

Contract Harvest Project Schedule – Contractor Pool

Project timeline estimates. This schedule is a guide and may be adjusted to account for holidays and weekends and to accommodate staff schedules.

Wild Plum Sorts 30-094409

Contractor Pool Eligibility Process	Advertise RFSOQ	Ongoing - Available on-line
	Issue RFSOQ Packets	http://www.dnr.wa.gov/htdocs/fr/sales/contracts.html
	Deadline for completed SOQ's	Open ended. SOQ evaluations to occur on the 15 th day of every month
	Announcement of Contractor Eligibility	
	Eligible Contractor selection appeal period begins	20 th day of every month
	Eligible Contractor selection appeal period ends	25 th day of every month
Log Auction and Harvester Bid Process	BNR Approval	NA
	Issue Harvester Request For Quotes (RFQ) and Bid Forms	August 29, 2016
	Conduct Harvester Pre-bid Meeting	N/A
	Log Sort Auction Date	March 30, 2017
	If no-bid sort(s), consult PSL for schedule adjustment, otherwise proceed.	
	Harvester Bid Opening & Notification	September 15, 2016
	Announce Log Destination Information	March 30, 2017
	Confirmation of Log Sort Auction, Harvester Services Contract Signing, Log Purchaser Contract Signing	April 10, 2017
Project Operations	Operations Begin	September 26, 2016
	Road Construction (E3000R, E3200R, E3200 Pre-haul)	September 26, 2016
	Log Deliveries Begin	April 24, 2017
	Log Deliveries End	October 15, 2017
	Operations End	November 1, 2017



WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

REQUEST FOR QUOTE
RFQ NO. 30-094409

PROJECT TITLE: WILD PLUM SORTS

QUOTE DUE DATE: September 15, 2016 2:00 PM

EXPECTED TIME PERIOD FOR CONTRACT: September 15, 2016 to November 3, 2017

CONTRACTOR ELIGIBILITY: This procurement is open to those contractors who have been pre-qualified and are listed in the Department of Natural Resources Contract Harvesting Services Eligible Bidder Pool.

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SECTION 1 INTRODUCTION

1.01 Project Summary

The Washington State Department of Natural Resources, (DNR) solicits Quotes from firms interested in participating on a project described below:

Defined in the Harvesting Services Contract. The selected harvester will be expected to access, cut, yard, load and haul logs from the WILD PLUM SORTS CH Timber Sale to specified delivery points.

1.02 Purpose and Background

This Request for Quotes seeks responses from harvesters, logging firms, operators of logging equipment or any firms, businesses or individuals who have been pre-qualified for DNR's harvester bidding pool and are interested in contract harvesting approximately 3302 MBF of timber in 5 unit(s) for the Department of Natural Resources in the Southeast Region Office.

1.03 Minimum Qualifications

Candidate Harvesters must be licensed to do business in the State of Washington and must demonstrate that they are capable of performing the work and meet the requirements outlined in the attached Harvesting Services Contract and Road Plan.

Candidate Harvesters must participate in a two-part process to bid on the work defined by the Harvesting Contract (Exhibit B) and Road Plan (Exhibit C). First, a Statement of Qualifications (SOQ) must be submitted to DNR for evaluation. The Candidate Harvester must achieve 'eligible-for-bidding' status placing them in the DNR's eligible bidder pool. Second, Eligible Bidders will be requested to submit a bid for the Harvesting Services Contract along with a 'Statement of Available Resources and Work Plan' and any other materials listed as 'required' in section 2.06 of this RFQ. The State will award the contract to the eligible bidder who submits the lowest bid and has provided a 'Statement of Available Resources and Work Plan' that demonstrates to the State that the Candidate Harvester has the ability to complete the project as required.

Proposals from Candidate Harvesters who do not meet these minimum qualifications shall be rejected.

1.04 Contract Term

The period of performance of the Harvesting Service Contract resulting from this Request for Quotes (RFQ) and subsequent bidding process is tentatively scheduled for September 15, 2016 to November 3, 2017. Any amendments extending the period of performance shall be at DNR's sole discretion.

1.05 Payment for Work

The State shall make payments to the Contractor for services required and approved including log hauling and road work calculated according to the terms in the harvesting services contract. The Contractor is responsible for independently negotiating, procuring and paying for all services provided.

Depending on the project bid structure defined in section 2.06 ‘Contract Harvesting Services Quote Format’ of this RFQ, payment will be calculated using:

- The Contractor’s On Board Truck (OBT) bid rate per ton for logs harvested and delivered for sort(s) 1, 2, 3 and 4.
- And an OBT rate of \$20.00 per Ton for sort 5 harvested and delivered.
- Utility volume scaled in mbf sorts will be determined on an adjusted gross scale basis and paid for at an OBT rate of \$20.00 per mbf.
- Payments to the Contractor for hauling services shall be based upon the tons delivered multiplied by: a base rate, ‘A’ and ‘C mile rates’, a fuel index factor and the Contractor’s hauling bid factor using the following formula:

$$\begin{aligned} &\text{Hauling Services Payment Rate per Ton} \\ &= (\text{Base Rate} + \text{Mileage Rate}) \times (\text{Contractor’s hauling bid factor}) \end{aligned}$$

Base Rate = \$2.35
 (based on multiple truck operation fixed cost/ton within ‘*Report to the Washington State Legislature, The Washington Log Trucking Industry: Costs and Safety Analysis, August 2008*’)

$$\text{Mileage Rate} = ((\$0.16 \times \text{C miles}) + (\$0.11 \times \text{A miles})) \times (\text{Fuel Index Factor})$$

The Fuel Index Factor will be adjusted quarterly by the State based upon the U.S. Energy Information Administration’s Weekly Retail On-Highway Diesel prices for the West Coast region posted at <http://tonto.eia.doe.gov/oog/info/wohdp/diesel.asp> using the following formula;

$$\text{Fuel Index Factor} = 1 + \frac{Q_{(x)} - Q_{(base)}}{Q_{(base)}}$$

Where; $Q_{(base)}$ = Average fuel price for quarter preceding harvesting services contract bid opening.
 $Q_{(x)}$ = Average fuel price for quarter preceding log deliveries.

The fuel index factor will be calculated each;
 January and apply to loads delivered between January 1 and March 31,
 April and apply to loads delivered between April 1 and June 30,
 July and apply to loads delivered between July 1 and September 30,
 October and apply to loads delivered between October 1 and December 31.

Hauling Rate Example:

Base Rate = \$2.35

C miles = 10

A miles = 100

Fuel Index Factor = 1.000

Mileage Rate = (($\$0.16 \times 10$) + ($\0.11×100)) \times (1.000) = \$12.60

Contractor's hauling bid factor = 1.100

Hauling Services Payment Rate per Ton

= (Base Rate + Mileage Rate) \times (Contractor's hauling bid factor)

= ($\$2.35 + \12.60) \times 1.100

= \$16.45

For sorts bid on an mbf basis tonnage will be calculated using the State's conversion rate unless actual tonnage is available and approved for use. For tonnage based sorts, actual tonnage shall apply.

- With prior approval by the State and toll/ferry receipt provided, reimbursement of toll/ferry costs incurred for transporting logs.
- Payment amounts for fixed-rate road construction elements are based upon the rates established by the State and listed in the Harvesting Services Contract. When applicable, payment amounts for biddable road construction elements will be in accordance with the rates listed in Contractor's road cost proposal provided as an attachment to the official bid form.

1.06 RFQ Definitions

Definitions of terms used in this Request for Statement of Qualifications.

Contractor - Individual or company selected to harvest and haul logs for the State.

Contractor may also be required to perform roadwork or other services as required in the Harvesting Services Contract and Road Plan.

DNR - The State of Washington, Department of Natural Resources.

Eligible Bidder - Candidate Harvester who's Statement of Qualifications has scored a pre-determined minimum point total (as determined by the DNR). Only eligible bidders are requested to submit a bid for the work outlined in the Harvesting Services Contract.

Harvesting Services Contract - the agreement between the State and a Contractor that defines the work to be done by the Contractor. The Contractor and the State sign this contract after the timber sale auction where the Purchaser's of the log sorts has been determined.

Purchaser - Person or Company that has purchased logs to be delivered by the Contractor of a Contract Harvesting Sale. A Contract Harvesting sale usually has numerous Purchasers.

Quote – Official bid form submitted by Eligible Bidders. A complete Quote consists of the bid rate for delivered logs, the bid rates for hauling services, and a completed ‘Statement of Available Resources and Work Plan’.

Request for Quotes (RFQ) - A formal procurement process used to solicit bids from pre-qualified firms for the right to perform the work defined in the RFQ.

Request for Statement of Qualifications (RFSOQ) - A formal procurement process used to pre-qualify firms for inclusion in the DNR’s Contract Harvesting Services Eligible Bidder Pool.

Request for Quotes Coordinator - DNR employee who oversees the Contractor Selection Process and serves as the main point of contact between the DNR and Candidate Harvesters. The Coordinator may delegate some of the duties, but is responsible for ensuring the process is properly followed and documented.

Statement of Qualifications (SOQ) – Document to be filled out by Candidate Harvesters and submitted to the DNR. Lists the Candidate Harvesters experience, qualifications, background information and references. Used by an evaluation team to determine which Candidate Harvesters are qualified to bid for the right to perform the harvesting project.

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

SECTION 2 GENERAL INFORMATION FOR HARVESTERS

2.01 RFQ Coordinator

The RFQ Coordinator is the sole point of contact in the DNR for this eligible bidder selection process. All communication between the Candidate Harvester and the DNR shall be with the RFQ Coordinator.

RFQ Coordinator	Chris Brandon
Address	713 Bowers Road
City, State, Zip Code	Ellensburg, WA 98926
Phone Number	(509) 899-4825
Fax Number	
E-Mail Address	chris.brandon@dnr.wa.gov

2.02 Estimated Project Schedule

As defined in the Project Schedule (**See Exhibit A**)

The DNR reserves the right to revise this schedule.

2.03 Pre-Quote Candidate Harvester Questions

Candidate Harvesters may mail, FAX, or E-mail questions about the RFQ to the RFQ Coordinator. The RFQ Coordinator will accept questions until September 8, 2016 at 2:00 PM. Questions received after this date and time will not be answered unless the RFQ Coordinator decides that it is in the DNR's best interests to answer them. A copy of the question(s) received, along with the DNR's official answer(s), will be mailed or faxed to each Candidate Harvester who received a copy of the RFQ. This copy will become an addendum to the RFQ. The DNR shall be bound only by written answers to questions. Oral responses given on the telephone will be considered unofficial.

2.04 Submitting a Quote

Candidate Harvesters must submit ONE copy of the official Harvesting Services Contract Sealed Bid Form including a 'Statement of Available Resources and Work Plan' with original signatures. The Quote, whether mailed, hand delivered, or faxed must arrive at the DNR no later than 2:00 PM, local time, on September 15, 2016.

The Quote is to be sent to the RFQ Coordinator at the address listed in Item 2.01 above. The envelope should be clearly marked "Attention RFQ Coordinator, Contract Harvesting Services Quote Enclosed, Do Not Open Until September 15, 2016."

Candidate Harvesters who mail Quotes should allow for normal mail delivery time to ensure timely delivery of their Quotes to the RFQ Coordinator. Candidate Harvesters assume the risk for the method of delivery they choose. The DNR assumes no responsibility for delays caused by a delivery service. Quotes may not be transmitted by email.

Late Quotes will not be accepted and will be automatically disqualified from further consideration. All Quotes and any accompanying documentation become the property of the DNR and will not be returned.

2.05 Proprietary Information/Public Disclosure.

Proposals are considered public records as defined in chapter 42.56 RCW. In the event a firm desires to claim portions of its proposal proprietary and exempt from public disclosure, it must clearly identify those portions. Each page of the proposal claimed to be exempt must be clearly identified as “proprietary information.” If a public records request is made for the information that the consultant has marked as “proprietary information,” the firm may seek to obtain a court order from a court of competent jurisdiction enjoining disclosure pursuant to chapter 42.56 RCW, or other state or federal law that provides for nondisclosure. The successful contractor’s proposal generally becomes part of the contract that is subject to public disclosure.

DNR will charge for copying and shipping, as permitted by RCW 42.56.120. No fee shall be charged for inspection of contract files. Twenty-four (24) hours notice to the RFQ Coordinator is required. All requests for information should be directed to the Coordinator.

2.06 Contract Harvesting Services Quote Format

For a responsive bid, the following bid elements are required to be submitted on or attached to an official DNR Harvesting Services bid form;

OBT harvesting rate per MBF/Ton	Required
Hauling services bid factor (formatted to 3 decimals i.e. #.###)	Required
Road construction cost proposal	Required
Statement of Available Resources and Work Plan	Required
All attachments incorporated by reference	Required

2.07 Revisions to the RFQ

The DNR reserves the right to revise the RFQ and/or to issue addenda to the RFQ. The published questions and answers from the Pre-proposal meeting/questions shall be an addendum to the RFQ.

The DNR also reserves the right to cancel or to reissue the RFQ in whole or in part, prior to execution of a Harvesting Services contract. If DNR finds it necessary to revise any part of the RFQ, addenda will be provided to all those who received the RFQ.

2.08 Most Favorable Terms

The State reserves the right to determine the Successful Bidder without further discussion of the Quote submitted. Therefore, the Quote should be submitted initially on the most favorable terms, which the Candidate Harvester can propose. There will be no best and final offer procedure. The State reserves the right to contact a Candidate Harvester for clarification of a Quote.

2.09 Costs to Propose

The DNR will not be liable for any costs that the Candidate Harvester incurs in preparing a Quote related to this RFQ or any other activities related to responding to this RFQ.

SECTION 3 PROJECT SCOPE OF WORK

3.01 Project Scope of Work.

As defined in the Harvesting Services Contract, Road Plan and Timber Sale Map (**See Exhibits B, C and D**).

3.02 SPECIAL REQUIREMENTS

Construction of the E3000R and E3200R, prehaul of the E-3200 from station 13+80 to 16+75, and abandonment of the E-3000 and E3200 are the only permitted activities prior to the sale of sorts 1 through five expected to sell at the end of March 2017. Construction shall take begin approximately September 15, 2016 and shall be complete no later than November 1, 2016 unless approved in writing by the Contract Administrator. This project will require the harvest and delivery of a large amount of timber in a relatively short operating window. It is imperative that the successful harvester has the ability and resources available to complete this project within the anticipated work schedule as described in section 1.04 of this RFQ.

SECTION 4 QUOTE EVALUATION

4.01 Evaluation Team.

DNR will designate an evaluation team to evaluate Quotes. The evaluation team will evaluate quotes according to the requirements outlined in this RFQ and any addenda, which are issued.

4.02 Administrative Requirements.

The RFQ Coordinator will review all Quotes to determine compliance with administrative requirements and instructions specified in the RFQ. Only Quotes meeting the minimum requirements will be forwarded to the evaluation team for further review.

4.03 Responsibleness.

When evaluating Quotes, the evaluation team will consider candidate Harvester's responsibleness. A Candidate Harvester is responsible if it:

- Has adequate financial resources to perform the contract, or the ability to obtain them;
- Is able to comply with the required delivery or performance schedule, taking into consideration all existing commercial and governmental business commitments;

- Has a satisfactory performance record. A Candidate Harvester shall not be determined responsible or non-responsible solely on the basis of a lack of relevant performance history, unless the DNR determines special standards are appropriate. A Candidate Harvester that is or recently has been seriously deficient in contract performance shall be presumed to be non-responsible, unless the DNR determines that the circumstances were properly beyond the Candidate Harvester's control, or that the Candidate Harvester has taken appropriate corrective action. Past failure to apply sufficient tenacity and perseverance to perform acceptably is strong evidence of non-responsibility. Failure to meet the quality requirements of the contract is a significant factor to consider in determining satisfactory performance. The DNR shall consider the number of contracts involved and the extent of deficient performance in each contract when making this determination.
- Any special standards will be properly identified in this solicitation and will apply to all Candidate Harvesters and their subcontractors.

4.04 Information Used for Evaluation.

Evaluators will use the information in the Candidate Harvester's Quote or bid form, their references, their previous Washington DNR performance evaluations, ability to meet special standards, and their Quote or 'Harvesting Services Contract Sealed Bid Form' including their 'Statement of Available Resources and Work Plan'.

4.05 Signatures

Quotes must be signed and dated by a person authorized to bind the Candidate Harvester to a contractual arrangement, e.g., the President or Executive Director if a corporation, the managing partner if a partnership, or the proprietor if a sole proprietorship.

4.06 Failure to Comply

If the Candidate Harvester fails to comply with any requirement of the RFQ, DNR will reject the Quote.

4.07 Rejecting Quotes

The DNR reserves the right at its sole discretion to reject any and all Quotes received without penalty and not to issue a contract from this RFQ. The DNR also reserves the right at its sole discretion to waive minor administrative irregularities contained in any Quote.

4.08 Lowest Responsible Bidder

Award of this Contract shall be to the lowest responsible bidder as determined by the DNR. In determining the lowest responsible bidder, in addition to price, the following may be considered:

- a. the ability, capacity, and skill of the bidder to perform the contract;
- b. the character, integrity, reputation, judgment, experience, and efficiency of the bidder;
- c. whether the bidder can perform the contract within the time specified;

- d. the quality of performance of previous contracts; and
- e. the previous and existing compliance by the bidder with laws relating to the contract or services. The DNR's determination that a bidder is not qualified shall result in rejection of the bid submitted.

4.09 Challenges to the Apparent Successful Bidder

- a. An unsuccessful bidder may appeal the bid award if they believe the process used to award the contract was not conducted properly. Please include the reasons why you believe the contract should not be awarded to the successful bidder.
- b. The DNR Region Manager must receive the appeal; in writing no later than 5 days from the date the letter was sent by fax or mail to the bidder notifying them that they were unsuccessful.

The Region Manager shall issue a written decision within 10 days of receipt of the appeal and cite the reasons for approving or disapproving the appeal.

- c. If the appellate is not satisfied with the decision of the Region Manager, the appellant may further appeal to the Deputy Supervisor-Uplands within 5 business days from the issuance of the Region Manger's written decision. The Deputy Supervisor-Uplands shall consider all information provided and issue a final decision in writing, citing reasons to approve or disapprove the appellant's appeal.

SECTION 5 RFQ EXHIBITS

- Exhibit A Estimated Harvest Project Schedule
- Exhibit B Draft Harvesting Services Contract
- Exhibit C Road Plan
- Exhibit D Timber Sale Map
- Exhibit E Harvesting Services Contract Sealed Bid Form



TIMBER NOTICE OF SALE

SALE NAME: WILD PLUM SORTS

AGREEMENT NO: 30-94410 - 30-94414

AUCTION: March 23, 2017 starting at 10:00 a.m.
Pacific Cascade Region Office, Castle Rock, WA

COUNTY: Kittitas

SALE LOCATION: Sale located approximately 15 miles west of Ellensburg

**PRODUCTS SOLD
AND SALE AREA:**

All timber except leave trees as described in Schedule A, bounded by the following: pink flagging, white "Timber Sale Boundary" tags, and orange flashers in units 1, 2, 3, and 4; All timber except leave trees marked with orange paint, bounded by the following: pink flagging, blue "Special Management Boundary" tags, white "Timber Sale Boundary" tags, and orange flashers in Unit 5 meeting the specifications described below; on parts of Sections 21, 22, 26, 27, and 35 all in Township 19 North, Range 16 East W.M., containing 528 acres, more or less.

MINIMUM BID AND ESTIMATED LOG VOLUMES:

Agreement #	Sort #	Species and Sort Specifications	Average Log Length	Estimated Volume		Tons Per MBF	Minimum Bid Delivered Prices		Total Appraised Value	Bid Deposit
				Mbf	Tons		\$/mbf	\$/Ton		
30-094410	1	DF Sawlogs 5"-7" dib	N/A	1827	13702	7.5		\$60.00	\$822,120.00	\$82,218.00
30-094411	2	DF Sawlogs 8"+	26	718	5170	7.2	\$620.00		\$445,160.00	\$44,516.00
30-094412	3	PP Sawlogs 5"+	26	359	2262	6.3	\$350.00		\$125,650.00	\$12,565.00
30-094413	4	GF Sawlogs 5"+	N/A	40	360	9		\$45.00	\$16,200.00	\$1,620.00
30-094414	5	Pulp 2.5"+	N/A	358	3222	9		\$25.00	\$80,550.00	\$8,055.00
Totals:				3302	24716				\$1,489,740.00	

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BV-SFIS-US09000572)

BID METHOD: Sealed Bids **UNIT OF MEASURE:** MBF Scale/Tonnage Scale

EXPIRATION DATE: October 31, 2017 **ALLOCATION:** Export Restricted

PAYMENT SECURITY: To be determined by the State as described in Clause P-045.2 of the Purchaser's Contract.

BIDDING PROCEDURES: A separate sealed bid and envelope must be submitted for each log sort. Prospective Purchasers may bid on any or all log sorts. On the day of sale the Purchaser must bring their bid deposit up to 10% of their total bid price. Complete bidding procedures and auction information may be obtained from the Southeast Region Office in Ellensburg WA. Phone number (509)925-8510.



TIMBER NOTICE OF SALE

TIMBER EXCISE

TAX:

Purchaser must pay the forest excise taxes associated with the log sorts delivered to them. The tax rate for this sale is 4.2 %. Taxable Stumpage = Total Delivered Value – (Harvest Cost + Estimated Haul Cost + ARRF). For more information contact the Department of Revenue, Forest Tax Section at 1-800-548-8829.

Use the following rates for estimating taxable stumpage:

Harvest Cost = \$0.00 per MBF for sorts 2 and 3, \$0.00 per Ton for sorts 1 and 4 and \$20.00 per Ton for sort 5.

Hauling Services Payment Rate per Ton
= (Base Rate + Mileage Rate) x (Contractor's hauling bid factor)

Base Rate = \$2.35 per ton

Mileage Rate = $(\$0.16 \times C \text{ miles}) + (\$0.11 \times A \text{ miles}) \times \text{Fuel Index Factor}$

ARRF does not apply.

Note: To calculate AARF rates per ton use the tons\mbf conversion factor in the table above.

CONFIRMATION:

Each sort is subject to confirmation following auction. Sorts will not be confirmed until at least 10 days after auction. Final contract award is contingent upon the State's haul cost analysis. Actual haul route may vary and is subject to change at the State's discretion.

SPECIAL REMARKS:

The successful Purchaser(s) will be required to purchase logs from the sale area upon delivery to their location specified in the bid submitted. Logs will be delivered to the Purchaser's delivery location by the State's contract harvester. Purchaser is responsible for weighing and scaling costs. All tonnage loads will be weighed and all mbf loads will be scaled at State approved locations. The State reserves the right to determine where logs are authorized to be scaled and weighed.

Leave trees in Unit 5 are marked in orange paint.

For more information regarding this log sort sale visit our web site:

<http://www.dnr.wa.gov/programs-and-services/product-sales-and-leasing/timber-sales/timber-auction-packets>. If you have questions call Chris Brandon at the Southeast Region Office at (509) 899-4825 or Steve Teitzel at the Product Sales and Leasing Division Office in Olympia at (360) 902-1741.

**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

HARVESTING SERVICES CONTRACT

AGREEMENT NO. 30-094409

SALE NAME: WILD PLUM SORTS

**THE STATE OF WASHINGTON DEPARTMENT OF NATURAL
RESOURCES, HEREINAFTER ACTING SOLELY, IN ITS PROPRIETARY
CAPACITY, STATE, AND CONTRACTOR, AGREE AS FOLLOWS:**

Section G: General Terms

G-001.1 Definitions

The following definitions apply throughout this contract;

Contract Administrator: Region Manager's designee responsible for assuring that the contractual obligations of the Contractor are met.

Contractor: State-selected harvester responsible to perform all duties as required by the Harvesting Services Contract, including but not limited to timber harvesting, road construction, debris removal and piling, hauling and delivery of forest products for weighing and/or scaling, to the Purchasers of the timber sales Sorts.

Delivery: Occurs when logs or forest products meeting the sorting specifications arrive at the Purchaser's destination, as described in the contract.

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

Harvesting: A general term, referring to the Contractor's various obligations under the Harvesting Services Contract.

Harvesting Services Contract: Contract between the Contractor and the State, which sets forth the procedures and obligations of the Contractor for completing the harvesting of timber, and the delivery of various log sorts to the State's purchasers, and the payment obligations of the State, The Harvesting Services Contract will include a Road Plan for any road construction or reconstruction, where applicable.

Log Sale and Purchase Contract: Purchase Agreement between the State and Purchaser(s) of particular log sorts from the timber sale.

Purchaser: The company or individual that has entered a Log Sale Contract with the State for individual log sorts from the timber sale area. The Contractor must deliver the designated log sorts to this company or individual. Contractor will likely be delivering different log sorts to different purchasers under the Harvesting Services Contract.

Road Construction Services: Includes building new and maintaining existing forest roads and associated work that may be optional or required as described in the Road Plan.

State: The Washington State Department of Natural Resources, landowner and seller of logs from the timber sale area. The State is represented by the Region Manager as designated on the contract signature page. Contractual obligations to the State are enforced by the Region Manager or the designated Contract Administrator.

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

G-015.1 Harvest Area and Location

Contractor shall harvest and deliver, all timber except leave trees as described in Schedule A, bounded by the following: pink flagging, white "Timber Sale Boundary" tags, and orange flashers in units 1, 2, 3, and 4; All timber except leave trees marked with orange paint, bounded by the following: pink flagging, blue "Special Management Boundary" tags, white "Timber Sale Boundary" tags, and orange flashers in Unit 5 located on approximately 528 acres on part(s) of Sections 21, 22, 26, 27, and 35 all in Township 19 North, Range 16 East W.M. of Kittitas County as shown on the attached timber sale map.

G-020.1 Inspection by Contractor

Contractor hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products to be harvested. Contractor further warrants to the State that they enter this contract based solely upon their own judgment of the harvest and road work, and condition of the forest products, formed after their own examination and inspection of both the timber sale area and the forest products to be harvested. Contractor 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.

G-022.1 Sorting Specifications

Contractor is responsible for sorting logs to the specifications listed below and hauling to the appropriate designated locations. Contractor is responsible for determining the highest value of each tree felled and the highest value destination of each log manufactured. The Contract Administrator will provide direction and guidance to Contractor with respect to highest value.

Logs produced under this contract will be manufactured by Contractor meeting the individual sort specifications and Purchaser's preferred log lengths, with a minimum length of 12 feet, unless otherwise directed by the Contract Administrator.

Contractor shall deliver log sorts to the Purchaser(s) location that meet the following specifications:

Agreement No.	Sort #	Species Diameter	Scaling Rule	Preferred Log Lengths	Destination	A Miles	C Miles
94410	1	DF Sawlogs 5"-7" dib	ES				
94411	2	DF Sawlogs 8"+	ES				
94412	3	PP Sawlogs 5"+	ES				
94413	4	GF Sawlogs 5"+	ES				
94414	5	Pulp 2.5"+	ES				

Unless otherwise specified, no blue stain is allowed in Ponderosa pine.

“WS” indicates that west side scaling rules apply. Minimum trim is 10 inches per scaling segment for west side scaling rules. “ES” indicates that east side scaling rules apply. Minimum trim is 6 inches per scaling segment for east side scaling rules.

Logs delivered by Contractor that do not meet the receiving Purchaser's log sort requirements as described above that have been pre-approved for delivery by the Contract Administrator shall not be considered mis-sorts.

G-024.1 Manufacturing Standards

For sorts designated as non-utility, Contractor will manufacture and deliver logs with the following minimum specifications:

- a. Sweep will be limited to within the bole of the log as measured using a tape stretched between the centers of each end of the log.

- b. Limbs and knots shall be cut flush, with no more than 15 percent of a log having limbs or knots over 2 inches in diameter extending more than 2 inches above the surface of the log.
- c. Logs in peeler sorts shall be chuckable with no more than a 2 inch diameter area of rot within a 5 inch diameter circle located at the center of either end of the log.
- d. If poles are to be produced under this contract, they shall meet the specifications outlined in Schedule P, Pole Specifications.

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	Harvest Prescription Summary
M	Additional Road Maintenance Payment Rates

G-027.1 Log Delivery Schedule and Conditions

- a. Contractor shall deliver logs to Purchaser's designated delivery location per G-022.1 clause. If a log delivery location is changed during this contract, the Contract Administrator shall notify the Contractor. Once notified, the Contractor shall deliver logs to the new location.
- b. The Contractor may deliver logs to the Purchaser's delivery location during the Purchaser's working hours, or at least between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, except, scheduled closures and legal holidays for the contract term as described in clause G-030.1, unless permission to do otherwise is agreed upon by the State.
- c. The Contractor agrees to deliver said logs on conventional or self-loading logging trucks, properly and legally loaded, bound, branded, and ticketed. Logs in loads shall not be double-ended unless approved in writing by the Contract Administrator. It is understood and agreed that the Purchaser incurs no obligation to accept improperly or illegally loaded trucks in its facility. Any truck so loaded may be directed to vacate the yard and shall remain the responsibility of the Contractor to make the load conform to legal requirements for hauling.
- d. If a receiving Purchaser plans a scheduled closure, the Contract Administrator shall notify the Contractor at least 48 hours before the scheduled closure. Depending on the length of the scheduled closure or delays in log delivery, the Contract Administrator will decide in the best interest of the State on the disposition of the affected log sort(s) or any alternate delivery schedule or location.
- e. Contractor's daily log delivery to a Purchaser's location may be limited according to the table below, provided the Contract Administrator notifies the

Contractor at least 48 hours prior to the time this truck delivery limit is established.

Sort(s)	Maximum No. Loads/day
1,2,3,4,5	10

- f. A truck delivery is all the wood hauled including sorts on super trucks, mule trains and pups brought to the delivery point by a single truck. Contractor shall notify the State's Contract Administrator if for any reason a Purchaser refuses truck deliveries.

G-030.1 Contract Term and Expiration Dates

To ensure the timely completion of activities under this contract, the State shall determine the project starting date. The State shall notify the Contractor no later than fourteen (14) days prior to the anticipated starting date.

All activities required under this contract are to be completed between the starting date of September 15, 2016 and the expiration date of November 3, 2017. All forest product deliveries are to be completed prior to October 16, 2017.

Contractor shall not have any right to enter the sale area to perform harvesting services after contract expiration.

G-033.1 Curtailment of Operations

Contractor shall provide the State with five days advance written notice to the Contract Administrator of its intent to commence or cease any and all operations under this contract. The commencement or cessation of operations must be approved by the Contract Administrator. Failure to comply will be considered a breach.

G-040.1 Contract Term Adjustment

A Contract Term Adjustment may be considered based on actual time lost through unforeseeable causes beyond the control and without fault or negligence of the Contractor, including, but not restricted to, acts of the State, closures by government regulatory agencies, mill closures, fires, vandals, and unusually severe weather conditions, provided that the Contractor shall, within seven (7) calendar days of the initiation of such delay, notify the State, in writing, of the cause of delay, upon which notification the State shall ascertain the facts and extent of the delay and notify the Contractor in writing of its decision regarding contract adjustment.

G-054.1 Early Contract Termination

The State may terminate this contract prior to the expiration date listed in G-030.1 in whole or in part by giving fifteen (15) days written notice to the Contractor when it is in the best interests of the State. If this contract is so terminated, the State shall be liable to make payments to the Contractor for the sum of the estimated expenditures for road construction, felling, bucking, yarding and decking of products processed but not

removed from the sale area due to termination action. Contractor may not seek any other damages from the State for early termination of this harvesting agreement.

G-060.1 Exclusion of Warranties

The following specific matters ARE NOT WARRANTED, and are EXCLUDED from this transaction:

- a. The **CONDITION** of the site or forest products. Any descriptions of the site or forest products in the notice of sale, other pre-contractual documents, or the Harvesting Services Contract are provided solely for administrative and identification purposes.
- b. The **ACREAGE** contained within any sale area. Any acreage descriptions appearing in the notice of sale, other pre-contractual documents, or the Harvesting Services Contract are estimates only, provided solely for administrative and identification purposes.
- c. The **VOLUME, WEIGHT, QUALITY, or GRADE** of the forest products to be harvested. The descriptions of the forest products to be harvested are estimates only, made solely for administrative and identification purposes.
- d. 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 informational purposes, but the information contained therein is not warranted. Contractors must make their own assessments of the site.
- e. **THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES** or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.
- f. **THAT THE FORESTRY OPERATIONS** to be performed under this contract **WILL BE FREE FROM REGULATORY ACTIONS** by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- g. Items contained in any other documents prepared for or by the State.

G-064.1 Permits

Contractor is responsible for obtaining any permits not already obtained by the State that relate to Contractor's operation. Forest Practice Application / Hydraulic Project

Approval permits obtained by the State shall be transferred to Contractor. Contractor is responsible for all permits, amendments and renewals.

G-065 Regulatory Disclaimer

The State disclaims any responsibility for, or liability relating to, regulatory actions by any government agency, including actions pursuant to the Forest Practices Act, Ch. 76.09 RCW that may affect the operability of the timber sale.

G-066.1 Governmental Regulatory Actions

a. Regulatory Risk

Except as provided in this clause, Contractor assumes all risks associated with governmental regulatory actions, including actions taken pursuant to the Forest Practices Act, Ch. 76.09 RCW, the Endangered Species Act, 16 U.S.C 1531-1544 and any Habitat Conservation Plan between the Department of Natural Resources and the U.S. Fish and Wildlife Service or any other agency now in place and as may be amended, or hereafter created, that may affect the operability of the timber sale.

b. Increased Costs

Contractor shall be responsible for any increased operational costs arising from any applicable foreign or domestic governmental regulation or order that does not cause contract performance to become commercially impracticable or that does not substantially frustrate the purpose of the contract. If impracticability or frustration results from Contractor's failure to comply with this contract or from Contractor's acts or omissions, Contractor shall remain responsible for fulfilling contract obligations notwithstanding the impracticability or frustration.

G-070.1 Limitation on Damage

In the event of a breach of any provision of this contract by the State, the exclusive remedy available to the Contractor will be limited to a return of the Performance Security, and payment for improvements and other services rendered by the Contractor, which were required by the Harvesting Services Contract. The State shall not be liable for any damages, whether direct, incidental, or consequential.

G-092.1 Harvest Area Boundary Adjustment

The State may make adjustments in the harvest area boundaries, or may mark timber outside such boundaries. The cumulative changes to the sale area during the term of the contract shall not exceed more than five (5) percent of the original sale area. Such adjustments or marking will be accomplished by the Contract Administrator. The Contractor must remove and deliver all material so designated, prior to the expiration date of the contract. All contract services within such boundary adjustments or so marked shall be paid for at contract rates.

G-112.1 Title

All rights, title, and interest in and to any timber shall belong to the State until delivered, at which time the appropriate Purchaser assumes title.

G-116.1 Sustainable Forestry Initiative® (SFI) Certification

Forest products harvested and delivered under this contract are certified as being in conformance with the Sustainable Forestry Initiative program Standard under certificate number BV-SFIS-US09000572.

Contractor shall have at least one person regularly on-site during active operations that have completed training according to the requirements outlined within the SFI® program Standard. Contractor shall designate in writing the name(s) of the individual(s) who will be on-site and provide proof of their successful completion of an approved training program prior to active operations.

G-120.1 Responsibility for Work

All work, equipment, personnel, and materials necessary to perform the Harvesting Services Contract shall be the responsibility of the Contractor.

G-121.1 Exceptions

Exceptions to Contractor's responsibility in clause G-120.1 shall be limited exclusively to the circumstances described in this clause. These exceptions shall not apply where damages occur due to Contractor's failure to take reasonable precautions or to exercise sound forest engineering and construction practices.

The State shall bear the cost to repair any existing roadway or section of required road completed to the point that an authorization to haul has been issued where such damage was not caused by Contractor, its employees, agents, or invitees, including independent contractors. Contractor shall accomplish repairs promptly as required by the State at the rates set forth in the equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State may elect to accomplish repairs by means of State provided resources.

Nothing contained in clauses G-120.1 (Responsibility for Work) and G-121.1(Exceptions) shall be construed as relieving Contractor of responsibility for, or damage resulting from, Contractor's operations or negligence, nor shall Contractor be relieved from full responsibility for making good any defective work or materials.

G-123.1 Operating Authority

The State has arranged for the Contractor to have full and free license and authority to enter upon said lands with his agents and employees and do all things necessary, within the limitations herein set forth, in harvesting said timber as described in this contract.

G-124.1 Contractor Not an Employee of State

Contractor and his or her employees or agents performing under this contract are not employees of the State. The Contractor will not hold itself out as nor claim to be an officer or employee of the State by reason hereof, nor will the Contractor make any

claim or right, privilege or benefits which would accrue to an employee under chapter 41.06 RCW or Chapter 28B.16 RCW.

G-125.1 Use of Subcontractors

Contractor's use of subcontracted services shall be subject to approval in writing by the Contract Administrator. Approval of subcontracted services may be revoked in accordance with the G-220.1 'State Suspends Operations' clause when the Contract Administrator determines that the Subcontractor's work has been performed in a manner that does not meet contractual requirements, optimize value or otherwise causes damage to the state.

Contractor shall arrange with the Contract Administrator to meet on site at least once a week during active operations to review and inspect subcontractor performance. Contractor shall provide a written plan of operations detailing planned operations for the following week.

G-126.1 Disputes with Subcontractors or Material Providers

Should Contractor and its subcontractors or materials providers develop disputes affecting the completion of obligations under this contract, Contractor shall resolve any such disputes in a timely and efficient manner that does not involve or adversely affect either the State or its Purchasers.

G-130.1 Prevention of Damage and Consequences of Contractor-Caused Damage

The Contractor agrees to exercise due care and caution at all times to avoid damage to all special resources including environmentally sensitive areas, research, demonstration, and cultural objects or areas. Additionally, the Contractor agrees to protect all improvements on State property affected by the work of this contract including, but not limited to, roads, culverts, bridges, ditches, fences, utility lines, and buildings.

If damages occur due to the Contractor's operations, the Contractor shall be responsible for damage or restoration costs, or other compensation measures as described in this contract. State may deduct damage or restoration costs from payments to the Contractor. This clause shall not relieve the Contractor from other applicable civil or criminal remedies provided by law.

G-140.1 Indemnity

To the fullest extent permitted by law, Contractor shall indemnify, defend and hold harmless State, agencies of State and all officials, agents and employees of State, from and against all claims arising out of or resulting from the performance of 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. Contractors' obligations to indemnify, defend, and hold harmless includes any claim by Contractors' agents, employees, representatives, or any subcontractor or its employees. Contractor expressly agrees to indemnify, defend, and hold harmless State for any claim arising out of or incident to Contractors' or any

subcontractors' performance or failure to perform the contract. Contractors' obligation to indemnify, defend, and hold harmless State shall not be eliminated or reduced by any actual or alleged concurrent negligence of State or its agents, agencies, employees and officials. Contractor waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend and hold harmless State and its agencies, officials, agents or employees.

In addition to any other remedy authorized by law, the State may retain as much of the performance security, or any money or credits due Contractor necessary to assure indemnification.

G-150.1 Insurance

Contractor 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 also suspend Contractor operations until required insurance has been secured.

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 should issue all insurance and surety bonds. Any exception shall be reviewed and approved by the department's risk manager before the insurance coverage is accepted. 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 Southeast region office 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, Contractor shall furnish State 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. The Contractor shall obtain insurance coverage prior to operations commencing and continually maintain it in full force until all contract obligations have been satisfied or an operating release has been signed by the State.

Contractor 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 Contractor's liability or responsibility.

The State of Washington, Department of Natural Resources, 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. Contractor 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 Contractor and such coverage and limits shall not limit Contractor'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, shall not be less than as follows:

Commercial General Liability (CGL) Insurance. Contractor shall maintain general liability (CGL) insurance, and, if necessary, 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. Contractor shall buy employers liability insurance, and, if necessary, 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. Contractor shall comply with all State of Washington workers' compensation statutes and regulations. Workers' compensation coverage shall be provided for all employees of Contractor 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, Contractor 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 Contractor, 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, Contractor shall indemnify State. Indemnity shall include all fines, payment of benefits to Contractor or subcontractor employees, or their heirs or legal representatives, and the cost of effecting coverage on behalf of such employees.

Business Auto Policy (BAP). Contractor shall maintain business auto liability and, if necessary, 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. Contractor waives all rights against State for the recovery of damages to the extent they are covered by business auto liability or commercial umbrella liability insurance.

G-160.1 Agents

The State's rights and duties will be exercised by the Region Manager. The Region Manager will notify Contractor in writing who is responsible for administering the contract. The Region Manager has sole authority to waive, modify, or amend the terms of this contract in the manner prescribed in clause G-180.1. No agent, employee, or representative of the State has any authority to bind the State to any affirmation, representation, or warranty concerning the forest products harvested beyond the terms of this contract.

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

G-170.1 Assignment and Delegation

Contractor shall assign no rights or interest in this contract without prior written permission of the State. Any attempted assignment shall be void and ineffective for all purposes unless made in conformity with this paragraph. Contractor may perform any duty through a delegate, but Contractor is not thereby relieved of any duty to perform or any liability. Any assignee or delegate shall be bound by the terms of the contract in the same manner as Contractor.

G-180.1 Modifications

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

G-181.1 Contract Modification for Protection of Resources and Improvements

The Harvesting Services contract may be unilaterally terminated or modified by the State upon determination that the Contractor's operations would cause serious damage to resources or improvements, or would be significantly inconsistent with State land management plans.

In the event of contract modification under this section and through no fault of Contractor operations, the Contractor shall be reimbursed for any additional operations required, provided that any work or extra protection shall be subject to prior approval of the State.

G-190 Contract Complete

This contract is the final expression of the Parties' agreement. There are no understandings, agreements, or representations, expressed or implied, which are not specified in this contract.

G-200.1 Notice

Notices required to be given by the State under the following clauses shall be in writing and shall be delivered to the Contractor's authorized agent or sent by certified mail to the Contractor's post office address, so that their receipt may be acknowledged by Contractor.

G-030.1 Commencement Date

G-092.1 Harvest Area Boundary Adjustment

G-181.1 Contract Modification for Protection of Resources and Improvements

G-210.1 Violation of Contract

G-220.1 State Suspends Operation

D-015.1 Delivered Mis-sorted Logs and Penalties

D-016.1 Damages for Delivered Mis-manufactured Logs

All other notices required to be given under this contract shall be in writing and delivered to the authorized agent or mailed to the party's post office address. Contractor agrees to notify the State of any change of address.

G-210.1 Violation of Contract

- a. If Contractor violates any provision of this contract, the Contract Administrator, by written notice, may suspend those operations in violation. If the violation is capable of being remedied, the Contractor has fifteen (15) days after receipt of suspension notice to remedy the violation. If the violation cannot be remedied or Contractor fails to remedy the violation within fifteen (15) days after receipt of a suspension notice, the State may terminate the rights of the Contractor and collect liquidated damages under this contract

associated with the breach. In the event of such a contract termination, the State may demand all or part of the Contractor's surety in order to satisfy the State's damages.

- b. The State has the right to remedy a breach if Contractor is unable, as determined by the State, to remedy the breach, or if the Contractor has not remedied the breach within 15 days of a suspension notice. Any expense incurred by the State in remedying Contractor's breach may be charged to Contractor, or State may deduct such expenses from payments to the Contractor.
- c. If the contract expires without the Contractor having performed all their duties under this contract, Contractor's rights and obligations to harvest, deliver forest products, and perform any additional contract-related requirements are terminated. Thus, Contractor cannot remedy any breach once this contract expires. This provision shall not relieve Contractor of any financial obligations and unresolved contractual agreements, including payment to sub-contractors for work performed under this contract.

G-220.1 State Suspends Operations

The Contract Administrator may suspend any operation of Contractor under this contract when the State is suffering, or there is reasonable expectation the State will suffer environmental, monetary or other damage if the operation is allowed to continue.

Contractor shall be in breach of this contract if the operation continues after the suspension notice or if the operation resumes prior to approval and notice from the Contract Administrator.

Contractor may request a modification of suspension within seven (7) calendar days of the start of suspension through the dispute resolution process. If this process results in a finding that the suspension exceeded the time reasonably necessary to stop or prevent damage to the State, Contractor may request a contract term adjustment based on the number of excess days of suspension.

G-230.1 Unauthorized Activity

Any cutting, removal, or damage of forest products by Contractor, its employees, agents, or invitees, including independent contractors, in a manner inconsistent with the terms of this contract or State law, is unauthorized. Such activity may subject Contractor to liability for triple the value of said forest products under RCW 79.02.320 or RCW 79.02.300 and may result in prosecution under RCW 79.02.330 or other applicable statutes.

G-240.1 Dispute Resolution

The following procedures apply in the event of a dispute regarding interpretation or administration of this contract and the parties agree that these procedures must be followed before a lawsuit can be initiated.

- a. In the event of a dispute, Contractor must make a written request to the Region Manager for resolution prior to seeking other relief.
- b. The Region Manager will issue a written decision on Contractor's request within five business days.
- c. Within five business days of receipt of the Region Manager's decision, the contractor may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.
- d. Unless otherwise agreed, the Deputy Supervisor - Uplands will hold a conference within 15 calendar days of the receipt of Contractor's request for review of the Region Manager's written decision. Contractor and the Region Manager will have an opportunity to present their positions. The Deputy Supervisor - Uplands will issue a decision within a reasonable time of being presented with both Parties' positions.

G-250.1 Compliance with All Laws

Contractor shall comply with all applicable statutes, regulations and laws, including, but not limited to, chapter 27.53 RCW, chapter 68.50 RCW, WAC 240-15 and WAC 296-54. Contractor shall provide documentation from Washington State Departments of Labor and Industries and Revenue that all obligations concerning worker compensation and safety will be met. Failure to comply may result in forfeiture 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-270.1 Equipment Left on State Land

All equipment owned or in the possession of Contractor, its employees, agents, or invitees, including independent contractors, shall be removed from the sale area and other State land by the termination date of this contract. Equipment remaining unclaimed on State land 30 days after the expiration of the contract period is subject to disposition as provided by law. Contractor shall pay to the State all costs of moving, storing, and disposing of such equipment. The State shall not be responsible for any damages to or loss of the equipment or damage caused by the moving, storing or disposal of the equipment.

G-280.1 Operating Release

An operating release is a written document, signed by the State and the Contractor, indicating that the Contractor has been relieved of certain rights or responsibilities with regard to the entire or a portion of the timber sales contract. Contractor 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, Contractor's right to cut and remove forest products on the released area will terminate.

G-310.1 Road Use Authorization

The Contractor is authorized to use the following State roads, and roads for which the State has acquired easements and road use permits; E-3000, E-3000R, E-3200, E-3200R, E-3030, E-3201, E-3203, E-3206, E-3210, E-3215, E-3215A, E-3240, E-3250, E-3251, M-1700, M-1720. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

G-330.1 Pre-work Conference

Contractor shall arrange with the Contract Administrator to review this contract and to examine the sale area before beginning any operations. A plan of operations shall be developed and agreed upon by the Contract Administrator and Contractor before beginning any operations. 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 Contractor's plan of operations shall not be construed as any statement or warranty that the plan of operations is adequate for Contractor's purposes or complies with applicable laws.

Contractor shall arrange with the Contract Administrator to review this contract and work requirements with any and all subcontractors prior to receiving authorization for any subcontractor to begin operations.

G-340.1 Preservation of Markers

Any legal land subdivision survey corners and witness objects are to be preserved. If such are destroyed or disturbed, the Contractor shall, at the Contractor's own expense, re-establish them through a licensed land surveyor in accordance with U.S. General Land Office standards. Corners and/or witness objects that must be disturbed or destroyed in the process of road construction or logging shall be adequately referenced and/or replaced in accordance with RCW 58.24.040(8). Such references must be approved by the Contract Administrator prior to removal of said corners and/or witness objects.

G-370.1 Blocking Roads

Contractor shall not block the E-3000, E-3000R, unless authority is granted in writing by the Contract Administrator.

G-396.1 County Hauling Permit

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

G-430.1 Open Fires

The Contractor its employees or its subcontractors shall not set or allow to be set any open fire at any time of the year without first obtaining permission in writing from the Contract Administrator.

G-450.1 Encumbrances

This contract and Contractor's activities are subject to the following:

DATA MISSING

Section P: Payments and Securities**P-030.1 Payment for Harvesting and Hauling Services**

The State shall pay Contractor for harvesting and hauling services at the following rates:

Payment for Harvesting Stump to Truck ('On Board Truck' or OBT): The State's payment to the Contractor for harvesting services will be in accordance with the following table;

Sort Number(s)	Unit of Measure	OBT Rate	OBT Utility Rate
2,3	Ton	\$0.00	\$20.00
1,4	Ton	\$0.00	N/A
5	Ton	\$20.00	N/A

Utility volume for mbf sorts determined on an adjusted gross scale basis.

Payment for Hauling: The State's payment to the Contractor for hauling services upon the tons delivered multiplied by: a base rate, 'A' and 'C' mile rates, the 'haul miles' listed in clause G-022.1, a fuel index factor and the Contractor's hauling bid factor using the following formula:

Hauling Services Payment Rate per Ton
 = (Base Rate + Mileage Rate) x (DATA MISSING: No data found.)

Base Rate = \$2.35
 (based on the multiple truck operation fixed cost/ton within 'Report to the Washington State Legislature, The Washington Log Trucking Industry: Costs and Safety Analysis, August 2008'.)

Mileage Rate = ((\$.16 x C miles) + (\$.11 x A miles)) x Fuel Index Factor

The Fuel Index Factor will be adjusted quarterly by the State based upon the U.S. Energy Information Administration's Weekly Retail On-Highway Diesel prices for the West Coast region posted at <http://tonto.eia.doe.gov/oog/info/wohdp/diesel.asp> using the following formula;

Fuel Index Factor = 1 + ((Q(x) - Q(base)) / Q(base))

Where;

Q(base) = Average fuel price for quarter preceding harvesting services contract bid opening.

Q(x) = Average fuel price for quarter preceding log deliveries.

The fuel index factor will be calculated each;

January and apply to loads delivered between January 1 and March 31,

April and apply to loads delivered between April 1 and June 30,

July and apply to loads delivered between July 1 and September 30,

October and apply to loads delivered between October 1 and December 31.

Travel distances to each log sort destination will be determined by the State and represents the one-way travel distance from the sale area to the purchaser's delivery point.

The state must approve all haul routes and will determine travel distances prior to contractor delivery of logs to each specified destination. The State may determine alternate haul routes and delivery destinations during the course of this contract. Upon notification by the State, the Contractor is required to deliver logs: using the alternative route, or to State approved alternative delivery locations. Payment rates for approved alternate routes and delivery destinations shall be set forth by amending this clause in accordance with clause G-180.1.

For sorts bid on an mbf basis tonnage will be calculated using the State's conversion rates in the table below unless actual tonnage is available and approved for use. For tonnage sorts, actual tonnage shall apply.

MBF Sort(s)	MBF/Tons Conversion Factor
2	7.2
3	6.3

Contractor is responsible for billing the State for harvesting and hauling services performed using load data collected by State approved third party scaling organizations and reported by the State designated Log and Load Reporting Service. The billing statement shall include itemized accounts and summaries of harvesting tonnage and hauling mileage charges in a format approved by the State.

The billing schedule shall be the 1st and the 16th of each month with payment due by State within fourteen (14) days. Reporting periods end on the 15th and the end of each month.

No certificate given or payment made shall be evidence of the satisfactory performance of the Contract, either wholly or in part, against the claim of the State to the contrary, and no payment shall be construed to be an acceptance of any defective work, which may before or afterwards appear.

P-031.1 Payment for Hauling Across Ferries and Other Miscellaneous Tolls

Prior approval is required for payment of any additional transportation charges incurred by Contractor, including ferries, toll bridges, and other miscellaneous tolls.

If the Contract Administrator authorizes hauling across ferries, toll bridges, or other miscellaneous tolls, the Contractor's billing statement must include an itemized list of loads by ticket number and date of crossing(s) with receipts for each ferry crossing and/or number of toll bridge crossings attached. 'Good to Go' regulated bridge tolls will be reimbursed at a fixed rate of per toll crossing. Miscellaneous tolls controlled by the Washington State Transportation Commission (WSTC), or other government agencies, will be reimbursed at their posted rates or the actual cost with receipts, whichever is less.

Requests for payment of additional transportation charges must be received by the State prior to contract termination. Contractor shall only be reimbursed for the amount of toll approved by the Contract Administrator.

Payment for tolls incurred for backhauling loaded trucks shall be the responsibility of the Contractor and will not be reimbursed by the State.

Convenience tolling will not be reimbursed.

P-032.1 Payment for Road Construction

The Contractor is responsible for independently negotiating, procuring and paying for road construction services provided.

The State shall pay Contractor for roadwork completed at the following rates:

See Exhibit G

One station of road construction is 100 feet. All materials, equipment time, labor, and equipment mobilization costs are included in the total price.

Upon completion of road construction, the Contractor shall submit a report identifying the road(s), and the number of stations that have been completed to the Contract Administrator. Once the Contract Administrator has approved the roadwork in writing, the Contractor is responsible for billing the State for road construction services performed. The billing statement shall include an itemized account of the road(s), the number of stations and which stations have been completed. The Contract Administrator will verify that road construction described on the billing statement is complete prior to State making payment to Contractor.

The billing schedule shall be the 1st and the 15th of each month with payment due by State within fourteen (14) days. Reporting periods end on the 14th and the end of each month.

No certificate given or payment made shall be evidence of the satisfactory performance of the Contract, either wholly or in part, against the claim of the State to the contrary, and no payment shall be construed to be an acceptance of any defective work, which may before or afterwards appear.

P-033.1 Payment for Additional Road Maintenance Work

The Contractor is responsible for independently negotiating, procuring and paying for additional road maintenance services provided.

During the course of operations, the State may identify and require additional road maintenance work to be completed by the Contractor. The amount of payment for this additional road maintenance work deemed necessary by the State will be calculated and paid for using the equipment rates in Schedule M 'Additional Road Maintenance Payment Rates'.

Upon completion of any additional road maintenance work, the Contractor shall submit a report identifying the road(s), and the number of stations that have been completed to the Contract Administrator. Once the Contract Administrator has approved the additional road maintenance work in writing, the Contractor is responsible for billing the State for additional road maintenance services performed. The billing statement shall include an itemized account of the road(s), the number of stations and which stations have been completed. The Contractor Administrator will verify that road maintenance described on the billing statement is complete prior to State making payment to Contractor. The billing schedule shall be the 1st and the 15th of each month with payment due by State within fourteen (14) days. Reporting periods end on the 14th and the end of each month.

No certificate given or payment made shall be evidence of the satisfactory performance of the Contract, either wholly or in part, against the claim of the State to the contrary, and no payment shall be construed to be an acceptance of any defective work, which may before or afterwards appear.

P-034.1 Payment for Additional Miscellaneous Work

During the course of operations, the State may identify and require additional miscellaneous work to be completed by the Contractor.

A plan for the additional work deemed necessary by the State shall be provided by the Contractor and must be approved in writing by the State prior to commencement of work by the Contractor. After the Contract Administrator has inspected and approved the work in writing, the Contractor is responsible for billing the State for work performed. The billing statement shall include an itemized account of the equipment, labor and materials necessary for the additional work that has been completed and approved.

The State shall reimburse the Contractor for approved costs within thirty (30) days of State's approval of the statement.

No certificate given or payment made shall be evidence of the satisfactory performance of the Contract, either wholly or in part, against the claim of the State to the contrary, and no payment shall be construed to be an acceptance of any defective work, which may before or afterwards appear.

P-090.1 Performance Security

Prior to start of any operations Contractor agrees to provide one or more of the following State approved performance securities; cash, savings account assignment, certificate of deposit assignment, irrevocable standby letter of credit, or a Miller Act bond, for the amount of \$50,000.00. At least 50% must be in a form other than a bond, unless otherwise agreed to by the State.

Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by Contractor's operations, failure to perform, or noncompliance with any rule or law. In addition, said security may be used by the State to satisfy any claims or liens made by Contractor's subcontractors, material providers, or other individuals against the State or its Purchasers, which arise from this Harvesting Services Contract.

If at any time the State decides that this security has become unsatisfactory, the Contractor agrees to suspend operations and, within fifteen (15) days of notification, replace the security with one acceptable to the State. The State may also require increases to the existing performance security at any time.

Unapplied performance security will be returned to Contractor after the State issues an operating release and completes the financial closeout.

P-100.1 Performance Security Reduction

The State may reduce the performance security after an operating release has been issued if the State determines that adequate security exists for any remaining obligations of Contractor. Prior to any reduction of the performance security amount, the Contractor must submit a written reduction request. No reduction will be allowed by the State unless such reduction can be made while fully protecting the State's interests.

P-120.1 Contractor Responsibility for Subcontractor Services

Contractor is responsible for negotiating, procuring, and paying for all services rendered by any subcontractor. Subcontractor services may include, but are not limited to, harvesting logs, hauling logs, and building roads.

Section L: Log Definitions and Accountability

L-010.1 Forest Products Conveyed

Forest products conveyed are logs or parts of logs delivered meeting the sorting criteria defined by clauses G-022.1 and G-024.1 of this contract.

L-013.1 Log Sorts Delivered to Incorrect Destination

Purchasers have agreed to purchase the log sort (s) as described in the G-022.1 clause. In the event a load of logs from an incorrect sort is delivered to a Purchaser, the Purchaser may reject the load. If Purchaser receives an incorrectly delivered load, Contractor shall notify the State within 24 hours. The Contractor will maintain responsibility for proper disposition and delivery of incorrectly delivered loads.

L-060.1 Load Tickets

Contractor 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.

Contractor shall account for all load tickets issued by the Contract Administrator. The State may treat load tickets not accounted for as lost forest products. All costs associated with computing the billings for lost loads shall be borne by Contractor.

L-090 Scaling Rules

Determination of volume of any forest products shall be conducted by a state approved third party scaling organization and in accordance with the Eastside log scaling and grading rules, Region 6 taper 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. Forest products sold under the contract which require weighing shall be weighed at a location that meets Washington State Department of Agriculture approval.

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 en-route 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-114.1 State Approval of Haul Route

Contractor shall file with the Contract Administrator and Contract Administrator shall approve a map showing the haul route, which unscaled and unweighed logs will travel from the harvest area to the weighing/scaling location and approved destinations. The Contractor must notify Contract Administrator within 24 hours of any deviation from the haul route. The route of haul may be changed by prior agreement of the State and the Contractor. The Contract administrator must be notified by the Contractor of any overnight stays of an unscaled or unweighed load of logs.

L-130.1 Conversion Factors

Forest products harvested and delivered from the sale area that are not measured in units specified in the P-030.1 'Payment for Harvesting and Hauling Services' clause of this contract shall be converted to the contract specified payment units using Department of Natural Resources conversion factors unless a plan to do otherwise has been pre-approved by the State.

Section H: Harvesting Operations**H-012.1 Leave Tree Damage Definition**

Leave trees are trees required for retention within the sale boundary. Contractor 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 Contractor'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 100 square inches.
- b. A leave tree's 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 Contractor may be required to pay liquidated damages for Excessive Leave Tree Damage as detailed in clause D-040.1.

H-013.1 Reserve Tree Damage Definition

Reserve trees are trees required and designated for retention within the sale boundary. Contractor shall protect reserve trees from being cut, damaged, or removed during operations.

Reserve tree damage exists when one or more of the following criteria occur as a result of Contractor's operation, as determined by the Contract Administrator.

- a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 100 square inches.
- b. A reserve tree's top is broken or the live crown ratio is reduced below 30 percent.
- c. A reserve 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 reserve tree has been cut or damaged, the Contractor shall provide a replacement reserve tree of like condition, size, and species within the sale area, as approved by the Contract Administrator. Contractor may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.1.

Removal of designated reserve trees from the sale area is unauthorized, and may invoke the use of the G-230.1 'Trespass and Unauthorized Activity' clause. Contractor is required to leave all cut or damaged reserve trees on site.

H-015.1 Skid Trail Requirements

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

- a. Skid trail will not exceed 18 feet in width, including rub trees.
- b. Skid trails shall not cover more than 10 percent of the total acreage on each unit.
- c. Skid trails will be pre-approved by the Contract Administrator.
- d. Except for rub trees, skid trails shall be felled and yarded prior to falling adjacent timber.
- e. Rub trees shall be left standing until all timber tributary to the skid trail has been removed.
- f. Excessive soil damage is not permitted. Excessive soil damage is described in clause H-017.
- g. Skid trails will be water barred at the time of completion of yarding, if required by the Contract Administrator.

Violation of any part of this clause will be cause to revoke the Contractor's rights to harvest and to enter the sale area.

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 12 inches as measured from the natural ground line. To reduce soil damage, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other mitigation measures. 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 excluding right of way timber must be removed within 30 days of being felled.

H-030.1 Timber Falling

Trees shall be felled and logs shall be bucked to obtain the greatest practicable utilization and value of forest products.

H-035 Fall Trees Into Sale Area

Trees shall be felled into the sale area unless otherwise approved 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-052.1 Branding and Painting

The State shall provide a State of Washington registered log brand. Contractor must brand and paint all logs removed from the harvest area in a manner that meets the requirements of WAC 240-15-030(2)(a)(i). All logs removed from the harvest area designated as export restricted shall also be painted in a manner that meets the requirements of WAC 240-15-030(2)(a)(ii).

For pulp loads purchased under a contract designated as export restricted, Contractor shall brand at least 3 logs with legible brands at one end. Also, 10 logs shall be painted at one end with durable red paint.

H-080 Snags Not to be Felled

Snags not required to be felled for safety reasons may 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. Stump height shall not exceed 12 inches in height measured on the uphill side, or 2 inches above the root collar, whichever is higher.

H-120.1 Harvesting Equipment

Forest products harvested under this contract shall be removed using Ground based Systems and Cable Systems, unless authority to use other methods or equipment is granted in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-140.1 Special Harvest Requirements

Contractor shall accomplish the following during the harvest operations:

1. A copy of the timber sale prospectus map and contract shall be present on-site during active operations.
2. Contractor is required to maintain an average production of 8 loads per day during the normal work week (Monday through Friday excluding holidays) within 1 week of sort contract signing unless authority to do otherwise is granted by the Contract Administrator. This production rate will be maintained for the duration of harvesting portion of the contract (Approximately April 24 – October 15, 2017). The Contract Administrator will verify minimum production requirements every 2 weeks and notify contractor within 24 hours of production shortfalls.
3. Marked leave trees may be traded for trees of the same size and species with prior written approval from the Contract Administrator.
4. All operations and hauling associated with the E3210 from station 33+00 to 56+50, the E3215 from 0+00 to 11+70, and the E3201 from 0+00 to 15+75 will be restricted to Monday through Friday from 6:00 a.m. -6:00 p.m. Contractor may request alternate hours of operation, which will require written approval by the Contract Administrator before alternate hours of operation may begin. This authorization may be revoked at any time by the Contract Administrator.

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

H-141.1 Additional Harvest Requirements

Contractor shall accomplish the following during the harvest operations:

In constructing crossings, only those trees needed for passage within type Ns ELZs shall be removed and left within the ELZ outside the ordinary high water mark – any cutting of trees is subject to Contract Administrator approval.

Following operations, abandonment shall consist of removing the crossing, pulling back any existing side cast material, water-barring trails, grass seeding and spreading straw on exposed soils.

Permission to do otherwise must be granted in writing by the State.

H-150.1 Required Removal of Forest Products

Contractor shall remove from the sale area, present for scaling and deliver to the designated purchaser locations specified in the G-022.1 clause all forest products conveyed that meet the following minimum dimensions unless directed otherwise by the Contract Administrator:

Species	Net Bd Ft	Log Length (ft)	Log dib
Conifer	10	12	2.5

The State may treat failure to remove forest products left in the sale area that meet the above specifications as a breach of this contract. The Contractor shall be responsible for forest products not removed. At the State's option, the State or a third party scaling organization may scale forest products, for volume, that meet the above specifications and are left in the sale area. State may deduct the value of forest products not removed from payments to the Contractor for harvesting services rendered. All costs associated with scaling and computing the billing for forest products left in the sale area will be borne by Contractor.

If Contractor's failure to remove all the forest products specified under the contract is due to circumstances beyond the control and without fault or negligence of the Contractor including, but not restricted to, acts of the State, closures by government regulatory agencies, mill closures, fires, vandals, and unusually severe weather conditions, the State may elect to modify the required removal requirements. Contractor is required to request contract removal requirement modifications in writing. The State shall consider such requests and may grant them in part or entirety only when Contractor has demonstrated that they have been endeavoring to complete the project and are otherwise performing with due diligence.

H-161.1 Excessive Timber Breakage

The Contractor shall be responsible for felling and yarding timber in a manner that shall minimize breakage and maintain stump heights within contract specifications, unless permission to do otherwise is agreed to by the Contract Administrator.

The State may treat excessive timber breakage, as determined by the Contract Administrator as a breach of this contract. At the State's option, the State or a third party scaling organization may scale forest products, for volume. State may deduct the value of forest products damaged through excessive breakage from payments to the Contractor for harvesting services rendered. All costs associated with scaling and computing the billing for forest products damaged through excessive breakage will be borne by Contractor.

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 authorized in writing by the Contract Administrator.

H-230.1 Tops and Limbs Outside the Sale Boundary

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

Section C: Construction and Maintenance**C-040.1 Road Plan**

Road construction and associated work provisions of the Road Plan for this project, dated May 17, 2016 are hereby made a part of this contract.

The State may make modifications to the Road Plan made necessary by unforeseen conditions. Any modifications that create additional work for the Contractor shall be paid in accordance with the payment terms set forth in this contract.

C-050.1 Contractor Road Maintenance and Repair

Contractor shall perform work at their own expense on E3030, E3200, E3200R, E3201, E3203, E3206, E3210, E3215, E3215A, E3240, E3250, E3251, M1720 road(s). All work shall be completed to the specifications detailed in the Road Plan.

C-060.1 Designated Road Maintainer

If required by the State, the Contractor shall perform maintenance and replacement work as directed by the State on E3000 (0+00 to 37+90, 68+55 to 138+90), E3000R, M1700. The Contractor shall furnish a statement, in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State shall reimburse the Contractor for said costs within thirty (30) days of receipt and approval of the statement.

C-080.1 Landing Location Approval Prior to Construction

Landing locations shall be marked by the Contractor and approved by the Contract Administrator prior to construction.

C-130.1 Dust Abatement

Contractor shall abate dust on the E-3000, E-3000R.

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, valid contact numbers and procedures for medical emergencies, fire, hazardous spills, forest practice violations and any unauthorized or unlawful activity 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 for inspection at the prework meeting and kept readily available to all personnel, including subcontractors, on site during active operations.

S-010.1 Fire Hazardous Conditions

Contractor acknowledges that operations under this Contract may increase the risk of fire. Contractor shall conduct all operations under this agreement 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.

In the event of an uncontrolled fire, Contractor agrees to provide equipment and personnel working at the site to safely and effectively engage in first response fire suppression activity.

Contractor'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-040.1 Noxious Weed Control

Contractor shall notify the Contract Administrator in advance of moving equipment onto State lands. Contractor shall thoroughly clean all off-road equipment prior to entry onto State land to remove contaminated soils and noxious weed seed. If equipment is moved from one DNR project area to another, the Contract Administrator reserves the right to require the cleaning of equipment. Equipment shall be cleaned at a location approved by the Contract Administrator.

S-060.1 Pump Truck or Pump Trailer

Contractor 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-100 Stream Cleanout

Slash or debris which enters all typed streams as a result of operations under this contract and which is identified by the Contract Administrator shall be removed and deposited in a stable position. Removal of slash or debris shall be accomplished in a manner that avoids damage to the natural stream bed and bank vegetation.

S-110 Resource Protection

No equipment may operate within the equipment limitation zones unless approved by the contract administrator unless authority is granted in writing by the Contract Administrator.

S-130.1 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

Contractor 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. Contractor 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 avoids the release of hazardous materials, including petroleum products, into the environment (water, air or land).

c. Hazardous Material Spill Containment, Control and Cleanup

If safe to do so, Contractor shall take immediate action to contain and control all hazardous material spills. Contractor 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. If large quantities of bulk fuel/other hazardous materials are stored on site, Contractor must be able to effectively control a container leak and contain & recover a hazmat spill equal to the largest single on site storage container volume. (HAZWOPER reg. 29CFR 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 Contractor 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 Contractor 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)

S-131.1 Refuse Disposal

As required by RCW 70.93, All Contractor generated refuse shall be removed from state lands for proper disposal prior to termination of this contract. No refuse shall be burned, buried or abandoned on state forest 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-010.1 Liquidated Damages

The clauses in the DAMAGES section of this contract provide for the State's payments to the Contractor to be reduced for certain breaches of the terms of this contract. These offsets are agreed to as liquidated damages for the Contractor's breach, and are not penalties. They are reasonable estimates of anticipated harm to the State caused by the Contractor's breach. The State and Contractor agree to these liquidated damages provisions 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 Contractor by allowing the Contractor to better assess its responsibilities under the contract.

D-015.1 Damages for Delivered Mis-sorted Logs

Logs delivered by Contractor that do not meet the receiving Purchaser's log sort specifications as described in clause G-022.1, where species are mixed, or are over 1" out of tolerance of scaling diameter, and logs not meeting the minimum length requirements as designated for this contract, and unless otherwise indicated, logs containing blue stain are considered mis-sorts.

Mis-sorted log volume will be considered on a per load basis. When mis-sorts amount to more than 5% of a load's total volume, as determined by a third party scaling organization, the State is harmed and an adjustment to the Contractor's harvesting payment may be made. For the improper delivery of mis-sorted logs, the State may

reduce the harvesting payment by \$100.00 for each load delivered which contained mis-sorted volume in excess of 5%, as documented by third party scaling ticket.

D-016.1 Damages for Delivered Mis-manufactured Logs or Poles

Logs or Poles delivered by Contractor that do not meet the receiving Purchaser's preferred log length specifications as described in clause G-022.1, and logs not meeting minimum log quality specifications for sweep, peeler sorts, untrimmed limbs and knots as described in the G-024.1 clause are considered mis-manufactured logs or poles.

Mis-manufactured log or pole volume will be considered on a per load basis. When mis-manufactured logs or poles amount to more than 5% of a loads total volume, as determined by a third party scaling organization, the State is harmed and an adjustment to the harvesting payment may be made. For the delivery of mis-manufactured logs or poles, the State may reduce the harvesting payment due to the Contractor by an amount of \$100.00 for each load of logs or \$300 for each load of poles delivered which has been determined to contain mis-manufactured volume in excess of 5% as documented by third party scaling ticket.

D-023.1 Damages for Failure to Remove Forest Products

Contractor's failure to remove all of the forest products specified prior to the expiration of the contract operating authority results in substantial injury to the State. The value of the forest products sold at the time of breach is not readily ascertainable. The Contractor's failure to perform disrupts the State's management plans in the project area, the actual cost of which is difficult to assess. A re-offering of the contract involves additional time and expense and is not an adequate remedy. Therefore, the Contractor agrees to accept a reduction of the amount due for harvesting services from the State in the amount calculated according to the following guidelines:

- a. Full stumpage value will be assessed for felled trees, individual or scattered standing trees, or clumps of standing trees less than three acres in size, plus all costs associated with scaling and computing the stumpage value of the forest products left.
- b. 35% of full stumpage value will be assessed for clumps of standing trees greater than three acres in size, plus all costs associated with scaling and computing the stumpage value of the forest products left.

The stumpage value of forest products left shall be determined by the State or a third party scaling organization utilizing whatever method(s) best suited for accurate volume and acreage measurement as determined by the State.

D-024.1 Damages for Excessive Timber Breakage

Excessive breakage of timber results in substantial injury to the State. The value of the forest products sold at the time of breach is not readily ascertainable. Therefore, the Contractor agrees to accept a reduction of the amount due for harvesting services from the State at an amount calculated according to the following:

The value for excessive timber breakage will be determined at a rate, which reflects the log sort price that the Purchasers would have paid for unbroken logs minus the cost of delivery, plus all costs associated with scaling and computing the stumpage value of the forest products excessively broken.

The stumpage value of forest products excessively broken shall be determined by the State or a third party scaling organization utilizing whatever method(s) best suited for accurate volume measurement as determined by the State.

D-030.1 Inadequate Log Accountability

Removal of forest products from the sale area without adequate branding and/or valid load tickets attached to the load, weighing or scaling forest products in a location other than the facilities authorized for use for this sale, and failing to deliver load ticket to the weighing/scaling official all result in substantial injury to the State. The potential loss from not having proper branding, ticketing, weighing locations and accountability is not readily ascertainable. These contractual breaches result in a loss of load and weighting/scaling data the potential for the removal of forest products for which the State receives no payment, and cause increases in the State's administration costs associated with this contract. The actual costs of these breaches are difficult to assess.

For these reasons, Contractor's payments for harvesting under this contract will be reduced in the following amounts, as liquidated damages, to compensate the State for these breaches: a sum of \$100.00 each time a load of logs does not have branding as required in the contract, \$250.00 each time a load of logs does not have a load ticket as required by the contract, \$250.00 each time a load ticket has not been filled out as required by the plan of operations, \$250.00 each time a load is weighed or scaled at a facility not approved as required by the contract, and \$250.00 each time load and weight scale data is not presented to the weighing/scaling official.

D-040.1 Leave Tree Excessive Damage

When Contractor's operations exceed the damage limits set forth in clause H-012.1, Leave Tree Damage Definition, the trees damaged result in substantial injury to the State. The value of the damaged leave trees at the time of the breach is not readily ascertainable. Therefore, Contractor agrees to pay the State as liquidated damages at the rate of \$250.00 per tree for all damaged trees in Units 1, 2, 3, and 4.

D-041.1 Reserve Tree Excessive Damage

When Contractor's operations exceed the damage limits set forth in clause H-013.1, Reserve Tree Damage Definition, and when the Contract Administrator determines that a suitable replacement for a damaged reserve tree is not possible, the damaged trees result in substantial injury to the State. The value of the damaged reserve trees at the time of the breach is not readily ascertainable. Therefore, the Contractor agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged reserve trees that are not replaced in Unit 5.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Todd Welker
Southeast Region Manager

Date: _____
Address:

Date: _____

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 _____

Schedule A
Harvest Prescription Summary

The Wild Plum Sorts Timber Sale is an uneven-aged thinning in Units 1, 2, 3, and 4 under an operator select prescription. To achieve the desired post-harvest stand composition and structure this prescription involves a combination of spacing, species, and diameter limit guidelines. Stand densities throughout the sale area are highly variable as are stand conditions (e.g. the presence or absence of mistletoe).

Unit 5 a variable retention harvest with leave trees marked in orange paint.

For the purposes of this harvest contract, the minimum dimensions of a harvested tree are defined in clause H-150.1.

Operator Select Unit Prescriptions:

1. Retain a minimum of 21 trees per acre (approximately 45' x 45' spacing). Spacing may vary to allow retention of the most vigorous, well-formed trees.
2. Leave the two largest diameter, healthy trees per acre.
3. Trees over 30 inches DBH shall not be cut, unless approved by the Contract Administrator
4. Leave trees shall:
 - be greater than 10 inches DBH
 - not have multiple tops
 - be free of conks, broken tops, or visible rot
 - possess the largest, fullest crown
5. Leave tree species preference (from most preferred to least):
 - Western larch
 - ponderosa pine
 - Douglas-fir
 - grand fir

All other species not listed will be retained unless otherwise directed by the Contract Administrator.

6. Remove all trees with moderate to heavy mistletoe infestation or a Hawksworth rating of 2 or higher. This does not supersede the maximum cut diameter, or minimum tree per acre requirement unless authorized by the Contract Administrator.
7. The Harvester or his representative will sample mark a representative portion of each unit as approved by the Contract Administrator prior to the contractor entering the stand.

8. Leave all snags where operationally feasible. Those trees that pose a hazard as defined by the Washington State Department of Labor and Industries may be felled, but must be left on site.

Schedule M
MAINTENANCE EQUIPMENT RATE
 (Hourly Rate including Operator)

Motor Grader	ARRF Rate
To 140 HP (Cat 120H, 120M)	\$138.00
To 175 HP (John Deere 670D, 670G, 672D, G, Cat 12M, Cat140G, Cat 143H, Volvo G930, Komatsu GD-655-3).....	\$150.00
To 200 HP (John Deere 772, Cat 140M, Volvo G940, Komatsu GD-675-3).....	\$165.00
Over 200 HP (Cat 160M, 14M, 16H, Komatsu GD-825A-2)	\$209.00
Addition for ripper/scarifier use:	
To 140 HP	add \$4.00
To 175 HP	add \$6.00
Over 175 HP	add \$10.00

Front End Loader & Loader/Backhoe Combinations

To 75 HP (Cat 416D, 416E, Komatsu WB142-2)	\$96.00
To 110 HP (Cat 420E, Case 580, 590, Cat 908H, 914G, John Deere 344J).....	\$106.00
To 160 HP (Cat 450E, 924H, 930H, Hyundai HL730-9, John Deere 524K)	\$122.00
Over 160 HP (John Deere 624K, Case 621E, Cat 938H, 950H, 966K).....	\$142.00
Addition for special backhoe attachment use:	
compactor, clam, extendaboom, etc.....	add \$ 6.50/hr.

Gravel Trucks

On-Highway Rear Dump	\$97.00
On-Highway Rear Dump Transfer Trailer (2 axles, 10 cy)	\$13.00
On-Highway Bottom Dump Trailer (3 axles, 12 cy)	\$11.00

Dozers

To 75 HP (Case 650K, Cat D3K XL).....	\$101.00
To 105 HP (Cat D4K, D5K, Case 750K, 850K, John Deere 450J, 550J, 650J, Komatsu D37EX-22).....	\$111.00
To 135 HP (Cat D6K, Case 1150K, John Deere 700J, Komatsu D51EX-22)	\$130.00
To 185 HP (John Deere 750J, Case 1650, 1850, Cat D6N, Komatsu D61EX-15)	\$150.00
To 240 HP (Cat D6T, D7E, John Deere 850J, Komatsu D65EX-15)	\$184.00
Over 240 HP (Cat D8T, John Deere 950J)	\$252.00
Addition for Ripper use:	
To 180 HP	add \$8.00
To 235 HP	add \$13.00
Over 235 HP	add \$20.00

Tractor Brush Cutters

To 67 PTO HP	\$65.00
To 80 PTO HP	\$80.00
Over 80 PTO HP (JD 6200, 6300, 6400)	\$95.00

Excavators and Shovels

To 60 HP (Kubota U45, U55, John Deere 50D, Hitachi 50U, Cat 307D).....	\$92.00
To 95 HP (Cat 312D, 314D, Doosan 140LCV, Hitachi 120-3, 135US-3, Link Belt 135, Komatsu PC 120-6, PC130-8, John Deere 120D, 135D)	\$133.00
To 120 HP (Cat 315D, John Deere 160LC, Doosan 175LCV, Komatsu PC160LC-8, Link Belt 160LX, Volvo EC160C L)	\$146.00

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Excavators and Shovels (con't.)

To 140 HP (Cat 319D L, 320C, Hitachi 160LC-3, Link Belt 210LX).....	\$161.00
To 170 HP (Cat 320D, Hitachi 200LC-3, 225LCV, Link Belt 240LX, Komatsu PC200-8 PC220LC-8, John Deere 225D LC, Volvo EC240C).....	\$172.00
To 230 HP (Cat 324D, 324E, 328D, 329D, John Deere 240D, 270D, 290G, Hitachi 240LC-3, 270LC-3, Link Belt 290LX RB, Volvo EC290C, Komatsu PC270LC-8)	\$200.00
Over 230 HP (Cat 330D, 336D, Volvo EC330C, John Deere 330C, 330D, Komatsu PC300LC-8, PC350LC-8, Link Belt 330LX, 350X2, Hitachi 330LC, 350LC-3).....	\$230.00
Excavator Attachment.....	Add to Excavator \$30.00

Self-Propelled Vibratory Compactors

To 80 HP (Bomag BW145DH-40, BW177D-40, Dynapac CA150D, Sakai SV201D, Ing Rand SD45F TF).....	\$100.00
To 125 HP (Bomag BW177PDBH-40, Cat CP-433E, Sakai SV400D-II, Dynapac CA152D)	\$110.00
Over 125 HP (Bomag BW211PD-40, Dynapac CA262D, Ing Rand SD105DA TF, Sakai SV505D-I).....	\$120.00

Track Mounted Rock Drills (with one operator)

To 4.5 inch Diameter Hole.....	\$210.00
Over 4.5 inch Diameter Hole	\$246.75

Heavy Equipment Hauling

On-Highway Rear Dump	\$97.00
Tilt Deck Utility Trailer (2 axle, up to 40,000 lbs).....	\$9.00
Tilt Deck Utility Trailer (3 axle, up to 50,000 lbs).....	\$12.00
On -Highway Truck Tractor (GVW up to 50,000 lbs).....	\$104.00
Lowbed Trailer (2 axle, up to 50,000 lbs)	\$15.00
Lowbed Trailer (3 axle, up to 80,000 lbs)	\$21.00

Water Trucks

On-Highway Water Tanker (3,000 gallon capacity).....	\$92.00
On-Highway Water Tanker (4,000 gallon capacity).....	\$114.00
Off-Highway Water Tanker (5,000 gallon capacity).....	\$135.00

Power Saws and Pumps.....\$10.00

Labor Wages (Fully Burdened Rates including profit and overhead)

Laborer – Journey Level.....	\$40.00
Laborer – Apprentice Level	\$32.00

NOTATIONS

HP taken at the Flywheel unless stated otherwise.

WA Sales Tax - Add sales tax only if an activity is not directly tied to a State Timber Sale. Sales tax on purchased material will be reimbursed.

Hourly rates include operator, owning and operating costs, profit and overhead, and also includes all costs of service and support vehicles.

Specification data, such as weight and flywheel hp, can be determined upon request by providing equipment make and model information.

Rates for equipment not included in this schedule can be determined upon request.

Rev. 07/2016

9/12/2016

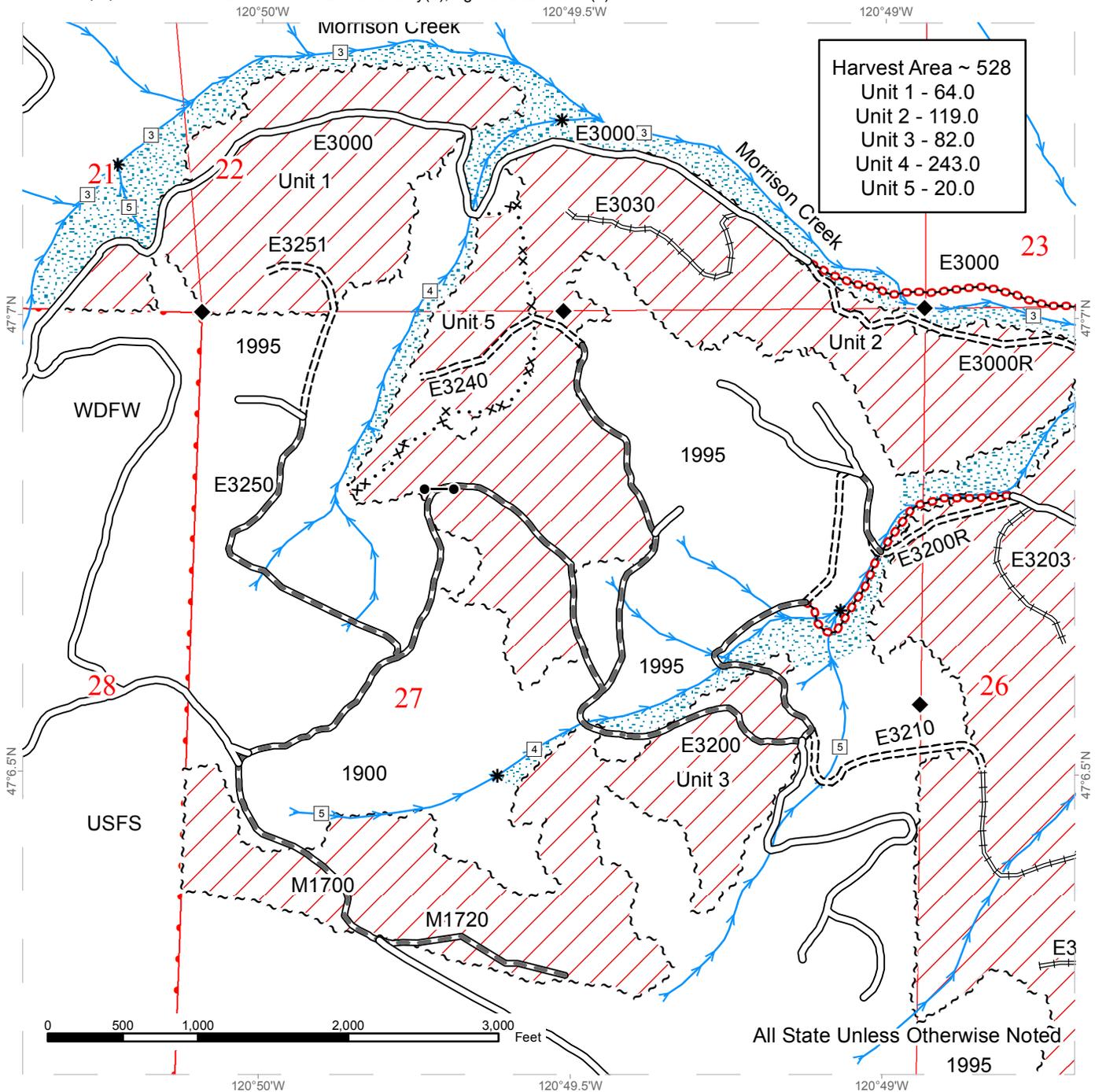
39 of 39

Agreement No. 30-094409

TIMBER SALE MAP

SALE NAME: WILD PLUM SORTS
AGREEMENT #: 30-094409
TOWNSHIP(S): T19R16E
TRUST(S): Common School and Indemnity(3), Agricultural School(4)

REGION: Southeast Region
COUNTY(S): KITTITAS
ELEVATION RGE: 2376-3412



Legend

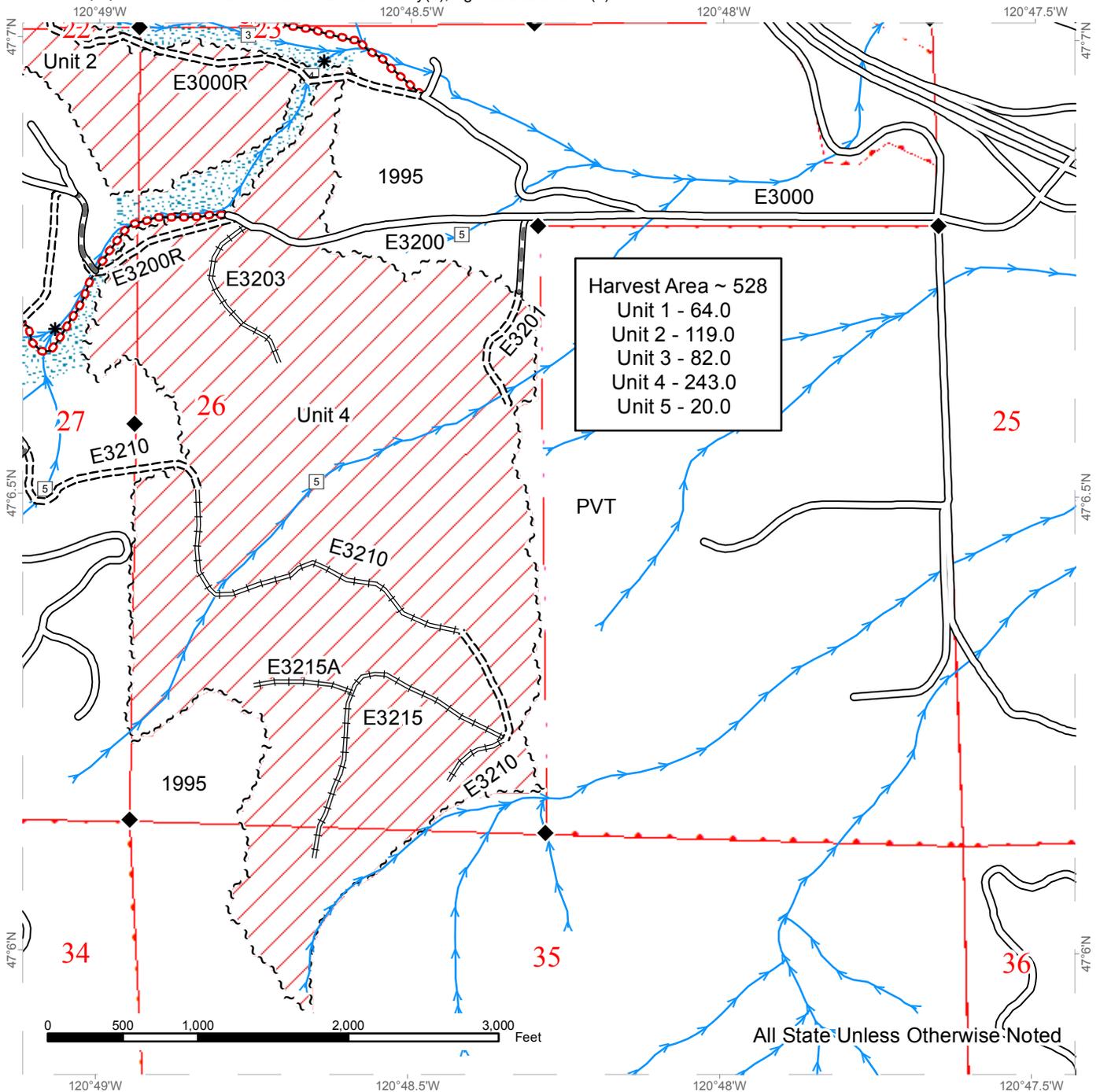
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|--|--------------------|--|-----------------------------|--|-------------------------------|
| | Sale Area | | Streams | | Existing Roads |
| | Riparian Mgt Zone | | Stream Break | | Required Pre-Haul Maintenance |
| | Sale Boundary Tags | | Stream Type 5 | | Required Reconstruction |
| | Special Mgmt Area | | Gates (Corporate) | | Required Construction |
| | Right of Way Tags | | DNR Managed Lands | | Required Abandonment |
| | Monumented Corners | | Public Land Survey Sections | | |



TIMBER SALE MAP

SALE NAME: WILD PLUM SORTS
AGREEMENT #: 03-094409
TOWNSHIP(S): T19R16E
TRUST(S): Common School and Indemnity(3), Agricultural School(4)

REGION: Southeast Region
COUNTY(S): KITTITAS
ELEVATION RGE: 2376-3412



Harvest Area ~ 528
 Unit 1 - 64.0
 Unit 2 - 119.0
 Unit 3 - 82.0
 Unit 4 - 243.0
 Unit 5 - 20.0

All State Unless Otherwise Noted

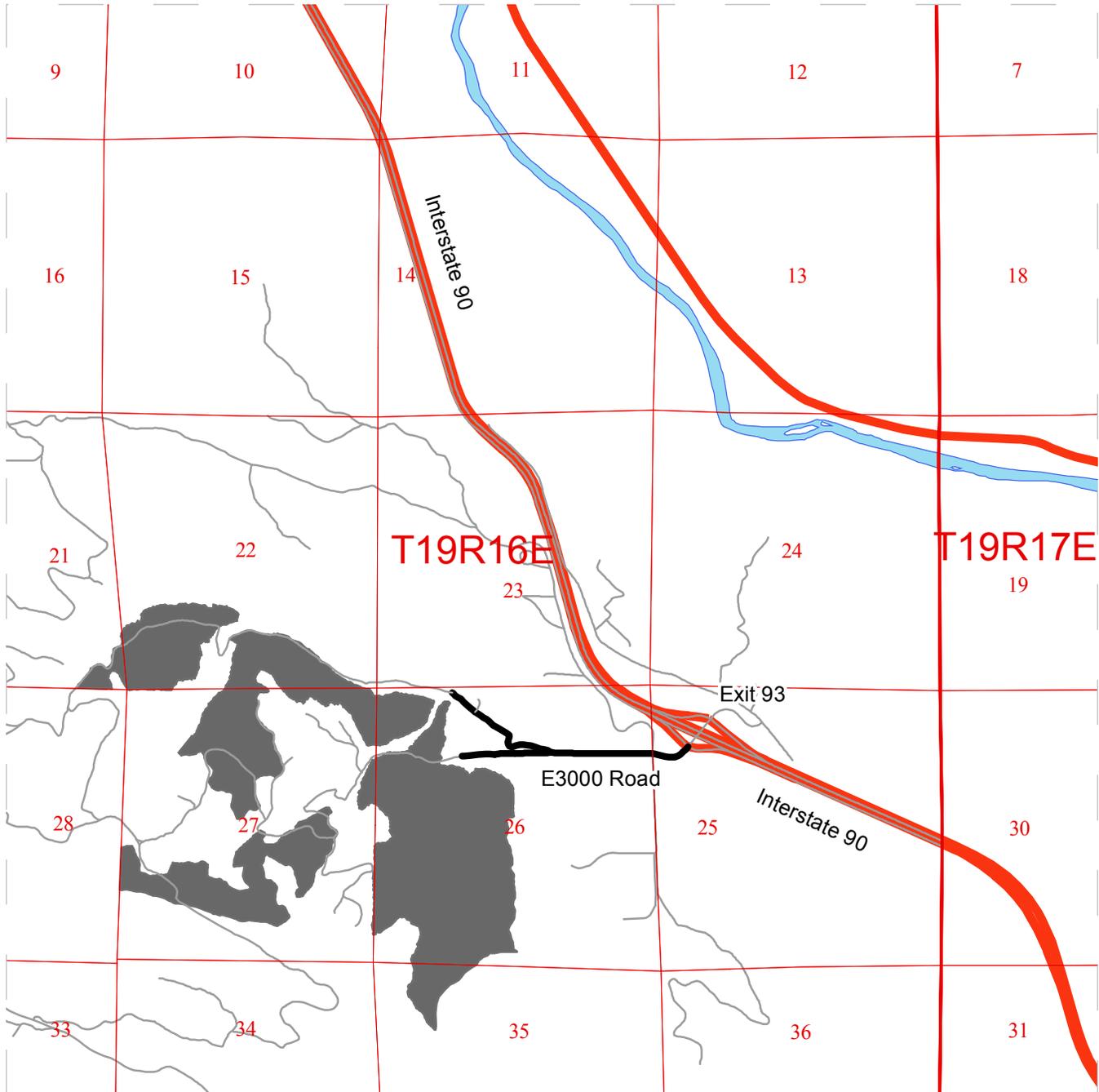
Legend	
	Sale Area
	Riparian Mgt Zone
	Sale Boundary Tags
	Special Mgmt Area
	Right of Way Tags
	Monumented Corners
	Streams
	Stream Break
	Stream Type 5
	Gates (Corporate)
	DNR Managed Lands
	Public Land Survey Sections
	Existing Roads
	Required Pre-Haul Maintenance
	Required Reconstruction
	Required Construction
	Required Abandonment



DRIVING MAP

SALE NAME: WILD PLUM SORTS
AGREEMENT#: 30-094409
TOWNSHIP(S): T19R16E
TRUST(S): Common School and Indemnity(3), Agricultural School(4)

REGION: Southeast Region
COUNTY(S): KITTITAS
ELEVATION RGE: 2376-3412



	Timber Sale Unit
	Highways
	Haul Route
	Other Route
	Public Land Survey Sections

From Cle Elum, drive east on Interstate 90 for 8 miles to Exit 93. Take Exit 93 and turn right onto Elk Heights County Road and drive southwest for 0.2 miles to start of E3000 Road. Drive west on E3000 Road for 0.4 miles to junction of E3000 & E3200 Roads.

N

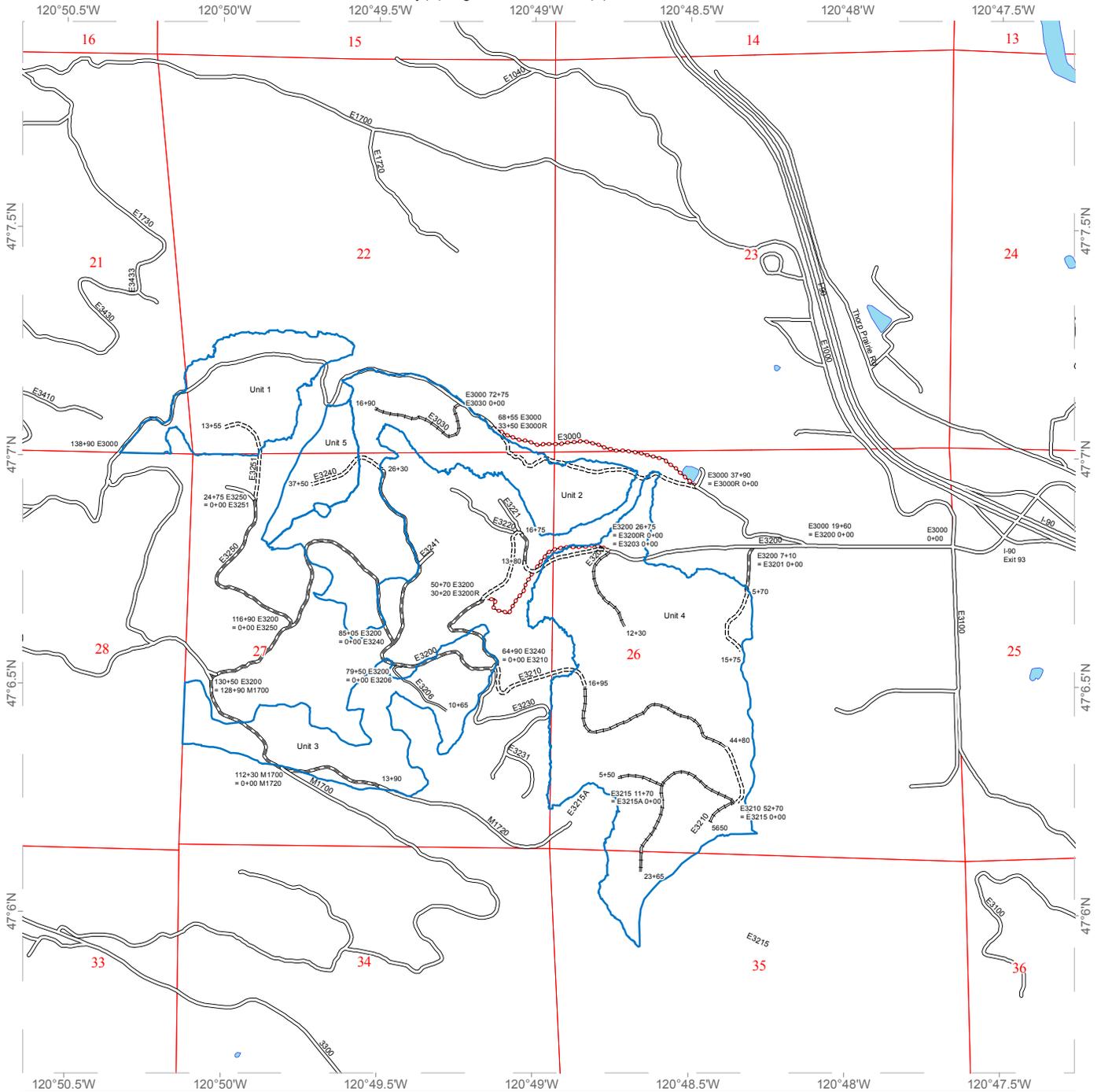


0 0.2 0.4 0.8 1.2 1.6
 Miles

ROAD PLAN MAP

SALE NAME: WILD PLUM SORTS
AGREEMENT #: 30-094409
TOWNSHIP(S): T19R16E
TRUST(S): Common School and Indemnity(3), Agricultural School(4)

REGION: Southeast Region
COUNTY(S): KITTITAS
ELEVATION RGE: 2376-3412



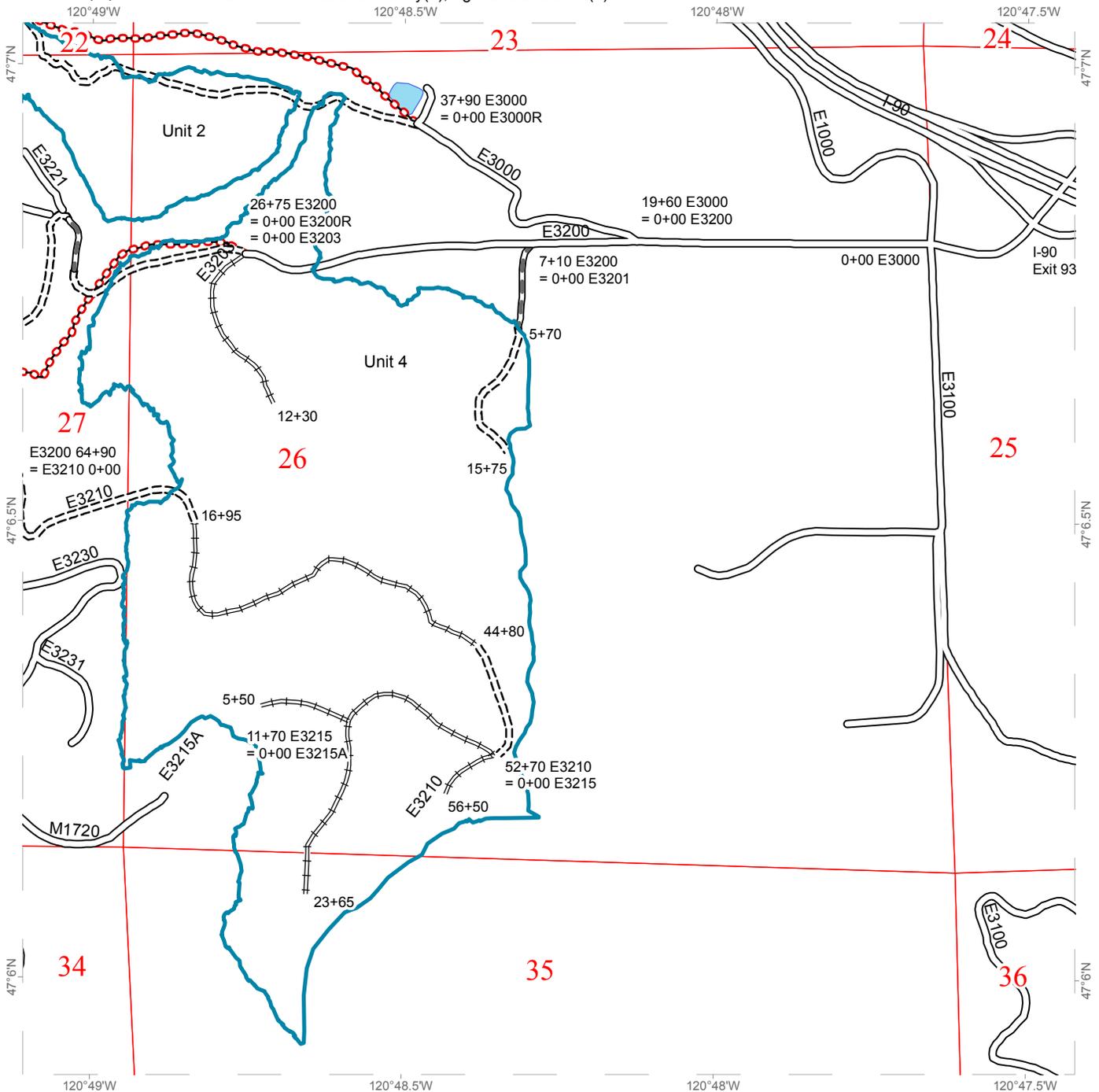
Required Pre-Haul Maintenance	Public Land Survey Sections
Required Construction	Sale Unit Boundary
Required Reconstruction	
Required Abandonment	
Existing Roads	

0 500 1,000 2,000 3,000 Feet

ROAD PLAN M A P

SALE NAME: WILD PLUM SORTS
AGREEMENT #: 30-094409
TOWNSHIP(S): T19R16E
TRUST(S): Common School and Indemnity(3), Agricultural School(4)

REGION: Southeast Region
COUNTY(S): KITTITAS
ELEVATION RGE: 2376-3412



Required Pre-Haul Maintenance	Public Land Survey Sections
Required Construction	Sale Unit Boundary
Required Reconstruction	
Required Abandonment	
Existing Roads	

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

WILD PLUM SORTS TIMBER SALE ROAD PLAN
KITITITAS COUNTY
ALPINE DISTRICT

AGREEMENT NO.: 30-094409

STAFF ENGINEER: NICK JONES

DATE: MAY 17, 2016

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>
E3000	37+90 to 68+55	Abandonment
E3000R	0+00 to 33+50	New Construction
E3030	0+00 to 16+90	Reconstruction
E3200	50+70 to 130+50	Pre-haul Maintenance
E3200	26+75 to 50+70	Abandonment
E3200R	0+00 to 13+80	New Construction
E3200R	13+80 to 16+75	Pre-haul Maintenance
E3200R	16+75 to 30+20	New Construction
E3201	0+00 to 5+70	Reconstruction
E3201	5+70 to 15+75	New Construction
E3203	0+00 to 12+30	Reconstruction
E3206	0+00 to 10+65	Reconstruction
E3210	0+00 to 16+95	New Construction
E3210	16+95 to 44+80	Reconstruction
E3210	44+80 to 52+70	New Construction
E3210	52+70 to 56+50	Reconstruction
E3215	0+00 to 23+65	Reconstruction
E3215A	0+00 to 5+50	Reconstruction
E3240	0+00 to 26+30	Pre-haul Maintenance
E3240	26+30 to 37+50	New Construction
E3250	0+00 to 24+75	Pre-haul Maintenance
E3251	0+00 to 13+55	New Construction
M1700	112+30 to 128+90	Pre-haul Maintenance
M1720	0+00 to 13+90	Pre-haul Maintenance

0-4 CONSTRUCTION

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E3000R	0+00 to 33+50	Clearing, grubbing, excavation, construction of ditch, installation of culverts, application of rock
E3200R	0+00 to 13+80	Clearing, grubbing, excavation, construction of ditch, installation of culvert, construction of rolling dips, application of rock
E3200R	16+75 to 30+20	Clearing, grubbing, excavation, construction of rolling dips
E3201	5+70 to 15+75	Clearing, grubbing, excavation, installation of culvert
E3210	0+00 to 16+95	Clearing, grubbing, excavation, construction of ditch, installation of culvert, construction of rolling dips
E3210	44+80 to 52+70	Clearing, grubbing, excavation
E3240	26+30 to 37+50	Clearing, grubbing, excavation, construction of rolling dips
E3251	0+00 to 13+55	Clearing, grubbing, excavation, construction of rolling dips

0-5 RECONSTRUCTION

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E3030	0+00 to 16+90	Clearing, grubbing, excavation, construction of rolling dips
E3201	0+00 to 5+70	Clearing, grubbing, excavation, construction of rolling dips
E3203	0+00 to 12+30	Clearing, grubbing, excavation, construction of rolling dips
E3206	0+00 to 10+65	Clearing, grubbing, excavation
E3210	16+95 to 44+80	Clearing, grubbing, excavation, construction of ditch, installation of culvert, construction of rolling dips
E3210	52+70 to 56+50	Clearing, grubbing, excavation, construction of rolling dip
E3215	0+00 to 23+65	Clearing, grubbing, excavation, construction of rolling dips
E3215A	0+00 to 5+50	Clearing, grubbing, excavation

0-6 PRE-HAUL MAINTENANCE

This project includes, but is not limited to the following pre-haul maintenance requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E3200	50+70 to 130+50	Brushing, ditch cleaning and shaping, culvert cleaning, construction of rolling dips, grading
E3200R	13+80 to 16+75	Brushing, construction of rolling dips, grading
E3240	0+00 to 26+30	Brushing, ditch cleaning and shaping, culvert cleaning, construction of rolling dips, grading
E3250	0+00 to 24+75	Brushing, culvert cleaning, construction of rolling dips, grading
M1700	112+30 to 128+90	Brushing, culvert cleaning, construction of rolling dips, grading
M1720	0+00 to 13+90	Brushing, construction of rolling dip, grading

0-7 POST-HAUL MAINTENANCE

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

0-10 ABANDONMENT

This project includes abandonment listed in Clause 9-21 ROAD ABANDONMENT.

0-11 ABANDONMENT BEFORE TIMBER REMOVAL

Contractor shall abandon the following roads after completion of associated relocation.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E3000	37+90 to 68+55	Removal of culverts, construction of non-drivable waterbars and earthen barricades, sidecast recovery, road surface ripping, slash scattering, application of grass seed and straw
E3200	26+75 to 50+70	Removal of culverts, construction of non-drivable waterbars and earthen barricades, slash scattering, application of grass seed and straw

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

If the Contractor 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, Contractor 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 NON-COMPLIANCE WITH STATE ROAD PLAN

Quantities established in this road plan are minimum acceptable values. Additional quantities required by the state due to non-compliance or the Contractor's choice of construction techniques will be at the Contractor's expense.

1-3 ROAD DIMENSIONS

Contractor shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan, unless controlled by construction stakes or design data (plan, profile, and cross-sections).

1-4 ROAD TOLERANCES

Contractor 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

1-5 DESIGN DATA

Design data is available upon request for the following roads at the Department of Natural Resources Southeast Region Office in Ellensburg, WA.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
E3000R	0+00 to 33+50	New Construction
E3200R	0+00 to 13+80	New Construction
E3200R	16+75 to 30+20	New Construction

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.

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

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

Contractor 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.

1-10 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).

1-11 FP/HPA REQUIREMENTS

The following work is subject to requirements under a Forest Practices/Hydraulics Project Approval (FP/HPA) issued by the State of Washington.

<u>Road</u>	<u>Stations</u>	<u>Work Type</u>
E3000	0+00 to 33+50	Abandonment
E3200	26+75 to 50+70	Abandonment

ROAD MARKING

1-15 ROAD MARKING

Contractor shall perform road work on the following roads in accordance with the state's marked location.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
E3000R	0+00 to 33+50	New Construction*
E3200R	0+00 to 13+80	New Construction*
E3200R	16+75 to 30+20	New Construction*
E3201	5+70 to 15+75	New Construction***
E3210	0+00 to 16+95	New Construction**
E3210	44+80 to 52+70	New Construction**
E3240	26+30 to 37+50	New Construction**
E3251	0+00 to 13+55	New Construction***

* Marked with centerline stakes, slopes stakes, yellow clearing flags with right of way tags.

** Marked with orange centerline and yellow clearing flags with right of way tags.

***Marked with orange centerline.

1-16 CONSTRUCTION STAKES SET BY STATE

Contractor shall perform work on the following roads in accordance with the construction stakes set in the field for grade and alignment.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
E3000	0+00 to 33+50	New Construction
E3200	0+00 to 13+80	New Construction
E3200	16+75 to 30+20	New Construction

1-18 REFERENCE POINT DAMAGE

Contractor 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 Contractor resets all moved or damaged RPs.

TIMING

1-21 HAUL APPROVAL

Contractor shall not use roads under this road plan for any hauling without written approval from the Contract Administrator.

1-22 WORK NOTIFICATIONS

On the following road, Contractor shall notify the Contract Administrator a minimum of 14 calendar days before work begins.

<u>Road</u>	<u>Stations</u>
E3000R	0+00 to 33+50

1-23 ROAD WORK PHASE APPROVAL

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

- Subgrade construction, drainage installation and subgrade compaction
- Rock application and rock compaction

RESTRICTIONS

1-25 ACTIVITY TIMING RESTRICTION

On the following road, the operation of road construction equipment is not allowed on weekends or state recognized holidays, unless authorized in writing by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
E3000R	0+00 to 138+90

Road construction, road reconstruction, road maintenance, rock haul and timber haul are not allowed during from November 1 to March 31 unless authorized in writing by the Contract Administrator.

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION, Contractor shall provide a maintenance plan to include further protection of state resources. Contractor 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. Contractor is required to maintain all haul roads at their own expense including those listed in Contract Clause C-060.1 DESIGNATED ROAD MAINTAINER.

1-29 SEDIMENT RESTRICTION

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

1-30 CLOSURE TO PREVENT DAMAGE

In accordance with Contract Clause G-220.1 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 4 inches on pit run roads.
- Wheel track rutting exceeds 4 inches on crushed rock roads.
- Wheel track rutting exceeds 6 inches on native surface roads.
- 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, Contractor shall cease operations, or perform corrective maintenance or repairs, subject to specifications within this road plan. Before and during any suspension, Contractor shall protect the work from damage or deterioration.

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.

OTHER INFRASTRUCTURE

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

Contractor 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 Contractor's expense, as directed by the Contract Administrator when authorized by the county or WSDOT.

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

Contractor 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.

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

Contractor may be required to perform maintenance on roads listed in Contract Clause C-060.1 DESIGNATED ROAD MAINTAINER as directed by the Contract Administrator. Contractor shall maintain roads in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following roads, Contractor shall use a grader to shape the existing surface prior to timber haul. Contractor shall accomplish all grading using a motor grader with a minimum of 175 horsepower.

<u>Road</u>	<u>Stations</u>	<u>Activity</u>
E3200	50+70 to 130+50	Pre-haul Maintenance
E3200R	13+80 to 16+75	Pre-haul Maintenance
E3240	0+00 to 26+30	Pre-haul Maintenance
E3250	0+00 to 24+75	Pre-haul Maintenance
M1700	112+30 to 128+90	Pre-haul Maintenance
M1720	0+00 to 13+90	Pre-haul Maintenance

2-6 CLEANING CULVERTS AND CATCH BASINS

On the following roads, Contractor shall clean the inlets and outlets of all culverts prior to timber haul.

<u>Road</u>	<u>Stations</u>
E3200	56+00, 58+95, 63+35, 68+80, 76+20, 82+45, 85+80, 94+05
E3240	2+15, 3+85, 7+75, 10+30, 22+75, 24+75
E3250	11+40
M1700	126+60

2-7 CLEANING DITCHES

On the following roads, Contractor shall clean ditches. Work must be completed prior to timber haul and must be done in accordance with the TYPICAL SECTION SHEET.

<u>Road</u>	<u>Stations</u>
E3200	58+95 to 78+90, 94+05 to 97+05
E3240	0+00 to 18+40, 22+75 to 24+75

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

BRUSHING

3-1 BRUSHING

On the following roads, Contractor shall cut vegetative material up to 3 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Brushing must be achieved by manual or mechanical cutting or removal of brush, trees, and branches. Contractor shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
E3200	50+70 to 130+50
E3200R	13+80 to 16+75
E3240	0+00 to 26+30
E3250	0+00 to 24+75
M1700	112+30 to 128+90
M1720	0+00 to 13+90

CLEARING

3-5 CLEARING

On the following roads, Contractor shall fall all vegetative material larger than 2 inches DBH or over 5 feet high between the marked right-of-way boundaries 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.

<u>Road</u>	<u>Stations</u>
E3000R	0+00 to 33+50
E3030	0+00 to 16+90
E3200R	0+00 to 13+80
E3200R	16+75 to 30+20
E3201	0+00 to 15+75
E3203	0+00 to 12+30
E3206	0+00 to 10+65
E3210	0+00 to 56+50
E3215	0+00 to 23+65
E3215A	0+00 to 5+50
E3240	26+30 to 37+50
E3251	0+00 to 13+55

3-8 PROHIBITED DECKING AREAS

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

- Within the grubbing limits.
- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 40%.
- Against standing trees unless approved by the Contract Administrator.

GRUBBING

3-10 GRUBBING

Contractor shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Contractor shall also remove stumps with undercut roots outside the grubbing limits. Grubbing must be completed before starting excavation and embankment.

ORGANIC DEBRIS

3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all components of a tree that remain as by-products after the manufacture of logs, including but not limited to tree tops, branches, limbs, needles, leaves, and stumps that are larger than one cubic foot in volume within the clearing limits as shown on the TYPICAL SECTION SHEET or BRUSHING DETAIL.

3-21 DISPOSAL COMPLETION

Contractor shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Contractor shall complete all disposal of organic debris prior to timber haul.

3-23 PROHIBITED DISPOSAL AREAS

Contractor 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.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 40%.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

Contractor shall scatter organic debris outside of the grubbing limits on the downhill side of the road unless otherwise directed by the Contract Administrator.

SECTION 4 – EXCAVATION

4-2 PIONEERING

Pioneering may not extend past construction that will be completed during the current construction season. 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

Contractor shall follow these standards for road grade and alignment except as designed and construction staked:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 12 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 4% 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.

Contractor shall follow these standards for switchbacks:

- Maximum favorable grades for switchbacks is 12%.
- 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

Contractor shall construct excavation slopes no steeper than shown on the following table:

<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

Contractor shall construct embankment slopes no steeper than shown on the following table:

<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

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

4-8 CURVE WIDENING

On the following road, additional widening for shall be placed on the inside of curve.

<u>Road</u>	<u>Stations</u>	<u>Curve Widening</u>
E3200R	17+40 to 19+25	4 ft

4-9 EMBANKMENT WIDENING

On the following road, additional widening shall be applied to embankment.

<u>Road</u>	<u>Stations</u>	<u>Embankment Widening</u>
E3000R	8+80 to 9+95	2 ft right – 2 ft left
E3000R	24+40 to 24+80	2 ft right – 2 ft left
E3200R	10+68 to 13+45	4 ft right – 2 ft left

4-10 WIDEN THE EXISTING SUBGRADE

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

<u>Road</u>	<u>Stations</u>
E3030	0+00 to 16+90
E3201	0+00 to 5+70
E3203	0+00 to 12+30
E3206	0+00 to 10+65
E3210	16+95 to 44+80
E3210	52+70 to 56+50
E3215	0+00 to 23+65
E3215A	0+00 to 5+50

4-14 ONE-FOOT EXCAVATION LIMIT

On the following road, Contractor shall not exceed a one-foot cut at centerline unless approved by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
E3201	0+00 to 5+70

4-21 TURNOUTS

Contractor shall construct turnouts as designated on the TURNOUT LIST. Locations may be adjusted to fit the final subgrade alignment and sight distances, subject to written approval by the Contract Administrator

DITCH CONSTRUCTION

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

On the following roads, Contractor shall construct or reconstruct ditches into the subgrade as specified on the TYPICAL SECTION SHEET. Ditches must be constructed concurrently with construction or reconstruction of the subgrade.

<u>Road</u>	<u>Stations</u>
E3000R	0+00 to 33+50
E3200	58+95 to 78+90, 94+05 to 97+05
E3240	0+00 to 18+40, 22+75 to 24+75

4-28 DITCH DRAINAGE

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

WASTE MATERIAL

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

Contractor may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris.

4-38 PROHIBITED WASTE DISPOSAL AREAS

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

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- Within a riparian management zone.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Against standing timber.
- Outside the clearing limits.

SHAPING

4-55 ROAD SHAPING

Contractor 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.

4-56 DRY WEATHER SHAPING

At any time of year, the Contract Administrator may require the application of water to facilitate shaping activities. The method of water application is subject to written approval by the Contract Administrator.

COMPACTION

4-60 FILL COMPACTION

Contractor shall compact all embankment and waste material. The minimum acceptable compaction is achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over the entire width of the lifts.

4-62 DRY WEATHER COMPACTION

At any time of year, the Contract Administrator may require the application of water to facilitate compaction activities. The method of water application is subject to written approval by the Contract Administrator.

4-63 SURFACE COMPACTION

Contractor shall compact constructed, reconstructed or maintained road surfaces in accordance with the COMPACTION LIST.

SECTION 5 – DRAINAGE

CULVERTS

5-5 CULVERTS

Contractor 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 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, with the exception of that described in Clause 5-6 USED CULVERT MATERIAL and must meet the specifications in Clauses 10-15 through 10-17.

5-6 USED CULVERT MATERIAL

Contractor may install used culverts on the following roads. All other roads must have new culverts installed.

<u>Road</u>	<u>Stations</u>
E3201	13+30

5-7 TEMPORARY STREAM CULVERT INSTALLATION

Contractor shall install temporary culverts as shown in the TEMPORARY CULVERT DETAIL. Temporary stream culverts must be located in the natural channel of the stream. Temporary culverts must be removed as indicated in Clause 9-20 ROAD DECOMMISSIONING. Geotextile fabric must meet the specifications in Clause 10-2 GEOTEXTILE FOR SEPARATION.

<u>Road</u>	<u>Stations</u>
E3201	13+30

CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the National Corrugated Metal Pipe Association's "Installation Manual for Corrugated Steel Drainage Structures

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

Cross drain 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 as specified in the Engineer’s design.

ENERGY DISSIPATERS

5-20 ENERGY DISSIPATERS

Contractor shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts. Energy dissipaters shall consist of rock weighing at least 15 pounds. Energy dissipaters must extend a minimum of 1 foot to each side of the culvert at the outlet and a minimum of 2 feet beyond the outlet.

CATCH BASINS, HEADWALLS, AND ARMORING

5-25 CATCH BASINS

Contractor 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

At the following culvert locations, Contractor shall construct rock headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL on all cross drain culverts. Rock used for headwalls must weigh at least 15 pounds. 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-half culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. No placement by end dumping or dropping of rock is allowed.

<u>Road</u>	<u>Stations</u>
E3000R	0+00, 3+00, 5+50, 8+60, 10+00, 12+20, 15+80, 18+80, 27+60, 32+40

5-27 ARMORING FOR STREAM CROSSING CULVERTS

At the following culvert locations, Contractor shall place rock 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-half culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. No placement by end dumping or dropping of rock is allowed.

<u>Road</u>	<u>Stations</u>
E3000R	9+28, 24+57, 26+90, 27+95
E3200R	11+80
E3201	13+30
E3210	3+85, 24+05

SURFACE DRAINAGE

5-31 ROLLING DIP CONSTRUCTION

Contractor shall construct rolling dips in accordance with the ROLLING DIP DETAIL and at locations specified on the ROLLING DIP LIST or at locations as . Rolling dips must be installed concurrently with construction of the subgrade and must be maintained in an operable condition.

5-33 NATIVE SURFACE ROADS

On the following road, if overwintered, native surface roads must be waterbarred by November 1. Contractor shall construct waterbars according to the attached 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.

<u>Road</u>	<u>Stations</u>
E3206	0+00 to 10+65
E3215A	0+00 to 5+50

SECTION 6 – ROCK AND SURFACING

ROCK SOURCE

6-1 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the ROCK BALLAST LIST may be obtained from the following sources on state land at no charge to the Contractor. Contractor shall obtain written approval from the Contract Administrator for the use of material from any other source. Contractor shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the listed location.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
E3200R	NE¼ NE¼ Section 27 T19N R16E	Pit run for ballast

6-5 ROCK FROM COMMERCIAL SOURCE

Rock used in accordance with the quantities on the ROCK SURFACING LIST shall be obtained from a commercial source at the Contractor's expense. Rock sources are subject to written approval by the Contract Administrator before their use. Rock sources must be a WSDOT certified source.

6-11 ROCK SOURCE USE PLAN BY CONTRACTOR

Contractor prepare and shall submit to the Contract Administrator a written ROCK SOURCE USE PLAN. The plan is subject to written approval by the Contract Administrator before any rock source operations. Upon completion of operations, the rock source must be left in the condition specified in the written ROCK SOURCE USE PLAN and approved in writing by the Contract Administrator. Contractor shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the rock source. Rock source use plan prepared by the Contractor must show the following information:

- Rock source location.
- Rock source overview showing access roads, and use areas.
- Rock source reclamation plan describing how the area will be left in a condition that will ensure public safety and minimize environmental impacts.

6-12 ROCK SOURCE SPECIFICATIONS

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

- Walls may not be undermined or over steepened. The maximum slope of the walls is 0.5:1 (H:V).
- Walls must be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The maximum height of walls is 6 feet.
- Width of benches must be a minimum of 6 feet.
- The surface of source 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.

ROCK MANUFACTURE

6-20 ROCK GRADATION TYPES

Contractor shall provide 1 1/4"-inch crushed rock in accordance with the types and amounts listed in the ROCK SURFACING LIST. Contractor utilize pit run rock in accordance with the types and amounts listed in the ROCK BALLAST LIST. Rock must meet the following specifications for and the exact point of evaluation for conformance to specifications will be determined by the Contract Administrator.

ROCK GRADATIONS

6-25 FINES

% Passing U.S. #40 sieve	100%
% Passing U.S. #200 sieve	0%

The portion of aggregate retained on the No. 200 sieve may not contain more than 0.2 percent organic debris and trash. All percentages are by weight.

6-28 1 ¼-INCH MINUS CRUSHED ROCK

% Passing 1 ¼" square sieve	100%
% Passing 5/8" square sieve	50 - 80%
% Passing U.S. #4 sieve	30 - 50%
% Passing U.S. #40 sieve	3 - 18%
% Passing U.S. #200 sieve	5%

The portion of aggregate retained on the No. 4 sieve may not contain more than 0.2 percent organic debris and trash. All percentages are by weight.

6-41 PIT RUN ROCK

No more than 80 percent of the rock may be larger than 6 inches in any dimension and no rock may be larger than 8 inches in any dimension. Pit Run rock may not contain more than 5 percent by weight of organic debris, dirt, and trash.

ROCK MEASUREMENT

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of specified rock depths are defined as the compacted depth using the compaction methods required in this road plan. Estimated quantities specified in the ROCK BALLAST LIST and ROCK SURFACING LIST are loose yards. Contractor shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction.

ROCK APPLICATION

6-70 APPROVAL BEFORE ROCK APPLICATION

Contractor shall obtain written approval from the Contract Administrator for subgrade before rock application.

6-71 ROCK APPLICATION

Contractor shall apply rock in accordance with the specifications and quantities shown on the ROCK BALLAST LIST and ROCK SURFACING LIST. Rock must be spread, shaped, and compacted full width concurrent with rock hauling operations.

SECTION 8 – EROSION CONTROL

8-4 SLASH FILTER WINDROW

On the following roads, Contractor shall construct a slash filter windrow at the toe of fill slopes. Slash filter windrows must be continuous between beginning and ending stations.

<u>Road</u>	<u>Stations</u>
E3000R	8+80 to 9+80
E3000R	24+10 to 28+50
E3200R	10+80 to 12+80

REVEGETATION

8-15 REVEGETATION

On the following roads, Contractor shall evenly spread grass seed at the rate of 3 pounds per acre to all exposed soils within 25’ of culvert removal locations in accordance with Clause 9-2 CULVERT REMOVAL FROM SEASONAL STREAMS. Grass seed shall be in accordance with Clause 10-18 GRASS SEED. Required seed not spread by the termination of this contract will become the property of the state.

<u>Road</u>	<u>Location</u>	<u>Qty (lbs)</u>	<u>Type</u>
E3000	43+15	2	Grass Seed
E3000	60+40	2	Grass Seed
E3200	38+30	2	Grass Seed
E3200	44+85	2	Grass Seed
E3200	46+95	2	Grass Seed

*Quantities are estimates only. Actual quantities may vary and are the responsibility of the Contractor.

8-26 PROTECTION FOR EXPOSED SOIL

On the following roads, Contractor shall provide and evenly spread a 1-inch layer of straw to all exposed soils within 25’ of culvert removal locations in accordance with Clause 9-2 CULVERT REMOVAL FROM SEASONAL STREAMS. Straw shall in accordance with Clause 10-19 STRAW.

<u>Road</u>	<u>Location</u>	<u>Qty (bales)</u>	<u>Type</u>
E3000	43+15	4	Straw
E3000	60+40	4	Straw
E3200	38+30	4	Straw
E3200	44+85	4	Straw
E3200	46+95	4	Straw

SECTION 9 – POST-HAUL ROAD WORK

STRUCTURES

9-1 EARTHEN BARRICADES

Contractor shall construct earthen barricades in accordance with the EARTHEN BARRICADE DETAIL and at locations specified on the EARTHEN BARRICADE LIST or as directed by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
E3000	37+90 to 68+55
E3200	26+75 to 50+70

9-2 CULVERT REMOVAL FROM SEASONAL STREAM

On the following roads, Contractor shall remove existing culverts from seasonal streams and leave the resulting channel open with excavation slope and excavated channel width as specified. Excavated material shall be used to construct earthen barricades in accordance with Clause 9-1.

<u>Road</u>	<u>Stations</u>	<u>Excavated Channel Width</u>	<u>Slope Ratio</u>	<u>Comments</u>
E3000	43+15	8'	3:1*	Remove 96" x 40' Culvert
E3000	60+40	8'	3:1*	Remove 96" x 40' Culvert
E3200	38+30	5'	3:1*	Remove 24" x 42' Culvert
E3200	44+85	5'	3:1*	Remove 30" x 44' Culvert
E3200	46+952	5'	3:1*	Remove 30" x 44' Culvert

*Or to match natural ground slopes.

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

Culverts removed from roads become the property of the Contractor and must be removed from state land.

9-4 NON-DRIVABLE WATER BARS

Contractor shall construct non-drivable waterbars in accordance with the NON-DRIVABLE WATER BAR DETAIL and at locations specified on the NON-DRIVABLE WATER BAR LIST or as directed by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
E3000	37+90 to 68+55
E3200	26+75 to 50+70

9-5 DRIVABLE WATER BARS

Contractor shall construct drivable waterbars in accordance with the DRIVABLE WATER BAR DETAIL and at locations specified on the DRIVABLE WATER BAR LIST or as directed by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
E3000	37+90 to 68+55
E3200	26+75 to 50+70

POST-HAUL MAINTENANCE

9-6 POST-HAUL MAINTENANCE

Contractor shall perform post-haul maintenance in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS and as specified below.

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
E3030	0+00 to 16+90	Final grading and drivable water bar installation
E3200	0+00 to 26+75	Final grading and drivable water bar installation
E3200	50+70 to 130+50	Final grading and drivable water bar installation
E3200R	0+00 to 30+20	Final grading and drivable water bar installation
E3201	0+00 to 15+75	Final grading and drivable water bar installation
E3203	0+00 to 12+30	Final grading and drivable water bar installation
E3206	0+00 to 10+65	Final grading and drivable water bar installation
E3210	0+00 to 56+50	Final grading and drivable water bar installation
E3215	0+00 to 23+65	Final grading and drivable water bar installation
E3215A	0+00 to 5+50	Final grading and drivable water bar installation
E3240	0+00 to 37+50	Final grading and drivable water bar installation
E3250	0+00 to 24+75	Final grading and drivable water bar installation
E3251	0+00 to 13+55	Final grading and drivable water bar installation
M1700	112+30 to 128+90	Final grading and drivable water bar installation
M1720	0+00 to 13+90	Final grading and drivable water bar installation

ABANDONMENT

9-21 ROAD ABANDONMENT

Contractor shall abandon the following roads.

<u>Road</u>	<u>Stations</u>	<u>Type</u>	<u>Date</u>
E3000	37+90 to 68+55	Medium	After completion of E3000R
E3200	26+75 to 50+70	Medium	After completion of E3200R

9-23 MEDIUM DECOMMISSIONING AND ABANDONMENT

- Fill in ditches.
- On the following roads and at the specified locations, rip the surface to a minimum depth of 6 inches.

<u>Road</u>	<u>Stations</u>
E3000	37+90 to 42+65, 43+40 to 59+50, 61+50 to 68+55

- Outslope the surface at a minimum of 20 percent.
- Remove road shoulder berms except as directed.
- Construct non-drivable water bars in accordance with Clause 9-4 NON-DRIVABLE WATER BARS. Non-drivable water bars shall be keyed into the cut-slope to intercept the ditch if a ditch is present. Water bars must be outsloped to provide positive drainage.
- Construct earthen barricades in accordance Clause 9-1 EARTHEN BARRICADES.
- Remove culverts in accordance with Clause 9-2 CULVERT REMOVAL FROM SEASONAL STREAMS and Clause 9-3 CULVERT MATERIAL REMOVED FROM STATE LAND.
- On the following roads and at the specified locations, remove road fill. Removed road fill shall be placed outside the riparian area and as directed by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
E3000	42+65 to 43+40, 59+50 to 61+50

- Apply grass seed, concurrently with abandonment, in accordance with Clause 8-15 REVEGETATION and Clause 8-25 GRASS SEED.
- Cover exposed soils, concurrently with abandonment, with straw in accordance with Clause 8-26 PROTECTION FOR EXPOSED SOIL .
- On the following roads and at the specified locations, scatter woody debris onto abandoned road surfaces.

<u>Road</u>	<u>Stations</u>
E3000	37+90 to 68+55
E3200	26+75 to 50+70

SECTION 10 MATERIALS

10-2 GEOTEXTILE FOR SEPARATION

Geotextiles must meet the following minimum requirements for strength and property qualities, and must be designed by the manufacturer to be used for separation. Material must be free of defects, cuts, and tears.

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Non-woven
Apparent opening size	D 4751	No. 30 max
Water permittivity	D 4491	0.02 sec ⁻¹
Grab tensile strength	D 4632	160 lb
Grab tensile elongation	D 4632	>= 50%
Puncture strength	D 6241	310 lb
Tear strength	D 4533	50 lb
Ultraviolet stability	D 4355	50% retained after 500 hours of exposure

10-15 CORRUGATED STEEL CULVERT

Metallic coated steel culverts must meet AASHTO M-36 (ASTM A-760) specifications. Culverts must be galvanized (zinc coated meeting AASHTO M-218).

10-16 METAL BAND

Metal coupling and end bands must meet the AASHTO specification designated for the culvert and must have matching corrugations. Culverts 24 inches and smaller must have bands with a minimum width of 12 inches. Culverts over 24 inches must have bands with a minimum width of 24 inches

10-17 GAGE AND CORRUGATION

Metal culverts must conform to the following specifications for gage and corrugation as a function of diameter.

<u>Diameter</u>	<u>Gage</u>	<u>Corrugation</u>
18" to 24"	16 (0.064")	2 2/3" X 1/2"
30" to 48"	14 (0.079")	2 2/3" X 1/2"
54" to 96"	14 (0.079")	3" X 1"

10-18 GRASS SEED

Grass seed must meet the following specifications:

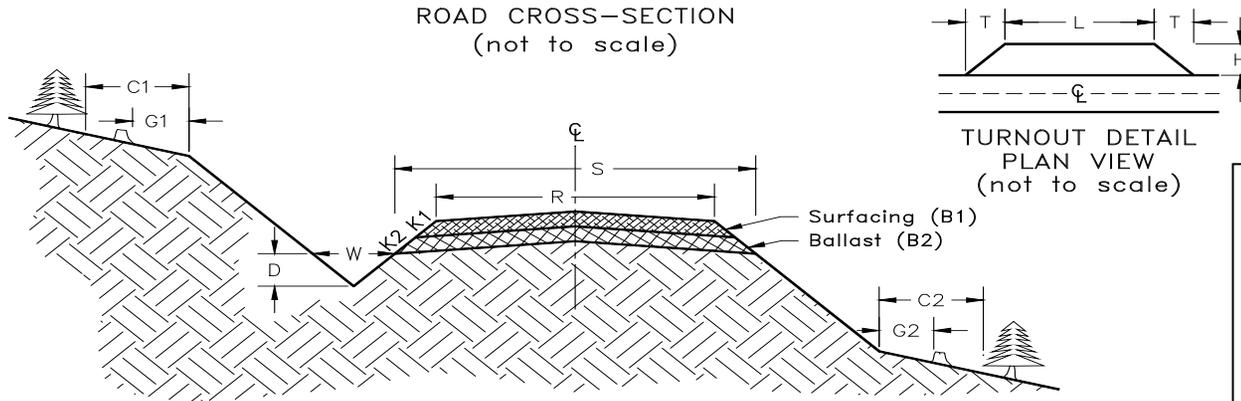
1. Weed seed may not exceed 0.5% by weight.
2. All seed species must have a minimum 90% germination rate, unless otherwise specified.
3. Seed must be certified.
4. Seed must be furnished in standard containers showing the following information:
 - a. Common name of seed
 - b. Net weight
 - c. Percent of purity
 - d. Percentage of germination
 - e. Percentage of weed seed and inert material
5. Seed must conform to the following mixture.

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>
Intermediate wheatgrass	30-35
smooth brome	30-35
hard fescue	30-35
Inert and Other Crop	0.5

10-19 STRAW

Straw must be certified weed free.

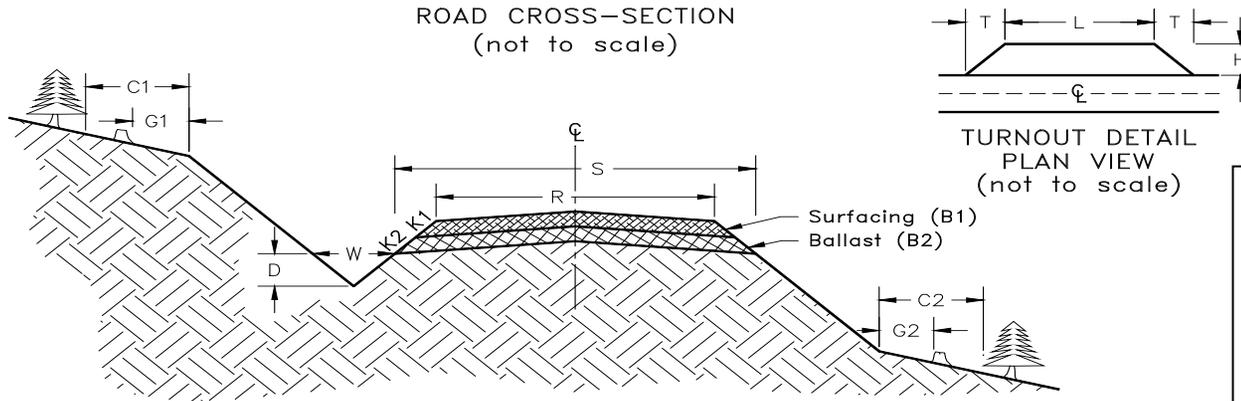
TYPICAL SECTION SHEET



NOTE: GRUBBING LIMITS FOR RECONSTRUCTION ARE 1' BEYOND EDGE OF ROAD OR BACK OF DITCH. CLEARING LIMITS POSTED WITH RIGHT OF WAY TAGS AND YELLOW FLAGGING. IF NOT POSTED, SEE BRUSHING DETAIL.

ROAD	CONSTRUCTION/ RECONSTRUCTION/ PRE-HAUL	FROM STATION	TO STATION	TOL. CLASS	SUBGRADE WIDTH S	CROWN @ CENTERLINE	OUTSLOPE IN 10 FEET	ROAD WIDTH R	DITCH		GRUBBING LIMITS		CLEARING LIMITS		TURNOUT TAPER LENGTH WIDTH			COMMENTS
									WIDTH W	DEPTH D	G1	G2	C1	C2	T	L	W	
E3000R	CONSTRUCTION	0+00	33+50	B	14'	4"	-	12	3'	1'	1'	1'	POSTED	25'	50'	10'		
E3030	RECONSTRUCTION	0+00	16+90	C	14'	-	6"	-	-	-	SEE NOTE	SEE NOTE						
E3200	PRE-HAUL	50+70	130+50	N/A	14'	-	6"				SEE NOTE	SEE NOTE						
E3200R	CONSTRUCTION	0+00	13+80	B	14'	-	6"	12	-	-	1'	1'	POSTED	25'	50'	10'		
E3200R	PRE-HAUL	13+80	16+75	N/A	14'	-	6"	-	-	-	SEE NOTE	SEE NOTE						
E3200R	CONSTRUCTION	16+75	30+20	B	14'	-	6"	-	-		1'	1'	POSTED	25'	50'	10'		
E3201	RECONSTRUCTION	0+00	5+70	C	14'	-	6"	-	-	-	SEE NOTE	N/A						
E3201	CONSTRUCTION	5+70	15+75	C	14'	-	6"	-	-	-	1'	1'	SEE NOTE					

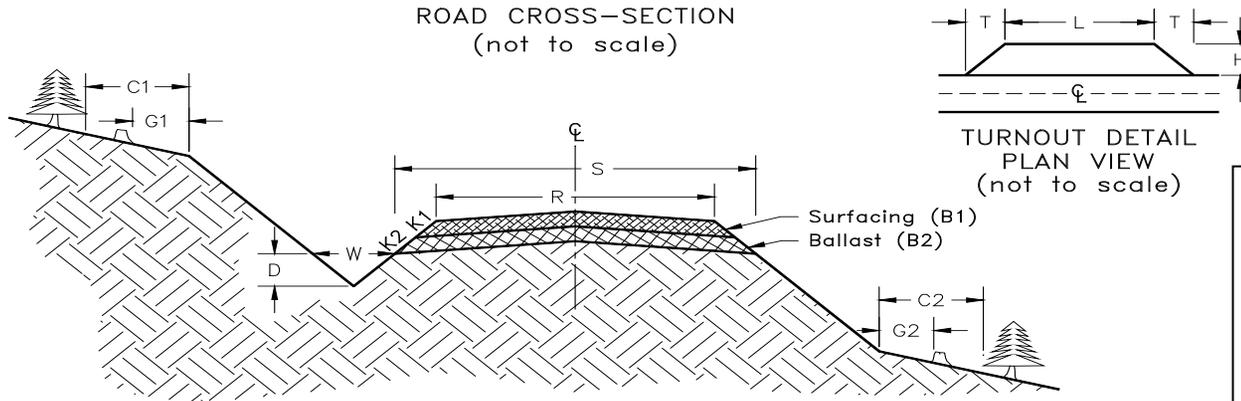
TYPICAL SECTION SHEET



NOTE: GRUBBING LIMITS FOR RECONSTRUCTION ARE 1' BEYOND EDGE OF ROAD OR BACK OF DITCH. CLEARING LIMITS POSTED WITH RIGHT OF WAY TAGS AND YELLOW FLAGGING. IF NOT POSTED, SEE BRUSHING DETAIL.

ROAD	CONSTRUCTION/ RECONSTRUCTION/ PRE-HAUL	FROM STATION	TO STATION	TOL. CLASS	SUBGRADE WIDTH S	CROWN @ CENTERLINE	OUTSLOPE IN 10 FEET	ROAD WIDTH R	DITCH WIDTH DEPTH		GRUBBING LIMITS		CLEARING LIMITS		TURNOUT TAPER LENGTH WIDTH	COMMENTS
									W	D	G1	G2	C1	C2		
E3203	RECONSTRUCTION	0+00	12+30	C	14'	-	6"	-	-	-	SEE NOTE	SEE NOTE				
E3206	RECONSTRUCTION	0+00	10+65	C	14'	-	6"	-	-	-	SEE NOTE	SEE NOTE				
E3210	CONSTRUCTION	0+00	16+95	C	14'	-	6"	-	-	-	1'	1'	POSTED			
E3210	RECONSTRUCTION	16+95	44+80	C	14'	-	6"	-	-	-	SEE NOTE	SEE NOTE				
E3210	CONSTRUCTION	44+80	52+70	C	14'	-	6"	-	-	-	1'	1'	POSTED			
E3210	RECONSTRUCTION	52+70	56+50	C	14'	-	6"	-	-	-	SEE NOTE	SEE NOTE				
E3215	RECONSTRUCTION	0+00	23+65	C	14'	-	6"	-	-	-	SEE NOTE	SEE NOTE				
E3215A	RECONSTRUCTION	0+00	5+50	C	14'	-	6"	-	-	-	SEE NOTE	SEE NOTE				
E3240	PRE-HAUL	0+00	26+30	N/A	14'	-	6"	-	-	-	SEE NOTE	SEE NOTE				
E3240	CONSTRUCTION	26+30	37+50	C	14'	-	6"	-	-	-	1'	1'	SEE NOTE			

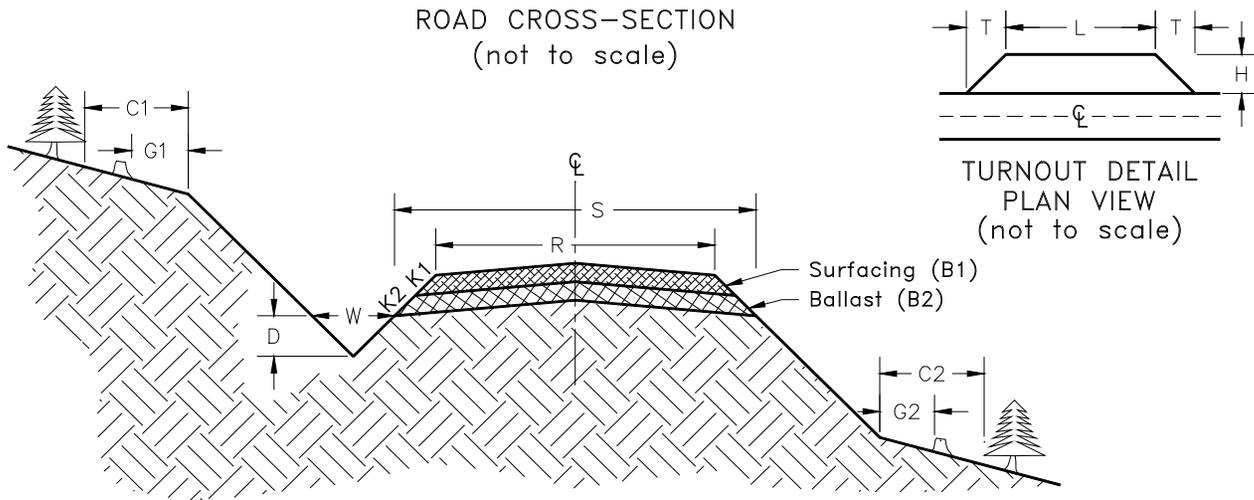
TYPICAL SECTION SHEET



NOTE: GRUBBING LIMITS FOR RECONSTRUCTION ARE 1' BEYOND EDGE OF ROAD OR BACK OF DITCH. CLEARING LIMITS POSTED WITH RIGHT OF WAY TAGS AND YELLOW FLAGGING. IF NOT POSTED, SEE BRUSHING DETAIL.

ROAD	CONSTRUCTION/ RECONSTRUCTION/ PRE-HAUL	FROM STATION	TO STATION	TOL. CLASS	SUBGRADE WIDTH S	CROWN @ CENTERLINE	OUTSLOPE IN 10 FEET	ROAD WIDTH R		DITCH WIDTH DEPTH W D		GRUBBING LIMITS G1 G2		CLEARING LIMITS C1 C2		TURNOUT TAPER LENGTH WIDTH T L W			COMMENTS	
E3250	PRE-HAUL	0+00	24+75	N/A	14'	-	6"	-	-	-	-	SEE NOTE	SEE NOTE							
E3251	CONSTRUCTION	0+00	13+55	C	14'	-	6"	-	-	-	-	1'	1'	SEE NOTE						
M1700	PRE-HAUL	112+30	128+90	N/A	14'	-	6"	-	-	-	-	SEE NOTE	SEE NOTE							
M1720	PRE-HAUL	0+00	13+90	N/A	14'	-	6"	-	-	-	-	SEE NOTE	SEE NOTE							

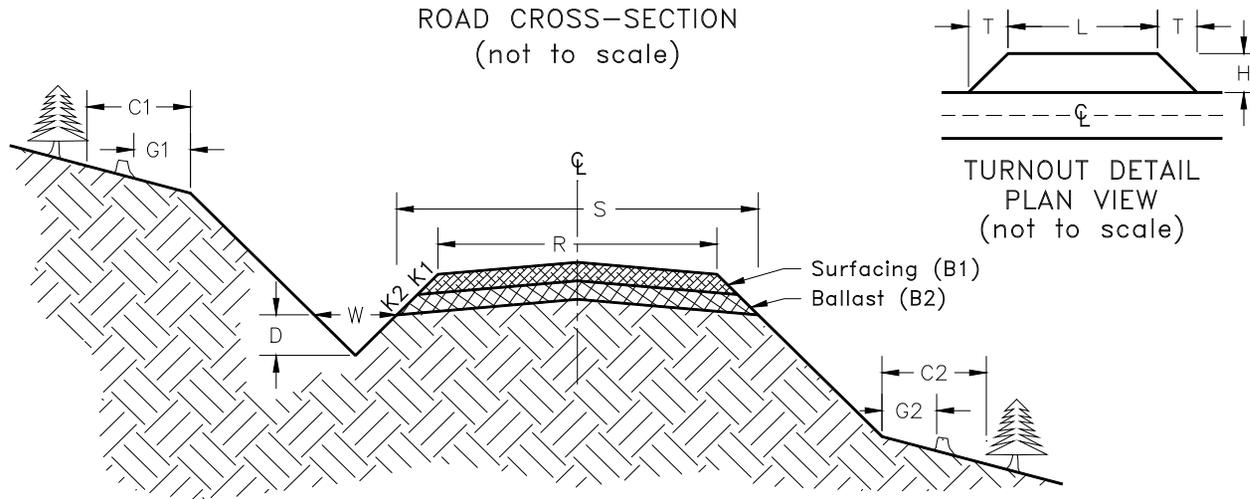
ROCK BALLAST LIST



Road Number	From Station	To Station	Rock Slope K2	Compacted Rock Depth (in)B2	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length	Width	Taper
E3200R	10+80	12+80	2:1	B2	40	2.00	80	E3200	-	-	-

BALLAST TOTAL 80 Cubic Yards

ROCK SURFACING LIST



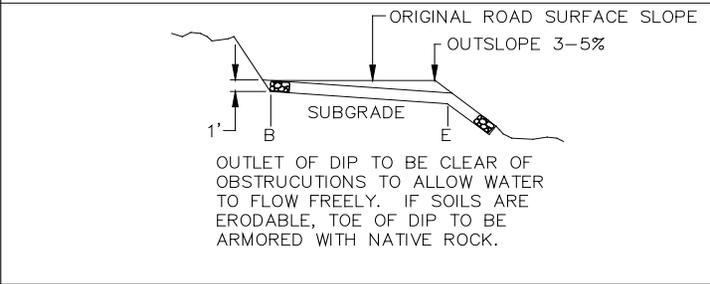
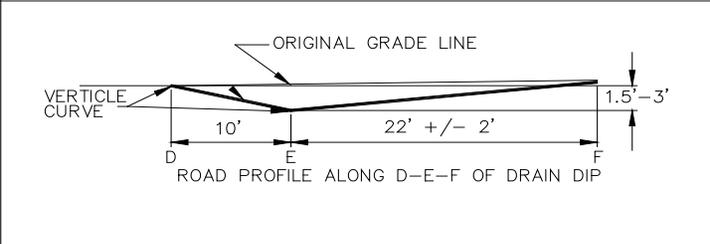
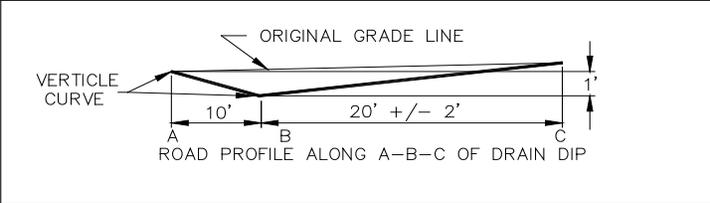
Road Number	From Station	To Station	Rock Slope K2	Compacted Rock Depth (in) B2	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length L	Width H	Taper T
E3000R	8+80	9+80	2:1	6	40	1.00	40	Commercial	-	-	-
E3000R	24+10	28+50	2:1	6	40	4.40	180	Commercial	-	-	-

SURFACE TOTAL 220 Cubic Yards

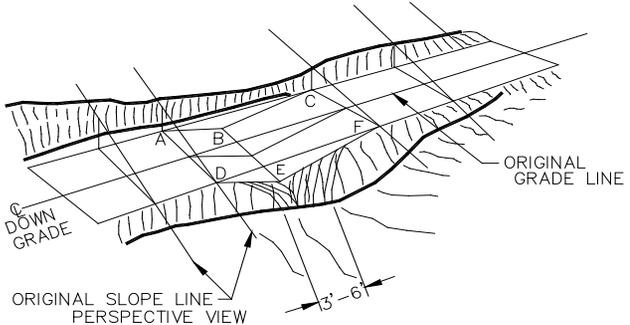
COMPACTION LIST

Road	From Station	To Station	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
E3000R	0+00	33+50	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
E3000R	8+80	9+80	Rock	8	Vibratory Smooth Drum	16000	6	3
E3000R	24+10	28+50	Rock	8	Vibratory Smooth Drum	16000	6	3
E3030	0+00	16+90	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
E3200	50+70	130+50	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
E3200R	0+00	30+20	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
E3200R	10+80	12+80	Rock	8	Vibratory Smooth Drum	16000	6	3
E3201	0+00	15+75	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
E3203	0+00	12+30	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
E3206	0+00	10+65	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
E3210	0+00	56+50	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
E3215	0+00	23+65	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
E3215A	0+00	5+50	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
E3240	0+00	37+50	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
E3250	0+00	24+75	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
E3251	0+00	13+55	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
M1700	112+30	128+90	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3
M1720	0+00	13+90	Subgrade – Surface		Vibratory Smooth Drum	16000	6	3

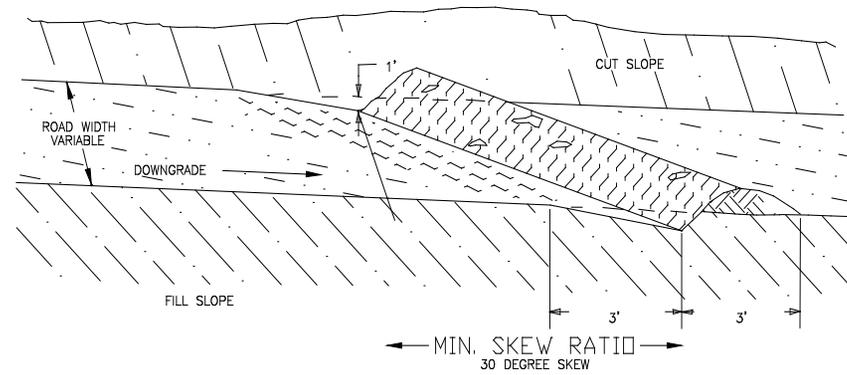
ROLLING DIP DETAIL



NOTE: PLAN OF DIP SHOWN IS FOR OUTSLOPED ROLLING DIP. DIPS MAY BE EITHER INSLOPED OR OUTSLOPED. WHEN INSLOPED, DIPS SHALL DRAIN FREELY INTO DITCHES OR CULVERT INLETS. WHEN OUTSLOPED, THEY SHALL DRAIN FREELY ONTO NATURAL GROUND. WHERE SOILS ARE ERODABLE, OUTLET SHALL BE ARMORED WITH NATIVE ROCK. THE MINIMUM CROSS GRADE FROM "B" TO "E" IS 4% GREATER THAN THE ROAD SURFACE SLOPE. SKEW LINE B-E TO FIT LOW POINT IN DRAW, IF LOCATED IN NATURAL DRAIN.



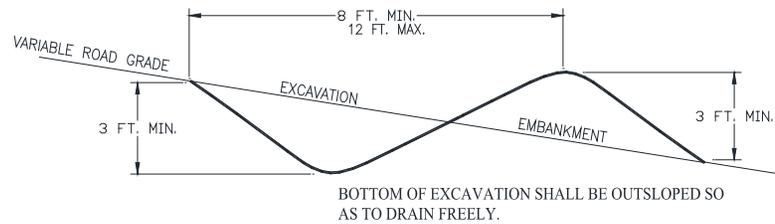
DRIVABLE WATER BAR DETAIL



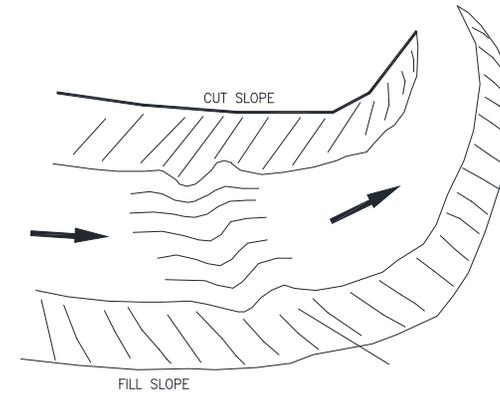
NOTES

1. ALL WATER BARS SHALL BEGIN AT THE INTERSECTION OF THE ROADBED AND CUT SLOPE AND RUN ACROSS THE ENTIRE WIDTH OF THE ROADBED.
2. ALL WATER BARS SHALL HAVE FREE FLOWING OUTLETS.

NON-DRIVABLE WATER BAR DETAIL



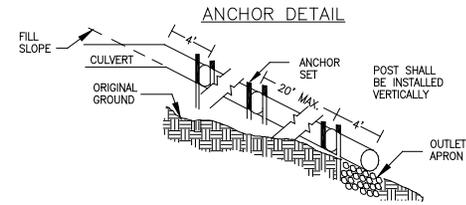
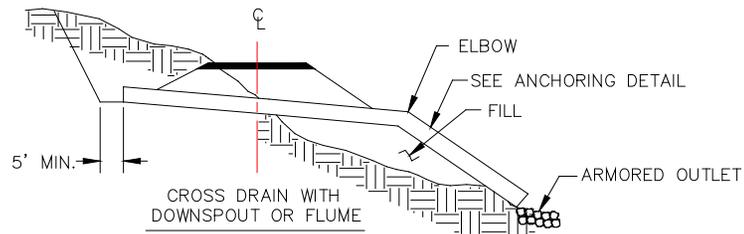
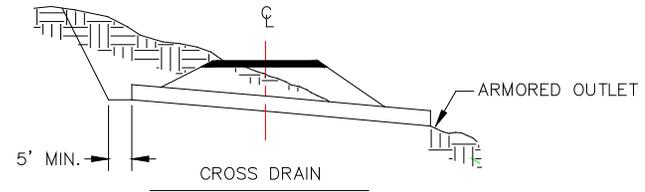
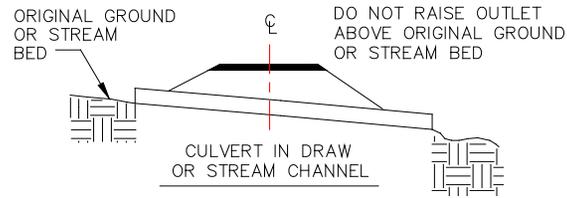
PROFILE VIEW



METHOD OF INSTALLATION

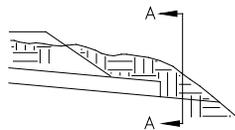
NOTE: EMBANKMENT SIDE OF UNDRIVABLE WATER BAR SHALL BE PLACED IN ON SIDE VEHICLE TRAFFIC WILL BE COMING FROM.

CULVERT AND DRAINAGE SPECIFICATION DETAIL

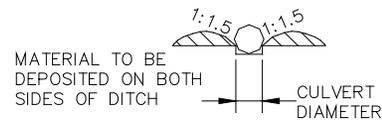


NOTE: MINIMUM COVER OVER CULVERT AT SHOULDER AT INLET SHALL BE 18" OR 1/2 THE CULVERT DIAMETER, WHICHEVER IS GREATER.
 CATCH BASINS SHALL BE MINIMUM 5' WIDE BY 6' LONG.
 CUT SLOPES AT CATCH BASINS SHALL BE AS SPECIFIED IN CLAUSE 5.1-8.

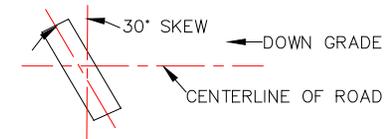
OUTLET DITCH



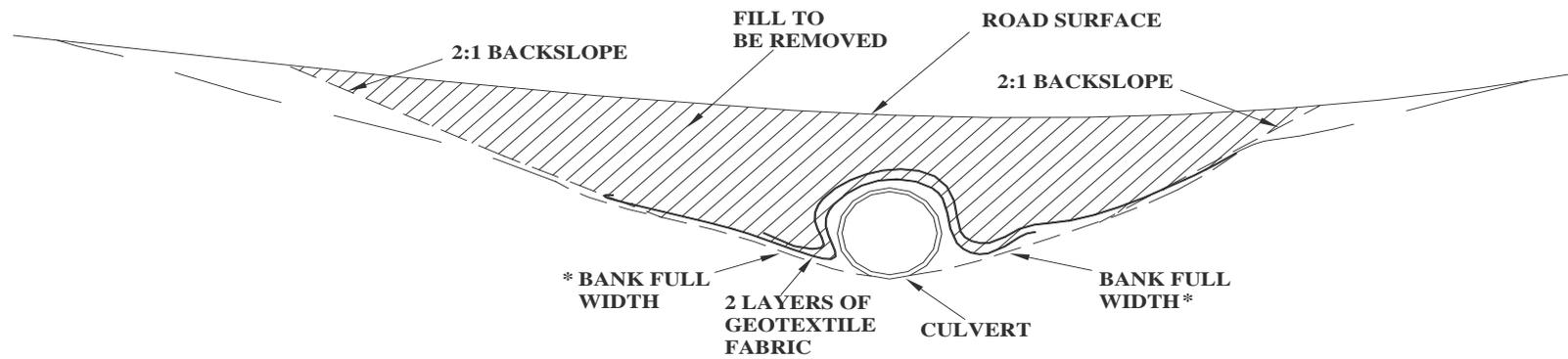
SECTION A-A



SKEW DIAGRAM

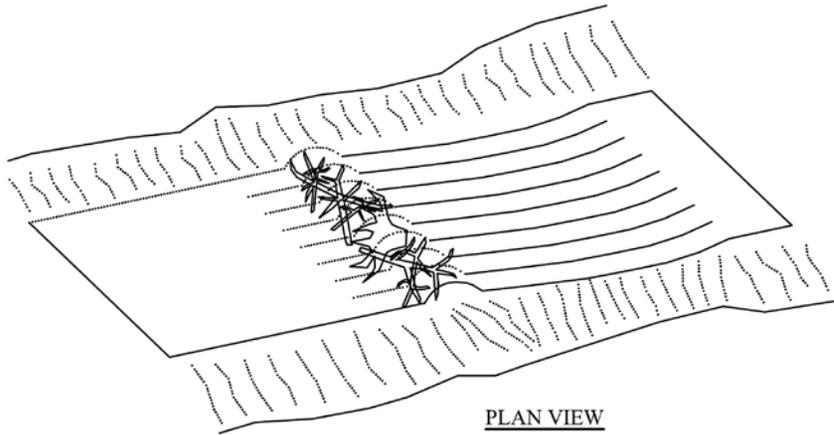


TEMPORARY CULVERT DETAIL



*** BEGIN 2:1 SLOPE AT FIVE FEET FROM BANK FULL WIDTH**

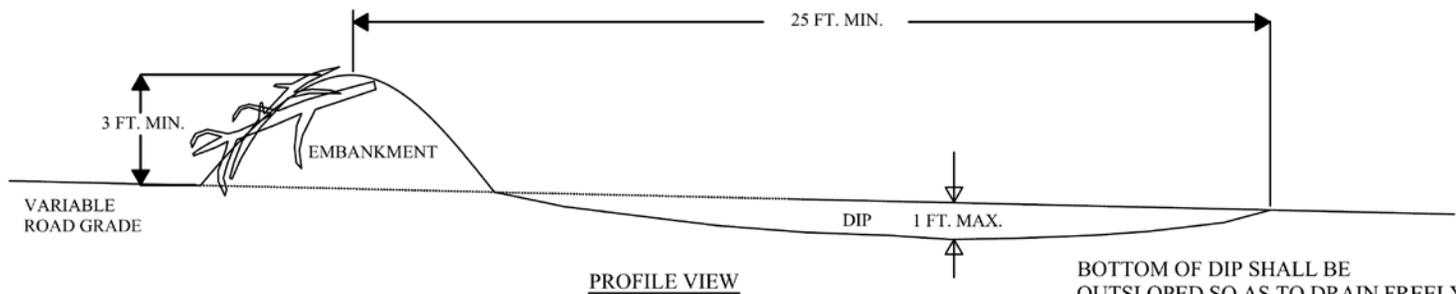
EARTHEN BARRICADE DETAIL



PLAN VIEW

SLASH AND ROOT WADS SHALL BE INCORPORATED IN THE EMBANKMENT SIDE OF THE BARRICADE.

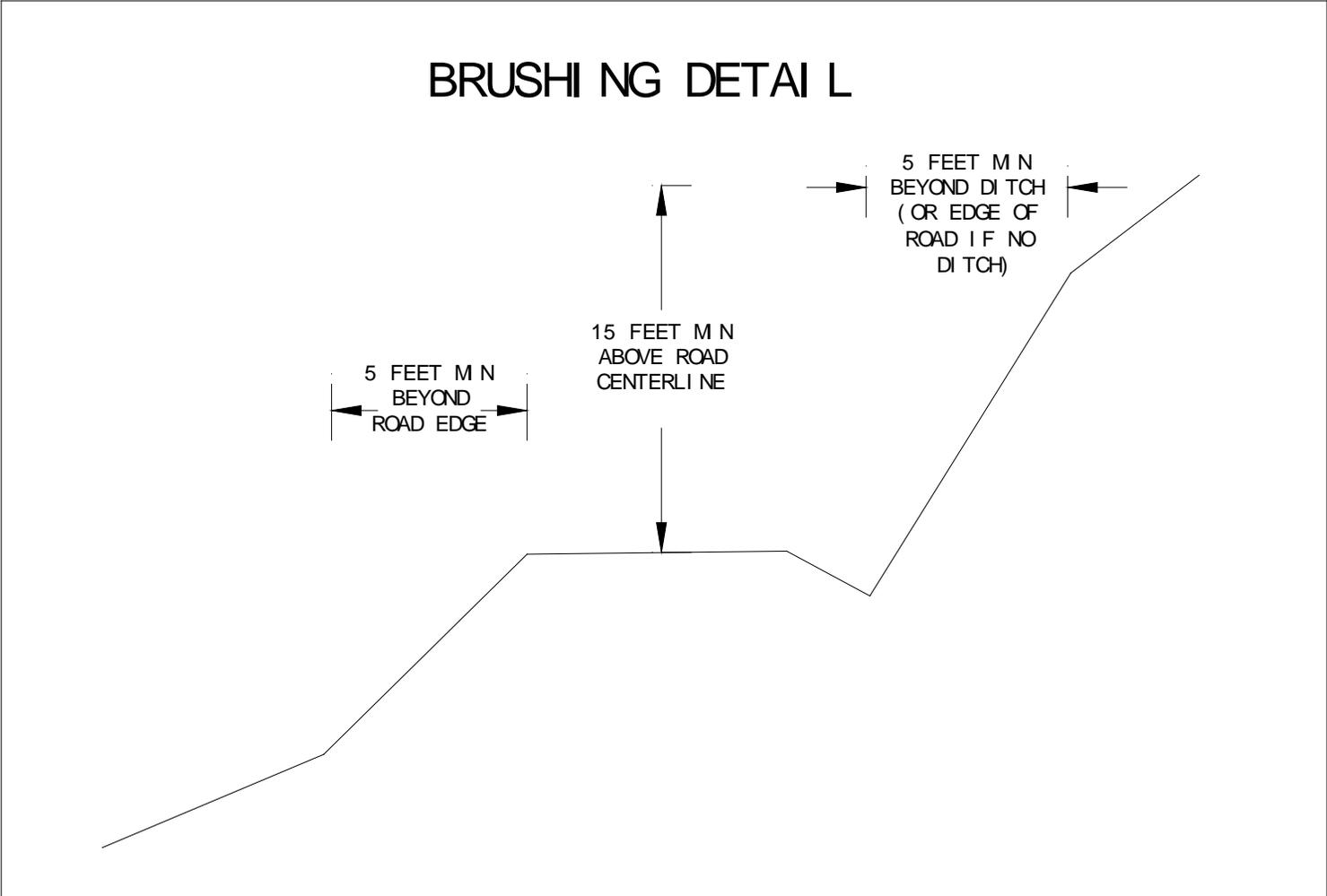
NOTE: EMBANKMENT SIDE OF BARRICADE SHALL BE PLACED ON SIDE VEHICLE TRAFFIC WILL BE COMING FROM.



PROFILE VIEW

BOTTOM OF DIP SHALL BE OUTSLOPED SO AS TO DRAIN FREELY

BRUSHING DETAIL



CULVERT LIST

<u>Road</u>	<u>L-Station</u>	<u>Diameter (in.)</u>	<u>Gauge</u>	<u>Length (ft.)</u>	<u>Headwall</u>	<u>Remarks</u>
E3000R	0+00	18	16	24	Rock	Cross Drain
E3000R	3+00	18	16	24	Rock	Cross Drain
E3000R	5+50	18	16	24	Rock	Cross Drain
E3000R	8+60	18	16	26	Rock	Cross Drain
E3000R	9+28	48	14	50	Rock	Ns Stream
E3000R	10+00	18	16	24	Rock	Cross Drain
E3000R	12+20	18	16	24	Rock	Cross Drain
E3000R	15+80	18	16	24	Rock	Cross Drain – with lead out
E3000R	18+80	18	16	26	Rock	Cross Drain
E3000R	24+57	24	16	54	Rock	Type U Draw
E3000R	26+90	24	16	40	Rock	Type U Draw
E3000R	27+60	18	16	20	Rock	Cross Drain
E3000R	27+95	24	16	30	Rock	Type U Draw
E3000R	32+40	18	16	24	Rock	Cross Drain
E3200R	11+80	36	14	48	Rock	Ns Stream
E3201	13+30	24	16	30	Rock	Ns Stream
E3210	3+85	24	16	40	Rock	Ns Stream
E3210	24+05	24	16	40	Rock	Ns Stream

TURNOUT LIST

<u>Road</u>	<u>Begin L-Station</u>	<u>End L- Station</u>	<u>Turnout Width</u>	<u>Full Width Length</u>	<u>Taper Length</u>	<u>Remarks</u>
E3000R	1+40	2+40	10'	50'	25'	Turnout Right
E3000R	6+40	7+40	10'	50'	25'	Turnout Right
E3000R	11+20	12+20	10'	50'	25'	Turnout Right
E3000R	18+80	19+80	10'	50'	25'	Turnout Right
E3000R	28+40	29+40	10'	50'	25'	Turnout Right
E3200R	1+60	2+60	10'	50'	25'	Turnout Right
E3200R	7+25	8+25	10'	50'	25'	Turnout Right

ROLLING DIP LIST

<u>Road</u>	<u>L-Station</u>	<u>Remarks</u>
E3030	1+60	As per detail
E3030	7+10	As per detail
E3030	12+60	As per detail
E3200	62+50	As per detail
E3200	71+40	As per detail
E3200	78+90	As per detail
E3200	84+15	As per detail
E3200	88+90	As per detail
E3200	103+60	As per detail
E3200	108+30	As per detail with lead-out
E3200	112+90	As per detail
E3200	122+25	As per detail with lead-out
E3200R	12+50	As per detail
E3200R	16+80	As per detail
E3200R	20+60	As per detail
E3200R	25+50	As per detail
E3201	1+30	As per detail
E3201	4+90	As per detail
E3203	1+65	As per detail
E3203	8+50	As per detail
E3210	1+35	As per detail
E3210	5+70	As per detail
E3210	9+70	As per detail
E3210	17+50	As per detail
E3210	23+30	As per detail
E3210	33+10	As per detail
E3210	38+95	As per detail
E3210	44+80	As per detail
E3210	52+80	As per detail
E3215	6+00	As per detail
E3215	11+45	As per detail
E3215	18+25	As per detail
E3240	18+40	As per detail
E3240	26+20	As per detail
E3240	29+40	As per detail
E3240	33+00	As per detail

ROLLING DIP LIST CONTINUED

<u>Road</u>	<u>L-Station</u>	<u>Remarks</u>
E3250	3+50	As per detail
E3250	4+90	As per detail
E3250	10+20	As per detail
E3250	20+00	As per detail
E3250	24+50	As per detail
E3251	4+00	As per detail
E3251	7+00	As per detail
M1700	113+75	As per detail
M1700	117+45	As per detail
M1700	124+80	As per detail
M1720	7+15	As per detail

EARTHEN BARRICADE LIST

<u>Road</u>	<u>L-Station</u>	<u>Remarks</u>
E3000	38+60	As per detail
E3000	44+25	As per detail
E3000	61+50	As per detail
E3000	66+65	As per detail
E3200	27+25	As per detail
E3200	37+75	As per detail
E3200	38+90	As per detail
E3200	49+95	As per detail

NON-DRIVABLE WATER BAR LIST

<u>Road</u>	<u>L-Station</u>	<u>Remarks</u>
E3000	40+25	As per detail
E3000	41+85	As per detail
E3000	45+35	As per detail
E3000	48+00	As per detail
E3000	51+30	As per detail
E3000	54+90	As per detail
E3000	58+60	As per detail
E3000	63+30	As per detail
E3000	65+65	As per detail
E3200	29+00	As per detail
E3200	31+80	As per detail
E3200	35+30	As per detail
E3200	41+35	As per detail
E3200	44+40	As per detail
E3200	45+40	As per detail
E3200	46+60	As per detail
E3200	47+50	As per detail

DRIVABLE WATER BAR LIST

<u>Road</u>	<u>L-Station</u>	<u>Remarks</u>
E3030	3+60	As per detail
E3030	6+80	As per detail
E3030	10+70	As per detail
E3030	15+10	As per detail
E3200	54+00	As per detail
E3200	57+00	As per detail
E3200	60+00	As per detail
E3200	64+00	As per detail
E3200	69+00	As per detail
E3200	77+00	As per detail
E3200	81+00	As per detail
E3200	83+00	As per detail
E3200	91+00	As per detail
E3200	95+00	As per detail
E3200	99+00	As per detail
E3200	116+00	As per detail
E3200	119+00	As per detail
E3200	125+00	As per detail
E3200R	3+00	As per detail
E3200R	6+00	As per detail
E3200R	10+00	As per detail
E3200R	14+00	As per detail
E3200R	28+00	As per detail
E3201	8+85	As per detail
E3201	11+85	As per detail
E3201	13+00	As per detail
E3201	13+60	As per detail
E3201	14+35	As per detail
E3203	3+10	As per detail
E3203	6+10	As per detail
E3203	8+50	As per detail
E3206	0+50	As per detail
E3206	2+75	As per detail
E3206	5+00	As per detail
E3206	10+50	As per detail

DRIVABLE WATER BAR LIST CONTINUED

<u>Road</u>	<u>L-Station</u>	<u>Remarks</u>
E3210	3+50	As per detail
E3210	4+25	As per detail
E3210	12+00	As per detail
E3210	15+00	As per detail
E3210	20+00	As per detail
E3210	27+00	As per detail
E3210	30+00	As per detail
E3210	41+00	As per detail
E3210	48+00	As per detail
E3210	51+00	As per detail
E3210	55+00	As per detail
E3215	0+50	As per detail
E3215	3+00	As per detail
E3215	6+00	As per detail
E3215	9+00	As per detail
E3215	12+00	As per detail
E3215	15+00	As per detail
E3215	18+00	As per detail
E3125	21+00	As per detail
E3215A	0+50	As per detail
E3215A	3+00	As per detail
E3215A	4+50	As per detail
E3240	0+50	As per detail
E3240	2+65	As per detail
E3240	6+10	As per detail
E3240	8+35	As per detail
E3240	12+00	As per detail
E3240	15+00	As per detail
E3240	18+00	As per detail
E3240	21+00	As per detail
E3240	24+00	As per detail
E3240	28+00	As per detail
E3240	32+00	As per detail
E3240	34+00	As per detail
E3250	0+50	As per detail
E3250	7+00	As per detail
E3250	15+00	As per detail
E3250	18+00	As per detail
E3250	22+00	As per detail

DRIVABLE WATER BAR LIST CONTINUED

<u>Road</u>	<u>L-Station</u>	<u>Remarks</u>
E3251	0+50	As per detail
E3251	3+00	As per detail
E3251	6+00	As per detail
E3251	9+00	As per detail
E3251	12+00	As per detail
M1700	112+35	As per detail
M1700	115+20	As per detail
M1720	10+40	As per detail
M1720	13+90	As per detail

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the cut slope/fill slope ratios.
- 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 on the TYPICAL SECTION SHEET to provide a smooth, rut-free traveled surface and maintain surface water runoff in an even, unconcentrated manner.
- 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, created by grading, to facilitate drainage, except as marked or directed by the Contract Administrator.

Drainage

- Prevent silt bearing road surface and ditch runoff from delivering sediment to any streams or wetlands.
- Maintain rolling 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 dissipaters at culvert outlets with non-erodible material or rock.
- Keep ditches, culverts, and other drainage structures 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.

Preventative Maintenance

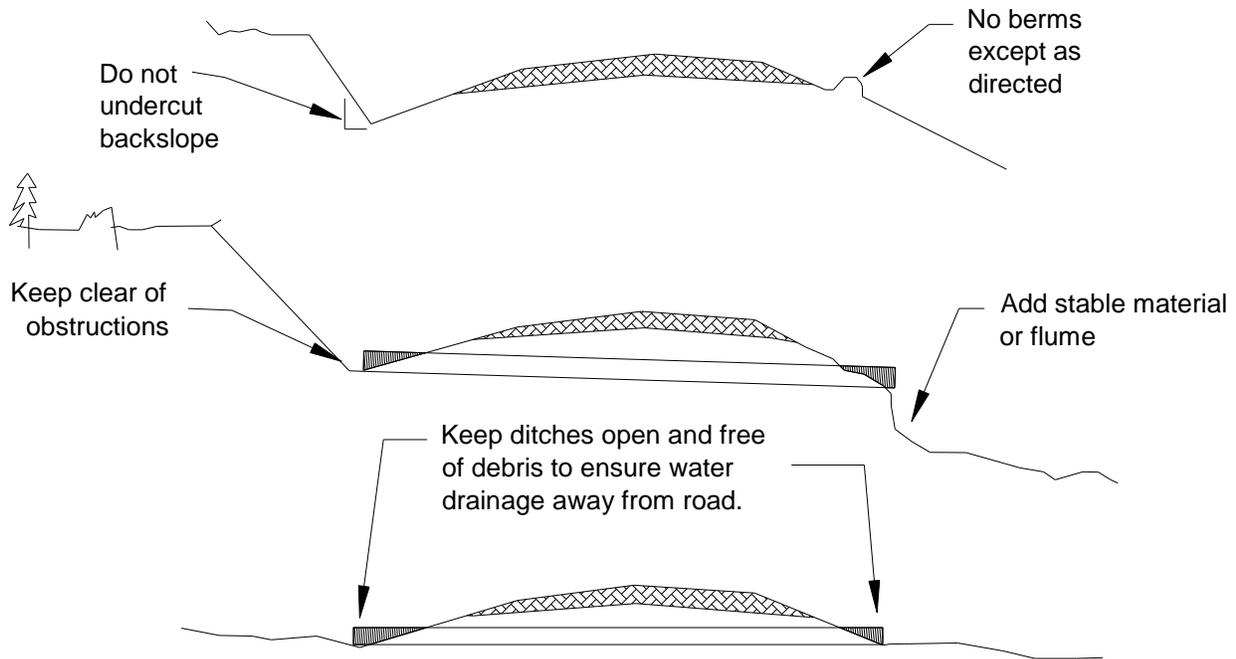
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

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.



SUMMARY - Road Development Costs

REGION: Southeast
DISTRICT: Alpine

SALE/PROJECT NAME: Wild Plum Sorts

CONTRACT #: 30-094409

ROAD NUMBERS:	E3000R, E3200R, E3201, E3210, E3240, E3251	E3030, E3201, E3203, E3206, E3210, E3215, E3215A	E3200, E3200R, E3240, E3250, M1700, M1720
ROAD STANDARD:	Construction	Reconstruction	Maintenance
NUMBER OF STATIONS:	120.40	106.35	164.30
CLEARING & GRUBBING:	\$10,037	\$3,510	\$2,937
EXCAVATION AND FILL:	\$29,717	\$13,185	-
MISC. MAINTENANCE:			\$2,898
ROAD ROCK:	\$6,966	-	-
STOCKPILE:	-	-	-
CULVERTS AND FLUMES:	\$19,401	\$993	\$160
STRUCTURES:	\$500	\$800	\$1,050
MOBILIZATION:	\$431	\$381	\$588
TOTAL COSTS:	\$67,052	\$18,868	\$7,633
COST PER STATION:	\$557	\$177	\$46
FINAL MAINTENANCE COSTS:		\$6,828	
ROAD DEACTIVATION & ABANDONMENT COSTS:		\$5,338	

TOTAL (All Roads) = \$105,719
SALE VOLUME MBF = 3,302
TOTAL \$/MBF = \$32

Compiled by: Nick Jones

Date: 06/03/16



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)

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
PETER GOLDMARK
COMMISSIONER OF PUBLIC LANDS

**HARVESTING SERVICES CONTRACT
SEALED BID FORM**

WILD PLUM SORTS

(Print Project Name)

30-094409

(Agreement No.)

(Print Company Name)

(Street Address)

(Business Telephone Number)

(City, State and Zip Code)

(email address)

To meet Harvesting obligations, I bid the following On Board Truck (OBT) rate:

(check box for appropriate project payment method. RFQ section 2.06)

- \$/Ton of timber harvested and delivered.**
 \$/mbf of timber harvested and delivered.

And to meet pole sort Harvesting obligations, I bid the following OBT rate:

(check box for appropriate project payment method. RFQ section 2.06)

- \$/Ton of poles harvested and delivered.**
 \$/mbf of poles harvested and delivered.

“Does Not Apply” to projects with no pole sorts identified. Refer to RFQ section 2.06.

To meet Hauling obligations, I bid:

Hauling Bid Factor

(format to 3 decimal places ie 0.000)

Hauling Services Payment calculation explained in RFQ section 1.05.
Actual “live-load” weights used to determine payment for hauling sorts designated as “tonnage”. Sorts designated as “MBF” will use calculated tonnage based on the DNR’s advertised “tons/mbf conversion factor specific for each sort unless actual tonnage is available and approved for use.

If awarded this contract, I am responsible for independently negotiating, procuring and paying for any and all subcontracted services provided.

Attached is my completed 'Statement of Available Resources and Work Plan' which I understand will be evaluated by the Department of Natural Resources in conjunction with my bid to determine my ability to complete the project.

BY SUBMISSION OF THIS BID THE BIDDER WARRANTS AND AGREES TO THE FOLLOWING:

1. The bid price has been determined independently, without consultation, communication, or agreement with others for the purpose of restricting competition.
2. The bid is a firm offer for a period of 90 days from the bid submission deadline, and it may be accepted by the State without further negotiation at any time within the 90-day period.
3. In preparing this proposal or bid, the Bidder was not assisted by any current or former employee of the DNR whose duties relate (or did relate) to this prospective contract and who was assisting in other than his or her official, public capacity. Neither does such a person or any member of his or her immediate family have any financial interest in the outcome of this proposal.
4. Acceptance of the Harvesting Services Contract general terms and conditions.
5. Acceptance of the Harvesting Services Contract estimated road payment values as shown fixed by terms in contract clause P-027.
6. The Bidder has had an opportunity to fully inspect the sale area and the timber to be harvested.
7. The Bidder enters this bid based solely upon their own judgment of the costs associated with harvesting, hauling, and any additional required work formed after their own examination and inspection of both the timber sale area and the forest products to be harvested.
8. The Bidder enters this bid without any reliance upon the volume estimates, acreage estimates, appraisals, pre-bid documentation, or any other representation by the State Department of Natural Resources.
9. The Bidder, if successful, will furnish the necessary labor, equipment, and services needed to complete the work as specified by the harvesting contract including commencing and completing the operations in the times specified.
10. The Bidder agrees to execute the harvesting contract for the said project and agrees to furnish surety and insurance as required in the specifications.

11. The Bidder assumes the risk of liabilities related to any regulatory actions by any government agency that may affect the operability of these harvesting contracts. Such regulatory actions include, but are not limited to, actions taken pursuant to the Forest Practices Act, chapter 76.09 RCW, and the Endangered Species Act, 16 U.S.C. §§ 1531-1544. Please see the Harvesting Services Contract for further information.

12. The DNR cannot verify the presence or absence of northern spotted owls, marbled murrelets or any other threatened or endangered species that may affect the operability of the timber sale. The Bidder relies solely on his/her own assessments.

13. Acreage estimates and volume estimates contained within the harvesting services contract are made only for administrative and identification purposes. Except as expressly provided by the harvesting contract, the Apparent Successful Contractor shall be responsible to harvest the sale, even if the actual acreage or timber volume varies from the estimated quantity or volume shown.

14. The DNR will not reimburse the Bidder for any costs incurred in the preparation of this proposal. All proposals become the property of the DNR and I/we claim no proprietary rights to the ideas or writings contained in them.

15. The Bidder will be required to comply with the Department's Nondiscrimination Plan and federal and state laws on which it is based. If requested by the DNR, the Bidder/Harvester will submit additional information about the nondiscrimination and affirmative action policies and plans of their organization in advance of or after the contract award.

By signing and submitting this bid the Bidder agrees to all of the preceding requirements. The Bidder further warrants to the State that they enter this bid based upon their own judgments of the value of the harvesting services to be provided through the Harvesting Services Contract, formed after their own examination and inspection of both the timber sale area and the forest products to be harvested.

 (Signature of authorized representative submitting this bid)

 (Date)

 (Print name and title of authorized representative signing bid)

PRE-CRUISE NARRATIVE

Sale Name: Wild Plum	Region: SE
Application # 30-094409	District: Alpine
Contact	Phone: (509)- 859-1339
Forester: Tom Frantz	Location: Ellensburg, WA.

Type of Sale: Sort sale (contract harvest)

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit #	Legal Description Sec/Twp/Rng	Grant	Gross Acres	RMZ Acres	Net Acres	Method of acreage determination (compass chain traverse, photo, declination used, GPS, etc.)
1	S 21&22 T19 R16E	03	89	25	64	Garmin GPS
2	S 22,26,27 T19 R16E	03, 04	141	22	119	Garmin GPS
3	S 27 T19 R16E	04	89	7	82	Garmin GPS
4	S 26,27,35 T19 R16E	03, 04	251	8	243	Garmin GPS
5	S 22&27 T19 R16E	03, 04	25	5	20	Garmin GPS
Total			595	67	528	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Mark leave, take, etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Prescriptive harvest, leaving 21 tpa >11" dbh		
2	Prescriptive harvest, leaving 21 tpa >11" dbh		
3	Prescriptive harvest, leaving 21 tpa >11" dbh		
4	Prescriptive harvest, leaving 21 tpa >11" dbh		
5	Prescriptive harvest, leaving 7-10 tpa >11" dbh		Leave trees marked orange in unit

OTHER PRE-CRUISE INFORMATION:

Unit #	Estimated Volume	Access information (Gates, locks, etc.)	Photos, traverse maps required
1		E3000 road – no gates	
2		E3000 road – no gates	
3		E3240 road – gate just past unit boundary (786 key)	
4		M1700 road – no gates	
5		E3200 road – blocked with boulders	
Total	~2,200 mbf	← Based on existing cruise data	

REMARKS:

All species to be cut with a preference for Western Larch and Ponderosa Pine to be left as leave trees.

Prepared By: Tom Frantz Date: 06/29/2016	Title: Forester 1	CC:
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Cruise Narrative

Sale Name: Wild Plum Sorts	Region: SE
Agree. #:	District: Alpine
Lead cruiser: Brian Mize	Completion date: July 28, 2014
Other cruisers on sale:	

Unit acreage specifications:

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1	64	Yes	
2	119	Yes	
3	82	Yes	
4	243	Yes	
5	20	Yes	
Total	528		

Unit cruise specifications:

Unit #	Sample type (VP, FP, ITS,100%)	Expansion factor (BAF, full/half)	Sighting height (4.5 ft, 16 ft.)	Grid size (Plot spacing or % of area)	Plot ratio (cruise:count)	Total number of plots
1	VP	20	4.5	8 ch x 6 ch	1:8	18
2	VP	20	4.5	8 ch x 6 ch	1:8	34
3	VP	20	4.5	8 ch x 6 ch	1:8	16
4	VP	27.78	4.5	8 ch x 6 ch	1:8	94
5	VP	20	4.5	8 ch x 6 ch	1:8	34

Sale/Cruise Description:

Minor species cruise intensity:	n/a			
Minimum cruise spec:	7" dbh, 5" dib			
Avg ring count by sp:	DF =		WH =	SS =
Leave/take tree description:				
Other conditions				

Field observations:

Original cruise was done in 2014. Sale boundaries have been adjusted since then and plots were assigned to new units. Used all original plots for unit 2, and used original plots from unit 2 for unit 5. We dropped 14 plots from
--

Unit 4.

Grants: _____

Prepared by: Tom
Frantz

Title: NRS1

CC:

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T019 R016 S22 Ty0001 THRU T019 R016 S27 Ty0005				Project:		WILDPLUM											Page		1		
				Acres		528.00											Date		7/19/2016		
																	Time		11:39:31AM		
Spp	S	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
PP	L	4		28	10.0	389	351	185			92	8	4	20	76	28	13	173	1.62	2.0	
PP	L	5		53	4.9	686	652	344	9	70	20	1	6	25	55	14	27	7	58	0.68	11.3
PP	L	9		19		231	231	122	70	24	6		68	32		11	5	14	0.31	16.0	
PP Totals				16	5.6	1,306	1,233	651	18	42	38	3	17	25	51	7	18	7	42	0.65	29.3
PP		4		9	10.0	94	84	45			100		100			16	13	92	1.35	.9	
PP		5		67	1.2	603	595	314	40	59	0		16	31	53	24	6	36	0.40	16.5	
PP		9		24		207	207	109	73	27			61	18	22	8	5	10	0.29	21.0	
PP Totals				12	1.9	903	887	468	44	46	10		35	25	41		15	6	23	0.39	38.4
DF		2		9		518	518	273			100		29	71		22	12	117	1.03	4.4	
DF		3		53	3.9	2,870	2,759	1,457		97	2	1	2	15	36	47	33	7	58	0.54	47.2
DF		4		29	1.8	1,572	1,543	815	100				11	34	46	9	28	5	28	0.27	54.8
DF		9		9		465	465	245	94	4	2		73	27		4	5	4	0.24	119.5	
DF Totals				69	2.6	5,424	5,285	2,790	38	51	11	1	14	27	32	27	16	6	23	0.40	225.9
DF	L	2		25		38	38	20			100		100			20	12	108	1.09	.4	
DF	L	3		12		19	19	10		100				100		26	8	53	0.60	.4	
DF	L	4		63		95	95	50	43	57					100	40	6	54	0.41	1.8	
DF	L	9														6			0.00	2.1	
DF Totals				2		152	152	80	27	48	25		25	12	62		19	6	33	0.48	4.6
GF		3		36	12.8	35	30	16		100			45		55	26	8	48	0.63	.6	
GF		4		55	11.6	51	45	24	80	20				100		27	5	28	0.26	1.6	
GF		9		9		7	7	4	77	23			100			3	5	3	0.24	2.3	
GF Totals				1	11.1	93	82	43	51	49			25	55	20		15	6	18	0.35	4.5
Totals					3.0	7,878	7,639	4,033	35	49	15	1	17	27	35	21	16	6	25	0.43	302.7

TC PSTATS		PROJECT STATISTICS							PAGE	1		
		PROJECT WILDPLUM							DATE	7/19/2016		
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
019	016	22	WILDPLUM	0001	THR	528.00	195	776	S	W		
019	016	27	WILDPLUM	0005								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			195	776	4.0							
CRUISE			106	163	1.5	58,806		.3				
DBH COUNT			29	133	4.6	29,065		.5				
REFOREST COUNT			39	97	2.5							
BLANKS			21									
100 %												
STAND SUMMARY												
			SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			303	125.3	10.3	55	22.7	73.0	5,424	5,285	1,451	1,452
DOUG FIR-L			13	2.1	12.3	69	0.5	1.8	152	152	42	42
PONDEROS			104	20.7	11.1	50	4.2	13.9	903	887	227	227
PONDEROS-L			59	16.0	14.2	55	4.7	17.7	1,306	1,233	353	353
GRAND F			9	2.3	9.9	55	0.4	1.2	93	82	23	23
TOTAL			488	166.4	10.9	55	32.6	107.5	7,878	7,639	2,095	2,097
CONFIDENCE LIMITS OF THE SAMPLE												
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR												
CL	68.1	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		73.4	7.5	62	67	72						
DOUG FIR-L		78.6	73.6	24	90	156						
PONDEROS		60.3	9.9	57	63	70						
PONDEROS-L		106.6	23.2	99	129	159						
GRAND F		58.1	25.9	28	38	48						
TOTAL		93.6	7.3	68	74	79	350	87	39			
CL	68.1	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		77.7	7.9	18	19	21						
DOUG FIR-L		60.1	56.3	10	24	37						
PONDEROS		60.3	9.9	15	17	19						
PONDEROS-L		87.5	19.1	29	36	42						
GRAND F		86.5	38.5	8	13	18						
TOTAL		86.3	6.7	19	21	22	297	74	33			
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		112.6	8.1	115	125	135						
DOUG FIR-L		500.8	35.8	1	2	3						
PONDEROS		198.5	14.2	18	21	24						
PONDEROS-L		166.5	11.9	14	16	18						
GRAND F		683.0	48.9	1	2	3						
TOTAL		86.4	6.2	156	166	177	298	75	33			
CL	68.1	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		90.8	6.5	68	73	78						
DOUG FIR-L		483.2	34.6	1	2	2						
PONDEROS		199.8	14.3	12	14	16						
PONDEROS-L		145.5	10.4	16	18	19						
GRAND F		674.2	48.2	1	1	2						
TOTAL		68.3	4.9	102	108	113	186	47	21			

PROJECT STATISTICS
PROJECT WILDPLUM

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
019	016	22	WILDPLUM	0001	THR	528.00	195	776	S	W
019	016	27	WILDPLUM	0005						

CL	68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR		90.9	6.5	4,941	5,285	5,628			
DOUG FIR-L		489.9	35.1	99	152	206			
PONDEROS		201.4	14.4	759	887	1,014			
PONDEROS-L		158.8	11.4	1,093	1,233	1,373			
GRAND F		701.8	50.2	41	82	124			
TOTAL		71.8	5.1	7,247	7,639	8,031	206	51	23

CL	68.1	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR		86.2	6.2	1,363	1,452	1,542			
DOUG FIR-L		487.1	34.9	27	42	56			
PONDEROS		214.4	15.3	192	227	262			
PONDEROS-L		156.6	11.2	313	353	392			
GRAND F		717.0	51.3	11	23	35			
TOTAL		69.9	5.0	1,992	2,097	2,202	195	49	22

T TSPCSTGR	Species, Sort Grade - Board Foot Volumes (Type)										Page 1											
	Project: WILDPLUM										Date 7/19/2016											
											Time 11:39:32AM											
T019 R016 S22 T0001										T019 R016 S22 T0001												
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt													
019	016	22	WILDPLUM	0001	64.00	18	118	S	W													
Spp	S	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
					Net BdFt	Def%	Gross		Net	Log Scale Dia.				Log Length				Ln	Dia	Bd		CF/Lf
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft			
DF		2		3		194	194	12						100				26	12	130	1.05	1.5
DF		3		62	2.9	4,102	3,983	255					100		32	10	58	31	7	53	0.48	74.6
DF		4		8		481	481	31	100					15		85		30	5	28	0.33	17.2
DF		9		27		1,709	1,709	109	96	4				100				12	5	13	0.20	134.5
DF	Totals			64	1.8	6,485	6,366	407	33	64	3			28	23	12	36	20	6	28	0.36	227.9
DF	L	2		25		316	316	20					100					20	12	108	1.09	2.9
DF	L	3		12		155	155	10					100					26	8	53	0.60	2.9
DF	L	4		63		785	785	50	43	57						100		40	6	54	0.41	14.5
DF	L	9																6			0.00	17.4
DF	L	Totals		13		1,256	1,256	80	27	48	25			25	12	62		19	6	33	0.48	37.7
PP	L	4		17		228	228	15					100					32	21	603	3.75	.4
PP	L	5		83		1,082	1,082	69	18	68	8	6			11	22	67	35	7	67	0.68	16.3
PP	L	9																6			0.00	16.3
PP	L	Totals		13		1,311	1,311	84	15	56	6	23			9	35	56	18	7	40	0.74	32.9
PP		5		86		539	539	35	15	85				62		38		19	6	26	0.34	20.5
PP		9		14		87	87	6	100					100				6	5	4	0.12	20.5
PP	Totals			6		626	626	40	27	73				67		33		12	5	15	0.29	41.1
GF		3		31	20.9	174	138	9					100					40	9	92	0.91	1.5
GF		4		64		275	275	18	73	27						100		26	5	32	0.25	8.5
GF		9		5		22	22	1	38	62				100				2	6	2	0.32	10.0
GF	Totals			4	7.8	471	434	28	48	52				5	63	32		15	6	22	0.38	20.1
Type	Totals				1.5	10,148	9,992	640	30	61	6	3		25	20	15	40	18	6	28	0.40	359.7

T TSPCSTGR	Species, Sort Grade - Board Foot Volumes (Type)										Page 1										
	Project: WILDPLUM										Date 7/19/2016										
											Time 11:39:32AM										
T019 R016 S27 T0002										T019 R016 S27 T0002											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
019	016	27	WILDPLUM	0002	119.00	34	152	S	W												
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft			
DF		2		19	1,107	1,107	132						100				24	12	130	1.07	8.5
DF		3		46	5.3	2,706	305		87	8	5		34	27	39		31	7	60	0.60	42.8
DF		4		32	5.8	1,894	212	100				33	28	38		25	5	24	0.23	75.5	
DF		9		3		158	19	56	25	19		53	47			1	5	1	0.41	115.7	
DF	Totals			63	4.3	5,865	668	33	41	24	2	12	46	24	18	14	6	23	0.42	242.5	
PP		4		17	10.4	342	36					100				16	13	92	1.36	3.3	
PP		5		64	.6	1,108	131	41	59			14	7	79		26	6	38	0.42	28.9	
PP		9		19		316	38	36	64			17	30	52		6	5	11	0.50	30.1	
PP	Totals			20	2.3	1,766	205	33	50	18		30	10	60		16	6	28	0.48	62.3	
PP	L	4		4		61	7					100				16	12	80	1.01	.8	
PP	L	5		78	10.9	1,218	129	10	42	48		5	35	60		23	8	60	0.78	18.2	
PP	L	9		18		243	29	14	61	24		91	9			6	6	15	0.55	16.1	
PP L	Totals			16	8.7	1,521	165	10	43	46		24	29	47		15	7	40	0.74	35.0	
GF		3		45		51	6					100				20	7	30	0.41	1.7	
GF		4		39	33.3	67	5	100					100			28	5	20	0.29	2.2	
GF		9		16		17	2	100				100				4	5	4	0.20	3.9	
GF	Totals			1	16.5	135	13	55	45			60	40			14	5	14	0.31	7.9	
Type Totals					4.8	9,288	8,839	1,052	30	43	26	2	18	36	35	11	15	6	25	0.47	347.8

T019 R016 S27 T0004										T019 R016 S27 T0004				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
019	016	27	WILDPLUM	0004	243.00	94	291	S	W					

Spp	S	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/	
					T	rt	ad		Net BdFt	Def%	Gross	Net	Net MBF	4-5	6-11	12-16	17+	12-20	21-30	31-35	
DF			2	3		203	203	49	100				49	51			20	12	100	1.01	2.0
DF			3	54	4.4	2,917	2,790	678	100				4		45	51	35	7	59	0.51	47.3
DF			4	36		1,877	1,877	456	100				1	46	37	16	30	5	31	0.28	60.5
DF			9	7		314	314	76	100				64	36			2	5	2	0.23	130.0
DF	Totals			77	2.4	5,312	5,185	1,260	42	54	4		8	21	38	33	16	5	22	0.39	239.8
PP	L		4	14	23.4	197	151	37	100				100				24	12	92	1.08	1.6
PP	L		5	51		517	517	126	5	95			7	15	78		28	7	57	0.59	9.0
PP	L		9	35		360	360	87	87	13			58	42			16	5	18	0.27	20.3
PP	L	Totals		15	4.3	1,074	1,028	250	33	52	15		24	37	39		20	6	33	0.45	31.0
PP			5	61	2.6	305	297	72	79	21				60	40		26	5	35	0.31	8.6
PP			9	39		183	183	45	100				87	13			10	5	11	0.21	16.6
PP	Totals			7	1.6	488	481	117	87	13			33	42	25		16	5	19	0.27	25.2
Type	Totals				2.6	6,875	6,694	1,627	44	51	5		12	25	37	26	16	6	23	0.39	295.9

T019 R016 S27 T0005		T019 R016 S27 T0005
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt		
019 016 27 WILDPLUM 0005 20.00 34 152 S W		

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/	
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf	
DF		2		19	1,191	1,191	24	100				100				24	12	133	1.08	9.0	
DF		3		48	4.8	2,982	2,839	57	88	7	5		33	25	42	31	7	60	0.59	47.5	
DF		4		30	5.8	1,894	1,784	36	100				33	28	38	25	5	24	0.23	75.5	
DF		9		3		176	176	4	60	23	17		58	42		1	5	1	0.39	120.4	
DF	Totals			69	4.1	6,243	5,990	120	32	43	24	2	12	45	23	20	15	6	24	0.43	252.3
PP		4		16	8.4	443	406	8	100				100				16	13	93	1.31	4.4
PP		5		67	3.7	1,763	1,697	34	31	65	4		11	28	61	25	6	41	0.48	41.6	
PP		9		17		417	417	8	33	67			29	24	47	6	5	10	0.52	41.6	
PP	Totals			29	3.9	2,623	2,520	50	26	55	19		28	23	49	15	6	29	0.53	87.6	
GF		3		45		51	51	1	100				100				20	7	30	0.41	1.7
GF		4		39	33.3	67	45	1	100				100				28	5	20	0.29	2.2
GF		9		16		17	17	0	100				100				4	5	4	0.20	3.9
GF	Totals			1	16.5	135	113	2	55	45			60	40		14	5	14	0.31	7.9	
Type Totals					4.2	9,002	8,624	172	30	46	22	2	17	39	31	14	15	6	25	0.45	347.9

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				WILDPLUM				DATE	7/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
019	016	22	WILDPLUM	0001	64.00	18	118	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		18	118	6.6						
CRUISE		14	26	1.9	2,448		1.1			
DBH COUNT		4	23	5.8	10,511		.2			
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	71	138.2	10.2	58	24.7	78.9	6,485	6,366	1,643	1,645
DOUG FIR-L	13	17.4	12.3	69	4.1	14.4	1,256	1,256	344	344
PONDEROS	10	20.5	10.0	44	3.5	11.1	626	626	146	146
PONDEROS-L	19	16.3	15.4	60	5.4	21.1	1,311	1,311	436	436
GRAND F	5	10.0	10.1	60	1.8	5.6	471	434	114	114
TOTAL	<i>118</i>	<i>202.5</i>	<i>10.9</i>	<i>57</i>	<i>39.7</i>	<i>131.1</i>	<i>10,148</i>	<i>9,992</i>	<i>2,682</i>	<i>2,685</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		62.0	16.6	73	87	102				
DOUG FIR-L		78.6	73.6	24	90	156				
PONDEROS		32.7	18.7	41	50	59				
PONDEROS-L		140.4	97.1	7	237	467				
GRAND F		64.3	60.2	22	55	88				
TOTAL		<i>121.0</i>	<i>24.2</i>	<i>73</i>	<i>97</i>	<i>120</i>	<i>609</i>	<i>152</i>	<i>68</i>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		57.6	15.4	20	24	28				
DOUG FIR-L		60.1	56.3	10	24	37				
PONDEROS		32.6	18.6	11	13	16				
PONDEROS-L		113.3	78.4	12	58	103				
GRAND F		104.2	97.6	0	20	39				
TOTAL		<i>96.5</i>	<i>19.3</i>	<i>21</i>	<i>26</i>	<i>31</i>	<i>387</i>	<i>97</i>	<i>43</i>	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		93.2	22.6	107	138	169				
DOUG FIR-L		121.5	29.5	12	17	23				
PONDEROS		158.4	38.4	13	21	28				
PONDEROS-L		108.6	26.3	12	16	21				
GRAND F		308.8	74.8	3	10	18				
TOTAL		<i>70.2</i>	<i>17.0</i>	<i>168</i>	<i>202</i>	<i>237</i>	<i>208</i>	<i>52</i>	<i>23</i>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		64.8	15.7	67	79	91				
DOUG FIR-L		114.4	27.7	10	14	18				
PONDEROS		154.0	37.3	7	11	15				
PONDEROS-L		88.8	21.5	17	21	26				
GRAND F		297.5	72.1	2	6	10				
TOTAL		<i>44.5</i>	<i>10.8</i>	<i>117</i>	<i>131</i>	<i>145</i>	<i>84</i>	<i>21</i>	<i>9</i>	

TC TSTATS				STATISTICS			PAGE	2		
				PROJECT	WILDPLUM		DATE	7/19/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
019	016	22	WILDPLUM	0001	64.00	18	118	S	W	
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		65.9	16.0	5,350	6,366	7,382				
DOUG FIR-L		117.1	28.4	899	1,256	1,612				
PONDEROS		153.7	37.2	393	626	859				
PONDEROS-L		96.6	23.4	1,004	1,311	1,617				
GRAND F		291.9	70.7	127	434	741				
TOTAL		50.7	12.3	8,764	9,992	11,221	109	27	12	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		58.0	14.1	1,414	1,645	1,876				
DOUG FIR-L		116.0	28.1	247	344	440				
PONDEROS		153.7	37.2	92	146	200				
PONDEROS-L		89.8	21.8	341	436	531				
GRAND F		314.3	76.2	27	114	201				
TOTAL		43.6	10.6	2,401	2,685	2,969	80	20	9	

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				WILDPLUM				DATE	7/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
019	016	27	WILDPLUM	0002	119.00	34	146	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		34	146	4.3						
CRUISE		18	27	1.5	3,745		.7			
DBH COUNT		13	57	4.4	15,883		.4			
REFOREST COUNT										
BLANKS		3								
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	85	115.7	10.5	58	21.6	70.0	5,865	5,612	1,475	1,476
PONDEROS	33	29.2	12.8	56	7.3	26.2	1,766	1,725	478	479
PONDEROS-L	26	16.1	14.7	74	4.9	18.9	1,521	1,389	397	397
GRAND F	2	3.9	9.6	49	0.6	2.0	135	113	35	35
TOTAL	<i>146</i>	<i>164.9</i>	<i>11.4</i>	<i>59</i>	<i>34.7</i>	<i>117.1</i>	<i>9,288</i>	<i>8,839</i>	<i>2,385</i>	<i>2,387</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		81.4	24.5	62	82	102				
PONDEROS		57.1	21.5	55	70	85				
PONDEROS-L		34.9	17.4	84	102	120				
GRAND F		47.1	44.1	17	30	43				
TOTAL		<i>67.9</i>	<i>13.3</i>	<i>68</i>	<i>78</i>	<i>89</i>	<i>191</i>	<i>48</i>	<i>21</i>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		91.6	27.6	18	24	31				
PONDEROS		49.5	18.7	15	19	23				
PONDEROS-L		26.0	12.9	26	30	34				
GRAND F		15.3	14.3	8	9	10				
TOTAL		<i>72.9</i>	<i>14.3</i>	<i>19</i>	<i>23</i>	<i>26</i>	<i>221</i>	<i>55</i>	<i>25</i>	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		159.8	27.4	84	116	147				
PONDEROS		165.8	28.4	21	29	37				
PONDEROS-L		193.2	33.1	11	16	21				
GRAND F		409.9	70.2	1	4	7				
TOTAL		<i>113.9</i>	<i>19.5</i>	<i>133</i>	<i>165</i>	<i>197</i>	<i>518</i>	<i>129</i>	<i>58</i>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		108.1	18.5	57	70	83				
PONDEROS		149.5	25.6	20	26	33				
PONDEROS-L		137.5	23.6	14	19	23				
GRAND F		406.0	69.6	1	2	3				
TOTAL		<i>69.0</i>	<i>11.8</i>	<i>103</i>	<i>117</i>	<i>131</i>	<i>190</i>	<i>48</i>	<i>21</i>	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		97.9	16.8	4,670	5,612	6,554				
PONDEROS		148.2	25.4	1,287	1,725	2,163				
PONDEROS-L		145.6	25.0	1,043	1,389	1,736				
GRAND F		415.3	71.2	33	113	194				
TOTAL		<i>64.3</i>	<i>11.0</i>	<i>7,865</i>	<i>8,839</i>	<i>9,813</i>	<i>165</i>	<i>41</i>	<i>18</i>	

TC TSTATS				STATISTICS				PAGE	2	
PROJECT				WILDPLUM				DATE	7/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
019	016	27	WILDPLUM	0002	119.00	34	146	S	W	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		91.7	15.7	1,244	1,476	1,708				
PONDEROS		152.2	26.1	354	479	603				
PONDEROS-L		140.7	24.1	301	397	493				
GRAND F		406.2	69.6	11	35	59				
TOTAL		<i>62.4</i>	<i>10.7</i>	<i>2,132</i>	<i>2,387</i>	<i>2,642</i>	<i>155</i>	<i>39</i>	<i>17</i>	

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				WILDPLUM				DATE	7/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
019	016	27	WILDPLUM	0003	82.00	16	80	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	16	80	5.0							
CRUISE	10	14	1.4		8,579		.2			
DBH COUNT										
REFOREST										
COUNT	5	22	4.4							
BLANKS	1									
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	7	81.7	11.8	48	18.2	62.5	4,088	4,088	1,191	1,193
PONDEROS	4	16.1	11.3	47	3.3	11.3	678	678	169	169
PONDEROS-L	3	6.8	24.0	75	4.3	21.3	1,995	1,857	528	527
TOTAL	14	104.6	12.9	50	26.4	95.0	6,761	6,622	1,888	1,889
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	69.5	28.3		50	70	90				
PONDEROS	54.5	31.2		38	55	72				
PONDEROS-L	18.2	12.6		242	277	311				
TOTAL	90.4	25.0		82	110	138	351	88	39	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	75.1	30.5		15	21	28				
PONDEROS	60.5	34.6		9	14	19				
PONDEROS-L	4.6	3.2		76	78	81				
TOTAL	89.1	24.7		24	31	39	341	85	38	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	52.8	13.6		71	82	93				
PONDEROS	114.9	29.6		11	16	21				
PONDEROS-L	94.0	24.2		5	7	8				
TOTAL				105	105	105				
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	52.1	13.4		54	63	71				
PONDEROS	111.8	28.9		8	11	14				
PONDEROS-L	93.9	24.2		16	21	26				
TOTAL				95	95	95				
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	52.8	13.6		3,531	4,088	4,644				
PONDEROS	110.6	28.5		485	678	872				
PONDEROS-L	94.0	24.3		1,406	1,857	2,307				
TOTAL				6,622	6,622	6,622				
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	52.4	13.5		1,032	1,193	1,354				
PONDEROS	115.0	29.7		119	169	219				
PONDEROS-L	93.9	24.2		399	527	654				
TOTAL				1,889	1,889	1,889				

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT		WILDPLUM		DATE	7/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
019	016	27	WILDPLUM	0003	82.00	16	80	S	W	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				WILDPLUM				DATE	7/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
019	016	27	WILDPLUM	0004	243.00	94	291	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	94	291	3.1							
CRUISE	46	69	1.5	43,403			.2			
DBH COUNT										
REFOREST										
COUNT	34	75	2.2							
BLANKS	14									
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	50	141.8	9.9	55	24.2	76.3	5,312	5,185	1,465	1,467
PONDEROS	8	16.6	9.2	48	2.5	7.6	488	481	106	106
PONDEROS-L	11	20.3	12.2	45	4.7	16.4	1,074	1,028	279	279
TOTAL	69	178.6	10.1	53	31.5	100.3	6,875	6,694	1,851	1,852
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	62.9	8.9		48	53	58				
PONDEROS	83.3	31.4		25	36	48				
PONDEROS-L	71.8	22.7		56	72	88				
TOTAL	68.6	8.2		50	54	59	188	47	21	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	65.0	9.2		14	16	17				
PONDEROS	101.1	38.1		5	8	12				
PONDEROS-L	70.7	22.3		16	21	25				
TOTAL	71.3	8.6		14	16	17	203	51	23	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	73.4	7.6		131	142	152				
PONDEROS	233.8	24.1		13	17	21				
PONDEROS-L	133.1	13.7		18	20	23				
TOTAL	47.1	4.9		170	179	187	89	22	10	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	67.9	7.0		71	76	82				
PONDEROS	230.0	23.7		6	8	9				
PONDEROS-L	127.5	13.1		14	16	19				
TOTAL	39.4	4.1		96	100	104	62	16	7	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	68.4	7.0		4,820	5,185	5,551				
PONDEROS	229.1	23.6		367	481	594				
PONDEROS-L	130.7	13.5		889	1,028	1,166				
TOTAL	41.5	4.3		6,407	6,694	6,980	69	17	8	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	68.5	7.1		1,363	1,467	1,570				
PONDEROS	232.7	24.0		81	106	131				
PONDEROS-L	129.5	13.3		242	279	316				
TOTAL	43.5	4.5		1,769	1,852	1,935	75	19	8	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT		WILDPLUM		DATE	7/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
019	016	27	WILDPLUM	0004	243.00	94	291	S	W	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				WILDPLUM				DATE	7/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
019	016	27	WILDPLUM	0005	20.00	33	141	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		33	141	4.3						
CRUISE		18	27	1.5	629		4.3			
DBH COUNT		12	53	4.4	2,671		2.0			
REFOREST COUNT										
BLANKS		3								
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	90	120.4	10.7	58	22.8	74.6	6,243	5,990	1,581	1,582
PONDEROS	49	40.7	13.0	58	10.4	37.6	2,623	2,520	704	704
GRAND F	2	3.9	9.6	49	0.6	2.0	135	113	35	35
TOTAL	<i>141</i>	<i>165.0</i>	<i>11.3</i>	<i>57</i>	<i>34.0</i>	<i>114.2</i>	<i>9,002</i>	<i>8,624</i>	<i>2,320</i>	<i>2,322</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		81.4	24.5	62	82	102				
PONDEROS		48.9	14.1	71	82	94				
GRAND F		47.1	44.1	17	30	43				
TOTAL		<i>67.9</i>	<i>13.3</i>	<i>68</i>	<i>78</i>	<i>89</i>	<i>191</i>	<i>48</i>	<i>21</i>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		91.6	27.6	18	24	31				
PONDEROS		43.5	12.5	20	23	26				
GRAND F		15.3	14.3	8	9	10				
TOTAL		<i>72.9</i>	<i>14.3</i>	<i>19</i>	<i>23</i>	<i>26</i>	<i>221</i>	<i>55</i>	<i>25</i>	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		155.9	27.1	90	124	158				
PONDEROS		129.4	22.5	33	42	51				
GRAND F		403.6	70.2	1	4	7				
TOTAL		<i>113.1</i>	<i>19.7</i>	<i>137</i>	<i>170</i>	<i>204</i>	<i>511</i>	<i>128</i>	<i>57</i>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		106.7	18.6	63	77	91				
PONDEROS		115.4	20.1	31	39	47				
GRAND F		399.8	69.5	1	2	3				
TOTAL		<i>68.9</i>	<i>12.0</i>	<i>104</i>	<i>118</i>	<i>132</i>	<i>190</i>	<i>47</i>	<i>21</i>	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		97.5	17.0	5,125	6,172	7,219				
PONDEROS		115.5	20.1	2,075	2,596	3,118				
GRAND F		409.0	71.1	34	117	199				
TOTAL		<i>65.5</i>	<i>11.4</i>	<i>7,872</i>	<i>8,885</i>	<i>9,898</i>	<i>172</i>	<i>43</i>	<i>19</i>	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		91.5	15.9	1,371	1,630	1,890				
PONDEROS		117.6	20.5	577	726	874				
GRAND F		400.0	69.6	11	36	61				
TOTAL		<i>62.1</i>	<i>10.8</i>	<i>2,134</i>	<i>2,392</i>	<i>2,650</i>	<i>154</i>	<i>38</i>	<i>17</i>	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT		WILDPLUM		DATE	7/19/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
019	016	27	WILDPLUM	0005	20.00	33	141	S	W	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	

Species Summary - Trees, Logs, Tons, CCF, MBF

T019 R016 S22 Ty0001	64.0
T019 R016 S27 Ty0002	119.0
T019 R016 S27 Ty0005	20.0

Project WILDPLUM
Acres 528.00

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Species	s T	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
		Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
DOUG FIR		66,174	111,128	21,830	11.59	6.90	0.40	7,660	7,668	2,864	2,790
PONDEROS	L	8,446	15,464	4,470	22.04	12.04	0.64	1,863	1,862	689	651
PONDEROS		10,947	20,297	2,880	10.96	5.91	0.39	1,200	1,200	477	468
DOUG FIR	L	1,114	2,414	627	19.75	9.11	0.48	220	220	80	80
GRAND F		1,191	2,382		10.21	5.11	0.35	122	122	49	43
Totals		87,871	151,685	29,807	12.60	7.30	0.43	11,064	11,071	4,160	4,033

Wood Type	Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
		Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
C		87,871	151,685	29,807	12.60	7.30	0.43	11,064	11,071	4,160	4,033
Totals		87,871	151,685	29,807	12.60	7.30	0.43	11,064	11,071	4,160	4,033

Log Stock Table - MBF

T019 R016 S22 Ty0001
 THRU
 T019 R016 S27 Ty0005

Project: WILDPLUM
Acres 528.00

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Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches												
									2-4	5-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+	
DF		9	18		31		31	1.1		31											
DF		9	19		8		8	.3		4	4										
DF		9	20		27		27	1.0		27											
DF		9	21		39		39	1.4		30	1	3	2	4							
DF		9	24		28		28	1.0		28											
DF		Totals			2,864	2.6	2,790	69.2		1046	1017	382	21	274	24	25					
DF	L	2	20		20		20	25.2					15	6							
DF	L	3	26		10		10	12.3			4	2	4								
DF	L	4	39		5		5	5.8		5											
DF	L	4	40		46		46	56.7		17	16	13									
DF		Totals			80		80	2.0		21	20	15	4	15	6						
GF		3	20		7		7	16.4			7										
GF		3	40		11	20.9	9	20.3				4	5								
GF		4	26		18		18	40.4		13	5										
GF		4	28		9	33.3	6	14.3		6											
GF		9	9		2		2	5.5		2											
GF		9	11		1		1	3.2		1	1										
GF		Totals			49	11.1	43	1.1		22	13	4	5								
Total		All Species			4,160	3.0	4,033	100.0		1412	1230	597	140	399	191	56			7		

EXHIBIT G
Wild Plum Sorts

Roads or Structures	Type	Stations	Price
E3000	Abandonment	37+90 to 68+55	
E3000R	New Construction	0+00 to 33+50	
E3030	Reconstruction	0+00 to 16+90	
E3200	Pre-haul Maintenance	50+70 to 130+50	
E3200	Abandonment	26+75 to 50+70	
E3200R	New Construction	0+00 to 13+80	
E3200R	Pre-haul Maintenance	13+80 to 16+75	
E3200R	New Construction	16+75 to 30+20	
E3201	Reconstruction	0+00 to 5+70	
E3201	New Construction	5+70 to 15+75	
E3203	Reconstruction	0+00 to 12+30	
E3206	Reconstruction	0+00 to 10+65	
E3210	New Construction	0+00 to 16+95	
E3210	Reconstruction	16+95 to 44+80	
E3210	New Construction	44+80 to 52+70	

EXHIBIT G
Wild Plum Sorts

E3210	Reconstruction	52+70 to 56+50	
E3215	Reconstruction	0+00 to 23+65	
E3215A	Reconstruction	0+00 to 5+50	
E3240	Pre-haul Maintenance	0+00 to 26+30	
E3240	New Construction	26+30 to 37+50	
E3250	Pre-haul Maintenance	0+00 to 24+75	
E3251	New Construction	0+00 to 13+55	
M1700	Pre-haul Maintenance	112+30 to 128+90	
M1720	Pre-haul Maintenance	0+00 to 13+90	
Total			