



TIMBER NOTICE OF SALE

SALE NAME: TIGERILLA VRH & VDT

AGREEMENT NO: 30-099064

AUCTION: April 23, 2024 starting at 10:00 a.m., COUNTY: Lewis South Puget Sound Region Office, Enumclaw, WA.

SALE LOCATION: Sale located approximately 5 miles east of Mineral, WA.

PRODUCTS SOLD AND SALE AREA:

All timber, except trees marked with blue paint or bounded out by yellow leave tree area tags, snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, and blue "Special Management Unit" tags in Unit #1;

All timber as described in Schedule A, except snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, and blue "Special Management Unit" tags in Unit #2; white timber sale boundary tags, private property marked with white Carsonite posts, and the RT300 Road in Unit #3;

All timber bounded by orange right of way tags, except title to the timber within the right of way boundary tags is not conveyed to the Purchaser unless the associated roads are actually constructed in Units #4 and #6;

All timber bounded by orange right of way boundary tags and the RT300 Road, except title to the timber is conveyed to the Purchaser only if the designated landing is constructed and utilized in Unit #5.

All forest products above located on part(s) of Sections 6 and 7 all in Township 14 North, Range 6 East, Sections 1 and 12 all in Township 14 North, Range 5 East, W.M., containing 79 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BVC-SFIFM-018227) and FSC 100% raw materials under the Forest Stewardship Council® Standard (cert no: BV-FM/COC-080501).

ESTIMATED SALE VOLUMES AND QUALITY:

Table with columns: Species, Avg DBH, Ring Count, Total MBF, Total \$/MBF, and MBF by Grade (1P, 2P, 3P, SM, 1S, 2S, 3S, 4S, UT). Rows include Douglas fir, Hemlock, Cottonwood, Red alder, Other Hardwood, Other Conifer, and Sale Total.

MINIMUM BID: \$363/MBF (est. value \$802,000.00) BID METHOD: Sealed Bids

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

EXPIRATION DATE: October 31, 2026 ALLOCATION: Export Restricted



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BIDDABLE SPECIES: Douglas fir

BID DEPOSIT: \$80,200.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Harvest activities are estimated to be 60 percent ground based harvest, 12 percent uphill cable and 28 percent downhill cable. Cable and ground based equipment, with cable-tethered equipment limited to sustained slopes of 75 percent or less, self-leveling equipment limited to sustained slopes of 65 percent or less, and all other ground based equipment limited to sustained slopes of 45 percent or less. Yarding may be restricted during wet weather if rutting becomes excessive, per clause H-017.

Downhill cable logging may be required in portions of Unit #1. This sale was designed using a 72 foot tower, 50 foot tailholds, and intermediate supports.

Falling and yarding will not be permitted on weekends or State recognized holidays, unless approved in writing by the Contract Administrator.

ROADS: 28.37 stations of optional construction. 315.20 stations of required prehaul maintenance. 27.87 stations of abandonment, if constructed. Purchaser maintenance on the RT300 Road, and Spurs 1 and 2. Designated maintenance on the E560, RT100, and RT200 roads.

Rock for this proposal can be obtained from the State owned RT200 Pit and existing stockpile per Road Plan 6-3 at no cost to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. Rock source development is to be completed per Section 6 and as specified in the Rock Source Development Plan in the Road Plan.

Operation of road construction equipment and rock haul will not be permitted from November 1 to May 15 nor on weekends or State recognized holidays, unless authority to do so is granted, in writing from the Contract Administrator. If permission is granted to operate from November 1 to May 15, the Purchaser shall comply with a maintenance plan, when a maintenance plan is determined necessary by the Contract Administrator, to include further protection of State resources per Road Plan clause 1-26.

The hauling of forest products will not be permitted from November 1 to May 15 unless authorized in writing by the Contract Administrator nor on weekends or State recognized holidays, unless authority to do so is granted, in writing from the Contract Administrator. If permission is granted to operate from November to May 15 preventive measures may be required to protect water, soil, roads and other forest assets.

ACREAGE DETERMINATION

CRUISE METHOD: Units #1, #2, and #3 acreage was determined by traversing boundaries by GPS. Units #4, #5, and #6 acreage was determined by multiplying length times width. GPS data files are available at DNR's website for timber sale packets. See cruise narrative for cruise method.

FEES: \$45,135.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: This sale contains high quality Douglas-fir sawlogs and poles. See cruise.



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Unit #1 is a variable retention harvest unit, Unit #2 is a variable density RMZ thinning unit and Unit #3 is a variable density thinning per contract Schedules A-C. Down wood and snag recruitment requirements exist as part of the riparian thinning prescription in Units #2 and #3. Down wood requirements exist as part of WMZ mitigation for Spur 1 construction in Unit #4. See contract Schedule C for requirements.

A portion of Unit #4 and Spur 1 (sta 0+00 to 6+70) crosses through a Wetland Management Zone and requires mitigation and additional abandonment requirements (see Road Plan for details).

Unit #5 is associated with the designated landing. Use of this designated landing is optional. Trees within Unit #5 are to be cut only if this landing is used.

There are restrictions associated with operations on the RT300 road. See clause G-370, H-140 and Road Plan clause 11-5.

Purchaser shall cut all vine maple greater than 6 feet in height within Unit #1, leaving a stump no more than 12 inches in height.

There is the potential that the Puppets timber sale will be utilizing the RT pit at the same time as the Tigerilla timber sale contract term. The Purchaser may need to coordinate work with the Contract Administrator in the event operational periods may overlap in the RT Pit.

If using a tailhold on private property, Purchaser is responsible for all costs and damages associated with a permit. Purchaser is responsible for obtaining this permit, if one is needed. Contact Mike Fowler at 360-819-3406 for more information.

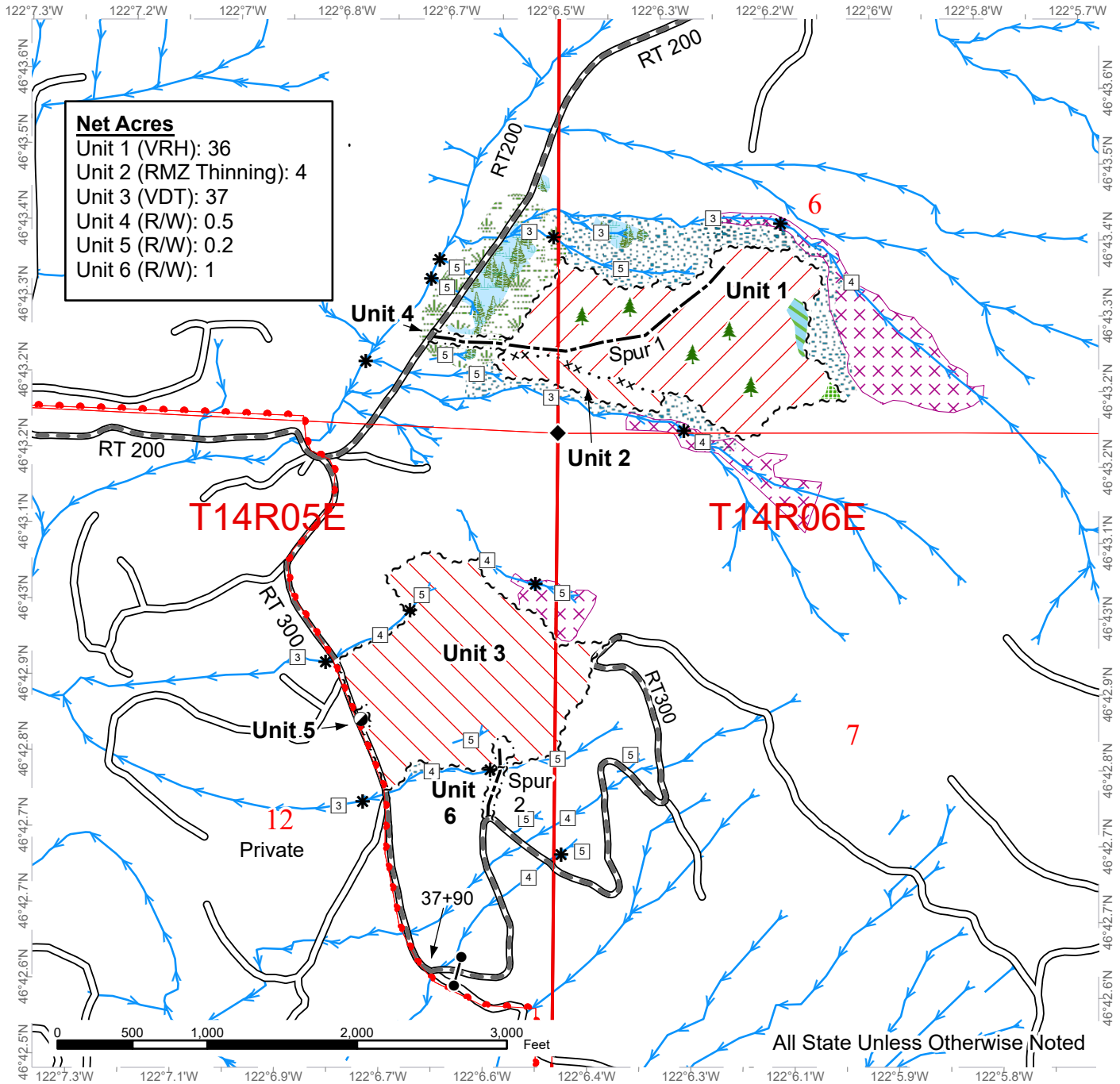
Note to cruisers and appraisers: Please refrain from leaving pink, orange, or blue flagging from your cruises in or around the sale area to avoid confusion with DNR's marking. Additionally, for the safety of the public, please remove from roads all string from string boxes used during appraising or cruising this sale.

See map for gate locations. Gate keys may be obtained by contacting the South Puget Sound Region Office at 360-825-1631 or by contacting Mike Fowler at 360-819-3406.

TIMBER SALE MAP

SALE NAME: TIGERILLA VRH & VDT
AGREEMENT #: 30-099064
TOWNSHIP(S): T14R5E, T14R6E
TRUST(S): Normal School (8), Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region
COUNTY(S): Lewis
ELEVATION RGE: 1880-2680



Net Acres
 Unit 1 (VRH): 36
 Unit 2 (RMZ Thinning): 4
 Unit 3 (VDT): 37
 Unit 4 (R/W): 0.5
 Unit 5 (R/W): 0.2
 Unit 6 (R/W): 1

All State Unless Otherwise Noted

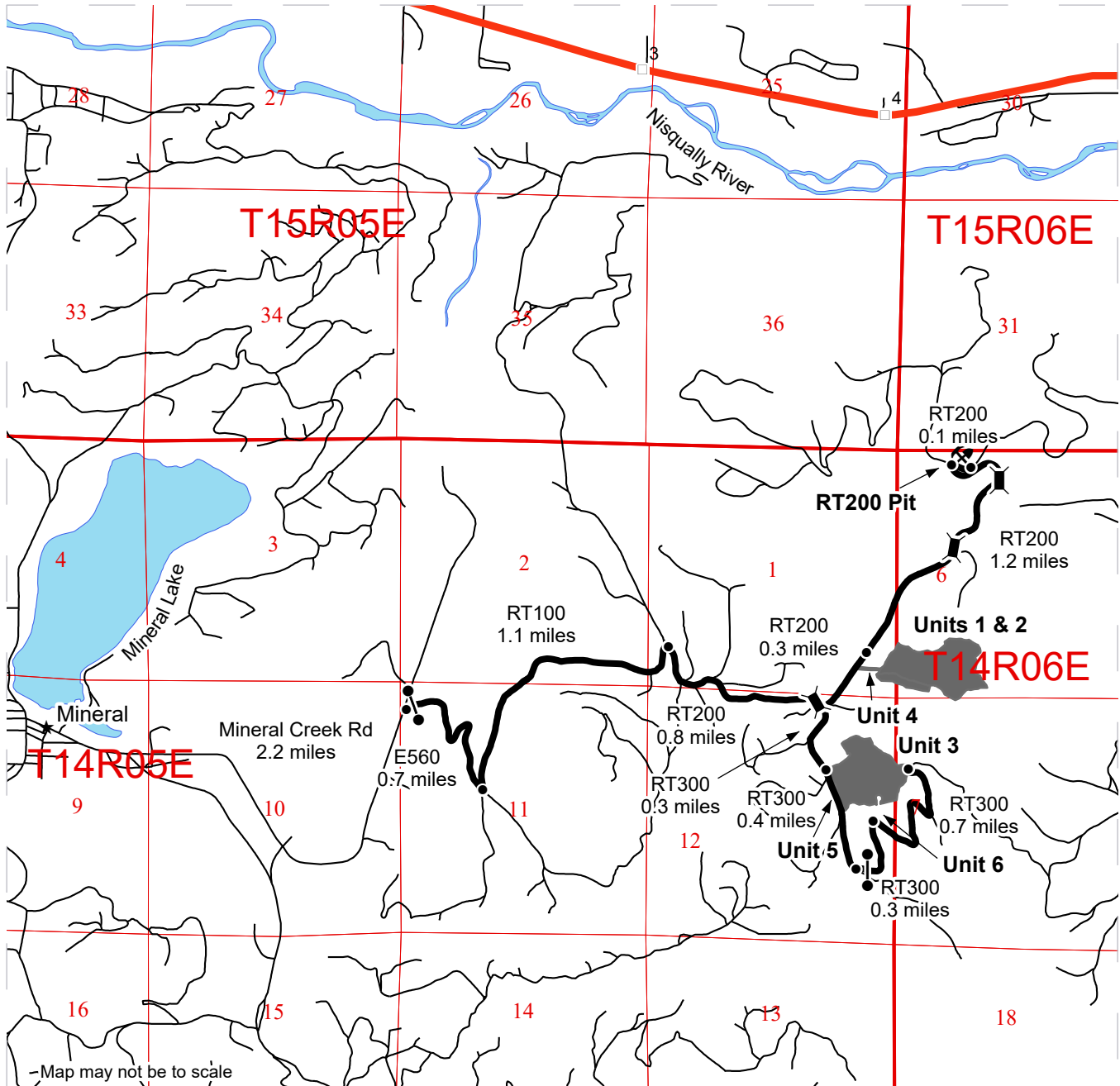
Variable Retention Harvest	Sale Boundary Tags	Stream Type
Variable Density Thinning	Special Mgmt Area	Stream Type Break
Non-Tradeable Leave Tree Area	Right of Way Tags	Designated Landing
Tailhold Restriction Area	Property Line	Leave Tree Area <1/4-acre
Leave Tree Area	Existing Roads	Survey Monument
Riparian Mgt Zone	Required Pre-Haul Maintenance	Public Land Survey Sections
Forested Wetland	Optional Construction	Public Land Survey Townships
Wetland Mgt Zone	Streams	
	Gate	



DRIVING MAP

SALE NAME: TIGERILLA VRH & VDT
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-Map may not be to scale

	Timber Sale Unit
	Haul Route
	Highway
	Other Roads
	Bridge
	Distance Indicator
	Gate (383 Master Lock)
	Rock Pit
	Town
	Milepost Markers

DRIVING DIRECTIONS:

Units 1, 2, and 4: Take Mineral Creek Road east from Mineral for 2.2 miles. Turn right onto the E560 road and follow for 0.7 miles. Bear left and continue on the RT100 road for 1.1 miles. Turn right onto the RT200 road and follow for 0.8 miles to the junction of the RT200 and RT300. Continue on the RT200 for 0.3 miles to reach the Unit 4.

Units 3, 5, and 6: From the junction of the RT200 and RT300, turn right on the RT300 and follow for 0.3 mile to reach Units 3 and 5. Continue along the RT300 for 0.4 miles then bear left through the gate and follow for 0.3 miles to reach Unit 6.

RT 200 Pit: From Unit 4, continue on the RT200 for 1.2 miles. Bear right to continue on the RT200 for 0.1 miles to reach the pit.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted MBF Scale AGREEMENT NO. 30-099064

SALE NAME: TIGERILLA VRH & VDT

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-010 Products Sold and Sale Area

Purchaser was the successful bidder on April 23, 2024 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase, cut, and remove the following forest products: All timber, except trees marked with blue paint or bounded out by yellow leave tree area tags, snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, and blue "Special Management Unit" tags in Unit #1;

All timber as described in Schedule A, except snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, and blue "Special Management Unit" tags in Unit #2; white timber sale boundary tags, private property marked with white Carsonite posts, and the RT300 Road in Unit #3;

All timber bounded by orange right of way tags, except title to the timber within the right of way boundary tags is not conveyed to the Purchaser unless the associated roads are actually constructed in Units #4 and #6;

All timber bounded by orange right of way boundary tags and the RT300 Road, except title to the timber is conveyed to the Purchaser only if the designated landing is constructed and utilized in Unit #5.

All forest products described above located on approximately 79 acres on part(s) of Sections 6, and 7 all in Township 14 North, Range 6 East, Sections 1, and 12 all in Township 14 North, Range 5 East W.M. in Lewis County(s) as shown on the attached timber sale map and as designated on the sale area.

All forest products described above from the bole of the tree that meet or exceed 2 inches diameter inside bark on the small end are eligible for removal. Above ground components of a tree that remain as by-products after the manufacture of logs, including but not limited to tree tops, branches, limbs, needles, leaves, stumps, are not eligible for removal under the terms of this contract.

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

G-020 Inspection By Purchaser

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

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	Harvest Prescription in Units #2 and #3
B	Prescription Compliance
C	Recruitment of Downed Wood and Snags
D	Cable Corridor Requirements in Unit #3

G-030 Contract Term

Purchaser shall remove the forest products conveyed and complete all work required by this contract prior to October 31, 2026.

G-040 Contract Term Adjustment - No Payment

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

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

G-050 Contract Term Extension - Payment

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

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

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

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

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

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

- e. Payment of \$30.00 per acre per annum for the acres on which an operating release has not been issued within the VRH Units. Payment of \$3.00 per acre per annum for the acres on which operating release has not been issued within the VDT Units.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

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

G-060 Exclusion of Warranties

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

- a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."
- c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.
- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.
- f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.
- g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-061 Inadvertent Discovery of Cultural Resources

Purchaser acknowledges that cultural resources as defined in WAC 222-16-010 may exist within the timber sale area and that the existence and location of such resources

may be unknown at the time this contract is executed. Purchaser has a duty to exercise due care in its operations and in the event any human skeletal remains are discovered by the Purchaser or the State during the course of operations Purchaser shall immediately halt operations and notify local law enforcement in the most expeditious manner possible then notifying the Contract Administrator. In the event cultural resources are discovered by the Purchaser or the State during the course of operations Purchaser shall immediately halt operations and notify the Contract Administrator. Any potential resources shall not be removed or disturbed. Purchaser shall resume operations as directed in writing by the Contract Administrator.

G-062 Habitat Conservation Plan

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

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

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

G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in

streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.

- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.
- c. Purchaser shall refer to a specific ITP number, ITP TE812521-1 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.
- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

Purchaser is responsible for obtaining any permits not already obtained by the State that relate to Purchaser's operation. Forest Practice Application / Hydraulic Project Approval permits obtained by the State shall be transferred to Purchaser. Purchaser is responsible for all permits, amendments and renewals.

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

- a. Risk

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

Purchaser shall remain responsible for payment of the total contract price notwithstanding the impracticability or frustration.

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

G-090 Sale Area Adjustment

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

G-100 Forest Products Not Designated

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

G-110 Title and Risk of Loss

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

G-115 Forest Stewardship Council® (FSC® C012959) Certification

Forest products purchased under this contract are FSC 100% certified as being in conformance with the Forest Stewardship Council Forest Management Standard under certificate number: BV-FM/COC-080501.

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

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

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

G-120 Responsibility for Work

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

G-121 Exceptions

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

The State will bear the cost to repair damages caused by a third party. In all other cases, the Purchaser shall bear responsibility for the costs as described below.

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

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

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

The repair work identified by the State shall be promptly completed by Purchaser at an agreed price. The State may elect to accomplish repairs by means of State-provided resources.

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

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

G-140 Indemnity

To the fullest extent permitted by law, Purchaser shall indemnify, defend and hold harmless State, agencies of State and all officials, agents and employees of State, from and against all claims arising out of or resulting from the performance of the contract. "Claim" as used in this contract means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorneys' fees, attributable for bodily injury,

sickness, disease or death, or injury to or destruction of tangible property including loss of use resulting therefrom. Purchasers' obligations to indemnify, defend, and hold harmless includes any claim by Purchasers' agents, employees, representatives, or any subcontractor or its employees. Purchaser expressly agrees to indemnify, defend, and hold harmless State for any claim arising out of or incident to Purchasers' or any subcontractors' performance or failure to perform the contract. Purchasers' obligation to indemnify, defend, and hold harmless State shall not be eliminated or reduced by any actual or alleged concurrent negligence of State or its agents, agencies, employees and officials. Purchaser waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend and hold harmless State and its agencies, officials, agents or employees.

G-150 Insurance

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

All insurance and surety bonds should be issued by companies admitted to do business within the State of Washington and have a rating of A-, Class VII or better in the most recently published edition of Best's Reports. If an insurer is not admitted, all insurance policies and procedures for issuing the insurance policies must comply with Chapter 48.15 RCW and 284-15 WAC.

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

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

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

Purchaser shall include all subcontractors as insured under all required insurance policies, or shall furnish separate certificates of insurance and endorsements for each

subcontractor. Subcontractor(s) must comply fully with all insurance requirements stated herein. Failure of subcontractor(s) to comply with insurance requirements does not limit Purchaser's liability or responsibility.

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

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

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

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

Commercial General Liability (CGL) Insurance. Purchaser shall maintain general liability (CGL) insurance, and, if necessary, commercial umbrella insurance with a limit of not less than \$1,000,000.00 per each occurrence. If such CGL insurance contains aggregate limits, the General Aggregate limit shall be at least twice the "each occurrence" limit. CGL insurance shall have products-completed operations aggregate limit of at least two times the "each occurrence" limit. CGL coverage shall include a Logging and Lumbering Endorsement (i.e. Logger's Broad-Form) to cover the events that include, but are not limited to, fire suppression expenses, accidental timber trespasses, and wildfire property damage with limits of not less than \$2,000,000.00 each occurrence.

CGL insurance shall be written on Insurance Services Office (ISO) occurrence form CG 00 01 (or a substitute form providing equivalent coverage). All insurance shall cover liability arising out of premises, operations, independent contractors, products completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another party assumed in a business contract), and contain separation of insured (cross liability) condition.

Employer's Liability "Stop Gap" Insurance. Purchaser shall buy employers liability insurance, and, if necessary, commercial umbrella liability insurance with limits not less than \$1,000,000.00 each accident for bodily injury by accident or \$1,000,000.00 each employee for bodily injury by disease.

Workers' Compensation Coverage. Purchaser shall comply with all State of Washington workers' compensation statutes and regulations. Workers' compensation coverage shall be provided for all employees of Purchaser and employees of any

subcontractor or sub-subcontractor. Coverage shall include bodily injury (including death) by accident or disease, which exists out of or in connection with the performance of this contract. Except as prohibited by law, Purchaser waives all rights of subrogation against State for recovery of damages to the extent they are covered by workers' compensation, employer's liability, commercial general liability, or commercial umbrella liability insurance.

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

Business Auto Policy (BAP). Purchaser shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit not less than \$1,000,000.00 per accident. Such insurance shall cover liability arising out of "Any Auto". Business auto coverage shall be written on ISO form CA 00 01, or substitute liability form providing equivalent coverage. If necessary the policy shall be endorsed to provide contractual liability coverage and cover a "covered pollution cost or expense" as provided in the 1990 or later editions of CA 00 01. Purchaser waives all rights against State for the recovery of damages to the extent they are covered by business auto liability or commercial umbrella liability insurance.

G-160 Agents

The State's rights and duties will be exercised by the Region Manager at Enumclaw, Washington. The Region Manager will notify Purchaser in writing who is responsible for administering the contract. The Region Manager has sole authority to waive, modify, or amend the terms of this contract in the manner prescribed in clause G-180. No agent, employee, or representative of the State has any authority to bind the State to any affirmation, representation, or warranty concerning the forest products conveyed beyond the terms of this contract.

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

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

G-210 Violation of Contract

G-220 State Suspends Operations

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

G-210 Violation of Contract

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

G-220 State Suspends Operations

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

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

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

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

G-230 Unauthorized Activity

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

G-240 Dispute Resolution

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

- a. In the event of a dispute, Purchaser must make a written request to the Region Manager for resolution prior to seeking other relief.
- b. The Region Manager will issue a written decision on Purchaser's request within ten business days.
- c. Within ten business days of receipt of the Region Manager's decision, Purchaser may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.

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

G-250 Compliance with All Laws

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

G-260 Venue

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

G-270 Equipment Left on State Land

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

G-280 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; on the E560, RT100, RT200, and RT300 roads, and Spurs 1 and 2. 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 E560, RT100, RT200, RT300 from 0+00 to 37+90, unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

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

Easement #55-001448 entered into between the State of Washington and Manke and Sons, Inc., dated November 1, 1979.

Easement #55-000989 entered into between the State of Washington and Weyerhaeuser Company, dated April 10, 1973.

G-396 Public Hauling Permit

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

G-430 Open Fires

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

G-450 Encumbrances

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

To be determined approximately one month prior to the day of sale.

Section P: Payments and Securities

P-010 Initial Deposit

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

P-021 Payment for Forest Products

Purchaser agrees to pay the following rates per MBF Scribner net log scale for forest products conveyed and cut or removed from the sale area plus \$45,135.00 on day of sale and \$9.00 per MBF upon removal in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause.

DATA MISSING

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

Utility logs, special cull and peelable cull logs of all species, included on loads of logs that are required to be removed and scaled per clause H-150 will be paid for on an adjusted gross scale basis at the rate of \$20.00 per MBF plus fees.

P-027 Payment for Removal of Optional Forest Products

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

P-040 Weighing and Scaling Costs

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

P-045 Guarantee of Payment

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

P-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-052 Payment Procedure

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

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

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

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

Forest products included in this agreement which are destroyed, damaged, stolen, lost, or mismatched shall be paid for by Purchaser on demand of the State. The rates contained in clause P-021 shall apply.

P-080 Payment Account Refund

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

P-090 Performance Security

Purchaser agrees to furnish, within 30 days of the confirmation date, security acceptable to the State in the amount of \$100,000.00. The Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by operations under this contract or resulting from Purchaser's noncompliance with any rule or law. Acceptable performance security may be in the form of a performance bond, irrevocable letter of credit, cash, savings or certificate of deposit account assignments, and must name the State as the obligee or beneficiary. A letter of credit must comply with Title 62A RCW, Article 5. Performance security must remain

in full force over the duration of the contract length. Surety bonds issued shall conform to the issuance and rating requirements in clause G-150. The State shall retain the performance security pursuant to RCW 79.15.100. Purchaser shall not operate unless the performance security has been accepted by the State. If at any time the State decides that the security document or amount has become unsatisfactory, Purchaser agrees to suspend operations and, within 30 days of notification, to replace the security with one acceptable to the State or to supplement the amount of the existing security.

P-100 Performance Security Reduction

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

Section L: Log Definitions and Accountability

L-010 Forest Products Conveyed

Forest products conveyed are all logs or parts of logs described by the 'Products Sold and Sale Area' (G-010) clause meeting the removal requirements listed in the 'Required Removal of Forest Products' (H-150) clause.

L-020 Short Logs - Peeler Blocks

Logs or parts of logs which are removed from the sale area that fail to meet the minimum gross length requirements shall be scaled and graded as short logs or peeler blocks. Such material shall be paid for at the forest products rates specified in this contract.

L-040 Utility Logs

Utility logs are logs that meet the minimum utility log standards as described by the log scaling rules applicable for this contract.

L-060 Load Tickets

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

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

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

L-071 Log and Load Reporting Service

This contract requires the use of a State approved third party Log and Load Reporting Service (LLRS). Purchaser shall ensure log volume measurement data and/or load and weight data is received by the LLRS within 1 business day of logs being measured or weighed. Purchaser agrees to pay the LLRS for log and load data supplied to the State.

If during the term of this contract, the State discontinues use of the LLRS, the State will notify the Purchaser in writing and the Purchaser will then be responsible to send log scale and/or weight information to the State.

L-080 Scaling Rules

Determination of volume and grade of any forest products shall be conducted by a state approved third party scaling organization and in accordance with the Westside log scaling and grading rules and Scribner Volume Table, revised July 1, 1972, contained in the Northwest Log Rules Eastside and Westside Log Scaling Handbook (developed and produced by the Northwest Log Rules Advisory Group) and in effect on the date of confirmation of this contract.

Special scaling specifications shall be noted on the State's Brand Designation form which is hereby incorporated to this contract by reference.

L-110 State Approval of Log Scaling and Weighing Locations

Forest Product measurement and weighing facilities required by this contract must be approved by the State. Forest products sold under the contract which require log scaling shall be scaled, measured, or counted by a State approved third party log scaling organization. Forest products sold under the contract which require weighing shall be weighed at a location that meets Washington State Department of Agriculture approval.

Prior to forest products being hauled, the Contract Administrator must authorize in writing the use of State approved measurement and/or weighing facilities that are at or enroute to final destinations. Forest products from this sale shall be measured or weighed at facilities, which are currently approved for use by the State and are currently authorized for this sale. The State reserves the right to verify load volume and weights with State employees or contractors at the State's own expense. The State reserves the right to revoke the authorization of previously approved measurement locations.

L-120 Long Log Taper Distribution

Forest products over 40 feet long plus trim shall be segment scaled and the lower segment diameters shall be determined using actual taper. In order to utilize taper rules for determining segment diameters for poles and pilings greater than 40 feet in length plus trim, Purchaser must request use of a Pole and Piling Scaling Specification Agreement on file in the region office. Approval for usage of a special Pole and Piling Scaling Specification Agreement may be granted at the sole discretion of the State.

Following State approval for usage of the Pole and Piling Scaling Specification Agreement, the Brand Designation form shall be amended to incorporate the long log taper rules. The volume reported by the scaling organization for forest products over 40 feet plus trim will be expanded by 5 percent and the additional 5 percent volume shall be billed to the purchaser at the contract rate.

L-130 Conversion Factors

Forest products removed from the sale area that are not measured in units specified in the 'Payment for Forest Products' clause of this contract shall be converted to board feet using Department of Natural Resources' standard conversion factors.

Section H: Harvesting Operations

H-011 Certification of Fallers and Yarder Operators

All persons engaged in the felling and yarding of timber must receive certification in writing from the Contract Administrator. Certification may be revoked when the Contract Administrator determines that non-compliance of leave tree selection criteria or cut tree selection criteria is occurring, or excessive damage to leave trees or skid trails is occurring.

Excessive damage for leave trees is defined in clause H-012.
Excessive damage for reserve trees is defined in clause H-013.

Excessive skid trail damage is defined in clause H-015 or H-016.

When leave tree damage exceeds the limits set forth in clause H-012,
Purchaser shall be subject to liquidated damages (clause D-040)
When reserve tree damage exceeds the limits set forth in clause H-013,
Purchaser shall be subject to liquidated damages (clause D-041).

H-012 Leave Tree Damage Definition

Leave trees are trees required for retention within the sale boundary. Purchaser shall protect leave trees from being cut, damaged, or removed during operations.

Leave tree damage exists when more than 5 percent of the leave trees are damaged in a unit and when one or more of the following criteria occur as a result of Purchaser's operation, as determined by the Contract Administrator:

- a. A leave tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 324 square inches.
- b. A leave tree top is broken or the live crown ratio is reduced below 30 percent.
- c. A leave tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

If the Contract Administrator determines that a leave tree has been cut or damaged, the Purchaser may be required to pay liquidated damages for Excessive Leave Tree Damage as detailed in clause D-040.

H-013 Reserve Tree Damage Definition

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

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

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

If the Contract Administrator determines that a reserve tree has been cut or damaged, the Purchaser shall provide a replacement reserve tree of like condition, size, and species within the sale unit containing the damaged leave tree, as approved by the Contract Administrator. Purchaser may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.

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

H-015 Skid Trail Requirements

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

Purchaser shall comply with the following during the yarding operation:

- a. Skid trails will not exceed 12 feet in width, including rub trees.
- b. Skid trails shall not cover more than 10 percent of the total acreage on one unit.
- c. Skid trail location will be pre-approved by the Contract Administrator.
- d. Except for rub trees, skid trails shall be felled and yarded prior to the felling of adjacent timber.

- e. Rub trees shall be left standing until all timber tributary to the skid trail has been removed.
- f. Excessive soil damage is not permitted. Excessive soil damage is described in clause H-017.
- g. Skid trails will be water barred at the time of completion of yarding, if required by the Contract Administrator.

The requirements in this clause apply to Units #2 and #3 only.

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-025 Timing Requirements for Timber Removal

All timber must be removed within 60 days of being felled.

H-030 Timber Falling

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

H-035 Fall Trees Into Sale Area

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

H-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for Units #1, #2 and #3. The plan shall address the harvest requirements related to the thinning prescription, skid trail locations, falling, yarding, tailhold restriction areas, and the FPA Falling and Yarding plan associated with the watershed analysis worksheet, which are part(s) of this contract. The harvest plan shall be approved by the Contract Administrator prior to beginning the harvest operation. Purchaser shall not deviate from the harvest plan without prior written approval by the Contract Administrator.

H-050 Rub Trees

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

H-052 Branding and Painting

Forest products shall be branded with a brand furnished by the State prior to removal from the landing. All purchased timber shall be branded in a manner that meets the requirements of WAC 240-15-030(2)(a)(i). All timber purchased under a contract designated as export restricted shall also be painted in a manner that meets the requirements of WAC 240-15-030(2)(a)(ii).

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

H-080 Snags Not to be Felled

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

H-110 Stump Height

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using cable and ground based equipment, with cable-tethered equipment limited to sustained slopes of 75 percent or less, self-leveling equipment limited to sustained slopes of 65 percent or less, and all other ground based equipment limited to sustained slopes of 45 percent or less. 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 May 15 nor on weekends or 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:

A. Existing downed trees or logs dead for more than 5 years yarded to the landing shall be returned to their original locations.

B. The designated landing in Unit #5 is optional. Purchaser shall only construct the landing if necessary. If constructed, this landing shall be built a minimum of 30 feet off the RT 300 Road.

C. Equipment limitation zones are required within 30 feet of Type 5 streams.

D. Crossings of Type 5 streams may be allowed at locations approved in writing by the Contract Administrator. Purchaser shall place a culvert or log puncheon at crossing locations (when water is present) to protect the stream bank and prevent sedimentation. All materials placed in and/or over the stream at these crossings shall be removed immediately upon completion of yarding on that skid trail.

E. Any and all operations associated with this sale may be temporarily suspended when, in the opinion of the Contract Administrator, there is the potential for delivery to typed water.

F. No equipment shall operate or trees felled or damaged outside the timber sale boundary.

G. Within shovel logging areas, and when yarding and loading operations are occurring simultaneously, an additional shovel will be required for loading to avoid extra trips to the landing. No more than one round trip per shovel road is allowed.

H. Take measures throughout operations to control soil erosion, water channelization, and prevent sediment delivery to streams or wetlands. Methods may include construction of water bars, "sweeping" with logs, silt traps, or other measures on skid trails, yarding corridors and haul roads.

I. No more than two skid trails open to active skidding at any one time.

J. In the event operations become inactive for long periods of time, skid trails shall be water barred prior to completion of yarding tributary timber to prevent water accumulation and sediment movement, if required by the Contract Administrator.

K. Once a skid trail is closed, the Purchaser shall not reopen a skid trail unless approved in writing by the Contract Administrator.

L. To facilitate proper reforestation in areas of high slash concentrations, Purchaser shall, in concurrence with ground based yarding, clear plantable spots at an 12 foot by 12 foot spacing in Unit #1.

M. Notify all employees and contractors working on this sale that any danger tree marked or unmarked may be felled. Any marked danger tree will 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-141 Additional Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

A. Leave 2 down logs per acre in Unit #1. A log is defined as having a minimum diameter of 12 inches on the small end of the log and a minimum length of 20 feet or at least 100 board feet.

B. Areas restricting operations due to protection of potentially unstable slopes are located within and outside the sale boundary.

- Locations inside the sale boundary are identified as Non-Tradeable Leave Trees marked with yellow Leave Tree Area tags as shown on the Timber Sale and Logging Plan Maps inside which no trees may be used as tailholds and no equipment may operate within, nor logs felled into or yarded through or over.
- Locations outside the sale boundary are identified as Tailhold Restriction Areas on the Logging Plan and Timber Sale Maps. Trees within these areas shall not be used as tailholds.

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

H-150 Required Removal of Forest Products

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

Species	Net bd ft	Log length (ft)	Log dib
All species	10	12	5

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

H-157 Optional Removal of Forest Products Not Designated

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

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

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

H-160 Mismatch

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

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

H-180 Removal of Specialized Forest Products or Firewood

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

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

H-250 Additional Falling Requirements

Within Unit #1, all vine maple stems 6 feet tall or greater, shall be felled. Remaining stumps shall be no more than 12 inches in height. Areas of young or immature timber may be excluded from this requirement 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 8/23/2023 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on RT300 Road, and Spurs 1 and 2. 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 the E560, the RT100, and the RT200 roads. 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-080 Landing Locations Approved Prior to Construction

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

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-100 Stream Cleanout

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

S-110 Resource Protection

No equipment may operate within any wetland or stream 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 or other releases of hazardous material/waste during operations conducted under this contract.

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

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

d. Hazardous Material Release Reporting

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

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

S-131 Refuse Disposal

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

Section D: Damages

D-010 Liquidated Damages

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

D-020 Failure to Remove Forest Products

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

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

Where:

LD = Liquidated Damage value.

V = The unremoved value at the date of breach of contract. The value is determined by subtracting the removal volume to date from the State's cruise volume multiplied by the contract bid rates.

ID = Initial Deposit paid at date of contract that has not been applied to timber payments.

P = Advance payments received but not yet applied to specific contract requirements.

C = Charges assessed for contract requirements completed prior to breach of contract but not paid for.

A = Administrative Fee = \$2,500.00.

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

Where:

r = daily equivalent of an annual interest at current interest rate as established by WAC 332-100-030.

LD = Liquidated damage value.

N = Number of days from date of breach to date payment is received.

D-030 Inadequate Log Accountability

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

Enforcement actions for unauthorized removal of forest products for each improperly branded load, improperly ticketed load, lost or unaccounted for tickets, or use of a facility not authorized for this sale or improper submission of scaling data are impractical, expensive, time consuming and are not an adequate remedy. Therefore, Purchaser agrees to pay the State, as liquidated damages, a sum of \$100 each time a load of logs does not have branding as required in the contract, \$250 each time a load of logs does not have a load ticket as required by the contract, \$250 each time a load ticket has not been filled out as required by the plan of operations, \$250 each time a load is weighed or scaled at a location not approved as required under this contract, \$250 each time a log ticket summary report is not submitted properly, and if a third party Log and Load Reporting Service is required, \$250 each time scaling or weight data is not properly submitted to the Log and Load Reporting Service per clause L-071, and \$250 each unused ticket that is not returned to the State, for any reason.

D-040 Leave Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-012, Leave Tree Damage Definition, the trees damaged result in substantial injury to the State. The value of the damaged leave trees at the time of the breach is not readily ascertainable. Therefore, Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged trees in Units #2 or #3.

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 Unit #1.

SIGNATURES

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

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Don Melton

Print Name

South Puget Sound Region Manager

Date: _____

Date: _____

Address:

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

STATE OF _____)

COUNTY OF _____)

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

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

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

Notary Public in and for the State of

My appointment expires _____

Schedule A
Harvest Prescription in Units #2 and #3

Harvest Prescription in Units #2 and #3:

This harvest is to enhance habitat by a variable density thinning to achieve the relative density (RD) target below. To accomplish this prescription, trees may be harvested that are six (6) to thirty-five (35) inches in diameter at breast height (DBH). No trees that are thirty-six (36) inches or larger in DBH shall be felled, with the exception of those trees which pose a safety hazard.

Unit #	Residual Target RD
2	48
3	48

- Only live trees six (6) inches or greater in DBH will be used to calculate RD. Trees that are less than six (6) inches in DBH are to be protected during harvest operations where possible, with special attention given to western red cedar.
- The RD target is an average at the unit level.
- In any given area, the residual RD shall not vary by more than five (5) points above or below the unit target.
- The RD listed for each unit is required; Purchaser shall leave sufficient trees and basal area per acre in the units to achieve the RD following harvest.
- Leave trees shall be thoroughly distributed across the harvest units on an acre by acre basis. Leave trees shall be selected using the Leave Tree Selection Criteria.
- Trees marked for structure creation shall not count towards the residual RD target.
- Relative Density (RD) will be calculated using the following formula

$$RD = \frac{BA}{\sqrt{QMD}}$$

Leave Tree Selection Criteria:

The Purchaser shall select leave trees from the dominant and co-dominant canopy by comparing with other trees in the stand, first by using species preference, then by form preference listed below.

Species preference (in descending order of priority):

- 1) western red cedar
- 2) Douglas-fir
- 3) western hemlock
- 4) Pacific silver fir/noble fir/Sitka spruce
- 5) big leaf maple
- 6) red alder

Form preference (in descending order of priority):

- 1) Free of disease, major defect and damage*
- 2) Largest diameter
- 3) Tallest height
- 4) Fullest and most vigorous crown

*Four trees per acre with defect, damage or decay are to be left as wildlife trees

The Purchaser shall comply with the reserve tree selection guidelines listed in “Guidelines for Selecting Reserve Trees” published by the Washington Department of Labor and Industries. The Purchaser is not required to leave any unsafe tree.

Certification:

The Contract Administrator will approve and certify in writing all persons engaged in selection of leave trees or felling of timber prior to cutting operations, per clause H-011.

Equipment Restriction:

Equipment must remain 25 feet away from the white timber sale boundary tags adjacent to Type 3 and 4 streams in Units #2 and #3 unless authorized by the Contract Administrator.

Schedule B
Prescription Compliance

Prescription Compliance for Units #2 and #3

Compliance:

To ensure that the Purchaser is in compliance with the prescription, the Purchaser shall measure sample plots across the landscape concurrently while harvesting Units #2 and #3. These plots shall be pre-determined, with approval by the Contract Administrator (CA), on a 330 foot by 330 foot grid covering each unit to ensure random and unbiased plot locations. If 330 foot by 330 foot grid is not possible due to configuration of the unit, another unbiased grid will be agreed upon by the CA.

At each plot location, stand conditions will be measured using a fixed plot of 1/10 acre and a variable plot with a 20 BAF prism. (A different BAF may be used if approved by CA.)

All compliance plots, as described above, will be marked in the field. The perimeter of the plot will be marked with fluorescent pink flagging. On each plot, the count trees will be marked with one yellow band of paint, and BA trees with two yellow bands of paint. The Purchaser shall demonstrate, to the satisfaction of the CA, a working knowledge and ability to accurately measure and calculate Relative Density. The Purchaser shall submit compliance plot data to the CA at the following intervals:

Unit #2 after 10% of the unit has been cut and every 20% of the total unit acreage thereafter.
Unit #3 after 10% of the unit has been cut and every 20% of the total unit acreage thereafter.

The following tables include residual trees per acre (TPA) and basal area (BA) averages that are recommended based on cruise information and modeling to achieve the RD prescription for Units #2 and #3. These are estimates only. Compliance of the RD achieved in Units #2 and #3 will be based on actual plot data.

Unit #	Average TPA Recommended	Average Basal Area per Acre
2	116	210
3	121	211

If a plot indicates that the RD is more than five (5) points above or below the unit target, the CA must be notified immediately. The CA shall determine if this deviation will require recertification of the fallers.

The Purchaser shall not deviate from the requirements set forth in the Compliance portion of this schedule without prior written approval by the CA.

Schedule C
Recruitment of Downed Wood and Snags

Recruitment of Downed Wood and Snags in Units #2, #3 and #4

Structure Creation:

In Units #2 and #3, the Purchaser shall enhance habitat by creating structure trees as part of the DNR's Riparian Forest Restoration Strategy (RFRS). In Unit #4 the Purchaser shall enhance habitat by creating structure trees as part of the Wetland Management Zone (WMZ) mitigation. Trees are marked for down woody debris and snag creation.

Down woody debris (DWD) creation:

Trees designated for DWD creation are marked with 2 bands of pink paint and a "D" at a rate of three (3) trees per thinned Riparian Management Zone (RMZ) acre and five (5) trees in Unit #4. Some of these trees are to be felled towards the stream/wetland, and into the stream/wetland where feasible. Others in Unit #2 should not be felled toward the stream due to potentially unstable slopes. The Contract Administrator shall be present during DWD creation in Unit #2 to ensure trees are not felled into potentially unstable slopes.

For any tree that is marked for creation of DWD, the faller has the authority to make the below modifications for safety. If any modifications for safety are made, the Purchaser shall notify the Contract Administrator.

- If unsafe to fall the tree, the tree may be traded for another nearby tree of similar species and size for falling as DWD towards stream. Alternate trees must be reviewed and approved by the Contract Administrator.
- If unsafe to fall the tree towards the stream, the tree may be felled in another safer direction.

Snag creation:

Trees designated for snag creation are marked with 2 bands of pink paint and an "S" at a rate of two (2) trees per thinned RMZ acre. Snags may be created by either girdling or topping. If the Purchaser elects to girdle the trees, girdling shall be exposing the cambium completely around the bole of the tree in a manner approved by the Contract Administrator. If the Purchaser elects to top the tree, the topping shall occur above 20 feet.

Schedule D
Cable Corridor Requirements in Unit #3

- A. Location of corridors must be marked by Purchaser and approved by the Contract Administrator.
- B. A corridor will not exceed 12 feet in width, including the rub trees.
- C. Excessive soil damage is not permitted in the corridor. Excessive soil damage within the corridor will be as defined in clause H-017, Preventing Excessive Soil Disturbance.
- D. Corridors shall 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 schedule without prior written approval by the Contract Administrator.



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region: South Puget Sound

Timber Sale Name: Tigerilla VRH & VDT

Application Number: 30- 099064

EXCISE TAX APPLICABLE ACTIVITIES

Construction: 50 linear feet
Road to be constructed (optional and required) but not abandoned

Reconstruction: 0 linear feet
Road to be reconstructed (optional and required) but not abandoned

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

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

Pre-Haul Maintenance: 31,520 linear feet
Existing road to receive maintenance work (optional and required) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Construction: 2787 linear feet
Roads to be constructed (optional and required) and then abandoned

0 linear feet

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

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

(Revised 9/18)

PRE-CRUISE NARRATIVE

Sale Name: Tigerilla VRH & VDT	Region: South Puget Sound
Agreement #: 30-099064	District: Rainier
Contact Forester: Nick Meboe	Phone/ Location: (564)-669-1724 Ext: /
Alternate Contact: Mike Fowler	Phone/ Location: (360)-819-3406 Ext: /

Type of Sale (lump sum, mbf scale, tonnage scale or contract harvest): mbf scale
 Required or Optional removal of utility as pulp (*for scale sales only*): optional
 Evaluated for RFRS Implementation?: Yes, implemented in Units 2 and 3.

Percentage cable-uphill: 12%
 Percentage cable-downhill: 28%
 Percentage ground based: 60%

Species Onsite: RC, DF, WH, RA, BC, BLM, NF, SF, SS, Other:(Please List)

UNIT ACREAGES* AND METHOD OF DETERMINATION:

Unit #	Harvest R/W or RMZ WMZ	Legal Description Sec/Twp/Rng	Grant	Gross Traversed Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method, dimensions and error of closure if applicable)
					RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1		Sec 01/ T 14N/ R 05 E Sec 06/ T 14N/ R 06 E Sec 07/ T 14N/ R 06 E	01, 03	37.7		1.4			36.3	Garmin, Trimble R1
2		Sec 01/ T 14N/ R 05 E Sec 06/ T 14N/ R 06 E	01, 03	3.9					3.9	Garmin, Trimble R1
3		Sec 12/ T 14N/ R 05 E Sec 07/ T 14N/ R 06 E	03	37.1					37.1	Garmin, Trimble R1
4 R/W		Sec 01/ T 14N/ R 05 E	03	0.5					0.5	Length x Width
5 R/W		Sec 12/ T 14N/ R 05 E	03	0.2					0.2	Length x Width
6 R/W		Sec 12/ T 14N/ R 5 E	03	1.0					1.0	Length x Width
TOTAL ACRES				80.4		1.4			79.0	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Mark leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.) *For all marked thinnings, include a tree count by species.
Unit 1	Variable Retention Harvest – Boundary marked by white “Timber Sale Boundary” tags with pink flashers and blue “Special Management Unit Boundary” tags with pink flashers.		8 leave trees per acre. 310 leave trees. Leave tree areas marked by yellow “Leave Tree Area” tags with pink flashers. Individual leave trees are marked with a single band of blue paint.

Unit 2	Variable Density Thinning – Boundary marked by white “Timber Sale Boundary” tags with pink flashers and blue “Special Management Unit Boundary” tags with pink flashers.	RFRS treated acres have structure creation trees marked with 2 bands of pink paint with an “S” for snag creation and two bands of pink paint with a “D” for down wood creation. Trees are not to be included in cruise. 20 trees total.	Thin to RD 48. No trees over 35” DBH to be cut.
Unit 3	Variable Density Thinning – Boundary marked by white “Timber Sale Boundary” tags with pink flashers, white Carsonite posts along property lines with pink flagging, and the RT300 road.	RFRS treated acres have structure creation trees marked with 2 bands of pink paint with an “S” for snag creation and two bands of pink paint with a “D” for down wood creation. Trees are not to be included in cruise. 15 trees total.	Thin to RD 48. No trees over 35” DBH to be cut.
Unit 4 ROW	Boundary marked by orange “Right-of-Way Boundary” tags with orange flashers.	WMZ treated acres have structure creation trees marked with two bands of pink paint with a “D” for down wood creation. Trees are not to be included in cruise. 5 trees total.	
Unit 5 ROW	Boundary marked by orange “Right-of-Way Boundary” tags with orange flashers.		
Unit 6 ROW	Boundary marked by orange “Right-of-Way Boundary” tags with orange flashers.		

OTHER PRE-CRUISE INFORMATION:

Unit #	Estimated Volume	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	See Cruise	Access off RT200. 383 key needed to enter through E-560.	
2	See Cruise	Access off RT200. 383 key needed to enter through E-560.	
3	See Cruise	Access off RT300. 383 key needed to enter through E-560. CJ-18 needed on RT300 to access top of unit.	
4	See Cruise	Access off RT200. 383 key needed to enter through E-560.	
5	See Cruise	Access off RT300. 383 key needed to enter through E-560.	
6	See Cruise	Access off RT300. 383 key needed to enter through E-560. 383 key needed on RT300 to access unit.	

REMARKS:

Puppers timber sale may be hauling/working on the E560, RT100, and RT200 roads.

Prepared By: Nick Meboe Date: 10/9/2023	Title: Forester	CC: Mike Fowler
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Timber Sale Cruise Report Tigerilla

Sale Name: TIGERILLA VRH VDT

Sale Type: MBF SCALE

Region: SO PUGET

District: RAINIER

Lead Cruiser: Aaron Coleman

Other Cruisers: Mike Sly

Cruise Narrative:

This sale consists of 1 variable retention harvest (VRH) unit, 2 variable density thinning (VDT) units and 3 right-of-way (R/W) units located off the RT200 and RT300 roads in the Tahoma State Forest. A 383 key was needed to access the gate on the E560 road, and all roads were in good condition.

The primary species for this sale is as follows:

Douglas-fir (77%) with an average diameter of 19 inches.

Western hemlock (18%) with an average diameter of 13 inches.

Unit 1 contains pole-quality trees, which were captured on VP plots. Only "natural" poles were sampled and tallied in the cruise. Unit 1 is mostly shovel ground, with some favorable downhill cable portions. Unit 2 is mostly shovel ground as well, with an uphill cable portion. Overall defect was minimal, but was most commonly observed as broken/forked tops.

Units 2 & 3 are to be thinned down to RD 48, as outlined in Schedule A.

Timber Sale Notice Volume (MBF)

Sp	DBH	Rings/In	Age	MBF Volume by Grade					
				All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	19.3	7		2,039	77	1,335	490	110	26
WH	13.8			493		142	225	126	
BC	24.4			70		70			
RA	10.2			53			0	52	
ALL	16.7			2,655	77	1,547	716	288	26

Timber Sale Notice Weight (tons)

Sp	Tons by Grade					
	All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	13,669	420	8,084	3,970	988	208
WH	4,681		1,149	2,077	1,455	
RA	448			2	446	
BC	434		434			
ALL	19,232	420	9,667	6,049	2,889	208

Timber Sale Overall Cruise Statistics

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
330.8	3.7	153.7	3.1	50,990	4.8

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
TIGERILLA U1	B2: VR, 2 BAF (54.44, 40 for some species) Measure All, Sighting Ht = 4.5 ft	36.3	37.7	43	43	1
TIGERILLA U2	B1: VR, 1 BAF (54.44) Measure All, Sighting Ht = 4.5 ft	3.9	3.9	5	5	0
TIGERILLA U3	B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	37.1	37.1	26	15	0
TIGERILLA U4	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	0.5	0.5	2	2	0
TIGERILLA U5	ST: Strip/Percent Sample (1 tree expansion)	0.2	0.2	1	1	0
TIGERILLA U6	B1: VR, 1 BAF (54.44) Measure All, Sighting Ht = 4.5 ft	1.0	1.0	1	1	0
All		79.0	80.3	78	67	1

Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
BC	LIVE	2 SAW	Domestic	12.7	32	946	884	6.5	434.3	69.8
DF	LIVE	2 SAW	Domestic	15.3	33	11,417	11,293	1.1	5,613.6	892.1
DF	LIVE	2 SAW	HQ-A	18.2	32	2,186	2,186	0.0	925.5	172.7
DF	LIVE	2 SAW	HQ-B	17.4	33	2,379	2,359	0.9	1,036.3	186.4
DF	LIVE	2 SAW	Pole	14.9	33	1,062	1,062	0.0	508.1	83.9
DF	LIVE	3 SAW	Domestic	9.0	34	5,803	5,789	0.2	3,723.6	457.4
DF	LIVE	3 SAW	HQ-B	11.4	32	157	157	0.0	81.3	12.4
DF	LIVE	3 SAW	Pole	9.0	33	260	260	0.0	164.9	20.5
DF	LIVE	4 SAW	Domestic	6.3	23	1,347	1,344	0.2	949.8	106.2
DF	LIVE	4 SAW	Pole	7.0	22	52	52	0.0	37.8	4.1
DF	LIVE	CULL	Cull	18.5	22	267	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	20.7	37	975	975	0.0	420.3	77.0
DF	LIVE	UTILITY	Pulp	9.0	33	334	334	0.0	207.9	26.4
RA	LIVE	3 SAW	Domestic	11.0	35	4	3	4.3	1.9	0.3
RA	LIVE	4 SAW	Domestic	6.1	32	689	661	4.0	445.9	52.3

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
WH	LIVE	2 SAW	Domestic	13.9	33	1,860	1,803	3.0	1,148.7	142.5
WH	LIVE	3 SAW	Domestic	9.0	34	2,860	2,848	0.4	2,077.1	225.0
WH	LIVE	4 SAW	Domestic	5.7	26	1,599	1,592	0.5	1,455.1	125.8

Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
BC	5 - 7	LIVE	Domestic	6.5	32	28	0.0	23.6	2.2
BC	8 - 11	LIVE	Domestic	9.8	33	121	2.9	68.7	9.5
BC	12 - 15	LIVE	Domestic	14.2	33	312	7.3	155.2	24.6
BC	16 - 19	LIVE	Domestic	18.3	32	175	1.0	73.2	13.8
BC	20+	LIVE	Domestic	21.1	33	249	11.4	113.5	19.7
DF	5 - 7	LIVE	Pulp	6.0	19	23	0.0	15.3	1.8
DF	5 - 7	LIVE	Domestic	6.1	28	2,794	0.1	2,019.9	220.8
DF	5 - 7	LIVE	Pole	7.0	28	112	0.0	87.0	8.8
DF	8 - 11	LIVE	Pulp	8.2	38	93	0.0	57.5	7.4
DF	8 - 11	LIVE	Domestic	9.9	31	4,241	0.3	2,604.9	335.0
DF	8 - 11	LIVE	Pole	10.0	31	200	0.0	115.8	15.8
DF	8 - 11	LIVE	HQ-B	11.4	32	157	0.0	81.3	12.4
DF	12 - 15	LIVE	Pulp	12.3	40	218	0.0	135.1	17.2
DF	12 - 15	LIVE	Domestic	13.5	34	5,461	0.4	2,976.9	431.4
DF	12 - 15	LIVE	Pole	14.0	33	614	0.0	318.2	48.5
DF	12 - 15	LIVE	HQ-B	14.2	34	549	1.2	275.1	43.3
DF	12 - 15	LIVE	HQ-A	14.5	32	295	0.0	156.1	23.3
DF	12 - 15	LIVE	Cull	14.8	24	0	100.0	0.0	0.0
DF	16 - 19	LIVE	Pole	17.2	32	448	0.0	189.8	35.4
DF	16 - 19	LIVE	HQ-B	17.3	33	1,057	1.3	483.6	83.5
DF	16 - 19	LIVE	Domestic	17.5	33	4,331	1.4	2,013.9	342.2
DF	16 - 19	LIVE	HQ-A	17.7	33	1,491	0.0	663.8	117.8
DF	16 - 19	LIVE	Cull	18.8	32	0	100.0	0.0	0.0
DF	20+	LIVE	HQ-B	21.8	32	754	0.0	277.7	59.5
DF	20+	LIVE	Domestic	22.4	34	1,597	2.7	671.5	126.2
DF	20+	LIVE	Cull	23.3	14	0	100.0	0.0	0.0
DF	20+	LIVE	HQ-A	23.7	33	1,375	0.0	526.0	108.6
RA	5 - 7	LIVE	Domestic	5.7	33	521	2.4	347.9	41.2
RA	8 - 11	LIVE	Domestic	9.2	24	143	9.4	100.0	11.3
WH	5 - 7	LIVE	Domestic	5.8	28	2,174	0.3	1,939.4	171.7
WH	8 - 11	LIVE	Domestic	9.8	33	2,266	0.6	1,592.8	179.0

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	12 - 15	LIVE	Domestic	13.3	33	1,334	2.0	879.4	105.4
WH	16 - 19	LIVE	Domestic	17.3	34	469	5.9	269.4	37.1

Cruise Unit Report TIGERILLA U1

Unit Sale Notice Volume (MBF): TIGERILLA U1

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	Spec Mill	2 Saw	3 Saw	4 Saw
DF	20.5			1,260	13	941	244	61
WH	13.6			389		98	182	109
BC	21.7			39		39		
RA	10.9			15				15
ALL	16.9			1,702	13	1,077	427	185

Unit Cruise Design: TIGERILLA U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2: VR, 2 BAF (54.44, 40 for some species) Measure All, Sighting Ht = 4.5 ft	36.3	37.7	43	43	1

Unit Cruise Summary: TIGERILLA U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	156	156	3.6	0
WH	89	89	2.1	0
BC	8	8	0.2	0
RA	6	6	0.1	0
ALL	259	259	6.0	0

Unit Cruise Statistics: TIGERILLA U1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	197.5	71.2	10.9	175.7	35.8	2.9	34,706	79.7	11.2
WH	112.7	87.2	13.3	95.0	38.7	4.1	10,707	95.4	13.9
BC	7.4	293.4	44.7	143.8	21.5	7.6	1,070	294.2	45.4
RA	5.6	296.0	45.1	72.6	24.5	10.0	405	297.0	46.2
ALL	323.2	38.3	5.8	145.1	45.9	2.9	46,888	59.7	6.5

Unit Summary: TIGERILLA U1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	LIVE	CUT	8	ALL	21.7	71	87	1,092	1,070	2.0	2.9	7.4	1.6	38.9
DF	LIVE	CUT	156	ALL	20.5	78	99	35,594	34,706	2.5	86.2	197.5	43.6	1,259.8
RA	LIVE	CUT	6	ALL	10.9	36	53	409	405	0.9	8.6	5.6	1.7	14.7
WH	LIVE	CUT	89	ALL	13.6	50	63	10,873	10,707	1.5	111.7	112.7	30.6	388.7
ALL	LIVE	CUT	259	ALL	16.8	61	78	47,967	46,888	2.2	209.4	323.2	77.5	1,702.0
ALL	ALL	ALL	259	ALL	16.8	61	78	47,967	46,888	2.2	209.4	323.2	77.5	1,702.0

Unit Stand Table: TIGERILLA U1

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	16	LIVE	CUT	1	16.0	66	80	143	0.0	0.7	0.9	0.2	5.2
BC	20	LIVE	CUT	3	20.0	71	87	338	3.2	1.3	2.8	0.6	12.3
BC	22	LIVE	CUT	1	22.0	66	79	98	0.0	0.4	0.9	0.2	3.6
BC	28	LIVE	CUT	1	28.0	80	99	161	6.0	0.2	0.9	0.2	5.8
BC	30	LIVE	CUT	2	30.0	82	102	331	0.0	0.4	1.9	0.3	12.0
DF	12	LIVE	CUT	5	12.0	46	61	459	0.0	8.1	6.3	1.8	16.7
DF	14	LIVE	CUT	9	14.0	56	70	1,077	0.0	10.7	11.4	3.0	39.1
DF	16	LIVE	CUT	10	16.0	65	82	1,522	0.0	9.1	12.7	3.2	55.3
DF	18	LIVE	CUT	15	18.0	75	94	2,355	1.5	10.7	19.0	4.5	85.5
DF	20	LIVE	CUT	23	20.0	82	104	4,308	3.1	13.3	29.1	6.5	156.4
DF	22	LIVE	CUT	19	22.0	88	111	4,475	0.2	9.1	24.1	5.1	162.4
DF	24	LIVE	CUT	36	24.0	92	117	8,648	1.8	14.5	45.6	9.3	313.9
DF	26	LIVE	CUT	10	26.0	94	119	2,368	7.1	3.4	12.7	2.5	85.9
DF	28	LIVE	CUT	6	28.0	105	134	1,836	4.3	1.8	7.6	1.4	66.7
DF	30	LIVE	CUT	6	30.0	103	132	1,820	3.1	1.5	7.6	1.4	66.1
DF	32	LIVE	CUT	11	32.0	112	144	3,844	0.9	2.5	13.9	2.5	139.5
DF	34	LIVE	CUT	4	34.0	113	145	1,378	8.9	0.8	5.1	0.9	50.0
DF	36	LIVE	CUT	2	36.0	113	145	614	8.3	0.4	2.5	0.4	22.3
RA	10	LIVE	CUT	3	10.0	34	47	225	0.0	5.1	2.8	0.9	8.2
RA	12	LIVE	CUT	3	12.0	40	60	180	1.9	3.6	2.8	0.8	6.5
WH	8	LIVE	CUT	1	8.0	29	53	73	0.0	3.6	1.3	0.4	2.6
WH	10	LIVE	CUT	11	10.0	35	45	871	0.0	25.5	13.9	4.4	31.6
WH	12	LIVE	CUT	19	12.0	44	57	1,485	0.4	30.6	24.1	6.9	53.9
WH	14	LIVE	CUT	19	14.0	52	65	2,066	0.2	22.5	24.1	6.4	75.0
WH	16	LIVE	CUT	17	16.0	64	77	2,454	0.4	15.4	21.5	5.4	89.1
WH	18	LIVE	CUT	10	18.0	72	89	1,586	0.0	7.2	12.7	3.0	57.6

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
WH	20	LIVE	CUT	7	20.0	79	99	1,222	4.2	4.1	8.9	2.0	44.4
WH	22	LIVE	CUT	1	22.0	88	111	218	8.1	0.5	1.3	0.3	7.9
WH	24	LIVE	CUT	3	24.0	78	98	578	3.2	1.2	3.8	0.8	21.0
WH	28	LIVE	CUT	1	28.0	83	104	156	25.0	0.3	1.3	0.2	5.7

Cruise Unit Report TIGERILLA U2

Unit Sale Notice Volume (MBF): TIGERILLA U2

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	22.2			82	63	15	4
WH	13.4			45	21	13	10
BC	22.0			6	6		
ALL	17.1			133	90	28	14

Unit Cruise Design: TIGERILLA U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (54.44) Measure All, Sighting Ht = 4.5 ft	3.9	3.9	5	5	0

Unit Cruise Summary: TIGERILLA U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	10	22	4.4	0
WH	7	15	3.0	0
BC	1	1	0.2	0
ALL	18	38	7.6	0

Unit Cruise Statistics: TIGERILLA U2

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	239.5	65.5	29.3	193.4	20.8	6.6	46,335	68.7	30.0
WH	163.3	102.7	45.9	150.0	37.0	14.0	24,499	109.2	48.0
BC	10.9	223.6	100.0	138.2	0.0	0.0	1,505	223.6	100.0
ALL	413.7	22.0	9.8	174.8	28.5	6.7	72,339	36.0	11.9

Unit Summary: TIGERILLA U2

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	LIVE	CUT	1	ALL	22.0	98	123	1,942	1,505	22.5	4.1	10.9	2.3	5.9
DF	LIVE	CUT	10	ALL	22.2	93	118	21,061	21,061	0.0	40.5	108.9	23.1	82.1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	LEA	12	ALL	21.6	88	111	25,274	25,274	0.0	51.3	130.7	28.1	98.6
WH	LIVE	CUT	7	ALL	13.4	63	78	11,433	11,433	0.0	77.8	76.2	20.8	44.6
WH	LIVE	LEA	8	ALL	20.1	86	108	13,066	13,066	0.0	39.5	87.1	19.4	51.0
ALL	LIVE	LEA	20	ALL	21.0	87	110	38,340	38,340	0.0	90.8	217.8	47.5	149.5
ALL	LIVE	CUT	18	ALL	17.1	74	93	34,437	33,999	1.3	122.4	196.0	46.3	132.6
ALL	ALL	ALL	38	ALL	18.9	80	100	72,776	72,339	0.6	213.2	413.7	93.8	282.1

Unit Stand Table: TIGERILLA U2

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	22	LIVE	CUT	1	22.0	98	123	1,505	22.5	4.1	10.9	2.3	5.9
DF	16	LIVE	CUT	1	16.7	79	100	1,575	0.0	7.2	10.9	2.7	6.1
DF	18	LIVE	CUT	1	18.5	85	107	1,510	0.0	5.8	10.9	2.5	5.9
DF	20	LIVE	CUT	1	20.8	91	116	1,799	0.0	4.6	10.9	2.4	7.0
DF	22	LIVE	CUT	3	21.9	94	120	6,131	0.0	12.5	32.7	7.0	23.9
DF	26	LIVE	CUT	2	25.6	103	131	4,481	0.0	6.1	21.8	4.3	17.5
DF	30	LIVE	CUT	1	29.1	110	141	2,679	0.0	2.4	10.9	2.0	10.4
DF	32	LIVE	CUT	1	32.5	116	149	2,886	0.0	1.9	10.9	1.9	11.3
DF	12	LIVE	LEA	1	11.7	61	75	1,086	0.0	14.6	10.9	3.2	4.2
DF	20	LIVE	LEA	2	19.6	88	111	3,199	0.0	10.4	21.8	4.9	12.5
DF	22	LIVE	LEA	1	21.1	92	117	1,723	0.0	4.5	10.9	2.4	6.7
DF	24	LIVE	LEA	2	23.9	98	126	4,048	0.0	7.0	21.8	4.4	15.8
DF	26	LIVE	LEA	1	25.0	102	130	2,116	0.0	3.2	10.9	2.2	8.3
DF	28	LIVE	LEA	3	28.1	108	138	7,618	0.0	7.6	32.7	6.2	29.7
DF	30	LIVE	LEA	1	29.5	111	142	2,657	0.0	2.3	10.9	2.0	10.4
DF	32	LIVE	LEA	1	32.7	116	149	2,827	0.0	1.9	10.9	1.9	11.0
WH	10	LIVE	CUT	2	9.5	53	64	1,884	0.0	43.8	21.8	7.0	7.3
WH	14	LIVE	CUT	2	13.6	69	85	3,077	0.0	21.6	21.8	5.9	12.0
WH	20	LIVE	CUT	1	19.3	85	107	1,683	0.0	5.4	10.9	2.5	6.6
WH	22	LIVE	CUT	1	21.8	91	115	2,243	0.0	4.2	10.9	2.3	8.7
WH	26	LIVE	CUT	1	26.5	100	126	2,546	0.0	2.8	10.9	2.1	9.9
WH	18	LIVE	LEA	3	18.1	82	103	4,106	0.0	18.3	32.7	7.7	16.0
WH	20	LIVE	LEA	3	19.9	87	109	4,644	0.0	15.2	32.7	7.3	18.1
WH	24	LIVE	LEA	1	23.2	94	118	1,933	0.0	3.7	10.9	2.3	7.5
WH	30	LIVE	LEA	1	29.5	105	133	2,383	0.0	2.3	10.9	2.0	9.3

Cruise Unit Report TIGERILLA U3

Unit Sale Notice Volume (MBF): TIGERILLA U3

Sp	DBH	Rings/In	Age	MBF Volume by Grade					
				All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	16.9			636	64	298	209	39	26
WH	15.6			58		24	28	6	
RA	9.9			37				37	
BC	29.1			25		25			
ALL	16.1			755	64	346	237	82	26

Unit Cruise Design: TIGERILLA U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	37.1	37.1	26	15	0

Unit Cruise Summary: TIGERILLA U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	24	131	5.0	0
WH	4	15	0.6	0
RA	2	11	0.4	0
BC	2	2	0.1	0
ALL	32	159	6.1	0

Unit Cruise Statistics: TIGERILLA U3

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	274.3	52.5	10.3	167.1	32.8	6.7	45,843	61.9	12.3
WH	31.4	209.0	41.0	148.1	22.2	11.1	4,652	210.2	42.5
RA	23.0	242.6	47.6	95.5	4.0	2.8	2,200	242.7	47.7
BC	4.2	509.9	100.0	158.1	3.8	2.7	662	509.9	100.0
ALL	332.9	27.5	5.4	160.3	32.2	5.7	53,357	42.4	7.8

Unit Summary: TIGERILLA U3

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	LIVE	CUT	2	ALL	29.1	121	137	722	662	8.3	0.9	4.2	0.8	24.6
DF	LIVE	CUT	24	ALL	16.2	77	97	17,191	17,147	0.3	71.7	102.6	25.5	636.2
DF	LIVE	LEA	45	ALL	19.1	94	120	28,768	28,696	0.3	86.3	171.7	39.3	1,064.6
RA	LIVE	CUT	2	ALL	11.1	45	71	1,054	1,000	5.2	15.6	10.5	3.1	37.1
RA	LIVE	LEA	6	ALL	14.2	66	84	1,265	1,200	5.2	11.4	12.6	3.3	44.5
WH	LIVE	CUT	4	ALL	13.7	75	92	1,551	1,551	0.0	10.2	10.5	2.8	57.5
WH	LIVE	LEA	4	ALL	13.1	59	74	3,101	3,101	0.0	22.4	20.9	5.8	115.1
ALL	LIVE	LEA	55	ALL	17.7	85	108	33,135	32,997	0.4	120.1	205.2	48.4	1,224.2
ALL	LIVE	CUT	32	ALL	15.4	72	92	20,518	20,360	0.8	98.4	127.7	32.2	755.4
ALL	ALL	ALL	87	ALL	16.7	79	101	53,652	53,357	0.6	218.5	332.9	80.6	1,979.5

Unit Stand Table: TIGERILLA U3

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	28	LIVE	CUT	1	27.4	118	134	340	0.0	0.5	2.1	0.4	12.6
BC	32	LIVE	CUT	1	31.2	126	140	322	15.7	0.4	2.1	0.4	11.9
DF	10	LIVE	CUT	4	9.8	51	63	1,078	0.2	16.1	8.4	2.7	40.0
DF	12	LIVE	CUT	5	12.1	63	78	1,496	0.2	13.1	10.5	3.0	55.5
DF	14	LIVE	CUT	5	13.8	68	85	1,634	0.2	10.1	10.5	2.8	60.6
DF	16	LIVE	CUT	5	15.9	73	92	1,652	0.2	7.6	10.5	2.6	61.3
DF	18	LIVE	CUT	6	17.7	89	113	1,876	0.0	7.3	12.6	3.0	69.6
DF	20	LIVE	CUT	5	19.7	92	117	1,755	0.1	4.9	10.5	2.4	65.1
DF	22	LIVE	CUT	4	21.8	94	120	1,439	0.2	3.2	8.4	1.8	53.4
DF	24	LIVE	CUT	8	23.9	104	133	3,074	0.8	5.4	16.8	3.4	114.0
DF	26	LIVE	CUT	3	25.5	126	162	1,218	0.1	1.8	6.3	1.2	45.2
DF	28	LIVE	CUT	3	28.1	118	151	1,428	0.1	1.5	6.3	1.2	53.0
DF	32	LIVE	CUT	1	31.2	114	147	497	0.0	0.4	2.1	0.4	18.4
DF	10	LIVE	LEA	2	10.6			638	0.3	6.8	4.2	1.3	23.7
DF	12	LIVE	LEA	4	11.8	69	87	1,004	0.1	11.1	8.4	2.4	37.3
DF	14	LIVE	LEA	5	13.9	81	102	1,544	0.2	10.0	10.5	2.8	57.3
DF	16	LIVE	LEA	9	15.8	82	104	2,663	0.1	13.8	18.8	4.7	98.8
DF	18	LIVE	LEA	6	18.4	103	132	2,046	0.6	6.8	12.6	2.9	75.9
DF	20	LIVE	LEA	10	19.9	94	119	3,121	0.2	9.7	20.9	4.7	115.8
DF	22	LIVE	LEA	12	22.1	106	134	4,402	0.1	9.4	25.1	5.3	163.3
DF	24	LIVE	LEA	12	24.1	110	142	4,632	0.7	7.9	25.1	5.1	171.8
DF	26	LIVE	LEA	8	25.8	111	142	3,360	0.5	4.6	16.8	3.3	124.6

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	28	LIVE	LEA	8	27.8	113	145	2,975	0.6	4.0	16.8	3.2	110.4
DF	30	LIVE	LEA	5	30.4	123	158	1,993	0.1	2.1	10.5	1.9	73.9
DF	32	LIVE	LEA	1	32.0			319	0.3	0.4	2.1	0.4	11.8
RA	10	LIVE	CUT	2	9.8	39	67	394	2.7	8.0	4.2	1.3	14.6
RA	12	LIVE	CUT	2	11.9	55	76	406	7.5	5.4	4.2	1.2	15.0
RA	14	LIVE	CUT	1	13.5			200	5.2	2.1	2.1	0.6	7.4
RA	12	LIVE	LEA	2	11.7	58	78	358	0.0	5.6	4.2	1.2	13.3
RA	14	LIVE	LEA	1	14.0	67	85	203	0.0	2.0	2.1	0.6	7.5
RA	16	LIVE	LEA	1	16.0	74	90	205	0.0	1.5	2.1	0.5	7.6
RA	18	LIVE	LEA	2	17.6	78	92	434	3.1	2.5	4.2	1.0	16.1
WH	10	LIVE	CUT	1	9.9			310	0.0	3.9	2.1	0.7	11.5
WH	12	LIVE	CUT	1	11.9	63	77	241	0.0	2.7	2.1	0.6	9.0
WH	16	LIVE	CUT	1	15.1	74	92	315	0.0	1.7	2.1	0.5	11.7
WH	20	LIVE	CUT	2	20.0	93	114	684	0.0	1.9	4.2	0.9	25.4
WH	8	LIVE	LEA	1	8.4	47	57	202	0.0	5.4	2.1	0.7	7.5
WH	10	LIVE	LEA	1	10.0			320	0.0	3.8	2.1	0.7	11.9
WH	12	LIVE	LEA	1	12.8			320	0.0	2.3	2.1	0.6	11.9
WH	14	LIVE	LEA	3	13.6	65	86	874	0.0	6.2	6.3	1.7	32.4
WH	18	LIVE	LEA	2	17.3	82	102	647	0.0	2.6	4.2	1.0	24.0
WH	20	LIVE	LEA	2	20.1	89	112	739	0.0	1.9	4.2	0.9	27.4

Cruise Unit Report TIGERILLA U4

Unit Sale Notice Volume (MBF): TIGERILLA U4

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	12.8			12	7	2	2
WH	10.1			2		1	1
ALL	12.2			14	7	3	3

Unit Cruise Design: TIGERILLA U4

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	0.5	0.5	2	2	0

Unit Cruise Summary: TIGERILLA U4

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	9	9	4.5	0
WH	2	2	1.0	0
ALL	11	11	5.5	0

Unit Cruise Statistics: TIGERILLA U4

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	151.2	15.7	11.1	155.5	43.8	14.6	23,517	46.6	18.4
WH	33.6	141.4	100.0	126.4	32.5	22.9	4,249	145.1	102.6
ALL	184.9	38.6	27.3	150.2	42.2	12.7	27,766	57.2	30.1

Unit Summary: TIGERILLA U4

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	9	ALL	12.8	55	67	23,517	23,517	0.0	169.3	151.2	42.3	11.8
WH	LIVE	CUT	2	ALL	10.1	52	63	4,249	4,249	0.0	60.4	33.6	10.6	2.1
ALL	LIVE	CUT	11	ALL	12.1	54	66	27,766	27,766	0.0	229.7	184.9	52.8	13.9
ALL	ALL	ALL	11	ALL	12.1	54	66	27,766	27,766	0.0	229.7	184.9	52.8	13.9

Unit Stand Table: TIGERILLA U4

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	8	LIVE	CUT	1	7.0	37	44	1,320	0.0	62.9	16.8	6.4	0.7
DF	10	LIVE	CUT	2	10.0	52	64	2,650	0.0	61.6	33.6	10.6	1.3
DF	12	LIVE	CUT	1	12.0	61	76	1,840	0.0	21.4	16.8	4.9	0.9
DF	24	LIVE	CUT	2	24.0	99	127	6,484	0.0	10.7	33.6	6.9	3.2
DF	26	LIVE	CUT	1	25.0	102	130	3,333	0.0	4.9	16.8	3.4	1.7
DF	28	LIVE	CUT	1	28.0	108	138	3,777	0.0	3.9	16.8	3.2	1.9
DF	30	LIVE	CUT	1	30.0	112	143	4,113	0.0	3.4	16.8	3.1	2.1
WH	8	LIVE	CUT	1	8.0	46	55	1,637	0.0	48.1	16.8	5.9	0.8
WH	16	LIVE	CUT	1	16.0	77	96	2,612	0.0	12.0	16.8	4.2	1.3

Cruise Unit Report TIGERILLA U5

Unit Sale Notice Volume (MBF): TIGERILLA U5

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	16.8			1	0	0	0
RA	14.1			1		0	0
BC	26.0			1	1		
WH	14.8			0		0	
ALL	15.9			2	1	1	1

Unit Cruise Design: TIGERILLA U5

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
ST: Strip/Percent Sample (1 tree expansion)	0.2	0.2	1	1	0

Unit Cruise Summary: TIGERILLA U5

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	3	3	3.0	0
RA	7	7	7.0	0
BC	1	1	1.0	0
WH	3	3	3.0	0
ALL	14	14	14.0	0

Unit Cruise Statistics: TIGERILLA U5

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	23.1	0.0	0.0	156.2	40.4	23.3	3,600	40.4	23.3
RA	37.7	0.0	0.0	94.9	34.9	13.2	3,575	34.9	13.2
BC	18.4	0.0	0.0	148.1	0.0	0.0	2,730	0.0	0.0
WH	17.8	0.0	0.0	87.5	11.9	6.9	1,560	11.9	6.9
ALL	97.0	0.0	0.0	118.2	32.7	8.8	11,465	32.7	8.8

Unit Summary: TIGERILLA U5

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	LIVE	CUT	1	ALL	26.0	116	131	3,640	2,730	25.0	5.0	18.4	3.6	0.5
DF	LIVE	CUT	3	ALL	16.8	71	91	3,600	3,600	0.0	15.0	23.1	5.6	0.7
RA	LIVE	CUT	7	ALL	14.1	67	85	3,730	3,575	4.2	34.8	37.7	10.0	0.7
WH	LIVE	CUT	3	ALL	14.8	70	90	1,560	1,560	0.0	14.9	17.8	4.6	0.3
ALL	LIVE	CUT	14	ALL	16.0	72	90	12,530	11,465	8.5	69.7	97.0	23.9	2.3
ALL	ALL	ALL	14	ALL	16.0	72	90	12,530	11,465	8.5	69.7	97.0	23.9	2.3

Unit Stand Table: TIGERILLA U5

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	26	LIVE	CUT	1	26.0	116	131	2,730	25.0	5.0	18.4	3.6	0.5
DF	10	LIVE	CUT	1	10.0	42	64	160	0.0	5.0	2.7	0.9	0.0
DF	14	LIVE	CUT	1	13.0	61	82	540	0.0	5.0	4.6	1.3	0.1
DF	24	LIVE	CUT	1	24.0	111	127	2,900	0.0	5.0	15.7	3.2	0.6
RA	12	LIVE	CUT	1	12.0	59	79	195	0.0	5.0	3.9	1.1	0.0
RA	14	LIVE	CUT	4	13.8	66	84	1,685	4.0	20.0	20.6	5.6	0.3
RA	16	LIVE	CUT	2	15.5	72	88	1,695	4.8	10.0	13.1	3.3	0.3
WH	14	LIVE	CUT	2	13.5	65	85	795	0.0	10.0	10.0	2.7	0.2
WH	18	LIVE	CUT	1	17.0	80	99	765	0.0	5.0	7.9	1.9	0.2

Cruise Unit Report TIGERILLA U6

Unit Sale Notice Volume (MBF): TIGERILLA U6

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	17.8			48	26	19	4
ALL	17.8			48	26	19	4

Unit Cruise Design: TIGERILLA U6

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (54.44) Measure All, Sighting Ht = 4.5 ft	1.0	1.0	1	1	0

Unit Cruise Summary: TIGERILLA U6

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	6	6	6.0	0
ALL	6	6	6.0	0

Unit Cruise Statistics: TIGERILLA U6

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	326.6	0.0	0.0	147.9	17.9	7.3	48,325	17.9	7.3
ALL	326.6	0.0	0.0	147.9	17.9	7.3	48,325	17.9	7.3

Unit Summary: TIGERILLA U6

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	6	ALL	17.8	81	103	48,325	48,325	0.0	189.0	326.6	77.4	48.3
ALL	LIVE	CUT	6	ALL	17.8	81	103	48,325	48,325	0.0	189.0	326.6	77.4	48.3
ALL	ALL	ALL	6	ALL	17.8	81	103	48,325	48,325	0.0	189.0	326.6	77.4	48.3

Unit Stand Table: TIGERILLA U6

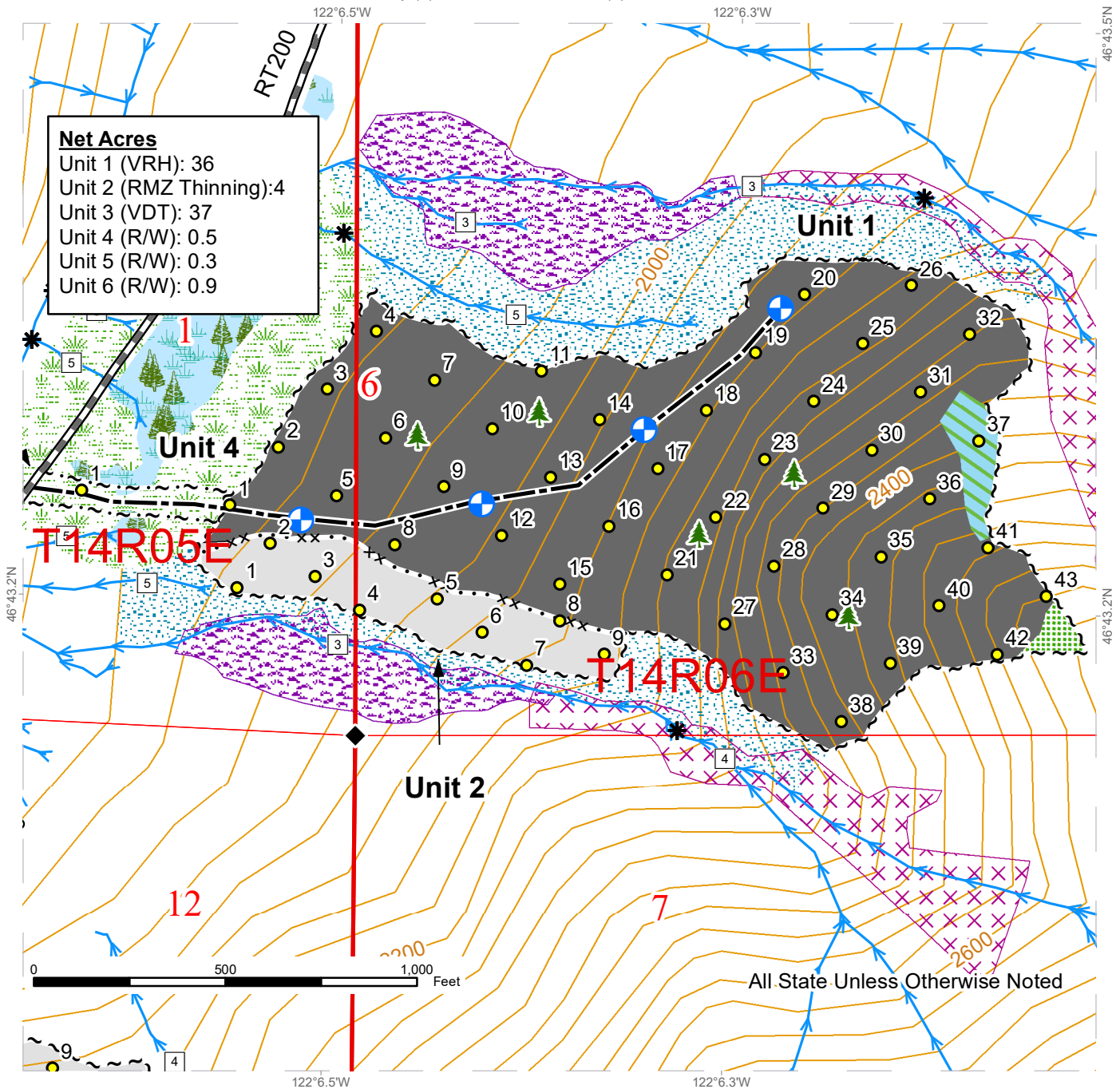
Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	14	LIVE	CUT	1	14.0	69	87	5,806	0.0	50.9	54.4	14.5	5.8
DF	16	LIVE	CUT	1	16.0	77	97	7,408	0.0	39.0	54.4	13.6	7.4

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	18	LIVE	CUT	1	18.0	83	105	7,980	0.0	30.8	54.4	12.8	8.0
DF	20	LIVE	CUT	1	20.0	89	113	8,159	0.0	25.0	54.4	12.2	8.2
DF	22	LIVE	CUT	2	21.5	93	118	18,973	0.0	43.3	108.9	23.5	19.0

CRUISE MAP

SALE NAME: TIGERILLA VRH & VDT
AGREEMENT#: 30-099064
TOWNSHIP(S): T14R5E, T14R6E
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region
COUNTY(S): Lewis
ELEVATION RGE: 1880-2680



Variable Retention Harvest	Leave Tree Area	Stream Type Break
Variable Density Thinning	Riparian Mgt Zone	Survey Monument
Sale Boundary Tags	Forested Wetland	Landing - Proposed
Special Mgmt Area	Wetland Mgt Zone	Leave Tree Area <1/4-acre
Leave Tree Tags	Required Pre-Haul Maintenance	Public Land Survey Sections
Right of Way Tags	Optional Construction	Public Land Survey Townships
Non-Tradeable Leave Tree Area	Contours 40-foot	DNR Managed Lands
Tailhold Restriction Area	Streams	
Channel Migration Zone	Stream Type	

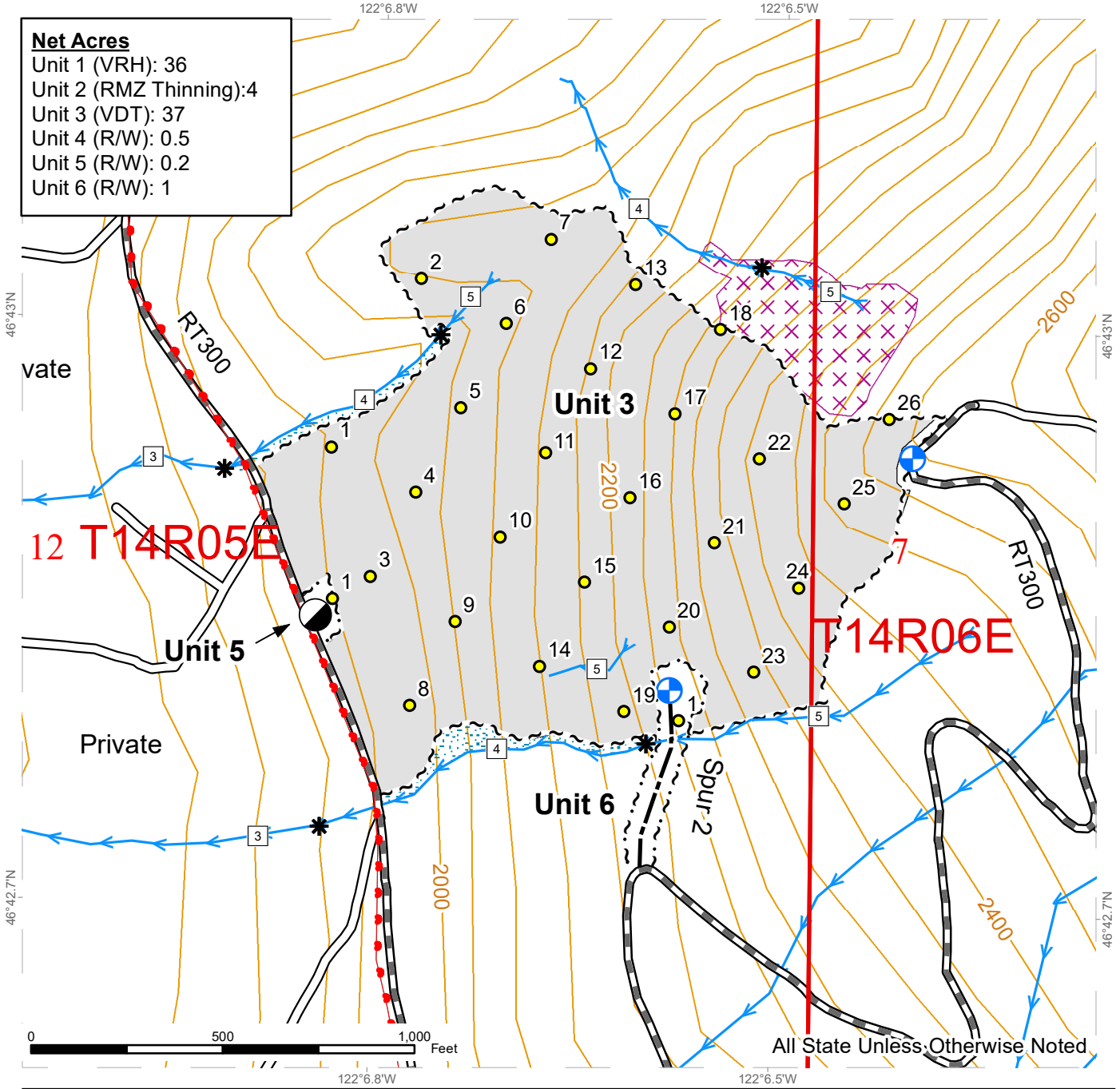


LOGGING PLAN MAP

SALE NAME: TIGERILLA VRH & VDT
AGREEMENT#: 30-099064
TOWNSHIP(S): T14R5E, T14R6E
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region
COUNTY(S): Lewis
ELEVATION RGE: 1880-2680

Net Acres
 Unit 1 (VRH): 36
 Unit 2 (RMZ Thinning): 4
 Unit 3 (VDT): 37
 Unit 4 (R/W): 0.5
 Unit 5 (R/W): 0.2
 Unit 6 (R/W): 1



Variable Density Thinning	Required Pre-Haul Maintenance	Public Land Survey Sections
Sale Boundary Tags	Optional Construction	Public Land Survey Townships
Special Mgmt Area	Contours 40-foot	DNR Managed Lands
Leave Tree Tags	Streams	
Right of Way Tags	Stream Type	
Tailhold Restriction Area	Stream Type Break	
Riparian Mgt Zone	Designated Landing	
Existing Roads	Landing - Proposed	





Forest Practices Application/Notification Notice of Decision

FPA/N No: 2423770

Effective Date: 1/18/2024

Expiration Date: 1/18/2027

Shut Down Zone: 659 S

EARR Tax Credit: Eligible Non-eligible

Reference: Tigerilla #30-099064

Decision

- Notification Accepted** Operations shall not begin before the effective date.
- Approved** This Forest Practices Application is subject to the conditions listed below.
- Disapproved** This Forest Practices Application is disapproved for the reasons listed below.
- Withdrawn** Applicant has withdrawn the Forest Practices Application/Notification (FPA/N).
- Closed** All forest practices obligations are met.

FPA/N Classification

- Class II Class III Class IVG Class IVS

Number of Years Granted on Multi-Year Request

- 4 years 5 years

Conditions on Approval/Reasons for Disapproval

Issued By: Chris Baus

Region: South Puget Sound Region

Title: Resource Protection Forester

Date: 1/18/2024

Copies to: Landowner, Timber Owner and Operator

Issued in person: LO TO OP By:  Date: 1/18/2024

Appeal Information

You have thirty (30) days to **file** (i.e., **actually deliver**) an appeal in writing of this Decision and any related State Environmental Policy Act (SEPA) determinations to the Pollution Control Hearings Board, the Attorney General’s Office, and the Department of Natural Resources’ region office. See [RCW 76.09.205](http://www.wa.gov/RCW76.09.205). The appeal period starts when the applicant receives this decision, which usually happens electronically on the date indicated below.

You must file your appeal at all three addresses below:

Pollution Control Hearings Board	Office of the Attorney General Natural Resources Division	Department Of Natural Resources South Puget Sound Region
<u>Physical Address</u> 1111 Israel Road SW Suite 301 Tumwater, WA 98501 <u>Mailing address</u> Post Office Box 40903 Olympia, WA 98504-0903	<u>Physical Address</u> 1125 Washington Street, SE Olympia, WA 98504 <u>Mailing Address</u> Post Office Box 40100 Olympia, WA 98504-0100	<u>Physical Address</u> 950 Farman Ave N Enumclaw, WA 98022 <u>Mailing Address</u> 950 Farman Ave N Enumclaw, WA 98022

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

Other Applicable Laws

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

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

Use the “Notice of Transfer of Approved Forest Practices Application/Notification” form. This form is available at region offices and on the Forest Practices website <https://www.dnr.wa.gov/programs-and-services/forest-practices/review-applications-fpars/forest-practices-forms-and>. Notify DNR of new Operators within 48 hours.

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

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

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

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

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

DNR Declaration of Mailing

I, **Julie Antonsen**, caused the Notice of Decision for FPA/N No. **2423770** to be placed in the United States mail at **Olympia, WA**; postage paid. I declare under penalty of perjury of the laws of the State of Washington, that the foregoing is true and correct.

1/18/2024

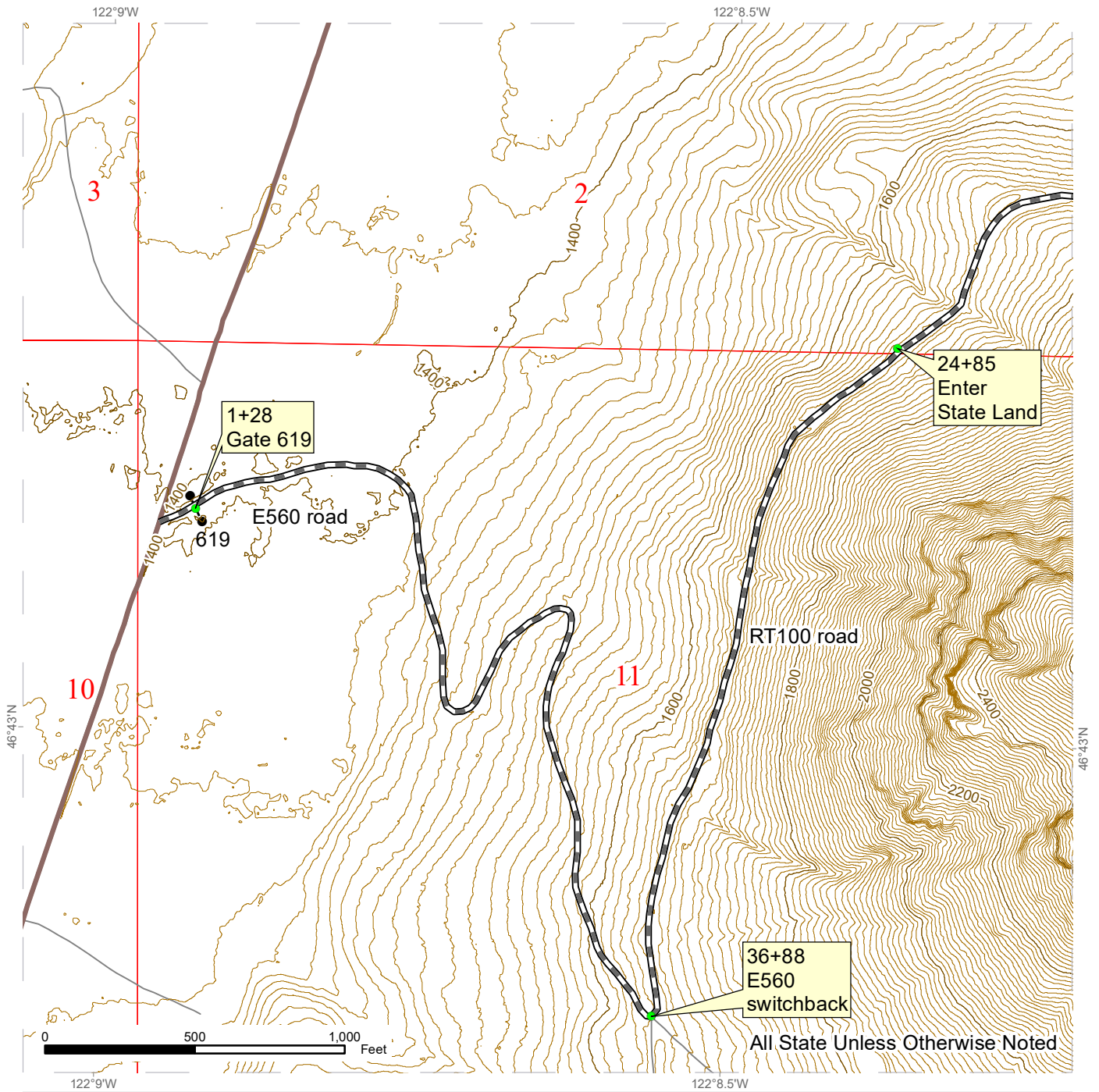
(Date)

Enumclaw, WA

(City & State where signed)

(Signature)

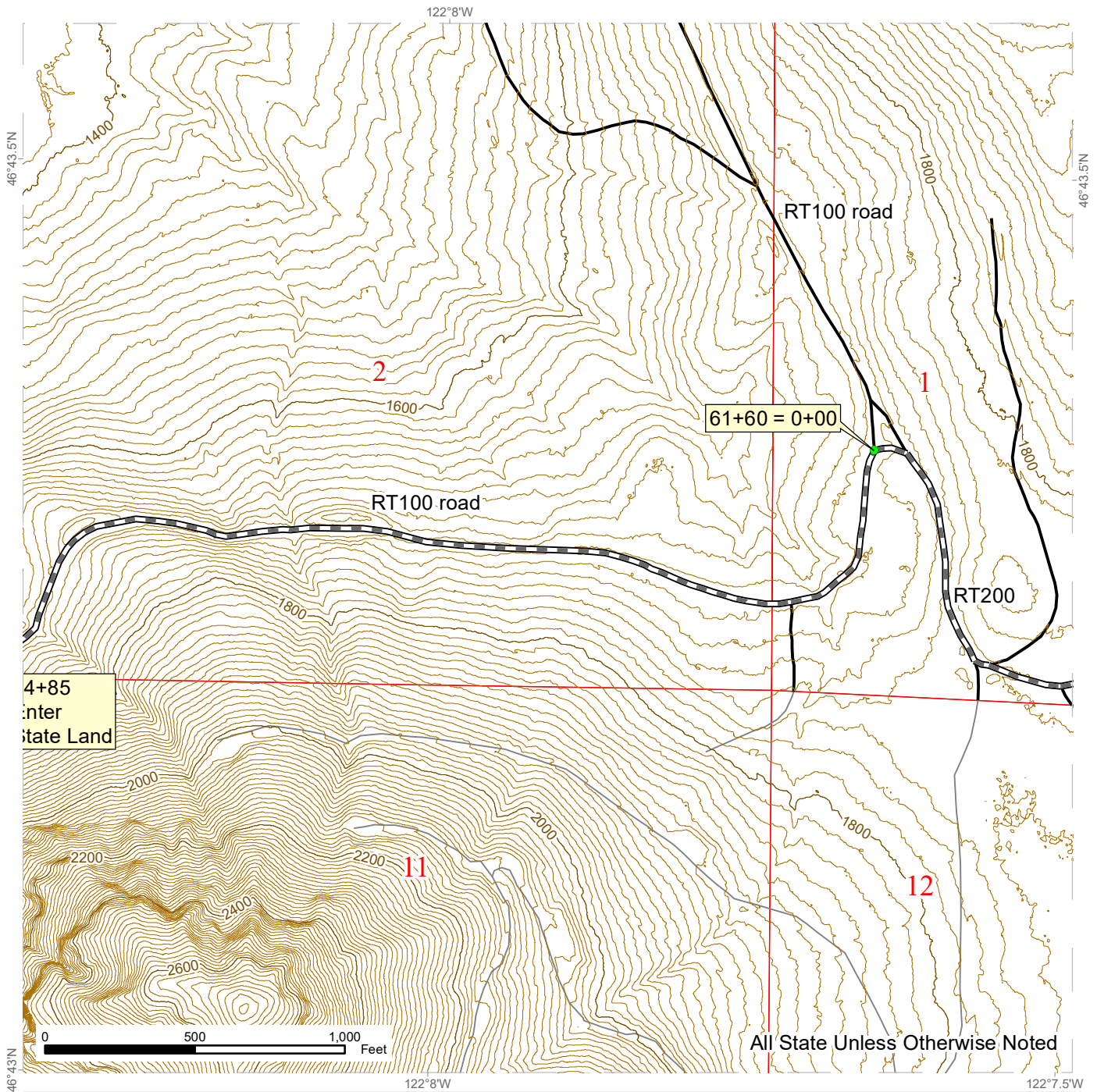
Tigerilla VRH & VDT Timber Sale Road Work Map, pg 1 of 7



● Road Stationing	Active/driveable road	<p>Note: See Road Plan for additional work and culvert installations.</p>
Pre-haul Maintenance	Contours 10 ft	
Gates (Corporate)	Public Land Survey Townships	
	Public Land Survey Sections	



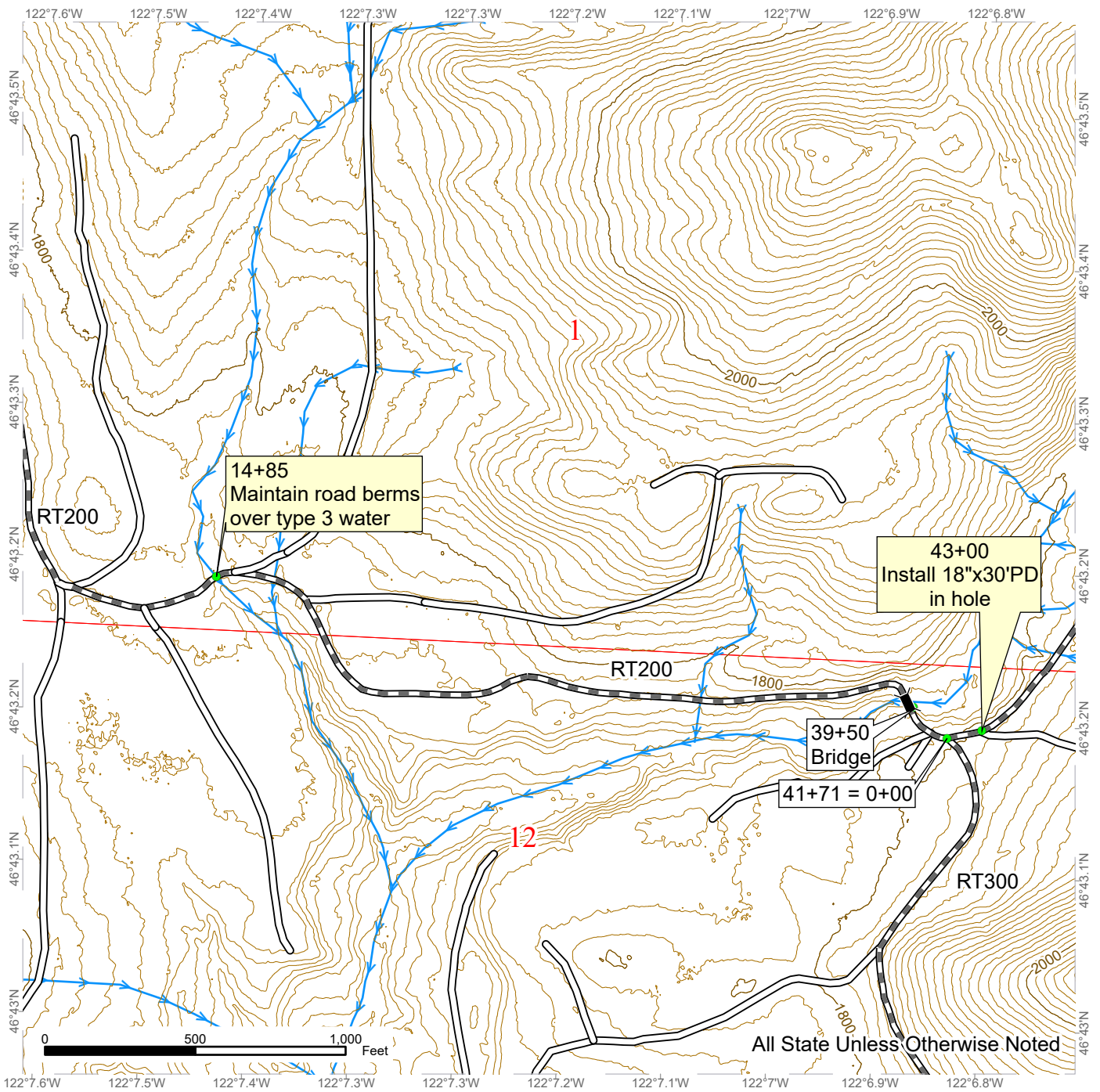
Tigerilla VRH & VDT Timber Sale Road Work Map, pg 2 of 7



All State Unless Otherwise Noted

● Road Stationing	Active/driveable road	<p>Note: See Road Plan for additional work and culvert installations.</p>
Pre-haul Maintenance	Contours 10 ft	
	Public Land Survey Townships	
	Public Land Survey Sections	

Tigerilla VRH & VDT Timber Sale Road Work Map, pg 3 of 7



14+85
Maintain road berms
over type 3 water

43+00
Install 18"x30'PD
in hole

39+50
Bridge

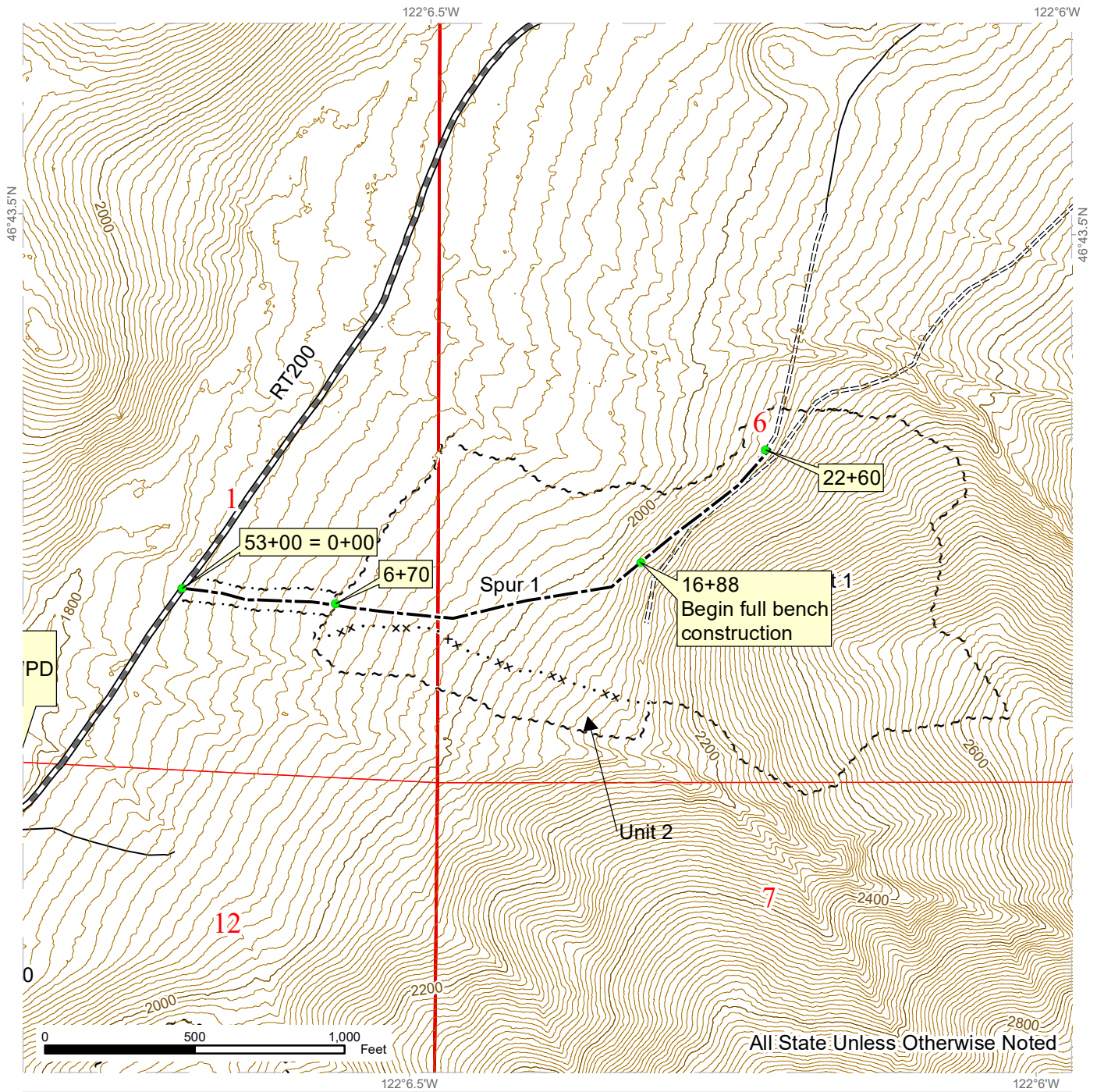
41+71 = 0+00

All State Unless Otherwise Noted

Note: See Road Plan for additional work and culvert installations.

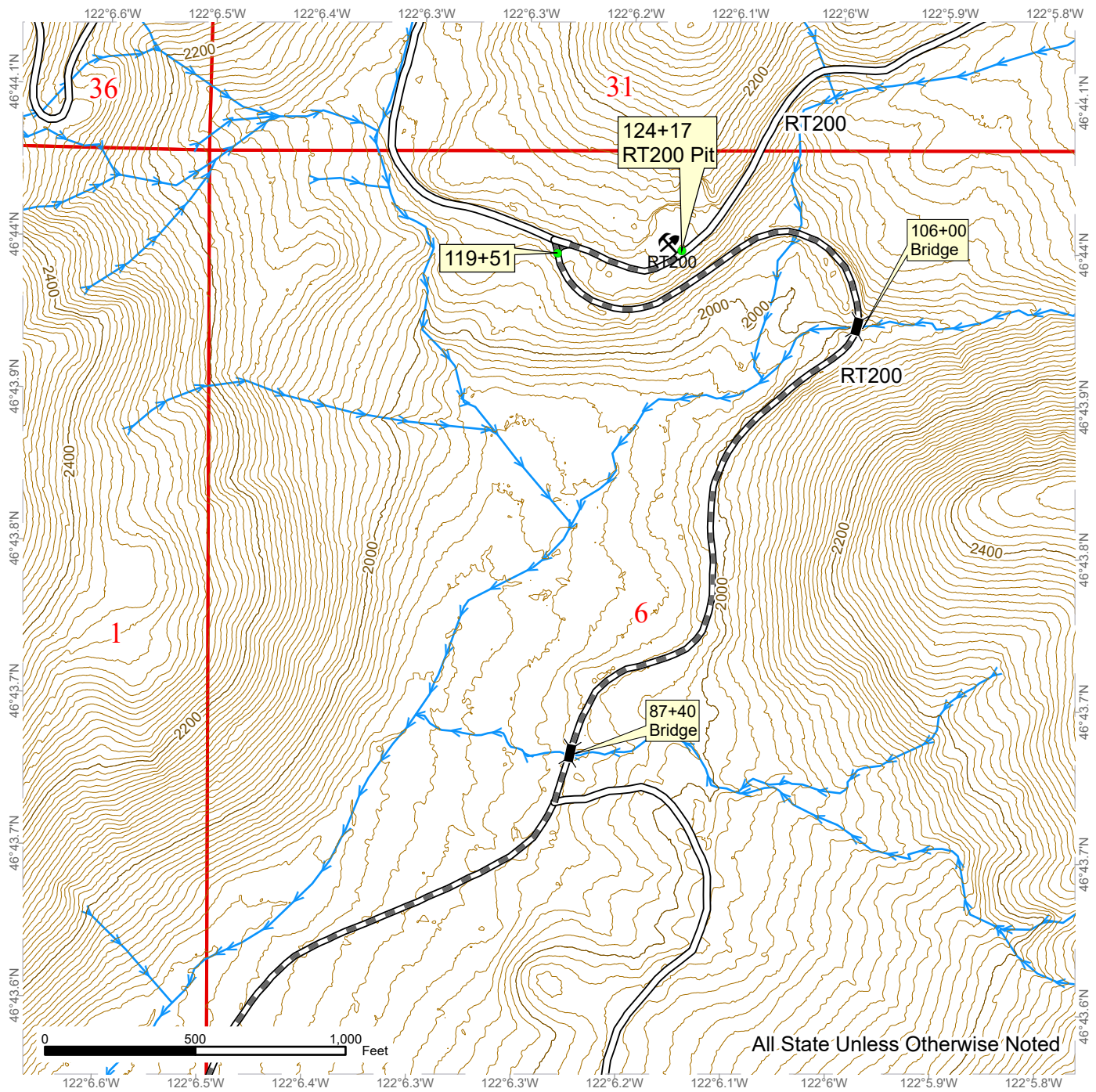
State Lands - Bridges	Contours 10 ft
Road Stationing	Streams
Existing Roads	Public Land Survey Townships
Required Pre-Haul Maintenance	Public Land Survey Sections

Tigerilla VRH & VDT Timber Sale Road Work Map, pg 4 of 7



● Road Stationing	— Active/driveable road	<p>Note: See Road Plan for additional work and culvert installations.</p>
--- Optional Construction	— Non-driveable road	
▬▬▬ Pre-haul Maintenance	==== Orphaned road	
~ ~ ~ Sale Boundary Tags	— Contours 10 ft	
· · · ×× Special Mgmt Area	▭ Public Land Survey Townships	
~ · · ~ Right of Way Tags	▭ Public Land Survey Sections	

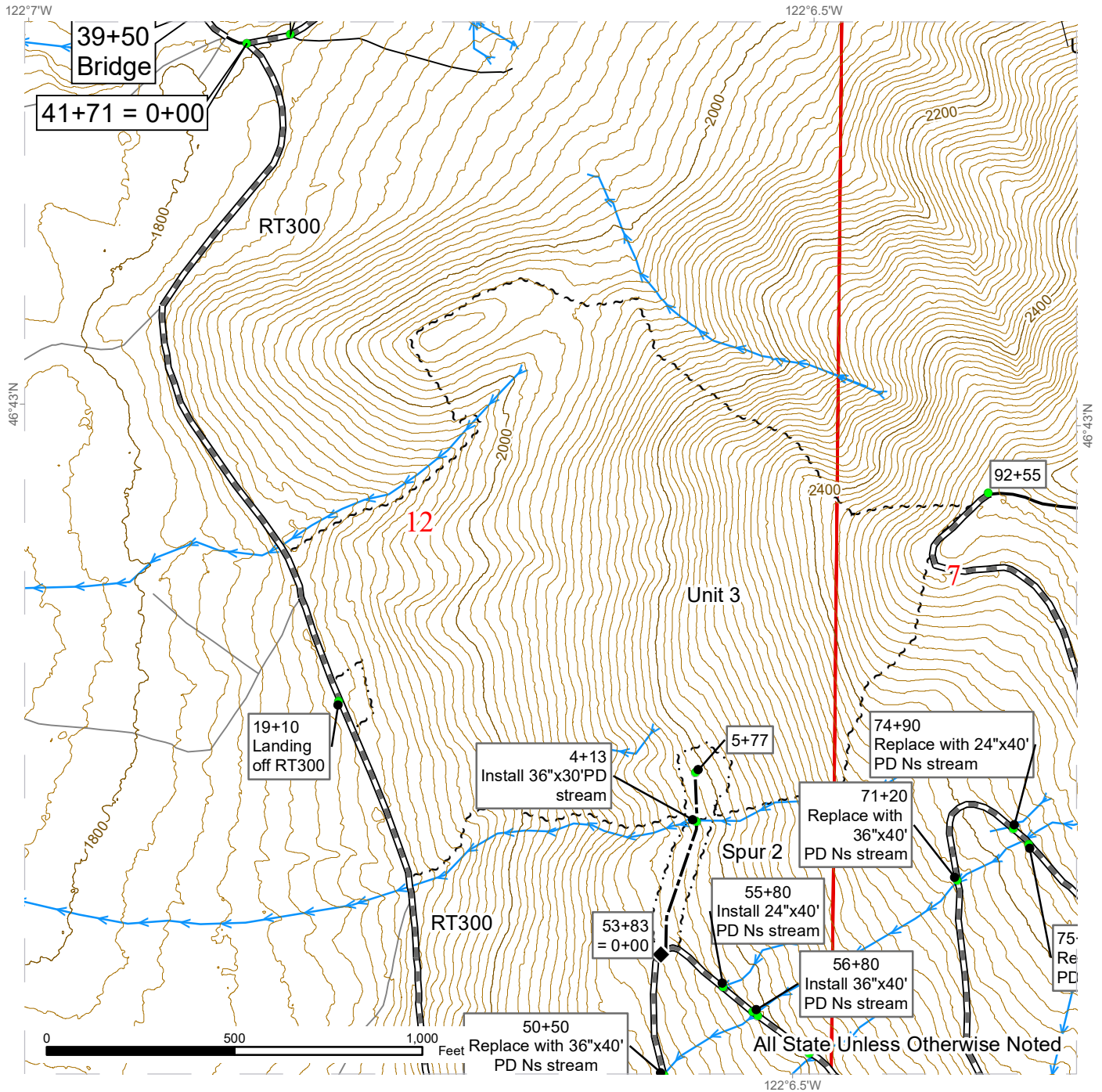
Tigerilla VRH & VDT Timber Sale Road Work Map, pg 5 of 7



All State Unless Otherwise Noted

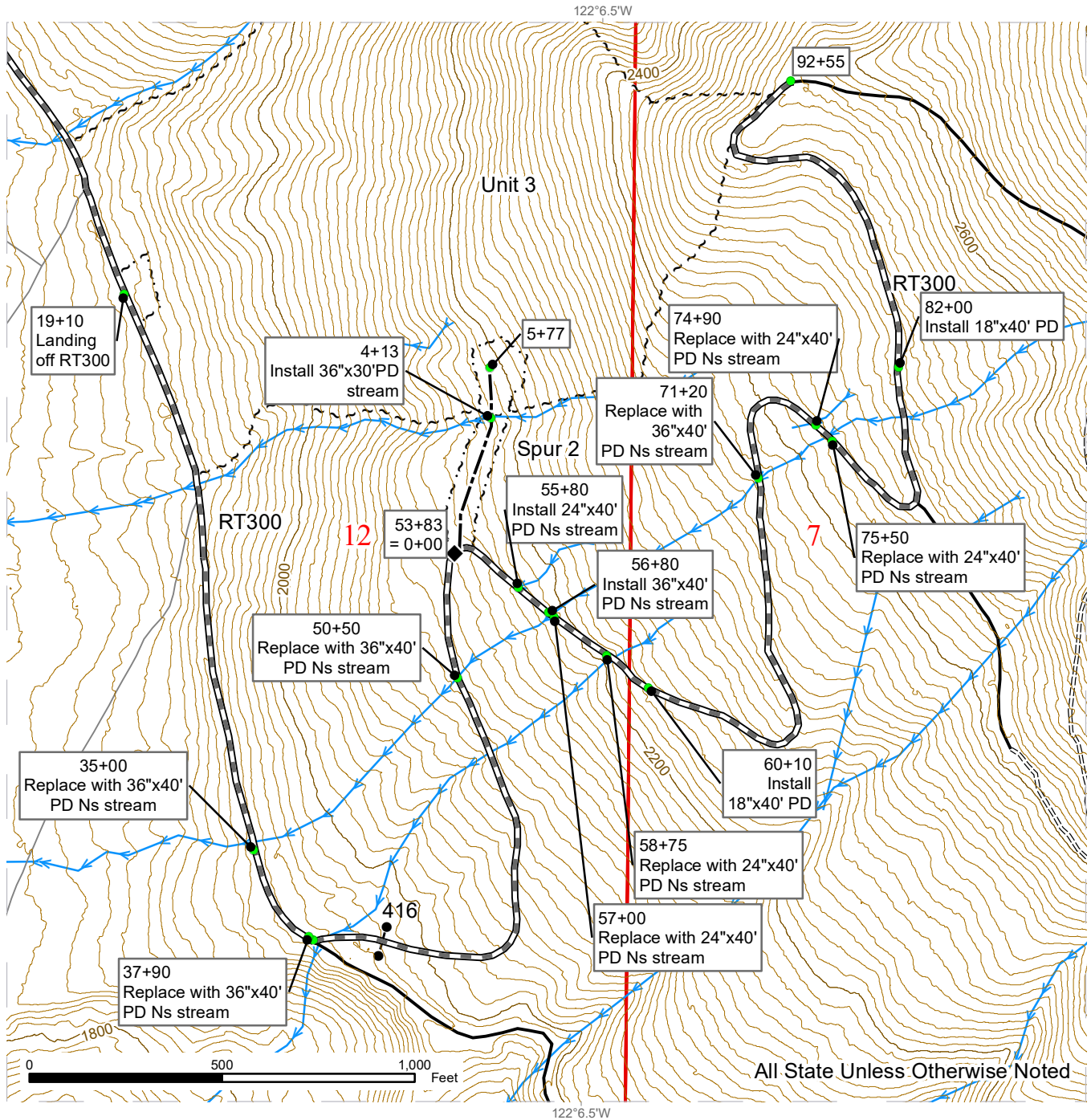
State Lands - Bridges	Rock Pit (Corporate)	<p>Note: See Road Plan for additional work and culvert installations.</p>
Road Stationing	Streams	
Existing Roads	Public Land Survey Townships	
Required Pre-Haul Maintenance	Public Land Survey Sections	
Contours 10 ft		


Tigerilla VRH & VDT Timber Sale Road Work Map, pg 6 of 7



● Road Stationing	— Active/driveable road	<p>Note: See Road Plan for additional work and culvert installations.</p>
--- Optional Construction	— Non-driveable road	
▬ Pre-haul Maintenance	— Contours 10 ft	
~ ~ ~ Sale Boundary Tags	▭ Public Land Survey Townships	
~ · ~ · ~ Right of Way Tags	▭ Public Land Survey Sections	

Tigerilla VRH & VDT Timber Sale Road Work Map, pg 7 of 7



● Road Stationing	— Active/driveable road	<p>Note: See Road Plan for additional work and culvert installations.</p> 
--- Optional Construction	==== Orphaned road	
▬ Pre-haul Maintenance	— Contours 10 ft	
~ ~ ~ Sale Boundary Tags	▭ Public Land Survey Townships	
~ · ~ · ~ Right of Way Tags	▭ Public Land Survey Sections	
● Gates (Corporate)		

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

TIGERILLA VRH & VDT TIMBER SALE ROAD PLAN
LEWIS COUNTY
RAINIER DISTRICT
SPS REGION

AGREEMENT NO.: 30-099064

STAFF ENGINEER: MICHELLE BELL

DATE: 8/23/2023

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>
E560	0+00 to 36+88	Pre-haul maintenance
RT100	0+00 to 61+60	Pre-haul maintenance
RT200	0+00 to 124+17	Pre-haul maintenance
RT300	0+00 to 92+55	Pre-haul maintenance
Spur 1	0+00 to 22+60	Abandon, if built
Spur 2	0+50 to 5+77	Abandon, if built

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>
Spur 1	0+00 to 22+60	Construction
Spur 2	0+00 to 5+77	Construction

0-4 CONSTRUCTION

Construction includes, but is not limited to:

- Clearing.
- Grubbing.
- Right of way debris disposal.
- Excavation and/or embankment to subgrade.
- Landing construction.
- Acquisition and installation of drainage structures.
- Manufacture or acquisition and application of rock.
- Acquisition and application of grass seed and straw.

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>
E560	0+00 to 36+88	<ul style="list-style-type: none"> • Grading, shaping, and compaction of road surface. • Clean blowdown from road right of way.
RT100	0+00 to 24+85	
RT100	24+85 to 61+60	<ul style="list-style-type: none"> • Brushing right-of-way. • Grading, shaping, and compaction of road surface. • Clean blowdown from road right of way.
RT200	0+00 to 124+17	<ul style="list-style-type: none"> • Brushing right-of-way. • Grading, shaping, and compaction of road surface. • Bridge maintenance. • Acquisition and installation of drainage structure. • Manufacture or acquisition and application of rock. • Clean blowdown from road right of way.
RT300	0+00 to 92+55	<ul style="list-style-type: none"> • Brushing right-of-way. • Clean culverts • Clean ditches, headwalls, and catch basins. • Acquisition and installation of drainage structures. • Grading, shaping, and compaction of road surface. • Clean blowdown from road right of way.

0-7 POST-HAUL MAINTENANCE

This project includes post-haul road maintenance listed in Clause 9.5 POST-HAUL MAINTENANCE.

0-10 ABANDONMENT

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

0-12 DEVELOP ROCK SOURCE

Purchaser may develop an existing rock source. Rock source development may involve Clearing, Stripping, Drilling, Blasting, and Crushing. Rock source development will involve manufacture of 2000 cubic yard crushed rock stockpile. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

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

1-3 ROAD DIMENSIONS

Purchaser shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan, 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.
7. Road Work maps.

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

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

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

1-9 DAMAGED METALLIC COATING

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

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:

- Centerline is marked with orange pin flags and orange flagging for new construction.
- Pre-haul maintenance culverts are marked with wooden stakes and orange flagging.

1-16 CONSTRUCTION STAKES SET BY STATE

Purchaser shall perform work in accordance with the designs and reference points set in the field for grade and alignment. Reconstruction of existing road grades must conform to the original location except where construction staked or designed.

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 road work before the start of timber haul, unless approved in writing by the Contract Administrator.

1-21 HAUL APPROVAL

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

1-22 WORK NOTIFICATIONS

Purchaser shall notify the Contract Administrator 5 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:

- Drainage installation
- Subgrade compaction
- Rock compaction

SUBSECTION RESTRICTIONS

1-25 ACTIVITY TIMING RESTRICTION

No operation of road construction equipment or rock haul will be allowed on weekends or state recognized holidays, unless authorized in writing by the Contract Administrator.

The specified activities are not permitted during the listed closure periods unless authorized in writing by the Contract Administrator.

<u>Activity</u>	<u>Closure Period</u>
Operation of road construction equipment or rock haul	November 1 to May 15

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a seasonal closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION, Purchaser shall comply with a maintenance plan to include further protection of state resources. Purchaser shall obtain written approval from the Contract Administrator for the maintenance plan, and shall put preventative measures in place before operating during the closure period. Purchaser is required to maintain all haul roads at their own expense including those listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER. If other operators are using, or desire to use these roads, a joint operating plan must be developed. All parties shall follow this plan.

1-29 SEDIMENT RESTRICTION

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

1-30 CLOSURE TO PREVENT DAMAGE

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

- Wheel track rutting exceeds 6 inches on new construction rocked roads.
- Wheel track rutting exceeds 4 inches on crushed rock 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 BRIDGE SURFACE RESTRICTION

Metal tracked equipment shall not be used on bridge surfaces at any time. If equipment must be run on bridge surfaces, then rubber tired equipment or other methods, as approved in writing by Contract Administrator, shall be used.

Any dirt, rock, or other material tracked or spilled on the bridge surface shall be removed immediately. Any damage to the surface(s) shall be repaired at the Purchaser's expense as directed by the Contract Administrator.

1-33 SNOW PLOWING RESTRICTION

Snowplowing will be allowed after the execution of a SNOW PLOWING AGREEMENT, which is available from the Contract 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.

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 road(s) are affected by this sale:

<u>Road Name</u>
Mineral Creek Road

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.

2-5 MAINTENANCE GRADING – EXISTING ROAD

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

<u>Road</u>	<u>Stations</u>
E-560	0+00 to 36+88
RT100	0+00 to 61+60
RT200	0+00 to 124+17
RT300	0+00 to 53+83

2-6 CLEANING CULVERTS

On the following road(s), Purchaser shall clean the inlets and outlets of all culverts.

<u>Road</u>	<u>Stations</u>
RT300	0+00 to 92+55

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

On the following road(s), Purchaser shall clean ditches, headwalls, and catchbasins. Work must be completed before timber haul and must be done in accordance with the TYPICAL SECTION SHEET. Ditch cleaning shall be accomplished using a hydraulic excavator unless approved in writing by the Contract Administrator. Pulling ditch material across the road or mixing in with the road surface is not allowed. Excavated material must be scattered outside the clearing limits.

<u>Road</u>	<u>Stations</u>
RT300	0+00 to 92+55

2-8 MAINTAINING EROSION CONTROL STRUCTURES

On the following road(s), Contractor shall clean and maintain all erosion control devices including but not limited to rock berms.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
RT200	14+85	Maintain berm on both road edges over the type 3 stream culvert during haul in wet weather. Berm is total 80 ft long with 40 feet before and 40 feet after the culvert.

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

SUBSECTION BRUSHING

3-1 BRUSHING

On the following road(s), Purchaser shall cut vegetative material up to 3 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Brushing must be achieved by manual or mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
RT100	24+85 to 61+60
RT200	0+00 to 124+17
RT300	0+00 To 92+55

3-2 BRUSHING RESTRICTION

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

SUBSECTION CLEARING

3-5 CLEARING

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

3-8 PROHIBITED DECKING AREAS

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

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

SUBSECTION GRUBBING

3-10 GRUBBING

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET except as stated in CLAUSE 11-3 STUMPS. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. Grubbing must be completed before starting excavation and embankment.

3-12 STUMP PLACEMENT

On the following road(s), Purchaser may place grubbed stumps adjacent to the road shoulder, within the clearing limits, and outside the right of way tags. Stumps placed outside the right-of-way tags must be positioned upright, with root wads in contact with the forest floor. Stumps placed within the right-of-way tags shall be used for road abandonment.

<u>Road</u>	<u>Stations</u>
Spur 1	0+00 to 6+70

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 clearing 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 application of rock or timber haul.

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 20 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 55%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.
- In location that would impede drainage.

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 the clearing limits.

SECTION 4 – EXCAVATION

4-2 PIONEERING

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

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

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

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 12 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 6% 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.

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

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

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

4-12 FULL BENCH CONSTRUCTION

On the following roads where side slopes exceed 45%, Purchaser shall use full bench construction for the entire subgrade width except as construction staked or designed. Purchaser shall end haul waste material to the location specified in Clause 4-37 WASTE AREA LOCATION.

<u>Road</u>	<u>Full Bench Location</u>
Spur 1	16+88 to 22+60

4-14 ONE-FOOT EXCAVATION LIMIT

On the following road(s), Purchaser shall not exceed a one-foot cut at centerline unless approved by the Contract Administrator or as designed.

<u>Road</u>	<u>Stations</u>
Spur 1	0+00 to 6+70

SUBSECTION INTERSECTIONS, TURNOUTS AND TURNAROUNDS

4-21 TURNOUTS

Purchaser shall construct turnouts as designated on the TURNOUT LIST. 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 TURNOUT LIST.

SUBSECTION DITCH CONSTRUCTION

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

The Purchaser shall construct and reconstruct ditches into the subgrade as specified on the TYPICAL SECTION SHEET. Excavated slopes shall be consistent with Clause 4-5 CUT SLOPE RATIO. Ditches shall be constructed concurrently with construction of the subgrade.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Purchaser shall construct ditchouts as needed. Ditchouts must be constructed in a manner that diverts ditch water onto the forest floor and must have excavation backslopes no steeper than a 1:1 ratio.

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

4-37 WASTE AREA LOCATION

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

<u>Road</u>	<u>Waste Area Location</u>	<u>Comments</u>
Spur 2	5+77	Waste and organic debris shall be piled separately.
RT300	92+55	

4-38 PROHIBITED WASTE DISPOSAL AREAS

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

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- On side slopes steeper than 55%.
- 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.

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.

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 and waste area segments too narrow to accommodate equipment. Waste material may be placed by end-dumping or sidecasting until sufficiently wide enough to support the equipment.

4-61 SUBGRADE COMPACTION

Purchaser shall compact constructed 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 rock application.

4-63 EXISTING SURFACE COMPACTION

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

SECTION 5 – DRAINAGE

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

5-12 UNUSED MATERIALS STATE PROPERTY

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

5-13 CONTINGENCY CULVERTS

The following culverts will be supplied by the Purchaser and are available for installation as directed by the Contract Administrator.

<u>Road</u>	<u>Size</u>
On any portion of road used for timber or rock haul.	Two 18" x 30' PD
	One 18" culvert band for PD culverts above

SUBSECTION CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

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

5-17 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 12%.

5-18 CULVERT DEPTH OF COVER

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

SUBSECTION ENERGY DISSIPATERS

5-20 ENERGY DISSIPATERS

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

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT LIST. 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. Rock must be set in place by machine. Placement must with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

5-25 CATCH BASINS

Purchaser shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 2 feet wide and 4 feet long.

5-26 HEADWALLS FOR CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts. Rock used for headwalls must be QUARRY SPALLS. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. Placement must be by zero-drop-height method only. No placement by end dumping or dropping of rock is allowed. QUARRY SPALLS shall meet the specifications in CLAUSE 6-43 QUARRY SPALLS.

SUBSECTION SURFACE DRAINAGE

5-33 NATIVE SURFACE ROADS

If overwintered, native surface roads must be waterbarred by November 1. Purchaser shall construct waterbars according to the attached DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical distance of no more than 10 feet between waterbars or between natural drainage paths, and with a maximum spacing of 300 feet.

SECTION 6 – ROCK AND SURFACING

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>
RT200	NW1/4 Section 6 Township 14 North Range 6 East, W.M.	2-1/2 Inch Minus Crushed 4 Inch In Place Quarry Spalls

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 PLAN prepared by the state included in this road plan. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator. Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the rock source.

<u>Source</u>
RT200

6-12 ROCK SOURCE SPECIFICATIONS

Rock sources must be in accordance with the following specifications, unless otherwise specified in the ROCK SOURCE DEVELOPMENT 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 25 feet.
- The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient except as approved by the Contract Administrator.
- All operations must be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- All vehicle access to the top of the pit faces must be blocked.

6-14 DRILL AND SHOOT

Rock drilling and shooting must meet the following specifications:

- Additional oversize material remaining in the rock source at the conclusion of the timber sale may not exceed 5% of the total volume mined in that source.
- Oversize material is defined as rock fragments larger than 1.5 feet in any dimension.
- Oversized rock that exceeds the maximum allowable amount must be reduced to a smaller size within the rock source.
- Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before blasting operations.
- Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 5 calendar days before drilling.
- All operations must be carried out in compliance with the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and the Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- Purchaser shall block access roads before blasting operations.

SUBSECTION ROCK MANUFACTURE

6-20 ROCK CRUSHING OPERATIONS

Rock crushing operations must conform to the following specifications:

- Operations and placement of oversize material must be conducted in or near the rock source site, as approved in writing by the Contract Administrator.
- If a smooth roll crusher is used, the maximum size of material fed into it shall be equal to the largest size of the material coming out of it plus 8.5 percent of the roll radius.
- The crushing operation per pit must be concluded within 30 working days from the time it begins in that pit unless approved in writing by the Contract Administrator.
- Purchaser is required to produce sieve analysis for crushing operations every 1000 yards for each rock gradation type.

6-23 ROCK GRADATION TYPES

Purchaser shall manufacture rock in accordance with the types and amounts listed in the ROCK LIST. Rock must meet the following specifications for gradation and uniform quality when placed in hauling vehicles or during manufacture and placement into a stockpile. Purchaser shall provide a sieve analysis upon request from the Contract Administrator.

SUBSECTION ROCK GRADATIONS

6-32 2 ½-INCH MINUS CRUSHED ROCK

% Passing 2 ½" square sieve	100%
% Passing 2" square sieve	60 - 100%
% Passing 1" square sieve	50 - 70%
% Passing U.S. #4 sieve	30 - 50%
% Passing U.S. #40 sieve	16% maximum
% Passing U.S. #200 sieve	5% maximum

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

6-38 4-INCH IN-PLACE ROCK

Purchaser shall manufacture 4-inch in-place rock. In-place processing such as grid rolling, jaw crushing, or other such method as demonstrated by the Purchaser to be effective, shall be required if necessary to achieve the following requirements:

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

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

6-43 QUARRY SPALLS

% Passing 8" square sieve	100%
% Passing 3" square sieve	40% maximum
% Passing 3/4" square sieve	10% maximum

Rock may not contain more than 5 percent vegetative debris or trash. All percentages are by weight.

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 compacted yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction.

6-56 ROCK MEASUREMENT BY TRUCK VOLUME

Measurement of 2-1/2 INCH MINUS CRUSH rock is on a cubic yard truck measure basis. The Purchaser shall measure each truck box before rock hauling. An average of such volumes for each truck will be used to tally the volume hauled. The Contract Administrator may periodically require that a load be flattened off and its volume calculated. Purchaser shall maintain load tally sheets for each truck as shown in ROCK ACCOUNTABILITY DETAIL and shall give them to the Contract Administrator or e-mail them to the Contract Administrator on a weekly basis during rocking operations.

6-65 ROCK STOCKPILE LOCATION

Purchaser shall stockpile rock as listed below.

<u>Rock Source</u>	<u>Rock Type</u>	<u>Quantity (c.y.)</u>	<u>Stockpile Location</u>
RT200	2-1/2 Inch Minus Crushed	2000	Stockpile Site

6-67 ROCK STOCKPILE SPECIFICATIONS

Rock stockpiles listed in Clause 6-65 ROCK STOCKPILE LOCATION must meet the following specifications:

Before placing aggregates upon the stockpile site, the site must be cleared of vegetation, trees, stumps, brush, rocks, or other debris and the ground leveled to a smooth, firm, uniform surface. 1-1/2 Inch Minus Crushed remaining in stockpile area shall be pushed to the far end of the stockpile area.

When completed, the stockpile must be neat and regular in shape. The stockpile height is limited to a maximum of 25 feet. Stockpiles in excess of 500 cubic yards must be built up in layers of not more than 4 feet deep. Stockpile layers must be constructed by trucks, clamshells, or other methods approved in writing by the Contract Administrator. Pushing aggregates into piles with a bulldozer shall not be permitted. Each layer must be completed over the entire area of the pile before depositing aggregates in the next layer. The aggregates may not be dumped so that they run down and over the lower layers in the stockpile. The method of dropping from a bucket or spout in one location to form a cone shaped pile is not allowed.

No equipment other than pneumatic tired equipment may be used on stockpiles. Stockpiles of different types or sizes of aggregate must be spaced far enough apart, or separated by suitable walls or partitions, to prevent the mixing of the aggregates.

SUBSECTION ROCK APPLICATION

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for subgrade including: ditches, headwalls, catch basins, culverts, energy dissipaters, ditch-outs, subgrade shaping and compacting before rock application.

6-71 ROCK APPLICATION

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

6-73 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.

6-75 OPTIONAL ROCK EXCEPTION

On the following roads, if hauling takes place from May 1 to September 30 Purchaser may place less rock than shown on the ROCK LIST, when approved in writing by the Contract Administrator.

If less rock is applied, Purchaser shall submit a written plan, for approval, describing how these roads will be constructed, used, maintained, and treated post-haul. Purchaser shall meet post-haul specifications in Section 9 POST-HAUL ROAD WORK, the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, or other conditions of the approved plan.

<u>Road</u>	<u>Stations</u>
Spur 1	1+50 to 61+60
Spur 2	0+00 to 5+77

SECTION 7 – STRUCTURES

7-30 BRIDGE MAINTENANCE

Purchaser shall conduct bridge maintenance as listed.

<u>Road</u>	<u>Station(s)</u>	<u>Requirements</u>
RT200	39+50 106+00	Clean deck of dirt and rocks prior to haul. Maintain clean bridge deck during haul. Clean bridge deck of dirt and rock after haul is complete. During cleaning all dirt/debris shall be placed on DNR property where it will not enter the stream.
RT200	87+40	Clean running planks of dirt and rocks prior to haul. Maintain clean running planks during haul. Clean running planks of dirt and rocks after haul is complete. During cleaning all dirt/debris shall be placed on DNR property where it will not enter the stream.

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>	<u>Gate No.</u>
RT300	39+50	416

7-71 GATE CLOSURE DURING HAUL

On the following road(s), Purchaser shall keep gates closed and locked except for passing vehicles. If Purchaser elects to use an alternate plan for gate security, Purchaser shall submit a detailed plan to the Contract Administrator for written approval.

<u>Road</u>	<u>Station</u>	<u>Gate No.</u>	<u>Comment</u>
E-560	1+30	619	This gate is on private property shall be kept closed and locked except for passing vehicles unless alternative arrangements are made with the owner. Landowner’s contact information available from the Contract Administrator.

SECTION 8 – EROSION CONTROL

8-15 REVEGETATION

On the following road(s), Purchaser shall spread grass seed on all exposed soils resulting from road work activities using hand spreading method. Other methods of covering must be approved in writing by the Contract Administrator.

<u>Road</u>	<u>Location</u>	<u>Qty (lbs)*</u>	<u>Comments</u>
Spur 1	0+00 to 6+70	70	Quantity includes application after road construction and after road abandonment
RT300	0+00 to 92+55	50	Apply grass seed to all stream crossings with exposed soil.

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

8-16 REVEGETATION SUPPLY

The Purchaser shall provide the grass seed and certified weed-free straw.

8-17 REVEGETATION TIMING

On the following road(s), Purchaser shall revegetate as specified in Comments unless otherwise approved in writing by the Contract Administrator.

<u>Road</u>	<u>Location</u>	<u>Comments</u>
Spur 1	0+00 to 6+70	After road work is completed grass seed all exposed soils within the right of way. After abandonment is completed grass seed all exposed soils in the right of way including the road prism.
RT300	0+00 to 92+55	After road work is completed grass seed all exposed soils within the right of way.

8-18 PROTECTION FOR SEED

Purchaser shall provide a protective cover for seed. The protective cover shall consist of certified weed-free straw. The protective cover shall not be deeper than 3 inches and shall not cover more than 70% of the seeded area. Seed must be covered before the first anticipated storm event. The protective cover requirement may be waived in writing by the Contract Administrator if Purchaser is able to demonstrate a revegetation plan that will result in the establishment of a uniform dense crop (at least 50% coverage) of 3-inch tall grass by October 31.

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixture listed below on all exposed soil at a rate of 50 to 70 pounds per acre of exposed soil. Grass seed must meet the following specifications:

1. Seed shall be certified weed-free.
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 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>
Annual Rye grass	60
Oats	30
Perennial Ryegrass	10
Inert Material	0.5

SECTION 9 – POST-HAUL ROAD WORK

9-1 EARTHEN BARRICADES

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

<u>Road</u>	<u>Stations</u>
Spur 1	0+00
Spur 2	0+50

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.

<u>Road</u>	<u>Stations</u>	<u>Excavated Channel Width</u>	<u>Slope Ratio</u>
Spur 2	4+13	3	2:1

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

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

9-5 POST-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
RT200	39+50	Clean bridge deck
RT200	87+40	Clean bridge running planks
RT200	106+00	Clean bridge deck
RT300	18+00 to 20+00	Rock per ROCK LIST
RT300	91+00 to 92+55	Rock per ROCK LIST

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface.

9-12 LANDING EMBANKMENT REMOVAL

Purchaser shall reduce or relocate the landing embankment. Place excavated material in a waste area approved in writing designated by the Contract Administrator.

9-21 ROAD ABANDONMENT

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
Spur 1	0+00 to 6+70	Medium
Spur 1	6+70 to 22+60	Light
Spur 2	0+50 to 5+77	Light

9-22 LIGHT ABANDONMENT

- Remove road shoulder berms.
- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 100 feet.
- 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.
- Remove culverts.
- Remove ditch cross drain culverts and leave the resulting trench open.
- Slope all trench walls and approach embankments no steeper than 1.5:1.
- Block roads with earthen barricades in accordance with the attached EARTHEN BARRICADE DETAIL.

9-23 MEDIUM ABANDONMENT

- Remove road shoulder berms.
- Rip the surface to a minimum depth of 15 inches or to 2 inches into the soil beneath the rock road surface.
- Construct non-drivable waterbars similar to the attached NON-DRIVABLE WATERBAR DETAIL as marked by the Contract Administrator in the field. Waterbars shall be installed to provide positive drainage of road surface water, but not deep enough to create a trench that connects both sides of the road. Waterbars shall be maximum of 10 inches deep.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Remove culverts.
- Remove ditch cross drain culvert and leave the resulting trench open.
- Slope all trench walls and approach embankments no steeper than 1.5:1.
- Place root wads and clearing debris on road prism. Root wads shall be placed upright.
- Apply grass seed concurrently with abandonment and in accordance with Section 8 EROSION CONTROL.
- Cover, concurrently with abandonment and in accordance with Section 8 EROSION CONTROL, all exposed soils within right of way with weed-free straw. Straw shall be sprinkled and not clumped over seed.
- Block roads with earthen barricades in accordance with the attached EARTHEN BARRICADE DETAIL.

SECTION 10 MATERIALS

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

10-10 JUTE EROSION CONTROL MATTING

Jute mesh must have a uniform open plain weave made from jute yarn that does not vary by more than half its nominal diameter. Erosion control matting must conform to the specifications listed below, and must be recommended by the manufacturer for use on embankments with a slope of 1½:1 (H:V) or steeper.

- Mesh size 1 inch max.
- Mesh mass, 0.9 lb/yd² ±5%

10-11 COCONUT EROSION CONTROL MATTING

Coconut mat must have a uniform open plain weave made from jute, coconut coir, synthetic polypropylene fibers, or other approved yarn. Erosion control matting must conform to the specifications listed below, and must be recommended by the manufacturer for use on embankments with a slope of 1½:1 (H:V) or steeper.

- Mesh size 0.5 to 1 inch.
- Mesh mass, 0.4 lb/yd² min.
- Netting must be photodegradable on one side.
- Moisture content may not exceed 20%.

10-12 WOOD EXCELSIOR EROSION CONTROL MATTING

Excelsior blanket must have a uniform thickness made of curled wood excelsior secured on the top side to a biodegradable, photodegradable extruded plastic mesh. Matting must be smolder resistant without the use of additional chemical additives. Erosion control matting must conform to the specifications listed below, and must be recommended by the manufacturer for use on embankments with a slope of 1½:1 (H:V) or steeper.

- Mesh size 1 to 2 inch.
- Blanket mass, 1 lb/yd² ±10%
- Excelsior fibers 7.8 inch (200-mm) length 80% min.

10-17 CORRUGATED PLASTIC CULVERT

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

10-22 PLASTIC BAND

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

SECTION 11 SPECIAL NOTES

11-1 CLEANING BLOWDOWN FROM ROAD RIGHT OF WAY

On the following road(s), blowdown, including limbs, shall be removed from the road surface, cutslope, and ditchline.

<u>Road</u>	<u>Stations</u>
E-560	0+00 to 36+88
RT100	0+00 to 61+60
RT200	0+00 to 124+17
RT300	0+00 to 92+55

11-2 SEDIMENT RESTRICTION

On the following road, Purchaser shall not allow silt-bearing runoff to enter any WMZ. Contract Administrator may require the use of silt-fencing, jute mesh, conconut mat, or other means to eliminate silt-bearing runoff. All materials used shall be removed from State Land prior to road abandonment approval.

<u>Road</u>	<u>Stations</u>
Spur 1	0+00 to 6+70

11-3 STUMPS

On the following road, Purchaser is not required to remove stumps if they are cut flush with the ground.

<u>Road</u>	<u>Stations</u>
Spur 1	0+00 to 6+70

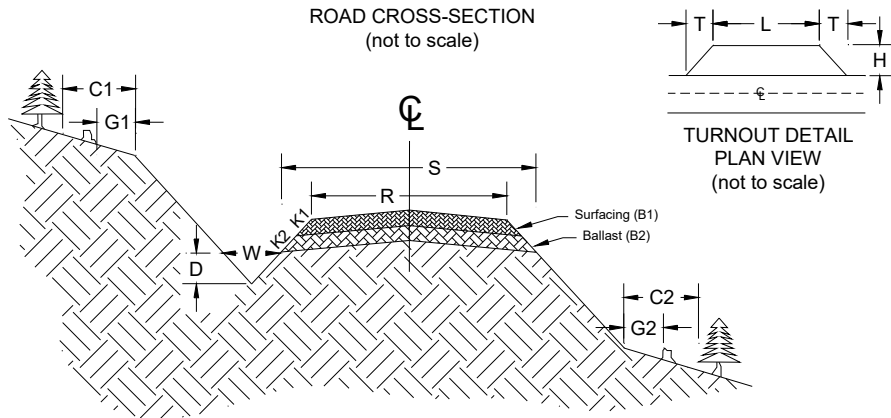
11-4 LANDING DEBRIS

Purchaser shall reduce or relocate debris generated by road and landing construction, in a manner approved, in writing, by the Contract Administrator, to avoid landing failures and potential debris slides.

11-5 EQUIPMENT EXCLUSION

Other than ingress and egress, the Purchaser shall not operate a processor on the RT300 road.

TYPICAL SECTION SHEET



Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch		Crown in. @ CL	Grubbing Limits (feet)		Clearing Limits* (feet)	
						Width (feet)	Depth (feet)		G1	G2	C1	C2
				S	R	W	D		G1	G2	C1	C2
E-560	0+00	36+88	A	15	12	4	2	4	-	-	5	5
RT100	0+00	61+60	A	15	12	4	2	4	-	-	5	5
RT200	0+00	124+17	A	15	12	4	2	4	-	-	5	5
RT300	0+00	92+55	A	15	12	4	2	4	-	-	5	5
Spur 1	0+00	6+70	C	15	12	2	2	4	0	0	tags	tags
Spur 1	6+70	22+60	C	15	12	2	1	4	0	0	0	0
Spur 2	0+00	5+77	C	15	12	2	1	4	0	0	tags	tags

*Tags are Right of Way Tags except as noted.

COMPACTION LIST

Road	From Station	To Station	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
All new construction and reconstruction			Culvert Installations	12	Smooth Drum Vibratory Roller	14,000	4 low freq. with Vibe on	3
			Embankment	12				
			Fill & select borrow	12				
			Subgrade					
			Rock	12				
			Waste Area	12				
All pre-haul and post haul			After grading existing road surface and prior to rocking					
			Culvert Installations	12				
			Rock	9				

ROCK LIST

BALLAST

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y. Station	# of Stations	C.Y. Sub-total	Rock Source	
			K2	B2					
Spur 1	0+00	6+70	1.5:1	12"	50	6.7	335	RT200 (4 Inch In Place)	
Spur 1*	6+70	22+60	1.5:1	12"	50	15.9	795		
Spur 2*	0+00	5+77	1.5:1	12"	50	5.77	289		
Landing Rock*							200		
RT200	43+00	Backfill culvert install with 2-1/2" Minus Crushed or alternative rock approved by CA.						10	RT200
RT300	See Culvert List	Backfill culvert installs with 2-1/2" Minus Crushed or alternative rock approved by CA. Roughly 10 cyd per culvert installation						130	
Quarry Spalls for culvert Installations. See Culvert List for locations							35		

*Optional Rock

BALLAST TOTAL: 1794 Cubic yards

SURFACE

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y. Station	# of Stations	Truck C.Y. Subtotal	Comments Rock Source
			K2	B2	2-1/2" Minus Crushed			RT200
RT200	42+50	43+50	1.5:1	6	25	1	25	
RT300	See Culvert and Drainage List for locations.		1.5:1	6	25 per culvert	13 culverts	325	Rock 50 feet before and after each culvert install.
2-1/2 Inch Minus Crushed Stockpile in RT200 Rock Source							2000	
RT300	18+00	20+00	1.5:1	4	17	2	34	Apply Post-haul
RT300	91+00	92+55	1.5:1	4	17	1.55	26	Apply Post-haul

SURFACE TOTAL: 2410 Cubic yards

NOTE: Except for rock types listed in Clause 6-56, yardages are estimated on a compacted (In-Place) basis. Apply appropriate factors to determine loose amounts for estimating purposes.

CULVERT AND DRAINAGE LIST, PG 1 OF 2

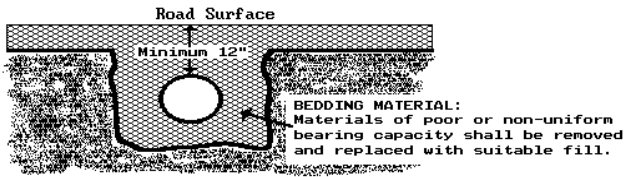
Road Number	Location	Culvert		Length (ft)			Riprap (C.Y.)			Backfill Material*	Placement Method*	Const. Staked *	Remarks
		Dia. (in)	Type	Culvert	Downspt	Flume	Inlet	Outlet	Type				
RT200	43+00	18	PD	40			0.5	1	QS	SR		Add quarry spalls at outlet	
RT300	19+10	18	PD	30			0.5	0.5	QS	SR		Install in RT300 ditch for landing access unless alternative location authorized by CA	
	35+00	36	PD	40			1	1	QS	SR		Replacement. Ns stream	
	37+90	36	PD	40			1	1	QS	SR		Replacement. Ns stream	
	50+50	36	PD	40			1	1	QS	SR		Replacement. Ns stream	
	55+80	24	PD	40			1	1	QS	SR		Ns stream	
	56+80	36	PD	40			1	1	QS	SR		Replacement. Ns stream	
	57+00	36	PD	40			1	1	QS	SR		Replacement. Ns stream	
	58+75	24	PD	40			1	1	QS	SR		Replacement. Ns stream	
	60+10	18	PD	40			1	1	QS	SR		Seep	
	71+20	36	PD	40			1	1	QS	SR		Replacement. Ns stream	
	74+90	24	PD	40			1	1	QS	SR		Replacement Ns stream	
	75+50	24	PD	40			1	1	QS	SR		Replacement. Ns stream	
	75+65	Install sediment trap in ditch. See Sediment Trap Detail.											
	82+00	18	PD	40			0.5	0.5	QS	SR		Seep	
Spur 1	1+56	18	TEMP	40			0.5	0.5	QS	NT			
	8+37	18	TEMP	30			0.5	0.5	QS	NT			
	10+66	18	TEMP	30			0.5	0.5	QS	NT			
	12+70	18	TEMP	30			0.5	0.5	QS	NT			
	16+89	18	TEMP	30			0.5	0.5	QS	NT			
Spur 2	4+13	36	TEMP	30			1	1	QS	NT		Ns stream	
	4+63	18	TEMP	30			0.5	0.5	QS	NT			
Contingency culverts See Clause 5-13		18	TEMP	30			0.5	0.5	QS	NT			
		18	TEMP	30			0.5	0.5	QS	NT			

* SEE CULVERT AND DRAINAGE SPECIFICATION DETAIL

CULVERT AND DRAINAGE LIST, PG 2 OF 2

PD = Polyethylene Pipe Dual Wall AASHTO No. M294 Type S or ASTM F2648
TEMP = Temporary

CULVERT BACKFILL AND BASE PREPARATION
(For culverts less than 36")

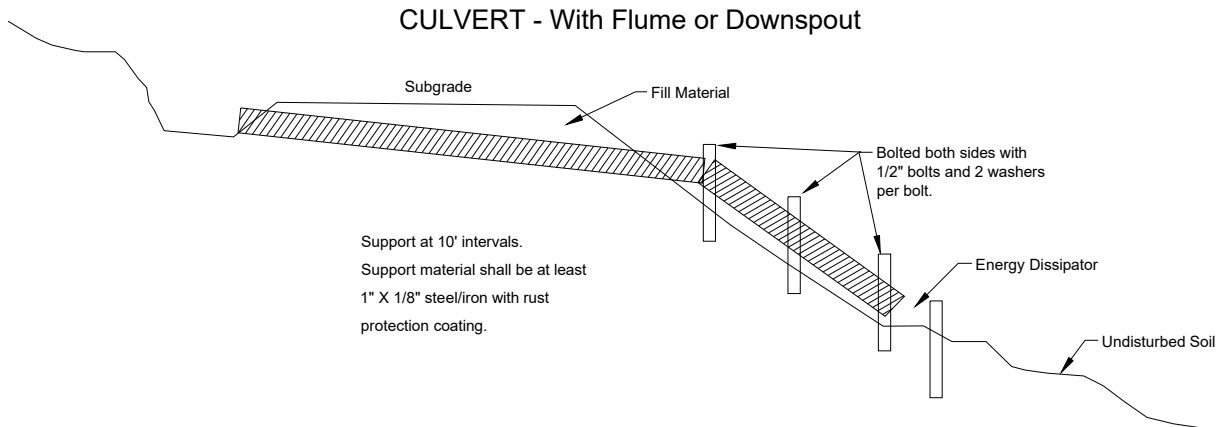
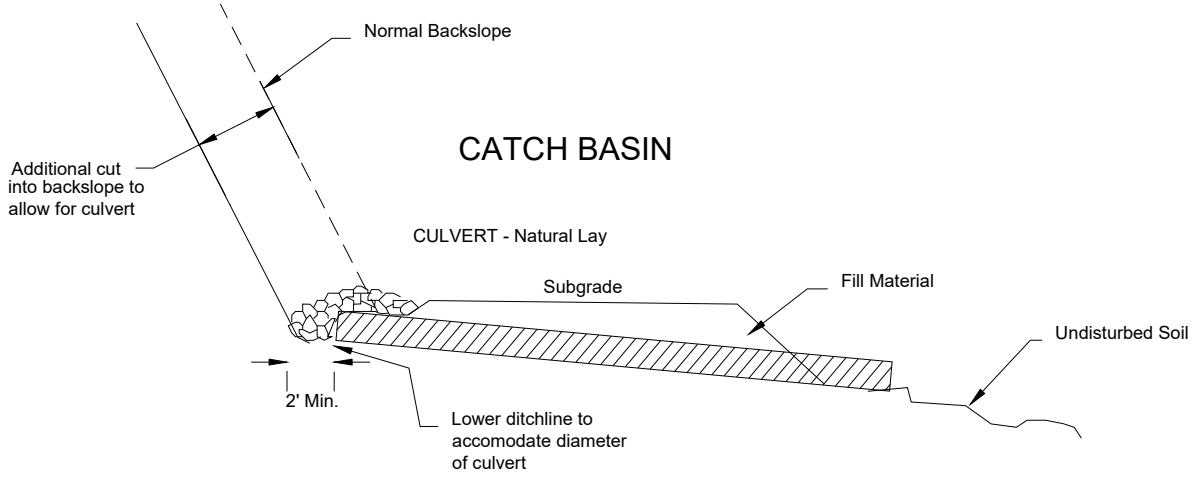


Key:

- QS - Quarry Spalls
- LL - Light Loose Riprap
- SR - Shot Rock
- NT - Native (bank run)
- SL - Select Fill
- HL - Heavy Loose Riprap
- Flume - Half round pipe
- Downspout - Full round pipe

CULVERT AND DRAINAGE SPECIFICATION DETAIL

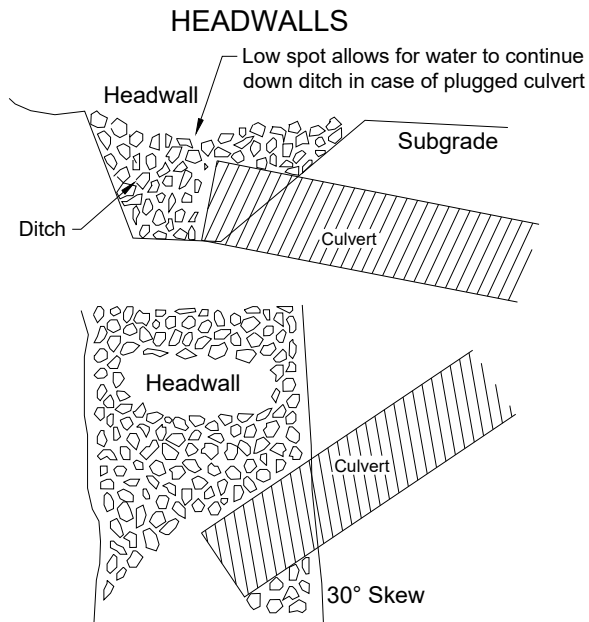
(Page 1 of 3)



CULVERT AND DRAINAGE SPECIFICATION DETAIL

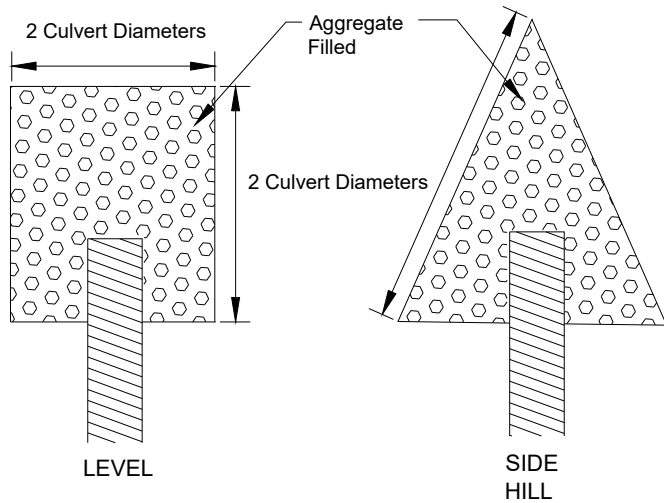
(Page 2 of 3)

Proper preparation of foundation and placement of bedding material shall precede the installation of all culvert pipe. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform dense unyielding base. The backfill material shall be placed so that the pipe is uniformly supported along the barrel.



Headwalls to be constructed of material that will resist erosion.

ENERGY DISSIPATORS



Dissipator Specifications:
Depth: 1 culvert diameter
Aggregate: as specified in the CULVERT LIST.

CULVERT AND DRAINAGE SPECIFICATION DETAIL

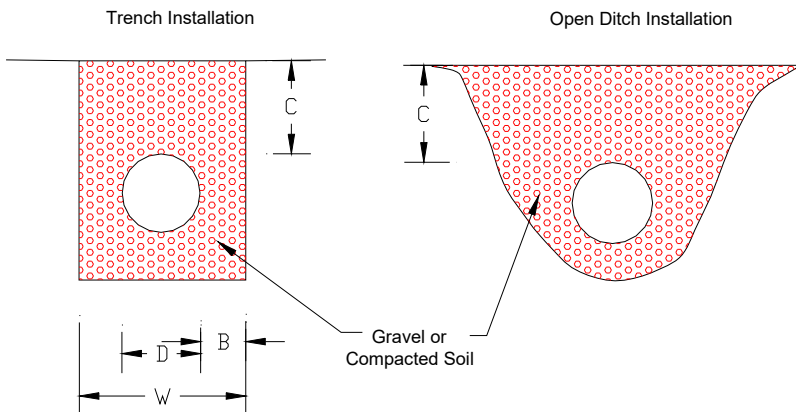
(Page 3 of 3)

POLYETHYLENE PIPE INSTALLATION

INSTALLATION REQUIREMENTS:

1. Crushed stone, gravel, or compacted soil backfill material shall be used as the bedding and envelope material around the culvert. The aggregate size shall not exceed 1/6 pipe diameter or 4" diameter, whichever is smaller.
2. The corrugated pipe shall be laid on grade, on a layer of bedding material as shown for the two types of installations. If native soil is used as the bedding and backfill material, it shall be well compacted in six inch layers under the haunches, around the sides and above the pipe to the recommended minimum height of cover.
3. Either crushed aggregate or flexible (asphalt) pavement may be laid as part of the minimum cover requirements.
4. Site conditions and availability of bedding materials often dictate the type of installation method used.
5. The load bearing capability of flexible conduits is dependent on the type of backfill material used and the degree of compaction achieved. Crushed stone and gravel backfill materials typically reach a compaction level of 90-95% AASHTO standard density without compaction. When native soils are used as backfill material, a compaction level of 85% is required. This minimum compaction can be achieved by either hand or mechanical tamping.

MINIMUM DIMENSIONS *Trench or Open Ditch Installation*



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

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, page 1 of 2

Cuts and Fills

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

Surface

- Grade and shape the road surface, turnouts, and shoulders to the original shape on the TYPICAL SECTION SHEET to provide a smooth, rut-free traveled surface and maintain surface water runoff in an even, unconcentrated manner.
- 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.

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.

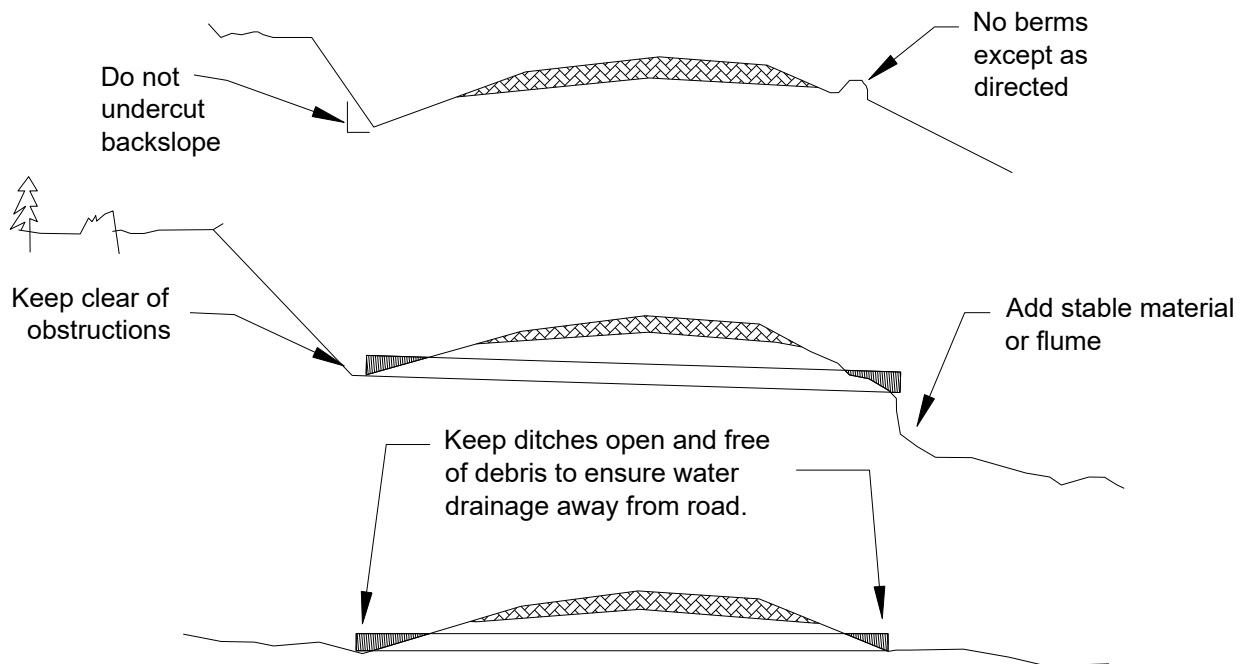
FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, page 2 of 2

Termination of Use or End of Season

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

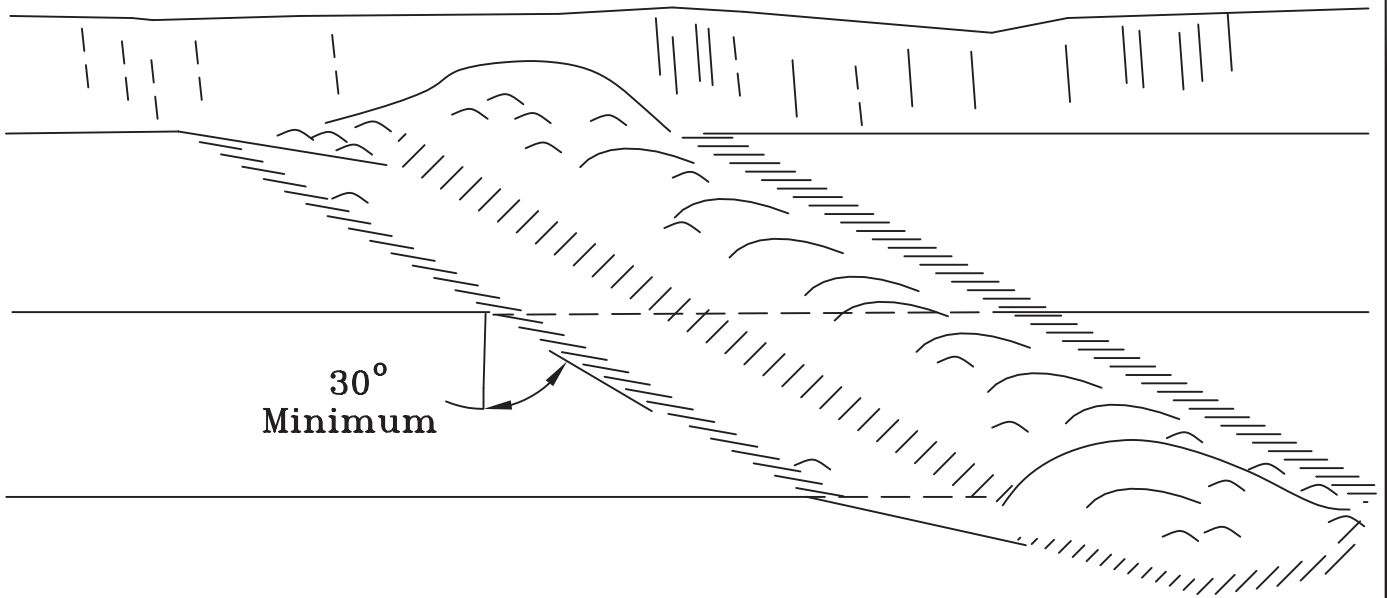
Debris

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

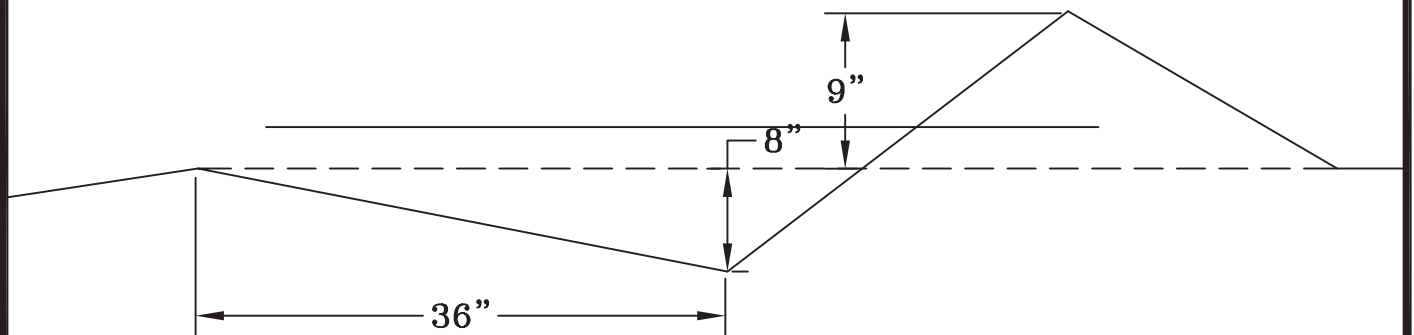


Drivable Water Bar Detail

Cross Ditch



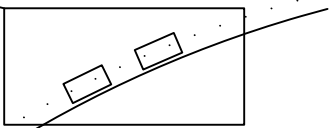
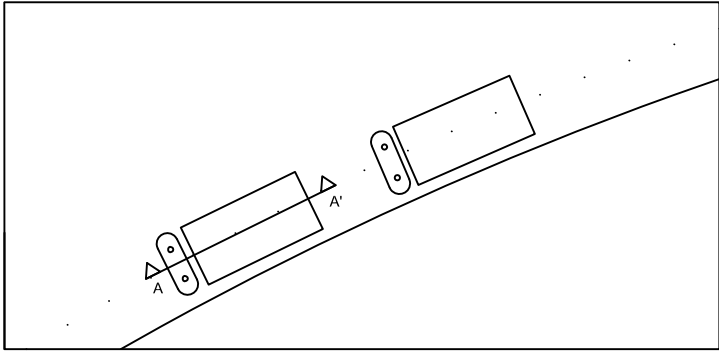
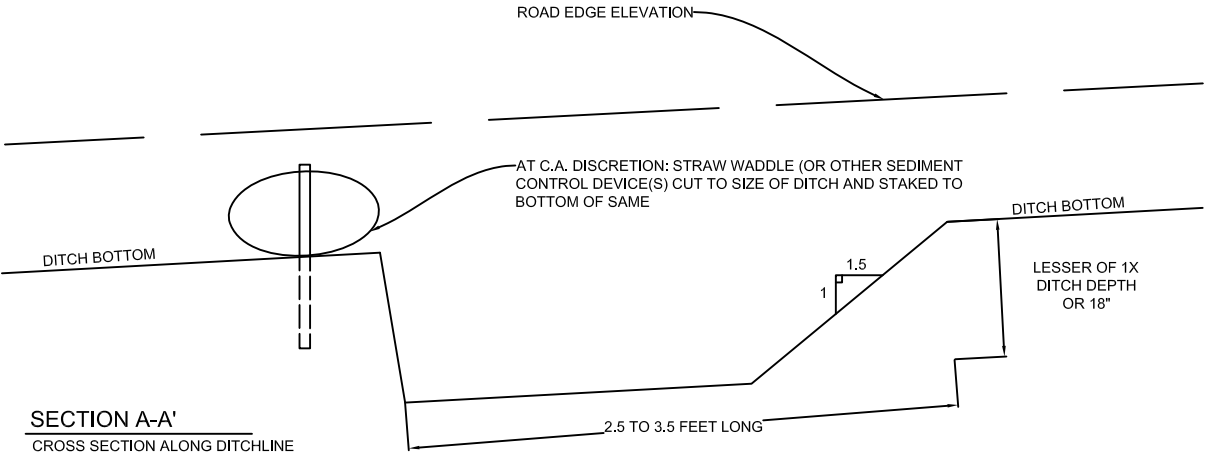
Cross Section at Centerline



Drivable Water Bar Detail

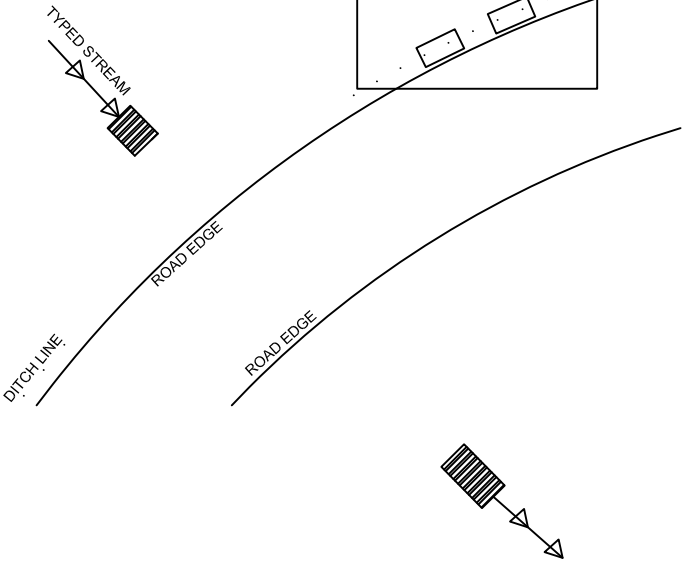
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Drawn by: M.A.D.

SEDIMENT TRAP DETAIL



NOTES:

- CONSTRUCT SEDIMENT TRAPS IN SETS GREATER THAN ONE, WHENEVER POSSIBLE.
- SEDIMENT TRAPS SHOULD BE PLACED AS CLOSE AS PRACTICABLE TO STREAM CROSSING.
- IF SEDIMENT TRAPS FILL WITH SEDIMENT DURING HAUL OPERATIONS, REMOVING SEDIMENT FROM TRAPS IS CONSIDERED ROUTINE MAINTENANCE.
- ADDITIONAL SEDIMENT CONTROL DEVICES, SUCH AS HAY BALES, STRAW WADDLES OR OTHERS MAY BE REQUIRED AS SHOWN IF IN THE OPINION OF THE CONTRACT ADMINISTRATOR, SEDIMENT TRAP ALONE DOES NOT APPEAR TO BE EFFECTIVE.

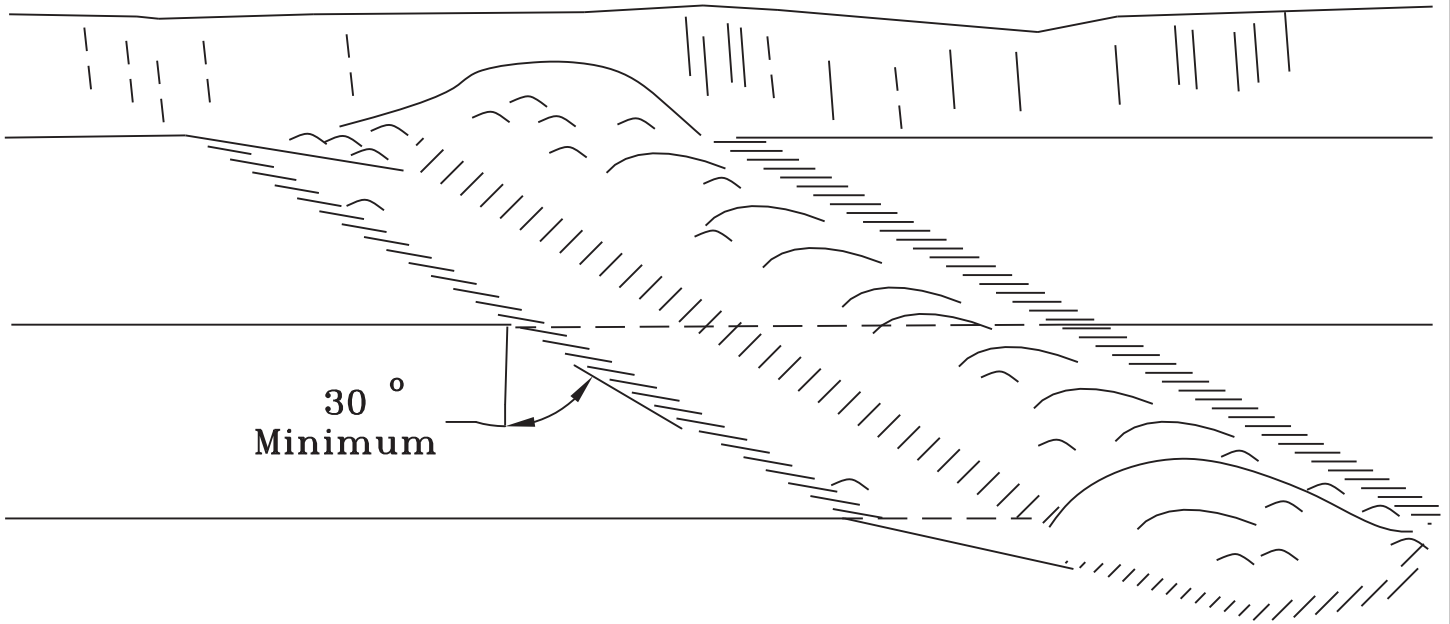


SEDIMENT TRAP DETAIL	
	WASHINGTON STATE DEPARTMENT OF Natural Resources <small>SFS Region</small>

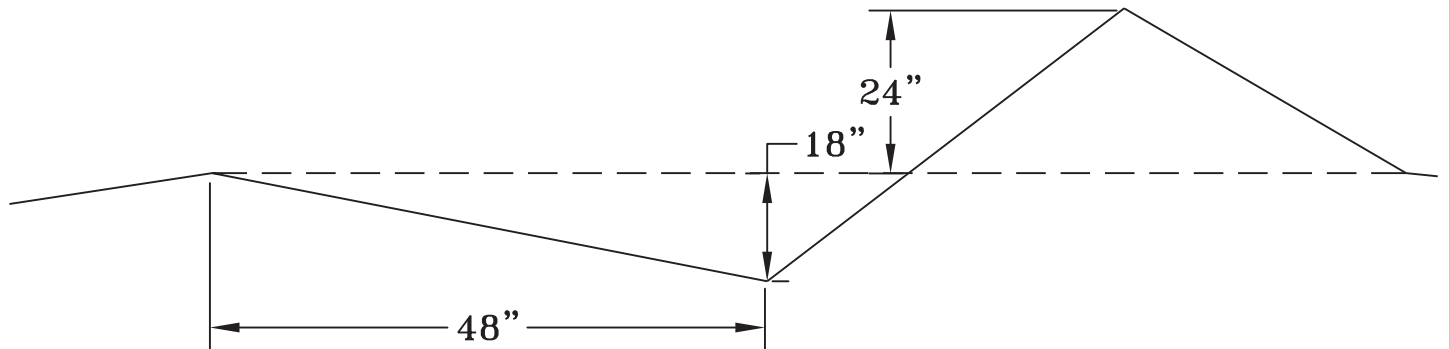
Date: 09/16/2014
 Scale : NTS
 App#
 Drawn by: WPH
 Sheet 1 of 1

Non-Drivable Water Bar Detail

Cross Ditch



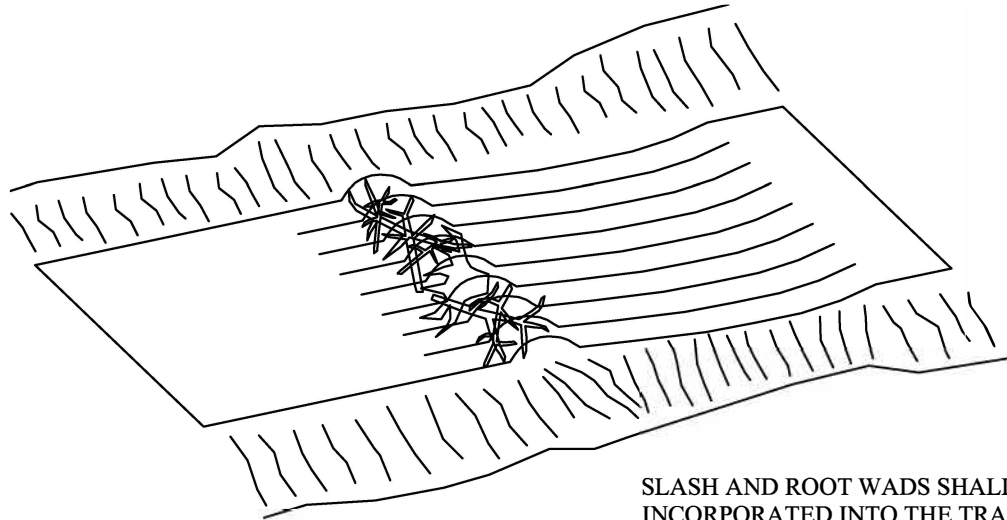
Cross Section at Centerline



Non-Drivable Water Bar Detail

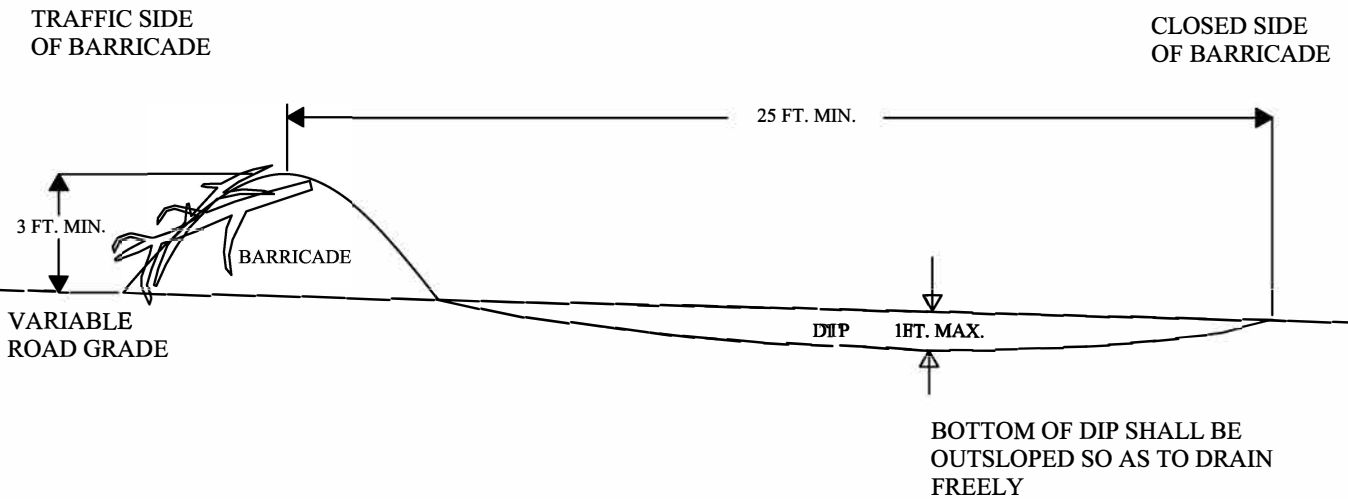
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Drawn by: M.A.D.

EARTHEN BARRICADE DETAIL

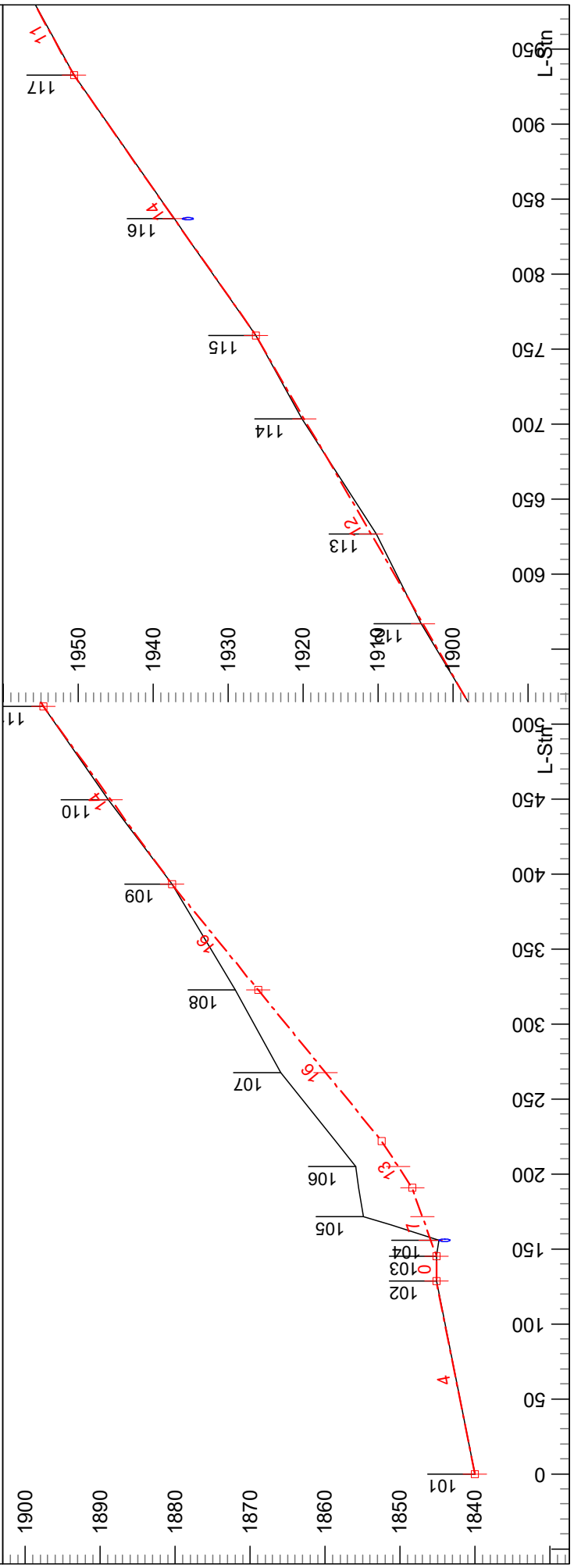
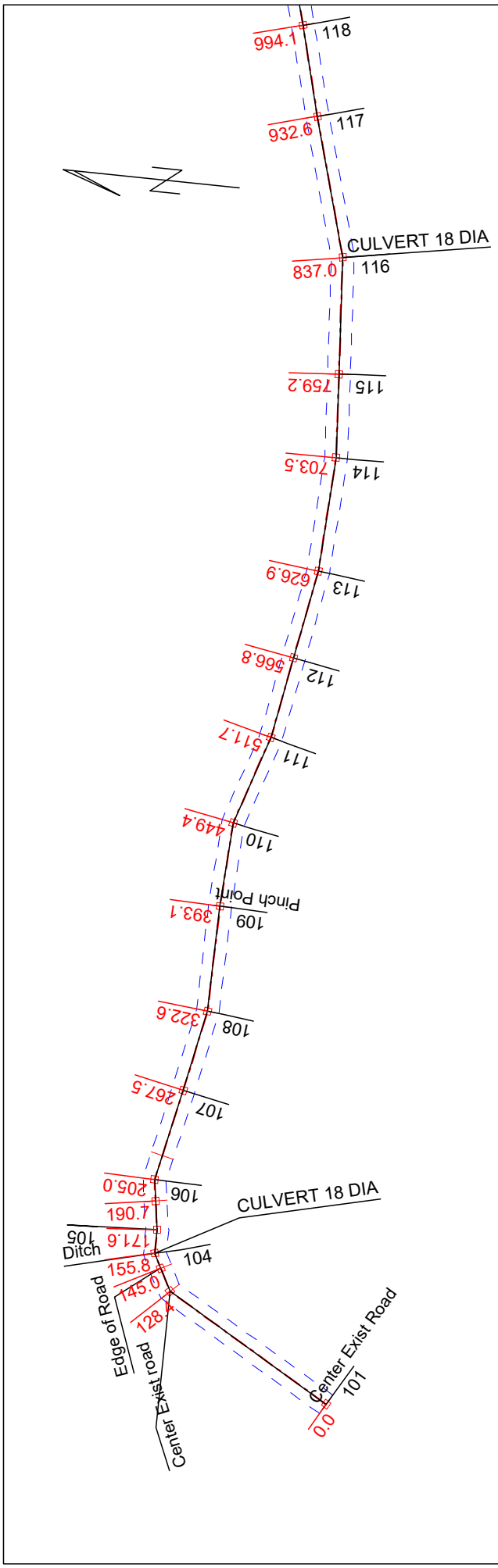


SLASH AND ROOT WADS SHALL BE INCORPORATED INTO THE TRAFFIC SIDE OF THE BARRICADE.

PLAN VIEW




PROFILE VIEW



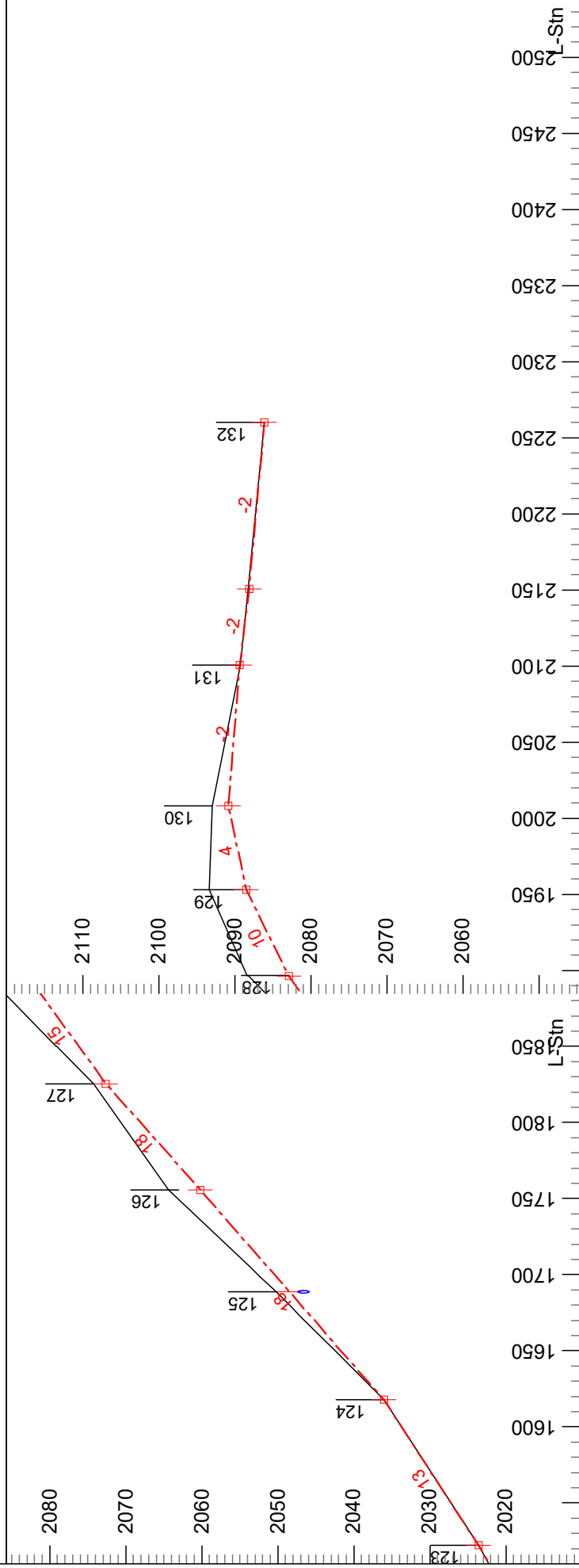
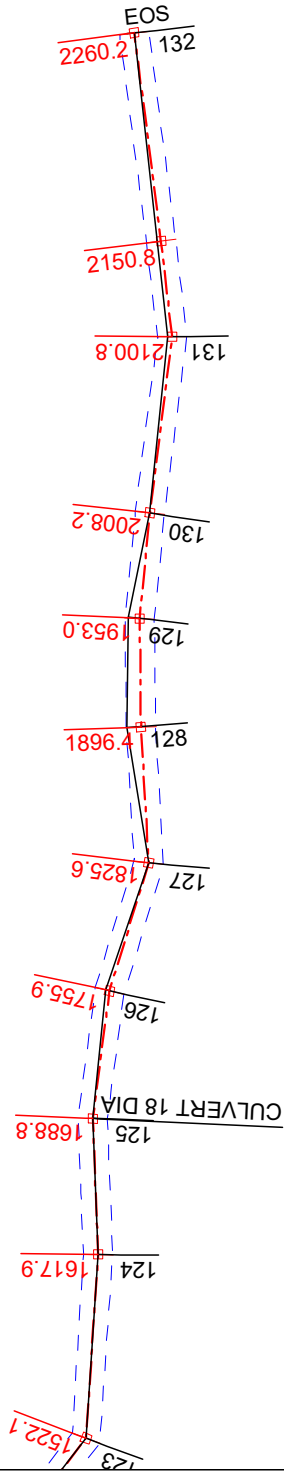
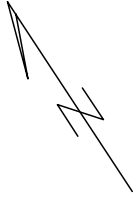
Engineer: M. Bell
 Page 1 of 9
 Printed: 23/11/15

Plan Scale 1:1200
 Profile Vert Scale 1:240
 Profile Horz Scale 1:1200

Washington State Department of
 Natural Resources
 South Puget Sound Region



Tigerilla VRH & VDT Timber Sale
 Spur 1 Road August 23, 2023
 Contract #: 30-099064



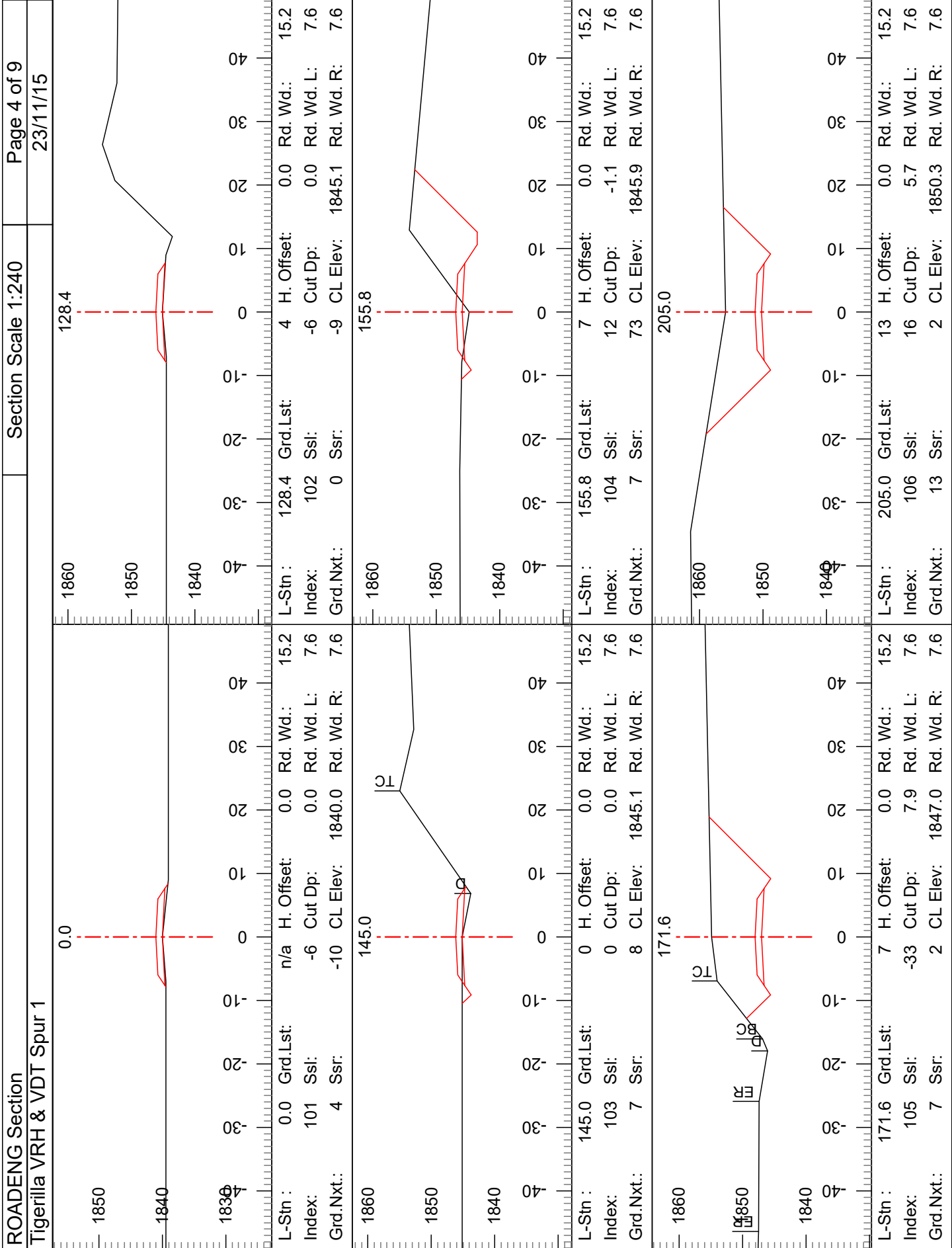
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 Page 3 of 9
 Printed: 23/11/15

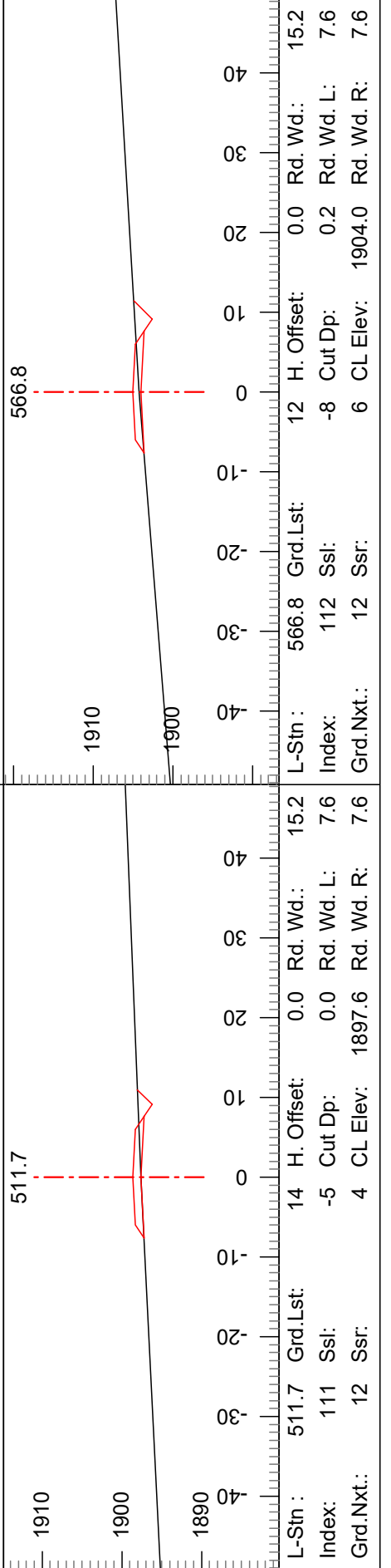
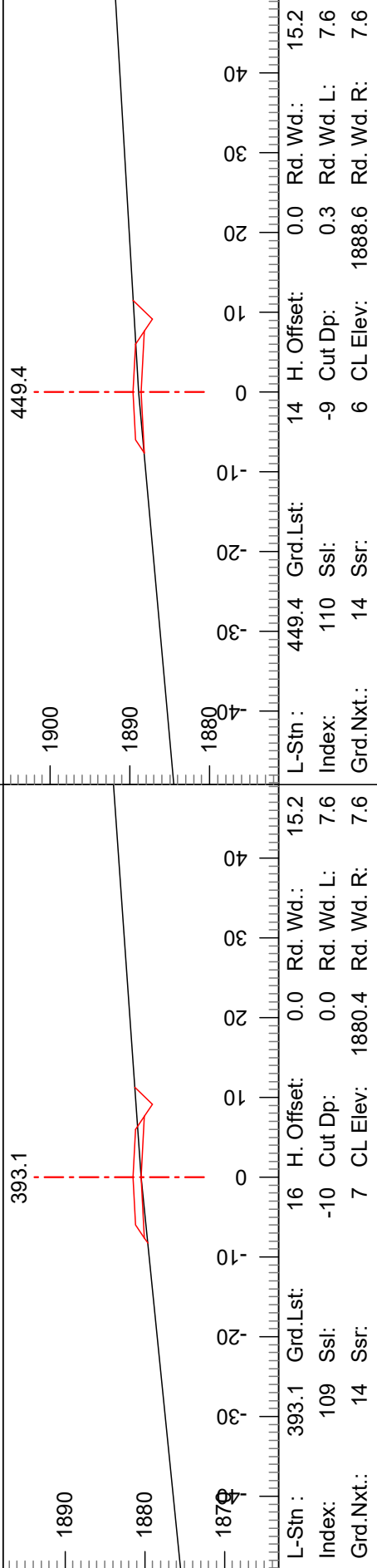
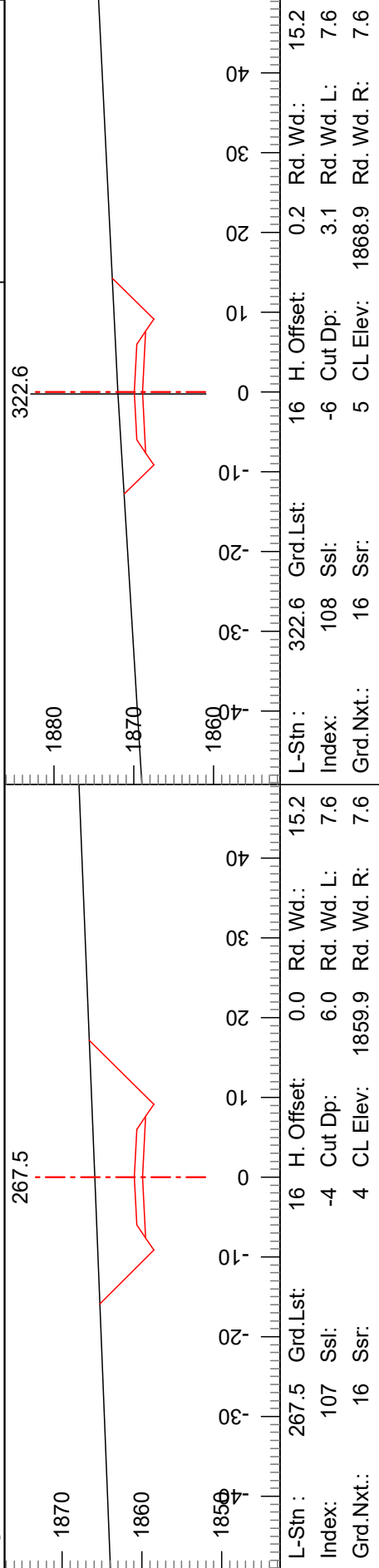
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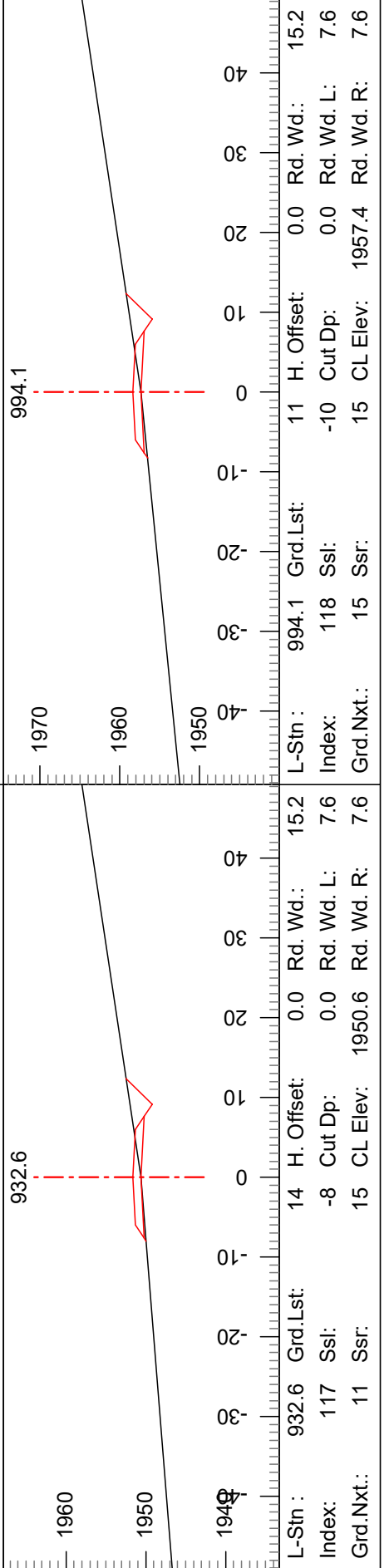
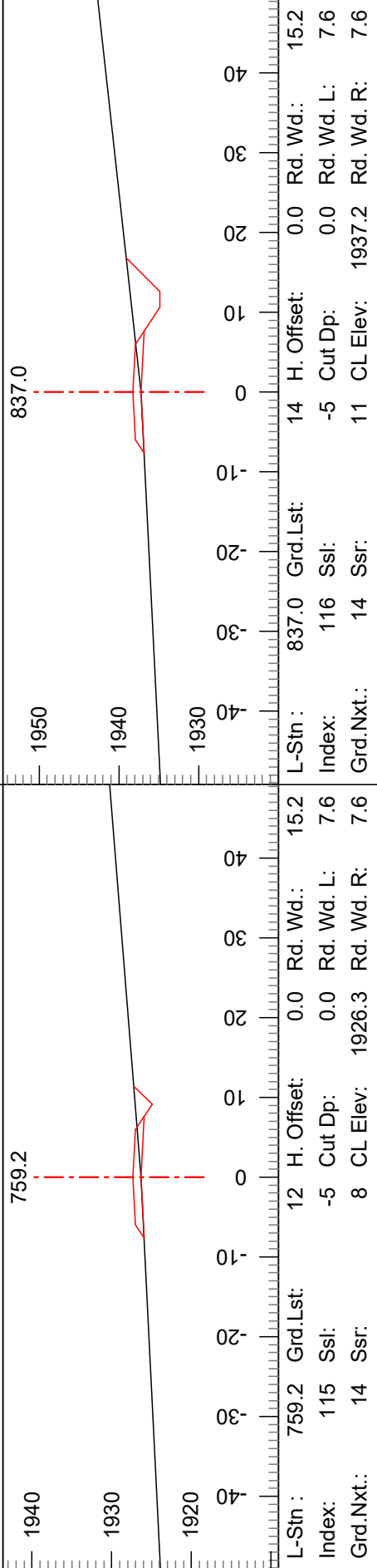
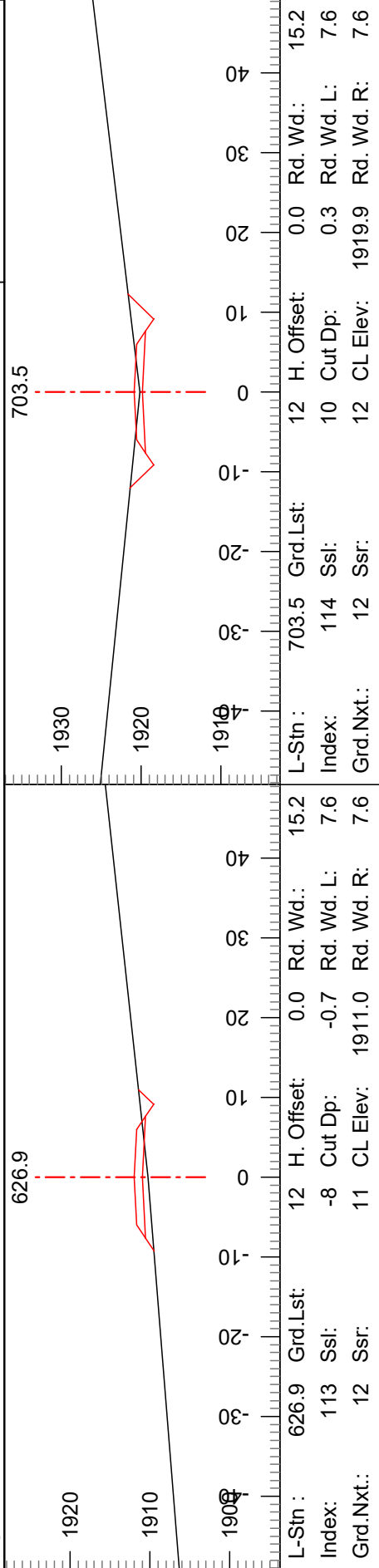
Washington State Department of
 Natural Resources
 South Puget Sound Region

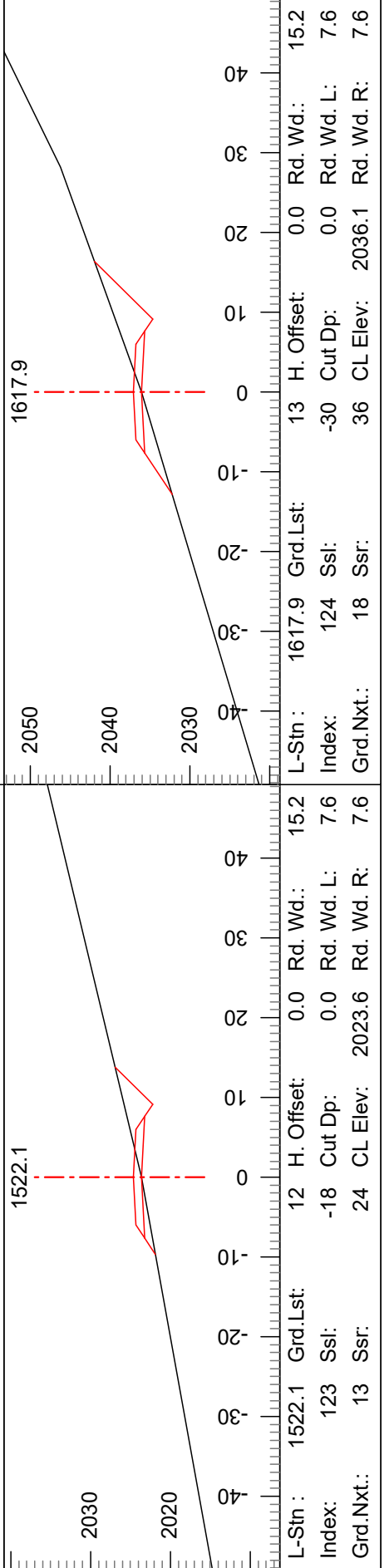
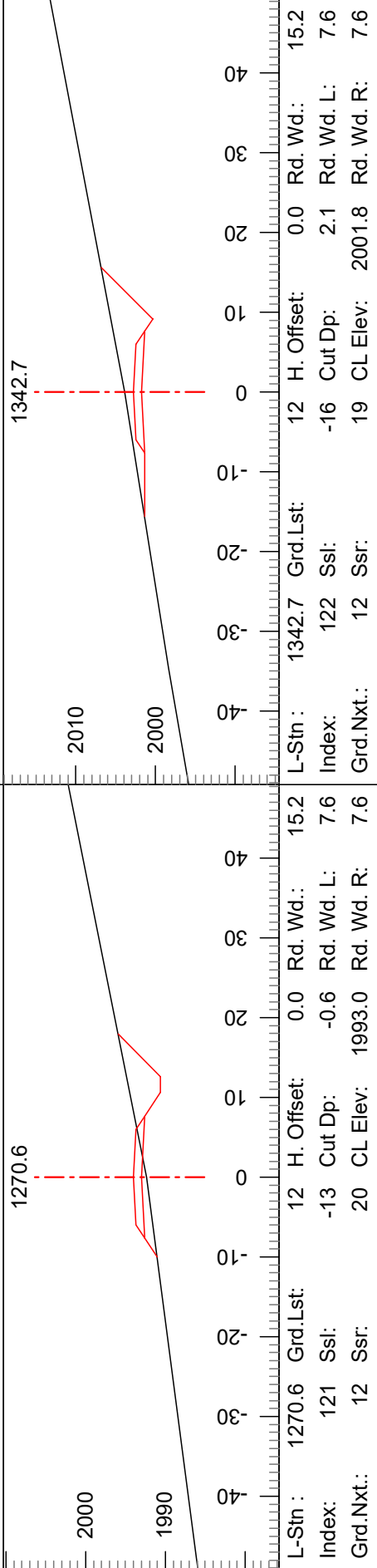
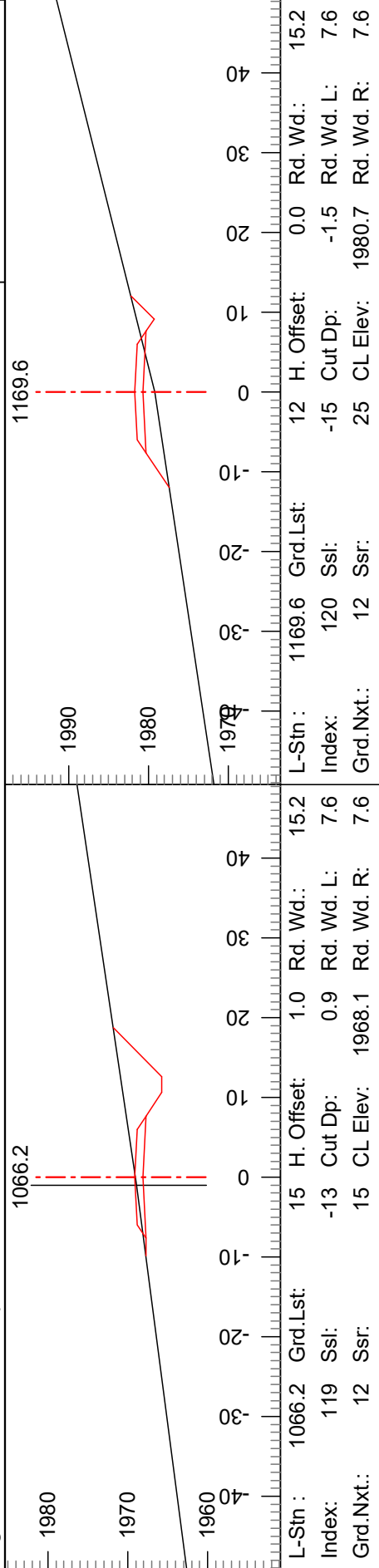


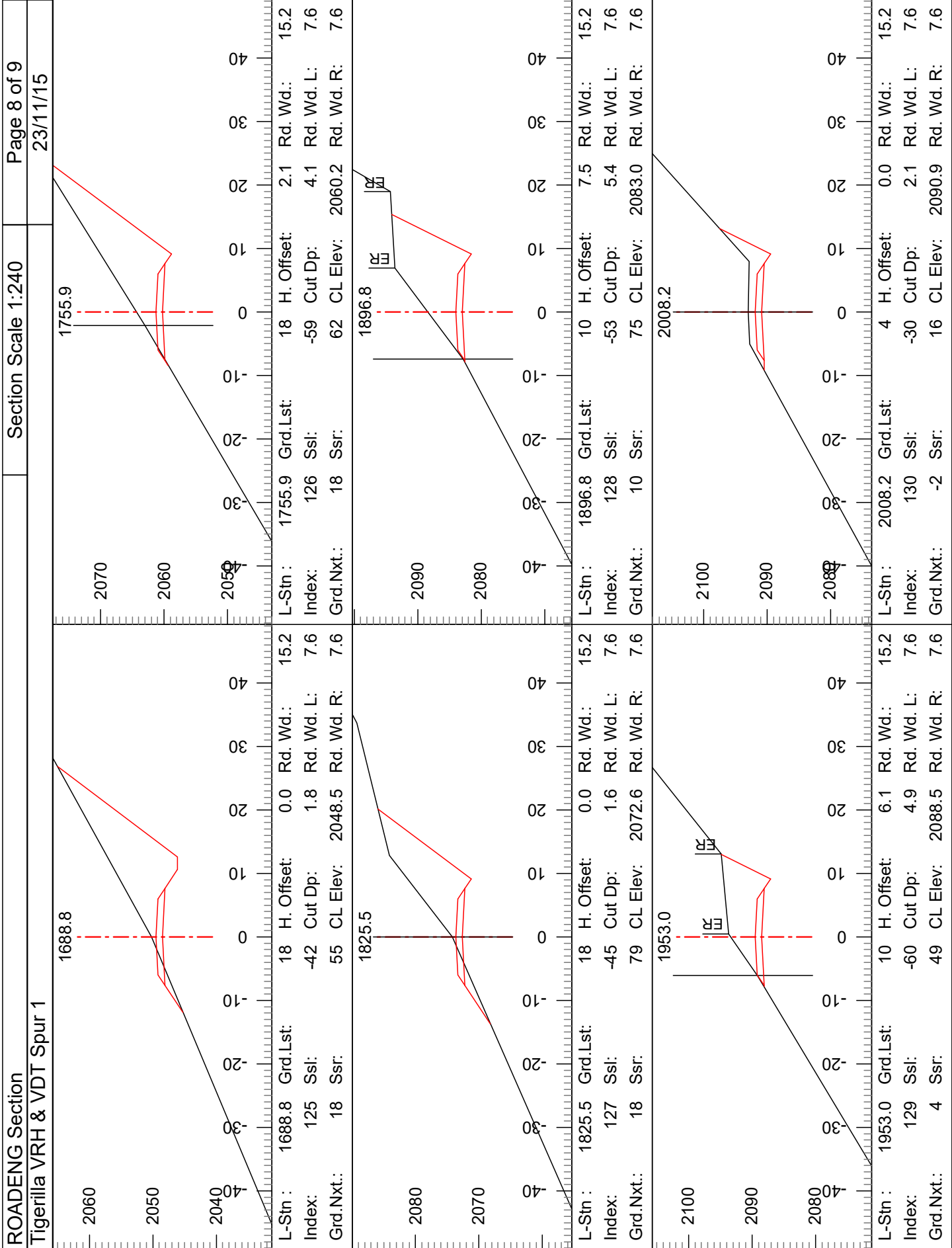
Tigerilla VRH & VDT Timber Sale
 Spur 1 Road August 23, 2023
 Contract #: 30-099064

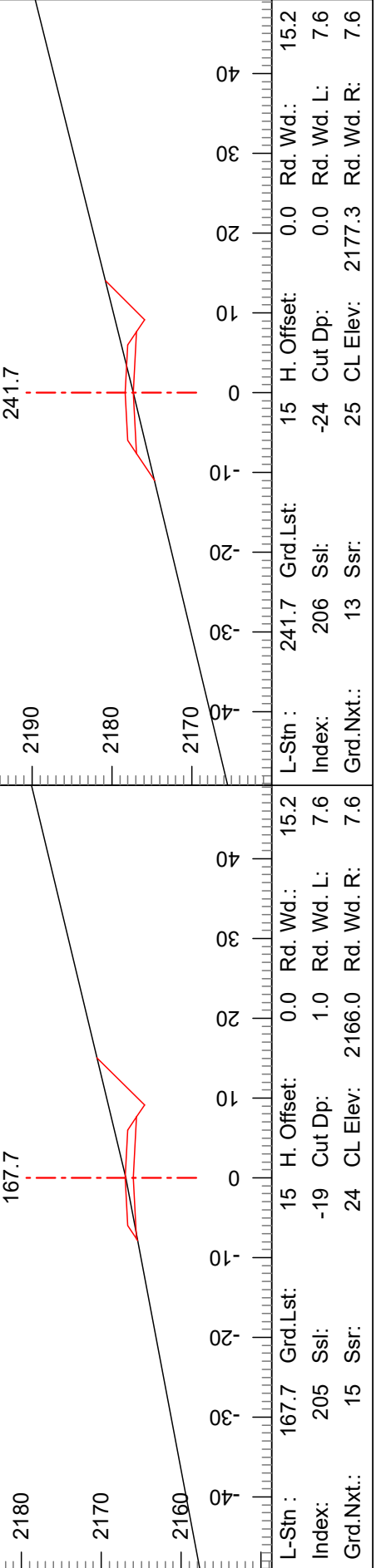
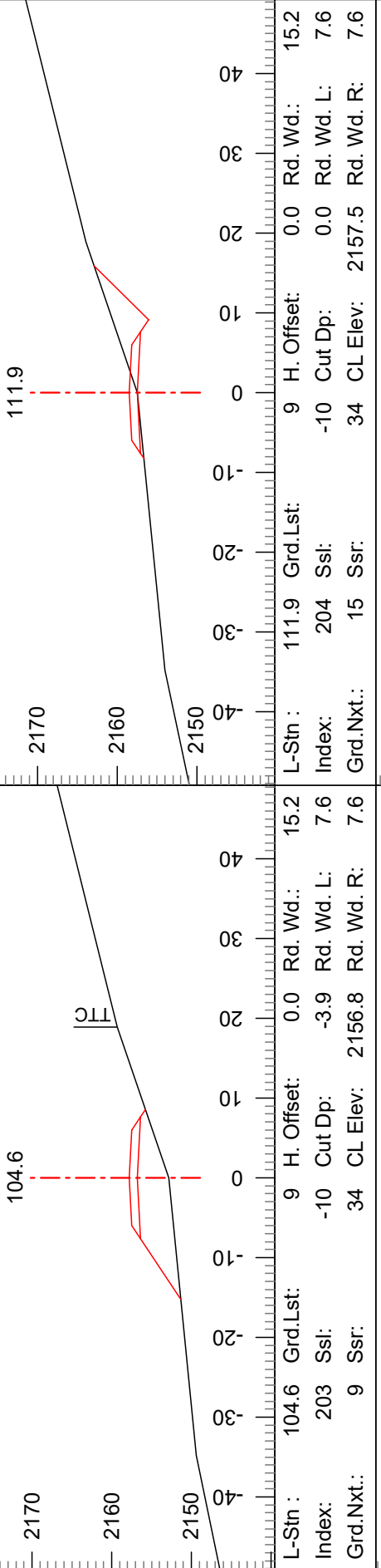
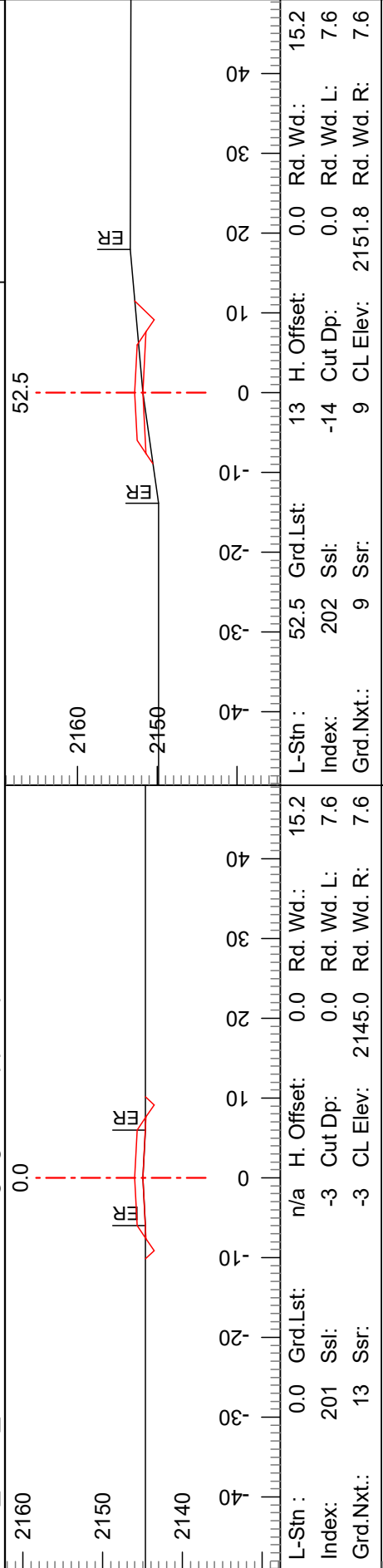


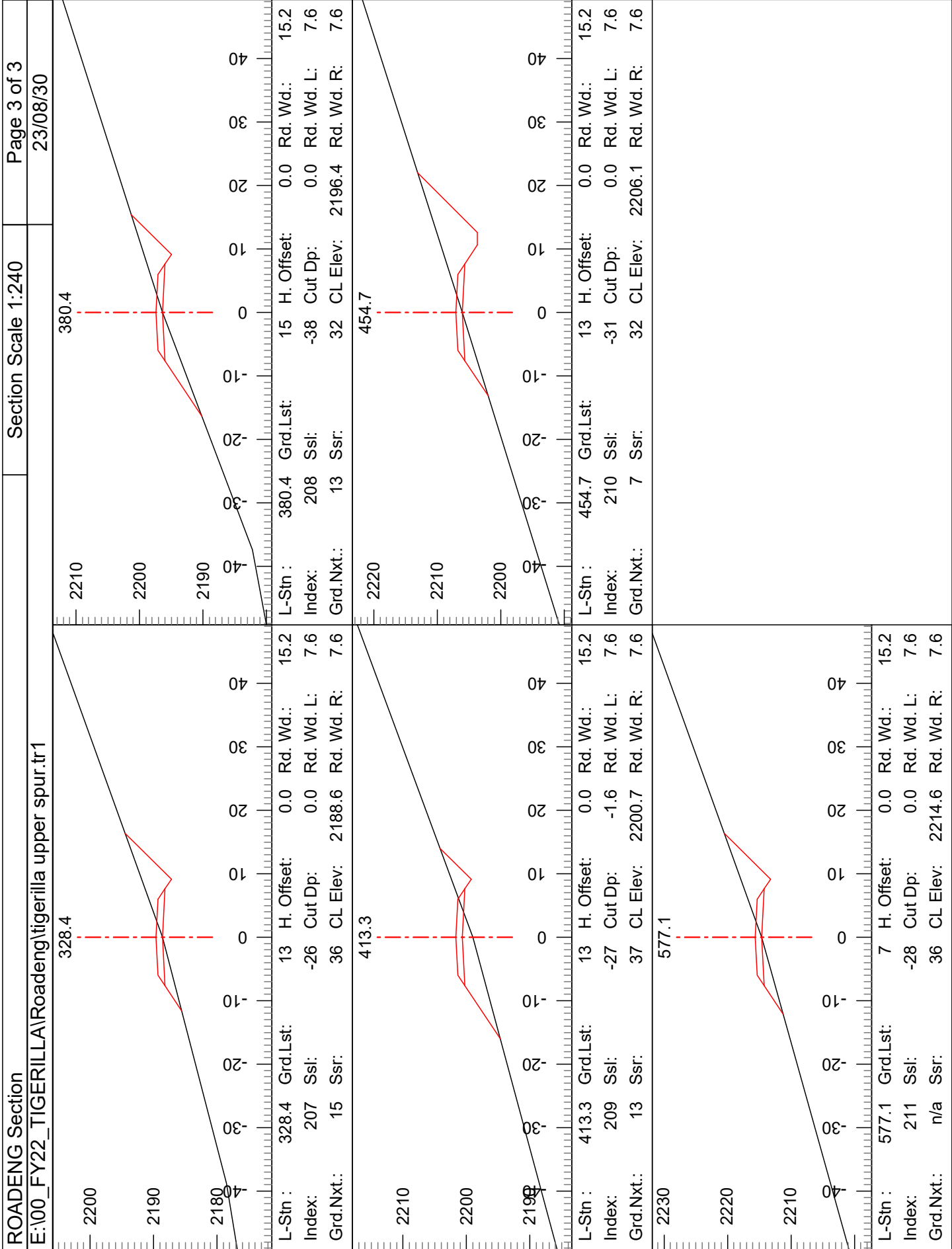












Legal Description: NW1/4 Section 6, T14N, R6E, W.M.

Rock Pit Name: RT200 Pit

PIT DEVELOPMENT PLAN, pg 1 of 3

In addition to Clause 6-12 ROCK SOURCE SPECIFICATIONS, the following specifications apply:

See "RT200 Pit Plan Map, pg 3 of 3" drawing for additional information.

Quantity and Quality of ballast pit is not guaranteed by the State.

At the start of pit operation the RT200 road through the pit shall be smoothed.

Tree Removal:

Pit expansion and removal of any timber must be approved by Contract Administrator.

Overburden and Slash:

- Pile root wads and organic debris larger than one cubic foot in volume in clean, burnable piles in designated waste areas as shown as *Clearing Debris* on the attached map. Additional areas shall be approved by the Contract Administrator.
- Pile all reject rock and overburden away from pit working area as shown in the *Waste Area*. Waste shall be compact in lifts not to exceed 2 ft by routing equipment over the entire area. Waste shall not be placed against standing timber.
- Overburden and organic debris shall be kept separate.

Oversize:

Any new oversize material shall not exceed 5% of the total mined for the sale within this rock source. Oversize material is defined as rock fragments larger than 1.5 feet in any dimension.

Rock Crushing and Crushed Stockpile:

- Any new stockpile shall not be mixed with existing stockpiles.

Legal Description: NW1/4 Sect 6, T14N, R6E, W.M.

Rock Pit Name: RT200 Pit

PIT DEVELOPMENT PLAN, pg 2 of 3

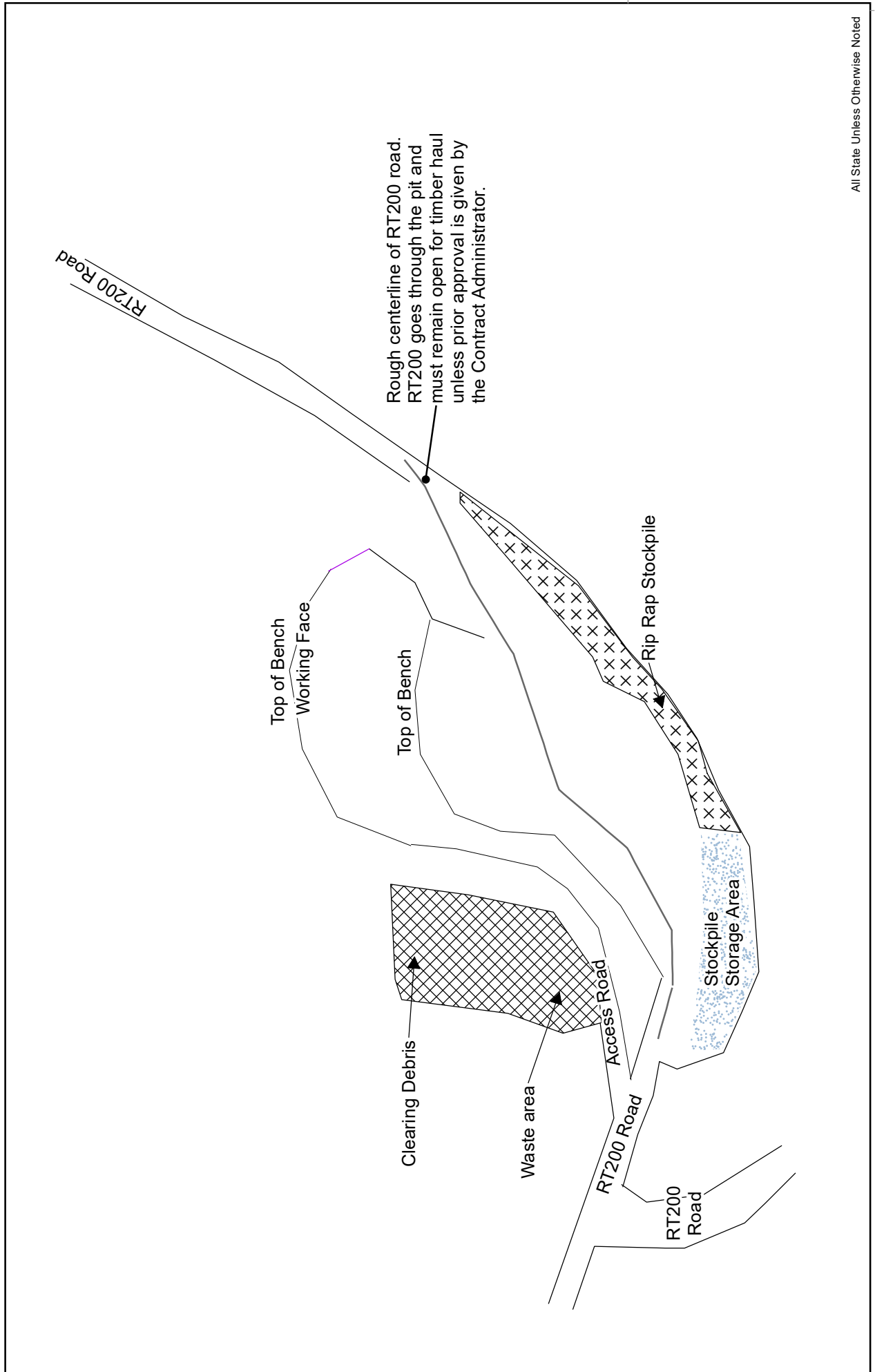
Specifications:

- A minimum stripping width of 20 feet must be maintained from all pit faces and at the termination of operations pit shall be left in said condition. No undercutting shall be permitted.
- Pit floor shall not be lowered.
- Pit floor shall be sloped to allow drainage. No ponding will be allowed.
- Maximum face height shall not exceed 30 feet in height.
- Working bench width shall be a minimum of 25 feet.
- RT200 road travels through the pit. The road location may be changed with approval from the Contract Administrator and provided the following: travel pathway will remain at 12-ft running surface; road will be smooth and allow passage of lowboys and loaded log trucks.

End of Use:

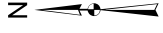
- At the termination of use, rock pit face shall have a maximum backslope of 1/2V:1H.
- At the termination of use, all overburden shall have a maximum backslope of 1 ½: 1.
- At the completion of operations, the working rock face shall be scaled to remove loose rock.
- At the completion of operations, the site shall be cleared of all temporary structures, equipment, and rubbish, and shall be left in a neat and presentable condition.
- At the completion of operations, Contractor shall request written approval from the Contract Administrator for final rock source condition and compliance with the terms of this plan.

RT200 Pit Plan Map, pg 3 of 3



All State Unless Otherwise Noted

1 inch = 100 feet



Legend

DEPARTMENT OF NATURAL RESOURCES - SOUTH PUGET SOUND REGION

SUMMARY - ROAD DEVELOPMENT COSTS

(COSTS ARE ESTIMATES ONLY & ARE NOT GUARANTEED BY THE STATE OR PART OF THE ROAD PLAN.)

SALE/PROJECT NAME: **Tigerilla VRH & VDT**

CONTRACT NUMBER: **30-099064**

TYPE:	Construction	Reconstruction	Pre-Haul Maintenance
NUMBER OF STATIONS:	28.37	0.00	315.20
AVG. SIDESLOPE:	32	0	
CLEARING AND GRUBBING:	\$4,547	\$0	
EXCAVATION AND FILL:	\$16,489	\$0	
MISC. MAINTENANCE:			\$7,554
ROCK TOTALS:			
Ballast:	\$14,466	\$0	\$5,206
Surfacing:	\$0	\$0	\$2,707
Riprap/Quarry Spalls:	\$76	0	\$41
Stockpiles:			\$19,000
CULVERTS AND FLUMES:	\$6,724	\$0	\$14,863
STRUCTURES:	\$0	\$0	\$0
GENERAL EXPENSES:	\$3,807	\$0	\$4,443
MOBILIZATION:	\$2,400	\$0	\$2,400
TOTAL COSTS:	\$48,508	\$0	\$56,214
COST PER STATION:	\$1,710	\$0	\$178
POST HAUL AND ABANDONMENT COSTS:			\$6,277

NOTE1: This appraisal has no allowance for profit and risk.

NOTE2: This appraisal does not account for optional rock.

TOTAL (All Roads) =	\$110,999
SALE VOLUME MBF =	2,655
TOTAL COST PER MBF =	\$41.81

Plans to be furnished by:

Compiled by:

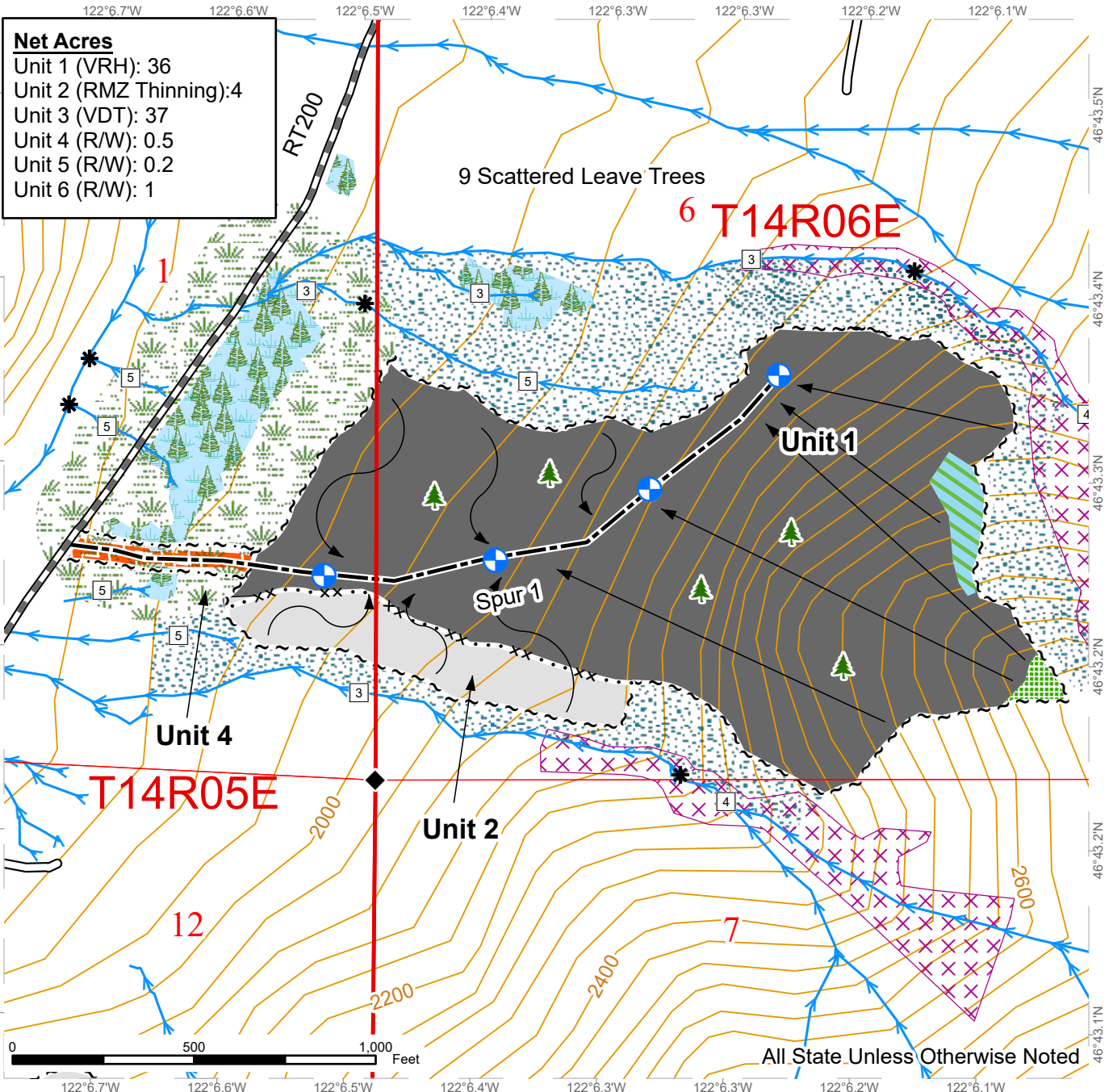
M. Bell

Date: 09/01/23

LOGGING PLAN MAP

SALE NAME: TIGERILLA VRH & VDT
AGREEMENT#: 30-099064
TOWNSHIP(S): T14R5E, T14R6E
TRUST(S): Normal School (8), Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region
COUNTY(S): Lewis
ELEVATION RGE: 1880-2680



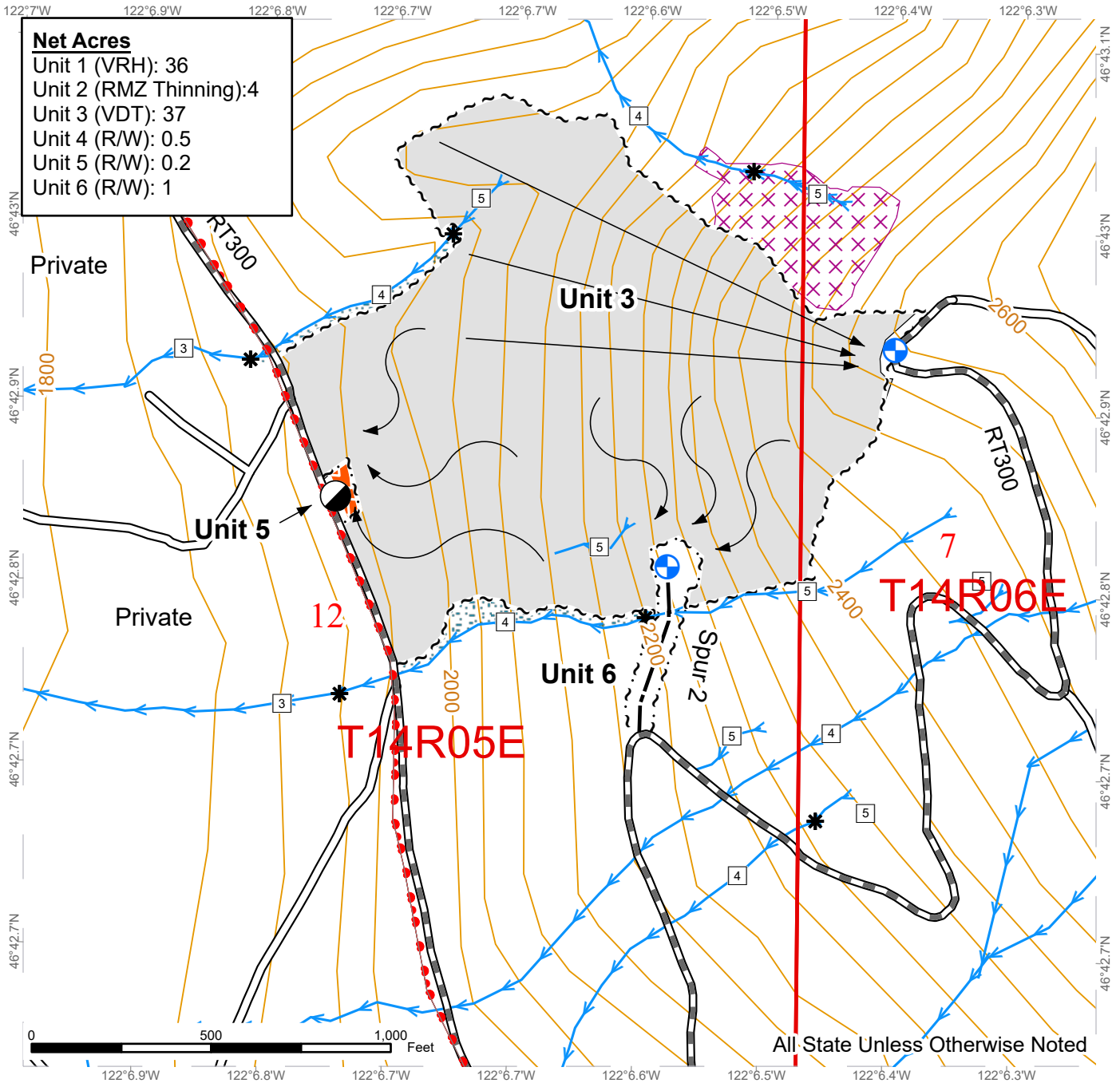
Net Acres
 Unit 1 (VRH): 36
 Unit 2 (RMZ Thinning): 4
 Unit 3 (VDT): 37
 Unit 4 (R/W): 0.5
 Unit 5 (R/W): 0.2
 Unit 6 (R/W): 1

Variable Retention Harvest	Tailhold Restriction Area	Streams
Variable Density Thinning	Leave Tree Area	Stream Type
Right-of-Way Harvest	Riparian Mgt Zone	Stream Type Break
Sale Boundary Tags	Forested Wetland	Survey Monument
Special Mgmt Area	Wetland Mgt Zone	Landing - Proposed
Right of Way Tags	Existing Roads	Leave Tree Area <1/4-acre
Ground Harvest	Required Pre-Haul Maintenance	Public Land Survey Sections
Cable Harvest	Optional Construction	Public Land Survey Townships
Non-Tradeable Leave Tree Area	Contours 40-foot	

LOGGING PLAN MAP

SALE NAME: TIGERILLA VRH & VDT
AGREEMENT#: 30-099064
TOWNSHIP(S): T14R5E, T14R6E
TRUST(S): Normal School (8), Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region
COUNTY(S): Lewis
ELEVATION RGE: 1880-2680



Net Acres	
Unit 1 (VRH):	36
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Unit 4 (R/W):	0.5
Unit 5 (R/W):	0.2
Unit 6 (R/W):	1

All State Unless Otherwise Noted

Variable Density Thinning	Tailhold Restriction Area	Stream Type
Right-of-Way Harvest	Riparian Mgt Zone	Stream Type Break
Sale Boundary Tags	Existing Roads	Designated Landing
Right of Way Tags	Required Pre-Haul Maintenance	Landing - Proposed
Property Line	Optional Construction	Public Land Survey Sections
Ground Harvest	Contours 40-foot	Public Land Survey Townships
Cable Harvest	Streams	

777806

EASEMENT

THIS AGREEMENT, made and entered into this 10th day of April, 1973, by and between WEYERHAEUSER COMPANY, a Washington corporation, herein called "Weyerhaeuser," and STATE OF WASHINGTON, acting by and through the Department of Natural Resources, herein called "State," WITNESSETH:

I

A. Weyerhaeuser for and in consideration of the grant hereinafter made by State, hereby grants and conveys to State, its successors and assigns, a permanent easement assignable in whole or in part upon, over, and along rights of way sixty (60) feet in width, over and across the lands in Lewis County, Washington, described on the attached "Exhibit A," being thirty (30) feet on each side of the center line(s) of a road or roads located approximately as shown in red on the attached "Exhibit B."

Subject as to said lands to all matters of public record.

B. State, for and in consideration of the grant hereinabove made, hereby grants and conveys to Weyerhaeuser, its successors and assigns, a permanent easement assignable in whole or in part upon, over, and along rights of way sixty (60) feet in width over and across the lands in Lewis County, Washington, described on the attached "Exhibit A," being thirty (30) feet on each side of the center line(s) of a road or roads located approximately as shown in green on the attached "Exhibit B."

Subject as to said lands to all matters of public record.

II

The parties hereto hereby agree that the rights hereinabove granted by one party hereto to the other shall be subject to the following terms and conditions:

1. The easements are conveyed for the purposes of construction, reconstruction, use and maintenance of a road or roads for the purpose of providing access to and from lands now owned or hereafter acquired by the parties hereto.

2. Each party hereto reserves for itself, its successors and assigns, the right at all times for any purpose, to cross and recross at any place on grade or otherwise, and to use said rights of way in a manner that will not unreasonably interfere with the rights granted herein.

3. Each party hereto may grant to third parties, upon such terms as it chooses, any or all of the rights reserved by it herein; provided, that use by such party shall be subject to the terms and conditions of this agreement and shall not unreasonably interfere with the rights granted to the other party herein.

4. Each party hereto may permit its respective agents, contractors, licensees, lessees, purchasers of timber or other valuable materials, and their agents, hereinafter individually referred to as "Permittee" and collectively referred to as "Permittees," to exercise the rights granted to it herein; provided, that when a party hereto or one of its Permittees plans to use any portion of said roads for the purpose of hauling timber or other valuable materials, such party shall notify the other thereof at least fifteen (15) days prior to the commencement of use of said rights, advising of the portion of road to be used, the approximate dates when such use will begin and end, and of the approximate volumes of forest products or valuable materials to be hauled and forthwith upon the completion of such use notify the other party thereof.

5. The cost of road maintenance and resurfacing shall be allocated on the basis of respective uses of said roads. When any party uses a road, that party shall perform or cause to be performed, or contribute or cause to be contributed, that share of maintenance and resurfacing occasioned by such use as hereinafter provided. During periods when a road is being used solely by one party, such party shall maintain that portion of said road so used to the standards existing at the time use is commenced. During periods when more than one party is using the same road, or any portion thereof, the parties hereto shall meet and establish necessary maintenance provisions. Such provisions shall include, but shall not be limited to:

(a) the appointment of a maintainer, which may be one of the parties hereto or any third party, who will perform or cause to be performed at a reasonable and agreed upon rate the maintenance and resurfacing of the road or the portion thereof being used; and

(b) a method of payment by which each party using said road or a portion thereof, shall pay its pro rata share of the cost incurred by said maintainer in maintaining or resurfacing said road or portion thereof.

For purposes of this agreement, maintenance is defined as the work normally necessary to preserve and keep the roadway, road structure and road facilities as nearly as possible in their present condition or as hereafter improved.

6. Each party using any portion of a road shall repair, or cause to be repaired, at its sole cost and expense, that damage to said road occasioned by it which is in excess of that which it would cause through normal and prudent usage of said road. Should inordinate damage to a road occur which is not caused by an authorized user of said road, the parties hereto shall meet to agree upon the cost of replacement, the party to undertake the replacement, and the shares of replacement cost to be borne by each user of said road.

7. Unless the parties hereto agree in writing to share the costs of improvements in advance of such improvements being made, such improvements shall be solely for the account of the improver.

8. Each party hereto reserves to itself all timber now on or hereafter growing within the rights of way on its said lands.

9. Each party hereto shall require each of its Permittees, before using any of said roads on the lands of the other party hereto, to:

(a) obtain and during the term of such use, maintain a policy of liability insurance in a form generally acceptable in the trade and customary in the area of said rights of way, insuring said Permittee against liability arising out of its operations, including use of vehicles. Minimum amounts of insurance shall be:

(1) For log haulers, and other miscellaneous users operating heavy trucks (over one (1) ton), One Hundred Thousand Dollars (\$100,000.00) for injury to one person, Three Hundred Thousand Dollars (\$300,000.00) for any one occurrence, and One Hundred Thousand Dollars (\$100,000.00) property damage for any one occurrence;

(2) For fern cutters, bough cutters, shake cutters, or other miscellaneous users operating pickup trucks, light trucks (under one (1) ton) or passenger cars for the purpose of transporting miscellaneous forest products, Twenty-five Thousand Dollars (\$25,000.00) for injury to one person, Fifty Thousand Dollars (\$50,000.00) for any one occurrence, and Five Thousand Dollars (\$5,000.00) property damage for any one occurrence; or

(3) Such other limits as the parties hereto may agree upon in writing from time to time.

(b) deliver to each party hereto a certificate from the insurer of said Permittee certifying that coverage is not less than the above named amounts is in force and that, in the event of cancellation or modification of such coverage, the insurer will give each party hereto ten (10) days written notice prior to any cancellation or modification.

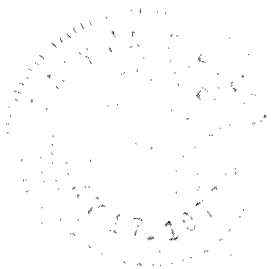
App. No. 36385

STATE OF WASHINGTON)
) ss
COUNTY OF THURSTON)

On this 8th day of May, 19 73, before me personally appeared BERT L. COLE, to be known to be the Commissioner of Public Lands, and ex officio administrator of the Department of Natural Resources of the State of Washington, the Department that executed the within and foregoing instrument on behalf of the State of Washington, and acknowledged said instrument to be the free and voluntary act and deed of the State of Washington for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the official seal of the Commissioner of Public Lands for the State of Washington.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year set forth above.

Mary Jane Salter
Notary Public in and for the State of
Washington, residing at Olympia.



855000

EASEMENT SUPPLEMENT

THIS SUPPLEMENTAL AGREEMENT, made and entered into this 8th day of November, 1978, by and between WEYERHAEUSER COMPANY, a Washington corporation, herein called "Weyerhaeuser," and STATE OF WASHINGTON, acting by and through the Department of Natural Resources, herein called "State," WITNESSETH:

Whereas, on the 10th day of April, 1973, Weyerhaeuser and the State entered into an easement exchange hereinafter called Original Agreement, which was recorded in the records of Lewis County, Washington on the 11th day of May, 1973, in Volume 73 of Deeds, pages 22-27, under Auditor's File No. 777806. Said Original Agreement is hereby supplemented as follows:

I

A. Weyerhaeuser for and in consideration of a payment of Seventy Three Thousand Eight Hundred Eighty Two and no/100 Dollars (\$73,882.00) for the cost shared road to be paid pursuant to Payment Agreement No. 527, dated January 24, 1969, and the grant hereinafter made by the State, hereby grants and conveys to State, its successors and assigns, a permanent easement upon, over, and along rights of way sixty (60) feet in width, over and across portions of Government Lots 1 and 2; SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 4, Township 14 North, Range 5 East, W.M., the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 33, Township 15 North, Range 5 East W.M., and the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 34, Township 15 North, Range 5 East, W.M., all in Lewis County, Washington, being thirty (30) feet on each side of the centerline of a road or roads located approximately as shown in green and yellow on the attached "Exhibit A."

Subject as to said lands to all matters of public record.

B. State, for and in consideration of a payment of Fifty Four Thousand Five Hundred Eighty Three and no/100 Dollars (\$54,583.00) for right of way timber and the grant hereinabove made, hereby grants and conveys to Weyerhaeuser, its successors and assigns, a permanent easement upon, over, and along rights of way sixty (60) feet in width over and across portions of the SW $\frac{1}{4}$ NE $\frac{1}{4}$; S $\frac{1}{2}$ NW $\frac{1}{4}$; N $\frac{1}{2}$ SW $\frac{1}{4}$; SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 34, Township 15 North, Range 5 East, W.M., in Lewis County, Washington, being thirty (30) feet on each side of the centerline of a road or roads located approximately as shown in red on the attached "Exhibit A."

Subject as to said lands to all matters of public record.

C. It is mutually agreed by the parties hereto that Weyerhaeuser will construct the road shown in red and green on said "Exhibit A" in accordance with road construction specifications, dated April 11, 1978, as filed with the parties in their respective offices at Chehalis and Olympia, Washington.

Provided, however, thirty (30) days prior to any reconstruction, and/or betterment of said roads by either party on lands of the other party, the initiating party will submit to the landowning party a written request for joint review of the proposed project, upon completion of which the initiating party will submit a complete and detailed plan of operations. Said project will be conducted in accordance with the provisions of the approved plan of operations and with the Federal, State and/or local rules and regulations, governing such operations, in force at the time the project is commenced.

Except as herein supplemented all of the terms, conditions and reservations of the Original Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the parties herto have executed this instrument, in duplicate as of the day and year first above written.



Affix Seal of Corporation

WEYERHAEUSER COMPANY

By *Alan Wilson*

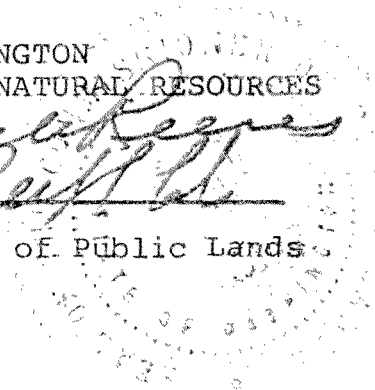
Attest *Robert M. Mogenesen*

Affix Seal of Commissioner of Public Lands

Application No. 36385

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

By *Bert L. Cole*
BERT L. COLE
Commissioner of Public Lands



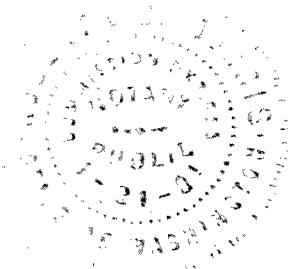
11-578
Wilson
11-578
VOL. 175 PAGE 718

STATE OF WASHINGTON)
) SS
COUNTY OF KING)

*Acting

On this 16th day of October, 1978, before me personally appeared D. W. Wilbur and Robert N. Mogensen, to me known to be the Land & Timber Resources Manager* and Assistant Secretary, respectively, of WEYERHAEUSER COMPANY, the corporation that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument and that the seal affixed is the corporate seal of said corporation.

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



Robert A. Morris
Notary Public in and for the State of Washington, residing at Burgalla.

STATE OF WASHINGTON)
) SS
COUNTY OF THURSTON)

On this _____ day of _____, 1978, before me personally appeared BERT L. COLE, to me known to be the Commissioner of Public Lands, and ex officio administrator of the Department of Natural Resources of the State of Washington, the Department that executed the within and foregoing instrument on behalf of the State of Washington, and acknowledged said instrument to be the free and voluntary act and deed of the State of Washington for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the official seal of the Commissioner of Public Lands for the State of Washington.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year set forth above.

Notary Public in and for the State of Washington, residing at _____.

STATE OF WASHINGTON)
) ss
COUNTY OF THURSTON)

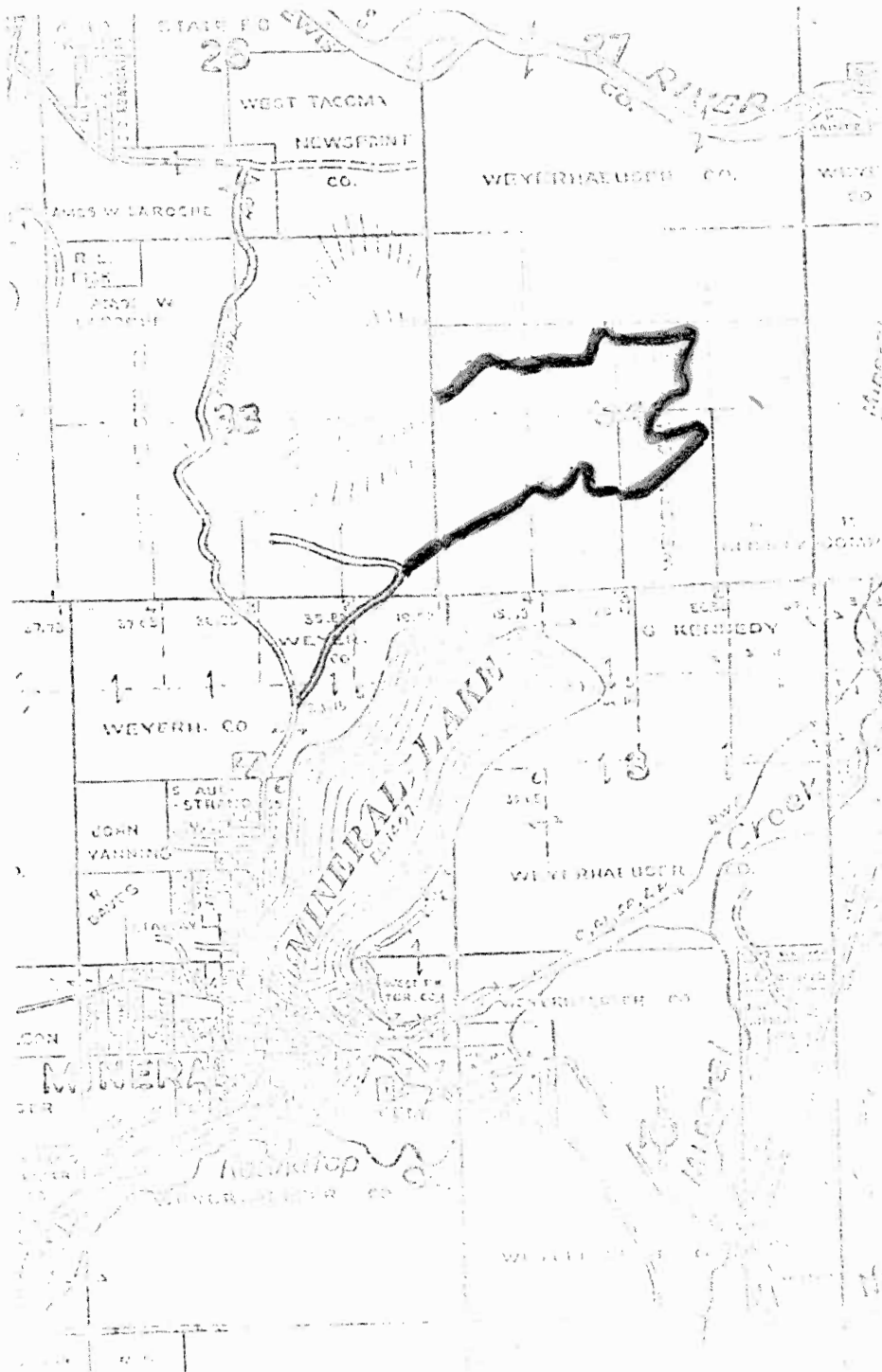
On this 8th day of September, 1978, before me personally appeared BRUCE W. REEVES, to me known to have signature authorization delegated to him to sign for BERT L. COLE, the Commissioner of Public Lands, and ex officio administrator of the Department of Natural Resources of the State of Washington, the Department that executed the within and foregoing instrument on behalf of the State of Washington, and acknowledged said instrument to be the free and voluntary act and deed of the State of Washington for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the official seal of the Commissioner of Public Lands for the State of Washington.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year set forth above.

Nancy L. Samsel
Notary Public in and for the State of
Washington, residing at Olympia.



REC'D
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98524
P.P. Samsel
Notary Public
State of Washington
Olympia, WA



15N.-5E.
14N.-5E.

Easement 55-000989
MAR - 6 1984
5.00

THIS SUPPLEMENTAL AGREEMENT, made and entered into this 15th day of February, 1984, by and between WEYERHAEUSER COMPANY, a Washington corporation, herein called "Weyerhaeuser," and STATE OF WASHINGTON, acting by and through the Department of Natural Resources, herein called "State," WITNESSETH:

Whereas, on the 10th day of April, 1973, Weyerhaeuser and the State entered into an easement exchange hereinafter called Original Agreement, which was recorded in the records of Lewis County, Washington, on the 11th day of May, 1973, in Volume 73 of Deeds, pages 22-27 under Auditor's File No. 777806. Said Original Agreement is hereby supplemented as follows:

I

A. Weyerhaeuser for and in consideration of FORTY FIVE THOUSAND ONE HUNDRED TWENTY FIVE and NO/100 DOLLARS (\$45,125.00) for the cost shared road to be paid pursuant to Payment Agreement No. 527, dated January 24, 1969, and the grant hereinafter made by the State, hereby grants and conveys to State, its successors and assigns, a permanent easement upon, over, and along rights of way sixty (60) feet in width, over and across the SW1/4 and W1/2SE1/4 of Section 29, Township 15 North, Range 5 East, W.M., in Lewis County, Washington, being thirty (30) feet on each side of the centerline of a road or roads located approximately as shown in red on the attached "Exhibit A."

Subject as to said lands to all matters of public record.

B. State, for and in consideration of the grant hereinabove made, hereby grants and conveys to Weyerhaeuser, its successors and assigns, a permanent easement upon, over, and along rights of way sixty (60) feet in width over and across the E1/2NE1/4 and NE1/4SE1/4 of Section 30, Township 15 North, Range 5 East, W.M., in Lewis County, Washington, being thirty (30) feet on each side of the centerline of a road or roads located approximately as shown in green on the attached "Exhibit A."

Subject as to said lands to all matters of public record.

C. Thirty (30) days prior to any reconstruction, and/or betterment of said roads by either party on lands of the other party, the initiating party will submit to the landowning party a written request for joint review of the proposed project, upon completion of which the initiating party will submit a complete and detailed plan of operations. Said project will be conducted in accordance with the provisions of the approved plan of operations and with the Federal, State and/or local rules and regulations, governing such operations, in force at the time the project is commenced.

Except as herein supplemented all of the terms, conditions and reservations of the Original Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this instrument, in duplicate as of the day and year first above written.



Affix Seal of Corporation

WEYERHAEUSER COMPANY

By [Signature]
Forest Land Use Manager Title

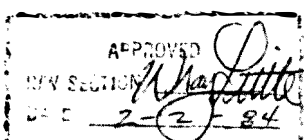
Attest [Signature]
Assistant Secretary Title

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

[Signature]
BRIAN J. BOYLE
Commissioner of Public Lands

Affix Seal of Commissioner
of Public Lands

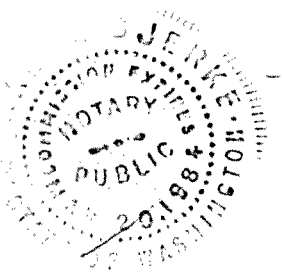
Easement No. 989
App. No. 36385
031228



STATE OF WASHINGTON)
) ss
County of King)

On this 1st day of February, 1984, before me personally appeared D. W. Wilbur and Robert N. Mogensen, to me known to be the Forest Land Use Manager and Assistant Secretary, respectively, of WEYERHAEUSER COMPANY, the corporation that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument and that the seal affixed is the corporate seal of said corporation.

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



Gerald W. Rymer
Notary Public in and for the State of
Washington, residing at Federal Way.

STATE OF WASHINGTON)
) ss
COUNTY OF THURSTON)

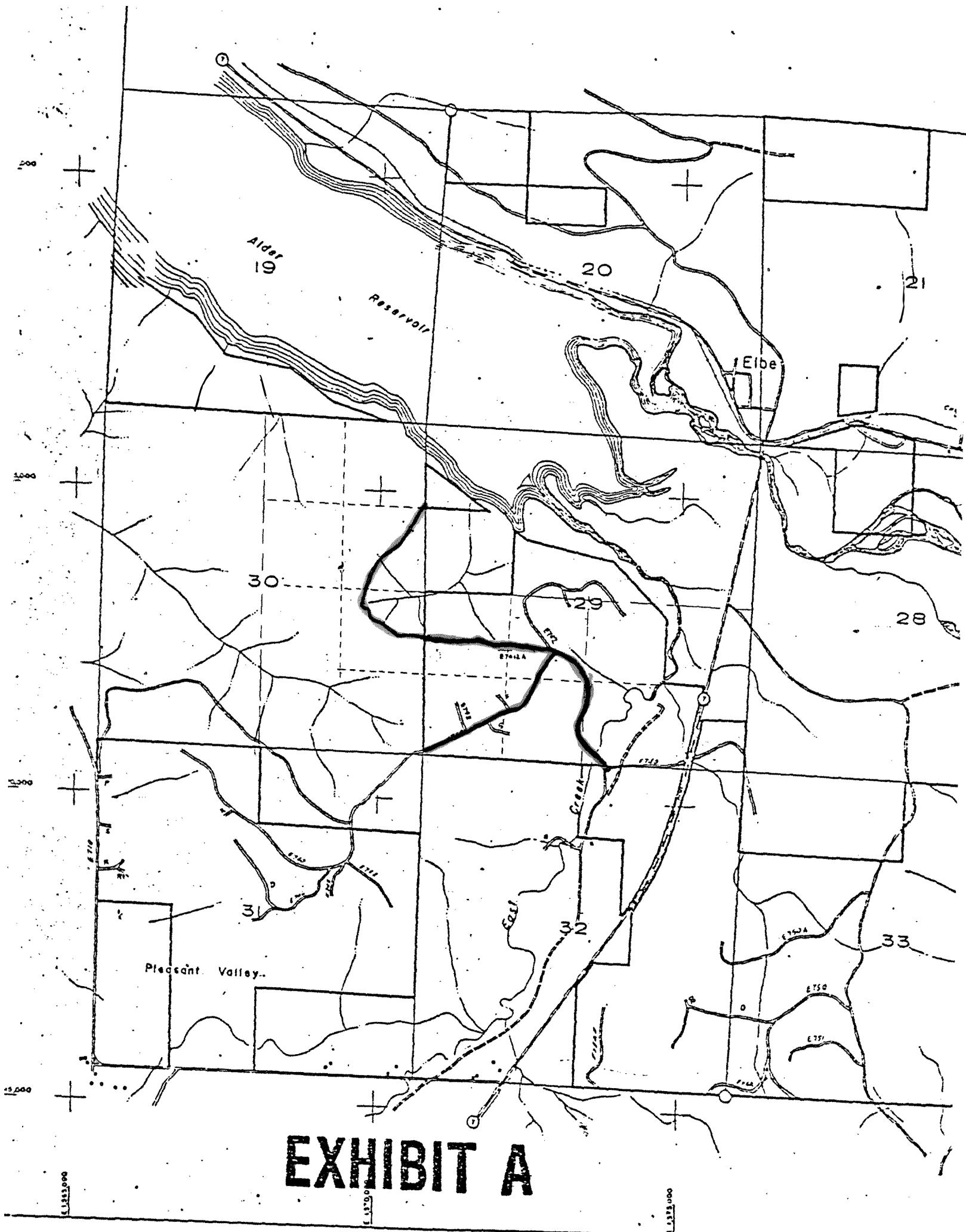
On this 6th day of February, 1984, before me personally appeared BRIAN J. BOYLE, to me known to be the Commissioner of Public Lands, and ex officio administrator of the Department of Natural Resources of the State of Washington, the Department that executed the within and foregoing instrument on behalf of the State of Washington, and acknowledged said instrument to be the free and voluntary act and deed of the State of Washington for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the official seal of the Commissioner of Public Lands for the State of Washington.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year set forth above.

Edith P. Johnson
Notary Public in and for the State of
Washington, residing at Olympia

Easement No. 989
App. No. 36385

INDEXED - VOL. PAGE
State of Wash
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Olympia wa 98504
Auditor



EASEMENT

THIS AGREEMENT, made and entered into this 18th day of January, 1989, by and between WEYERHAEUSER COMPANY, a Washington corporation, herein called "Weyerhaeuser," and STATE OF WASHINGTON, acting by and through the Department of Natural Resources, herein called "State," WITNESSETH:

I.

State, for and in consideration of One Hundred and No/100 Dollars (\$100.00) for land damages to be paid pursuant to Payment Agreement No. 527, dated January 24, 1969, hereby grants and conveys to Weyerhaeuser, its successors and assigns, a permanent easement upon, over and along rights of way forty (40) feet in width over and across the NE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 34, Township 15 North, Range 5 East, W.M., in Lewis County, Washington, being twenty (20) feet on each side of the centerline of a road located approximately as shown in red on the attached "Exhibit A."

Subject as to said lands to all matters of public record.

II.

The parties hereto hereby agree that the rights hereinabove granted shall be subject to the following terms and conditions:

1. This easement is conveyed for the purposes of construction, reconstruction, use and maintenance of a road or roads for the purpose of providing access to and from lands now owned or hereafter acquired by Weyerhaeuser.

Provided, however, thirty (30) days prior to any reconstruction and/or betterment of said road on State lands, Weyerhaeuser will submit to the State a written request for joint review of the proposed project, upon completion of which Weyerhaeuser will submit a complete and detailed plan of operations. Said project will be conducted in accordance with the provisions of the approved plan of operations and with the Federal, State and/or local rules and regulations, governing such operations, in force at the time the project is commenced.

2. The State reserves for itself, its successors and assigns, the right at all times for any purpose, to cross and recross at any place on grade or otherwise, the said rights of way in a manner that will not unreasonably interfere with the rights granted herein.

The State further reserves to itself, its successors, assigns and permittees the right to use, maintain, patrol, reconstruct and repair said road for any and all purposes provided that use for the hauling of timber or other valuable materials shall be initiated by serving notice to Weyerhaeuser, acknowledging such use shall be predicated on the basis of sharing in the values of the road. Weyerhaeuser agrees that upon receipt of this notice of intent the parties shall mutually agree as to their respective percentage of the total tributary acreage and then replacement value of the roadway or other such facility.

The State shall then pay or cause to be paid, its share of the facility being considered. The State shall also be responsible for the reconstruction of the facility if necessary to provide the use desired. Thereafter the parties shall share replacement items on the basis of the previously calculated percentage.

3. Except as herein specifically provided, those terms and conditions of that certain Easement Exchange, dated April 10, 1973, as recorded in the Records of Lewis County, Washington on May 11, 1973 in Volume 73 of Deeds, pages 22 through 27, under Auditor's File No. 777806, are incorporated herein and made a part of this easement.

IN WITNESS WHEREOF, the parties hereto have executed this instrument, in duplicate, as of the day and year first above written.

WEYERHAEUSER COMPANY

By: *D. W. Wilbur*
Forest Land Use Manager

Attest: *Robert N. Mogensen*
Assistant Secretary

Affix Seal of Corporation

**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

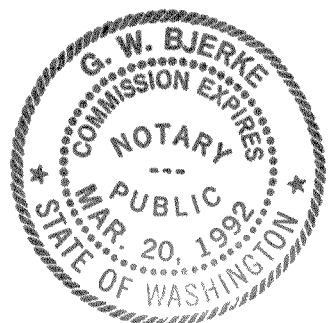
Kenneth E. Solt
KENNETH E. SOLT, Manager
Division of Lands and Minerals

Affix Seal of Commissioner
of Public Lands

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

On this 10th day of January, 1989, before me personally appeared D. W. Wilbur and Robert N. Mogensen, to me known to be the Forest Land Use Manager and Assistant Secretary, respectively, of **WEYERHAEUSER COMPANY**, the corporation that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument and that the seal affixed is the corporate seal of said corporation.

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



G. W. Bjerke
Notary Public in and for the State of Washington.
My Appointment expires: March 20, 1992

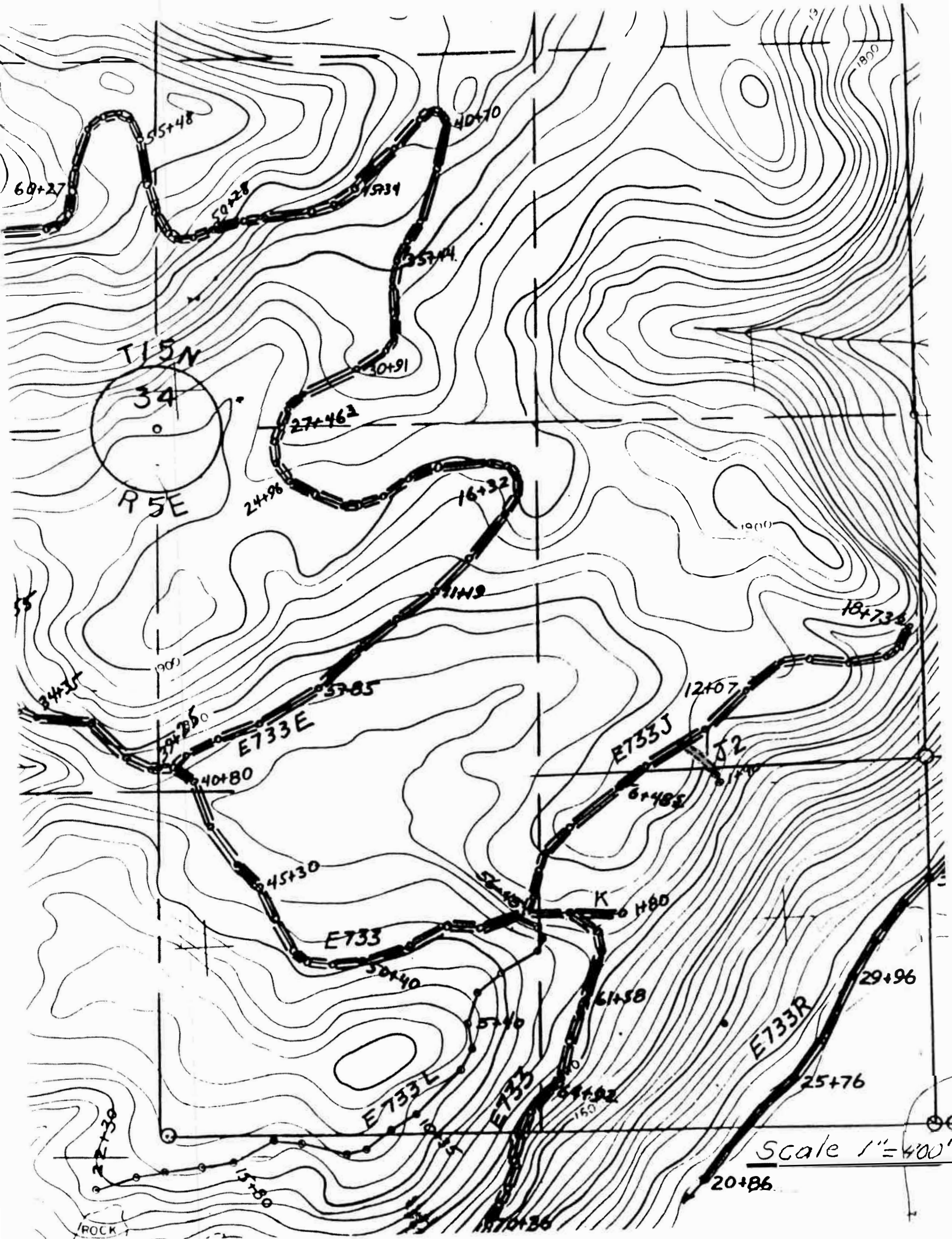


EXHIBIT 'A'

EASEMENT

The Grantor, MANKE & SONS, INC., a Washington corporation, in consideration of One Dollar (\$1.00) and other valuable considerations, hereby grants and conveys to the STATE OF WASHINGTON, acting by and through the Department of Natural Resources, herein called the Grantee, its successors and assigns, a permanent easement upon, over, and along rights of way sixty (60) feet in width over and across the SE 1/4 SW 1/4, Section 2, Township 14 North, Range 5 East, W.M., in Lewis County, Washington, being thirty (30) feet on each side of the centerline of a road or roads located approximately as shown in red on the attached "Exhibit A".

Subject as to said lands to all matters of public record.

1. The easement is conveyed for the purpose of constructing and/or maintaining a road to provide access to and from lands presently owned or hereinafter acquired by the Grantee, or controlled by the Grantee, for land management and administration activities, including but not limited to valuable material removal operations.

2. The Grantor reserves to itself, its successors and assigns, the right to use the roadway in any manner which does not unreasonably interfere with the use of said road by the Grantee, its assigns, successors, agents, contractors, employees, lessees, or licensees. Said road users will, however, contribute their pro rata share to the maintenance costs caused by their usage so that such maintenance will leave the road in as good a condition as existed at the time of commencement of said use.

IN WITNESS WHEREOF, the Grantor has hereunto set its hand and seal this 1st day of November, 19 79.

MANKE & SONS, INC.

By Virgil Manke, Sec. title

Affix Seal of Corporation

Attest _____ Title

STATE OF Wash.)
County of Mason) ss

On this 1st day of November, 19 79, before me personally appeared Virgil Manke and _____, to me known to be the

Secretary and _____, respectively, of Manke & Sons Co., Inc., the corporation that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument and that the seal affixed is the corporate seal of said corporation.

Robert M. Spivey
Notary Public in and for the State of Wash., residing at Quinton

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
BERT L. COLE, Commissioner of Public Lands

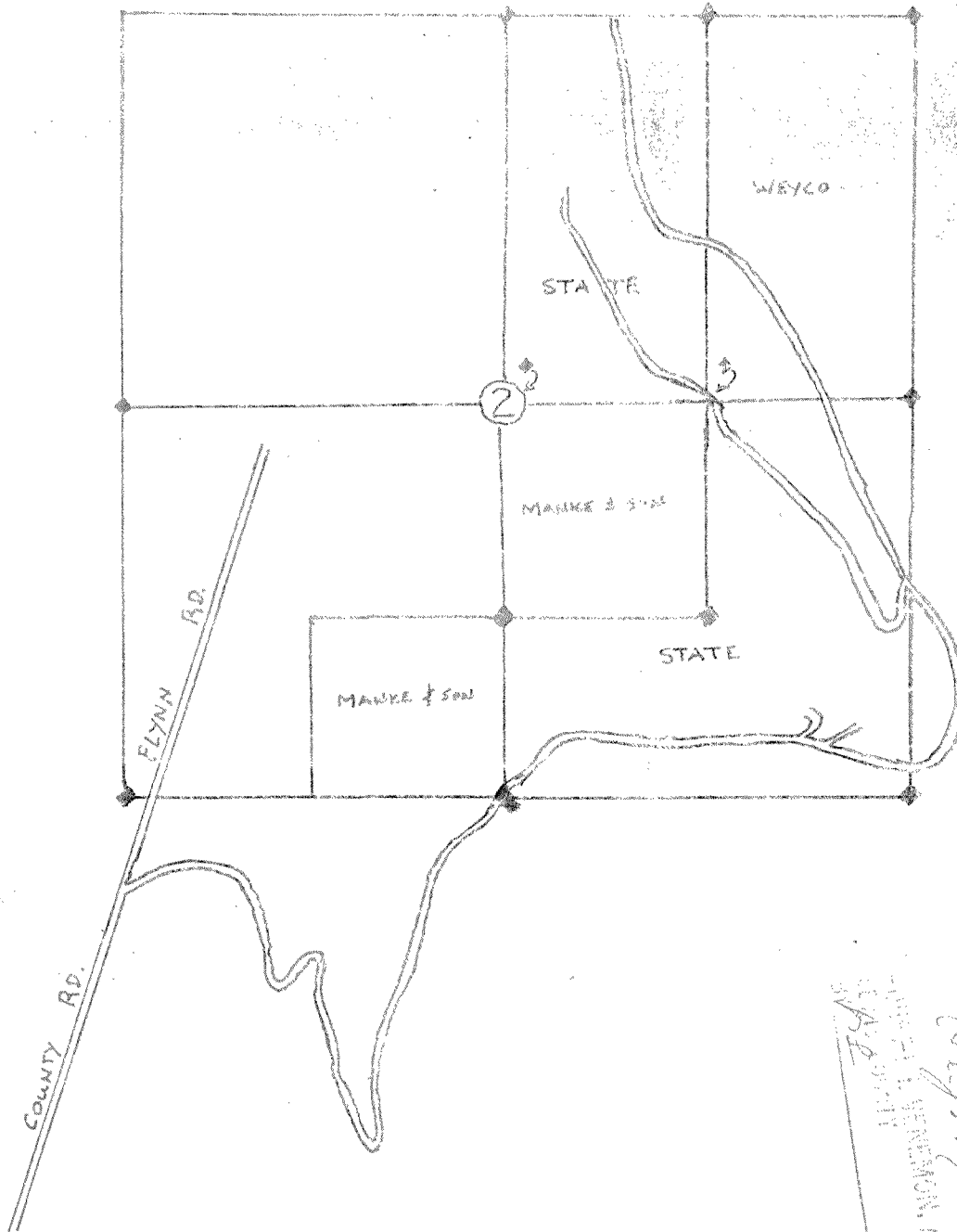
Application No. E-1440

County LEWIS

Name of Sale FLYNN ROAD

District TILTON

TOWNSHIP 14 NORTH, RANGE 5 (E.) (100) W.M.



RECORDED
 APR 17 AM 11:19
 DEPT. OF NATURAL RESOURCES
 TILTON DISTRICT
 AUDITOR
 PACE



EXHIBIT A

SCALE: 1" = 1200'

Drawn By: S.B.

Date: 2-2-76

LEGEND

-  EXISTING ROAD
-  REQUEST ROAD

 SET CORNER - CON. MON.