

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) Sta	(5) State Brand Information (Complete)			
(1) Contract Number:	WL-341-202	0-W00576-01					
(2) Sale Name:	Cram Clear	пир					
(3) Contract Expiration	3) Contract Expiration Date: 03/31/2022						
(4) Purchaser Name:							
(6) State Representative	es:						
Name		Circle One	Phone No.	Cell No.	Alt Phone		
		Logging Projects All					
		Logging Projects All					
		Logging Projects All					
		Logging Projects All			1		
(7) Purchaser Represer	ntatives:	Circle One	Phone No.	Cell No.	Alt Phone		
<u>ivanie</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 Subcontract Project No. Subcon	tors and Start Date tractor Name.	ates: Start Date	Completion Da	ite <u>Cell No.</u>	Alt Phone		
		1					
ISub	ocontractor Na	⊥L me. S	L tart Date	Cell No.	Alt Phone		
		<u> </u>					
			-				
9) Comments:			L				

⁽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.

X Temporary stream crossings.



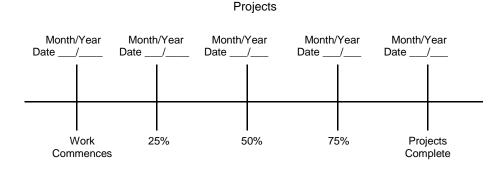
Oregon Department of Forestry

2600 State St Salem OR 97310 PART III: EXHIBITS

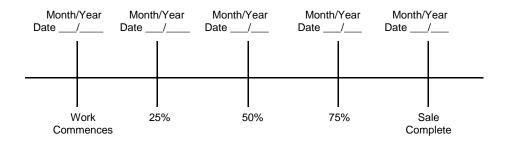
EXHIBIT B OPERATIONS PLAN

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.



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:	SUBMITTED BY: PURCHASER
STATE OF OREGON - DEPARTMENT OF FORESTRY	
Title	Title



Oregon Department of Forestry EXHIBIT C - SAWMILL GRADE (WESTSIDE SCALE) SCALING INSTRUCTIONS - LOCATION APPROVAL - BRAND INFORMATION Western Lane - SOA

(1)	ORIGINAL REGIST	TRATION	N □ Dat	e			(9) SALE NAME: Cram Cleanup
	REVISION NUMBE	R 00	<u>00</u> □ Dat	e			COUNTY: Lane
	CANCELLATION		☐ Dat	e			- (10) STATE CONTRACT NUMBER:
(2)	TO:						WL-341-2020-W00576-01
` ,		nird Party	Scaling Orgar	nization)		(11) STATE BRAND REGISTRATION NUMBER:
(3)	FROM: Western L	ane Ph	one <u>(541</u>) 935-2	2283		
	(State Forestr	•					(12) STATE BRAND INFORMATION:
			RIAL HWY				
		4,OR 974	87-0157				- <u> </u>
(4)	PURCHASER:						_) (
	Mailing Address:						
	_						
	Phone Number:						-
(5)	MINIMUM S	CALING	SDECIEIC	ATION	9		_ (13) PAINT REQUIRED: YES ☑ 1 COLOR: Orange
(5)		CALING	SPECIFICA	ATION			COLOR: Orange
	SPECIES	N	IINIMUM NE		LUME		(14) SPECIAL REQUESTS (Check applicable)
	Conifers		10				PEELABLE CULL (all species) ☑
	Hardwoods		10)			NO DEDUCTIONS ALLOWED FOR
	* ^	4 4 4 4		101	\\/+-:-	1-	MECHANICAL DAMAGE ☑
(C)	*Apply minimum volu		o whole logs o	over 40	westsic	ie	ADD-BACK VOLUME - Deductions due to delay ☑
(6)	WESTSIDE SCALE Use Region 6 actual to		Logs over 40	,			OTHER:
	ooo region o dotaar a	apor raio.	YES				(15) REMARKS
(7)	W-:	-1-	150	NO			(15) REMARKS
	Weight Scale Samp		Ш	<u> </u>		1	,
(8)	APPROVED SCAL LOCATIONS	ING	ies	ठ	쑹	ght	
	shown on the ODF Approvations web-site)	ed .	Species	Yard	Truck	Weight	Occupated Manage (Optional including the Pintial)
	ations web site /		0,				Operator's Name (Optional inclusion by District):
							(16)
							Purchaser or Authorized Representative Date
							-
					<u> </u>	ļ	State Forester Representative Date
					<u> </u>	ļ	
							State Forester Representative PRINT NAME



Oregon Department of Forestry EXHIBIT C - SAWMILL GRADE INSTRUCTIONS FOR FORM 343-307a (rev. 11/11) Western Lane - SOA

(1) Check appropriate box. REVISION NUMBER requires comments. CANCELLATION requires logging and hauling to be complete, recall branding hammers, date and sign where indicated, write diagonally across page "CANCEL", and send to TPSO.

(2)

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@southernoregonlogscaling.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

Pacific Log Scaling & Grading Bureau, Inc. P.O.Box 23939, Portland, OR 97281 Phone: (503) 684-5599 Fax: (503) 639-4880

Email: PacLogScale@sol.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: http://www.odf.state.or.us/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 conversion factors, per load volumes, 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.

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.



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

Western Lane, SOA

(1)	ORIGINAL REGISTRATION Date	(9) SALE NAME: Cram Cleanup
	REVISION NUMBER 000 Date	COUNTY: Lane
	CANCELLATION	STATE CONTRACT NUMBER:
(2)		WL-341-2020-W00576-01
	(Approved Pulp Processing Facility)	(11) STATE BRAND REGISTRATION NUMBER:
(3)	FROM: Western Lane Phone (541) 935-2283 (State Forestry District) Address: 87950 TERRITORIAL HWY VENETA,OR 97487-0157	(12) STATE BRAND INFORMATION:
(4)	PURCHASER:	— /
(5)	Scaling Bureau (TPSO) Processing Weight receipts:	
	Mailing Address: , Phone Number:	(13) REMARKS :
	THORE NUMBER	
(6)	STATE Definition of Approved Pulp Sort:	Operator's Name (Optional inclusion by District):
	• Top portion of the tree (tops).	
	All logs with a diameter (Big End) greater	(14) SIGNATURES:
	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). 	Purchaser or Authorized Representative Date
	 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. 	State Forester Representative Date
	Weigher shall sign the weight receipt.	State Forester Representative PRINT NAME
	• 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	1

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.

Distribution: ORIGINAL: Salem/ COPIES: TPSO, Approved Pulp Processing Location, Purchaser, District, Mgmt. Unit



Oregon Department of Forestry EXHIBIT C - PULP SORT Instructions for Form 343-307b

Western Lane, SOA

- (1) **Must Complete.** Check appropriate box. REVISION NUMBER requires comments in the Remarks Section(13). CANCELLATION requires logging and hauling to be complete, recall branding hammers, date and sign where indicated, write diagonally across page "CANCEL", and send to TPSO.
- (2) **Must Complete.** Approved Pulp Processing Facility. Write in as written in the Approved Log Delivery Location http://www.odf.state.or.us/DIVSIONS/management/asset_management/ScalingLocation.asp
- (3) Must Complete. State Forestry District and District Phone Number.
- (4) Must Complete. Purchaser's business name as it appears on the Contract.
- (5) Must Complete. 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

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

Pacific Log Scaling & Grading Bureau, Inc. P.O.Box 23939, Portland, OR 97281 Phone: (503) 684-5599 Fax: (503) 639-4880

Email: PacLogScale@sol.com

Must Complete. Big end log not to exceed ______ inches. 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.

- (7) Must Complete. Enter sale name and county. If more than one county write in all the counties that the sale is located in.
- (8) Must Complete. Enter sale Contract number.
- (9) Must Complete. Enter Oregon's State Brand Registry Number (REQUIRED).
- (10) **Must Complete.** 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).
- (11) Use this section to list any special instructions or the reason for any revisions in section item(1).
- (12) Must Complete. Purchaser required to sign and date completed form in addition to State Forester Representative, sign and print name on the form.

Salem Distribution Instructions: Original will be mailed to Salem after it is electronically scanned and placed in the Salem transfer drive \\WPODFFILL01\Transfer\ScalingInstructions or e-mailed directly to scaling@odf.state.or.us. Scaling instructions for each brand should be scanned separately, for each approved TPSO.

Distribution(See specific instructions on pg.2): ORIGINAL: Salem/ COPIES: TPSO, Approved Pulp Processing Location,
Purchaser, District, Mgmt. Unit

EXHIBIT D FOREST ROAD SPECIFICATIONS

Road	Subgrade Width	Surfaced Width	STATION TO STATION	POINT TO POINT	Drainage
Spur 1	16'	12'		A to F	Crowned
Spur 1a	14'	12'	0+00 to 5+20		Outsloped

Surface width shall be increased to accommodate off-tracking on horizontal curves.

<u>CLEARING</u>. 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 10 feet back of the top of the cutslope and 10 feet out from the toe of the fill slope, or as directed by STATE. The "Road Brushing Specifications" in Exhibit I shall apply. 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.

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

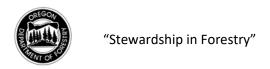
All stumps shall be completely removed within the limits of required grubbing. Stumps overhanging cutslopes shall be removed. Grubbing debris shall not be placed or permitted to remain in or under any road embankment sections. Grubbing debris shall not be left lodged against standing trees.

GRUBBING CLASSIFICATION.

New construction - from the top of the cutslope 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.

<u>CLEARING AND GRUBBING DISPOSAL</u>. Scatter in stable locations through openings in the timber outside of the cleared right-of-way, except areas where end-haul is required. In areas where end-haul is required, clearing and grubbing debris shall be fully contained and hauled to a designated waste area. Clearing and grubbing debris shall be left in a stable location, and not left lodged against standing tree



Page 2 of 6

EXHIBIT D FOREST ROAD SPECIFICATIONS

<u>EXCAVATION</u>. 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.

<u>Curve Widening</u>. 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

<u>Subgrade</u>. Subgrade shall be crowned or outsloped at 4 to 6 percent as shown on the "Forest Road Specifications" table in this Exhibit unless otherwise specified 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.

<u>TURNOUTS</u>. Increase roadbed width an additional 8 feet for both subgrade and surfacing. Length shall be at least 25 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.

<u>SLOPES</u>	Back Slopes	Fill Slopes
Solid Rock	Vertical to 1/4:1	
Fractured Rock	1/4:1	
Soil - side slopes 50% and over	³ ⁄ ₄ :1	
Soil - side slopes less than 50%	1:1	1½ :1

Top of cutslope shall be rounded were specified by STATE.

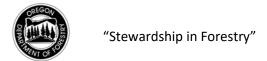
<u>LANDINGS</u>. Landings shall be constructed as posted in the field, no less than 50 feet wide and no more than 70 feet wide unless otherwise approved by STATE. Surface is to be outsloped or crowned for drainage with general grade no more than 3 percent. Surface as shown in the "Road Surfacing" table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

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

<u>SEASONAL WINTERIZATION</u>. All unsurfaced roads or unfinished subgrades shall be waterbarred in accordance with the specifications in Exhibit I, and blocked from vehicular traffic prior to October 31, annually and as directed by STATE.

Cram Cleanup

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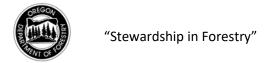
EXHIBIT D

FOREST ROAD SPECIFICATIONS

GENERAL ROAD CONSTRUCTION/RECONSTRUCT INSTRUCTIONS:

- (1) <u>Timber Removal</u>. Remove all trees within posted right-of-way, as specified in Section 2210, "Designated Timber."
- (2) <u>Bank Slough Removal</u>. Dig out all bank slough. Bank slough material 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.
- (3) <u>Drainage Ditches</u>. Restore or construct ditch lines, including ditchouts, as directed by STATE. Clean out any plugged culvert inlets and outlets. 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. 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.
- (4) 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.
- (5) 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 G.
- (6) <u>Stream crossings and Cross Drain culverts</u> shall be installed as directed by STATE and in accordance to Exhibit G. The Location of the culverts shall be marked by STATE. A STATE representative will mark the location after the completion of the subgrade. Rocking shall not occur until all culverts have been installed unless otherwise approved in writing by STATE.
- (7) All inlets and outlets of stream crossings shall be armored with rock. All outlets of cross drains shall be armored with rock. Rock may be acquired at STATE approved locations on STATE lands, or utilized from STATE approved road generated rock material. Install energy dissipater as outlined in Exhibit G.
- (8) Each culvert shall be backfilled with some crushed rock, or provided extra surfacing rock allocated over the culvert on the running surface, or compact the soil with a tamping device. Operator shall provide adequate support around the culvert.
- (9) 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 or outsloped at 4 to 6 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 or outsloped at 4 to 6 percent.

The subgrade shall be approved by STATE prior to the application of rock.



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EXHIBIT D

END-HAUL REQUIREMENTS

Road	STA. to STA.	Approx. Waste (yds ³)	Waste Area Location	Waste Area Treatment
Spur 1a	1+40 to 3+54	92	1	1
	Total	92		

Landing fills shall not be allowed on slopes over 55%

End-Haul Areas General Requirements

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. Material shall not be sidecast unless specified above.

When controlled blasting is required, it shall be accomplished using timing devices, delayed charges, low intensity shots, or other suitable means to contain material within the road prism.

Containment/Sidecast

- (1) Full: No excavated material remains below the road.
- (2) Normal/Incidental: The amount of excavated material lost over the outside edge of the road shall not exceed 1 foot in depth.
- (3) Sidecast: Material shall be spread evenly below the road so that it does not build up behind trees, snags or other debris, and shall not exceed 3 feet in depth.

Any amount of material exceeding the containment requirements shall be removed by whatever means necessary and end-hauled to a designated waste area.

Waste Area Location

- (1) As shown on Exhibit A and as marked in the field.
- (2) Setback from slope break shall be a minimum of 20 feet horizontal measurement.
- (3) As directed by STATE.

Waste Area Treatment

- (1) Deposit at waste area, spread evenly, compact with Dozer, and provide adequate drainage.
- (2) Pile woody debris separate from other waste material.

Page 5 of 6

EXHIBIT D

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS

Spur 1 as shown on Exhibit A:

A to F

Grade and shape running surface and establish drainage. Spur 1 is crowned and the operator shall maintain or reestablish drainage for the entire road. Clearing ditches of debris, cleaning out catch basins and unplugging or cleaning culverts along the road. The operator shall maintain or reestablish drainage for each section prior to the application of surfacing rock. The subgrade shall be crowned at 3 to 6 percent.

Conduct roadside brushing according to Exhibit G.

Conduct standard maintenance. Reestablish drainage, remove bank slough, unplug cross drains.

Prepare the running surface for a lift of rock.

Operator shall utilize ditchouts where feasible.

Remove any berms on the inside and outside edge of the road that impedes drainage. The operator shall be careful to minimize the disturbance to the grasses and herbs growing in the ditchline and outside edge of the road.

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS

A Start of road improvement, begin grading and shaping road.

B Continue standard improvement of road. Prepare running surface for a lift of rock.

C Construct a truck turnout on south side of road. The turnout shall be a maximum of 50 feet in

length with a maximum width of 25 feet.

D Construct a truck turnaround on south side of road. The turnaround should be a maximum of 30

feet in length with a maximum width of 25 feet.

Waste area is located at project point D.

E Construct a landing. Landing shall be a minimum of 50' by 50' and no greater than 70' by 70'.

F End road reconstruction.

Rocking Instructions:

A to F From project point A to project point F, provide a compacted depth of 2" of 3/4"-0" rock.

C Apply the allocated truck turnout rock.

D Apply the allocated truck turnaround rock.

Cram Cleanup

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EXHIBIT D

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS

E Apply the allocated landing rock.

Spur 1a as shown on Exhibit A

0+00 to 5+20

Open old road bed, the existing road bed consists of several seedlings that will need to be cut and removed. Grade and shape running surface and establish drainage. Spur 1a outsloped and the operator shall maintain or reestablish drainage for the entire road. The subgrade shall be out sloped at 3 to 6 percent.

Conduct roadside brushing as well as brushing of seedlings within roadbed according to Exhibit G.

Conduct standard maintenance. Reestablish drainage, remove bank slough if any persists on road.

Prepare the running surface for a lift of rock.

Operator shall utilize ditchouts if feasible.

Remove any berms on the inside and outside edge of the road that impedes drainage. The operator shall be careful to minimize the disturbance to the grasses and herbs growing in the ditchline and outside edge of the road.

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS

0+00	Start of road im	provement. beain	grading a	and shaping road.

1+40 Start removal of soil that has sloughed onto road bed from the cut bank. Establish a 14 foot

subgrade.

3+54 End removal of soil that has sloughed onto road bed from the cut bank.

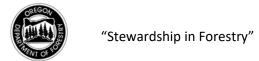
5+20 Reconstruct landing. Landing shall be a minimum of 50' by 50' and no greater than 70' by 70' and

sloped for drainage.

Rocking Instructions:

0+00 to 5+20 From project point 0+00 to project point 5+20, provide a compacted depth of 2" of 1-1/2" -0" rock.

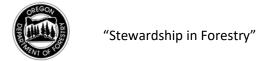
5+20 Apply the allocated landing rock.



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Exhibit E

ROAD	ROCK TYPE	ROCK SIZE	COMPACTED DEPTH	YDS ³ /STA	TOTAL STATIONS		O STA. o Point	APPROX TOATAL YDS ³
Spur 1	CAP	3/4"-0"	2"	11	46.35	Α	F	510
Spur 1a	CAP	1 1/2"-0"	2"	11	5.20	0+00	5+20	60
LANDINGS								
ROAD		ROCK SIZE	COMPACTED DEPTH	YDS ³ /STA	STATIONS	STATION/ POINT		APPROX. TOATAL YDS ³
Spur 1		Jaw Run		40	1.00	Е		40
Spur 1a		Jaw Run		40	1.00	5+20		40
TRUCK TURN AROL	TRUCK TURN AROUND							
ROAD		ROCK SIZE	COMPACTED DEPTH	Yds ³ /Point	NO. OF TURN AROUNDS	STATION	V POINT	APPROX TOATAL YDS ³
Spur 1		Jaw Run		20	2	C,	D	40



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EXHIBIT E

Rock Totals	1 1/2"-0"	3"-0"	Jaw Run
LOOSE TRUCK Cu. Yds	510	60	120

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

Depth measurement shall be used to determine contract compliance.

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EXHIBIT E

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.

<u>Depth Measurement</u>. 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.

<u>Load Records</u>. 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 weekly. However, depth measurement shall be used to determine contract compliance.

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EXHIBIT E

DURABLE CRUSHED ROCK SPECIFICATIONS

O == = = = = =	Describence
Gradina	Requirements

For 3/4"-0"	Passing Passing Passing Passing Passing Passing Passing	1" sieve 3/4" sieve 3/8" sieve 1/4" sieve No. 10 sieve No. 40 sieve	100% 90-100% 55-75% 40-60% 20-40% 8-16%
For 1½"-0"	Passing Passing Passing Passing Passing Passing Passing	2" sieve 1½" sieve 3/4" sieve 1/4" sieve No. 10 sieve No. 40 sieve	100% 90-100% 60-90% 30-50% 15-30% 7-15%
For 3"-0"	Passing Passing Passing Passing Passing Passing Passing Passing	4" sieve 3" sieve 1½" sieve 3/4" sieve 1/4" sieve No. 10 sieve	100% 90-100% 60-90% 40-60% 20-40% 5-20%
For Pit Run	Passing Passing	6" sieve 3" sieve	100% 45-65%

Control of gradation shall be by visual inspection by STATE.



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EXHIBIT F

COMPACTION AND PROCESSING REQUIREMENTS

<u>Moisture Content</u>: 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.

<u>Crushed Rock</u>. 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 and compacted 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, outsloped, or insloped at 4 to 6 percent as specified in the "Forest Roads Specifications" table in Exhibit D and as directed by STATE.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
All road segments requiring crushed rock.	(1) Vibratory Roller



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EXHIBIT F

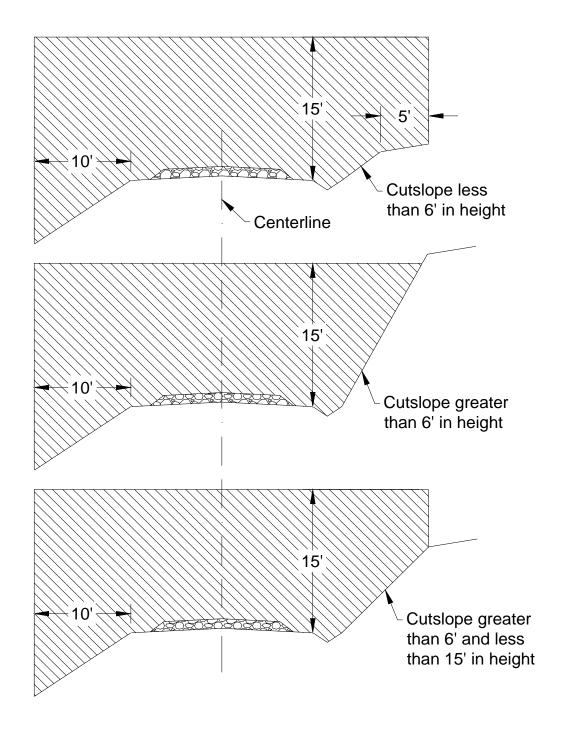
COMPACTION EQUIPMENT OPTIONS

(1) <u>Vibratory Rollers</u>. 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.



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EXHIBIT G
ROAD BRUSHING SPECIFICATIONS



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EXHIBIT G

ROAD BRUSHING SPECIFICATIONS

REQUIREMENTS

The minimum height of clearing shall be 15 feet from the road surface, and the minimum width of clearing shall be 10 feet horizontal on the down slope side from the road shoulder. (*The minimum width of brushing on the cut slope side of the road shall be dictated by the height of the cut slope as indicated in the drawing above. In situations where site distance is an issue brushing heights on the cut slope may vary from the drawing, as directed by STATE.)

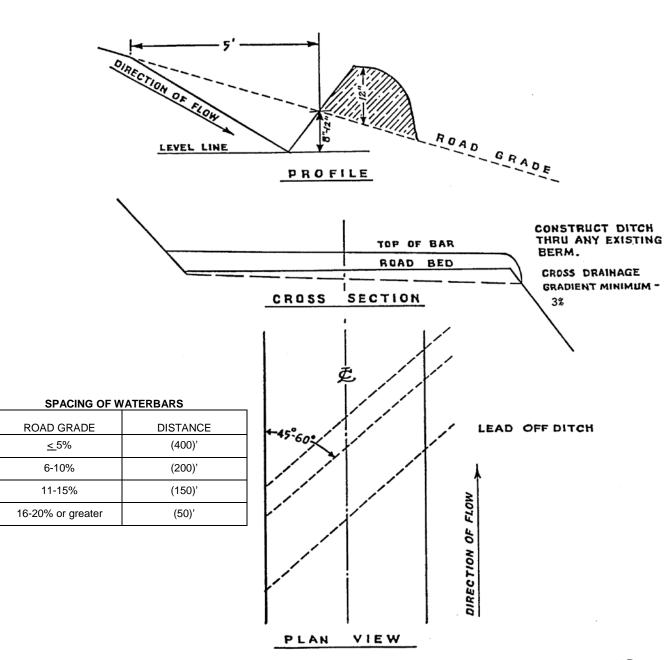
For cut slopes less than 6 feet in height, brushing shall extend 5 feet beyond the top of cut slope. For cut slopes greater than 6 feet in height, brushing shall extend 15 feet horizontal distance from the road shoulder.

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.

Debris resulting from the brushing operation shall be removed from the roadway, cut slope, ditches, water courses, culvert inlets and outlets and sediment catching 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.

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EXHIBIT H
WATERBAR SPECIFICATIONS



WATERBAR SPECIFICATIONS FOR CROSS DITCHING #298