Updated information is being provided for Bluehorse timber sale #30-101103 documents as follows:

<table>
<thead>
<tr>
<th>Brief Description</th>
<th>DATE</th>
<th>Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add Notice of Legal Appeal</td>
<td>12/08/2021</td>
<td>AEM</td>
</tr>
<tr>
<td>Notice of Sale – language added to Special Remarks regarding appeal by Center for Responsible Forestry</td>
<td>12/08/2021</td>
<td>AEM</td>
</tr>
<tr>
<td>Draft Contract: language added to clause G-060 regarding appeal by Center for Responsible Forestry</td>
<td>12/08/2021</td>
<td>AEM</td>
</tr>
</tbody>
</table>
To: Prospective Purchasers of Bluehorse Timber Sale

From: Duane Emmons, PSL Division Manager

Subject: Notice of Legal Appeal

Date: December 8, 2021

This letter is to ensure you are aware that the Center for Responsible Forestry filed a legal appeal on the Bluehorse Timber Sale and associated environmental review. Language about the lawsuit has been added to the Notice of Sale and draft contract.

The appeal requests:
- an order invalidating the Board’s approval of the Bluehorse project for auction,
- an order invalidating the SEPA Determination of Non-Significance as “clearly erroneous”,
- a declaration that the Bluehorse project could have probable, significant adverse impacts to the environment, necessitating preparation of an Environmental Impact Statement, and
- an order enjoining all forest practices pursuant to the Bluehorse Project, among other relief requested.

The lawsuit was filed with Grays Harbor Superior Court as Cause No. 21-2-00647-14.

Please consult an attorney before bidding on this sale if you have questions about the risk associated with the lawsuit.

Notice of the appeal will be shared again verbally prior to auction of the sale on December 14th.

Please be aware
- The State is not responsible for legal actions filed by third-parties that may affect the operability of timber sales.
- The purchaser assumes the risk of loss for any costs, damages, or business expectations related to this auction resulting from such legal action.
- Notice of the lawsuit will be shared again verbally prior to the auction of the sale on December 14.
- It is recommended to seek advice of legal counsel with respect to Purchaser rights and interests before entering into this contract.
- The standard 10-day confirmation period applies as with all DNR timber sales.

DNR values our customers and wanted ensure you are informed of the situation prior to auction.
TIMBER NOTICE OF SALE

SALE NAME: BLUEHORSE  AGREEMENT NO: 30-101103

AUCION: December 14, 2021 starting at 10:00 a.m.,  COUNTY: Grays Harbor, Thurston
South Puget Sound Region Office, Enumclaw, WA

SALE LOCATION: Sale located approximately 7 miles northeast of Oakville.

PRODUCTS SOLD AND SALE AREA: All timber, except leave trees bounded out by yellow leave tree area tags, trees marked with a single band of blue paint, snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white Timber Sale Boundary tags and the E-Line and E-2070 roads in Unit #1; white Timber Sale Boundary tags, timber type change marked with pink flagging, and the E-Line, E-3030, and E-3040 roads in Unit #2; white Timber Sale Boundary tags and the E-3050 Road in Unit #3.

All forest products above located on part(s) of Sections 21, 22 and 23 all in Township 16 North, Range 4 West, W.M., containing 96 acres, more or less.

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

ESTIMATED SALE VOLUMES AND QUALITY:

<table>
<thead>
<tr>
<th>Species</th>
<th>Avg DBH</th>
<th>Ring Count</th>
<th>Total MBF</th>
<th>1P</th>
<th>2P</th>
<th>3P</th>
<th>SM</th>
<th>1S</th>
<th>2S</th>
<th>3S</th>
<th>4S</th>
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<tbody>
<tr>
<td>Douglas fir</td>
<td>26.7</td>
<td>6</td>
<td>4,093</td>
<td>29</td>
<td>244</td>
<td>3,289</td>
<td>475</td>
<td>48</td>
<td>8</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Hemlock</td>
<td>16.3</td>
<td>397</td>
<td></td>
<td>218</td>
<td>135</td>
<td>38</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Red alder</td>
<td>15.2</td>
<td>349</td>
<td></td>
<td>176</td>
<td>65</td>
<td>88</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Maple</td>
<td>21.3</td>
<td>114</td>
<td></td>
<td>12</td>
<td>42</td>
<td>17</td>
<td>43</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Red cedar</td>
<td>21.5</td>
<td>9</td>
<td></td>
<td>8</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sale Total</td>
<td></td>
<td></td>
<td>4,962</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

MINIMUM BID: $2,122,000.00  BID METHOD: Sealed Bids

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

EXPIRATION DATE: October 31, 2023  ALLOCATION: Export Restricted

BID DEPOSIT: $212,200.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Harvesting activities are estimated to be 12 percent cable, and 88 percent ground based harvest. Cable, tethered, and tracked ground based equipment with non-tethered self-leveling equipment limited to sustained slopes 65 percent or less, all other tracked equipment limited to sustained slopes that are 45 percent or less. Rubber tired skidders are not allowed, except 6-wheeled rubber tired skidders with over-the-tire tracks spanning both sets of rear tires, and tracked skidders, will be allowed for pole removal only on sustained slopes that are 45 percent and less. Yarding may be restricted during wet weather if rutting becomes excessive, per clause H-017.
TIMBER NOTICE OF SALE

ROADS: 10.08 stations of required construction. 3.10 stations of required reconstruction. 21.02 stations of optional construction. 7.35 stations of optional reconstruction. 132.50 stations of required prehaul maintenance. 13.83 stations of abandonment, if constructed. Purchaser maintenance on the E-2065, E-2070, E-3020 from 19+25 to 26+60, E-3040, E-3040-1, E-3041, E-3041-1 and E-3050 roads. Designated maintenance on all other roads used.

Rock for this proposal may be obtained from the State owned Vantage Quarry, and the existing stockpile at Vantage Quarry, at no cost to the Purchaser or any commercial rock source at the Purchaser's expense.

The operation of road construction equipment is not allowed from November 1 to April 30, nor on weekends or State recognized holidays, unless authority to do so is granted, in writing, by the Contract Administrator. If permission is granted to operate from November 1 to April 30, a maintenance plan is required per Road Plan clause 1-26. The hauling of forest products will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator. If permission is granted to operate from November 1 to April 30, preventative measures may be required to protect water, soil, roads and other forest assets.

ACREAGE DETERMINATION

CRUISE METHOD: Acreage was determined by traversing boundaries by GPS in all units, and length times width for existing roads in Unit #2. GPS data files are available at DNR's website for timber sale auction packets. See cruise narrative for cruise method.

FEES: $84,354.00 is due on day of sale. $9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: The Center for Responsible Forestry appealed the Board's approval of the "Bluehorse" timber sale to Grays Harbor Superior Court, Cause No. 21-2-00647-14. Please consult an attorney before bidding on this sale if you have questions about the risk of impacts to operability under the contract.

This sale contains high-quality Douglas-fir.

Purchaser shall cut all hardwood stems greater than 2 inches dbh within all harvest units, leaving a stump no more than 12 inches in height.

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 yarded through or over. Locations outside the sale boundary are identified as Slope Stability Mitigation Zones on the Logging Plan and Timber Sales Maps. Trees within these areas shall not be used as tailholds.

Decking of forest products will not be allowed within the Prohibited Decking Area identified on the Logging Plan and Timber Sale maps.

For the safety of the public, please remove from roads and trails all string from string boxes used during appraising or cruising this sale.
TIMBER SALE MAP

SALE NAME: BLUEHORSE
AGREEMENT #: 30-101103
TOWNSHIP(S): T16R4W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 840-1360

Unit 1
25 Acres

Private

E-Line
E-2030
E-2040
E-2050
E-2060
E-2070
E-2080
E-2090
E-3000
E-3010
E-3020
E-3030
E-3040
E-3050
E-3060
E-3070
E-3080
E-3090

Sale Area
Non-Tradeable Leave Tree Area
Riparian Mgt Zone
Forested Wetland
Slope Stability Mitigation Zone

Sale Boundary Tags
Property Line
Existing Roads
Required Pre-Haul Maintenance
Required Reconstruction
Optional Construction

Clipped Streams
Stream Type
Stream Type Break
Leave Tree Area <1/4-acre
Non-Tradeable Leave Tree Area <1/4-acre
Survey Monument

Prepared By: acle490
Modification Date: nchi490 10/12/2021
DRIVING DIRECTIONS:

- Unit 1: From Highway 12, between milepost 32 and 33, turn right (East) onto the D-Line. Continue for 0.8 mile, then turn right (East) onto the E-Line. Continue for 3.1 miles to reach Unit 1.
- Unit 2: From Unit 1, continue on E-Line for 1.6 miles to reach Unit 2.
- Unit 3: From Unit 2, continue on E-Line for 0.5 mile to reach the intersection with the E-3050. From the intersection take the left fork onto the E-3050 and continue for 0.3 mile to reach Unit 3.
- Vantage Quarry: From Unit 1, continue on the E-Line for 1.5 miles to the intersection of the E-3020 road. Turn left (north) and follow the E-3020 for 500 feet to Vantage Quarry.
STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

BILL OF SALE AND CONTRACT FOR
FOREST PRODUCTS

Export Restricted Lump Sum AGREEMENT NO. 30-0101103

SALE NAME: BLUEHORSE

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract:

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

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

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

Purchaser: The company or individual that has entered into a Bill of Sale and Contract for Forest Products with the State for the right to harvest and remove forest products from the timber sale area.
Road Construction: Includes building new and maintaining existing forest roads and associated work that may be optional or required as described in the Road Plan.

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

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

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on December 14, 2021 and the sale was confirmed on _________________. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber, except leave trees bounded out by yellow leave tree area tags, trees marked with a single band of blue paint, snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white Timber Sale Boundary tags and the E-Line and E-2070 roads in Unit #1; white Timber Sale Boundary tags, timber type change marked with pink flagging, and the E-Line, E-3030, and E-3040 roads in Unit #2; white Timber Sale Boundary tags and the E-3050 Road in Unit #3.

All forest products above located on approximately 96 acres on part(s) of Sections 21, 22, and 23 all in Township 16 North, Range 4 West W.M. in Grays Harbor, and Thurston County(s) as designated on the sale area and as shown on the attached timber sale map.

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

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

G-020 Inspection By Purchaser

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

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2023.

G-040 Contract Term Adjustment - No Payment

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

a. Road and bridge failures which deny access.

b. Access road closures imposed by road owner.

c. Excessive suspensions as provided in clause G-220.

d. Regulatory actions not arising from Purchaser's failure to comply with this contract which will prevent timber harvest for a period less than 6 months.

G-051 Contract Term Extension - Payment

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

a. A written request for extension of the contract term must be received prior to the expiration date of the contract.

b. Completion of all required roads and compliance with all contract and regulatory requirements.

c. For the first extension, not to exceed 1 year, payment of at least 25 percent of the total contract price.

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

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

d. Payment of an amount based on 12 percent interest per annum on the unpaid portion of the total contract price.
All payments, except the initial deposit, will be deducted from the total contract price to determine the unpaid portion of the contract.

e. Payment of $1,134.00 per acre per annum for the acres on which an operating release has not been issued in the harvest area.

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.

The Center for Responsible Forestry appealed the Board’s approval of the “Bluehorse” timber sale to Grays Harbor Superior Court, Cause No. 21-2-00647-14. Please consult an attorney before bidding on this sale if you have questions about the risk of impacts to operability under the contract.

G-062 Habitat Conservation Plan

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

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

Any modifications to the contract shall be proposed in writing by Purchaser, shall continue to meet the terms and conditions of the HCP and ITP, and shall require the prior written approval of the Region Manager before taking effect.
G-063 Incidental Take Permit Notification Requirements

a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.

b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.

c. Purchaser shall refer to a specific ITP number, ITP TE812521-1 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.

d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

Purchaser is responsible for obtaining any permits not already obtained by the State that relate to Purchaser's operation. Forest Practice Application / Hydraulic Project Approval permits obtained by the State shall be transferred to Purchaser. Purchaser is responsible for all permits, amendments and renewals.
G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

a. Risk

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

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

G-091 Sale Area Adjustment

The Parties may agree to adjustments in the sale area boundary. The cumulative changes to the sale area during the term of the contract shall not exceed more than four percent of the original sale area. If the sale area is increased, the added forest products become a part of this contract. The State shall determine the volume added and shall calculate the increase to the total contract price using the rates set forth in clause G-101, G-102, or G-103. If the sale area is reduced, the State shall determine the volume to be reduced. The State shall calculate the reduction to the total contract price using the rates set forth in clause G-101, G-102, or G-103.

G-101 Forest Products Not Designated

Any forest products not designated for removal, which must be removed in the course of operations authorized by the State, shall be approved and designated by the Contract Administrator. Added forest products become a part of this contract and the Scribner log scale volume, as defined by the Northwest Log Rules Advisory Group, shall be determined by the Contract Administrator. Added forest products shall be paid for at the following contract payment rates per Mbf Scribner log scale.

The pricing schedule has not been set for the sale.

G-111 Title and Risk of Loss

Title to the forest products under this contract passes to the Purchaser after they are removed from the sale area, if adequate advance payment or payment security has been provided to the State under this contract. Purchaser bears all risk of loss of, or damage to, and has an insurable interest in, the forest products described in this contract from the time the sale is confirmed under RCW 79.15.120. Breach of this contract shall have no effect on this provision.

G-116 Sustainable Forestry Initiative® (SFI) Certification

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative program Standard under certificate number: PwC-SFIFM-513.
Purchaser shall have at least one person regularly on-site during active operations that have completed training according to the requirements outlined within the SFI® program Standard. Purchaser shall designate in writing the name(s) of the individual(s) who will be on-site and provide proof of their successful completion of an approved training program prior to active operations.

G-120 Responsibility for Work

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

G-121 Exceptions

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

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 Purchaser's expense regardless of cost, to remedy deficiencies at any time.

G-140 Indemnity

To the fullest extent permitted by law, Purchaser shall indemnify, defend and hold harmless State, agencies of State and all officials, agents and employees of State, from and against all claims arising out of or resulting from the performance of the contract. "Claim" as used in this contract means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorneys' fees, attributable for bodily injury, sickness, disease or death, or injury to or destruction of tangible property including loss of use resulting therefrom. Purchaser's obligations to indemnify, defend, and hold harmless includes any claim by Purchaser's 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 Purchaser's or any subcontractors' performance or failure to perform the contract. Purchaser's 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; the D-Line, E-Line, E-2065, E-2070, E-3020, E-3020 Reroute, E-3030, E-3040, E-3040-1, E-3041, E-3041-1 and E-3050
roads. 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 D-Line, E-Line, E-3020 from 0+00 to 19+25, E-3020 Reroute and E-3030 roads, 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:


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:

Lease, including the terms and provisions thereof,
For:   Land Use License
In Favor of:   Washington Department of Fish & Wildlife
Disclosed by Application No.:   60-095576
Granted:   5/2/2017
Expires:     6/30/2022

Region Encumbrances

Lease, including the terms and provisions thereof,
For:   Minor Forest Products
In Favor of:   DNR South Puget Sound Region
Disclosed by Application No.:   35-SPSGH02
Granted:   1/1/2015
Expires:     Indefinite

Lease, including the terms and provisions thereof,
For:   Minor Forest Products
In Favor of:   DNR South Puget Sound Region
Disclosed by Application No.:   35-SPSTC01
Granted:   1/1/2015
Expires:     Indefinite

Section P: Payments and Securities

P-011 Initial Deposit

Purchaser paid DATA MISSING initial deposit, which will be maintained pursuant to RCW 79.15.100(3). If the operating authority on this contract expires without Purchaser's payment of the full amount specified in Clause P-020, the initial deposit will be immediately forfeited to the State, and will be offset against Purchaser's remaining balance due. Any excess initial deposit funds not needed to ensure full payment of the contract price, or not needed to complete any remaining obligations of the Purchaser existing after contract expiration, will be refunded to the Purchaser.

P-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of $129,012.00. The total contract price consists of a $0.00 contract bid price plus $129,012.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066...
clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

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

P-045 Guarantee of Payment

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

P-050 Billing Procedure

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

P-080 Payment Account Refund

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

P-090 Performance Security

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

Section H: Harvesting Operations

H-013 Reserve Tree Damage Definition
Reserve trees are trees required and designated for retention within the sale boundary. Purchaser shall protect reserve trees from being cut, damaged, or removed during operations.

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

a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 100 square inches.

b. A reserve tree top is broken or the live crown ratio is reduced below 30 percent.

c. A reserve tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

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

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

H-017 Preventing Excessive Soil Disturbance
Operations may be suspended when soil rutting exceeds 12 inches as measured from the natural ground line. To reduce soil damage, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other mitigation measures. Suspended operations shall not resume unless approval to do so has been given, in writing, by the Contract Administrator.

H-035 Fall Trees Into Sale Area
Trees shall be felled into the sale area unless otherwise approved by the Contract Administrator.
Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for the sale area. The plan shall address the felling, yarding, landing locations, tailhold locations, cable corridor locations, skid trail locations, and slash management plan, 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-051 Branding and Painting**

Purchaser shall provide a State of Washington registered log brand, acceptable to the State, unless the State agrees to furnish the brand. All purchased timber shall be branded in a manner that meets the requirements of WAC 240-15-030(2)(a)(i). All timber purchased under a contract designated as export restricted shall also be painted in a manner that meets the requirements of WAC 240-15-030(2)(a)(ii).

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

**H-080 Snags Not to be Felled**

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

**H-120 Harvesting Equipment**

Forest products sold under this contract shall be harvested and removed using cable, tethered, and tracked ground based equipment with non-tethered self-leveling equipment limited to sustained slopes 65 percent or less, all other tracked equipment limited to sustained slopes that are 45 percent or less. Rubber tired skidders are not allowed, except 6-wheeled rubber tired skidders with over-the-tire tracks spanning both sets of rear tires, and tracked skidders, will be allowed for pole removal only on sustained slopes that are 45 percent and 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-130 Hauling Schedule**

The hauling of forest products will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator.
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. Equipment limitation zones are required within 30 feet of Type 5 streams.

c. 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.

d. Decking of forest products will not be allowed within the "Prohibited Decking Area" identified on the Logging Plan and Timber Sale maps.

e. No trees felled or damaged, outside the timber sale boundary.

f. The Purchaser shall 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.

g. Within shovel logging areas, the shovel operator shall break up concentrations of logging debris greater than 11.5 feet by 11.5 feet to allow exposure of natural forest soils to ensure proper reforestation.

h. Designated haul roads have been designed to allow for the transport of poles 60 feet in length or less. If the Purchaser chooses to remove poles greater than 60 feet in length, a haul plan must be submitted in writing to the Contract Administrator, which details the desired haul route, additional reconstruction needs, and mitigation for damage, resulting from hauling oversize material. If approved in writing by the Contract Administrator, all work shall be at the Purchaser’s expense.

i. Skid Trails

• Purchaser shall 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.
• Purchaser shall not have more than two skid trails open to active skidding at any one time.
• Skid trail closure shall occur immediately upon completion of yarding all tributary timber. Closure shall consist of creating plantable spots at approximately 11.5 foot by 11.5 foot spacing to facilitate reforestation and creating water bars or other methods as directed by the Contract Administrator to prevent water accumulation and sediment movement.
• 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.
• Once a skid trail is closed, the Purchaser shall not reopen a skid trail unless approved in writing 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. Purchaser shall leave 2 down logs per acre. 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 yarded through or over.
   • Locations outside the sale boundary are identified as Slope Stability Mitigation Zones on the Logging Plan and Timber Sales Maps. Trees within these areas shall not be used as tailholds.

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

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 all harvest units, all hardwood stems greater than 2 inches dbh, shall be felled. Remaining stump 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 3/4/2021 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on the E-2065, E-2070, E-3020 from 19+25 to 26+60, E-3040, E-3040-1, E-3041, E-3041-1 and E-3050 roads. All work shall be completed to the specifications detailed in the Road Plan.

C-060 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on all other roads used not covered in clause C-050. Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-080 Landing Locations Approved Prior to Construction

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

C-090 Landing Location

Landings shall be built 25 feet off the E-Line road(s).

C-140 Water Bars

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

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

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

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

S-010 Fire Hazardous Conditions

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

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

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

S-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 Type 5 streams as a result of operations under this contract and which is identified by the Contract Administrator shall be removed and deposited in a stable position. Removal of slash or debris shall be accomplished in a manner that avoids damage to the natural stream bed and bank vegetation.

S-120 Stream Protection
No timber shall be felled into, across, or yarded through Type 3 and Type 4 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-013 Liquidated Damages or Failure to Perform

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

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

D-041 Reserve Tree Excessive Damage

When Purchaser’s operations exceed the damage limits set forth in clause H-013, Reserve Tree Damage Definition, and when the Contract Administrator determines that a suitable replacement for a damaged reserve tree is not possible, the damaged trees result in substantial injury to the State. The value of the damaged reserve trees at the time of the breach is not readily ascertainable. Therefore, the Purchaser agrees to pay the State as liquidated damages at the rate of $1,000.00 per tree for all damaged reserve trees that are not replaced in all units.
SIGNATURES

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

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

______________________  ________________________
Purchaser Scott Sargent
____________________ South Puget Sound Region Manager
Print Name

Date: ________________ Date: _________________
Address:
CORPORATE ACKNOWLEDGEMENT
(Required for both LLC and Inc. Entities)

STATE OF ____________________________
COUNTY OF ____________________________

On this _____________ day of _______________________, 20___, before me personally appeared ________________________________________________ to me known to be the _______________________________________________________________ of the corporation that executed the within and foregoing instrument and acknowledged said instrument to be the free and voluntary act and deed of the corporation, for the uses and purposes therein mentioned, and on oath stated that (he/she was) (they were) authorized to execute said instrument.

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

____________________________________
Notary Public in and for the State of

____________________________________
My appointment expires _____________
WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region: South Puget Sound
Timber Sale Name: Bluehorse
Application Number: 30-  101103

EXCISE TAX APPLICABLE ACTIVITIES

Construction: 1,727 linear feet  
Road to be constructed (optional and required) but not abandoned

Reconstruction: 1,045 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: 13,250 linear feet  
Existing road to receive maintenance work (optional and required) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Construction: 1,383 linear feet  
Roads to be constructed (optional and required) and then abandoned

Temporary Reconstruction: 0 linear feet  
Roads to be reconstructed (optional and required) and then abandoned

All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale contract. The Department of Revenue bears responsibility for determining forest road excise taxes. The Department of Natural Resources developed this form to help estimate the impact of forest excise taxes. However, the information provided may not precisely calculate the actual amount of taxes due. The Department of Revenue is available for consultation by calling 1.800.548.8829.
(Revised 9/18)
**PRE-CRUISE NARRATIVE**

<table>
<thead>
<tr>
<th>Sale Name: Bluehorse</th>
<th>Region: South Puget Sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreement #: 30-101103</td>
<td>District: Black Hills</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact</th>
<th>Phone/ Location: (360) 280-3113</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forester: Allyn Cole</td>
<td></td>
</tr>
</tbody>
</table>

| Alternate Contact: Derwood Duncan III | |

Type of Sale (lump sum, mbf scale, tonnage scale or contract harvest): **Lump Sum**
Required or Optional removal of utility as pulp (for scale sales only): **N/A**
Evaluates for RFRS Implementation?: **Yes, due to potential windthrow and cost, RFRS was not implemented.**

Percentage cable-uphill: **12**
Percentage cable-downhill: **0**
Percentage ground based: **88**

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

### UNIT ACREAGES* AND METHOD OF DETERMINATION:

<table>
<thead>
<tr>
<th>Unit #</th>
<th>Harvest R/W or RMZ WMZ</th>
<th>Legal Description Sec/Twp/Rng</th>
<th>Grant</th>
<th>Gross Traversed Acres</th>
<th>Deductions from Gross Acres (No harvest acres)</th>
<th>Acreage Determination (List method, dimensions and error of closure if applicable)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RMZ/WMZ Acres</td>
<td>Leave Tree Acres</td>
</tr>
<tr>
<td>1</td>
<td>Sec 21/ T16N/ R04 W</td>
<td>03</td>
<td>26.5</td>
<td>0</td>
<td>1.5</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Sec 22/ T16N/ R04 W</td>
<td>02 &amp; 42</td>
<td>69.5</td>
<td>0</td>
<td>5.4</td>
<td>2.5</td>
</tr>
<tr>
<td>3</td>
<td>Sec 22 &amp; 23/ T16N/ R04 W</td>
<td>02 &amp; 42</td>
<td>10.0</td>
<td>0</td>
<td>0.5</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>106</td>
<td>0</td>
<td>7.4</td>
<td>2.5</td>
</tr>
</tbody>
</table>

### HARVEST PLAN AND SPECIAL CONDITIONS:

<table>
<thead>
<tr>
<th>Unit #</th>
<th>Harvest Prescription: (Mark leave, take, paint color, tags, flagging etc.)</th>
<th>Special Management areas:</th>
<th>Other conditions (# leave trees, etc.) *For all marked thinnings, include a tree count by species.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Variable Retention Harvest: Boundaries are marked with white “Timber Sale Boundary” tags and pink flagging, E-Line and E-2070 roads. Clumped leave trees are marked with yellow “Leave Tree Area” tags with pink flagging. Single leave trees are marked with a band of blue paint.</td>
<td>N/A</td>
<td>199 Leave Trees Clumped 36 Individually Scattered</td>
</tr>
</tbody>
</table>
Variable Retention Harvest: Boundaries are marked with white “Timber Sale Boundary” tags with pink flagging, E-Line, E-3030 and E-3040 roads. Clumped leave trees are marked with yellow “Leave Tree Area” tags with pink flagging. Single leave trees are marked with a band of blue paint.

530 Leave Trees Clumped
32 Individually Scattered

Variable Retention Harvest: Boundaries are marked with white “Timber Sale Boundary” tags with pink flagging, and the E-3050 road. Clumped leave trees are marked with yellow “Leave Tree Area” tags with pink flagging. Single leave trees are marked with a band of blue paint.

85 Leave Trees Clumped
5 Individually Scattered

OTHER PRE-CRUISE INFORMATION:

<table>
<thead>
<tr>
<th>Unit #</th>
<th>Estimated Volume</th>
<th>Access information (Gates, locks, etc.)</th>
<th>Photos, traverse maps required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>See Cruise</td>
<td>N/A</td>
<td>Traverse maps with contours, roads and leave trees. Photo (Scale 1” to 400’).</td>
</tr>
<tr>
<td>2</td>
<td>See Cruise</td>
<td>N/A</td>
<td>Traverse maps with contours, roads and leave trees. Photo (Scale 1” to 400’).</td>
</tr>
<tr>
<td>3</td>
<td>See Cruise</td>
<td>N/A</td>
<td>Traverse maps with contours, roads and leave trees. Photo (Scale 1” to 400’).</td>
</tr>
</tbody>
</table>

REMARKS:
Unit 1 consist of large areas of hardwood, and high quality Douglas-fir.
Units 2 and 3 consist of high quality Douglas-fir.
Timber Sale Cruise Report
BLUEHORSE

Sale Name: BLUEHORSE
Sale Type: LUMP SUM
Region: SO PUGET
District: BLACK HILLS
Lead Cruiser: DPClark
Other Cruisers: KBailey, BWarnstadt

Cruise Narrative:
Location: BlueHorse timber sale is located in the Capital Forest 4 to 6 forest road miles east of Highway 12 just north of Oakville.

Cruise Design: Stands were cruised sight at 16' with a 27.78BAF for RC and hardwoods, a 46.94 for conifers. Unit 3 54.44BAF at 16' for conifers 27.78BAF for hardwoods. Hardwood logs scaled in 30' and 40' lengths. Conifers scaled favoring 40' lengths.

Timber Quality: The DF is large with clean first logs becoming limby by second log. WH has small limbs. RA quality is good saw logs. MA log quality varies from straight saw logs to pulp clumps. There is a very small amount of RC in this sale. There is a small amount of poles in Unit 3 but most of DF is to large. Ring count is tight.

Stand Conditions: All units are in a conifer hardwood mix approximately 90 years old. Unit 1 is heavy on the hardwoods, Unit 3 is light on hardwoods. Unit 2 was commercially thinned approximately 30+ years ago. The understory has heavy patches of regen and heavy patches of brush. Moderate mortality from root disease and insects. There was a small amount of Phaeolus schwienitzii and Fomes pini observed. There is modest storm damage. Many hardwoods have ice storm damaged tops.

Logging: Approximately 88% of the ground in this sale can be machine harvetsed, the rest can be done with a Yoder.

Timber Sale Notice Volume (MBF)

<table>
<thead>
<tr>
<th>Sp</th>
<th>DBH</th>
<th>Rings/In</th>
<th>Age</th>
<th>All</th>
<th>Peeler</th>
<th>Spec Mill</th>
<th>1 Saw</th>
<th>2 Saw</th>
<th>3 Saw</th>
<th>4 Saw</th>
<th>Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF</td>
<td>26.7</td>
<td>6.4</td>
<td></td>
<td>4,093</td>
<td>29</td>
<td>244</td>
<td>3,289</td>
<td>475</td>
<td>48</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>WH</td>
<td>16.3</td>
<td></td>
<td></td>
<td>397</td>
<td>219</td>
<td>135</td>
<td>38</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RA</td>
<td>15.2</td>
<td></td>
<td></td>
<td>349</td>
<td></td>
<td>176</td>
<td>65</td>
<td>88</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MA</td>
<td>21.3</td>
<td></td>
<td></td>
<td>114</td>
<td>12</td>
<td>42</td>
<td>17</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC</td>
<td>21.5</td>
<td></td>
<td></td>
<td>9</td>
<td></td>
<td>8</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>21.8</td>
<td>6.5</td>
<td></td>
<td>4,962</td>
<td>29</td>
<td>244</td>
<td>12</td>
<td>3,725</td>
<td>700</td>
<td>175</td>
<td>78</td>
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MBF Volume by Grade

July 1, 2021 13:28:39
### Timber Sale Notice Weight (tons)

<table>
<thead>
<tr>
<th>Sp</th>
<th>All</th>
<th>Peeler</th>
<th>Spec Mill</th>
<th>1 Saw</th>
<th>2 Saw</th>
<th>3 Saw</th>
<th>4 Saw</th>
<th>Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF</td>
<td>25,606</td>
<td>160</td>
<td>1,330</td>
<td>19,635</td>
<td>3,986</td>
<td>427</td>
<td>67</td>
<td></td>
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<tr>
<td>WH</td>
<td>3,541</td>
<td>1,682</td>
<td>1,377</td>
<td>429</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RA</td>
<td>2,651</td>
<td>1,240</td>
<td>468</td>
<td>768</td>
<td>175</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MA</td>
<td>854</td>
<td>61</td>
<td>327</td>
<td>157</td>
<td>308</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC</td>
<td>78</td>
<td></td>
<td>72</td>
<td>6</td>
<td></td>
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<tr>
<td>ALL</td>
<td>32,729</td>
<td>160</td>
<td>1,330</td>
<td>22,884</td>
<td>6,060</td>
<td>1,630</td>
<td>603</td>
<td></td>
</tr>
</tbody>
</table>

### Timber Sale Overall Cruise Statistics (Cut + Leave Trees)

<table>
<thead>
<tr>
<th>BA (sq ft/acre)</th>
<th>BA SE (%)</th>
<th>V-BAR (bf/sq ft)</th>
<th>V-BAR SE (%)</th>
<th>Net Vol (bf/acre)</th>
<th>Vol SE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>260.3</td>
<td>4.7</td>
<td>195.3</td>
<td>2.3</td>
<td>51,939</td>
<td>4.9</td>
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### Timber Sale Unit Cruise Design

<table>
<thead>
<tr>
<th>Unit</th>
<th>Design</th>
<th>Cruise Acres</th>
<th>FMA Acres</th>
<th>N Plots</th>
<th>N Cruise Plots</th>
<th>N Void Plots</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLUEHORSE U1</td>
<td>B2C: VR, 2 BAF (46.94, 27.78 for some species) Measure/Count Plots, Sighting Ht = 16 ft</td>
<td>25.0</td>
<td>26.5</td>
<td>25</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>BLUEHORSE U2</td>
<td>B2C: VR, 2 BAF (46.94, 27.78 for some species) Measure/Count Plots, Sighting Ht = 16 ft</td>
<td>61.6</td>
<td>69.5</td>
<td>62</td>
<td>32</td>
<td>0</td>
</tr>
<tr>
<td>BLUEHORSE U3</td>
<td>B2C: VR, 2 BAF (54.44, 27.78 for some species) Measure/Count Plots, Sighting Ht = 16 ft</td>
<td>9.5</td>
<td>10.0</td>
<td>11</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>All</td>
<td></td>
<td>96.1</td>
<td>106.0</td>
<td>98</td>
<td>50</td>
<td>0</td>
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### Timber Sale Log Grade x Sort Summary

<table>
<thead>
<tr>
<th>Sp</th>
<th>Status</th>
<th>Grade</th>
<th>Sort</th>
<th>Dia</th>
<th>Len</th>
<th>BF Gross</th>
<th>BF Net</th>
<th>Defect %</th>
<th>Tons</th>
<th>MBF Net</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF</td>
<td>LIVE</td>
<td>2 SAW</td>
<td>Domestic</td>
<td>17.9</td>
<td>39</td>
<td>19,903</td>
<td>19,368</td>
<td>2.7</td>
<td>11,148.2</td>
<td>1,861.3</td>
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<tr>
<td>DF</td>
<td>LIVE</td>
<td>2 SAW</td>
<td>HQ-A</td>
<td>16.7</td>
<td>40</td>
<td>170</td>
<td>170</td>
<td>0.0</td>
<td>102.7</td>
<td>16.4</td>
</tr>
<tr>
<td>DF</td>
<td>LIVE</td>
<td>2 SAW</td>
<td>HQ-B</td>
<td>19.1</td>
<td>40</td>
<td>14,886</td>
<td>14,681</td>
<td>1.4</td>
<td>8,384.2</td>
<td>1,410.9</td>
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<td>DF</td>
<td>LIVE</td>
<td>3 PEELER</td>
<td>HQ-A</td>
<td>29.3</td>
<td>40</td>
<td>303</td>
<td>303</td>
<td>0.0</td>
<td>159.8</td>
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<td>3 SAW</td>
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<td>4 SAW</td>
<td>Domestic</td>
<td>5.6</td>
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<td>507</td>
<td>498</td>
<td>1.6</td>
<td>427.4</td>
<td>47.9</td>
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<tr>
<td>Sp</td>
<td>Status</td>
<td>Grade</td>
<td>Sort</td>
<td>Dia</td>
<td>Len</td>
<td>BF Gross</td>
<td>BF Net</td>
<td>Defect %</td>
<td>Tons</td>
<td>MBF Net</td>
</tr>
<tr>
<td>-----</td>
<td>--------</td>
<td>-------</td>
<td>------</td>
<td>-----</td>
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</tr>
<tr>
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<td>CULL</td>
<td>Cull</td>
<td>12.1</td>
<td>7</td>
<td>411</td>
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<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
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<td>DF</td>
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<td>SPECIAL MILL</td>
<td>HQ-A</td>
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<td>LIVE</td>
<td>UTILITY</td>
<td>Pulp</td>
<td>7.8</td>
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<td>94</td>
<td>86</td>
<td>8.7</td>
<td>67.1</td>
<td>8.2</td>
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<td>Domestic</td>
<td>21.4</td>
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<td>136</td>
<td>121</td>
<td>11.0</td>
<td>61.4</td>
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<td>LIVE</td>
<td>2 SAW</td>
<td>Domestic</td>
<td>15.1</td>
<td>28</td>
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<td>433</td>
<td>12.9</td>
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Unit Cruise Design: BLUEHORSE U1

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Unit Cruise Summary: BLUEHORSE U1

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Unit Cruise Statistics (Cut + Leave Trees): BLUEHORSE U1

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<th>V-BAR (bf/sq ft)</th>
<th>V-BAR CV (%)</th>
<th>V-BAR SE (%)</th>
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**Cruise Unit Report**

**BLUEHORSE U2**

### Unit Sale Notice Volume (MBF): BLUEHORSE U2

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### Unit Cruise Summary: BLUEHORSE U2

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<th>Ring-Count Trees</th>
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### Unit Cruise Statistics (Cut + Leave Trees): BLUEHORSE U2

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<th>V-BAR (bf/sq ft)</th>
<th>V-BAR CV (%)</th>
<th>V-BAR SE (%)</th>
<th>Net Vol (bf/acre)</th>
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<td>BF Net</td>
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Cruise Unit Report
BLUEHORSE U3

Unit Sale Notice Volume (MBF): BLUEHORSE U3

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Unit Cruise Design: BLUEHORSE U3

Design | Cruise Acres | FMA Acres | N Plots | N Cruise Plots | N Void Plots |
-------|--------------|-----------|---------|----------------|--------------|
B2C: VR, 2 BAF (54.44, 27.78 for some species) | 9.5          | 10.0      | 11      | 6              | 0            |
Measure/Count Plots, Sighting Ht = 16 ft

Unit Cruise Summary: BLUEHORSE U3

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<th>Sp</th>
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<th>All Trees</th>
<th>Trees/Plot</th>
<th>Ring-Count Trees</th>
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Unit Cruise Statistics (Cut + Leave Trees): BLUEHORSE U3

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<th>BA SE (%)</th>
<th>V-BAR (bf/sq ft)</th>
<th>V-BAR CV (%)</th>
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Unit Summary: BLUEHORSE U3

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<th>Defect %</th>
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<th>BA</th>
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<td>22.6</td>
<td>106</td>
<td>137</td>
<td>86,396</td>
<td>85,645</td>
<td>0.9</td>
<td>125.5</td>
<td>348.7</td>
<td>72.6</td>
<td>813.7</td>
</tr>
</tbody>
</table>
Sale Area
Non-Tradeable Leave Tree Area
Riparian Mgt Zone
Forested Wetland
Potentially Unstable Slopes
～～～ Sale Boundary Tags
E-Line
1-1 to 1-21
E-Line
1-22 to 1-26
E-2070
1-27 to 1-49
E-2072
1-50 to 1-84
E-2080
1-85 to 1-129
Grays Harbor
123°11.5'W

SALE NAME:
BLUEHORSE

AGREEMENT #:
30-101103

TOWNSHIP(S):
T16R4W

TRUST(S):
Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION:
South Puget Sound Region

COUNTY(S):
Grays Harbor, Thurston

ELEVATION RGE:
640-1360

SALE AREA:
Non-Tradeable Leave Tree Area
Riparian Mgt Zone
Forested Wetland
Potentially Unstable Slopes
Sale Boundary Tags
Existing Roads
Required Pre-Haul Maintenance
Required Reconstruction
Optional Construction
Clipped Streams
Stream Type
Stream Type Break

Prepared By: acle490
Modification Date: kbai490 5/27/2021
Forest Practices Application/Notification
Notice of Decision

FPA/N No: 2422558
Effective Date: 10/1/2021
Expiration Date: 10/1/2024
Shut Down Zone: 655
EARR Tax Credit: ☒ Eligible  ☐ Non-eligible
Reference: Bluehorse #30-101103

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: Matt Brady  Region: South Puget Sound
Title: Resource Protection Forester  Date: 10/1/2021
Copies to: ☒ Landowner, Timber Owner and Operator
Issued in person: ☒ Landowner  ☒ Timber Owner  ☒ Operator  By: [Signature]
**Appeal Information**

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

You must file your appeal at all three addresses below:

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

Information regarding the Pollution Control Hearings Board can be found at: [http://www.eluho.wa.gov/](http://www.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](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 Affidavit of Mailing**

On this day **10/1/2021**, I placed in the United States mail at Olympia, WA, postage paid, a true and accurate copy of this document. Notice of Decision FPA #**2422558**.

Meredith Dessens

(Printed Name)  

(Signature)
Begin grading, 6" lift of rock & compacting
Sta. 207+40

End grading, 6" lift of rock & compacting
Sta. 251+30

Begin grading, 6" lift of rock & compacting
Sta. 307+40

End grading, 6" lift of rock & compacting
Sta. 351+30

Install 18"x30' culvert
Sta. 2+15

Install 18"x30' culvert
Sta. 9+75

Install 18"x30' culvert
Sta. 3+41

End ditch reconstruction
Sta. 164+80

Begin ditch reconstruction
Sta. 152+80

Begin insloping road, grading, 6" lift of rock & compacting
Sta. 158+00

End insloping road, grading, 6" lift of rock & compacting
Sta. 161+10

End grading & 6" lift of rock, compacting & brushing
Sta. 7+50

Begin grading, 6" lift of rock, compacting & brushing
Sta. 0+00

Install 18"x30' culvert
Sta. 2+04

Remove existing 18"x30' culvert
Sta. 10+60

Construct Ditchout-Left
Sta. 6+50

Construct Ditchout-Right
Sta. 21+00

End ditch reconstruction
Sta. 19+25
End grading, 6" lift of rock & compacting  
Construct Ditchout-Right  
Sta. 26+60

Begin grading, 6" lift of rock & compacting  
Sta. 19+25

End grading, 6" lift of rock, compacting & brushing  
Sta. 16+00

Install 18"x30' culvert  
Sta. 10+60

Install 18"x30' culvert  
Sta. 9+75

Install 18"x35' culvert  
Sta. 2+15

Install 18"x30' culvert  
Sta. 3+41

Install 18"x30' culvert  
Sta. 3+57

Install 18"x30' culvert  
Sta. 4+60

Install 18"x30' culvert  
Sta. 5+30

Install 18"x40' culvert  
Sta. 7+32

Install 18"x30' culvert  
Sta. 9+75

Install 18"x30' culvert  
Sta. 11+80

Install 18"x35' culvert  
Sta. 13+00

Install 18"x35' culvert  
Sta. 15+60

Install 18"x30' culvert  
Sta. 16+00

Install 18"x30' culvert  
Sta. 19+25

Install 18"x35' culvert  
Sta. 2+00

Install 18"x30' culvert  
Sta. 3+41

Install 18"x35' culvert  
Sta. 2+70

Install 18"x30' culvert  
Sta. 2+15

Install 18"x30' culvert  
Sta. 4+60

Install 18"x30' culvert  
Sta. 5+60

Install 18"x30' culvert  
Sta. 6+99

Install 18"x35' culvert  
Sta. 10+60

Install 18"x35' culvert  
Sta. 11+48

Install 18"x35' culvert  
Sta. 12+00

Install 18"x35' culvert  
Sta. 14+00

Install 18"x35' culvert  
Sta. 15+60

Install 18"x35' culvert  
Sta. 17+00

Install 18"x35' culvert  
Sta. 18+00

Install 18"x35' culvert  
Sta. 19+25

Install 18"x35' culvert  
Sta. 22+00

Install 18"x35' culvert  
Sta. 24+00

Install 18"x35' culvert  
Sta. 26+60

Install 18"x30' culvert  
Sta. 28+00

Install 18"x30' culvert  
Sta. 30+00

Install 18"x30' culvert  
Sta. 32+00

Install 18"x30' culvert  
Sta. 34+00

Install 18"x30' culvert  
Sta. 36+00

Install 18"x35' culvert  
Sta. 38+00

Install 18"x30' culvert  
Sta. 40+00

Install 18"x30' culvert  
Sta. 42+00

Install 18"x30' culvert  
Sta. 44+00

Install 18"x30' culvert  
Sta. 46+00

Install 18"x30' culvert  
Sta. 48+00

Install 18"x30' culvert  
Sta. 50+00

Install 18"x30' culvert  
Sta. 52+00

Install 18"x30' culvert  
Sta. 54+00

Install 18"x30' culvert  
Sta. 56+00

Install 18"x30' culvert  
Sta. 58+00

Install 18"x30' culvert  
Sta. 60+00

Install 18"x30' culvert  
Sta. 62+00

Install 18"x30' culvert  
Sta. 64+00

Install 18"x30' culvert  
Sta. 66+00

Install 18"x30' culvert  
Sta. 68+00

Install 18"x30' culvert  
Sta. 70+00

Install 18"x30' culvert  
Sta. 72+00

Install 18"x30' culvert  
Sta. 74+00
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.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Line</td>
<td>152+80 to 158+00</td>
<td>Pre-haul Maintenance</td>
</tr>
<tr>
<td>E-Line</td>
<td>158+00 to 161+10</td>
<td>Reconstruction</td>
</tr>
<tr>
<td>E-Line</td>
<td>161+10 to 164+80</td>
<td>Pre-haul Maintenance</td>
</tr>
<tr>
<td>E-Line</td>
<td>207+40 to 251+30</td>
<td>Pre-haul Maintenance</td>
</tr>
<tr>
<td>E-2065</td>
<td>0+20 to 6+50</td>
<td>Abandonment-if constructed</td>
</tr>
<tr>
<td>E-2070</td>
<td>0+00 to 7+50</td>
<td>Pre-haul Maintenance</td>
</tr>
<tr>
<td>E-3020</td>
<td>2+05 to 2+25</td>
<td>Pre-haul Maintenance</td>
</tr>
<tr>
<td>E-3020</td>
<td>9+65 to 9+85</td>
<td>Pre-haul Maintenance</td>
</tr>
<tr>
<td>E-3020</td>
<td>10+50 to 10+70</td>
<td>Pre-haul Maintenance</td>
</tr>
<tr>
<td>E-3020 Reroute</td>
<td>0+00 to 10+08</td>
<td>Construction</td>
</tr>
<tr>
<td>E-3040</td>
<td>0+00 to 15+60</td>
<td>Pre-haul Maintenance</td>
</tr>
<tr>
<td>E-3041</td>
<td>0+00 to 16+00</td>
<td>Pre-haul Maintenance</td>
</tr>
<tr>
<td>E-3041-1</td>
<td>0+00 to 7+53</td>
<td>Abandonment-if constructed</td>
</tr>
<tr>
<td>E-3050</td>
<td>0+00 to 40+00</td>
<td>Pre-haul Maintenance</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-2065</td>
<td>0+00 to 6+50</td>
<td>Construction</td>
</tr>
<tr>
<td>E-3020</td>
<td>19+25 to 26+60</td>
<td>Reconstruction</td>
</tr>
</tbody>
</table>
0-4 CONSTRUCTION
Construction includes, but is not limited to.
- Clearing;
- Grubbing;
- Right-of-way debris disposal;
- Excavation and/or embankment to subgrade;
- Turnaround construction;
- Acquisition and installation of drainage structures;
- Acquisition, manufacture, and application of rock.

0-5 RECONSTRUCTION
Reconstruction includes, but is not limited to.
- Ripping road, and insloping road surface;
- Brush Clearing;
- Construction of drainage features;
- Acquisition, manufacture, and application of rock.

0-6 PRE-HAUL MAINTENANCE
Pre-haul maintenance includes, but is not limited to.
- Acquisition and installation of drainage structures;
- Acquisition, manufacture, and application of rock;
- Grading road surfaces;
- Brushing roads;
- Reconstruction of ditch;

0-7 POST-HAUL MAINTENANCE
This project includes post-haul road maintenance listed in Clause 9-5 POST-HAUL MAINTENANCE 9-5.

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. 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 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.

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

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.
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.
1-7 TEMPORARY ROAD CLOSURE
Purchaser shall notify the Contract Administrator a minimum of 7 calendar days before the closure of the following roads. Construction may not close any road for more than 2 consecutive calendar days.

<table>
<thead>
<tr>
<th>Road</th>
<th>Number of Allowable Closed Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Line</td>
<td>2</td>
</tr>
<tr>
<td>E-3020</td>
<td>2</td>
</tr>
</tbody>
</table>

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.

1-9 DAMAGED METALLIC COATING
Any cut ends, or damaged galvanized or aluminized coating on existing or new bridge components, culverts, downspouts, and flumes must be cleaned and treated with a minimum of two coats of zinc rich paint or cold galvanizing compound.

1-15 ROAD MARKING
Purchaser shall perform road work in accordance with the state’s marked location. All road work is marked as follows:
- Construction: Orange ribbon tied at eye-height along centerline, with orange pin flags marking centerline.
- Reconstruction: existing roads.

1-16 CONSTRUCTION STAKES SET BY STATE
Purchaser shall perform work on the following road(s) in accordance with the reference points set in the field for grade and alignment. Reconstruction of existing road grades must conform to the original location.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-2065</td>
<td>0+00 to 6+50</td>
<td>Construction</td>
</tr>
<tr>
<td>E-3020 Reroute</td>
<td>0+00 to 10+08</td>
<td>Construction</td>
</tr>
<tr>
<td>E-3040-1</td>
<td>0+00 to 6+99</td>
<td>Construction</td>
</tr>
<tr>
<td>E-3041-1</td>
<td>0+00 to 7+53</td>
<td>Construction</td>
</tr>
</tbody>
</table>

1-18 REFERENCE POINT DAMAGE
Purchaser shall reset reference points (RPs) that were moved or damaged at any time during construction to their original locations. Excavation and embankment may not proceed on road segments controlled by said RPs until Purchaser resets all moved or damaged RPs.
1-21 **HAUL APPROVAL**

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

1-22 **WORK NOTIFICATIONS**

On the following road(s), Purchaser shall notify the Contract Administrator a minimum of 7 calendar days before work begins.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Line</td>
<td>152+80 to 164+80</td>
</tr>
<tr>
<td>E-Line</td>
<td>207+40 to 251+30</td>
</tr>
<tr>
<td>E-3020</td>
<td>0+00 to 11+40</td>
</tr>
</tbody>
</table>

1-23 **ROAD WORK PHASE APPROVAL**

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

- Subgrade construction
- Grading of existing roads prior to rock application
- Haul approval

1-25 **ACTIVITY TIMING RESTRICTION**

The operation of road construction equipment is not allowed on weekends or state recognized holidays, unless authorized in writing by the Contract Administrator. In addition, the specified activities are not allowed during the listed closure period(s) unless authorized in writing by the State.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Closure Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>The operation of road construction equipment</td>
<td>November 1 to April 30.</td>
</tr>
</tbody>
</table>

1-26 **OPERATING DURING CLOSURE PERIOD**

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION or Contract Clause H-130 HAULING SCHEDULE, Purchaser is required to maintain all haul roads at their own expense. 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:

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

1-33 SNOW PLOWING RESTRICTION
Snowplowing will be allowed after the execution of a SNOW PLOWING AGREEMENT, which is available from the Contact Administrator upon request. If damage occurs while plowing, further permission to plow may be revoked by the Contract Administrator.

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS
Purchaser shall immediately remove any mud, dirt, rock, or other material tracked or spilled on to county roads and state highways.

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

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE
Purchaser shall maintain all roads used under this contract in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS for the entire term of this contract. Maintenance is required even during periods of inactivity.
2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE
Purchaser shall perform maintenance on roads listed in Contract Clause C-050 PURCHASER ROAD MAINTENANCE AND REPAIR in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER
Purchaser may be required to perform maintenance on roads listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER as directed by the Contract Administrator. Purchaser shall maintain roads in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-4 PASSAGE OF LIGHT VEHICLES
Purchaser shall maintain the following road(s) in a condition that will allow the passage of light administrative vehicles, except as allowed by Clause 1-7.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-Line</td>
<td>0+00 to 43+00</td>
</tr>
<tr>
<td>E-Line</td>
<td>0+00 to 287+00</td>
</tr>
<tr>
<td>E-3020</td>
<td>0+00 to 11+40</td>
</tr>
<tr>
<td>Or</td>
<td></td>
</tr>
<tr>
<td>E-3020 Reroute</td>
<td>0+00 10+08</td>
</tr>
</tbody>
</table>

2-5 MAINTENANCE GRADING – EXISTING ROAD
On the following road(s), Purchaser shall use a grader to shape the existing surface before application of rock, or if not rocking rock, before timber haul. Purchaser shall accomplish all grading using a motor grader with a minimum of 175 horsepower.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Line</td>
<td>158+00 to 161+10</td>
<td>Grade before application of rock</td>
</tr>
<tr>
<td>E-Line</td>
<td>207+40 to 251+30</td>
<td>Grade before application of rock</td>
</tr>
<tr>
<td>E-2070</td>
<td>0+00 to 7+50</td>
<td>Grade before application of rock</td>
</tr>
<tr>
<td>E-3020</td>
<td>19+25 to 26+60</td>
<td>Grade before application of rock</td>
</tr>
<tr>
<td>E-3040</td>
<td>0+00 to 15+60</td>
<td>Grade before application of rock</td>
</tr>
<tr>
<td>E-3041</td>
<td>0+00 to 16+00</td>
<td>Grade before application of rock</td>
</tr>
<tr>
<td>E-3050</td>
<td>0+00 to 28+50</td>
<td>Grade before timber haul</td>
</tr>
<tr>
<td>E-3050</td>
<td>28+50 to 40+00</td>
<td>Grade before application of rock</td>
</tr>
</tbody>
</table>

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL
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 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.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-2070</td>
<td>0+00 to 7+50</td>
</tr>
<tr>
<td>E-3040</td>
<td>0+00 to 15+60</td>
</tr>
<tr>
<td>E-3041</td>
<td>0+00 to 16+00</td>
</tr>
</tbody>
</table>

3-3 BRUSHING ALTERNATIVE
On the following road(s), pulling, digging, pushing over, and other non-cutting methods used for vegetation removal may be used for brushing. Excavator buckets, log loaders and similar equipment may be used for.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-3020</td>
<td>19+25 to 26+60</td>
</tr>
</tbody>
</table>

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.

3-10 GRUBBING
Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. Grubbing must be completed before starting excavation and embankment.
3-20 ORGANIC DEBRIS DEFINITION
Organic debris is defined as all vegetative material not eligible for removal by Contract Clause G-010 PRODUCTS SOLD AND SALE AREA or G-011 RIGHT TO REMOVE FOREST PRODUCTS AND CONTRACT AREA, that is larger than one cubic foot in volume within the grubbing limits as shown on the TYPICAL SECTION SHEET.

3-21 DISPOSAL COMPLETION
Purchaser shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Purchaser shall complete all disposal of organic debris, before timber haul.

3-23 PROHIBITED DISPOSAL AREAS
Purchaser shall not place organic debris in the following areas:
- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland
- On road subgrades, or excavation and embankment slopes.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED
Purchaser shall not bury organic debris unless otherwise stated in this plan.

3-25 SCATTERING ORGANIC DEBRIS
Purchaser shall scatter organic debris outside of the clearing limits in natural openings. Where natural openings are unavailable or restrictive, alternate debris disposal methods are subject to the written approval of the Contract Administrator.

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.

4-3 ROAD GRADE AND ALIGNMENT STANDARDS
Purchaser shall follow these standards for road grade and alignment except as designed:
- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 12 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

**4-5 CUT SLOPE RATIO**
Purchaser shall construct excavation slopes no steeper than shown on the following table:

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

**4-6 EMBANKMENT SLOPE RATIO**
Purchaser shall construct embankment slopes no steeper than shown on the following table:

<table>
<thead>
<tr>
<th>Material Type</th>
<th>Embankment Slope Ratio</th>
<th>Embankment Slope Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandy Soils</td>
<td>2:1</td>
<td>50</td>
</tr>
<tr>
<td>Common Earth and Rounded Gravel</td>
<td>1½:1</td>
<td>67</td>
</tr>
<tr>
<td>Angular Rock</td>
<td>1¼:1</td>
<td>80</td>
</tr>
</tbody>
</table>

**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.
4-22 TURNAROUNDS
Purchaser may construct optional turnarounds as designated on the TURNOUT AND TURNAROUND LIST. Optional turnarounds must be no larger than 30 feet long and 30 feet wide. Change in locations are subject to written approval by the Contract Administrator.

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION
On the following road(s), Purchaser shall construct and/or reconstruct ditches into the subgrade as specified on the TYPICAL SECTION SHEET.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Line</td>
<td>152+80 to 164+80</td>
</tr>
<tr>
<td>E-2065</td>
<td>0+00 to 6+50</td>
</tr>
<tr>
<td>E-3020</td>
<td>19+25 to 26+60</td>
</tr>
<tr>
<td>E-3020 Reroute</td>
<td>0+00 to 10+08</td>
</tr>
<tr>
<td>E-3040-1</td>
<td>0+00 to 6+99</td>
</tr>
<tr>
<td>E-3041-1</td>
<td>0+00 to 7+53</td>
</tr>
</tbody>
</table>

4-27 DITCH WORK – MATERIAL USE PROHIBITED
On the following road(s), Purchaser shall not pull ditch material across the road or mix in with the road surface. Excavated material must be end hauled to the location specified in Clause 4-37 WASTE AREA LOCATION.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Line</td>
<td>152+80 to 164+80</td>
</tr>
</tbody>
</table>

4-28 DITCH DRAINAGE
Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS
Purchaser shall construct ditchouts as identified in the table below and as needed. Ditchouts must be constructed in a manner that diverts ditch water onto the forest floor and must have excavation backslopes no steeper than a 1:1 ratio. L or R denotes ditchout left or ditchout right.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
<th>L or R</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-2065</td>
<td>6+50</td>
<td>L</td>
</tr>
<tr>
<td>E-3020</td>
<td>21+00</td>
<td>R</td>
</tr>
<tr>
<td>E-3020</td>
<td>26+60</td>
<td>R</td>
</tr>
<tr>
<td>E-3041</td>
<td>7+75</td>
<td>L</td>
</tr>
</tbody>
</table>
4-35 WASTE MATERIAL DEFINITION
Waste material is defined as all dirt, rock, mud, or related material that is extraneous or unsuitable for construction material. Waste material, as used in Section 4 EXCAVATION, is not organic debris.

4-36 DISPOSAL OF WASTE MATERIAL
Purchaser may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris. On side slopes greater than 45%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

4-37 WASTE AREA LOCATION
Purchaser shall deposit waste material in the listed designated areas. Additional waste areas may also be identified or approved by the Contract Administrator.

<table>
<thead>
<tr>
<th>Road</th>
<th>Waste Area Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-2070</td>
<td>East of sta. 5+40, on the downhill side</td>
</tr>
<tr>
<td>E-3020 Reroute</td>
<td>Expand existing overburden pile east of sta. 9+00</td>
</tr>
</tbody>
</table>

4-38 PROHIBITED WASTE DISPOSAL AREAS
Purchaser shall not deposit waste material in the following areas, except as otherwise specified in this plan:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- Within a riparian management zone.
- Within a wetland management zone.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.

4-45 SELECT BORROW
Select borrow consists of granular material, either naturally occurring or processed, and contains no more than 5% clay, organic debris, or trash by volume.

4-55 ROAD SHAPING
Purchaser shall shape the subgrade and surface as shown on the TYPICAL SECTION SHEET. The subgrade and surface shape must ensure runoff in an even, un-concentrated manner, and must be uniform, firm, and rut-free.
4-58 **EXISTING ROAD RIPPING AND BLADING**
On the following road(s), Purchaser shall rip the surface to a depth of 18 inches and reshape as shown on the TYPICAL SECTION SHEET. During the reshaping process, rocks over 4 inches in diameter must be placed in a location specified in Clause 4-37 WASTE AREA LOCATION.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Line</td>
<td>158+00 to 161+10</td>
</tr>
</tbody>
</table>

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 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 and reconstructed subgrades in accordance with the COMPACTION LIST by routing equipment over the entire width except ditch. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before application of rock.

4-63 **EXISTING SURFACE COMPACTION**
On the following road(s), after new rock is placed and shaped, Purchaser shall compact maintained road surfaces in accordance with the COMPACTION LIST by routing equipment over the entire width.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Line</td>
<td>158+00 to 161+10</td>
</tr>
<tr>
<td>E-Line</td>
<td>207+40 to 251+30</td>
</tr>
<tr>
<td>E-2070</td>
<td>0+00 to 7+50</td>
</tr>
<tr>
<td>E-3020</td>
<td>19+25 to 26+60</td>
</tr>
<tr>
<td>E-3040</td>
<td>0+00 to 15+60</td>
</tr>
<tr>
<td>E-3041</td>
<td>0+00 to 16+00</td>
</tr>
<tr>
<td>E-3050</td>
<td>28+50 to 40+00</td>
</tr>
</tbody>
</table>

**SECTION 5 – DRAINAGE**

5-1 **REMOVAL OF SHOULDER BERMS**
Purchaser shall remove berms from road shoulders. The construction of ditchouts is required where ponding could result from the effects of sidecast debris.
5-5 **CULVERTS**
Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT AND DRAINAGE LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts must be new material and meet the specifications in Clauses 10-15 through 10-24, except as specified in Clause 5-7.

5-7 **USED CULVERT MATERIAL**
On the following road(s), Purchaser may install used culverts. All other roads must have new culverts installed.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-2065</td>
<td>0+00 to 6+50</td>
</tr>
</tbody>
</table>

5-12 **UNUSED MATERIALS STATE PROPERTY**
On required roads, any materials listed on the CULVERT AND DRAINAGE LIST that are not installed will become the property of the state. Purchaser shall stockpile materials at the Mima Mounds Pit (SW¼ NW¼ Section 10 T16R03W)

5-15 **CULVERT INSTALLATION**
Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL. 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 10%.

5-18 **CULVERT DEPTH OF COVER**
All culverts must be installed with a depth of cover of not less than 1 foot of compacted subgrade over the top of the culvert at the shallowest point.

5-20 **ENERGY DISSIPATERS**
Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts that specify the placement of rock.
The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT AND DRAINAGE 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.

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 on the CULVERT AND DRAINAGE LIST. 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.

5-33 NATIVE SURFACE ROADS
If overwintered, native surface roads must be waterbarred by November 1. Purchaser shall construct waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical distance of no more than 10 feet between waterbars or between natural drainage paths, and with a maximum spacing of 150 feet.

SECTION 6 – ROCK AND SURFACING

6-2 ROCK SOURCE ON STATE LAND
Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following source(s) on state land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the rock source(s), a joint operating plan must be developed. All parties shall follow this plan. Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before starting any operations in the listed locations.

<table>
<thead>
<tr>
<th>Source</th>
<th>Location</th>
<th>Rock Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vantage Quarry</td>
<td>SW¼NW¼ of Sect. 22 T16R04W</td>
<td>2-Inch Minus, 4-Inch In-Place, Quarry Spalls</td>
</tr>
</tbody>
</table>

6-3 ROCK SOURCE STATE LAND, EXISTING STOCKPILE
Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following existing stockpile(s) on state land at no charge to the Purchaser. Other
stockpiles may not be used without prior written approval from the Contract Administrator.

<table>
<thead>
<tr>
<th>Source</th>
<th>Location</th>
<th>Rock Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vantage Quarry</td>
<td>Between E-3020 Rd and proposed E-3020 Reroute</td>
<td>1 ½ Inch Minus (may be used in place of 2-Inch Minus)</td>
</tr>
</tbody>
</table>

6-5 **ROCK FROM COMMERCIAL SOURCE**

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

<table>
<thead>
<tr>
<th>Possible Source</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Lake Resources</td>
<td>10201 Littlerock Rd SW</td>
</tr>
<tr>
<td></td>
<td>Olympia, WA 98512</td>
</tr>
<tr>
<td>Northwest Rock Inc.</td>
<td>6801 State Route 12</td>
</tr>
<tr>
<td></td>
<td>Oakville, WA 98568</td>
</tr>
</tbody>
</table>

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 VANTAGE QUARRY DEVELOPMENT PLAN prepared by the state and included in this road plan. Upon completion of operations, the rock source must be left in the condition specified in the VANTAGE QUARRY DEVELOPMENT PLAN, and approved in writing by the Contract Administrator.

<table>
<thead>
<tr>
<th>Source</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vantage Quarry</td>
<td>SW¼NW¼ of Sect. 22 T16R04W</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Material</th>
<th>Maximum Slope Ratio (Horiz. : Vert.)</th>
<th>Maximum Slope Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>2:1</td>
<td>50</td>
</tr>
<tr>
<td>Gravel</td>
<td>1.5:1</td>
<td>67</td>
</tr>
<tr>
<td>Common Earth</td>
<td>1:1</td>
<td>100</td>
</tr>
</tbody>
</table>
Fractured Rock | 0.5:1 | 200  
Solid Rock    | 0:1   | vertical

- Pit walls must be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The width of pit benches must be a minimum of 1.5 times the maximum length of the largest machine used.
- The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient.
- All vegetation, including stumps shall be cleared a minimum of 20 feet beyond the top of all working faces and scattered in natural openings.
- Oversized material remaining in the rock source at the conclusion of the timber sale may not exceed 10% of the total volume mined in that source. Oversize material is defined as rock fragments larger than two feet in any direction.
- All operations must be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- All vehicle access to the top of the pit faces must be blocked.

6-14 **DRILL AND SHOOT**
Rock drilling and shooting must meet the following specifications:
- Oversize material remaining in the rock source at the conclusion of the timber sale may not exceed 10% of the total volume mined in that source.
- Oversize material is defined as rock fragments larger than two feet in any dimension.
- Oversized rock that exceeds the maximum allowable amount must be reduced in size until it no longer meets Oversize material definition.
- Purchaser shall notify the Contract Administrator a minimum of 3 working days before blasting operations.
- Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator a minimum of 1 working day before any 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 and trails before blasting operations.

6-20 **ROCK CRUSHING OPERATIONS**
Rock crushing operations must conform to the following specifications:
- The crushing operation must be concluded within 30 working days from the time it begins.
6-22  **FRACTURE REQUIREMENT FOR ROCK**
A minimum of 50% by visual inspection of coarse aggregate must have at least one fractured face. Coarse aggregate is the material greater than 1/4-inch in size.

6-23  **ROCK GRADATION TYPES**
Purchaser shall provide or 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. Purchaser shall provide a sieve analysis upon request from the Contract Administrator.

6-30  **2-INCH MINUS CRUSHED ROCK**

<table>
<thead>
<tr>
<th>% Passing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2” square sieve</td>
<td>100%</td>
</tr>
<tr>
<td>1” square sieve</td>
<td>50 - 85%</td>
</tr>
<tr>
<td>U.S. #4 sieve</td>
<td>30 - 50%</td>
</tr>
<tr>
<td>U.S. #40 sieve</td>
<td>16% maximum</td>
</tr>
<tr>
<td>U.S. #200 sieve</td>
<td>5% maximum</td>
</tr>
</tbody>
</table>

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

6-38  **4-INCH IN-PLACE ROCK**
4-inch in-place rock must have a minimum of 90 percent of the top 4 inches of the running surface pass a 4-inch square opening.

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

6-43  **QUARRY SPALLS**

<table>
<thead>
<tr>
<th>% Passing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8” square sieve</td>
<td>100%</td>
</tr>
<tr>
<td>4” square sieve</td>
<td>40% maximum</td>
</tr>
<tr>
<td>3/4” square sieve</td>
<td>10% maximum</td>
</tr>
</tbody>
</table>

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

6-55  **ROCK APPLICATION MEASURED BY COMPACTED DEPTH**
Measurement of specified rock depths, are defined as the compacted depth(s) using the compaction methods required in this road plan. Estimated quantities specified in the ROCK LIST are 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, unless otherwise stated in Clause 6-75 OPTIONAL ROCK EXCEPTION.
6-70 APPROVAL BEFORE ROCK APPLICATION
Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction on new roads and road grading on existing roads before rock application.

6-71 ROCK APPLICATION
Purchaser shall apply rock in accordance with the specifications and quantities shown on the ROCK LIST. Rock must be spread, shaped, and compacted full width concurrent with rock hauling operations. Road surfaces must be compacted in accordance with the COMPACTION LIST by routing equipment over the entire width.

6-73 ROCK FOR WIDENED PORTIONS
Purchaser shall apply rock to turnarounds, turnouts, and areas with curve widening to the same depth and specifications as the traveled way.

6-75 OPTIONAL ROCK EXCEPTION
On the following roads, Purchaser may provide and place less rock than shown on the ROCK LIST.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-2065</td>
<td>0+00 to 6+50</td>
</tr>
<tr>
<td>E-3041-1</td>
<td>0+00 to 7+53</td>
</tr>
</tbody>
</table>

SECTION 7 – STRUCTURES

7-5 STRUCTURE DEBRIS
Purchaser shall not allow debris from the installation or removal of structures to enter any stream. Purchaser shall maintain a clean jobsite, with all materials stored away from the high water mark or other area presenting a risk of the materials entering a stream. Debris entering any stream must be removed immediately, and placed in the site(s) designated for stockpiling or disposal. Purchaser shall retrieve all material carried downstream from the jobsite.

7-57 CULVERT SHAPE CONTROL
Purchaser shall monitor the culvert shape during backfill and compaction. Special attention must be paid to maintaining the structure’s rise dimensions, concentricity, and smooth uniform curvature. If compaction methods are resulting in peaking or deflection of the culvert, Purchaser shall modify the compaction method to achieve the appropriate end result.

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. Purchaser shall revegetate during the first available opportunity after road work is completed.

<table>
<thead>
<tr>
<th>Road</th>
<th>Location</th>
<th>Qty (lbs)</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-3040</td>
<td>11+55 to 12+05</td>
<td>50 lbs/acre</td>
<td>Pasture Mix</td>
</tr>
</tbody>
</table>

8-16 REVEGETATION SUPPLY
The Purchaser shall provide the Pasture Mix grass seed and straw.

SECTION 9 – POST-HAUL ROAD WORK

9-1 EARTHEN BARRICADES
Purchaser shall construct barricades in accordance with the BARRICADE DETAIL.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-2065</td>
<td>0+20</td>
</tr>
<tr>
<td>E-3041-1</td>
<td>0+00</td>
</tr>
</tbody>
</table>

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND
Culverts removed from roads become the property of the Purchaser and must be removed from state land.

9-5 POST-HAUL MAINTENANCE
Purchaser shall perform post-haul maintenance in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

9-10 LANDING DRAINAGE
Purchaser shall provide for drainage of the landing surface.

9-21 ROAD ABANDONMENT
Purchaser shall abandon the following roads before the termination of this contract.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-2065</td>
<td>0+20 to 6+50</td>
<td>Abandonment</td>
</tr>
<tr>
<td>E-3041-1</td>
<td>0+00 to 7+53</td>
<td>Abandonment</td>
</tr>
</tbody>
</table>

9-22 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 150 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.
- Block roads with earthen barricades in accordance with the attached BARRICADE DETAIL.
- 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.

SECTION 10 MATERIALS

10-17 CORRUGATED PLASTIC CULVERT
Polyethylene culverts must meet AASHTO M-294 specifications, or ASTM F-2648 specifications for recycled polyethylene. Culverts must be Type S – double walled with a corrugated exterior and smooth interior.

10-22 PLASTIC BAND
Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used. Split coupling bands must have a minimum of four corrugations, two on each side of the pipe joint.

SECTION 11 SPECIAL NOTES

11-1 SETTLING POND AND PUMP
On the following roads, Purchaser shall remove and/or install culverts from live streams. Culvert removal and installation shall be in accordance with the FPA, Settling Pond and Pump Detail and Live Stream Culvert Removal Procedure unless authorized in writing by the Contract Administrator.

<table>
<thead>
<tr>
<th>Road</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-3040</td>
<td>11+80</td>
</tr>
<tr>
<td>Road Number</td>
<td>From Station</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
</tr>
<tr>
<td>D-Line</td>
<td>0+00</td>
</tr>
<tr>
<td>E-Line</td>
<td>0+00</td>
</tr>
<tr>
<td>E-Line</td>
<td>158+00</td>
</tr>
<tr>
<td>E-Line</td>
<td>161+10</td>
</tr>
<tr>
<td>E-2065</td>
<td>0+00</td>
</tr>
<tr>
<td>E-2070</td>
<td>0+00</td>
</tr>
<tr>
<td>E-3020</td>
<td>0+00</td>
</tr>
<tr>
<td>E-3020</td>
<td>19+25</td>
</tr>
<tr>
<td>E-3020 Reroute</td>
<td>0+00</td>
</tr>
<tr>
<td>E-3040</td>
<td>0+00</td>
</tr>
<tr>
<td>E-3040-1</td>
<td>0+00</td>
</tr>
<tr>
<td>E-3041</td>
<td>0+00</td>
</tr>
<tr>
<td>E-3041-1</td>
<td>0+00</td>
</tr>
<tr>
<td>E-3050</td>
<td>0+00</td>
</tr>
</tbody>
</table>
## TURNOUT & TURNAROUND LIST

<table>
<thead>
<tr>
<th>Road Number</th>
<th>Begin L-Station</th>
<th>End L-Station</th>
<th>Turnout Width (H)</th>
<th>Full Width Length (L)</th>
<th>Taper Length (T)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-2065</td>
<td>3+00</td>
<td>3+60</td>
<td>30′</td>
<td>30′</td>
<td>15′</td>
<td>Turnaround Left</td>
</tr>
<tr>
<td>E-3040-1</td>
<td>2+50</td>
<td>3+10</td>
<td>30′</td>
<td>30′</td>
<td>15′</td>
<td>Turnaround Right</td>
</tr>
<tr>
<td>E-3041-1</td>
<td>3+20</td>
<td>3+80</td>
<td>30′</td>
<td>30′</td>
<td>15′</td>
<td>Turnaround Left</td>
</tr>
</tbody>
</table>

*See Typical Section Sheet for Turnout Detail

## COMPACTION LIST

<table>
<thead>
<tr>
<th>Road</th>
<th>From Station</th>
<th>To Station</th>
<th>Type</th>
<th>Max Depth Per Lift (inches)</th>
<th>Equipment Type</th>
<th>Equipment Weight (lbs)</th>
<th>Minimum Number of Passes</th>
<th>Maximum Operating Speed (mph)</th>
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</thead>
<tbody>
<tr>
<td>All New Construction</td>
<td></td>
<td></td>
<td>Subgrade</td>
<td>12”</td>
<td>Smooth Drum Vibratory Roller</td>
<td>12,000</td>
<td>3 low freq. vibe on</td>
<td>3.5</td>
</tr>
<tr>
<td>All New Construction</td>
<td></td>
<td></td>
<td>Rock</td>
<td>8”</td>
<td>Smooth Drum Vibratory Roller</td>
<td>12,000</td>
<td>3 low freq. vibe on</td>
<td>3.5</td>
</tr>
<tr>
<td>All Prehaul Maintenance</td>
<td></td>
<td></td>
<td>Existing Surface</td>
<td>-</td>
<td>Smooth Drum Vibratory Roller</td>
<td>12,000</td>
<td>3 low freq. vibe on</td>
<td>3.5</td>
</tr>
<tr>
<td>All Prehaul Maintenance</td>
<td></td>
<td></td>
<td>Surfacing</td>
<td>6”</td>
<td>Smooth Drum Vibratory Roller</td>
<td>12,000</td>
<td>3 low freq. vibe on</td>
<td>3.5</td>
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</tbody>
</table>
**ROCK LIST**

**BALLAST & SURFACING**

<table>
<thead>
<tr>
<th>Road Number</th>
<th>From Station</th>
<th>To Station</th>
<th>Rock Slope</th>
<th>Compacted Rock Depth</th>
<th>C.Y./Station</th>
<th># of Stations</th>
<th>C.Y. Subtotal</th>
<th>Rock Source</th>
<th>Turnout</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td>E-2065*</td>
<td>0+00</td>
<td>6+50</td>
<td>1 ½:1</td>
<td>12”</td>
<td>50</td>
<td>6.50</td>
<td>325</td>
<td>Vantage Quarry -and/or- Commercial</td>
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</tr>
<tr>
<td>E-3020</td>
<td>19+25</td>
<td>26+60</td>
<td>1 ½:1</td>
<td>8”</td>
<td>32</td>
<td>7.35</td>
<td>235</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-3040-1</td>
<td>0+00</td>
<td>6+99</td>
<td>1 ½:1</td>
<td>12”</td>
<td>50</td>
<td>6.99</td>
<td>350</td>
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<td></td>
</tr>
<tr>
<td>E-3041-1*</td>
<td>0+00</td>
<td>7+53</td>
<td>1 ½:1</td>
<td>12”</td>
<td>50</td>
<td>7.53</td>
<td>377</td>
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<td></td>
</tr>
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<td>Turnarounds</td>
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<tr>
<td>Landing Rock*</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-Line</td>
<td>158+00</td>
<td>161+10</td>
<td>1 ½:1</td>
<td>6”</td>
<td>31</td>
<td>3.10</td>
<td>96</td>
<td>Vantage Quarry -and/or- Commercial</td>
<td></td>
</tr>
<tr>
<td>E-Line</td>
<td>207+40</td>
<td>251+30</td>
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<td>6”</td>
<td>31</td>
<td>43.90</td>
<td>1361</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-2070</td>
<td>0+00</td>
<td>7+50</td>
<td>1 ½:1</td>
<td>6”</td>
<td>24</td>
<td>7.50</td>
<td>180</td>
<td>Vantage Quarry -and/or- Commercial</td>
<td></td>
</tr>
<tr>
<td>E-3020 Reroute</td>
<td>0+00</td>
<td>10+08</td>
<td>1 ½:1</td>
<td>12”</td>
<td>58</td>
<td>10.08</td>
<td>585</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-3020</td>
<td>2+05</td>
<td>2+25</td>
<td>1 ½:1</td>
<td>12”</td>
<td>50</td>
<td>0.20</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-3020</td>
<td>9+65</td>
<td>9+85</td>
<td>1 ½:1</td>
<td>12”</td>
<td>50</td>
<td>0.20</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-3020</td>
<td>10+50</td>
<td>10+70</td>
<td>1 ½:1</td>
<td>12”</td>
<td>50</td>
<td>0.20</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-3040</td>
<td>0+00</td>
<td>15+60</td>
<td>1 ½:1</td>
<td>6”</td>
<td>24</td>
<td>15.60</td>
<td>374</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-3041</td>
<td>0+00</td>
<td>16+00</td>
<td>1 ½:1</td>
<td>6”</td>
<td>24</td>
<td>16.00</td>
<td>384</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-3050</td>
<td>28+50</td>
<td>40+00</td>
<td>1 ½:1</td>
<td>6”</td>
<td>24</td>
<td>11.50</td>
<td>276</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Landing Construction</td>
<td>400</td>
<td>2 ea.</td>
<td>800</td>
<td>Vantage Quarry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culvert Headwalls and Dissipaters</td>
<td>29</td>
<td></td>
<td></td>
<td>Quarry Spalls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Optional Rock: Purchaser is allowed the following rock depths from State owned rock sources, but application of rock is not required.

NOTE: Yardages are estimated on a compacted (In-Place) basis. Compliance of required rock will be based on compacted depth measurement. **Apply appropriate factors to determine loose amounts for estimating purposes.**
## CULVERT AND DRAINAGE LIST

<table>
<thead>
<tr>
<th>Road Number</th>
<th>Location</th>
<th>Culvert Dia. (in)</th>
<th>Culvert Type</th>
<th>Length (ft)</th>
<th>Riprap (C.Y.)</th>
<th>Backfill Type</th>
<th>Placement Method*</th>
<th>Const. Staked*</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-2065</td>
<td>2+04</td>
<td>18</td>
<td>TEMP</td>
<td>30</td>
<td>1</td>
<td>1.5</td>
<td>QS</td>
<td>NT</td>
<td>Construct ditchout left</td>
</tr>
<tr>
<td>E-2065</td>
<td>6+50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-3020</td>
<td>2+15</td>
<td>18</td>
<td>PD</td>
<td>35</td>
<td>1</td>
<td>1.5</td>
<td>QS</td>
<td>NT</td>
<td>Remove Existing</td>
</tr>
<tr>
<td>E-3020</td>
<td>9+75</td>
<td>18</td>
<td>PD</td>
<td>30</td>
<td>1</td>
<td>1.5</td>
<td>QS</td>
<td>NT</td>
<td>Construct ditchout right</td>
</tr>
<tr>
<td>E-3020</td>
<td>10+60</td>
<td>18</td>
<td>PD</td>
<td>30</td>
<td>1</td>
<td>1.5</td>
<td>QS</td>
<td>NT</td>
<td>Construct ditchout right</td>
</tr>
<tr>
<td>E-3020</td>
<td>21+00</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-3020</td>
<td>26+60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>E-3020</td>
<td>3+41</td>
<td>18</td>
<td>PD</td>
<td>30</td>
<td>1</td>
<td>1.5</td>
<td>QS</td>
<td>NT</td>
<td></td>
</tr>
<tr>
<td>E-3020</td>
<td>7+32</td>
<td>18</td>
<td>PD</td>
<td>40</td>
<td>1</td>
<td>1.5</td>
<td>QS</td>
<td>NT</td>
<td></td>
</tr>
<tr>
<td>E-3020</td>
<td>2+70</td>
<td>18</td>
<td>PD</td>
<td>35</td>
<td>1</td>
<td>1.5</td>
<td>QS</td>
<td>NT</td>
<td>Replace existing</td>
</tr>
<tr>
<td>E-3040</td>
<td>11+80</td>
<td>36</td>
<td>PD</td>
<td>60</td>
<td>3</td>
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<td>NT</td>
<td>Replace existing, T4</td>
</tr>
<tr>
<td>E-3040</td>
<td>13+00</td>
<td>18</td>
<td>PD</td>
<td>30</td>
<td>1</td>
<td>1.5</td>
<td>QS</td>
<td>NT</td>
<td></td>
</tr>
<tr>
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<td>3+57</td>
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<td>PD</td>
<td>30</td>
<td>1</td>
<td>1.5</td>
<td>QS</td>
<td>NT</td>
<td></td>
</tr>
<tr>
<td>E-3041</td>
<td>1+00</td>
<td>18</td>
<td>PD</td>
<td>30</td>
<td>1</td>
<td>1.5</td>
<td>QS</td>
<td>NT</td>
<td>Construct ditchout left</td>
</tr>
<tr>
<td>E-3041</td>
<td>7+75</td>
<td></td>
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</tr>
</tbody>
</table>

**Key:**
- **QS** - Quarry Spalls
- **NT** - Native (bank run)
- **LL** - Light Loose Riprap
- **HL** - Heavy Loose Riprap

**Culvert Backfill and Base Preparation**

Key:
- **QS** - Quarry Spalls
- **NT** - Native (bank run)
- **LL** - Light Loose Riprap
- **HL** - Heavy Loose Riprap
CULVERT AND DRAINAGE SPECIFICATION DETAIL
(Page 1 of 3)

Normal Backslope
Additional cut into backslope to allow for culvert
2' Min.
CATCH BASIN
CULVERT - Natural Lay
Subgrade Fill Material
Undisturbed Soil
Lower ditchline to accommodate diameter of culvert

CULVERT - With Flume or Downspout
Subgrade Fill Material
Support at 10' intervals.
Support material shall be at least 1" X 1/8" steel/iron with rust protection coating.
Bolted both sides with 1/2" bolts and 2 washers per bolt.
Energy Dissipator
Undisturbed Soil
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.

**HEADCWALLS**

- Low spot allows for water to continue down ditch in case of plugged culvert
- Headwalls to be constructed of material that will resist erosion.

**ENERGY DISSIPATORS**

- Aggregate: as specified in the CULVERT LIST.
- 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

<table>
<thead>
<tr>
<th>Nominal Diameter</th>
<th>Minimum Thickness</th>
<th>Minimum Cover</th>
<th>Min. Trench Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>B</td>
<td>C</td>
<td>W</td>
</tr>
<tr>
<td>18&quot;</td>
<td>6&quot;</td>
<td>12&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>24&quot;</td>
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<tr>
<td>6&quot;</td>
<td>6&quot;</td>
<td>12&quot;</td>
<td>54&quot;</td>
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</table>
Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the construction materials. Remove slides up to 100 cubic yards in volume from ditches and the roadway. Repair fill-failures with selected material or material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

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

Drainage

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

Termination of Use or End of Season
- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

Debris
- Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.
LIVE STREAM CULVERT REMOVAL PROCEDURE

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

1) Purchaser shall notify the Contract Administrator of intent to start project, and a pre-work conference shall be held before move in of equipment. State will designate a representative that will inspect site when work is being performed in creek channel.

2) Assemble the items on the Materials List onsite before proceeding.

3) Remove 95% of fill.

4) Set up pumps (2 required, with one as backup).

5) Dam up stream with sandbags and line floor of dam with plastic (to prevent subsurface water flow), place clean rock on plastic to hold in place, and key leading edge of plastic into channel bottom - see SETTLING POND AND PUMP DETAIL. Build a settling pond at culvert outlet. Fill may need to be removed before the settling pond installation due to space limitations. Pump clean water at catch basin around work site and back into stream. Dirty water shall be pumped away from site and onto forest floor a minimum of 200 feet from live streams.

6) Remove remainder of fill and culvert.

7) Backfill settling pond.

Materials List:

- 3 pumps. The clean water pump (dam at culvert catch basin), dirty water pump (settling pond) and the backup pump shall each have a minimum capacity to keep pace with current and anticipated flows.
- 240 square feet plastic sheet;
- 10 bales of straw;
BARRICADE DETAIL

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

PLAN VIEW

TRAFFIC SIDE
OF BARRICADE

3 FT. MIN.

BARRICADE

VARIABLE
ROAD GRADE

25 FT. MIN.

CLOSED SIDE
OF BARRICADE

DIP
1 FT. MAX.

BOTTOM OF DIP SHALL BE OUTFLOPED SO AS TO DRAIN FREELY

PROFILE VIEW
**BRUSHING DETAIL**  
*(not to scale)*

**BRUSHING LIST**

<table>
<thead>
<tr>
<th>Road Number</th>
<th>Stations</th>
<th>Road Width (feet)</th>
<th>Ditch Width (feet)</th>
<th>Ditch Depth (feet)</th>
<th>Brushing Limits (feet)</th>
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<td>In addition to brushing... Cut brush an extra 16 feet on the inside of curves to provide extra visibility on switchbacks and curves</td>
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B1 extends horizontally the specified distance in feet from the back of the ditch. B2 extends horizontally the specified distance in feet from the outside edge of the running surface.
SETTLING POND AND PUMP DETAIL

Line floor at dam with plastic sheet to prevent subsurface loss of water.

Build sandbag & plastic dam and key into creek channel walls.

Pump dirty water from site, onto forest floor 200 feet (minimum) from live streams.

Place silt fence at base of fill slope to catch surface run-off (if raining).

Build settling pond. Fill may need to be removed before pond can be built.

Legend

Pump  
P  
Ditch  <  <  <
Non-Drivable Water Bar Detail

Cross Ditch

Cross Section at Centerline

WATER BAR DETAIL

Date:  Scale: None  App#:  Drawn by: M.A.B.

WASHINGTON STATE DEPARTMENT OF Natural Resources
P-Stn : 331.0  H. Offset:  9.9  Cut Dp:   -1.1  
L-Stn : 330.7  V.Offset:  -0.9  Index:   108

P-Stn : 436.5  H. Offset:   0.0  Cut Dp:    0.0  
L-Stn : 435.7  V.Offset:   0.0  Index:   109

P-Stn : 513.3  H. Offset:  -5.1  Cut Dp:    1.9  
L-Stn : 512.2  V.Offset:  -1.1  Index:   110

P-Stn : 592.0  H. Offset:   0.0  Cut Dp:    0.0  
L-Stn : 590.5  V.Offset:   0.0  Index:   111

P-Stn : 651.7  H. Offset:   0.0  Cut Dp:  -1.1  
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1. Development for rock shall be in area ‘C’ as shown on the Vantage Quarry Plan View map. Loose Shot Rock as shown on Vantage Quarry Plan View Map also available for use.

2. All vegetation including stumps shall be cleared a minimum of 35 feet beyond the top of all working faces. Trees shall be cleared to a minimum of ¾ of the height of the tallest tree adjacent to the pit. Surface shall be scalped of all overburden within 20 feet of working face at all times. Overburden faces shall be sloped no steeper than 1:1.

3. Overburden shall be end hauled to the designated waste area on the Vantage Quarry Plan View map. Minimal acceptable compaction is achieved by placing waste material in 2 foot or shallower lifts and routing excavation equipment over entire width of the lifts. End hauled overburden shall be sloped no steeper than 1.5:1.

4. Root wads and organic debris larger than one cubic foot in volume shall be separated from overburden material and piled in the vegetative waste area as shown on the Vantage Quarry Plan View map.

5. Quarry faces shall not exceed 30 feet in height and shall be sloped no steeper than 1/4:1.

6. Working bench width shall be a minimum of 20 feet.

7. The quarry floor shall have continuity of slope be left in a smooth and neat condition, providing drainage to the northwest at a minimum of 2 percent. All knobs, bumps, or extrusions shall be removed to the existing floor level by excavation or drill and shoot techniques.

8. Reclamation will not be required following use.

9. All operations shall be carried out in compliance with all regulations of:

10. The Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 3 working days prior to any drilling. Access roads and recreational trails in the area shall be blocked prior to blasting operations.

11. The Purchaser shall notify the Contract Administrator a minimum of 3 working days before blasting operations.

12. At the completion of rock source operations, Purchaser shall ask Contract Administrator for written approval of final rock source condition and compliance with the terms of this plan.
13. At the end of operations, quarry faces and walls shall be scaled and cleared of loose and overhanging material, and benches shall have safety berms constructed or access blocked to highway vehicles.

14. The site shall be cleared of all temporary structures, equipment and rubbish, and shall be left in a neat and presentable condition so that future operations may proceed in an orderly manner.
DEPARTMENT OF NATURAL RESOURCES - SOUTH PUGET SOUND REGION

Road Development Cost Estimate

(For internal DNR use only. Costs are estimates only & are not guaranteed by the State or part of the Road Plan.)

REGION: SPS  UNIT: Littlerock

SALE/PROJECT NAME: Bluehorse  CONTRACT NUMBER: 30-101103
LEGAL DESCRIPTION: Sects 21, 22 & 23, T16R04W

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CULVERTS AND FLUMES: $2,595  STRUCTURES: $0  GENERAL EXPENSES: $5,065  MOBILIZATION: $5,800  TOTAL COSTS: $67,144  COST PER STATION: $2,159  POST HAUL COSTS: $8,273  

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

TOTAL (All Roads) = $163,049
SALE VOLUME MBF = 4,962
TOTAL COST PER MBF = $32.86

Date: 03/16/21

RoadCost_Bluehorse_v16March2021.xlsx
Unit 2
62 Acres
Scattered Individual Trees

Sale Area
Leave Tree Area
Riparian Mgt Zone
Forest Wetland
Wetland Mgt Zone
Slope Stability Mitigation Zone
Prohibited Decking Area

Existing Roads
Required Pre-Haul Maintenance
Required Construction
Optional Construction
Optional Reconstruction
Ground Harvest
Cable Harvest

Clipped Streams
Stream Type
Stream Type Break
Landing - Proposed
Leave Tree Area <1/4-acre
Rock Pit
Waste Area

Prepared By: acle490
Modification Date: nchi490 10/12/2021