



Oregon Department of Forestry
 2600 State St Salem OR 97310

PART III: EXHIBITS

EXHIBIT B

TIMBER SALE OPERATIONS PLAN

(See page 2 for instructions)

Date Received by State: _____

(5) State Brand Information (Complete)

(1) Contract Number: KL-341-2022-GF7320-01

(2) Sale Name: Abbey - GNA

(3) Contract Expiration Date: 10/31/2024

(4) Purchaser Name: _____

(6) State Representatives:

<u>Name</u>	<u>Circle One</u>	<u>Phone No.</u>	<u>Cell No.</u>	<u>Alt Phone</u>
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			

(7) Purchaser Representatives:

<u>Name</u>	<u>Circle One</u>	<u>Phone No.</u>	<u>Cell No.</u>	<u>Alt Phone</u>
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			

(8) Name of Subcontractors and Start Dates:

<u>Project No.</u>	<u>Subcontractor Name.</u>	<u>Start Date</u>	<u>Completion Date</u>	<u>Cell No.</u>	<u>Alt Phone</u>

Subcontractor Name. Start Date Cell No. Alt Phone

(9) Comments:

(10) Operations Map: Attach a copy of timber sale Exhibit A or other suitable map which plainly shows the items listed on the instruction sheet.



Oregon Department of Forestry

2600 State St Salem OR 97310

PART III: EXHIBITS

EXHIBIT B







INSTRUCTION SHEET FOR OPERATIONS PLAN

SUBMIT ONE COPY OF PLAN STATE

Operations shall be limited to the work shown in the plan until a revised plan or supplemental plan is submitted covering additional work. Compliance with this plan is not in lieu of compliance with any federal requirements related to the federal Endangered Species Act. If STATE has prepared a required Forest Practices Act (FPA) "Written Plan" for operations, PURCHASER shall comply with all provisions of the Written Plan.

Explanation of Item No.(from Page 1)

- (5) All sales require you to use a brand furnished by STATE. If the State brand has not been assigned when the plan is submitted, it will be furnished and assigned later. Complete drawing. If more than one brand is assigned to the sale, complete both drawings.
- (6) The contract requires you to have a designated representative available on the sale area or work location who is authorized to receive in your behalf any notice or instruction given by STATE and to take action in regard to performance under the contract. If logging and project work is widely separated, a representative is required for each.
- (7) The STATE representative will be designated when your plan is approved and is the person who will inspect and issue instructions regarding performance.
- (8) Show names of subcontractors to be used for any or all phases of the operations. If subcontractors are not Known, or are changed later, give notification to the STATE representative prior to commencement of work by subcontractor.
- (9) Show projected dates for commencement of both projects and logging. If projected dates need to be changed at a later date, notification must be given to the STATE representative by supplemental plan or otherwise, prior to commencement of such operations.
- (10) The STATE representative will furnish extra copies of Exhibit A of the contract for your use in preparing the operations map. The map shall use the following legend and show:
 1. Landing locations, approximate setting boundaries, and probable sequence of logging the settings. Number the settings in sequence.
 2. Locations of spur roads planned for construction, other than required by the timber sale contract. Provide spur road specifications
 3. Locations of proposed tractor yarding roads. Show if and how marked on the ground.
 4. Locations of temporary stream crossings.
 5. List the sequence of performing project work.
 6. Location of rock sources - attach pit development plans.

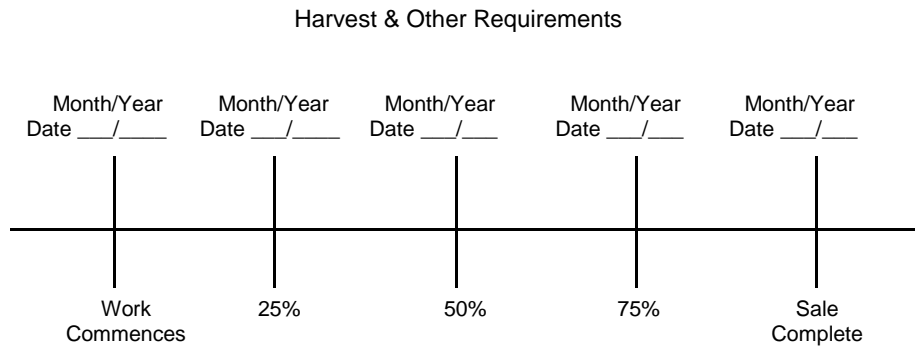
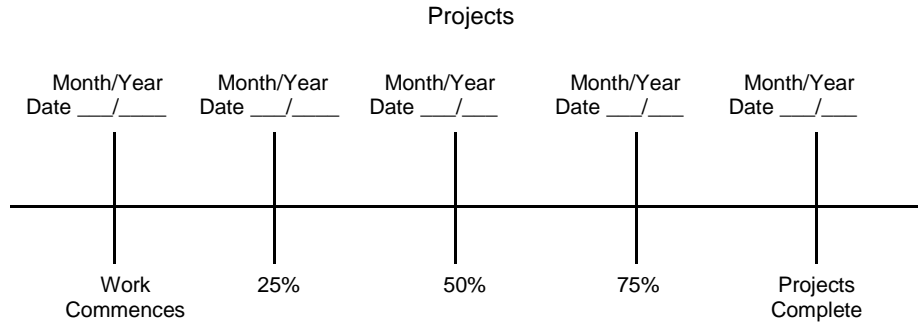
	1	Cable Landing, with numbers for sequence.
	A	Tractor Landing with alphabetical sequence.
		Approximate setting boundary.
		Spur truck roads.
		Tractor yarding roads.
		Temporary stream crossings.



Oregon Department of Forestry
 2600 State St Salem OR 97310
 PART III: EXHIBITS
EXHIBIT B
OPERATIONS PLAN

Completion Timeline

Indicate on the appropriate timeline below, the dates by which you plan to complete the work as required under this contract. The purpose of this section is to develop a plan that will ensure you complete the work as required, and meet the interim completion date(s) and contract expiration date. This plan is incorporated and made a part of the contract. When, in the opinion of STATE, operations are not commencing in a manner that meets the intent of this plan, you may be placed in violation of contract and your operations suspended until an amended plan is submitted and approved by STATE.



The Federal Endangered Species Act (ESA) prohibits a person from taking any federally listed threatened or endangered species. Taking under the federal ESA may include alteration of habitat. STATE's approval of this plan does not certify that PURCHASER's operation under the plan is lawful under the federal ESA. As provided in the timber sale contract, PURCHASER's must comply with all applicable state, federal, and local laws.

PURCHASER's compliance with this plan is not in lieu of compliance with any federal requirements related to the federal Endangered Species Act.

APPROVED; Date: _____

SUBMITTED BY:
PURCHASER

STATE OF OREGON - DEPARTMENT OF
FORESTRY

Title _____

Title _____



Oregon Department of Forestry
EXHIBIT C - SAWMILL GRADE (EASTSIDE SCALE)
SCALING INSTRUCTIONS - LOCATION APPROVAL - BRAND INFORMATION
Klamath-Lake - EOA

(1) ORIGINAL REGISTRATION Date _____
 REVISION NUMBER 000 Date _____
 CANCELLATION Date _____

(2) TO: _____
 (Third Party Scaling Organization)

(3) FROM: Klamath-Lake Phone (541) 883-5681
 (State Forestry District)

Address: 3200 DELAP RD
KLAMATH FALLS, OR 97601

(4) PURCHASER: _____
 Mailing Address: _____

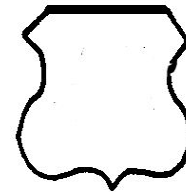
Phone Number: _____

(9) **SALE NAME:** Abbey - GNA
COUNTY: Klamath

(10) **STATE CONTRACT NUMBER:**
KL-341-2022-GF7320-01

(11) **STATE BRAND REGISTRATION NUMBER:**

(12) STATE BRAND INFORMATION:



(13) PAINT REQUIRED: YES
 COLOR: Orange

(14) **SPECIAL REQUESTS** (Check applicable)

PEELABLE CULL (all species).....	<input type="checkbox"/>
NO DEDUCTIONS ALLOWED FOR MECHANICAL DAMAGE	<input checked="" type="checkbox"/>
PENCIL BUCK.....	<input type="checkbox"/>
ADD-BACK VOLUME - Deductions due to delay...	<input checked="" type="checkbox"/>

OTHER :

(15) **REMARKS:**

Operator's Name (Optional inclusion by District): _____

(16) **SIGNATURES:**

 Purchaser or Authorized Representative Date

 State Forester Representative Date

 State Forester Representative PRINT NAME

(5) **MINIMUM SCALING SPECIFICATIONS**

SPECIES	MINIMUM NET VOLUME
Conifers	10
Hardwoods	10

*Apply minimum volume test to whole logs over 20' Eastside

(6) **EASTSIDE SCALE:**
 *Log lengths will be measured in 1-foot multiples, with 4 inches of minimum trim per segment.
 *Use Region 6 actual taper rule. Logs over 40'.

YES NO

(7) Weight Scale Sample

(8) **APPROVED SCALING LOCATIONS**
 (as shown on the ODF Approved Locations web-site)

	Species	Yard	Truck	Weight



Oregon Department of Forestry
EXHIBIT C - SAWMILL GRADE
INSTRUCTIONS FOR EXHIBIT C
Klamath-Lake - EOA

- (1) Check appropriate box. REVISION NUMBER requires comments. CANCELLATION requires logging and hauling to be complete, recall branding hammers.
- (2) Designate Third Party Scaling Organization (TPSO).

<p>Columbia River Log Scaling & Grading Bureau P.O.Box 7002, Eugene, OR 97401 Phone: (541) 342-6007 Fax: (541) 342-2631 Email: services@crls.com</p> <p>Mountain Western Log Scaling & Grading Bureau P.O.Box 580, Roseburg, OR 97470 Phone: (541) 673-5571 Fax: (541) 672-6381 Email: info@mwlsqb.com</p> <p>Northwest Log Scalers Inc. 6137 NE 63rd St, Vancouver, WA, 98661 Phone: (360) 553-7212 ext. 4 Fax:(360) 553-7213 Email: info@nwlogscalers.com</p>	<p>Pacific Rim Log Scaling Bureau, Inc. 8288 28th Court North East, Lacey, WA 98516 Phone: (360) 528-8710 Fax: (360) 528-8718 Email: office@prlsb.com</p> <p>Yamhill Log Scaling & Grading Bureau P.O.Box 709, Forest Grove, OR 97116 Phone: (503) 359-4474 Fax: (503) 359-4476 Email: yamhilllog@frontier.com</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
- (3) State District office, address and phone.
- (4) Enter Purchaser's business name, address, and phone number as it appears on the Contract.
- (5) Minimum Scaling Specifications. Scaling diameter inches is used for pencil buck minimum diameter.
- (6) Eastside - Region 6 actual taper segment scale. Check Yes or No. Special Service Rules on file with TPSO. See: Segment Scaling and Grading of Long Logs - All Species - State Forestry Department Scaling Practices (Northwest Log Rules Eastside). Items with * follow U.S. Forest Service Eastside rules.
- (7) Weight Scale Sample - Check box if sale is to be a Weight Scale Sample. All specifics for handling, scaling and processing will be attached or explained in the Remarks section item (15).
- (8) Show scaling locations only applicable to TPSO. Location name should appear as it does on the ODF Approved Scaling Location web site: https://apps.odf.oregon.gov/Divisions/management/asset_management/scalinglocation.asp Locations with scaling and processing directions specific to their location should be on a separate form. Species should be identified if not capable of receiving "all" species. Check appropriate box for either: yard, truck scale, or weight. Refer to the web site listed above for the locations approval status.
- (9) Enter sale name and county.
- (10) Enter sale Contract number.
- (11) Enter Oregon's State Brand Registry Number (**REQUIRED**).
- (12) Show brand assigned to timber sale. One brand only. If more than one brand is assigned to the sale: (1) make a separate form for each brand and (2) on each form, explain and show other brand(s) in the Remarks section item (15).
- (13) Check yes for Paint Required and designate "Orange" for color. Non required removal volumes may sometimes require blue paint.
- (14) Special Requests. These are requests that will be applied to ODF timber sales. All boxes applicable to the timber sales designated in the Exhibit C form must be "marked". If "Other" is indicated, it must contain a description and any necessary comments.
- (15) Use this space to designate any weight scale sample instructions or any other explanations to clarify scaling, processing and/or mailing requirements. If additional scaling locations are approved, revise original or current form showing all (old and new) locations. Check REVISION box at top of form and explain under remarks. Route as indicated.
- (16) Require purchaser to sign and date completed form in addition to State Forester Representative, sign and print name on the form. Signatures not required on revisions.



Oregon Department of Forestry
EXHIBIT C - PULP SORT
PROCESSING INSTRUCTIONS - LOCATION APPROVAL
BRAND INFORMATION

Klamath-Lake, EOA

(1) ORIGINAL REGISTRATION Date _____
REVISION NUMBER 000 Date _____
CANCELLATION _____

(2) _____

(Approved Pulp Processing Facility)

(3) FROM: Klamath-Lake Phone (541) 883-5681
(State Forestry District)
Address: 3200 DELAP RD
KLAMATH FALLS, OR 97601

(4) PURCHASER: _____

(5) Scaling Bureau (TPSO) Processing Weight receipts:

Mailing Address: _____

Phone Number: _____

(6) **STATE Definition of Approved Pulp Sort:**
• Top portion of the tree (tops).
• All logs with a diameter (Big End) greater than 10 inches marked with blue paint.

(7) PULP FACILITY PROCESSING INSTRUCTIONS:

- Pulp loads shall be weighed in lieu of scaling.
- One Ton = 2000 lbs (Short Ton).
- Pulp loads shall have a yellow Log Load Receipt attached.
- Gross weight and truck tare weight for each load shall be machine printed on the weight receipt.
- Weigher shall sign the weight receipt.
- Weigher shall record the Log Load Receipt number on the weight receipt.
- Weigher shall attach the Weight receipt to the Log Load Receipt and mail them weekly to the TPSO processing the Weight receipt.

(8) TPSO PROCESSING INSTRUCTIONS

- Submit data files daily (or each day of activity).
- Mail or deliver scale tickets weekly to ODF Headquarters in Salem.

(9) **SALE NAME:** Abbey - GNA

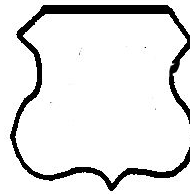
COUNTY: Klamath

STATE CONTRACT NUMBER:

KL-341-2022-GF7320-01

(11) STATE BRAND REGISTRATION NUMBER: _____

(12) STATE BRAND INFORMATION: _____



(13) **REMARKS:**

Operator's Name (Optional inclusion by District):

(14) SIGNATURES:

Purchaser or Authorized Representative Date

State Forester Representative Date

State Forester Representative PRINT NAME

Notify the District within one hour when branding is inadequate for quick identification, the logs are marked with orange paint, the receipts are missing, not correctly or completely filled out, and/or logs do not meet the specifications of the STATE definition of Approved Pulp Sort.

General Distribution: TPSO, Approved Scaling Locations and Purchaser.



Oregon Department of Forestry EXHIBIT C - PULP SORT INSTRUCTIONS FOR EXHIBIT C

Klamath-Lake, EOA

- (1) Check appropriate box. REVISION NUMBER requires comments. CANCELLATION requires logging and hauling to be complete, recall branding hammers.
- (2) Approved Pulp Processing Facility. Write in as written in the Approved Log Delivery Location https://apps.odf.oregon.gov/Divisions/management/asset_management/scalinglocation.asp
- (3) State District office, address and phone.
- (4) Enter Purchaser's business name, address, and phone number as it appears on the Contract.
- (5) Third Party Scaling Organization that will be processing the weight tickets, mailing address, and phone number.

Columbia River Log Scaling & Grading Bureau
P.O.Box 7002, Eugene, OR 97401
Phone: (541) 342-6007 Fax: (541) 342-2631
Email: services@crls.com

Pacific Rim Log Scaling Bureau, Inc.
8288 28th Court North East, Lacey, WA 98516
Phone: (360) 528-8710 Fax: (360) 528-8718
Email: office@prlsb.com

Mountain Western Log Scaling & Grading Bureau
P.O.Box 580, Roseburg, OR 97470
Phone: (541) 673-5571 Fax: (541) 672-6381
Email: info@mwlsgb.com

Yamhill Log Scaling & Grading Bureau
P.O.Box 709, Forest Grove, OR 97116
Phone: (503) 359-4474 Fax: (503) 359-4476
Email: yamhilllog@frontier.com

Northwest Log Scalers Inc.
6137 NE 63rd St, Vancouver, WA, 98661
Phone: (360) 553-7212 ext. 4 Fax:(360) 553-7213
Email: info@nwlogscalers.com

Big end of log is not to exceed 2 inches greater than the minimum removal specifications in the contract. Example: Minimum removal specifications 6 inches and 20 board feet, then the Big end of log not to exceed 8 inches. When conifer and hardwood removal specifications are different, use the smaller removal diameter to determine this specification.

- (9) Enter sale name and county.
- (10) Enter sale Contract number.
- (11) Enter Oregon's State Brand Registry Number **(REQUIRED)**.
- (12) Show brand assigned to timber sale. One brand only, if more than one brand is assigned to the sale: (1) make a separate form for each brand and (2) on each form, explain and show other brand(s) in the Remarks section Item (13).
- (13) Use this section to list any special instructions or the reason for any revisions in section item (1).
- (14) Require purchaser to sign and date completed form in addition to State Forester Representative, sign and print name on the form. Signatures not required on revisions.

EXHIBIT D

IMPROVEMENT

SUBGRADE WIDTH	RUNNING WIDTH	POINT TO POINT	DRAINAGE
12 feet	10 feet	A to B	Shape to Drain
12 feet	10 feet	A to C	Shape to Drain
12 feet	10 feet	D to G	Shape to Drain
12 feet	10 feet	E to F	Shape to Drain
12 feet	10 feet	J to K	Shape to Drain
12 feet	10 feet	M to N	Shape to Drain
12 feet	10 feet	O to P	Shape to Drain
12 feet	10 feet	R to S	Shape to Drain
12 feet	10 feet	T to U	Shape to Drain
12 feet	10 feet	V to W	Shape to Drain
15 feet	12 feet	Z to 2A	Shape to Drain
15 feet	12 feet	2B to 2C	Shape to Drain
12 feet	10 feet	2E to 2F	Shape to Drain
12 feet	10 feet	2G to 2J	Shape to Drain
12 feet	10 feet	2H to 2I	Shape to Drain
12 feet	10 feet	2K to 2L	Shape to Drain
12 feet	10 feet	2M to 2N	Shape to Drain
12 feet	12 feet	2O to 2P	Shape to Drain
12 feet	10 feet	2R to 2T	Shape to Drain
12 feet	10 feet	2S to 2U	Shape to Drain
12 feet	10 feet	2V to 2W	Shape to Drain
12 feet	10 feet	2X to 2Y	Shape to Drain
12 feet	10 feet	2Z to 3A	Shape to Drain
12 feet	10 feet	3B to 3C	Shape to Drain
15 feet	12 feet	3H to 3I	Shape to Drain
15 feet	12 feet	3J to 3L	Shape to Drain
12 feet	10 feet	3L to 3M	Shape to Drain
15 feet	12 feet	3L to 3N	Shape to Drain
15 feet	12 feet	3J to 3O	Shape to Drain
15 feet	12 feet	3P to 3Q	Shape to Drain
15 feet	12 feet	3T to 3F	Shape to Drain
15 feet	12 feet	4A to 4B	Shape to Drain
15 feet	12 feet	4C to 4D	Shape to Drain

EXHIBIT D

CONSTRUCT

SUBGRADE WIDTH	RUNNING WIDTH	POINT TO POINT	DRAINAGE
12 feet	10 feet	R to Q	Shape to Drain
12 feet	10 feet	3D to 3E	Shape to Drain
12 feet	10 feet	H spur	Shape to Drain
12 feet	10 feet	I spur	Shape to Drain
12 feet	10 feet	2D spur	Shape to Drain
12 feet	10 feet	Y spur	Shape to Drain
12 feet	10 feet	X spur	Shape to Drain

CLEARING. This work shall consist of clearing, removing, and disposing of all trees, Snags, Down Timber, brush, surface objects, and protruding obstructions within the clearing limits.

Where clearing limits have not been marked, the clearing limits shall extend 4 feet back of the top of the cutslope and 4 feet out from the toe of the fill slope, or as directed by STATE. Clearing debris shall not be placed or permitted to remain in or under any road embankment sections. Clearing debris shall not be left lodged against standing trees.

All danger trees, leaners, and Snags outside the clearing limits which could fall and hit the road shall be felled.

For road segments with abundant down trees across the road surface this material will be removed and piled to burn in stand openings adjacent to the right of way prior to grubbing work.

GRUBBING. This work shall consist of the removal or digging out of stumps and protruding objects.

All stumps shall be completely removed within the limits of required grubbing. Stumps overhanging cut-slopes shall be removed. Grubbing debris shall not be left lodged against standing trees.

EXHIBIT D

GRUBBING CLASSIFICATION.

Improvements and reconstructions - 4 feet back from the shoulder of the subgrade or ditch, whichever is widest, or as marked in the field.

CLEARING AND GRUBBING DISPOSAL. Scatter in stable locations through openings in the timber outside of the cleared right-of-way. Clearing and grubbing debris shall be left in a stable location, and not left lodged against standing trees.

EXCAVATION. Excavation and grading shall not be done when weather and/or ground conditions are such that damage will result to existing subgrade or cause excessive erosion.

Unless road plans show otherwise, all roads shall be on a balanced cross section, except when the slope is over 60 percent, the road shall be on full bench for the width specified.

Suitable excavated material shall be used for the formation of fills, shoulders, and drainage structure backfills. Embankment materials shall be free of woody debris, brush, muck, sod, frozen material, and other deleterious materials.

Sidecast includes any road generated excess excavation material which is not essential as part of the road prism, is not compacted, and is below the roadway. Sidecast shall not be placed where it will enter a stream course. Leaving sidecast below the road is only permissible if specifically allowed in "Full Bench and End Haul Requirements" in this Exhibit.

All spur roads will be constructed to prevent any damage to the paved surface of the 62 road.

ROAD WIDTH LIMITATIONS. PURCHASER shall obtain advance written approval from STATE to construct the road to a greater width than specified.

Curve Widening. Widen the inside shoulder of all curves as specified in the plans or as follows: 400 divided by the radius of the curve equals the amount of extra width.

DRAINAGE

Subgrade. Subgrade shall be crowned or outsloped at 4 to 6 percent as shown on the "Forest Road Specifications" table in this Exhibit.

Ditchouts. Construct ditchouts to drain away from subgrade at locations marked in the field or as directed by STATE.

EXHIBIT E

SPECIFICATIONS FOR BRUSH AND SLASH SHOVEL PILING

Description of Work to be Done

Areas designated for work under the contract shall be treated according to the specifications given below:

Clearing - Brush, logging Slash, and other debris shall be cleared from planting sites and piled in windrows or piles, so that 80 percent or more of the soil organic layer is exposed. All woody vegetation other than trees is defined as brush in this exhibit.

Piles - Piles shall be located inside the project area designated for piling and shall be more than 30 feet from any edge or standing conifer tree. All piles shall be compact and contain a minimum of soil. Height of the piles shall be no less than eight (8) feet. Diameter of piles shall be no less than ten feet.

Conifer Trees - shall be saved, unless otherwise directed by STATE.

Protective Measures - shall comply with Oregon Forest Practice Rules issued per ORS 527.610 to 527.992. Examples of protective measures are: (1) waterbarring tractor trails where necessary to prevent runoff toward streams; (2) not windrowing in streams or streamways; and (3) leaving Stream Buffers along designated streams.

Work specifications may be modified or waived only upon written notice from STATE.

EXHIBIT E

SPECIFICATIONS FOR BRUSH AND SLASH SHOVEL PILING

Equipment Type, Equipment Operation, and Conduct of Work

The specifications given below are requirements for equipment type, equipment operation, and conduct of work under the contract.

Shovel - shall be a track-mounted machine with a ground-pressure rating of not more than 6.8 PSI and a net horsepower of 70 or more. The machine shall be capable of a minimum horizontal reach of 26 feet and a minimum vertical reach of 16 feet.

- Excavator-shovel: Bucket shall be a hydraulically controlled, "clamshell-style bucket with rake arms," with a 360-degree continuous rotation, and tooth length on rake arm shall be greater than 12 inches long, unless otherwise approved in writing by STATE. "Clamshell-style bucket with rake arms" shall be hydraulically controlled to operate bucket in a horizontal position for piling Slash.

Equipment	Rate	Hours	Appraised Value
Excavator	\$ 137.50 / hour	145	\$19,937.50

Operator - must be experienced in operating similar equipment on land clearing operations, be able to operate the equipment proficiently, and pile the debris on the area as directed by STATE.

Support - including transport, other equipment, replacements, supplies, maintenance, and repairs shall be furnished as required to complete work; and shall be furnished without cost to STATE, other than as agreed under the contract terms.

Work Scheduling - work shall be accomplished only during favorable weather conditions and started within 14 calendar days after completion of yarding activities on the Timber Sale Area. Operations shall provide for continual operation until contract work is completed, unless interrupted by poor weather, fire closures, or other uncontrollable circumstances. Equipment breakdowns shall be repaired without undue delay, and provision shall be made for replacement of equipment to prevent prolonged delays. Piling operation shall not be allowed when operations might damage sites or affect stream flows. Any exception to these instructions must be authorized in writing by STATE.

STATE Representative - shall provide directions for the conduct of work according to specifications

EXHIBIT F

Specifications for Subsoiling Temp Roads, Skid Trails, and Landings in Units Where Prescribed:

Subsoiling may be necessary to loosen compacted soils where detrimental soil conditions exceed 20 percent of the unit area or as deemed necessary by STATE, to mitigate effects from current and historic harvesting activities and fuels treatments. Subsoiling may be used to decommission temporary roadbeds, landings, and primary skid trails. Subsoiling may not be appropriate in all instances (e.g., high surface and/or subsurface rock content, areas that are shallow to bedrock, areas where excessive damage to the root system of the residual stand may occur). Subsoiling treatment will be prioritized as follows to achieve the required acreages specified for each unit in Table 1 below: 1) temp roads, unless specified to remain open; 2) primary skid trails; 3) landings (accessible area not encumbered with slash piles), if determined to be appropriate for treatment by STATE. Any unit requiring subsoiling treatment MUST have all temporary roads used by the purchaser treated as part of the required acreage unless temporary roads have been expressly identified to remain open.

- (1) Recommended Subsoiling Equipment Specifications: Subsoiler design should consider the ability to place slash to meet surface cover requirements specified below. Bulldozer-mounted implements are considered less desirable for this work due to their diminished maneuverability, greater likelihood of root system damage to the residual stand, and inability to place slash in the same pass. A combination of Skidder to transport additional slash, and an excavator to subsoil and place slash were appraised for this project.

- (2) Definition of Subsoiling: Subsoiling is defined as alleviating heavily compacted soils using an implement specifically designed to reduce soil strength, restore intrinsic bulk density (weight per unit volume), macropore space, permeability, infiltration, and tilth of soil layers to depth. Soil shall be decompact to a minimum of 18 inches, except where the Government agrees to lesser depths. Disturbance of surface organics and remaining vegetation will be minimized. **Subsoiling results in soil that is decompact, slightly lifted, and well-fractured both horizontally and vertically but is NOT plowed, mixed, or displaced.** Treated areas shall span the total width of the compacted ground surface. In some instances, where machine capability allows, the full width of the skid trail may not warrant treatment (e.g., decompaction of the two-track surface may be preferable). Subsurface rocks should not be pulled to the surface and large supportive roots should not be severed. The distance between subsoiler shank passes within a compacted area shall typically not exceed 24 inches unless inspection by Soil Scientist determines greater distance between passes is effective at treating compaction. Scarification may also be necessary, in addition to subsoiling, where surface soil is puddled or crusted. Subsoiling shall be kept reasonably current and shall be done during optimal soil conditions unless otherwise agreed. Subsoiling should not occur when

EXHIBIT F

ground is frozen, unless approved by STATE, to prevent unwanted displacement and mixing. Subsoiling will not occur during excessively dry conditions (when soils are dusty and exhibit no adherence when squeezed in a ball) to prevent destruction of soil structure and unwanted mixing. Available slash should be placed in conjunction with subsoiling treatment, as specified below. Subsoiled areas must not be re-trafficked with machinery to place slash/surface cover.

- (3) Slash Placement and Effective Ground Cover: To facilitate successful soil rehabilitation, subsoiling must be coupled with organic matter addition and surface soil protection. Where existing litter and fine woody material is lacking, this will be achieved by placing logging slash or woody material available within the unit across the soil surface to achieve a minimum of 50% areal cover (unless otherwise agreed to by STATE). Machines will not make additional passes off skid trails or landings solely to retrieve slash for this purpose. If adequate slash is not present within the cutting unit adjacent to treated skid trails (within machine's reach from skid trail or work area), fine slash (limbs and tops with needles attached) may need to be retrieved from landing piles. Bole wood will NOT be retrieved from landing piles but may be utilized if present within the unit adjacent to treatment areas and is not otherwise required to be retained. No coarse woody debris of Decay Class 3 or greater should be disturbed or moved. Subsoiling and surface cover placement should be completed in one pass, or subsoiling accomplished as the final pass, to prevent compacting or displacing treated area. Subsoiled areas will not be re-trafficked to place slash/surface cover. All logging slash staged within a unit to achieve required effective ground cover must be fully dispersed/spread at the completion of work within that unit.
- (4) Location and quantity of work: Anticipated acreage of subsoiling needed for each treatment unit is listed in the table below. However, on-the-ground work will be planned by consulting with STATE to determine the most appropriate areas to treat to meet soil restoration objectives. Actual acreage requiring treatment in each unit may be more or less than the amounts estimated below. Contractor will track work as it is accomplished and will adhere to the amounts listed in the table below unless a different amount is agreed to with the STATE. Actual acres treated in each unit will be credited toward overall awarded acreage. Skid trails will be credited at 12 feet width by total length of trail treated, and temp roads will be credited at 14 feet width by total length of road treated, unless otherwise agreed to in writing. Segments of skid trail/temp road up to 100 linear feet where excessive rock or other site conditions preclude effective treatment may be credited toward treatment acreage where they fall within a segment that is otherwise acceptably treated. Any slash staged in these intermittent untreated areas should be scattered evenly over the untreated surface. Anticipated units where subsoiling will be needed and estimated acres of treatment in those units are summarized in the table below:

GNA Timber Sale Contract
 No. KL-341-2022-GF7320-01
 Abbey - GNA

EXHIBIT F

Unit	NEPA Unit	Unit Acres	Approximate Subsoil Acres	Notes
1	148	16	1.1	
2	217	11	0.8	
3	216	14	1.0	
4	214	24	1.7	
5	212	41	2.4	
6	213	26	1.6	
7	163	51	3.1	
8	153	19	0.0	
10	155	6	0.0	
14	160	27	1.9	
15	161	19	1.3	
16	186	29	2.0	
17	183	11	0.8	
18	184	11	0.0	
20	167	15	1.1	
23	166	26	1.8	
24	165	13	0.9	
25	147	9	0.6	
26	139	22	1.5	
27	140	16	1.1	
28	141	53	3.7	
29	143	28	0.0	
30	142	21	1.5	
34	138	18	1.3	
35	137	26	1.8	
36	136	50	3.5	
37	126	92	6.4	
38	124	30	2.1	
39	123	9	0.6	
40	123	11	0.8	
41	120	100	7.0	
42	121	58	4.1	
43	128	211	14.8	
44	131	33	2.3	

GNA Timber Sale Contract
 No. KL-341-2022-GF7320-01
 Abbey - GNA

EXHIBIT F

Unit	NEPA Unit	Unit Acres	Approximate Subsoil Acres	Notes
47	174	16	1.1	
48	177	24	1.7	
49	178	24	1.7	
50	175	26	1.8	
51	180	25	1.8	
52	181	13	0.9	
53	182	10	0.7	
54	187	11	0.8	
55	188	34	2.4	
56	189	15	1.1	
57	190	24	1.7	

Total

91.7 acres

EXHIBIT G

Sale Unit	NEPA Unit	Acres	Residual Basal Area	Treatment	Create Opening acres	Opening type
1	148	16	80 BA	Remove all lodgepole pine. Remove all Fir <25" dbh within 30' of PP. Do not cut DF	2.4	1
2	217	13	60 BA	Leave 4, 10 – 20 tree clumps.	.65	2
3	216	15	60 BA	Leave 4, 10 – 20 tree clumps.	.75	2
4	214	27	60 BA	Leave 8, 10 – 15 tree clumps.	1.3	2
5	212	41	60 BA	Leave 12, 10 – 15 tree clumps	4.1	2
6	213	26	60 BA	Leave 8, 10-15 tree clumps Cut, Skid, Pile	1.3	2
7	163	51	109 TPA 20 x 20	Remove all Lp and Wf within 20 feet of a healthy PP >5" dbh Remove all Lp and Wf within 30 feet of a healthy PP >21" dbh No PP, WWP to be cut	n/a	n/a
8	153	19	80 BA	Remove all lodgepole pine. Remove all True Fir <25" dbh within 30' of PP>5" dbh No PP, DF, or WWP to be cut	n/a	n/a
10	155	6	80 BA	Remove all lodgepole pine.	n/a	n/a
14	160	27	80 BA	Remove all lodgepole pine. Remove all True Fir < 25" dbh within 30' of a ponderosa pine 9" dbh or greater. No PP, WWP to be cut	4.0	1
15	161	19	134 TPA	Remove Unhealthy lodgepole pine.	n/a	n/a
16	186	29	60 BA	Leave 8, 10 – 15 tree clumps. Remove all lodgepole pine outside of clumps.	n/a	n/a

EXHIBIT G

Sale Unit	NEPA Unit	Acres	Residual Basal Area	Treatment	Create Opening acres	Opening type
17	183	11	134 TPA	Remove all True Fir and lodgepole pine within 30' of a ponderosa pine 9" dbh or greater. Cut, Skid, Pile	n/a	n/a
18	184	11	80 BA	Remove all True Fir <25" dbh within 30' of a ponderosa pine 9" dbh or greater. No PP or WWP to be cut Remove all Lodgepole pine	1.6	1
20	167	15	80 BA	North of 110 Road- Cut all trees except PP and True fir > 25" dbh. Remove all lodgepole pine. Remove all True Fir within 30' of a ponderosa pine 5" dbh or greater.	n/a	n/a
23	166	26	60 BA	Leave 8, 10 – 15 tree clumps. Remove all lodgepole pine outside of clumps.	1.3	2
24	165	13	n/a	Remove all lodgepole pine. Remove all True Fir <25" dbh within 50' of a ponderosa pine 5" dbh or greater.	n/a	n/a
25	147	9	100 BA	Remove all White fir and lodgepole pine.	n/a	n/a
26	139	22	80 BA	Remove all lodgepole pine.	n/a	n/a
27	140	16	60 BA	Leave 3, 10 – 15 tree clumps. Remove all lodgepole pine and White fir within 30' of Ponderosa pine.	n/a	n/a
28	141	53	80 BA	Create 3- 2acre sized openings. (Flagged)	6	3
29	143	28	134 TPA	Remove all lodgepole pine. Cut, Skid, Pile	n/a	n/a
30	142	21	80 BA	Openings to the North of 120 road.	3.1	1
34	138	18	n/a	Remove all lodgepole pine and White fir < 21" dbh	n/a	n/a
35	137	26	80 BA	Thin from below-Species preference	3.9	1

EXHIBIT G

Sale Unit	NEPA Unit	Acres	Residual Basal Area	Treatment	Create Opening acres	Opening type
36	136	50	80 BA	Thin from below-Species preference	7.5	1
37	126	92	80 BA	Remove all lodgepole pine.	13.8	1
38	124	30	80BA	Do not cut PP over 250 years old		
39	123	9	80 BA	Remove all lodgepole pine and White fir within 50' of Ponderosa pine. Do not cut PP over 250 years old	n/a	n/a
40	132	11	60 BA	Remove all lodgepole pine and White fir within 50' of Ponderosa pine. Do not cut PP over 250 years old	n/a	n/a
41	120	100	n/a	Remove all lodgepole pine	n/a	n/a
42	121	58	60 BA	Remove all lodgepole pine	n/a	n/a
43	128	211	80 BA	Remove all lodgepole pine and White fir within 30' of Ponderosa pine or Sugar pine > 5" dbh	n/a	n/a
44	131	33	60 BA	Remove all lodgepole pine	n/a	n/a
46	172	22	60 BA	Leave 7, 10 – 15 tree clumps. Remove all lodgepole pine	n/a	n/a
47	174	16	60 BA	Leave 5, 10 – 15 tree clumps. Remove all lodgepole pine	.8	2
48	177	24	n/a	Remove all Lodgepole pine and White fir < 25" dbh	n/a	n/a
49	178	24	60 BA	Leave 7, 10 – 15 tree clumps. Remove all lodgepole pine	1.2	2
50	175	26	60 BA	Leave 8, 10 – 15 tree clumps. Remove all lodgepole pine	1.3	2
51	180	25	60 BA	Leave 8, 10 – 15 tree clumps. Remove all lodgepole pine	1.25	2

EXHIBIT G

Sale Unit	NEPA Unit	Acres	Residual Basal Area	Treatment	Create Opening acres	Opening type
52	181	13	134 TPA 18 x 18	Remove all lodgepole pine Cut, Skid, Pile	n/a	n/a
53	182	10	80 BA	Remove all True Fir <25" dbh within 30' of a ponderosa pine 5" dbh or greater. Remove all lodgepole pine	1.5	4
54	187	11	80 BA	Remove all True Fir <25" dbh within 30' of a ponderosa pine 5" dbh or greater. Remove all lodgepole pine	1.7	4
55	188	34	134 TPA 18 x 18	Cut, Skid, Pile	n/a	n/a
56	189	15	134 TPA 18 x 18	Cut, Skid, Pile	n/a	n/a
57	190	24	134 TPA 18 x 18	Cut, Skid, Pile	n/a	n/a

1: Create .5 - 2 - acre opening.

2: Create .25 - .75 - acre openings. Leave 3 TPA in Half of these openings.

3: Create 2 - acre opening.

4: Create .5 – 1- acre opening.

Clumps:

The Inter tree distance to be considered is 20', measured bole to bole. Only live trees are included in the clump tally, but snags within a clump are desirable. Trees need to be healthy. Medium to large trees are desirable while sawlog size is the minimum.

