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: _____

(1) Contract Number: WO-341-2023-W00902-01

(2) Sale Name: Long John

(3) Contract Expiration Date: 09/30/2025

(4) Purchaser Name: _____

(5) State Brand Information (Complete)

(6) State Representatives:

Name	Circle One	Phone No.	Cell No.	Alt Phone
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			
	Logging Projects All			

(7) Purchaser Representatives:

Name	Circle One	Phone No.	Cell No.	Alt Phone
	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:

Project No.	Subcontractor Name.	Start Date	Completion Date	Cell No.	Alt Phone

	Subcontractor Name.	Start Date	Cell No.	Alt Phone
FELLING				
YARDING				

(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.

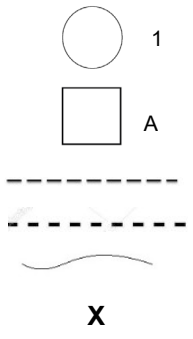
(7) The STATE representative will be designated when your plan is approved and is the person who will inspect and issue instructions regarding performance.

(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.



Cable Landing, with numbers for sequence.

Tractor Landing with alphabetical sequence.

Approximate setting boundary.

Spur truck roads.

Tractor yarding roads.

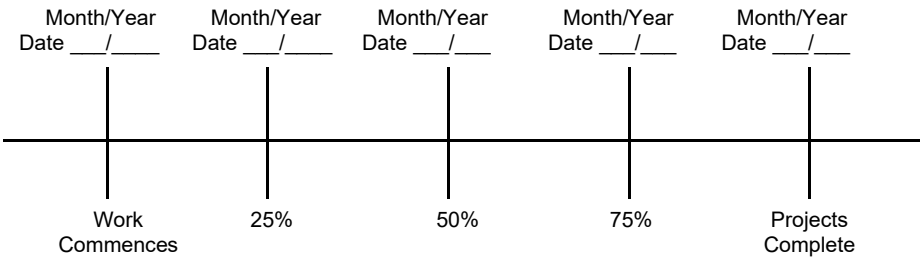
Temporary stream crossings.

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

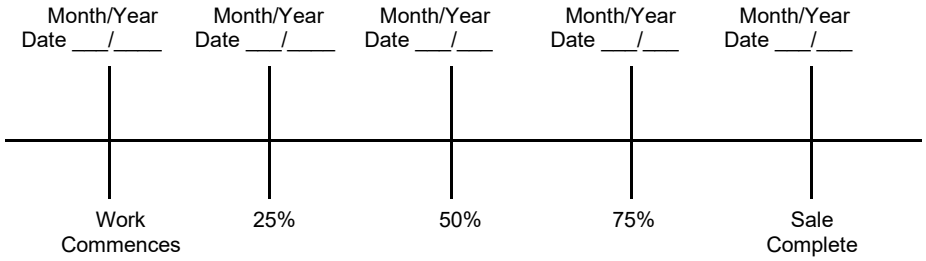
Completion Timeline

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.

Projects



Harvest & Other Requirements



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: _____

STATE OF OREGON - DEPARTMENT OF FORESTRY

_____

Title _____

SUBMITTED BY:
PURCHASER

_____

Title _____

Oregon Department of Forestry

EXHIBIT C - SAWMILL GRADE (WESTSIDE SCALE)
SCALING INSTRUCTIONS - LOCATION APPROVAL - BRAND INFORMATION
West Oregon - NWOA

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

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

(3) FROM: West Oregon Phone (541) 929-3266
(State Forestry District)
Address: 24533 ALSEA HWY
PHILOMATH,OR 97370

(4) PURCHASER: _____
Mailing Address: _____

Phone Number: _____

(5) **MINIMUM SCALING SPECIFICATIONS**	
SPECIES	MINIMUM NET VOLUME
Conifers	10
Hardwoods	10

*Apply minimum volume test to whole logs over 40' Westside

(6) WESTSIDE SCALE:
Use Region 6 actual taper rule. Logs over 40'.

	YES	NO
(7) Weight Scale Sample	☐	☑

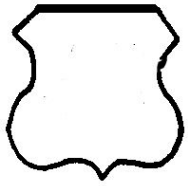
(8) **APPROVED SCALING LOCATIONS** (as shown on the ODF Approved Locations web-site)	Species	Yard	Truck	Weight

(9) **SALE NAME:** Long John
COUNTY: Lincoln

(10) **STATE CONTRACT NUMBER:**
WO-341-2023-W00902-01

(11) STATE BRAND REGISTRATION NUMBER:

(12) **STATE BRAND INFORMATION:**



(13) PAINT REQUIRED: YES ☑
COLOR: Orange

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

PEELABLE CULL (all species).....	☑
NO DEDUCTIONS ALLOWED FOR MECHANICAL DAMAGE.....	☑
ADD-BACK VOLUME - Deductions due to delay...	☑

OTHER :

(15) **REMARKS:** "Mule Train" loads require a load ticket for each set of bunks.

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

(16) SIGNATURES:

_____
Purchaser or Authorized Representative Date

_____
State Forester Representative Date

_____
State Forester Representative PRINT NAME

Notify the District within one hour when branding or painting is inadequate for quick identification, the receipts are missing, not correctly or completely filled out, and/or when logs presented for scaling are impossible to scale accurately.
General Distribution: TPSO, Approved Scaling Locations and Purchaser.

Oregon Department of Forestry
EXHIBIT C - SAWMILL GRADE
INSTRUCTIONS FOR EXHIBIT C
West Oregon - NWOA

(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).

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

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

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

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

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

(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.

(6) Westside - 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 (Westside).

(7) Weight Scale Sample - Check box if sale is to be a Weight Scale Sample. All specifies 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

West Oregon, NWOA

(1) ORIGINAL REGISTRATION ☐ Date _____

REVISION NUMBER 000 ☐ Date _____

CANCELLATION ☐ Date _____

(2) TO: _____

(Approved Pulp Processing Facility)

(3) FROM: West Oregon Phone (541) 929-3266
(State Forestry District)

Address: 24533 ALSEA HWY

PHILOMATH,OR 97370

(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 8 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:** Long John

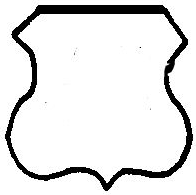
COUNTY: Lincoln

(10) **STATE CONTRACT NUMBER:**

WO-341-2023-W00902-01

(11) STATE BRAND REGISTRATION NUMBER: _____

(12) STATE BRAND INFORMATION:



(13) **REMARKS:** "Mule Train" loads require a load ticket for each set of bunks.

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

West Oregon, NWOA

(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

(6) 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

FOREST ROAD SPECIFICATIONS

SUBGRADE WIDTH	SURFACED WIDTH	POINT TO POINT	STATION TO STATION	DRAINAGE
14 feet	n/a	A to B	0+00 to 1+40	Outsloped
14 feet	n/a	C to D	0+00 to 2+60	Outsloped
14 feet	n/a	1 to 2	0+00 to 56+60	Insloped/Outsloped
14 feet	n/a	3 to 4	0+00 to 5+10	Outsloped
16 feet	14 feet	5 to 6	0+00 to 167+90	Crowned/Ditch
14 feet	n/a	7 to 8	0+00 to 9+10	Outsloped
14 feet	14 feet	9 to 10	0+00 to 4+90	Outsloped
16 feet	14 feet	11 to 12	0+00 to 173+30	Crowned/Ditch

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.

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

CLEARING CLASSIFICATION.

New Construction - Where clearing limits have not been marked, the clearing limits shall extend 5 feet back of the top of the cutslope and 5 feet out from the toe of the fill slope, or as directed by STATE.

Improvement - The “Road Brushing Specifications" in Exhibit E shall apply. Where clearing limits have not been marked, the clearing limits shall extend 5 feet back of the top of the cutslope and 5 feet out from the toe of the fill slope, or as directed by STATE.

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 CLASSIFICATION.

New construction - from the top of the cut slope to the toe of the fill.

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. Clearing and grubbing debris shall not be placed or permitted to remain in or under any road embankment sections. Clearing and grubbing debris shall be left in a stable location, and not left lodged against standing trees. Clearing and grubbing debris may be scattered through openings in the timber outside of the cleared right-of-way, except for the following areas where debris shall be fully contained and hauled to a designated waste area:

- Where end-haul is required
- On unstable areas
- In any stream channel (Type F, N or D) or where material may enter the stream channel.

Clearing, grubbing, and associated disposal shall be completed prior to subgrade approval.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

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.

Excavation shall conform to STATE-specified lines, grades, dimensions, and plans when provided.

Unless road plans show otherwise, all roads shall be on a balanced cross section, except when the slope is over 50 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 fills shall be machine compacted according to the "Compaction and Processing Requirements" in this Exhibit.

ROAD WIDTH LIMITATIONS. PURCHASER shall obtain advance written approval from STATE to construct the road to a greater width than specified. Extra subgrade width shall be required for:

Fill Widening. Add to each fill shoulder 1 foot for fills 3 feet to 6 feet high; 2 feet for fills over 6 feet high.

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 at 4 to 6 percent or outsloped at 3 to 4 percent as shown on the "Forest Road Specifications" table in this Exhibit.

Ditch. Construct V shaped ditch 3 feet wide and to a depth of 1 foot below subgrade.

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

TURNOUTS. Increase roadbed width an additional 8 feet for both subgrade and surfacing. Length shall be at least 50 feet, or as staked on the ground, plus 25-foot approaches at each end.
Location: Intervisible but not greater than 750 feet apart and as marked in the field.

SLOPES	Cut Slopes	Fill Slopes
Solid Rock	Vertical to ¼ :1	
Fractured Rock	½ :1	
Soil - side slopes 50% and over	¾ :1	1½:1
Soil - side slopes less than 50%	1 :1	1½:1

Top of cut slope shall be rounded.

LANDINGS. Landings shall be constructed as posted in the field, no less than 50 feet wide and no more than 70 feet wide unless otherwise approved by STATE. Surface is to be crowned for drainage with general grade no more than 3 percent. Surface as shown in the "Road Surfacing" table in this Exhibit.

TURNAROUNDS. Increase subgrade width an additional 20 feet for a length of 20 feet at locations marked in the field.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

SEASONAL WINTERIZATION. All unsurfaced roads or unfinished subgrades shall be waterbarred in accordance with the specifications in Exhibit D, and blocked from vehicular traffic prior to October 1, annually and as directed by STATE.

GENERAL ROAD CONSTRUCTION INSTRUCTIONS:

(1) Timber Removal. Remove all trees within posted Right-of-Way Boundary as specified in Section 2210, Designated Timber.

(2) Excavated Materials. Excavated materials shall be utilized for road construction and hauled in where necessary. Surplus excavation materials shall be hauled to the waste areas as marked in the field and/or designated on Exhibit A. Surplus excavated materials and waste materials shall be sloped and compacted for drainage. Fills shall be thoroughly compacted in accordance with this Exhibit.

(3) Drainage Ditches. Construct ditchlines, including ditchouts, as directed by STATE. Cut slopes of ditchlines and ditchouts shall not exceed a 1:1 slope. Construct culvert sediment basins. Waste materials from drainage ditches and sediment basins shall be placed in nearby waste areas and uniformly sloped and compacted for drainage, as directed by STATE.

(4) Equipment. All excavation and riprap placement shall be performed using a minimum 1½ cubic-yard, track-mounted excavator.

(5) Subgrade Preparation and Application of Surfacing Rock.

(a) Complete culvert installations, drainage ditches, ditchouts, fill construction, and other specified work prior to the application of surfacing rock.

(b) Subgrade shall be crowned at 4 to 6 percent or outsloped at 3 to 4 percent.

(c) Upon completion of above required work, apply, process, and compact surfacing rock in accordance with specifications in the “Compaction and Processing Requirements” in this Exhibit. Final road surface shall be crowned at 4 to 6 percent or outsloped at 3 to 4 percent.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS (Project No. 1)

Segment	Station	Work Description
A to B	0+00 to 1+40	Construct outsloped, unsurfaced spur with dozer. Shape and compact road with grader and vibratory roller.
	1+40	Construct outsloped 50'x50' Landing at Pt. B with dozer. Shape and compact Landing with grader and vibratory roller.
C to D	0+00 to 2+60	Construct outsloped, unsurfaced spur with dozer. Shape and compact road with grader and vibratory roller.
	2+60	Construct outsloped 20'x30' Landing at Pt. D with dozer. Shape and compact Landing with grader and vibratory roller.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

GENERAL ROAD IMPROVEMENT INSTRUCTIONS:

(1) Timber Removal. Remove all trees within posted Right-of-Way Boundary or individually marked "CUT" in orange paint, as specified in Section 2210, Designated Timber.

(2) Roadside Brushing. Conduct roadside brushing as specified in Exhibit E.

(3) Excavated Materials. Excavated materials shall be utilized for road and fill construction and hauled in where necessary. Surplus excavation materials shall be hauled to the waste areas as marked in the field and/or designated on Exhibit A. Surplus excavated materials and waste materials shall be sloped and compacted for drainage. Fills shall be thoroughly compacted in accordance with Exhibit D.

(4) Bank Slough Removal. Excavate all bank slough. Bank slough material shall not be pulled across existing surfacing rock. Excavated material shall be hauled to the designated waste areas as marked in the field and/or designated on Exhibit A.

(5) Culvert Replacement, Culvert Installation, Fill Reconstruction, and Fill Removal. Existing culvert geometry shall be modified to provide for optimum drainage and culvert performance. Modifications may include, skewing the culvert and/or installing the culvert at gradients equal to or exceeding the drainage (or ditch) gradient. Where fill reconstruction or culvert replacement is specified, fills shall be excavated to natural stream course levels. All woody debris encountered during fill excavation shall be removed. Excess waste materials shall be hauled to nearby waste areas and shall be uniformly sloped and compacted for drainage. Fill reconstruction backfill shall consist of select materials and may be obtained from borrow pits, as directed by STATE. Backfill materials shall be hauled in where necessary and thoroughly compacted in accordance with this Exhibit. Crushed rock shall be used for backfilling excavation trenches less than 3 feet deep. STATE may require the use of crushed rock for culvert bedding. Removed culverts shall be hauled to an approved refuse site off of STATE land. Install a culvert marker at each newly installed culvert.

(6) Culvert Cleaning and Repairs. Remove all debris from inside all existing culverts on the road improvement segment, as directed by STATE. Damaged culvert inlets and/or outlets shall be repaired by opening them with a hydraulic jack, or cutting off the culvert end to allow for free passage of water at peak flow levels.

(7) Drainage Ditches. Restore or construct ditchlines, including ditchouts, as directed by STATE. Clean out all culvert inlets and outlets for a 10-foot radius. Re-establish or construct culvert sediment basins. Waste materials from drainage ditches and sediment basins shall not be pulled across existing surfacing rock, but shall be placed in nearby waste areas and uniformly sloped and compacted for drainage, as directed by STATE.

(8) Fill Armor and Energy Dissipator Construction. Where rock is specified for fill armor, rock shall be machine placed and tamped at a 1½:1 slope, beginning at the toe of the fill. Where rock is used for an energy dissipator, rock shall be placed below the culvert outlet and embedded for a minimum of 3 feet, in accordance with Exhibit D.

(9) Sidecast Pullback. Excavate/pullback previously sidecast materials below the road at designated locations. Developed slopes shall be pulled back to a 1½:1 slope or to natural ground contours. The beginning position for sidecast pullback shall be no greater than 20 feet vertical distance from the existing road surface, in accordance with Exhibit D. Sidecast material remaining greater than 20 feet below the road shall be tapered and sloped for drainage.

(10) Sod Removal. Remove sod from crushed rock surfacing as directed by STATE. Sod material shall be scattered in stable locations through openings in the timber outside of the cleared right-of-way. In areas where sod cannot be scattered in a stable location, material shall be end hauled to designated waste areas as shown on Exhibit A, or other stable locations as directed by STATE.

(11) Equipment. All excavation and riprap placement shall be performed using a minimum 1½ cubic yard, track-mounted excavator.

(12) Waste areas. Waste areas shall be uniformly sloped and compacted for drainage. Designated waste materials shall be seeded and mulched in accordance with specifications in Exhibit F.

(13) Subgrade Preparation and Application of Surfacing Rock.

(a) Complete culvert installations, drainage ditches, fill reconstruction, ditchouts, and other specified work prior to the application of new surfacing rock.

(b) Cut out all potholes and/or washboard sections from the existing surfacing.

(c) Apply required patching and leveling rock, as directed by STATE.

(d) Process (grade and mix) the existing surface and added base rock. Provide for a crown of 4 to 6 percent or outslope of 3 to 4 percent, and compact in accordance to the "Compaction and Processing Requirements" in this Exhibit.

(e) Upon completion of above required work, apply, process, and compact surfacing rock in accordance to this Exhibit.

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS (Project No. 2)

Segment	Station	Work Description
1 to 2	0+00 to 2+60	Brush road according to specifications in Exhibit E and remove sod and brushing debris from road with grader. Apply 20 CY of 1½"-0" spot rock to road and process and compact spot rock with grader and vibratory roller. At Sta. 2+60, Apply 20 CY of 3"-0" rock to turnout and process and compact with grader and vibratory roller.
	0+75	Install a farm-style gate according to the following specifications (Project No. 4). The gate opening shall be 16 feet long and be fitted with two - 8 ft farm utility, rail style gates, gauge 16 or better, attached to 4"x4" pressure treated posts with a minimum of 4 feet cemented into the ground. Purchaser shall provide 3 feet of grade 30 or higher chain. STATE shall mark location on the ground. Before work begins on gate installation, PURCHASER shall submit an installation plan to STATE for approval.
	2+60 to 56+60	Re-open road with grader and compact with vibratory roller. Brush road according to specifications in Exhibit E and remove brushing debris with grader. Apply 20 CY of jaw-run rock as transition rock from Sta. 2+60 to Sta. 3+10. Spread and compact transition rock with dozer and vibratory roller.
	7+00 to 7+90	Apply 40 CY of jaw-run patch rock to road. Spread and compact rock with dozer and vibratory roller. At Sta. 7+00, construct 30'x30' outsloped Landing. Shape and compact Landing with grader and vibratory roller.
	11+90	Re-open Landing with excavator and compact subgrade with vibratory roller.
	12+95	Install 18"x30' CPP culvert as directed by STATE. Utilize 10 CY of 1½"-0" rock as culvert bedding and backfill.
	20+60	Re-open Landing with excavator and compact with vibratory roller. Construct Waste Area 1 with excavator adjacent to Landing.
	21+25 to 25+10	Remove sidecast material (approx. 100 CY) and end haul to Waste Area 1 as shown on Exhibit A.

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS (Project No. 2) cont.

Segment	Station	Work Description
1 to 2 (cont'd)	21+70 to 22+60	Realign road by excavating 4 ft into cutbank and end haul excavated material (approx. 220 CY) to Waste Area 1 as shown on Exhibit A. Shape and compact new road subgrade with grader and vibratory roller. Cut and deck trees (approx. 4 alders) in a stable location away from State managed lands. At Sta. 21+95, re-install existing culvert to line up with new road grade. Utilize clean excavated material as bedding and backfill. Place 10 CY of pit-run for an energy dissipater at culvert outlet according to specifications in Exhibit D.
	48+70	Construct 50' x 50' outsloped Landing. Shape and compact Landing with grader and vibratory roller.
	56+60	Re-open Landing at Pt. 2 with grader and compact with vibratory roller.
3 to 4	0+00 to 5+10	Re-open road with grader and compact with vibratory roller. Brush roads according to specifications in Exhibit E and remove brushing debris with grader.
	5+10	Re-open Landing at Pt. 4 with grader and compact with vibratory roller.
5 to 6	0+00 to 167+90	Brush road from Sta. 30+10 to Pt. 6 according to specifications in Exhibit E and remove sod and brushing debris from road with grader. From Pt. 5 to Pt. 6, apply 160 CY of 1½"-0" spot rock to road and process and compact with grader and vibratory roller. Clean out approximately 2 culvert inlets and outlets.
	24+45	Place 10 CY of jaw-run rock on outside of edge of road to repair road edge failure and compact.
	56+70 to 112+65	Re-establish ditch and scatter waste onsite with backhoe (approx. 56 stations).
	132+45 to 154+10	Daylight road by removing trees marked with "CUT" in orange paint (approx. 148 trees). Deck trees in a stable location.
	143+00 to 149+20	Round cutslope and remove slough material (approx. 10 CY) from ditch with excavator. Haul waste to Waste Area 2.
	152+85	Re-open Landing with grader and apply 10 CY of jaw-run rock. Process and compact Landing rock with grader and vibratory roller.
	154+10	Re-open Landing with grader and apply 40 CY of jaw-run rock. Process and compact Landing rock with grader and vibratory roller.
	167+90	Re-open Landing at Pt. 6 with grader and apply 10 CY of jaw-run rock. Process and compact Landing rock with grader and vibratory roller.
7 to 8	0+00 to 9+10	Re-open road with grader and compact with vibratory roller. Brush road according to specifications in Exhibit E and remove brushing debris with grader. From 0+00 to 0+50, apply 10 CY of jaw-run rock to road and process and compact with grader and vibratory roller.
	3+10	Construct 30'x30' Landing. Shape and compact Landing with grader and vibratory roller.

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS (Project No. 2) cont.

Segment	Station	Work Description
7 to 8 (cont.)	3+90 to 4+70	Realign road by excavating 4 ft into cutbank with dozer as directed by STATE. Clear brush and organic material away from where headwall under road has eroded. Repair erosion by placing clean excavated material from road realignment in pocket and compact. Drift excess clean waste forward, adding to existing surface. Shape and compact affected subgrade with grader and vibratory roller (approx. 2 stations).
9 to 10	0+00 to 4+90	Re-open road with excavator. Brush roads according to specifications in Exhibit E and remove sod and brushing debris with grader and vibratory roller. Apply a 4” lift of 3”-0” rock (110 CY) to road and process and compact with grader and vibratory roller.
	3+85	Re-open Landing with excavator and apply 30 CY of jaw-run rock to Landing. Process and compact Landing rock with grader and vibratory roller.
11 to 12	0+00 to 172+70	Re-establish ditch from Sta. 46+30 to Sta. 69+80 (approx. 10 stations) and from Sta. 113+20 to Sta. 127+35 (approx. 14.2 stations) as directed by STATE. Scatter waste material on site with backhoe. From 127+35 to Pt. 12, remove sod from road with grader.
	0+00 to 167+85	From Pt. 11 to Sta. 167+85, apply 200 CY of 1½”-0” spot rock to road. Process rock with grader.
	121+30 to 123+75	At Sta. 121+30, begin road realignment by shifting road 1.5 feet into the cutslope. At Sta. 121+55, begin shifting road 3.5 feet into cutslope. Taper new road prism back to the current road in the 25 feet before Sta. 123+75. Excavate cutslope back to a 1:1-1/3 backslope. Between Sta. 121+30 and Sta. 123+75, excavate sidecast material below road. Remove road slough (approximately 20 CY), excavated cutbank material (approximately 1920 CY) and sidecast material (approximately 70 CY) and end haul to Waste Area 3. Shape and compact subgrade with grader and vibratory roller. Apply 40 CY of jaw-run rock at a depth of 8 inches and 40 CY of 1½”-0” rock as surface rock at a depth of 8 inches to cover road realignment surface. Process and compact rock with grader and vibratory roller in accordance with this Exhibit.
	167+85 to 172+70	From Sta. 167+85 to Pt. 12, apply a 4” lift of 3”-0” rock (110 CY) to road. Process and compact rock with grader and vibratory roller (approx. 4.9 stations).
	172+70	Flatten and spread excess material south of Landing. Apply 30 CY of jaw-run rock to Landing and process and compact with grader and vibratory roller.
	172+70 to 173+30	Extend Landing 60 feet with dozer and shape and compact Landing with grader and vibratory roller. Apply 50 CY of jaw-run rock to Landing and spread and compact with dozer and vibratory roller. Construct Waste Area 3 as shown on Exhibit A. STATE shall mark final location on the ground. Grass seed and mulch Waste Area 3 in accordance with Exhibit F and after road realignment and sidecast removal is approved by STATE.

EXHIBIT D

ROAD SURFACING

Application	Rock Size and Type	Location	Depth of Rocks (inches)	Point to Point		Sta. to Sta.		TOTAL VOLUME (CY)	TOTAL WEIGHT (TONS)
				1 to 2		0+00 to 56+60			
				Volume (CY) per		Number of			
Spot Rock	1½”-0”	0+00 to 2+60	n/a	10	Load	2	Loads	20	27
Turnout Rock	3”-0”	2+60	n/a	10	Load	2	Loads	20	27
Transition Rock	Jaw-Run	2+60 to 3+10	n/a	10	Load	2	Load	20	27
Patch rock	Jaw-Run	7+00 to 7+90	n/a	10	Load	4	Loads	40	54
Bedding and backfill	1½”-0”	12+95	n/a	10	Culvert	1	Culvert	10	14
Dissipater	Pit-Run	21+95	n/a	10	Culvert	1	Culvert	10	14
Total Rock for Road Segment			1 to 2					120	162

Application	Rock Size and Type	Location	Depth of Rocks (inches)	Point to Point		Sta. to Sta.		TOTAL VOLUME (CY)	TOTAL WEIGHT (TONS)
				5 to 6		0+00 to 167+90			
				Volume (CY) per		Number of			
Spot Rock	1½”-0”	0+00 to 167+90	n/a	10	Load	16	Loads	160	216
Fill Repair Rock	Jaw-Run	24+45	n/a	10	Load	1	Load	10	14
Landing Rock	Jaw-Run	152+85 & 154+10	n/a	10	Load	6	Loads	60	81
Total Rock for Road Segment			5 to 6					230	311

Application	Rock Size and Type	Location	Depth of Rocks (inches)	Point to Point		Sta. to Sta.		TOTAL VOLUME (CY)	TOTAL WEIGHT (TONS)
				7 to 8		0+00 to 9+10			
				Volume (CY) per		Number of			
Junction Rock	Jaw-Run	0+00 to 0+50	n/a	10	Load	1	Load	10	14
Total Rock for Road Segment			7 to 8					10	14

EXHIBIT D

ROAD SURFACING

Application	Rock Size and Type	Location	Depth of Rocks (inches)	Point to Point 9 to 10 Volume (CY) per		Sta. to Sta. 0+00 to 4+90 Number of		TOTAL VOLUME (CY)	TOTAL WEIGHT (TONS)
4”-Lift	3”-0”	0+00 to 4+90	4	22	Station	4.9	Stations	110	149
Landing Rock	Jaw-Run	3+85	n/a	30	Landing	1	Landing	30	41
Total Rock for Road Segment			9 to 10					140	189

Application	Rock Size and Type	Location	Depth of Rocks (inches)	Point to Point 11 to 12 Volume (CY) per		Sta. to Sta. 0+00 to 173+30 Number of		TOTAL VOLUME (CY)	TOTAL WEIGHT (TONS)
Spot Rock	1½”-0”	0+00 to 167+85	n/a	10	Load	20	Loads	200	270
Base Rock	Jaw-Run	121+30 to 123+75	8	15	Station	2.5	Stations	40	54
Surface Rock	1½”-0”	121+30 to 123+75	8	15	Station	2.5	Stations	40	54
4”-Lift	3”-0”	167+85 to 172+70	4	22	Station	4.9	Stations	110	149
Landing Rock	Jaw-Run	172+70 & Pt. 12	n/a	10	Load	8	Load	80	108
Total Rock for Road Segment			11 to 12					470	635

	Total Rock Volumes For Projects Nos. 1 & 2			
Rock Size	1½”-0”	3"-0”	Jaw-Run	Pit-Run
Rock Totals CY	430	240	290	10
Rock Totals TONS	581	324	392	14

	Total Rock Volume For Project No. 5			
Size	1½”-0”	3"-0”	Jaw-Run	Pit-Run
Rock Totals CY	500	-	-	-
Rock Totals TONS	675	-	-	-

	Maintenance Rock Volumes			
Rock Size	1½”-0”	3"-0”	Jaw-Run	Pit-Run
Rock Totals CY	250	-	-	-
Rock Totals TONS	338	-	-	-

	CY to TONS Conversion Factors			
Size	1½”-0”	3"-0”	Jaw-Run	Pit-Run
Tons/CY	1.35	1.35	1.35	1.35

Roads shall be uniformly graded, shaped and approved by STATE prior to rocking.

EXHIBIT D

ROCK ACCOUNTABILITY

PURCHASER shall obtain subgrade approval from STATE prior to rocking. Rocking shall be limited to periods when weather conditions are acceptable to STATE and when sediment will not enter streams. Additional surfacing needed because of construction season or construction practice is not included in the preceding ROAD SURFACING table, and shall be furnished at PURCHASER expense.

Rock accountability shall be determined by the following methods, as directed by STATE. STATE shall be given 24 hours' notice prior to rocking.
Depth Measurement. Rock shall be spread and compacted according to the depths specified in Exhibit D. Truck measure volumes are given, but shall not limit the amount of rock spread.

Depth shall be determined in the most compacted area of the surface cross section. The depth of compacted aggregates shall not vary more than 1 inch from the depth specified in the "Road Surfacing" table in Exhibit D. The average depth for each road segment shall be the specified depth or greater. If additional rock is required because of insufficient depth, the locations, and volumes to be added shall be determined by STATE.

Load Records. Notify STATE before spreading the rock and maintain a record of all rock delivered for spreading. Make the record available for STATE inspection. A report listing the amount of rock delivered the prior month must be submitted no later than the 15th of each month.

EXHIBIT D

COMPACTION AND PROCESSING REQUIREMENTS

Moisture Content: Compaction must take place when moisture content of the materials being compacted is favorable for effective compaction as determined by STATE.

Compaction Pass: A pass is defined as traveling a road section forward and then backward over that same section.

Subgrade. Subgrade surfaces of the road segments listed below shall be graded and compacted. Compaction shall be accomplished by traveling all surfaces from shoulder to shoulder until the surface is smooth and hard and visible deformation ceases. At least 3 passes shall be made over the entire width and length of the road. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

Rock shall be crowned at 4 to 6 percent or outsloped at 3 to 4 percent as specified in the “Forest Roads Specifications” table in Exhibit D.

ROAD SEGMENT	SUBGRADE COMPACTION OPTIONS
All road segments.	1

Fills. Embankments and fills shall be placed in (approximately) horizontal layers not more than 8 inches in depth. Each layer shall be separately, and thoroughly, compacted. Compaction equipment shall be operated over the entire width of each layer until visible deformation of the layers ceases. At least 3 passes shall be made over the entire width and length of each layer.

Placing individual rocks or boulders with more depth than the allowed layer thickness shall be permitted, provided the embankment will accommodate them. Such rocks and boulders shall be at least 6 inches below the subgrade. They shall be carefully distributed and the voids filled with finer material, forming a dense and compacted mass. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

ROAD SEGMENT	FILLS COMPACTION OPTIONS
All road segments.	1 and 2

Crushed Rock. The rock shall be uniformly mixed and spread in layers on the approved roadbed. Each layer of crushed rock shall be moistened or dried to uniform moisture content suitable for maximum compaction and compacted in layers not to exceed 6 inches in depth. When more than 1 layer is required, each shall be shaped, compacted, and approved by STATE before the succeeding layer is placed. Any irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and adding or removing material until the surface is smooth and uniform. Each layer shall be compacted with a minimum of 3 passes over the entire width and length of the road until the surface is smooth and hard and visible deformation ceases. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

Rock shall be compacted and processed during the same project period it is spread, unless otherwise approved in writing by STATE.

Rock shall be crowned at 4 to 6 percent or outsloped at 3 to 4 percent as specified in the “Forest Roads Specifications” table in Exhibit D.

ROAD SEGMENT	CRUSHED COMPACTION OPTIONS
All road segments requiring crushed rock.	1

EXHIBIT D

COMPACTION EQUIPMENT OPTIONS

(1) Vibratory Rollers. The drum shall have a smooth surface, a diameter not less than 48 inches, a width not less than 58 inches, and a turning radius of 15 feet or less. Vibration frequency shall be regulated in steps to 1400, 1500, and 1600 VPM, corresponding to engine speeds of 1575, 1690, and 1800 RPM. The centrifugal force developed shall be 7 tons at 1600 VPM. It shall be activated by a power unit of not less than 25 horsepower. The vibratory roller shall be self-propelled and operated at speeds ranging from 0.9 miles to 1.8 miles per hour, as directed by STATE.

(2) Vibratory Hand-Operated or Backhoe-Mounted Tamper. Vibratory hand-held or hydraulic tampers shall be used for compaction of backfill materials around culverts and bridge approach embankment materials around abutments. The tamper shoe dimensions shall be a minimum of 10" X 13" and capable of a centrifugal force of 2,250 pounds.

EXHIBIT D

[DURABLE] CRUSHED ROCK SPECIFICATIONS

Grading Requirements

For 1½"-0”	Passing	2" sieve	100%
	Passing	1½" sieve	90-100%
	Passing	3/4" sieve	60-90%
	Passing	1/4" sieve	30-50%
	Passing	No. 10 sieve	15-30%
	Passing	No. 40 sieve	7-15%
For 3”-0”	Passing	4" sieve	100%
	Passing	3" sieve	90-100%
	Passing	1½" sieve	60-90%
	Passing	3/4" sieve	40-60%
	Passing	1/4" sieve	20-40%
	Passing	No. 10 sieve	5-20%
For Jaw-Run	Passing	6" sieve	100%
	Passing	3" sieve	45-65%
	Passing	¼" sieve	0-10%
For Pit-Run	Passing	10" sieve	100%
	Passing	6" sieve	60-85%
	Passing	3" sieve	30-50%
	Passing	¼" sieve	0-10%

Control of gradation shall be by visual inspection by STATE.

EXHIBIT D

CULVERT SPECIFICATIONS

All culvert materials shall be furnished and installed by PURCHASER, unless otherwise specified in the Contract.

Culverts 36 inches in diameter and smaller shall be constructed of corrugated polyethylene, unless otherwise specified in the Contract. Polyethylene culverts shall be double-walled and meet the requirements of AASHTO M-294-11, Type S, or ASTM F2648.

Polyethylene joints shall be made with split couplings, corrugated to engage the culvert corrugations, and shall engage a minimum of 4 corrugations, 2 on each side of the culvert joint.

Culverts shall be located according to the alignment and grade as shown on the Plan and Profile, and/or as staked in the field, or as specified in special instructions.

The STATE Representative shall determine final culvert locations and stake the locations in the field prior to installation.

Culverts in live streams shall be installed with the inlet and outlet on grade with the stream bottom, unless otherwise specified in writing.

Cross Drain Culverts

Cross drain culverts on road grades in excess of 3 percent shall be skewed at least 30 degrees from perpendicular to the road centerline, except that cross drain culverts at the low point of dips in roads shall not be skewed. Cross drains shall be skewed to fit the required culvert length to the road prism. Cross drain culverts shall be installed at a slope steeper than the incoming ditch grade, but not less than 3 percent or greater than 10 percent.

Disconnect Culverts

The culvert inlet shall be located as close to the channel that it is disconnecting, while the culvert outlet shall be located as far from the channel as possible; discharge culvert outflow on the forest floor, allowing for filtration before the water enters the disconnected channel.

The foundation and trench walls for all culverts shall be free from logs, stumps, limbs, stones, and other objects which would dent or damage the culvert. The culvert trench shall be excavated 3 culvert diameters wide to permit compaction and working on each side of the culvert. Tamping shall be done in 6-inch lifts, 1 culvert diameter each side of the culvert. Bedrock shall be excavated as required to provide a uniform foundation for the full length of the culvert.

A bedding of crushed rock as specified shall be placed to provide a wide band of support and to transmit the load from above evenly over the entire length of the culvert for all culverts.

Backfill shall consist of crushed rock on improvement segments.

Transporting of the culvert shall be done carefully. Dragging or allowing free fall from trucks or into trenches shall not be permitted.

Minimum height of cover over top of culvert to subgrade when road is to be rocked shall be as follows: 12" for culverts 18” to 36”. Minimum vertical cover for other designs shall be as specified by STATE. The finished subgrade shall match the subgrade of the road prior to installation.

Lengths of individual culvert sections shall be not less than 10 feet, unless otherwise provided for in special instructions. The shortest culvert section length shall be placed at the inlet end.

The ends of each culvert shall be free of logs and debris which would restrict the free flow of water.

EXHIBIT D

CULVERT SPECIFICATIONS

The intake end of cross drain and disconnect culverts shall be provided with a sediment catching basin 3 feet in diameter at the bottom. The outlet end of any culvert which would allow water to erode embankment soil shall be provided with an energy dissipator, half round, or other approved slope protection device. Construct lead-off ditches away from culvert outlets where the slope gradients restrict the free flow of water.

Compaction by tamping utilizing a Vibratory Hand-Operated or Backhoe-Mounted Tamper is required for all culverts.

All culverts scheduled for replacement shall become property of the PURCHASER and be removed from STATE land and hauled to an approved refuse site in the same project period in which replacement occurred. Damaged culvert inlets and/or outlets shall be repaired by opening them with a hydraulic jack, or cutting off the culvert end to allow for free passage of water at peak flow levels.

The intake ends of culverts in fills less than 3 feet to the top of the culvert shall be marked by driving white fiberglass posts within 6 inches of the downgrade side. Posts shall be a minimum of 6 feet long and 2½ inches wide, with the spade driven 2 feet into the ground. Install a culvert marker at each existing culvert that is missing a marker that could be reached by a grader blade.

Energy Dissipators shall be installed prior to culvert installation, unless otherwise approved in writing by STATE.

A manufacturer's certification that the product was manufactured, tested, and supplied in accordance with this specification shall be furnished to STATE upon request.

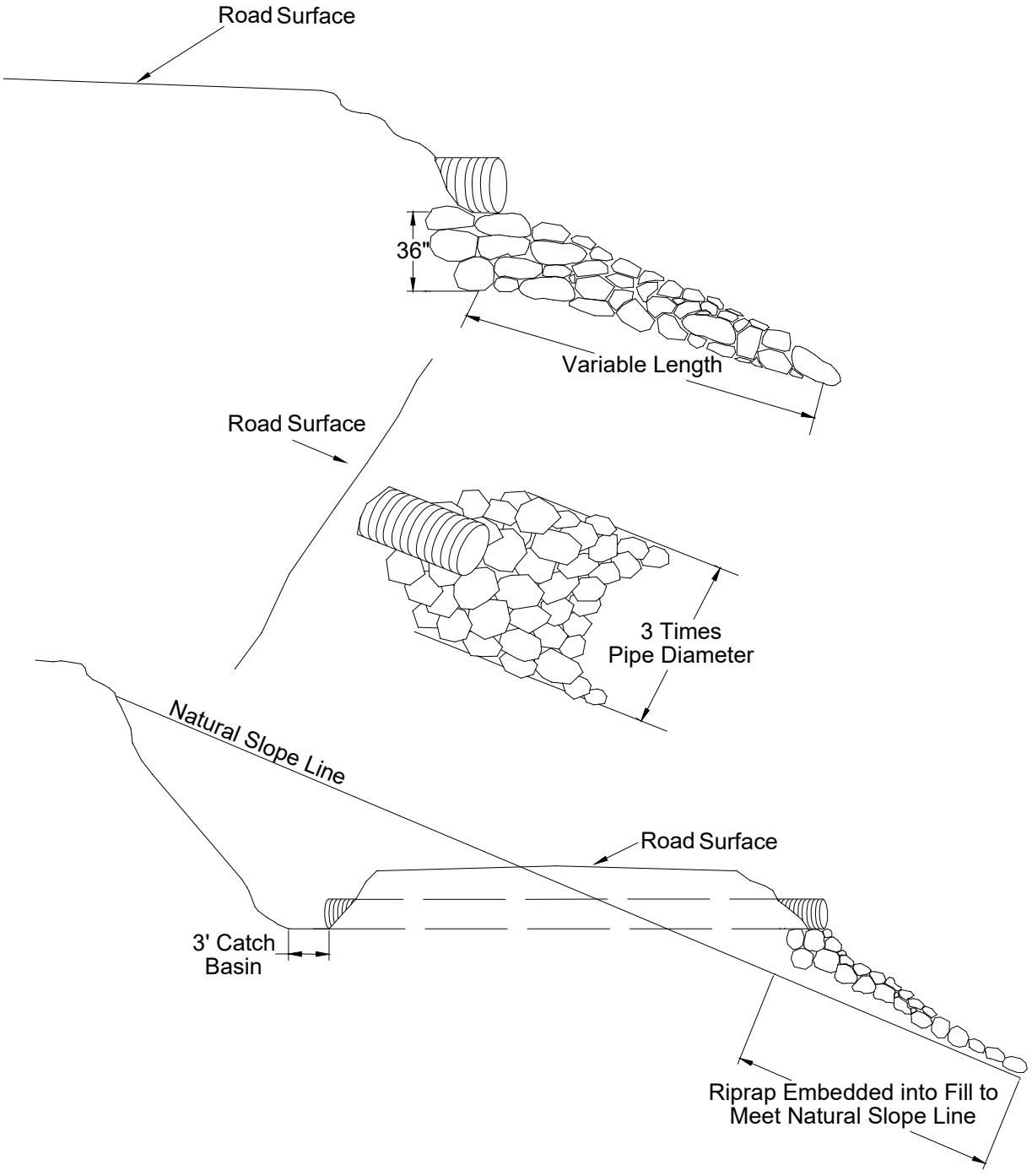
CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	MATERIAL TYPE	ROAD SEGMENT POINT TO POINT	STATION
1	18	30	CPP	1 to 2	Sta. 12+95

CPP = Polyethylene

EXHIBIT D

TYPICAL EMBEDDED ENERGY DISSIPATOR



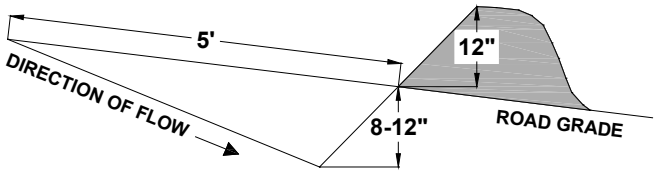
Dissipator shall be installed prior to the installation of the culvert, unless approved by STATE.

EXHIBIT D

WATERBAR SPECIFICATIONS

PROFILE

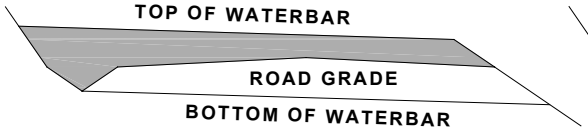
DITCHED AND OUTSLOPED



SPACING OF WATERBARS	
ROAD GRADE	DISTANCE
< 6 %	400'
6 - 10 %	200'
11 - 15 %	150'
> 15 %	100'

CROSS SECTION

DITCHED



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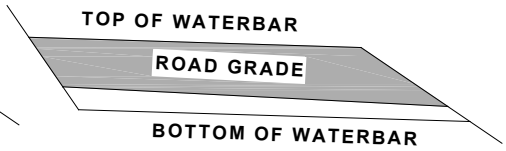
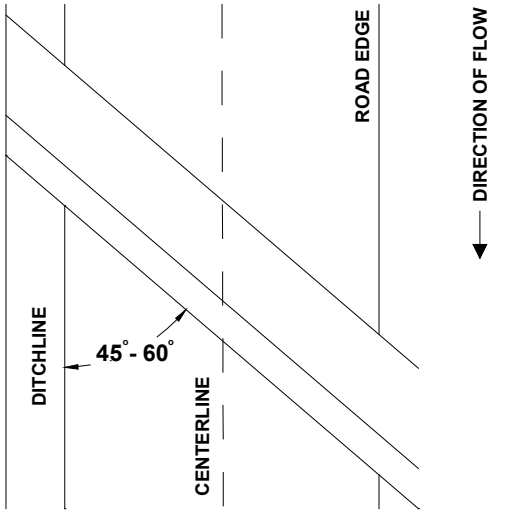


CONSTRUCT DITCHOUT THRU ANY EXISTING BERM.
CROSS DRAINAGE GRADIENT MINIMUM 3%.

PLAN VIEW

DITCHED



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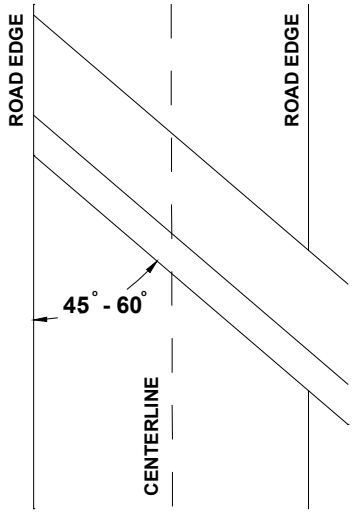
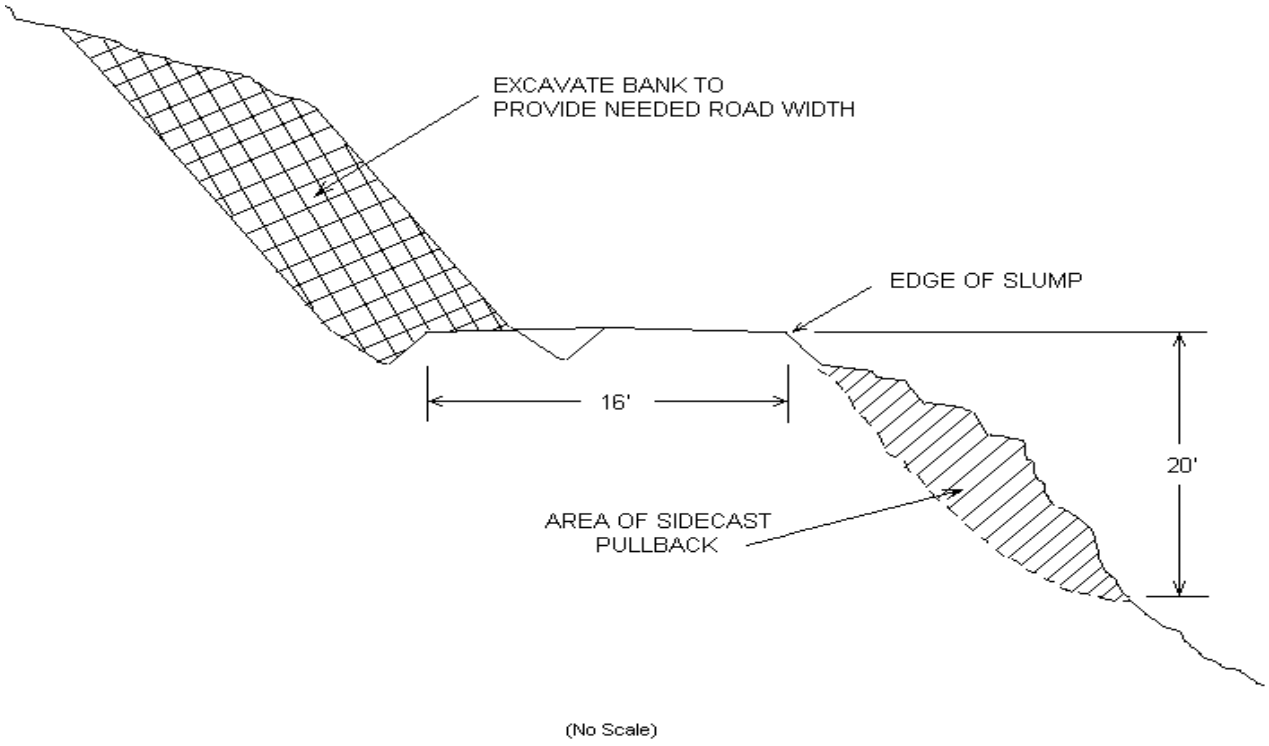


EXHIBIT D

TYPICAL CROSS SECTION VIEW OF SIDECAST PULLBACK AND ROAD REALIGNMENT



(No Scale)

EXHIBIT E

ROAD BRUSHING SPECIFICATIONS

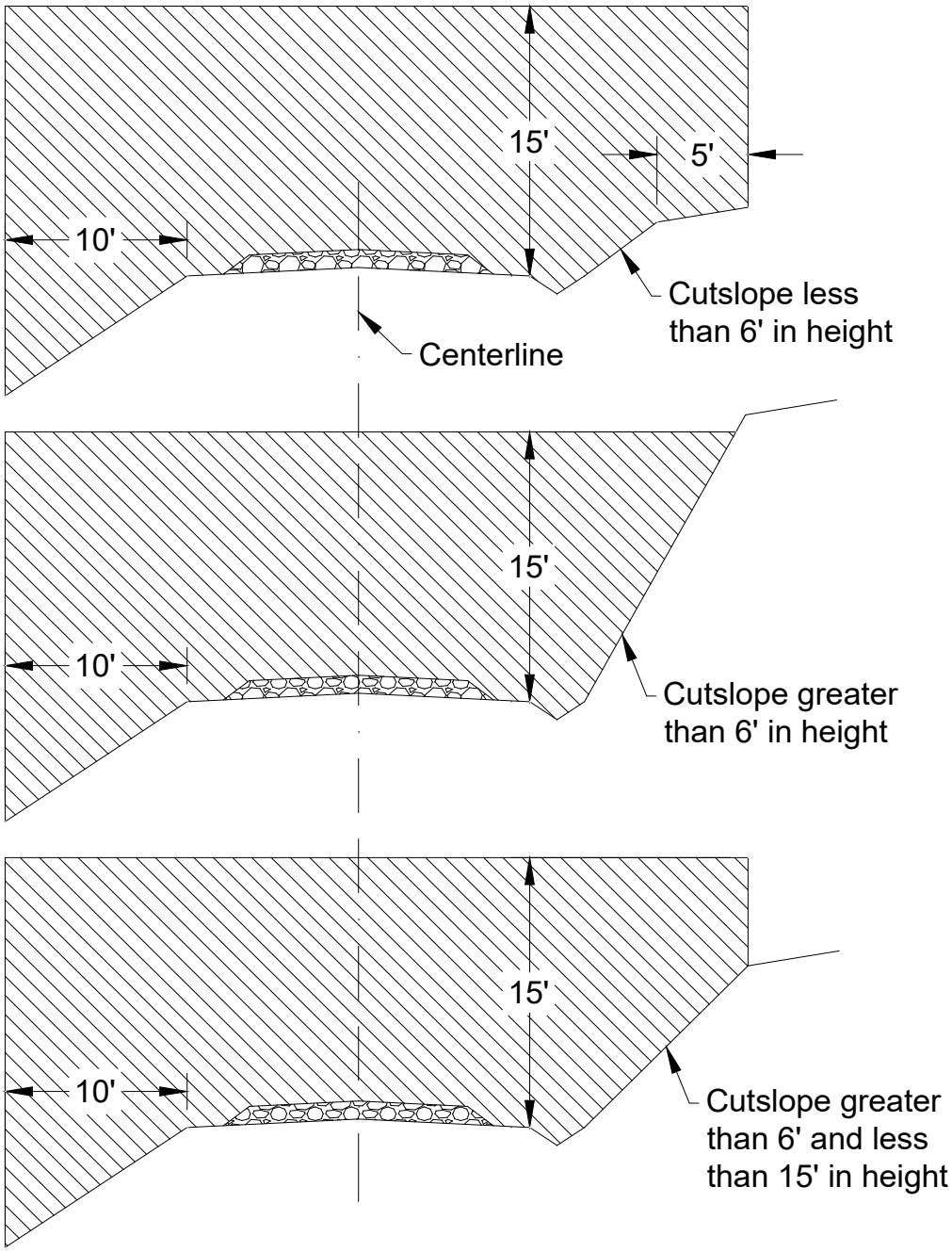


EXHIBIT E

ROAD BRUSHING SPECIFICATIONS

CUTTING REQUIREMENTS:
Purchaser shall conduct roadside brushing on the road points as listed in Section 2610 of this Contract. The minimum height of brushing shall be for all situations 15 feet from the road surface, and the minimum width of brushing on the down slope side of the road shall be 10 feet horizontal distance. The minimum width of brushing on the cutslope side of the road shall be dictated by the height of the cutslope as indicated in the three drawings above. In situations where site distance is an issue brushing height on the cutslope may vary from the above drawings, as directed by STATE. All turnouts and turnarounds encountered shall be brushed.

Brush and trees shall be cut to a maximum height of 6 inches above the ground surface or obstructions such as rocks or existing stumps. All vegetation on the road surface shall be cut flush to the road surface. Stumps greater than three inches on the road shoulder and ditchline, shall be cut flush to the surface.

CLEAN-UP and DEBRIS REMOVAL:
Debris resulting from the brushing operation shall be removed from the roadway, cutslope, ditches, water courses, culvert inlets/outlets, and sediment catch basins. Debris shall be mulched or scattered downslope from the road or placed in other stable locations. Large debris, 6 inches or larger in diameter, shall be mulched or cut into lengths 6 feet or less to facilitate rapid decay, unless otherwise approved by STATE.

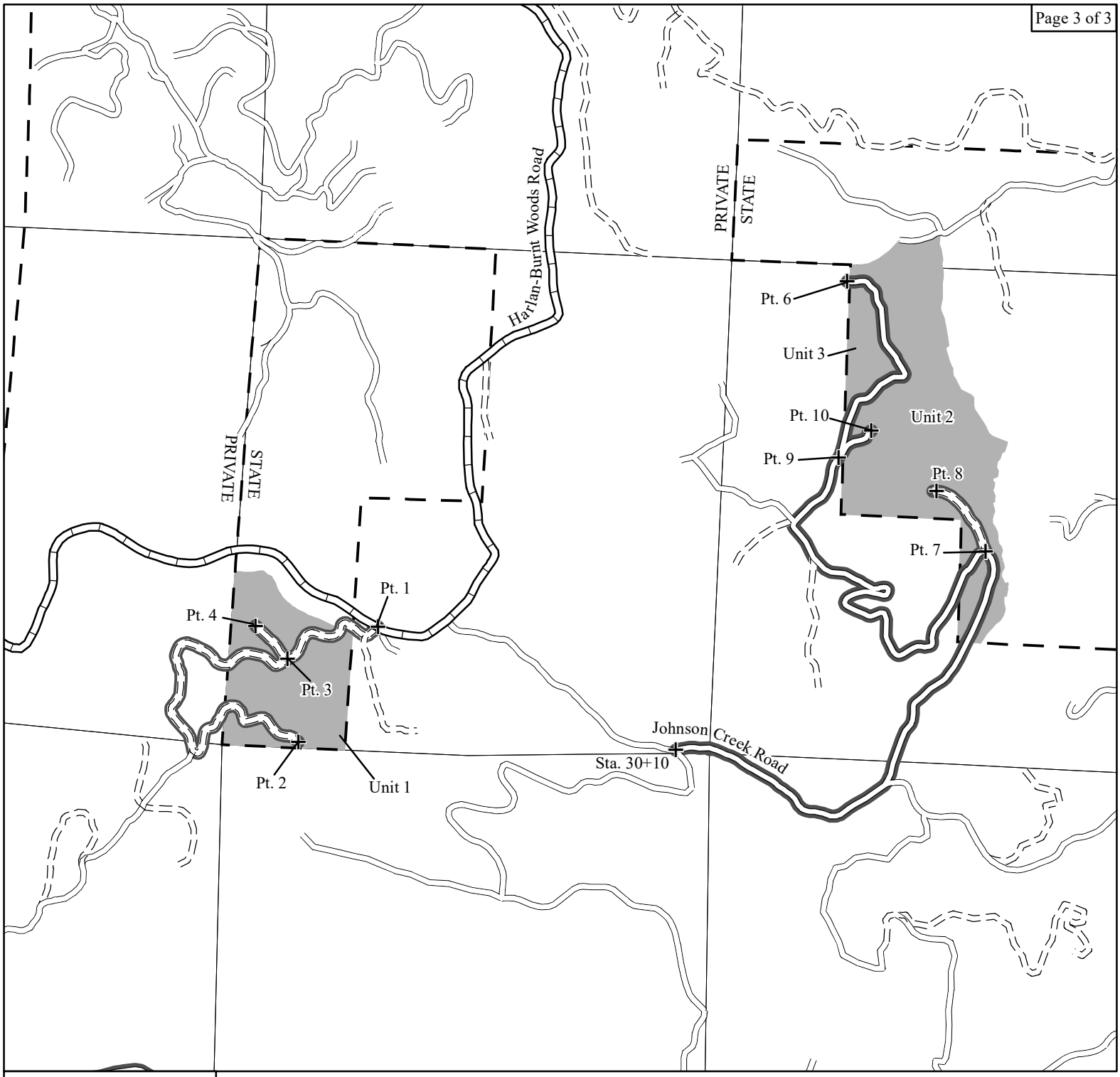
Trees larger than 6 inches in diameter at stump height, located within brushing limits but outside of the ditchline or shoulder, shall not be cut down, but shall be limbed for road visibility.

Existing debris on the roadway, cutslope, ditchline, or catch basin shall be removed and treated. Debris shall be mulched or scattered downslope from the road or placed in other stable locations. Large non-merchantable debris, 6 inches or larger in diameter, shall be mulched or cut into lengths 6 feet or less to facilitate rapid decay, unless otherwise approved by STATE.

Merchantable blown down trees encountered shall be bucked in lengths as directed by STATE, and placed in locations acceptable to STATE, or pushed out of the road prism.

When spur roads to be brushed end with a landing, the landing is to be brushed as directed by STATE.

CULVERT AND ROAD MARKER DAMAGES: Culvert and road markers damaged, or any portion of a marker damaged from PURCHASER activities shall be replaced.



Legend

- Timber Sale Area
- Ownership

Roads

- Paved Road
- Surfaced Road
- Unsurfaced Road
- Roadside Brushing
- Project Point

EXHIBIT "E"

ROAD BRUSHING
OF TIMBER SALE CONTRACT NO. WO-341-2022-W00902-01
LONG JOHN
PORTIONS OF SECTIONS 3 & 4 T12S, R8W, W.M., &
PORTIONS OF SECTION 34 T11S, R8W, W.M.,
LINCOLN COUNTY, OREGON.

N

1:18,000

0.25 0.125 0 0.25 0.5 0.75 1 Miles

Date: 03/28/2022

EXHIBIT F

SEEDING AND MULCHING

This work shall consist of preparing seedbeds and furnishing and placing required seed and straw mulch. Straw mulch shall consist of straw that is free of noxious weeds.

Soil Preparation. All areas to be seeded shall be finished and then cultivated to provide a reasonably firm, but friable seedbed. A minimum of 1/2 inch of surface soil shall be in a loose condition.

Seeding Seasons. Seeding shall be performed only from March 1 through June 15 and August 15 through October 15. Seeding materials shall not be applied during windy weather or when the ground is excessively wet or frozen. Areas of disturbed soil shall be seeded by the end of the project period in which work was started. PURCHASER shall notify STATE within 24 hours of seeding.

APPLICATION METHODS FOR SEED

Dry Method. Mechanical seeders, seed drills, landscape seeders, cultipacker seeders, or other approved mechanical seeding equipment shall be used to apply the seed in the amounts and mixtures specified. Hand-operated seeding devices may be used when seed is applied in dry form.

APPLICATION RATES FOR SEED

The seed mixture listed below shall be applied at 100 lbs. per acre. The seed mixture shall be comprised of the ODFW forage mix.

SPECIES	MIXTURE	PURE LIVE SEED	GERMINATION
Annual Rye	33%	95%	>90%
Orchard Grass	33%	95%	>90%
Perennial Rye	17%	95%	>90%
White Clover	17%	95%	>70%

Mulching Period. Straw mulch shall be applied within 24 hours of spreading grass seed.

APPLICATION RATES FOR MULCH

Place straw mulch to a reasonably uniform thickness of ¾ to 1¼ inches. This rate requires between 1 and 1½ tons of dry mulch per acre.

Application Locations:

Waste Area 4 after completion of compaction. Cutbank and sidecast pullback areas.

PART IV: OTHER INFORMATION

FPA WRITTEN PLAN for Yarding Corridors through Type F RMA's

Long John Timber Sale

Location: Portions of Section 3, T12S, R08W, W.M., Lincoln County, Oregon.

Landowner: Oregon Department of Forestry
24533 Alsea Hwy
Philomath OR, 97370
(541) 929-3226

Protected Resources: Peterson Creek, a medium Type F stream, and 4 small Type F tributaries to Peterson Creek.

Situation: Approximately 2,400 ft of Peterson creek, medium Type F, and 1,100ft of an unnamed tributary, small Type F, make up the Eastern boundary of Unit 2 and approximately 2,500 ft of unnamed tributaries, small Type F, run through Unit 2. To achieve one-end suspension, cable corridors may need to Tailhold on the other side of the Type F streams, however no logs will be yarded through the RMA's.

Resource Protection Practices:
Along all of the above mentioned streams, as well as any other streams, the following practices are required under the timber sale contract, to protect the streams and streamside areas:

- No trees will be felled within stream buffers (RMA's), except as necessary in cable corridors.
- Trees that fall or slide into Type F RMA's shall not be removed without prior approval from STATE.
- Trees adjacent to the stream buffers (RMA's) will be felled away from or parallel to the streams to prevent trees from entering the aquatic areas.
- When cable logging is conducted nearby the RMA's, logging lines may cross, but will not be lowered into the RMA's during yarding, except during rigging. During rigging the lines must be pulled out of the RMA's when changing corridors.
- Cable corridors must be at least 100 feet apart where they cross the RMA's.

I, the undersigned, submit this written plan in compliance with the requirements in the Forest Practices Act regarding the use of cable corridors across Type F RMA's. I agree to the protection measures listed on this plan:

_____ Date: _____
Purchaser/Operator Contract Representative

_____ Date: _____
State Representative