WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

REQUEST FOR QUOTE
RFQ NO. 30-092787

PROJECT TITLE: FROSTY FH FIT

QUOTE DUE DATE: May 17, 2016 2:30 PM

EXPECTED TIME PERIOD FOR CONTRACT: June 3, 2016 to July 31, 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 FROSTY FH FIT 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 2440 MBF of timber in 9 unit(s) for the Department of Natural Resources in the Northeast 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 June 3, 2016 to July 31, 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) 01, 02, 03, 04 and 05.

- And $13.00 per Ton for sort 06 harvested and delivered.

- Utility volume for mbf sorts will be determined on an adjusted gross scale basis and paid for at 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:

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

  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'*)

  Mileage Rate = (($0.16 x C miles) + ($0.11 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;

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

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 x 10) + ($0.11 x 100)) x (1.000) = $12.60
Contractor's hauling bid factor = 1.100

Hauling Services Payment Rate per Ton
= (Base Rate + Mileage Rate) x (Contractor's hauling bid factor)
= ($2.35 + $12.60) x 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	Matt Lougy
Address	225 S. Silke Road
City, State, Zip Code	Colville, WA 991149369
Phone Number	(509)684-7474
Fax Number	(509)684-7484
E-Mail Address	matt.lougy@gmail.com

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 Harvester Meeting

DNR recommends that Candidate Harvesters who intend to submit a Quote attend the Harvester meeting. This meeting will be held on April 26, 2016 at 11:00 AM, in Northeast Region Office conference room. Attendance is not mandatory.

DNR will send a copy of the questions and answers from the Harvester meeting to each Candidate Harvester who received a copy of the RFQ. Written questions may be submitted in advance of the meeting to the RFQ Coordinator. The DNR shall be bound only to written answers to questions. Oral responses given at the Harvester meeting are 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 2:30 PM, local time, on May 17, 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 May 17, 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 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 <u>SPECIAL REQUIREMENTS</u>

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
Exhibit F	Road Proposal Cost Form

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.

FROSTY FH FIT Timber sale

Contractor Pool Eligibility Process	Advertise RFSOQ	Ongoing - Available on-line http://www.dnr.wa.gov/BusinessPermits/Topics/ForestryContracts/Pages/psl_forestry_service_contracts.aspx
	Issue RFSOQ Packets	
	Deadline for completed SOQ's	Open ended. SOQ evaluations to occur on the 15th day of every month
	Announcement of Contractor Eligibility	20th day of every month
	Eligible Contractor selection appeal period begins	
	Eligible Contractor selection appeal period ends	25th day of every month

Log Auction and Harvester Bid Process	**BNR Approval**	**4/4/2016**
	Issue Harvester Request For Quotes (RFQ) and Bid Forms	**4/22/2016**
	Conduct Harvester Pre-bid Meeting	**4/26/2016 (NE HQ conference room 11 am)**
	Log Sort Auction Date	**5/24/2016**
	Announce Log Destination Information	**5/24/2016**
	Harvester Bid Opening & Notification	**5/17/2016**
	Harvester selection appeal period ends	**5/23/2016**
	Confirmation of Log Sort Auction, Harvester Services Contract Signing, Log Purchaser Contract Signing	**6/3/2016**

Project Operations	**Operations Begin**	**6/17/2016**
	Log Deliveries Begin	**6/17/2016**
	Log Deliveries End	**12/31/2016**
	Operations End	**7/31/2017**

Revision Date 6/1/2012

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

HARVESTING SERVICES CONTRACT

AGREEMENT NO. 30-092787

SALE NAME: FROSTY FH FIT

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 in Units 1, 2, 3, 4, 5, 6, 7, 8, and 9 bounded by blue Special Management Unit Boundary tags located on approximately 1034 acres on part(s) of Section 16 in Township 35 North, Range 31 East, Sections 23, 26, 27, 34, and 36 all in Township 36 North, Range 30 East, Section 30 in Township 36 North, Range 31 East W.M. of Okanogan 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
93553	1	DF/WL 7" - 10"+ dib	ES				
93554	2	DF/WL 11"+ dib	ES				
93555	3	DF/WL 5" - 6"+ dib and no-chuck DF/WL 7" - 10"+dib	ES				
93556	4	PP 7" - 10""+ dib	ES				
93557	5	PP 11"+ dib	ES				
93558	6	DF/WL/PP 2"+ dib utility and no-chuck DF/WL 11"+dib	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.
e. Surface characteristics for a high quality (HQ) "A" log sort will have sound tight knots and not to exceed 1 ½ inch in diameter, numbering not more than an average of one per foot of log length. May include logs with not more than two larger knots. Knots ½ inch and smaller in diameter shall not be a determining factor. Logs will have a growth ring count of 6 or more rings per inch in the outer third top end of the log.

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	Frosty FH FIT Schedule A
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**
01,02,03,04,05,06	20

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 June 3, 2016 and the expiration date of July 31, 2017. All forest product deliveries are to be completed prior to December 30, 2016.

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 contact. 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-050.1 Contract Term Extension

An extension of operating authority time may be granted at the discretion of the State upon written request thirty (30) days prior to the termination date and upon the terms and conditions as specified by the State. Contract extensions may not exceed thirty (30) days unless otherwise agreed to by State and Contractor. Extension requests within the last thirty (30) days of the contract may be considered if the extension would be in the best interest of the State. The extension, if granted, will be contingent upon the payment of an extension fee to the State, by the Contractor, in the amount of $100.00 per day of extension.

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 Contact 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 Northeast 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; E363130F, E363130E, E363130G, Main Road, Coyote Road, E363023E, E363023G, E363023P, E363023N, E363023M, E363023K, E363023F, E363026J, Caribou Road, E363027E, E363034H, E363034J, E363034F, E353002E, E363036F, E363036E, E363036P, E363036N, E363036G, E363036J, E363036R, E363036T, Coco Mtn Road, Watoka Way, Poglina Way S., Sorona Way E., E353116G, E353116F. 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-350 Permanent Plots

There are permanent plot(s) located within the sale area. The aluminum tags at the base of the trees within the plot(s) shall not be removed or destroyed.

G-370.1 Blocking Roads

Contractor shall not block the Aeneas Valley Road, E363034G, E363130F, E353002E, Coco Mtn Road, Watoka Way, Poglina Way, Sorona Way, Main Road, Coyote Road, Caribou Road,, unless authority is granted in writing by the Contract Administrator.

G-380.1 Road Easement and Road Use Permit Requirements

The State grants Contractor the right to operate under the following rights of way:

ESE 55-000628 (T36 R30 S.1-2)
ESE 55-001947 - Sun Ranch
ESE 55-002184 Grillo-Heatherly
RUP 55-092073 Sun Ranch
RUP 55-093705 McManus
RUP 55-093706 Sosnove
RAP OK County Pre-approval

G-390.1 Road Approach Permit Requirements

Contractor agrees to comply with the attached terms and conditions of the road approach permit entered into between the State and Okanogan County Department of Public Works.

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
01,02,03,04,05	Ton	$0.00	N/A
06	Ton	$13.00	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)

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 = (($0.16 x C miles) + ($0.11 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.

[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:

Roads or Structures	Number of Stations	Dollars per Station
Caribou Rd - Pre-haul maintenance	16.2	
Coyote Rd - Pre-haul maintenance	10.34	
Main Rd - Pre-haul maintenance	81.4	
Poglina Way - Pre-haul maintenance	12.8	
Sorona Way - Pre-haul maintenance	16.6	
Sorona Way - Construction	3.4	
Watoka Way - Pre-haul maintenance	47.3	
E353002E - Pre-haul maintenance	73.9	
E353002E - Reconstruction	2.7	
E353002E - Pre-haul maintenance	4.4	
E353116F - Construction	1	
E353116F - Pre-haul maintenance	2.7	
E353116G - Construction	50.3	
E363023E - Pre-haul maintenance	31.56	
E363023E - Reconstruction	60.1	
E363023E - Pre-haul maintenance	26	
E363023F - Pre-haul maintenance	26.9	
E363023G - Pre-haul maintenance	36	
E363023K - Pre-haul maintenance	13	
E363023M - Reconstruction	17	
E363023N - Reconstruction	8.6	
E363023P - Construction	8	
E363026J - Reconstruction	4.3	
E363027E - Pre-haul maintenance	36.6	
E363034F - Pre-haul maintenance	14.5	
E363034H - Construction	1	
E363034J - Construction	1	
E363036E - Pre-haul maintenance	20	
E363036E - Construction	6.6	
E363036E - Pre-haul maintenance	9.9	
E363036F - Pre-haul maintenance	42.9	

E363036F - Construction	2.6	
E363036G - Pre-haul maintenance	33.4	
E363036G - Construction	8.8	
E363036J - Pre-haul maintenance	3.7	
E363036J - Reconstruction	4.3	
E363036J - Pre-haul maintenance	8.7	
E363036N - Pre-haul maintenance	28.5	
E363036P - Construction	11	
E363036R - Pre-haul maintenance	2	
E363036R - Reconstruction	11.3	
E363036T - Construction	1.5	
E363130E - Pre-haul maintenance	7.8	
E363130F - Pre-haul maintenance	48.1	
E363130G - Pre-haul maintenance	9.7	
E363023E - Decommission	60.1	
E363023J - Abandon	8	
E363023L - Abandon	10.9	
E363034H - Decommission	1	
E363034J - Decommission	1	
E363036E - Abandon	4	
E363036G - Decommission	9.3	
E363036J - Decommission	13	
E363036K - Abandon	18.3	
E363036M - Abandon	16.8	
E363036R - Decommission	13.3	
Old 36G - Abandon	8.4	

Additional Payments or Reductions	Number of Items	Cost Per Item	Total Cost
18" culvert (purchased and installed) as directed by the contract administrator	102 feet	$13.00/ft.	$1,326.00
Additional Rock (delivered and spread) as directed by the contract administrator	500 cy	$10.00/cy	$5,000.00

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 $100,000.00. 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-001 Operations Outside the Sale Boundaries

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

H-010.1 Cutting and Yarding Schedule

Falling and Yarding will not be permitted from March 15 to June 1 In addition, falling and yarding will not be permitted in units 3 and 4 from February 15 to August 15 due to the proximity of Golden Eagle nest. Units 1, 2, 5, 6, 7, 8, and 9 falling and yarding will not be permitted from March 15 to June 1 unless authorized in writing by the Contract Administrator.

H-011.1 Certification of Fallers and Log Manufacturers

All persons engaged in the felling of timber and manufacturing of logs or poles must receive certification in writing from the Contract Administrator. Certification may be revoked when the Contract Administrator determines that log utilization or manufacturing has been performed in a manner that does not optimize value or otherwise causes damage to the state.

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 20 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-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 16 feet in width, including rub trees.

b. Skid trails shall not cover more than 20 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 10 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 forest products 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-100 Tree Spacing

Trees must be left to provide for a spacing of not more than 400.00 feet between trees.

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-130.1 Hauling Schedule

The hauling of forest products will not be permitted DATA MISSING from March 15 to June 1 unless authorized in writing by the Contract Administrator .

H-140.1 Special Harvest Requirements

Contractor shall accomplish the following during the harvest operations:

1) Road salts shall not be applied to roads for dust abatement or removing of ice from road surfaces.
2) All slash shall be piled at landings and all landings shall be separated from the road prism at completion of harvest.
3) Appropriate warning signs shall be posted at locations designated by the Contract Administrator.
4) If snow plowing occurs, snow berms shall be removed at locations designated by the Contract Administrator to allow surface water to drain from roads.
5) Contractor shall protect regeneration in all units where protection of trees does not interfere with prescription implementation.

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:

1)Erosion Control – Contractor shall deliver 500 pounds of grass seed to Highlands Fire Camp. Seed provided shall meet the following specifications: 40% Mountain Brome, 30% Sherman Big Bluegrass, and 30% Idaho Fescue. Seed shall be certified weed free, premixed and delivered in 50 pound bags labeled with timber sale name on each bag.

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 (inches)
PP	10	12	6
All other species	10	12	2

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.

H-260 Fall Leaners

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

Section C: Construction and Maintenance

C-040.1 Road Plan

Road construction and associated work provisions of the Road Plan for this project, dated August 5, 2015 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 E363130F, E363130E, E363130G, Main Road, Coyote Road, E363023E, E363023G, E363023P, E363023N,

E363023M, E363023K, E363023F, E363026J, Caribou Road, E363027E, E363034H, E363034J, E363034F, E353002E, E363036F, E363036E, E363036P, E363036N, E363036G, E363036J, E363036R, E363036T, Watoka Way, Poglina Way S., Sorona Way E., E353116G, E353116. road(s). All work shall be completed to the specifications detailed in the Road Plan.

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-090 Landing Location

Landings shall be built 10 off the road prism of all road(s).

C-130.1 Dust Abatement

Contractor shall abate dust on the E363130F, E363130E, E363130G, Main Road, Coyote Road, E363023E, E363023G, E363023P, E363023N, E363023M, E363023K, E363023F, E363026J, Caribou Road, E363027E, E363034H, E363034J, E363034F, E353002E, E363036F, E363036E, E363036P, E363036N, E363036G, E363036J, E363036R, E363036T, Coco Mtn road, Watoka Way, Poglina Way S., Sorona Way E., E353116G, E353116F road(s) used for hauling from June 15 to November 30.

C-140.1 Water Bars

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

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

An Emergency Response Plan (ERP) shall be provided to the Contract Administrator containing but not limited to, 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-020.1 Extreme Hazard Abatement

Contractor shall provide a written Extreme Hazard Abatement plan that meets the requirements of WAC 332-24 prior to the beginning of logging operations. The plan must be acceptable to the Contract Administrator. The plan will identify how Contractor will accomplish abatement. Contractor shall also provide, and keep current, a written timetable for completion of all specified work in the plan. The Contract Administrator's acceptance and approval of Contractor's hazard abatement plan shall not be construed as any statement or warranty that the hazard abatement plan is adequate for Contractor's purposes or complies with applicable laws.

S-030 Landing Debris Clean Up

Landing debris shall be disposed of 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 any stream 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-120 Stream Protection

No timber shall be felled into, across, or yarded through any stream.

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.

S-140.1 Fence Repair

Contractor shall immediately repair all fence damage resulting from operations on this sale to an equal or better condition than existed at the time of sale.

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 $1,000.00 per tree for all damaged trees in units 1-9.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

_____	_____
Purchaser	Loren D. Torgerson Northeast Region Manager
Date: _____	Date: _____
Address:	

CORPORATE ACKNOWLEDGEMENT

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
Frosty FH FIT Schedule A

General Harvest Instructions

1. All persons engaged in the felling of timber and manufacturing of logs or poles must receive certification in writing from the Contract Administrator. Certification may be revoked when the Contract Administrator determines that take tree selection, log utilization, or manufacturing has been performed in a manner that does not achieve silvicultural objectives, optimize value, or otherwise causes damage to the state.

2. Unit boundaries are marked with pink flagging, and blue "Special Management Unit Boundary" tags and orange flashers. Property lines are marked with pink and yellow flagging, with blue "Special Management Unit Boundary" and orange flashers.

3. Harvest all green timber that is not described as being a leave tree, and is capable of at least yielding a log with a 5.6 inch small end DIB in PP and a 4.6 inch small end DIB in all other species and is at least 12 feet long.

4. The irregular availability of quality leave trees and clumped nature of merchantable trees may result in spacing distances greater than 100 feet or less than those described for individual unit target spacing indicated in #5 below. Harvested openings shall not create voids of greater than 400 feet between leave trees.

5. Adhere to the following leave tree requirements

Prescriptions for All Units

This management will be an uneven-aged prescriptive harvest targeting suppressed and diseased trees in the mid-story and overstory cohorts for removal. Leave trees identified above will be derived from the 100+ year old overstory cohort when available.

- Leave trees for the overstory cohort will be selected preferring healthy trees in the following species preference PP, WL then DF.
- The target average leave tree spacing for this unit will be 46 feet by 46 feet.
- Leave all hardwood species and any snags that may be left safely standing.
- An emphasis will be placed on removing trees that have high defect, poor form, and removing trees that have disease/insect damage.

Additional Requirement for Unit 5:

- Extreme hazard abatement of 50 feet will be implemented along Aeneas Valley Road.

Additional Requirements for Unit 8:

This unit had fire impact from the Northstar fire in September of 2015, severity ranged from low (under burn) to moderate (bole scorching). As such:
- Only trees with live crowns will be selected for harvest.
- Emphasis will be placed on reducing the amount of charred wood being delivered, fire scars burned through the bark and into the wood fiber noticed during manufacturing will be bucked from the log when necessary.

Additional Requirements for Unit 9:

- Extreme hazard abatement of 50 feet will be implemented along Coco Mountain Road.

This unit had fire impact from the Northstar fire in September of 2015, severity ranged from low (under burn) to moderate (bole scorching). As such:
- Only trees with live crowns will be selected for harvest.
- Emphasis will be placed on reducing the amount of charred wood being delivered, fire scars burned through the bark and into the wood fiber noticed during manufacturing will be bucked from the log when necessary.

The above prescription details meets or exceeds the requirements of the following: State Watershed Systems Policy, and the Retention and Perpetuation of Legacy Trees Eastern Washington Procedures.

Schedule M
Additional Road Maintenance Payment Rates

ADDITIONAL ROAD MAINTENANCE PAYMENT RATES
(Hourly Rate Including Operator)

Motor Grader

To 140 HP (Cat 120H, 120M) $128.00
To 175 HP (John Deere 670D, 670G, 672D, G & Cat 12M & Volvo G930 & Komatsu GD-655-3) $139.00
To 200 HP (John Deere 772 & Cat 140M & Volvo G940 & Komatsu GD675-3) $162.00
Over 200 HP (Cat 160M, 14M, 16H & Komatsu GD-825A-2) $216.00

Ripper/Scarifier Use
To 140 HP $4.00
To 175 HP $6.00
Over 175 HP $10.00

Front End Loaders & Loader/Backhoe

To 75 HP (Cat 416D, Cat 416E & Komatsu WB142-2) $79.00
To 110 HP (Cat 420E & Case 580, 590 & Cat 908H, 914G & John Deere 344J) $91.00
To 160 HP (Cat 450E, Cat 924H, 930H & Hyundai HL 730-9 & John Deere 524K) $111.00
Over 160 HP (John Deere 624K & Case 621E & Cat 938H, 950H, 966K) $136.00
Addition for special attachment use: compactor, clam, extendaboom, etc. add $6.50

Gravel Trucks

Dual Rear Axle $98.00
5-axle Combination End Dump & End Dump Trailer $115.00
5-axle Tractor & Belly Dump Trailer $115.00

Dozers

To 75 HP (Case 650K & Cat D3K XL) $105.00
To 105 HP (Cat D4K, D5K & Case 750K, 850K & John Deere 450J, 550J, 650J & Komatsu D37EX-22) $114.00
To 135 HP (Cat D6K & Case 1150K, John Deere 700J & Komatsu D51EX-22) $139.00
To 185 HP (John Deere 750J & Case 1650, 1850 & Cat D6N & Komatsu D61EX-15) $168.00
To 240 HP (Cat D6T, D7E & John Deere 850J & Komatsu D65EX-15) $201.00
Over 240 HP (Cat D8T & John Deere 950J) $280.00

Ripper Use

To 180 HP add $7.50
To 235 HP add $12.50
Over 235 HP add $20.00

Excavators

To 60 HP (Kubota U45, U55 & John Deere 50D & Hitachi 50U & Cat 307D) $75.00
To 95 HP (Cat 312D, 314D & Doosan 140LCV & Hitachi 120-3, 135US-3 & Link-Belt 135 & Komatsu PC120-6, PC130-8 & John Deere 120D, 135D) $120.00
To 120 HP (Cat 315D & John Deere 160LC & Doosan 175LCV & Komatsu PC160LC-8 & Link-Belt 160 LX & Volvo EC160C L) $132.00
To 140 HP (Cat 319D L, 320C & Hitachi 160LC-3 & Link-Belt 210LX) $157.00
To 170 HP (Cat 320D & Hitachi 200LC-3, 225LCV & Link-Belt 240 LX & Komatsu PC200-8, PC220LC-8 & John Deere 225D LC & Volvo EC240C) $182.00
To 230 HP (Cat 324D, 324E, 328D, 329D & John Deere 240D, 270D, 290G & Hitachi 240LC-3, 270LC-3 & Link-Belt 290 LX RB & Volvo EC290C & Komatsu PC270LC-8) $252.00
Over 230 HP (Cat 330D, 336D & Volvo EC330C & John Deere 330C, 330D & Komatsu PC300LC-8, C350LC-8 & Link-Belt 330LX, 350 X2 & Hitachi 330LC, 350LC-3) $284.00
Add Excavator Attachment Rate to Excavator $30.00

Self-Propelled Vibratory Compactors

To 80 HP (Bomag BW145DH-40, BW177D-40 & Dynapac CA150D & Sakai 201D & Ing. Rand SD45F TF) $88.00
To 125 HP (Bomag BW177PDBH-40 & Cat CP-433E & Sakai SV400D-ll & Dynapac CA152D) $103.00
Over 125 HP (Bomag BW211PD-40 & Dynapac CA262D & Ing. Rand SD105DA TF & Sakai SV505D-1) $115.00

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

Track Mounted Rock Drills (with one operator)

To 3.5” Diameter Hole $200.00
Over 3.5” Diameter Hole $235.00

Heavy Equipment Hauling

Truck and Tilt Trailer $110.00
Tractor and Lowbed Trailer, to 55,000 # payload $123.00
Tractor and Lowbed Trailer, over 55,000 # payload $145.00

Water Trucks

To 3,000 gallons $90.00
To 4,000 gallons $100.00
Over 4,000 gallons $105.00

Power Saws and Pumps $10.00

Labor Wages (Woods Rate before loading) $25.00

INSTRUCTIONS
HP taken at the Flywheel unless stated otherwise.
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.
Rates include 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 on equipment not included in this schedule can be determined upon request.
Purchased materials, such as additional rock or additional culverts, not specifically tied to Clause P-027 and requested by the Contract Administrator will be reimbursed.

Rev. 8/1/2015

Page 1

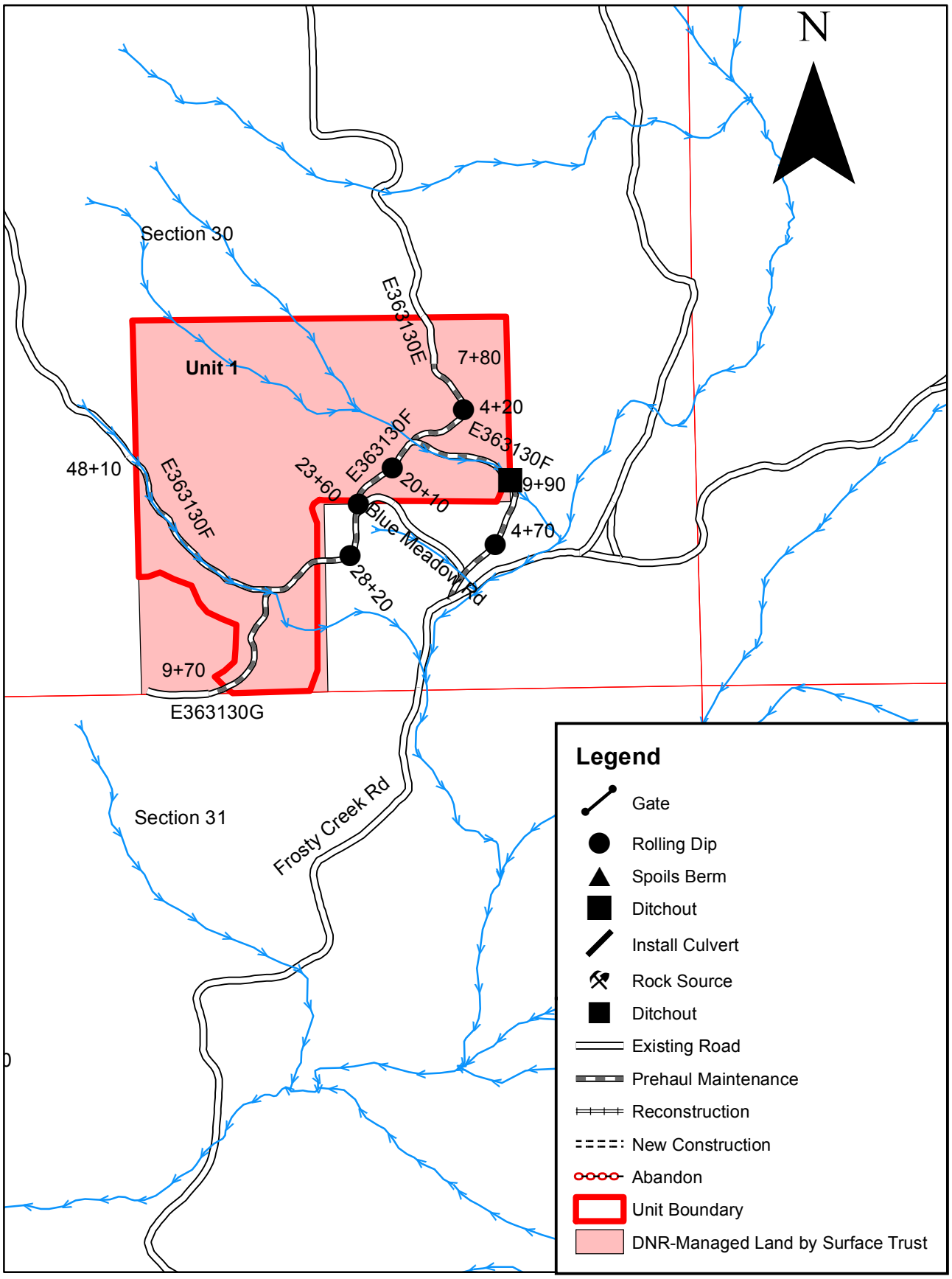
Agreement No.: 30-092787

Washington State Department of Natural Resources
Frosty Road Plan Map

Trust: 03

Region: Northeast
County: Okanogan

Township 36 N Range 31 E W.M.



2,000 1,000 0 2,000 Feet

Scale: 1 inch to 1000 feet

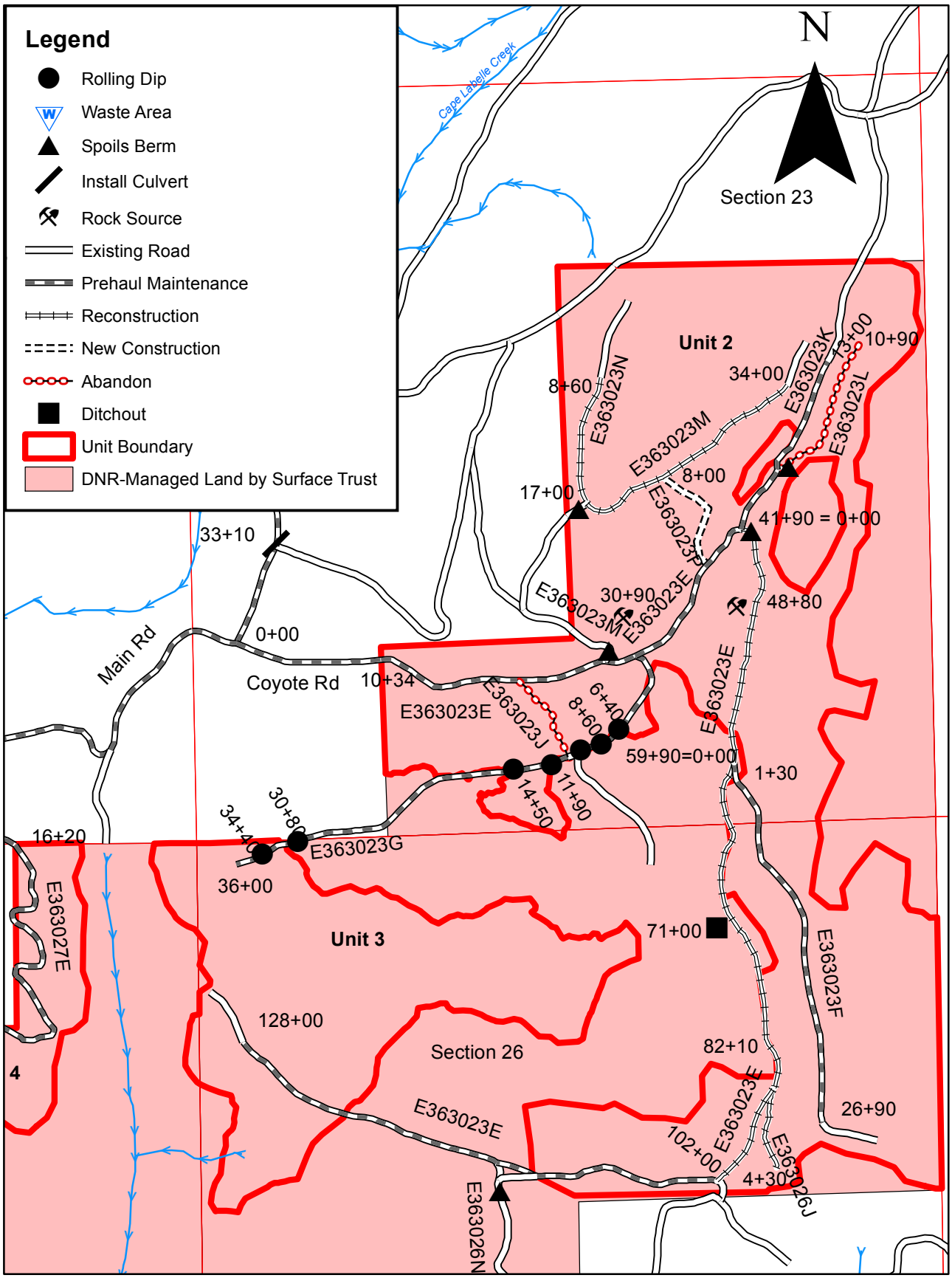
Agreement No.: 30-092787

Washington State Department of Natural Resources
Frosty Road Plan Map

Trust: 03

Region: Northeast
County: Okanogan

Township 36 N Range 30 E W.M.



2,000 1,000 0 2,000 Feet

Scale: 1 inch to 1000 feet

Agreement No.: 30-092787

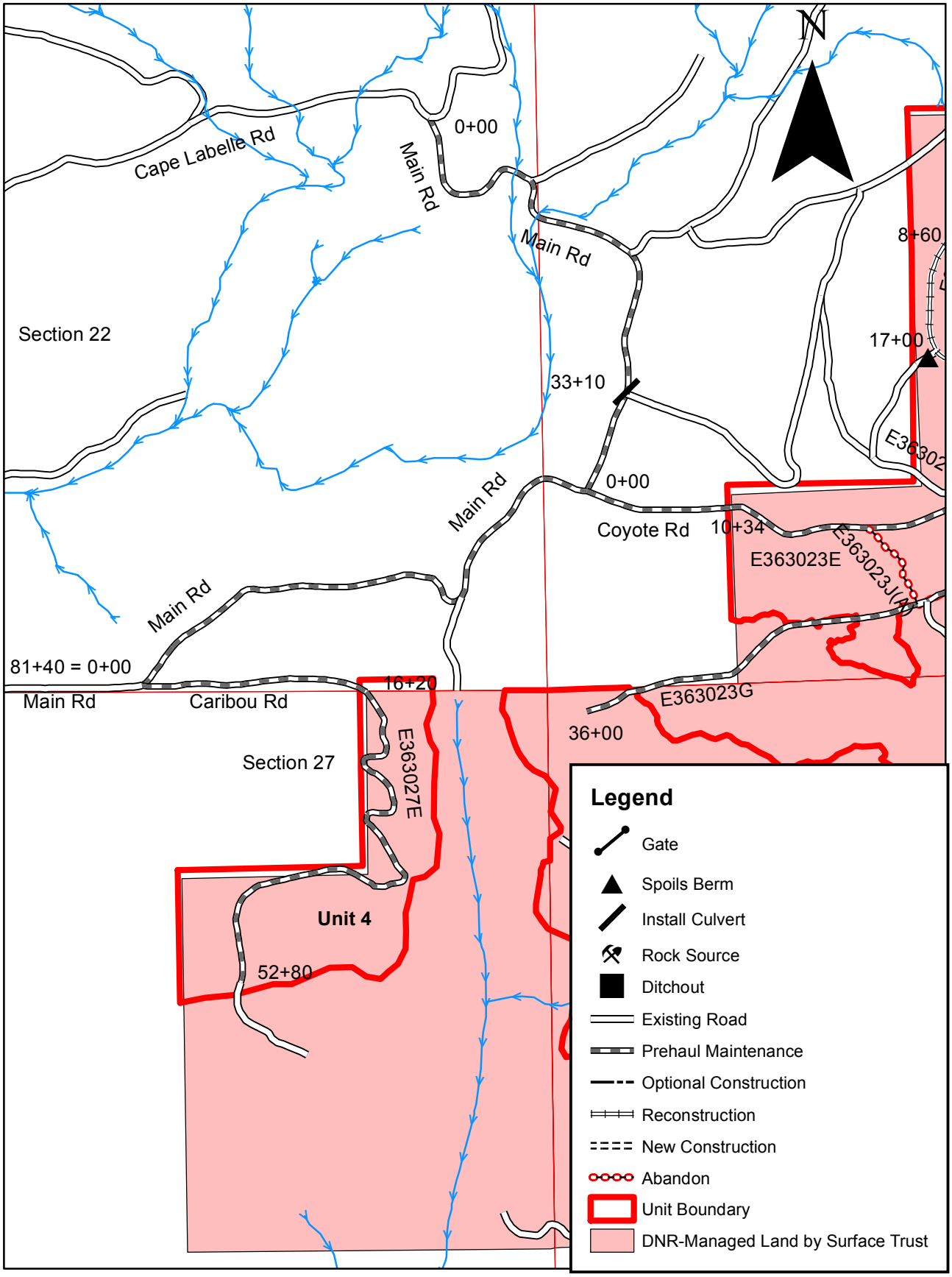
Washington State Department of Natural Resources

Frosty Road Plan Map

Trust: 03

Region: Northeast
County: Okanogan

Township 36 N Range 30 E W.M.



2,000 1,000 0 2,000 Feet

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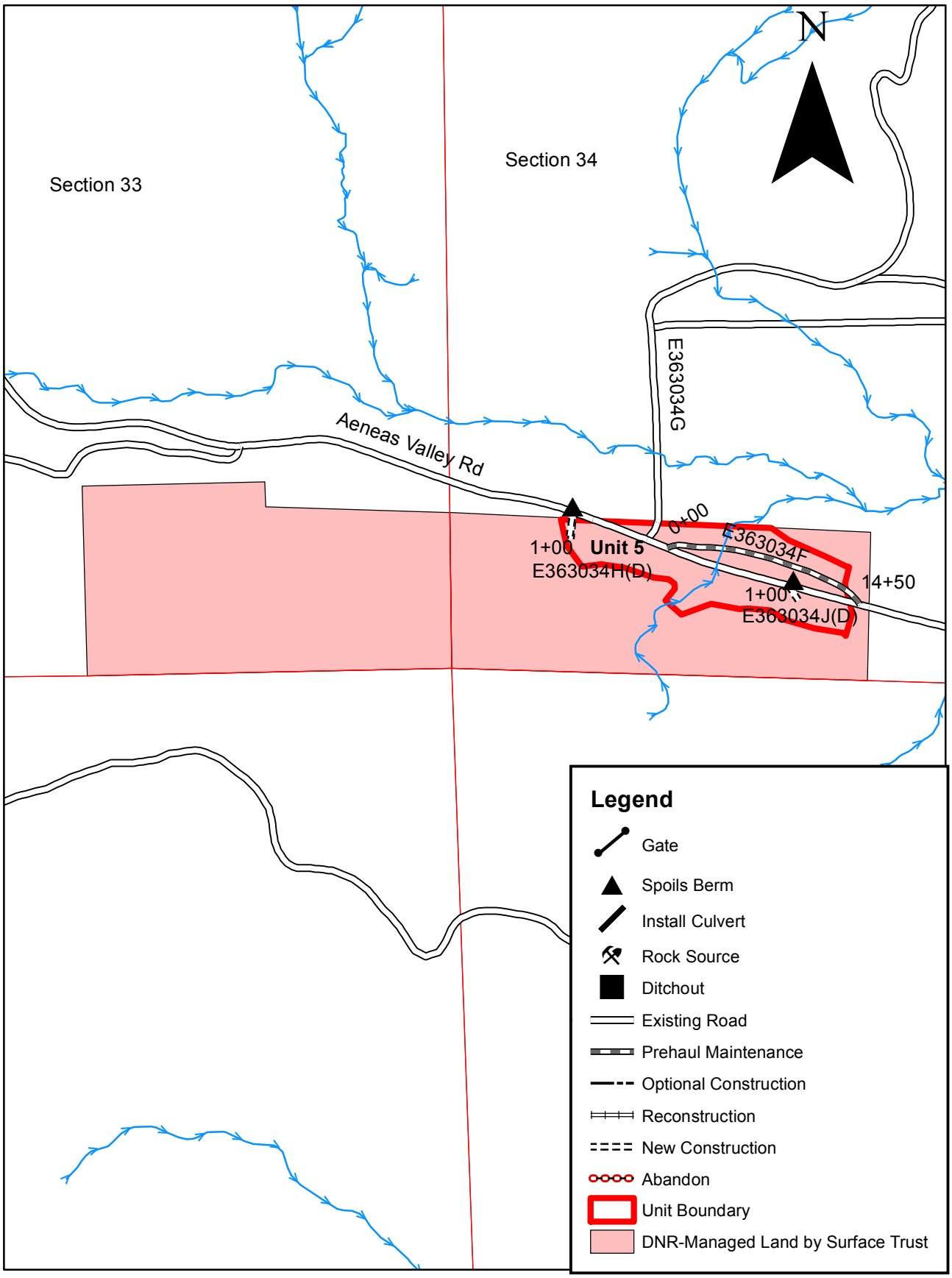
Washington State Department of Natural Resources

Frosty Road Plan Map

Trust: 03

Region: Northeast
County: Okanogan

Township 36 N Range 30 E W.M.



2,000 1,000 0 2,000 Feet

Scale: 1 inch to 1000 feet

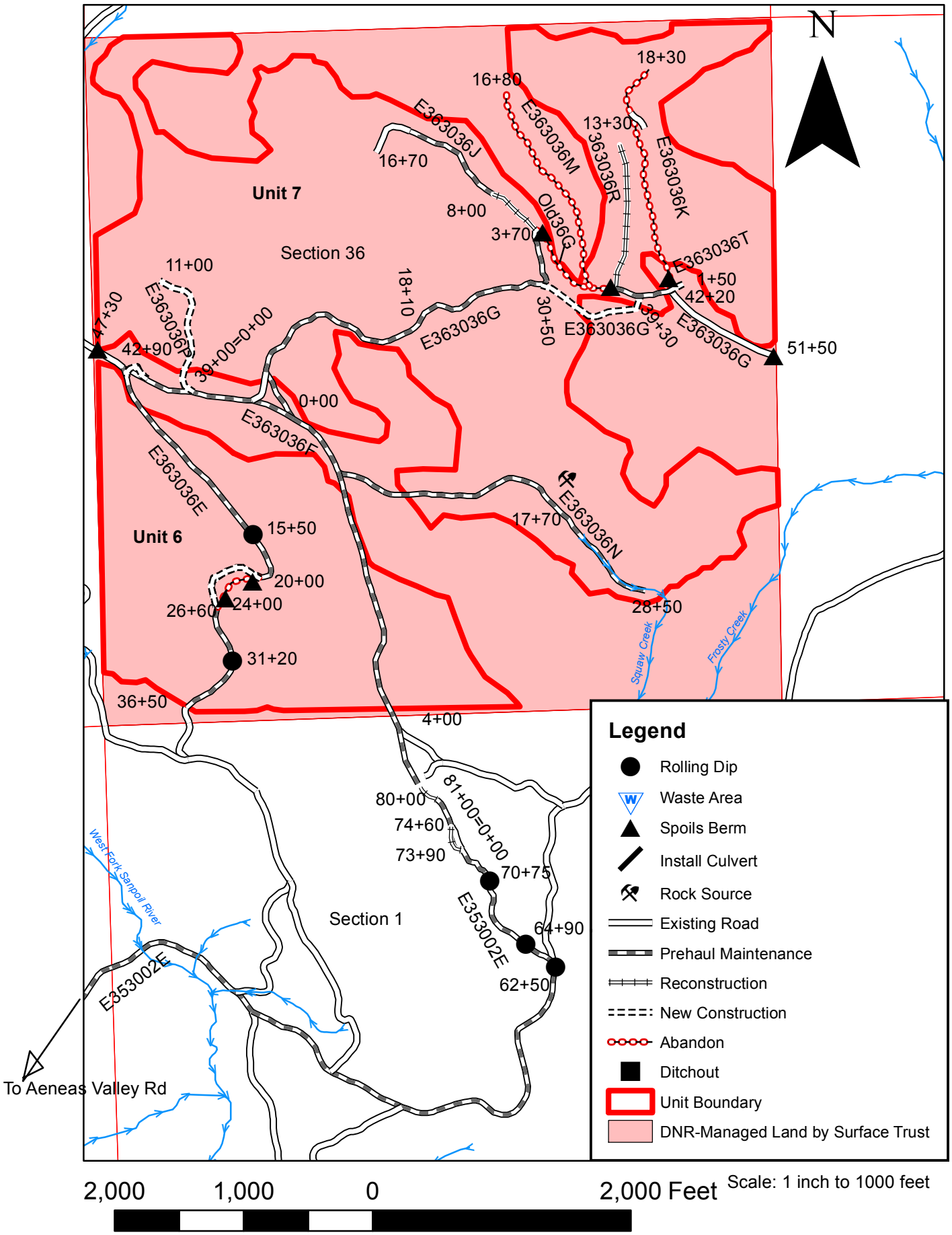
Agreement No.: 30-092787

Washington State Department of Natural Resources
Frosty Road Plan Map

Trust: 03

Region: Northeast
County: Okanogan

Township 35 & 36 N Range 30 E W.M.



Scale: 1 inch to 1000 feet

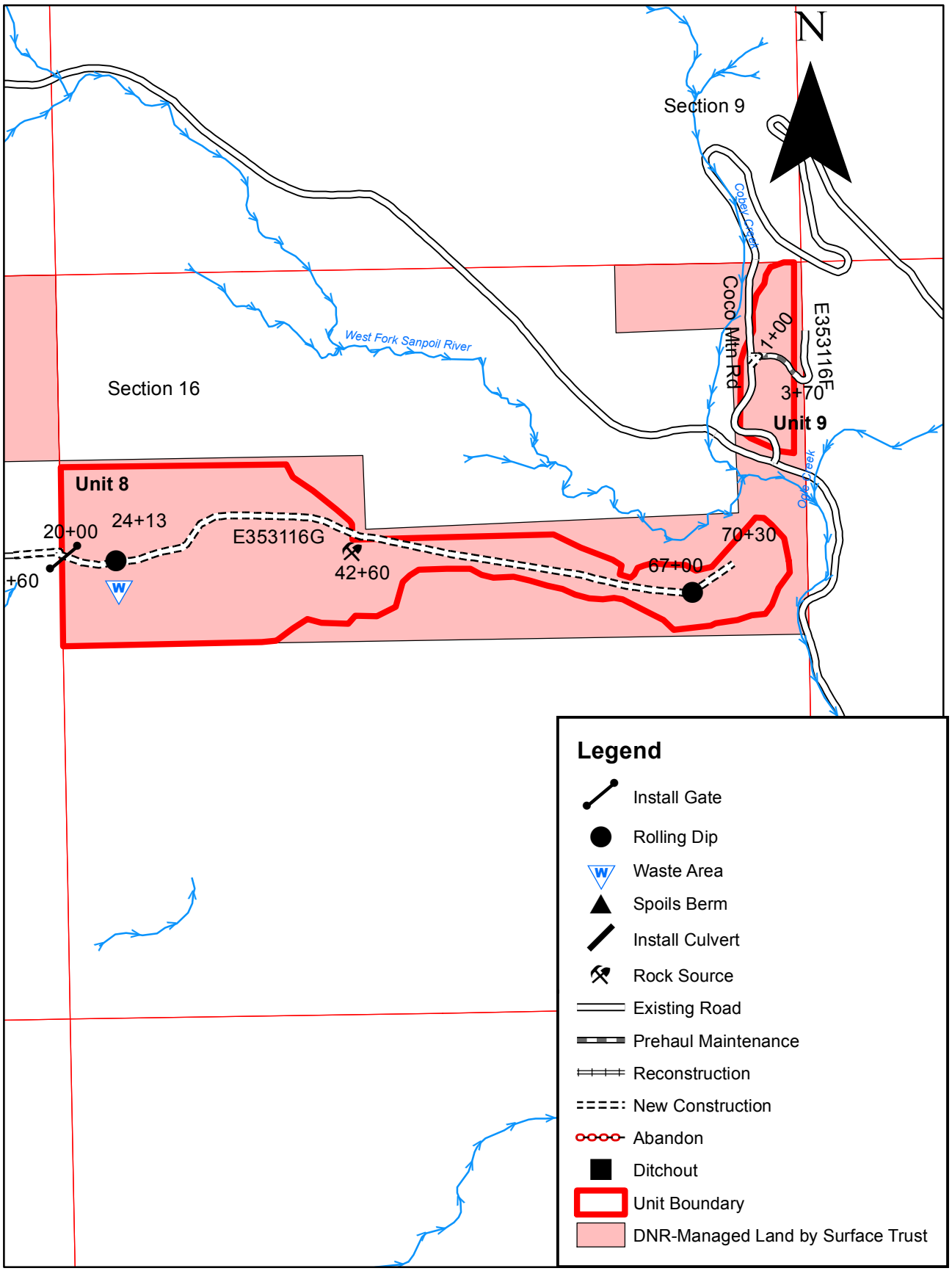
Agreement No.: 30-092787

Washington State Department of Natural Resources
Frosty Road Plan Map

Trust: 03

Region: Northeast
County: Okanogan

Township 35 N Range 31 E W.M.



2,000 1,000 0 2,000 Feet

Scale: 1 inch to 1000 feet

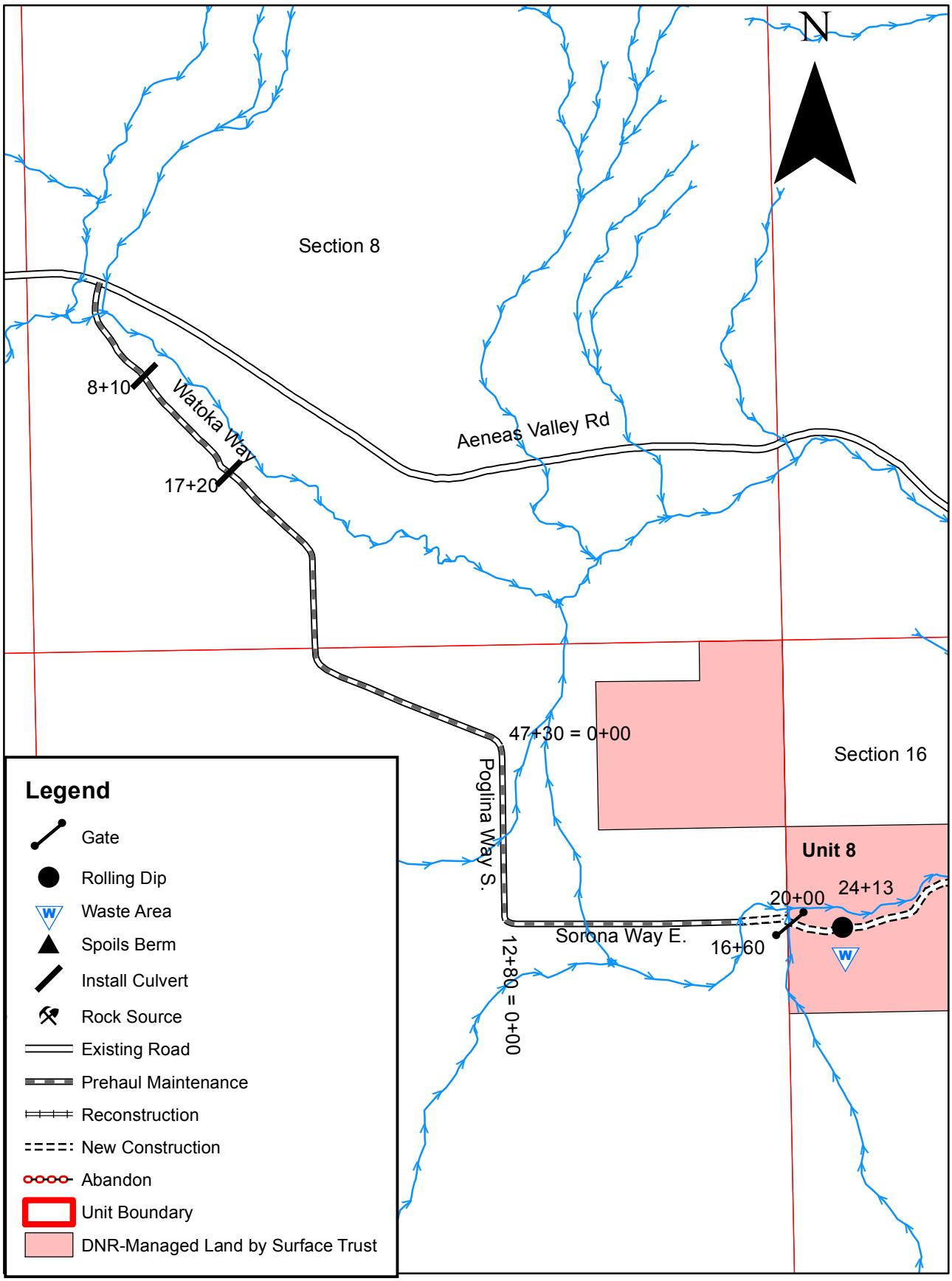
Agreement No.: 30-092787

Washington State Department of Natural Resources
Frosty Road Plan Map

Trust: 03

Region: Northeast
County: Okanogan

Township 35 N Range 31 E W.M.



2,000 1,000 0 2,000 Feet

Scale: 1 inch to 1000 feet

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

FROSTY FH FIT TIMBER SALE ROAD PLAN
OKANOGAN COUNTY
HIGHLANDS DISTRICT

AGREEMENT NO.: 30-092787 STAFF ENGINEER: ERIC FORNER

DATE: 5 AUGUST 2015 DRAWN & COMPILED BY: ERIC FORNER

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.

Road	Stations	Type
Caribou Rd	0+00 – 16+20	Prehaul Maintenance
Coyote Rd	0+00 – 10+34	Prehaul Maintenance
Main Rd	0+00 – 81+40	Prehaul Maintenance
Poglina Way S	0+00 – 12+80	Prehaul Maintenance
Sorona Way E	0+00 – 16+60	Prehaul Maintenance
Sorona Way E	16+60 – 20+00	Construction
Watoka Way	0+00 – 47+30	Prehaul Maintenance
E353002E	0+00 – 73+90	Prehaul Maintenance
E353002E	73+90 – 74+60	Reconstruction
E353002E	74+60 – 78+00	Prehaul Maintenance
E353002E	78+00 – 80+00	Reconstruction
E353002E	80+00 – 81+00	Prehaul Maintenance
E353116F	0+00 – 1+00	Construction
E353116F	1+00 – 3+70	Prehaul Maintenance
E353116G	20+00 – 70+30	Construction
E363023E	10+34 – 41+90	Prehaul Maintenance
E363023E	41+90 – 102+00	Reconstruction
E363023E	102+00 – 128+00	Prehaul Maintenance
E363023F	0+00 – 26+90	Prehaul Maintenance
E363023G	0+00 – 36+00	Prehaul Maintenance
E363023K	0+00 – 13+00	Prehaul Maintenance
E363023M	17+00 – 34+00	Reconstruction

E363023N	0+00 – 8+60	Reconstruction
E363023P	0+00 – 8+00	Construction
E363026J	0+00 – 4+30	Reconstruction
E363027E	16+20 – 52+80	Prehaul Maintenance
E363034F	0+00 – 14+50	Prehaul Maintenance
E363034H	0+00 – 1+00	Construction
E363034J	0+00 – 1+00	Construction
E363036E	0+00 – 20+00	Prehaul Maintenance
E363036E	20+00 – 26+60	Construction
E363036E	26+60 – 36+50	Prehaul Maintenance
E363036F	0+00 – 42+90	Prehaul Maintenance
E363036F	42+90 – 45+50	Construction
E363036G	0+00 – 30+50	Prehaul Maintenance
E363036G	30+50 – 39+30	Construction
E363036G	39+30 – 42+20	Prehaul Maintenance
E363036J	0+00 – 3+70	Prehaul Maintenance
E363036J	3+70 – 8+00	Reconstruction
E363036J	8+00 – 16+70	Prehaul Maintenance
E363036N	0+00 – 28+50	Prehaul Maintenance
E363036P	0+00 – 11+00	Construction
E363036R	0+00 – 2+00	Prehaul Maintenance
E363036R	2+00 – 13+30	Reconstruction
E363036T	0+00 – 1+50	Construction
E363130E	0+00 – 7+80	Prehaul Maintenance
E363130F	0+00 – 48+10	Prehaul Maintenance
E363130G	0+00 – 9+70	Prehaul Maintenance

0-4 CONSTRUCTION

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

Road	Stations	Requirements
Sorona Way E	16+60 – 20+00	Blade and shape, rock
E353116F	0+00 – 1+00	Clear, Blade & shape, Construct curve
E353116G	20+00 – 70+30	Full Bench, End Haul, Rolling dips, Rock showing: 48+18 – 48+48’ 63+90 – 64+15’
E363023P	0+00 – 8+00	Blade and shape
E363034H	0+00 – 1+00	Clear, Blade & shape, landing off Hwy
E363034J	0+00 – 1+00	Blade and shape, landing off of Hwy
E363036E	20+00 – 26+60	Clear, Blade & shape, Rock showing: about 150’ total of small rock outcroppings in the new construction

E363036F	42+90 – 45+50	Clear, Blade & shape, Construct curve
E363036G	30+50 – 39+30	Clear, Blade & shape
E363036P	0+00 – 11+00	Clear, Blade & shape
E363036T	0+00 – 1+50	Blade & shape

Construction includes, but is not limited to clearing & grubbing, pioneering & decking logs, subgrade construction and compaction, rolling dip, cross drain, and culvert installation, Fish passage structure installation, cut & fill, embankment construction, riprap and rock application. Construct roads to the TYPICAL SECTION SHEET, ROCK LIST, and CULVERT & DRAINAGE LIST, for general specifications, unless otherwise specified in design details.

0-5 RECONSTRUCTION

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

Road	Stations	Requirements
E353002E	73+90 – 74+60	Follow fence line, Stay left, Rock, Avoid mud pit
E353002E	78+00 – 80+00	Blade & shape, Re-establish road
E363023E	41+90 – 102+00	Rock, Widen road,
E363023M	17+00 – 34+00	Re-establish road
E363023N	0+00 – 8+60	Re-establish road
E363026J	0+00 – 4+30	Re-establish road
E363036J	3+70 – 8+00	Brush, Widen road
E363036R	2+00 – 13+30	Re-establish road

Reconstruction includes, but is not limited to clearing & grubbing, subgrade reconstruction, rolling dip, cross drain, and culvert installation, bridge installation, cut & fill, embankment construction, culvert and ditch cleaning, riprap and rock application. Reference the TYPICAL SECTION SHEET, ROCK LIST, and CULVERT & DRAINAGE LIST, for general specifications.

0-6 PRE-HAUL MAINTENANCE

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

Road	Stations	Requirements
Caribou Rd	0+00 – 16+20 (start E363027E)	Brush, Widen curve, Widen road, Blade & shape
Coyote Rd	0+00 – 10+34	Blade & shape, Widen jct w/main rd
Main Rd	0+00 – 81+40	Blade & shape, Rock, Install culvert, Ditch
Poglina Way S	0+00 – 12+80	Blade and Shape
Sorona Way E	0+00 – 16+60	Blade & shape, Rock
Watoka Way	0+00 – 47+30	Blade & shape, Rock, Install culverts, Ditch

E353002E	0+00 – 73+90	Brush, Blade & shape, Rock, Install rolling dips, Rock showing: 26+50 – 30' 40+70 – 45' 71+85 – 50' 72+70 – 50' Improve grades to <18% favorable and <12% adverse and smooth vertical and horizontal transition
E353002E	74+60 – 78+00	Brush, Blade & shape, Rock
E353002E	80+00 – 81+00	Brush, Blade & shape, Rock
E353116F	1+00 – 3+70	Brush, Blade & shape
E363023E	10+34 – 41+90	Brush, Blade & shape * (stations 10+34 – 29+60 will be brushed by Cape Labelle FIT)
E363023E	102+00 – 128+00	Brush, Blade & shape
E363023F	0+00 – 26+90	Brush, Blade & shape, Rock showing: 1+30 -1+80 remove rock encroaching onto road prism
E363023G	0+00 – 36+00	Blade & shape * (Brushing and Dips to be installed by Cape Labelle FIT)
E363023K	0+00 – 13+00	Brush, Blade & shape
E363027E	16+20 – 52+80	Brush, Blade & shape
E363034F	0+00 – 14+50	Brush, Blade & shape
E363036E	0+00 – 20+00	Brush, Blade & shape, Install rolling dip
E363036E	26+60 – 36+50	Brush, Blade & shape, Install rolling dip
E363036F	0+00 – 42+90	Brush, Blade & shape, Rock, Rock showing: 0+00 – 0+30 remove rock encroaching onto road prism
E363036G	0+00 – 30+50	Brush, Blade & shape, Rock, Rock showing: 18+10 – 18+60 cut top of hump and fill bottom to lessen grade to 12%
E363036G	39+30 – 42+20	Brush, Blade & shape
E363036J	0+00 – 3+70	Brush, Blade & shape
E363036J	8+00 – 16+70	Brush, Blade & shape
E363036N	0+00 – 28+50	Brush, Blade & shape
E363036R	0+00 – 2+00	Brush, Blade & shape
E363130E	0+00 – 7+80	Brush, Blade & shape, Install rolling dip
E363130F	0+00 – 48+10	Brush, Blade & shape, Install rolling dips, Ditch, Ditchout, Rock
E363130G	0+00 – 9+70	Brush, Blade & shape

Maintenance includes, but is not limited to brushing, clearing, grubbing, subgrade reshaping, rolling dip, cross drain, underdrain, and culvert installation, cleaning culverts

and ditches, grading, and riprap and rock application. Reference the TYPICAL SECTION SHEET, ROCK LIST, and CULVERT & DRAINAGE LIST, for general specifications.

0-7 POST-HAUL MAINTENANCE

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

0-9 DECOMMISSIONING

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

0-10 ABANDONMENT

This project includes abandonment listed in Clause 9-20 ROAD DECOMMISSIONING AND ABANDONMENT.

0-12 DEVELOP ROCK SOURCE

Contractor may develop a new rock source. Rock source development will involve developing a plan approved by the Contract Administrator. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

0-13 STRUCTURES

Contractor shall provide and install gates. Requirements for these structures are listed in Section 7 STRUCTURES.

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.

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

1-6 ORDER OF PRECEDENCE

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

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

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

1-7 TEMPORARY ROAD CLOSURE

Contractor shall notify the Contract Administrator a minimum of 5 calendar days before the closure of any road. Construction may not close any road for more than 21 consecutive calendar days.

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.

1-9 DAMAGED METALLIC COATING

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

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).

1-15 ROAD MARKING

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

- Orange ribbon for grade.
- Blue ribbon for drainage.

1-20 COMPLETE BY DATE

Contractor shall complete pre-haul road work before the start of timber haul.

1-21 HAUL APPROVAL

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

1-22 WORK NOTIFICATIONS

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

1-23 ROAD WORK PHASE APPROVAL

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

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

1-25 ACTIVITY TIMING RESTRICTION – SEE CONTRACT

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION or Contract Clause H-130 HAULING SCHEDULE, 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 DESIGNATED ROAD MAINTAINER. If other operators are using, or desire to use these designated maintainer roads, a joint operating plan must be developed. All parties shall follow this plan.

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 6 inches on pit run roads.
- Wheel track rutting exceeds 4 inches on crushed rock roads.
- Wheel track rutting exceeds 4 inches on native surface roads.
- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, in the opinion of the Contract Administrator excessive road damage or rutting may occur.

Operations must stop unless authority to continue working or hauling is granted in writing by the Contract Administrator. In the event that surface or base stability problems persist, 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. Contractor shall request a SNOW PLOWING AGREEMENT each time plowing occurs. If damage occurs while plowing, further permission to plow may be revoked by the Contract Administrator.

SUBSECTION OTHER INFRASTRUCTURE

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

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.

1-41 REQUIREMENTS FOR PAVED ROAD APPROACHES

Requirements for the Aeneas Valley Road approaches:
Contractor shall build up approaches to allow a smooth grade transition between the E363034H road surfacing, E363034J road surfacing, and Aeneas Valley Road roads. The top of the E363034H, E363034J road surfacing road surfacing, must be kept level with the surface of the Aeneas Valley Road at all times. The surface of the E363034H, E363034J approaches must slope from the edge of the Aeneas Valley Road road at the

rate of 2 inches per foot for a distance of 10 feet, unless otherwise directed by the Contract Administrator or as shown in the approach permit.

1-43 ROAD WORK AROUND UTILITIES

Road work is in close proximity to a utility. Known utilities are listed, but it is the Contractor's responsibility to identify any utilities not listed. Contractor shall work in accordance with all applicable laws or rules concerning utilities. Contractor is responsible for all notification, including "call before you dig", and liabilities associated with the utilities and their rights-of-way. Contractor shall notify the utility before starting road work.

Road	Area
Aeneas Val. Rd	Unit 5
Caribou Rd	Sun Ranch Area
Coyote Rd	Sun Ranch Area
Main Rd	Sun Ranch Area
All Roads	Lyman Lakes Area
E353002E	Entire Road
E363036F	Portions of road

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.

2-4 PASSAGE OF LIGHT VEHICLES

Contractor shall maintain roads in a condition that will allow the passage of light administrative vehicles.

2-5 MAINTENANCE GRADING – EXISTING ROAD

Contractor shall use a grader to shape the existing surface before haul. Contractor shall accomplish all grading using a motor grader with a minimum of 175 horsepower.

2-6 CLEANING CULVERTS

Contractor shall clean the inlets and outlets of all culverts and shall obtain written approval from the Contract Administrator before timber haul.

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

Contractor shall clean ditches, headwalls, and catch basins. Work must be completed before timber haul and must be done in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL.

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

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 of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Contractor shall remove brushing debris from the road surface, ditch lines, and culvert inlets and outlets.

3-2 BRUSHING RESTRICTION

Pulling, digging, pushing over, and other non-cutting methods used for vegetation removal may not be used for brushing. Contractor shall submit a detailed list of equipment and methods to be used during brushing, for approval by the Contract Administrator before starting work. Excavator buckets, log loaders and similar equipment may not be used for brushing unless otherwise approved in writing by the Contract Administrator.

3-5 CLEARING

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

3-7 RIGHT-OF-WAY DECKING

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

3-8 PROHIBITED DECKING AREAS

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.

3-10 GRUBBING

Contractor shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET and within waste and debris areas. Contractor shall also remove stumps with undercut roots outside the grubbing limits. Contractor shall remove stumps using a hydraulic mounted excavator unless authorized in writing by the

Contract Administrator. Stumps over 22 inches diameter must be split. Stumps over 40 inches must be quartered. Grubbing must be completed before starting excavation and embankment.

3-12 STUMP PLACEMENT

Contractor shall place grubbed stumps adjacent to the road shoulder and as directed by the Contract Administrator and in compliance with all other clauses in this road plan. Stumps must be positioned upright, with root wads in contact with the forest floor on stable locations. Contractor shall place stumps in 6-foot high rows.

3-14 STUMPS WITHIN DESIGNATED WASTE AREAS

Contractor is not required to remove stumps within waste areas if they are cut flush with the ground.

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.

3-21 DISPOSAL COMPLETION

Contractor shall remove organic debris from the road surface, ditch lines, and culvert inlets and outlets. Contractor shall complete all disposal of organic debris, except by burning, before end of haul.

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

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

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, unless used to comply with the specifications detailed in the Riparian Strategy.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 40%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-30 EXCLUSION OF DOZER BLADES

Contractor shall not use dozer blades for the piling of organic debris.

3-31 PILING

Contractor shall pile organic debris no closer than 20 feet from standing timber and no higher than 10 feet in areas specified in Clause 3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS. Piles must be free of rock and soil.

3-32 END HAULING ORGANIC DEBRIS

On slopes greater than 55%, Contractor shall end haul or push organic debris to the designated waste areas specified in Clause 3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS or to a waste area located by the Contract Administrator.

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

Contractor shall use a track mounted hydraulic excavator for construction work, unless authorized in writing by the Contract Administrator.

4-2 PIONEERING

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

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Contractor shall follow these standards for road grade and alignment:

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 adverse grades for switchbacks is 10%
- 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, unless construction staked or designed:

Material Type	Excavation Slope Ratio	Excavation Slope Percent
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 unless construction staked or designed:

Material Type	Embankment Slope Ratio	Embankment Slope Percent
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

The minimum widening placed on the inside of curves is:

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

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

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

Contractor shall apply embankment widening equally to both sides of the road to achieve the required width.

4-10 WIDEN THE EXISTING SUBGRADE

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. Pulling excavation material across the road or mixing in with the existing road surface is not allowed.

4-12 FULL BENCH CONSTRUCTION

Where side slopes exceed 55%, Contractor shall use full bench construction for the entire subgrade width.

4-14 ONE-FOOT EXCAVATION LIMIT

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

4-21 TURNOUTS

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

4-22 TURNAROUNDS

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

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Contractor shall construct ditchouts as identified and as needed and as directed by the Contract Administrator. Ditchouts must be constructed in a manner that diverts ditch water onto the forest floor and must have excavation back slopes no steeper than a 1:1 ratio.

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. On side slopes greater than 45%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

4-37 WASTE AREA LOCATION

Contractor shall deposit waste material in areas identified or approved by the Contract Administrator. The amount of material allowed in a waste area is at the discretion of the Contract Administrator.

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.
- Within the operational area for cable landings.
- Against standing timber.
- Outside the clearing limits.

4-45 SELECT BORROW

Select borrow consists of granular material, either naturally occurring or processed, and contains no more than 5% clay, organic debris, or trash by volume.

4-46 COMMON BORROW

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

4-47 NATIVE MATERIAL

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

4-48 BORROW MATERIAL

Borrow material may not contain more than 5% clay, organic debris, or trash by volume.

4-49 BORROW SOURCE

Contractor shall obtain borrow material from borrow sources identified or approved by the Contract Administrator. Development of the borrow source must be in accordance

with a written BORROW SOURCE DEVELOPMENT PLAN to be submitted by the Contractor and approved in writing by the Contract Administrator.

4-50 BORROW APPLICATION

Contractor shall apply borrow in accordance with quantities shown on the ROCK LIST. Borrow must be spread, shaped, and compacted full width concurrent with hauling operations.

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. Contractor shall accomplish all shaping using a motor grader with a minimum of 175 horsepower.

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.

4-60 FILL COMPACTION

Contractor shall compact all embankment and waste material by routing equipment over the entire width of each lift. A plate compactor must be used for areas specifically requiring keyed embankment construction and for embankment segments too narrow to accommodate equipment. Waste material may be placed by end-dumping or sidecasting until sufficiently wide enough to support the equipment.

4-61 SUBGRADE COMPACTION

Contractor shall compact constructed and reconstructed subgrades deeper than 5 feet at the road shoulder by routing equipment over the entire width except ditch. Contractor shall obtain written approval from the Contract Administrator for subgrade compaction before haul.

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 EXISTING SURFACE COMPACTION

Contractor shall compact maintained road surfaces by routing equipment over the entire width.

SECTION 5 – DRAINAGE

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 AND DRAINAGE LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts must be new material and meet the specifications in Clauses 10-15 through 10-23.

5-11 UNUSED MATERIALS STATE PROPERTY

On required roads, any materials listed on the CULVERT AND DRAINAGE LIST that are not installed will become the property of the state. Contractor shall stockpile materials as directed by the Contract Administrator.

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," the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings". Corrugated Polyethylene pipe must be installed in a manner consistent with the manufacturer's recommendations.

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

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

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

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 recommended by the culvert manufacturer for the type and size of the pipe.

5-20 ENERGY DISSIPATERS

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

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT AND DRAINAGE SPECIFICATION DETAIL.

5-25 CATCH BASINS

Contractor shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 4 feet wide and 4 feet long with back slopes consistent with Clause 4-5 CUT SLOPE RATIO.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

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

5-30 DRIVABLE WATERBAR CONSTRUCTION

Contractor shall construct drivable waterbars in accordance with the DRIVABLE WATERBAR DETAIL and as specified in the CULVERT AND DRAINAGE LIST as marked in the field. Drivable waterbars must be installed concurrently with construction of the subgrade and must be maintained in an operable condition.

5-31 ROLLING DIP CONSTRUCTION

Contractor shall construct rolling dips in accordance with the ROLLING DIP DETAIL and as specified in the CULVERT AND DRAINANGE LIST and as marked in the field. Rolling dips must be installed concurrently with construction of the subgrade and must be maintained in an operable condition.

5-33 NATIVE SURFACE ROADS

If overwintered, native surface roads must be waterbarred by 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.

SECTION 6 – ROCK AND SURFACING

6-1 ROCK SOURCE NOT ON STATE LAND

Rock used in accordance with the quantities on the ROCK LIST may be obtained from source(s) on private land at the Constractor's expense. Contractor shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations.

Contractor shall obtain written approval from the Contract Administrator for the use of material from any alternate source**.**

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following POTENTIAL source(s) 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 potential source. If other operators are using, or desire to use the rock source(s), a joint operating plan must be developed. All parties shall follow this plan. Contractor shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the listed locations.

Source	Location	Rock Type
Mixed rock	E363023E 30+90	Ballast
Mixed rock	E363023E 48+80	Ballast
Mixed rock	E363036N 17+70	Ballast

6-5 ROCK FROM COMMERCIAL SOURCE

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

Possible Source	Location
Wauconda Quarry	411 Toroda Creek Road

6-11 ROCK SOURCE DEVELOPMENT PLAN BY CONTRACTOR

Contractor may conduct rock source development and use at the following sources, in accordance with a written ROCK SOURCE DEVELOPMENT AND RECLAMATION PLAN to be prepared by the Contractor. 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 ROCK SOURCE DEVELOPMENT AND RECLAMATION 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 development plans prepared by the Contractor must show the following information:

- Rock source location.

- Rock source overview showing access roads, development areas, stockpile locations, waste areas, and floor drainage.
- Rock source profiles showing development areas, bench locations including widths, and wall faces including heights.
- 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 DEVELOPMENT AND RECLAMATION PLAN:

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

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

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

6-14 DRILL AND SHOOT

Rock drilling and shooting must meet the following specifications:

- Oversize material remaining in the rock source at the conclusion of the timber sale may not exceed 5% of the total volume mined in that source.
- Oversize material is defined as rock fragments too large to be converted by the Purchaser to a size that will meet specifications used for the roads in this sale.

- Oversized rock that exceeds the maximum allowable amount must be removed from working areas.
- Purchaser shall notify the Contract Administrator a minimum of 10 working days before blasting operations.
- Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 10 working days before any drilling (Form #M-126PAC).
- All operations must be carried out in compliance with 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 the Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- Purchaser shall block access roads and trails before blasting operations.

6-22 FRACTURE REQUIREMENT FOR ROCK

A minimum of 50% by visual inspection of coarse aggregate must have at least one fractured face. Coarse aggregate is the material greater than 1/4-inch in size.

6-34 3-INCH MINUS BALLAST ROCK

Ballast rock must be 100% equal to, or smaller than, 3 inches in at least one dimension.

Rock may contain no more than 5 percent organic debris, dirt, and trash. All percentages are by weight.

6-41 PIT RUN ROCK

No more than 50 percent of the rock may be larger than 8 inches in any dimension and no rock may be larger than 12 inches in any dimension. Select Pit Run rock may not contain more than 5 percent by weight of organic debris, dirt, and trash. Rock may require processing to meet this specification.

6-42 CLEAN ROCK, SHOT OR RIPPABLE BALLAST

No more than 10 percent of the rock by weight may exceed 8 inches in any dimension and no rock may be larger than 12 inches in any dimension. Shot or Rippable Ballast rock may not contain more than 5 percent by weight of organic debris, dirt, and trash.

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

6-50 LIGHT LOOSE RIP RAP

Rip rap must consist of angular, hard, sound, and durable stone. It must be free from segregation, seams, cracks, and other defects. Light loose rip rap must be free of rock fines, soil, organic debris or other extraneous material, and must meet the following requirements:

At Least/Not More Than	Size Range
20% / 90%	20”- 36”
80% / --	12”- 30”
10% / 20%	3”- 8”

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

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

6-70 APPROVAL BEFORE ROCK APPLICATION

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

6-71 ROCK APPLICATION

Purchaser shall apply rock in accordance with the specifications and quantities shown on the ROCK LIST. Rock must be spread, shaped, and compacted full width concurrent with rock hauling operations. The Contract Administrator will direct locations for rock that is to be applied as spot patching. Road surfaces must be compacted by routing equipment over the entire width.

6-80 WATERING FOR DUST ABATEMENT

Contractor shall use water for dust abatement as directed by the Contract Administrator.

SECTION 7 – STRUCTURES

7-76 GATE INSTALLATION

Contractor shall install the listed gate(s)**.** Gate installations must be installed within 30 days of end of haul

Road	Station	Type*	Provided by
E353116G	20+00	Stock gate (tube gate)	Contractor

Tubular gate installation(s) must be in accordance with the METAL GATE DETAIL.

The gate must be installed with a post and locking device to allow the gate to be locked in an open position. The Contract Administrator will provide Contractor with a padlock.

If Contractor wishes to install an alternate design, detailed plans for the construction of the gate must be submitted to the Contract Administrator. Contractor shall obtain

written approval for the plans from the Contract Administrator or their designee, before gate installation begins.

The gate must be primed and painted in accordance with the METAL GATE DETAIL

If fences exist at the site of gate installation(s), Contractor shall connect the fencing to the posts of the new installation, except by permission from the Contract Administrator.

7-78 GATE SUPPLIED BY CONTRACTOR

Contractor shall provide all gates specified for installation in Clause 7-76 GATE INSTALLATION. Contractor shall obtain written approval for the gates from the Contract Administrator before installation.

SECTION 9 – POST-HAUL ROAD WORK

9-1 EARTHEN BARRICADES

Contractor shall construct barricades in accordance with the SPOILS BERM DETAIL.

Road	Stations
E363023E	42+20
E363023L	0+20
E363023M	0+10, 17+00
E363026N	0+50
E363034H	0+10
E363034J	0+10
E363036E	20+00, 24+00 old road
E363036F	47+30 old road
E363036G	51+50
E363036K	0+10
Old 36G	0+20,8+20

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.

9-5 POST-HAUL MAINTENANCE

Contractor shall perform post-haul maintenance in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS on all required roads.

9-10 LANDING DRAINAGE

Contractor shall provide for drainage of the landing surface.

9-20 ROAD DECOMMISSIONING AND ABANDONMENT

Contractor shall decommission the following roads within 30 days following completion of timber haul.

Road	Stations	Type
E363023E	41+90 – 102+00	Decommission
E363023J	0+00 – 8+00	Abandon
E363023L	0+00 – 10+90	Abandon
E363034H	0+00 – 1+00	Decommission
E363034J	0+00 – 1+00	Decommission
E363036E	20+00 – 24+00(old rd)	Abandon
E363036G	42+20 – 51+50	Decommission
E363036J	0+00 – 13+00	Decommission
E363036K	0+00 – 18+30	Abandon
E363036M	0+00 – 16+80	Abandon
E363036R	0+00 – 13+30	Decommission
Old 36G	0+00 – 8+40	Abandon

9-22 LIGHT DECOMMISSIONING/ABANDONMENT

Decommissioning/Abandonment requires the following:

- Remove road shoulder berms except as directed.
- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing which will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 100 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars shall be outsloped to provide positive drainage. Outlets shall be on stable locations.
- Block roads with earthen barricades according to the attached SPOILS BERM DETAIL.
- Scatter woody debris onto decommissioned/abandoned road surfaces.

SECTION 10 MATERIALS

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) except culverts over 24 inches must be aluminized (aluminum type 2 coated meeting AASHTO M-274.

10-16 CORRUGATED ALUMINUM CULVERT

Aluminum culverts must meet AASHTO M-196 (ASTM A-745) specifications.

10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts must meet AASHTO M-294 specifications, or ASTM F-2648 specifications for recycled polyethylene. Culverts must be Type S – double walled with a corrugated exterior and smooth interior.

10-21 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.

10-22 PLASTIC BAND

Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used. Couplings must be split coupling band. Split coupling bands must have a minimum of four corrugations, two on each side of the pipe joint.

10-23 RUBBER CULVERT GASKETS

Rubber gaskets must be continuous closed cell, synthetic expanded rubber gaskets conforming to the requirements of ASTM D 1056. Rubber gaskets must be used with all corrugated metal pipe coupling bands.

10-24 GAGE AND CORRUGATION

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

Diameter	Gage	Corrugation
12” to 18"	16 (0.064”)	$2\ ^{2}/_{3}$" X $^{1}/_{2}$"
24" to 48"	14 (0.079”)	$2\ ^{2}/_{3}$" X $^{1}/_{2}$"
54" to 96"	14 (0.079”)	3" X 1"

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Cuts and Fills

- Maintain slope lines as constructed. Remove slides from ditches and the roadway. Repair fill-failures, in accordance with Clause 4-6 EMBANKMENT SLOPE RATIO, with selected material or material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

- Grade and shape the road surface, turnouts, and shoulders to the original shape as directed, to provide a smooth, rut-free traveled surface and maintain surface water runoff in an even, unconcentrated manner.
- Blading shall not undercut the backslope or cut into geotextile fabric on the road.
- If required by the Contract Administrator, water shall be applied as necessary to control dust and retain fine surface rock.
- Surface material shall not be bladed off the roadway. Replace surface material when lost or worn away <, or as directed by the Contract Administrator>.
- Remove shoulder berms to facilitate drainage, except as marked or directed by the Contract Administrator.
- For roads with geotextile fabric: spread surface aggregate to fill in soft spots and wheel ruts (barrel spread) to prevent damage to the geotextile fabric.

Drainage

- Prevent silt bearing road surface and ditch runoff from delivering sediment to any streams or wetlands.
- Maintain 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 and culverts clear of obstructions and functioning as intended.
- Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This shall be done even during periods of inactivity.

Structures

- Repair culverts, bridges, gates, fences, cattle guards, signs, and other road structures as required because of purchaser use.

Preventative Maintenance

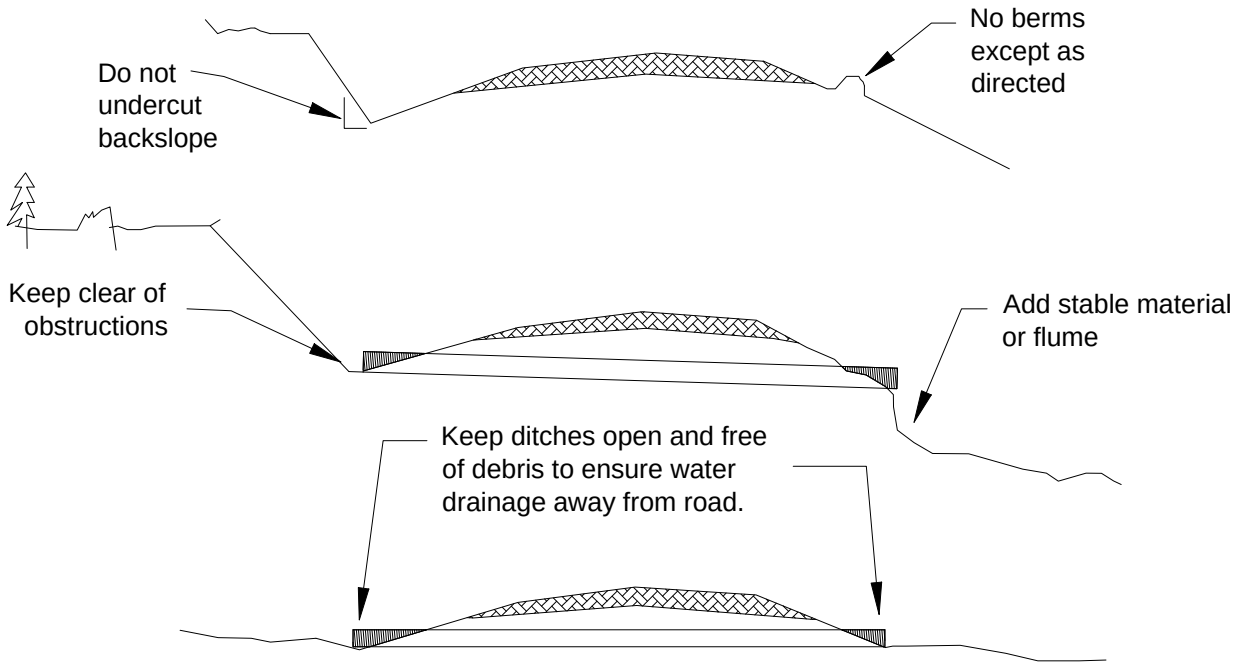
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

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.

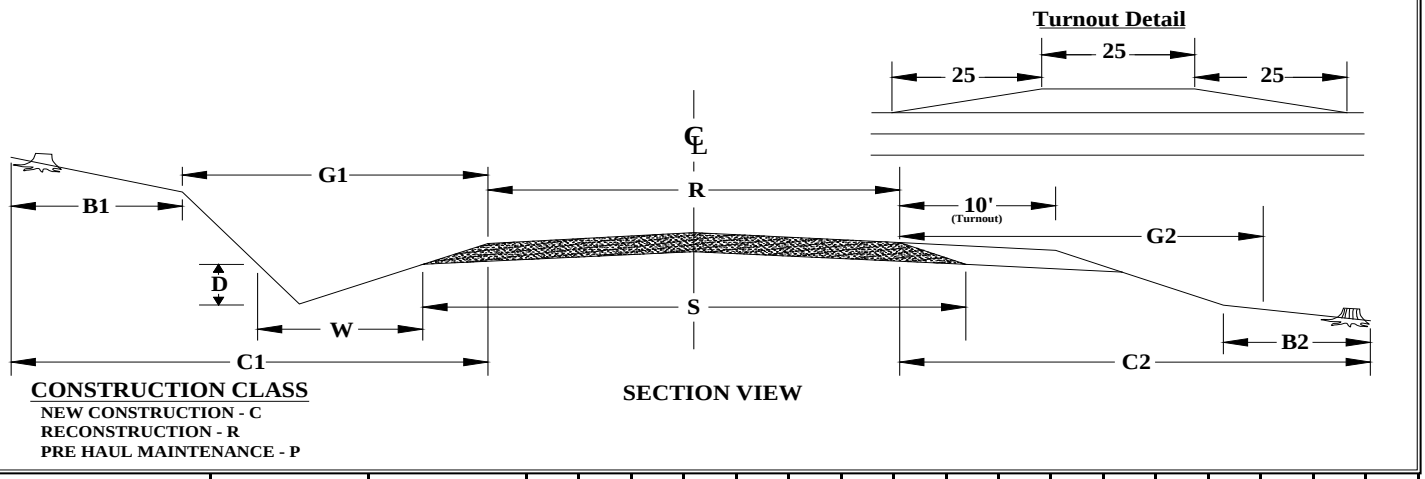


State of Washington

Department of Natural Resources

Application No. : 30-092787 **Name of Sale: Frosty**

Typical Section Sheet



ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	INSLOPE "/10'	OUTSLOPE "/10'	CROWN " AT CL	DITCH WIDTH (W)	DITCH DEPTH (D)	DITCH 2 SIDES	DITCH SIDE (L Left R Right)	DITCHOUT	GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (B1)	ROAD FILL CLEARING (B2)	R/W CUT CLEARING (C1)	R/W FILL CLEARING (C2)
Caribou Rd	0+00	16+20	P		12									3	3	5	5	10	10
Coyote Rd	0+00	10+34	P		12									3	3	5	5	6	6
Main Rd	0+00	33+10	P		12			3	3	1				3	3	5	5	6	6
Main Rd	33+10	36+60	P		12			3	3	1				3	3	5	5	6	6
Main Rd	36+60	81+40	P		12									3	3	5	5	6	6
Poglina Way	0+00	12+80	P		12									3	3	5	5	6	6
Sorona Way E.	0+00	16+60	P		12									3	3	5	5	6	6
Sorona Way E.	16+60	20+00	C		12		4							3	3	5	5	6	6
Watoka Way	0+00	5+70	P		12									3	3	5	5	6	6
Watoka Way	5+70	11+70	P		12			3	3	1		R	R	3	3	5	5	6	6
Watoka Way	11+70	17+20	P		12									3	3	5	5	6	6
Watoka Way	17+20	19+20	P		12			3	3	1		R		3	3	5	5	6	6
Watoka Way	19+20	47+30	P		12									3	3	5	5	6	6
E353002E	0+00	73+90	P		12									3	3	5	5	6	6
E353002E	73+90	74+60	R		12		4							3	3	5	5	6	6
E353002E	74+60	78+00	P		12									3	3	5	5	6	6
E353002E	78+00	80+00	R		12		4							3	3	5	5	6	6
E353002E	80+00	81+00	P		12									3	3	5	5	6	6
E353116F	0+00	1+00	C		12		4							3	3	5	5	10	10
E353116F	1+00	3+70	P		12									3	3	5	5	10	10
E353116G	20+00	70+30	C		14		4							3	3	5	5	10	10
E363023E	10+34	41+90	P		12									3	3	5	5	10	10

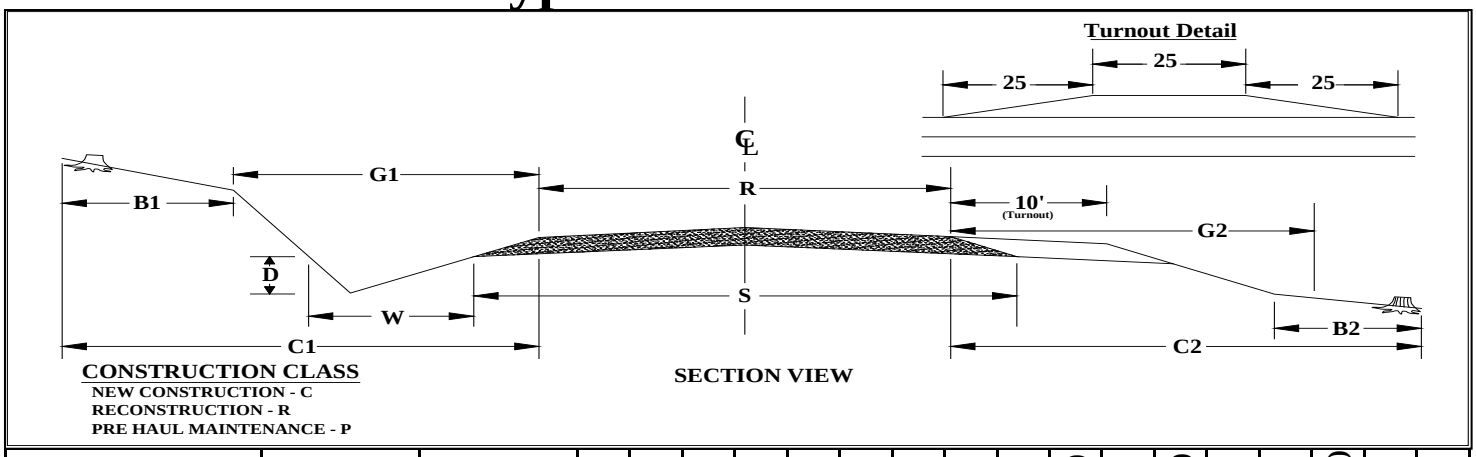
Date: 7-13-2015

State of Washington

Department of Natural Resources

Application No. : 30-092787 **Name of Sale: Frosty**

Typical Section Sheet



ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	INSLOPE "/10'	OUTSLOPE "/10'	CROWN " AT CL	DITCH WIDTH (W)	DITCH DEPTH (D)	DITCH 2 SIDES	DITCH SIDE (L Left R Right)	DITCHOUT	GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (B1)	ROAD FILL CLEARING (B2)	R/W CUT CLEARING (C1)	R/W FILL CLEARING (C2)
E363023E	41+90	69+70	R		14		4							3	3	5	5	10	10
E363023E	69+70	71+00	R		12			3	1	1		R		3	3	5	5	10	10
E363023E	71+00	82+10	R		12									3	3	5	5	10	10
E363023E	82+10	102+00	R		14									3	3	5	5	10	10
E363023E	102+00	128+00	P		12									3	3	5	5	10	10
E363023F	0+00	26+90	P		12									3	3	5	5	10	10
E363023G	0+00	36+00	Maintain as directed by the Contract Administrator																
E363023K	0+00	13+00	P		12									3	3	5	5	10	10
E363023M	17+00	34+00	R		12									3	3	5	5	10	10
E363023N	0+00	8+60	R		12									3	3	5	5	10	10
E363023P	0+00	8+00	C		12		4							3	3	5	5	10	10
E363026J	0+00	4+30	R		12		4							3	3	5	5	10	10
E363027E	16+20	52+80	P		14									3	3	5	5	10	10
E363034F	0+00	14+50	P		12									3	3	5	5	10	10
E363034H	0+00	1+00	C		12		4							3	3	5	5	10	10
E363034J	0+00	1+00	C		12		4							3	3	5	5	10	10
E363036E	0+00	20+00	P		12									3	3	5	5	10	10
E363036E	20+00	26+60	C		12		4							3	3	5	5	10	10
E363036E	26+60	36+50	P		12									3	3	5	5	10	10
E363036F	0+00	42+90	P		12		4							3	3	5	5	10	10
E363036F	42+90	45+50	C		12		4							3	3	5	5	10	10
E363036G	0+00	30+50	P		12									3	3	5	5	10	10

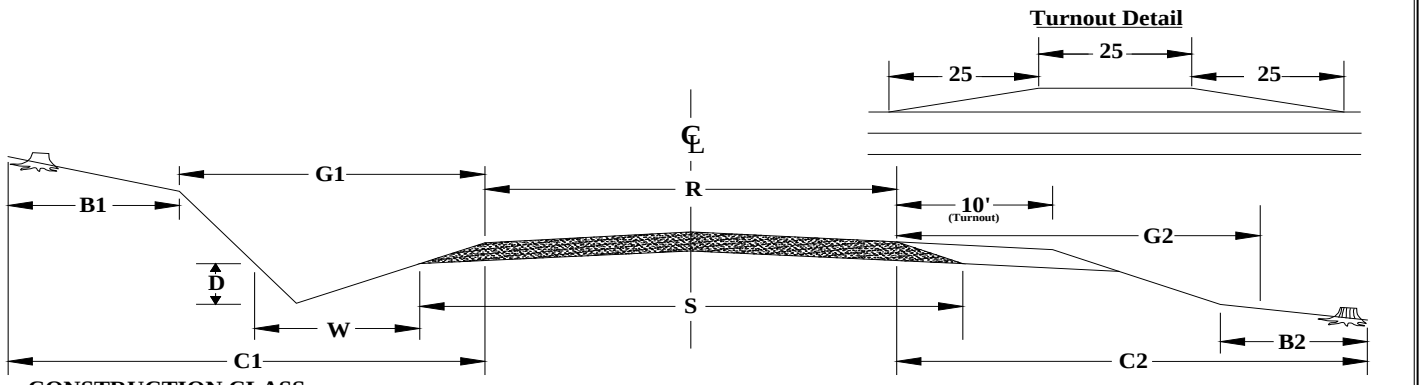
Date: 7-13-2015

State of Washington

Department of Natural Resources

Application No. : 30-092787 **Name of Sale: Frosty**

Typical Section Sheet



CONSTRUCTION CLASS
NEW CONSTRUCTION - C
RECONSTRUCTION - R
PRE HAUL MAINTENANCE - P

ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	INSLOPE "/10'	OUTSLOPE "/10'	CROWN " AT CL	DITCH WIDTH (W)	DITCH DEPTH (D)	DITCH 2 SIDES	DITCH SIDE (L Left R Right)	DITCHOUT	GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (B1)	ROAD FILL CLEARING (B2)	R/W CUT CLEARING (C1)	R/W FILL CLEARING (C2)
E363036G	30+50	39+30	C		12		4							3	3	5	5	10	10
E363036G	39+30	42+20	P		12									3	3	5	5	10	10
E363036J	0+00	3+70	P		12									3	3	5	5	10	10
E363036J	3+70	8+00	R		14		4							3	3	5	5	10	10
E363036J	8+00	16+70	P		12									3	3	5	5	10	10
E363036N	0+00	28+50	P		12									3	3	5	5	10	10
E363036P	0+00	11+00	C		12		4							3	3	5	5	10	10
E363036R	0+00	2+00	P		12									3	3	5	5	10	10
E363036R	2+00	13+30	R		12		4							3	3	5	5	10	10
E363036T	0+00	1+50	C		12		4							3	3	5	5	10	10
E363130E	0+00	7+80	P		12									3	3	5	5	10	10
E363130F	0+00	9+90	P		12									3	3	5	5	10	10
E363130F	9+90	17+00	P		12			3	3	1		R	R	3	3	5	5	10	10
E363130F	17+00	48+10	P		12									3	3	5	5	10	10
E363130G	0+00	9+70	P		12									3	3	5	5	10	10

Date: 7-13-2015

STATE OF WASHINGTON

DEPARTMENT OF NATURAL RESOURCES

Application No.: 30-092787 **Name of Sale: Frosty** **Date: 7-1-2015**

CULVERT & DRAINAGE LIST

Road Name	Station	CULVERT			LENGTH			RIPRAP			Ditch	Staked	Rolling Dip	Notes
		Diameter (in)	Gauge	Skew	Culvert (ft)	Downspout	Flume	Inlet C.Y.	Outlet C.Y.	Catchbasin				
Main Rd	33+10	18			34						13			1,2,6,10,11,13,15
	36+60										14			14
Watoka Wy	5+70										13			12,13
	8+10	12			30									1,2,6,10,11,15
	11+70										14			14
	17+20	12			30						13			1,2,6,10,11,13,15
	19+20										14			14
E353002E	62+50												9	9
	64+90												9	9
	70+75												9	9
353116G	24+13												9	9
353116G	67+00												9	9
E363023E	69+70										13			13
	71+00										14			2,12,14
E363036E	15+50												9	9
	31+20												9	9
E363130E	4+20												9	9
E363130F	4+70												9	9
	9+90										13			12,13
	17+00										14			14
	20+10												9	9
	23+60												9	9
	28+20												9	9

STRUCTURE NOTES

1. **Install Headwall - See Detail D1**
2. **Install Catchbasin - See Detail D1**
3. **Armor Catchbasin - See Detail D1**
4. **Armor Ditch**
5. **Heavy Loose RipRap**
6. **Light Loose RipRap**
7. **Step Bevel Pipe Ends**
8. **Remove Existing Pipe**
9. **See Rolling Dip Detail D5**
10. **See Pipe Installation Detail D1**
11. **Install Energy dissipator - See D1**
12. **Install Ditchout**
13. **Start Ditch**
14. **End Ditch**
15. **For guage refer to Road Plan:**

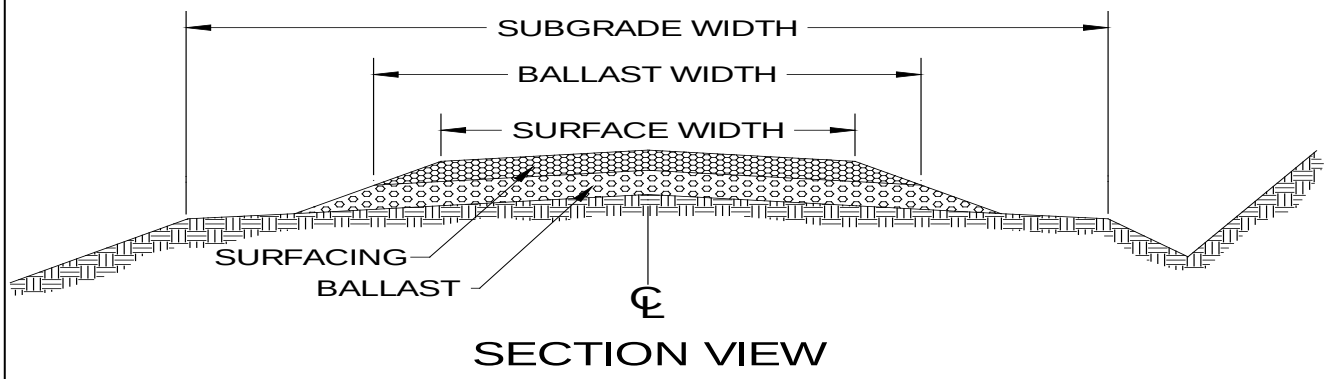
10-24 GUAGE AND CORRUGATION

STATE OF WASHINGTON

DEPARTMENT OF NATURAL RESOURCES

Application No.: 30-092787 **Name of Sale: Frosty**

ROCK LIST



1. ROCK DEPTHS ARE DEFINED AS COMPACTED DEPTHS.
2. LOOSE YARD QUANTITIES ARE DEPENDANT ON SOURCE.
3. ROCK SLOPES SHALL BE 1.5(H) : 1(V).
4. ALL ROCK SOURCES ARE SUBJECT TO APPROVAL BY THE CONTRACT ADMINISTRATOR.

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	BALLAST SOURCE	BALLAST WIDTH (ft)	BALLAST DEPTH (in)	BALLAST QTY (cu.yd./sta)	SURFACE SOURCE	SURFACE WIDTH (ft)	SURFACE DEPTH (in)	SURFACE QTY (cu.yd./sta)	Crushed Rock Total
Coyote Rd (280cy Ballast)	0+00	10+34			14	6	27				0	
Main Rd.	30+30	30+80							12	6	24	12
	54+00	55+00							12	4	15	15
Sorona Way E.	1+00	2+00					0		12	6	24	24
(57 cy Ballast)	7+00	9+00					0		12	6	24	48
	12+90	13+90			14	12	57		12	4	15	15
	16+60	20+00					0		12	4	15	51
Watoka Way	0+00	1+00							12	4	15	29
(68 cy Ballast)	1+00	2+00			14	14	68		12	4	15	30
	5+70	6+70							12	6	24	24
	33+70	34+50					0		12	6	24	19
	37+90	37+90					0				0	20
	43+80	44+10					0		12	6	24	10
E353002E	33+30	35+60			12	6	24					
(348 cy Ballast)	42+30	46+90			12	6	24					
	64+90	65+40			12	6	24					
	73+90	81+00			12	6	24				0	
E363023E	42+70						10				0	
(204 cy Ballast)	60+20	61+10			14	6	27					
	62+10	62+50			14	6	27					
	69+70	71+00			14	8	37					
	79+20	80+70			14	12	57					
	80+70	82+10			14	6	27					
TOTAL								Crushed =				297

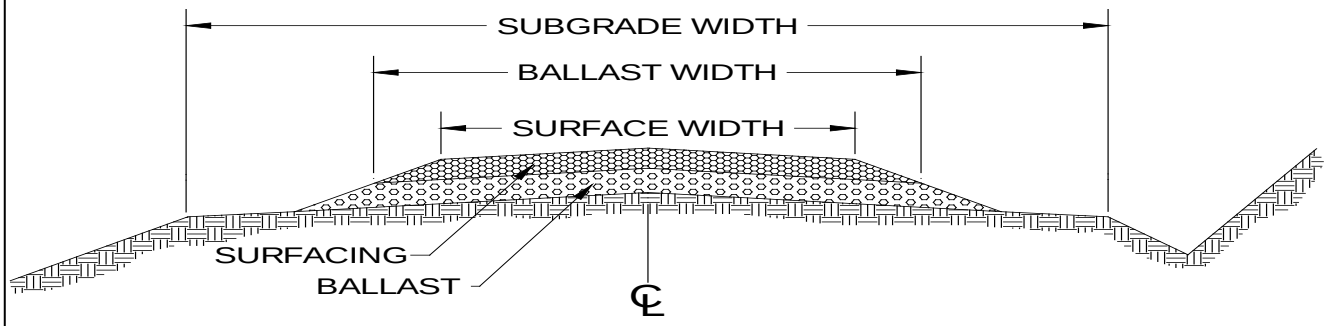
DATE: 07-14-2015

STATE OF WASHINGTON

DEPARTMENT OF NATURAL RESOURCES

Application No.: 30-092787 **Name of Sale: Frosty**

ROCK LIST



SECTION VIEW

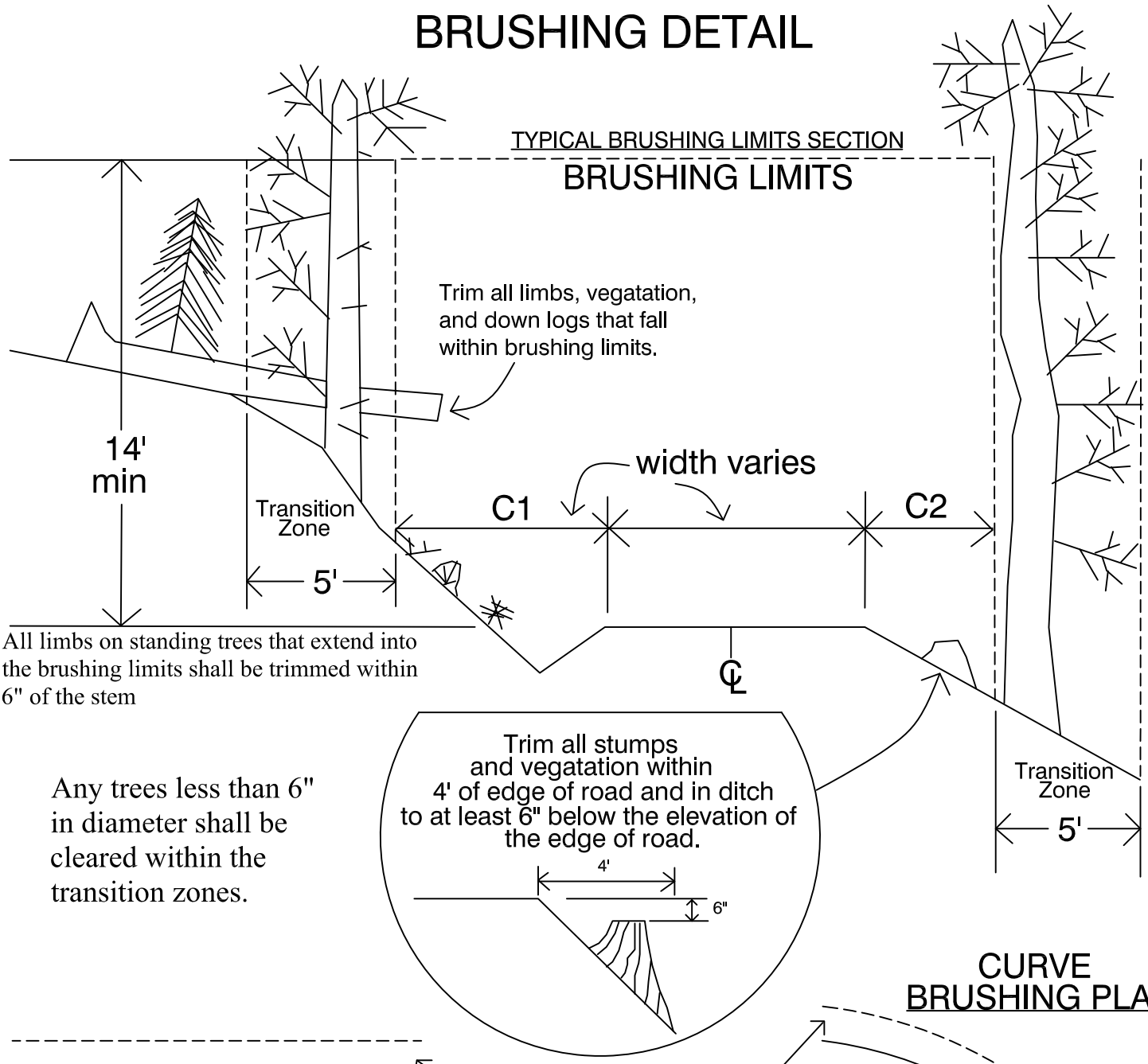
1. ROCK DEPTHS ARE DEFINED AS COMPACTED DEPTHS.
2. LOOSE YARD QUANTITIES ARE DEPENDANT ON SOURCE.
3. ROCK SLOPES SHALL BE 1.5(H) : 1(V).
4. ALL ROCK SOURCES ARE SUBJECT TO APPROVAL BY THE CONTRACT ADMINISTRATOR.

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	BALLAST SOURCE	BALLAST WIDTH (ft)	BALLAST DEPTH (in)	BALLAST QTY (cu.yd./sta)	SURFACE SOURCE	SURFACE WIDTH (ft)	SURFACE DEPTH (in)	SURFACE QTY (cu.yd./sta)	Crushed Rock Total
E363036F	0+00	4+00			12	6	24					
(391 cy Ballast)	7+80	18+10			12	6	24					
	20+50	22+50			12	6	24					
E363130F	30+20						20					
(40cy Ballast)	48+10						20					
TOTAL		1388 cy Ballast						Crushed =				297
	Values are for in place compacted cubic yards											

DATE: 07-14-2015

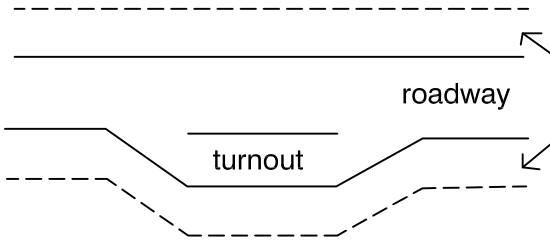
BRUSHING DETAIL

TYPICAL BRUSHING LIMITS SECTION



All limbs on standing trees that extend into the brushing limits shall be trimmed within 6" of the stem

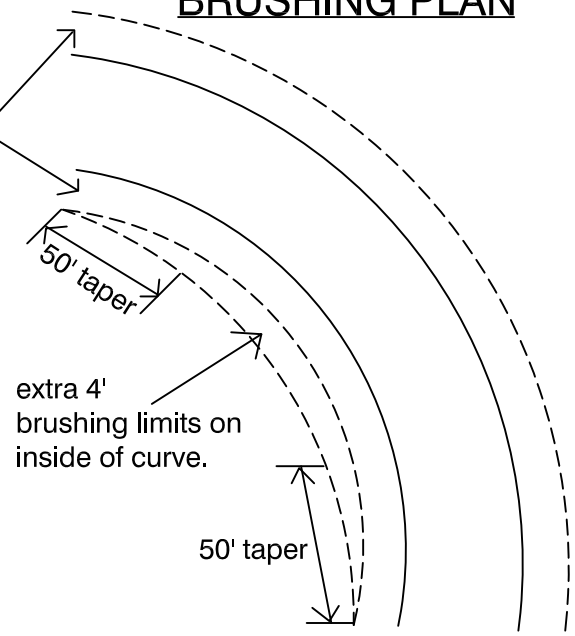
Any trees less than 6" in diameter shall be cleared within the transition zones.



Brushing limits as shown on typical section

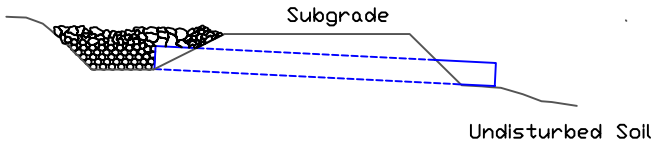
TURNOUT BRUSHING PLAN

CURVE BRUSHING PLAN

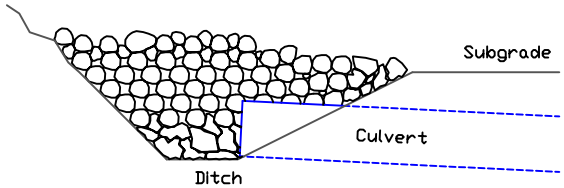


1. All vegatation within the brushing limits shall be cut to within 8" of the ground unless otherwise directed by the contract administrator.
2. All brush, trees limbs, etc. shall be removed from the road surface and ditchline.
3. All debris that may roll or migrate into the ditchline shall be removed.

CULVERT AND DRAINAGE SPECIFICATIONS DETAIL - D1

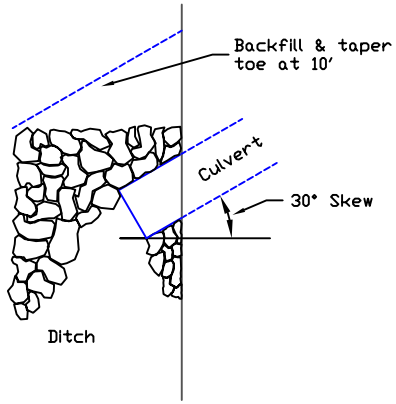


HEADWALLS



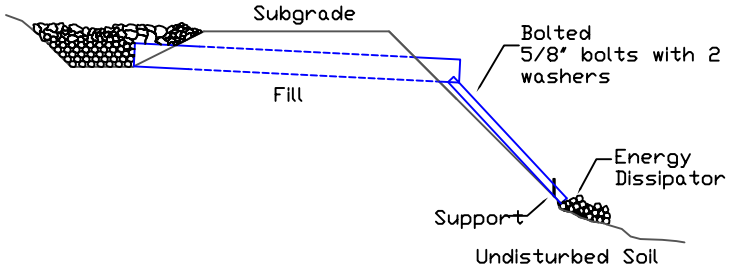
Headwall to be constructed of material that will resist erosion

PLAN VIEW



FLUME

Use where ground conditions are uniform, providing for stability of flume.



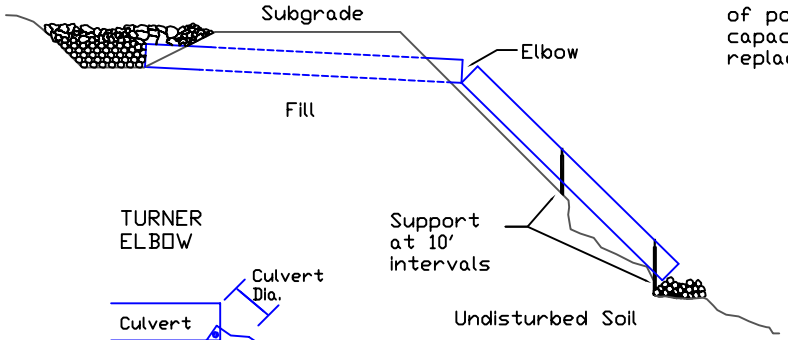
Minimum Cover	Minimum Bed Depth	Min. Trench Width	Nominal Diameter
A	B	C	D
12"	6"	36"	18"
12"	6"	42"	24"
12"	6"	48"	30"
12"	6"	54"	36"

CULVERT BACKFILL & BASE PREPARATION

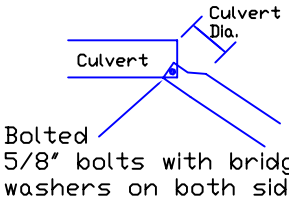
(For Culverts Less Than 36")

DOWNSPOUT

Use where ground conditions are irregular.



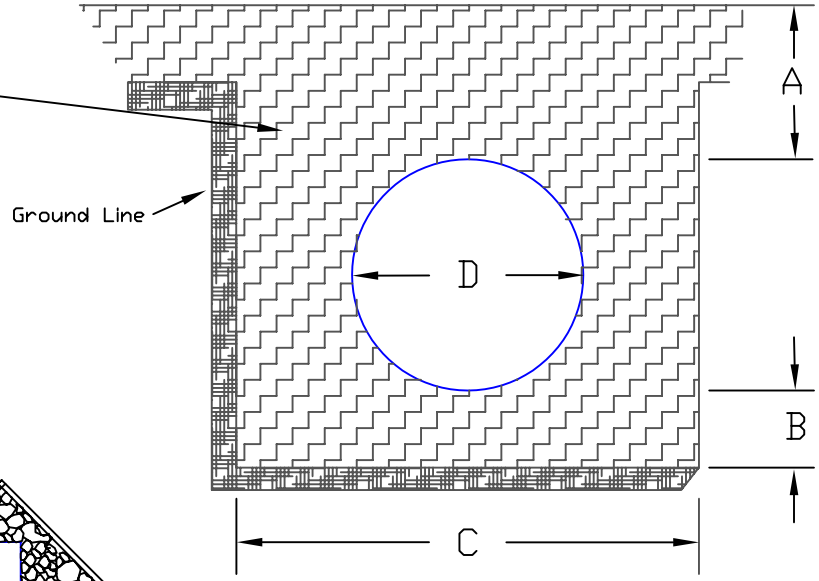
TURNER ELBOW



BEDDING MATERIAL:

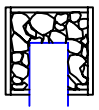
Use granular material - 3" minus. Large rocks shall be replaced with suitable material. Materials of poor or non-uniform bearing capacity shall be removed and replaced with suitable fill.

ROAD SURFACE

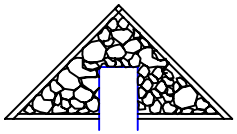


DISSIPATOR SPEC'S
Size in Culvert Diameters

Area	2 X 2
Depth	1
Aggragate	1/3



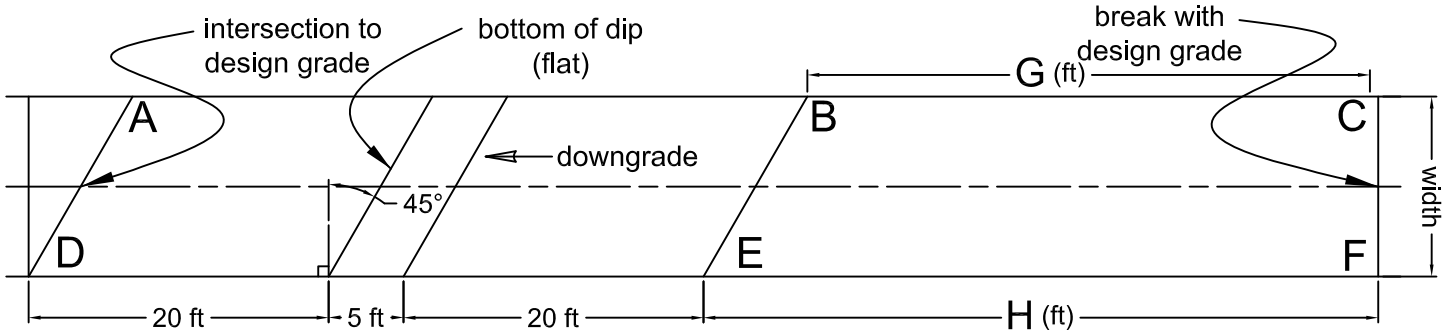
Level



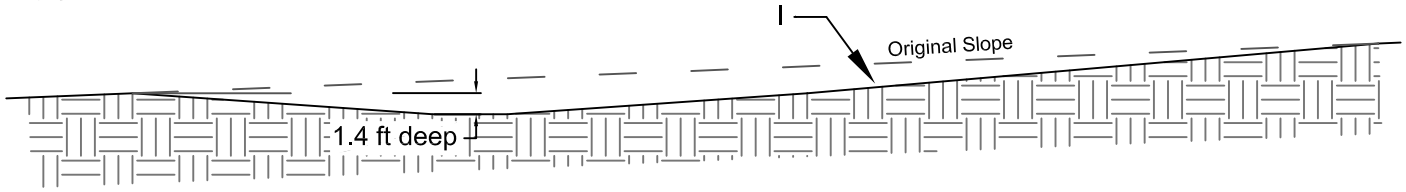
Side Hill

STANDARD 45° ROLLING DIP

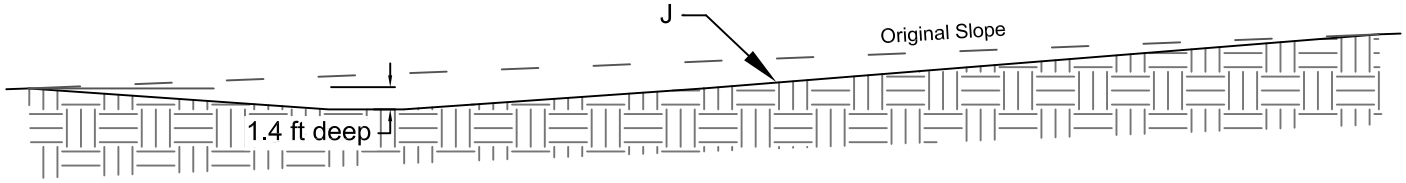
PLAN OF ROLLING DIP

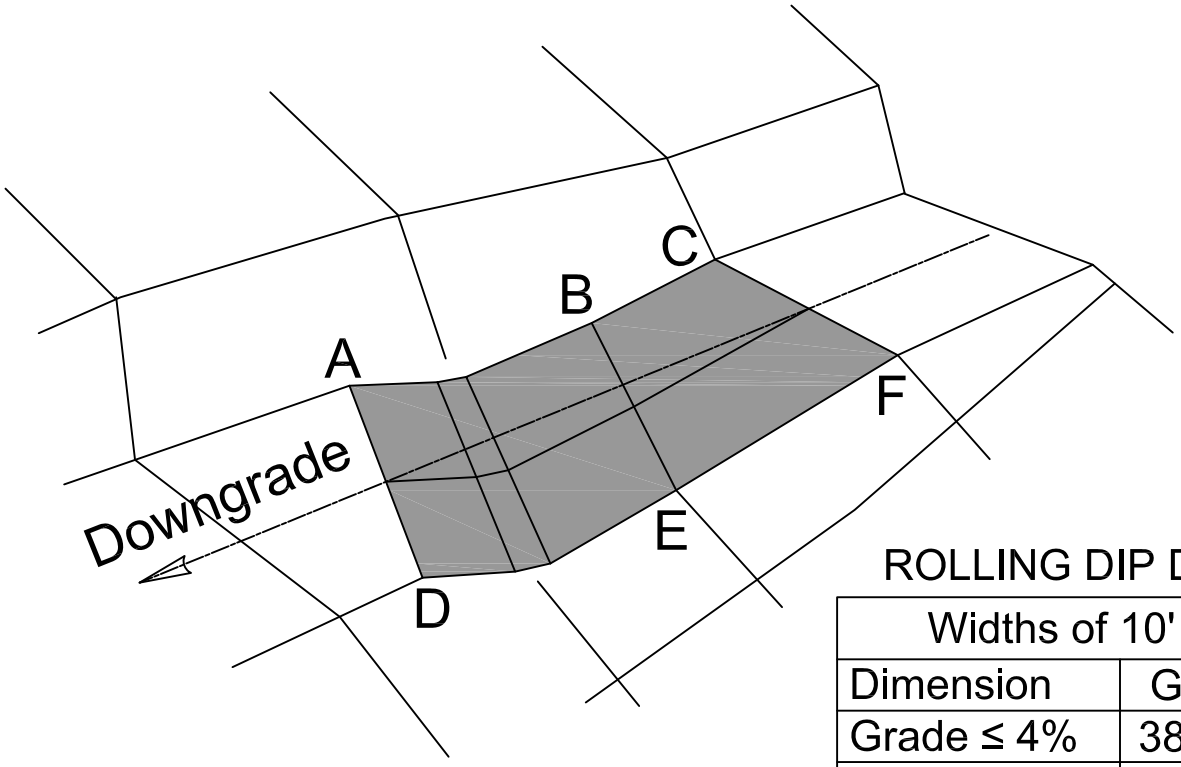


CUT BANK



FILL SLOPE



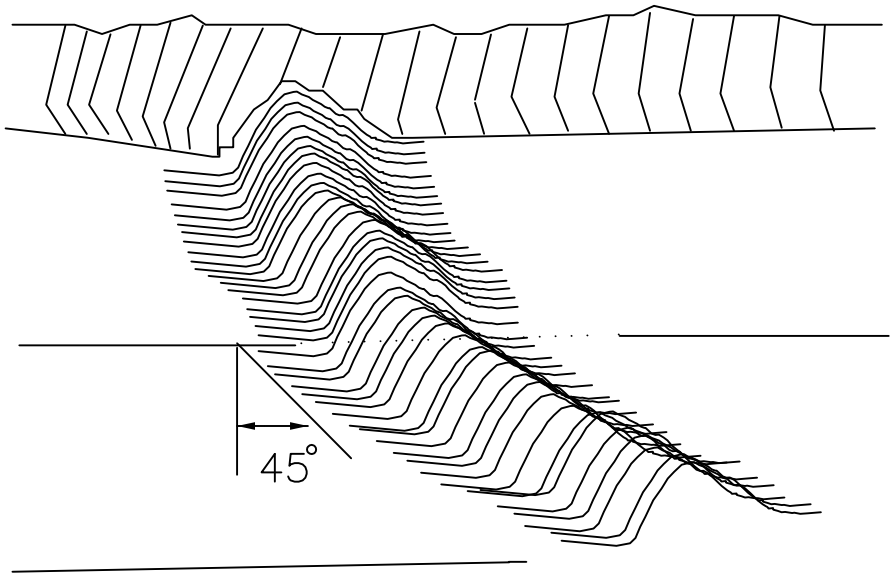


ROLLING DIP DEMENSIONS

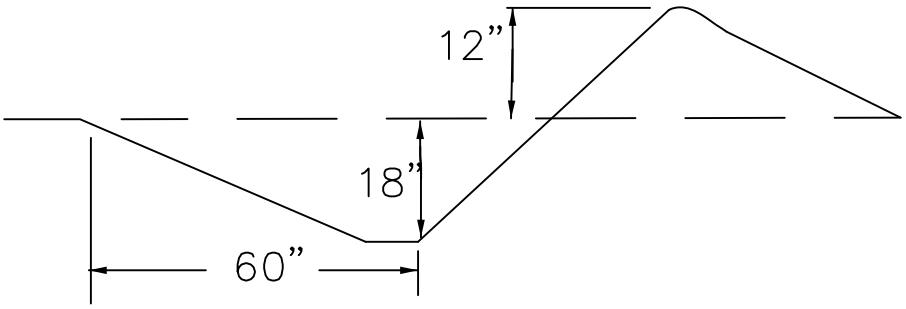
Widths of 10' through 14'				
Dimension	G	H	I	J
Grade ≤ 4%	38'	45'	9%	8%
Grade = 6%	48'	55'	11%	11%
Grade = 8%	58'	65'	14%	14%

Erica Kemp 05/2008

Top View



Side View



1. Waterbar construction for forest roads with little or no traffic.
2. Specifications are average and may be adjusted to conditions.
3. Bottom of waterbar must be outsloped to ensure proper drainage.
4. Rock outlet if steep fill slope is present.

Driveable Waterbar Detail

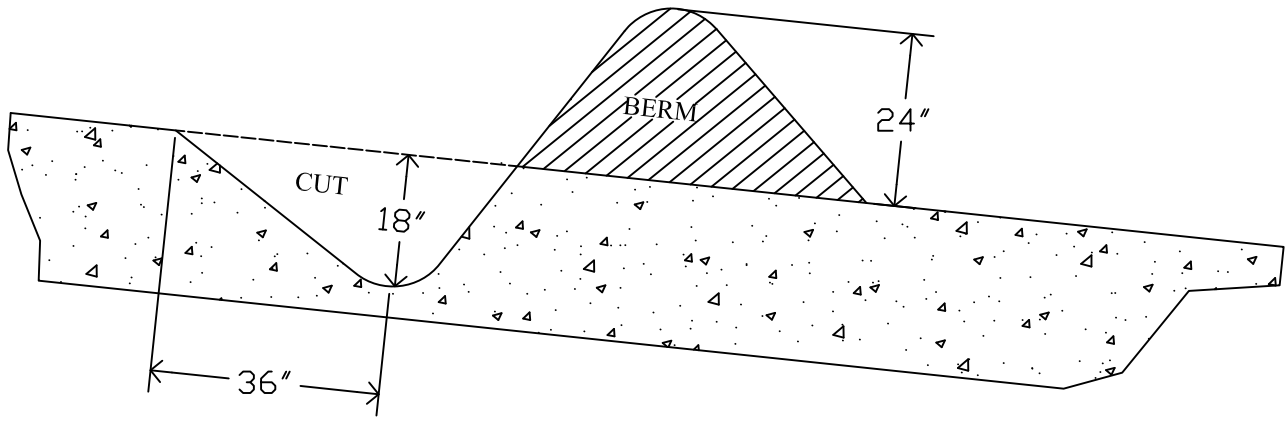
WASHINGTON STATE DEPARTMENT OF
Natural Resources

Northeast Region
Colville, Washington

Designed By:	Stash Slabinski	9/06/05
Drawn By:	Stash Slabinski	9/06/05

Revised:

Non-Driveable Water Bar Detail



Notes:

1. WATERBAR CONSTRUCTION FOR FOREST ROADS WITH NO TRAFFIC. SPECIFICATIONS ARE AVERAGE AND MAY BE ADJUSTED TO CONDITIONS.

2. TIE BERM INTO BANK. IF DITCH EXISTS, TIE CUT INTO DITCH.

3. CONSTRUCT CROSS DRAIN BERM APPROXIMATELY 24 IN. HIGH.

4. CUT WATERBAR A MINIMUM OF 18 IN.

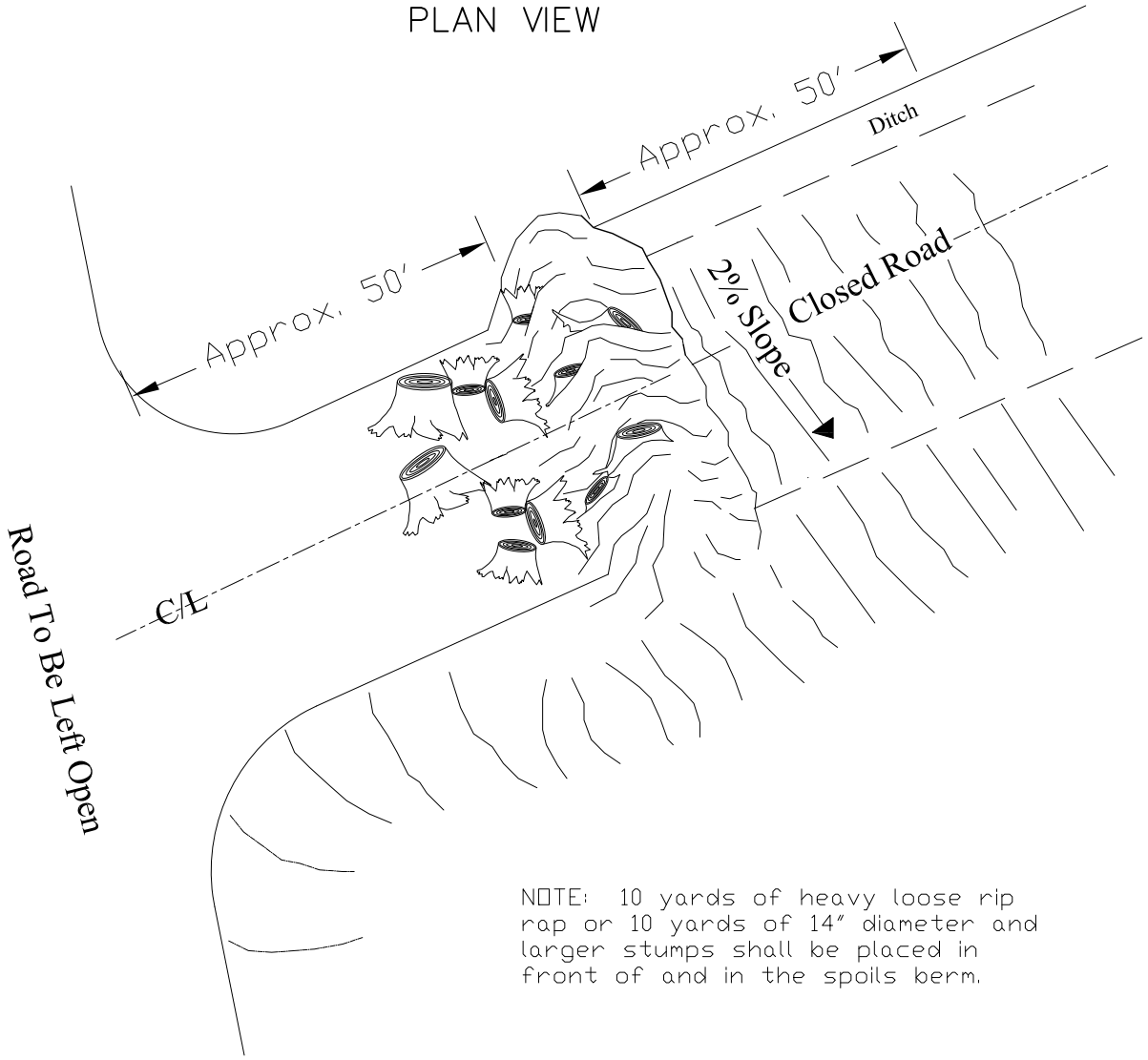
5. ENSURE PROPER DRAINAGE AT OUTLET.

6. SKEW WATERBAR 45 DEGREES DOWNGRADE WITH ROAD CENTERLINE.

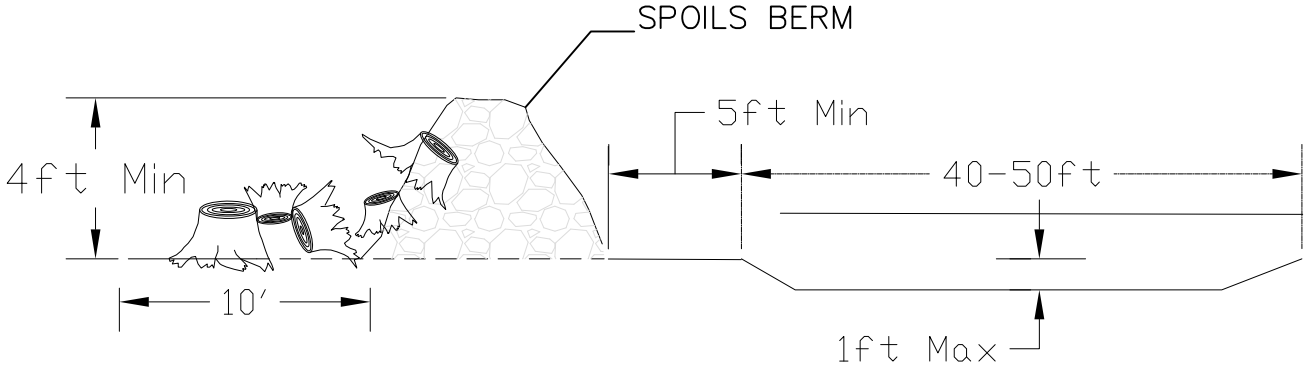
Non-Driveable Waterbar Detail			
Northeast Region Colville, Washington			WASHINGTON STATE DEPARTMENT OF Natural Resources
Designed By:	Stash Slabinski	4/21/05	
Drawn By:	Stash Slabinski	4/21/05	Revised: 1 OF 1

SPOILS BERM DETAIL

PLAN VIEW



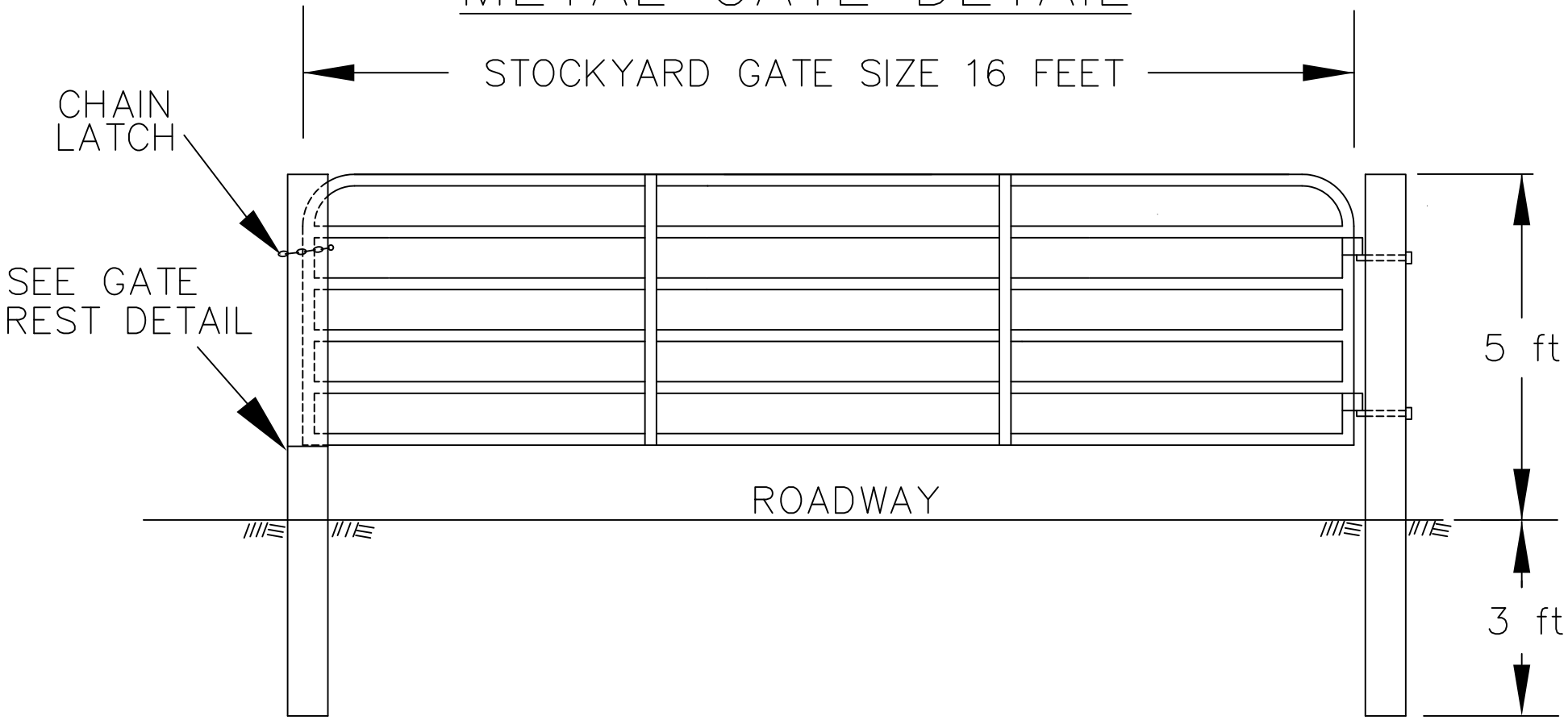
NOTE: 10 yards of heavy loose rip rap or 10 yards of 14" diameter and larger stumps shall be placed in front of and in the spoils berm.

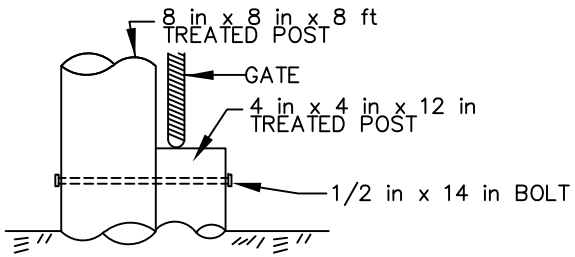


Note: $\frac{1}{3}$ of stumps or rip rap shall be partially buried in the spoils berm and/or road surface.

Revised 8-29-2008

METAL GATE DETAIL

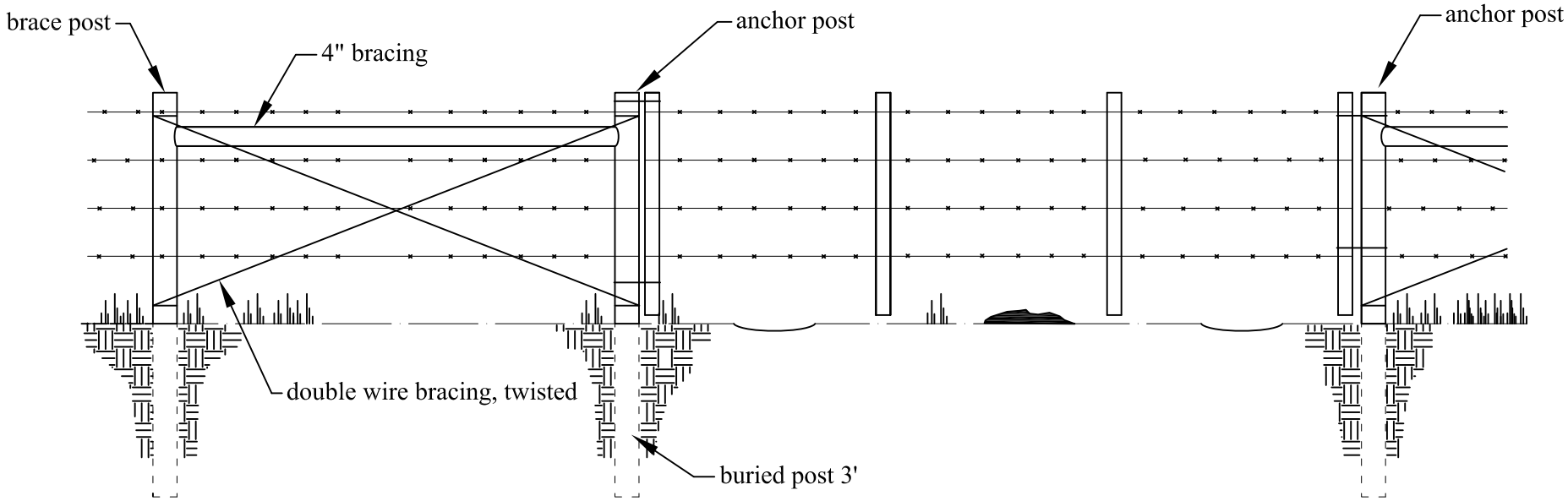




GATE REST DETAIL

1. THE GATE SHALL BE STOCKYARD TYPE OR ITS EQUIVALENT. THE GATE MEMBERS SHALL BE FABRICATED FROM 2 in OD x 16 GAUGE HIGH STRENGTH STEEL TUBING THE VERTICAL STAYS SHALL BE HIGH STRENGTH PRESS FORMED 16 GAUGE STEEL (OR EQUAL). FINISH ON THE GATE SHALL CONSIST OF AT LEAST ONE PRIMER COAT AND ONE COAT OF SURFACE PAINT.
2. ALL BOLTS SHOWN INCLUDE WASHERS AND NUTS.
3. WOODEN POSTS AND WOODEN GATE REST SHALL BE TREATED

4 Strand Wire Gate and Gate Brace Detail



1. First wire from ground must be 14" high.
2. Subsequent wires must be no less than 10" apart.
3. Double wrap all bracing.
4. All brace posts must be 7' long, 5" in diameter, and embedded 3'.
5. Dap braces into posts.
6. Spike braces to posts.
7. There must be 8' on center between anchor post and brace post.
8. The gate stays must be no less than 5' apart and 1 ½" in diameter.
9. Barbed wire must be 12 ½ gauge conventional or 15 ½ gauge high-tension. 2 twisted strands with 14 gauge or heavier two-point barbs on approx. 5 in centers. Class 1 (min. or equivelant) zinc-coating as per ASTM A-121.
10. There must be a gate brace at both ends of the gate.

Washington State Department of
Natural Resources

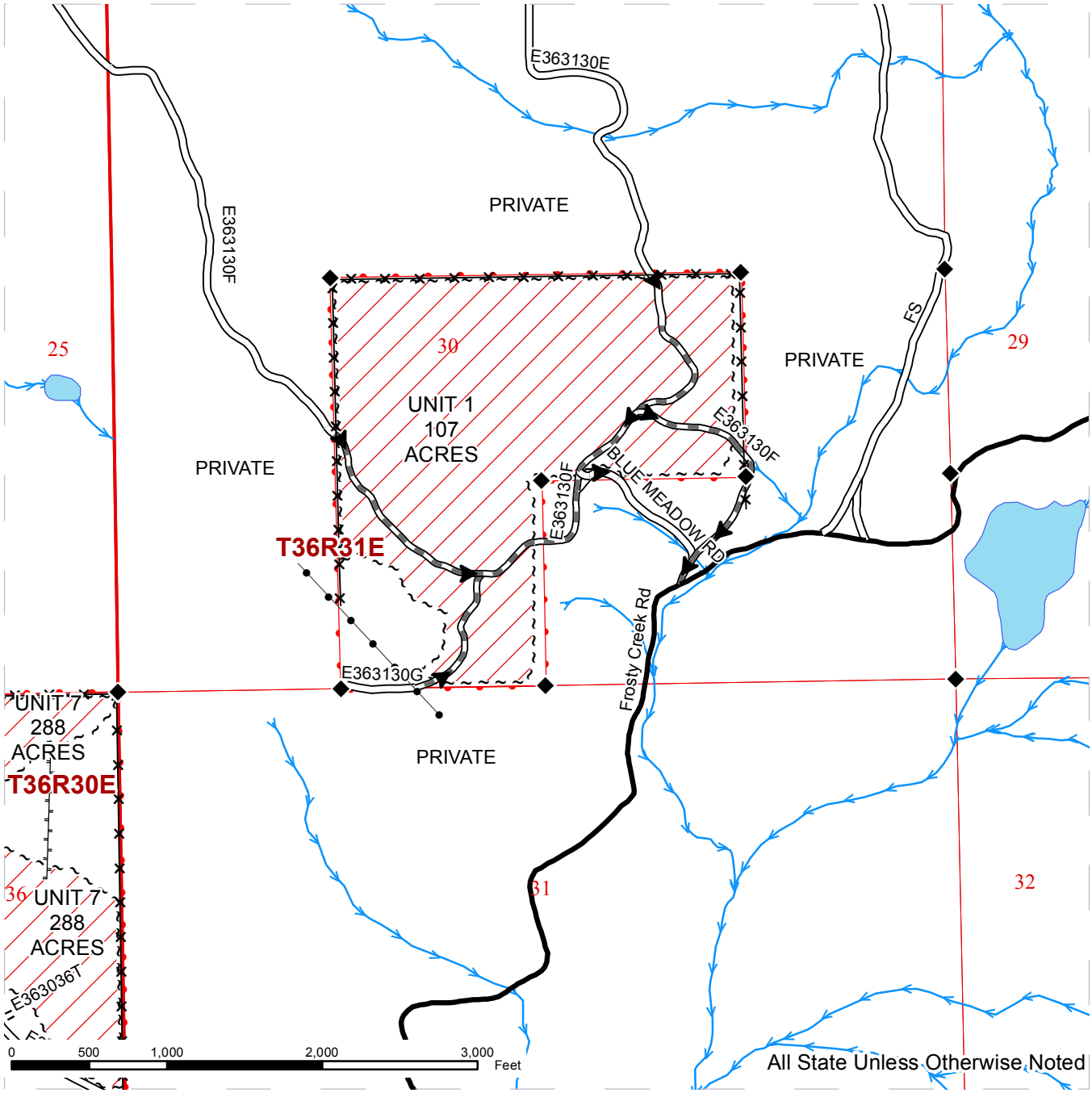
Northeast Region
Colville, Washington

Drawn by:	Jason Bauer
Revised:	10/06/2009

TIMBER SALE MAP

SALE NAME: FROSTY FH FIT
AGREEMENT#: 30-092787
TOWNSHIP(S): T36R30E, T36R31E, T35R31E
TRUST(S): Common School and Indemnity(3)

REGION: Northeast Region
COUNTY(S): OKANOGAN
ELEVATION RGE: 2384-3965



Sale Boundary Tags
Ground Skidding
Extreme Hazard Abatement
Existing Road
Required Construction
Required Reconstruction
Required PreHaul Maintenance
Required Abandonment
Designated Skid Trail
County Road
Haul Route
Gate
Rock Source
Fence
Powerline
Streams
Monument Corners

N

Prepared By: cdic490 Modified By: dzei490 Creation Date: 6/22/2015 Modification Date: 3/25/2016

TIMBER SALE MAP

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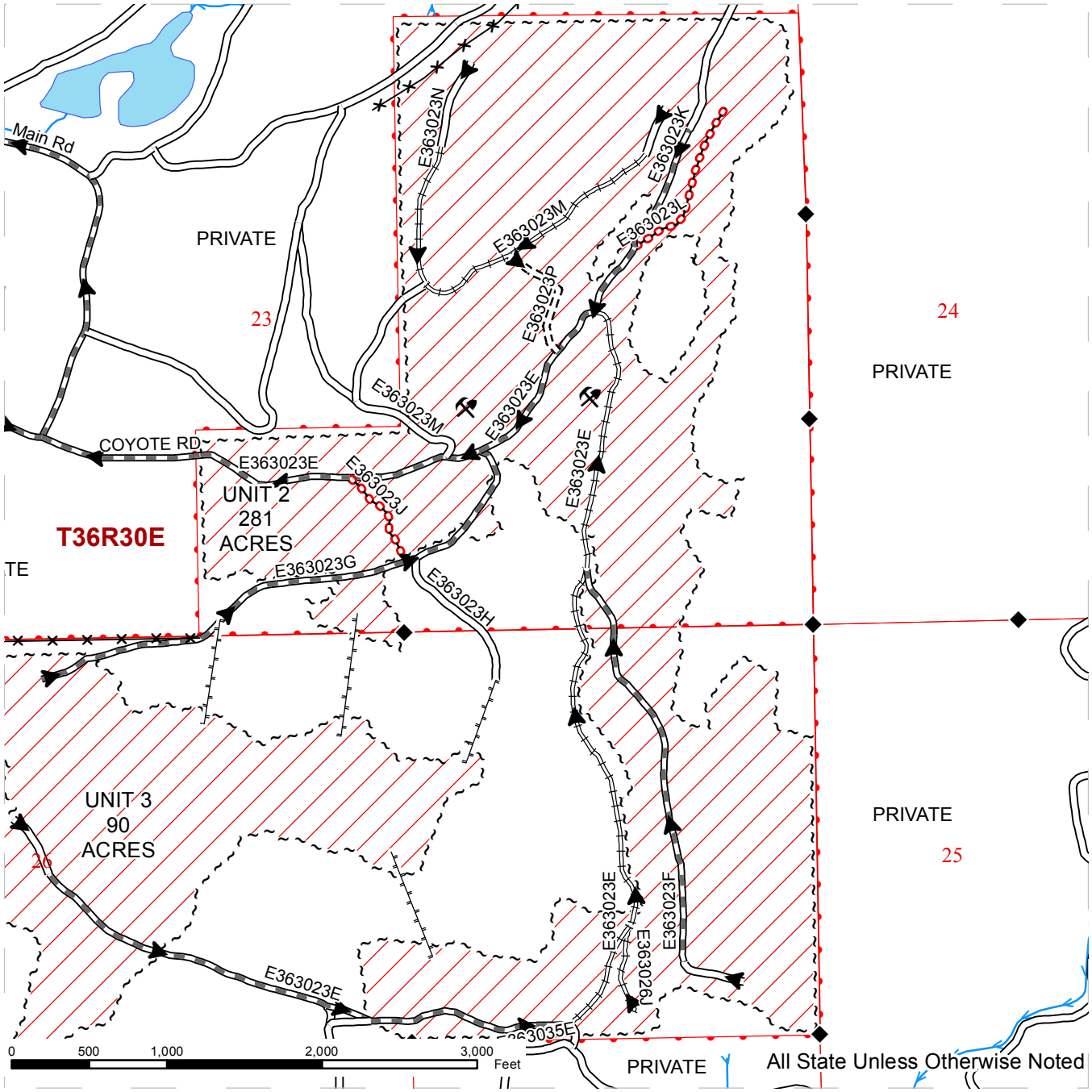

Sale Boundary Tags
Ground Skidding
Extreme Hazard Abatement
Existing Road
Required Construction
Required Reconstruction
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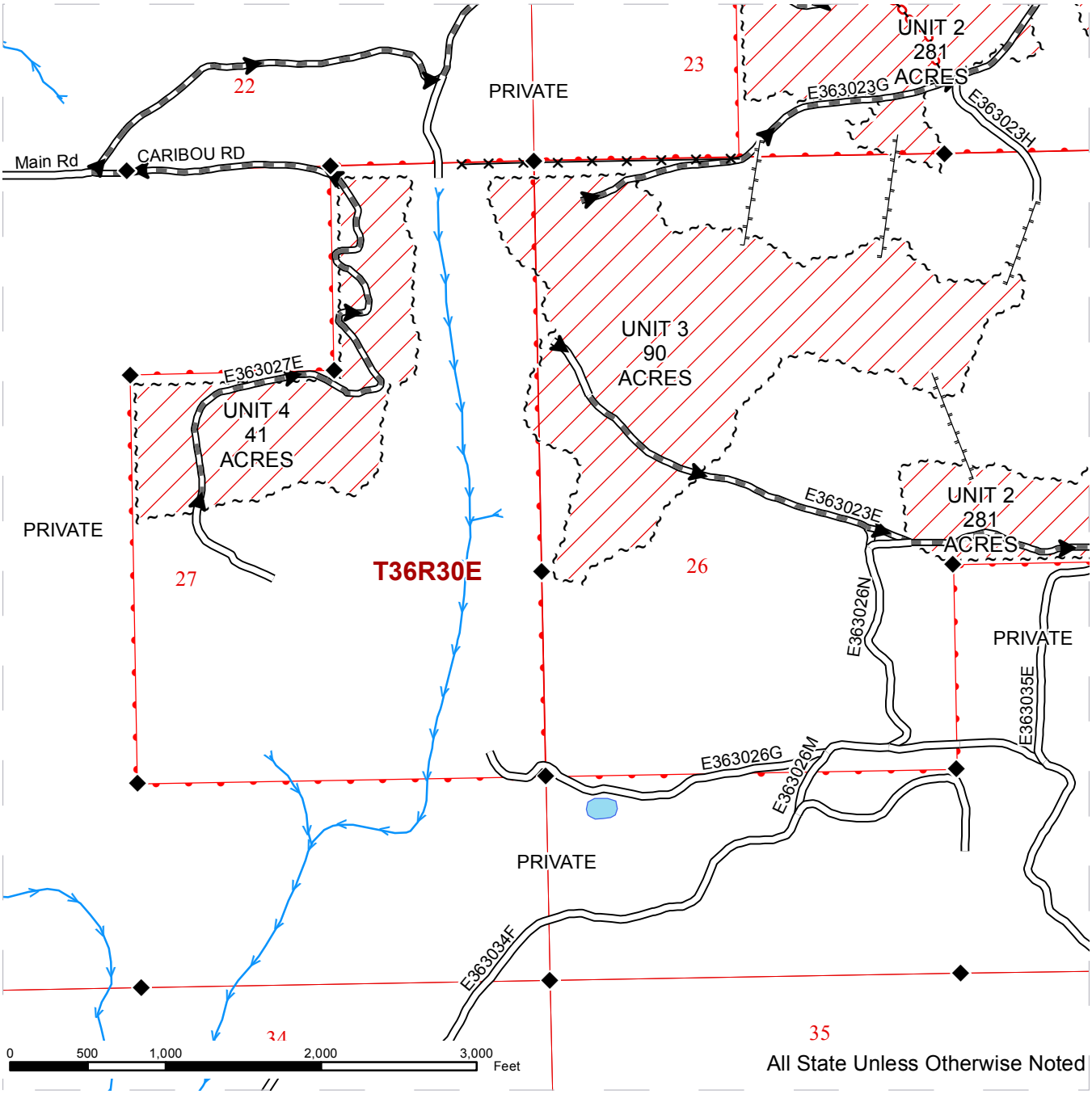

Sale Boundary Tags	Existing Road	Haul Route	Streams
Ground Skidding	Required Construction	Gate	Monument Corners
Extreme Hazard Abatement	Required Reconstruction	Rock Source	
	Required PreHaul Maintenance	Fence	
	Required Abandonment	Powerline	
	Designated Skid Trail		
	County Road		

N

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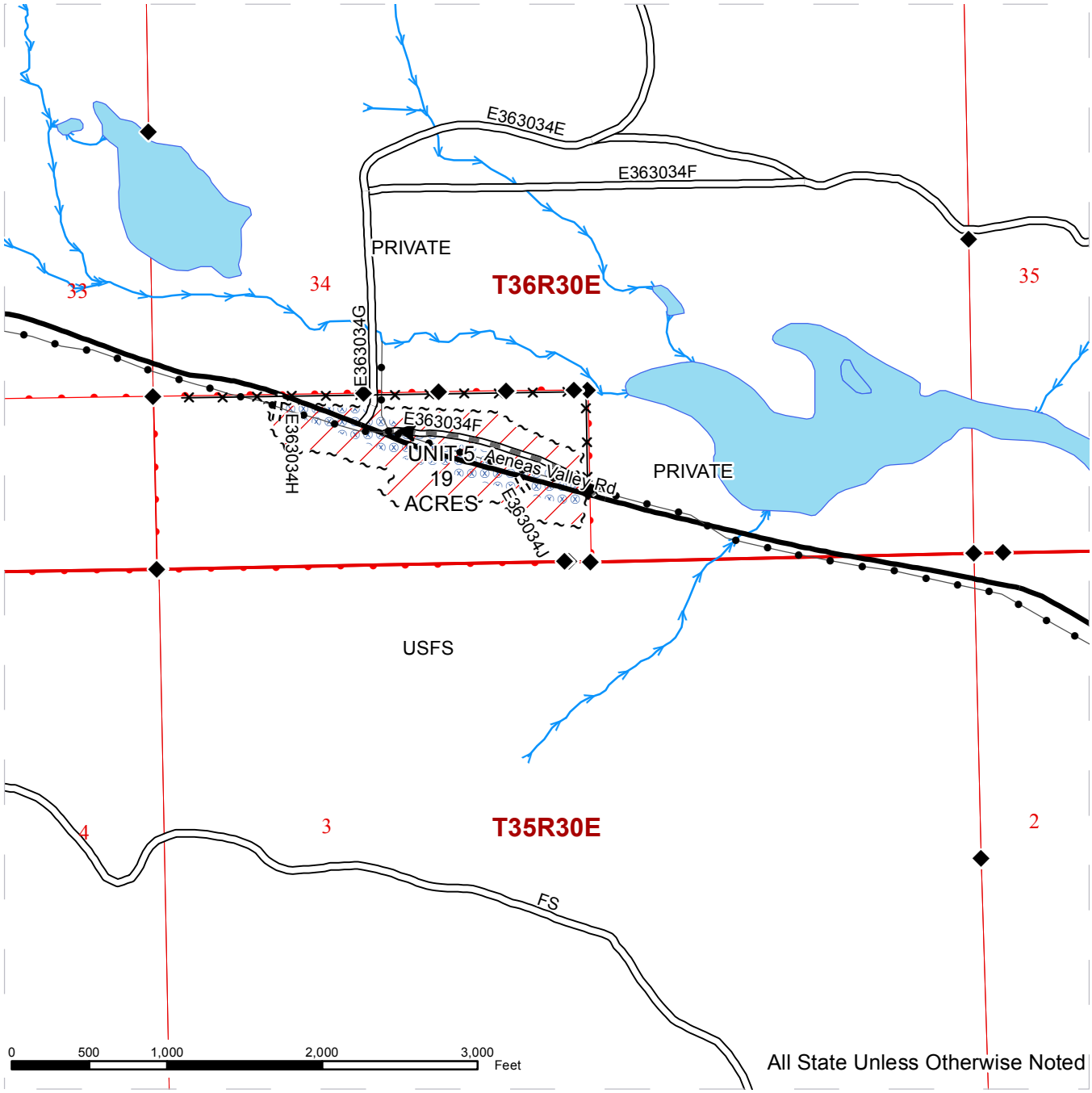

~ ~ ~ Sale Boundary Tags	Existing Road	Haul Route	Streams
Ground Skidding	Required Construction	Gate	Monument Corners
Extreme Hazard Abatement	Required Reconstruction	Rock Source	
	Required PreHaul Maintenance	Fence	
	Required Abandonment	Powerline	
	Designated Skid Trail		
	County Road		

N

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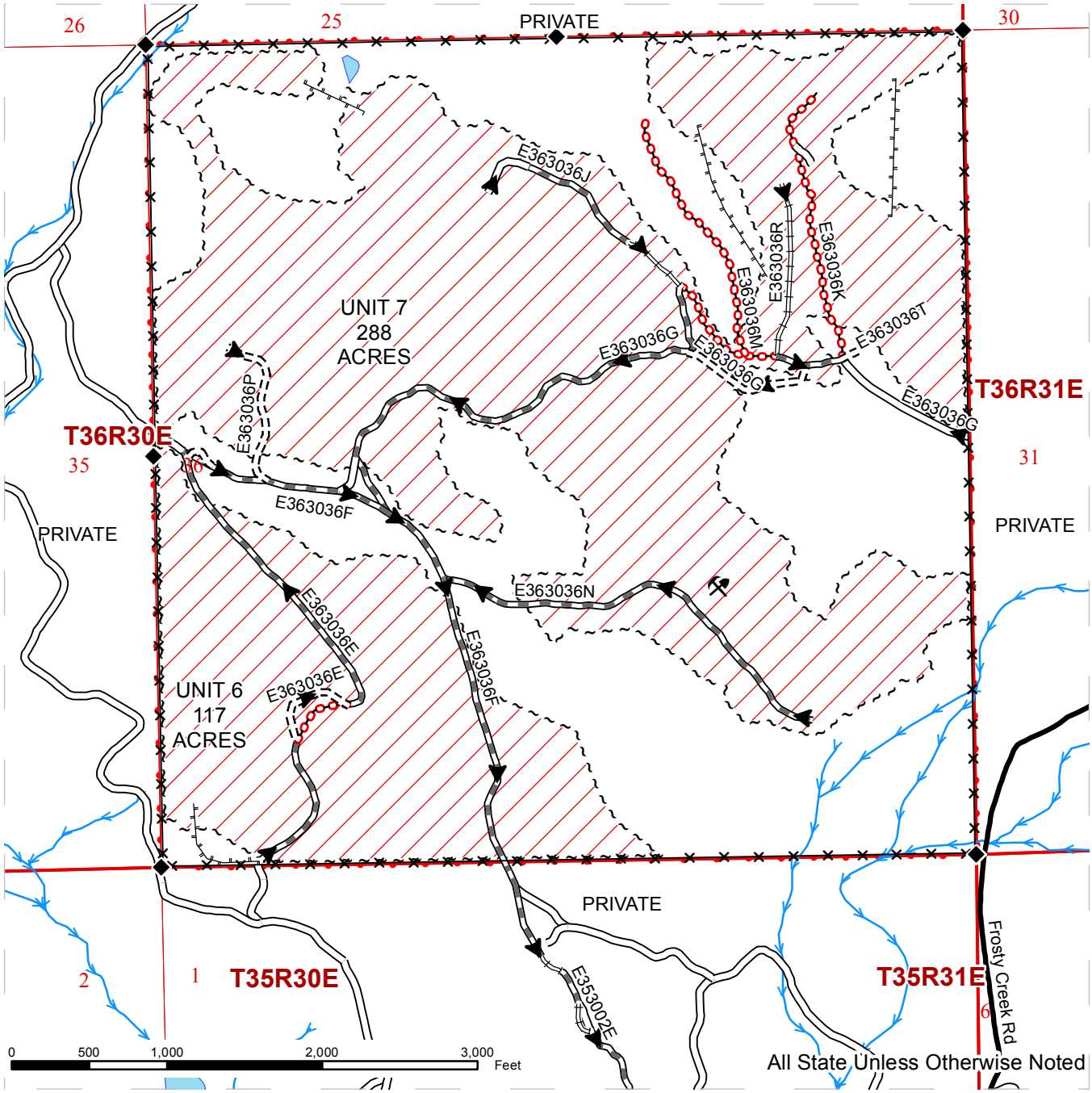

~ ~ ~ Sale Boundary Tags	Existing Road	Haul Route	Streams
Ground Skidding	Required Construction	Gate	Monument Corners
Extreme Hazard Abatement	Required Reconstruction	Rock Source	
	Required PreHaul Maintenance	Fence	
	Required Abandonment	Powerline	
	Designated Skid Trail		
	County Road		

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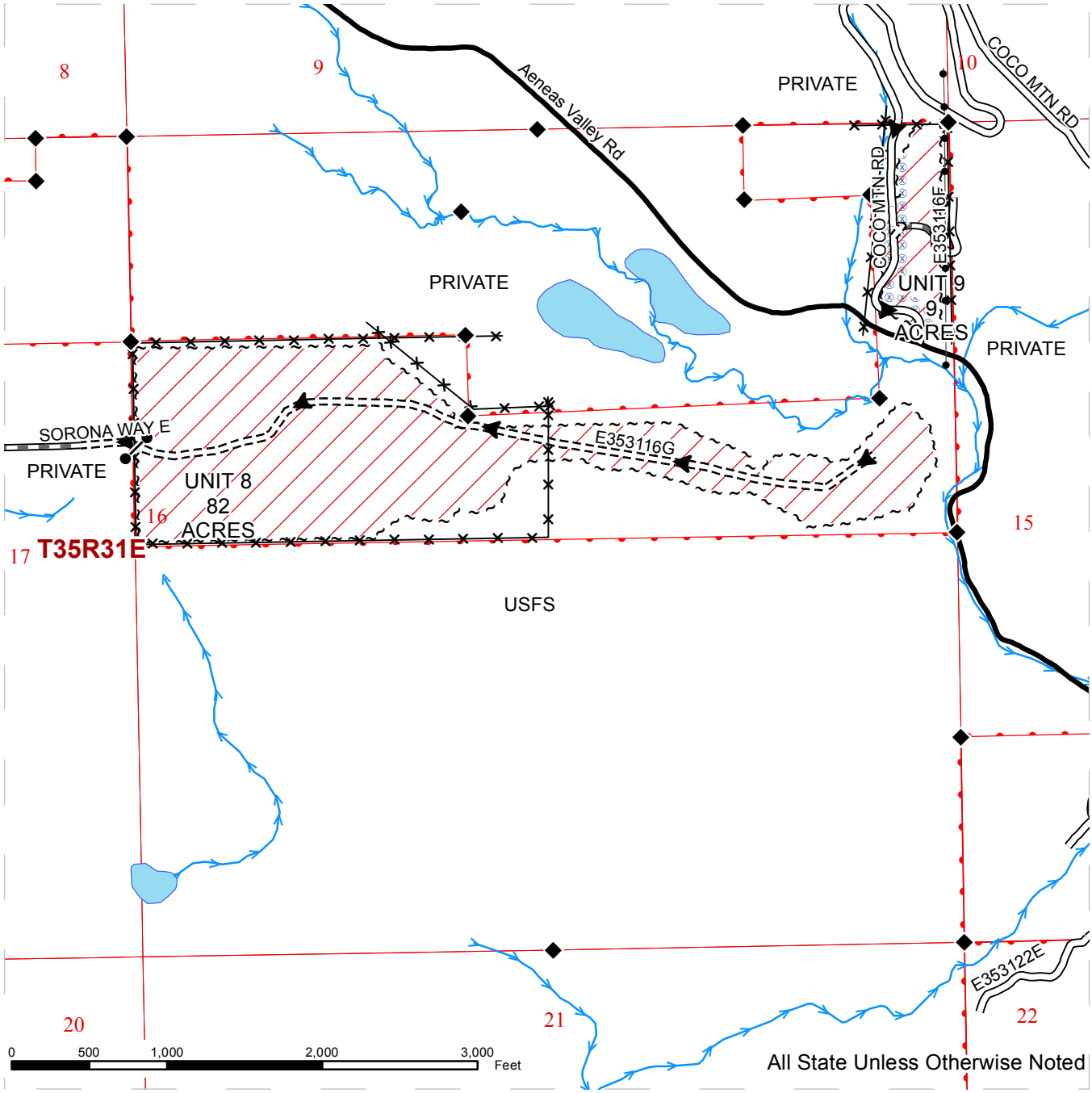

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Ground Skidding
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N

Prepared By: cdic490 Modified By: dzei490 Creation Date: 6/22/2015 Modification Date: 3/25/2016

DRIVING MAP

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AGREEMENT#: 30-092787
TOWNSHIP(S): T36R30E, T36R31E, T35R31E
TRUST(S): Common School and Indemnity(3)

REGION: Northeast Region
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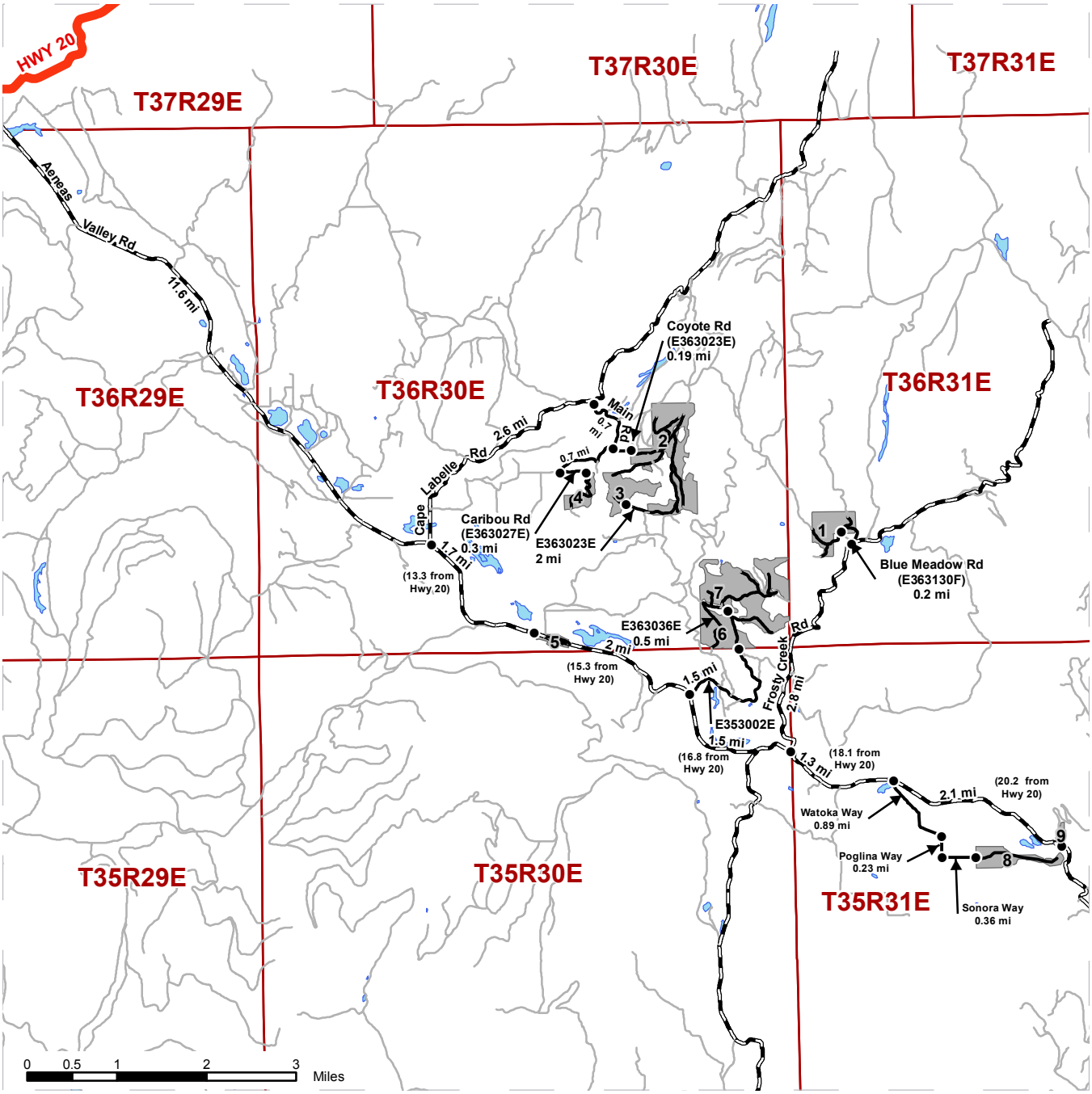

Timber Sale Unit
Haul Route
Other Route
County Road
Highway
Distance Indicator

DRIVING DIRECTIONS:

All units are south of Hwy 20 on Aeneas Valley Road. All driving directions will start from the intersection of Hwy 20 and Aeneas Valley Road.

Unit 2: Travel 11.6 miles South from intersection of Hwy 20 on Aeneas Valley Rd, to Cape Labelle Rd. Travel North on Cape Labelle Rd for 2.6 mi. Turn South on Main Rd (E363022E). Travel 0.7 mi to Coyote Rd. Turn East on Coyote Rd traveling 0.19 mi to unit. At this point Coyote turns to E363023E Rd.

Unit 3: Continue Eastward on E363023E Rd, and then swing to the south, then westward, traveling 2.0 mi to the unit.

Unit 4: At the intersection of Coyote Rd and Main Rd, continue traveling West 0.7 mi on Main Rd to intersection of Caribou Rd. Travel East on Caribou Rd (E363027E) 0.3 mi.

Unit 5: From intersection of Hwy 20, travel South 13.3 mi on Aeneas Valley Rd to unit.

Unit 6: From intersection of Hwy 20, travel South 15.3 mi on Aeneas Valley Rd to intersection of E353002E Rd. Turn East onto E353002E Rd and travel 1.5 mi to unit. Once on State Land E353002E Rd turns into E363036E Rd.

Unit 7: Continue North on E363036E Rd, through Unit 6, for 0.5 mile to reach unit.

Unit 1: From intersection of Hwy 20, travel South 16.8 mi on Aeneas Valley Rd to intersection of Frosty Creek Rd. Travel East on Frosty Creek Rd 2.8 mi to intersection of Blue Meadow Rd (E363130F). Travel North on Blue Meadow Rd (E363130F) 0.2 mi.

Unit 8: From intersection of Hwy 20, travel South 18.1 mi on Aeneas Valley Rd to Watoka Way. Travel Southward on Watoka Way 0.89 mile, turning South and changing into Poglina Way travelling 0.23 mi, then turning East and changing into Sonora Way travelling 0.36 mi. to the unit.

Unit 9: From intersection of Hwy 20, travel South 20.2 mi on Aeneas Valley Rd to unit.

N

Prepared By: cdic490 Modified By: dzei490 Creation Date: 6/22/2015 Modification Date: 3/10/2016

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

HARVESTING SERVICES CONTRACT
SEALED BID FORM

FROSTY FH FIT
NO. 92787

_____
(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:

N/A

(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.

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

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)

Statement of Available Resources and Work Plan

Attach additional pages if necessary.

1. List your available resources (i.e. # of sides, crew & equipment dedicated to the project, use of subcontractors) and describe your plans how you will complete this project within the project schedule.

2. Provide an estimated time-line indicating your expected rate of log deliveries to the state's designated log purchaser locations for this project.

3. Describe how you plan to complete any additional special work requirements identified in section 3.02 of the project's RFQ.

Exhibit F

Road Cost Proposal

Instructions:

1. Enter Contractor's per station bid rates for each biddable item unless specified differently below.

2. Required items (Proposed Stations = required) are fixed to the stations listed in the table and the total should reflect the total cost for completing all stations for that item. Multiply the Price per Station bid and the Stations and enter the total cost for each item.

3. Non-required items (Proposed Stations is blank) may be bid for on a proposed quantity of work. Enter the number of stations in the Proposed Stations column for that item the Contractor proposes to complete. Enter the Contractor's per station bid rate for each of these items. Multiply the Price per Station bid and the Stations and enter the total cost for each item.

4. Add all item totals and enter the total in the Total Road Cost Proposal below the table.

Roads	Type	Stations or Quantities	Proposed Stations or Quantities	Price per Station or Quantities	Total
Caribou Rd	Pre-haul maintenance	16.2	Required		
Coyote Rd	Pre-haul maintenance	10.34	Required		
Main Rd	Pre-haul maintenance	81.4	Required		
Poglina Way	Pre-haul maintenance	12.8	Required		
Sorona Way	Pre-haul maintenance	16.6	Required		
Sorona Way	Construction	3.4	Required		
Watoka Way	Pre-haul maintenance	47.3	Required		
E353002E	Pre-haul maintenance	73.9	Required		
E353002E	Reconstruction	2.7	Required		
E353002E	Pre-haul maintenance	4.4	Required		
E353116F	Construction	1	Required		
E353116F	Pre-haul maintenance	2.7	Required		
E353116G	Construction	50.3	Required		
E363023E	Pre-haul maintenance	31.56	Required		
E363023E	Reconstruction	60.1	Required		
E363023E	Pre-haul maintenance	26	Required		
E363023F	Pre-haul maintenance	26.9	Required		
E363023G	Pre-haul maintenance	36	Required		
E363023K	Pre-haul maintenance	13	Required		
E363023M	Reconstruction	17	Required		
E363023N	Reconstruction	8.6	Required		
E363023P	Construction	8	Required		
E363026J	Reconstruction	4.3	Required		
E363027E	Pre-haul maintenance	36.6	Required		
E363034F	Pre-haul maintenance	14.5	Required		
E363034H	Construction	1	Required		

E363034J	Construction	1	Required		
E363036E	Pre-haul maintenance	20	Required		
E363036E	Construction	6.6	Required		
E363036E	Pre-haul maintenance	9.9	Required		
E363036F	Pre-haul maintenance	42.9	Required		
E363036F	Construction	2.6	Required		
E363036G	Pre-haul maintenance	33.4	Required		
E363036G	Construction	8.8	Required		
E363036J	Pre-haul maintenance	3.7	Required		
E363036J	Reconstruction	4.3	Required		
E363036J	Pre-haul maintenance	8.7	Required		
E363036N	Pre-haul maintenance	28.5	Required		
E363036P	Construction	11	Required		
E363036R	Pre-haul maintenance	2	Required		
E363036R	Reconstruction	11.3	Required		
E363036T	Construction	1.5	Required		
E363130E	Pre-haul maintenance	7.8	Required		
E363130F	Pre-haul maintenance	48.1	Required		
E363130G	Pre-haul maintenance	9.7	Required		
E363023E	Decommission	60.1	Required		
E363023J	Abandon	8	Required		
E363023L	Abandon	10.9	Required		
E363034H	Decommission	1	Required		
E363034J	Decommission	1	Required		
E363036E	Abandon	4	Required		
E363036G	Decommission	9.3	Required		
E363036J	Decommission	13	Required		
E363036K	Abandon	18.3	Required		
E363036M	Abandon	16.8	Required		
E363036R	Decommission	13.3	Required		
Old 36G	Abandon	8.4	Required		

Total Road Cost Proposal = $_____

WASHINGTON STATE DEPARTMENT OF Natural Resources

TIMBER NOTICE OF SALE

***SALE NAME**: FROSTY FH FIT* ***AGREEMENT NO**: 30-93553 - 30-93558*

AUCTION: May 24, 2016 starting at 10:00 a.m. **COUNTY: Okanogan**
Northeast Region Office, Colville, WA

SALE LOCATION: Sale located approximately 20 miles southeast of Tonasket, Washington.

PRODUCTS SOLD AND SALE AREA: All timber except leave trees as described in Schedule A in Units 1, 2, 3, 4, 5, 6, 7, 8, and 9 bounded by blue Special Management Unit Boundary tags meeting the specifications described below; on parts of Section 16 in Township 35 North, Range 31 East, Sections 23, 26, 27, 34, and 36 all in Township 36 North, Range 30 East, Section 30 in Township 36 North, Range 31 East W.M., containing 1034 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		
30-093553	01	DF/WL 7" - 10" dib	N/A	780	4680	6		$67.00	$313,560.00	$31,356.00
30-093554	02	DF/WL 11"+ dib	N/A	578	2890	5		$80.00	$231,200.00	$23,120.00
30-093555	03	DF/WL 5" - 6" dib and no-chuck DF/WL 7" - 10"dib	N/A	324	2074	6.4		$46.00	$95,404.00	$9,540.40
30-093556	04	PP 7" - 10"" dib	N/A	350	2100	6		$49.00	$102,900.00	$10,290.00
30-093557	05	PP 11"+ dib	N/A	332	1660	5		$60.00	$99,600.00	$9,960.00
30-093558	06	DF/WL/PP 2"+ dib utility and no-chuck DF/WL 11"+dib	N/A	76	684	9		$22.00	$15,048.00	$1,504.80
Totals:				**2440**	**14088**				**$857,712.00**	

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

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

EXPIRATION DATE: January 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 Northeast Region Office in Colville WA. Phone number (509)684-7474.

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 = $28.00 per Ton for sorts 01, 02, 03, 04 and 05 and $13.00 per Ton for sort 06.

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 x C miles) + ($0.11 x A miles)) x 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.

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 Sam Steinshouer or Matt Lougy at the Northeast Region Office at (509)684-7484 or Steve Teitzel at the Product Sales and Leasing Division Office in Olympia at (360)902-1741.

Cruise Narrative

Sale Name: Frosty FH FIT	**Region:** Northeast
Agreement Number: 30-092787	**District:** Highlands
Lead Cruiser: Cougar Environmental	**Completion Date:** 9/15/2014
Other Cruisers on sale: Tracy Smith, Cole Wrbelis	**Legal:** Section 16, T 35 N, R 31 E; Sections 23, 26, 27, 34 & 36, T 36 N, R 30 E; Section 30, T 36 N, R 31 E WM.

Unit Acreage Specifications:

Unit #	Gross Acres	Net Acres	Total Deletions	Existing Roads	Leave Tree Acres	Power Line	RMZ Acres
1	106.54	106.54	0.00				
2	281.71	280.71	1.00				1.00
3	91.35	90.45	0.90				0.90
4	41.46	41.46	0.00				
5	21.98	19.38	2.60	2.60			
6	117.21	117.21	0.00				
7	288.21	288.01	0.20				0.20
8	82.68	82.38	0.30				0.30
9	9.60	8.80	0.80	0.80			
		0.00					
Total	1040.74	1034.94	5.80	3.40	0.00	0.00	2.40

Cruise Sample Design:

This timber sale was cruised using the **variable plot** sampling method. Each plot was a full plot. Plot locations were created using a computer generated grid, and found using a hand held GPS unit.

Unit #	Small BAF (count)	Large BAF (cruise)	Sighting height	Grid size (plot spacing in feet)	% Cruise to count Target	% Cruise to count Actual	Total number of Plots
1	20.00	20.00	D4H	450 X 450	100%	100%	21
2	20.00	20.00	D4H	450 X 450	100%	100%	58
3	20.00	20.00	D4H	450 X 450	100%	100%	17
4	20.00	20.00	D4H	450 X 450	100%	100%	6
5	20.00	20.00	D4H	450 X 450	100%	100%	4
6	20.00	20.00	D4H	450 X 450	100%	100%	23
7	20.00	20.00	D4H	450 X 450	100%	100%	61
8	20.0 / 33.61	20.0 / 33.61	D4H	450 X 450	100%	100%	17
9	20.00	20.00	D4H	450 X 450	100%	100%	3
Total							210

Cruise Specifications:

Minor species cruise intensity:	We grade all trees that were in with the small BAF.
Minimum top dib:	**Ponderosa pine:** Trees less than 17.5” DBH have a minimum top of 5.6” dib. Trees 17.6” and greater DBH have a minimum top dib of 40% of DOB at 16’or a 6” top whichever is greater. **All other species:** Trees less than 17.5” DBH have a minimum top of 4.6” dib. Trees 17.6” and greater DBH have a minimum top dib of 40% of DOB at 16’or a 6” top whichever is greater.
Minimum dbh:	Ponderosa pine: 8.0 inches DBH All other species: 7.0 inches DBH
Log lengths:	Saw logs: 16 feet where possible, minimum of 12 feet Utility: 16 feet where possible, minimum of 12 feet
Take / Leave tree description:	Harvest all conifers that meet the minimum cruise specifications and are not to be left according to the prescription guidelines. All units have a prescription written for them. See “Schedule A”
Commercial species observed in sale area, but not in cruise:	Engelmann spruce
Utility wood:	Comprised of non-board foot volume and volume below the minimum top diameter of 5” or 40% of DOB at 16’ to a minimum of a 2.6” top.
Status codes used:	L – leave tree
Sort codes used	D – saw log, U – utility log
Species table used:	NE 2 inch 16
Grade table used:	Eastgrad
Other tables used (cruise adjustment):	Cruise adjustment table “General” was used in unit 8 only to account for the loss of volume from the North Star fire. 20% of the volume was deducted in this unit.

Field Observations:

Location:	Eastern Okanogan County, 21 miles southeast of Tonasket, Washington.
Aspect:	North, East, South and West
Elevation:	2400 to 3900
Slope:	Unit 1 – 0% to 40% Unit 2 – 0% to 40% Unit 3 – 0% to 45% Unit 4 – 0% to 35% Unit 5 – 0% to 50% Unit 6 – 0% to 45% Unit 7 – 0% to 40% Unit 8 – 0% to 75% Unit 9 – 0% to 45%
Harvest Methods:	100% Ground base yarding with the longest skidding of 1200 feet.
Stand Composition:	The stands are second growth ponderosa pine and Douglas-fir with larger residual trees. There is a minor component of western larch.
Stand Health:	The many of trees in units 8 & 9 have been killed by the North Star Fire which burned in August. Bark beetles are active and the woodpeckers are working on those trees. There is mistletoe in some of the ponderosa pine, Douglas-fir and western larch.
Timber Quality:	The timber is a mix of fair quality Douglas-fir (68%), ponderosa pine (30%) and western larch (2%).
Non-board Foot Volume:	74 mbf of the total sale volume is comprised of utility wood.
Other Considerations:	This area was cruised by contract cruisers working for Cougar Environmental in 2014. We removed the plots that were not in the sale area and manipulated the cruise to remove the leave tree volume. These trees are marked with an “L” in the status column.

Trust and Counties:

Trust – 03, Located in Okanogan County

Prepared by: Dan Griggs

Title: Forest Check Cruiser 1

CC: Timber Sales Document Center & File #30-092787

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T35N R31E S16 Ty00U8
THRU
T36N R31E S30 Ty00U1

Project: **FROSTYFH**

Acres **1,034.94**

Page **1**
Date **11/24/2015**
Time **11:42:32AM**

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF		D	2	13	8.5	227	207	215			85	15	100				16	14	107	1.42	1.9
DF		D	3	33	5.6	572	540	559		67	31	2	100				16	10	62	0.81	8.8
DF		D	4	49	6.7	834	778	805	17	82	1		100				16	7	25	0.34	31.2
DF		U	UT	5		72	72	74	86	8	6		100				16	4	15	0.20	4.9
DF	**Totals**			30	6.3	1,704	1,597	1,653	12	63	22	3	100				16	7	34	0.46	46.9
DF	L	D	2	25	5.3	114	108	112			28	72	100				16	17	187	2.23	.6
DF	L	D	3	28	6.7	126	118	122		22	28	50	100				16	14	121	1.45	1.0
DF	L	D	4	41	3.6	182	175	181	11	70	7	12	100				16	7	31	0.43	5.7
DF	L	U	UT	6	5.7	23	21	22	40			60	100				16	5	33	0.40	.6
DF	**Totals**			8	5.0	444	422	437	6	35	18	40	100				16	8	53	0.68	7.9
WL	L	D	2	57	1.3	67	66	68			47	53	100				16	17	179	1.84	.4
WL	L	D	3	31	2.0	37	36	37		42	58		100				16	12	83	0.93	.4
WL	L	D	4	11		12	12	13		100			100				16	8	34	0.46	.4
WL	L	U	UT	1		0	0	0	100				100				16	4	10	0.32	.0
WL	**Totals**			2	1.4	116	115	119	0	24	45	31	100				16	12	96	1.06	1.2
WL		D	2	26		15	15	16			21	79	100				16	17	177	1.88	.1
WL		D	3	28	29.1	23	16	17		73	27		100				16	11	48	0.74	.3
WL		D	4	46	14.9	31	26	27	19	81			100				16	7	22	0.29	1.2
WL	**Totals**			1	16.3	69	58	60	9	57	13	21	100				16	8	36	0.47	1.6
PP	L	D	3		10.7	6	5	6				100	100				16	20	250	3.06	.0
PP	L	D	4	41	2.0	1,026	1,005	1,040			62	38	100				16	15	137	1.61	7.4
PP	L	D	5	59	4.8	1,511	1,438	1,488		72	20	8	100				16	9	46	0.63	31.6
PP	**Totals**			46	3.7	2,542	2,449	2,534		42	37	21	100				16	10	63	0.81	39.0
PP		D	4	26	3.5	194	187	194			90	10	100				16	14	116	1.43	1.6
PP		D	5	74	7.5	557	515	533		87	13		100				16	8	35	0.50	14.6
PP	**Totals**			13	6.5	751	702	727		64	33	3	100				16	9	43	0.59	16.2
Totals					5.1	5,627	5,343	5,529	4	51	31	15	100				16	9	47	0.62	112.8

TC PSTATS

PROJECT STATISTICS

PROJECT FROSTYFH

DATE 11/24/2015

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
35N	31E	16	FROSTY FH	00U8	THR	1,034.94	210	515	S	E
36N	31E	30	FROSTY FH	00U1						

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	210	515	2.5		
CRUISE	170	515	3.0	51,120	1.0
DBH COUNT					
REFOREST COUNT					
BLANKS	40				
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
P PINE	76	7.9	13.7	61	2.2	8.1	751	702	158	150
P PINE-L	241	16.9	16.1	60	6.0	23.9	2,542	2,449	506	503
DOUG FIR	152	20.2	11.9	60	4.5	15.5	1,704	1,597	355	339
DOUG FIR-L	37	3.7	13.4	58	1.0	3.6	444	422	87	87
W LARCH	4	.5	13.7	70	0.1	.5	69	58	14	12
W LARCH-L	5	.2	20.1	91	0.1	.5	116	115	20	20
TOTAL	*515*	*49.4*	*13.9*	*60*	*14.0*	*52.2*	*5,627*	*5,343*	*1,140*	*1,112*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	**SAMPLE TREES - BF** LOW	AVG	HIGH	# OF TREES REQ. 5	7	INF. POP. 10
P PINE	74.4	8.5	128	140	152			
P PINE-L	86.4	5.6	230	243	257			
DOUG FIR	73.9	6.0	119	126	134			
DOUG FIR-L	105.3	17.3	270	326	383			
W LARCH	114.8	65.6	80	233	385			
W LARCH-L	76.8	38.2	398	644	890			
TOTAL	*100.1*	*4.4*	*194*	*203*	*212*	*401*	*205*	*100*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	**TREES/ACRE** LOW	AVG	HIGH	# OF PLOTS REQ. 5	7	INF. POP. 10
P PINE	274.6	19.0	6	8	9			
P PINE-L	151.6	10.5	15	17	19			
DOUG FIR	258.9	17.9	17	20	24			
DOUG FIR-L	413.6	28.5	3	4	5			
W LARCH	1134.9	78.3	0	0	1			
W LARCH-L	719.4	49.6	0	0	0			
TOTAL	*139.2*	*9.6*	*45*	*49*	*54*	*775*	*396*	*194*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	**BASAL AREA/ACRE** LOW	AVG	HIGH	# OF PLOTS REQ. 5	7	INF. POP. 10
P PINE	232.1	16.0	7	8	9			
P PINE-L	134.9	9.3	22	24	26			
DOUG FIR	189.3	13.1	13	16	18			
DOUG FIR-L	334.0	23.0	3	4	4			
W LARCH	988.7	68.2	0	0	1			
W LARCH-L	661.5	45.7	0	1	1			
TOTAL	*94.0*	*6.5*	*49*	*52*	*56*	*353*	*180*	*88*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	**NET BF/ACRE** LOW	AVG	HIGH	# OF PLOTS REQ. 5	7	INF. POP. 10
P PINE	244.6	16.9	584	702	821			
P PINE-L	155.5	10.7	2,186	2,449	2,712			
DOUG FIR	190.7	13.2	1,387	1,597	1,807			

TC PSTATS

PROJECT STATISTICS

PROJECT FROSTYFH

DATE 11/24/2015

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
35N	31E	16	FROSTY FH	00U8	THR	1,034.94	210	515	S	E
36N	31E	30	FROSTY FH	00U1						

CL 68.1	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR-L	382.2	26.4	311	422	533			
W LARCH	875.0	60.4	23	58	93			
W LARCH-L	688.6	47.5	60	115	169			
TOTAL	*106.6*	*7.4*	*4,950*	*5,343*	*5,735*	*454*	*232*	*114*

CL 68.1	COEFF		**V BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	246.4	17.0	72	87	101			
P PINE-L	152.5	10.5	91	102	113			
DOUG FIR	188.2	13.0	89	103	117			
DOUG FIR-L	384.5	26.5	86	117	148			
W LARCH	842.9	58.2	46	116	186			
W LARCH-L	658.7	45.5	114	218	321			
TOTAL	*105.8*	*7.3*	*95*	*102*	*110*	*448*	*229*	*112*

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: FROSTYFH

Date 11/24/2015
Time 11:42:32AM

T36N R31E S30 T00U1

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
36N	31E	30	FROSTY FH	00U1	106.54	21	60	S	E

T36N R31E S30 T00U1

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
PP	L	D	4	66	.1	2,940	2,938	313			54	46	100				16	15	146	1.66	20.1
PP	L	D	5	34	.9	1,520	1,506	160		82	18		100				15	8	39	0.59	38.8
PP	**L**	**Totals**		71	.4	4,460	4,444	473		28	42	30	100				16	11	75	0.96	58.9
PP		D	4	32		569	569	61			78	22	100				16	14	127	1.51	4.5
PP		D	5	68		1,204	1,204	128		89	11		100				15	8	38	0.54	31.5
PP		**Totals**		29		1,773	1,773	189		60	33	7	100				15	9	49	0.67	36.0
Type Totals					.3	6,233	6,217	662		37	40	24	100				15	10	66	0.85	94.9

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: FROSTYFH

Date 11/24/2015

Time 11:42:32AM

T36N R30E S23 T00U2

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
36N	30E	23	FROSTY FH	00U2	280.71	58	105	S	E

T36N R30E S23 T00U2

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF		D	2	7	5.2	130	123	35			85	15	100				16	13	99	1.37	1.2
DF		D	3	26	1.2	407	402	113		80	20		100				16	10	64	0.79	6.3
DF		D	4	53	1.5	830	818	230	4	92	4		100				16	7	27	0.38	30.0
DF		U	UT	14		209	209	59	85	7	8		100				16	5	16	0.21	12.8
DF		**Totals**		48	1.5	1,576	1,552	436	14	70	15	1	100				16	7	31	0.42	50.3
DF	L	D	3	16	5.3	43	40	11		61	39		100				16	11	64	0.85	.6
DF	L	D	4	74	2.8	189	184	52	7	93			100				16	7	23	0.34	8.0
DF	L	U	UT	10	.0	24	24	7	100				100				16	5	16	0.18	1.5
DF	**L**	**Totals**		8	2.9	256	249	70	15	79	6		100				16	7	25	0.35	10.1
PP	L	D	3	1	10.7	22	20	6				100	100				16	20	250	3.06	.1
PP	L	D	4	10	8.0	101	93	26			61	39	100				16	15	134	1.91	.7
PP	L	D	5	89	6.6	944	881	247		88	12		100				16	8	40	0.53	22.2
PP	**L**	**Totals**		30	6.8	1,067	994	279		78	16	6	100				16	9	43	0.58	23.0
PP		D	4	16		68	68	19			100		100				16	14	127	1.47	.5
PP		D	5	84	1.1	352	348	98		89	11		100				16	8	38	0.47	9.1
PP		**Totals**		13	.9	420	417	117		75	25		100				16	8	43	0.52	9.7
WL	L	D	2	36	14.3	23	20	6			100		100				16	15	120	1.63	.2
WL	L	D	3	54		30	30	8		39	61		100				16	13	90	1.01	.3
WL	L	D	4	10		5	5	1		100			100				16	8	30	0.50	.2
WL	**L**	**Totals**		2	5.7	58	55	15		30	70		100				16	12	82	1.04	.7
Type Totals					3.3	3,378	3,266	917	8	73	17	2	100				16	8	35	0.46	93.7

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: FROSTYFH

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T36N R30E S23 T00U3

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
36N	30E	23	FROSTY FH	00U3	90.45	17	38	S	E

T36N R30E S23 T00U3

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF		D	2	12	4.6	262	250	23			66	34	100				16	15	122	1.65	2.1
DF		D	3	17		334	334	30		28	48	24	100				16	12	86	1.06	3.9
DF		D	4	69		1,364	1,364	123	30	70			100				16	6	23	0.27	58.2
DF		U	UT	2		23	23	2	100				100				16	4	10	0.18	2.3
DF		**Totals**		41	.6	1,983	1,971	178	22	53	17	8	100				16	7	30	0.36	66.4
DF	L	D	4	97		805	805	73	14	86			100				16	7	27	0.36	29.3
DF	L	U	UT	3		18	18	2	100				100				16	3	10	0.12	1.8
DF	**L**	**Totals**		17		823	823	74	16	84			100				16	7	26	0.34	31.1
PP	L	D	4	42	1.2	725	717	65			38	62	100				16	16	174	1.99	4.1
PP	L	D	5	58	2.8	1,019	990	90		27	35	37	100				16	10	76	0.95	13.1
PP	**L**	**Totals**		35	2.1	1,744	1,707	154		16	36	48	100				16	12	99	1.20	17.2
PP		D	4	19		67	67	6			100		100				16	14	110	1.32	.6
PP		D	5	81		279	279	25		75	25		100				16	10	55	0.70	5.1
PP		**Totals**		7		347	347	31		60	40		100				16	10	61	0.77	5.7
Type Totals					1.0	4,896	4,847	438	12	46	22	20	100				16	8	40	0.49	120.5

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: FROSTYFH

Date 11/24/2015

Time 11:42:32AM

T36N R30E S27 T00U4

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
36N	30E	27	FROSTY FH	00U4	41.46	6	20	S	E

T36N R30E S27 T00U4

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
PP		D	4	25		336	336	14			100		100				16	14	120	1.39	2.8
PP		D	5	75	2.6	1,023	996	41		100			100				15	7	27	0.45	36.7
PP		**Totals**		27	2.0	1,359	1,332	55		75	25		100				15	8	34	0.52	39.5
PP	L	D	4	18		233	233	10			100		100				16	16	160	1.68	1.5
PP	L	D	5	82	3.6	1,082	1,043	43		100			100				16	8	36	0.56	29.1
PP	**L**	**Totals**		26	3.0	1,315	1,276	53		82	18		100				16	8	42	0.61	30.6
DF		D	3	37		715	715	30		74	26		100				16	10	56	0.82	12.7
DF		D	4	60		1,145	1,145	47	36	64			100				16	7	27	0.40	42.0
DF		U	UT	3		49	49	2	100				100				16	4	10	0.22	4.9
DF		**Totals**		39		1,909	1,909	79	24	66	10		100				16	7	32	0.48	59.5
DF	L	D	2	87		356	356	15			38	62	100				16	16	145	1.78	2.5
DF	L	D	4	13		49	49	2		100			100				16	9	40	0.76	1.2
DF	**L**	**Totals**		8		406	406	17		12	33	55	100				16	13	110	1.44	3.7
Type Totals					1.3	4,988	4,922	204	9	68	18	4	100				16	8	37	0.55	133.3

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: FROSTYFH

Date 11/24/2015

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T36N R30E S34 T00U5

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
36N	30E	34	FROSTY FH	00U5	19.38	4	10	S	E

T36N R30E S34 T00U5

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/Lf	Logs Per /Acre
PP	L	D	4	47		1,144	1,144	22			50	50	100				16	16	160	1.75	7.2
PP	L	D	5	53	3.0	1,305	1,265	25		29	23	48	100				16	12	94	1.06	13.5
PP	**L**	**Totals**		46	1.6	2,449	2,409	47		15	36	49	100				16	13	117	1.30	20.6
PP		D	5	100	5.7	763	720	14		100			100				16	8	34	0.49	21.1
PP		**Totals**		14	5.7	763	720	14		100			100				16	8	34	0.49	21.1
DF		D	2	35		498	498	10			100		100				16	13	95	1.22	5.2
DF		D	3	16	14.3	260	223	4		100			100				16	11	60	1.00	3.7
DF		D	4	49		672	672	13	62	38			100				16	6	24	0.33	28.6
DF		**Totals**		26	2.6	1,430	1,393	27	30	34	36		100				16	7	37	0.52	37.5
DF	L	D	3	56	12.5	476	416	8			100		100				16	14	105	1.55	4.0
DF	L	D	4	44		319	319	6	88	12			100				16	5	20	0.31	16.0
DF	**L**	**Totals**		14	7.5	795	736	14	38	5	57		100				16	7	37	0.56	19.9
Type Totals					3.3	5,437	5,257	102	13	30	34	23	100				16	9	53	0.69	99.2

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: FROSTYFH

Date 11/24/2015

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T36N R30E S36 T00U6

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
36N	30E	36	FROSTY FH	00U6	117.21	23	58	S	E

T36N R30E S36 T00U6

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
PP	L	D	4	43	1.9	1,216	1,192	140			63	37	100				16	14	128	1.48	9.3
PP	L	D	5	57	5.6	1,638	1,547	181		74	6	20	100				16	9	47	0.67	32.6
PP	**L**	**Totals**		52	4.0	2,854	2,739	321		42	31	27	100				16	10	65	0.85	42.0
PP		D	4	60	3.6	337	325	38			100		100				16	13	103	1.34	3.1
PP		D	5	40	1.7	219	215	25		77	23		100				16	9	48	0.67	4.5
PP		**Totals**		10	2.8	556	540	63		31	69		100				16	11	71	0.95	7.7
DF		D	2	38	7.6	543	501	59			76	24	100				16	14	108	1.47	4.6
DF		D	3	33	4.5	447	427	50		81	19		100				16	10	55	0.80	7.7
DF		D	4	28		366	366	43	9	91			100				16	7	28	0.43	13.1
DF		U	UT	1		10	10	1	100				100				16	4	10	0.18	1.0
DF		**Totals**		25	4.5	1,366	1,304	153	3	52	35	9	100				16	9	49	0.71	26.5
DF	L	D	2	19	9.8	151	136	16			21	79	100				16	18	190	2.15	.7
DF	L	D	3	32	12.1	246	216	25		9	31	60	100				16	16	151	1.73	1.4
DF	L	D	4	32	16.4	261	218	26		8	7	84	100				16	15	156	2.18	1.4
DF	L	U	UT	17	9.1	124	113	13				100	100				16	20	242	3.04	.5
DF	**L**	**Totals**		13	12.6	782	684	80		5	16	78	100				16	17	170	2.11	4.0
Type Totals					5.2	5,558	5,267	617	1	38	34	27	100				16	10	66	0.88	80.1

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: FROSTYFH

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T36N R30E S36 T00U7

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
36N	30E	36	FROSTY FH	00U7	288.01	61	154	S	E

T36N R30E S36 T00U7

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
PP	L	D	4	42	3.0	1,347	1,306	376			66	34	100				16	15	129	1.55	10.1
PP	L	D	5	58	4.6	1,866	1,780	513		75	23	2	100				16	9	44	0.61	40.3
PP	**L**	**Totals**		55	3.9	3,212	3,086	889		43	41	15	100				16	10	61	0.80	50.4
PP		D	4	37	4.1	158	152	44			86	14	100				16	15	127	1.54	1.2
PP		D	5	63	4.8	271	258	74		73	27		100				16	8	39	0.58	6.6
PP		**Totals**		7	4.6	429	409	118		46	49	5	100				16	9	53	0.73	7.8
DF		D	2	11	3.7	181	174	50			100		100				16	14	111	1.48	1.6
DF		D	3	58	3.5	910	879	253		73	25	2	100				16	10	61	0.81	14.3
DF		D	4	28		432	432	124	16	84			100				16	7	28	0.39	15.4
DF		U	UT	3		35	35	10	85	15			100				15	3	10	0.17	3.5
DF		**Totals**		27	2.5	1,559	1,521	438	6	67	26	1	100				16	8	44	0.59	34.8
DF	L	D	2	33	7.1	129	120	35			19	81	100				16	19	224	2.76	.5
DF	L	D	3	54	6.0	204	192	55		9	20	71	100				16	16	161	1.89	1.2
DF	L	D	4	13	2.7	46	45	13		45	55		100				16	9	47	0.75	1.0
DF	**L**	**Totals**		6	6.0	380	357	103		11	24	65	100				16	14	132	1.66	2.7
WL	L	D	2	91		148	148	43			15	85	100				16	19	244	2.33	.6
WL	L	D	3	7		11	11	3		51	49		100				16	11	68	0.94	.2
WL	L	D	4	1		2	2	1		100			100				16	7	30	0.53	.1
WL	L	U	UT	1		1	1	0	100				100				16	4	10	0.32	.1
WL	**L**	**Totals**		3		162	162	47	1	5	17	78	100				16	15	175	1.76	.9
WL		D	2	50		55	55	16			21	79	100				16	17	177	1.88	.3
WL		D	3	24		26	26	8		100			100				16	10	62	0.82	.4
WL		D	4	26		28	28	8	11	89			100				15	7	27	0.37	1.1
WL		**Totals**		2		109	109	32	3	47	10	40	100				16	9	61	0.75	1.8
Type Totals					3.5	5,851	5,644	1,626	2	47	35	16	100				16	9	57	0.75	98.4

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: FROSTYFH

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T35N R31E S16 T00U8

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
35N	31E	16	FROSTY FH	00U8	82.38	17	65	S	E

T35N R31E S16 T00U8

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
PP	L	D	4	27	3.4	1,063	1,027	85			89	11	100				16	15	123	1.50	8.3
PP	L	D	5	73	6.1	2,842	2,670	220		58	28	15	100				16	9	53	0.71	49.9
PP	**L**	**Totals**		33	5.3	3,906	3,697	305		42	45	14	100				16	10	63	0.82	58.2
PP		D	4	8	23.8	193	147	12			100		100				16	13	76	1.16	1.9
PP		D	5	92	22.0	1,983	1,546	127		91	9		100				16	8	29	0.42	52.7
PP		**Totals**		15	22.2	2,176	1,693	139		83	17		100				16	8	31	0.45	54.6
DF		D	2	11	20.6	596	473	39			84	16	100				16	15	102	1.25	4.6
DF		D	3	23	20.6	1,151	914	75		26	74		100				16	11	60	0.74	15.1
DF		D	4	66	20.3	3,259	2,598	214	16	84			100				16	7	21	0.27	121.5
DF		**Totals**		35	20.4	5,006	3,985	328	11	61	27	2	100				16	7	28	0.36	141.2
DF	L	D	2	65	3.8	585	563	46			33	67	100				16	17	181	2.11	3.1
DF	L	D	3	23		197	197	16		40	17	43	100				16	13	103	1.14	1.9
DF	L	D	4	12		103	103	9		55	45		100				16	9	44	0.69	2.4
DF	**L**	**Totals**		8	2.5	885	863	71		16	31	53	100				16	13	117	1.40	7.4
WL	L	D	2	35		246	246	20			100		100				16	15	125	1.37	2.0
WL	L	D	3	45	2.8	320	311	26		42	58		100				16	12	83	0.91	3.8
WL	L	D	4	20		132	132	11		100			100				16	8	35	0.45	3.8
WL	**L**	**Totals**		6	1.3	697	688	57		38	62		100				16	11	73	0.82	9.5
WL		D	3	32	42.9	193	110	9		50	50		100				16	11	40	0.70	2.8
WL		D	4	68	20.0	291	233	19	23	77			100				16	7	21	0.26	11.2
WL		**Totals**		3	29.1	484	343	28	15	69	16		100				16	7	24	0.35	14.0
Type Totals					14.3	13,154	11,270	928	4	53	33	9	100				16	8	40	0.51	285.0

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: FROSTYFH

Date 11/24/2015

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T35N R31E S16 T00U9

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
35N	31E	16	FROSTY FH	00U9	8.80	3	5	S	E

T35N R31E S16 T00U9

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF		D	3	25		391	391	3		100			100				16	10	60	0.89	6.5
DF		D	4	75		1,143	1,143	10	23	77			100				16	7	28	0.39	40.3
DF		**Totals**		39		1,534	1,534	13	18	82			100				16	7	33	0.46	46.8
DF	L	D	3	76		621	621	5		100			100				16	11	65	0.86	9.5
DF	L	D	4	18		143	143	1		100			100				16	7	30	0.41	4.8
DF	L	U	UT	6		48	48	0	100				100				16	3	10	0.16	4.8
DF	**L**	**Totals**		21	.0	812	812	7	6	94			100				16	8	43	0.57	19.1
PP	L	D	4	32		499	499	4				100	100				16	21	300	2.91	1.7
PP	L	D	5	68	13.7	1,228	1,060	9		29	47	24	100				16	11	68	1.01	15.5
PP	**L**	**Totals**		40	9.7	1,728	1,560	14		20	32	48	100				16	12	91	1.20	17.1
Type Totals					4.1	4,073	3,905	34	8	60	13	19	100				16	8	47	0.64	83.0

TC PSPCTLTCM

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

T35N R31E S16 Ty00U8	82.3
T35N R31E S16 Ty00U9	8.8
T36N R31E S30 Ty00U	106.5

Project **FROSTYFH**
Acres **1,034.94**

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Species	ST	Total Trees	Total Logs	Total Tons	Net Cubic Ft/ Tree	Net Cubic Ft/ Log	CF/ LF	Total CCF Gross	Total CCF Net	Total MBF Gross	Total MBF Net
P PINE	L	17,516	40,334	12,579	29.73	12.91	0.81	5,241	5,207	2,631	2,534
DOUG FIR		20,906	48,519	10,472	16.80	7.24	0.45	3,674	3,513	1,764	1,653
P PINE		8,141	16,748	3,920	19.13	9.30	0.59	1,633	1,557	777	727
DOUG FIR	L	3,805	8,199	2,555	23.55	10.93	0.68	896	896	460	437
W LARCH	L	247	1,234	501	84.54	16.93	1.06	209	209	120	119
W LARCH		505	1,667	336	24.55	7.44	0.47	140	124	71	60
Totals		51,120	116,702	30,363	22.51	9.86	0.62	11,794	11,506	5,823	5,529

Wood Type Species	Total Trees	Total Logs	Total Tons	Net Cubic Ft/ Tree	Net Cubic Ft/ Log	CF/ LF	Total CCF Gross	Total CCF Net	Total MBF Gross	Total MBF Net
C	51,120	116,702	30,363	22.51	9.86	0.62	11,794	11,506	5,823	5,529
Totals	51,120	116,702	30,363	22.51	9.86	0.62	11,794	11,506	5,823	5,529

TC PLOGSTVB

Log Stock Table - MBF

T35N R31E S16 Ty00U8
THRU
T36N R31E S30 Ty00U1

Project: FROSTYFH
Acres 1,034.94

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Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-4	5-6	7-10	11-12	13-14	15-16	17-18	19-20	21-23	24-29	30-39	40+
DF		D	2	16	235	8.5	215	13.0				15	132	35	25	8				
DF		D	3	16	592	5.6	559	33.8		4	236	225	47	33	13					
DF		D	4	12	5	11.7	4	.3		4	1									
DF		D	4	14	9	8.0	8	.5		8										
DF		D	4	16	847	6.6	791	47.9		263	510	18								
DF		D	4	20	1	20.0	1	.1			1									
DF		U	UT	13	3		3	.2	3											
DF		U	UT	14	2		2	.1	2											
DF		U	UT	16	70		70	4.2	26	38	2	4								
DF		Totals			1,764	6.3	1,653	29.9	30	317	750	262	179	69	38	8				
DF	L	D	2	16	118	5.3	112	25.6					22	9	24	14	35	7		
DF	L	D	3	16	130	6.7	122	27.9			17	19	4	20	14	25	22			
DF	L	D	4	12	0		0	.1			0									
DF	L	D	4	14	1		1	.1			1									
DF	L	D	4	16	187	3.7	180	41.3		53	90	2	10	3	3	4		14		
DF	L	U	UT	16	23	5.7	22	5.0	3	5						7	6			
DF		Totals			460	5.0	437	7.9	3	59	108	21	36	32	42	50	64	21		
WL	L	D	2	16	69	1.3	68	57.7					9	23	10	13	6	8		
WL	L	D	3	16	38	2.0	37	31.3			2	16	20							
WL	L	D	4	16	13		13	10.8			13									
WL	L	U	UT	16	0		0	.2	0											
WL		Totals			120	1.4	119	2.1	0		14	16	29	23	10	13	6	8		
WL		D	2	16	16		16	26.4					3		5	7				
WL		D	3	16	23	29.1	17	27.8			10	7								
WL		D	4	14	1		1	1.5		1										
WL		D	4	16	31	15.3	26	44.2		6	20									
WL		Totals			71	16.3	60	1.1		7	30	7	3		5	7				
PP	L	D	3	16	6	10.7	6	.2								6				
PP	L	D	4	16	1,061	2.0	1,040	41.1				107	272	265	181	147	58	11		

TC PLOGSTVB

Log Stock Table - MBF

T35N R31E S16 Ty00U8
THRU
T36N R31E S30 Ty00U1

Project: FROSTYFH
Acres 1,034.94

Date 11/24/2015
Time 11:42:31AM

Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-4	5-6	7-10	11-12	13-14	15-16	17-18	19-20	21-23	24-29	30-39	40+
PP	L	D	5	12	10		10	.4		9	1									
PP	L	D	5	14	22	19.7	17	.7		15	3									
PP	L	D	5	15	6	9.0	6	.2		1								5		
PP	L	D	5	16	1,525	4.6	1,455	57.4		71	736	380	102	47	45	24	21	14	16	
PP		Totals			2,631	3.7	2,534	45.8		95	740	487	374	312	226	177	78	30	16	
PP		D	4	16	201	3.5	194	26.6				12	88	74	20					
PP		D	5	12	10	5.5	9	1.3		9										
PP		D	5	14	14	3.2	13	1.8		13	1									
PP		D	5	16	537	7.5	497	68.3		19	341	120	17							
PP		D	5	18	6		6	.8		6										
PP		D	5	20	10	20.0	8	1.1			8									
PP		Totals			777	6.5	727	13.1		46	350	133	105	74	20					
Total		All Species			5,823	5.1	5,529	100.0	34	525	1992	925	727	510	339	255	149	58	16	

TC PLOGSTVT_SED

Project Log Stock Table - TONS(SED)

T35N R31E S16 Ty00U8
THRU
T36N R31E S30 Ty00U1

Project: FROSTYFH
Acres 1,034.94

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Date 11/24/2015
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Spp	S T	Sort	Grade	Log Len	SED	TONS	Tons by Scaling Diameter in Inches 2-4	5-6	7-10	11-12	13-14	15-16	17-18	19-20	21-23	24-29	30-39	40+
DF		D	2	16	13.9	1,351				94	850	235	135	37				
DF		D	3	16	10.5	3,440		28	1388	1453	296	200	75					
DF		D	4	12	5.4	44		36	8									
DF		D	4	14	5.1	82		82										
DF		D	4	16	6.7	5,081		1559	3423	99								
DF		D	4	20	7.0	14			14									
DF		U	UT	12	3.0	5	5											
DF		U	UT	13	3.0	11	11											
DF		U	UT	14	3.2	13	13											
DF		U	UT	16	4.3	432	202	186	9	35								
Graded						10472	230	1891	4842	1681	1145	435	210	37				
DF		Totals			7.4	10,472	230	1891	4842	1681	1145	435	210	37				
DF	L	D	2	16	16.6	606					119	55	132	59	203	38		
DF	L	D	3	16	12.2	665			95	123	24	118	64	124	117			
DF	L	D	4	12	8.0	5			5									
DF	L	D	4	14	7.0	6			6									
DF	L	D	4	16	6.8	1,150		322	611	18	59	17	37	21		66		
DF	L	U	UT	16	4.2	123	27	20						38	38			
Graded						2555	27	342	717	141	202	191	233	242	357	104		
DF		Totals			8.3	2,555	27	342	717	141	202	191	233	242	357	104		
WL	L	D	2	16	15.5	270					36	105	35	46	21	28		
WL	L	D	3	16	12.0	161			9	70	82							
WL	L	D	4	16	8.0	67			67									
WL	L	U	UT	16	4.0	3	3											
Graded						501	3		76	70	118	105	35	46	21	28		
WL		Totals			11.3	501	3		76	70	118	105	35	46	21	28		
WL		D	2	16	16.7	65					15		20	29				
WL		D	3	16	10.9	115			57	58								
WL		D	4	14	5.0	6		6										
WL		D	4	16	6.7	151		37	113									
Graded						336		43	171	58	15		20	29				
WL		Totals			7.7	336		43	171	58	15		20	29				

TC PLOGSTVT_SED

Project Log Stock Table - TONS(SED)

T35N R31E S16 Ty00U8
THRU
T36N R31E S30 Ty00U1

Project: **FROSTYFH**
Acres **1,034.94**

Date **11/24/2015**
Time **11:42:31AM**

Spp	ST	Sort	Grade	Log Len	SED	TONS	Tons by Scaling Diameter in Inches 2-4	5-6	7-10	11-12	13-14	15-16	17-18	19-20	21-23	24-29	30-39	40+
PP	L	D	3	16	20.0	26								26				
PP	L	D	4	16	15.2	4,695				554	1310	1185	784	589	230	43		
PP	L	D	5	12	6.1	91		82	9									
PP	L	D	5	14	6.1	125		102	24									
PP	L	D	5	15	7.7	32		8								24		
PP	L	D	5	16	9.3	7,610		433	4074	1883	513	205	194	93	78	57	79	
Graded						12579		625	4106	2437	1823	1390	978	708	308	124	79	
PP		Totals			10.3	12,579		625	4106	2437	1823	1390	978	708	308	124	79	
PP		D	4	16	14.0	933				62	456	333	82					
PP		D	5	9	6.0													
PP		D	5	12	6.0	79		79										
PP		D	5	14	6.0	69		63	5									
PP		D	5	16	8.6	2,747		121	1902	620	104							
PP		D	5	18	6.0	30		30										
PP		D	5	20	7.0	62			62									
Graded						3920		293	1969	682	561	333	82					
PP		Totals			8.5	3,920		293	1969	682	561	333	82					
Total		All Species				30,363	260	3194	11882	5069	3863	2454	1557	1062	687	256	79	

TC TSTATS

STATISTICS

PROJECT FROSTYFH

DATE 11/24/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
36N	**31E**	**30**	**FROSTY FH**	**00U1**	106.54	21	60	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	21	60	2.9		
CRUISE	18	60	3.3	3,725	1.6
DBH COUNT					
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
P PINE	18	13.8	15.1	65	4.4	17.1	1,773	1,773	365	365
P PINE-L	42	21.1	18.6	60	9.3	40.0	4,460	4,444	885	882
TOTAL	*60*	*35.0*	*17.3*	*62*	*13.7*	*57.1*	*6,233*	*6,217*	*1,249*	*1,247*

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	7	10
P PINE	65.1	15.8	148	176	204			
P PINE-L	73.0	11.3	272	306	341			
TOTAL	*76.8*	*9.9*	*241*	*267*	*294*	*236*	*120*	*59*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	149.7	33.5	9	14	18			
P PINE-L	86.5	19.3	17	21	25			
TOTAL	*83.8*	*18.8*	*28*	*35*	*42*	*296*	*151*	*74*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	144.2	32.3	12	17	23			
P PINE-L	86.6	19.4	32	40	48			
TOTAL	*87.3*	*19.5*	*46*	*57*	*68*	*321*	*164*	*80*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	156.4	35.0	1,153	1,773	2,393			
P PINE-L	102.6	22.9	3,424	4,444	5,463			
TOTAL	*104.7*	*23.4*	*4,760*	*6,217*	*7,673*	*461*	*235*	*115*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	156.4	35.0	67	103	140			
P PINE-L	102.6	22.9	86	111	137			
TOTAL	*104.7*	*23.4*	*83*	*109*	*134*	*461*	*235*	*115*

TC TSTATS

STATISTICS

PROJECT FROSTYFH

DATE 11/24/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
36N	**30E**	**23**	**FROSTY FH**	**00U2**	280.71	58	105	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	58	105	1.8		
CRUISE	47	105	2.2	14,090	.7
DBH COUNT					
REFOREST COUNT					
BLANKS	11				
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	45	23.3	11.1	54	4.7	15.5	1,576	1,552	333	333
DOUG FIR-L	10	6.7	9.7	48	1.1	3.4	256	249	56	56
P PINE	13	6.1	11.6	65	1.3	4.5	420	417	82	82
P PINE-L	36	14.0	12.8	56	3.5	12.4	1,067	994	214	211
W LARCH-L	1	.2	19.5	73	0.1	.3	58	55	11	11
TOTAL	*105*	*50.2*	*11.5*	*55*	*10.7*	*36.2*	*3,378*	*3,266*	*695*	*692*

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	7	10
DOUG FIR	73.3	10.9	86	96	106			
DOUG FIR-L	63.9	21.3	35	45	55			
P PINE	84.0	24.2	87	115	142			
P PINE-L	94.4	15.7	94	111	129			
W LARCH-L								
TOTAL	*87.6*	*8.6*	*92*	*101*	*109*	*307*	*157*	*77*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	186.4	24.5	18	23	29			
DOUG FIR-L	236.8	31.1	5	7	9			
P PINE	359.3	47.2	3	6	9			
P PINE-L	198.7	26.1	10	14	18			
W LARCH-L	761.6	100.0	0	0	0			
TOTAL	*104.8*	*13.8*	*43*	*50*	*57*	*439*	*224*	*110*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	140.9	18.5	13	16	18			
DOUG FIR-L	221.0	29.0	2	3	4			
P PINE	277.7	36.5	3	4	6			
P PINE-L	159.2	20.9	10	12	15			
W LARCH-L	761.6	100.0	0	0	1			
TOTAL	*77.7*	*10.2*	*33*	*36*	*40*	*242*	*123*	*60*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	139.5	18.3	1,268	1,552	1,837			
DOUG FIR-L	234.8	30.8	172	249	325			
P PINE	274.4	36.0	267	417	567			
P PINE-L	161.1	21.2	783	994	1,204			
W LARCH-L	761.6	100.0	0	55	110			
TOTAL	*82.0*	*10.8*	*2,914*	*3,266*	*3,618*	*269*	*137*	*67*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	139.5	18.3	82	100	118			

TC TSTATS

STATISTICS

PROJECT **FROSTYFH**

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TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
36N	**30E**	**23**	**FROSTY FH**	**00U2**	280.71	58	105	S	E

CL: 68.1 %
SD: 1.0

	COEFF VAR.	S.E.%	V-BAR/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	7	INF. POP. 10
DOUG FIR-L	234.8	30.8	50	72	94			
P PINE	274.4	36.0	59	93	126			
P PINE-L	161.1	21.2	63	80	97			
W LARCH-L	761.6	100.0	0	159	318			
TOTAL	*82.0*	*10.8*	*80*	*90*	*100*	*269*	*137*	*67*

TC TSTATS

STATISTICS

PROJECT FROSTYFH

DATE 11/24/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
36N	**30E**	**23**	**FROSTY FH**	**00U3**	90.45	17	38	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	17	38	2.2		
CRUISE	12	38	3.2	4,959	.8
DBH COUNT					
REFOREST COUNT					
BLANKS	5				
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	15	32.1	10.0	70	5.6	17.6	1,983	1,971	381	382
DOUG FIR-L	6	11.0	10.9	74	2.1	7.1	823	823	171	170
P PINE	3	2.4	16.4	64	0.9	3.5	347	347	70	70
P PINE-L	14	9.4	18.0	45	3.9	16.5	1,744	1,707	331	330
TOTAL	*38*	*54.8*	*12.2*	*66*	*12.8*	*44.7*	*4,896*	*4,847*	*953*	*953*

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	7	10
DOUG FIR	87.4	23.4	85	111	137			
DOUG FIR-L	16.3	7.3	70	75	80			
P PINE	27.6	19.1	119	147	175			
P PINE-L	70.2	19.5	293	364	435			
TOTAL	*102.6*	*16.7*	*168*	*202*	*235*	*421*	*215*	*105*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	331.4	82.9	5	32	59			
DOUG FIR-L	347.7	86.9	1	11	21			
P PINE	291.2	72.8	1	2	4			
P PINE-L	196.3	49.1	5	9	14			
TOTAL	*261.3*	*65.3*	*19*	*55*	*91*	*2,902*	*1,481*	*726*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	236.7	59.2	7	18	28			
DOUG FIR-L	346.2	86.5	1	7	13			
P PINE	299.5	74.9	1	4	6			
P PINE-L	98.2	24.6	12	16	21			
TOTAL	*142.8*	*35.7*	*29*	*45*	*61*	*867*	*442*	*217*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	245.0	61.3	764	1,971	3,178			
DOUG FIR-L	359.4	89.8	84	823	1,562			
P PINE	315.4	78.9	73	347	620			
P PINE-L	99.7	24.9	1,281	1,707	2,132			
TOTAL	*153.2*	*38.3*	*2,991*	*4,847*	*6,703*	*997*	*509*	*249*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	245.0	61.3	43	112	180			
DOUG FIR-L	359.4	89.8	12	117	221			
P PINE	315.4	78.9	21	98	176			
P PINE-L	99.7	24.9	78	104	129			
TOTAL	*153.2*	*38.3*	*67*	*108*	*150*	*997*	*509*	*249*

TC TSTATS

STATISTICS

PROJECT FROSTYFH

DATE 11/24/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
36N	**30E**	**27**	**FROSTY FH**	**00U4**	41.46	6	20	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	6	20	3.3		
CRUISE	5	20	4.0	3,321	.6
DBH COUNT					
REFOREST COUNT					
BLANKS	1				
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
P PINE	6	27.0	11.6	50	5.9	20.0	1,359	1,332	307	306
P PINE-L	6	20.2	13.5	51	5.5	20.0	1,315	1,276	296	296
DOUG FIR	7	31.6	11.6	46	6.8	23.3	1,909	1,909	453	453
DOUG FIR-L	1	1.2	22.3	54	0.7	3.3	406	406	85	85
TOTAL	*20*	*80.1*	*12.4*	*49*	*19.0*	*66.7*	*4,988*	*4,922*	*1,141*	*1,140*

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	7	10
P PINE	111.7	49.8	44	88	132			
P PINE-L	75.6	33.7	54	82	109			
DOUG FIR	59.4	24.2	63	83	103			
DOUG FIR-L								
TOTAL	*88.9*	*20.4*	*77*	*97*	*116*	*333*	*170*	*83*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	131.4	58.5	11	27	43			
P PINE-L	98.4	43.9	11	20	29			
DOUG FIR	116.3	51.8	15	32	48			
DOUG FIR-L	244.9	109.2		1	3			
TOTAL	*102.0*	*45.4*	*44*	*80*	*116*	*496*	*253*	*124*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	89.4	39.9	12	20	28			
P PINE-L	89.4	39.9	12	20	28			
DOUG FIR	113.9	50.8	11	23	35			
DOUG FIR-L	244.9	109.2		3	7			
TOTAL	*62.0*	*27.6*	*48*	*67*	*85*	*183*	*93*	*46*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	111.3	49.6	671	1,332	1,993			
P PINE-L	113.7	50.7	630	1,276	1,923			
DOUG FIR	118.0	52.6	905	1,909	2,912			
DOUG FIR-L	244.9	109.2		406	848			
TOTAL	*61.4*	*27.4*	*3,576*	*4,922*	*6,269*	*180*	*92*	*45*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	111.3	49.6	34	67	100			
P PINE-L	113.7	50.7	31	64	96			
DOUG FIR	118.0	52.6	39	82	125			
DOUG FIR-L	244.9	109.2		122	254			
TOTAL	*61.4*	*27.4*	*54*	*74*	*94*	*180*	*92*	*45*

TC TSTATS

STATISTICS

PROJECT FROSTYFH

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TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
36N	**30E**	**34**	**FROSTY FH**	**00U5**	19.38	4	10	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	4	10	2.5		
CRUISE	4	10	2.5	1,082	.9
DBH COUNT					
REFOREST					
COUNT					
BLANKS					
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
P PINE	2	12.4	12.2	58	2.9	10.0	763	720	159	161
P PINE-L	3	5.3	22.8	68	3.1	15.0	2,449	2,409	430	430
DOUG FIR	3	22.2	11.1	57	4.5	15.0	1,430	1,393	312	310
DOUG FIR-L	2	16.0	10.7	54	3.1	10.0	795	736	179	178
TOTAL	*10*	*55.8*	*12.8*	*57*	*14.0*	*50.0*	*5,437*	*5,257*	*1,079*	*1,079*

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	7	10
P PINE	80.8	75.8	17	70	123			
P PINE-L	59.9	41.5	343	587	830			
DOUG FIR	87.0	60.2	50	127	203			
DOUG FIR-L	118.8	111.4		125	264			
TOTAL	*116.2*	*38.7*	*155*	*253*	*351*	*600*	*306*	*150*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	125.1	71.5	4	12	21			
P PINE-L	90.4	51.7	3	5	8			
DOUG FIR	135.1	77.2	5	22	39			
DOUG FIR-L	168.5	96.4	1	16	31			
TOTAL	*118.0*	*67.5*	*18*	*56*	*93*	*728*	*372*	*182*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	115.5	66.0	3	10	17			
P PINE-L	66.7	38.1	9	15	21			
DOUG FIR	127.7	73.0	4	15	26			
DOUG FIR-L	115.5	66.0	3	10	17			
TOTAL	*51.6*	*29.5*	*35*	*50*	*65*	*140*	*71*	*35*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	127.6	73.0	195	720	1,245			
P PINE-L	73.0	41.8	1,403	2,409	3,415			
DOUG FIR	145.7	83.3	232	1,393	2,554			
DOUG FIR-L	122.0	69.7	223	736	1,249			
TOTAL	*43.6*	*24.9*	*3,947*	*5,257*	*6,568*	*99*	*51*	*25*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	127.6	73.0	19	72	125			
P PINE-L	73.0	41.8	94	161	228			
DOUG FIR	145.7	83.3	15	93	170			
DOUG FIR-L	122.0	69.7	22	74	125			
TOTAL	*43.6*	*24.9*	*79*	*105*	*131*	*99*	*51*	*25*

TC TSTATS

STATISTICS

PROJECT FROSTYFH

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TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
36N	**30E**	**36**	**FROSTY FH**	**00U6**	117.21	23	58	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	23	58	2.5		
CRUISE	19	58	3.1	3,876	1.5
DBH COUNT					
REFOREST COUNT					
BLANKS	4				
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
P PINE	6	2.6	19.4	64	1.2	5.2	556	540	116	116
P PINE-L	32	19.7	16.1	59	6.9	27.8	2,854	2,739	575	574
DOUG FIR	15	9.8	15.7	59	3.3	13.0	1,366	1,304	300	301
DOUG FIR-L	5	1.0	28.1	71	0.8	4.3	782	684	136	136
TOTAL	*58*	*33.1*	*16.7*	*60*	*12.3*	*50.4*	*5,558*	*5,267*	*1,126*	*1,126*

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	7	10
P PINE	16.6	7.4	199	215	231			
P PINE-L	92.4	16.3	197	235	273			
DOUG FIR	77.0	20.6	133	168	203			
DOUG FIR-L	52.2	26.0	530	716	902			
TOTAL	*95.8*	*12.6*	*225*	*257*	*289*	*367*	*187*	*92*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	347.0	74.0	1	3	4			
P PINE-L	140.8	30.0	14	20	26			
DOUG FIR	168.5	35.9	6	10	13			
DOUG FIR-L	324.7	69.2	0	1	2			
TOTAL	*100.7*	*21.5*	*26*	*33*	*40*	*424*	*216*	*106*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	331.3	70.6	2	5	9			
P PINE-L	122.1	26.0	21	28	35			
DOUG FIR	157.5	33.6	9	13	17			
DOUG FIR-L	308.8	65.8	1	4	7			
TOTAL	*91.7*	*19.6*	*41*	*50*	*60*	*352*	*180*	*88*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	356.3	76.0	130	540	950			
P PINE-L	127.1	27.1	1,997	2,739	3,482			
DOUG FIR	166.0	35.4	843	1,304	1,766			
DOUG FIR-L	351.0	74.8	172	684	1,195			
TOTAL	*107.4*	*22.9*	*4,062*	*5,267*	*6,473*	*482*	*246*	*121*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	356.3	76.0	25	104	182			
P PINE-L	127.1	27.1	72	98	125			
DOUG FIR	166.0	35.4	65	100	135			
DOUG FIR-L	351.0	74.8	40	157	275			
TOTAL	*107.4*	*22.9*	*81*	*104*	*128*	*482*	*246*	*121*

TC TSTATS

STATISTICS

PROJECT FROSTYFH

DATE 11/24/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
36N	30E	36	FROSTY FH	00U7	288.01	61	154	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	61	154	2.5		
CRUISE	47	154	3.3	10,240	1.5
DBH COUNT					
REFOREST COUNT					
BLANKS	14				
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
P PINE	13	3.2	15.6	64	1.1	4.3	429	409	90	90
P PINE-L	90	19.8	16.5	63	7.3	29.5	3,212	3,086	647	639
DOUG FIR	39	11.1	14.5	67	3.4	12.8	1,559	1,521	329	329
DOUG FIR-L	8	.9	23.5	59	0.5	2.6	380	357	71	71
W LARCH	2	.4	16.9	86	0.2	.7	109	109	21	21
W LARCH-L	2	.2	27.6	88	0.1	.7	162	162	26	26
TOTAL	*154*	*35.6*	*16.1*	*65*	*12.6*	*50.5*	*5,851*	*5,644*	*1,183*	*1,176*

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	7	10
P PINE	71.1	20.5	148	186	224			
P PINE-L	77.9	8.2	215	234	254			
DOUG FIR	49.7	8.0	157	171	184			
DOUG FIR-L	49.1	18.5	488	599	710			
W LARCH	90.0	84.4	60	385	710			
W LARCH-L	50.2	47.0	575	1,085	1,595			
TOTAL	*88.1*	*7.1*	*229*	*246*	*264*	*311*	*159*	*78*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	337.1	43.2	2	3	5			
P PINE-L	140.1	17.9	16	20	23			
DOUG FIR	202.7	25.9	8	11	14			
DOUG FIR-L	526.6	67.4	0	1	1			
W LARCH	615.9	78.9	0	0	1			
W LARCH-L	554.9	71.0	0	0	0			
TOTAL	*111.6*	*14.3*	*30*	*36*	*41*	*498*	*254*	*124*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	285.6	36.6	3	4	6			
P PINE-L	131.3	16.8	25	30	34			
DOUG FIR	182.9	23.4	10	13	16			
DOUG FIR-L	428.5	54.9	1	3	4			
W LARCH	547.6	70.1	0	1	1			
W LARCH-L	547.6	70.1	0	1	1			
TOTAL	*98.3*	*12.6*	*44*	*50*	*57*	*386*	*197*	*97*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	311.3	39.9	246	409	572			
P PINE-L	154.2	19.7	2,477	3,086	3,695			
DOUG FIR	191.2	24.5	1,148	1,521	1,893			
DOUG FIR-L	434.3	55.6	159	357	556			
W LARCH	558.0	71.4	31	109	188			

TC TSTATS

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PROJECT FROSTYFH

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TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
36N	**30E**	**36**	**FROSTY FH**	**00U7**	288.01	61	154	S	E

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10
W LARCH-L	559.5	71.6	46	162	278			
TOTAL	*111.5*	*14.3*	*4,838*	*5,644*	*6,449*	*497*	*254*	*124*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	311.3	39.9	58	96	134			
P PINE-L	154.2	19.7	84	105	125			
DOUG FIR	191.2	24.5	90	119	148			
DOUG FIR-L	434.3	55.6	60	136	212			
W LARCH	558.0	71.4	48	167	286			
W LARCH-L	559.5	71.6	70	247	423			
TOTAL	*111.5*	*14.3*	*96*	*112*	*128*	*497*	*254*	*124*

TC TSTATS

STATISTICS

PROJECT FROSTYFH

DATE 11/24/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
35N	31E	16	FROSTY FH	00U8	82.38	17	65	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	17	65	3.8		
CRUISE	17	65	3.8	9,624	.7
DBH COUNT					
REFOREST					
COUNT					
BLANKS					
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
P PINE	15	26.3	13.4	58	7.0	25.7	2,176	1,693	483	389
P PINE-L	16	18.1	17.7	73	7.3	30.8	3,906	3,697	763	763
DOUG FIR	26	63.9	11.1	60	12.8	42.6	5,006	3,985	994	796
DOUG FIR-L	4	1.9	23.0	72	1.1	5.5	885	863	166	166
W LARCH	2	4.7	12.5	65	1.1	4.0	484	343	97	78
W LARCH-L	2	1.9	17.5	97	0.8	3.2	697	688	125	125
TOTAL	*65*	*116.8*	*13.2*	*63*	*30.7*	*111.7*	*13,154*	*11,270*	*2,629*	*2,317*

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	7	10
P PINE	58.5	15.6	65	77	89			
P PINE-L	77.9	20.1	250	313	375			
DOUG FIR	91.6	18.3	90	110	131			
DOUG FIR-L	60.3	34.5	338	515	692			
W LARCH	28.3	26.5	59	80	101			
W LARCH-L	51.1	47.9	188	360	532			
TOTAL	*109.3*	*13.6*	*159*	*184*	*209*	*478*	*244*	*120*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	153.9	38.5	16	26	36			
P PINE-L	159.3	39.8	11	18	25			
DOUG FIR	154.7	38.7	39	64	89			
DOUG FIR-L	273.4	68.4	1	2	3			
W LARCH	412.3	103.1		5	9			
W LARCH-L	282.6	70.7	1	2	3			
TOTAL	*74.7*	*18.7*	*95*	*117*	*139*	*237*	*121*	*59*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	139.4	34.9	17	26	35			
P PINE-L	151.9	38.0	19	31	43			
DOUG FIR	137.5	34.4	28	43	57			
DOUG FIR-L	232.1	58.0	2	6	9			
W LARCH	412.3	103.1		4	8			
W LARCH-L	292.4	73.1	1	3	5			
TOTAL	*42.6*	*10.6*	*100*	*112*	*124*	*77*	*39*	*19*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	146.0	36.5	1,075	1,693	2,311			
P PINE-L	161.1	40.3	2,208	3,697	5,186			
DOUG FIR	134.2	33.6	2,648	3,985	5,322			

TC TSTATS

STATISTICS

PROJECT FROSTYFH

DATE 11/24/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
35N	**31E**	**16**	**FROSTY FH**	**00U8**	82.38	17	65	S	E

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR-L	237.3	59.3	351	863	1,376			
W LARCH	412.3	103.1		343	697			
W LARCH-L	306.8	76.7	160	688	1,216			
TOTAL	*50.2*	*12.6*	*9,854*	*11,270*	*12,686*	*107*	*55*	*27*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	141.5	35.4	42	66	90			
P PINE-L	156.5	39.1	72	120	168			
DOUG FIR	141.6	35.4	62	94	125			
DOUG FIR-L	229.8	57.4	64	157	250			
W LARCH	412.3	103.1		87	176			
W LARCH-L	286.5	71.6	51	218	386			
TOTAL	*46.8*	*11.7*	*88*	*101*	*114*	*93*	*47*	*23*

TC TSTATS

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PROJECT FROSTYFH

DATE 11/24/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
35N	31E	16	FROSTY FH	00U9	8.80	3	5	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	3	5	1.7		
CRUISE	1	5	5.0	206	2.4
DBH COUNT					
REFOREST COUNT					
BLANKS	2				
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	2	13.4	13.5	76	3.6	13.3	1,534	1,534	346	346
DOUG FIR-L	1	4.8	16.0	73	1.7	6.7	812	812	175	175
P PINE-L	2	5.2	21.8	56	2.9	13.3	1,728	1,560	328	328
TOTAL	*5*	*23.4*	*16.2*	*71*	*8.3*	*33.3*	*4,073*	*3,905*	*849*	*849*

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	7	10
DOUG FIR	30.7	28.8	82	115	148			
DOUG FIR-L								
P PINE-L	77.3	72.5	103	375	647			
TOTAL	*86.2*	*42.9*	*131*	*230*	*329*	*368*	*188*	*92*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	173.2	120.0		13	30			
DOUG FIR-L	173.2	120.0		5	11			
P PINE-L	173.2	120.0		5	11			
TOTAL	*173.2*	*120.0*		*23*	*51*	*1,727*	*881*	*432*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	173.2	120.0		13	29			
DOUG FIR-L	173.2	120.0		7	15			
P PINE-L	173.2	120.0		13	29			
TOTAL	*173.2*	*120.0*		*33*	*73*	*1,727*	*881*	*432*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	173.2	120.0		1,534	3,373			
DOUG FIR-L	173.2	120.0		812	1,785			
P PINE-L	173.2	120.0		1,560	3,430			
TOTAL	*173.2*	*120.0*		*3,905*	*8,589*	*1,727*	*881*	*432*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	173.2	120.0		115	253			
DOUG FIR-L	173.2	120.0		122	268			
P PINE-L	173.2	120.0		117	257			
TOTAL	*173.2*	*120.0*		*117*	*258*	*1,727*	*881*	*432*

TC TSTNDSUM

Stand Table Summary

Project **FROSTYFH**

T36N R31E S30 T00U1

T36N R31E S30 T00U1

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Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
36N	31E	30	FROSTY FH	00U1	106.54	21	60

Spc	ST	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
PP	L	9	1	70	34	2.109	.95	2.11	3.8	10.0	.19	8	21	21	9	2
PP	L	10	1	85	66	1.678	.95	3.36	5.3	25.0	.43	18	84	46	19	9
PP	L	13	2	79	66	2.072	1.90	5.24	7.0	30.0	.89	37	157	94	39	17
PP	L	16	2	84	71	1.331	1.90	3.99	11.0	55.0	1.05	44	220	112	47	23
PP	L	17	6	82	75	3.678	5.71	11.64	10.9	50.0	3.03	126	582	323	135	62
PP	L	18	2	84	64	1.079	1.90	3.24	12.5	60.0	.97	40	194	104	43	21
PP	L	19	3	85	62	1.468	2.86	3.89	15.2	71.3	1.43	59	278	152	63	30
PP	L	20	2	85	76	.887	1.90	3.12	15.5	81.4	1.16	48	254	124	52	27
PP	L	21	5	85	67	2.038	4.76	6.51	16.2	80.7	2.54	106	525	270	113	56
PP	L	22	2	84	71	.715	1.90	2.50	18.0	89.9	1.08	45	225	115	48	24
PP	L	23	2	86	67	.652	1.90	1.96	22.2	114.9	1.04	43	225	111	46	24
PP	L	24	2	86	63	.596	1.90	1.79	23.4	116.7	1.01	42	209	107	45	22
PP	L	25	1	79	65	.289	.95	.87	22.6	103.3	.47	20	89	50	21	10
PP	L	26	4	85	76	1.038	3.81	3.89	24.8	137.3	2.32	96	534	247	103	57
PP	L	27	3	86	77	.722	2.86	2.40	30.0	170.0	1.73	72	409	184	77	44
PP	L	28	2	84	91	.445	1.90	.89	28.1	152.5	.60	25	136	64	27	14
PP	L	30	1	84	86	.189	.95	.76	30.1	177.5	.61	23	134	65	24	14
PP	L	35	1	83	98	.143	.95	.72	39.7	234.0	.68	28	168	73	30	18
PP		Totals	42	82	67	21.130	40.00	58.87	15.0	75.5	21.23	882	4,444	2,262	940	473
PP		10	1	50	40	1.935	.95	1.93								
PP		12	2	83	74	2.449	1.90	4.90	7.5	35.0	.88	37	171	94	39	18
PP		13	2	85	72	1.945	1.90	5.83	7.3	35.0	1.02	43	204	109	45	22
PP		14	2	84	76	1.772	1.90	5.32	8.1	38.1	1.03	43	203	110	46	22
PP		15	2	84	73	1.512	1.90	4.54	9.8	48.4	1.07	45	220	114	48	23
PP		16	1	80	67	.727	.95	2.18	9.2	40.0	.48	20	87	52	21	9
PP		17	1	84	78	.619	.95	1.86	11.8	56.7	.52	22	105	56	23	11
PP		18	1	81	70	.545	.95	1.63	12.7	63.3	.50	21	104	53	22	11
PP		19	1	83	83	.494	.95	1.98	13.0	62.5	.61	26	124	65	27	13
PP		20	1	78	56	.432	.95	1.30	13.9	60.0	.43	18	78	46	19	8
PP		21	1	81	67	.411	.95	1.23	17.3	83.3	.51	21	103	54	23	11
PP		22	1	85	71	.354	.95	1.06	20.0	100.0	.51	21	106	54	23	11
PP		23	1	87	83	.342	.95	1.37	19.2	105.0	.63	26	144	67	28	15
PP		24	1	84	76	.298	.95	.89	25.4	140.0	.55	23	125	58	24	13
PP		Totals	18	79	68	13.835	17.14	36.02	10.1	49.2	8.75	365	1,773	933	389	189
Totals			60	81	67	34.965	57.14	94.89	13.1	65.5	29.98	1247	6,217	3,194	1,328	662

TC TSTNDSUM

Stand Table Summary

Project **FROSTYFH**

T36N R30E S23 T00U2

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Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
36N	30E	23	FROSTY FH	00U2	280.71	58	105

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		7	1	79	35	1.220	.34	1.22	3.0	10.0	.11	4	12	32	10	3
DF		8	6	84	49	5.794	2.07	10.57	3.5	18.1	1.06	37	191	298	104	54
DF		9	3	81	54	2.399	1.03	3.94	4.7	23.9	.53	19	94	148	52	26
DF		10	6	81	49	3.794	2.07	7.59	5.2	23.3	1.11	39	177	310	110	50
DF		11	4	80	51	2.141	1.38	4.28	6.1	25.0	.74	26	107	209	73	30
DF		12	8	84	63	3.555	2.76	9.39	6.8	32.2	1.80	63	303	505	178	85
DF		13	2	82	55	.732	.69	1.82	8.0	36.1	.42	15	66	117	41	18
DF		14	2	81	62	.637	.69	1.91	8.7	38.4	.47	17	73	133	47	21
DF		15	4	83	69	1.156	1.38	3.44	9.9	45.0	.97	34	155	271	95	43
DF		16	2	81	69	.498	.69	1.73	10.2	48.8	.50	18	84	141	50	24
DF		17	3	82	75	.654	1.03	2.39	12.2	55.4	.83	29	132	232	82	37
DF		18	3	80	67	.594	1.03	1.59	15.3	73.7	.69	24	117	195	68	33
DF		23	1	80	70	.117	.34	.47	19.1	85.0	.26	9	40	72	25	11
DF		Totals	45	82	54	23.291	15.52	50.35	6.6	30.8	9.48	333	1,552	2,661	935	436
PP	L	9	4	87	57	3.047	1.38	3.05	3.9	23.0	.39	12	70	108	34	20
PP	L	10	6	85	48	3.880	2.07	5.16	5.3	26.3	.66	27	136	184	77	38
PP	L	11	1	86	45	.542	.34	.54	7.0	30.0	.09	4	16	26	11	5
PP	L	13	1	85	52	.380	.34	.76	8.6	45.0	.16	7	34	44	18	10
PP	L	14	7	85	62	2.322	2.41	4.97	9.3	41.2	1.10	46	205	308	130	57
PP	L	15	9	86	63	2.552	3.10	5.39	10.9	51.5	1.40	59	277	393	164	78
PP	L	16	2	87	63	.491	.69	1.22	11.6	54.0	.34	14	66	95	40	19
PP	L	18	1	82	60	.200	.34	.40	16.0	70.0	.15	6	28	43	18	8
PP	L	21	2	84	72	.290	.69	.73	19.8	95.6	.34	14	70	96	41	20
PP	L	27	2	70	70	.176	.69	.53	27.2	110.7	.34	14	59	96	40	16
PP	L	28	1	82	59	.078	.34	.24	29.4	140.0	.17	7	33	47	19	9
PP		Totals	36	85	56	13.958	12.41	22.98	9.2	43.2	5.14	211	994	1,441	592	279
PP		8	2	88	67	1.962	.69	1.96	4.5	24.6	.21	9	48	60	25	14
PP		9	2	87	57	1.431	.69	1.43	5.7	30.0	.19	8	43	55	23	12
PP		11	1	89	78	.486	.34	.97	6.8	35.0	.16	7	34	44	19	10
PP		12	1	86	66	.470	.34	.94	7.2	35.0	.16	7	33	46	19	9
PP		13	1	88	77	.368	.34	1.11	7.4	36.7	.20	8	41	55	23	11
PP		14	1	89	60	.347	.34	.69	8.9	45.0	.15	6	31	42	17	9
PP		15	1	85	82	.293	.34	.88	9.4	46.7	.20	8	41	56	23	11
PP		16	1	87	68	.253	.34	.51	12.7	70.0	.15	6	35	43	18	10
PP		18	1	86	53	.191	.34	.38	17.0	75.0	.16	6	29	44	18	8
PP		21	1	82	75	.139	.34	.42	18.5	93.3	.19	8	39	52	22	11
PP		22	1	85	75	.129	.34	.39	21.0	110.0	.20	8	43	55	23	12
PP		Totals	13	87	66	6.071	4.48	9.68	8.5	43.0	1.96	82	417	551	230	117
DF	L	8	2	83	48	1.928	.69	2.87	3.7	20.0	.31	11	57	87	30	16
DF	L	9	2	81	48	1.750	.69	1.75	4.4	20.0	.22	8	35	61	21	10
DF	L	10	3	82	49	1.872	1.03	3.12	5.9	26.0	.52	18	81	145	52	23
DF	L	11	1	82	40	.523	.34	1.05	5.7	15.0	.17	6	16	48	17	4
DF	L	12	1	85	56	.411	.34	.82	8.6	45.0	.20	7	37	56	20	10
DF	L	17	1	75	44	.224	.34	.45	13.7	50.0	.17	6	22	49	17	6
DF		Totals	10	82	48	6.708	3.45	10.06	5.5	24.7	1.59	56	249	447	156	70
WL	L	20	1	87	90	.166	.34	.67	16.6	82.5	.26	11	55	74	31	15
WL		Totals	1	87	90	.166	.34	.67	16.6	82.5	0.26	11	55	74	31	15
Totals			105	84	56	50.193	36.21	93.73	7.4	34.8	18.44	692	3,266	5,175	1,944	917

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Stand Table Summary

Project **FROSTYFH**

T36N R30E S23 T00U3

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Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
36N	30E	23	FROSTY FH	00U3	90.45	17	38

Spc	ST	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		7	1	85	72	4.402	1.18	8.80	2.7	20.0	.68	24	176	61	22	16
DF		8	4	85	72	14.233	4.71	21.52	3.8	21.5	2.30	81	463	208	73	42
DF		9	2	87	73	5.153	2.35	12.91	4.3	24.0	1.58	55	310	142	50	28
DF		10	1	81	78	2.033	1.18	6.10	5.1	26.7	.89	31	163	80	28	15
DF		11	1	77	53	1.849	1.18	3.70	6.2	25.0	.66	23	92	59	21	8
DF		12	1	80	63	1.426	1.18	4.28	6.5	26.7	.79	28	114	71	25	10
DF		16	1	81	76	.875	1.18	3.50	9.4	45.0	.93	33	158	84	30	14
DF		18	1	82	57	.666	1.18	1.33	17.8	85.0	.68	24	113	61	21	10
DF		19	1	79	69	.585	1.18	1.76	16.6	73.3	.83	29	129	75	26	12
DF		22	1	82	56	.446	1.18	1.34	20.5	100.0	.78	27	134	71	25	12
DF		23	1	84	55	.401	1.18	1.20	22.3	100.0	.76	27	120	69	24	11
DF		Totals	15	84	70	32.069	17.65	66.44	5.7	29.7	10.87	382	1,971	983	345	178
PP	L	10	2	75	36	4.547	2.35	4.55	5.4	24.7	.59	24	113	53	22	10
PP	L	16	1	83	59	.812	1.18	1.62	13.0	60.0	.51	21	97	46	19	9
PP	L	19	1	85	48	.610	1.18	1.22	16.6	75.0	.49	20	92	44	18	8
PP	L	20	1	82	52	.550	1.18	1.10	18.6	85.0	.49	20	94	44	19	8
PP	L	21	1	86	70	.513	1.18	1.54	16.9	83.3	.63	26	128	57	24	12
PP	L	22	1	88	53	.434	1.18	.87	24.5	130.0	.51	21	113	46	19	10
PP	L	24	1	82	87	.384	1.18	1.54	20.8	107.5	.77	32	165	69	29	15
PP	L	27	1	83	61	.287	1.18	.86	29.0	140.0	.60	25	121	54	23	11
PP	L	28	1	80	72	.267	1.18	.80	31.4	170.0	.61	25	136	55	23	12
PP	L	29	2	84	85	.510	2.35	1.78	33.2	190.3	1.42	59	338	128	53	31
PP	L	30	1	85	74	.235	1.18	.70	39.7	216.7	.67	28	153	61	25	14
PP	L	32	1	85	78	.207	1.18	.62	44.6	253.3	.67	28	157	60	25	14
PP		Totals	14	80	51	9.357	16.47	17.20	19.2	99.2	7.93	330	1,707	717	299	154
DF	L	10	1	85	75	1.994	1.18	5.98	5.1	26.7	.87	30	160	79	27	14
DF	L	11	5	82	74	8.983	5.88	25.10	5.6	26.4	3.99	140	663	361	127	60
DF		Totals	6	83	74	10.978	7.06	31.08	5.5	26.5	4.86	170	823	440	154	74
PP		15	1	83	59	.921	1.18	1.84	11.0	50.0	.48	20	92	44	18	8
PP		16	1	85	81	.886	1.18	2.66	11.1	56.7	.71	29	151	64	27	14
PP		19	1	85	55	.610	1.18	1.22	17.0	85.0	.50	21	104	45	19	9
PP		Totals	3	84	66	2.418	3.53	5.72	12.3	60.6	1.69	70	347	153	64	31
Totals			38	83	67	54.822	44.71	120.45	7.9	40.2	25.35	953	4,847	2,293	862	438

TC TSTNDSUM

Stand Table Summary

Project **FROSTYFH**

T36N R30E S27 T00U4

T36N R30E S27 T00U4

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
36N	30E	27	FROSTY FH	00U4	41.46	6	20

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Spc	ST	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		7	1	73	39	11.468	3.33	11.47	3.9	20.0	1.27	45	229	53	18	10
DF		11	1	82	39	4.872	3.33	9.74	5.8	20.0	1.61	56	195	67	23	8
DF		12	1	83	42	4.106	3.33	8.21	7.2	30.0	1.69	59	246	70	25	10
DF		14	1	77	47	3.353	3.33	6.71	8.6	30.0	1.64	57	201	68	24	8
DF		15	2	81	63	5.435	6.67	16.31	9.8	43.3	4.56	160	707	189	66	29
DF		16	1	81	59	2.358	3.33	7.07	10.6	46.7	2.14	75	330	89	31	14
DF		Totals	7	78	46	31.593	23.33	59.51	7.6	32.1	12.91	453	1,909	535	188	79
PP		8	1	79	40	9.315	3.33	9.31	3.3	10.0	.73	30	93	30	13	4
PP		10	1	80	57	6.631	3.33	6.63	5.7	30.0	.90	38	199	37	16	8
PP		12	1	82	52	4.244	3.33	8.49	5.9	25.0	1.21	50	212	50	21	9
PP		15	2	78	56	5.433	6.67	10.87	10.2	40.1	2.67	110	436	111	46	18
PP		21	1	84	75	1.399	3.33	4.20	18.5	93.3	1.86	77	392	77	32	16
PP		Totals	6	80	51	27.023	20.00	39.50	7.8	33.7	7.38	306	1,332	306	127	55
PP	L	10	1	82	60	5.991	3.33	5.99	5.7	30.0	.82	34	180	34	14	7
PP	L	13	1	76	36	3.911	3.33	3.91	9.0	20.0	.85	35	78	35	15	3
PP	L	14	1	84	56	3.074	3.33	6.15	9.1	45.0	1.35	56	277	56	23	11
PP	L	15	2	77	54	5.814	6.67	11.63	9.6	40.0	2.69	112	465	111	46	19
PP	L	21	1	87	40	1.454	3.33	2.91	20.1	95.0	1.40	59	276	58	24	11
PP		Totals	6	80	51	20.244	20.00	30.59	9.7	41.7	7.11	296	1,276	295	123	53
DF	L	22	1	82	65	1.229	3.33	3.69	23.0	110.0	2.41	85	406	100	35	17
DF		Totals	1	82	65	1.229	3.33	3.69	23.0	110.0	2.41	85	406	100	35	17
Totals			20	79	49	80.090	66.67	133.28	8.6	36.9	29.81	1140	4,922	1,236	473	204

TC TSTNDSUM

Stand Table Summary

Project **FROSTYFH**

T36N R30E S34 T00U5

T36N R30E S34 T00U5

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Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
36N	30E	34	FROSTY FH	00U5	19.38	4	10

Spc	ST	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
PP	L	18	1	82	68	2.893	5.00	8.68	12.7	63.3	2.65	111	550	51	21	11
PP	L	26	1	88	106	1.325	5.00	6.63	24.7	142.0	3.92	164	941	76	32	18
PP	L	29	1	81	111	1.068	5.00	5.34	29.1	172.0	3.73	156	918	72	30	18
PP		Totals	3	83	86	5.287	15.00	20.65	20.8	116.7	10.31	430	2,409	200	83	47
DF		8	1	77	55	15.871	5.00	15.87	3.9	20.0	1.76	62	317	34	12	6
DF		16	1	80	62	3.719	5.00	11.16	9.8	40.0	3.17	109	446	61	21	9
DF		19	1	83	76	2.622	5.00	10.49	13.3	60.0	3.96	139	629	77	27	12
DF		Totals	3	78	59	22.212	15.00	37.52	8.3	37.1	8.88	310	1,393	172	60	27
DF	L	8	1	73	54	13.972	5.00	13.97	4.6	20.0	1.84	65	279	36	13	5
DF	L	22	1	79	60	1.983	5.00	5.95	19.1	76.7	3.26	114	456	63	22	9
DF		Totals	2	74	55	15.956	10.00	19.92	8.9	36.9	5.10	178	736	99	35	14
PP		11	1	77	54	8.007	5.00	8.01	6.5	30.0	1.25	52	240	24	10	5
PP		15	1	84	66	4.360	5.00	13.08	8.3	36.7	2.57	109	480	50	21	9
PP		Totals	2	79	58	12.367	10.00	21.09	7.6	34.1	3.82	161	720	74	31	14
Totals			10	78	60	55.822	50.00	99.17	10.9	53.0	28.11	1079	5,257	545	209	102

TC TSTNDSUM

Stand Table Summary

Project **FROSTYFH**

T36N R30E S36 T00U6

T36N R30E S36 T00U6

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
36N	30E	36	FROSTY FH	00U6	117.21	23	58

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Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
PP	L	10	2	71	46	3.068	1.74	3.07	6.4	20.0	.47	20	61	55	23	7
PP	L	11	1	73	58	1.318	.87	1.32	7.4	30.0	.23	10	40	27	11	5
PP	L	12	2	73	45	2.274	1.74	2.27	8.0	25.2	.45	18	57	53	21	7
PP	L	13	1	84	79	.973	.87	1.95	8.1	35.0	.38	16	68	44	18	8
PP	L	14	2	81	64	1.662	1.74	3.32	9.1	37.6	.73	30	125	86	36	15
PP	L	15	5	82	74	3.508	4.35	9.84	10.0	46.3	2.38	99	455	279	116	53
PP	L	16	1	77	56	.639	.87	1.28	11.6	50.0	.36	15	64	42	17	7
PP	L	17	2	84	65	1.130	1.74	3.39	11.1	51.7	.91	38	175	107	44	21
PP	L	18	1	85	72	.498	.87	1.49	13.6	66.7	.49	20	100	57	24	12
PP	L	19	3	83	58	1.353	2.61	3.16	15.4	68.5	1.16	49	217	137	57	25
PP	L	20	1	85	75	.403	.87	1.21	17.2	86.7	.50	21	105	58	24	12
PP	L	21	1	78	63	.362	.87	1.08	15.6	56.7	.41	17	61	47	20	7
PP	L	22	1	88	91	.318	.87	1.27	20.0	110.0	.61	25	140	72	30	16
PP	L	23	2	88	65	.619	1.74	1.55	23.8	126.0	.89	37	195	104	43	23
PP	L	25	4	86	83	1.019	3.48	3.58	25.2	139.6	2.17	90	500	254	106	59
PP	L	26	1	80	90	.238	.87	.95	24.2	112.5	.55	23	107	64	27	13
PP	L	28	1	88	72	.200	.87	.60	35.3	200.0	.51	21	120	60	25	14
PP	L	32	1	91	86	.161	.87	.64	40.3	232.5	.62	26	149	73	30	18
PP		Totals	32	79	63	19.741	27.83	41.98	13.7	65.3	13.80	574	2,739	1,618	673	321
DF		12	3	80	62	3.314	2.61	8.74	6.6	27.4	1.65	58	240	193	68	28
DF		14	2	78	59	1.663	1.74	4.18	8.8	36.1	1.06	37	151	124	43	18
DF		16	1	80	52	.631	.87	1.26	13.3	55.0	.48	17	69	56	20	8
DF		17	2	78	69	1.097	1.74	3.29	12.9	55.0	1.20	42	181	141	50	21
DF		18	4	79	60	1.952	3.48	5.86	13.5	54.2	2.23	79	317	262	93	37
DF		20	2	81	66	.822	1.74	2.05	19.2	88.0	1.12	39	180	131	46	21
DF		24	1	88	89	.281	.87	1.13	25.3	147.5	.81	29	166	95	33	19
DF		Totals	15	80	62	9.760	13.04	26.49	11.4	49.2	8.55	301	1,304	1,002	352	153
DF	L	25	1	82	95	.266	.87	1.06	26.6	145.0	.81	28	154	94	33	18
DF	L	28	2	73	71	.413	1.74	1.43	30.6	136.4	1.25	44	195	146	51	23
DF	L	29	1	87	107	.186	.87	.93	36.5	176.0	.96	34	163	113	40	19
DF	L	33	1	88	91	.147	.87	.59	50.5	290.0	.85	30	171	99	35	20
DF		Totals	5	80	87	1.011	4.35	4.01	33.8	170.4	3.86	136	684	453	159	80
PP		16	1	82	84	.607	.87	1.82	11.8	56.7	.51	21	103	60	25	12
PP		19	2	82	74	.856	1.74	2.57	14.9	69.9	.91	38	180	107	45	21
PP		20	1	87	79	.403	.87	1.21	17.4	90.0	.50	21	109	59	25	13
PP		21	1	85	70	.372	.87	1.12	16.9	76.7	.45	19	86	53	22	10
PP		23	1	74	61	.315	.87	.94	17.4	66.7	.40	16	63	46	19	7
PP		Totals	6	82	75	2.553	5.22	7.66	15.1	70.5	2.78	116	540	326	136	63
Totals			58	80	64	33.065	50.43	80.15	14.1	65.7	28.99	1126	5,267	3,398	1,320	617

TC TSTNDSUM

Stand Table Summary

Project **FROSTYFH**

T36N R30E S36 T00U7

T36N R30E S36 T00U7

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
36N	30E	36	FROSTY FH	00U7	288.01	61	154

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Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
PP	L	9	2	69	40	1.422	.66	1.42	1.8	4.8	.14	3	7	41	8	2
PP	L	10	2	82	53	1.202	.66	1.20	6.4	30.0	.19	8	36	53	22	10
PP	L	11	2	74	61	1.014	.66	1.49	6.2	26.8	.22	9	40	64	27	12
PP	L	12	4	83	57	1.700	1.31	3.40	6.6	28.8	.54	22	98	155	65	28
PP	L	13	4	81	59	1.457	1.31	2.91	8.0	33.8	.55	23	98	159	67	28
PP	L	14	5	83	84	1.491	1.64	4.76	8.2	41.2	.94	39	196	271	113	56
PP	L	15	6	82	63	1.647	1.97	3.84	10.0	42.8	.91	38	164	263	110	47
PP	L	16	9	84	83	2.054	2.95	6.62	10.9	53.3	1.73	72	353	498	208	102
PP	L	17	8	83	71	1.675	2.62	4.79	12.1	57.4	1.39	58	275	400	167	79
PP	L	18	3	80	71	.557	.98	1.67	12.6	50.0	.50	21	84	145	61	24
PP	L	19	11	83	71	1.845	3.61	5.38	14.8	69.6	1.91	80	375	550	230	108
PP	L	20	5	83	82	.750	1.64	2.84	15.0	71.7	1.02	43	204	295	123	59
PP	L	21	4	82	69	.550	1.31	1.52	18.5	86.9	.67	28	132	194	81	38
PP	L	22	3	86	58	.372	.98	.99	19.4	90.3	.46	19	90	134	55	26
PP	L	23	4	82	81	.455	1.31	1.48	20.6	99.3	.74	31	147	212	88	42
PP	L	24	3	83	82	.308	.98	1.13	21.8	111.7	.59	25	126	170	71	36
PP	L	25	6	83	75	.582	1.97	2.04	22.4	115.9	1.13	46	236	325	132	68
PP	L	26	4	84	85	.360	1.31	1.44	24.4	132.9	.84	35	191	243	101	55
PP	L	27	4	85	89	.333	1.31	1.33	26.7	147.5	.85	36	196	246	102	57
PP	L	43	1	78	75	.033	.33	.13	29.8	287.5	.18	4	38	51	11	11
PP		Totals	90	81	68	19.810	29.51	50.41	12.7	61.2	15.52	639	3,086	4,469	1,841	889
DF		7	1	85	33	1.227	.33	1.23	3.0	20.0	.11	4	25	33	11	7
DF		12	2	80	72	.801	.66	2.80	6.3	29.9	.50	18	84	144	51	24
DF		13	6	80	66	2.199	1.97	6.65	7.1	32.1	1.34	47	214	387	136	62
DF		14	8	80	71	2.524	2.62	8.18	8.1	36.1	1.88	66	295	542	190	85
DF		15	4	82	75	1.077	1.31	3.51	9.7	47.6	.97	34	167	280	98	48
DF		16	3	80	79	.714	.98	2.84	9.7	44.9	.78	28	128	225	79	37
DF		17	6	80	76	1.271	1.97	4.87	11.0	49.5	1.53	54	241	440	155	69
DF		19	2	78	75	.342	.66	1.20	14.0	65.8	.48	17	79	138	49	23
DF		20	2	78	73	.303	.66	1.05	15.9	71.4	.48	17	75	137	48	22
DF		21	3	80	85	.414	.98	1.80	16.2	80.0	.83	29	144	239	84	41
DF		23	2	79	73	.231	.66	.69	23.1	100.0	.46	16	69	131	46	20
DF		Totals	39	81	68	11.102	12.79	34.83	9.4	43.7	9.36	329	1,521	2,696	946	438
PP		10	1	70	44	.601	.33	.60	5.9	20.0	.09	4	12	25	10	3
PP		11	1	77	79	.463	.33	.93	6.2	25.0	.14	6	23	40	17	7
PP		12	1	76	73	.411	.33	.82	7.0	30.0	.14	6	25	40	17	7
PP		14	1	82	78	.330	.33	.99	7.8	36.7	.18	8	36	53	22	10
PP		16	1	80	77	.235	.33	.70	9.9	46.7	.17	7	33	48	20	9
PP		18	1	82	65	.183	.33	.55	12.7	53.3	.17	7	29	48	20	8
PP		19	2	84	74	.348	.66	1.04	14.5	68.4	.36	15	71	103	43	20
PP		20	1	83	82	.149	.33	.60	14.5	72.5	.21	9	43	59	25	12
PP		21	1	88	91	.131	.33	.53	18.1	95.0	.23	9	50	66	27	14
PP		22	1	78	47	.130	.33	.26	20.0	45.0	.12	5	12	36	15	3
PP		24	2	83	71	.212	.66	.74	20.7	101.2	.37	15	75	106	44	22
PP		Totals	13	79	69	3.192	4.26	7.75	11.7	52.8	2.16	90	409	622	260	118
DF	L	13	1	82	47	.361	.33	.72	9.0	35.0	.18	6	25	52	19	7
DF	L	26	2	78	79	.183	.66	.73	24.9	119.9	.52	18	88	150	53	25
DF	L	28	1	78	83	.075	.33	.30	31.8	157.5	.27	9	47	77	27	14
DF	L	30	1	82	94	.067	.33	.27	38.9	225.0	.30	10	60	85	30	17
DF	L	31	2	78	69	.126	.66	.44	37.4	183.9	.47	16	81	135	47	23

TC TSTNDSUM

Stand Table Summary

Project **FROSTYFH**

T36N R30E S36 T00U7

T36N R30E S36 T00U7

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
36N	30E	36	FROSTY FH	00U7	288.01	61	154

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Spc	ST	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF	L	32	1	79	100	.059	.33	.24	42.3	235.0	.29	10	56	82	29	16
DF		Totals	8	80	67	.871	2.62	2.70	26.3	132.3	2.02	71	357	582	205	103
WL	L	26	1	88	90	.092	.33	.46	23.9	140.0	.26	11	64	76	32	18
WL	L	30	1	87	136	.066	.33	.46	32.4	210.0	.36	15	98	104	43	28
WL		Totals	2	88	109	.158	.66	.92	28.2	175.2	0.62	26	162	180	75	47
WL		14	1	81	87	.316	.33	1.26	7.3	35.0	.22	9	44	64	27	13
WL		24	1	86	102	.103	.33	.52	22.3	126.0	.28	12	65	80	33	19
WL		Totals	2	82	91	.419	.66	1.78	11.7	61.5	0.50	21	109	144	60	32
Totals			154	81	69	35.553	50.49	98.39	12.0	57.4	30.19	1176	5,644	8,694	3,387	1,626

TC TSTNDSUM

Stand Table Summary

Project FROSTYFH

T35N R31E S16 T00U8

T35N R31E S16 T00U8

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
35N	31E	16	FROSTY FH	00U8	82.38	17	65

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Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		7	1	87	46	6.620	1.98	6.62	3.0	16.0	.70	20	106	58	16	9
DF		9	6	82	57	23.880	10.26	43.66	3.6	19.8	5.64	158	866	465	130	71
DF		10	4	80	59	13.257	7.11	28.63	3.9	19.7	4.03	113	564	332	93	46
DF		11	5	81	64	11.224	7.48	27.73	4.7	21.5	4.67	131	595	384	108	49
DF		15	2	78	95	1.998	2.35	6.96	7.4	34.4	1.83	51	239	150	42	20
DF		16	1	82	89	1.364	1.98	5.46	8.9	42.0	1.73	48	229	142	40	19
DF		18	2	82	89	2.302	3.95	9.21	10.8	54.0	3.51	99	497	289	82	41
DF		19	1	81	82	1.004	1.98	4.02	11.5	54.0	1.64	46	217	135	38	18
DF		20	2	81	71	1.089	2.35	3.81	13.0	61.8	1.76	49	235	145	41	19
DF		22	2	84	92	1.204	3.15	5.14	15.5	85.0	2.84	80	437	234	66	36
DF		Totals	26	82	62	63.941	42.60	141.23	5.6	28.2	28.34	796	3,985	2,334	656	328
PP	L	11	1	81	69	2.942	1.98	5.88	6.2	25.0	.88	37	147	72	30	12
PP	L	13	1	78	59	2.212	1.98	4.42	7.5	30.0	.79	33	133	65	27	11
PP	L	14	1	84	87	1.773	1.98	5.32	8.9	43.3	1.13	47	230	93	39	19
PP	L	16	1	80	70	1.364	1.98	4.09	10.0	40.0	.99	41	164	82	34	13
PP	L	17	2	84	90	2.482	3.95	9.93	11.0	54.9	2.62	109	545	216	90	45
PP	L	18	2	86	90	2.278	3.95	8.02	12.9	65.8	2.47	104	528	204	85	43
PP	L	19	1	88	75	.994	1.98	2.98	16.0	83.3	1.15	48	248	95	39	20
PP	L	20	1	84	90	.944	1.98	3.77	14.1	70.0	1.27	53	264	105	44	22
PP	L	22	1	77	88	.729	1.98	2.92	16.6	80.0	1.16	48	233	96	40	19
PP	L	24	3	80	104	1.920	5.93	9.60	18.3	89.4	4.21	176	858	347	145	71
PP	L	26	1	90	61	.317	1.18	.95	28.9	163.3	.66	27	155	54	23	13
PP	L	45	1	88	90	.181	1.98	.36	111.0	530.0	.96	40	191	79	33	16
PP		Totals	16	82	81	18.134	30.83	58.25	13.1	63.5	18.31	763	3,697	1,508	628	305
PP		10	1	85	43	2.157	1.18	2.16	5.7	24.0	.37	12	52	30	10	4
PP		11	3	81	51	8.083	5.13	10.92	5.4	21.9	1.74	59	239	143	49	20
PP		12	1	80	76	2.560	1.98	5.12	5.6	24.0	.86	29	123	71	24	10
PP		13	3	80	67	4.714	4.33	9.43	6.7	30.6	1.87	63	288	154	52	24
PP		14	1	79	69	1.903	1.98	5.71	6.0	24.0	1.01	34	137	83	28	11
PP		15	1	83	71	1.590	1.98	4.77	7.4	34.7	1.06	35	165	87	29	14
PP		16	1	84	85	1.364	1.98	5.46	7.4	36.0	1.22	41	196	100	33	16
PP		17	1	77	74	1.284	1.98	3.85	8.7	34.7	1.00	34	134	82	28	11
PP		18	1	85	52	.704	1.18	1.41	11.8	56.0	.50	17	79	41	14	6
PP		19	1	81	79	1.015	1.98	3.04	11.3	53.3	1.03	34	162	85	28	13
PP		20	1	75	70	.915	1.98	2.75	11.6	42.7	.95	32	117	78	26	10
PP		Totals	15	81	63	26.290	25.65	54.62	7.1	31.0	11.60	389	1,693	955	321	139
DF	L	18	1	85	70	.704	1.18	2.11	14.4	70.0	.86	30	148	71	25	12
DF	L	21	1	77	81	.499	1.18	1.99	16.5	75.0	.93	33	150	77	27	12
DF	L	28	1	82	88	.466	1.98	2.33	30.0	172.0	1.99	70	400	164	58	33
DF	L	30	1	80	79	.240	1.18	.96	34.5	172.5	.94	33	165	78	27	14
DF		Totals	4	82	78	1.908	5.51	7.39	22.5	116.8	4.74	166	863	390	137	71
WL	L	16	1	90	92	.898	1.18	3.59	11.0	57.5	.96	40	206	79	33	17
WL	L	19	1	87	128	.983	1.98	5.90	14.5	81.7	2.05	86	482	169	70	40
WL		Totals	2	88	111	1.881	3.15	9.49	13.2	72.5	3.01	125	688	248	103	57
WL		11	1	85	70	3.288	1.98	9.86	4.1	21.3	1.21	40	210	100	33	17
WL		16	1	81	65	1.381	1.98	4.14	9.1	32.0	1.13	38	133	93	31	11
WL		Totals	2	84	69	4.669	3.95	14.01	5.6	24.5	2.34	78	343	192	64	28

TC TSTNDSUM

Stand Table Summary

Project **FROSTYFH**

T35N R31E S16 T00U8

T35N R31E S16 T00U8

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
35N	31E	16	FROSTY FH	00U8	82.38	17	65

Page: 2
Date: 11/24/201
Time: 11:42:34AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
Totals			65	82	66	116.824	111.70	284.98	8.1	39.5	68.32	2317	11,270	5,628	1,909	928

TC TSTNDSUM

Stand Table Summary

Project **FROSTYFH**

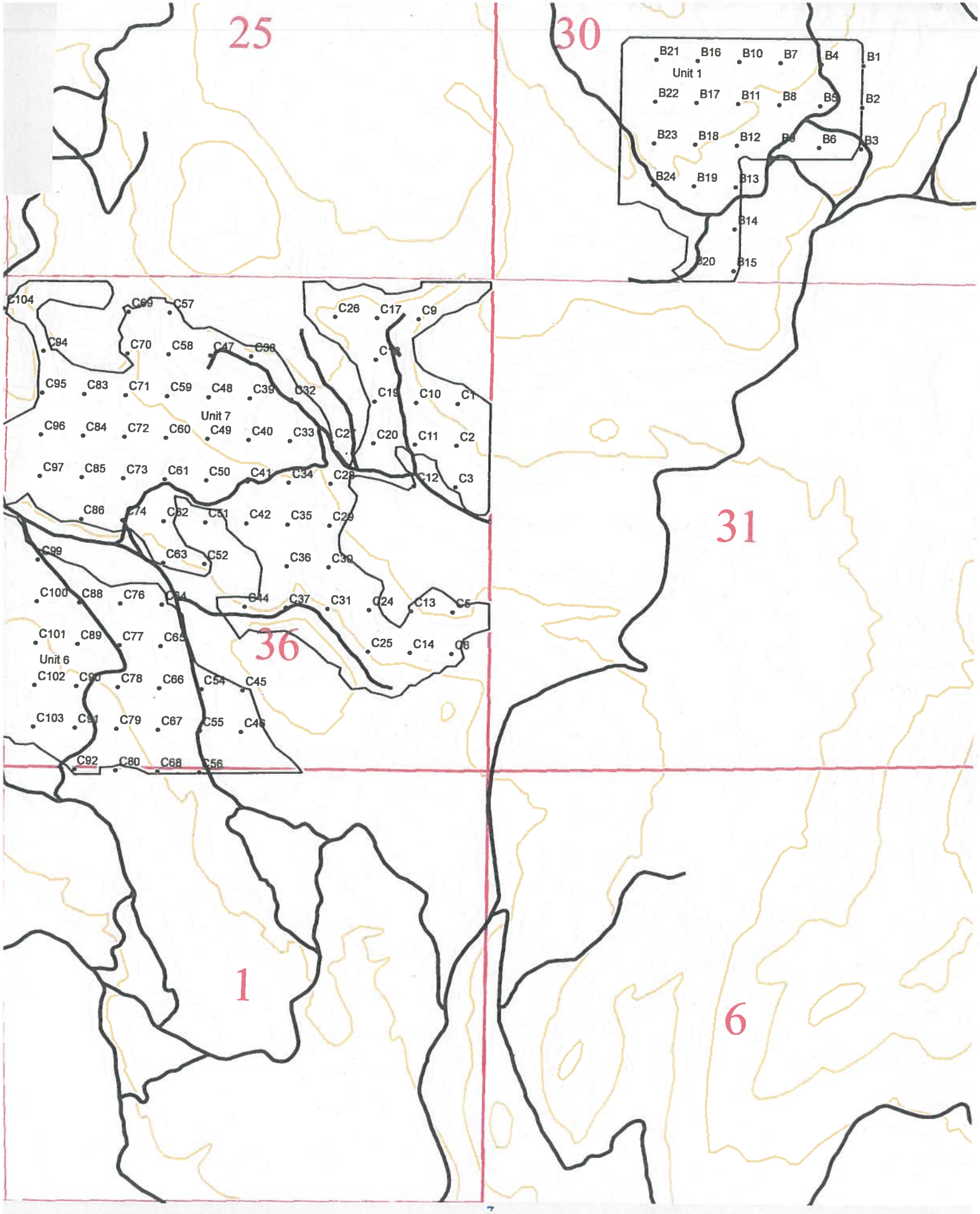
T35N R31E S16 T00U9

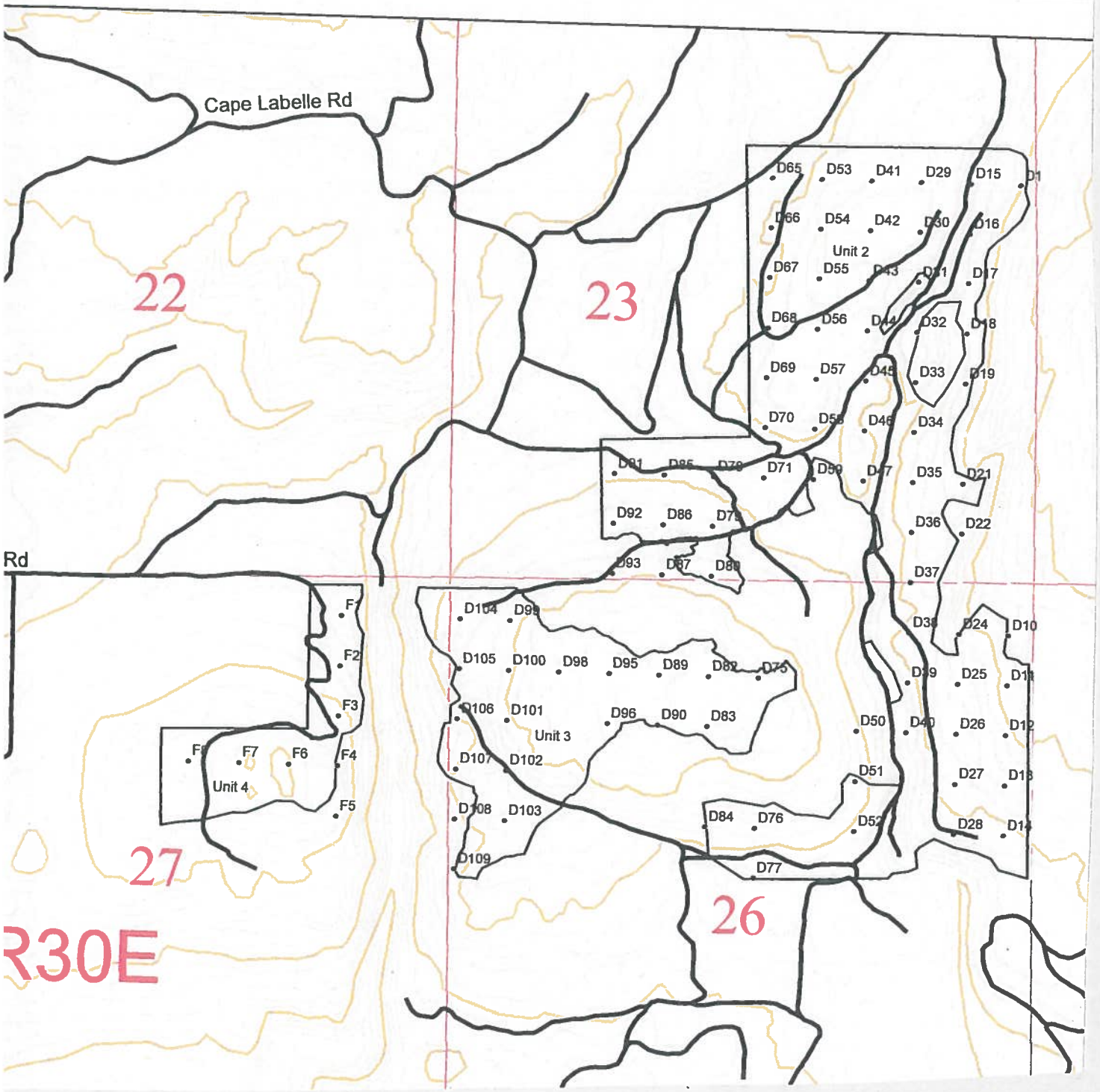
T35N R31E S16 T00U9

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
35N	31E	16	FROSTY FH	00U9	8.80	3	5

Page: 1
Date: 11/24/201
Time: 11:42:34AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
PP	L	19	1	81	63	3.495	6.67	10.49	13.1	56.7	3.29	137	594	29	12	5
PP	L	27	1	89	86	1.664	6.67	6.66	28.6	145.0	4.58	191	965	40	17	8
PP		Totals	2	84	70	5.160	13.33	17.14	19.1	91.0	7.87	328	1,560	69	29	14
DF		13	1	77	66	6.910	6.67	20.73	7.4	30.0	4.39	154	622	39	14	5
DF		14	1	77	86	6.512	6.67	26.05	7.4	35.0	5.47	192	912	48	17	8
DF		Totals	2	77	76	13.422	13.33	46.78	7.4	32.8	9.87	346	1,534	87	30	13
DF	L	16	1	77	73	4.775	6.67	19.10	9.1	42.5	4.98	175	812	44	15	7
DF		Totals	1	77	73	4.775	6.67	19.10	9.1	42.5	4.98	175	812	44	15	7
Totals			5	78	74	23.357	33.33	83.02	10.2	47.0	22.71	849	3,905	200	75	34


25
30
31
36
1
6
Unit 1
B21 B16 B10 B7 B4 B1
B22 B17 B11 B8 B5 B2
B23 B18 B12 B9 B6 B3
B24 B19 B13
B14
B20 B15
Unit 7
C104 C69 C57 C26 C17 C9
C94 C70 C58 C47 C38 C18
C95 C83 C71 C59 C48 C39 C32 C19 C10 C1
C96 C84 C72 C60 C49 C40 C33 C21 C20 C11 C2
C97 C85 C73 C61 C50 C41 C34 C28 C12 C3
C86 C74 C62 C51 C42 C35 C29
C99 C63 C52 C36 C30
C100 C88 C76 C64 C44 C37 C31 C24 C13 C5
C101 C89 C77 C65 C25 C14 C6
Unit 6
C102 C90 C78 C66 C54 C45
C103 C91 C79 C67 C55 C46
C92 C80 C68 C56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27
26
R30E
Rd
Unit 2
Unit 3
Unit 4
D65
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D41
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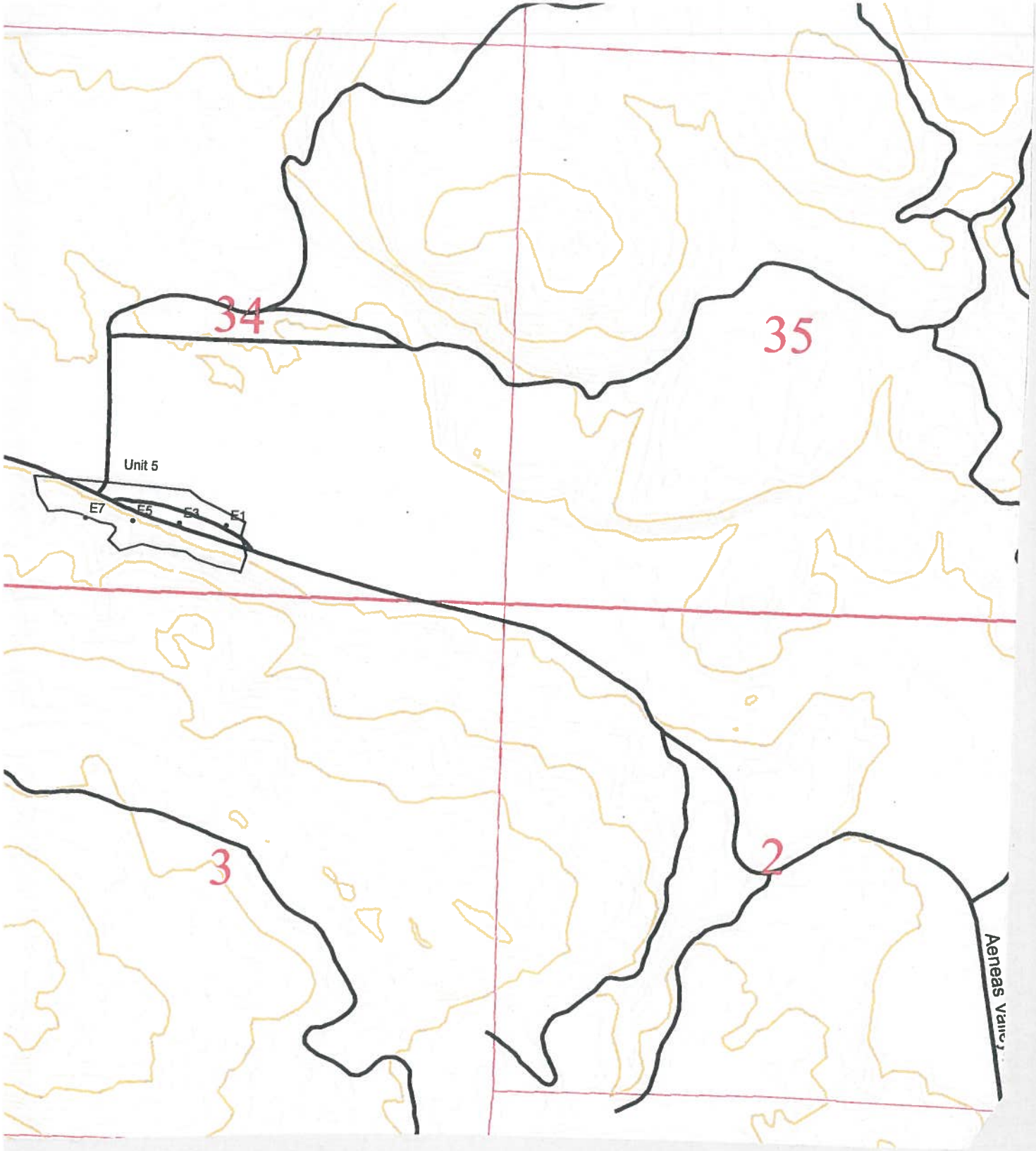
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35
Unit 5
E7
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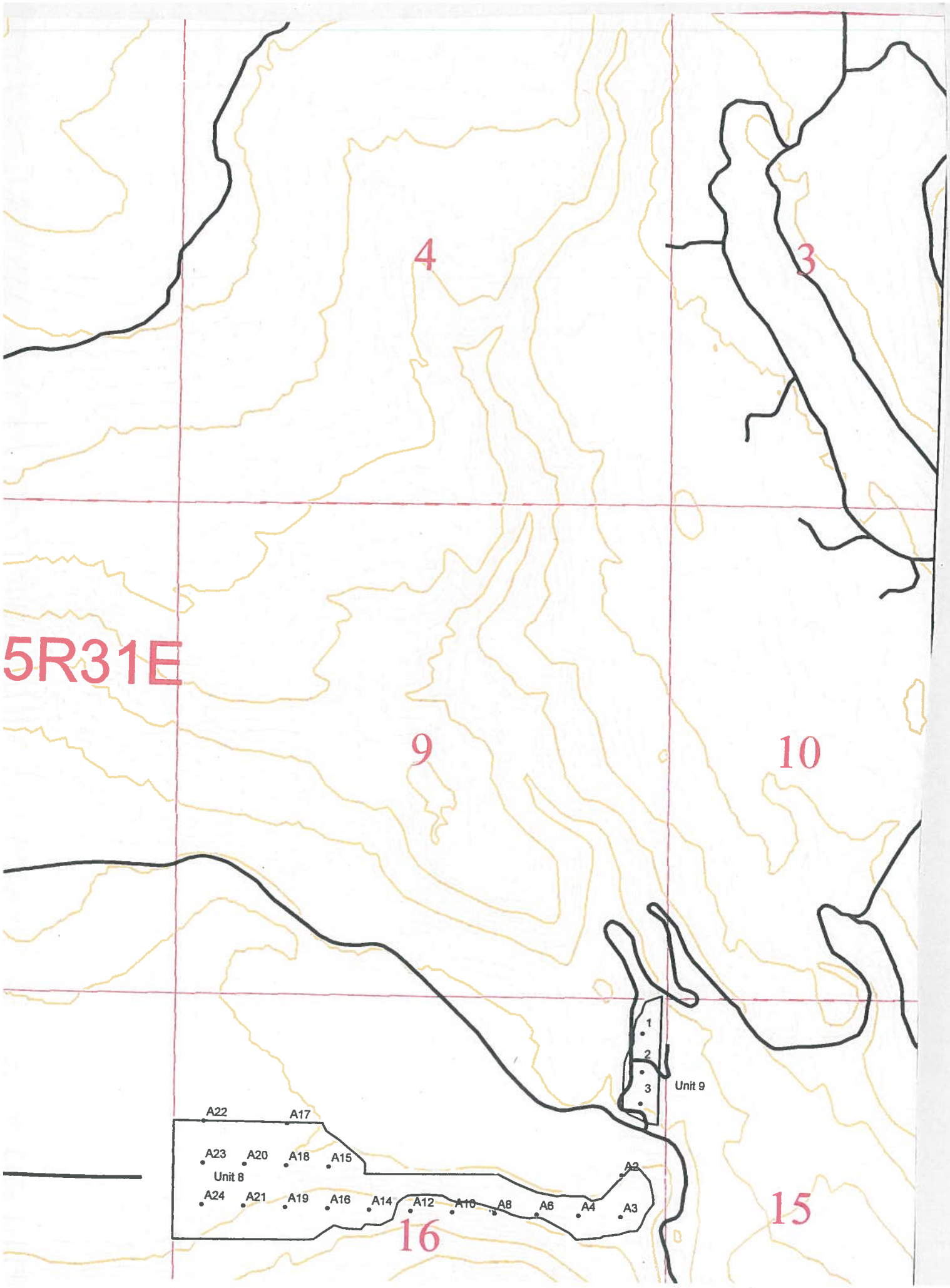
2
Aeneas Valley


4
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5R31E
9
10
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Unit 9
A22
A17
A23
A20
A18
A15
Unit 8
A24
A21
A19
A16
A14
A12
A10
A8
A6
A4
A2
A3
16
15

Mill Mileages
30-092787

Bidder	A Miles	C Miles	Ferry/Toll Rate ($)
Bennett Lumber (Princeton)	241	2	
Boise Cascade (Arden)	96	2	
Boise Cascade (Lower Mill)	79	2	
Boise Cascade (Upper Mill)	81	2	
C&C Timber (Port Gamble via North Cascades & Ferry)	287	2	117.15
Clearwater Paper (Wilma)	268	2	
Fitch (Snohomish via Stevens)	252	2	
Guy Bennett (Wilma)	268	2	
Hampton Tree Farms (Darrington via North Cascades)	206	2	
Hampton (Morton via White Pass)	345	2	
Hampton (Randle via White Pass)	325	2	
Home Fires (Spokane)	165	2	
IFG (Athol)	187	2	
IFG (LaClede)	169	2	
IFG (Moyie Springs)	222	2	
JKCK Enterprises (Cle Elum)	205	2	
JKCK Enterprises (Oroville)	41	2	
Omak Wood Products (Omak)	45	2	
Ponderay Newsprint (Usk)	140	2	
Potlatch (St Maries)	221	2	
Seattle Snohomish (Snohomish)	251	2	
Sierra Pacific (Mt. Vernon via North Cascades)	232	2	
Stimson (Plummer)	203	2	
Stimson (Priest River)	159	2	
TMI Foret Products (Morton)	344	2	
Tricon Timber (St Regis)	285	2	
Vaagen Brothers (Colville)	90	2	
Vaagen Brothers (Usk)	138	2	
Waupaca Northwoods (Wapato)	249	2	
Zosel (Oroville)	41	2	

WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

FPA/N No: 3020647
Effective Date: 12/30/15
Expiration Date: 12/30/18
Shut Down Zone: 687 W
EARR Tax Credit: [x] Eligible [ ] Non-eligible
Reference: DNR
Frosty FH FIT

Forest Practices Application/Notification
Notice of Decision

Decision

[ ] Notification	Operations shall not begin before the effective date.
[x] Approved	This Forest Practices Application is subject to the conditions listed below.
[ ] Disapproved	This Forest Practices Application is disapproved for the reasons listed below.
[ ] Closed	Applicant has withdrawn FPA/N.

FPA/N Classification

[ ] Class II [x] Class III [ ] Class IVG [ ] Class IVS

Number of Years Granted on Multi-Year Request

[ ] 4 years [ ] 5 years

Conditions on Approval / Reasons for Disapproval

No Conditions

Issued By: Shane Knowlton **Region:** Northeast

Title: Forest Practices Forester **Date:** 12/30/15

Copies to: [ ] **Landowner, Timber Owner and Operator.**

Issued in person: [x] **Landowner** [x] **Timber Owner** [x] **Operator By:** JS