



TIMBER NOTICE OF SALE

SALE NAME: Q BROOKS JUNCTION

AGREEMENT NO: 30-98161

AUCTION: June 16, 2020 starting at 10:00 a.m., Northeast Region Office, Colville, WA

COUNTY: Stevens

SALE LOCATION: Sale located approximately 13 miles northwest of Colville, WA

PRODUCTS SOLD AND SALE AREA:

All conifer species except for leave trees banded by blue paint, leave trees bounded by yellow leave tree area tags, two standing snags and two down logs per acre in Units 1, 2, 3, 4 and 5 bounded by white timber sale boundary tags; and all right of way timber bounded by orange right of way boundary tags on part(s) of Sections 8 all in Township 37 North, Range 39 East, Sections 36 all in Township 38 North, Range 38 East, W.M., containing 353 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: PwC-SFIFM-513)

ESTIMATED SALE VOLUMES AND QUALITY:

Table with columns: Species, Avg Ring DBH, Ring Count, Total MBF, Total Tons, Price \$/Ton, and MBF by Grade (P, SM, 1S, 2S, 3S, 4S, 5S, 6S, UT). Rows include Douglas fir, Ponderosa pine, Larch, Red cedar, and Sale Total.

MINIMUM BID: \$30.82/ton (est. value \$1,211,000.00) BID METHOD: Sealed Bids

PERFORMANCE SECURITY: \$100,000.00 SALE TYPE: Tonnage Scale

EXPIRATION DATE: July 1, 2022 ALLOCATION: Export Restricted

BIDDABLE SPECIES: Bidding to be allowed on all species combined.

BID DEPOSIT: \$121,100.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Dozer, Track skidder, Rubber tired skidder, and Ground based equipment. Falling and Yarding will not be permitted from February 1 to June 1 unless authorized in writing by the Contract Administrator due to spring breakup in Units 4 and 5 and from February 1 to July 1 unless authorized in writing by the Contract Administrator due to spring breakup and beetle timing restrictions in Units 1, 2 and 3.

ROADS: 6.15 stations of required construction. 64.75 stations of required reconstruction. 4.95 stations of optional construction. 139.65 stations of required prehaul maintenance. 34.85 stations of optional prehaul maintenance. Road construction will not be permitted from November 15 to June 1 unless authorized in writing by the Contract Administrator due to frozen conditions and spring breakup. The hauling of forest products will not be



TIMBER NOTICE OF SALE

permitted from February 1 to June 1 unless authorized in writing by the Contract Administrator due to spring breakup.

ACREAGE DETERMINATION

CRUISE METHOD: Acreage determined using GPS methods. Acreage shown above is net harvest acres in harvest units. Ponderosa pine and western red cedar: 8.0 - 17.5 inches dbh has a minimum top of 5.6 inch dib. All other species: 7.0 - 17.5 inches dbh has minimum top of 4.6 inch dib. All species 17.6 inches and greater dbh have a minimum top dib of 40% of dbh at 16 feet or a 6 inch top whichever is greater.

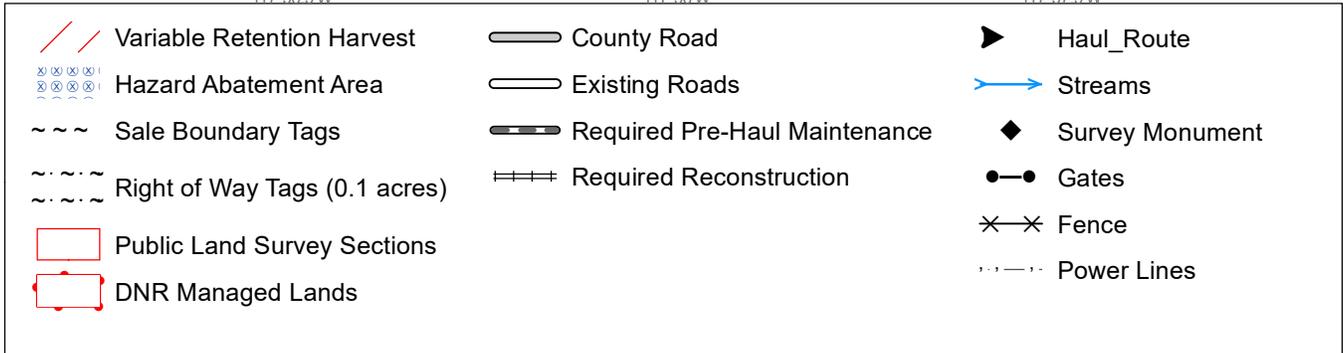
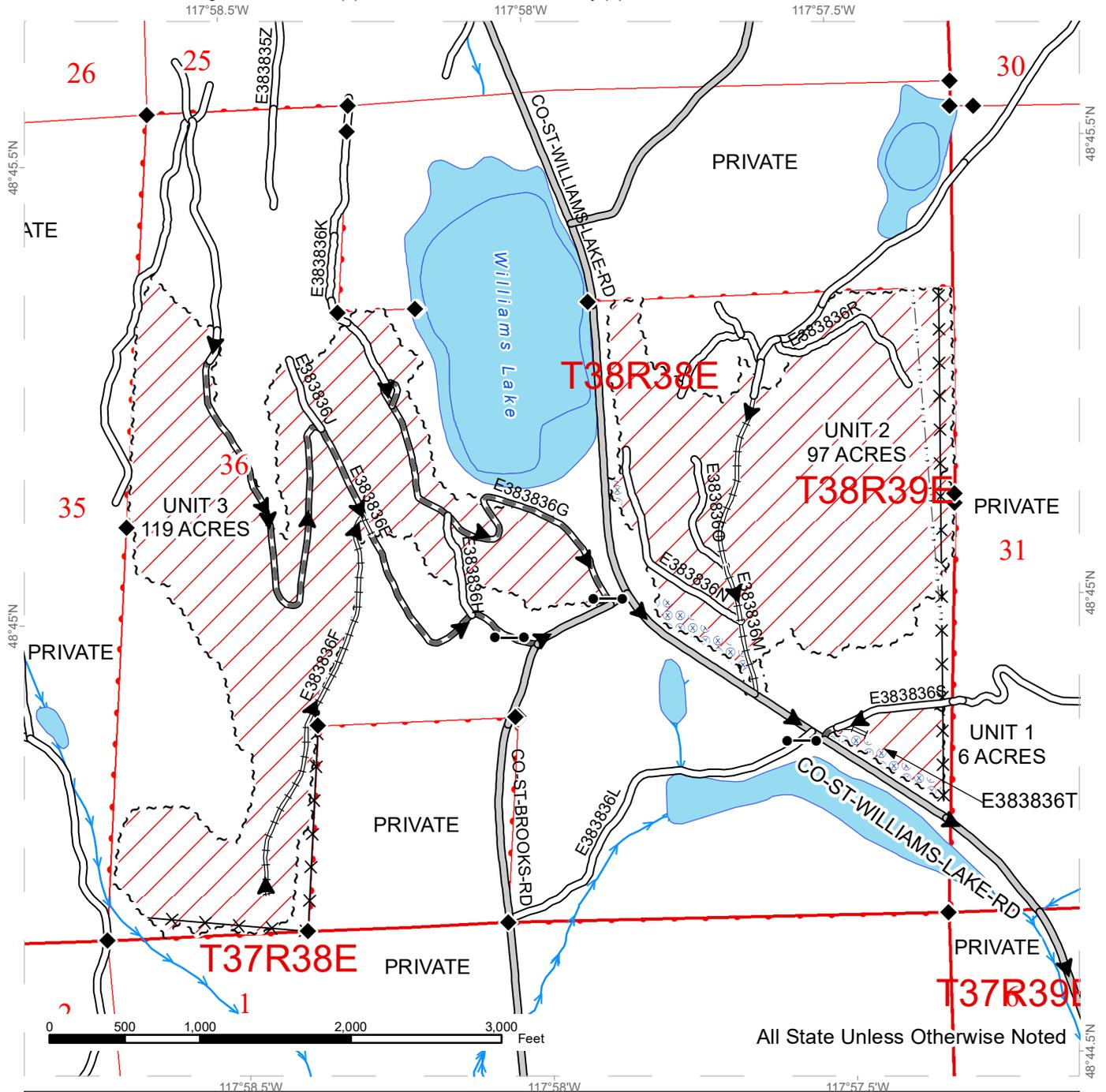
FEES: \$112,727.00 is due on day of sale. \$1.52 per ton is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: Locked gate restricts access to Unit 4. Contact the Northeast Region Office at (509) 684-7474 for access.

TIMBER SALE MAP

SALE NAME: Q BROOKS JUNCTION
AGREEMENT #: 30-098161
TOWNSHIP(S): T37R39E, T38R38E
TRUST(S): Agricultural School (4), Common School and Indemnity (3)

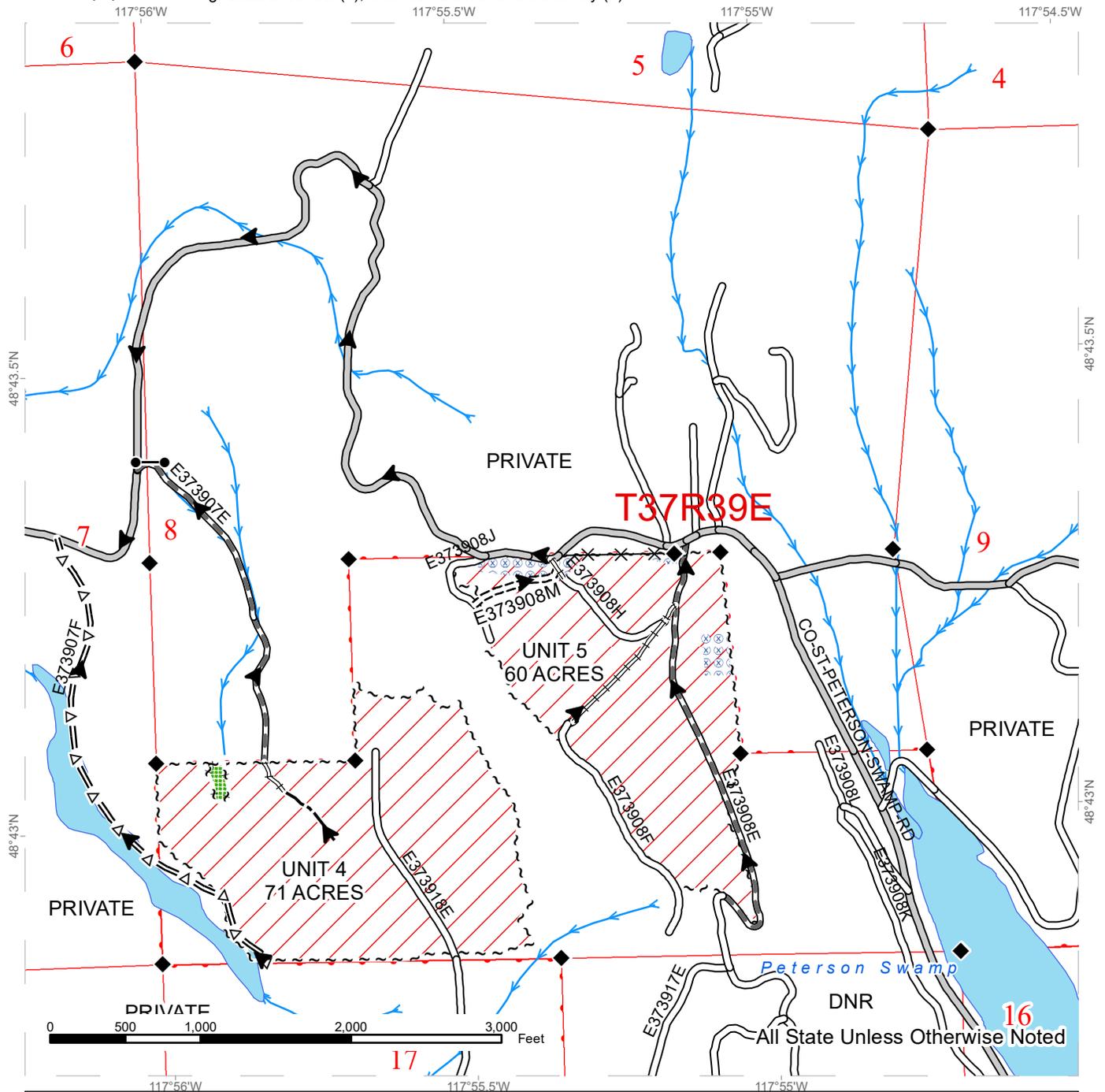
REGION: Northeast Region
COUNTY(S): Stevens
ELEVATION RGE: 1960-3000



TIMBER SALE MAP

SALE NAME: Q BROOKS JUNCTION
AGREEMENT #: 30-098161
TOWNSHIP(S): T37R39E, T38R38E
TRUST(S): Agricultural School (4), Common School and Indemnity (3)

REGION: Northeast Region
COUNTY(S): Stevens
ELEVATION RGE: 1960-3000



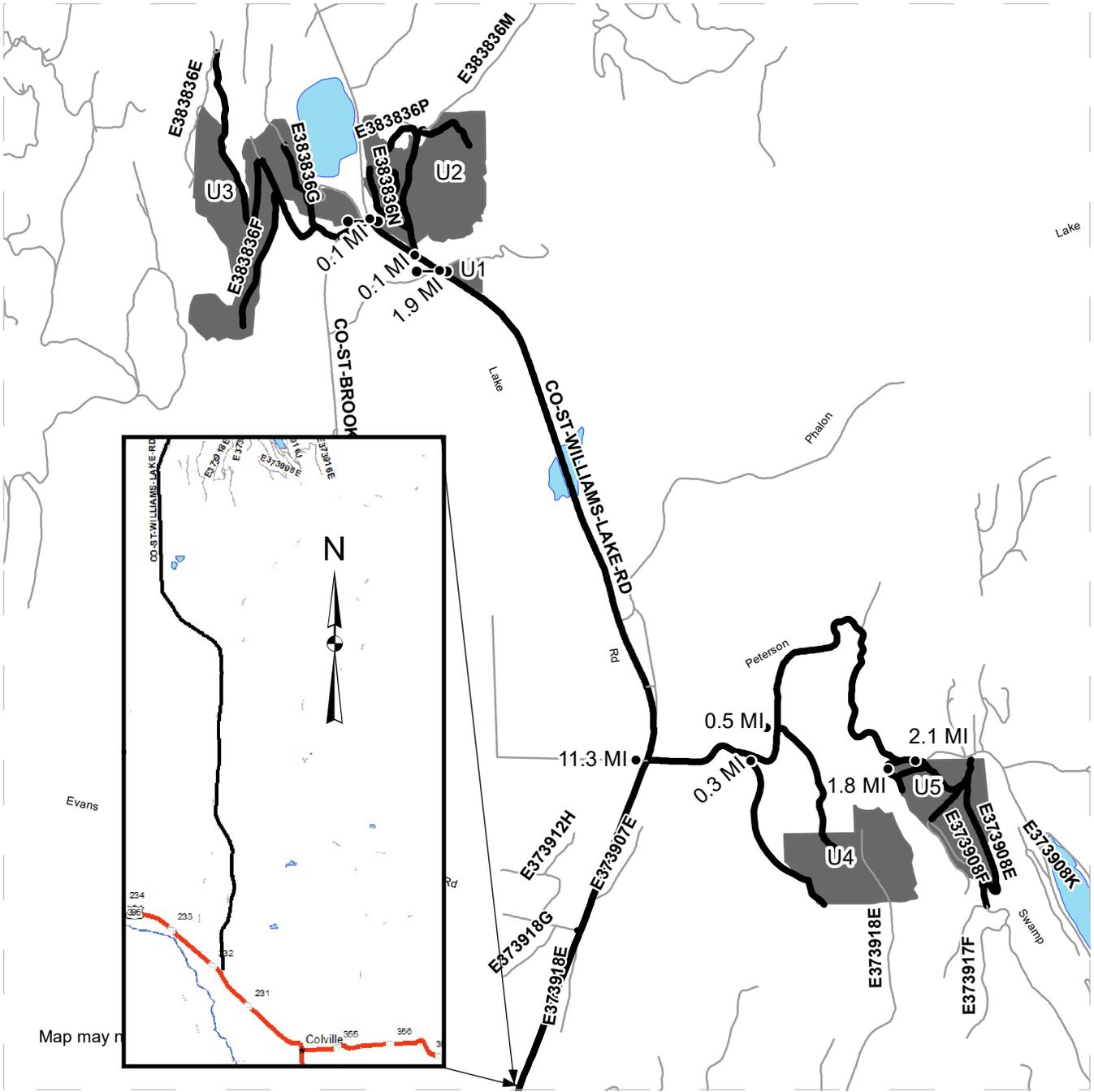
	Variable Retention Harvest		County Road		Haul_Route
	Leave Tree Area		Existing Roads		Streams
	Hazard Abatement Area		Required Pre-Haul Maintenance		Survey Monument
	Sale Boundary Tags		Required Construction		Gates
	Leave Tree Tags		Required Reconstruction		Fence
	Public Land Survey Sections		Optional Pre-Haul Maintenance		
	DNR Managed Lands		Optional Construction		



DRIVING MAP

SALE NAME: BROOKS JUNCTION
AGREEMENT#: 30-098161
TOWNSHIP(S): T37R39E, T38R38E
TRUST(S): Agricultural School (4), Common School and Indemnity (3)

REGION: Northeast Region
COUNTY(S): Stevens
ELEVATION RGE: 1960-3000



- Timber Sale Unit
- Haul Route
- Other Road
- Distance Indicator
- Gate

DRIVING DIRECTIONS:

From the North stop light in Colville drive North on 395 1.1 miles, turn right (North) on Williams Lake Road. Go 11.3 miles, for Units 4 and 5, turn right (East) Peterson Swamp Road. The access roads are located on the Right (South) side of the Road at 0.3 miles, 0.5 miles, 1.8 and 2.1 miles. For Units 1, 2 and 3, stay on the Williams Lake Road for 1.9 miles, Unit 1 is on the right (East) side. Proceed 0.1 miles Unit 2 is on the right (east). Proceed 0.1 miles, turn left (West) on Brooks Road, Unit 3 is on the right (North).



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

**BILL OF SALE AND CONTRACT FOR
FOREST PRODUCTS**

Export Restricted Tonnage Scale AGREEMENT NO. 30-098161

SALE NAME: Q BROOKS JUNCTION

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

Bill of Sale and Contract for Forest Products: Contract between the Purchaser and the State, which sets forth the procedures and obligations of the Purchaser in exchange for the right to remove forest products from the sale area. The Bill of Sale and Contract for Forest Products may include a Road Plan for any road construction or reconstruction, where applicable.

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

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

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

Road Construction: 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 Forest Products 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 Purchaser to perform a portion or all of the services required by The Bill of Sale and Contract for Forest Products. The Purchaser is responsible for independently negotiating, procuring and paying for all subcontracted services rendered.

G-010 Products Sold and Sale Area

Purchaser was the successful bidder on June 16, 2020 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase, cut, and remove the following forest products: All conifer species except for leave trees banded by blue paint, leave trees bounded by yellow leave tree area tags, two standing snags and two down logs per acre in Units 1, 2, 3, 4 and 5 bounded by white timber sale boundary tags; and all right of way timber bounded by orange right of way boundary tags, located on approximately 353 acres on part(s) of Section 8 in Township 37 North, Range 39 East, Section 36 in Township 38 North, Range 38 East W.M. in Stevens County(s) as shown on the attached timber sale map and as designated on the sale area.

All forest products described above from the bole of the tree that meet or exceed 2 inches diameter inside bark on the small end are eligible for removal. Above ground 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, stumps, are not eligible for removal under the terms of this contract.

Forest products purchased under a contract that is designated as export restricted shall not be exported until processed. Forest products purchased under a contract that is designated as exportable may be exported prior to processing.

G-020 Inspection By Purchaser

Purchaser hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products being sold. Purchaser further warrants to the State that they enter this contract based solely upon their own judgment of the value of the forest products, formed after their own examination and inspection of both the timber sale area and the forest products being sold. Purchaser also warrants to the State that they enter this contract without any reliance upon the volume estimates, acreage estimates, appraisals, pre-bid documentation, or any other representations by the State Department of Natural Resources.

G-030 Contract Term

Purchaser shall remove the forest products conveyed and complete all work required by this contract prior to July 1, 2022.

G-040 Contract Term Adjustment - No Payment

Purchaser may request an adjustment in the contract term. A claim must be submitted in writing and received by the State within 30 days after the start of interruption or delay. The claim must also indicate the actual or anticipated length of interruption or delay. The State may grant an adjustment without charge only if the cause for contract term adjustment is beyond Purchaser's control. The cause must be one of the following and the adjustment may be granted only if operations or planned operations under this contract are actually interrupted or delayed:

- a. Road and bridge failures which deny access.
- b. Access road closures imposed by road owner.
- c. Excessive suspensions as provided in clause G-220.
- d. Regulatory actions not arising from Purchaser's failure to comply with this contract which will prevent timber harvest for a period less than 6 months.

G-050 Contract Term Extension - Payment

Extensions of this contract term may be granted only if, in the judgment of the State, Purchaser is acting in good faith and is endeavoring to remove the forest products conveyed. The term of this contract may be extended for a reasonable time by the State if all of the following conditions are satisfied:

- a. A written request for extension of the contract term must be received prior to the expiration date of the contract.
- b. Completion of all required roads and compliance with all contract and regulatory requirements.
- c. For the first extension, not to exceed 1 year, payment of at least 25 percent of the contract value based on the contract payment rate and advertised volume.

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

The payments shall not include the initial deposit which shall be held according to the provisions of RCW 79.15.100.

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

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

- e. Payment of \$346.00 per acre per annum for the acres on which an operating release has not been issued .
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

Whenever the State determines that a survey for sensitive, threatened, or endangered species is prudent, or when Purchaser determines a survey is prudent and the State agrees, Purchaser shall perform such surveys at Purchaser's expense and to the standards required by the State. The survey information shall be supplied to the State.

G-060 Exclusion of Warranties

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

- a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."
- c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.
- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.

- f. THAT THE 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.
- g. 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.
- h. Items contained in any other documents prepared for or by the State.

G-064 Permits

Purchaser is responsible for obtaining any permits not already obtained by the State that relate to Purchaser's operation. Forest Practice Application / Hydraulic Project Approval permits obtained by the State shall be transferred to Purchaser. Purchaser 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 Governmental Regulatory Actions

a. Risk

Purchaser 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 Purchaser's failure to comply with this contract, Purchaser shall remain responsible for payment of the total contract price notwithstanding the impracticability or frustration.

b. Sale Area

When portions of the sale area become subject to a foreign or domestic governmental regulation or order that will likely prevent timber harvest for a period that will exceed the expiration date of this contract, and Purchaser has complied with this contract, the following shall apply:

- i. RCW 79.15.140 shall govern all adjustments to the contract area.

c. Adjustment of Price

The State shall adjust the total contract price by subtracting from the total contract price an amount determined in the following manner: The State shall cause the timber sale area subject to governmental regulation or order to be measured. The State shall calculate the percentage of the total sale area subject to the governmental regulation or order. The State shall reduce the total contract price by that calculated percentage. However, variations in species, value, costs, or other items pertaining to the affected sale area will be analyzed and included in the adjustment if deemed appropriate by the State. The State will further reduce the total contract price by the reasonable cost of unamortized roads Purchaser constructed but was unable to fully use for removing timber. A reduction in total contract price terminates all of the Purchaser's rights to purchase and remove the timber and all other interest in the affected sale area.

G-070 Limitation on Damage

In the event of a breach of any provision of this contract by the State, the exclusive remedy available to Purchaser will be limited to a return of the initial deposit, unapplied payments, and credit for unamortized improvements made by Purchaser. The State shall not be liable for any damages, whether direct, incidental or consequential.

G-080 Scope of State Advice

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

G-090 Sale Area Adjustment

The Parties may agree to adjustments in the sale area boundary. The cumulative changes to the sale area during the term of the contract shall not exceed more than four percent of the original sale area. If the sale area is increased, added forest products become a part of this contract and shall be paid for at the same rate and manner as other forest products under this contract.

G-100 Forest Products Not Designated

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

G-110 Title and Risk of Loss

Title to the forest products conveyed passes at confirmation of the sale. Purchaser bears the risk of loss of or damage to and has an insurable interest in the forest products in this contract from the time of confirmation of the sale of forest products. In the event of loss of or damage to the forest products after passage of title, whether the cause is foreseeable or unforeseeable, the forest products shall be paid for by Purchaser. Breach of this contract shall have no effect on this provision. Title to the forest products not removed from the sale area within the period specified in this contract shall revert to the State as provided in RCW 79.15.100.

G-116 Sustainable Forestry Initiative® (SFI) Certification

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative program Standard under certificate number: PwC-SFIFM-513.

Purchaser 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. Purchaser 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 Responsibility for Work

All work, equipment, and materials necessary to perform this contract shall be the responsibility of Purchaser. Any damage to improvements, except as provided in clause G-121 or unless the State issues an operating release pursuant to clause G-280, shall be repaired promptly to the satisfaction of the State and at Purchaser's expense.

G-121 Exceptions

Exceptions to Purchaser's responsibility in clause G-120 shall be limited exclusively to the following. These exceptions shall not apply where road damage occurs due to Purchaser's failure to take reasonable precautions or to exercise sound forest engineering and construction practices.

Road is defined as the road bed, including but not limited to its component parts, such as subgrade, ditches, culverts, bridges, and cattle guards.

For the purposes of this clause, damage will be identified by the State and is defined as:

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

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

The repair work identified by the State shall be promptly completed by Purchaser at an agreed price. The State may elect to accomplish repairs by means of State-provided resources. The State will bear the cost to repair damages caused by a third party. In all other cases, the Purchaser shall bear responsibility for the costs as described below.

For each event, Purchaser shall be solely responsible for the initial \$5,000 in repairs. For repairs in excess of \$5,000, the parties shall share equally the portion of costs between \$5,000 and \$15,000. The State shall be solely responsible for the portion of the cost of repairs that exceed \$15,000.

Nothing contained in clauses G-120 and G-121 shall be construed as relieving Purchaser of responsibility for, or damage resulting from, Purchaser's operations or negligence, nor shall Purchaser be relieved from full responsibility for making good any defective work or materials. Authorization to haul does not warrant that Purchaser built roads are free from material defect and the State may require additional work, at Purchasers expense regardless of cost, to remedy deficiencies at any time.

G-140 Indemnity

To the fullest extent permitted by law, Purchaser shall indemnify, defend and hold harmless 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. Purchasers' obligations to indemnify, defend, and hold harmless includes any claim by Purchasers' agents, employees, representatives, or any subcontractor or its employees. Purchaser expressly agrees to indemnify, defend, and hold harmless State for any claim arising out of or incident to Purchasers' or any subcontractors' performance or failure to perform the contract. Purchasers' 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. Purchaser 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.

G-150 Insurance

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

All insurance and surety bonds should be issued by companies admitted to do business within the State of Washington and have a rating of A-, Class VII or better in the most recently published edition of Best's Reports. If an insurer is not admitted, all insurance

policies and procedures for issuing the insurance policies must comply with Chapter 48.15 RCW and 284-15 WAC.

The State of Washington, Department of Natural Resources region office of sale origin shall be provided written notice before cancellation or non-renewal of any insurance referred to therein, in accord with the following specifications:

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

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

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

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

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

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

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

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

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

Business Auto Policy (BAP). Purchaser shall maintain business auto liability and, 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. Purchaser 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 Agents

The State's rights and duties will be exercised by the Region Manager at Colville, Washington. The Region Manager will notify Purchaser 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. 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 conveyed beyond the terms of this contract.

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

G-170 Assignment and Delegation

No rights or interest in this contract shall be assigned by Purchaser 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. Purchaser may perform any duty through a delegate, but Purchaser 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 Purchaser.

G-180 Modifications

Waivers, modifications, or amendments of the terms of this contract must be in writing signed by Purchaser and 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 Notice

Notices required to be given under the following clauses shall be in writing and shall be delivered to Purchaser's authorized agent or sent by certified mail to Purchaser's address of record:

G-210 Violation of Contract

G-220 State Suspends Operations

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. Purchaser agrees to notify the State of any change of address.

G-210 Violation of Contract

- a. If Purchaser 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, Purchaser has 30 days after receipt of a suspension notice to remedy the violation. If the violation cannot be remedied (such as a violation of WAC 240-15-015) or Purchaser fails to remedy the violation within 30 days after receipt of a suspension notice, the State may terminate the rights of Purchaser under this contract and collect damages.
- b. If the contract expires pursuant to clause G-030 or G-031 without Purchaser having performed all its duties under this contract, Purchaser's right to operate is terminated and Purchaser shall not have the right to remedy the breach. This provision shall not relieve Purchaser of any payment obligations.
- c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.
- d. If Purchaser's violation is a result of a failure to make a payment when due, in addition to a. and b. above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due.

G-220 State Suspends Operation

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

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

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

If it reasonably appears that the damage that the State is suffering, or can reasonably be expected to suffer if the operation is allowed to continue, will prevent harvest for a period that will exceed 6 months, and Purchaser has complied with this contract, the provisions of clause G-066 shall govern just as if the harvest was prevented by an applicable foreign or domestic governmental regulation or order.

G-230 Unauthorized Activity

Any cutting, removal, or damage of forest products by Purchaser, its employees, agents, or invitees, including independent contractors, in a manner inconsistent with the terms of this contract or State law, is unauthorized. Such activity may subject Purchaser 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 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, Purchaser 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 Purchaser's request within ten business days.
- c. Within ten business days of receipt of the Region Manager's decision, Purchaser may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.
- d. Unless otherwise agreed, a conference will be held by the Deputy Supervisor - Uplands within 30 calendar days of the receipt of Purchaser's request for review of the Region Manager's written decision. Purchaser 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 Compliance with All Laws

Purchaser 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. 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 Equipment Left on State Land

All equipment owned or in the possession of Purchaser, 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 60 days after the expiration of the contract period is subject to disposition as provided by law. Purchaser 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 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; E383836S, E383836T, E383836M, E383836G, E383836E, E383836F, E373907E, E373908H, E373908M, E373908E, E373908F, E373907F, E383836N, E383836J and E383836O. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

G-320 Erosion Control

Purchaser shall deliver 250 pounds of grass seed to a location designated by the Contract Administrator. Seed provided shall meet the following specifications.

10% Ladak Alfalfa, 10% Smooth Brome, 15% Big Bluegrass, 15% Hard Fescue, 15% Small Burnet, 20% Alsike Clover, 15% White Dutch Clover

Seed shall be certified weed free, premixed and delivered to Northeast Region Office in 50 pound bags clearly labeled with the timber sale name on each bag.

G-330 Pre-work Conference

Purchaser 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 Purchaser 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 Purchaser's plan of operations shall not be construed as any statement or warranty that the plan of operations is adequate for Purchaser's purposes or complies with applicable laws.

G-340 Preservation of Markers

Any legal land subdivision survey corners and witness objects are to be preserved. If such are destroyed or disturbed, the Purchaser shall, at the Purchaser'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-360 Road Use Reservation

The State shall have the right to use, without charge, all existing roads and any road constructed or reconstructed on State lands by Purchaser under this contract. The State may extend such rights to others. If the State grants such rights to others, the State shall require performance or payment, as directed by the State, for their proportionate share of maintenance based on their use.

G-370 Blocking Roads

Purchaser shall not block the E383836S, E383836T, E383836M, E383836G, E383836E, E383836F, E373907E, E373908H, E373908M, E373908E, E373908F and E373907F, unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

Purchaser agrees to comply with the terms and conditions of the attached:

- Easement 1653 with Eastman and Longfellow dated June 9, 1978
- Easement 1917 with McLean dated June 12, 1981
- Easement 1917 supplement with McLean dated March 19, 2019
- Easement 98137 with Aubert dated March 28, 2019
- Easement 98139 with Hughes dated March 19, 2019

G-430 Open Fires

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

G-450 Encumbrances

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

Lease, including the terms and provisions thereof,
For: Grazing
In Favor of: Washing Department of Fish & Wildlife
Disclosed by Application No.: 10-071953
Granted: 7/1/2001
Expires: 8/31/2019

Lease, including the terms and provisions thereof,
For: Grazing
In Favor of: Michael Leaden
Disclosed by Application No.: 10-A82424
Granted: 4/1/2018
Expires: 3/31/2028

Easement, including the terms and provisions thereof,
For: County Road
In Favor of: Stevens County
Disclosed by Application No.: 50-CR1162

Granted: 2/4/1926
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: County Road
In Favor of: Stevens County
Disclosed by Application No.: 50-CR2257
Granted: 10/9/1956
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: County Road
In Favor of: Stevens County
Disclosed by Application No.: 50-CR3219
Granted: 9/6/1985
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: Boise Cascade Corporation
Disclosed by Application No.: 50-038414
Granted: 6/2/1976
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: David Carman
Disclosed by Application No.: 50-039282
Granted: 9/13/1976
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Pipeline
In Favor of: Federico Seco de Lucena & Alejandra Vuittonet
Disclosed by Application No.: 50-044460
Granted: 4/1/1982
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Buried Power
In Favor of: The Washington Water Power Company
Disclosed by Application No.: 50-045779
Granted: 12/10/1982
Expires: Indefinite

Easement, including the terms and provisions thereof,

For: Buried Communication
In Favor of: Pacific Northwest Bell Telephone Company
Disclosed by Application No.: 50-045779
Granted: 5/14/1984
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: James N. & Patricia K. McNeil
Disclosed by Application No.: 50-046757
Granted: 2/11/1985
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: Walter W. & Barbara J. Van Vliet
Disclosed by Application No.: 50-047530
Granted: 1/3/1986
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: Vernon L. & Freda M. Thurman
Disclosed by Application No.: 50-047782
Granted: 3/6/1986
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: Vaagen Bros. Lumber Inc.
Disclosed by Application No.: 50-090082
Granted: 8/11/2014
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: Aubert Land & Livestock
Disclosed by Application No.: 50-098138
Granted: 3/28/2019
Expires: Indefinite

Lease, including the terms and provisions thereof,
For: Recreation
In Favor of: DNR
Disclosed by Application No.: 59-058240
Granted: 9/24/1969

Expires: 9/23/2019

Water Right, including the terms and provisions thereof,

For: Well

In Favor of: Washington State Department of Natural Resources

Disclosed by Application No.: 78-000574

Granted: 10/26/1973

Expires: Indefinite

Water Right, including the terms and provisions thereof,

For: Pond

In Favor of: Washington State Department of Natural Resources

Disclosed by Application No.: 78-004856

Granted: 6/18/1974

Expires: Indefinite

Water Right, including the terms and provisions thereof,

For: Lake

In Favor of: Washington State Department of Natural Resources

Disclosed by Application No.: 78-004857

Granted: 6/18/1974

Expires: Indefinite

Water Right, including the terms and provisions thereof,

For: Pond

In Favor of: Washington State Department of Natural Resources

Disclosed by Application No.: 78-004941

Granted: 6/18/1974

Expires: Indefinite

Section P: Payments and Securities

P-010 Initial Deposit

Purchaser paid DATA MISSING initial deposit, which will be maintained pursuant to RCW 79.15.100(3). If the operating authority on this contract expires without Purchaser's payment of the full amount specified in the 'Payment for Forest Products' clause, the initial deposit will be immediately forfeited to the State, and will be offset against Purchaser's remaining balance due. Any excess initial deposit funds not needed to ensure full payment of the contract price, or not needed to complete any remaining obligations of the Purchaser existing after contract expiration, will be refunded to the Purchaser.

P-024 Payment for Forest Products

Purchaser agrees to weigh all loads and pay the following rate per ton for forest products conveyed plus \$112,727.00 on day of sale and \$1.52 per ton upon removal in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause.

DATA MISSING

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

P-027 Payment for Removal of Optional Forest Products

Purchaser agrees to weigh all loads and pay the rate of \$2.00 per ton for forest products approved for removal from the sale area under clause H-157.

P-040 Weighing and Scaling Costs

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

P-045 Guarantee of Payment

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

P-052 Payment Procedure

If a third party Log and Load Reporting Service (LLRS) is required by this contract the State will compute and forward to the Purchaser statements of charges provided for in the contract. Purchaser shall deliver payment to the Northeast region office on or before the date shown on the billing statement.

If a third party LLRS is not required by this contract, Purchaser shall pay for forest products removed on a monthly basis. Payments will be submitted to the Northeast region office on or before the fourteenth of the month following the month in which the timber was removed or, according to an alternate payment schedule as approved by the State with at least one payment each month for timber removed. The alternate payment schedule, once approved by the State, shall become part of this contract and may be changed only with written approval of the State.

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

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

Forest products included in this agreement which are destroyed, damaged, stolen, lost, or mismanufactured shall be paid for by Purchaser on demand of the State. The rates contained in clause P-024 shall apply.

P-080 Payment Account Refund

Advance payments made under P-045 or P-045.2 remaining on account above the value for the charges shall be returned to Purchaser within 30 days following the final report of charges. Refunds not made within the 30 day period will accrue interest at the interest rate, as established by WAC 332-100-030, computed on a daily basis until paid.

P-090 Performance Security

Purchaser agrees to furnish, within 30 days of the confirmation date, security acceptable to the State in the amount of \$100,000.00. The Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by operations under this contract or resulting from Purchaser's noncompliance with any rule or law. Acceptable performance security may be in the form of a performance bond, irrevocable letter of credit, cash, savings or certificate of deposit account assignments, and must name the State as the obligee or beneficiary. A letter of credit must comply with Title 62A RCW, Article 5. Performance security must remain in full force over the duration of the contract length. Surety bonds issued shall conform to the issuance and rating requirements in clause G-150. The State shall retain the performance security pursuant to RCW 79.15.100. Purchaser shall not operate unless the performance security has been accepted by the State. If at any time the State decides that the security document or amount has become unsatisfactory, Purchaser agrees to suspend operations and, within 30 days of notification, to replace the security with one acceptable to the State or to supplement the amount of the existing security.

P-100 Performance Security Reduction

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

Section L: Log Definitions and Accountability

L-060 Load Tickets

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

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

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

L-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.

Section H: Harvesting Operations**H-001 Operations Outside the Sale Boundaries**

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

H-010 Cutting and Yarding Schedule

Falling and Yarding will not be permitted from February 1 to June 1 in Units 4 and 5 and from February 1 to July 1 in Units 1, 2 and 3 unless authorized in writing by the Contract Administrator.

H-013 Reserve Tree Damage Definition

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

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

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

If the Contract Administrator determines that a reserve tree has been cut or damaged, the Purchaser shall provide a replacement reserve tree of like condition, size, and species within the sale unit containing the damaged leave tree, as approved by the

Contract Administrator. Purchaser may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.

Removal of designated reserve trees from the sale area is unauthorized, and may invoke the use of the G-230 'Trespass and Unauthorized Activity' clause. Purchaser is required to leave all cut or damaged reserve trees on site.

H-015 Skid Trail Requirements

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

Purchaser shall comply with the following during the yarding operation:

- a. Skid trails will not exceed 14 feet in width, including rub trees.
- b. Skid trails shall not cover more than 10 percent of the total acreage on one unit.
- c. Skid trail location will be pre-approved by the Contract Administrator.
- d. Except for rub trees, skid trails shall be felled and yarded prior to the felling of 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.

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

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 5 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 7 days of being felled.

H-030 Timber Falling

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

H-035 Fall Trees Into Sale Area

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

H-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for Units 1, 2, 3, 4 and 5. The plan shall address the harvest operations and be incorporated at the prework conference, which are part(s) of this contract. The harvest plan shall be approved by the Contract Administrator prior to beginning the harvest operation. Purchaser shall not deviate from the harvest plan without prior written approval by the Contract Administrator.

H-050 Rub Trees

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

H-052 Branding and Painting

Forest products shall be branded with a brand furnished by the State prior to removal from the landing. All purchased timber shall be branded in a manner that meets the requirements of WAC 240-15-030(2)(a)(i). All timber purchased under a contract 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, Purchaser 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-110 Stump Height

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using rubber tired or track skidders, or ground based equipment D6 equivalent or smaller. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-130 Hauling Schedule

The hauling of forest products will not be permitted on all roads from February 1 to June 1 unless authorized in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- a. Harvesting will not be permitted in Units 1, 2 and 3 from February 1 to July 1 due to beetle activity.
- b. If the dead utility and firewood are removed, purchaser shall leave two down logs per acre and two standing snags per acre from the larger diameter classes.

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

H-150 Required Removal of Forest Products

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

Species	Net bd ft	Log length (ft)	Log dib
Green PP & WRC	20	16	5.6
All other green species	20	16	4.6

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

H-157 Optional Removal of Forest Products Not Designated

If in the course of operations, Purchaser decides to remove forest products that are below the minimum designated removal specifications per the 'Required Removal of Forest Products' (H-150), the payment rates in clause P-027 shall apply.

Forest products designated as optional shall be decked separately from forest products designated as required for removal. Prior to removal from the sale area, optional forest products as described in this clause must be inspected and approved by the Contract Administrator. Optional forest products may not be mixed with forest products that are required for removal by this contract and shall be removed from the sale area in separate truck loads using load tickets specified by the Contract Administrator.

All material removed under this clause is subject to the same log and load accountability rules as defined in the Log Definitions and Accountability section of this contract. Purchaser shall follow the payment procedures as required in the P-052 clause and will submit a separate summary report for all forest products removed from the sale area under the authority of this clause.

H-160 Mismanufacture

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

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

H-180 Removal of Specialized Forest Products or Firewood

Prior to the removal of conveyed specialized forest products or firewood from the sale area, Purchaser and the State shall agree in writing to the method of accounting for/and removal of such products.

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-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

Tops and limbs outside the sale boundary as a result of Purchaser'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 Road Plan**

Road construction and associated work provisions of the Road Plan for this sale, dated 5/21/2019 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on E383836S, E383836T, E383836M, E383836G, E383836E, E383836F, E373907E, E373908H, E373908M, E373908E, E373908F, E373907F, E383836N, E383836J and E383836O roads. All work shall be completed to the specifications detailed in the Road Plan.

C-080 Landing Locations Approved Prior to Construction

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

C-090 Landing Location

Landings shall be built 200 feet off the county road(s).

C-140 Water Bars

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

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

An Emergency Response Plan (ERP) shall be provided to the Contract Administrator containing but not limited to, 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 Fire Hazardous Conditions

Purchaser acknowledges that operations under this Contract may increase the risk of fire. Purchaser 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, Purchaser agrees to provide equipment and personnel working at the site to safely and effectively engage in first response fire suppression activity.

Purchaser's failure to effectively engage in fire-safe operations is considered a breach and may result in suspension of operations.

S-020 Extreme Hazard Abatement

Purchaser 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 Purchaser will accomplish abatement. Purchaser 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 Purchaser's hazard abatement plan shall not be construed as any statement or warranty that the hazard abatement plan is adequate for Purchaser'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 Noxious Weed Control

Purchaser shall notify the Contract Administrator in advance of moving equipment onto State lands. Purchaser 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-050 Cessation of Operations for Low Humidity

When the humidity is 12 percent or lower on the sale area, all operations must cease unless authority to continue is granted by the State in writing.

S-060 Pump Truck or Pump Trailer

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

S-070 Water Supply

Purchaser shall provide, during the "closed season", a water supply with a minimum capacity of 300 gallons for rapid filling of pump trucks or trailers at a location designated by the Contract Administrator.

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-110 Resource Protection

No harvesting equipment may operate within the Riparian Management Zone or wetland unless authority is granted in writing by the Contract Administrator.

S-120 Stream Protection

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

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

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

b. Hazardous Materials Spill Prevention

All operations shall be conducted in a manner that avoids the release of hazardous materials, including petroleum products, into the environment (water, air or land).

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 10 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, Purchaser 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 Purchaser to have all emergency contact information readily available and a means of remote communication for purposes of quick notification. In the event of a spill, the Purchaser is responsible for notifying the following:

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

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

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

ECY - Southwest Region:

1-360-407-6300

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

ECY - Central Region:

1-509-575-2490

(Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima counties)

ECY - Eastern Region:

1-509-329-3400

(Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman counties)

S-131 Refuse Disposal

As required by RCW 70.93, All Purchaser 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 Fence Repair

Purchaser 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 Liquidated Damages

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

D-021 Failure to Remove Forest Products

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

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

Where:

LD = Liquidated Damage value.

V = The unremoved value at the date of breach of contract. The value is determined by subtracting the removal tonnage to date from the cruised tonnage multiplied by the contract bid rates.

- ID = Initial Deposit paid at date of contract that has not been applied to timber payments.
- P = Advance payments received but not yet applied to specific contract requirements.
- C = Charges assessed for contract requirements completed prior to breach of contract but not paid for.
- A = Administrative Fee = \$2,500.00.

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

Where:

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

D-030 Inadequate Log Accountability

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

Enforcement actions for unauthorized removal of forest products for each improperly branded load, improperly ticketed load, lost or unaccounted for tickets, or use of a facility not authorized for this sale or improper submission of scaling data are impractical, expensive, time consuming and are not an adequate remedy. Therefore, Purchaser agrees to pay the State, as liquidated damages, a sum of \$100 each time a load of logs does not have branding as required in the contract, \$250 each time a load of logs does not have a load ticket as required by the contract, \$250 each time a load ticket has not been filled out as required by the plan of operations, \$250 each time a load is weighed or scaled at a location not approved as required under this contract, \$250 each time a log ticket summary report is not submitted properly, and if a third party Log and Load Reporting Service is required, \$250 each time scaling or weight

data is not properly submitted to the Log and Load Reporting Service per clause L-071, and \$250 each unused ticket that is not returned to the State, for any reason.

D-041 Reserve Tree Excessive Damage

When Purchaser’s operations exceed the damage limits set forth in clause H-013, Reserve Tree Damage Definition, and when the Contract Administrator determines that a suitable replacement for a damaged reserve tree is not possible, the damaged trees result in substantial injury to the State. The value of the damaged reserve trees at the time of the breach is not readily ascertainable. Therefore, the Purchaser agrees to pay the State as liquidated damages at the rate of \$1,500.00 per tree for all damaged reserve trees that are not replaced in the units.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Ken McNamee
Northeast Region Manager

Print Name

Date: _____

Date: _____

Address:

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

STATE OF _____)

COUNTY OF _____)

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

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

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

Notary Public in and for the State of

My appointment expires _____



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region: Northeast

Timber Sale Name: Q BROOKS JUNCTION

Application Number: 30- 098161

EXCISE TAX APPLICABLE ACTIVITIES

Construction: 1,110 linear feet
Road to be constructed (optional and required) but not abandoned

Reconstruction: 6,475 linear feet
Road to be reconstructed (optional and required) but not abandoned

Abandonment: 0 linear feet
Abandonment of existing roads not reconstructed under the contract

Decommission: 0 linear feet
Road to be made undriveable but not officially abandoned.

Pre-Haul Maintenance: 17,450 linear feet
Existing road to receive maintenance work (optional and required) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Construction: 0 linear feet
Roads to be constructed (optional and required) and then abandoned

0 linear feet

Temporary Reconstruction:
Roads to be reconstructed (optional and required) and then abandoned

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

(Revised 9/18)

PRE-CRUISE NARRATIVE

Sale Name: Brooks Junction	Region: Northeast
Agreement #: 30-098161	District: North Columbia
Contact Forester: Janet Rogers Phone / Location: 509-563-9121	County(s): Stevens, Choose a county
Alternate Contact: Tony E. Flanagan Phone / Location: 509-481-8032	Other information: Click here to enter text.

Type of Sale: Lump Sum	
Harvest System: Ground based Click here to enter text.	100
Harvest System: Select harvest system Click here to enter text. Enter % of sale acres	Click here to enter percent sale acres.
Harvest System: Select harvest system Click here to enter text.	Click here to enter percent sale acres.

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description (Enter only one legal for each unit) Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method and error of closure if applicable)
				RMZ/WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	S35 T38 R 38E	03	6.08	0	0	.04	0	6.04	GPS (Garmin)
2	S35 T38 R38E	03	99.68	0	0	1.59	.88 powerline	97.2 1	GPS (Garmin)
3	S35 T38 R38E	03	122.2 1	0	0	3.51	0	118. 70	GPS (Garmin)
4	S8 T37 R39E	04	72.24		1.00	.60	0	70.6 4	GPS (Garmin)
5	S8 T37 R39E	04	61.99	0	0	1.43	0	60.5 6	GPS (Garmin)
ROW	S35 T38 R38E	03	.1					.1	GPS (Garmin)

	Enter Sec / Twp / Rng								Choose an item.
TOTAL ACRES			362.2 2	0	1.0	7.17	.88	353. 15	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	All species not marked with blue paint 7" dbh and greater, except PP. All PP not marked with blue paint 8" dbh and greater.		6 TPA
2	All species not marked with blue paint 7" dbh and greater, except PP. All PP not marked with blue paint 8" dbh and greater		6 TPA
3	All species not marked with blue paint 7" dbh and greater, except PP. All PP not marked with blue paint 8" dbh and greater		6 TPA
4	All species not marked with blue paint 7" dbh and greater, except PP. All PP not marked with blue paint 8" dbh and greater	One acre, leave Tree area is along northern boundary.	6 TPA
5	All species not marked with blue paint 7" dbh and greater, except PP. All PP not marked with blue paint 8" dbh and greater		6 TPA
ROW	Take all trees within ROW tags , outside unit 2.		

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	DF/PP - 200		
2	DF/PP - 1.5		
3	DF/PP - 2.1	State hurd lock by cattle gaurd.	
4	DF/PP - 1.1	DNR lock on PVT gate, 3439 combo	

5	DF/PP - 1.0		
ROW	DP/PP - 100		
TOTAL MBF	5.0		

REMARKS:

Heavy amounts of tall brush and thick patches of DF regeneration make cruising difficult. Best time to cruise is after leaf drop and prior to heavy snow. Access is good to all units. There are some steep areas in Units 2, 3, and the upper portion of Unit 4.

There is an adjustment to the approach to Unit 2, this is the only exterior ROW trees in this proposal. This sale may be split in two, depending on volume from other sales. Units 1-3 would be Brooks JCT. Units 4 and 5 would become North Moberg. Contact Tony Flanagan prior to cruising.

Prepared By: Janet Rogers Date: 10/22/18	Title: NRS 2	CC:
---	------------------------	------------

Cruise Narrative

Sale Name: Brooks Junction	Region: Northeast
Agreement Number: 30-098161	District: North Columbia
Lead Cruiser: Jim Putnam	Completion Date: 4/25/2019
Other Cruisers on sale: Dylan Worlock	Legal: Section 36, T 38 N, R 38 E WM. & Section 8, T 37 N, R 39 E WM.

Unit Acreage Specifications:							
Unit #	Gross Acres	Net Acres	Total Deletions	Existing Roads	Leave Tree Acres	Power Line	Other
1	6.08	6.04	0.04	0.04			
2	99.68	97.21	2.47	1.59		0.88	
3	122.21	118.70	3.51	3.51			
4	72.24	70.64	1.60	0.60	1.00		
5	61.99	60.56	1.43	1.43			
ROW6	0.10	0.10	0.00				
Total	362.30	353.25	9.05	7.17	1.00	0.88	0.00

Cruise Sample Design:

This timber sale was cruised using the **variable plot** sampling method. The double basal area system was employed; a small BAF to determine Basal Area (count trees) and a large BAF to determine the Volume-Basal Area Ratio (cruise trees). 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	33.61	33.61	D4H	230' x 230'	100%	100%	5
2	33.61	100.28	D4H	260' x 260'	33%	31%	61
3	33.61	100.28	D4H	260' x 260'	33%	31%	73
4	40	122.50	D4H	260' x 260'	33%	35%	50
5	40	122.50	D4H	260' x 260'	33%	40%	36
ROW6	N/a	N/a	D4H	N/a	100%	100%	1
Total						35%	226

Cruise Specifications:

Minor species cruise intensity:	We grade the first tree of all minor species encountered with the smaller BAF; then followed through with the small BAF to large BAF ratio.
Minimum top dib:	<p>Ponderosa pine western redcedar: 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.</p> <p>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.</p>
Minimum dbh:	Ponderosa pine and western redcedar: 8.0 inches DBH All other species: 7.0 inches DBH
Log lengths:	Saw logs: 32 feet where possible, minimum of 12 feet
Take / Leave tree description:	Harvest all species not marked with blue paint 7" dbh and greater, except ponderosa pine; all PP and western redcedar not marked with blue paint 8" dbh and greater.
Commercial species observed in sale area, but not in cruise:	
Utility wood:	N/A
Status codes used:	N/A
Sort codes used	D – saw log
Species table used:	NE
Grade table used:	NEGRADE
Other tables used (cruise adjustment):	N/A

Field Observations:

Location:	Northern Stevens County, 15 miles north of Colville, Washington. Units 1-3 access via Williams Lake Rd; units 4-5 from Peterson Swamp Rd.
Aspect:	North, East, South and West
Elevation:	1900 to 3100
Slope:	Unit 1 – 0% to 20%, Average 5% Unit 2 – 0% to 60%, Average 25% Unit 3 – 0% to 50%, Average 15% Unit 4 – 0% to 60%, Average 20% Unit 5 – 0% to 50%, Average 20%
Harvest Methods:	100% Ground base yarding.
Stand Composition:	The stands are second growth Douglas-fir and ponderosa pine with larger residual trees. There is a minor component of western larch and western redcedar.
Stand Health:	Pockets of root rot were found within the sale area. Light mistletoe is evident in the western larch and to a lesser degree in the Douglas-fir in all units.
Timber Quality:	The timber is a mix of domestic quality Douglas-fir (84%) with smaller components of ponderosa pine (12%), western larch (4%) and western redcedar (<1%).
Non-board Foot Volume:	
Other Considerations:	

Trust and Counties:

Unit #	Based on Volume (mbf)			Based on Acres	
	Trust 03 Vol.	Trust 04 Vol.	Combined Vol.	Trust 03 Acres	Trust 04 Acres
1	84	0	84	6.08	0
2	1807	0	1807	99.68	0
3	1885	0	1885	122.21	0
4	0	1586	1586	0	72.24
5	0	1268	1268	0	61.99
ROW6	1	0	1	0.1	0
Total	3777	2854	6631	228.07	134.23
% of Total	56.96%	43.04%	100.00%	62.95%	37.05%

Prepared by: Dylan Worlock

Title: Forest Check Cruiser

CC: Timber Sales Document Center & File #30-098161

Species, Sort Grade - Board Foot Volumes (Project)

T37N R39E S08 Ty00U4 THRU T38N R38E S36 TyO6RW	Project: BROOKS Acres 353.25	Page 1 Date 11/13/2019 Time 10:52:12AM
--	---	---

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
								Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF	D	2	44	2.3	7,174	7,012	2,477			81	19		1	99	32	14	274	1.76	25.6	
DF	D	3	45	1.9	7,151	7,013	2,477		97	3		0	2	98	32	8	103	0.70	67.9	
DF	D	4	11	3.3	1,745	1,687	596	71	29			35	26	38	22	5	28	0.30	59.5	
DF Totals			84	2.2	16,070	15,712	5,550	8	46	37	9	4	4	92	28	8	103	0.78	153.0	
PP	D	4	38	2.2	921	900	318			82	18	2	3	95	32	14	255	1.62	3.5	
PP	D	5	62	2.0	1,455	1,426	504		100			7	8	85	27	8	75	0.62	19.1	
PP Totals			12	2.1	2,376	2,326	822		61	32	7	5	6	89	28	9	103	0.80	22.7	
WL	D	2	26	1.2	182	180	64			100				100	32	14	260	1.59	.7	
WL	D	3	60	.5	414	412	146		100				1	99	32	8	87	0.56	4.8	
WL	D	4	14	7.7	103	95	34	93	7			60		40	22	5	24	0.23	3.9	
WL Totals			4	1.7	700	687	243	13	61	26		8	1	91	28	7	73	0.53	9.4	
RC	D	3	86	7.1	42	39	14		100					100	32	10	130	1.36	.3	
RC	D	4	14		6	6	2		100			100			20	6	20	0.37	.3	
RC Totals			0	6.3	48	45	16		100			13		87	26	8	75	0.98	.6	
Totals				2.2	19,193	18,771	6,631		7	49	36	8	4	4	92	28	8	101	0.77	185.6

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT BROOKS							DATE	11/13/2019	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
37N	39E	08	BROOKS JNC	00U4	THR	353.25	226	766	S	E	
38N	38E	36	BROOKS JNC	O6RW							
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL		226	766	3.4							
CRUISE		156	271	1.7	32,674	.8					
DBH COUNT REFOREST COUNT		51	131	2.6							
BLANKS		19									
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		214	76.1	15.5	77	25.3	99.8	16,070	15,712	3,351	3,351
P PINE		44	11.7	16.5	72	4.3	17.3	2,376	2,326	503	503
W LARCH		12	4.4	13.0	91	1.1	4.0	700	687	140	140
WR CEDAR		1	.3	17.2	72	0.1	.5	48	45	15	15
TOTAL		271	92.5	15.5	77	30.9	121.6	19,193	18,771	4,010	4,010
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR		71.6	4.9	301	317	332					
P PINE		74.0	11.1	257	290	322					
W LARCH		74.2	22.3	202	260	318					
WR CEDAR											
TOTAL		72.1	4.4	295	309	323	208	52	23		
CL	68.1	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR		63.8	4.4	63	66	69					
P PINE		62.9	9.5	55	60	66					
W LARCH		68.2	20.5	42	52	63					
WR CEDAR											
TOTAL		63.9	3.9	62	65	67	163	41	18		
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR		31.0	2.1	75	76	78					
P PINE		203.4	13.5	10	12	13					
W LARCH		425.3	28.3	3	4	6					
WR CEDAR		1118.5	74.3	0	0	1					
TOTAL				92	92	92					
CL	68.1	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR		16.7	1.1	99	100	101					
P PINE		194.0	12.9	15	17	20					
W LARCH		389.0	25.9	3	4	5					
WR CEDAR		1118.5	74.3	0	0	1					
TOTAL				122	122	122					
CL	68.1	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR		20.7	1.4	15,495	15,712	15,929					
P PINE		201.1	13.4	2,016	2,326	2,637					
W LARCH		400.5	26.6	505	687	870					
WR CEDAR		1118.5	74.3	11	45	78					

PROJECT STATISTICS**PROJECT BROOKS**

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
37N 38N	39E 38E	08 36	BROOKS JNC BROOKS JNC	00U4 O6RW	THR THR	353.25	226	766	S E
CL	68.1	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
TOTAL					18,771	18,771	18,771		
CL	68.1	COEFF	NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR		19.0	1.3	3,309	3,351	3,394			
P PINE		197.5	13.1	437	503	569			
W LARCH		394.7	26.2	103	140	176			
WR CEDAR		1118.5	74.3	4	15	26			
TOTAL				4,010	4,010	4,010			
CL	68.1	COEFF	V_BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR				155	157	160			
P PINE		82.4	5.5	117	135	152			
W LARCH		224.8	14.9	125	171	216			
WR CEDAR		492.1	32.7	24	93	162			
TOTAL				154	154	154			

T38N R38E S36 T00U1										T38N R38E S36 T00U1				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
38N	38E	36	BROOKS JNC	00U1	6.04	5	14	S	E					

Spp	S	So	Gr	T	rt	ad	%	Net	Percent Net Board Foot Volume								Average Log				Logs Per /Acre					
									Bd. Ft. per Acre				Total	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/Lf	
									Def%	Gross	Net	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35						36-99
DF	D		2				26	1.6	3,424	3,369	20	100				100	32	15	302	1.79	11.2					
DF	D		3				68	1.0	8,672	8,590	52	90	10		4	96	32	8	100	0.66	86.1					
DF	D		4				6	.0	689	689	4	52	48			48	18	5	21	0.28	32.8					
DF	Totals						91	1.1	12,786	12,648	76	3	64	34		95	28	8	97	0.71	130.1					
PP	D		5				100		1,202	1,202	7	100				49	51	28	7	51	0.46	23.4				
PP	Totals						9		1,202	1,202	7	100				49	51	28	7	51	0.46	23.4				
Type Totals								1.0	13,988	13,850	84	3	67	31		91	28	8	90	0.67	153.6					

T38N R38E S36 T00U2										T38N R38E S36 T00U2				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
38N	38E	36	BROOKS JNC	00U2	97.21	61	70	S	E					

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre					
								Net	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/Lf	
													4-5	6-11	12-16	17+	12-20	21-30	31-35						36-99
DF	D	2	51	1.4	7,505	7,400	719			74	26			100	32	14	269	1.78	27.5						
DF	D	3	39	2.5	5,814	5,667	551		100					0	1	99	32	8	96	0.66	59.2				
DF	D	4	10	3.9	1,369	1,316	128	65	35					29	30	40	23	5	30	0.34	44.3				
DF	Totals		77	2.1	14,688	14,383	1,398	6	43	38	13			3	3	94	29	8	110	0.83	131.1				
PP	D	4	47	1.2	1,795	1,773	172			67	33			3	5	92	31	14	290	1.79	6.1				
PP	D	5	53	2.6	1,981	1,930	188		100					9	8	83	27	8	73	0.60	26.6				
PP	Totals		20	1.9	3,776	3,704	360		52	32	16			6	7	87	27	9	113	0.85	32.7				
WL	D	2	20		103	103	10			100						100	32	13	210	1.34	.5				
WL	D	3	71	.0	354	354	34		100							100	32	8	92	0.59	3.8				
WL	D	4	9		43	43	4	77	23					100			16	5	20	0.23	2.2				
WL	Totals		3		500	500	49	7	73	21				9		91	27	8	77	0.59	6.5				
Type Totals				2.0	18,964	18,586	1,807	5	45	36	13			4	4	92	29	8	109	0.83	170.3				

T38N R38E S36 T00U3 **T38N R38E S36 T00U3**
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 38N 38E 36 BROOKS JNC 00U3 118.70 73 73 S E

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF		D	2	37	3.8	4,837	4,653	552			76	24		3	97	32	14	276	1.77	16.9	
DF		D	3	50	1.7	6,262	6,157	731			94	6		3	97	32	8	104	0.70	59.4	
DF		D	4	13		1,567	1,567	186	87	13			33	25	42	22	5	29	0.27	54.6	
DF	Totals			78	2.3	12,666	12,378	1,469	11	48	32	9	4	6	90	28	8	95	0.72	130.9	
PP		D	4	27	4.5	976	931	111			100			100	32	13	213	1.42	4.4		
PP		D	5	73	1.5	2,484	2,446	290			100		5	6	88	28	8	79	0.64	31.0	
PP	Totals			21	2.4	3,459	3,377	401			72	28	4	5	92	29	8	96	0.75	35.4	
WL		D	3	66		84	84	10			100			100	32	9	100	0.83	.8		
WL		D	4	34		42	42	5	100					100	32	5	50	0.29	.8		
WL	Totals			1		126	126	15	33	67				100	32	7	75	0.56	1.7		
Type Totals					2.3	16,251	15,881	1,885	9	54	30	7	4	5	91	28	8	95	0.72	168.0	

T37N R39E S08 T00U4										T37N R39E S08 T00U4				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
37N	39E	08	BROOKS JNC	00U4	70.64	50	60	S	E					

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
DF		D	2	44	3.1	9,613	9,317				85	15			100			32	14	291	1.84	32.0
DF		D	3	48	1.7	10,121	9,947				98	2			3	97		32	8	103	0.70	96.7
DF		D	4	8		1,556	1,556			68	32			57	25	18		19	5	24	0.28	65.0
DF	Totals			93	2.2	21,290	20,820			1,471	5	49	39	7	4	3	93	28	8	107	0.82	193.7
WL		D	2	20	4.0	275	264									100		32	14	240	1.63	1.1
WL		D	3	67		880	880									100		32	8	88	0.52	10.0
WL		D	4	13		160	160				86	14				100		20	5	20	0.21	8.0
WL	Totals			6	.8	1,315	1,304			92	11	69	20		12		88	27	7	68	0.50	19.1
RC		D	3	86	7.1	208	193									100		32	10	130	1.36	1.5
RC		D	4	14		30	30									100		20	6	20	0.37	1.5
RC	Totals			1	6.3	238	223			16					13		87	26	8	75	0.98	3.0
PP		D	4	75		80	80									100		32	13	240	1.55	.3
PP		D	5	25	20.0	33	27									100		32	8	80	0.64	.3
PP	Totals			0	5.9	113	106			8		25	75			100		32	11	160	1.09	.7
Type Totals					2.2	22,956	22,454			1,586	5	51	38	6	5	3	92	28	8	104	0.80	216.4

T37N R39E S08 T00U5										T37N R39E S08 T00U5				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
37N	39E	08	BROOKS JNC	00U5	60.56	36	47	S	E					

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
DF		D	2	46	.8	8,763	8,697	527			90	10			100			32	14	261	1.63	33.4
DF		D	3	39	2.0	7,430	7,278	441			97	3			100			32	9	116	0.75	63.0
DF		D	4	15	8.4	3,023	2,771	168	59	41			28	26	46			24	5	31	0.33	89.9
DF		Totals		90	2.4	19,217	18,746	1,135	9	44	43	5	4	4	92			28	8	101	0.75	186.2
WL		D	2	39		575	575	35			100				100			32	15	294	1.67	2.0
WL		D	3	45	1.7	659	648	39			100			5	95			31	7	78	0.54	8.3
WL		D	4	16	17.5	264	217	13	100				36		64			26	5	25	0.22	8.6
WL		Totals		7	3.8	1,498	1,441	87	15	45	40		5	2	92			29	7	77	0.54	18.8
PP		D	4	63		481	481	29			100				100			32	14	266	1.66	1.8
PP		D	5	37	1.7	279	274	17			100		15	8	78			21	7	51	0.56	5.4
PP		Totals		4	.6	760	755	46		36	64		5	3	92			23	9	105	0.94	7.2
Type Totals						21,475	20,942	1,268	9	44	44	4	4	4	92			28	8	99	0.74	212.1

T38N R38E S36 T06RW										T38N R38E S36 T06RW				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
38N	38E	36	BROOKS JNC	O6RW	.10	1	7	S	E					

Spp	T	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre						
									Net	BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/Lf	
															4-5	6-11	12-16	17+	12-20	21-30		31-35					36-99
DF		D	3	82	9.5	4,200	3,800	0	100				100				32	8	76	0.68	50.0						
DF		D	4	18		800	800	0	100					38	63			21	5	20	0.28	40.0					
DF	Totals			53	8.0	5,000	4,600	0	17	83			7	11	83	27	6	51	0.55	90.0							
PP		D	4	65		2,700	2,700	0	100				100				32	14	270	1.63	10.0						
PP		D	5	35		1,400	1,400	0	100					14	86			23	8	70	0.62	20.0					
PP	Totals			47		4,100	4,100	0	34	66			5	95			26	10	137	1.03	30.0						
Type Totals					4.4	9,100	8,700	1	9	60	31			6	6	89	27	7	73	0.67	120.0						

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

T37N R39E S08 Ty00U4	70.6
T37N R39E S08 Ty00U5	60.5
T38N R38E S36 Ty06R	.1

Project BROOKS
Acres 353.25

Page No 1
Date: 11/13/2019
Time 10:52:13AM

Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
DOUG FIR	26,899	54,039	33,741	44.01	21.91	0.78	11,839	11,839	5,677	5,550
P PINE	4,127	8,003	4,266	43.08	22.22	0.81	1,778	1,778	839	822
W LARCH	1,542	3,315	1,185	32.03	14.90	0.54	494	494	247	243
WR CEDAR	105	210	126	51.05	25.53	0.98	54	54	17	16
Totals	32,674	65,567	39,319	43.35	21.60	0.77	14,164	14,164	6,780	6,631

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
C	32,674	65,567	39,319	43.35	21.60	0.77	14,164	14,164	6,780	6,631
Totals	32,674	65,567	39,319	43.35	21.60	0.77	14,164	14,164	6,780	6,631

Log Stock Table - MBF

T37N R39E S08 Ty00U4
 THRU
 T38N R38E S36 TyO6RW

Project: BROOKS
Acres 353.25

Page 1
Date 11/13/2019
Time 10:52:14AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches										
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
DF		D	2	30	16		16	.3				16							
DF		D	2	32	2,518	2.3	2,460	44.3				973	750	620	118				
DF		D	3	16	2		2	.0				2							
DF		D	3	24	11		11	.2			8	3							
DF		D	3	26	3		3	.1			3								
DF		D	3	28	3		3	.1				3							
DF		D	3	30	28		28	.5			28								
DF		D	3	32	2,479	2.0	2,430	43.8			538	751	1067	62	12				
DF		D	4	12	22		22	.4		17	5								
DF		D	4	14	26		26	.5		16	8	2	1						
DF		D	4	16	42		42	.8		15	23	4							
DF		D	4	18	42		42	.8		29	14								
DF		D	4	20	77		77	1.4		54	10	13							
DF		D	4	24	32		32	.6		16	13	3							
DF		D	4	26	58	6.5	54	1.0		46	8								
DF		D	4	28	2		2	.0		2									
DF		D	4	30	72	4.1	69	1.3		52	18								
DF		D	4	32	242	5.7	228	4.1		175	53								
DF		Totals			5,677	2.2	5,550	83.7		421	729	779	1071	1051	762	620	118		
PP		D	4	20	6	11.1	5	.6						5					
PP		D	4	24	10	6.3	9	1.1							9				
PP		D	4	32	310	2.0	304	37.0					151	92	42	19			
PP		D	5	12	3		3	.4			3								
PP		D	5	14	6		6	.8			6								
PP		D	5	16	8		8	.9			8								
PP		D	5	18	9		9	1.1			9								
PP		D	5	20	9		9	1.0			7	1							
PP		D	5	24	9	6.8	8	1.0			8								
PP		D	5	26	10		10	1.2			4		7						
PP		D	5	28	7		7	.8			7								
PP		D	5	30	14		14	1.7			14								
PP		D	5	32	440	2.2	430	52.3			76	179	175						
PP		Totals			839	2.1	822	12.4		142	180	182	151	97	52	19			
WL		D	2	32	64	1.2	64	26.2					19	31	13				
WL		D	3	26	2		2	.9			2								

Log Stock Table - MBF

T37N R39E S08 Ty00U4
 THRU
 T38N R38E S36 TyO6RW

Project: BROOKS
Acres 353.25

Page 2
Date 11/13/2019
Time 10:52:14AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches													
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+		
WL		D	3	32	144		144	59.1			48	37	59									
WL		D	4	16	3		3	1.3		3												
WL		D	4	18	6		6	2.4		5	1											
WL		D	4	20	11		11	4.6		10	2											
WL		D	4	32	16	17.3	13	5.5		13												
WL		Totals			247	1.7	243	3.7		31	53	37	59	19	31	13						
RC		D	3	32	15	7.1	14	86.7				14										
RC		D	4	20	2		2	13.3		2												
RC		Totals			17	6.3	16	.2		2	14											
Total		All Species			6,780	2.2	6,631	100.0		452	925	996	1325	1221	891	684	137					

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BROOKS			DATE	11/13/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
38N	38E	36	BROOKS JNC	00U1	6.04	5	14	S	E	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				TREES	TREES	TREES				
TOTAL		5	14	2.8						
CRUISE		5	14	2.8	502		2.8			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	12	65.2	15.1	78	20.8	80.7	12,786	12,648	2,626	2,626
P PINE	2	17.9	11.7	72	3.9	13.4	1,202	1,202	303	303
TOTAL	14	83.1	14.4	77	24.8	94.1	13,988	13,850	2,929	2,929
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		57.3	17.3	208	252	295				
P PINE		94.3	88.3	11	90	169				
TOTAL		64.3	17.8	188	229	269	178	44	20	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		54.5	16.4	43	51	60				
P PINE		77.6	72.7	6	21	37				
TOTAL		60.2	16.7	39	47	55	156	39	17	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		59.4	29.5	46	65	84				
P PINE		152.4	75.7	4	18	31				
TOTAL		32.3	16.1	70	83	96	52	13	6	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		63.2	31.4	55	81	106				
P PINE		136.9	68.0	4	13	23				
TOTAL		53.0	26.3	69	94	119	139	35	15	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		72.8	36.2	8,074	12,648	17,222				
P PINE		152.9	76.0	289	1,202	2,116				
TOTAL		72.8	36.2	8,843	13,850	18,857	261	65	29	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		68.5	34.0	1,732	2,626	3,520				
P PINE		142.1	70.6	89	303	516				
TOTAL		65.1	32.3	1,982	2,929	3,876	209	52	23	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		72.8	36.2	100	157	214				
P PINE		152.9	76.0	21	89	157				
TOTAL		72.8	36.2	94	147	200	261	65	29	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BROOKS			DATE	11/13/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
38N	38E	36	BROOKS JNC	00U2	97.21	61	226	S	E	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		61	226	3.7						
CRUISE		41	70	1.7	8,500		.8			
DBH COUNT										
REFOREST										
COUNT		15	49	3.3						
BLANKS		5								
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	49	68.8	16.0	74	24.1	96.4	14,688	14,383	3,164	3,164
P PINE	18	16.4	16.8	82	6.2	25.3	3,776	3,704	763	763
W LARCH	3	2.2	15.3	103	0.7	2.8	500	500	102	102
TOTAL	70	87.4	16.2	76	31.0	124.5	18,964	18,586	4,029	4,029
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	72.9	10.5		305	341	377				
P PINE	78.2	19.0		295	364	433				
W LARCH	33.8	23.4		189	247	304				
TOTAL	73.6	8.9		313	343	373	216	54	24	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	64.5	9.3		66	73	80				
P PINE	68.1	16.5		61	73	85				
W LARCH	34.7	24.0		38	50	63				
TOTAL	64.8	7.8		66	72	78	168	42	19	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	32.4	4.2		66	69	72				
P PINE	162.8	20.8		13	16	20				
W LARCH	483.7	61.9		1	2	4				
TOTAL				87	87	87				
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	29.5	3.8		93	96	100				
P PINE	146.6	18.8		21	25	30				
W LARCH	461.6	59.1		1	3	4				
TOTAL				125	125	125				
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	32.7	4.2		13,780	14,383	14,985				
P PINE	154.1	19.7		2,973	3,704	4,434				
W LARCH	461.4	59.0		205	500	795				
TOTAL				18,586	18,586	18,586				
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	31.5	4.0		3,037	3,164	3,291				
P PINE	149.9	19.2		617	763	909				
W LARCH	460.6	58.9		42	102	162				
TOTAL				4,029	4,029	4,029				

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	BROOKS			DATE	11/13/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
38N	38E	36	BROOKS JNC	00U2	97.21	61	226	S	E	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR				143	149	155				
P PINE		66.5	8.5	117	146	175				
W LARCH		337.2	43.1	74	182	289				
TOTAL		297.3	38.0	149	149	149	3,528	882	392	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BROOKS			DATE	11/13/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
38N	38E	36	BROOKS JNC	00U3	118.70	73	232	S	E	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
		PLOTS	TREES	PER PLOT	TREES	TREES				
TOTAL		73	232	3.2						
CRUISE		46	73	1.6	10,438	.7				
DBH COUNT										
REFOREST										
COUNT		20	43	2.2						
BLANKS		7								
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	55	69.2	14.5	77	20.8	79.2	12,666	12,378	2,614	2,614
P PINE	17	17.9	16.5	65	6.6	26.7	3,459	3,377	763	763
W LARCH	1	.8	14.2	90	0.2	.9	126	126	30	30
TOTAL	73	87.9	14.9	75	27.6	106.8	16,251	15,881	3,407	3,407
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	80.1	10.8		275	309	342				
P PINE	42.3	10.6		192	214	237				
W LARCH										
TOTAL	78.2	9.1		258	285	311	244	61	27	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	71.5	9.6		58	64	70				
P PINE	37.4	9.3		44	48	53				
W LARCH										
TOTAL	68.7	8.0		55	60	65	189	47	21	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	47.5	5.6		65	69	73				
P PINE	148.8	17.4		15	18	21				
W LARCH	599.9	70.2		0	1	1				
TOTAL	13.0	1.5		87	88	89	7	2	1	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	34.2	4.0		76	79	82				
P PINE	148.3	17.3		22	27	31				
W LARCH	599.9	70.2		0	1	2				
TOTAL				107	107	107				
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	35.7	4.2		11,861	12,378	12,895				
P PINE	149.0	17.4		2,789	3,377	3,966				
W LARCH	599.9	70.2		37	126	214				
TOTAL				15,881	15,881	15,881				
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	35.2	4.1		2,506	2,614	2,721				
P PINE	148.6	17.4		630	763	896				
W LARCH	599.9	70.2		9	30	51				
TOTAL				3,407	3,407	3,407				

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	BROOKS			DATE	11/13/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
38N	38E	36	BROOKS JNC	00U3	118.70	73	232	S	E	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR				150	156	163				
P PINE				104	126	149				
W LARCH		418.2	48.9	41	136	232				
TOTAL		293.0	34.3	149	149	149	3,429	857	381	

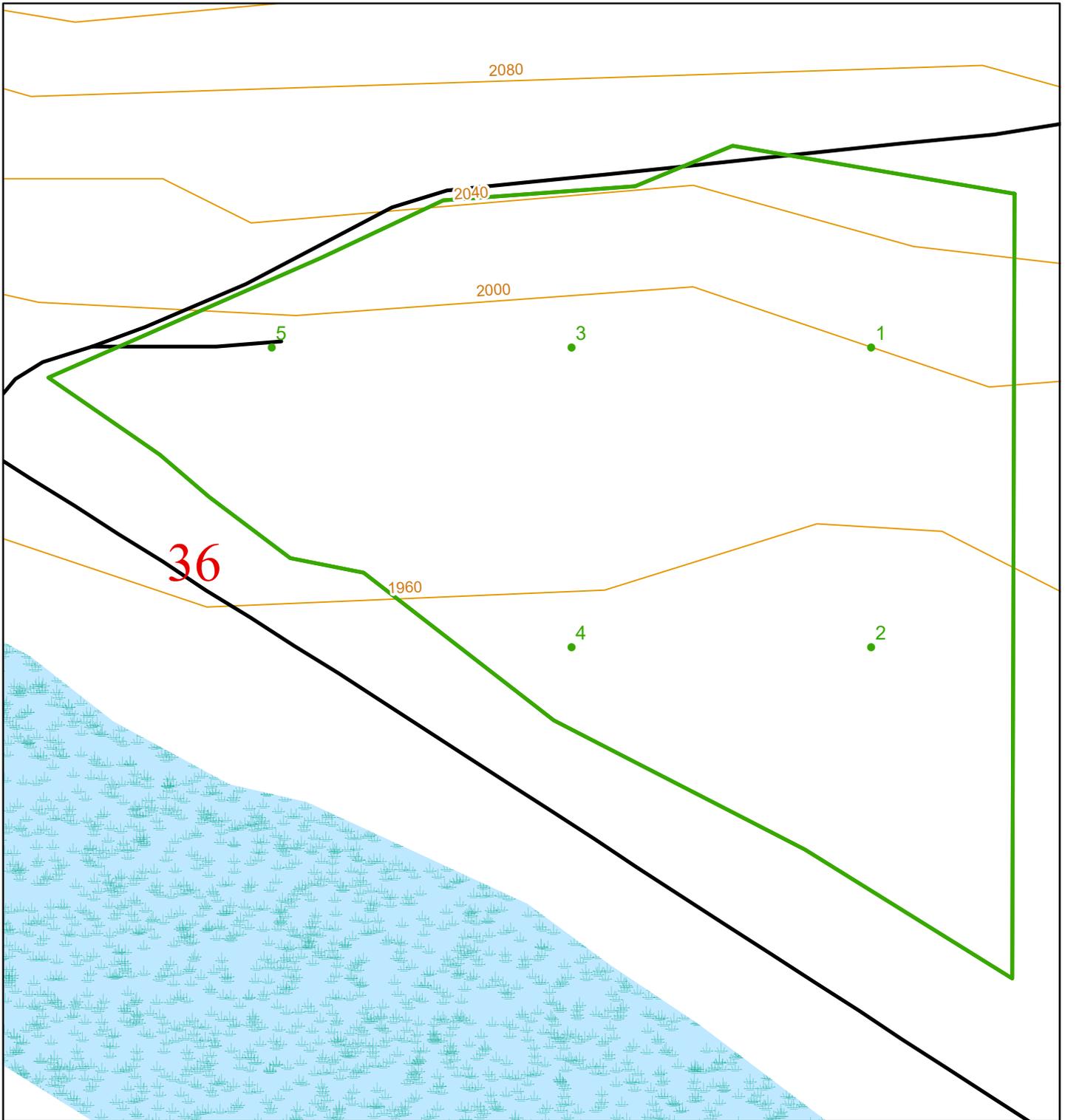
TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BROOKS			DATE	11/13/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
37N	39E	08	BROOKS JNC	00U4	70.64	50	170	S	E	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		50	170	3.4						
CRUISE		35	60	1.7	6,644		.9			
DBH COUNT										
REFOREST										
COUNT		10	27	2.7						
BLANKS		5								
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	55	84.3	16.5	81	30.9	125.6	21,290	20,820	4,395	4,395
W LARCH	3	8.0	12.9	92	2.0	7.2	1,315	1,304	258	258
WR CEDAR	1	1.5	17.2	72	0.6	2.4	238	223	76	76
P PINE	1	.3	21.0	78	0.2	.8	113	106	23	23
TOTAL	<i>60</i>	<i>94.1</i>	<i>16.3</i>	<i>81</i>	<i>33.7</i>	<i>136.0</i>	<i>22,956</i>	<i>22,454</i>	<i>4,751</i>	<i>4,751</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	62.1	8.4		318	347	376				
W LARCH	68.1	47.1		129	243	358				
WR CEDAR										
P PINE										
TOTAL	<i>62.4</i>	<i>8.1</i>		<i>311</i>	<i>338</i>	<i>366</i>	<i>156</i>	<i>39</i>	<i>17</i>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	54.8	7.4		67	72	77				
W LARCH	73.0	50.5		24	49	74				
WR CEDAR										
P PINE										
TOTAL	<i>54.9</i>	<i>7.1</i>		<i>65</i>	<i>70</i>	<i>75</i>	<i>120</i>	<i>30</i>	<i>13</i>	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR				84	84	84				
W LARCH	359.1	50.7		4	8	12				
WR CEDAR	522.7	73.9		0	1	3				
P PINE	707.1	99.9		0	0	1				
TOTAL				<i>94</i>	<i>94</i>	<i>94</i>				
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR				126	126	126				
W LARCH	349.4	49.4		4	7	11				
WR CEDAR	522.7	73.9		1	2	4				
P PINE	707.1	99.9		0	1	2				
TOTAL				<i>136</i>	<i>136</i>	<i>136</i>				
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR				20,820	20,820	20,820				
W LARCH	350.2	49.5		659	1,304	1,949				
WR CEDAR	522.7	73.9		58	223	388				
P PINE	707.1	99.9		0	106	213				
TOTAL				<i>22,454</i>	<i>22,454</i>	<i>22,454</i>				

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	BROOKS			DATE	11/13/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
37N	39E	08	BROOKS JNC	00U4	70.64	50	170	S	E	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH	5	10	15	
DOUG FIR				4,395	4,395	4,395				
W LARCH		350.1	49.5	130	258	385				
WR CEDAR		522.7	73.9	20	76	132				
P PINE		707.1	99.9	0	23	47				
TOTAL				<i>4,751</i>	<i>4,751</i>	<i>4,751</i>				
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH	5	10	15	
DOUG FIR				166	166	166				
W LARCH		96.1	13.6	91	181	271				
WR CEDAR		215.6	30.5	24	93	162				
P PINE		707.1	99.9	0	133	266				
TOTAL		<i>247.1</i>	<i>34.9</i>	<i>165</i>	<i>165</i>	<i>165</i>	<i>2,439</i>	<i>610</i>	<i>271</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BROOKS			DATE	11/13/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
37N	39E	08	BROOKS JNC	00U5	60.56	36	117	S	E	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	PER PLOT	TREES	TREES		
TOTAL		36	117	3.3						
CRUISE		28	47	1.7	6,584		.7			
DBH COUNT										
REFOREST										
COUNT		6	12	2.0						
BLANKS		2								
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	37	93.2	15.2	77	30.1	117.3	19,217	18,746	3,957	3,957
W LARCH	5	11.0	12.2	86	2.5	8.9	1,498	1,441	292	292
P PINE	5	4.5	15.0	67	1.4	5.6	760	755	157	157
TOTAL	47	108.7	14.9	78	34.1	131.8	21,475	20,942	4,406	4,406
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	64.8	10.6		278	311	344				
W LARCH	94.2	46.8		160	300	440				
P PINE	60.7	30.2		229	328	427				
TOTAL	65.9	9.6		281	311	341	173	43	19	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	57.9	9.5		58	64	70				
W LARCH	86.7	43.1		33	59	84				
P PINE	56.8	28.2		48	66	85				
TOTAL	59.3	8.6		58	64	69	140	35	16	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR				93	93	93				
W LARCH	255.0	42.5		6	11	16				
P PINE	379.2	63.1		2	5	7				
TOTAL				109	109	109				
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR				117	117	117				
W LARCH	218.1	36.3		6	9	12				
P PINE	305.6	50.9		3	6	8				
TOTAL				132	132	132				
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR				18,746	18,746	18,746				
W LARCH	225.7	37.6		899	1,441	1,982				
P PINE	367.1	61.1		294	755	1,217				
TOTAL				20,942	20,942	20,942				
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR				3,957	3,957	3,957				
W LARCH	222.0	37.0		184	292	400				
P PINE	349.7	58.2		66	157	248				
TOTAL				4,406	4,406	4,406				

TC TSTATS				STATISTICS				PAGE	2		
				PROJECT	BROOKS			DATE	11/13/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
37N	39E	08	BROOKS JNC	00U5	60.56	36	117	S	E		
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15		
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH	5	10	15		
DOUG FIR				160	160	160					
W LARCH				148.4	24.7	101	162	223			
P PINE				367.1	61.1	53	136	219			
TOTAL				206.0	34.3	159	159	159	1,694	424	188

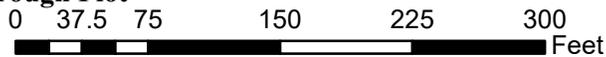
TC TSTATS				STATISTICS				PAGE	1	
				PROJECT BROOKS				DATE	11/13/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
38N	38E	36	BROOKS JNC	O6RW	0.10	1	7	S	E	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		1	7	7.0						
CRUISE		1	7	7.0	7	100.0				
DBH COUNT										
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
DOUG FIR	6	60.0	12.6	62	14.7	52.3	5,000	4,600	1,324	1,324
P PINE	1	10.0	20.8	82	5.2	23.6	4,100	4,100	807	807
TOTAL	7	70.0	14.1	65	20.2	75.9	9,100	8,700	2,131	2,131
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		61.5	27.4	56	77	98				
P PINE										
TOTAL		107.1	43.6	70	124	178	532	133	59	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		61.9	27.6	16	22	28				
P PINE										
TOTAL		83.5	34.0	20	30	41	323	81	36	



FMA POLYGON AND SAMPLE POINT INFORMATION

FMA_NM:	BROOKS JUNCTION U1	Township:	T38R38E
FMA_ID:	254508	DNR Region:	NORTHEAST
Acres:	6	Total Sample Points:	5
County:	STEVENS	Spacing Between Points:	Width: 230 Height: 230
		Point Rotation Degrees:	0

D:Deleted Plot
WT: Walkthrough Plot

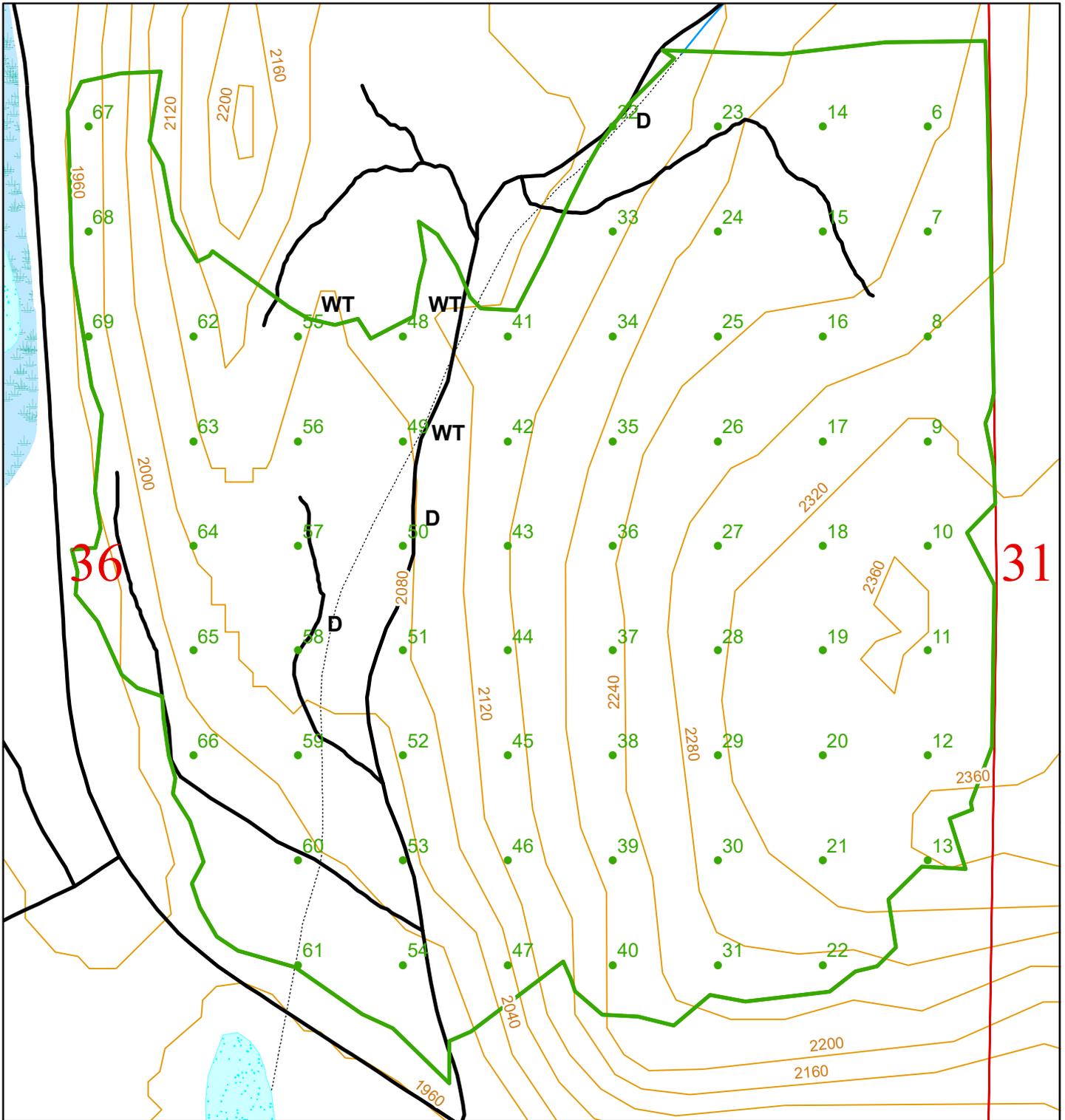


Scale 1:1,300



Legend

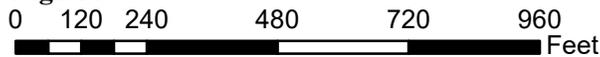
- Sample Points
- FMA polys
- Public Land Survey Sections
- Contours 40-foot



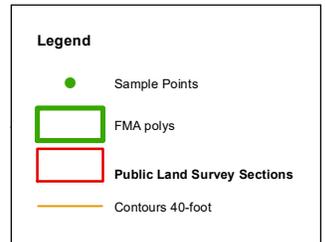
FMA POLYGON AND SAMPLE POINT INFORMATION

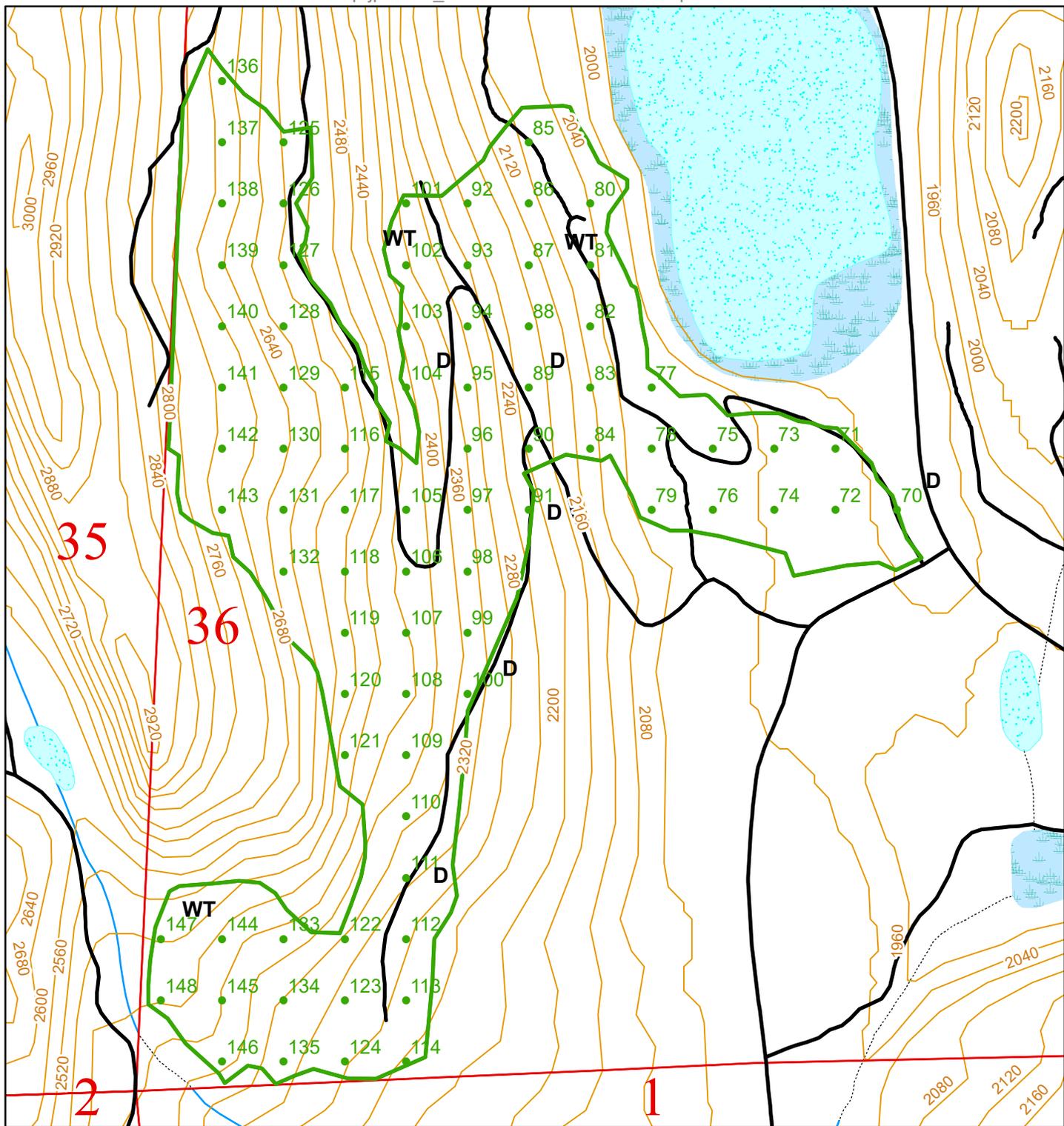
FMA_NM:	BROOKS JUNCTION U2	Township:	T38R38E
FMA_ID:	254515	DNR Region:	NORTHEAST
Acres:	100	Total Sample Points:	64
County:	STEVENS	Spacing Between Points:	Width: 260 Height: 260
		Point Rotation Degrees:	0

D: Deleted Plot
WT: Walkthrough Plot



Scale 1:4,200

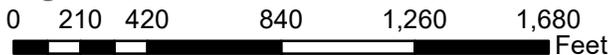




FMA POLYGON AND SAMPLE POINT INFORMATION

FMA_NM:	BROOKS JUNCTION U3	Township:	T38R38E
FMA_ID:	254514	DNR Region:	NORTHEAST
Acres:	122	Total Sample Points:	79
County:	STEVENS	Spacing Between Points:	Width: 260 Height: 260
		Point Rotation Degrees:	0

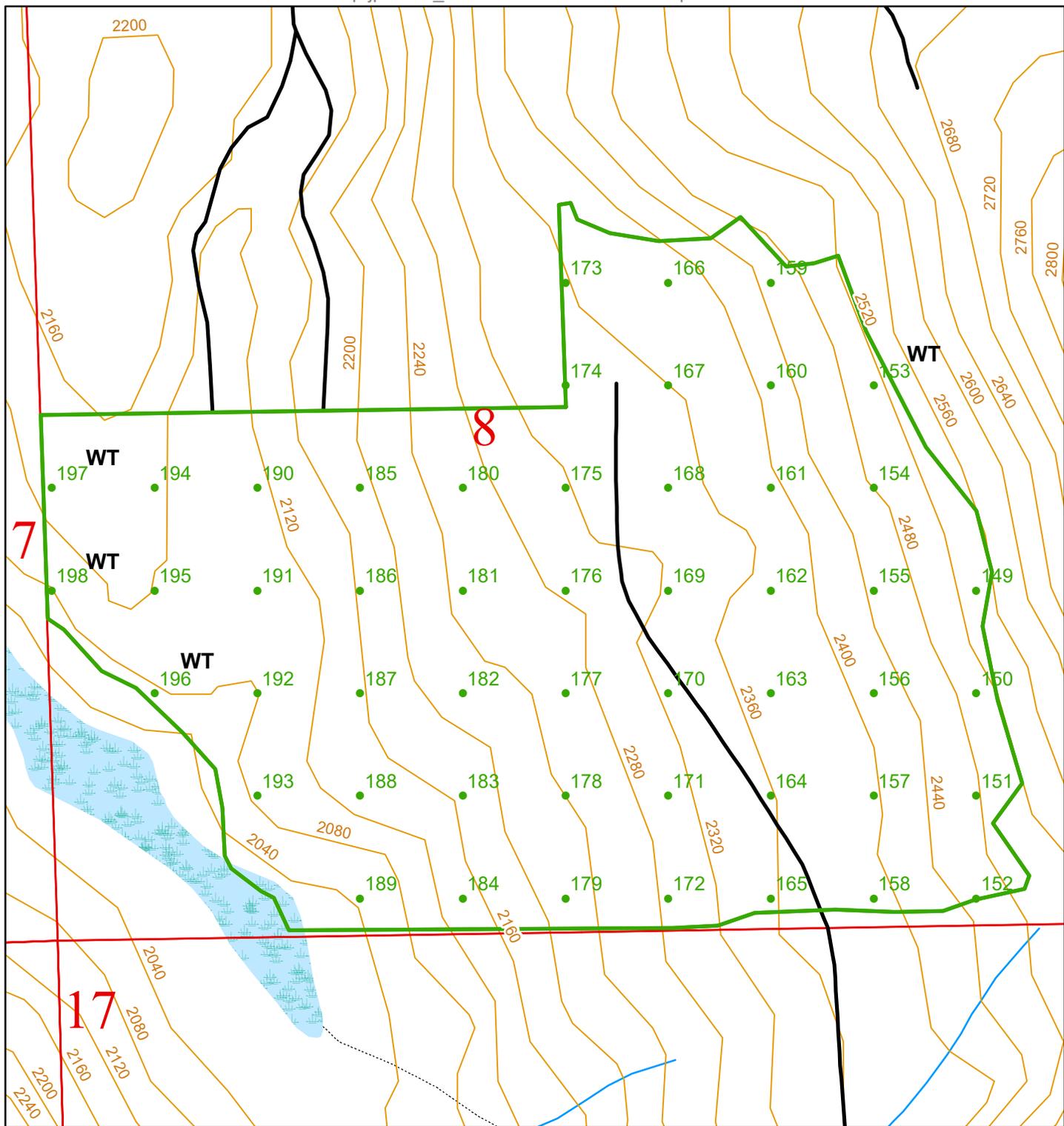
D: Deleted Plot
WT: Walkthrough Plot



Scale 1:7,200

Legend

- Sample Points
- FMA polys
- Public Land Survey Sections
- Contours 40-foot



FMA POLYGON AND SAMPLE POINT INFORMATION

FMA_NM:	BROOKS JUNCTION U4	Township:	T37R39E
FMA_ID:	265437	DNR Region:	NORTHEAST
Acres:	72	Total Sample Points:	50
County:	STEVENS	Spacing Between Points:	Width: 260 Height: 260
		Point Rotation Degrees:	0

D: Deleted Plot

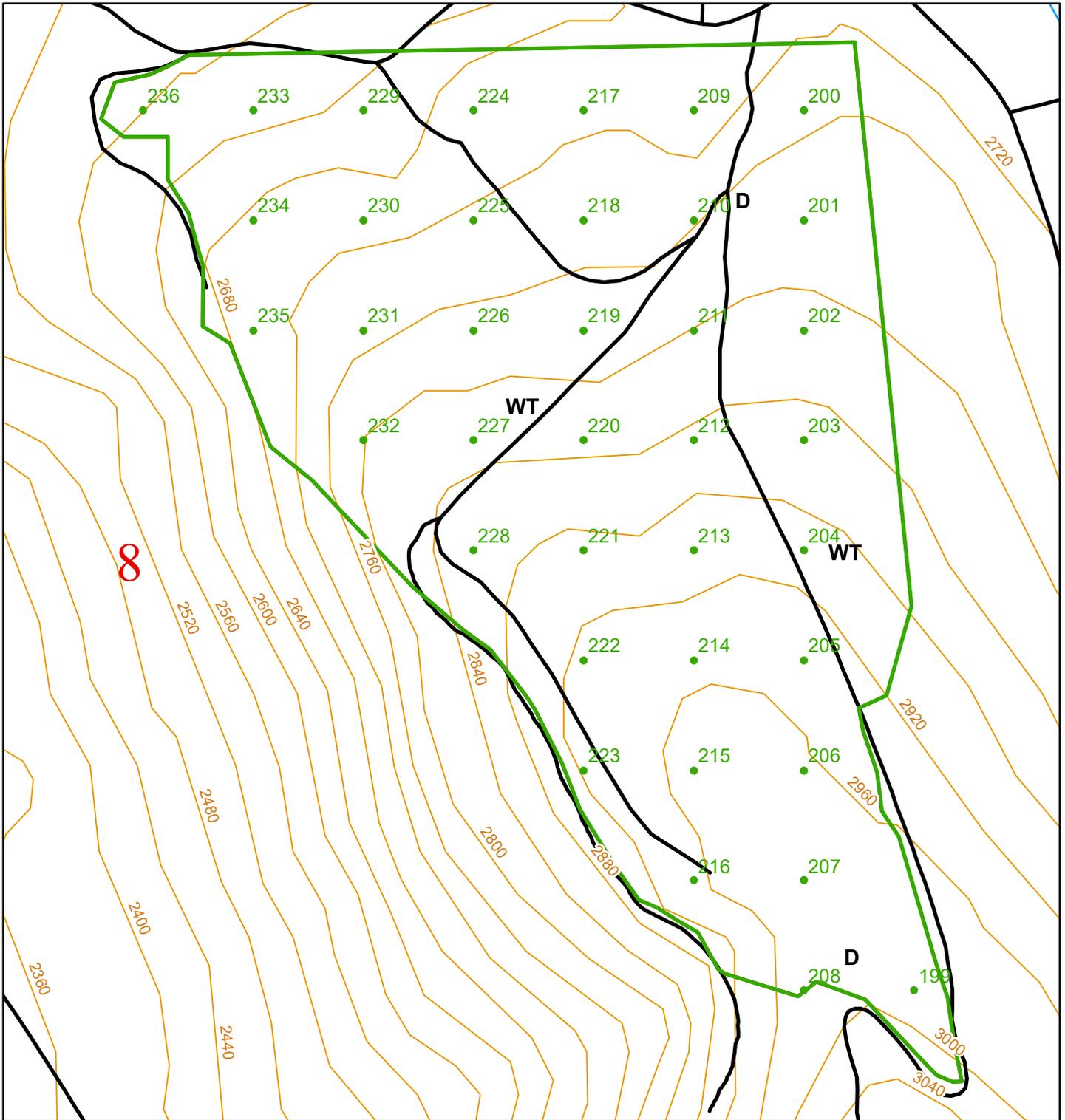
WT: Walkthrough Plot



Scale 1:4,300

Legend

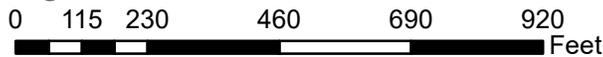
- Sample Points
- FMA polys
- Public Land Survey Sections
- Contours 40-foot



FMA POLYGON AND SAMPLE POINT INFORMATION

FMA_NM:	BROOKS JUNCTION U5	Township:	T37R39E
FMA_ID:	265439	DNR Region:	NORTHEAST
Acres:	62	Total Sample Points:	38
County:	STEVENS	Spacing Between Points:	Width: 260 Height: 260
		Point Rotation Degrees:	0

D: Deleted Plot
WT: Walkthrough Plot



Scale 1:4,000

Legend

- Sample Points
- FMA polys
- Public Land Survey Sections
- Contours 40-foot



Forest Practices Application/Notification Notice of Decision

FPA/N No: 3023242
 Effective Date: 12/27/2018
 Expiration Date: 12/27/2021
 Shut Down Zone: 687
 EARR Tax Credit: Eligible [] Non-eligible
 Reference: DNR "Brooks Junction"
 36-38-38 & 8-37-39

Decision

- Notification Operations shall not begin before the effective date.
- 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 Class III Class IVG Class IVS

Number of Years Granted on Multi-Year Request

4 years 5 years

Conditions on Approval / Reasons for Disapproval

Approved with no conditions.

Issued By: Bob Hinds Region: Northeast

Title: Forest Practices Forester Date: 12/27/2018

Copies to: Landowner, Timber Owner and Operator.

Issued in person: Landowner Timber Owner Operator By: _____

Appeal Information

You have thirty (30) days to appeal this Decision and any related State Environmental Policy Act determinations to the Pollution Control Hearings Board in writing at the following addresses:

Physical address: 1111 Israel Rd. SW, Ste 301, Tumwater, WA 98501

Mailing address: P.O. BOX 40903, OLYMPIA, WA 98504-0903

Information regarding the Pollution Control Hearings Board can be found at: <http://www.eluho.wa.gov/>

At the same time you file an appeal with the Pollution Control Hearings Board, also send a copy of the appeal to the Department of Natural Resources' region office and the Office of the Attorney General at the following addresses:

Office of the Attorney General
Natural Resources Division
1125 Washington Street SE
PO Box 40100
Olympia, WA 98504-0100

And

Department Of Natural Resources
Northeast Region
225 S Silke Rd
Colville, WA 99114

Other Applicable Laws

Operating as described in this application/notification does not ensure compliance with the Endangered Species Act, or other federal, state, or local laws.

Transfer of Forest Practices Application/Notification (WAC 222-20-010)

Use the "Notice of Transfer of Approved Forest Practices Application/Notification" form. This form is available at region offices and on the Forest Practices website: <http://www.dnr.wa.gov/businesspermits/forestpractices>. Notify DNR of new Operators within 48 hours.

Continuing Forest Land Obligations (RCW 76.09.060, RCW 76.09.070, RCW 76.09.390, and WAC 222-20-055)

Obligations include reforestation, road maintenance and abandonment plans, conversions of forest land to non-forestry use and/or harvest strategies on perennial non-fish habitat (Type Np) waters in Eastern Washington.

Before the sale or transfer of land or perpetual timber rights subject to continuing forest land obligations, the seller must notify the buyer of such an obligation on a form titled "Notice of Continuing Forest Land Obligation". The seller and buyer must both sign the "Notice of Continuing Forest Land Obligation" form and send it to the DNR Region Office for retention. This form is available at DNR region offices.

If the seller fails to notify the buyer about the continuing forest land obligation, the seller must pay the buyer's costs related to continuing forest land obligations, including all legal costs and reasonable attorneys' fees incurred by the buyer in enforcing the continuing forest land obligation against the seller.

Failure by the seller to send the required notice to the DNR at the time of sale will be prima facie evidence in an action by the buyer against the seller for costs related to the continuing forest land obligation prior to sale.

DNR affidavit of mailing:

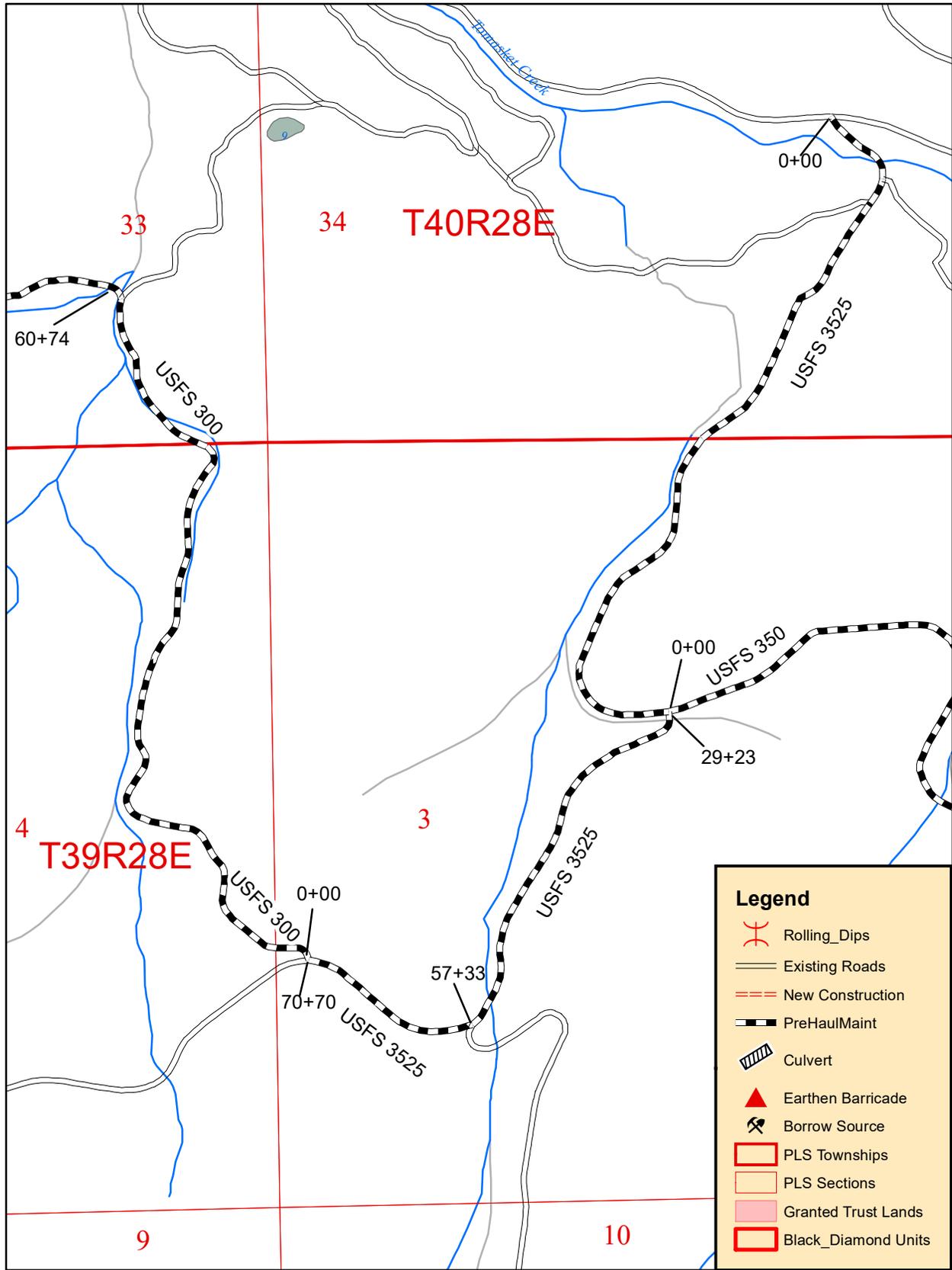
On this day <u>12-28-18</u> , I placed in the United States mail at <u>Colville</u> , WA,
(date) (post office location)
postage paid, a true and accurate copy of this document. Notice of Decision FPA # <u>3023242</u>
<u>Megan Kay</u> (Printed name) <u>Megan Kay</u> (Signature)

Washington State Department of Natural Resources

Q Black Diamond Timber Sale

Map #1
Trust:03 Agreement No. 30-100080

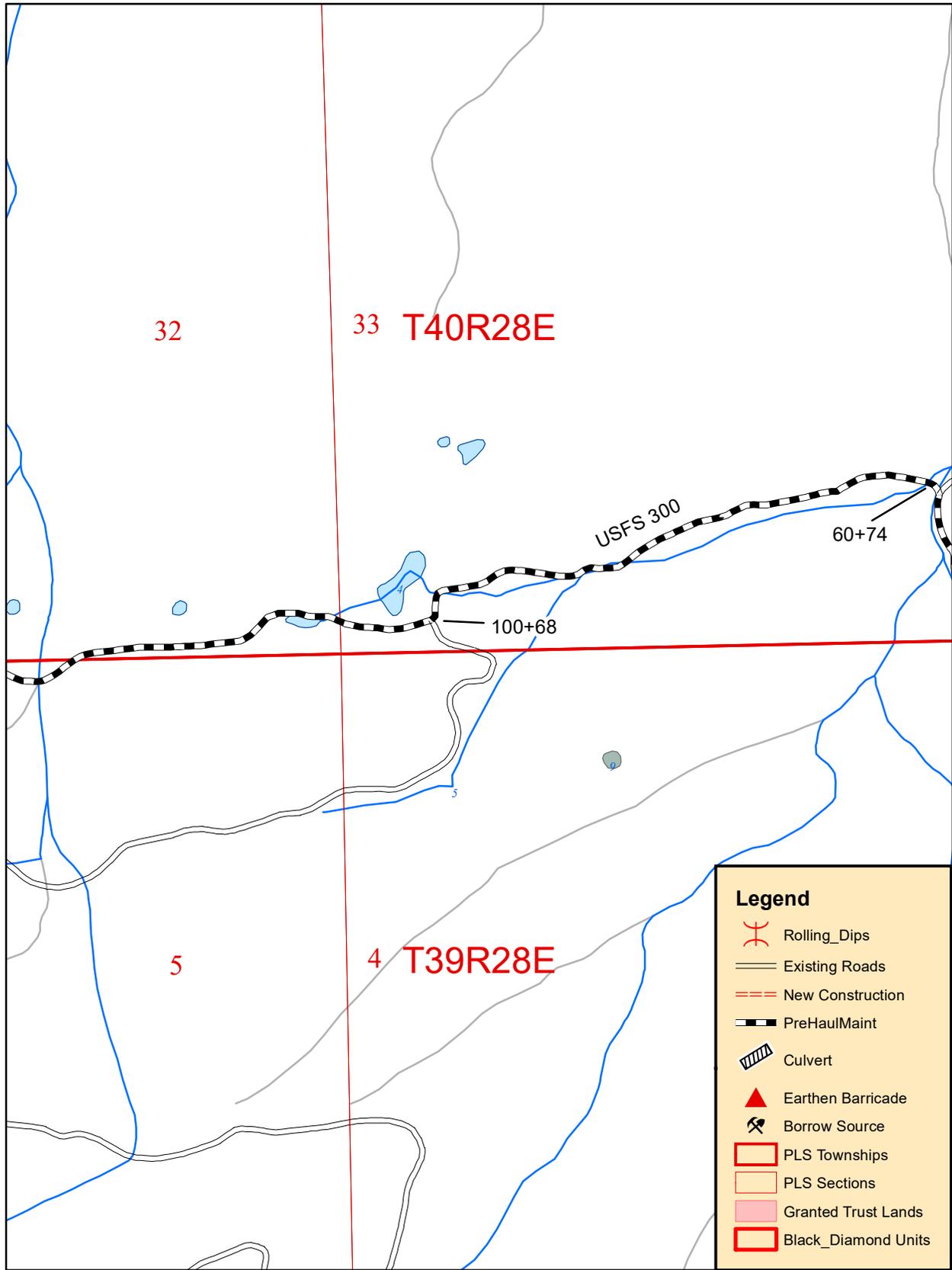
Region: Northeast
County: Okanogan



Washington State Department of Natural Resources Q Black Diamond Timber Sale

Map #2
Trust:03 Agreement No. 30-100080

Region: Northeast
County: Okanogan

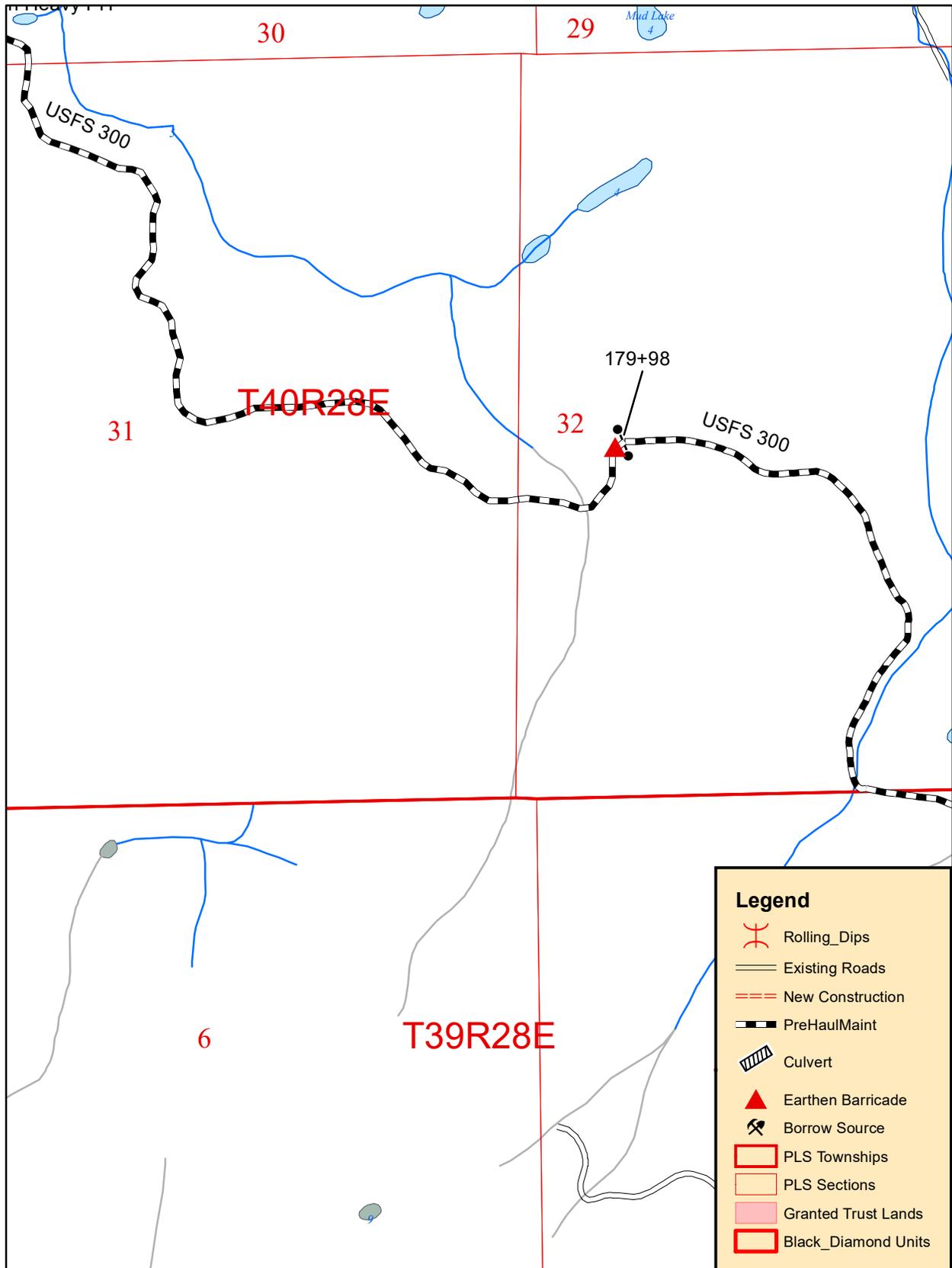


1,000 500 0 1,000
Feet

Washington State Department of Natural Resources Q Black Diamond Timber Sale

Map #3
Trust:03 Agreement No. 30-100080

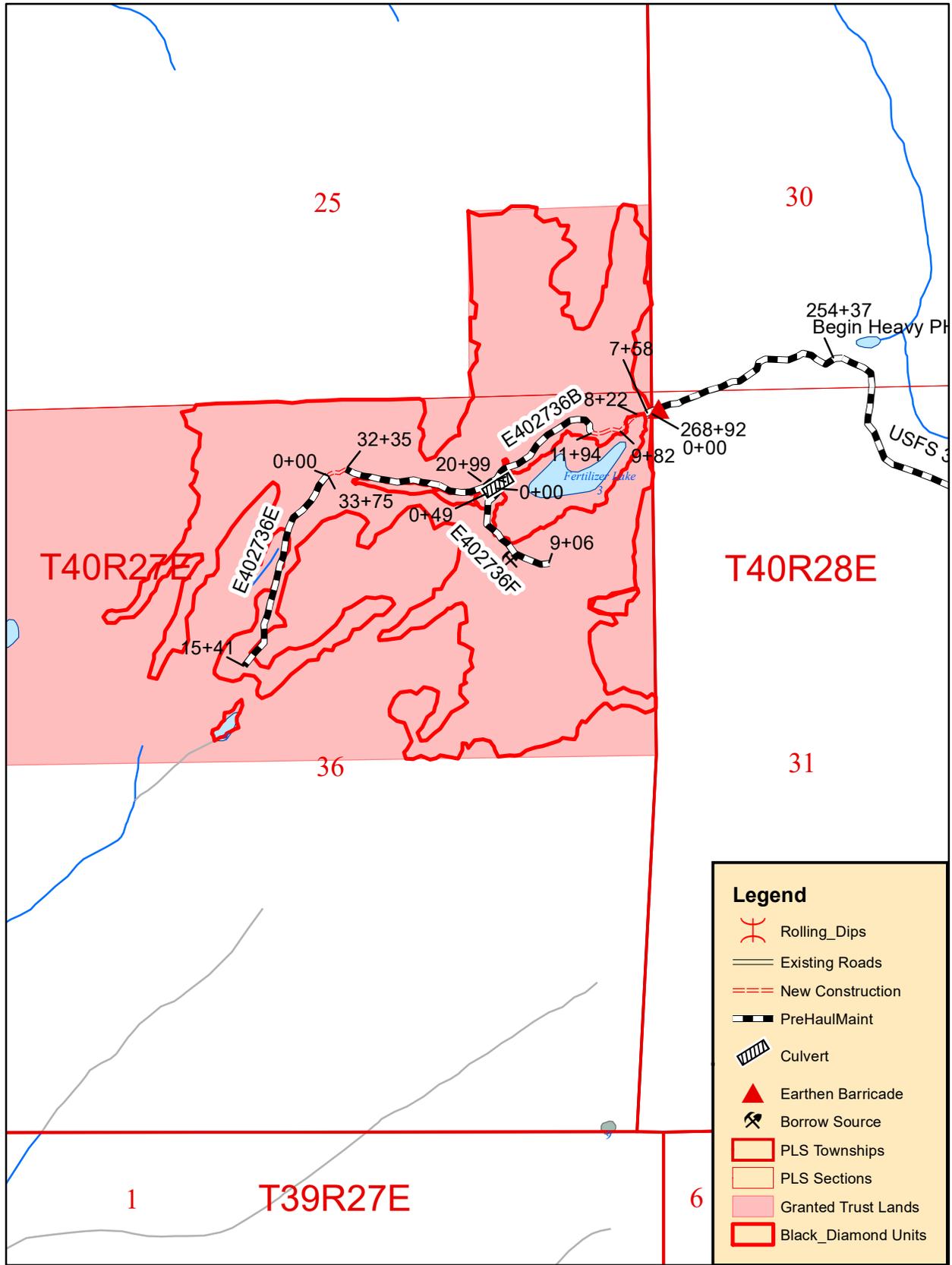
Region: Northeast
County: Okanogan



Washington State Department of Natural Resources Q Black Diamond Timber Sale

Map #4
Trust:03 Agreement No. 30-100080

Region: Northeast
County: Okanogan

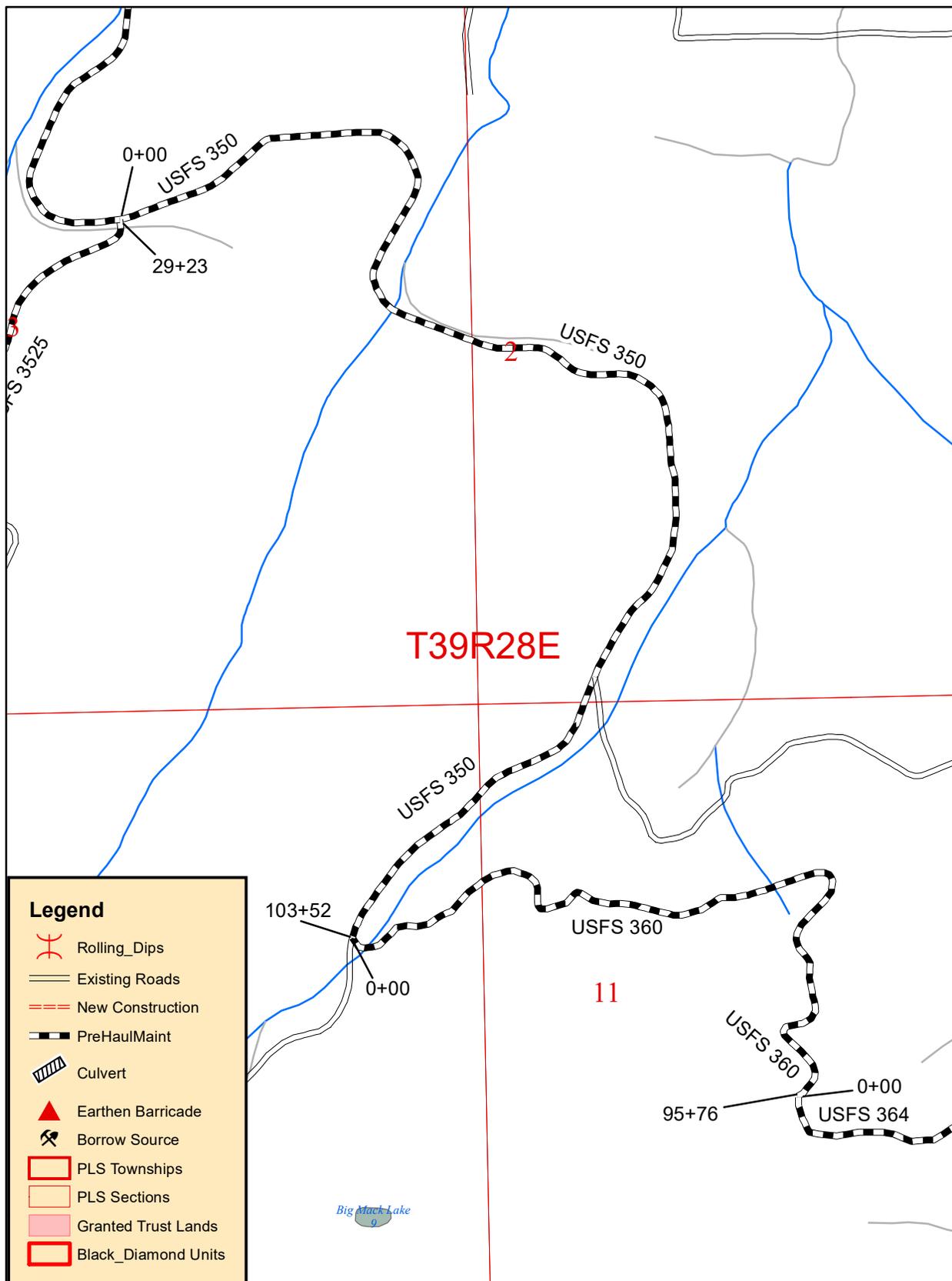


1,000 500 0 1,000
 Feet

Washington State Department of Natural Resources Q Black Diamond Timber Sale

Map #5
Trust:03 Agreement No. 30-100080

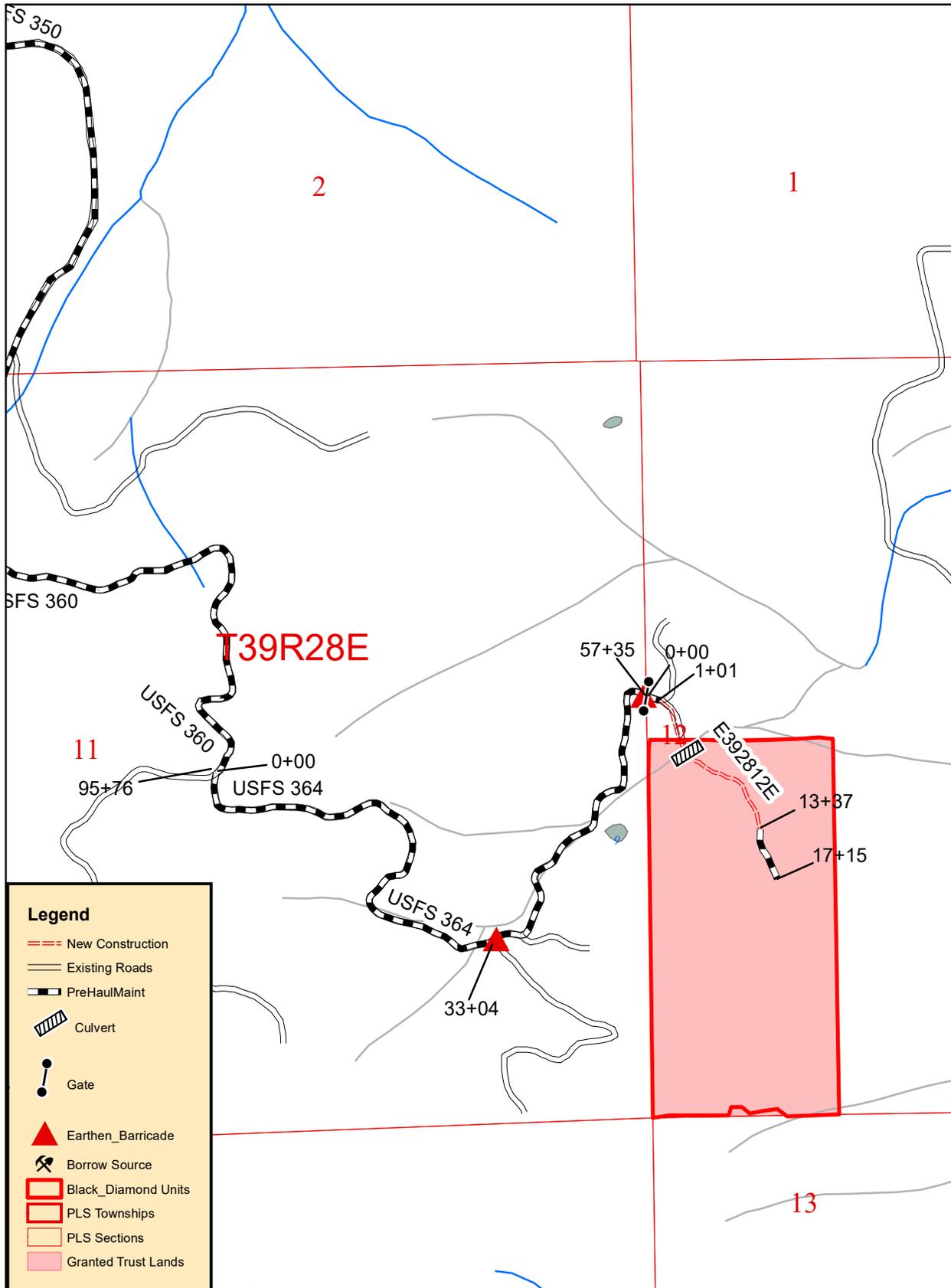
Region: Northeast
County: Okanogan



Washington State Department of Natural Resources Q Black Diamond Timber Sale

Map #6
Trust:03 Agreement No. 30-100080

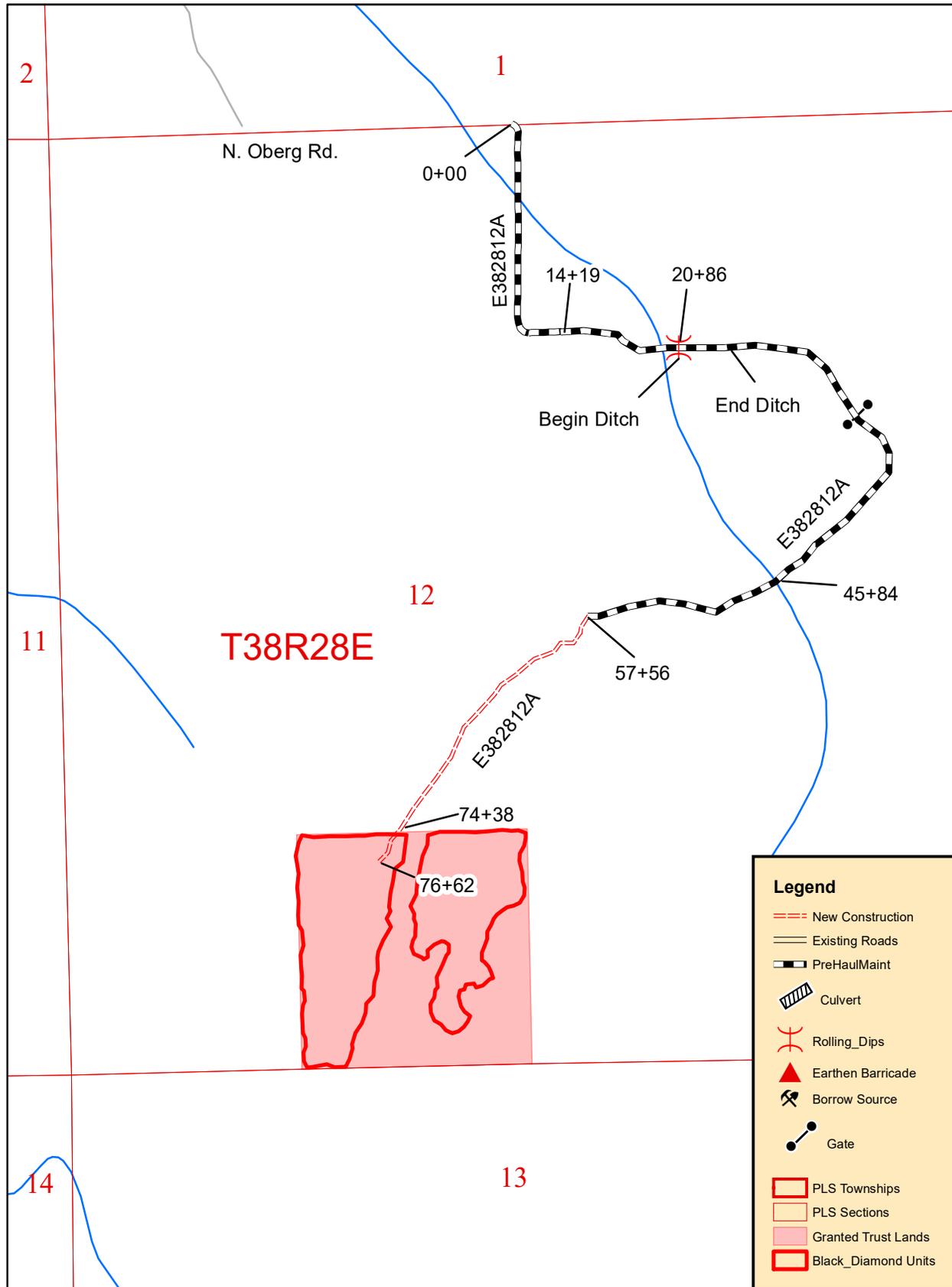
Region: Northeast
County: Okanogan



Washington State Department of Natural Resources Q Black Diamond Timber Sale

Map #7
Trust:03 Agreement No. 30-100080

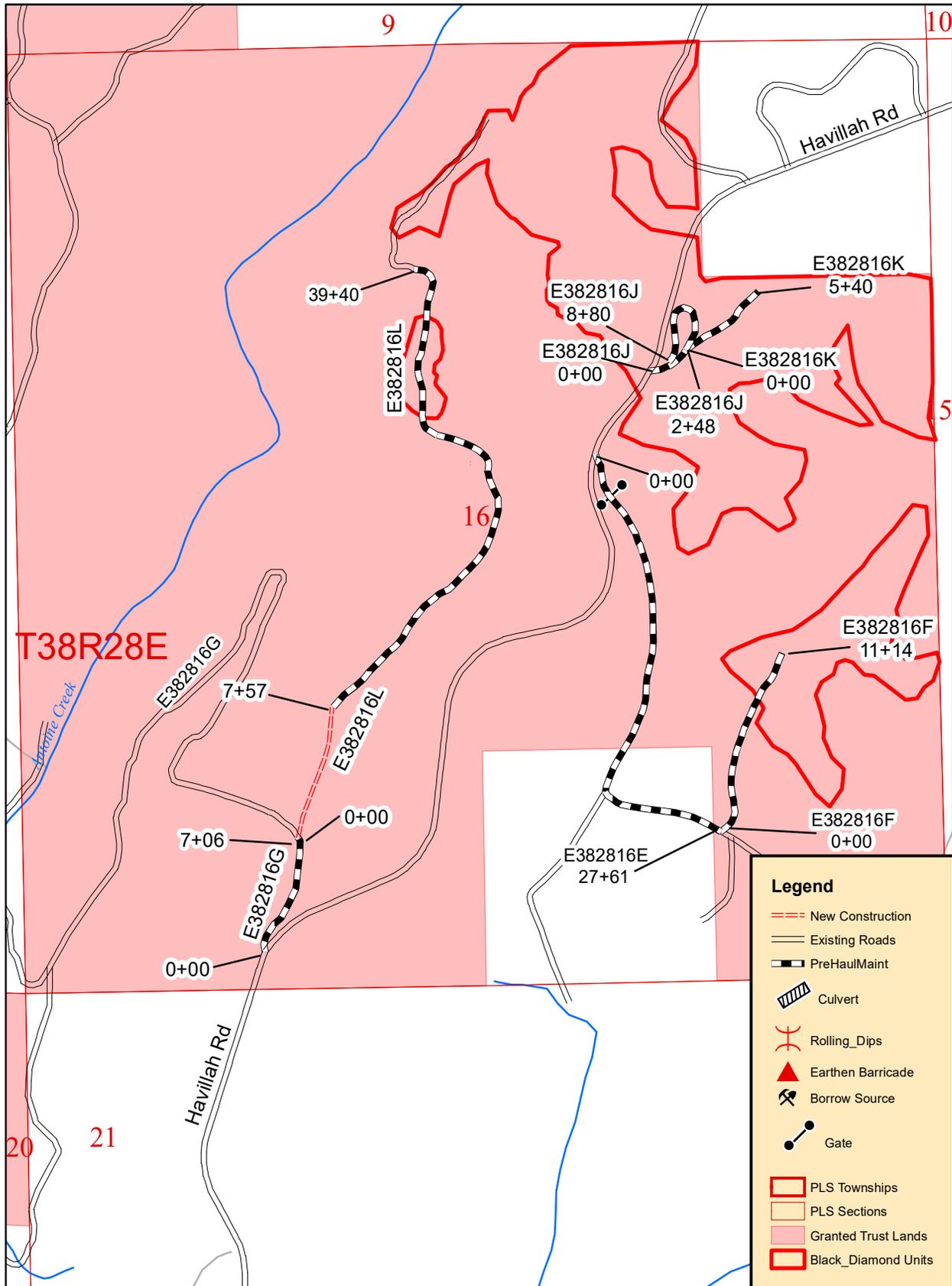
Region: Northeast
County: Okanogan



Washington State Department of Natural Resources Q Black Diamond Timber Sale

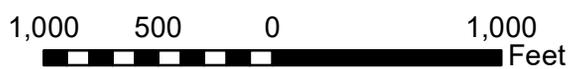
Map #8
Trust:03 Agreement No. 30-100080

Region: Northeast
County: Okanogan



Legend

- New Construction
- Existing Roads
- PreHaulMaint
- Culvert
- ⌒ Rolling_Dips
- ▲ Earthen Barricade
- ⚡ Borrow Source
- Gate
- PLS Townships
- PLS Sections
- Granted Trust Lands
- Black_Diamond Units



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Q BLACK DIAMOND TIMBER SALE ROAD PLAN
OKANOGAN COUNTY
HIGHLANDS UNIT
NORTHEAST REGION

AGREEMENT NO.: 30-100080

STAFF ENGINEER: ERIC ANDERSON

DATE: 09-18-2019

DRAWN & COMPILED BY: ERIC ANDERSON

SECTION 0 – SCOPE OF PROJECT

0-1 ROAD PLAN SCOPE

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

0-2 REQUIRED ROADS

The specified work on the following roads is required.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
E382812A	57.56	Pre Haul Maintenance
E382812A	19.06	Construction
E382816E	27.61	Pre Haul Maintenance
E382816F	11.14	Pre Haul Maintenance
E382816G	7.06	Pre Haul Maintenance
E382816J	8.80	Pre Haul Maintenance
E382816K	5.40	Pre Haul Maintenance
E382816L	7.57	Construction
E382816L	31.83	Pre Haul Maintenance
E392812E	4.79	Pre Haul Maintenance
E392812E	12.36	Construction
E402736B	27.99	Pre Haul Maintenance
E402736B	5.76	Construction
E402736E	15.41	Pre Haul Maintenance
E402736F	9.06	Pre Haul Maintenance
USFS 3525	70.70	Pre Haul Maintenance
USFS 300	268.92	Pre Haul Maintenance
USFS 350	103.52	Pre Haul Maintenance
USFS 360	95.76	Pre Haul Maintenance
USFS 364	57.35	Pre Haul Maintenance

0-4 CONSTRUCTION

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E382812A	57+56 to 76+62	Grub, excavate and grade new road as marked in field.
E382816L	0+00 to 7+57	Grub, excavate and grade new road as marked in field.
E392812E	1+01 to 13+37	Grub, excavate and grade new road as marked in field. Incorporate designated drainage structures into road.
E402736B	7+58 to 11+94	Grub, excavate and grade new road as marked in field. Rip or Drill and Shoot as needed.
E402736B	32+35 to 33+75	Grub, excavate and grade new road as marked in field. Incorporate designated drainage structures into road.

0-6 PRE-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E382812A	0+00 to 20+86	Blade, shape, improve and maintain drainage.
E382812A	20+86 to 22+36	Install armored rolling dip and ditch right side of road. End haul ditch material to a spot designated by CA.
E382812A	22+36 to 57+56	Blade, shape, improve and maintain drainage. Add 1 sta. of rock beginning at sta. 45+34. Refer to Rock List.
E382816E	0+00 to 27+61	Blade, shape, improve and maintain drainage.
E382816F	0+00 to 11+14	Blade, shape, improve and maintain drainage.

E382816G	0+00 to 7+06	Blade, shape, improve and maintain drainage.
E382816J	0+00 to 8+80	Blade, shape, improve and maintain drainage.
E382816K	0+00 to 5+40	Blade, shape, improve and maintain drainage.
E382816L	7+57 to 39+40	Blade, shape, improve and maintain drainage.
E392812E	0+00 to 1+01	Blade, shape, improve and maintain drainage.
E392812E	13+37 to 17+15	Blade, shape, improve and maintain drainage.
E402736B	0+00 to 7+58	Blade, shape, improve and maintain drainage.
E402736B	11+94 to 32+35	Blade, shape, improve and maintain drainage.
E402736E	0+00 to 15+41	Blade, shape, improve and maintain drainage.
E402736F	0+00 to 9+06	Blade, shape, install XDP, improve and maintain drainage.
USFS 3525	0+00 to 70+70	Blade, shape, improve and maintain drainage.
USFS 300	0+00 to 268+92	Blade, shape, improve and maintain drainage. At sta. 60+74 repair road over culvert with rip rap support on both sides of road, remove and reinstall two earthen barricades post-haul.
USFS 350	0+00 to 103+52	Blade, shape, improve and maintain drainage.
USFS 360	0+00 to 95+76	Blade, shape, improve and maintain drainage.
USFS 364	0+00 to 57+35	Blade, shape, improve and maintain drainage. Install two earthen barricades post-haul.

0-7 POST-HAUL MAINTENANCE

This project includes post-haul road maintenance listed in Clause 9-5 post-Haul Maintenance.

0-12 DEVELOP ROCK SOURCE

Purchaser may develop a new rock source on DNR Land. Rock source development will involve utilizing rock created from excavation and/or blasting bedrock within and adjacent to new road construction.

0-13 STRUCTURES

Purchaser shall install a log and gravel pad. Requirements for these structures are listed in Section 7 STRUCTURES.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

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

1-3 ROAD DIMENSIONS

Purchaser shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan, unless controlled by construction stakes.

1-4 ROAD TOLERANCES

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

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

1-5 DESIGN DATA

Design data is available upon request at the Department of Natural Resources Northeast Region Office in Colville, WA.

1-6 ORDER OF PRECEDENCE

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

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

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

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

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

1-9 DAMAGED METALLIC COATING

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

1-10 WSDOT STANDARD SPECIFICATION REFERENCE

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

SUBSECTION ROAD MARKING

1-15 ROAD MARKING

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

- Orange Flagging.
- Construction Stakes.

1-16 CONSTRUCTION STAKES SET BY STATE

Purchaser shall perform work on the following road(s) in accordance with the construction stakes and reference points set in the field for grade and alignment.

Reconstruction of existing road grades must conform to the original location except where construction staked or designed.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
<u>E392812E</u>	<u>1+01 to 13+37</u>	Construction

1-18 REFERENCE POINT DAMAGE

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

1-21 HAUL APPROVAL

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

1-22 WORK NOTIFICATIONS

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

SUBSECTION RESTRICTIONS

1-25 ACTIVITY TIMING RESTRICTION

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

1-26 OPERATING DURING CLOSURE PERIOD

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

ACTIVITY TIMING RESTRICTION, Purchase shall provide a maintenance plan to include further protection of state resources. Purchaser shall obtain written approval from the Contract Administrator for the maintenance plan, and shall put preventative measures in place before operating during the closure period. Purchaser is required to maintain all haul roads at their own expense including those listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER. If other operators are using, or desire to use these roads, a joint operating plan must be developed. All parties shall follow this plan.

1-29 SEDIMENT RESTRICTION

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

1-30 CLOSURE TO PREVENT DAMAGE

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

- Wheel track rutting exceeds 6 inches on pit run roads.
- Wheel track rutting exceeds 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, Purchaser shall cease operations, or perform corrective maintenance or repairs, subject to specifications within this road plan. Before and during any suspension, Purchaser shall protect the work from damage or deterioration.

1-33 SNOW PLOWING RESTRICTION

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

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

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

2-4 PASSAGE OF LIGHT VEHICLES

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

2-5 MAINTENANCE GRADING – EXISTING ROAD

Purchaser shall use a grader to shape the existing surface before final approval. Purchaser shall accomplish all grading using a motor grader.

2-6 CLEANING CULVERTS

Purchaser shall clean the inlets and outlets of all culverts and shall obtain written approval from the Contract Administrator before final approval.

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

Purchaser shall clean ditches, headwalls, and catchbasins within this road plan. Work must be completed before timber haul. Pulling ditch material across crushed rock surface roads or mixing in with the crushed surfacing is not allowed.

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

Purchaser 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. Purchaser shall remove brushing debris from the road surface, ditchlines, 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. 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

Purchaser shall fall all vegetative material larger than 2 inches DBH or over 5 feet high between the marked right-of-way boundaries and within waste and debris areas, or if not marked in the field, between the clearing limits specified on the TYPICAL SECTION SHEET, except on USFS Roads where clearing of material larger than 4 inches DBH must have written approval from the contract administrator. Clearing must be completed before starting excavation and embankment.

3-7 RIGHT-OF-WAY DECKING

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

3-8 PROHIBITED DECKING AREAS

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

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

3-10 GRUBBING

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

Purchaser shall place grubbed stumps adjacent to the road shoulder 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. Purchaser shall pile stumps no greater than 10 feet high.

3-14 STUMPS WITHIN DESIGNATED WASTE AREAS

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

3-21 DISPOSAL COMPLETION

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

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

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

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 40%.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-30 EXCLUSION OF DOZER BLADES

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

3-31 PILING

Purchaser 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 45%, Purchaser 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

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

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

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

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 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.

Purchaser 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

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

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

4-6 EMBANKMENT SLOPE RATIO

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

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

4-7 SHAPING CUT AND FILL SLOPE

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

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

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

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

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

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

4-12 FULL BENCH CONSTRUCTION

Where side slopes exceed 45%, Purchaser shall use full bench construction for the entire subgrade width except as construction staked or designed.

4-14 ONE-FOOT EXCAVATION LIMIT

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

4-21 TURNOUTS

Purchaser shall construct turnouts intervisible with a maximum distance of 1,000 feet between turnouts. Locations may be adjusted to fit the final subgrade alignment and sight distances. Locations changes 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

Purchaser shall construct ditches into the subgrade as specified on the TYPICAL SECTION SHEET.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

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

4-35 WASTE MATERIAL DEFINITION

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

4-36 DISPOSAL OF WASTE MATERIAL

Purchaser may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris. On side slopes greater than 55%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

4-37 WASTE AREA LOCATION

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

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser 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.
- Within a wetland management zone.
- On side slopes steeper than 35%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Against standing timber.
- Outside the clearing limits

4-47 BORROW MATERIAL

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

4-48 NATIVE MATERIAL

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

4-49 BORROW SOURCE

Purchaser shall obtain borrow material from borrow sources identified or approved by the Contract Administrator. Development of the borrow source must be in accordance with 0-12 DEVELOP ROCK AND BORROW SOURCES.

4-55 ROAD SHAPING

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

4-56 DRY WEATHER SHAPING

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

Purchaser shall compact all embankment and waste material by routing equipment over the entire width of each lift. Waste material may be placed by end-dumping or sidecasting until sufficiently wide enough to support the equipment.

4-61 SUBGRADE COMPACTION

Purchaser shall compact constructed subgrades deeper than 5 feet at the road shoulder by routing equipment over the entire width. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before final approval.

4-62 DRY WEATHER COMPACTION

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.

SECTION 5 – DRAINAGE

5-5 CULVERTS

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

5-12 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. Purchaser shall stockpile materials at Highlands Camp.

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" Culverts over 18 inches diameter shall be banded using lengths of no less than 10 feet, and no more than one length less than 16 feet. Shorter section of banded culvert shall be installed at the inlet end.

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Purchaser shall obtain written approval from the Area Engineer listed in this plan for the installation of culverts 30 inches in diameter and over before backfilling.

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

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

5-20 ENERGY DISSIPATERS

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts. Energy dissipater installation is subject to approval by the Contract Administrator.

5-21 DOWNSPOUTS AND FLUMES

Downspouts and flumes longer than 20 feet must be staked on both sides at a maximum interval of 10 feet with 6-foot heavy-duty steel posts, and fastened securely to the posts with No. 10 galvanized smooth wire 1/2-inch bolts in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL.

5-25 CATCH BASINS

Purchaser shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 2 feet wide and 4 feet long unless specified otherwise on within the Road Plan.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts on the CULVERT AND DRAINAGE LIST THAT specify the placement of rock. Rock used for headwalls must be Light Loose Rip Rap. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. Rock must be set in place by machine. Placement must be with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed. Light Loose Rip Rap shall meet the specifications in Clause 6-50 LIGHT LOOSE RIP RAP.

5-30 DRIVABLE WATERBAR CONSTRUCTION

Purchaser shall construct drivable waterbars in accordance with the DRIVABLE WATERBAR DETAIL and as marked in the field. Drivable waterbars must be installed concurrently with construction of the subgrade and must be maintained in an operable

condition. Purchaser shall install drivable waterbars using a crawler tractor. Use of any other equipment is not allowed without written approval from the Contract Administrator.

5-31 ROLLING DIP CONSTRUCTION

Purchaser shall construct rolling dips in accordance with the ROLLING DIP DETAIL 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. Purchaser shall install rolling dips using a crawler tractor. Use of other equipment is not allowed without written approval of the Contract Administrator.

5-33 NATIVE SURFACE ROADS

If overwintered, native surface roads must be waterbarred by November 1. Purchaser 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

6-2 ROCK SOURCE ON STATE LAND

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

6-5 ROCK FROM COMMERCIAL SOURCE

Rock used in accordance with the quantities on the ROCK LIST may be obtained from commercial source at the Purchaser's expense. Rock sources are subject to written approval by the Contract Administrator before their use.

6-21 IN-PLACE PROCESSING

Purchaser shall use in-place processing, such as a grid roller, mobile linear crusher, or other method of in-place processing to produce 4-inch in-place rock. Rock must meet the surfacing size specified in Clause 6-38 40-INCH IN-PLACE ROCK, purchaser shall remove any existing organic debris before the start of in-place crushing operations. The use of in-place processing methods is subject to written approval by the Contract Administrator.

6-28 1 ¼-INCH MINUS CRUSHED ROCK

% Passing 1 ¼" square sieve	100%
% Passing 5/8" square sieve	55 - 75%
% Passing U.S. #4 sieve	20 - 50%

Of the fraction passing the No. 4 sieve, 40% to 60% must pass the No. 10 sieve.

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

6-38 4-INCH IN-PLACE ROCK

4-inch in-place rock must have a minimum of 90 percent of the top 4 inches of the running surface pass a 4-inch square opening.

In-place rock may not contain more than 5 percent by weight of organic debris and trash. No more than 50 percent of rock may be larger than 8 inches in any dimension and no rock may be larger than 12 inches in any dimension.

6-50 LIGHT LOOSE RIP RAP

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

<u>Quantity</u>	<u>Approximate Size Range</u>
20% to 90%	500 lbs. to 1 ton (18" - 28")
15% to 80%	50 lbs. to 500 lbs. (8" - 18")
10% to 20%	3 inch to 50 lbs. (3" - 8")

6-51 HEAVY LOOSE RIP RAP

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

<u>Quantity</u>	<u>Size Range</u>
30% to 90%	1 ton to 2 ton (28" - 36")
30% to 70%	500 lbs. to 1 ton (18" - 28")
20% to 50%	50 lbs. to 500 lbs. (8" - 18")
10% to 20%	3 inch to 50 lbs. (3" - 8")

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of specified rock depths, are defined as the compacted depth(s) using the compaction methods required in this road plan. Estimated quantities specified in the ROCK LIST are compacted yards. Purchaser shall apply adequate amounts of rock to

meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction.

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator before rock application.

6-71 ROCK APPLICATION

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

6-76 DRY WEATHER ROCK COMPACTION

The Contract Administrator may require the application of water to facilitate compaction of the rock surfacing. The method of water application is subject to approval by the Contract Administrator.

6-80 WATERING FOR DUST ABATEMENT

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

SECTION 7 – STRUCTURES

7-6 STREAM CROSSING INSTALLATION

Purchaser shall install stream crossing structures in accordance with the manufacturer's requirements, Permits, Designs, Specifications and/or DETAILS.

CATTLE GUARDS

7-66 TEMPORARY CATTLE GUARDS

On the following road, Contract Administrator may direct the Contractor to install a temporary cattle guard supplied by the state in lieu of a 4-wire gate specified in clause **7-82**. The cattle guards are stored at Highlands Fire Camp. Temporary cattle guards shall be set flush with the ground so that vehicles may smoothly drive over them, as directed by the Contract Administrator. Installations shall be incorporated in and connected to existing fences with arms and/or wire. Contractor is liable for any damages to the temporary cattle guards and they must be returned to Highlands Fire Camp within 10 days after timber haul is completed. Gates shall be installed concurrent with the removal of the temporary cattle guards.

<u>Road</u>	<u>Stations</u>
E392812E	0+00

7-71 GATE CLOSURE DURING HAUL

On the following road(s), Contractor shall keep gates closed except for passing vehicles.

<u>Road</u>	<u>Station</u>	<u>Gate No.</u>	<u>Closure Period</u>	<u>Comment</u>
E382812A	33+10	1		Stretch Gate
E382816E	2+20	1		Tubular gate
E392812E	0+00	1		Stretch Gate

7-82 4-WIRE GATE INSTALLATION

On the following road(s), Contract Administrator may direct Contractor to provide and install 4-wire gates in accordance with the 4-WIRE GATE DETAIL. Gates must be installed to connect into the existing fencing.

<u>Road</u>	<u>Stations</u>
E392812E	0+00

SECTION 9 – POST-HAUL ROAD WORK

9-1 EARTHEN BARRICADES

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

<u>Road</u>	<u>Station</u>	<u>Requirement</u>
USFS 300	179+98	Remove earthen barricade pre-haul, reinstall post-haul
USFS 300	268+92	Remove earthen barricade pre-haul, reinstall post-haul
USFS 360	0+00	Remove earthen barricade pre- haul
USFS 364	0+00	Remove earthen barricade pre- haul
USFS 364	33+04	Install earthen barricade post-haul
USFS 364	57+35	Install earthen barricade post-haul

9-5 POST-HAUL MAINTENANCE

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

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface at all landings.

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).

10-20 FLUME AND DOWNSPOUT

Downspouts and flumes must meet the AASHTO specification designated for the culvert.

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.

10-23 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 GAUGE AND CORRUGATION

Unless otherwise stated by the manufacturer, metal culverts must conform to the following specifications for gauge and corrugation as a function of diameter.

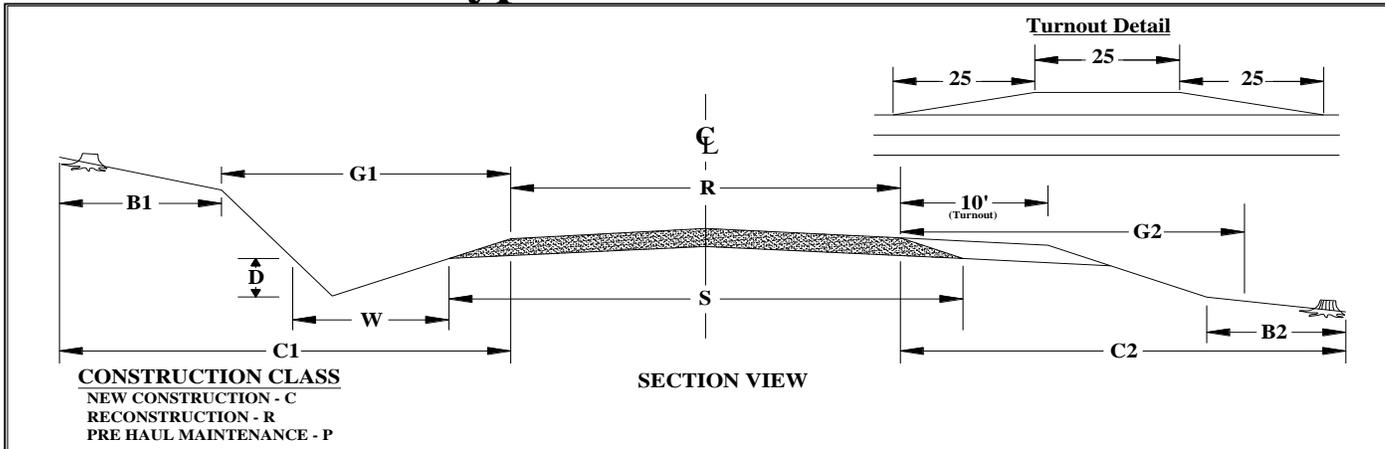
<u>Diameter</u>	<u>Gauge</u>	<u>Corrugation</u>
18"	16 (0.064")	2 ² / ₃ " X 1/2"
24" to 48"	14 (0.079")	2 ² / ₃ " X 1/2"
54" to 96"	12 (0.109")	3" X 1"

State of Washington
Department of Natural Resources

Application No. : 30-100080

Name of Sale: Q Black Diamond TS

Typical Section Sheet

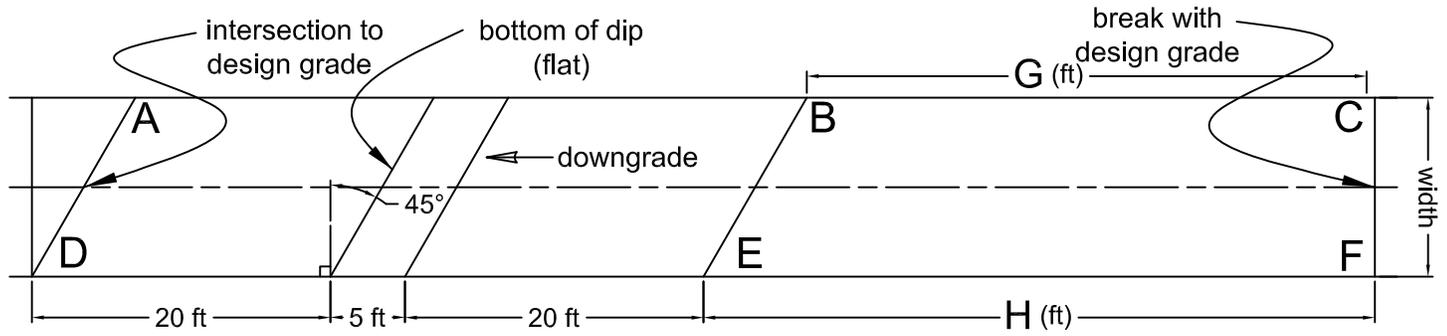


ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	INSLOPE "/10'	OUTSLOPE "/10'	CROWN " AT CL	DITCH WIDTH (W)	DITCH DEPTH (D)	DITCH RIGHT SIDE	Tolerance Class	GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (B1)	ROAD FILL CLEARING (B2)	R/W CUT CLEARING (C1)	R/W FILL CLEARING (C2)
E382812A	0+00	20+86	P		14		4					C	5	5			6	6
E382812A	20+86	22+36	P		14		4		3	1	1+50							
E382812A	22+36	57+56	P		14		4					C						
E382812A	57+56	76+62	C		14		4					C	5	5			6	6
E382816E	0+00	27+61	P		14		4					C	5	5			6	6
E382816F	0+00	11+14	P		14		4					C	5	5			6	6
E382816G	0+00	7+06	P		14		4					C	5	5			6	6
E382816J	0+00	8+80	P		14		4					C	5	5			6	6
E382816K	0+00	5+40	P		14		4					C	5	5			6	6
E382816L	0+00	7+57	C		14		4					C	5	5			6	6
E382816L	7+57	39+40	P		14		4					C	5	5			6	6
E392812E	0+00	1+01	P		14		4					C	5	5			6	6
E392812E	1+01	13+37	C		14		4					C	5	5			6	6
E392812E	13+37	17+15	P		14		4					C	5	5			6	6
E402736B	0+00	7+58	P		14		4					C	5	5			6	6
E402736B	7+58	11+94	C		14		4					C	5	5			6	6
E402736B	11+94	32+35	P		14		4					C	5	5			6	6
E402736B	32+35	33+75	C		14		4					C	5	5			6	6
E402736E	0+00	15+41	P		14		4					C	5	5			6	6
E402736F	0+00	9+06	P		14		4					C	5	5			6	6
USFS 3525	0+00	70+70	P		14		4					C					4	4
USFS 300	0+00	268+92	P		14		4					C					4	4
USFS 350	0+00	103+52	P		14		4					C					4	4
USFS 360	0+00	95+76	P		14		4					C					4	4
USFS 364	0+00	57+35	P		14		4					C					4	4

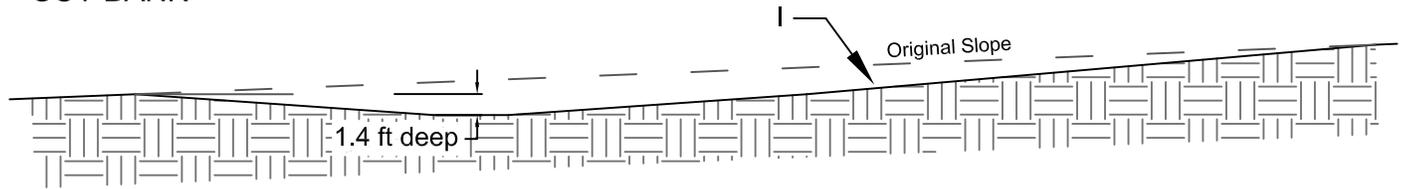
Date: 09-18-2019

STANDARD 45° ROLLING DIP

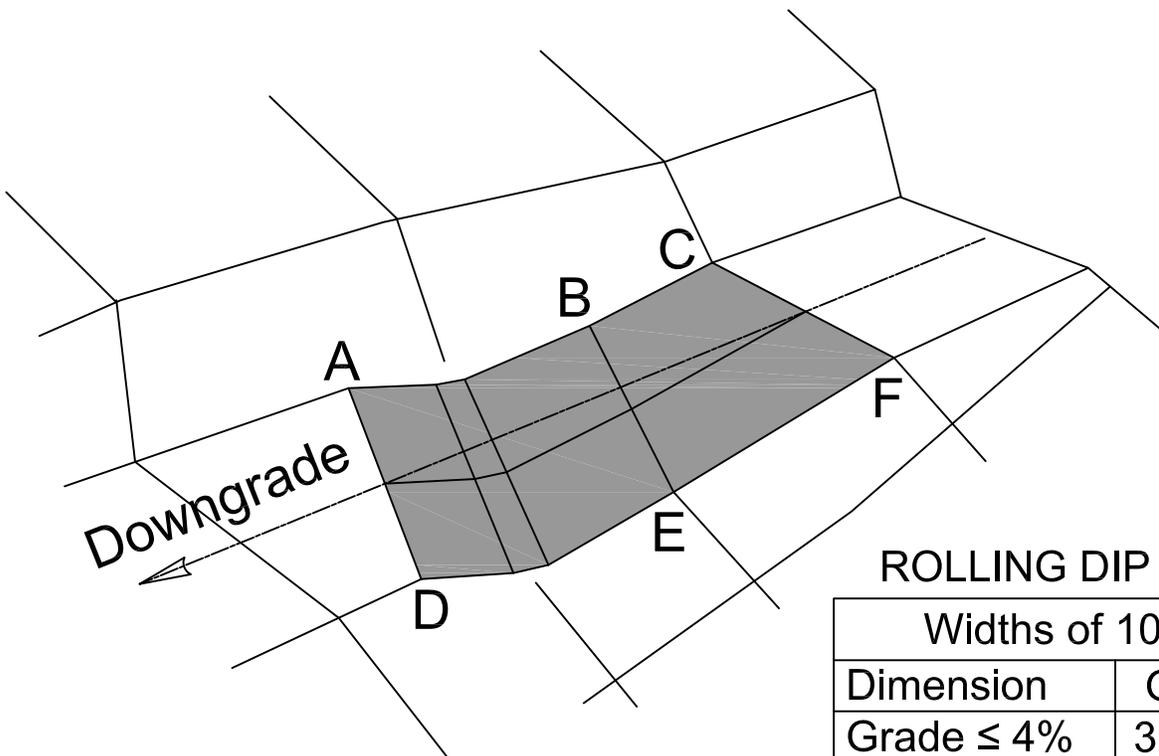
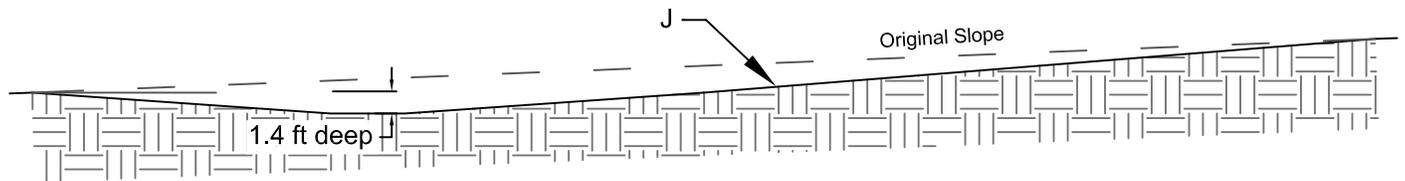
PLAN OF ROLLING DIP



CUT BANK



FILL SLOPE

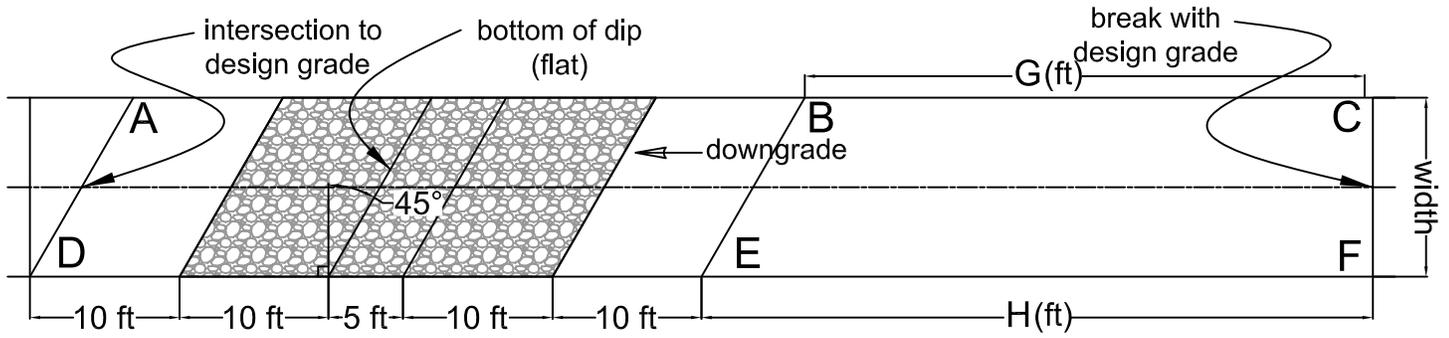


ROLLING DIP DEMENSIONS

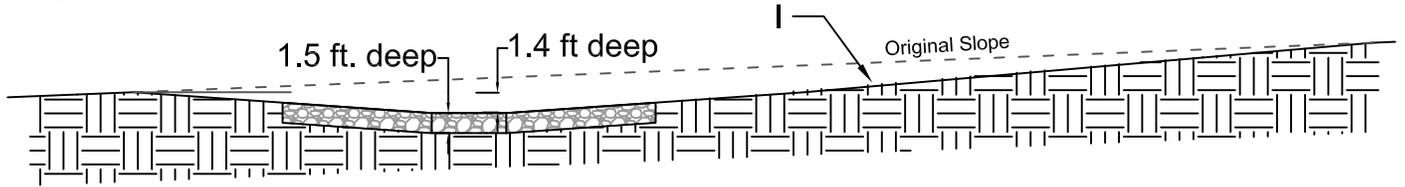
Widths of 10' through 14'				
Dimension	G	H	I	J
Grade ≤ 4%	38'	45'	9%	8%
Grade = 6%	48'	55'	11%	11%
Grade = 8%	58'	65'	14%	14%

ARMORED ROLLING DIP

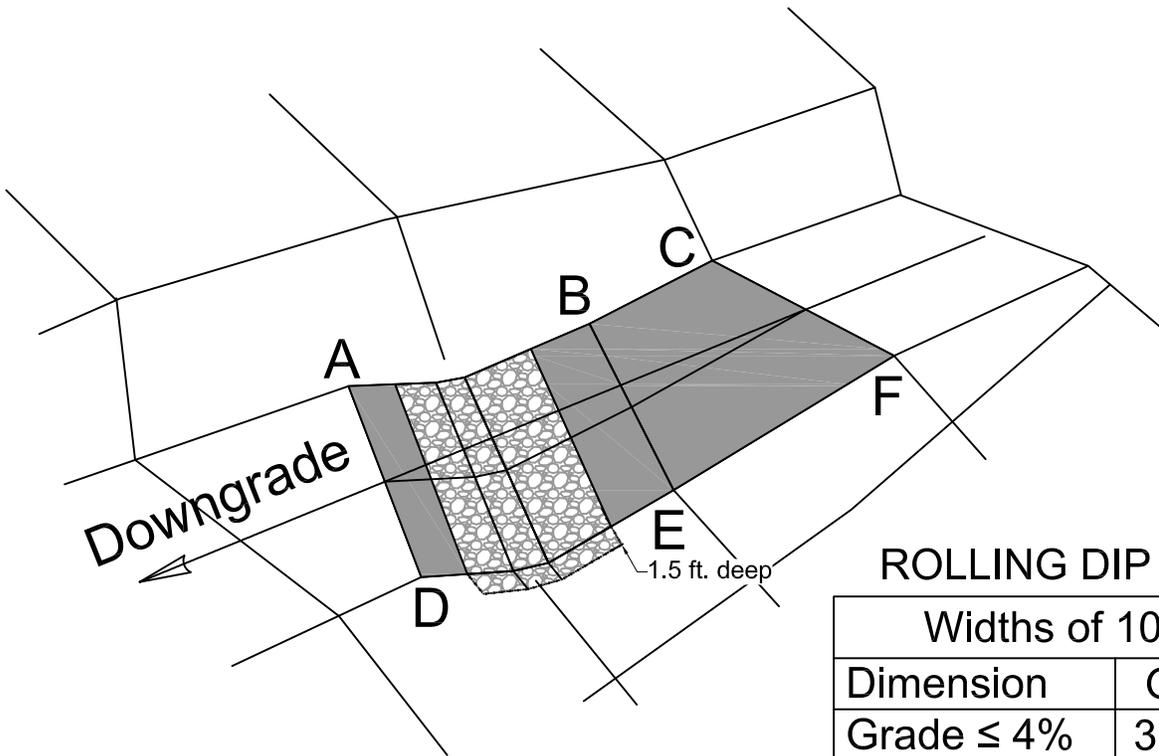
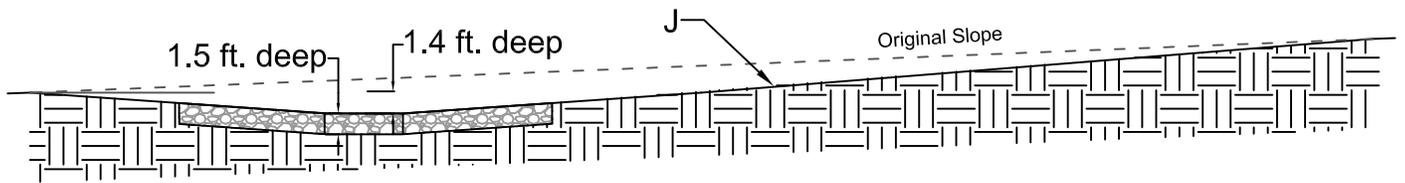
PLAN OF ARMORED ROLLING DIP



CUT BANK



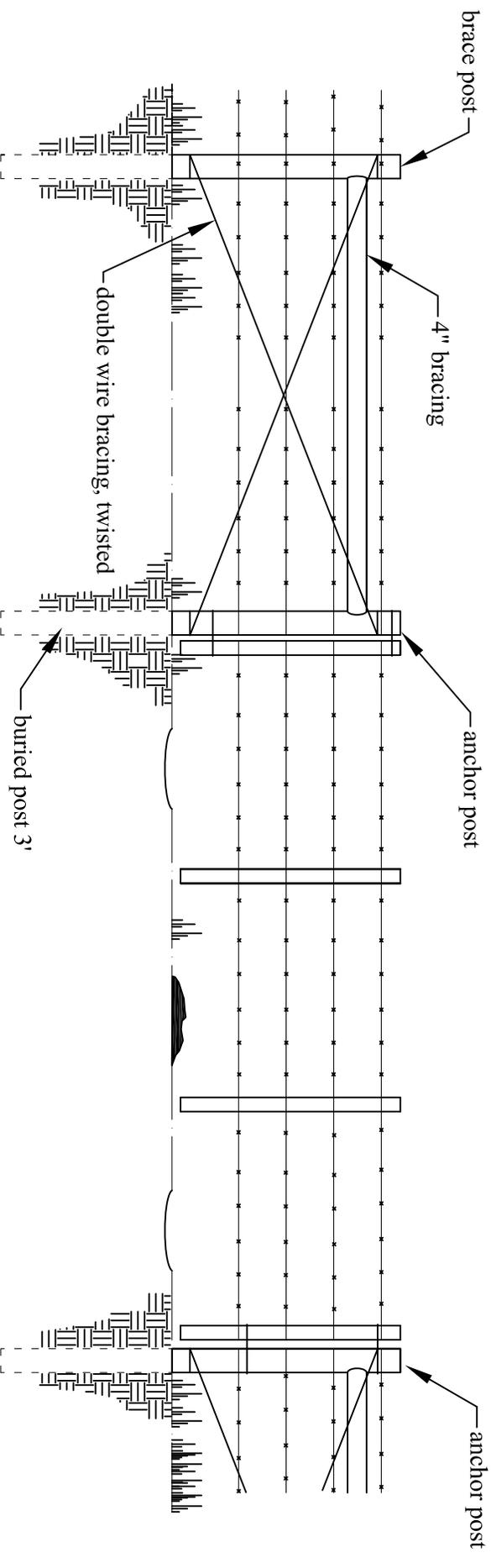
FILL SLOPE



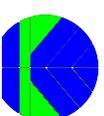
ROLLING DIP DEMENSIONS

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

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 equivalent) zinc-coating as per ASTM A-121.
10. There must be a gate brace at both ends of the gate.



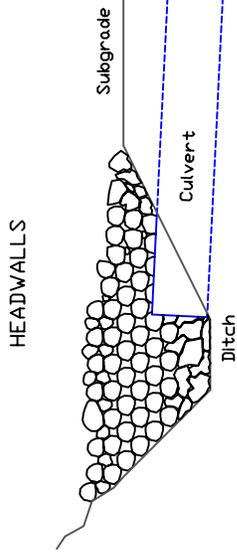
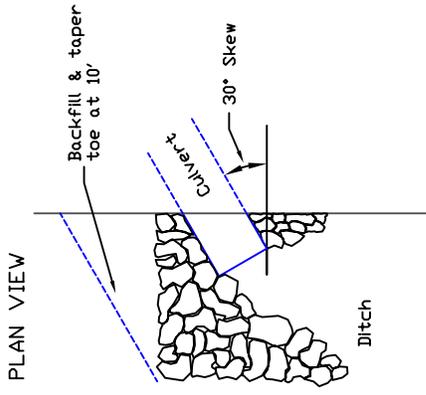
Washington State Department of
Natural Resources

Northeast Region
Colville, Washington

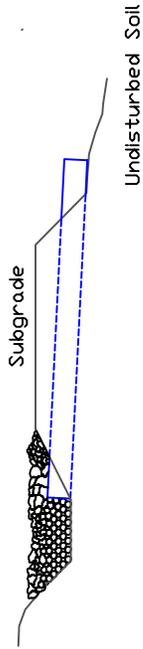
Drawn by: Jason Bauer

Revised: 10/06/2009

CULVERT AND DRAINAGE SPECIFICATIONS DETAIL - D1

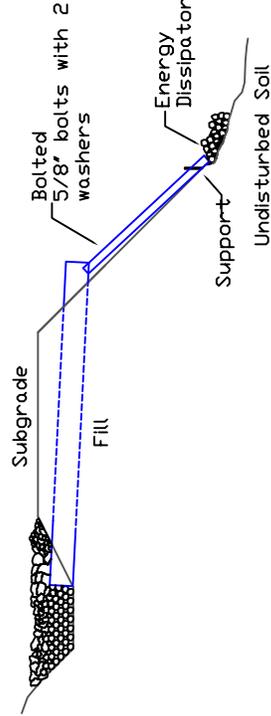


Headwall to be constructed of material that will resist erosion



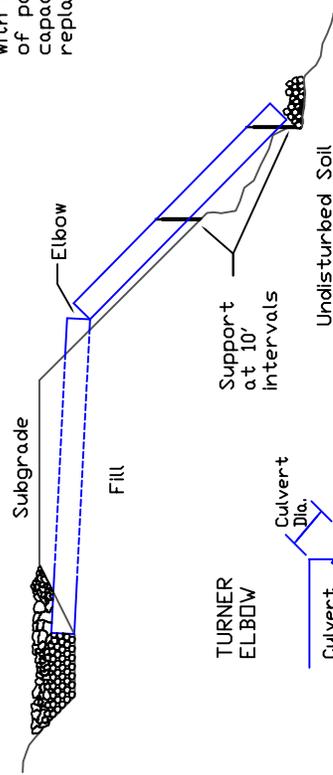
FLUME

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



DOWNSPOUT

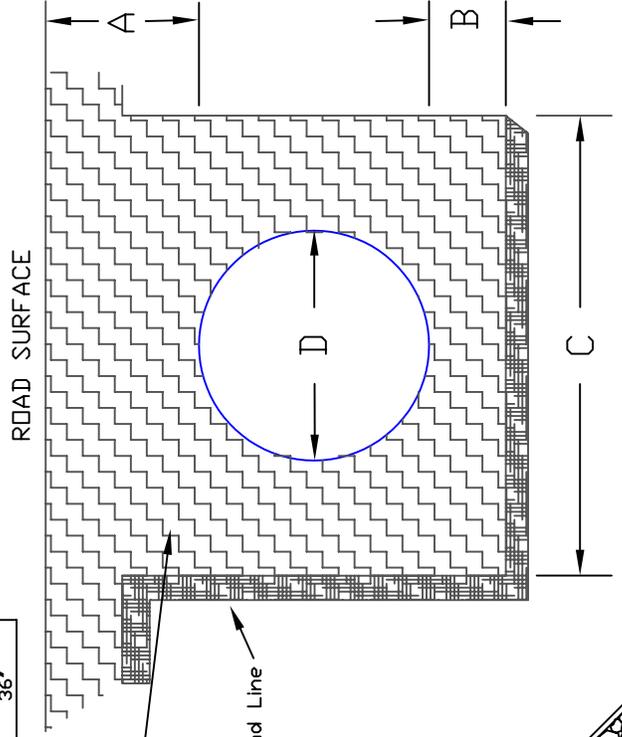
Use where ground conditions are irregular.



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

CULVERT BACKFILL & BASE PREPARATION

(For Culverts Less Than 36')

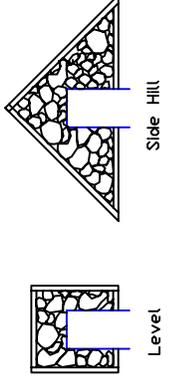


BEDDING MATERIAL:

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.

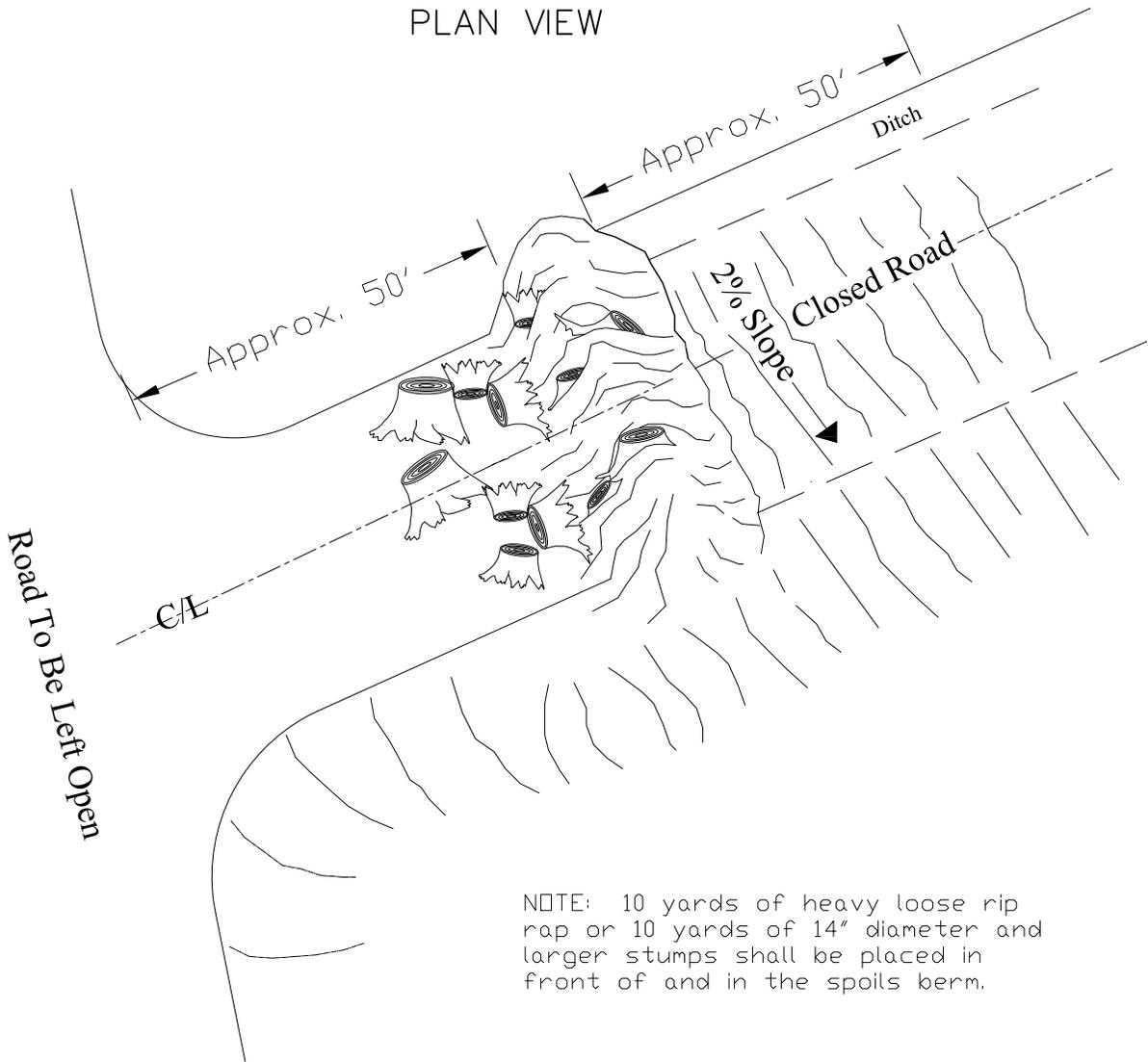
DISSIPATOR SPEC'S

Area 2×2
Depth 1
Aggregate 1/3

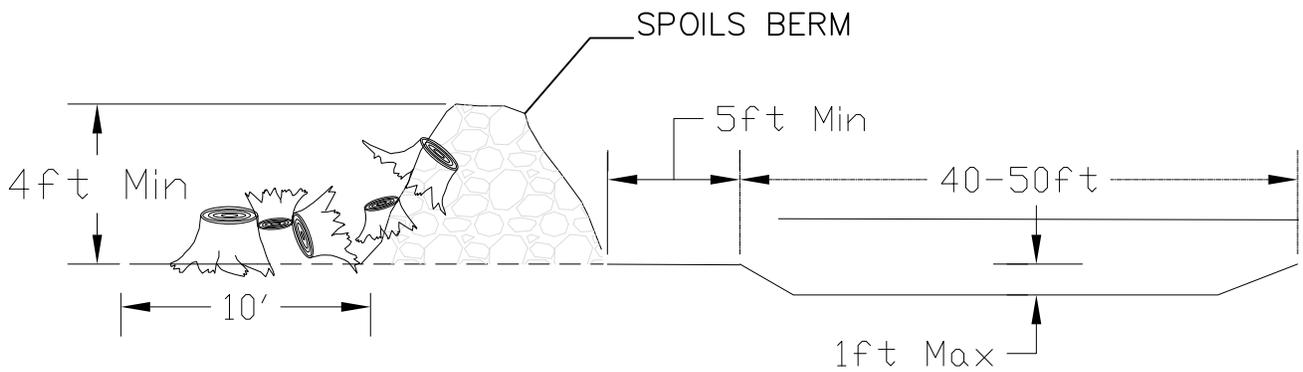


SPOILS BERM DETAIL

PLAN VIEW



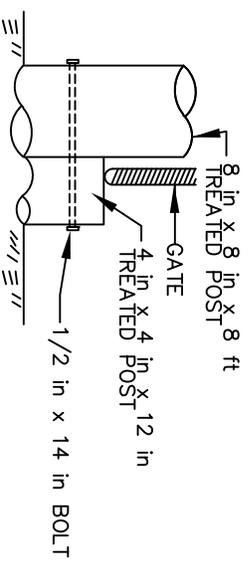
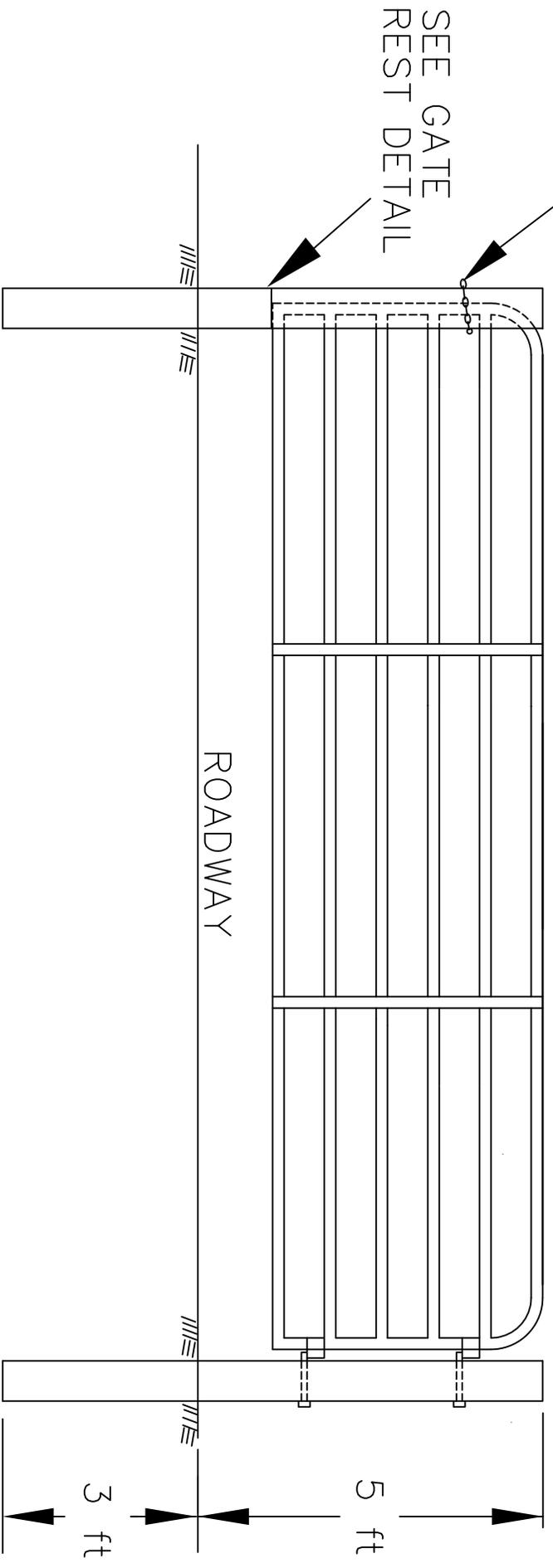
NOTE: 10 yards of heavy loose rip rap or 10 yards of 14" diameter and larger stumps shall be placed in front of and in the spoils berm.



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

METAL GATE DETAIL

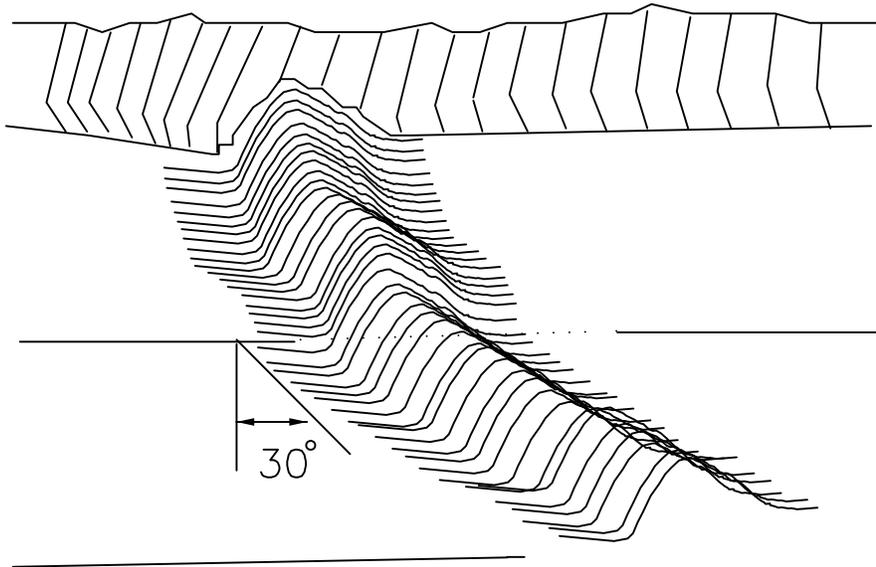
STOCKYARD GATE SIZE 16 FEET



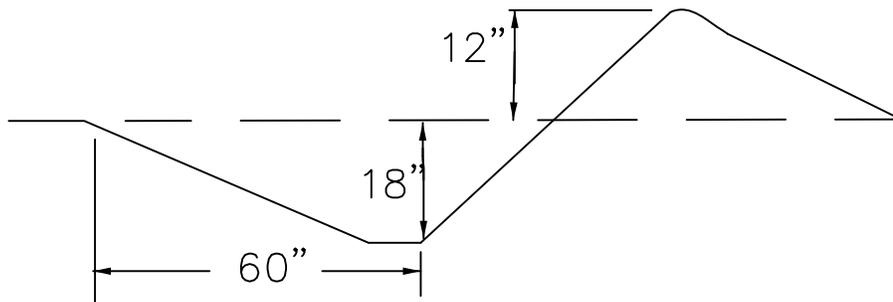
GATE REST DETAIL

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

Top View

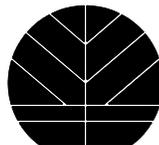


Side View



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

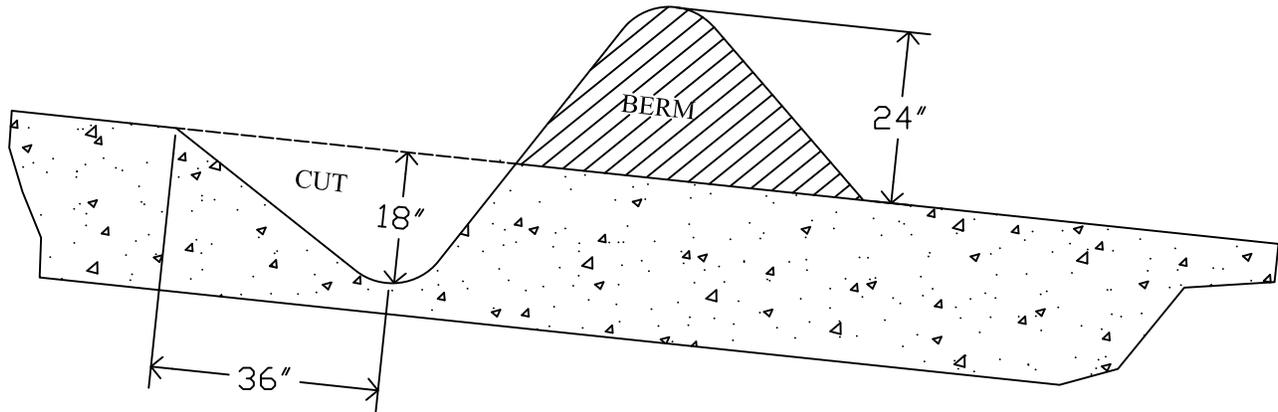
Designed By: Stash Slabinski 9/06/05

Drawn By: Stash Slabinski 9/06/05

Revised:

1 OF 1

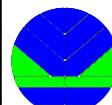
Non-Driveable Water Bar Detail



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 30 DEGREES DOWNGRADE WITH ROAD CENTERLINE.

Non-Driveable Waterbar Detail



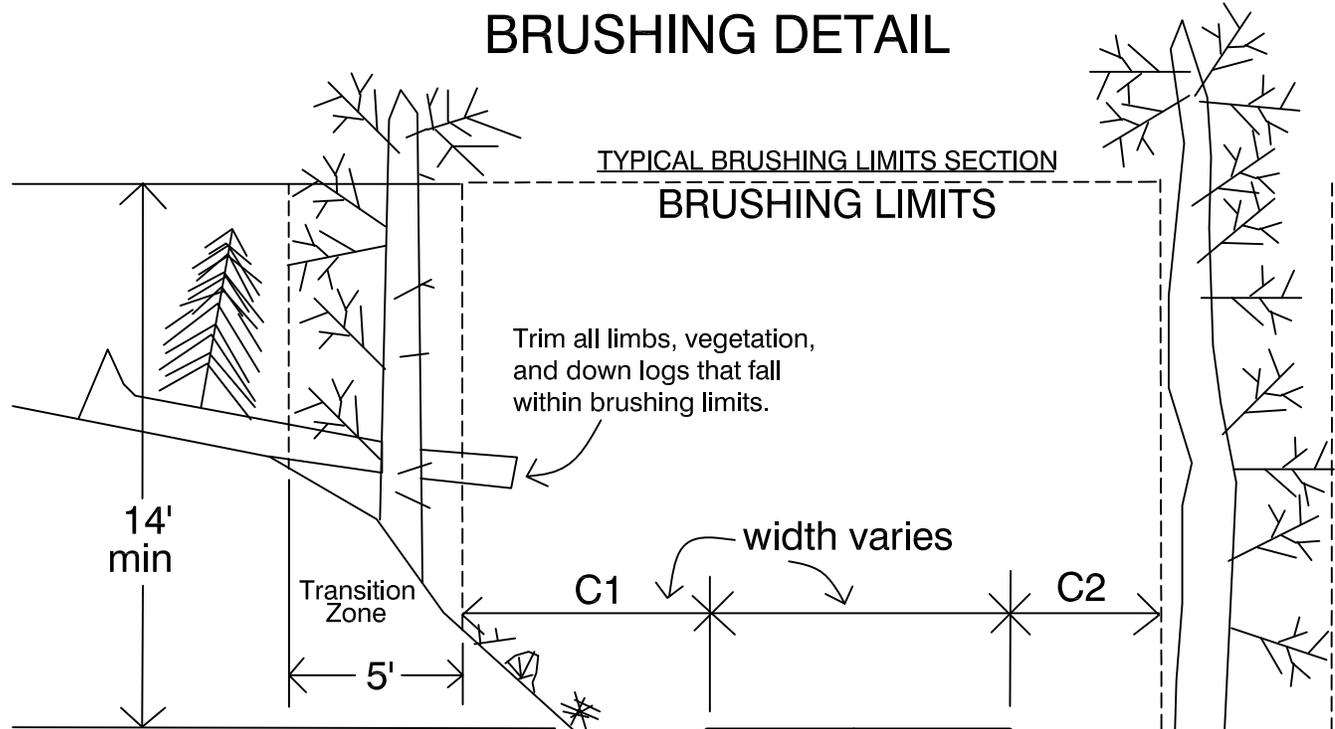
WASHINGTON STATE DEPARTMENT OF
Natural Resources

Northeast Region Colville, Washington		
Designed By:	Stash Slabinski	4/21/05
Drawn By:	Stash Slabinski	4/21/05

Revised:

1 OF 1

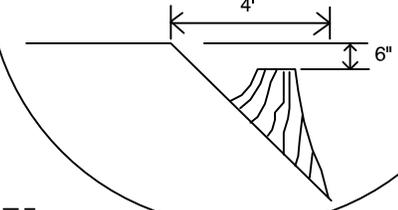
BRUSHING DETAIL



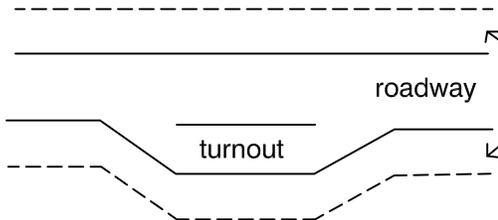
All limbs on standing trees that extend into the brushing limits shall be trimmed within 6" of the stem

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

Trim all stumps and vegetation within 4' of edge of road and in ditch to at least 6" below the elevation of the edge of road.

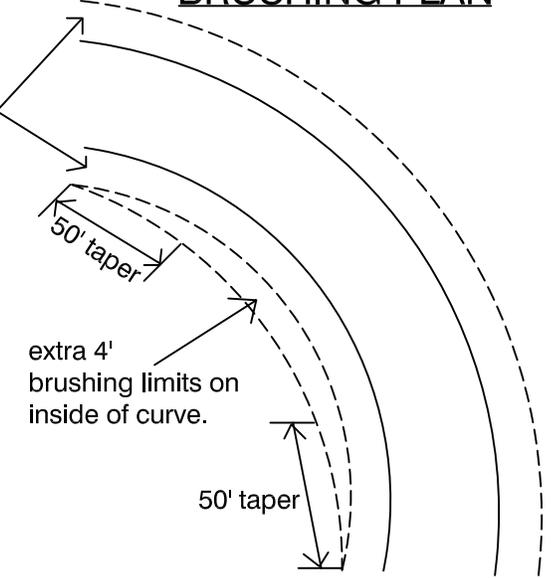


CURVE BRUSHING PLAN

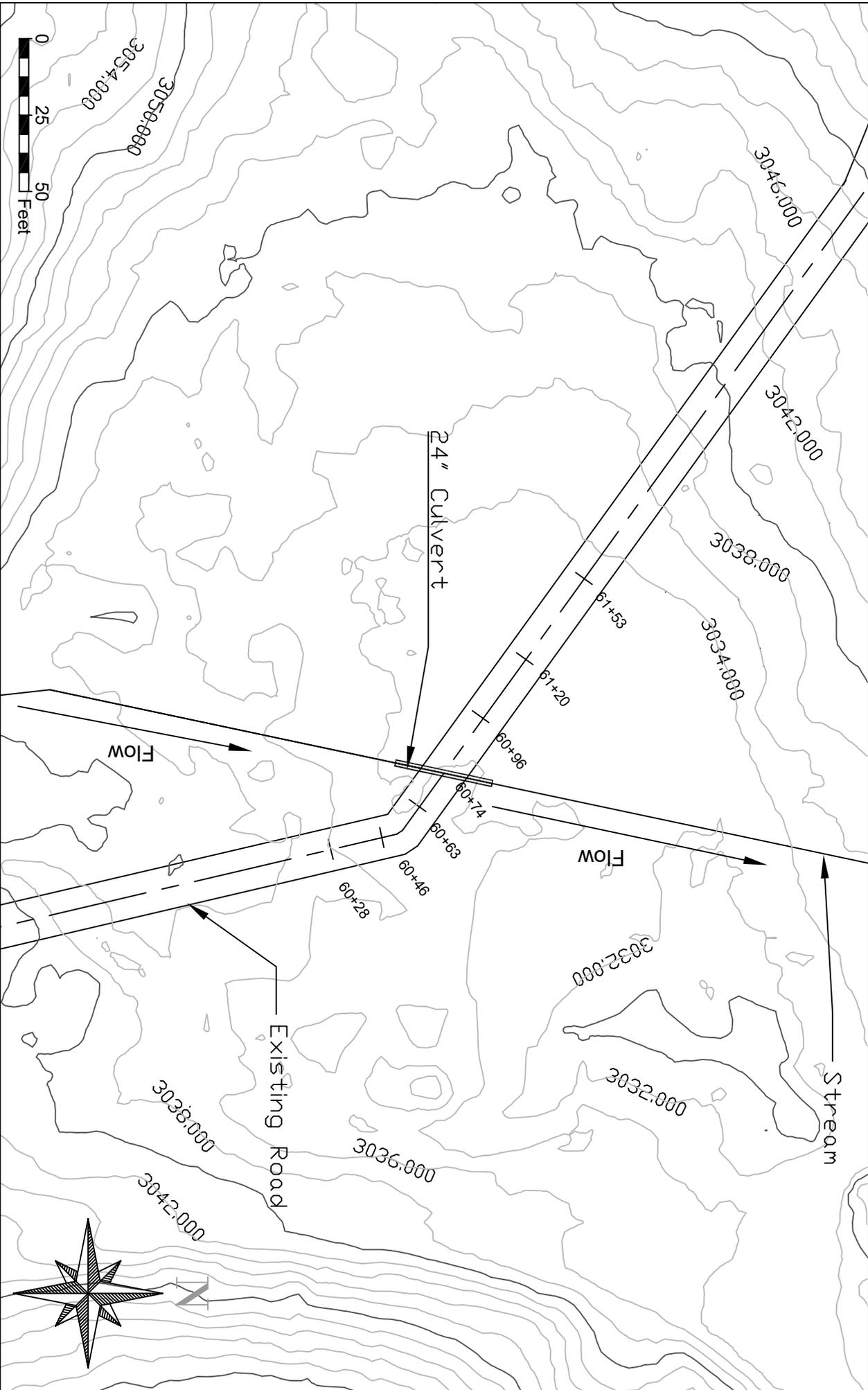


TURNOUT BRUSHING PLAN

1. All vegetation 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.



Brushing limits as shown on typical section



County: *Kanegan*

District: Highlands
 Contract Administrator:
 Eric Anderson

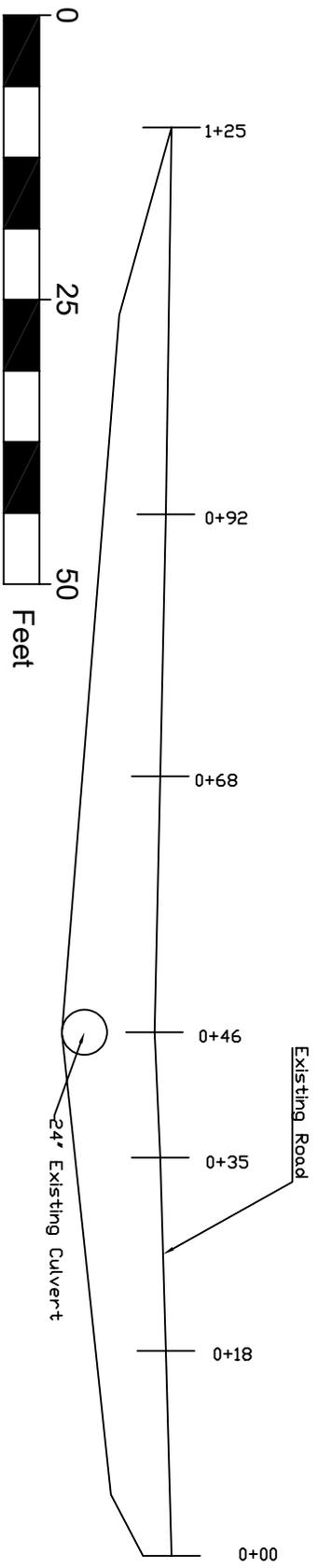
Black Diamond Fill Repair

Revisions	By	Date
2/11/20		

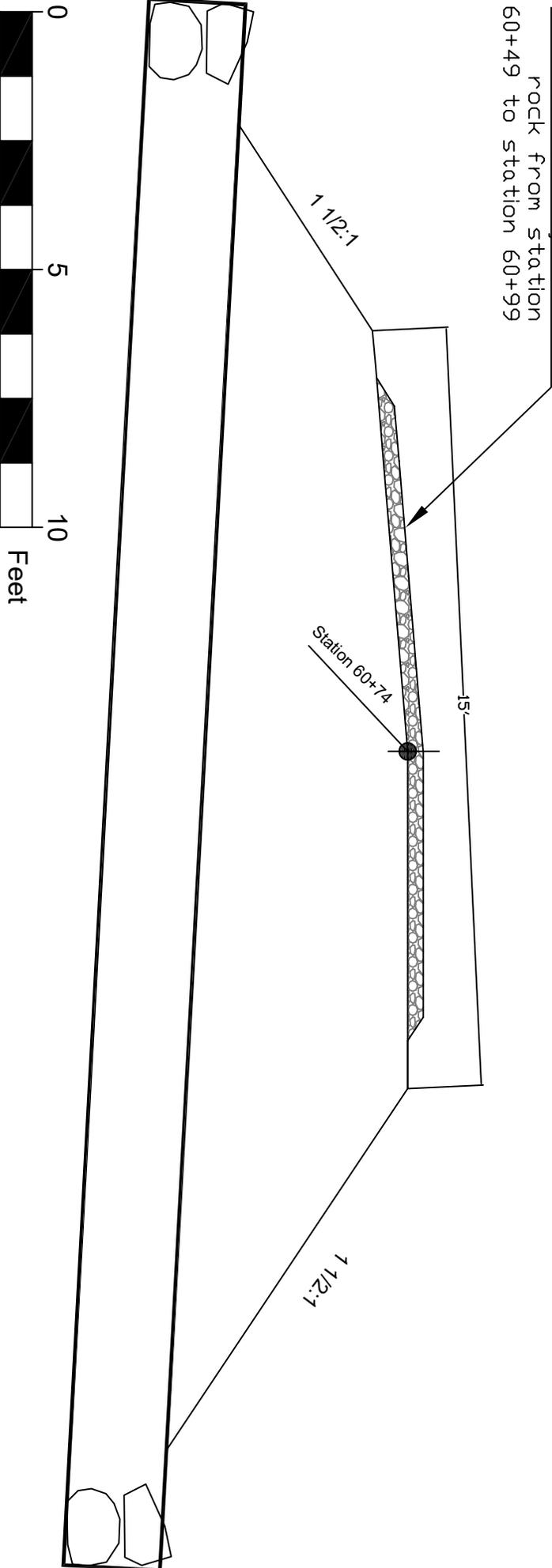
Legal Description:
SE 1/4 Sec 33 T40N R28E

Drawn: CR	Project: Fill repair
Designed: CR	View: Plan View
Checked:	Date: 10/8/19
Sheet: 2/2	

Road Profile



Cross Section View



County: *Osage*

District: highlands
Contract Administrator:
Eric Anderson

Black Diamond Fill Repair

Revisions	By	Date
10/11/20		

Legal Description:
SE 1/4 Sec 33 T40N R28E

Drawn: CR	Project: Fill Slope Repair
Designed: CR	View: profile and cross section
Checked:	Date: 10/8/19
Sheet: 1/2	

Sale Name Brooks Junction SUMMARY - Road Development Costs

REGION: Northeast

CONTRACT #: 30-098161 ENGINEER: Gene Gibbs

DISTRICT: North Columbia

DATE: 4/14/2019

	<i>Construction</i>	<i>Reconstruction</i>	<i>Maintenance</i>	<i>Deactivation</i>	
ROAD NUMBERS:	E373907E, E373908M	E383836T, E383836M, E383836E, E383836F, E373907E, E373908H, E373908F,	E383836S, E383836G, E383836E, E373907E, E373907F, E373908E		Additional Items
ROAD STANDARD:	<i>Construction</i>	<i>Reconstruction</i>	<i>Maintenance</i>	<i>Deactivation</i>	<i>Additional Items</i>
NUMBER OF STATIONS:	11.10	64.75	174.50		
CLEARING & GRUBBING:	\$339	\$2,061			
EXCAVATION AND FILL:	\$3,206	\$11,862			
MISC. MAINTENANCE:	\$105	\$615	\$4,766		
ROAD ROCK:		\$600			
ADDITIONAL ROCK:					\$1,200
CULVERTS AND FLUMES:					\$1,856
STRUCTURES/MATERIALS:					

TOTAL COSTS:	\$3,651	\$15,138	\$4,766	\$0	\$3,056
<i>COST PER STATION:</i>	\$329	\$234	\$27	\$0	\$0

	\$/per move	# of moves	Total
MOBILIZATION:	\$300	8	\$2,400

TOTAL (All Roads) = \$29,011
SALE VOLUME mbf = 6,631
TOTAL \$/MBF = \$4

Engineer's Notes: