00 Stations	21.00 Per Station	\$	692.89
		Misc. Maintenance Total	\$	4,593.38

Excavation and Fill

Landing (medium)	0+03 @	255.5 each		\$766.50
		Excavation Total		\$766.50

ROCK

Load dump truck	1634 CY @	\$ 0.83 per CY	\$	1,361.67
Rock haul	Round Trip (feet) 22200	71 Hours @	\$ 100.00 per Hour	\$ 7,134.68
Process/Compacting Surfacing (6" Lift)	1634 CY @	\$ 1.86 per CY	\$	3,033.11
		Road Rock Total	\$	11,529.46

CULVERTS & FLUMES

18" Polyethylene, double wall	feet @	\$21.93 per foot		\$0.00
24" Polyethylene, double wall	50 feet @	\$34.43 per foot		\$1,721.50
		Culvert & Flume Total		\$1,721.50

PREHAUL MAINTENANCE TOTAL \$ 18,610.84
\$/STA \$ 563.96

SALE/PROJECT NAME: 2D TIMBER SALE

CONTRACT #: 36-101213

ROAD NUMBER: Temp 1

Total road length (feet): 3100

Distance to x Pit (feet) 15500

Average Haul Speed (mph) 20

Truck Load/Unload Time (minutes) 12

Volume per Truck (CY) 11

Reconstruction

CLEARING & GRUBBING

Brushing (heavy)	31.00 stations @	\$	97.20 per station	\$	3,013.20
				C & G Total	\$ 3,013.20

EXCAVATION AND FILL

Reconstruction (light)	31.00 stations @	\$	138.85 per station	\$	4,304.34
Landing (medium)	4.00 each @	\$	255.50 each	\$	1,022.00
Turnaround	1.00 each @	\$	196.58 each	\$	196.58
				Excavation Total	\$ 5,522.92

ROCK

Load dump truck	1425 CY @	\$	0.83 per CY	\$	1,187.50
Rock haul	Round Trip (feet) 37200	72 Hours @	\$	100.00 per Hour	\$ 7,154.44
Process/Compacting Surfacing (6" Lift)	1425 CY @	\$	1.86 per CY	\$	2,645.16
				Road Rock Total	\$ 10,987.10

CULVERTS & FLUMES

18" Polyethylene, double wall	30 feet @	\$21.93 per foot	\$657.90
24" Polyethylene, double wall	feet @	\$34.43 per foot	\$0.00
Ditchout	each @	\$13.20 each	\$0.00
		Culvert & Flume Total	\$657.90

MISC. MAINTENANCE

Grass seed (spread by hand)	157 pounds @	\$	2.00 per pound	\$	313.13
Straw mulching (spread by hand)	0.03 acres @	\$	3,151.00 per acre	\$	86.80
				Misc Maintenance Total	\$ 399.94

Prehaul Maintenance Total	\$	20,581.06
	\$/sta	\$ 663.91

SALE/PROJECT NAME: 2D TIMBER SALE

CONTRACT #: 36-101213

ROAD NUMBER: Temp 2

Total road length (feet): 540

Distance to x Pit (feet) 14500

Average Haul Speed (mph) 20

Truck Load/Unload Time (minutes) 12

Volume per Truck (CY) 11

Reconstruction

CLEARING & GRUBBING

Brushing (light)	5.40 stations @	\$	32.40	per station	\$	174.96
					C & G Total	\$ 174.96

EXCAVATION AND FILL

Landing (medium)	1.00 each @	\$	255.50	each	\$	255.50
					Excavation Total	\$ 255.50

ROCK

Load dump truck	50 CY @	\$	0.83	per CY	\$	41.67
Rock haul	Round Trip (feet) 30080	\$	100.00	per Hour	\$	220.39
Process/Compacting Surfacing (6" Lift)	50 CY @	\$	1.86	per CY	\$	92.81
					Road Rock Total	\$ 354.86

MISC. MAINTENANCE

Grass seed (spread by hand)	27 pounds @	\$	2.00	per pound	\$	54.55
Straw mulching (spread by hand)	0.03 acres @	\$	3,151.00	per acre	\$	86.80
Maintenance grading & compacting	5.40 stations @	\$	21.00	per station	\$	113.40
					Misc Maintenance Total	\$ 254.75

Prehaul Maintenance Total	\$	1,040.07
	\$/sta	\$ 192.61

SALE/PROJECT NAME: 2D TIMBER SALE

CONTRACT #: 36-101213

ROAD NUMBER: Unit 7 Spur

Total road length (feet): 700

Distance to Pit (feet) 16000

Average Haul Speed (mph) 20

Truck Load/Unload Time (minutes) 12

Volume per Truck (CY) 11

CONSTRUCTION

CLEARING & GRUBBING

Scatter	7.00 stations @	\$	187.50	per station	\$	1,312.50
					C & G Total	\$ 1,312.50

EXCAVATION AND FILL

Construction (balanced, heavy)	2.50 stations @	\$	616.18	per station	\$	1,540.45
Construction (balanced, light)	5.00 stations @	\$	318.32	per station	\$	1,591.59
Landing (small)	1 each @	\$	193.00	each	\$	193.00
Endhaul Load Truck	1200 CY @	\$	0.83	per CY	\$	996.00
Endhaul Material	Round Trip (feet) 1400	23 Hours @	\$	16.20	per Hour	\$ 376.88
Compact Waste	5 Hours @	\$	150.00	per hour	\$	750.00
					Excavation Total	\$ 5,447.92

ROCK

Load dump truck	436 CY @	\$	0.83	per CY	\$	363.33
Rock haul	Round Trip (feet) 33400	20 Hours @	\$	100.00	per Hour	\$ 2,046.38
Process/Compacting Surfacing (6" Lift)	436 CY @	\$	1.86	per CY	\$	809.33
					Road Rock Total	\$ 3,219.04

CULVERTS & FLUMES

18" Polyethylene, double wall	feet @	\$21.93	per foot	\$0.00
24" Polyethylene, double wall	0 feet @	\$34.43	per foot	\$0.00
			Culvert, Flume, & Pipe Bedding Total	\$0.00

MISC. MAINTENANCE

Grass seed (spread by hand)	19 pounds @	\$	2.00	per pound	\$	38.57
Straw mulching (spread by hand)	0.00 acres @	\$	3,151.00	per acre	\$	-
					Misc Maintenance Total	\$ 38.57

Construction Total	\$	10,018.02
\$/sta	\$	1,431.15

SALE/PROJECT NAME: 2D TIMBER SALE

CONTRACT #: 36-101213

ROAD NUMBER: Unit 8 Spur

Total road length (feet): 350

Distance to Pit (feet) 15500

Average Haul Speed (mph) 20

Truck Load/Unload Time (minutes) 12

Volume per Truck (CY) 11

CONSTRUCTION

CLEARING & GRUBBING

Scatter	3.50 stations @	\$	187.50	per station	\$	656.25
					C & G Total	\$ 656.25

EXCAVATION AND FILL

Construction (balanced, light)	3.50 stations @	\$	318.32	per station	\$	1,114.11
Landing (small)	1 each @	\$	193.00	each	\$	193.00
					Excavation Total	\$ 1,307.11

ROCK

Load dump truck	268 CY @	\$	0.83	per CY	\$	223.33
Rock haul	Round Trip (feet) 31700	12 Hours @	\$	100.00	per Hour	\$ 1,218.64
Process/Compacting Surfacing (6" Lift)	268 CY @	\$	1.86	per CY	\$	497.48
					Road Rock Total	\$ 1,939.45

CULVERTS & FLUMES

18" Polyethylene, double wall	0 feet @	\$21.93	per foot	\$0.00
24" Polyethylene, double wall	0 feet @	\$34.43	per foot	\$0.00
			Culvert, Flume, & Pipe Bedding Total	\$0.00

MISC. MAINTENANCE

Grass seed (spread by hand)	10 pounds @	\$	2.00	per pound	\$	19.28
Straw mulching (spread by hand)	0.00 acres @	\$	3,151.00	per acre	\$	-
					Misc Maintenance Total	\$ 19.28

Construction Total	\$	3,922.10
\$/sta	\$	1,120.60

SALE/PROJECT NAME: 2D TIMBER SALE

CONTRACT #: 36-101213

ROAD NUMBER: Unit 11 Spur

Total road length (feet): 670

Distance to Pit (feet) 15500

Average Haul Speed (mph) 20

Truck Load/Unload Time (minutes) 12

Volume per Truck (CY) 11

CONSTRUCTION

CLEARING & GRUBBING

Scatter	6.70 stations @	\$	187.50	per station	\$	1,256.25
					C & G Total	\$ 1,256.25

EXCAVATION AND FILL

Construction (balanced, light)	6.70 stations @	\$	318.32	per station	\$	2,132.73
Landing (small)	2 each @	\$	193.00	each	\$	386.00
					Excavation Total	\$ 2,518.73

ROCK

Load dump truck	422 CY @	\$	0.83	per CY	\$	351.33
Rock haul	Round Trip (feet) 32340	19 Hours @	\$	100.00	per Hour	\$ 1,940.32
Process/Compacting Surfacing (6" Lift)	422 CY @	\$	1.86	per CY	\$	782.60
					Road Rock Total	\$ 3,074.25

CULVERTS & FLUMES

18" Polyethylene, double wall	feet @	\$21.93	per foot	\$0.00
24" Polyethylene, double wall	0 feet @	\$34.43	per foot	\$0.00
			Culvert, Flume, & Pipe Bedding Total	\$0.00

MISC. MAINTENANCE

Grass seed (spread by hand)	18 pounds @	\$	2.00	per pound	\$	36.91
Straw mulching (spread by hand)	0.00 acres @	\$	3,151.00	per acre	\$	-
					Misc Maintenance Total	\$ 36.91

Construction Total	\$	6,886.14
\$/sta	\$	1,027.78

SALE/PROJECT NAME: 2D TIMBER SALE

CONTRACT #: 36-101213

ROAD NUMBER: Unit 12 Spur

Total road length (feet): 520

Distance to Pit (feet) 17000

Average Haul Speed (mph) 20

Truck Load/Unload Time (minutes) 12

Volume per Truck (CY) 11

CONSTRUCTION

CLEARING & GRUBBING

Scatter	5.20 stations @	\$	187.50	per station	\$	975.00
					C & G Total	\$ 975.00

EXCAVATION AND FILL

Construction (balanced, light)	5.20 stations @	\$	318.32	per station	\$	1,655.25
Landing (small)	2 each @	\$	193.00	each	\$	386.00
					Excavation Total	\$ 2,041.25

ROCK

Load dump truck	464 CY @	\$	0.83	per CY	\$	386.33
Rock haul	Round Trip (feet) 35040	22 Hours @	\$	100.00	per Hour	\$ 2,241.37
Process/Compacting Surfacing (6" Lift)	464 CY @	\$	1.86	per CY	\$	860.56
					Road Rock Total	\$ 3,488.26

CULVERTS & FLUMES

18" Polyethylene, double wall	0 feet @	\$21.93	per foot	\$0.00
24" Polyethylene, double wall	0 feet @	\$34.43	per foot	\$0.00
			Culvert, Flume, & Pipe Bedding Total	\$0.00

MISC. MAINTENANCE

Grass seed (spread by hand)	14 pounds @	\$	2.00	per pound	\$	28.65
Straw mulching (spread by hand)	0.00 acres @	\$	3,151.00	per acre	\$	-
					Misc Maintenance Total	\$ 28.65

Construction Total	\$	6,533.16
\$/sta	\$	1,256.38

SALE/PROJECT NAME: 2D Timber Sale

CONTRACT #: 36-101213

ROAD NAMES: Decom 1, Temp 1, Temp 2, Unit 7 Spur, Unit 8 Spur, Unit 11 Spur,
Unit 12 spur

DECOMMISSIONING

ROAD DEACTIVATION & ABANDONMENT

Restore Natural Drainage	76.93 Stations	\$ 100.00 \$/Station	\$ 7,693.00
--------------------------	----------------	----------------------	-------------

Decommissioning Cost \$ 7,693.00

MOBILIZATION

SALE/PROJECT NAME: 2D Timber Sale

CONTRACT #: 36-101213

ROAD BUILDING EQUIPMENT

Grader	1 @	\$ 750	each	\$	750
Dozer (small)	1 @	\$ 500	each	\$	500
Excavator (small)	0 @	\$ 500	each	\$	-
Excavator (large)	1 @	\$ 1,000	each	\$	1,000
Roller	1 @	\$ 500	each	\$	500
End Dump	3 @	\$ 110	each	\$	330
Tractor Brusher	1 @	\$ 400	each	\$	400

ROAD BUILDING EQUIPMENT SUBTOTAL: \$ 3,480

POST HAUL EQUIPMENT

Grader	1 @	750	each	\$	750
Dozer (small)	1 @	500	each	\$	500
Excavator (large)	1 @	1000	each	\$	1,000
Roller	@	500	each	\$	-
End Dump	1 @	100	each	\$	100

POST HAUL & ABANDONMENT \$ 2,350

MOBILIZATION TOTAL \$ 5,830



**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion AD-1048
Lower Tier Covered Transactions**

The following statement is made in accordance with the Privacy Act of 1974 (5 U.S.C. § 552a, as amended). This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, and 2 C.F.R. §§ 180.300, 180.335, Participants' responsibilities. The regulations were amended and published on August 31, 2005, in 70 Fed. Reg. 51865-51880. Copies of the regulations may be obtained by contacting the Department of Agriculture agency offering the proposed covered transaction.

According to the Paperwork Reduction Act of 1995 an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0505-0027. The time required to complete this information collection is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The provisions of appropriate criminal and civil fraud privacy, and other statutes may be applicable to the information provided.

(Read instructions on page two before completing certification.)

- A. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency;
- B. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

ORGANIZATION NAME	PR/AWARD NUMBER OR PROJECT NAME
NAME(S) AND TITLE(S) OF AUTHORIZED REPRESENTATIVE(S)	
SIGNATURE(S)	DATE

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotope, American Sign Language, etc.) should contact the responsible agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint \(https://www.ascr.usda.gov/filing-program-discrimination-complaint-usda-customer\)](https://www.ascr.usda.gov/filing-program-discrimination-complaint-usda-customer) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442.

Instructions for Certification

- (1) By signing and submitting this form, the prospective lower tier participant is providing the certification set out on page 1 in accordance with these instructions.
- (2) The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.
- (3) The prospective lower tier participant shall provide immediate written notice to the person(s) to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- (4) The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549, at 2 C.F.R. Parts 180 and 417. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
- (5) The prospective lower tier participant agrees by submitting this form that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- (6) The prospective lower tier participant further agrees by submitting this form that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- (7) A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the System for Award Management (SAM) database.
- (8) Nothing contained in the foregoing shall be construed to require establishment of a system of records to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- (9) Except for transactions authorized under paragraph (5) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.