



TIMBER NOTICE OF SALE

SALE NAME: *JIGSAW*

AGREEMENT NO: *30-103988*

AUCTION: October 26, 2023 starting at 10:00 a.m., **COUNTY:** Pacific
Pacific Cascade Region Office, Castle Rock, WA

SALE LOCATION: Sale located approximately 5 miles south of Menlo

PRODUCTS SOLD AND SALE AREA: All timber, except trees marked with blue paint, all down timber existing 5 years prior to the day of sale and downed timber 60 inches diameter or greater, bounded by the following:

Unit 1, white "Timber Sale Boundary" tags, the N-2000 and reprod;

Unit 2, white "Timber Sale Boundary" tags, and reprod;

Unit 3, white "Timber Sale Boundary" tags, M-Line, M-1201 and reprod;

Unit 4, white "Timber Sale Boundary" tags, and reprod;

Unit 5 (ROW), orange "Right of Way" tags and orange flagging;

All forest products above located on part(s) of Sections 4 all in Township 12 North, Range 8 West, W.M., containing 95 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BVC-SFIFM-018227)

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Avg DBH	Ring Count	Total MBF	MBF by Grade								
				1P	2P	3P	SM	1S	2S	3S	4S	UT
Hemlock	15.8		3,815						1,717	1,662	407	29
Douglas fir	19.5		364				25		215	109	11	4
Red alder	18.9		166						110	16	38	2
Redcedar	24		88							83	5	
Noble fir	25.2		35						29	6		
Sale Total			4,468									

MINIMUM BID: \$671,000.00 **BID METHOD:** Sealed Bids

PERFORMANCE SECURITY: \$100,000.00 **SALE TYPE:** Lump Sum

EXPIRATION DATE: October 31, 2025 **ALLOCATION:** Export Restricted

BID DEPOSIT: \$67,100.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.



TIMBER NOTICE OF SALE

HARVEST METHOD: Cable, Cable-Assist, and Shovel. Harvesting activities are estimated to be 10 percent ground based yarding and 90 percent cable yarding. Ground based equipment is restricted to slopes of 45 percent and less, and shall operate only during dry soil conditions. Self-Leveling ground based yarding equipment will not be permitted on sustained slopes over 55 percent. Cable assist operations will not be permitted on slopes over 70 percent. See Clause H-140 for further harvest requirements.

ROADS: 14.11 stations of required reconstruction. 33.03 stations of optional construction. 2.25 stations of optional reconstruction. 300.62 stations of required prehaul maintenance. Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following source(s) on state land at no charge to the Purchaser: M-Line Quarry located in Section 4, T12N, R8W, WM. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source.

ACREAGE DETERMINATION

CRUISE METHOD: The sale acres were determined by GPS. The sale area was cruised using a variable plot cruise method.

FEES: \$75,956.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

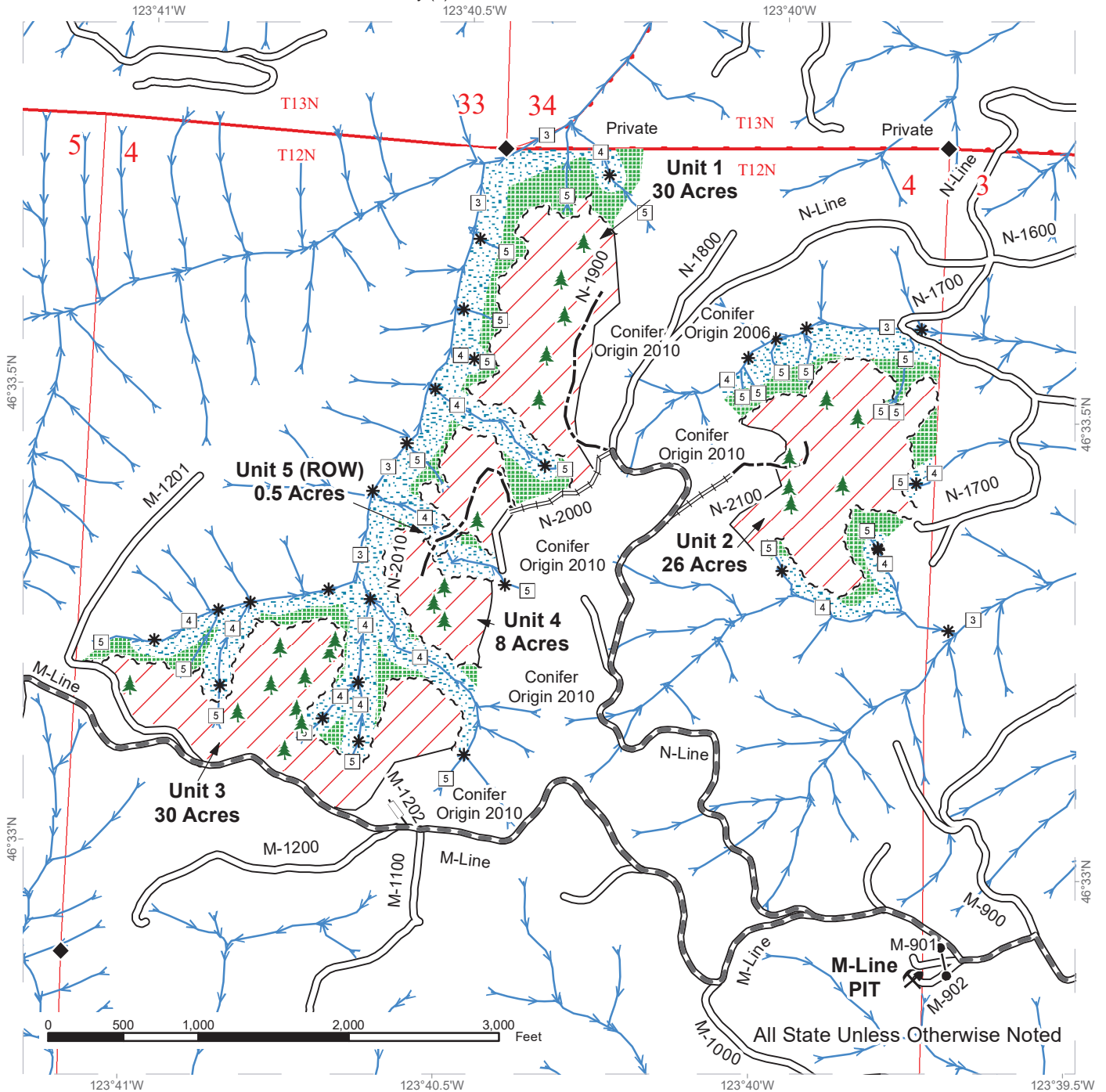
SPECIAL REMARKS: This sale contains approximately 25 MBF DF SM, 86 MBF DF HQ 2 Saw, 19 MBF DF HQ 3 Saw. See Cruise for additional for additional information.

All trees 60 inches Diameter at Breast Height (DBH) and greater shall not be felled unless for safety reasons. If trees 60 inches DBH or greater needs to be felled for safety reasons, trees will be left where felled.

TIMBER SALE MAP

SALE NAME: JIGSAW
AGREEMENT #: 30-103988
TOWNSHIP(S): T12R8W
TRUST(S): Common School and Indemnity (3)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 633-1504



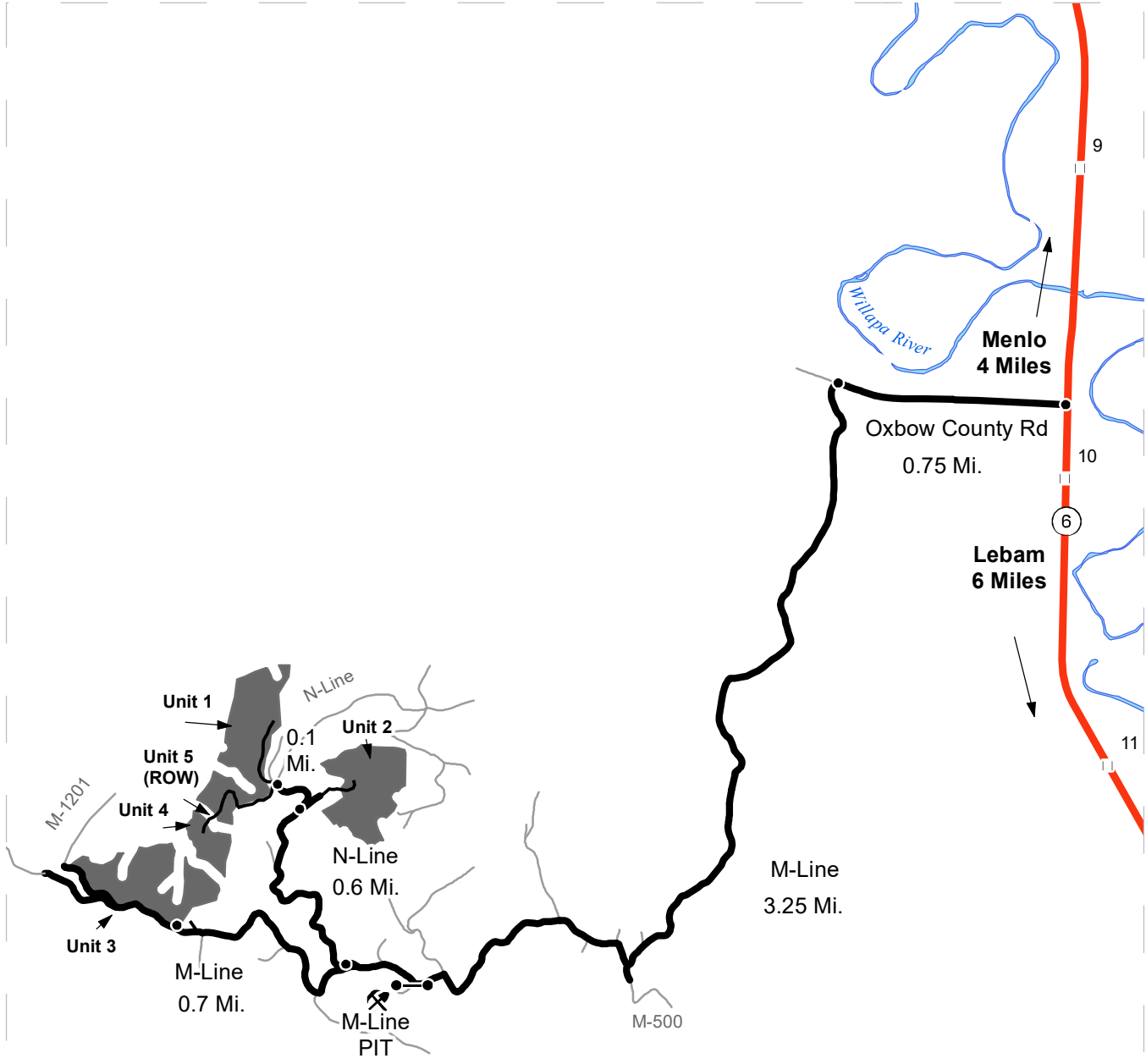
	Sale Area		Existing Roads		Streams
	Leave Tree Area		Required Pre-Haul Maintenance		Stream Type
	Riparian Mgt Zone		Required Reconstruction		Stream Type Break
	Sale Boundary Tags		Optional Construction		Survey Monument
	Right of Way Tags		Optional Reconstruction		Gate (PCP 1-1)
	Timber Type Change				Leave Tree Area <1/4-acre
					Rock Pit



DRIVING MAP

SALE NAME: JIGSAW
AGREEMENT#: 30-103988
TOWNSHIP(S): T12R8W
TRUST(S): Common School and Indemnity (3)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 633-1504



Map may not be to scale

	Timber Sale Unit
	Other Route
	Haul Route
	Milepost Markers
	Distance Indicator
	Gate (PCP 1-1)
	Rock Pit

DRIVING DIRECTIONS:

From SR 6 between Mile Marker 9 and 10. Head West on Oxbow County Road for 0.75 Miles. Turn Left (South) onto M-Line and continue for 3.25 miles to M-Line/N-Line Junction.

Unit 3; from Jct continue 0.7 miles on M-Line to Unit 3
 Unit 2: from Jct turn right (North) continue 0.6 miles to N-2100 to Unit 2
 Unit 1: from N-2100 jct continue 0.1 miles to N-2000 to Unit 1
 Unit 4: from Unit 1 continue on N-2010 to Unit 4.
 Unit 5: is ROW between Unit 1 and 4.

The Sawmill M-Line Quarry is along the M-Line around Mile Marker 3.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-0103988

SALE NAME: JIGSAW

**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-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on October 26, 2023 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber, except trees marked with blue paint, all down timber existing 5 years prior to the day of sale and downed timber 60 inches diameter or greater, bounded by the following:

Unit 1, white "Timber Sale Boundary" tags, the N-2000 and reprod;

Unit 2, white "Timber Sale Boundary" tags, and reprod;

Unit 3, white "Timber Sale Boundary" tags, M-Line, M-1201 and reprod;

Unit 4, white "Timber Sale Boundary" tags, and reprod;

Unit 5 (ROW), orange "Right of Way" tags and orange flagging;

All forest products above located on approximately 95 acres on part(s) of Section 4 in Township 12 North, Range 8 West W.M. in Pacific County(s) as designated on the sale area and as shown on the attached timber sale map.

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-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2025.

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-051 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 total contract price.

For the second extension, not to exceed 1 year, payment of at least 90 percent of the total contract price.

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 total contract price.

All payments, except the initial deposit, will be deducted from the total contract price to determine the unpaid portion of the contract.

- e. Payment of \$1,226.00 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-061 Inadvertent Discovery of Cultural Resources

Purchaser acknowledges that cultural resources as defined in WAC 222-16-010 may exist within the timber sale area and that the existence and location of such resources may be unknown at the time this contract is executed. Purchaser has a duty to exercise due care in its operations and in the event any human skeletal remains are discovered by the Purchaser or the State during the course of operations Purchaser shall immediately halt operations and notify local law enforcement in the most expeditious manner possible then notifying the Contract Administrator. In the event cultural resources are discovered by the Purchaser or the State during the course of operations Purchaser shall immediately halt operations and notify the Contract Administrator. Any potential resources shall not be removed or disturbed. Purchaser shall resume operations as directed in writing by the Contract Administrator.

G-062 Habitat Conservation Plan

The State has entered into a Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) to address state trust land management issues relating to compliance with the Federal Endangered Species Act. The activities to be carried out under this contract are located within the State's HCP area and are subject to the terms and conditions of the HCP, and the Services' Incidental Take Permit Nos. TE812521-1 and 1168 (collectively referred to as ITP), or as amended hereafter by the Services. The ITP authorizes the incidental take of certain federally listed threatened and endangered species, as specified in the ITP conditions. All HCP materials, including the ITP, are available for review at the State's Regional Offices and the administrative headquarters in Olympia, Washington.

By signing this contract, Purchaser agrees to comply with the terms and conditions of the ITP, and the HCP, which shall become terms of this contract. The State agrees to authorize the lawful activities of the Purchaser carried out pursuant to this contract, PROVIDED the Purchaser remains in compliance with the terms and conditions of both the HCP and ITP. The requirements set forth in this contract are intended to comply with the terms and conditions of the HCP and ITP. Accordingly, non-compliance with the terms and conditions of the HCP and ITP will render the authorization provided in this paragraph void, be deemed a breach of the contract and may subject Purchaser to liability for violation of the Endangered Species Act.

Any modifications to the contract shall be proposed in writing by Purchaser, shall continue to meet the terms and conditions of the HCP and ITP, and shall require the prior written approval of the Region Manager before taking effect.

G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.
- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.
- c. Purchaser shall refer to a specific ITP number, ITP TE812521-1 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.
- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this schedule must be presented and clearly explained by Purchaser to all

authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

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-091 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, the added forest products become a part of this contract. The State shall determine the volume added and shall calculate the increase to the total contract price using the rates set forth in clause G-101, G-102, or G-103. If the sale area is reduced, the State shall determine the volume to be reduced. The State shall calculate the reduction to the total contract price using the rates set forth in clause G-101, G-102, or G-103.

G-101 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 the Scribner log scale volume, as defined by the Northwest Log Rules Advisory Group, shall be determined by the Contract Administrator. Added forest products shall be paid for at the following contract payment rates per Mbf Scribner log scale.

The pricing schedule has not been set for the sale.

G-111 Title and Risk of Loss

Title to the forest products under this contract passes to the Purchaser after they are removed from the sale area, if adequate advance payment or payment security has been provided to the State under this contract. Purchaser bears all risk of loss of, or damage to, and has an insurable interest in, the forest products described in this contract from

the time the sale is confirmed under RCW 79.15.120. Breach of this contract shall have no effect on this provision.

G-116 Sustainable Forestry Initiative® (SFI®) Certification

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative 2022 Forest Management Standard under certificate number: BVC-SFIFM-018227.

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 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.

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.

Road is defined as the road bed, including but not limited to its component parts, such as cut and fill slopes, 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.

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 Castle Rock, 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 Operations

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; M-Line, M-901, M-902, M-1201, M-1202, N-Line, N-1900, N-2000, N-2010 and N-2100. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

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-380 Road Easement and Road Use Permit Requirements

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

Easement #55-076641 between State and Weyerhaeuser Dated 9/29/2004.

G-396 Public Hauling Permit

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

G-430 Open Fires

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

G-450 Encumbrances

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

DATA MISSING

Section P: Payments and Securities

P-011 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 Clause P-020, 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-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of \$116,168.00. The total contract price consists of a \$0.00 contract bid price plus \$116,168.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

THE PURCHASE PRICE SHALL NOT BE AFFECTED BY ANY FACTORS, INCLUDING: the amount of forest products actually present within the contract area, the actual acreage covered by the contract area, the amount or volume of forest products actually cut or removed by purchaser, whether it becomes physically impossible or uneconomic to remove the forest products, and whether the subject forest products have been lost or damaged by fire or any other cause. The only situations Purchaser may not be liable for the full purchase price are governed by clause G-066, concerning governmental regulatory actions taken during the term of the contract.

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-050 Billing Procedure

The State will compute and forward to Purchaser statements of charges provided for in the contract. Purchaser shall deliver payment to the State on or before the date shown on the billing statement.

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 H: Harvesting Operations

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 100 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 'Unauthorized Activity' clause. Purchaser is required to leave all cut or damaged reserve trees on site.

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 12 inches as measured from the natural ground line. To reduce soil damage, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other mitigation measures. Suspended operations shall not resume unless approval to do so has been given, in writing, by the Contract Administrator.

H-051 Branding and Painting

Purchaser shall provide a State of Washington registered log brand, acceptable to the State, unless the State agrees to furnish the brand. 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-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using Cable, Cable-Assist and Shovel. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

A. Ground based yarding equipment shall only operate during dry soil conditions.

B. Ground based yarding equipment will not be permitted on sustained slopes over 45 percent.

C. Self-Leveling ground based yarding equipment will not be permitted on sustained slopes over 55 percent.

D. Sediment delivery from roads will not be allowed. Hauling operations will be shut down as needed until conditions improve or work can be completed that eliminates the delivery of sediment.

E. All trees 60 inches Diameter at Breast Height (DBH) and greater shall not be felled unless for safety reasons. If trees 60 inches DBH or greater needs to be felled for safety reasons, trees will be left where felled.

F. Cable assist operations will not be permitted on slopes over 70 percent.

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

H-142 Wildlife Timing Restrictions

The following wildlife timing restrictions apply to this contract and shall be in place in the locations shown on the attached timber sale map.

Marbled Murrelet - Timing restrictions are described as no operations of heavy equipment within the critical nesting season (April 1 through September 23) during the daily peak activity periods (two hours prior to official sunset to two hours after official sunrise). Heavy equipment is identified as felling, yarding, and loading equipment for logging, and road maintenance and construction equipment. This area includes the M-Line, M-Line Quarry roads, M-901 and M-902 road(s).

Any blasting which will occur in the M-Line Quarry Pit are also subject to the aforementioned timing restrictions should they occur during the critical nesting season.

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

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.

Section C: Construction and Maintenance

C-040 Road Plan

Road construction and associated work provisions of the Road Plan for this sale, dated 3/24/2023 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on M-Line, M-901, M-902, M-1201, M-1202, N-Line, N-1900, N-2000, N-2010 and N-2100 roads. All work shall be completed to the specifications detailed in the Road Plan.

C-060 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on all roads not listed in Clause C-060. Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

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-030 Landing Debris Clean Up

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

S-035 Logging Debris Clean Up

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

S-050 Cessation of Operations for Low Humidity

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

S-060 Pump Truck or Pump Trailer

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

S-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-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 or other releases of hazardous material/waste during operations conducted under this contract.

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 covered in part a., the Purchaser is responsible for immediately notifying all the following:

- Department of Emergency Management at 1-800-258-5990
- National Response Center at 1-800-424-8802
- Appropriate Department of Ecology (ECY) at 1-800-645-7911
- DNR Contract Administrator

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.

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

The following clauses provide for payments by Purchaser to the State for breaches of the terms of this contract other than failure to perform. These payments are agreed to as liquidated damages and not as penalties. They are reasonable estimates of anticipated harm to the State, which will be 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.

Clause P-020 governs Purchaser's liability in the event Purchaser fails to perform any of the contract requirements other than the below liquidated damage clauses without written approval by the State. Purchaser's failure to pay for all or part of the forest products sold in this contract prior to expiration of the contract term results in substantial injury to the State. Therefore, Purchaser agrees to pay the State the full lump sum contract price in P-020 in the event of failure to perform.

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 \$1,000.00 per tree for all damaged reserve trees that are not replaced in all harvest units.

SIGNATURES

This agreement may be executed in any number of counterparts (including by electronic mail in portable document format (.pdf), or by facsimile) each of which shall be deemed an original but all of which, when taken together, shall constitute one and the same Agreement binding on all parties.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Scott Sargent
Pacific Cascade 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 _____

PRE-CRUISE NARRATIVE

Sale Name: JIGSAW	Region: Pacific Cascade
Agreement#: 30-103988	District: St.Helens District, Naselle Unit.
Contact Forester: Mike Henrie Phone / Location: 360-751-0075	County(s): PACIFIC
Alternate Contact: Brittany Church Phone / Location: 360-790-9438	Other information: Click here to enter text.

Type of Sale: Lump Sum	
Harvest System: Uphill Cable Click here to enter text.	90%
Harvest System: Ground based Click here to enter text.	10%
Enter % of 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 Determinati on (List method and error of closure if applicable)
				RMZ/ WMZ Acres	FMA ACRES	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	T12N;R08 W. Sec 4	03	60	19	41	11	0	0	30	GPS
2	T12N;R08 W. Sec 4 and 3	03	46	12	34	8	0	0	26	GPS
3	T12N;R08 W. Sec 4	03	51	16	35	5	0	0	30	GPS
4	T12N;R08 W. Sec 4	03	16	7	9	1	0	0	8	GPS
5 (ROW)	T12N;R08 W. Sec 4	03	0.5	0	0.5	0	0	0	0.5	GPS
TOTAL ACRES			173.5	54	119	25	0	0	94.5	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Boundaries are marked with white timber sale tags, pink flagging, existing road Leave Trees are marked with white timber sale tags and pink flagging or yellow leave tree area tags with pink flagging. Individual leave trees are marked with blue paint.	NONE	See Logging Plan Maps. 1000 Leave Trees.
2	Boundaries are marked with white timber sale tags, pink flagging and reprod. Leave tree areas are marked with white timber sale tags and pink flagging or Individual leave trees are marked with blue paint.	NONE	See Logging Plan Maps. 300 Leave Trees.
3	Boundaries are marked with white timber sale tags, pink flagging and reprod. Leave tree areas are marked with white timber sale tags and pink flagging or Individual leave trees are marked with blue paint.	NONE	See Logging Plan Maps. 300 Leave Trees.
4	Boundaries are marked with white timber sale tags, pink flagging and reprod. Leave tree areas are marked with white timber sale tags and pink flagging or Individual leave trees are marked with blue paint.	NONE	See Logging Plan Maps. 150 Leave Trees
5	ROW UNIT marked with Orange ROW tags.	NONE	See Logging Plan Maps. No leave trees

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	WH/DF/RA/WRC/SS/SPF	Sawmill M-Line to N-Line to N-2000	See Logging Plan Map and Driving Map
2	WH/DF/RA/WRC/SS/SPF	Sawmill M-Line to N-Line to N-2100	See Logging Plan Map and Driving Map
3	WH/DF/RA/WRC/SS/SPF	Sawmill M-Line	See Logging Plan Map and Driving Map
4	WH/DF/RA/WRC/SS/SPF	Sawmill M-Line to N-Line to N-2000	See Logging Plan Map and Driving Map
5	WH/DF/RA/WRC/SS/SPF	Sawmill M-Line to N-Line to N-2000	See Logging Plan Map and Driving Map
TOTAL MBF	4000 MBF ESTIMATE		

REMARKS:

<p>Units are mostly Western Hemlock with scattered Douglas-fir, Pacific Silver Fir, Western Red Cedar, Sitka Spruce and Red Alder.</p> <p>Some small pockets of old Wind throw.</p>

Prepared By: Mike Henrie Date: 11/29/2022	Title: Naselle Unit Forester	CC:
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Timber Sale Cruise Report JIGSAW

Sale Name: JIGSAW

Sale Type: LUMP SUM

Region: PACIFIC CASC

District: ST.HELENS

Lead Cruiser: Dylan Buchanan

Other Cruisers: B. Warnstadt

Cruise Narrative:

Location:

Jigsaw is located just 10 miles South of Raymond via highway 6. Then .75 miles on oxbow county road and up the M line 3.25 miles.

Cruise Design: Units 1-4 were cruised with a 54.44 BAF on a Count to Cruise plot ratio of 1:1. ROW 5 was ITS cruised measuring every 10th WH and every other RC.

Timber Quality: 90% of the Sale is dominated by WH with trace amounts of RA, RC, DF, and NF. The WH has a little dwarf mistletoe but looks good. They average 16-inch DBH and are scaled to 40 ft. lengths. Units 1 and 2 contain the bulk of DF. The DF trees observed were mixed SM HQ and Domestic. Much of the Sale is located on steep slopes and subject to wind and frost damage. The most common defects are broken tops and spike knots.

Logging and Stand Conditions: The unit is located on steep terrain and will call for mostly cable logging and about 10% ground based. I observed conks in 1 live WH. Some old Mechanical damage from previous logging present.

General Remarks:

Timber Sale Notice Volume (MBF)

Sp	DBH	Rings/In	Age	MBF Volume by Grade					
				All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
WH	15.8			3,815		1,717	1,662	407	29
DF	19.5			365	25	215	109	11	4
RA	18.9			166		110	16	38	2
RC	24.0			87			83	5	
NF	25.2			36		29	6		
ALL	16.0			4,469	25	2,072	1,877	460	35

Timber Sale Notice Weight (tons)

Sp	Tons by Grade					
	All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
WH						
DF						
RA						
RC						
NF						
ALL						

Sp	Tons by Grade					
	All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
WH	31,661		13,138	14,506	3,797	220
DF	2,496	137	1,339	905	86	30
RA	1,163		687	118	350	8
RC	698			672	27	
NF	241		182	59		
ALL	36,258	137	15,347	16,259	4,259	257

Timber Sale Overall Cruise Statistics (Cut + Leave Trees)

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
286.4	4.3	167.1	1.7	47,288	4.6

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
JIGSAW U 1	B1C: VR, 1 BAF (54.44) Measure/ Count Plots, Sighting Ht = 4.5 ft	30.0	40.7	28	13	0
JIGSAW U 2	B1C: VR, 1 BAF (54.44) Measure/ Count Plots, Sighting Ht = 4.5 ft	26.0	34.4	26	15	0
JIGSAW U3	B1C: VR, 1 BAF (54.44) Measure/ Count Plots, Sighting Ht = 4.5 ft	30.0	34.5	26	14	1
JIGSAW U4	B1C: VR, 1 BAF (54.44) Measure/ Count Plots, Sighting Ht = 4.5 ft	8.0	9.0	10	6	0
JIGSAW U5 ROW	ST: Strip/Percent Sample (1 tree expansion)	0.5	0.6	1	1	0
All		94.5	119.2	91	49	1

Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	17.6	40	1,442	1,364	5.4	841.5	128.9
DF	LIVE	2 SAW	HQ-A	16.8	40	460	456	0.8	247.9	43.1
DF	LIVE	2 SAW	HQ-B	19.1	40	481	458	4.8	249.4	43.3
DF	LIVE	3 SAW	Domestic	8.8	39	985	948	3.8	749.2	89.6
DF	LIVE	3 SAW	HQ-B	8.6	40	205	205	0.0	155.4	19.4
DF	LIVE	4 SAW	Domestic	5.3	25	126	120	4.7	85.7	11.3
DF	LIVE	CULL	Cull	7.9	9	17	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	24.2	40	263	263	0.0	137.0	24.9

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
DF	LIVE	UTILITY	Pulp	5.6	14	60	47	22.6	29.5	4.4
NF	LIVE	2 SAW	Domestic	17.8	40	338	311	8.1	182.4	29.4
NF	LIVE	3 SAW	Domestic	9.6	39	67	67	0.0	58.5	6.3
NF	LIVE	CULL	Cull	7.5	7	5	0	100.0	0.0	0.0
RA	LIVE	2 SAW	Domestic	14.9	29	1,199	1,167	2.7	687.2	110.3
RA	LIVE	3 SAW	Domestic	11.0	30	168	168	0.0	117.7	15.9
RA	LIVE	4 SAW	Domestic	6.2	29	414	401	3.2	349.5	37.9
RA	LIVE	CULL	Cull	5.7	5	17	0	100.0	0.0	0.0
RA	LIVE	UTILITY	Pulp	5.0	14	16	16	0.0	8.2	1.5
RC	LIVE	3 SAW	Domestic	13.5	38	965	878	9.0	671.6	83.0
RC	LIVE	4 SAW	Domestic	7.0	18	47	47	0.1	26.7	4.5
RC	LIVE	CULL	Cull	5.8	8	18	0	100.0	0.0	0.0
WH	LIVE	2 SAW	Domestic	15.1	40	19,212	18,168	5.4	13,138.3	1,716.8
WH	LIVE	3 SAW	Domestic	8.8	39	18,028	17,592	2.4	14,506.0	1,662.4
WH	LIVE	4 SAW	Domestic	5.5	31	4,343	4,302	0.9	3,796.9	406.6
WH	LIVE	CULL	Cull	5.7	7	499	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	6.3	13	310	309	0.3	219.5	29.2

Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	Pulp	5.1	14	44	0.0	27.2	4.2
DF	5 - 7	LIVE	Domestic	6.0	30	383	1.5	294.5	36.2
DF	5 - 7	LIVE	Cull	7.0	11	0	100.0	0.0	0.0
DF	8 - 11	LIVE	HQ-B	8.5	40	205	0.0	155.4	19.4
DF	8 - 11	LIVE	Cull	8.6	7	0	100.0	0.0	0.0
DF	8 - 11	LIVE	Pulp	9.4	13	3	84.4	2.3	0.2
DF	8 - 11	LIVE	Domestic	9.8	39	685	5.2	540.4	64.7
DF	12 - 15	LIVE	HQ-B	14.0	40	71	0.0	38.1	6.7
DF	12 - 15	LIVE	Domestic	14.1	40	245	0.6	170.1	23.1
DF	12 - 15	LIVE	HQ-A	14.3	40	111	0.0	68.8	10.5
DF	16 - 19	LIVE	HQ-A	17.3	40	207	1.6	109.3	19.6
DF	16 - 19	LIVE	HQ-B	18.0	40	136	3.7	72.6	12.9
DF	16 - 19	LIVE	Domestic	18.1	40	662	6.9	407.5	62.6
DF	20+	LIVE	Domestic	22.1	40	458	5.5	263.9	43.2
DF	20+	LIVE	HQ-A	22.7	40	402	0.0	206.7	38.0
DF	20+	LIVE	HQ-B	25.5	40	251	6.6	138.7	23.8
NF	5 - 7	LIVE	Cull	7.1	8	0	100.0	0.0	0.0

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
NF	8 - 11	LIVE	Cull	8.1	6	0	100.0	0.0	0.0
NF	8 - 11	LIVE	Domestic	9.7	39	67	0.0	58.5	6.3
NF	12 - 15	LIVE	Domestic	15.1	40	98	0.0	52.4	9.3
NF	16 - 19	LIVE	Domestic	17.8	40	115	14.5	75.0	10.8
NF	20+	LIVE	Domestic	24.6	40	98	7.5	55.1	9.3
RA	5 - 7	LIVE	Pulp	5.0	14	16	0.0	8.2	1.5
RA	5 - 7	LIVE	Cull	5.7	4	0	100.0	0.0	0.0
RA	5 - 7	LIVE	Domestic	6.1	29	391	3.3	339.0	36.9
RA	8 - 11	LIVE	Domestic	10.6	28	178	0.0	128.2	16.8
RA	12 - 15	LIVE	Domestic	13.5	29	580	2.8	377.5	54.8
RA	16 - 19	LIVE	Domestic	17.6	30	424	3.4	231.4	40.1
RA	20+	LIVE	Domestic	20.1	30	163	0.0	78.3	15.4
RC	5 - 7	LIVE	Cull	5.3	7	0	100.0	0.0	0.0
RC	5 - 7	LIVE	Domestic	7.0	26	125	5.5	135.6	11.8
RC	8 - 11	LIVE	Domestic	9.3	36	95	6.2	95.3	9.0
RC	12 - 15	LIVE	Cull	13.8	10	0	100.0	0.0	0.0
RC	12 - 15	LIVE	Domestic	13.9	35	15	9.0	16.3	1.4
RC	16 - 19	LIVE	Domestic	18.3	40	164	10.8	100.6	15.5
RC	20+	LIVE	Domestic	25.2	39	526	9.0	350.5	49.7
WH	< 5	LIVE	Cull	4.0	31	0	100.0	0.0	0.0
WH	5 - 7	LIVE	Cull	5.4	6	0	100.0	0.0	0.0
WH	5 - 7	LIVE	Pulp	5.7	13	246	0.0	177.0	23.3
WH	5 - 7	LIVE	Domestic	6.0	35	8,367	1.0	7,246.6	790.7
WH	8 - 11	LIVE	Cull	8.9	8	0	100.0	0.0	0.0
WH	8 - 11	LIVE	Domestic	9.9	39	13,402	2.6	10,939.3	1,266.5
WH	8 - 11	LIVE	Pulp	10.5	14	63	1.5	42.5	5.9
WH	12 - 15	LIVE	Domestic	13.6	40	9,885	4.0	7,572.2	934.2
WH	16 - 19	LIVE	Cull	16.9	14	0	100.0	0.0	0.0
WH	16 - 19	LIVE	Domestic	17.4	40	5,148	6.6	3,587.5	486.5
WH	20+	LIVE	Domestic	22.5	40	3,260	8.7	2,095.6	308.0

Cruise Unit Report JIGSAW U 1

Unit Sale Notice Volume (MBF): JIGSAW U 1

Sp	DBH	Rings/In	Age	MBF Volume by Grade				Utility
				All	2 Saw	3 Saw	4 Saw	
WH	14.9			1,064	395	525	144	
RA	21.3			122	105	5	12	
DF	22.2			119	71	46		2
RC	27.5			66		66		
ALL	16.0			1,372	572	642	156	2

Unit Cruise Design: JIGSAW U 1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	30.0	40.7	28	13	0

Unit Cruise Summary: JIGSAW U 1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	59	124	4.4	0
RA	7	14	0.5	0
DF	3	12	0.4	0
RC	7	11	0.4	0
ALL	76	161	5.8	0

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

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	241.1	50.1	9.5	147.2	27.3	3.5	35,481	57.0	10.1
RA	27.2	200.0	37.8	149.8	20.2	7.6	4,078	201.0	38.6
DF	23.3	232.7	44.0	170.6	5.6	3.2	3,979	232.8	44.1
RC	21.4	233.3	44.1	103.1	49.3	18.6	2,204	238.4	47.9
ALL	313.0	38.6	7.3	146.1	28.4	3.3	45,742	48.0	8.0

Unit Summary: JIGSAW U 1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	3	ALL	22.2	97	123	4,288	3,979	7.2	8.7	23.3	5.0	119.4
RA	LIVE	CUT	7	ALL	21.3	71	94	4,233	4,078	3.7	11.0	27.2	5.9	122.3
RC	LIVE	CUT	7	ALL	27.5	58	76	2,443	2,204	9.8	5.2	21.4	4.1	66.1
WH	LIVE	CUT	59	ALL	14.9	73	94	37,256	35,481	4.8	199.1	241.1	62.5	1,064.4
ALL	LIVE	CUT	76	ALL	16.0	73	95	48,219	45,742	5.1	224.0	313.0	77.4	1,372.3
ALL	ALL	ALL	76	ALL	16.0	73	95	48,219	45,742	5.1	224.0	313.0	77.4	1,372.3

Cruise Unit Report JIGSAW U 2

Unit Sale Notice Volume (MBF): JIGSAW U 2

Sp	DBH	Rings/In	Age	MBF Volume by Grade					
				All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
WH	14.1			1,042		446	437	150	9
DF	17.9			239	25	138	63	11	2
RA	10.8			29		5		23	2
NF	25.0			7		6	2		
ALL	14.3			1,317	25	594	502	184	13

Unit Cruise Design: JIGSAW U 2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	26.0	34.4	26	15	0

Unit Cruise Summary: JIGSAW U 2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	61	107	4.1	0
DF	15	22	0.8	0
RA	5	5	0.2	0
NF	1	1	0.0	0
ALL	82	135	5.2	0

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

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	224.0	56.8	11.1	178.8	21.0	2.7	40,069	60.6	11.5
DF	46.1	132.4	26.0	199.6	33.1	8.5	9,194	136.5	27.3
RA	10.5	416.5	81.7	107.2	16.9	7.5	1,122	416.8	82.0
NF	2.1	509.9	100.0	135.5	0.0	0.0	284	509.9	100.0
ALL	282.7	38.1	7.5	179.3	26.3	2.9	50,669	46.4	8.0

Unit Summary: JIGSAW U 2

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	15	ALL	17.9	80	104	9,459	9,194	2.8	26.4	46.1	10.9	239.1
NF	LIVE	CUT	1	ALL	25.0	89	113	360	284	21.2	0.6	2.1	0.4	7.4
RA	LIVE	CUT	5	ALL	10.8	52	71	1,164	1,122	3.6	16.5	10.5	3.2	29.2
WH	LIVE	CUT	61	ALL	14.1	79	102	41,420	40,069	3.3	206.6	224.0	59.7	1,041.8
ALL	LIVE	CUT	82	ALL	14.4	77	100	52,403	50,669	3.3	250.1	282.7	74.2	1,317.4
ALL	ALL	ALL	82	ALL	14.4	77	100	52,403	50,669	3.3	250.1	282.7	74.2	1,317.4

Cruise Unit Report JIGSAW U3

Unit Sale Notice Volume (MBF): JIGSAW U3

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WH	17.9			1,251	759	410	71	11
NF	25.3			28	24	4		
RC	12.4			16		12	4	
RA	15.0			14		11	3	
ALL	17.6			1,310	783	437	78	11

Unit Cruise Design: JIGSAW U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	30.0	34.5	26	14	1

Unit Cruise Summary: JIGSAW U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	60	108	4.2	0
NF	2	2	0.1	0
RC	2	2	0.1	0
RA	1	2	0.1	0
ALL	65	114	4.4	0

Unit Cruise Statistics (Cut + Leave Trees): JIGSAW U3

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	226.1	50.4	9.9	184.5	20.8	2.7	41,711	54.5	10.2
NF	4.2	353.3	69.3	225.2	18.5	13.1	943	353.8	70.5
RC	4.2	353.3	69.3	126.6	68.1	48.2	530	359.8	84.4
RA	4.2	509.9	100.0	111.6	0.0	0.0	467	509.9	100.0
ALL	238.7	50.0	9.8	182.9	22.8	2.8	43,652	55.0	10.2

Unit Summary: JIGSAW U3

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
NF	LIVE	CUT	2	ALL	25.3	99	127	978	943	3.6	1.2	4.2	0.8	28.3
RA	LIVE	CUT	1	ALL	18.2	63	77	474	467	1.4	2.3	4.2	1.0	14.0
RC	LIVE	CUT	2	ALL	12.4	24	123	588	530	9.9	5.0	4.2	1.2	15.9
WH	LIVE	CUT	60	ALL	17.9	85	113	44,503	41,711	6.3	129.4	226.1	53.4	1,251.3
ALL	LIVE	CUT	65	ALL	17.8	83	112	46,543	43,652	6.2	137.9	238.7	56.5	1,309.5
ALL	ALL	ALL	65	ALL	17.8	83	112	46,543	43,652	6.2	137.9	238.7	56.5	1,309.5

Cruise Unit Report JIGSAW U4

Unit Sale Notice Volume (MBF): JIGSAW U4

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WH	15.9			432	106	278	40	8
DF	30.0			7	6			0
RC	15.0			5		5		
ALL	16.0			443	112	283	40	8

Unit Cruise Design: JIGSAW U4

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	8.0	9.0	10	6	0

Unit Cruise Summary: JIGSAW U4

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	40	66	6.6	0
DF	1	1	0.1	0
RC	1	2	0.2	0
ALL	42	69	6.9	0

Unit Cruise Statistics (Cut + Leave Trees): JIGSAW U4

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	359.3	24.9	7.9	150.3	41.0	6.5	54,019	48.0	10.2
DF	5.4	316.2	100.0	152.4	0.0	0.0	830	316.2	100.0
RC	10.9	210.8	66.7	53.0	0.0	0.0	577	210.8	66.7
ALL	375.6	26.0	8.2	147.6	41.9	6.5	55,426	49.3	10.5

Unit Summary: JIGSAW U4

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	1	ALL	30.0	96	123	913	830	9.1	1.1	5.4	1.0	6.6
RC	LIVE	CUT	1	ALL	15.0	50	62	701	577	17.7	8.9	10.9	2.8	4.6

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
WH	LIVE	CUT	40	ALL	15.9	85	106	56,316	54,019	4.1	260.6	359.3	90.1	432.2
ALL	LIVE	CUT	42	ALL	16.0	84	105	57,930	55,426	4.3	270.6	375.6	93.9	443.4
ALL	ALL	ALL	42	ALL	16.0	84	105	57,930	55,426	4.3	270.6	375.6	93.9	443.4

Cruise Unit Report JIGSAW U5 ROW

Unit Sale Notice Volume (MBF): JIGSAW U5 ROW

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WH	15.6			25	11	12	2	1
RC	12.9			1		1	0	
RA	8.0			0			0	
ALL	15.4			26	11	12	2	1

Unit Cruise Design: JIGSAW U5 ROW

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
ST: Strip/Percent Sample (1 tree expansion)	0.5	0.6	1	1	0

Unit Cruise Summary: JIGSAW U5 ROW

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	11	111	111.0	0
RC	6	11	11.0	0
RA	1	1	1.0	0
ALL	18	123	123.0	0

Unit Cruise Statistics (Cut + Leave Trees): JIGSAW U5 ROW

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	296.2	0.0	0.0	170.8	7.6	2.3	50,582	7.6	2.3
RC	20.1	0.0	0.0	80.6	36.6	15.0	1,616	36.6	15.0
RA	0.7	0.0	0.0	88.6	0.0	0.0	62	0.0	0.0
ALL	316.9	0.0	0.0	164.9	30.7	7.2	52,260	30.7	7.2

Unit Summary: JIGSAW U5 ROW

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
RA	LIVE	CUT	1	ALL	8.0	35	61	72	62	13.9	2.0	0.7	0.2	0.0
RC	LIVE	CUT	6	ALL	12.9	47	63	1,696	1,616	4.7	22.1	20.1	5.6	0.8

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
WH	LIVE	CUT	11	ALL	15.6	86	109	51,492	50,582	1.8	223.1	296.2	75.0	25.3
ALL	LIVE	CUT	18	ALL	15.3	82	105	53,260	52,260	1.9	247.2	316.9	80.8	26.1
ALL	ALL	ALL	18	ALL	15.3	82	105	53,260	52,260	1.9	247.2	316.9	80.8	26.1



Forest Practices Application/Notification
Notice of Decision

FPA/N No: 2941524
Effective Date: 6/27/2023
Expiration Date: 6/27/2026
Shut Down Zone: 651N ; .
EARR Tax Credit: Eligible Non-eligible
Reference: Jigsaw TBS
30-103988

Decision

- Notification Accepted 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.
Withdrawn Applicant has withdrawn the Forest Practices Application/Notification (FPA/N).
Closed All forest practices obligations are met.

FPA/N Classification

Number of Years Granted on Multi-Year Request

- Class II Class III Class IVG Class IVS
4 years 5 years

Conditions on Approval/Reasons for Disapproval

No additional conditions.

NOTE: Forest practice activities located within 0.25 miles of an occupied marbled murrelet site are subject to disturbance avoidance timing restrictions per WACs 222-24-030, 222-30-050, 222-30-060, 222-30-065, 222-30-070, and 222-30-100. (April 1 to August 31)

Issued By: Eric Weinke Region: Pacific Cascade Region

Title: Forest Practices Forester Date: 6/27/2023

Copies to: Landowner, Timber Owner and Operator

Issued in person: LO TO OP By: Tonya Johnston Date: 6/27/2023

Appeal Information

You have thirty (30) days to *file* (i.e., *actually deliver*) an appeal in writing of this Decision and any related State Environmental Policy Act (SEPA) determinations to the Pollution Control Hearings Board, the Attorney General's Office, and the Department of Natural Resources' region office. See RCW 76.09.205. The appeal period starts when the applicant receives this decision, which usually happens electronically on the date indicated below.

You must file your appeal at all three addresses below:

Pollution Control Hearings Board	Office of the Attorney General Natural Resources Division	Department Of Natural Resources Pacific Cascade Region
<u>Physical Address</u> 1111 Israel Road, SW Suite 301 Tumwater, WA 98501 <u>Mailing address</u> Post Office Box 40903 Olympia, WA 98504-0903	<u>Physical Address</u> 1125 Washington Street, SE Olympia, WA 98504 <u>Mailing Address</u> Post Office Box 40100 Olympia, WA 98504-0100	<u>Physical Address</u> 601 Bond Rd Castle Rock WA 98611 <u>Mailing Address</u> Post Office Box 280 Castle Rock, WA 98611-0280

Information regarding the Pollution Control Hearings Board can be found at: <https://elaho.wa.gov>

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 <https://www.dnr.wa.gov/programs-and-services/forest-practices/review-applications-fpars/forest-practices-forms-and>. Notify DNR of new Operators within 48 hours.

Continuing Forestland 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 forestland 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 and 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 forestland obligation, the seller must pay the buyer's costs related to continuing forestland obligations, including all legal costs and reasonable attorneys' fees incurred by the buyer in enforcing the continuing forestland obligation against the seller.

Failure by the seller to send the required notice to 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 forestland obligation prior to sale.

DNR Declaration of Mailing

I, .caused the Notice of Decision for FPA/N No. . to be placed in the United States mail at Castle Rock, WA, postage paid. I declare under penalty of perjury of the laws of the State of Washington, that the foregoing is true and correct.

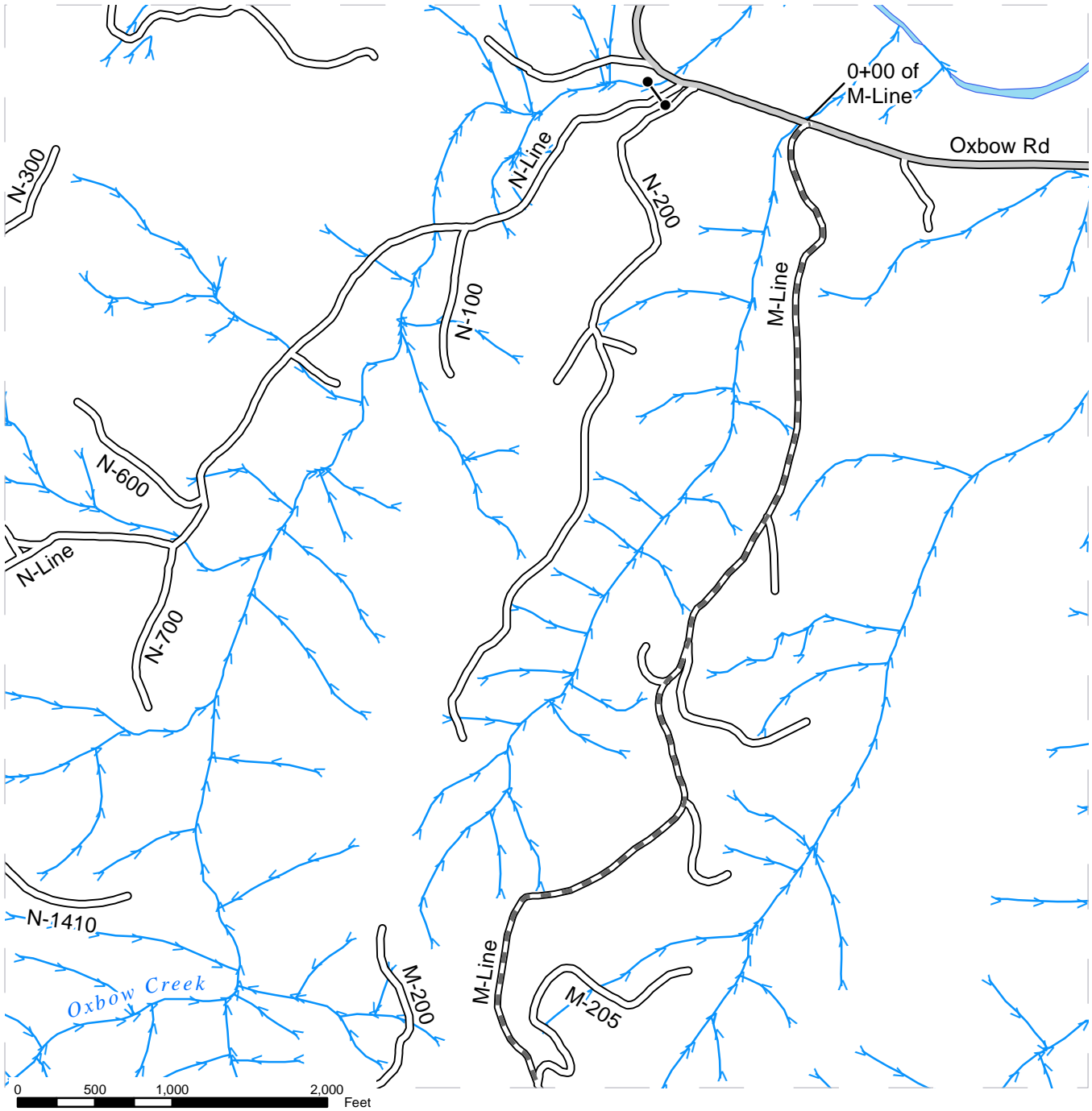
(Date) Castle Rock, WA _____ (Signature)






(City & State where signed)

ROAD PLAN MAP

SALE NAME: JIGSAW
AGREEMENT#: 30-103988
TOWNSHIP(S): T12R8W
TRUST(S): Common School and Indemnity(3)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 633-1504



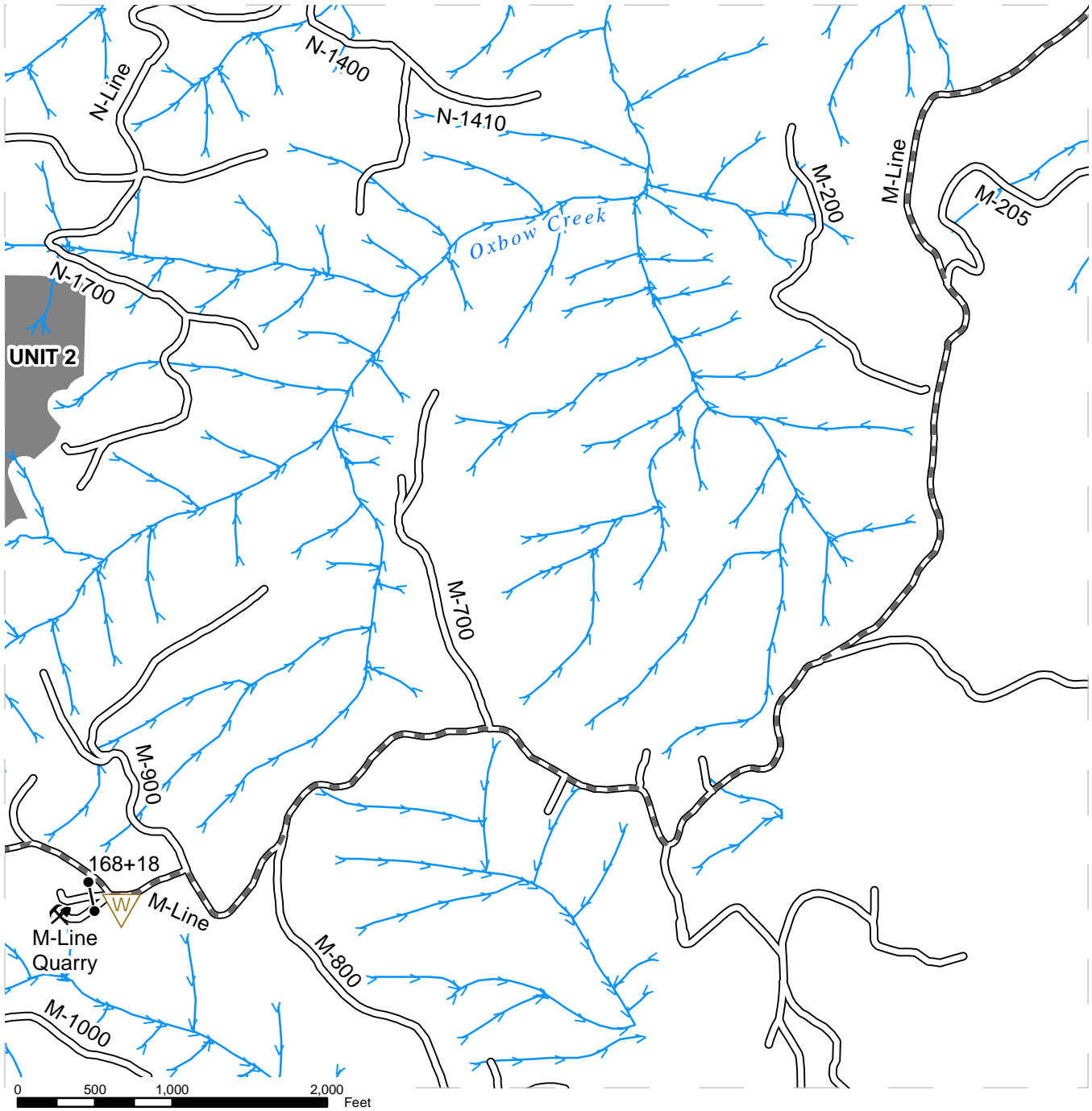
 County Road	 Gate (PCP 1-1)
 Existing Roads	 Streams
 Required Pre-Haul Maintenance	



ROAD PLAN MAP

SALE NAME: JIGSAW
AGREEMENT#: 30-103988
TOWNSHIP(S): T12R8W
TRUST(S): Common School and Indemnity(3)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 633-1504



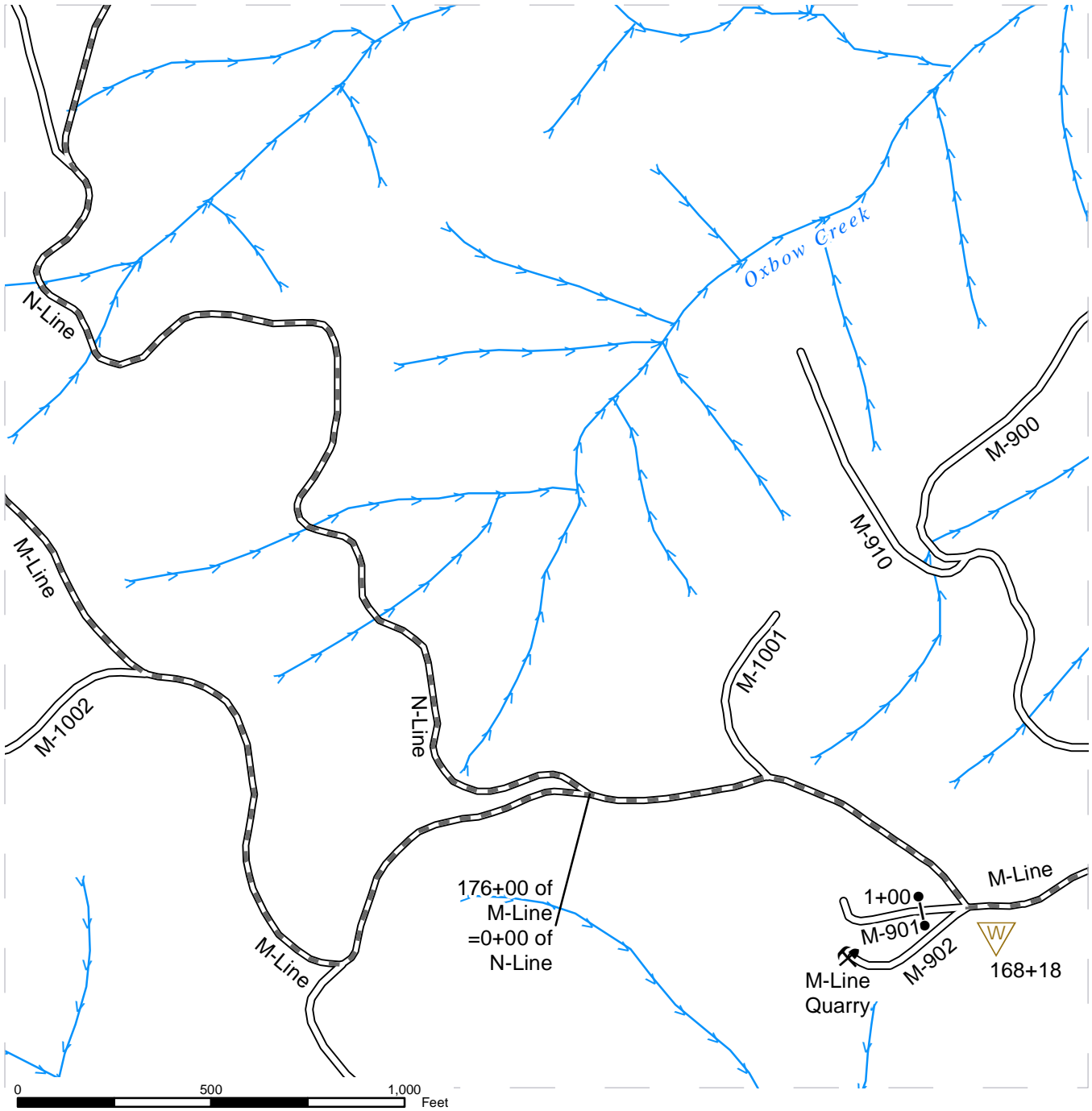
Existing Roads	Gate (PCP 1-1)	Harvest Unit
Required Pre-Haul Maintenance	Rock Pit	Streams
	Waste Area	









ROAD PLAN MAP

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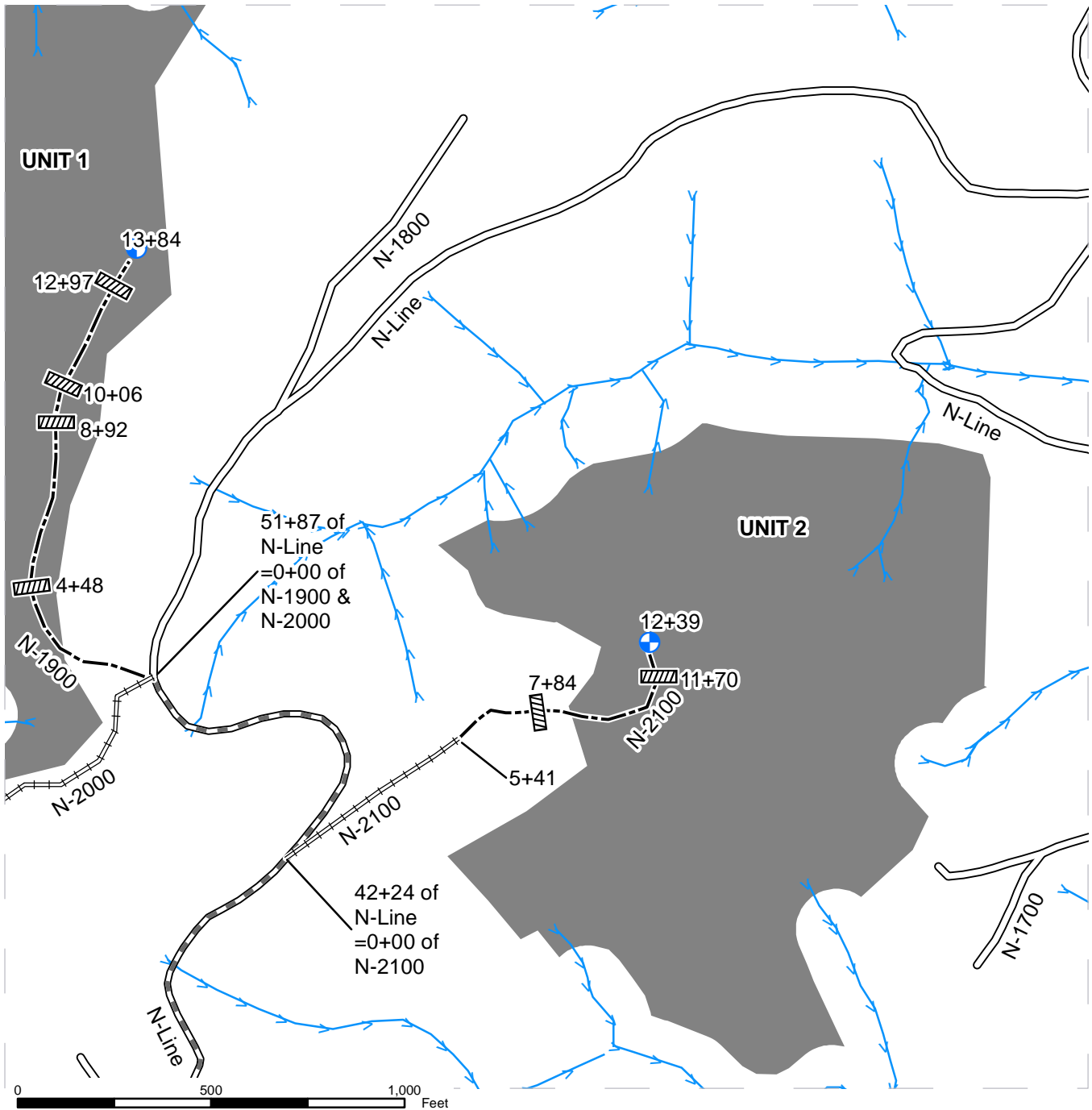


 Existing Roads	 Gate (PCP 1-1)
 Required Pre-Haul Maintenance	 Rock Pit
	 Waste Area
	 Streams

ROAD PLAN MAP

SALE NAME: JIGSAW
AGREEMENT#: 30-103988
TOWNSHIP(S): T12R8W
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REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 633-1504



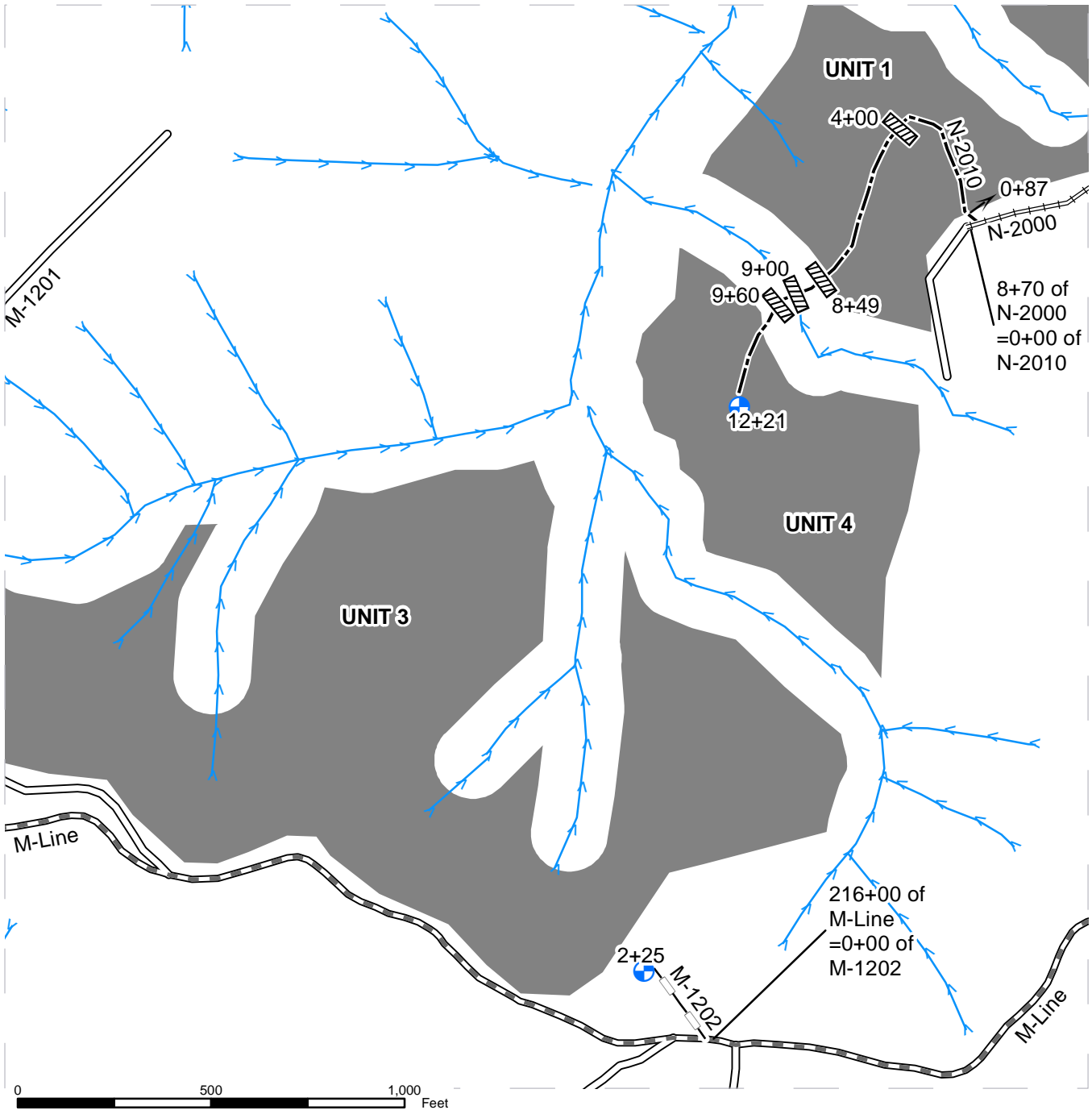
Existing Roads	Culvert	Harvest Unit
Required Pre-Haul Maintenance	Landing - Proposed	Streams
Required Reconstruction		
Optional Construction		



ROAD PLAN MAP

SALE NAME: JIGSAW
AGREEMENT#: 30-103988
TOWNSHIP(S): T12R8W
TRUST(S): Common School and Indemnity(3)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 633-1504



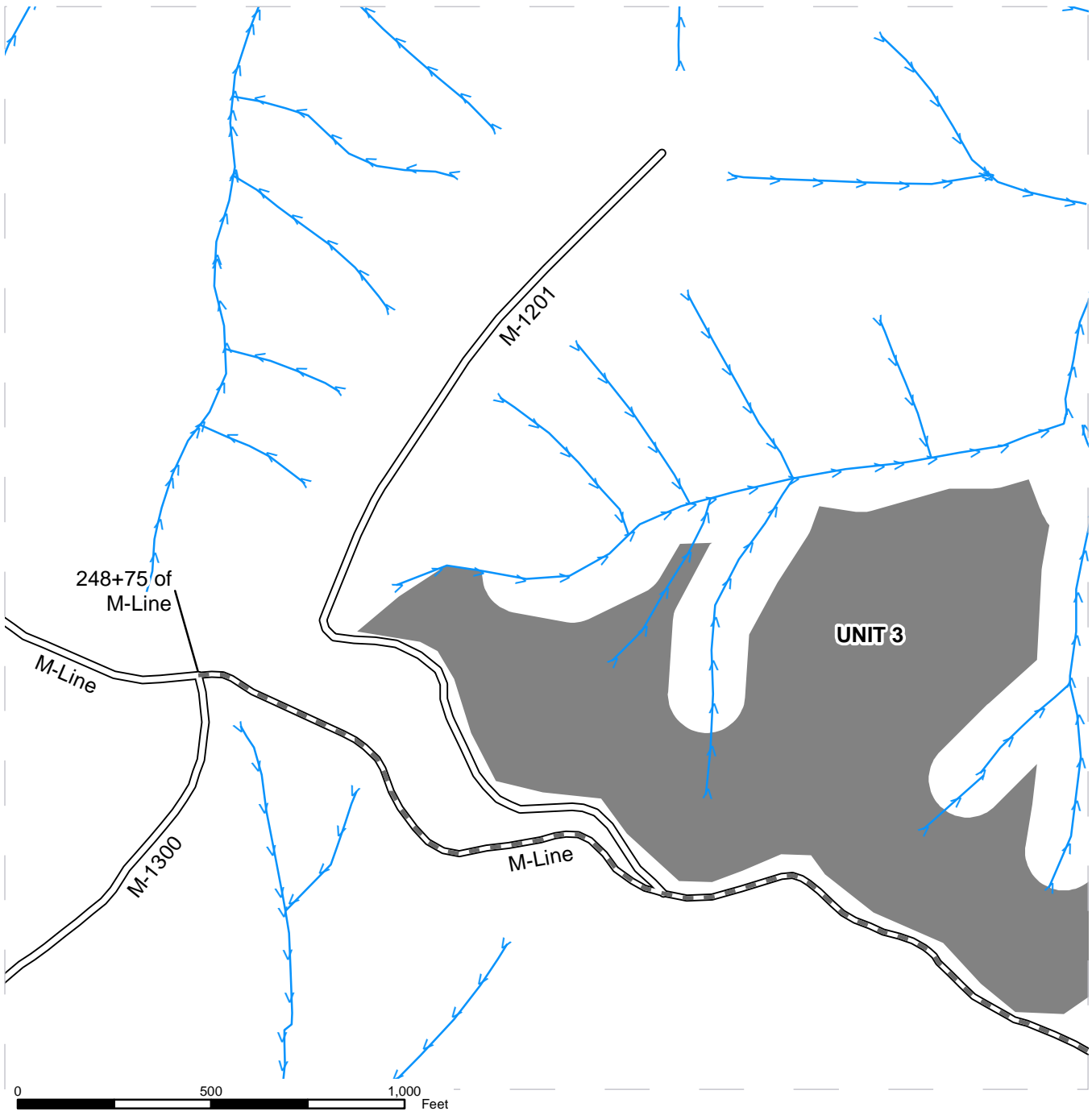
Existing Roads	Ditchout	Harvest Unit
Required Pre-Haul Maintenance	Culvert	Streams
Required Reconstruction	Landing - Proposed	
Optional Construction		
Optional Reconstruction		



ROAD PLAN MAP

SALE NAME: JIGSAW
AGREEMENT#: 30-103988
TOWNSHIP(S): T12R8W
TRUST(S): Common School and Indemnity(3)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 633-1504



Existing Roads	Harvest Unit
Required Pre-Haul Maintenance	Streams

N

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

JIGSAW TIMBER SALE ROAD PLAN
PACIFIC COUNTY
ST HELENS DISTRICT
PACIFIC CASCADE REGION

AGREEMENT NO.: 30-103988

STAFF ENGINEER: BRETT WALLACHY

DRAWN & COMPILED BY: ALICIA COMPTON

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>
M-Line	0+00 to 248+75	Pre-haul maintenance
N-Line	0+00 to 51+87	Pre-haul maintenance
N-2000	0+00 to 8+70	Reconstruction
N-2100	0+00 to 5+41	Reconstruction

0-3 OPTIONAL ROADS

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
M-1202	0+00 to 2+25	Reconstruction
N-1900	0+00 to 13+84	Construction
N-2010	0+00 to 12+21	Construction
N-2100	5+41 to 12+39	Construction

0-4 CONSTRUCTION

Construction includes, but is not limited to: clearing and grubbing; excavation, embankment, and fill; landing, turnaround, ditch, and ditch-out construction; acquisition and installation of drainage structures; shaping and compaction; manufacture and application of rock; acquisition and application of erosion control.

0-5 RECONSTRUCTION

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

<u>Road</u>	<u>Requirements</u>
M-1202	Clearing and grubbing, widening the road prism, shaping and compaction, rock, erosion control
N-2000	
N-2100	

0-6 PRE-HAUL MAINTENANCE

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

<u>Road</u>	<u>Requirements</u>
M-Line	Maintenance grading, rock
N-Line	Brushing, maintenance grading, rock

0-10 ABANDONMENT

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

0-12 DEVELOP ROCK SOURCE

Purchaser may develop an existing rock source. Rock source development will involve stripping overburden, waste material disposal, and blasting. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

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.

1-4 ROAD TOLERANCES

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

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

1-6 ORDER OF PRECEDENCE

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

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

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

1-7 TEMPORARY ROAD CLOSURE

Purchaser shall notify the Contract Administrator a minimum of 3 business days before the closure of any road. Construction may not close the following roads.

<u>Road</u>
M-Line

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.

1-15 ROAD MARKING

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

- Stakes, orange ribbon, orange paint, aluminum tags

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 timber 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 3 business days before work begins.

1-23 ROAD WORK PHASE APPROVAL

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

- Brushing
- Maintenance grading
- Subgrade construction and reconstruction
- Culvert installations
- Shaping & compaction
- Rock application & compaction
- Post-construction and reconstruction erosion control application
- Abandonment
- Post-abandonment erosion control application

1-25 ACTIVITY TIMING RESTRICTION

The specified activities are not allowed during the listed closure period(s) unless authorized in writing by the Contract Administrator.

<u>Activity</u>	<u>Closure Period</u>
Road construction and reconstruction	October 1 to April 30

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION, Purchaser shall provide a maintenance plan to include further protection of 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.

1-27 TIMING RESTRICTION FOR MARBLED MURRELET

On the following road(s), any road work, right-of-way timber falling and yarding, rock pit operation, or heavy equipment operation is not allowed from two hours before official sunset to two hours after official sunrise from April 1 through September 23. This restriction does not apply to hauling timber, rock, or equipment.

<u>Road</u>	<u>Stations</u>	<u>Activity</u>
M-Line	133+63(~M-600) to 166+01(~M-902)	Road work
-	M-Line Pit	Rock blasting

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 jaw and pit run roads.
- Wheel track rutting exceeds 4 inches on crushed rock roads.
- Wheel track rutting exceeds 8 inches on native surface roads.
- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, in the opinion of the Contract Administrator excessive road damage or rutting may occur.

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

1-33 SNOW PLOWING RESTRICTION

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

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

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

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

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.

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

Purchaser shall perform maintenance on roads listed in Contract Clause C-050 PURCHASER ROAD MAINTENANCE AND REPAIR in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

Purchaser may be required to perform maintenance on roads listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER as directed by the Contract Administrator. Purchaser shall maintain roads in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-4 PASSAGE OF LIGHT VEHICLES

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

2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following road(s), Purchaser shall use a grader to shape the existing surface before rock application.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
M-Line	0+00 to 248+75	Shape, apply specified rock, compact
N-Line	0+00 to 51+87	

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

On the following road(s), Purchaser shall cut vegetative material up to 5 inches in diameter, including limbs, as shown on the BRUSHING SECTION DETAIL. Brushing must be achieved by cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
N-Line	0+00 to 51+87

3-2 BRUSHING RESTRICTION

Pulling, digging, pushing over, and other non-cutting methods used for vegetation removal may not be used for brushing.

3-5 CLEARING

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

3-8 PROHIBITED DECKING AREAS

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

- Within the grubbing limits.
- Within 25 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 45%.
- 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. Grubbing must be completed before starting excavation and embankment.

3-12 STUMP PLACEMENT

Purchaser shall place grubbed stumps outside of the grubbing limits on the downhill side of the road and in compliance with all other clauses in this road plan.

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.

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 before timber haul.

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

Waste areas for organic debris are located as listed below.

<u>Road</u>	<u>Disposal Location</u>
M-Line	168+18 left

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 25 feet of a cross drain culvert.
- Within 50 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 45%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.
- On the uphill side of the road.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris outside of the grubbing limits on the downhill side of the road unless otherwise detailed in this road plan.

SECTION 4 – EXCAVATION

4-2 PIONEERING

Pioneering may not extend past construction that will be completed during the current construction season. In addition, the following actions must be taken as pioneering progresses:

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 12 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 12% in 100 feet.
- Maximum grade change for crest vertical curves is 8% in 100 feet.

4-5 CUT SLOPE RATIO

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

<u>Material Type</u>	<u>Excavation Slope Ratio</u>	<u>Excavation Slope Percent</u>
Common Earth	1:1	100
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:

<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.

4-10 WIDEN THE EXISTING SUBGRADE

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

4-22 TURNAROUNDS

Purchaser shall construct turnarounds as designated on the ROCK LIST. Turnarounds must be no larger than 30 feet long and 30 feet wide.

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Purchaser shall construct ditchouts as identified on the CULVERT LIST and as needed. 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.

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.

4-37 WASTE AREA LOCATION

Purchaser shall deposit waste material in the listed designated areas. The amount of material allowed in a waste area is at the discretion of the Contract Administrator.

<u>Road</u>	<u>Waste Area Location</u>
M-Line	168+18 left

4-38 PROHIBITED WASTE DISPOSAL AREAS

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

- Within 25 feet of a cross drain culvert.
- Within 50 feet of a live stream or wetland.
- Within a riparian management zone.
- Within a wetland management zone.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.
- Outside the clearing limits.
- On the uphill side of the road.

4-48 NATIVE MATERIAL

Native material consists of naturally occurring material that is free of organic debris, trash, and rocks greater than 4 inches in any dimension.

4-55 ROAD SHAPING

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

4-56 DRY WEATHER SHAPING

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

4-60 FILL COMPACTION

Purchaser shall compact all embankment and waste material in accordance with the COMPACTION LIST 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 and reconstructed subgrades in accordance with the COMPACTION LIST by routing equipment over the entire width. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before rock application.

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.

4-63 EXISTING SURFACE COMPACTION

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

SECTION 5 – DRAINAGE

5-1 REMOVAL OF SHOULDER BERMS

Purchaser shall remove berms from road shoulders. The construction of ditchouts is required where ponding could result from the effects of sidecast debris.

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 LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts may be new or used material and must meet the specifications in Clauses 10-15 through 10-24.

5-6 CULVERT TYPE

On the following road(s), Purchaser shall install culverts made of plastic in accordance with Clauses 10-15 through 10-24.

<u>Road</u>
N-1900
N-2100

5-7 USED CULVERT MATERIAL

On the following road(s), Purchaser may install used culverts. All other roads must have new culverts installed.

<u>Road</u>
N-2010

5-10 CULVERT MARKER INSTALLATION

On the following road(s), Purchaser shall provide and install culvert markers at the inlet and outlet in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL.

<u>Road</u>
N-1900
N-2100

5-12 UNUSED MATERIALS STATE PROPERTY

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

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL. Culverts shall be banded using lengths of no less than 10 feet, and no more than one length less than 20 feet. Shorter section of banded culvert shall be installed at the inlet end.

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Purchaser shall obtain written approval from the Contract Administrator for the installation of culverts 24 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.

5-20 ENERGY DISSIPATERS

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

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT LIST.

5-25 CATCH BASINS

Purchaser shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL.

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 LIST that specify the placement of rock at the inlet. Rock may not restrict the flow of water into culvert inlets or catch basins. The type and quantity of rock used for headwalls shall be as specified on the CULVERT LIST.

5-27 ARMORING FOR STREAM CROSSING CULVERTS

Purchaser shall place inlet armor in conjunction with or immediately following construction of the embankment at culverts designated as stream crossings on the CULVERT LIST. The type of armor and the amount of material must be consistent with the specifications listed on the CULVERT LIST. Rock must be placed around culvert inlet. Rock may not restrict the flow of water into culvert inlets. Armor installation is subject to approval by 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 NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical distance of no more than 10 feet between waterbars or between natural drainage paths, and with a maximum spacing of 300 feet.

SECTION 6 – ROCK AND SURFACING

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following source(s) on state land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the rock source(s), a joint operating plan must be developed. All parties shall follow this plan. Purchaser shall notify the Contract Administrator a minimum of 3 business days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>
M-Line	S4 T12N R8W

6-5 ROCK FROM COMMERCIAL SOURCE

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

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

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

<u>Source</u>
M-Line

6-23 ROCK GRADATION TYPES

Purchaser shall provide rock in accordance with the types and amounts listed in the ROCK LIST. Rock must meet the following specifications for gradation and uniform quality when placed in hauling vehicles. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator. Purchaser shall provide a sieve analysis upon request from the Contract Administrator.

6-28 1 ¼-INCH MINUS CRUSHED ROCK

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

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

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.

6-37 4-INCH JAW RUN ROCK

% Passing 4" square sieve	95%
% Passing U.S. #40 sieve	16% maximum
% Passing U.S. #200 sieve	5% maximum

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.

6-55 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 loose 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.

6-56 ROCK MEASUREMENT BY TRUCK VOLUME

Measurement of Turnaround, Landing, and Culvert rock is on a cubic yard truck measure basis. Purchaser shall measure each truck box before rock hauling. An average of such volumes for each truck will be used to tally the volume hauled. The Contract Administrator may periodically require that a load be flattened off and its volume calculated. Purchaser shall maintain load tally sheets for each truck and shall give them to the Contract Administrator on a weekly basis during rocking operations.

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for shaping & compaction 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. Road surfaces must be compacted in accordance with the COMPACTION LIST by routing equipment over the entire width.

6-73 ROCK FOR WIDENED PORTIONS

Purchaser shall apply rock to turnarounds, turnouts, and areas with curve widening to the same depth and specifications as the traveled way.

6-76 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.

SECTION 7 – STRUCTURES

7-6 STREAM CROSSING INSTALLATION

Purchaser shall install stream crossing structures in accordance with the manufacturer's requirements, and LIVE STREAM CULVERT INSTALLATION PROCEDURE, CULVERT AND DRAINAGE SPECIFICATION DETAIL, and any other requirements in this road plan.

7-70 GATE CLOSURE

On the following road(s), Purchaser shall keep gates closed and locked except during periods of haul. All gates that remain open during haul must be locked or securely fastened in the open position. All gates must be closed at termination of use.

<u>Road</u>	<u>Station</u>
M-901	1+00

SECTION 8 – EROSION CONTROL

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a 4-inch layer of straw to all exposed soils within 50 feet of a stream or wetland.

8-15 REVEGETATION

Purchaser shall spread grass seed on all exposed soils resulting from road work activities. Other methods of covering must be approved in writing by the Contract Administrator. Required seed not spread by the termination of this contract will become the property of the state.

<u>Road</u>	<u>Location</u>	<u>Qty (lbs)*</u>	<u>Type</u>
-	-	50	Waste Area
M-1202	0+00 to 2+25	5	Reconstruction
N-1900	0+00 to 13+84	64	Construction
N-2000	0+00 to 8+70	20	Reconstruction
N-2010	0+00 to 12+21	56	Construction
N-2010	0+00 to 12+21	28	Abandonment
N-2100	0+00 to 5+41	12	Reconstruction
N-2100	5+41 to 12+39	32	Construction

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

8-16 REVEGETATION SUPPLY

The Purchaser shall provide the grass seed.

8-17 REVEGETATION TIMING

Purchaser shall revegetate during the first available opportunity after road work is completed. Soils may not be allowed to sit exposed for longer than one month without receiving revegetation treatment unless otherwise approved in writing by the Contract Administrator.

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixture listed below on all exposed soil at a rate of 50 pounds per acre of exposed soil. Grass seed must meet the following specifications:

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

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>
Perennial Rye	35-45
Red Fescue	30-40
Highland Bent	5-15
White Clover	10-20
Inert and Other Crop	0.5

SECTION 9 – POST-HAUL ROAD WORK

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

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

9-5 POST-HAUL MAINTENANCE

Purchaser 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.

9-21 ROAD ABANDONMENT

Purchaser shall abandon the following roads before the termination of this contract.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
N-2010	0+00 to 12+21	Light

9-22 LIGHT ABANDONMENT

- Remove road shoulder berms except as directed.
- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 100 feet, or as marked in the field.
- Block roads with earthen barricades in accordance with the attached EARTHEN BARRICADE DETAIL.
- Remove culverts.
- Remove ditch cross drain culverts and leave the resulting trench open.
- Apply grass seed concurrently with abandonment and in accordance with Section 8 EROSION CONTROL.
- Cover, concurrently with abandonment, all exposed soils within 50 feet of any live stream, with a 4-inch deep layer of straw.

SECTION 10 MATERIALS

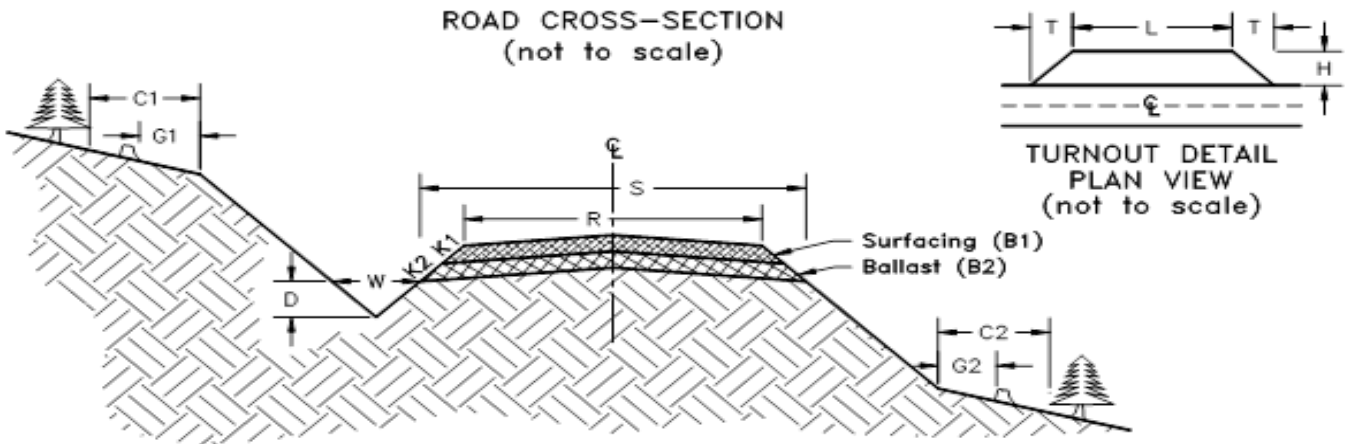
10-17 CORRUGATED PLASTIC CULVERT

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

10-22 PLASTIC BAND

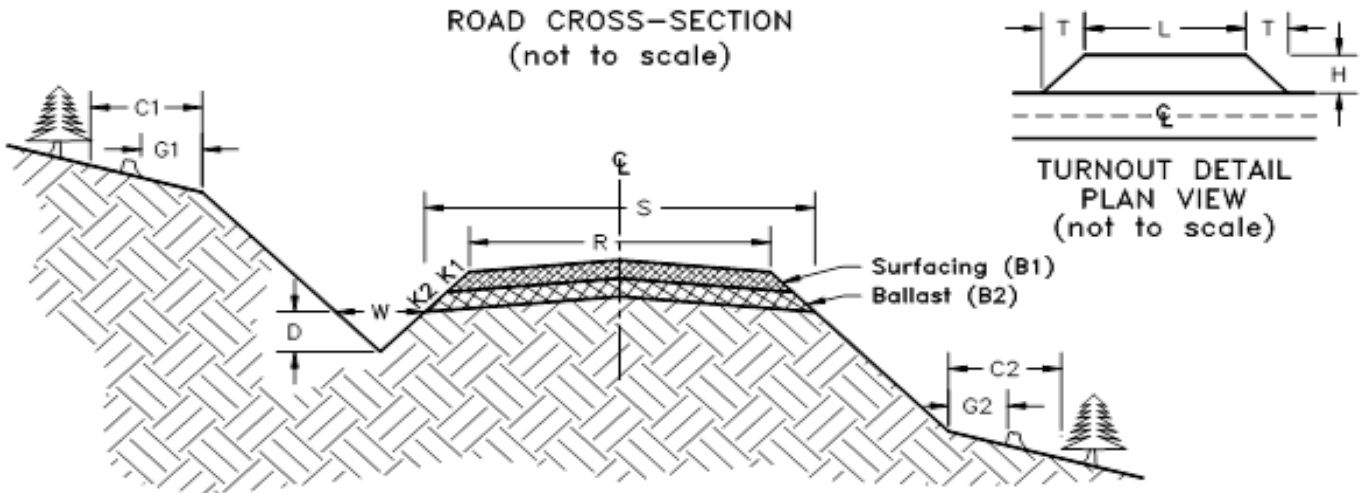
Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used. Couplings must be split coupling band. Split coupling bands must have a minimum of four corrugations, two on each side of the pipe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

TYPICAL SECTION SHEET



Road Name	From Station	To Station	Tolerance Class	Width (ft)		Ditch (ft)		Crown (%)	Grubbing Limits (ft)		Clearing Limits (ft)	
				Subgrade (S)	Road (R)	Width (W)	Depth (D)		G1	G2	C1	C2
M-Line	0+00	248+75	A	-	12	-	-	4	-	-	-	-
M-1202	0+00	2+25	B	16	12	3	1	4	5	5	10	10
N-Line	0+00	51+87	A	-	12	-	-	4	-	-	-	-
N-1900	0+00	13+84	C	16	12	3	1	4	5	5	10	10
N-2000	0+00	8+70	B	16	12	3	1	4	5	5	10	10
N-2010	0+00	12+21	C	16	12	3	1	4	5	5	10	10
N-2100	0+00	5+41	B	16	12	3	1	4	5	5	10	10
N-2100	5+41	12+39	C	16	12	3	1	4	5	5	10	10

ROCK LIST
(Page 1 of 2)



1 1/4-INCH CRUSHED ROCK

			<u>Compacted</u>				<u>Rock</u>			
<u>Road</u>	<u>From</u>	<u>To</u>	<u>Rock</u>	<u>CY/</u>	<u>No.</u>	<u>CY</u>	<u>Source</u>	<u>Turnout (ft)</u>		
			<u>Depth (in)</u>	<u>Station</u>	<u>Stations</u>	<u>Subtotal</u>	M-Line Pit	<u>L</u>	<u>H</u>	<u>T</u>
M-Line	-	0+00 248+75	3	16	248.75	4,042				
N-Line	-	0+00 51+87	3	16	51.87	843				

REQUIRED 1 1/4-INCH CRUSHED ROCK TOTAL 4885 Cubic Yards

ROCK LIST
(Page 2 of 2)

4-INCH JAW RUN ROCK

			<u>Compacted</u>				<u>Rock</u>				
<u>Road</u>	<u>From</u>	<u>To</u>	<u>Rock</u>	<u>CY/</u>	<u>No.</u>	<u>CY</u>	<u>Source</u>	<u>Turnout (ft)</u>			
			<u>Depth (in)</u>	<u>Station</u>	<u>Stations</u>	<u>Subtotal</u>	M-Line Pit	<u>L</u>	<u>H</u>	<u>T</u>	
M-1202	-	0+00	2+25	12	65	2.25	146				
M-1202	-	Turnaround	1+25	-	-	-	42				
M-1202	-	Landing	2+25	-	-	-	63				
N-1900	-	0+00	13+84	18	98	13.84	1,349				
N-1900	-	Turnaround	4+11	-	-	-	63				
N-1900	-	Landing	5+11	-	-	-	95				
N-1900	-	Turnaround	12+84	-	-	-	63				
N-1900	-	Landing	13+84	-	-	-	95				
N-1900	-	Culvert	-	-	-	-	8				
N-2000	-	0+00	8+70	12	65	8.70	566				
N-2010	-	0+00	12+21	18	98	12.21	1,190				
N-2010	-	Turnaround	2+48	-	-	-	63				
N-2010	-	Landing	3+48	-	-	-	95				
N-2010	-	Turnaround	11+21	-	-	-	63				
N-2010	-	Landing	12+21	-	-	-	95				
N-2010	-	Culvert	-	-	-	-	14				
N-2100	-	0+00	5+41	12	65	5.41	352				
N-2100	-	5+41	12+39	18	98	6.98	681				
N-2100	-	Turnaround	11+39	-	-	-	63				
N-2100	-	Landing	12+39	-	-	-	95				
N-2100	-	Culvert	-	-	-	-	4				

REQUIRED 4-INCH JAW RUN ROCK TOTAL 5199 Cubic Yards

CULVERT LIST

Road		Culvert		Erosion rock			Bedding/backfill	Construction	Culvert marker			Remarks
Name	Station	Diameter (in)	Culvert	Inlet (CY)	Outlet (CY)	Type	Type	Staked (Y/N)	Inlet (Y/N)	Outlet (Y/N)		
N-1900	4+48	18	30	1	1	JR	NT	N	Y	Y		Cross drain
N-1900	8+92	18	30	1	1	JR	NT	N	Y	Y		Cross drain, sag
N-1900	10+06	18	30	1	1	JR	NT	N	Y	Y		Cross drain, sag
N-1900	12+97	18	30	1	1	JR	NT	N	Y	Y		Cross drain
N-2010	0+87	-	-	-	-	-	-	-	-	-		DOR
N-2010	4+00	18	30	1	1	JR	NT	N	Y	Y		Cross drain
N-2010	8+49	18	30	1	1	JR	NT	N	Y	Y		Disconnect
N-2010	9+00	24	40	4	4	JR	NT	N	Y	Y		Stream, Np
N-2010	9+60	18	30	1	1	JR	NT	N	Y	Y		Disconnect
N-2100	7+84	18	30	1	1	JR	NT	N	Y	Y		Cross drain, sag
N-2100	11+70	18	30	1	1	JR	NT	N	Y	Y		Cross drain

Key

- JR- 4-INCH JAW RUN ROCK
- NT- NATIVE MATERIAL
- DOL- Ditchout left
- DOR- Ditchout right

COMPACTION LIST

				<u>Maximum</u>				<u>Maximum</u>	<u>Maximum</u>
				<u>Depth</u>		<u>Equipment</u>	<u>Minimum</u>	<u>Operating</u>	<u>Amount of</u>
<u>Road</u>	<u>From</u>	<u>To</u>		<u>Per Lift</u>	<u>Equipment</u>	<u>Weight</u>	<u>Number</u>	<u>Speed</u>	<u>Deflection</u>
<u>Name</u>	<u>Station</u>	<u>Station</u>	<u>Type</u>	<u>(inches)</u>	<u>Type</u>	<u>(pounds)</u>	<u>of Passes</u>	<u>(MPH)</u>	<u>(inches)</u>
All	-	-	Existing Surface	-	Vibratory Smooth Drum	20000	5	3	1
All	-	-	Subgrade	-	Vibratory Smooth Drum	20000	4	3	1
All	-	-	Embankment	12	Excavation	30000	4	3	2
All	-	-	Fill	24	Excavation	30000	4	3	2
All	-	-	Rock	-	Vibratory Smooth Drum	20000	5	3	1
All	-	-	Waste Area	24	Excavation	30000	-	-	4

CULVERT AND DRAINAGE SPECIFICATION DETAIL

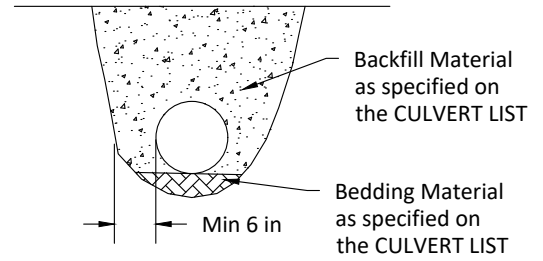
PAGE 1 OF 2

INSTALLATION REQUIREMENTS:

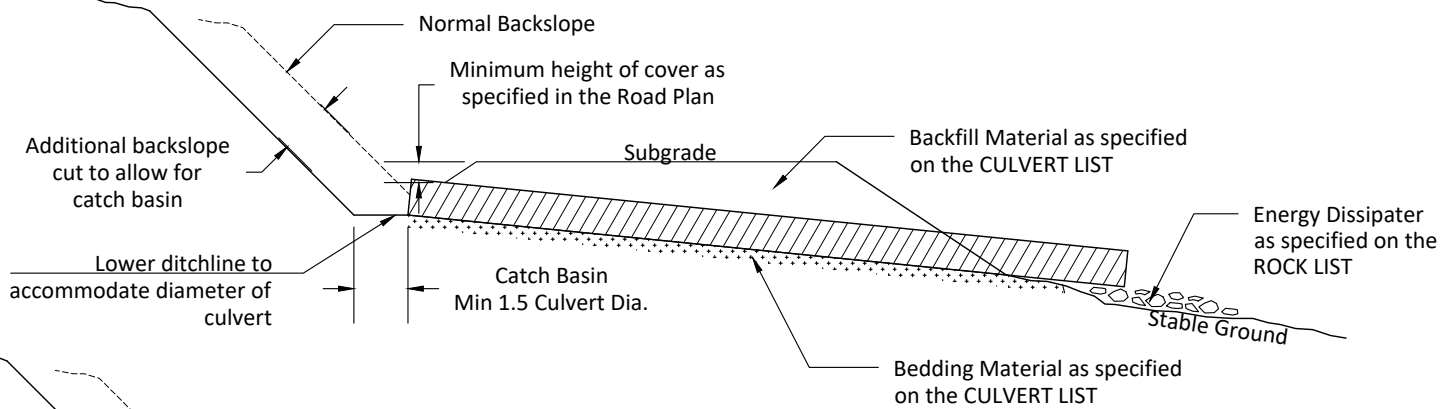
1. Proper preparation of foundation and placement of any required bedding material shall precede the installation of all culverts. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform, dense, unyielding base. The pipe must be uniformly supported along the barrel.
2. Backfill material shall be compacted under the culvert haunches, around the sides, and above the culvert in accordance with the COMPACTION LIST.

ALL DRAWINGS ARE NOT TO SCALE

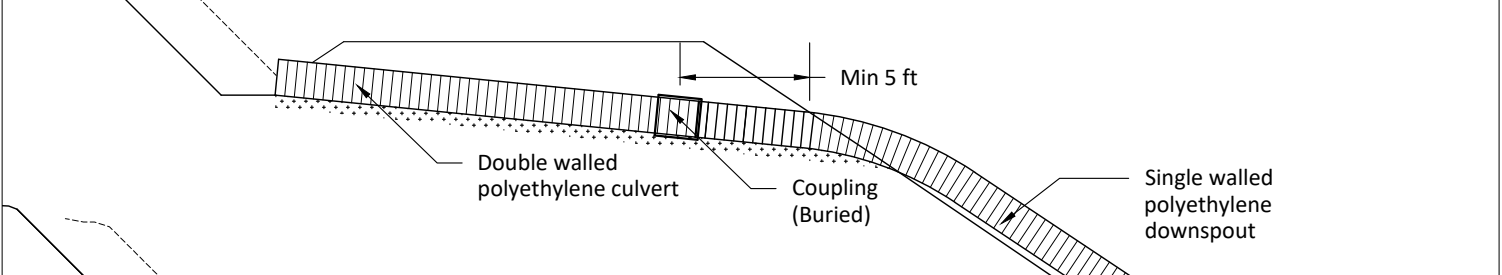
CROSS SECTION



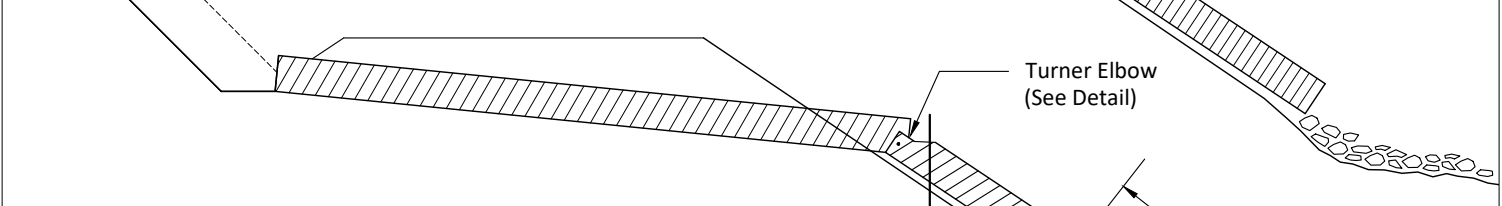
CULVERT PROFILE (TYPICAL)



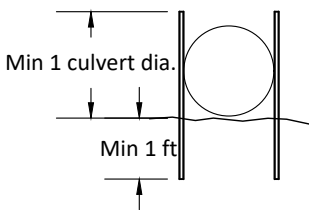
CULVERT WITH DOWNSPOUT OPTION 1



CULVERT WITH DOWNSPOUT OPTION 2

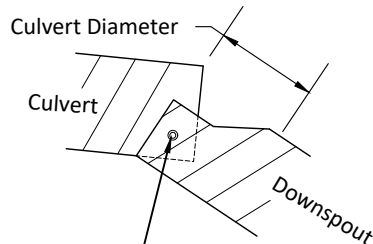


SUPPORT STAKES

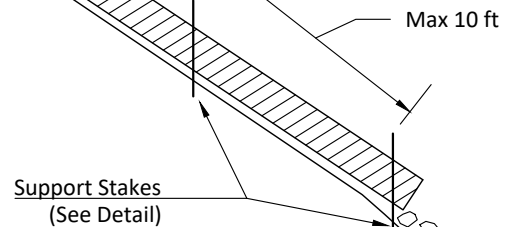


Stake Material: T-post with rust protection coating.
 Connections: Bolt support stakes to the culvert with $\frac{5}{8}$ " u-bolts, with washers on both the inside and outside of the culvert.
 Alternative staking methods may be approved, in writing, by the Contract Administrator.

TURNER ELBOW



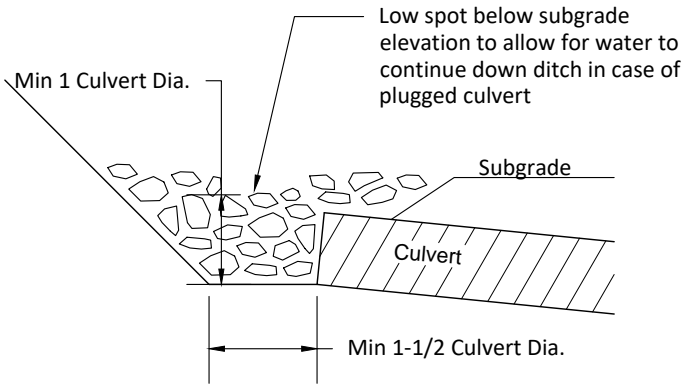
Downspout must be 6 inches larger in diameter than the culvert.



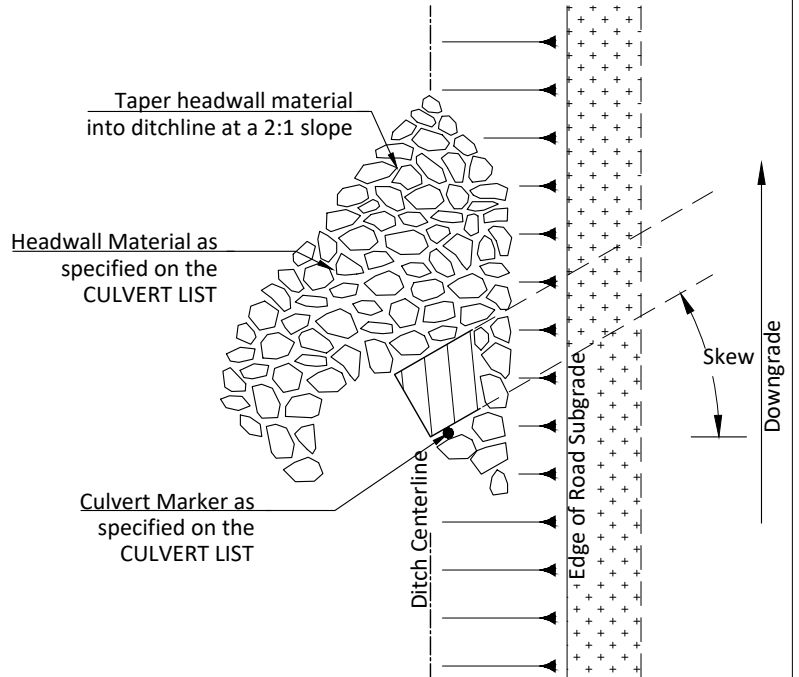
CULVERT AND DRAINAGE SPECIFICATION DETAIL
PAGE 2 OF 2

HEADWALLS

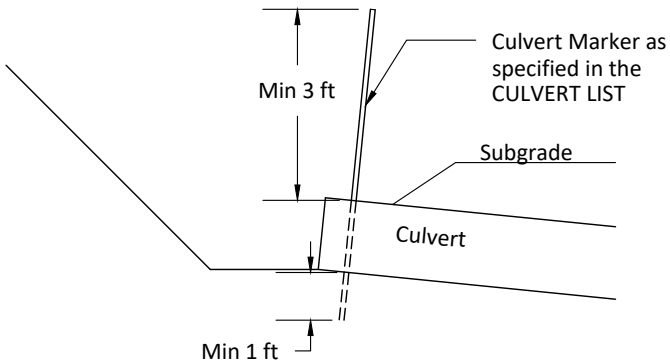
Section View



Plan View

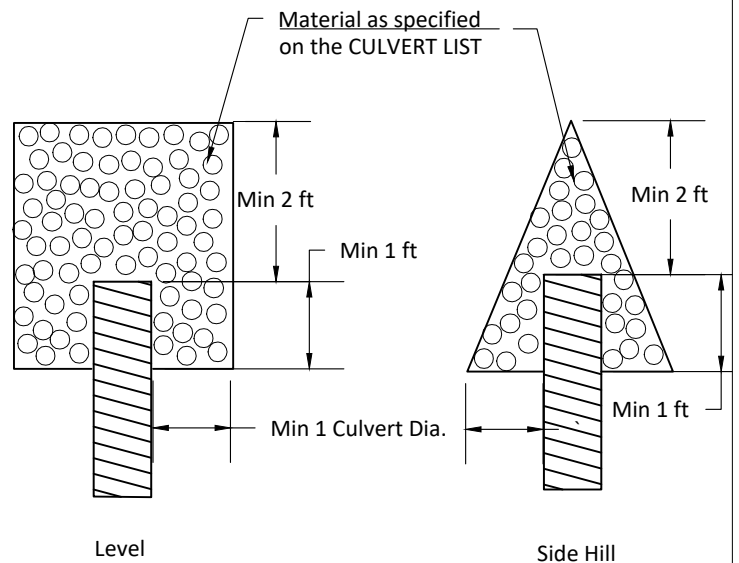


CULVERT MARKERS



Culvert Marker Material: 1 Inch I.D., Schedule 40 PVC Pipe, White. Marker must be capped on the top.
 Culvert Marker Placement: Place on uphill side of culvert, between corrugations if possible.
 Alternative culvert marker types may be approved, in writing, by the Contract Administrator.

ENERGY DISSIPATORS



Min Energy Dissipater Depth: 1 Culvert Dia.

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Page 1 of 2

Cuts and Fills

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

Surface

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

Drainage

- Prevent silt bearing road surface and ditch runoff from delivering sediment to any streams or wetlands.
- Maintain rolling dips and drivable waterbars as needed to keep them functioning as intended.
- Maintain headwalls to the road shoulder level with material that will resist erosion.
- Maintain energy dissipaters at culvert outlets with non-erodible material or rock.
- Keep ditches, culverts, and other drainage structures clear of obstructions and functioning as intended.
- Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This shall be done even during periods of inactivity.

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Page 2 of 2

Preventative Maintenance

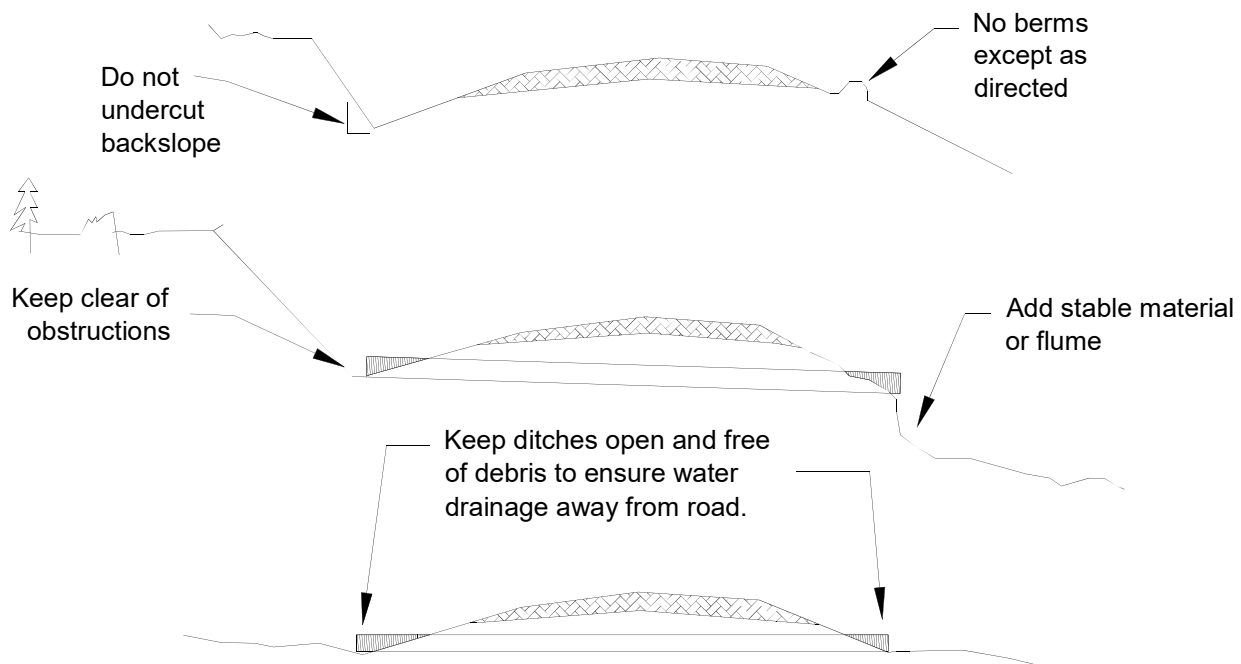
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

Debris

- Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.



LIVE STREAM CULVERT INSTALLATION PROCEDURE

Order of work is as follows, deviations shall be approved, in writing, by the Contract Administrator.

- 1) Contractor shall notify the Contract Administrator of intent to install each live stream culvert.
- 2) Assemble the items on the Materials List onsite before proceeding.
- 3) Culvert installation may not start during rain or forecast of rain.
- 4) Manage stream water according to the DEWATERING DETAIL.
- 5) Establish culvert lay, install energy dissipater, install culvert, build road fill, and place fill armor.
- 6) Backfill sumps.
- 7) Apply erosion control according to Section 8 of the Road Plan.

Materials List:

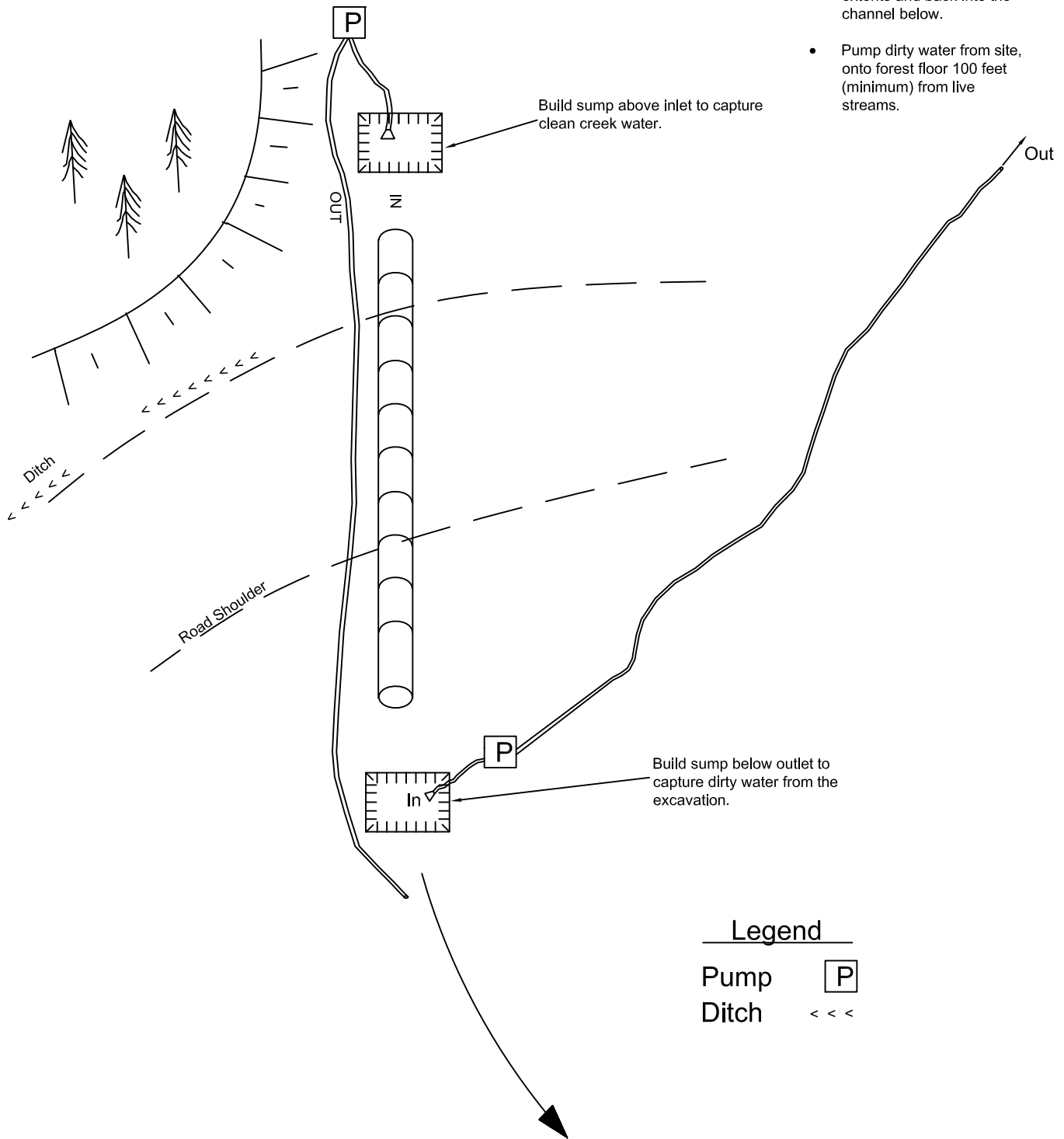
- pumps
- erosion rock
- culvert
- fill material
- armor
- grass seed
- straw bales

DEWATERING DETAIL

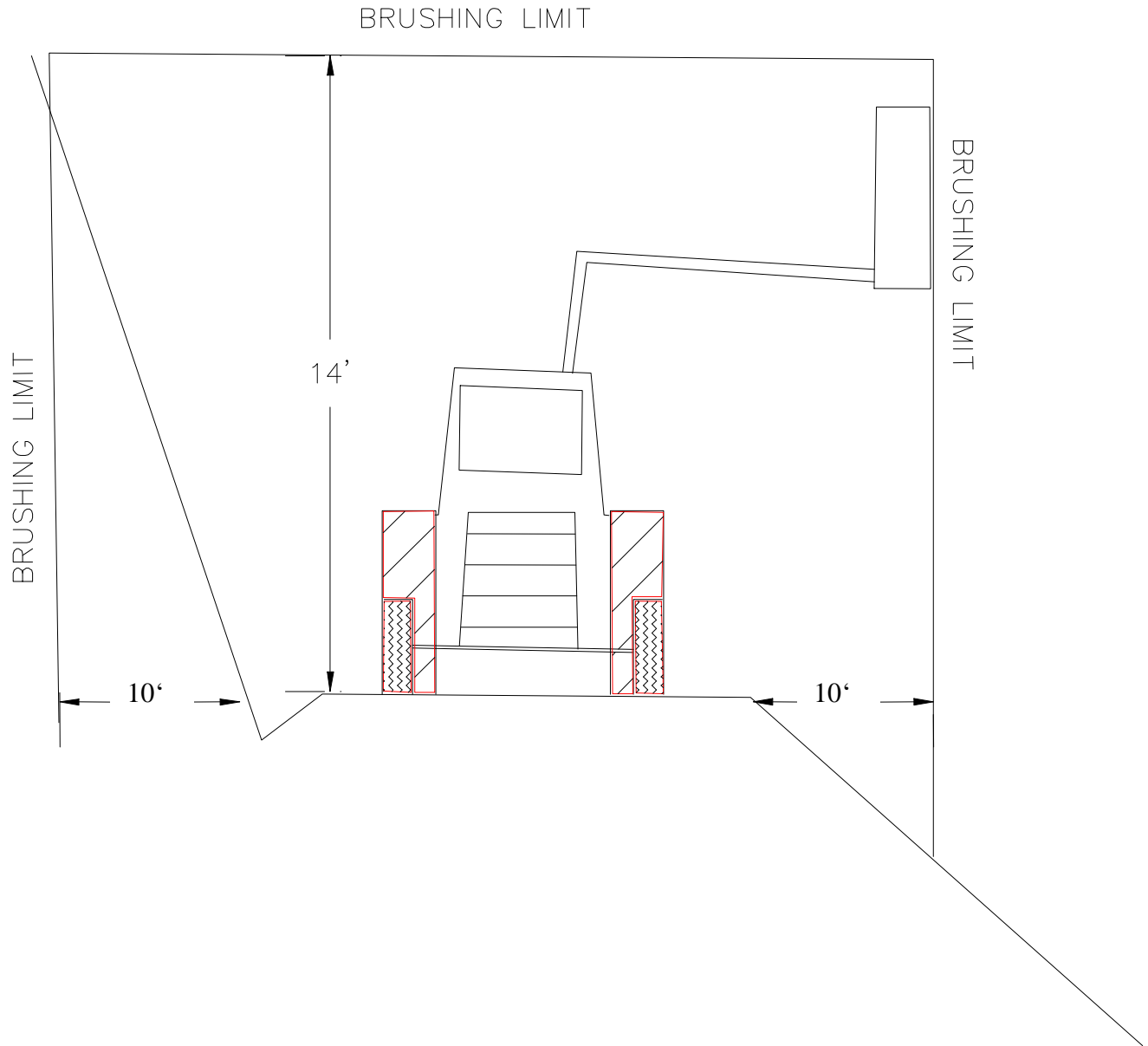
NOT TO SCALE

Notes:

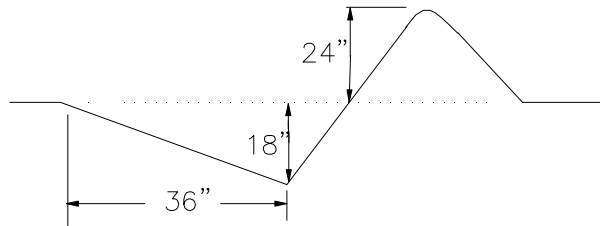
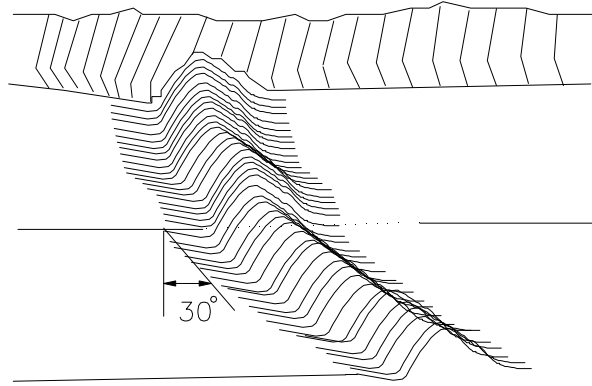
- Pump clean creek water around the excavation extents and back into the channel below.
- Pump dirty water from site, onto forest floor 100 feet (minimum) from live streams.



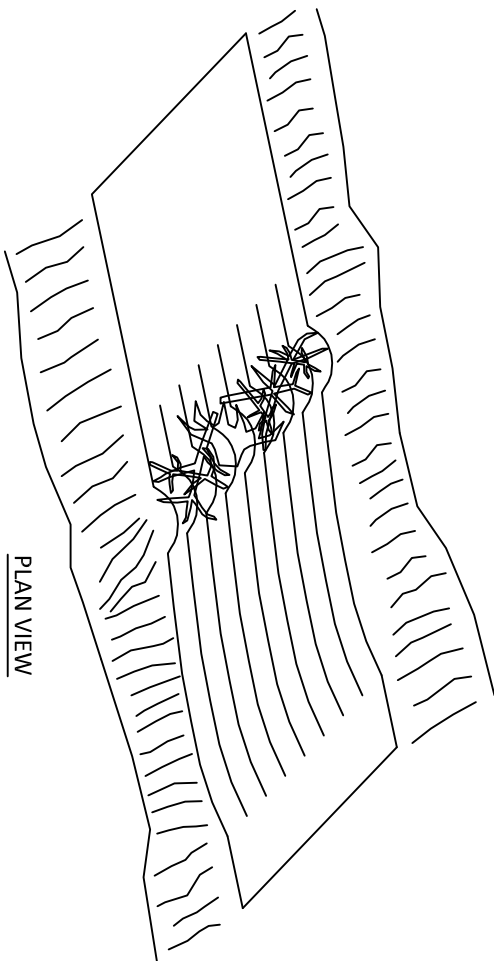
BRUSHING SECTION DETAIL



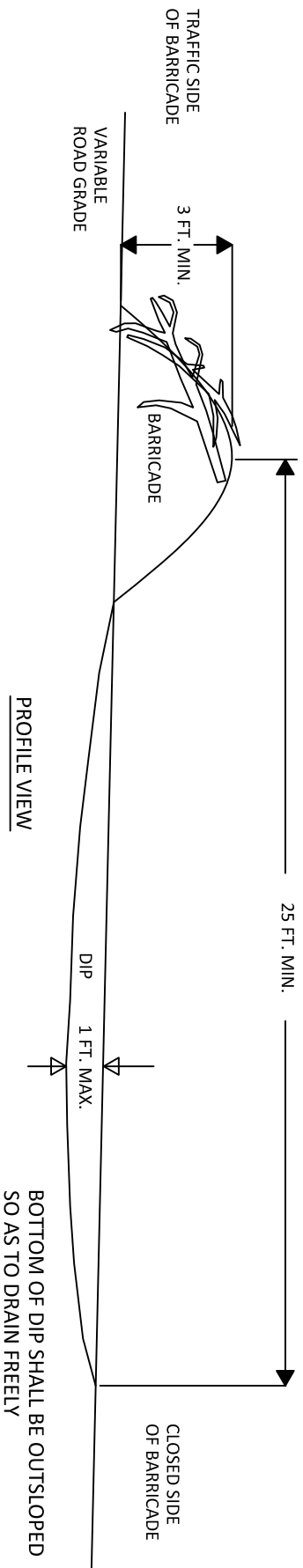
NON-DRIVABLE WATER BAR DETAIL



EARTHEN BARRICADE DETAIL



SLASH AND ROOT WADS SHALL BE INCORPORATED INTO THE TRAFFIC SIDE OF THE BARRICADE.



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

ROCK SOURCE DEVELOPMENT PLAN
M-Line Pit
Page 1 of 3

1. Mining shall be within the Mining Area as shown on the Map.
2. Vegetation shall be cleared a minimum of 10 feet beyond the top of the overburden top of cut.
3. Stumps shall be grubbed a minimum of 5 feet beyond the top of the overburden top of cut.
4. Organic debris shall be end hauled to the designated waste area specified in 3-22 of the ROAD PLAN.
5. Overburden shall be stripped to rock a minimum of 5 feet beyond the top of all pit faces and sloped no steeper than a 1:1 to daylight.
6. Waste material shall be end hauled to the designated waste area specified in 4-37 of the ROAD PLAN.
7. The Operator shall submit an informational drilling and shooting plan to the Contract Administrator prior to any drilling. (Form #M-126PAC)
8. Drilling and rock extraction may begin when the Contract Administrator has approved the clearing and grubbing, overburden removal, and informational drilling and shooting plan.
9. Pit faces, created or modified, shall not exceed 20 feet in height. Faces shall be sloped at ¼:1. Working bench width shall be a minimum of 20 feet.
10. The pit floor shall have continuity of slope and be left in a smooth and neat condition, providing drainage at a minimum of 2 percent. All knobs, bumps, or extrusions shall be removed to the designated floor level by excavation or drill and shoot techniques.
11. No sediment shall enter live water.
12. The location and amount of material to be placed in a temporary stockpile is subject to approval of the Contract Administrator. All stockpiled material shall be maintained in a neat and useable condition.
13. Oversize material remaining in the pit at the conclusion of use shall not exceed 5 percent of the total volume mined during that operation. Oversize material is defined as rock fragments larger than two feet in any direction. At the conclusion of operations, all remaining oversize material shall be placed as directed by the Contract Administrator.

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

ROCK SOURCE DEVELOPMENT PLAN
M-Line Pit
Page 2 of 3

14. All operations shall be carried out in compliance with all regulations of:
 - a. Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration.
 - b. "Safety Standards for Construction Work" (296-155 WAC), Washington Department of Labor and Industries.

15. At the end of operations, pit faces and walls shall be scaled and cleared of loose and overhanging material; benches shall have safety berms constructed or access blocked to highway vehicles. Upon completion of operations in the pit, the area will be left in a condition that will not endanger public safety, damage property, or be hazardous to animal or human life.

16. All exposed soil in the waste area shall be revegetated in accordance with ROAD PLAN clause 8-15 through 8-25.

17. The pit area shall be worked and left in a condition that future operations may proceed in an orderly manner.

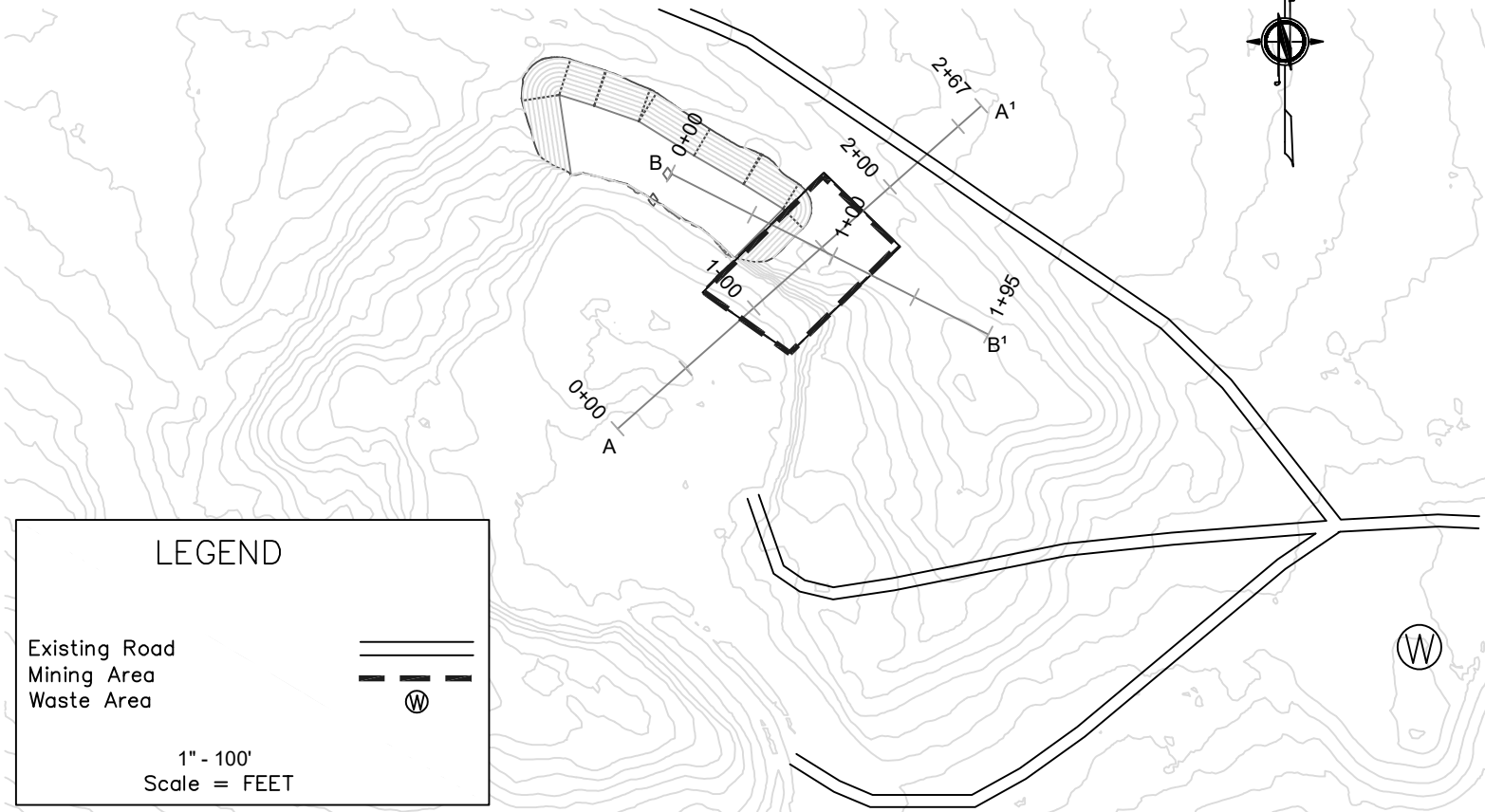
18. Upon completion of operations, the site shall be cleared of all temporary structures and left in a neat and presentable condition. Access shall be blocked with rip rap as directed by the Contract Administrator.

19. At the completion of rock source operations, the Contractor shall obtain written approval of final rock source condition and compliance with the terms of this plan.

ROCK SOURCE DEVELOPMENT PLAN

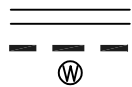
M-Line Pit

Page 3 of 3



LEGEND

Existing Road
Mining Area
Waste Area

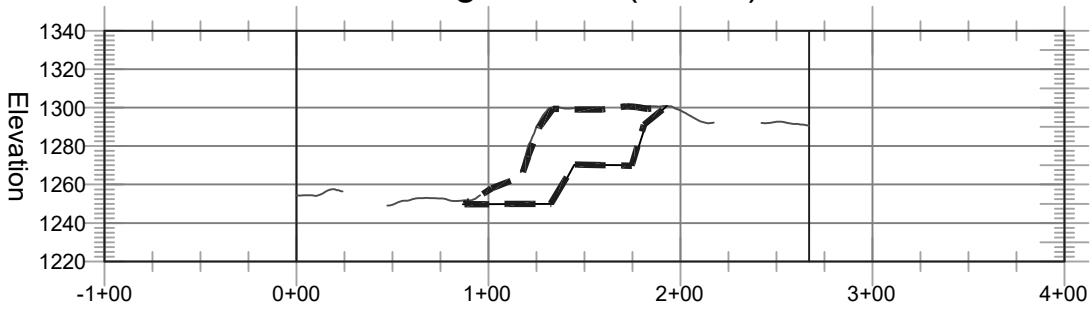


1" - 100'
Scale = FEET

CROSS SECTION PROFILE

Not to Scale

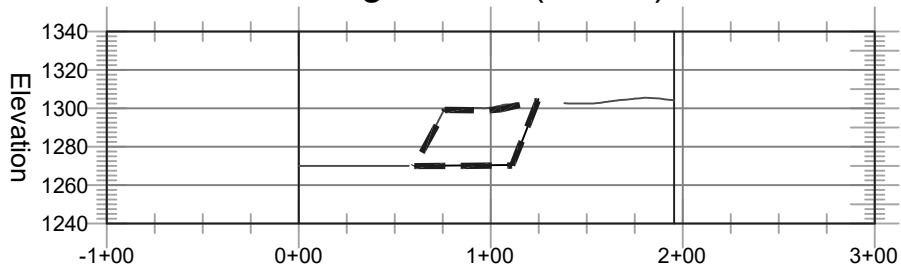
Alignment - (a to a')



CROSS SECTION PROFILE

Not to Scale

Alignment - (b to b')



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
PACIFIC CASCADE REGION

INFORMATIONAL BLASTING PLAN

Timber Sale/Project Name: _____ App./Project No.: _____

1. Blaster-in-Charge: Name: _____

Company: _____

Address: _____

Telephone: _____

2. Quarry Name/Location: _____

3. Total Estimated Cubic Yards in Blast (loose): _____

4. Hole Spacing: _____

5. Burden: _____

6. Hole Diameter: _____

7. Hole Depth: _____

8. Sub Drill: _____

9. Number of Holes: _____

10. Stemming Depth: _____

11. Explosive (mfg., name, density, %, V.O.D.): _____

12. Type and Size of Primer (if applicable): _____

13. Total Weight of Primers for Shot: _____

14. Calculated Powder Factor/Cubic Yard: _____

15. Number of Delays (in M.S.): _____

M-126PAC (03/04)

INFORMATIONAL BLASTING PLAN

Page 2 of 3

16. Number of Holes Fired on Each Delay: _____

17. Total Amount of Explosives Fired on Each Delay: _____

18. Type of Blasting Machine: _____

19. Date, Start Drilling: _____

20. Date and Time, Start Loading: _____

21. Date and Time of Blast (approx.): _____

INFORMATIONAL BLASTING PLAN

Page 3 of 3

22. Detail drawing of delay system (show hole pattern and delays in milliseconds). Attach additional sheets if required:

23. Typical cross-section of hole (show primer, main charge, sub drill, and stemming):

23. Submitted by: _____ Date: _____

24. Received by: _____ Date: _____

Note: Attach copies of manufacturer=s data sheet(s) for explosive and caps.

M-126PAC (03/04)

SUMMARY Road Development Estimate
 REGION Pacific Cascade
 DISTRICT St Helens

SALE/PROJECT NAME Jigsaw

AGREEMENT NO. 30-103988

ROAD NAME	N-1900, N-2010, N-2100	M-1202, N-2000, N-2100	M-Line, N-Line
ROAD STANDARD	Construction	Reconstruction	Maintenance
NUMBER OF STATIONS	33+03	16+36	300+62
CLEARING & GRUBBING	\$ 7,868	\$ 1,817	\$ -
EXCAVATION AND FILL	\$ 23,998	\$ 3,366	\$ -
MISC. MAINTENANCE	\$ 882	\$ 118	\$ 7,050
ROAD ROCK	Optional \$ -	\$ -	\$ -
	Required \$ 100,435	\$ 23,477	\$ 156,977
	Total \$ 100,435	\$ 23,477	\$ 156,977
ROCK STOCKPILE PROD	\$ -	\$ -	\$ -
CULVERTS AND FLUMES	\$ 7,456	\$ -	\$ -
STRUCTURES	\$ -	\$ -	\$ -
MOBILIZATION	\$ 4,033	\$ 4,033	\$ 4,033
TOTAL COSTS	\$ 144,672	\$ 32,812	\$ 168,060
COST PER STATION	\$ 4,380	\$ 2,006	\$ 559.04
ROAD DEACTIVATION & ABANDONMENT COSTS	\$ 3,630		

TOTAL (All Roads) \$349,173
TOTAL (Minus Optional Rock) \$349,173
SALE VOLUME MBF 4468
TOTAL \$/MBF \$ 78.15
TOTAL \$/MBF (Minus Optional Rock) \$ 78.15

ESTIMATED BY Brett Wallachy

ROCK SOURCE SUMMARY

SALE/PROJECT NAME Jigsaw
CONTRACT # 30-103988

PIT NAME M-Line Pit
LOCATION S4 T12N R8W

ASSUMED ROCK SWELL FACTOR LOOSE/COMPACTED 1.25
ASSUMED ROCK DENSITY TONS/CY 1.3

MISCELLANEOUS

ROCK PIT PREPARATION

Stripping overburden	\$ 280.00	per hour x 10	\$ 2,800
End haul overburden to Waste Area	\$ 165.00	per hour x 10	\$ 1,650
Spreading overburden at Waste Area	\$ 200.00	per hour x 10	\$ 2,000

WASTE AREA REVEGETATION

Grass seeding	\$ 3.64	per pound x 50	\$ 182
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MISCELLANEOUS TOTAL			\$ 6,632
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MOBILIZATION

SALE/PROJECT NAME Jigsaw
CONTRACT # 30-103988

PRE-HAUL/CONSTRUCTION EQUIPMENT

MOBILIZATION

Grader	\$ 1,000	each x 1	\$ 1,000
Loader	\$ 1,000	each x 1	\$ 1,000
Dump truck	\$ 100	each x 6	\$ 600
Dozer, small	\$ 500	each x 1	\$ 500
Dozer, large	\$ 1,000	each x 1	\$ 1,000
Brusher	\$ 500	each x 1	\$ 500
Excavator, small	\$ 500	each x 1	\$ 500
Excavator, large	\$ 1,000	each x 1	\$ 1,000
Roller	\$ 500	each x 1	\$ 500
Rock drill	\$ 1,000	each x 1	\$ 1,000
Jaw & cone	\$ 4,000	each x 1	\$ 4,000
PRE-HAUL/CONSTRUCTION SUBTOTAL			\$ 11,600

POST-HAUL/ABANDONMENT EQUIPMENT

MOBILIZATION

Excavator, small	\$ 500	each x 1	\$ 500
POST-HAUL/ABANDONMENT SUBTOTAL			\$ 500

MOBILIZATION TOTAL \$ 12,100

SUMMARY OF ROAD

SALE/PROJECT NAME Jigsaw
CONTRACT # 30-103988
ROAD NAME M-Line

Required pre-haul maintenance (stations) 248+75

REQUIRED PRE-HAUL MAINTENANCE

MISC. MAINTENANCE

Maintenance grading	\$	18.03	per station x	248.75		\$	4,485
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ROAD ROCK

REQUIRED

1 1/4-INCH MINUS CRUSHED ROCK	\$	13.57	per CY x	4229		\$	57,369
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Rock haul	\$	165.00	per hour x	398	round trip haul (miles)	4.71	\$	65,744
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Spread & compact rock	\$	3.06	per CY x	4229		\$	12,928
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TOTAL ROAD COST \$ 140,526

SUMMARY OF ROAD

SALE/PROJECT NAME Jigsaw
 CONTRACT # 30-103988
 ROAD NAME M-1202

Optional reconstruction (stations) 2+25
 Distance to M-Line Pit (miles) 0.96

REQUIRED RECONSTRUCTION

CLEARING & GRUBBING

Clearing & grubbing	\$	128.80	per station x	2.25		\$	290
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EXCAVATION AND FILL

Reconstruction	\$	202.50	per station x	2.25		\$	456
Landing	\$	284.00	each x	1		\$	284
Turnaround	\$	284.00	each x	1		\$	284
Shape & compact subgrade	\$	36.03	per station x	2.25		\$	81

MISC. MAINTENANCE

Grass seeding	\$	3.64	per pound x	5		\$	19
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ROAD ROCK

REQUIRED

4-INCH JAW RUN ROCK	\$	12.27	per CY x	251		\$	3,078
Rock haul	\$	165.00	per hour x	10	round trip haul (miles)	1.96	\$ 1,624
Spread & compact rock	\$	3.06	per CY x	251		\$	767

TOTAL ROAD COST \$ 6,882

SUMMARY OF ROAD

SALE/PROJECT NAME Jigsaw
CONTRACT # 30-103988
ROAD NAME N-Line

Required pre-haul maintenance (stations) 51+87
Distance to M-Line Pit (miles) 0.21

REQUIRED PRE-HAUL MAINTENANCE

MISC. MAINTENANCE

Brushing	\$	31.41	per station x	51.87		\$	1,629
Maintenance grading	\$	18.03	per station x	51.87		\$	935

ROAD ROCK

REQUIRED

1 1/4-INCH MINUS CRUSHED ROCK	\$	13.57	per CY x	882		\$	11,963
Rock haul	\$	165.00	per hour x	25	round trip haul (miles)	1.40	\$ 4,067
Spread & compact rock	\$	3.06	per CY x	882		\$	2,696

TOTAL ROAD COST \$ 21,290

SUMMARY OF ROAD

SALE/PROJECT NAME Jigsaw
 CONTRACT # 30-103988
 ROAD NAME N-1900

Optional construction (stations) 13+84
 Distance to M-Line Pit (miles) 1.19

OPTIONAL CONSTRUCTION

CLEARING & GRUBBING

Clearing & grubbing \$ 238.20 per station x 13.84 \$ 3,297

EXCAVATION AND FILL

Construction \$ 658.00 per station x 13.84 \$ 9,107

Landing \$ 284.00 each x 2 \$ 568

Turnaround \$ 284.00 each x 2 \$ 568

Shape & compact subgrade \$ 36.03 per station x 13.84 \$ 499

MISC. MAINTENANCE

Grass seeding \$ 3.64 per pound x 64 \$ 231

ROAD ROCK

REQUIRED

4-INCH JAW RUN ROCK \$ 12.27 per CY x 1678 \$ 20,587

Rock haul \$ 165.00 per hour x 89 round trip haul (miles) 2.64 \$ 14,635

Spread & compact rock \$ 3.06 per CY x 1670 \$ 5,106

Place erosion rock \$ 10.25 per CY x 8 \$ 82

CULVERTS AND FLUMES

18" Polyethylene, double wall \$ 20.89 per foot x 120 \$ 2,507

Culvert marker \$ 28.50 each x 8 \$ 228

TOTAL ROAD COST \$ 57,415

SUMMARY OF ROAD

SALE/PROJECT NAME Jigsaw
CONTRACT # 30-103988
ROAD NAME N-2000

Required reconstruction (stations) 8+70
Distance to M-Line Pit (miles) 1.19

REQUIRED RECONSTRUCTION

CLEARING & GRUBBING

Clearing & grubbing \$ 128.80 per station x 8.70 \$ 1,121

EXCAVATION AND FILL

Reconstruction \$ 202.50 per station x 8.70 \$ 1,762

Shape & compact subgrade \$ 36.03 per station x 8.70 \$ 313

MISC. MAINTENANCE

Grass seeding \$ 3.64 per pound x 20 \$ 73

ROAD ROCK

REQUIRED

4-INCH JAW RUN ROCK \$ 12.27 per CY x 566 \$ 6,937

Rock haul \$ 165.00 per hour x 29 round trip haul (miles) 2.55 \$ 4,749

Spread & compact rock \$ 3.06 per CY x 566 \$ 1,729

TOTAL ROAD COST \$ 16,683

SUMMARY OF ROAD

SALE/PROJECT NAME Jigsaw
 CONTRACT # 30-103988
 ROAD NAME N-2010

Optional construction (stations) 12+21
 Distance to M-Line Pit (miles) 1.36

OPTIONAL CONSTRUCTION

CLEARING & GRUBBING

Clearing & grubbing \$ 238.20 per station x 12.21 \$ 2,908

EXCAVATION AND FILL

Construction \$ 658.00 per station x 12.21 \$ 8,034
 Landing \$ 284.00 each x 2 \$ 568
 Turnaround \$ 284.00 each x 2 \$ 568
 Shape & compact subgrade \$ 36.03 per station x 12.21 \$ 440

MISC. MAINTENANCE

Grass seeding \$ 3.64 per pound x 56 \$ 204
 Straw mulching \$ 3,301.40 per acre x 0.1 \$ 330

ROAD ROCK

REQUIRED

4-INCH JAW RUN ROCK \$ 12.27 per CY x 1525 \$ 18,701
 Rock haul \$ 165.00 per hour x 90 round trip haul (miles) 2.94 \$ 14,799
 Spread & compact rock \$ 3.06 per CY x 1511 \$ 4,618
 Place erosion rock \$ 10.25 per CY x 14 \$ 144

CULVERTS AND FLUMES

18" Polyethylene, double wall \$ 20.89 per foot x 90 \$ 1,880
 24" Polyethylene, double wall \$ 28.26 per foot x 40 \$ 1,130
 Live water installation, diversion/pumping \$ 114.00 each x 1 \$ 114
 Culvert marker \$ 28.50 each x 8 \$ 228

\$ -

ROAD DEACTIVATION & ABANDONMENT

\$ -
 Light abandonment \$ 143.50 per station x 6.34 \$ 910
 Fill removal \$ 3.38 per cubic yard x 100 \$ 338
 Live water removal, diversion/pumping \$ 114.00 each x 1 \$ 114
 Cross drain removal and disposal \$ 370.00 each x 3 \$ 1,110
 Stream culvert removal and disposal \$ 445.00 each x 1 \$ 445
 Grass seeding \$ 3.64 per pound x 15 \$ 53
 Straw mulching \$ 3,301.40 per acre x 0.2 \$ 660

TOTAL ROAD COST \$ 58,297

SUMMARY OF ROAD

SALE/PROJECT NAME Jigsaw
 CONTRACT # 30-103988
 ROAD NAME N-2100

Total road length (stations) 12+39
 Required reconstruction (stations) 5+41
 Distance to M-Line Pit (miles) 1.01
 Optional construction (stations) 6+98
 Distance to M-Line Pit (miles) 1.11

REQUIRED RECONSTRUCTION

CLEARING & GRUBBING

Clearing & grubbing \$ 128.80 per station x 5.41 \$ 697

EXCAVATION AND FILL

Reconstruction \$ 202.50 per station x 5.41 \$ 1,096
 Shape & compact subgrade \$ 36.03 per station x 5.41 \$ 195

MISC. MAINTENANCE

Grass seeding \$ 3.64 per pound x 12 \$ 45

ROAD ROCK

REQUIRED

4-INCH JAW RUN ROCK \$ 12.27 per CY x 352 \$ 4,314
 Rock haul \$ 165.00 per hour x 15 round trip haul (miles) 2.12 \$ 2,463
 Spread & compact rock \$ 3.06 per CY x 352 \$ 1,075

REQUIRED RECONSTRUCTION SUBTOTAL \$ 9,884

OPTIONAL CONSTRUCTION

CLEARING & GRUBBING

Clearing & grubbing \$ 238.20 per station x 6.98 \$ 1,663

EXCAVATION AND FILL

Construction \$ 405.00 per station x 6.98 \$ 2,827
 Landing \$ 284.00 each x 1 \$ 284
 Turnaround \$ 284.00 each x 1 \$ 284
 Shape & compact subgrade \$ 36.03 per station x 6.98 \$ 251

MISC. MAINTENANCE

Grass seeding \$ 3.64 per pound x 32 \$ 117

ROAD ROCK

REQUIRED

4-INCH JAW RUN ROCK \$ 12.27 per CY x 845 \$ 10,366
 Rock haul \$ 165.00 per hour x 40 round trip haul (miles) 2.36 \$ 6,574
 Spread & compact rock \$ 3.06 per CY x 841 \$ 2,571
 Place erosion rock \$ 10.25 per CY x 4 \$ 41

CULVERTS AND FLUMES

18" Polyethylene, double wall \$ 20.89 per foot x 60 \$ 1,254
 Culvert marker \$ 28.50 each x 4 \$ 114

OPTIONAL CONSTRUCTION SUBTOTAL \$ 26,346

TOTAL ROAD COST \$ 36,230



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region:

Timber Sale Name:

Application Number:

EXCISE TAX APPLICABLE ACTIVITIES

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

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

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

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

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

EXCISE TAX EXEMPT ACTIVITIES

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

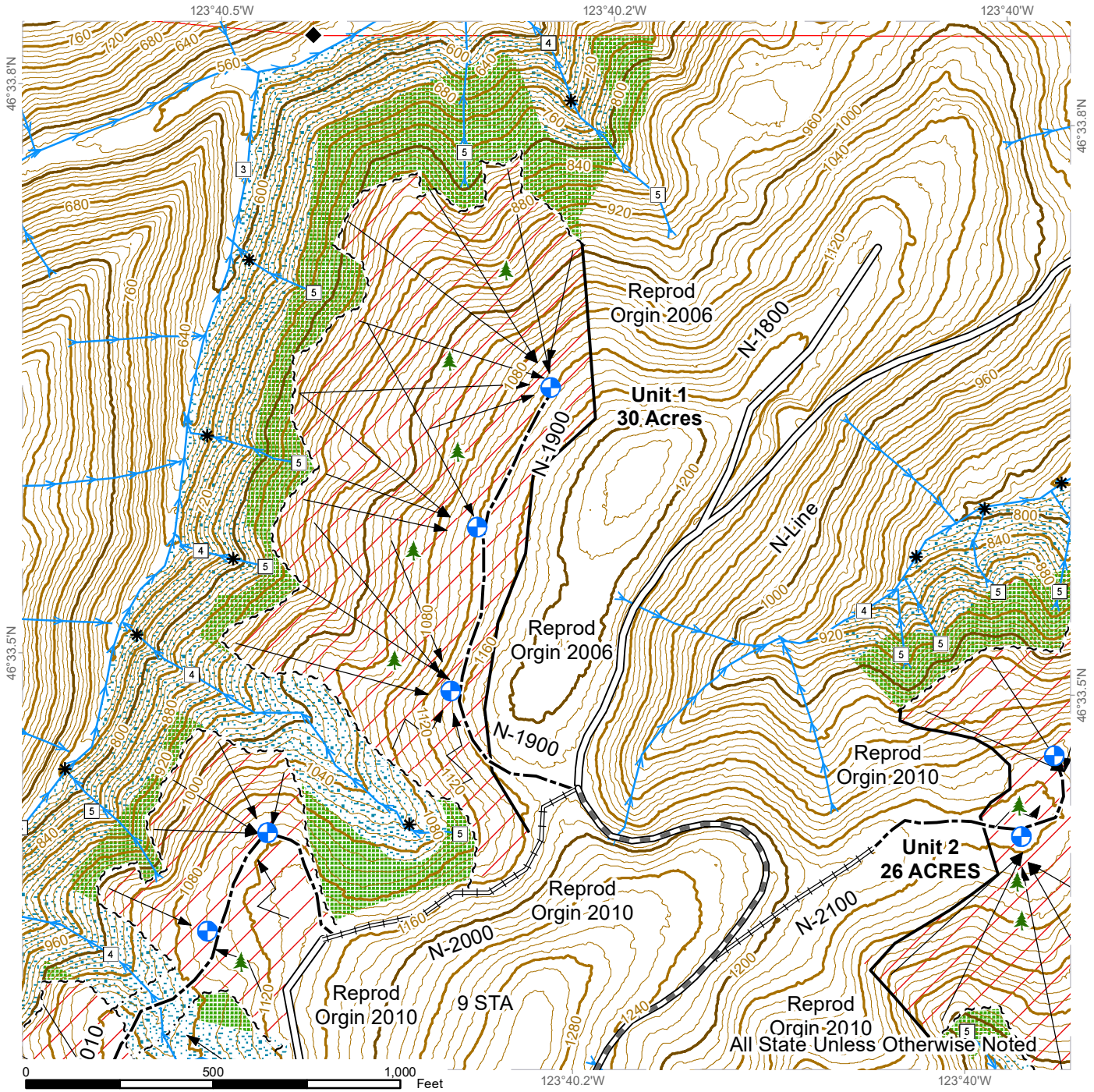
Temporary Reconstruction: **linear feet**
Roads to be reconstructed (optional and required) and then abandoned

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)

LOGGING PLAN MAP

SALE NAME: JIGSAW
AGREEMENT#: 30-103988
TOWNSHIP(S): T12R8W
TRUST(S): Common School and Indemnity (3)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 633-1504



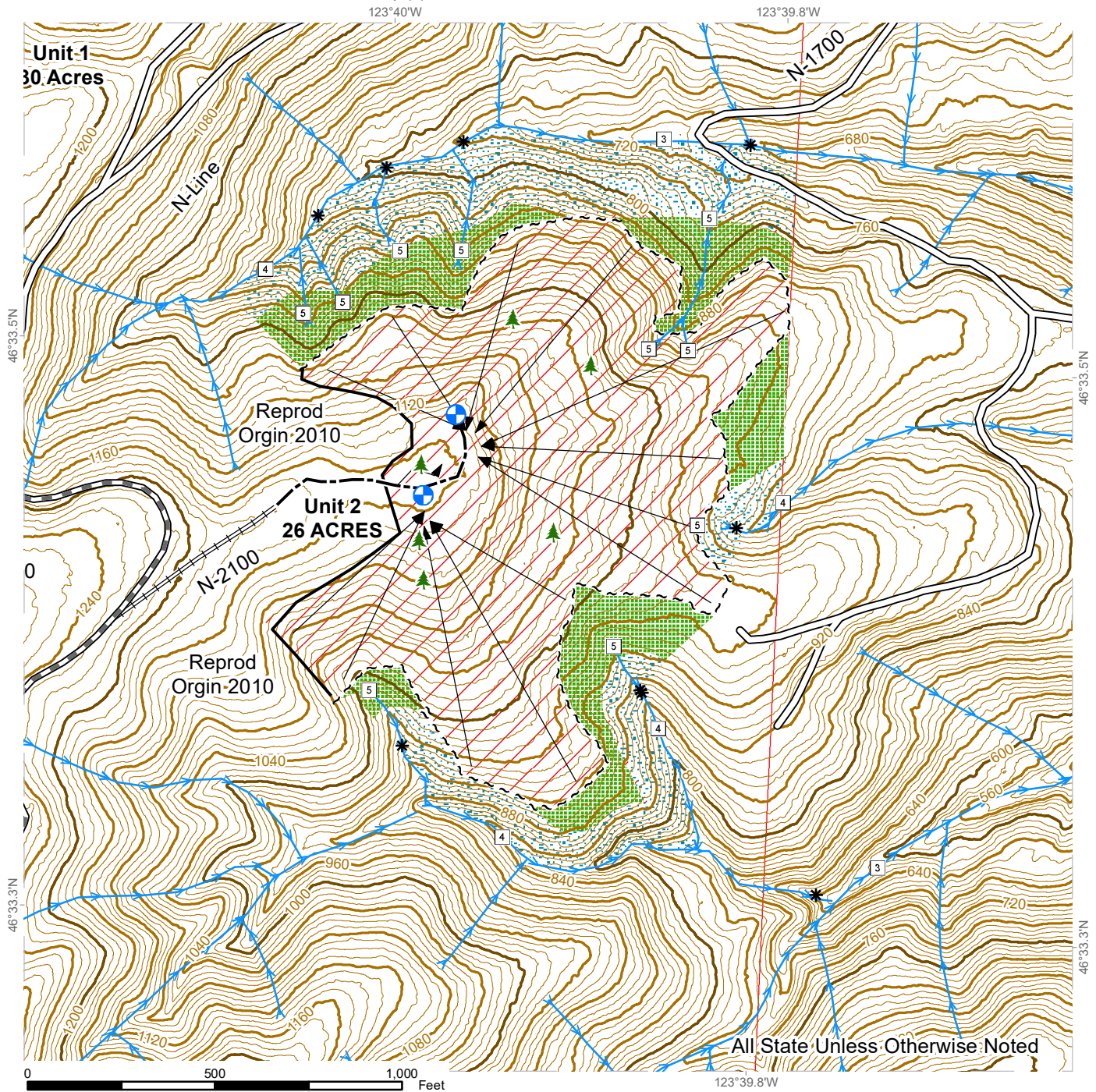
	Sale Area		Existing Roads		Stream Type
	Leave Tree Area		Required Pre-Haul Maintenance		Stream Type Break
	Riparian Mgt Zone		Required Reconstruction		Survey Monument
	Sale Boundary Tags		Optional Construction		Landing - Proposed
	Right of Way Tags		Streams		Leave Tree Area <1/4-acre
	Timber Type Change		Ground Harvest		Cable Harvest



LOGGING PLAN MAP

SALE NAME: JIGSAW
AGREEMENT#: 30-103988
TOWNSHIP(S): T12R8W
TRUST(S): Common School and Indemnity (3)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 633-1504



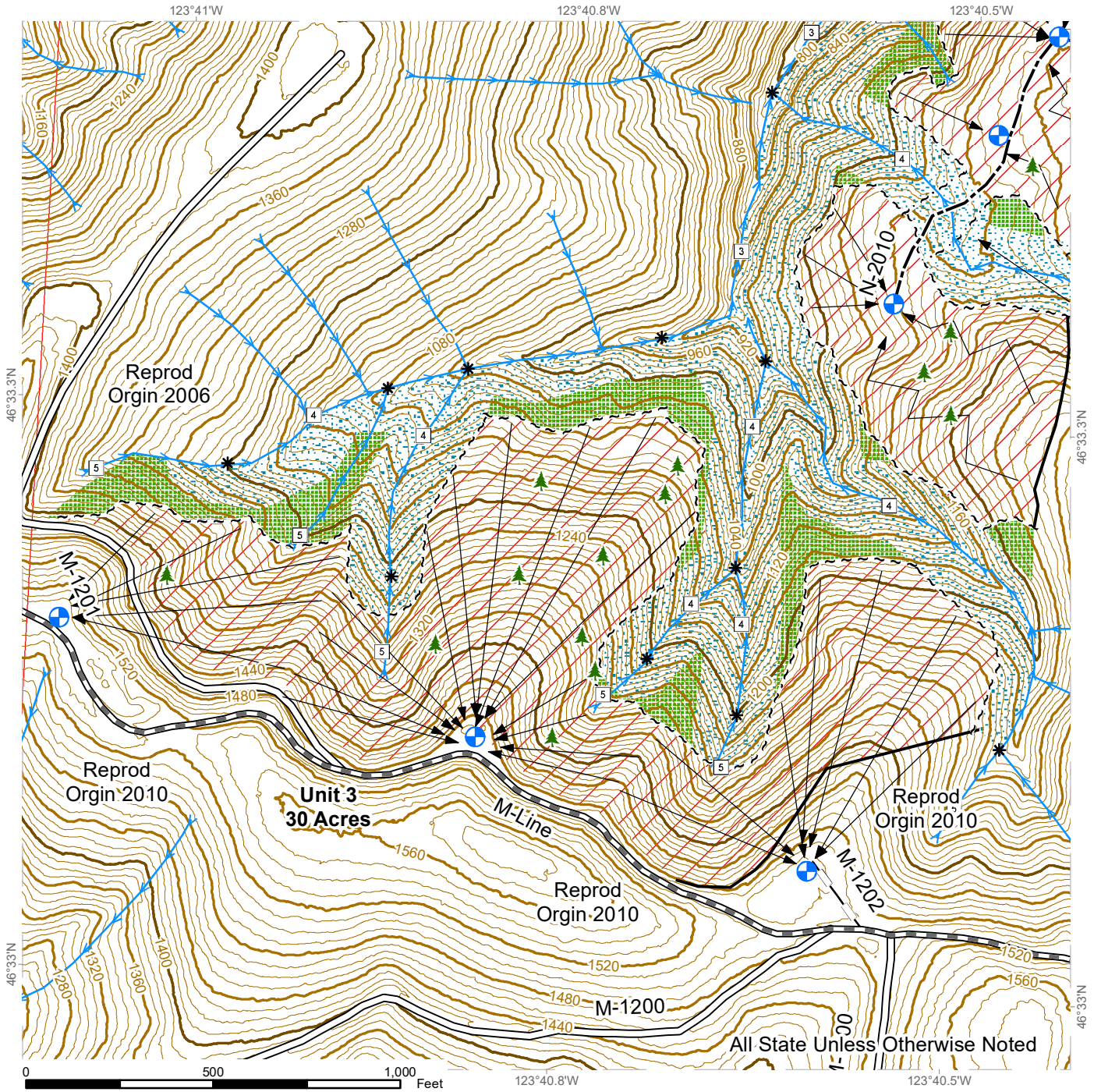
Sale Area	Existing Roads	Stream Type
Leave Tree Area	Required Pre-Haul Maintenance	Stream Type Break
Riparian Mgt Zone	Required Reconstruction	Landing - Proposed
Sale Boundary Tags	Optional Construction	Leave Tree Area <1/4-acre
Timber Type Change	Streams	Cable Harvest
		Ground Harvest



LOGGING PLAN MAP

SALE NAME: JIGSAW
AGREEMENT#: 30-103988
TOWNSHIP(S): T12R8W
TRUST(S): Common School and Indemnity (3)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 633-1504



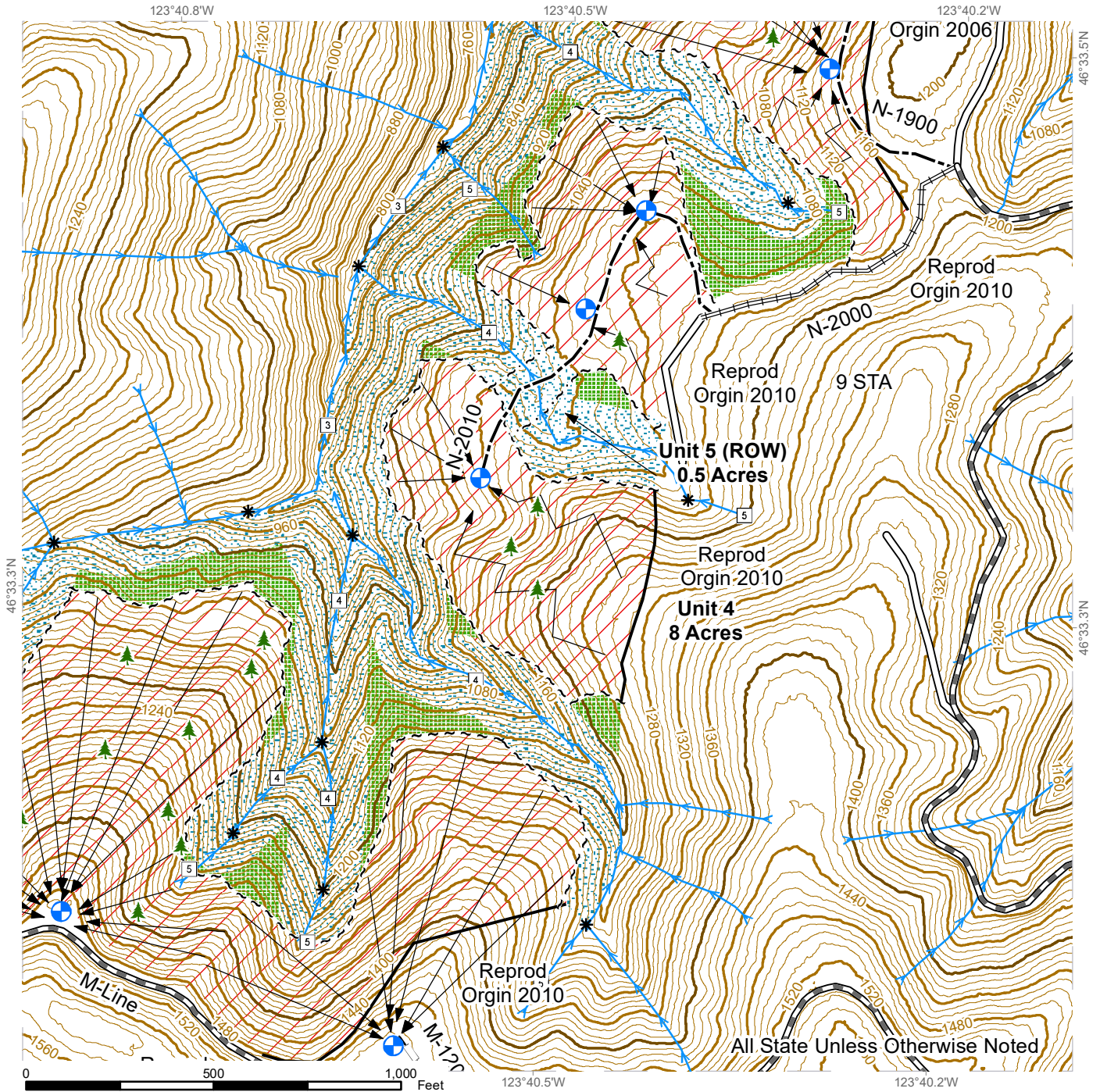
Sale Area	Existing Roads	Stream Type
Leave Tree Area	Required Pre-Haul Maintenance	Stream Type Break
Riparian Mgt Zone	Optional Construction	Landing - Proposed
Sale Boundary Tags	Optional Reconstruction	Leave Tree Area <1/4-acre
Right of Way Tags	Streams	Cable Harvest
Timber Type Change		Ground Harvest



LOGGING PLAN MAP

SALE NAME: JIGSAW
AGREEMENT#: 30-103988
TOWNSHIP(S): T12R8W
TRUST(S): Common School and Indemnity (3)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 633-1504



Sale Area	Existing Roads	Stream Type
Leave Tree Area	Required Pre-Haul Maintenance	Stream Type Break
Riparian Mgt Zone	Required Reconstruction	Landing - Proposed
Sale Boundary Tags	Optional Construction	Leave Tree Area <1/4-acre
Right of Way Tags	Optional Reconstruction	Cable Harvest
Timber Type Change	Streams	Ground Harvest

