



TIMBER NOTICE OF SALE

SALE NAME: SADIE HAWKINS

AGREEMENT NO: 30-97154

AUCTION: May 27, 2020 starting at 10:00 a.m., Olympic Region Office, Forks, WA

COUNTY: Clallam

SALE LOCATION: Sale located approximately 21 miles west of Port Angeles, WA.

PRODUCTS SOLD AND SALE AREA:

All timber, except trees marked with a ring of blue paint, or timber that has been on the ground for five years or more (Five years is defined by more than 1.5 inches of sap rot); bounded by timber sale boundary tags and a timber type change; and all timber bounded by right-of-way boundary tags, located on part(s) of Section 32 all in Township 31 North, Range 9 West, W.M., containing 14 acres, more or less.

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

ESTIMATED SALE VOLUMES AND QUALITY:

Table with columns: Species, Avg Ring DBH, Ring Count, Total MBF, and MBF by Grade (1P, 2P, 3P, SM, 1S, 2S, 3S, 4S, UT). Rows include Douglas fir, Red alder, Red cedar, Maple, Hemlock, Spruce, and Sale Total.

MINIMUM BID: \$53,000.00

BID METHOD: Sealed Bids

PERFORMANCE SECURITY:

\$10,600.00

SALE TYPE: Lump Sum

EXPIRATION DATE: October 30, 2021

ALLOCATION: Export Restricted

BID DEPOSIT: \$5,300.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: 100% Ground based.

Rubber tired skidders are prohibited.

Falling and Yarding will not be permitted from November 1 to April 30 or on weekends and State recognized holidays unless authorized in writing by the Contract Administrator.

ROADS:

17.00 stations of required reconstruction. 5.60 stations of optional construction. 30.91 stations of required pre-haul maintenance. 32.50 stations of optional pre-haul maintenance.

Timber felling, yarding, road work or operation of heavy equipment performed during the marbled murrelet nesting season (April 1 through September 23), is restricted to two



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hours after sunrise to two hours before sunset on the PA-I-2600, PA-1-2610, PA-I-2620 roads and Place Pit. This does not apply to hauling timber, rock or equipment.

Pre-haul maintenance, rock haul, timber haul and road construction will not be permitted from November 1 to April 30 or on weekends and State recognized holidays unless authorized in writing by the Contract Administrator.

ACREAGE DETERMINATION

CRUISE METHOD: Timber Sale acreage was 100% GPS'd. Sale unit was cruised using a variable plot sample. The right-of-way was cruised using an individual tree sampling.

FEES: \$5,134.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: There are locked gates on the PA-S-1000 and PA-I-2600 roads. Contact the Olympic Region Dispatch Center at (360) 374-2811 to obtain an AA-1 key.

DRIVING MAP

SALE NAME: SADIE HAWKINS
AGREEMENT#: 30-097154
TOWNSHIP(S): T31R9W
TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 360-520'



Map may not be to scale

- Timber Sale Unit
- Haul Route
- Other Road
- Milepost Markers
- Highway
- Distance Indicator
- Rock Pit
- Gate

DRIVING DIRECTIONS:

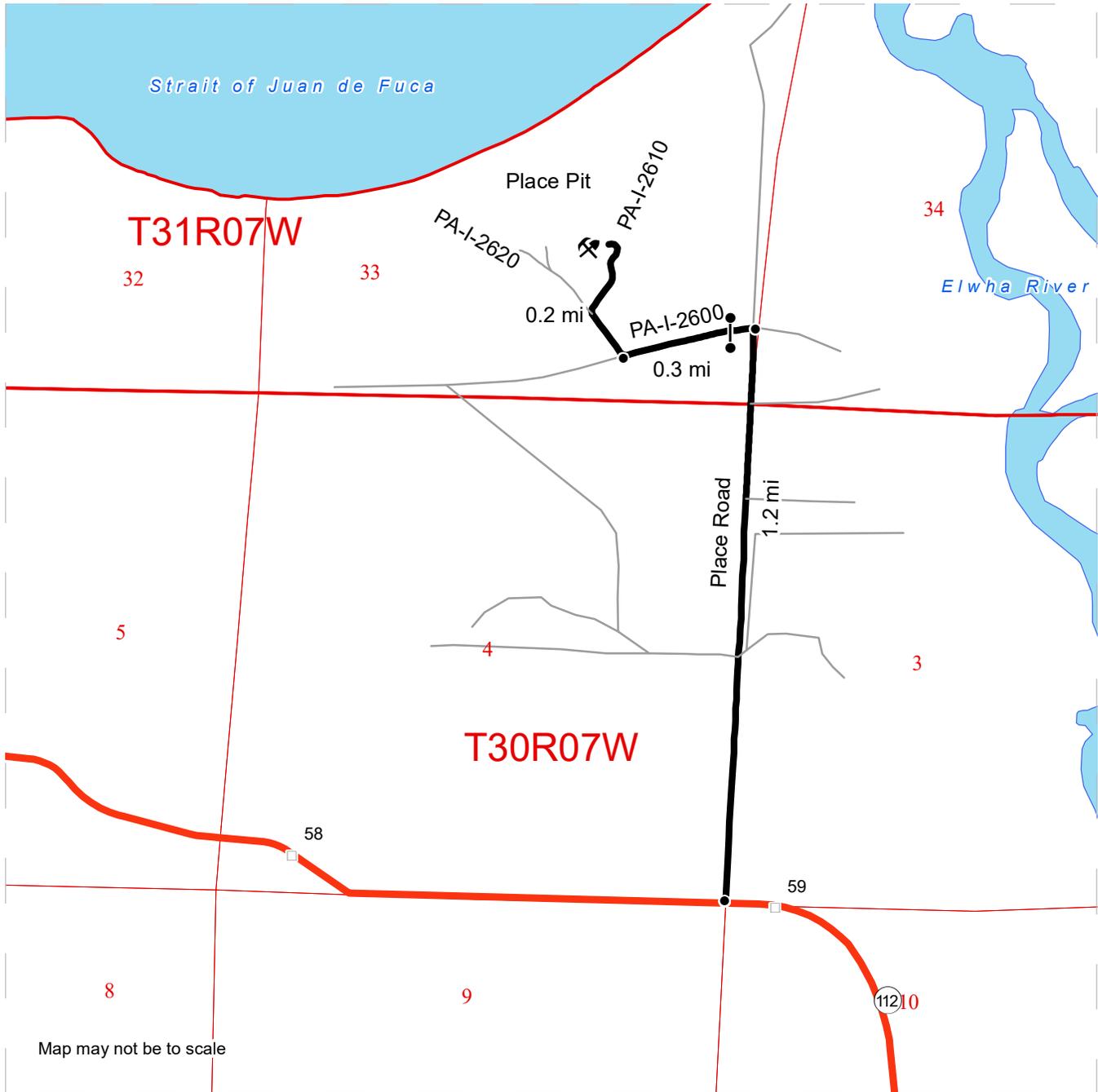
Sale Area
 From Port Angeles, drive west on SR 112 to milepost 44.4 and turn left (south) onto the PA-S-1000. Proceed through the gate (AA-1 key required). Continue 0.6 mi. and turn left (east) onto the PA-S-1030 to access Sale Area.



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-  Haul Route
-  Other Road
-  Milepost Markers
-  Highway
-  Distance Indicator
-  Rock Pit
-  Gate

DRIVING DIRECTIONS:

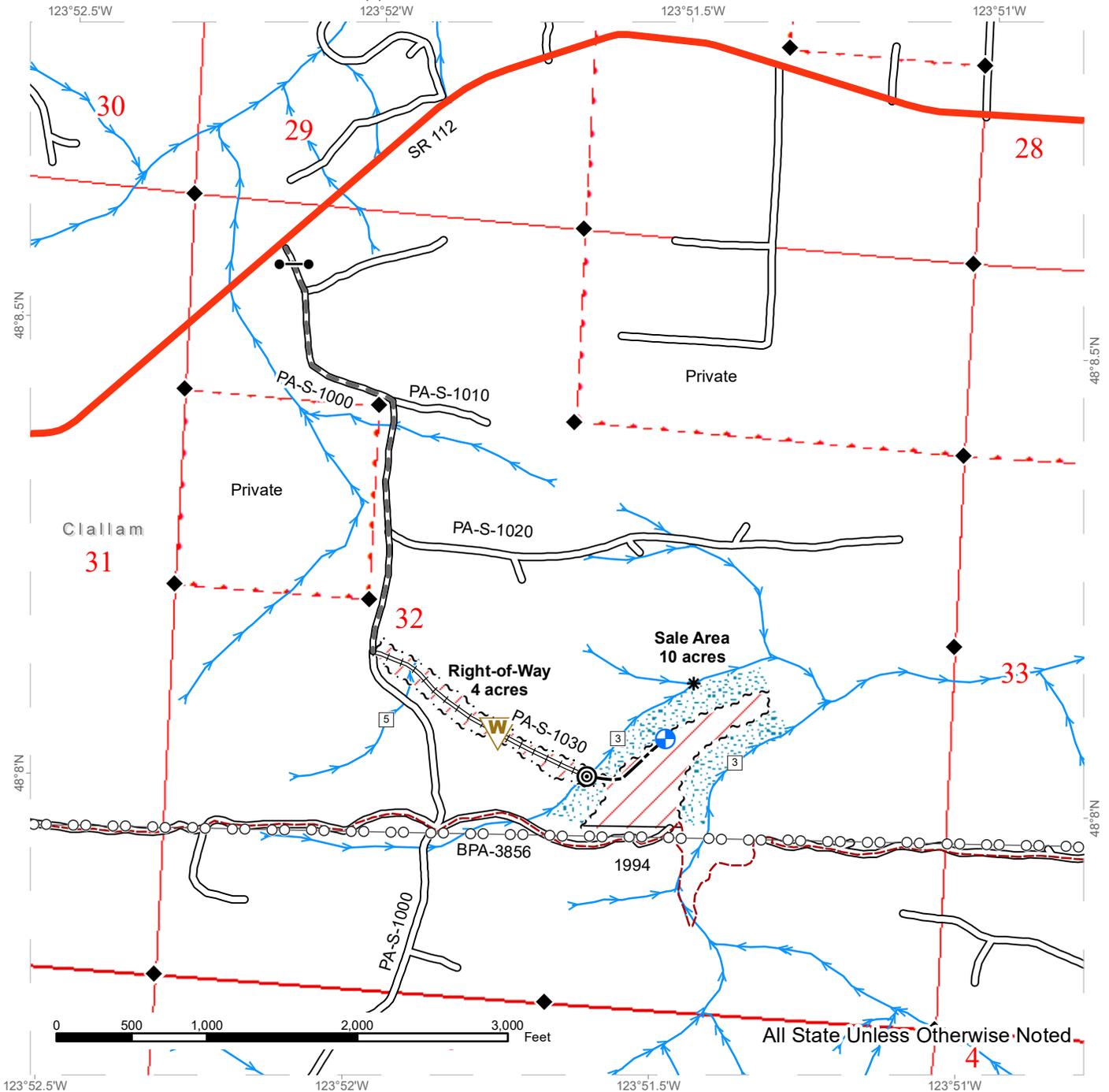
Place Pit
 From Port Angeles, drive west on SR 112 just past milepost 59 and turn right (north) on Place Road. Continue north on Place Road for 1.2 miles and then turn left (west) on the PA-I-2600. Proceed through the gate (AA-1 key required) and continue for 0.3 miles. Turn right onto the PA-I-2610 and continue for 0.2 miles to access Place Pit.



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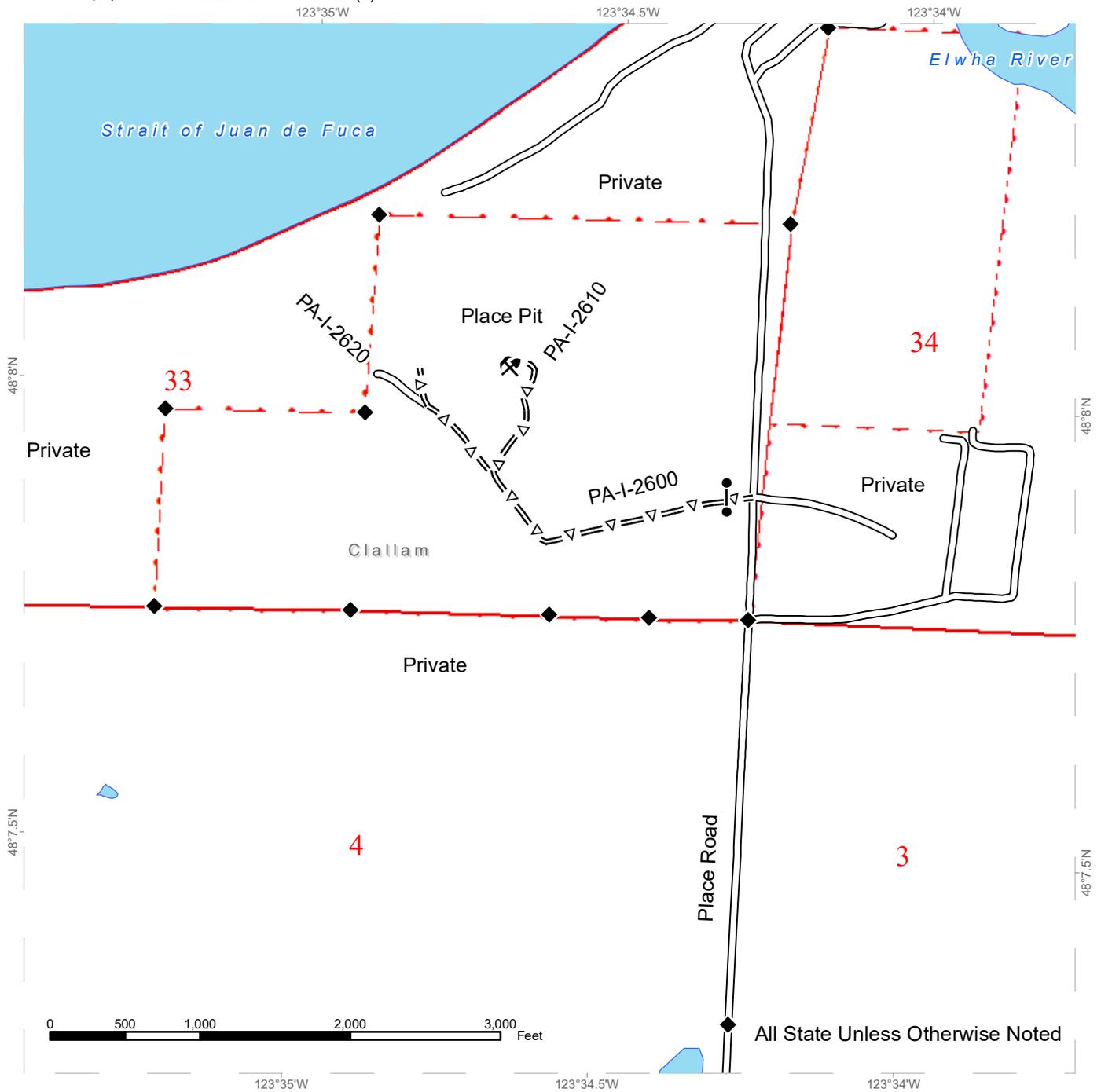
DNR Managed Lands	BPA Transmission Lines	Stream Type
Ground VRH	Highway	Stream Type Break
Riparian Mgt Zone	Existing Roads	Survey Monument
Sale Boundary Tags	Required Pre-Haul Maintenance	Gates
Right of Way Tags	Required Reconstruction	Culvert Removal
Timber Type Change	Optional Construction	Landing
DNR Straits Trails	Streams	Waste Area



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DNR Managed Lands	Survey Monument
Open Water	Gates
Existing Roads	Rock Pit
Optional Pre-Haul Maintenance	



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-097154

SALE NAME: SADIE HAWKINS

**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 May 27, 2020 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 a ring of blue paint, or timber that has been on the ground for five years or more (Five years is defined by more than 1.5 inches of sap rot); bounded by timber sale boundary tags and a timber type change; and all timber bounded by right-of-way boundary tags,, located on approximately 14 acres on part(s) of Section 32 in Township 31 North, Range 9 West W.M. in Clallam 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 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-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	SLASH PILING SPECIFICATIONS
B	GREEN TREE RETENTION PLAN

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 30, 2021.

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 \$762.00 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-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-106 Adding Naturally Damaged Forest Products

Any forest products not designated for removal that are seriously damaged by disease, insects or wind, or that may contribute seriously to the spread of insect or disease damage may be added to this sale by the State's Contract Administrator. Additions must be in unlogged areas of the sale and added volume shall not exceed an amount equal to 10 percent of the original advertised volume. Added forest products become a part of this contract and shall be paid for at the rate set forth in clause G-101, G-102 or G-103.

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 program Standard under certificate number: PwC-SFIFM-513.

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

G-120 Responsibility for Work

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

G-121 Exceptions

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

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

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

1. Failure of (a) required improvements or roads designated in clause C-050, or (b) required or optional construction completed to the point that authorization to haul has been issued;
2. Caused by a single event from forces beyond the control of Purchaser, its employees, agents, or invitees, including independent contractors; and
3. Includes, but is not limited to natural disasters such as earthquakes, volcanic eruptions, landslides, and floods.

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

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

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

G-140 Indemnity

To the fullest extent permitted by law, Purchaser shall indemnify, defend and hold harmless 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 Forks, Washington. The Region Manager will notify Purchaser in writing who is responsible for administering the contract. The Region Manager has sole authority to waive, modify, or amend the terms of this contract in the manner prescribed in clause G-180. No agent, employee, or representative of the State has any authority to bind the State to any affirmation, representation, or warranty concerning the forest products conveyed beyond the terms of this contract.

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

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

G-210 Violation of Contract

G-220 State Suspends Operations

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

G-210 Violation of Contract

- a. If Purchaser violates any provision of this contract, the Contract Administrator, by written notice, may suspend those operations in violation. If the violation is capable of being remedied, Purchaser has 30 days after receipt of a suspension notice to remedy the violation. If the violation cannot be remedied (such as a violation of WAC 240-15-015) or Purchaser fails to remedy the violation within 30 days after receipt of a suspension notice, the State may terminate the rights of Purchaser under this contract and collect damages.
- b. If the contract expires pursuant to clause G-030 or G-031 without Purchaser having performed all its duties under this contract, Purchaser's right to operate is terminated and Purchaser shall not have the right to remedy the breach. This provision shall not relieve Purchaser of any payment obligations.
- c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to

remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.

- d. If Purchaser's violation is a result of a failure to make a payment when due, in addition to a. and b. above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due.

G-220 State Suspends Operation

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

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

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

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

G-230 Unauthorized Activity

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

G-240 Dispute Resolution

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

- a. In the event of a dispute, Purchaser must make a written request to the Region Manager for resolution prior to seeking other relief.
- b. The Region Manager will issue a written decision on Purchaser's request within ten business days.

- c. Within ten business days of receipt of the Region Manager's decision, Purchaser may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.
- d. Unless otherwise agreed, a conference will be held by the Deputy Supervisor - Uplands within 30 calendar days of the receipt of Purchaser's request for review of the Region Manager's written decision. Purchaser and the Region Manager will have an opportunity to present their positions. The Deputy Supervisor - Uplands will issue a decision within a reasonable time of being presented with both Parties' positions.

G-250 Compliance with All Laws

Purchaser shall comply with all applicable statutes, regulations and laws, including, but not limited to; chapter 27.53 RCW, chapter 68.50 RCW, WAC 240-15 and WAC 296-54. Failure to comply may result in forfeiture of this contract.

G-260 Venue

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

G-270 Equipment Left on State Land

All equipment owned or in the possession of Purchaser, its employees, agents, or invitees, including independent contractors, shall be removed from the sale area and other State land by the termination date of this contract. Equipment remaining unclaimed on State land 60 days after the expiration of the contract period is subject to disposition as provided by law. Purchaser shall pay to the State all costs of moving, storing, and disposing of such equipment. The State shall not be responsible for any damages to or loss of the equipment or damage caused by the moving, storing or disposal of the equipment.

G-280 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; PA-S-1000, PA-S-1030, PA-I-2600, PA-I-2610, PA-I-2620. 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-370 Blocking Roads

Purchaser shall not block the PA-S-1000, unless authority is granted in writing by the Contract Administrator.

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 \$7,852.00. The total contract price consists of a \$0.00 contract bid price plus \$7,852.00 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 \$10,600.00. 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-001 Operations Outside the Sale Boundaries

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

H-010 Cutting and Yarding Schedule

Falling and Yarding will not be permitted from November 1 to April 30 or on weekends and State recognized holidays unless authorized in writing by the Contract Administrator.

H-013 Reserve Tree Damage Definition

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

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

- a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 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 'Trespass and Unauthorized Activity' clause. Purchaser is required to leave all cut or damaged reserve trees on site.

H-016 Skid Trail Requirements

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

Purchaser shall comply with the following during the yarding operation:

- a. A skid trail will not exceed 12 feet in width, including rub trees.
- b. Skid trails shall not cover more than 15 percent of the total acreage on one unit.
- c. Location of the skid trails must be marked by Purchaser and approved by the Contract Administrator.
- d. Except for rub trees, skid trails shall be felled and yarded prior to the felling of adjacent timber.
- e. Rub trees shall be left standing until all timber tributary to the skid trail has been removed.
- f. Excessive soil damage is not permitted. Excessive soil damage is described in clause H-017.
- g. Purchaser will not have more than two skid trails open to active skidding at any one time. All other skid trails used for skidding timber will be closed.
- h. Once a skid trail is closed, Purchaser will not reopen a skid trail unless approved in writing by the Contract Administrator.
- i. Skid trails will be water barred at the time of completion of yarding, if required by the Contract Administrator.

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

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 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-035 Fall Trees Into Sale Area

Trees shall be felled into the sale area unless otherwise approved 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-080 Snags Not to be Felled

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using ground based equipment, except rubber tired skidders, which are prohibited. 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-126 Tailholds on State Land

If Purchaser tailholds on State land, methods to minimize damage to live trees outside the sale area shall be employed and must be approved in writing by the Contract Administrator.

H-127 Tailholds on Private Land

If Purchaser chooses to tailhold on private property, Purchaser shall obtain permit(s) and assumes responsibility for all costs and damages associated with the permit(s). Purchaser must provide the State with a copy of the executed permit(s) or a letter from the landowner indicating that a satisfactory tailhold permit(s) has been consummated between Purchaser and the landowner.

H-130 Hauling Schedule

The hauling of forest products will not be permitted from November 1 to April 30, or on weekends and State recognized holidays unless authorized in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

1. Purchaser shall immediately repair all gate damage resulting from operations to an equal or better condition than existed at the time of the sale.
2. While felling timber, one warning sign must be posted on the PA-S-1000 road.
3. Yarding equipment shall not cross live streams without an FPHP
4. The Purchaser shall notify all employees and contractors working on this sale that any danger tree, marked or unmarked, may be felled. Any felled marked danger tree shall be replaced with a suitable tree of similar size and species as approved by the Contract Administrator.

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.

Timber felling, yarding, road work or operation of heavy equipment performed during the marbled murrelet nesting season (April 1 through September 23), is restricted to two hours after sunrise to two hours before sunset on the PA-I-2600, PA-1-2610, PA-I-2620 roads and Place Pit. This does not apply to hauling timber, rock or equipment. Permission to do otherwise must be granted in writing by the Stat

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

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

Section C: Construction and Maintenance

C-040 Road Plan

Road construction and associated work provisions of the Road Plan for this sale, dated 8/8/2018 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on PA-S-1030. 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 PA-S-1000, PA-I-2600, PA-I-2610, PA-I-2620, or all other roads not listed in clause C-050. 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.

C-140 Water Bars

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

Section S: Site Preparation and Protection**S-001 Emergency Response Plan**

An Emergency Response Plan (ERP) shall be provided to the Contract Administrator containing but not limited to, valid contact numbers and procedures for medical emergencies, fire, hazardous spills, forest practice violations and any unauthorized or unlawful activity on or in the vicinity of the sale area. The Contract Administrator and the State shall be promptly notified whenever an incident occurs requiring an emergency response.

The ERP must be presented for inspection at the prework meeting and kept readily available to all personnel, including subcontractors, on site during active operations.

S-010 Fire Hazardous Conditions

Purchaser acknowledges that operations under this Contract may increase the risk of fire. Purchaser shall conduct all operations under this agreement following the requirements of WAC 332-24-005 and WAC 332-24-405 and further agrees to use the highest degree of care to prevent uncontrolled fires from starting.

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

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

S-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-110 Resource Protection

No equipment may operate within areas of standing water unless authority is granted in writing by the Contract Administrator.

S-120 Stream Protection

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

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

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

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 10 gallons of oil, coolant, solvent or contaminated water are available on site to quickly address potential spills from any piece of equipment at all times throughout active operations. If large quantities of bulk fuel/other hazardous materials are stored on site, Purchaser must be able to effectively control a container leak and contain & recover a hazmat spill equal to the largest single on site storage container volume. (HAZWOPER reg. 29CFR 1910.120 (j) (1) (vii)).

d. Hazardous Material Release Reporting

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

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

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

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

ECY - Southwest Region:

1-360-407-6300

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

ECY - Central Region:

1-509-575-2490

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

ECY - Eastern Region:

1-509-329-3400

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

S-131 Refuse Disposal

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

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 the sale area.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Print Name

Mona Griswold
Olympic Region Manager

Date: _____
Address: _____

Date: _____

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

STATE OF _____)

COUNTY OF _____)

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

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

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

Notary Public in and for the State of

My appointment expires _____

Schedule A
SLASH PILING SPECIFICATIONS

Specifications for Slash Piling

All landings and processing areas shall be piled by creating circular piles of slash and brush conforming to the following specifications:

- A. Piles shall be a minimum of 12 feet tall by 8 feet wide to a maximum of 30 feet tall and 16 feet wide. Piles shall be cone shaped and stable.
- B. Piles shall be free of topsoil, large rotten logs and large stumps. Any unburnable material shall be well scattered.
- C. Piles shall not be placed on large stumps, logs, or against standing snags.
- D. Piles shall be stacked a minimum of 50 feet from all unit boundaries, Riparian Management Zones, leave trees, culverts, and any standing timber; a minimum of 100 feet from any public roads and highways; and a minimum of 200 feet from any structures.
- E. Piling shall be completed using an approved hydraulic shovel and grapples.
- F. Slash and displaced soil shall be removed from swales and natural drainage channels concurrent with yarding.
- G. Removal of slash piles from State land is optional.

Schedule B
GREEN TREE RETENTION PLAN

Leave the following as directed by the Contract Administrator:

1. All trees marked with a blue band of paint shall remain standing.
Individually dispersed leave trees are banded and butt spotted with blue paint.

Unit #	# of Individually Marked Trees	# of Clumps	# of Trees Clumped	Total # of Leave Trees
1	112	0	0	112



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES
FOREST EXCISE TAX ROAD SUMMARY SHEET

Region:

Timber Sale Name:

Application Number:

EXCISE TAX APPLICABLE ACTIVITIES

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

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

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

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

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

EXCISE TAX EXEMPT ACTIVITIES

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

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

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

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

(Revised 1/17)

DNR Timber Sale Trust Distribution Form

Sale Name
SADIE HAWKINS

Agreement Number
97154

Region
Olympic

District
STRAITS

Unit

Legal Location

Section(s)	32	Township	31	Range	9	E/W	W
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Auction Date
5/29/2019

Contract Expiration Date
10/31/2019

Sale Acres
14

Sale Class
Board

Sale Method
Lump Sum

Stand Origin Year
1935

FPA Number

FPA Renewal Date

Sale Volume Ratio

Conifer		
Spruce	2	0.70%
Red cedar	54	17.90%
Hemlock	11	3.60%
Douglas fir	155	51.30%
Totals For Conifer	222	73.50%
Hardwood		
Red alder	65	21.50%
Maple	15	5.00%
Totals For Hardwood	80	26.50%
Total	302	100.00%

Harvest Type

Harvest Type	% of Sale
Variable Retention Harvest	100.00%
Total	100.00%

Trust Distribution Table

County	1	Totals							
5 - Clallam	100.00%	100.00%							
		100.00%							

DNR Timber Sale Trust Distribution Form

Trust Levy Codes

5 - Clallam	
153	10000.00%
TOTAL:	10000.00%

Instructions:

To ensure proper distribution of funds to the trust beneficiaries of this sale, the State Lands Assistant must review the data in NaturE and sign in the space provided below.

Nature Data Reviewed by:

X

(Print Name)

(Signature)

Date:

DNR Timber Sale Trust Distribution Form

Trust Distribution Details

5-Clallam

Trust	Harvest Area	Acres
1	1	14.00
Total for 1		14.00

Total For 5-Clallam 14.00

Total Acres 14.00

**State of Washington
Department of Natural Resources
Timber Bill of Sale Extension Charges**

Extension Per Acre Charge Worksheet

Agreement No.:

Sale Name:

Region:

Sale Method:

Harvest Type:

Geographic Area:

Site Class (westside only):

- 1. Growth Loss
 - 2. Additional Growth
 - 3. Loss thru Disrupt.
- Per Acre Charge**

Westside PC/Thin		Westside Evenage		Eastside PC/Thin		Eastside Evenage	
scale	lump	scale	lump	scale	lump	scale	lump
			15.00				
			711.21				
			35.56				
\$0.00	\$0.00	\$0.00	\$761.77	\$0.00	\$0.00	\$0.00	\$0.00

Total Per Acre Charge:

This figure to be Input into the G-050 or G051 clause.

Cruise Narrative

Sale Name: Sadie Hawkins	Region: Olympic
Agreement #: 30-097154	District: Straits
Lead Cruiser: Kevin Peterson	Completion Date:
Other Cruisers: none	

Unit acreage specifications:

Unit #	Cruised Acres	Cruised acres agree with sale acres? Y/N	If acres do not agree explain why.
1	9	Y	
2	5	Y	
Total	14	Y	

Unit cruise specifications:

Unit #	Sample Type (VP,FP,ITS,100%)	Expansion Factor (baf,full/half)	Sighting Height (4.5', 16')	Grid Size (plot spacing)	Plot Ratio (cruise/count)	Number of plots
1	VP	54.44/40	4.5'	125 x 125	All Cruise	20
2	ITS	1/3.5	N/A	N/A	N/A	N/A

Sale/Cruise Description:

Minor species cruise intensity	Minor species sampled using same cruise plots. Red Cedar, Bigleaf Maple and Red Alder were cruised at a 40 BAF
Minimum cruise spec:	40% of Form Factor at 16 ft. D.O.B or 5 inch top.
Average ring count:	DF = 5 WH = SS =
Leave/take tree description:	Leave tree clumps are bounded out with yellow tags, pink flashers and blue paint. Individual leave trees are marked with blue bands and two blue butt marks.
Other conditions:	Exterior boundaries are marked with white tags and pink flashers

<p>Sort Description:</p>	<p>HA– Logs meeting the following criteria: Surface characteristics for a high quality A sort will have sound tight knots not to exceed 1 ½” in diameter, numbering not more than an average of one per foot of log length. May include logs with not more than two larger knots. Knots and knot indicators ½” in diameter and smaller shall not be a determining factor. Logs will have a growth ring count of 6 or more rings per inch in the outer third top end of the log. (minimum diameter 8”.)</p> <p>R – Logs meeting the following criteria: Gross diameter of 12 inches or greater, excessive knots greater than 2 ½ inches with recovery less than 65% of the net scale.</p>
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Field Observations:

Sadie Hawkins is a 14 acre lump sum sale set up off the PA-S-1000. It consists of one unit, although I have broken it up to two separate units in the cruise. The Southeast third of the unit has a stand origin of 1935 and the Western 2/3rds have an origin of 1992.

The total MBF for the sale is 302 MBF. The volume is comprised of 51% Douglas-fir, 22% Red Alder and 18% Western Red Cedar, with small amounts of Sitka Spruce, Western Hemlock and Bigleaf Maple. The average DF has a DBH of 19.5” and 69’. The Average RA has a DBH of 12.1 and a bole height of 50’. The average RC has a DBH of 19.8 and a bole height of 51’.

The sale is all ground based and has good access to the unit.

Grants: 01

Prepared By: Kevin Peterson – Olympic Region Cruiser

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																				
T000 R000 S00 TyU1 9.00 T000 R000 S00 TyU2 5.00				Project: SADIE Acres 14.00				Page 1 Date 9/13/2018 Time 4:07:25PM																
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre			
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf				
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99								
DF	CU	CU																7		0.00	1.0			
DF	HQ	2S		24	3.9	2,850	2,740	38				24	76					100	40	16	391	2.67	7.0	
DF	D	2S		46	2.1	5,220	5,110	72				48	52					14	86	38	15	319	2.15	16.0
DF	D	3S		20	6.3	2,314	2,169	30	19	81					2	70	27			34	9	88	0.78	24.7
DF	D	4S		7		747	747	10	80	20				52	48					21	6	26	0.38	28.5
DF	D	UT		3		314	314	4	18	82					18	82				18	6	26	0.43	12.3
DF	Totals			51	3.2	11,445	11,080	155	10	20	28	43		4	4	22	70			28	9	124	1.19	89.5
SS	D	4S		80		89	89	1		100					100					24	8	40	0.57	2.2
SS	D	UT		20		22	22	0	100					100						14	5	10	0.24	2.2
SS	Totals			1		111	111	2	20	80				20	80					19	7	25	0.45	4.5
RC	CU	CU			100.0	60													6	6		0.00	9.5	
RC	D	3S		88	21.7	4,412	3,452	48	9	24	21	46		5	3	5	87			34	11	146	1.87	23.7
RC	D	4S		12	6.1	465	437	6	97	3				19	44	11	26			24	5	25	0.44	17.3
RC	Totals			18	21.2	4,937	3,889	54	19	22	18	41		6	8	6	80			26	8	77	1.32	50.4
RA	D	2S		9	20.8	530	420	6		100										40	14	210	2.00	2.0
RA	D	3S		20	1.0	955	945	13		100				44	46		10			26	10	78	0.85	12.0
RA	D	4S		54	2.0	2,576	2,524	35	80	20				18	80	2				27	7	40	0.46	63.4
RA	D	UT		17		751	751	11	100					82	10	8				15	5	13	0.21	56.4
RA	Totals			22	3.6	4,812	4,640	65	60	31	9			32	54	3	11			22	6	35	0.47	133.9
WH	D	2S		28	30.4	307	214	3				100								40	17	320	3.58	.7
WH	D	3S		55	3.4	435	420	6		100										40	9	129	0.95	3.2
WH	D	4S		17		123	123	2	80	20					84		16			27	6	33	0.33	3.7
WH	Totals			4	12.5	865	756	11	13	59		28		14		86				34	8	99	0.98	7.7
BM	D	2S		58	21.1	803	634	9			79	21		21	25		54			32	14	185	2.18	3.4
BM	D	3S		2		18	18	0		100				100						20	10	70	0.81	.2
BM	D	4S		1		20	20	0		100				100						20	8	40	0.50	.5
BM	D	UT		39		412	412	6	54	46				17	20	40	23			26	6	40	0.64	10.3
BM	Totals			5	13.5	1,252	1,083	15	20	21	46	12		22	22	15	40			27	8	75	1.07	14.4
Totals					8.0	23,422	21,560	302	23	24	22	31		11	17	14	58			25	8	72	0.91	300.4

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT SADIE							DATE	9/13/2018	
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
000	000	00	ALDER	U1	14.00	21	254	S	W		
000	000	00	ALDER	U2							
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			21	254	12.1						
CRUISE			21	254	12.1	2,141	11.9				
DBH COUNT											
REFOREST											
COUNT											
BLANKS											
100 %											
STAND SUMMARY											
SAMPLE TREES		TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC	
DOUG FIR	85	39.9	19.5	69	18.8	82.9	11,445	11,080	3,019	3,019	
WR CEDAR	82	27.3	19.8	51	13.1	58.5	4,937	3,889	1,717	1,702	
R ALDER	56	71.1	12.1	50	16.4	57.1	4,812	4,640	1,388	1,388	
BL MAPLE	15	8.4	18.7	50	3.7	16.0	1,252	1,083	421	421	
WHEMLOCK	15	3.9	19.4	73	1.8	8.1	865	756	253	253	
S SPRUCE	1	2.2	12.0	45	0.5	1.7	111	111	38	38	
TOTAL	254	153.0	16.4	55	55.4	224.4	23,422	21,560	6,837	6,821	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		219.1	49.0	20	40	60					
WR CEDAR		294.5	65.9	9	27	45					
R ALDER		85.4	19.1	58	71	85					
BL MAPLE		204.2	45.7	5	8	12					
WHEMLOCK		380.1	85.0	1	4	7					
S SPRUCE		458.3	102.5		2	5					
TOTAL		118.7	26.6	112	153	194	593	302	148		
CL	68.1	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		339.4	75.9	20	83	146					
WR CEDAR		334.0	74.7	15	58	102					
R ALDER		85.5	19.1	46	57	68					
BL MAPLE		202.2	45.2	9	16	23					
WHEMLOCK		284.5	63.6	3	8	13					
S SPRUCE		458.3	102.5		2	4					
TOTAL		231.2	51.7	108	224	340	2,248	1,147	562		
CL	68.1	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		396.4	88.7	1,256	11,080	20,905					
WR CEDAR		375.1	83.9	626	3,889	7,152					
R ALDER		90.4	20.2	3,701	4,640	5,579					
BL MAPLE		201.1	45.0	596	1,083	1,571					
WHEMLOCK		334.4	74.8	191	756	1,322					
S SPRUCE		458.3	102.5		111	226					
TOTAL		295.4	66.1	7,314	21,560	35,806	3,667	1,871	917		
CL	68.1	COEFF	V_BAR/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		442.2	98.9	15	134	252					
WR CEDAR		435.5	97.4	11	67	122					
R ALDER		253.4	56.7	65	81	98					
BL MAPLE		229.5	51.3	37	68	98					

TC PSTATS		PROJECT STATISTICS						PAGE	2	
		PROJECT		SADIE				DATE	9/13/2018	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
000	000	00	ALDER	U1		14.00	21	254	S	W
000	000	00	ALDER	U2						
CL	68.1	COEFF		V_BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		441.7	98.8	24	94	164				
S SPRUCE		458.3	102.5		64	129				
TOTAL		<i>404.7</i>	<i>90.5</i>	<i>33</i>	<i>96</i>	<i>160</i>	<i>6,885</i>	<i>3,513</i>	<i>1,721</i>	

T000	R000	S00	TU1							T000	R000	S00	TU1
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
000	000	00	ALDER	U1	9.00	20	77	S	W				

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre		
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf			
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99							
RA	D	3S		19	1,143	1,143	10	100				57	43			24	10	73	0.83	15.6			
RA	D	4S		62	.8	3,723	3,693	33	79	21				19	79	2			27	7	40	0.46	91.7
RA	D	UT		19		1,134	1,134	10	100					81	10	9			15	5	13	0.21	85.4
RA	Totals			53	.5	6,000	5,970	54	68	32				38	59	3			21	6	31	0.41	192.8
DF	D	3S		55	15.5	1,461	1,235	11	24	76						100			32	8	64	0.75	19.3
DF	D	4S		23		517	517	5	100					27	73				23	5	22	0.28	23.4
DF	D	UT		22		488	488	4	18	82					18	82			20	6	33	0.49	14.8
DF	Totals			20	9.2	2,466	2,240	20	40	60				6	21	73			25	6	39	0.52	57.5
RC	CU	CU																	6	5		0.00	8.5
RC	D	3S		74	24.1	1,029	782	7		37	28	34				100			36	10	121	1.71	6.5
RC	D	4S		26	13.9	319	275	2	93	7				7	52	41			26	5	26	0.58	10.5
RC	Totals			9	21.7	1,348	1,056	10	24	29	21	26		2	13	85			22	6	41	1.00	25.5
BM	D	2S		61	21.1	1,249	986	9		79	21			21	25	54			32	14	185	2.18	5.3
BM	D	UT		39		606	606	5	51	49				18	15	43	25		26	6	41	0.67	14.8
BM	Totals			14	14.2	1,855	1,592	14	19	19	49	13		20	21	16	43		28	8	79	1.13	20.1
WH	D	2S		100	30.4	478	332	3			100					100			40	17	320	3.58	1.0
WH	Totals			3	30.4	478	332	3			100					100			40	17	320	3.58	1.0
SS	D	4S		80		139	139	1		100					100				24	8	40	0.57	3.5
SS	D	UT		20		35	35	0	100					100					14	5	10	0.24	3.5
SS	Totals			2		173	173	2	20	80				20	80				19	7	25	0.45	6.9
Type Totals					7.8	12,320	11,363	102	49	35	9	7		24	40	18	17		23	6	37	0.56	303.9

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	SADIE			DATE	9/13/2018		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
000	000	00	ALDER	U1	9.00	20	77	S	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
		PLOTS	TREES	PER PLOT	TREES	TREES					
TOTAL		20	77	3.8							
CRUISE		20	77	3.8	1,522	5.1					
DBH COUNT											
REFOREST											
COUNT											
BLANKS											
100 %											
STAND SUMMARY											
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
R ALDER	38	103.6	11.6	48	22.3	76.0	6,000	5,970	1,714	1,714	
DOUG FIR	12	33.8	13.3	49	8.9	32.7	2,466	2,240	758	758	
WR CEDAR	12	15.3	17.0	40	5.8	24.0	1,348	1,056	560	560	
BL MAPLE	12	11.9	19.2	49	5.5	24.0	1,855	1,592	632	632	
WHEMLOCK	2	1.0	31.0	62	1.0	5.4	478	332	149	149	
S SPRUCE	1	3.5	12.0	45	0.8	2.7	173	173	59	59	
TOTAL	<i>77</i>	<i>169.1</i>	<i>13.4</i>	<i>48</i>	<i>45.1</i>	<i>164.8</i>	<i>12,320</i>	<i>11,363</i>	<i>3,871</i>	<i>3,872</i>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
R ALDER	88.8	20.4		82	104	125					
DOUG FIR	172.7	39.6		20	34	47					
WR CEDAR	200.9	46.1		8	15	22					
BL MAPLE	218.0	50.0		6	12	18					
WHEMLOCK	307.8	70.6		0	1	2					
S SPRUCE	447.2	102.6			3	7					
TOTAL	<i>33.0</i>	<i>7.6</i>		<i>156</i>	<i>169</i>	<i>182</i>	<i>46</i>	<i>23</i>	<i>11</i>		
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
R ALDER	81.7	18.7		62	76	90					
DOUG FIR	174.4	40.0		20	33	46					
WR CEDAR	156.7	36.0		15	24	33					
BL MAPLE	205.2	47.1		13	24	35					
WHEMLOCK	307.8	70.6		2	5	9					
S SPRUCE	447.2	102.6			3	6					
TOTAL	<i>20.6</i>	<i>4.7</i>		<i>157</i>	<i>165</i>	<i>173</i>	<i>18</i>	<i>9</i>	<i>4</i>		
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
R ALDER	79.6	18.3		4,879	5,970	7,060					
DOUG FIR	169.9	39.0		1,367	2,240	3,114					
WR CEDAR	140.0	32.1		717	1,056	1,395					
BL MAPLE	208.0	47.7		832	1,592	2,351					
WHEMLOCK	307.8	70.6		98	332	567					
S SPRUCE	447.2	102.6			173	351					
TOTAL	<i>26.5</i>	<i>6.1</i>		<i>10,673</i>	<i>11,363</i>	<i>12,054</i>	<i>30</i>	<i>15</i>	<i>7</i>		
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
R ALDER	79.6	18.3		64	79	93					
DOUG FIR	169.9	39.0		42	69	95					
WR CEDAR	140.0	32.1		30	44	58					
BL MAPLE	208.0	47.7		35	66	98					

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT		SADIE		DATE	9/13/2018	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	ALDER	U1	9.00	20	77	S	W	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		307.8	70.6	18	61	104				
S SPRUCE		447.2	102.6		64	129				
TOTAL		27.4	6.3	65	69	73	32	16	8	

T	TSPCSTGR	Species, Sort Grade - Board Foot Volumes (Type)										Page	1							
												Date		9/13/2018						
												Time		4:07:26PM						
T000 R000 S00 TU2										T000 R000 S00 TU2										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
000	000	00	ALDER	U2	5.00	1	177	S	W											
S Sp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
								Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf	
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft		
DF	CU	CU														7			0.00	2.8
DF	HQ	2S	28	3.9	7,980	7,672	38		24	76					100	40	16	391	2.67	19.6
DF	D	2S	53	2.1	14,616	14,308	72		48	52			14	86		38	15	319	2.15	44.8
DF	D	3S	14		3,850	3,850	19	16	84				4	53	43	35	9	112	0.81	34.3
DF	D	4S	5		1,162	1,162	6	64	36			72	28			19	7	31	0.50	37.8
DF	D	UT														10	5		0.00	7.7
DF	Totals		68	2.2	27,608	26,992	135	5	13	32	49	3	2	15	80	30	11	184	1.58	147.0
RC	CU	CU		100.0	168											7	7		0.00	11.2
RC	D	3S	91	21.3	10,500	8,260	41	11	22	19	48	5	4	6	85	34	11	151	1.90	54.6
RC	D	4S	9		728	728	4	100				27	38	19	15	23	5	25	0.34	29.4
RC	Totals		23	21.1	11,396	8,988	45	18	20	18	45	7	7	7	79	27	9	94	1.44	95.2
RA	D	2S	52	20.8	1,484	1,176	6		100					100		40	14	210	2.00	5.6
RA	D	3S	26	4.5	616	588	3		100				57	43		35	10	105	0.88	5.6
RA	D	4S	19	17.8	511	420	2	100				7	93			27	6	33	0.50	12.6
RA	D	UT	3		63	63	0	100				100				14	5	15	0.17	4.2
RA	Totals		6	16.0	2,674	2,247	11	21	26	52		4	32	64		29	8	80	0.98	28.0
WH	D	3S	77	3.4	1,218	1,176	6		100					100		40	9	129	0.95	9.1
WH	D	4S	23		343	343	2	80	20				84	16		27	6	33	0.33	10.5
WH	Totals		4	2.7	1,561	1,519	8	18	82				19	81		33	7	78	0.68	19.6
BM	D	3S	29		49	49	0		100			100				20	10	70	0.81	.7
BM	D	4S	33		56	56	0		100			100				20	8	40	0.50	1.4
BM	D	UT	38		63	63	0	100					100			27	5	30	0.28	2.1
BM	Totals		0		168	168	1	38	63			63	38			23	7	40	0.42	4.2
Type Totals				8.0	43,407	39,914	200	9	18	29	43	4	5	12	79	29	10	136	1.40	294.0

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	SADIE		DATE	9/13/2018		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	ALDER	U2	5.00	1	177	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		1	177	177.0						
CRUISE		1	177	177.0	620		28.6			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	73	51.1	24.9	92	34.7	173.3	27,608	26,992	7,090	7,090
WR CEDAR	70	49.0	21.2	58	26.2	120.5	11,396	8,988	3,799	3,757
R ALDER	18	12.6	18.4	69	5.4	23.2	2,674	2,247	802	802
WHEMLOCK	13	9.1	16.0	75	3.2	12.8	1,561	1,519	441	441
BL MAPLE	3	2.1	12.1	55	0.5	1.7	168	168	41	41
TOTAL	<i>177</i>	<i>123.9</i>	<i>22.1</i>	<i>74</i>	<i>70.4</i>	<i>331.5</i>	<i>43,407</i>	<i>39,914</i>	<i>12,174</i>	<i>12,131</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										

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

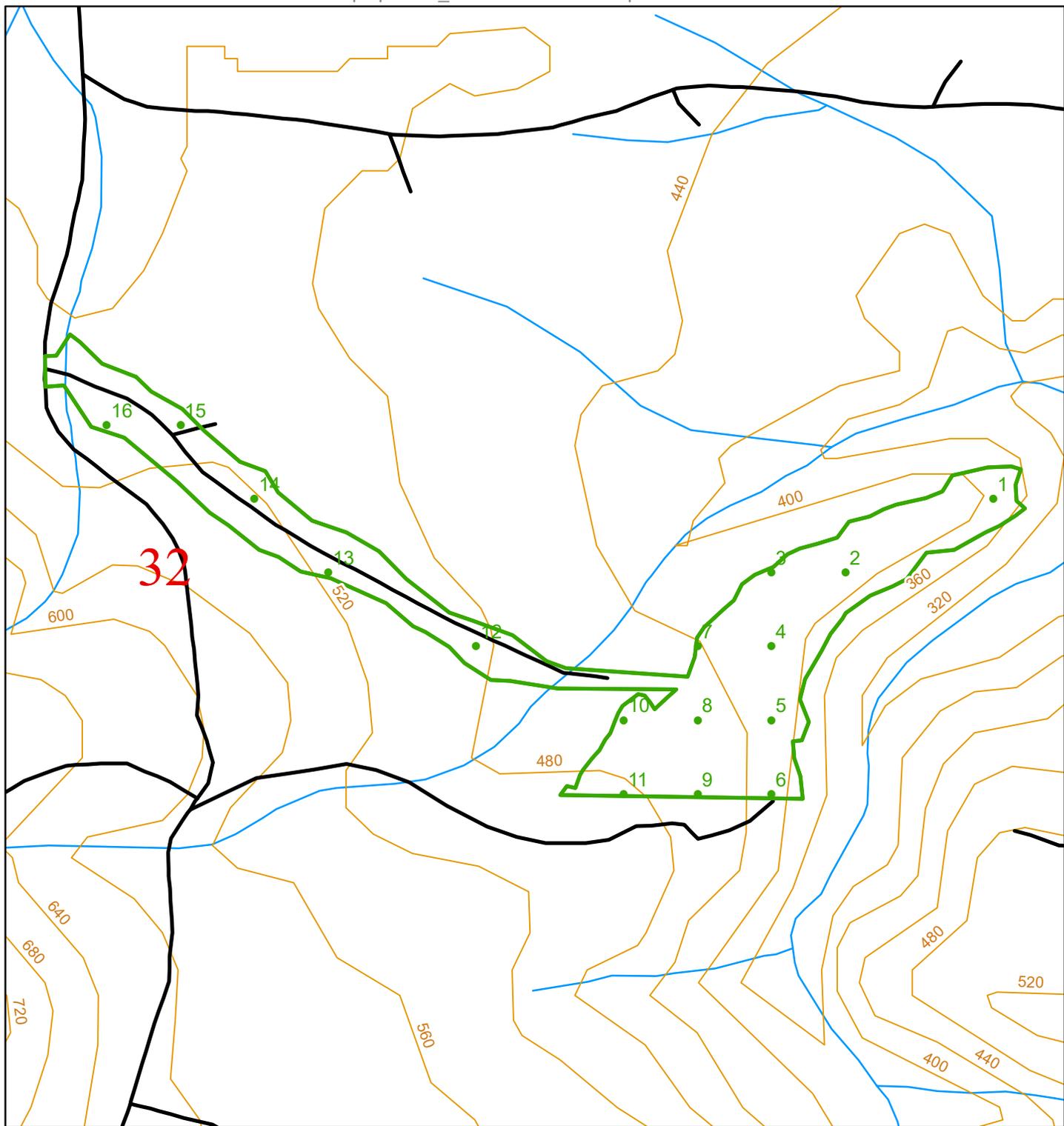
T000 R000 S00 TyU1	9.0
T000 R000 S00 TyU2	5.0

Project SADIE
Acres 14.00

Page No 1
Date: 9/13/2018
Time 4:07:26PM

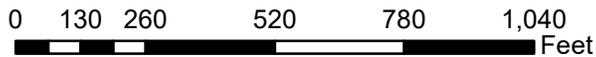
Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
DOUG FIR	559	1,239	1,205	75.59	34.13	1.20	423	423	160	155
R ALDER	995	1,875	535	19.53	10.37	0.46	194	194	67	65
WR CEDAR	383	573	565	62.24	41.59	1.37	240	238	69	54
BL MAPLE	118	202	156	49.97	29.15	1.06	59	59	18	15
WHEMLOCK	55	107	113	64.56	32.99	0.98	35	35	12	11
S SPRUCE	31	62	14	17.01	8.51	0.45	5	5	2	2
Totals	2,141	4,058	2,587	44.60	23.53	0.91	957	955	328	302

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
C	1,028	1,981	1,897	68.25	35.42	1.22	704	702	243	222
H	1,113	2,077	691	22.75	12.20	0.53	253	253	85	80
Totals	2,141	4,058	2,587	44.60	23.53	0.91	957	955	328	302



Cruiser Sample Point Locations

LAYER NAME:	fair_tbs_boundary_073018	Township:	T31R09W
POLY ID:	1	Total Sample Points:	16
Acres:	13	Spacing Between Points:	200
		Point Rotation Degrees:	0



Scale 1:4,600

Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

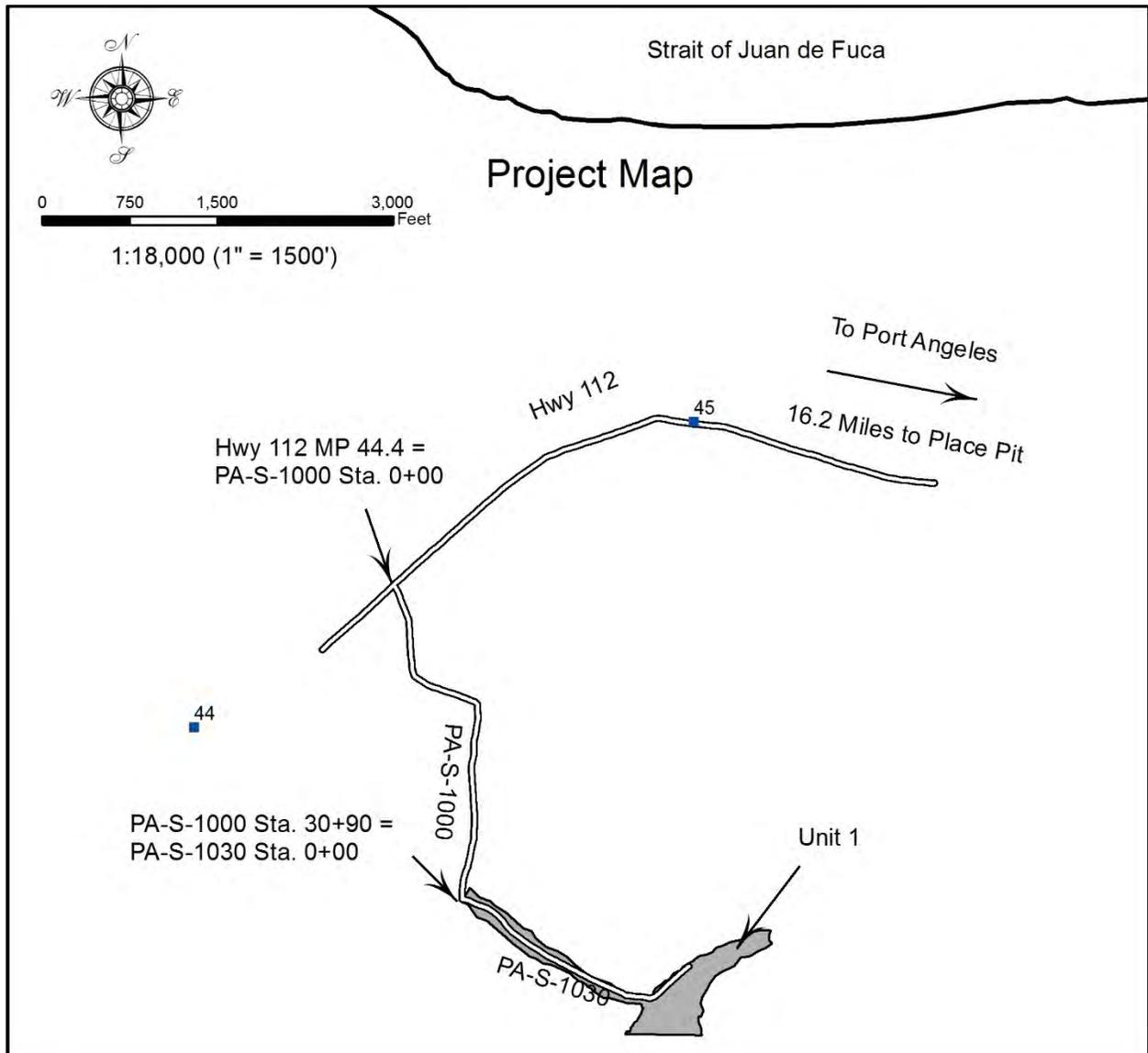
SADIE HAWKINS TIMBER SALE ROAD PLAN
CLALLAM COUNTY
STRAITS DISTRICT
OLYMPIC REGION

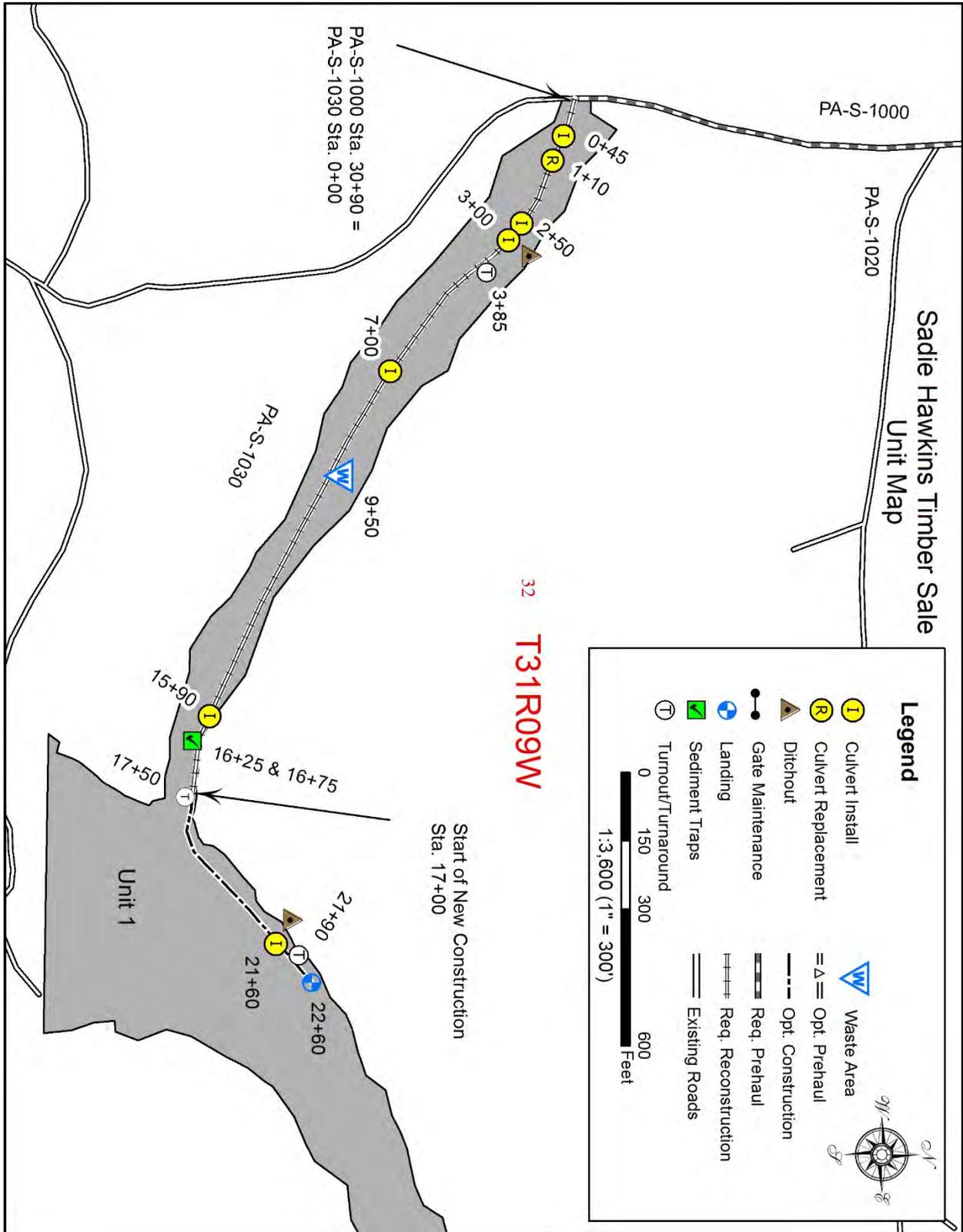
AGREEMENT NO.: 30-097154

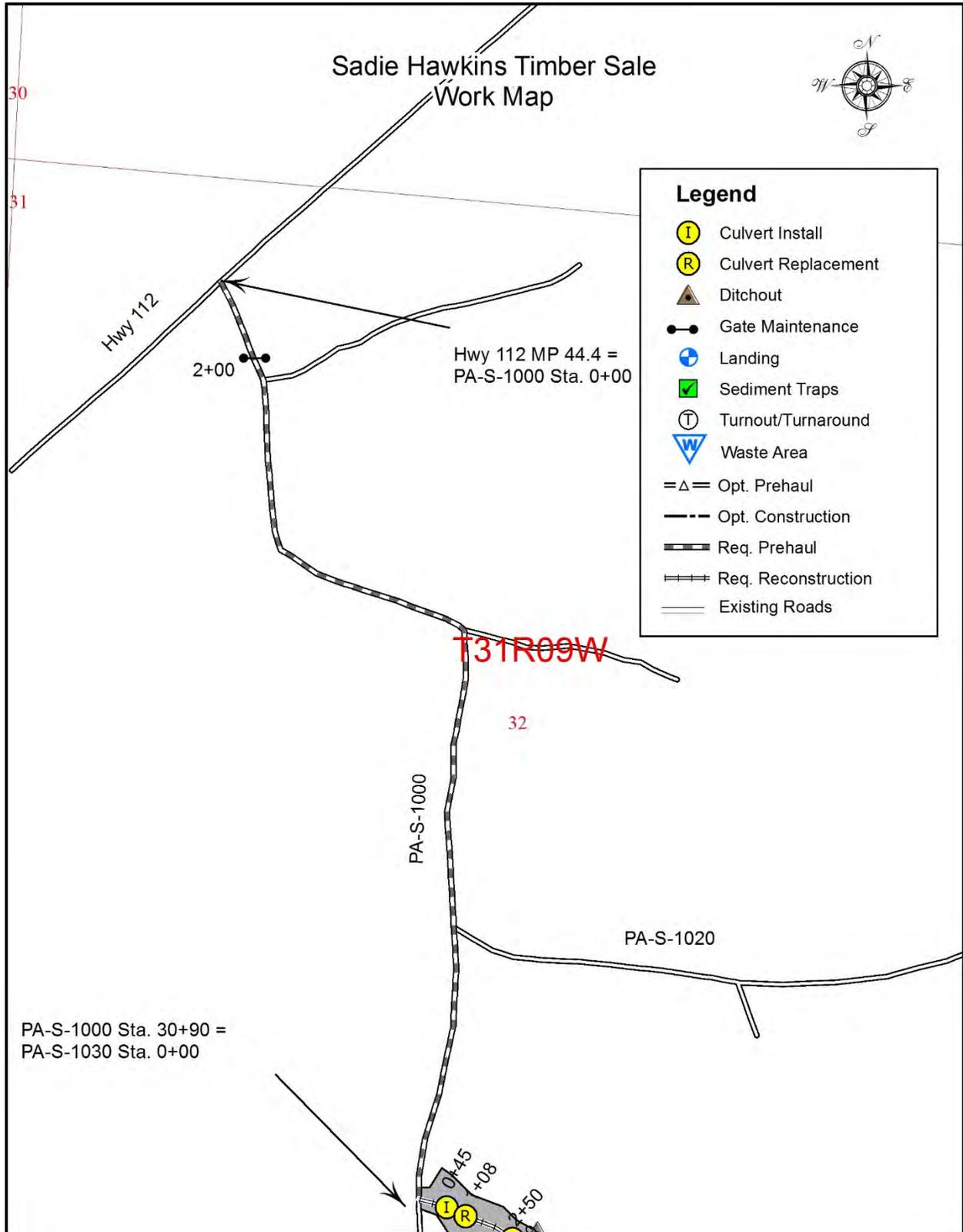
DISTRICT ENGINEER: GREG ELLIS

DATE: 8/8/18

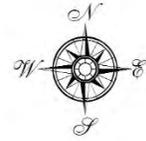
DRAWN & COMPILED BY: COURTNEY LITRELL





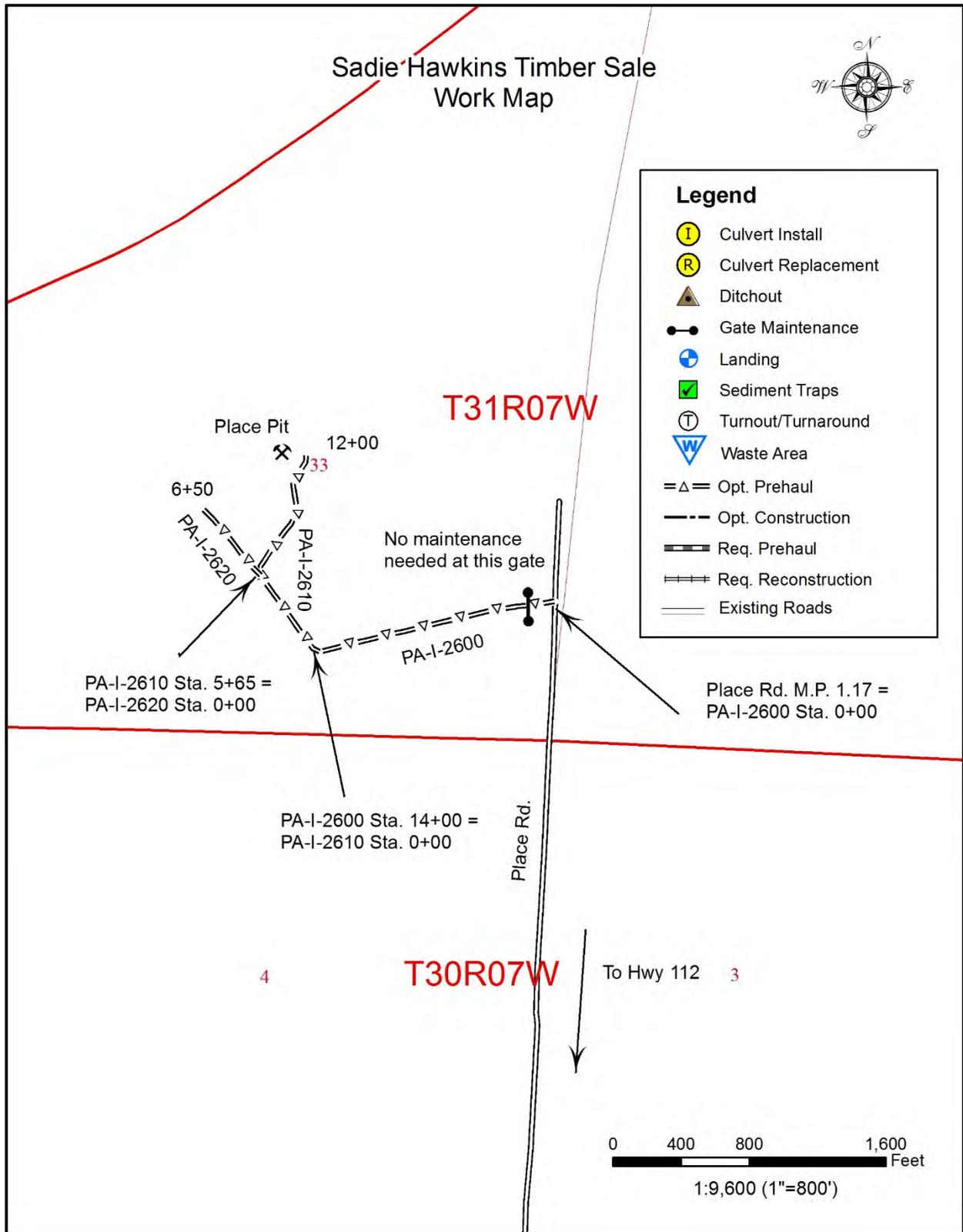


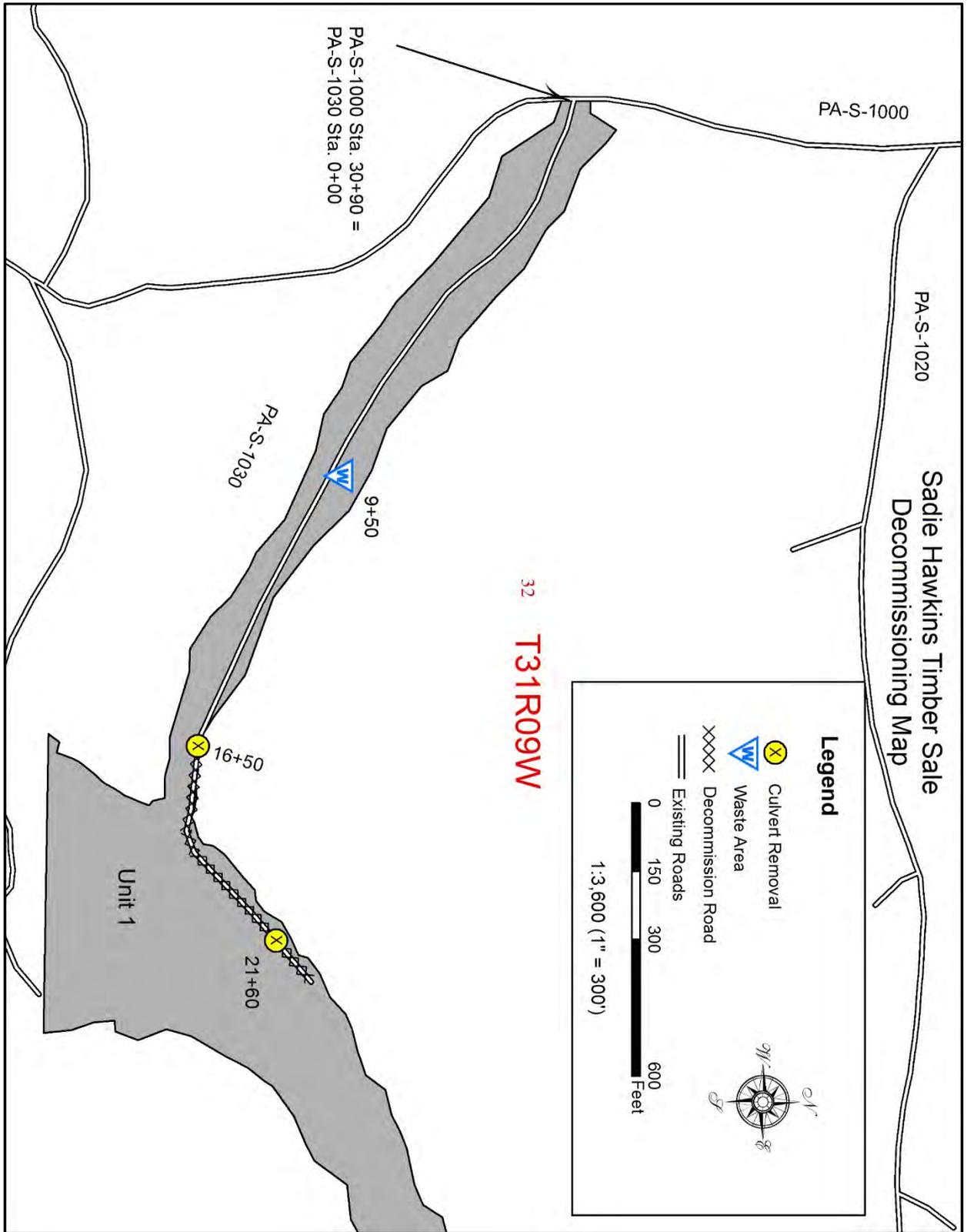
Sadie Hawkins Timber Sale Work Map



Legend

- Culvert Install
- Culvert Replacement
- Ditchout
- Gate Maintenance
- Landing
- Sediment Traps
- Turnout/Turnaround
- Waste Area
- Opt. Prehaul
- Opt. Construction
- Req. Prehaul
- Req. Reconstruction
- Existing Roads





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>
PA-S-1000	0+00 – 30+91	Pre-haul Maintenance
PA-S-1030	0+00 – 17+00	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>
PA-S-1030	17+00 – 22+60	Construction
PA-I-2600	0+00 – 14+00	Pre-haul Maintenance
PA-I-2610	0+00 – 12+00	Pre-haul Maintenance
PA-I-2620	0+00 – 6+50	Pre-haul Maintenance

0-4 CONSTRUCTION

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
PA-S-1030	17+00 – 22+60	See Below
Total Stations	5.6 Stations	

Construction includes, but is not limited to: Clearing, grubbing, right-of-way debris disposal, excavation and/or embankment to subgrade, end hauling material for construction, compacting road surfaces, constructing ditchlines, constructing ditchouts, constructing turnouts and turnarounds, curve widening, acquisition and installation of drainage structures, application of rock, spreading grass seed and hay.

0-5 RECONSTRUCTION

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
PA-S-1030	0+00 – 17+00	Reconstruction includes, but not limited to: Removal of all vegetative material with minimum loss of rock and dispose of in accordance with Clause 2-9 and Clause 3-23. Cleaning ditches and constructing ditches, constructing headwalls, cleaning culvert inlets and outlets in accordance with Clause 2-7. Installing additional culverts and replacing culverts in accordance with the culvert list. Grading, shaping and compacting existing road surface and turnouts in accordance with Clause 2-5, application of rock in accordance with the rock list.
Total Stations	17.00 Stations	

Reconstruction includes, but is not limited to: Installing additional culverts, realigning road segments, application of rock, removing culverts.

0-6 PRE-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
PA-S-1000	0+00 – 30+90	Grade, shape and compact existing running surface in accordance to Clause 2-5 or as directed by contract administrator. Paint gate in accordance with Clause 7-75.
PA-I-2600	0+00 – 14+00	Grade, shape and compact existing running surface in accordance to Clause 2-5 or as directed by contract administrator.
PA-I-2610	0+00 – 12+00	Grade, shape and compact existing running surface in accordance to Clause 2-5 or as directed by contract administrator.

PA-I-2620	0+00 – 6+50	Grade, shape and compact existing running surface in accordance to Clause 2-5 or as directed by contract administrator.
Total Stations	63.4 Stations	

Pre-haul maintenance includes, but is not limited to: Brushing right-of-way, right-of-way debris disposal, cleaning ditches, constructing ditches, installing additional culverts, widening road segments, constructing headwalls, cleaning culvert inlets and outlets, cross drain culvert replacements, installing erosion control materials and sediment removal structures, spot rocking, grading and shaping existing road surface and turnouts, constructing additional turnouts, compaction of road surface, application of rock, acquisition and application of grass seed and hay.

0-7 POST-HAUL MAINTENANCE

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

0-9 DECOMMISSIONING

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

0-13 STRUCTURES

Purchaser shall acquire and install all structures. Requirements for these structures are listed in Section 7 STRUCTURES.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

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

1-3 ROAD DIMENSIONS

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

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.

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

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

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

1-9 DAMAGED METALLIC COATING

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

1-10 WSDOT STANDARD SPECIFICATION REFERENCE

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

1-11 FPHP REQUIREMENTS

The following work is subject to requirements under a Forest Practice Hydraulics Project Approval issued by the State of Washington.

<u>Road</u>	<u>Stations</u>	<u>Work Type</u>
PA-S-1030	16+50	Culvert removal post-haul

1-12 SURVEY MONUMENTS

At no time during construction, reconstruction, or maintenance shall survey monuments, witness trees, or bearing trees be disturbed or damaged. If damaged or disturbed, Purchaser shall hire a licensed land surveyor to repair, replace, and/or reset them.

1-13 LOG LOADING

At no time shall the loading of logs occur on the PA-S-1000 road. In addition, no debris from harvesting operations shall be allowed on this road.

SUBSECTION ROAD MARKING

1-15 ROAD MARKING

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

- Orange ribbon and paint for construction centerlines.
- Construction stakes for everything else.

1-18 REFERENCE POINT DAMAGE

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

SUBSECTION TIMING

1-20 COMPLETE BY DATE

Purchaser shall complete pre-haul, reconstruction and construction road work before the start of timber haul.

1-21 HAUL APPROVAL

Purchaser shall not use roads under this road plan without written approval from the Contract Administrator.

1-22 WORK NOTIFICATIONS

On all the roads, the Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before work begins.

1-23 ROAD WORK PHASE APPROVAL

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

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

SUBSECTION RESTRICTIONS

1-25 ACTIVITY TIMING RESTRICTION

On the following road(s), are not allowed during the listed closure period(s) unless authorized in writing by the Contract Administrator.

<u>Road</u>	<u>Stations</u>	<u>Activity</u>	<u>Closure Period</u>
All	All	All	Weekends and State Recognized Holidays
All	All	All	November 1 st – April 30 th

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION or Contract Clause H-130 HAULING SCHEDULE, 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 including those listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER. If other operators are using, or desire to use these designated maintainer roads, a joint operating plan must be developed. All parties shall follow this plan.

1-27 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 one hour before official sunrise to two hours after official sunrise, and from one hour before official sunset to one hour after official sunset from April 1 through September 23. This restriction does not apply to hauling timber, rock, or equipment.

<u>Road</u>	<u>Stations</u>
-------------	-----------------

PA-I-2600, PA-I-2610, PA-I-2620	All
Place Pit	All

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

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

1-32 ASPHALT SURFACE RESTRICTION

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

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

1-33 SNOW PLOWING RESTRICTION

On all roads, snowplowing will be allowed after the execution of a SNOW PLOWING AGREEMENT, which is available from the Contact Administrator upon request. Purchaser shall request a SNOW PLOWING AGREEMENT each time plowing occurs. If damage occurs while plowing, further permission to plow may be revoked by the Contract Administrator.

SUBSECTION OTHER INFRASTRUCTURE

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

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.

The following county roads and state highways are affected by this sale:

<u>Road Name</u>
SR 112
Place Road

1-41 REQUIREMENTS FOR PAVED ROAD APPROACHES

Requirements for the SR 112 road approaches:

Purchaser shall build up approaches to allow a smooth grade transition between the PA-S-1000 and SR 112 roads. The top of the PA-S-1000 road surfacing must be kept level with the surface of the SR 112 road at all times. The surface of the PA-S-1000 approach must slope up from the edge of the SR 112 road at the rate of 2%, unless otherwise directed by the Contract Administrator.

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

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

2-2 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.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
PA-S-1000	0+00 – 30+90	Grade, shape, compact and remove shoulder vegetation per contract administrator.
PA-I-2600	0+00 – 14+00	Grade, shape, compact and remove shoulder vegetation per contract administrator.
PA-I-2610	0+00 – 12+00	Grade, shape, compact and remove shoulder vegetation per contract administrator.
PA-I-2620	0+00 – 6+50	Grade, shape, compact and remove shoulder vegetation per contract administrator.

2-6 CLEANING CULVERTS

On the following road(s), Purchaser shall clean the inlets and outlets of all culverts and shall obtain written approval from the Contract Administrator before start of timber haul.

<u>Road</u>	<u>Stations</u>
PA-S-1030	1+10

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

On the following road(s), Purchaser shall clean and/or construct ditches, headwalls, and catchbasins. Work must be completed before the start of timber haul and must be done in accordance with the Typical Section Sheet. Pulling ditch material across the road or mixing in with the road surface is not allowed. Ditchlines, headwalls, and catch basins shall not encroach into the existing road.

<u>Road</u>	<u>Stations</u>	<u>Left and/or Right</u>	<u>Comments</u>
PA-S-1030	0+00 – 17+00	Right	Ditching
PA-S-1030	16+25 & 16+75	Right	Catch Basin Install

2-9 REMOVING VEGETATIVE MATERIAL

On the following road(s), Purchaser shall remove all vegetative material, dirt, mud and other debris on the existing road surface with a minimum loss of rock. Material must be disposed of as specified in Clauses 4-35 through 4-38.

<u>Road</u>	<u>Stations</u>
PA-S-1030	0+00 – 17+00

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

SUBSECTION CLEARING

3-5 CLEARING

Purchaser shall fall all vegetative material larger than 5 inches DBH or over 15 feet high between the marked right-of-way boundaries or if not marked in the field, between the clearing limits specified on the TYPICAL SECTION SHEET. Clearing must be completed before starting excavation and embankment.

3-6 CLEARING WITHIN RIPARIAN AREA AT TYPE 1-3 STREAM CROSSING

At the following stream crossing location(s), Purchaser shall place a log, with length equal to two (2) times the width of the ordinary high water, from the largest diameter class conifer tree cut from within the Inner Zone (25 feet either side of the stream) in the stream in accordance with the Typical Riparian Strategy Detail.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
PA-S-1030	16+50	Place during culvert removal

3-7 RIGHT-OF-WAY DECKING

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

3-8 PROHIBITED DECKING AREAS

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

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

SUBSECTION GRUBBING

3-10 GRUBBING

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. Purchaser shall remove stumps using a hydraulic mounted excavator unless authorized in writing by the Contract Administrator. Grubbing must be completed before starting excavation and embankment.

3-11 GRUBBING WITHIN RIPARIAN AREA AT TYPE 1-3 STREAM CROSSING

Purchaser shall retain all grubbed stumps (root wads) within the Inner Zone (25 feet either side of the stream) for placement in accordance with the Typical Riparian Strategy Detail. Three root wads must be placed in or adjacent to the stream channel. The remaining stumps grubbed from the Inner Zone must be placed at least 50 feet from the roadway in the Middle (25 feet to 100 feet from the stream) or the Outer Zones (remaining portion of RMZ).

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
PA-S-1030	16+50	Place during culvert removal

3-12 STUMP PLACEMENT

Purchaser shall place grubbed stumps outside of the clearing limits, as directed by the Contract Administrator and in compliance with all other clauses in this road plan. Stumps must be positioned upright, with root wads in contact with the forest floor and on stable locations.

3-13 STUMPS FOR PUNCHEON MATERIAL

On the following road(s), stumps from within the grubbing limits may be overturned and driven flush with the ground surface for use as subgrade puncheon material.

Road	Stations
PA-S-1030	17+00 – 22+60

3-14 STUMPS WITHIN DESIGNATED WASTE AREAS

In the following waste area(s), Purchaser is not required to remove stumps within waste areas if they are cut flush with the ground.

Road	Waste Area	Stations
PA-S-1030	For Culvert Removal	9+50

SUBSECTION ORGANIC DEBRIS

3-20 ORGANIC DEBRIS DEFINITION

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

3-21 DISPOSAL COMPLETION

Purchaser shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Purchaser shall complete all disposal of organic debris, before the application of rock.

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

Waste areas for organic debris are located as listed below.

<u>Road</u>	<u>Stations</u>	<u>Disposal Location</u>	<u>Requirements</u>
PA-S-1030	16+50	9+50	Waste Area for Culvert Removal Grubbing Debris

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland ,unless used to comply with the specifications detailed in the Riparian Strategy, Clause 3-6 CLEARING WITHIN RIPARIAN AREA AT TYPE 1-3 STREAM CROSSING, and Clause 3-11 GRUBBING WITHIN RIPARIAN AREA AT TYPE 1-3 STREAM CROSSING .
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 45%.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris outside of the grubbing limits in accordance with Clause 3-23 unless otherwise detailed in this road plan and as directed by the Contract Administrator.

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

On all roads purchaser shall use a track mounted hydraulic excavator for construction, reconstruction and maintenance work unless stated otherwise within this Road Plan or authorized in writing by the Contract Administrator.

4-2 PIONEERING

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

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 16 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

4-5 CUT SLOPE RATIO

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

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

4-6 EMBANKMENT SLOPE RATIO

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

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

4-7 SHAPING CUT AND FILL SLOPE

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

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

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

SUBSECTION INTERSECTIONS, TURNOUTS AND TURNAROUNDS

4-21 TURNOUTS

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

4-22 TURNAROUNDS

Turnarounds must be no larger than 50 feet long and 30 feet wide. Locations are subject to written approval by the Contract Administrator.

SUBSECTION DITCH CONSTRUCTION

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-27 DITCH WORK – MATERIAL USE PROHIBITED

Purchaser shall not pull ditch material across the road or mix in with the road surface. Excavated material must be end hauled to the location specified in Clauses 4-36 through 4-38.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Purchaser shall construct ditchouts as identified in the table below and as needed to fit as built conditions. 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. L or R denotes ditchout left or ditchout right.

<u>Road</u>	<u>Stations</u>	<u>L or R</u>
PA-S-1030	3+00 (approx. 30')	Left
PA-S-1030	21+60 (approx. 20')	Left

SUBSECTION WASTE MATERIAL (DIRT)

4-35 WASTE MATERIAL DEFINITION

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

4-36 DISPOSAL OF WASTE MATERIAL

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

4-37 WASTE AREA LOCATION

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.

Note: All amount values are estimated bank yards.

<u>Waste Area Location</u>	<u>Waste Generated From Road</u>	<u>Waste Generated at Stations</u>	<u>Estimated Volume</u>
9+50	PA-S-1030	16+50	200 CY

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser shall not deposit waste material in the following areas:

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

- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.

4-39 WASTE AREA COMPACTION

Excavated material may be deposited adjacent to the road prism on side slopes up to 45% if the waste material is compacted and free of debris. On side slopes of 45% or more, all excavation shall be end hauled or pushed to designated waste areas. All waste material shall be compacted. The minimum acceptable compaction is achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over the entire width of the lifts, with the exception of side hill embankments too narrow to accommodate excavation equipment which may be placed by end-dumping or sidecasting until sufficiently wide to support the equipment.

SUBSECTION BORROW

4-47 NATIVE MATERIAL

Native material consists of naturally occurring material that is free of organic debris, trash, and rocks greater than 12 inches in any dimension.

SUBSECTION SHAPING

4-55 ROAD SHAPING

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

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.

SUBSECTION COMPACTION

4-60 FILL COMPACTION

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

4-61 SUBGRADE COMPACTION

Purchaser shall compact constructed and reconstructed subgrades in accordance with the COMPACTION LIST by routing equipment over the entire width, except ditch.

Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before before placement of rock.

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.

4-64 WASTE MATERIAL COMPACTION

All waste material shall be compacted by running equipment over it or bucket tamping.

4-65 CULVERT BACKFILL COMPACTION

Culvert backfills shall be accomplished by using a jumping jack compactor, performing at least 2 passes per lift, in lifts not to exceed 8 inches.

4-66 COMPACTION BY METHOD

Compaction shall consist of three complete passes over the entire width of each lift with a vibratory drum roller weighing a minimum of 6,000 pounds at a maximum operating speed of 3 mph. For embankment segments too narrow to accommodate a drum roller, a plate compactor shall be used.

SECTION 5 – DRAINAGE

5-3 PUNCHEON PLACEMENT

On the following road(s), puncheon may be utilized in the subgrade on the following road. Puncheon shall consist of logs of at least 4 inches in diameter and shall be at least 17 feet long.

<u>Road</u>	<u>Stations</u>
PA-S-1030	17+00 – 22+60

5-4 PENCHEON RESTRICTED

At no time shall puncheon be used in the subgrade, unless approved by the Contract Administrator or as listed above.

SUBSECTION CULVERTS

5-5 CULVERTS

Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts must be new material and meet the specifications in Clauses 10-15 through 10-23.

5-7 USED CULVERT MATERIAL

On the following road(s), Purchaser may install used culverts. All other culverts must have new culverts installed. Purchaser shall obtain approval from the Contract Administrator for the quality of the used culverts before installation. Culverts must meet the specifications in Clauses 10-15 through 10-23.

<u>Road</u>	<u>Stations</u>
PA-S-1030	21+60

5-12 UNUSED MATERIALS STATE PROPERTY

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

SUBSECTION CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the TYPICAL CROSS DRAIN CULVERT INSTALLATION DETAIL SHEET, TYPICAL TYPE NS NP CULVERT INSTALLATION DETAIL SHEET, the National Corrugated Metal Pipe Association's "Installation Manual for Corrugated Steel Drainage Structures" and the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings". Corrugated Polyethylene pipe must be installed in a manner consistent with the manufacturer's recommendations. Culverts over 15 inches diameter shall be banded using lengths of no less than 10 feet, and no more than one length less than 16 feet. Shorter section of banded culvert shall be installed at the inlet end.

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Purchaser shall obtain written approval from the District Engineer or his/her designee for the installation of culverts 30 inches in diameter and over before backfilling.

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

Cross drain culverts must be installed with a depth of cover of not less than 18 inches of compacted subgrade over the top of the culvert at the shallowest point. Stream crossing culverts must be installed with a depth of cover specified in the Engineer's design, TYPICAL TYPE NS NP DETAIL SHEET, or recommended by the culvert manufacturer for the type and size of the pipe, whichever is greater.

SUBSECTION ENERGY DISSIPATERS

5-20 ENERGY DISSIPATERS

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

Rock used for energy dissipaters must weigh at least 10 pounds. Energy dissipaters must extend a minimum of 1 foot to each side of the culvert at the outlet and a minimum of 2 feet beyond the outlet. Placement must be with a zero-drop-height method only.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

5-25 CATCH BASINS

Purchaser shall construct catch basins to resist erosion. Minimum dimensions of catch basins are 1-2 feet wide, 1-2 feet deep and 2-4 feet long.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the TYPICAL CROSS DRAIN CULVERT INSTALLATION DETAIL at all cross drain culverts that specify the placement of rock. Rock used for headwalls must consist of oversize or quarry spall material. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. No placement by end dumping or dropping of rock is allowed.

SECTION 6 – ROCK AND SURFACING

SUBSECTION ROCK SOURCE

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following 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 5 calendar days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Place Pit	T31N R07W Sec. 33	Pit Run Rock, 3" minus Rock

6-3 ROCK SOURCE STATE LAND, EXISTING STOCKPILE

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following existing stockpile(s) on state land at no charge to the Purchaser. Purchaser shall not remove more than 150 cubic yards of 3" minus rock. Purchaser shall not remove additional yardage without prior written approval from the Contract Administrator. Other stockpiles may not be used without prior written approval from the Contract Administrator.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>	<u>Quantity</u>
Place Pit	T31N R07W Sec. 33	3" minus Rock	150 yd ³

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.

SUBSECTION ROCK SOURCE DEVELOPMENT

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 AND RECLAMATION 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 AND RECLAMATION PLAN, and approved in writing by the Contract

Administrator. Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the rock source.

<u>Source</u>	<u>Rock Type</u>
Place Pit	Pit Run Rock

6-12 ROCK SOURCE SPECIFICATIONS

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

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

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

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

SUBSECTION ROCK GRADATIONS

6-28 1 ¼-INCH MINUS CRUSHED ROCK

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

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

6-33 3-INCH MINUS CRUSHED ROCK

% Passing 3" square sieve	100%
% Passing 2" square sieve	65 - 95%
% Passing 3/4" square sieve	28 - 70%
% Passing U.S. #4 sieve	10 - 35%
% Passing U.S. #200 sieve	0 - 10%

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

6-41 PIT RUN ROCK

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

SUBSECTION ROCK MEASUREMENT

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 estimated truck 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.

SUBSECTION ROCK APPLICATION

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for subgrade drainage installation included grading and 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. The Contract Administrator will direct locations for rock that is to be applied as spot patching. Road surfaces must be compacted in accordance with the COMPACTION LIST by routing equipment over the entire width and in lifts not to exceed 6 inches.

6-72 ROCK APPLICATION AFTER HAULING

On the following road(s), upon completion of all hauling operations, Purchaser shall apply 3" minus rock or 1 ¼" minus from a Commercial Source in accordance with the quantities shown on the ROCK LIST.

<u>Road</u>	<u>Stations</u>	<u>Rock Type</u>	<u>Amount</u>
PA-S-1000	0+00 – 30+90	3" minus Rock or 1 ¼" minus from a Commercial Source	100 yd ³

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

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

6-78 ROCK FOR SPOT PATCHING

Rock for spot patching shall be applied before any grading is done and before any rock lifts are applied. Once applied, spot patches shall be graded into the existing running surface.

SECTION 7 – STRUCTURES

SUBSECTION SIGNS

7-1 SIGN INSTALLATION

Purchaser shall purchase, install, and maintain of the following road signs. Signs must be installed a minimum of 7 days before hauling logs and/or rock. Signs must comply with the Federal Highway Administration’s Manual on Uniform Traffic Control Devices.

<u>Road</u>	<u>Station</u>	<u>Sign</u>
SR 112	Junction of SR 112 and PA-S-1000	2 Truck Crossing signs East and West

SUBSECTION STREAM CROSSING STRUCTURES GENERAL

7-5 STRUCTURE DEBRIS

Purchaser shall not allow debris from the installation or removal of structures to enter any stream. Components removed from existing structures(s) must be removed from state land or, as directed in writing, by the Contract Administrator. Purchaser shall maintain a clean jobsite, with all materials stored away from the high water mark or

other area presenting a risk of the materials entering a stream. Debris entering any stream must be removed immediately, and placed in the site(s) designated for stockpiling or disposal. Purchaser shall retrieve all material carried downstream from the jobsite.

7-6 STREAM CROSSING INSTALLATION

Purchaser shall install stream crossing structures in accordance with the manufacturer's requirements, and as directed by the District Engineer or their designee.

SUBSECTION GATE CLOSURE

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>
PA-S-1000	2+00

SUBSECTION GATES AND FENCES

7-75 GATE MAINTENANCE

Purchaser shall conduct gate maintenance as listed. Purchaser shall remove all old gate material from state land before the termination of the contract.

<u>Road</u>	<u>Station</u>	<u>Requirements</u>
PA-S-1000	2+00	Gate shall be painted Safety Yellow color using high gloss alkyd enamel paint. Prior to painting, surfaces shall be prepared by cleaning, sanding and removing all loose rust and paint. All surfaces shall be dry at the time of painting. Two coats of paint shall be applied, using the procedures described in the product instructions, with a minimum of eight hours drying time between coats.

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL STRUCTURES

On the following road(s), sediment control shall be accomplished as listed below.

<u>Road</u>	<u>Stations</u>	<u>Left and/or Right</u>	<u>Comments</u>
PA-S-1030	16+25, 16+75	Right	Silt Fence in Ditch x 2

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a 3-inch layer of straw or hay to all exposed soils stream at culvert installations and at the culvert removal location. Soils must be covered before the first anticipated storm event. Soils may not sit exposed during any rain event.

SUBSECTION REVEGETATION

8-15 REVEGETATION

Purchaser shall spread grass seed and hay mulch on all exposed soils including, but not limited to, stream culverts, waste areas, sidecast pullback areas, stream crossing removals, bridge installations, and other areas directed by the Contract Administrator. Revegetation of exposed soils shall be accomplished by manual dispersal of grass seed unless otherwise detailed in this Road Plan. Other methods of covering must be approved in writing by the Contract Administrator.

8-16 REVEGETATION SUPPLY

The Purchaser shall provide the all seed, mulch, straw and/or hay, matting etc..

8-17 REVEGETATION TIMING

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

8-18 PROTECTION FOR SEED

Purchaser shall provide a protective cover over the revegetated area. The protective cover may consist of but not be limited to, such items as dispersed hay mulch 3” thick or jute matting .

8-19 ASSURANCE FOR SEEDED AREA

Purchaser shall ensure the growth of a uniform and dense crop of grass. Purchaser shall reapply the seed and/or mulch in areas that have failed to germinate or have been damaged through any cause, restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the seed and/or mulch at no addition cost to the state.

SUBSECTION SEED, FERTILIZER, AND MULCH

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixture listed below on all exposed soil at a rate of 60 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>	<u>Minimum % germination</u>
Perennial Rye	35-45	90
Red Fescue	30-40	90
Highland Bent	5-15	85
White Clover	10-20	90
Inert and Other Crop	0.5	

SECTION 9 – POST-HAUL ROAD WORK

SUBSECTION STRUCTURES

9-1 EARTHEN BARRICADES

Purchaser shall construct barricades in accordance with the EARTHEN BARRICADE DETAIL.

<u>Road</u>	<u>Stations</u>
PA-S-1030	17+00

9-2 CULVERT REMOVAL FROM LIVE STREAM

On the following road(s), Purchaser shall remove existing culverts from live streams and leave the resulting channel open with excavation slope and excavated channel width as

specified. End haul excavated material to a waste area designated in Clause 4-37 WASTE AREA LOCATION. Culvert removal from live streams must be in accordance with the Culvert Removal Detail Sheet.

<u>Road</u>	<u>Stations</u>	<u>Slope Ratio</u>	<u>Comments</u>
PA-S-1030	16+50	2:1	See Culvert Removal Detail Sheet

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.

SUBSECTION POST-HAUL MAINTENANCE

9-5 POST-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
All	All	Clean culverts, clean ditches, grade road shape and compact as directed by the Contract Administrator.
PA-S-1000	0+00 – 30+90	Apply post haul rock per Clause 6-72.

SUBSECTION POST-HAUL LANDING MAINTENANCE

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface as approved in writing by the Contract Administrator.

9-11 LANDING EMBANKMENT

Purchaser shall slope landing embankments to the original construction specifications.

SUBSECTION DECOMMISSIONING AND ABANDONMENT

9-20 ROAD DECOMMISSIONING

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
PA-S-1030	17+00 – 22+60	Light Decommissioning
Total Stations	5.6	

9-22 LIGHT DECOMMISSIONING

- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL as directed by the Contract Administrator.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Block roads with earthen barricades in accordance with the attached EARTHEN BARRICADE DETAIL.
- Remove 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 100 feet of any live stream, with a 4-inch deep layer of straw.
- Provide and evenly spread a 4-inch layer of straw to all exposed soils associated with stream culvert and puncheon removals, as well as all waste material generated by fill removal that is within 30 feet of excavation limits.

SECTION 10 MATERIALS

SUBSECTION GEOTEXTILES

10-2 GEOTEXTILE FOR SEPARATION

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

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

10-6 GEOTEXTILE FOR TEMPORARY SILT FENCE

Geotextiles must meet the following minimum requirements for strength and property qualities, and must be designed by the manufacturer to be used for filtration. Woven slit-film geotextiles are not allowed. Material must be free of defects, cuts, and tears.

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Unsupported between posts
Apparent opening size	D 4751	No. 30 max., No. 100 min.
Water permittivity	D 4491	0.02 sec ⁻¹
Grab tensile strength	D 4632	180 lb in machine direction, 100lb in cross-machine direction
Grab tensile elongation	D 4632	30% max. at 180 lb or more
Ultraviolet stability	D 4355	70% retained after 500 hours of exposure

SUBSECTION CULVERTS

10-15 CORRUGATED STEEL CULVERT

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

10-17 CORRUGATED PLASTIC CULVERT

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

10-21 METAL BAND

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

10-22 PLASTIC BAND

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

10-23 RUBBER CULVERT GASKETS

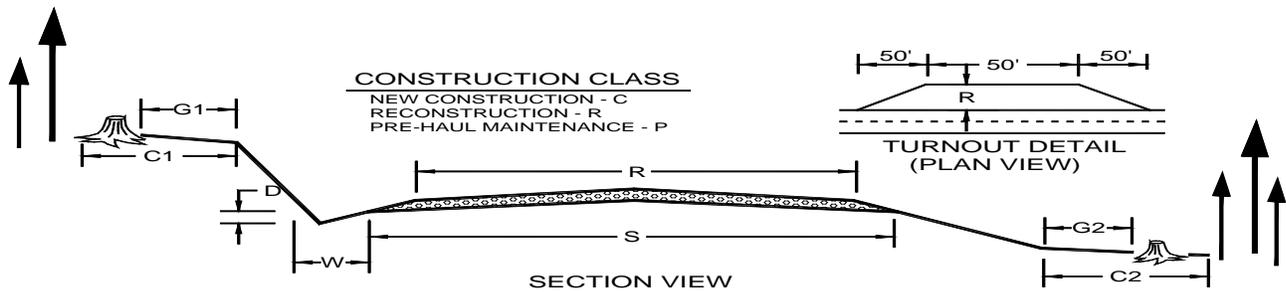
Rubber gaskets must be continuous closed cell, synthetic expanded rubber gaskets conforming to the requirements of ASTM D 1056. Rubber gaskets must be used with all corrugated metal pipe coupling bands.

10-24 GAUGE AND CORRUGATION

Unless otherwise stated in the engineer's design, metal culverts must conform to the following specifications for gage and corrugation as a function of diameter.

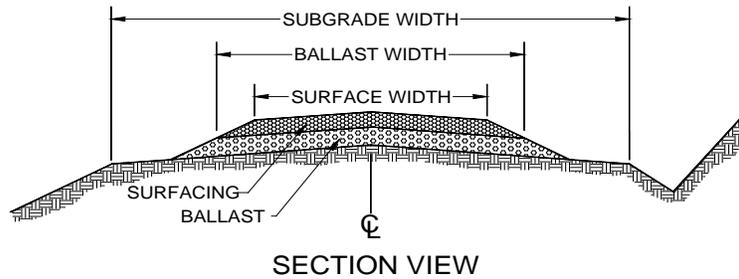
Diameter	Gauge	Corrugation
18"	16 (0.064")	2 2/3" X 1/2"
24" to 48"	14 (0.079")	2 2/3" X 1/2"
54" to 96"	12 (0.109")	3" X 1"

TYPICAL SECTION SHEET



ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	TOLERANCE CLASS	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	CROWN AT CL (in)	DITCH WIDTH (W)	DITCH DEPTH (D)	GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (C1)	ROAD FILL CLEARING (C2)
PA-S-1000	0+00	30+90	P			12'	3"	3'	1'				
PA-S-1030	0+00	17+00	R	C	17'	12'	3"	3'	1'	5'	5'	10'	5'
PA-S-1030	17+00	22+60	C	C	17'	12'	3"	3'	1'	5'	5'	10'	5'
PA-I-2600	0+00	14+00	P			12'	3"	3'	1'				
PA-I-2610	0+00	12+00	P			12'	3"	3'	1'				
PA-I-2620	0+00	6+50	P			12'	3"	3'	1'				

ROCK LIST SHEET



1. Rock quantities, subtotals and totals are "truck measure" estimates. Rock shall be applied to at least the depths listed.
2. All depths are compacted depths.
3. Rock slopes shall be 1½ (H) : 1 (V).
4. All rock sources are subject to approval by the Contract Administrator.
5. Pitrun is defined as pitrun or ballast per Line 6. Crushed is defined as any crushed rock from ¼" minus to 4" minus per Line 6. Oversize is defined as oversize, quarry spalls, light loose rip rap, or heavy loose rip rap per Line 6.
6. Rock sources= 1: Place Pit Pit Run Ballast, 2: Place Pit 3" minus, 3: Commercial Source 1 ¼" minus

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd ³ /sta)	Pitrun SUBTOTAL(yd ³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd ³ /sta)	Crushed Subtotal(yd ³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd ³)
PA-S-1000															
Post Haul	0+00	30+90							2,3				100		
PA-S-1030															
Lift	0+00	17+00	17	1	12	8	45	770							
Culvert	0+45			1				20							
Culvert	1+10			1				50							
Culvert	2+50			1				20							
Culvert	3+00			1				20							
Turnout	3+85			1				20							
Culvert	7+00			1				20							
Culvert	15+90			1				20							
Lift	17+00	22+60	17	1	12	12	70	390							
Turnaround	17+50			1				50							
Culvert	21+60			1				20							
Turnout	21+90			1				20							
Landing	22+60			1				50							
Totals:								1470					100		

CULVERT LIST

ROAD NAME	STATION	CULVERT DIAMETER (in)	CULVERT LENGTH (ft)	FLUME LENGTH (ft)		RIP RAP - INLET (cy)	RIP RAP - OUTLET (cy)	BACKFILL MATERIAL	NOTES
PA-S-1030	0+45	18	30					PR	Culvert Install
PA-S-1030	1+10	24	34					PR	Culvert Replacement
PA-S-1030	2+50	24	30					PR	Culvert Install
PA-S-1030	3+00	18	30					PR	Culvert Install
PA-S-1030	7+00	18	30					PR	Culvert Install
PA-S-1030	15+90	18	30					PR	Culvert Install
PA-S-1030	16+50	24	30						Remove Culvert during Decommissioning
PA-S-1030	21+60	18	30					PR	Culvert Install/ Remove Culvert during Decommissioning

All rip rap shall be Oversize unless specified in the Rock List, or in the field.
All backfill shall be native material (NT) unless specified otherwise. CR= 1 ½"- crushed rock, PR= Pit Run Rock

FISH STREAM WORK PROVISIONS

TIMING LIMITATIONS: The culvert removal project at Station 16+50 may begin July 1 and shall be completed by September 30.

1. Work shall conform to plans and specifications in the road plan.
2. Prior to the commencement of in-stream work, the Purchaser shall isolate the work area in a manner that fish cannot enter the work area, capture and safely move fish and other fish life from the work area. The Purchaser shall have fish capture and transportation equipment ready and on the job site. Captured fish shall be immediately and safely transferred to free-flowing water downstream of the work area.

TEMPORARY STREAM FLOW BYPASS

3. All in-stream work shall be conducted in the dry or in isolation from the stream flow by the installation of a bypass flume/pipe or by pumping the flow around the work area, back into the stream below the work area. Waste water pumped from within the work area shall terminate on the forest floor, sufficient distance from the stream to filter sediment prior to entering the stream.
4. The temporary bypass to divert flow around the work area shall be in place prior to initiation of other work in the wetted perimeter.
5. A sandbag revetment or similar device shall be installed at the bypass inlet to divert the entire flow through the bypass.
6. The bypass shall be of sufficient size to pass all flows and debris for the duration of the project.
7. If a pump is used for diverting water from the stream where fish are present, as per RCW 77.57.010 and 77.57.070, the pump intake shall be equipped with a fish guard to prevent passage of fish into the diversion pump. The pump intake shall be screened with 1/8 inch mesh to prevent fish from entering the pump. Velocity through the screened intake shall be less than 0.4 feet per second. Screens shall be maintained to prevent injury or entrapment of juvenile fish.

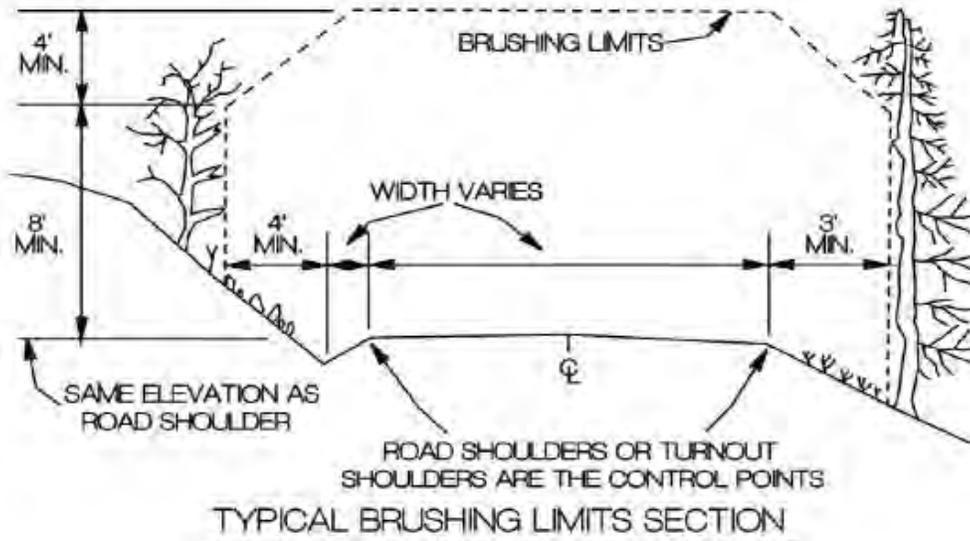
WATER QUALITY

8. Extreme care shall be taken to ensure that no petroleum products, hydraulic fluid, chemicals, or any other toxic or deleterious materials are allowed to enter or leach into the stream.

COMPACTION LIST

Road	Stations	Type	Max Depth Per Lift (inches)	Equipment Type	Minimum Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
Construction	All	Subgrade	6"	Vibratory Smooth Drum	6,000	2	3
Construction	All	Rock Placement	6"	Vibratory Smooth Drum	6,000	2	3
Construction	All	Culvert Backfill	8"	Jumping Jack		3	
Reconstruction	All	Subgrade	6"	Vibratory Smooth Drum	6,000	2	3
Reconstruction	All	Culvert Backfill	8"	Jumping Jack		3	
Reconstruction	All	Rock Placement	6"	Vibratory Smooth Drum	6,000	2	3
Pre-haul	All	Pre-haul Surface		Vibratory Smooth Drum	6,000	2	3
Pre-haul	All	Rock Placement	6"	Vibratory Smooth Drum	6,000	2	3
Post-haul Maintenance PA-S-1000	All	Rock Placement	6"	Vibratory Smooth Drum	6,000	2	3

BRUSHING DETAIL

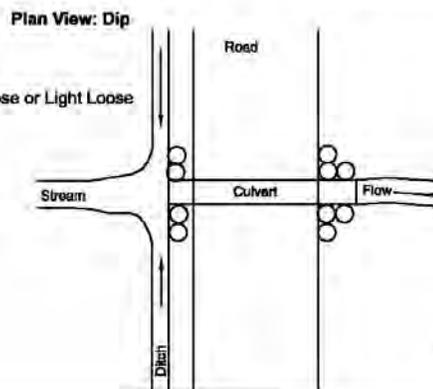
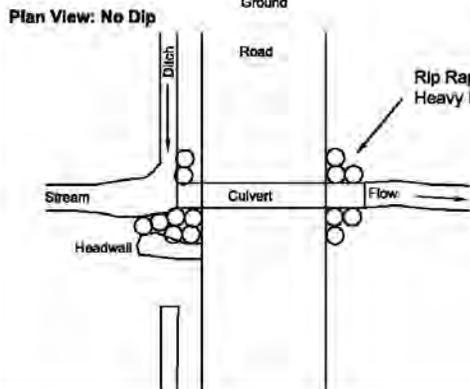
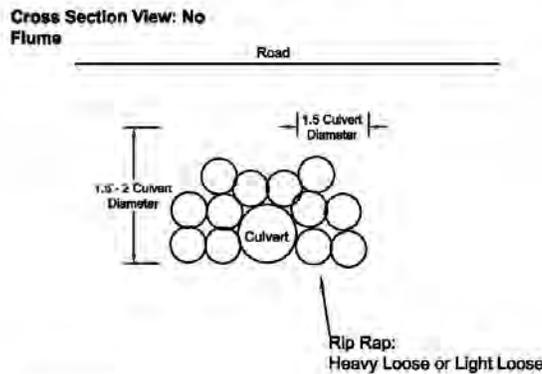
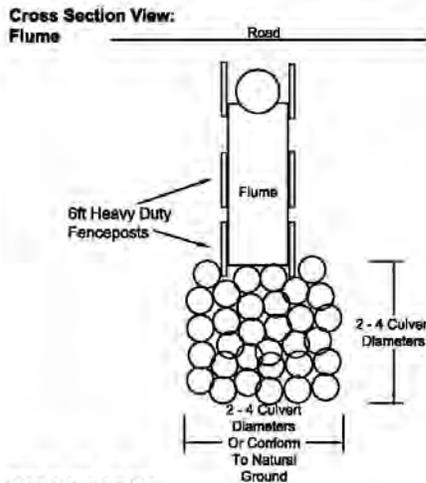
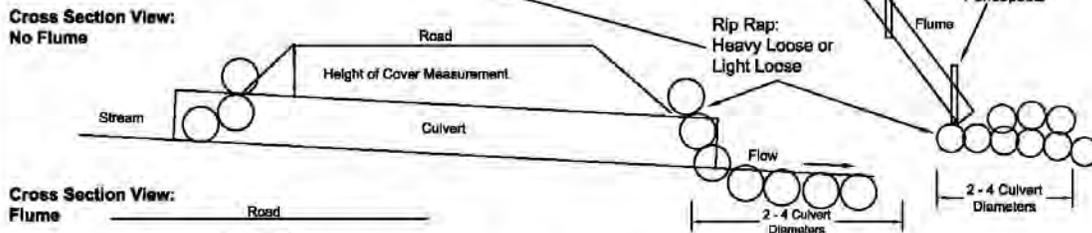
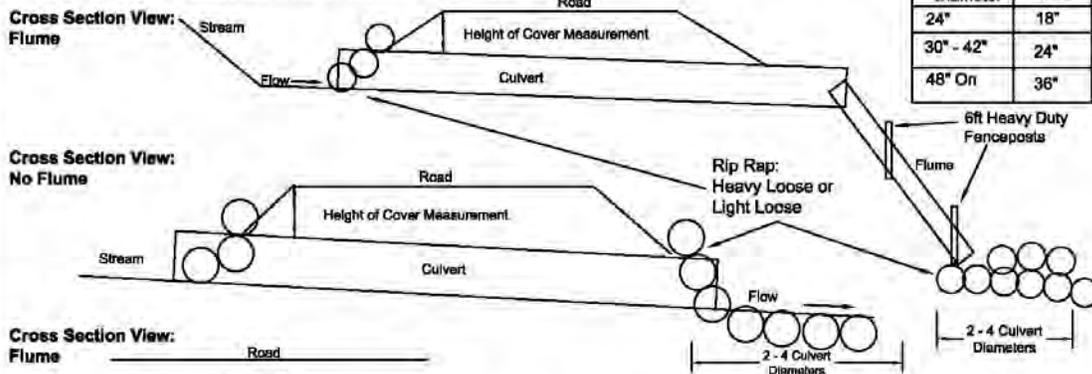


- 1) ALL VEGETATION WITHIN THE BRUSHING LIMITS SHALL BE CUT TO WITHIN 8' OF THE GROUND, UNLESS OTHERWISE DIRECTED BY THE CONTRACT ADMINISTRATOR.
- 2) ALL BRUSH, TREES, LIMBS, ETC. SHALL BE REMOVED FROM THE ROAD SURFACE.
- 3) ALL BRUSH, TREES, LIMBS, ETC. THAT MAY RESTRICT THE FLOW OF WATER SHALL BE REMOVED FROM THE DITCH LINE.
- 4) ALL DEBRIS THAT MAY ROLL OR MIGRATE INTO THE DITCHLINE SHALL BE REMOVED.

Typical Type Ns, Np Culvert Installation Detail Sheet.

- Water shall be diverted away from the work site before any "in stream" work begins, and shall continue until culvert installation is complete.
- Culvert lay shall match stream gradient up to 5%.
- Flumes longer than 10ft shall be staked on both sides at maximum intervals of 10ft with 6ft heavy duty steel fence posts, and fastened securely to the posts with No. 10 galvanized smooth wire or bolted to the fence posts.
- Rip rap shall be placed using a "zero height drop method", and shall be set in conjunction with the culvert installation.
- Rip rap shall be placed at headwalls, along the fill at the inlet, and at the end off flumes in accordance with this Detail. On culverts with no flume rip rap shall be placed along the fill at the outlet, unless there is stream drop or it is called for in the Road Plan, at which point it will be installed as an energy dissipater at the end of the culvert as specified in this Detail. All rip rap distance to be determined by the Contract Administrator or the District Engineer.
- Backfill compaction shall be achieved using a jumping jack, walk behind vibratory roller, or plate compactor on lifts not to exceed 8in. 3 complete passes per lift is required for compaction. Backfill shall be placed and compacted evenly on both sides of the culvert. Care shall be taken to ensure adequate compaction of backfill material under the haunches of the pipe. Excavation trench width shall be at least culvert diameter plus 3 times the width of the compactor footprint used.

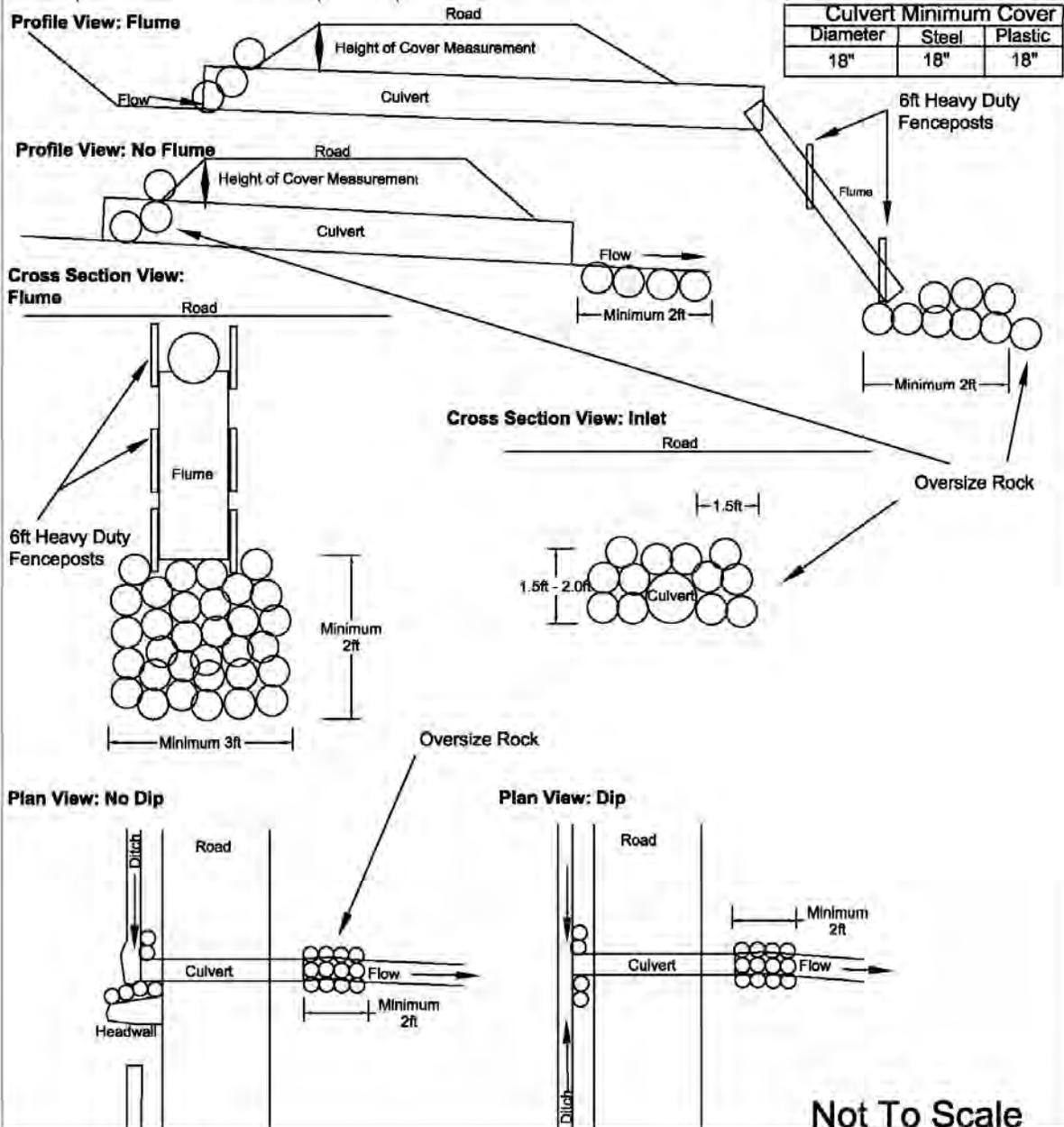
Culvert Minimum Cover		
Diameter	Steel	Plastic
24"	18"	24"
30" - 42"	24"	24"
48" Or	36"	36"



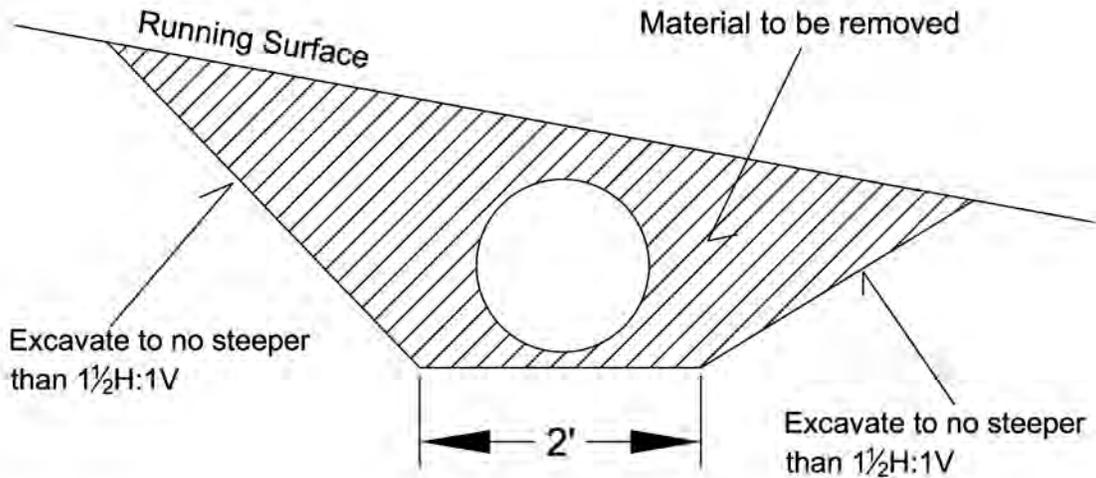
Not To Scale

Typical Cross Drain Culvert Installation Detail Sheet

- Culvert lay shall not exceed 10%.
- Flumes longer than 10ft shall be staked on both sides at maximum intervals of 10ft with 6ft heavy duty steel fence posts, and fastened securely to the posts with No. 10 galvanized smooth wire or bolted to the fence posts.
- Oversize shall be placed using a "zero height drop method", and shall be set in conjunction with the culvert installation.
- Oversize shall be placed at headwalls, along the fill at the inlet, and at the end off flumes in accordance with this Detail. On culverts with no flume oversize shall be placed at the outlet as an energy dissipater as specified in this Detail. All oversize distance to be determined by the Contract Administrator.
- Backfill compaction for installations on existing roads shall be achieved using a jumping jack, or plate compactor on lifts not to exceed 8in. 3 complete passes per lift is required for compaction. Backfill shall be placed and compacted evenly on both sides of the culvert. Care shall be taken to ensure adequate compaction of backfill material under the haunches of the pipe. Excavation trench width shall be at least culvert diameter plus at least the width of the compactor footprint used.

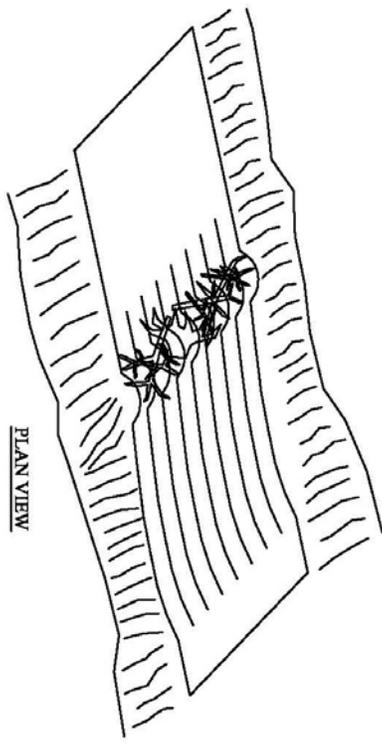


CROSSDRAIN REMOVAL DETAIL

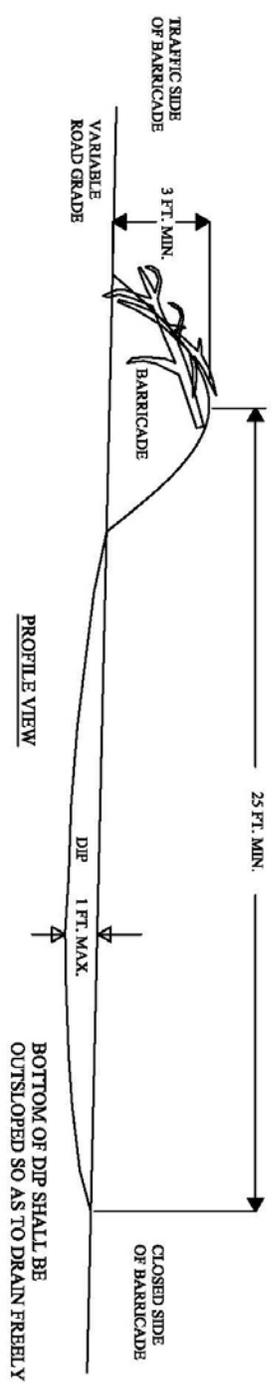


- 1) Excavated material may be wasted on the road surface on the downhill side of the excavation. Waste material shall be sloped at no steeper than $\frac{1}{2}$ H:1V.
- 2) Resulting trench shall be keyed into the ditchline and sloped towards the outside edge of the road with a drop of at least 1 foot in 10 feet.

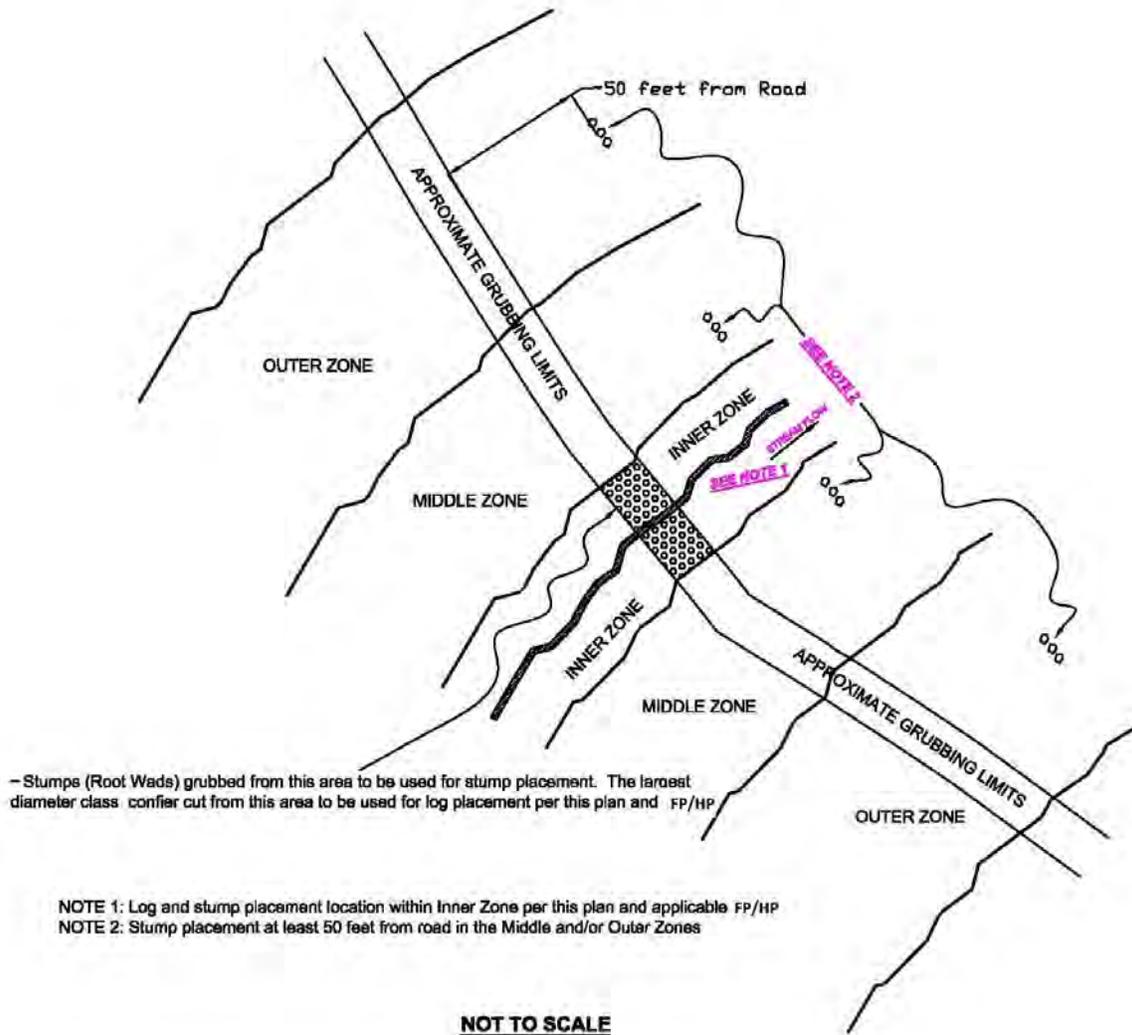
EARTHEN BARRICADE DETAIL



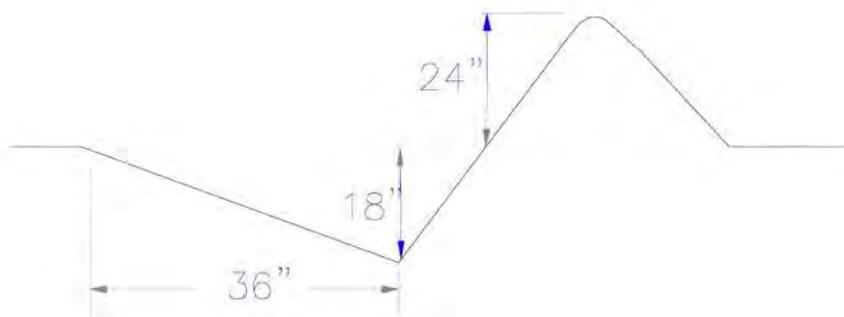
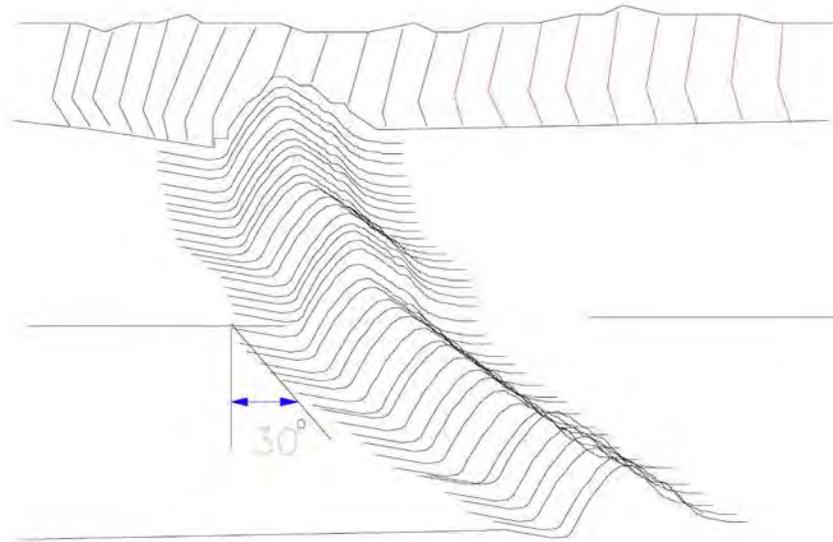
SLASH AND ROOT WADS SHALL BE INCORPORATED INTO THE TRAFFIC SIDE OF THE BARRICADE.



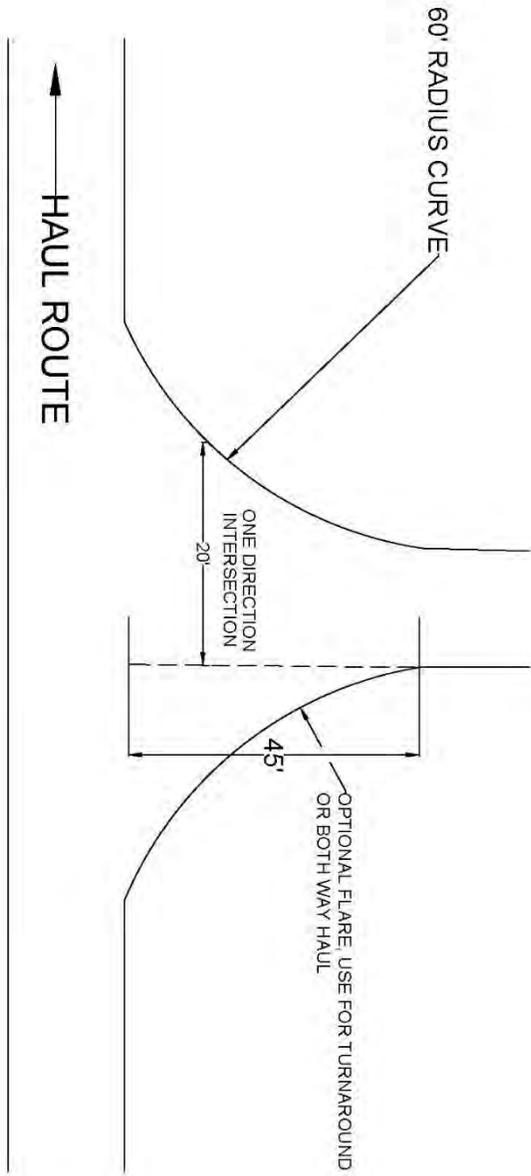
TYPICAL RIPARIAN STRATEGY STREAM CROSSING PLAN



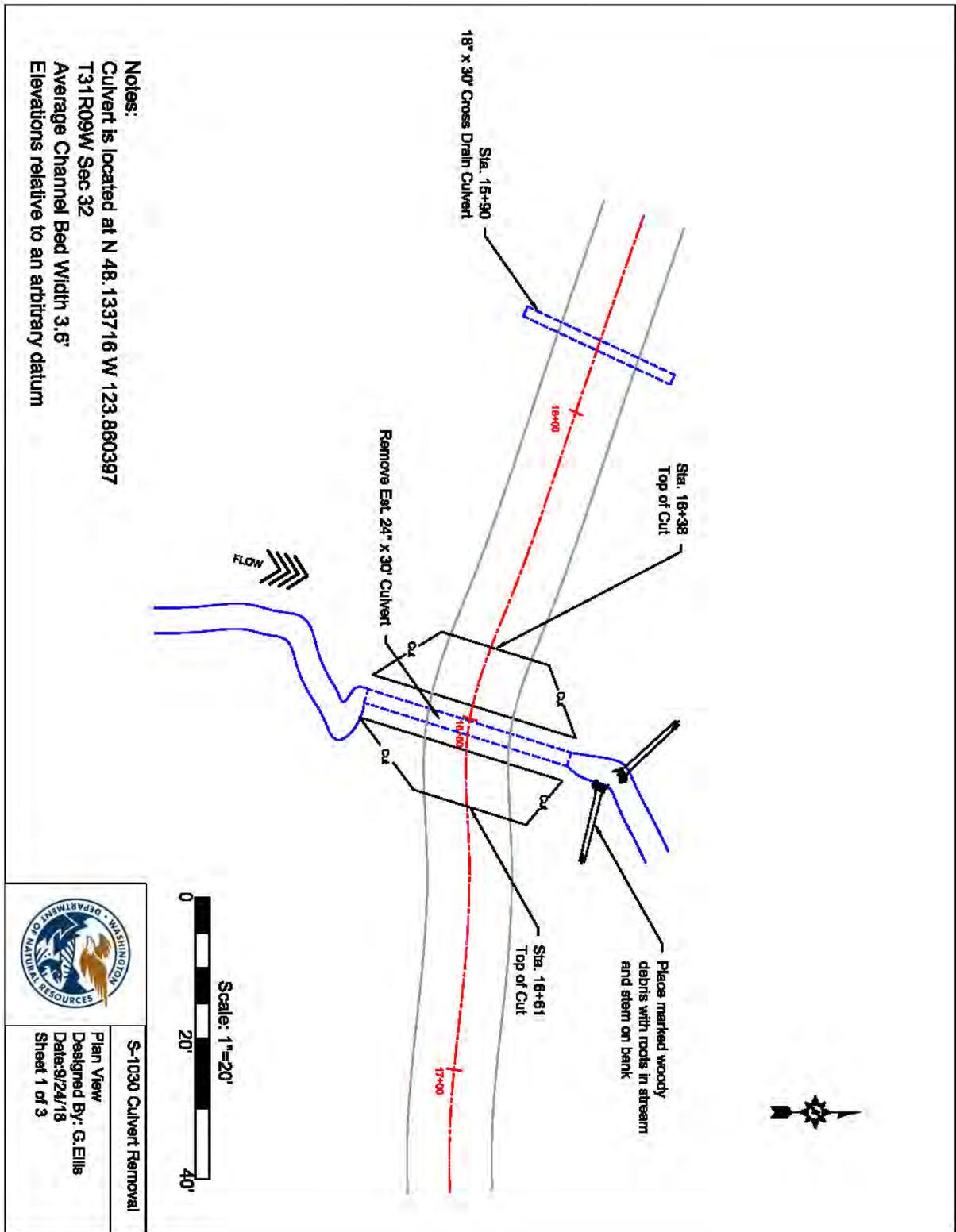
NON-DRIVABLE WATER BAR DETAIL

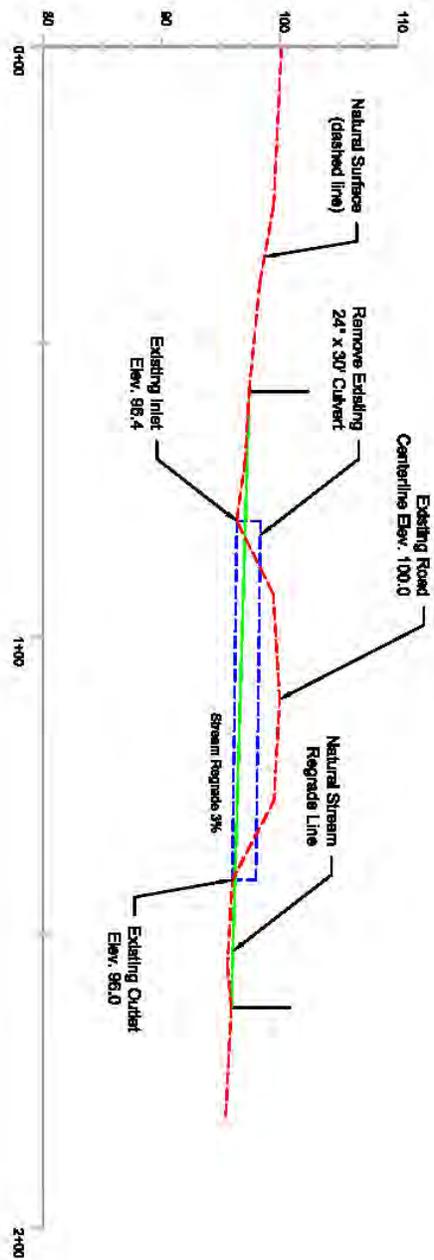


TYPICAL INTERSECTION



NOT TO SCALE

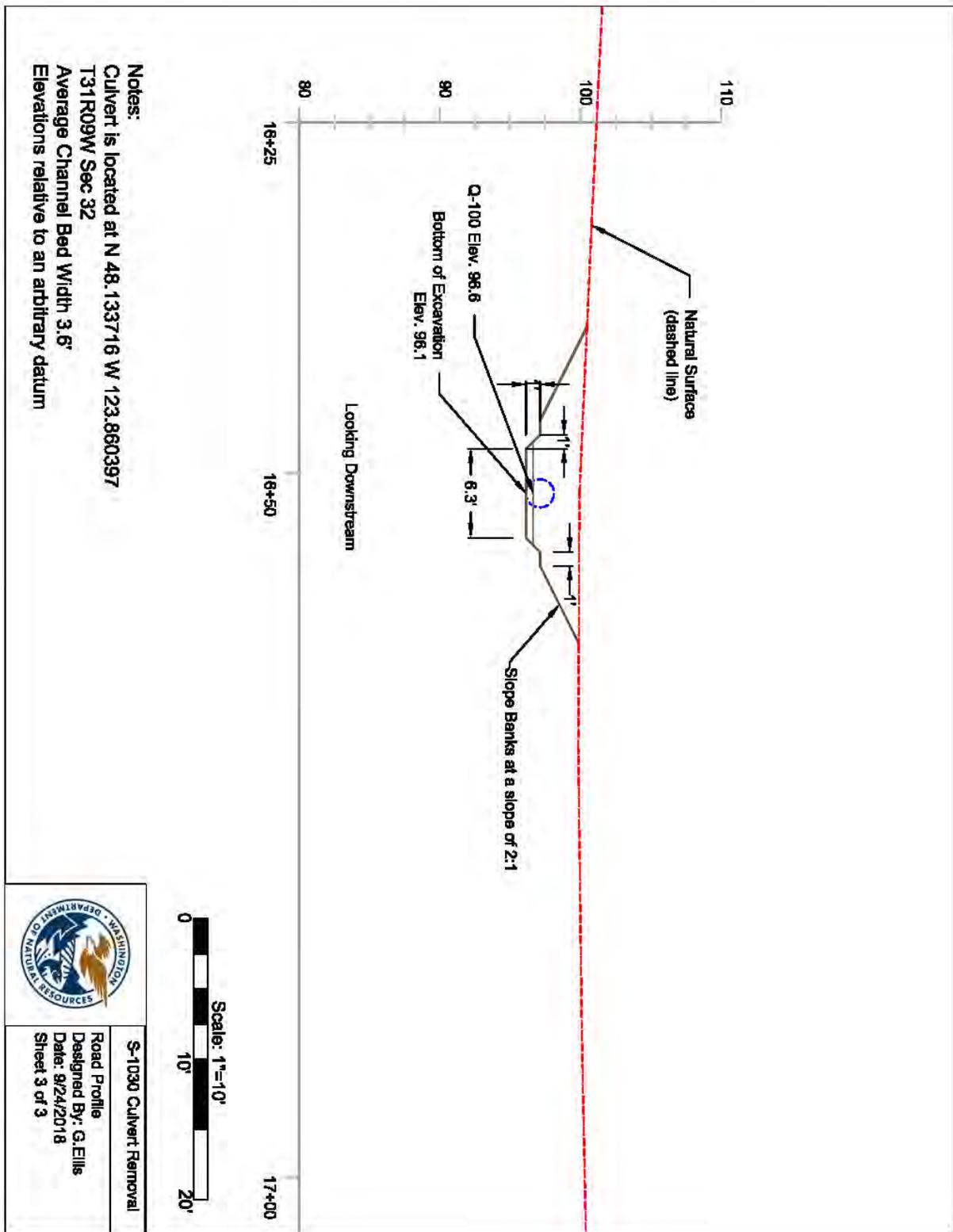


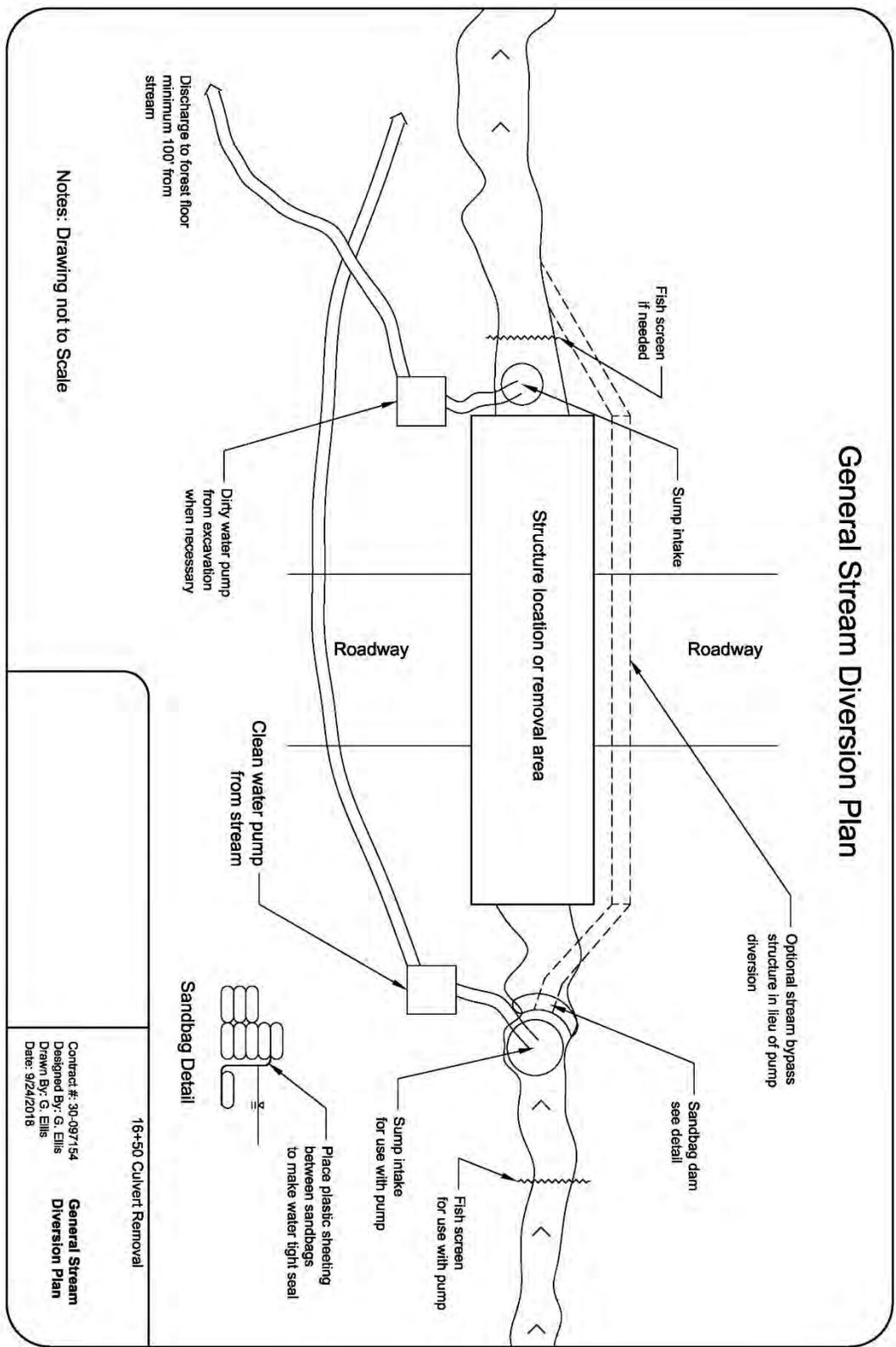


Notes:
 Culvert is located at N 48.133716 W 123.860397
 T31R09W Sec 32
 Average Channel Bed Width 3.6'
 Elevations relative to an arbitrary datum



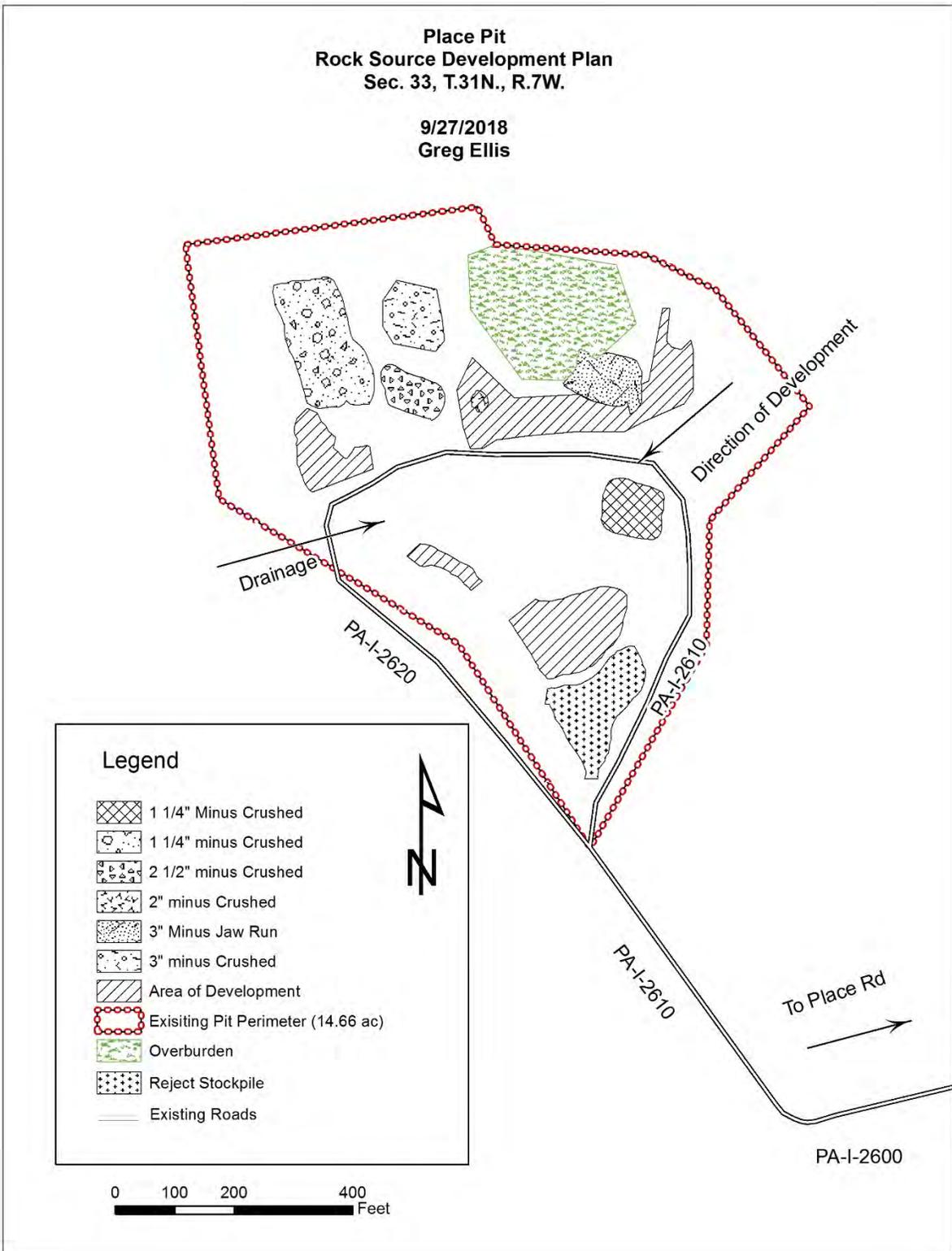
S-1030 Culvert Removal
 Stream Profile
 Designed By: G.Ellis
 Date: 8/24/2018
 Sheet 2 of 3





**Place Pit
Rock Source Development Plan
Sec. 33, T.31N., R.7W.**

**9/27/2018
Greg Ellis**



Place Pit
ROCK SOURCE DEVELOPMENT PLAN
Sec. 33, T.31N., R.07W.
PIT USE REQUIREMENTS

PIT USE REQUIREMENTS include but are not limited to the following:

1. Activity and Marbled Murrelet restrictions per **Clause 1-25** and **Clause 1-27**
2. Purchaser shall give the Contract Administrator a minimum of 7 days' notice prior to commencing any operations, and prepare an approved ROCK SOURCE DEVELOPMENT PLAN as per **Clause 6-10**.
3. Only the quantities and sorts specified in this road plan for this sale may be used or manufactured, unless otherwise approved by the Contract Administrator in writing.
4. If Purchaser elects to use rock from a stockpile or from a pit face, Purchaser shall remove no more than the following volume of material (cubic yards truck measure) from the existing stockpile or pit face as shown on the PLAN VIEW and PROFILE VIEW, unless otherwise approved by the Contract Administrator in writing.
5. Maintain drainage of the pit floor and all drainage structures within the pit boundaries at all times to the designated settling ponds.
6. Excavated face height shall not exceed 15 feet.
7. All excavated slopes shall have a 1 1/2:1 backslope or less at the completion of operations.
8. A minimum 4 foot high berm shall be constructed and constantly maintained along the upper edge of excavated pit faces. No pit faces shall be left unblocked at any time.
9. All operations shall be completed prior to the end of each operating season, including but not limited to: drainage maintenance, sloping of the excavated face, and construction of berms, unless otherwise approved in writing by the Contract Administrator.
10. The quality and quantity of rock and materials are not guaranteed.
11. All material shall remain the property of the State.
12. At the conclusion of operations, Purchaser shall ask the Contract Administrator for written approval of the final rock source condition and compliance with the terms of this plan.
13. All operations shall be carried out in compliance with the regulation 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
14. All work shall be conducted according to relevant specifications in this Road Plan, and the Contract Administrator.

SALE NAME: Sadie Hawkins		CONTRACT#: 30097154		SUMMARY - Road Development Costs				REGION: Olympic		DISTRICT: Straits		
LEGAL DESCRIPTION: T31N19W Sec. 32												
ROAD NAME:	PA-S-1030	PA-S-1030	PA-S-1000	PA-1-2600	PA-1-2610	PA-1-2620	PA-S-1000	0	0	0	0	TOTAL:
ROAD TYPE:	Construction	Recon.	Prehaul	Prehaul	Prehaul	Posthaul						
NUMBER OF STATIONS:	5.60	17.00	30.90	14.00	12.00	6.50	30.90	0.00	0.00	0.00	0.00	116.90
SIDESLOPE:	5%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%
CLEARING AND GRUBBING:	\$709	\$1,938	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,647
ROAD BRUSHING:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EXCAVATION AND FILL:	\$791	\$2,401	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,192
ROAD GRADING:	\$0	\$111	\$0	\$0	\$0	\$52	\$0	\$0	\$0	\$0	\$0	\$163
DITCH CLEANING/CONSTRUCTION:	\$0	\$663	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$663
ROCK TOTALS (Cu. Yds.)/ROCK COSTS:												
Ballast:	1470	1470	530	940	0	0	0	0	0	0	0	\$1,470
Surface:	100	100	\$6,848	\$12,070	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Over-size:	0	0	\$0	\$0	\$0	\$0	\$1,241	\$0	\$0	\$0	\$0	\$0
CULVERTS AND FLUMES:	\$660	\$4,305	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,965
STRUCTURES:	\$0	\$0	\$725	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$725
MISC. EXPENSES:	\$53	\$2,306	\$0	\$0	\$0	\$47	\$0	\$0	\$0	\$0	\$0	\$2,406
OVERHEAD:	\$997	\$2,141	\$87	\$0	\$0	\$161	\$0	\$0	\$0	\$0	\$0	\$3,386
TOTAL COSTS:	\$10,057	\$25,934	\$812	\$0	\$0	\$1,501	\$0	\$0	\$0	\$0	\$0	\$38,304
COST PER STATION:	\$1,796	\$1,526	\$26	\$0	\$0	\$49	\$0	\$0	\$0	\$0	\$0	\$328
MOBILIZATION:		\$6,750	\$1,791									
ROAD DEACTIVATION AND ABANDONMENT COSTS:			\$0									
Pit Work												
NOTE: This appraisal has no allowance for profit and risk.												
Sheet 1 of 1												
Plans to be furnished by:	Greg Ellis											
Computed by: Greg Ellis		Road Standard	Const.	Reconst.	Prehaul	Posthaul	TOTAL (All Roads) =	SALE VOLUME MBF =		TOTAL COST PER MBF =		
		11,744	27,622	17	2,500	3,188	\$46,845	328		\$142.82		
		6	17	1,625	63	63		TOTAL COST PER STATION =		\$400.73		
		2097	1,625	39	50			Date: 9/25/2018				

Forest Access Road Maintenance Specifications

Cuts and Fills

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

Surface

- Grade, shape and compact 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

Preventative Maintenance

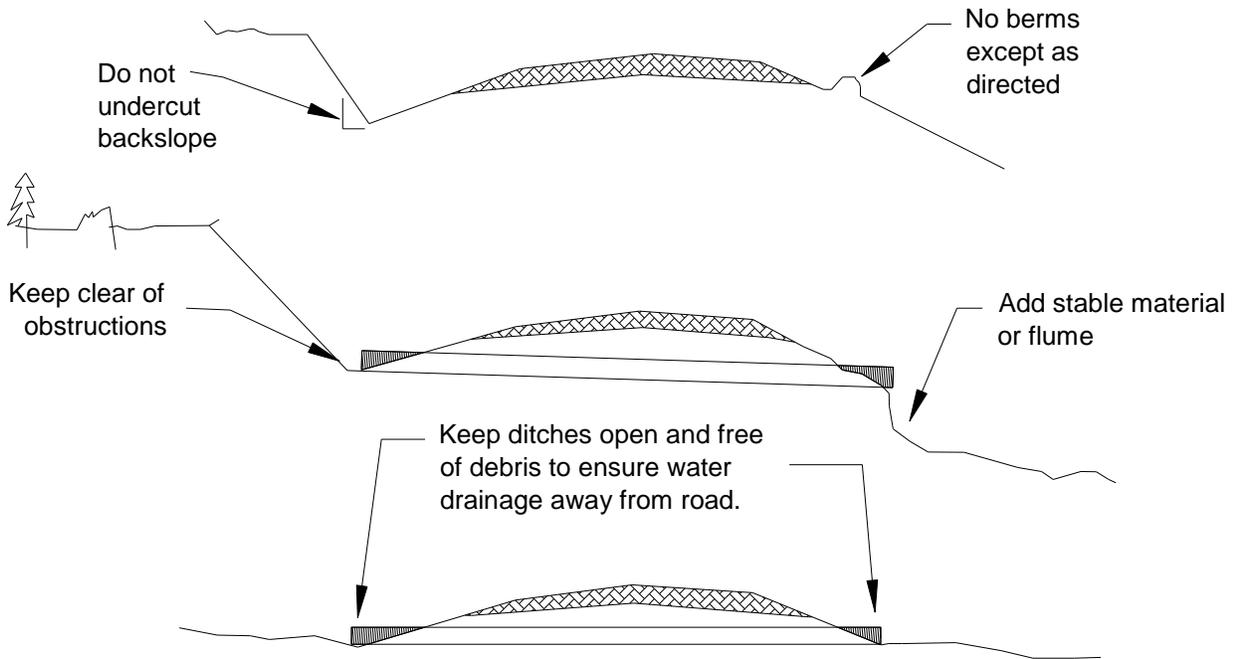
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

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

Debris

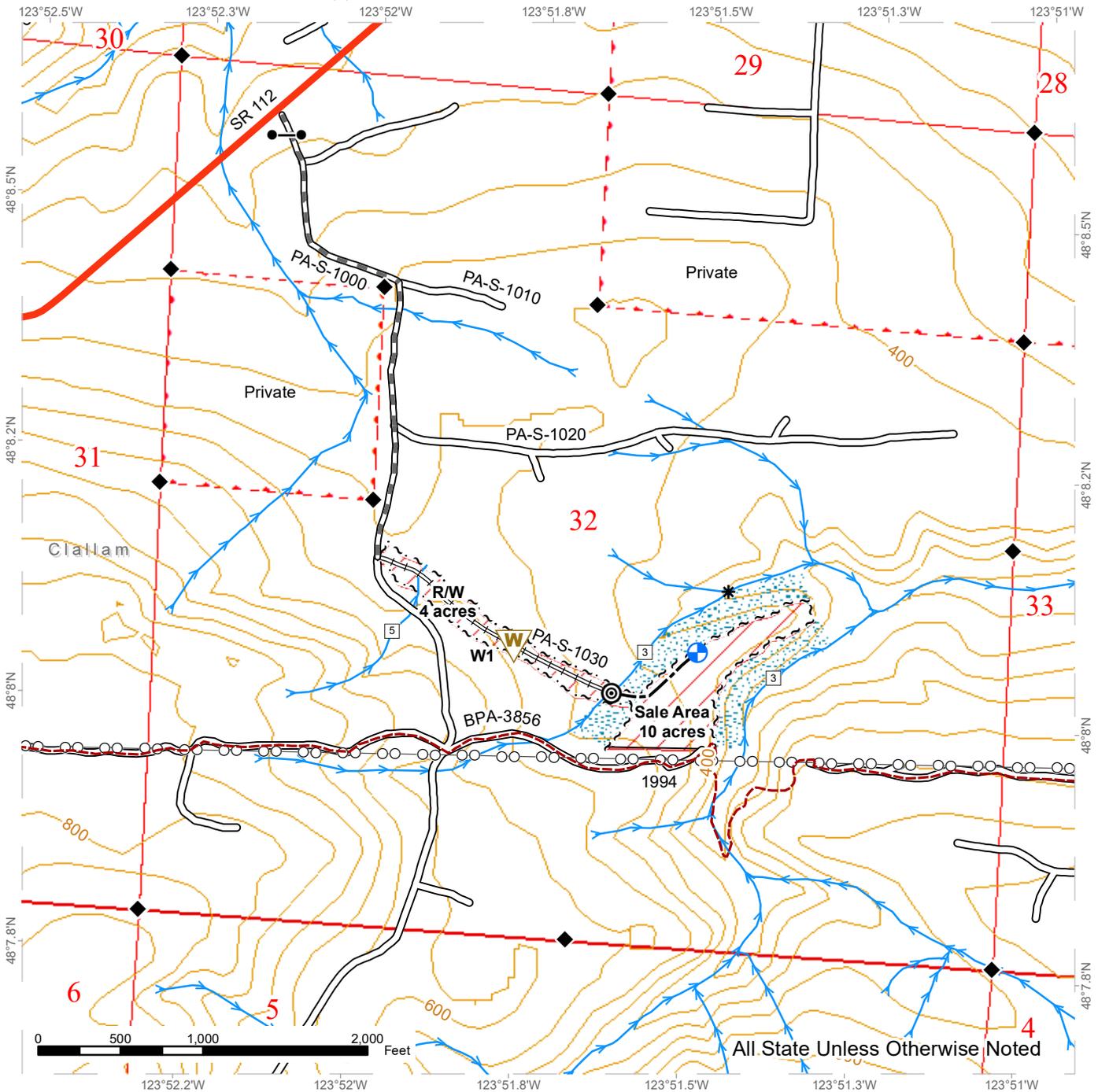
- Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.



LOGGING PLAN MAP

SALE NAME: SADIE HAWKINS
AGREEMENT#: 30-097154
TOWNSHIP(S): T31R9W
TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 360-520'



	Ground VRH		Required Pre-Haul Maintenance		Survey Monument
	Sale Boundary Tags		Required Reconstruction		Landing
	Timber Type Change		Optional Construction		Waste Area
	Right of Way Tags		Streams		Culvert Removal
	BPA Transmission Lines		Contours 40-foot		Gates
	Sadie Creek Trail		Stream Type		Stream Type Break
	Existing Roads				