

PART III: EXHIBITS

State Timber Sale Contract
No. 341-13-35
Treebeard

EXHIBIT B

Page 1 of 3
629-Form 341-203
Revised 06/97

OREGON DEPARTMENT OF FORESTRY

TIMBER SALE OPERATIONS PLAN

(See Page 2 for instructions)

Date Received by STATE: _____

(5) State Brand Information (complete):



(1) Contract No.: 341-13-35

(2) Sale Name: Treebeard

(3) Contract Expiration Date: October 31, 2015

Project Completion Dates: Project 5 and 6: September 15, 2013

(4) Purchaser: _____

(6) Purchaser Representatives:

Projects: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Projects: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Projects: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Projects: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Logging: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Logging: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Logging: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Logging: _____	Phone: _____	Cell/Other Phone: _____	Home: _____

(7) State Representatives:

Projects: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Logging: _____	Phone: _____	Cell/Other Phone: _____	Home: _____

(8) Name of Subcontractors & Starting Dates:

Projects: No(s) _____ - _____	Date: _____	Phone: _____
No(s) _____ - _____	Date: _____	Phone: _____
No(s) _____ - _____	Date: _____	Phone: _____
No(s) _____ - _____	Date: _____	Phone: _____
Logging: Felling _____	Date: _____	Phone: _____
Yarding: _____	Date: _____	Phone: _____

(9) Comments: _____

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

EXHIBIT B

INSTRUCTION SHEET FOR OPERATIONS PLAN

SUBMIT ONE COPY OF PLAN TO 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.

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 those required by the timber sale contract. Provide spur road specifications.
 3. Location of proposed tractor yarding roads. Show if and how marked on the ground.
 4. Location of temporary stream crossings.
 5. List the sequence of performing project work.
 6. Location of rock sources - attach pit development plans.



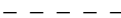
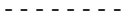


	Cable Landing, with numbers for sequence.
	Tractor Landing with alphabetical sequence.
	Approximate setting boundary.
	Spur truck roads.
	Tractor yarding roads.
	Temporary stream crossings.

EXHIBIT B
OPERATIONS PLAN

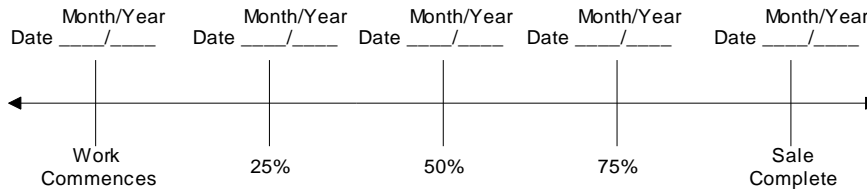
Completion Timeline

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, PURCHASERS 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 _____

Original: Salem
cc: District File
Purchaser

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

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

(3) FROM: Forest Grove (05) Phone (503) 357-2191
 (State Forestry District)
 Address 801 Gales Creek Road
Forest Grove, OR 97116

(4) PURCHASER: _____
 Mailing Address: _____
 Phone Number: _____

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

(14) SPECIAL REQUESTS (Check applicable)	
PEELABLE CULL (all species)	<input checked="" type="checkbox"/>
NO DEDUCTIONS ALLOWED FOR MECHANICAL DAMAGE	<input checked="" type="checkbox"/>
ADD-BACK VOLUME - Deductions due to delay	<input checked="" type="checkbox"/>
OTHER:	

(15) **REMARKS** _____

State Forester Representative PRINT NAME

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

EXHIBIT C – SAWMILL GRADE
INSTRUCTIONS FOR FORM 343-307a (rev. 11/11)

- (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) 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

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

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

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

Northwest Log Scalpers, Inc.
5526 NE 122nd Ave, Portland, OR 97230
Phone: (503) 254-0600 Fax: (503) 408-0919
Email: info@nwlogscalpers.com

Pacific Log Scaling & Grading Bureau, Inc.
P.O. Box 23939, Portland, OR 97281
Phone: (503) 684-5599 Fax: (503) 639-4880
Email: PacLogScale@aol.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 specifics for handling, scaling and processing will be attached or explained in the Remarks section Item (15).
- (8) Show scaling locations only applicable to TPSO. Location name should appear as it does on the ODF Approved Scaling Location web site: 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.

Salem Distribution Instructions: Original will be mailed to Salem after it is electronically scanned and placed in the Salem transfer drive \\WPODFILL01\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 Scaling Location, Purchaser, District, Mgmt. Unit

EXHIBIT D
FOREST ROAD SPECIFICATIONS

SUBGRADE WIDTH	SURFACED WIDTH	POINT TO POINT	STATION TO STATION	DRAINAGE
-	Match Existing Width	A to B	0+00 to 43+75	Crowned
-	Match Existing Width	C to D	0+00 to 20+00	Crowned
16 feet	12 feet	B to E	0+00 to 23+40	Crowned
14 feet	-	F to G	0+00 to 9+40	Crowned
14 feet	-	G to H	0+00 to 5+10	Crowned
14 feet 12 feet	-	H to I	0+00 to 1+50 1+50 to 7+25	Crowned Outsloped
12 feet	-	J to K	0+00 to 5+20	Outsloped
16 feet	12 feet	L to M	0+00 to 35+50	Crowned
16 feet	12 feet	N to O	0+00 to 3+00	Crowned
12 feet	-	P to Q	0+00 to 3+50	Outsloped

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

Where clearing limits have not been marked, the clearing limits shall extend 10 feet back of the top of the cutslope and 5 feet out from the toe of the fill slope, or as directed by STATE. Clearing debris shall not be placed or permitted to remain in or under any road embankment sections. Clearing debris shall not be left lodged against standing trees.

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

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.

CLEARING AND GRUBBING DISPOSAL. 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 trees.

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 or outsloped at 4 to 6 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 25 feet, or as staked on the ground, plus 25-foot approaches at each end.

Location: Intervisible but not greater than 750 feet apart.

SLOPES

Solid Rock

Fractured Rock

Soil - side slopes 50% and over

Soil - side slopes less than 50%

Back Slopes

Vertical to $\frac{1}{4}$:1

$\frac{1}{2}$:1

$\frac{3}{4}$:1

$\frac{3}{4}$:1

Fill Slopes

1½:1

1½:1

Top of cutslope 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 outsloped 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.

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

EXHIBIT D

FOREST ROAD SPECIFICATIONS

GENERAL ROAD CONSTRUCTION INSTRUCTIONS:

- (1) 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.
- (2) 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 E.
- (3) Subgrade Reinforcement. Where subgrade reinforcement is required, clean 6"-0" pitrun rock shall be hauled in and used for subgrade preparation. Truck measure volumes are given, but shall not limit the amount of rock spread to meet subgrade compaction requirements required in this Exhibit.
- (4) 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.

EXHIBIT D
FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS

<u>Segment</u>	<u>Station</u>	<u>Work Description:</u>
B to E	0+00	Point B. Begin road construction; crown road, begin ditch.
	23+40	Point E. End road construction, construct landing.
F to G	0+00	Point F. Begin road construction; crown road, begin ditch. Road follows old grade. Begin drifting material ahead to reduce grade.
	3+20	Install Culvert No. 1 (18" x 30') in ditchline of the powerline access road.
	4+00	End drift, begin balanced road construction.
	7+00	Install Culvert No. 2 (18" x 30').
	9+40	Point G.
H to I	0+00	Point H. Begin road construction; crown road begin ditch.
	1+00	Begin drifting material ahead to construct fill at 1+50.
	1+50	Live Stream. Install Culvert No. 3 (30" x 34'). End crowned road, begin outsloped road.
	2+00	Point P. Junction on left. End drift.
	7+25	Point I. End road construction, construct landing.
J to K	0+00	Point J. Begin road construction; outsloped road.
	5+20	Point K. End road construction, construct landing.
L to M	0+00	Point L. Begin road construction thru dispersed camping area; crown road, begin ditch.
	2+00	Road leaves dispersed camping area.
	2+10	Install Culvert No. 4 (18" x 30').
	2+25	Junction with OHV trail. Maintain OHV access to trail.
	6+25	Construct ditchout on the left.
	7+50	Junction with OHV trail. Maintain OHV access to trail.
	14+50	Begin subgrade reinforcement.
	14+80	Install Culvert No. 5 (18" x 30').
	15+00	End subgrade reinforcement.
	20+00	Install Culvert No. 6 (18" x 30').
	28+00	Point N. Junction on right.
	29+25	Install Culvert No. 7 (18" x 30').
	35+50	Point M. End road construction, construct landing.
N to O	0+00	Point N. Begin road construction; crown road, begin ditch.
	3+10	Point O. End road construction, construct landing.
P to Q	0+00	Point P. Begin road construction; outsloped road.
	3+50	Point Q. End road construction, construct landing.

EXHIBIT D
FOREST ROAD SPECIFICATIONS

GENERAL ROAD IMPROVEMENT INSTRUCTIONS:

1. 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. Waste materials shall be sloped and compacted for drainage. Fills shall be thoroughly compacted in accordance with Exhibit D.
2. Bank Slough Removal. Dig out all bank slough with an excavator, graders shall not be used. 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. Waste materials shall be seeded and mulched in accordance with specifications in Exhibit I.
3. 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. All waste materials shall be hauled to nearby waste areas and shall be uniformly sloped and compacted for drainage. Waste materials shall be seeded and mulched in accordance with specifications in Exhibit I. 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 off of STATE land.
4. Drainage Ditches. Restore or construct ditchlines, including ditchouts, with an excavator, graders shall not be used, 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. 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. Install a culvert marker at each newly installed culvert and at each existing culvert that is missing a marker that could be reached by a grader blade.
5. 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, 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.

EXHIBIT D
FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS

<u>Segment</u>	<u>Station</u>	<u>Work Description:</u>
A to B	0+00	Point A. Begin road improvement; crown road, begin ditch.
	3+10	Existing culvert.
	4+90	Existing culvert, install culvert marker.
	12+12	Existing culvert, install culvert marker.
	17+60	Existing culvert.
	19+70	Existing culvert.
	20+70	Existing culvert, install culvert marker.
	24+00	Existing culvert, install culvert marker.
	26+55	Existing culvert.
	31+10	Existing culvert, install culvert marker.
	31+50	Junction with OHV trail on left, construct rolling dip in ditchline of road.
	31+60	Point C.
	32+60	Existing culvert.
	36+40	Junction with OHV trail on right, construct rolling dip in ditchline of road.
	40+15	Existing culvert, install culvert marker.
	43+75	Point B. End road improvement.
C to D	0+00	Point C. Begin road improvement; crown road, begin ditch. Construct junction by drifting material ahead.
	1+50	End drift.
	3+15	Existing culvert. Begin curve widening.
	4+45	End curve widening.
	7+00	Begin curve widening.
	8+50	End curve widening.
	12+50	Begin drifting material ahead to construct grade. OHV trail to the left, install an OHV filter to limit access to 60" in width, according to Exhibit J and as directed by STATE.
	13+50	End drift.
G to H	0+00	Point G. Begin road improvement; crown road, begin ditch.
	2+90	Existing culvert.
	5+10	Point H.
Point R		Point R. Live Stream. Install Culvert No. 8 (36" x 30") with 12 cubic yards of 24" – 6" Riprap as energy dissipator placed at the outlet. Place 10 cubic yards of 6" – 0 Pit-Run on both the inlet and outlet side of the fill for a total of 20 cubic yards to act as fill armor, according to the specifications in Exhibit E.

EXHIBIT D

ROAD SURFACING

ROAD SEGMENT: B to E				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	B to E		0+00 to 23+40		
				Volume (CY) Per		Number of		
Base Rock	3"-0 Crushed	B to E	8	Station	42	Stations	23.4	983
Turnouts	3"-0 Crushed		8	Turnout	14	Turnouts	2	28
Turnarounds	3"-0 Crushed		8	TA	14	TAs	1	14
Junctions	3"-0 Crushed	Point B	8	Junction	20	Junctions	1	20
Landings	3"-0 Crushed	Point E	8	Landing	120	Landings	1	120
Total Rock for Road Segment:			B to E					1,165
ROAD SEGMENT: H to I				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	H to I		0+00 to 7+25		
				Volume (CY) Per		Number Of		
Culvert Bedding	1½"-0 Crushed	Culvert No. 3	Varies	Culvert	20	Culverts	1	20
Total Rock for Road Segment:			H to I					20
ROAD SEGMENT: L to M				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	L to M		0+00 to 35+50		
				Volume (CY) Per		Number Of		
Base Rock	3"-0 Crushed	L to M	8	Station	42	Stations	35.5	1,491
Turnouts	3"-0 Crushed		8	Turnout	14	Turnouts	3	42
Turnarounds	3"-0 Crushed		8	TA	14	TAs	1	14
Landings	3"-0 Crushed	Point M	8	Landing	120	Landings	1	120
Culvert Bedding	1½"-0 Crushed	Culvert No. 5	Varies	Culvert Bedding	20	Culvert Beddings	1	20
Subgrade Reinforcement	6"-0 Pit-Run	14+50-15+00	8	Subgrade Reinforcement	50	Subgrade Reinforcements	1	50
Total Rock for Road Segment:			L to M					1,737
ROAD SEGMENT: N to O				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	N to O		0+00 to 3+00		
				Volume (CY) Per		Number of		
Base Rock	3"-0 Crushed	N to O	8	Station	42	Stations	3	126
Turnarounds	3"-0 Crushed		8	TA	14	TAs	1	14
Junctions	3"-0 Crushed	Point N	8	Junction	20	Junctions	1	20
Landings	3"-0 Crushed	Point O	8	Landing	1	Landings	120	120
Total Rock for Road Segment:			N to O					280
Point R								TOTAL VOLUME (CY)
Application	Rock Size And Type	Location	Depth of Rock (inches)	Volume (CY) Per		Number Of		
Culvert Bedding	1½"-0 Crushed	Point R	Varies	Culvert	20	Culverts	1	
Energy Dissipator	24"-6" Riprap	Point R	Varies	Energy Dissipator	12	Energy Dissipators	1	12
Fill Armor	6"-0 Pit-Run	Point R	Varies	Fill Armor	20	Fill Armors	1	20
Total Rock for:			Point R					52
Point U								TOTAL VOLUME (CY)
Application	Rock Size And Type	Location	Depth of Rock (inches)	Volume (CY) Per		Number Of		
Culvert Bedding	1½"-0 Crushed	Point U	8"	Culvert	40	Culverts	1	
Culvert Seeding	Pit-Run 6"-0	Point U	18"	Culvert	24	Culverts	1	24
Fill Armor	24"-6" Riprap	Point U	Varies	Fill Armor	12	Fill Armor	2	50
Energy Dissipator	24"-6" Riprap	Point U	Varies	Energy Dissipator	12	Energy Dissipators	1	12
Total Rock for:			Point U					126

ROCK TOTALS (CY)	24"-6" Riprap	6"-0 Pit-Run	3"-0	1½"-0
	74	94	3,112	100

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.

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 prior to rocking. 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:

Subgrade shall be crowned or outsloped at 4 to 6 percent as specified in the "Forest Roads Specifications" table in Exhibit D.

ROAD SEGMENT	COMPACTION EQUIPMENT 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	COMPACTION EQUIPMENT OPTIONS
All road segments	1, 2 and 3

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 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 or outsloped at 4 to 6 percent as specified in the "Forest Roads Specifications" table in Exhibit D.

ROAD SEGMENT	COMPACTION EQUIPMENT 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) Tampingfoot Compactors. Tampingfoot compactors shall exert a minimum pressure of 250 pounds per square inch on the ground area in contact with the tamping feet. The compactor shall cover a minimum width of 60 inches per pass and weigh a minimum of 16,000 pounds.
- (3) Crawler Tractors. D-7 Caterpillar or equivalent or larger.

EXHIBIT E
CULVERT SPECIFICATIONS

All culvert materials with the exception of culvert No. 9, shall be furnished by PURCHASER.

Culverts Nos. 1 and 2 shall be metal or polyethylene, new or used in condition acceptable to STATE.

Culverts Nos. 3, 4, 5, 6, 7, and 8, shall be constructed of corrugated double-walled polyethylene and meet the requirements of AASHTO M-294-06, Type S Culvert.

Culvert No. 9 will be provided by STATE and shall be picked up by PURCHASER at South Fork Camp.

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.

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.

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 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 Culvert Nos. 3, 5, 8 and 9.

Backfill shall consist of, crushed rock, rock crusher reject, or job-excavated soil free of stumps, limbs, rocks, or other objects which would damage the culvert.

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

EXHIBIT E
CULVERT SPECIFICATIONS

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" and 18" for culverts 42" to 96", add 6" for roads which will not be rocked. Minimum vertical cover for other designs shall be as specified by STATE.

Lengths of individual culvert sections shall be not less than 10 feet, unless otherwise provided for in special instructions.

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

The intake end of relief 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 in the same project period in which replacement occurred.

The intake ends of culverts in fills less than 3 feet to the top of the culvert shall be marked by driving steel posts within 6 inches of the downgrade side. Posts shall be painted with a rust-resistant paint and be a minimum of 5 feet long, with the spade driven 2 feet into the ground.

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

EXHIBIT E
CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	MATERIAL TYPE	ROAD SEGMENT POINT TO POINT	STATION
1	18	30	CPP or ACSP, NEW or USED	F to G	3+20
2	18	30	CPP or ACSP, NEW or USED	F to G	7+00
3	30	34	CPP	H to I	1+50
4	18	30	CPP	L to M	2+10
5	18	30	CPP	L to M	14+80
6	18	30	CPP	L to M	20+00
7	18	30	CPP	L to M	29+25
8	36	30	CPP	Point R	-
9	112" x 75"	16	ACSP, 12 Gauge	S to T	8+00

ACSP = Aluminized, CPP = Polyethylene

Culvert No. 9 will be provided by STATE and shall be picked up by PURCHASER at South Fork Camp.

EXHIBIT F

DURABLE CRUSHED ROCK SPECIFICATIONS

Grading Requirements

<u>For 1½"-0"</u>	Passing	2" sieve	100%
	Passing	1½" sieve	90-100%
	Passing	¾" sieve	60-90%
	Passing	¼" sieve	30-50%
	Passing	No. 10 sieve	15-30%
	Passing	No. 40 sieve	7-15%
<u>For 3"-0"</u>	Passing	4" sieve	100%
	Passing	3" sieve	90-100%
	Passing	1½" sieve	60-90%
	Passing	¾" sieve	40-60%
	Passing	¼" sieve	20-40%
	Passing	No. 10 sieve	5-20%

PIT-RUN AND RIPRAP ROCK SPECIFICATIONS

<u>For 6"-0" Pit-Run</u>	Passing	10" sieve	100%
	Passing	6" sieve	60-85%
	Passing	3" sieve	30-50%
	Passing	1/4" sieve	0-20%

Material shall be well graded, free of organic material and shall not have excessive fine materials.

For 24"-6" Riprap A minimum of 50 percent of the material shall measure a minimum of 24 inches, measured in one dimension. Material shall be clean, well graded, and free of 2"-0" fines.

Control of gradation shall be by visual inspection by STATE.

EXHIBIT F

TYPICAL EMBEDDED ENERGY DISSIPATOR

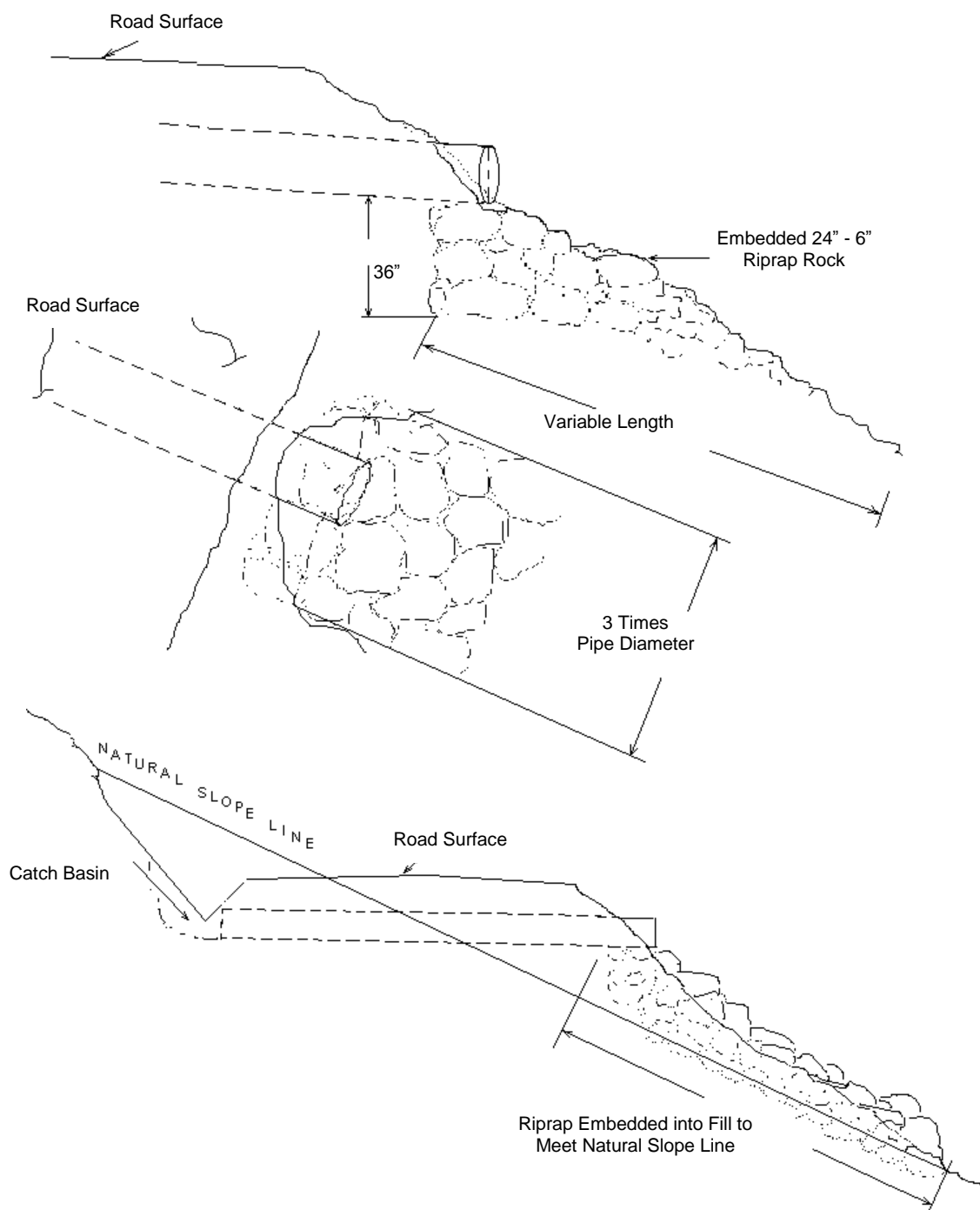
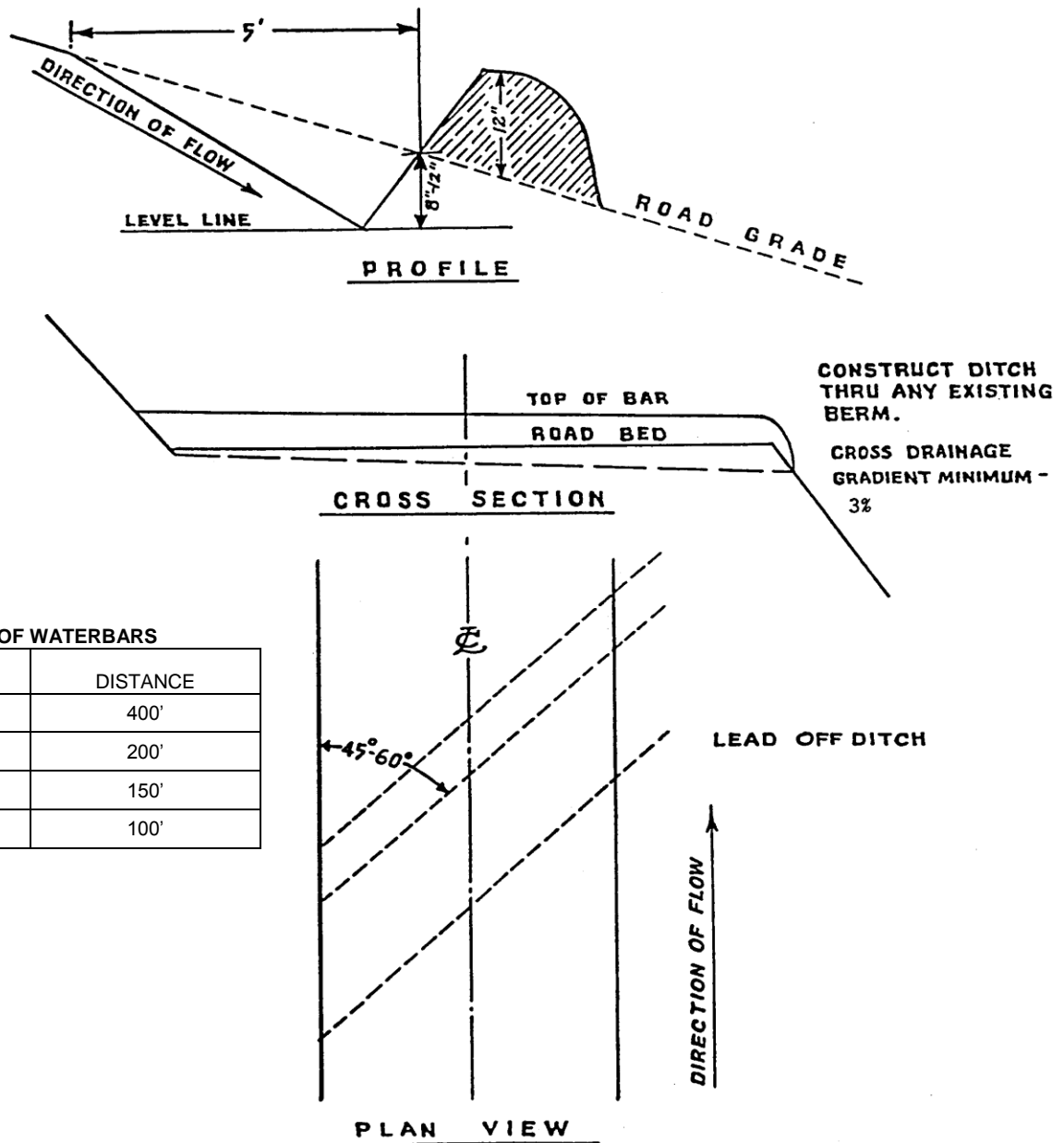


EXHIBIT G
WATERBAR SPECIFICATIONS



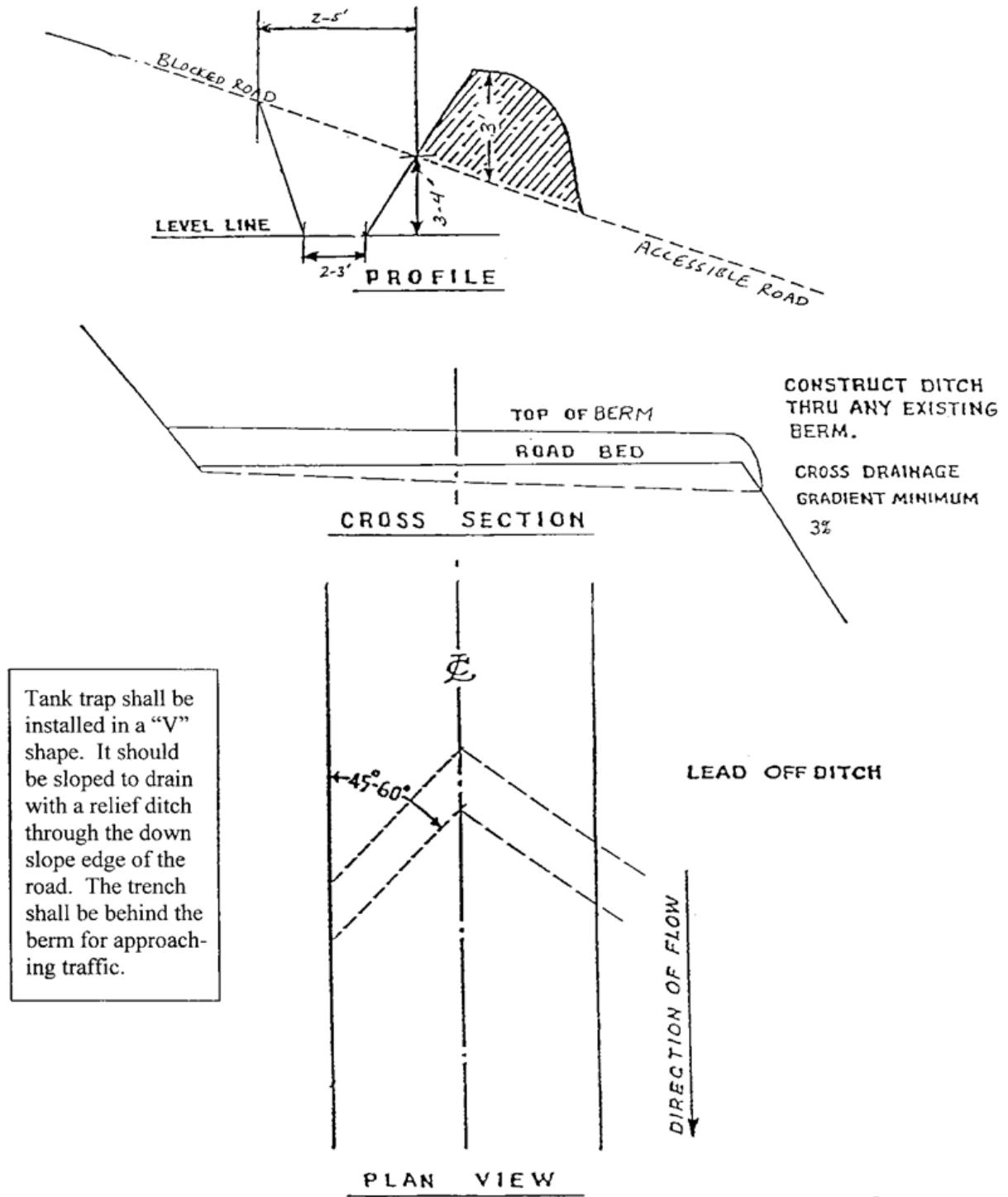
SPACING OF WATERBARS

ROAD GRADE	DISTANCE
≤ 5%	400'
6-10%	200'
11-15%	150'
16-20% or greater	100'

WATERBAR SPECIFICATIONS
FOR CROSS DITCHING #298

EXHIBIT G

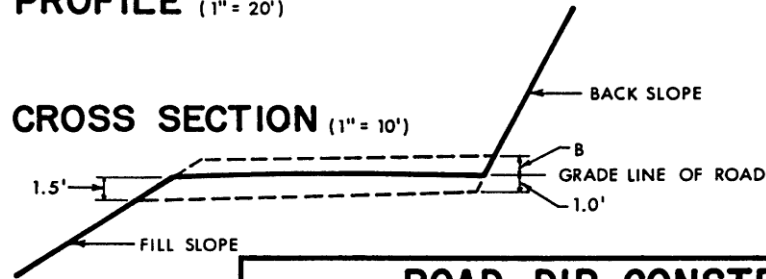
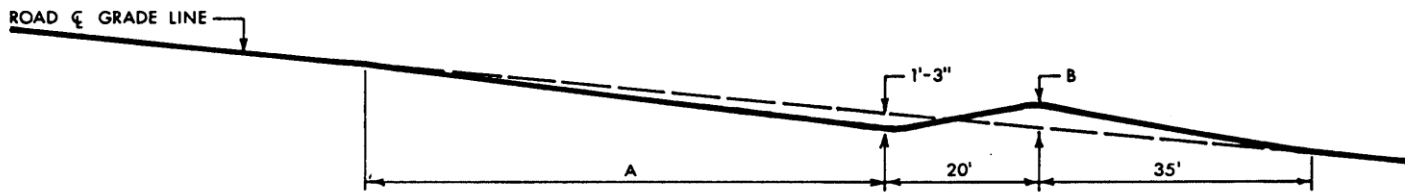
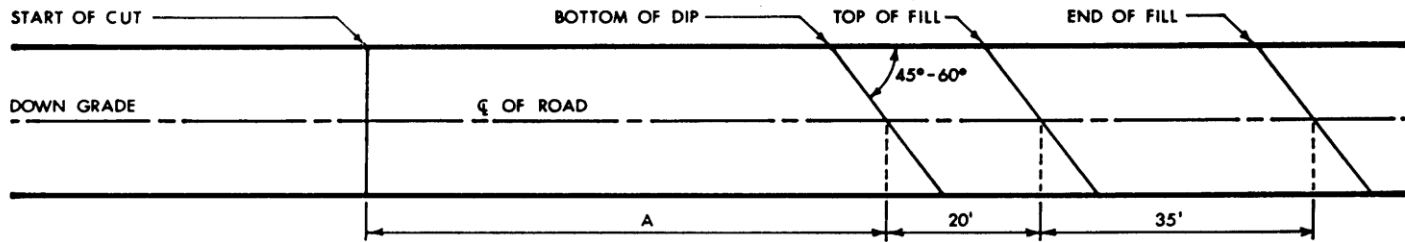
TANK TRAP SPECIFICATIONS



Tank trap shall be installed in a "V" shape. It should be sloped to drain with a relief ditch through the down slope edge of the road. The trench shall be behind the berm for approaching traffic.

EXHIBIT G

ROAD DIP CONSTRUCTION SPECIFICATIONS



DIMENSIONS

ROAD GRADE %	A	B
0% - 5%	50'	1.0'
5% - 10%	60'	1.5'
10% - 15%	70'	2.0'
MORE THAN 15%	USE WATERBARS	

ROAD DIP CONSTRUCTION
SPECIFICATIONS

SCALE: NOTED	APPROVED BY:	DRAWN BY FB
DATE: 10/14/80		REVISED
STATE OF OREGON DEPARTMENT OF FORESTRY 2600 STATE STREET SALEM OREGON 97310		
		DRAWING NUMBER 669

EXHIBIT H

ROAD BLOCKING SPECIFICATIONS

PURCHASER shall block the following segments: B to E, L to M, and N to O.

Specific objectives for this project include:

- (a) Minimize disturbance of existing vegetation.
 - (b) Blocking access to all vehicles.
 - (c) Construction of waterbars and tank traps.
1. Road Blocking. Roads shall be blocked to all vehicles by constructing tank traps and using local materials such as stumps, logs, and boulders. Construct tank traps according to the specifications in Exhibit G.
 2. Construct Waterbars. Construct waterbars according to the specifications in Exhibit G and as directed by STATE. Waterbars shall be 4 wheel drive pickup passable.
 3. Dry Conditions. All work shall be performed during dry conditions acceptable to STATE.
 4. Support, including transport, other equipment, replacements, supplies, maintenance, and repairs, shall be furnished as required to complete the project and shall be furnished without cost to STATE, other than as agreed under the contract terms.

SPECIFIC INSTRUCTIONS/SPECIFICATIONS :

<u>Segment</u>	<u>Station</u>	<u>Work Description</u>
B to E	0+00	Point B. Block road with local stumps, logs, and boulders. Construct six drivable waterbars as directed by STATE.
L to M	0+00	Point L. Maintain access to the dispersed camping areas.
	2+00	Construct a tank trap and block road to vehicle access. Construct eight drivable waterbars as directed by STATE.
	2+25	On either side of the OHV trail crossing, utilize local stumps, logs, and boulders to block access to the road and direct trail traffic across the road.
	7+50	On either side of the OHV trail crossing, utilize local stumps, logs, and boulders to block access to the road and direct trail traffic across the road.
N to O		Construct one drivable waterbar as directed by STATE.

EXHIBIT H

ROAD VACATING SPECIFICATIONS

PURCHASER shall vacate the following road segments: F to G, G to H, H to I, J to K, P to Q, S to G, and H to T.

Specific objectives for this project include:

- (a) Fill removal and stream channel development.
- (b) Culvert removal.
- (c) Restoration of natural contours by outsloping of the road prism.
- (d) Sidecast pullback.
- (e) Ripping of the road surface
- (f) Minimize disturbance of existing vegetation.

- (1) Fill Removal and Stream Channel Development. Remove fills to the natural stream course levels. Stream channels shall be excavated/developed to specified widths. Developed stream banks shall be sloped at natural contours or no steeper than 1 ½:1, as directed by STATE.
- (2) Culvert Removal. Remove drainage structures and culverts. Removed culverts shall be hauled to an approved refuse site off of STATE land.
- (3) Outslope Road. Outslope road to restore natural contours or establish a minimum of 10 percent slope for drainage at designated locations. If the road grade exceeds 10 percent, outslope of the road shall be 2 percent greater than the road grade. Rip the road surface to a depth of 12 inches according to the specifications in this exhibit and as directed by STATE.
- (4) 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 G.
- (5) Use of Excavated Materials.
 - (A) Fill Excavation and Sidecast Pullback. Excavated materials shall be placed on the interior (cut) side of the road, and utilized to restore the cutslope to natural contours, or to a minimum 10 percent outsloped surface for drainage. Any excess material will be hauled to a designated waste area, as directed by STATE.
 - (B) Woody Debris. Shall be placed on the surface of pullback/fill material.
 - (C) Block Roads. Use excavated material from fill removals to block roads from vehicle access, as directed by STATE.
- (6) Erosion Control. Erosion control shall be completed in a progressive manner. Grass seed and straw mulch shall be applied for every 500 feet of road vacated, prior to continuing work.

All excavated material and bare soil shall utilize grass seed and straw mulch approved by STATE and in accordance with the specifications in Exhibit I. Applied mulch shall be a minimum of 2 inches deep and provide a uniform cover.

- (7) Road Blocking. Roads shall be blocked to all vehicles by constructing tank traps and using local materials such as stumps, logs, and boulders. Construct tank traps according to the specifications in Exhibit G.
- (8) Construct Waterbars. Construct waterbars according to the specifications in Exhibit G and as directed by STATE.
- (9) Equipment. A minimum 1½ cubic-yard, track mounted excavator shall be used for all excavation, culvert removal, streambed preparation, road blocking, and waterbarring, unless otherwise approved in writing by STATE.
- (10) Dry Conditions. All work shall be performed during dry conditions acceptable to STATE.
- (11) Support, including transport, other equipment, replacements, supplies, maintenance, and repairs, shall be furnished as required to complete the project and shall be furnished without cost to STATE, other than as agreed under the contract terms.

EXHIBIT H ROAD VACATING SPECIFICATIONS

SPECIFIC INSTRUCTIONS/SPECIFICATIONS:

<u>Segment</u>	<u>Station</u>	<u>Work Description</u>
F to G	0+00	Point F. Begin road vacating, rip entire road surface and pull brush on to road. Construct tank trap and block road using local stumps, logs, and boulders. Construct three waterbars as directed by STATE.
	3+20	Remove existing culvert. Construct a waterbar. On either side of the OHV trail crossing, construct a tank trap and utilize local stumps, logs, and boulders to block access to the road and to direct trail traffic across the road.
	7+00	Remove existing culvert. Construct a waterbar.
	9+40	Point G. End road vacating.
G to H	0+00	Point G. Begin road vacating, rip entire road surface and pull brush onto road. Construct two waterbars as directed by STATE.
	2+90	Live stream. Remove existing culvert and fill.
	5+00	Construct a tank trap and utilize local stumps, logs, and boulders to block access to all vehicles.
	5+10	Point H. End road vacating.
H to I	0+00	Point H. Begin vacating half of the road width leaving 60" of road surface, as directed by STATE.
	2+00	Point P.
	5+25	Point I. End road vacating.
P to Q	0+00	Point P. Construct a tank trap and utilize local stumps, logs, and boulders to block access to all vehicles. Begin vacating entire road width. Construct one waterbar as directed by STATE.
	3+50	Point Q. End road vacating.
J to K	0+00	Point J. Begin road vacating. Construct tank trap and block road using local stumps, logs, and boulders. Maintain OHV access to trail on right. Construct two waterbars, as directed by STATE.
	1+00	On either side of the OHV trail crossing, construct a tank trap and utilize local stumps, logs, and boulders to block access to the road and to direct trail traffic across the road.
	5+20	Point K. End road vacating.
H to T	0+00	Point H. Begin vacating half of the road leaving 60" of road surface, as directed by STATE. Construct two waterbars, as directed by STATE.
	7+75	Point T. Install an OHV filter to limit access to 60" in width, according to Exhibit J and as directed by STATE.
S to G	0+00	Point S. Install an OHV filter to limit access to 60" in width, according to Exhibit J and as directed by STATE. Maintain OHV access to designated trails. Construct tank trap and block access to all unmarked OHV trails.
	2+30	Designated trail on right, maintain OHV access to trail.
	6+00	Remove existing culvert and construct rolling dip.
	8+00	Point U, existing culvert to be replaced with Project 5.
	10+70	Designated trail on left, maintain OHV access.
	13+60	Begin road vacating and rip road surface. Begin fill removal. Apply grass seed, fertilizer and mulch according to the specifications in Exhibit I. Construct two waterbars, as directed by STATE.
	15+10	End fill removal.
	17+10	Begin fill removal.
	17+60	End fill removal.
	21+25	Remove existing culvert.
	24+00	OHV trail on right. Remove culvert and excavate entire fill on right; waste material in vacated road grade. Vacate trail for 125' past fill; block access using excavated material and local stumps, logs, and boulders.
	31+35	Live Stream. Excavate existing culvert and fill.
	35+80	Point G. End road vacating.

EXHIBIT H

TYPICAL CROSS SECTION VIEW OF ROAD VACATING SIDECAST PULLBACK

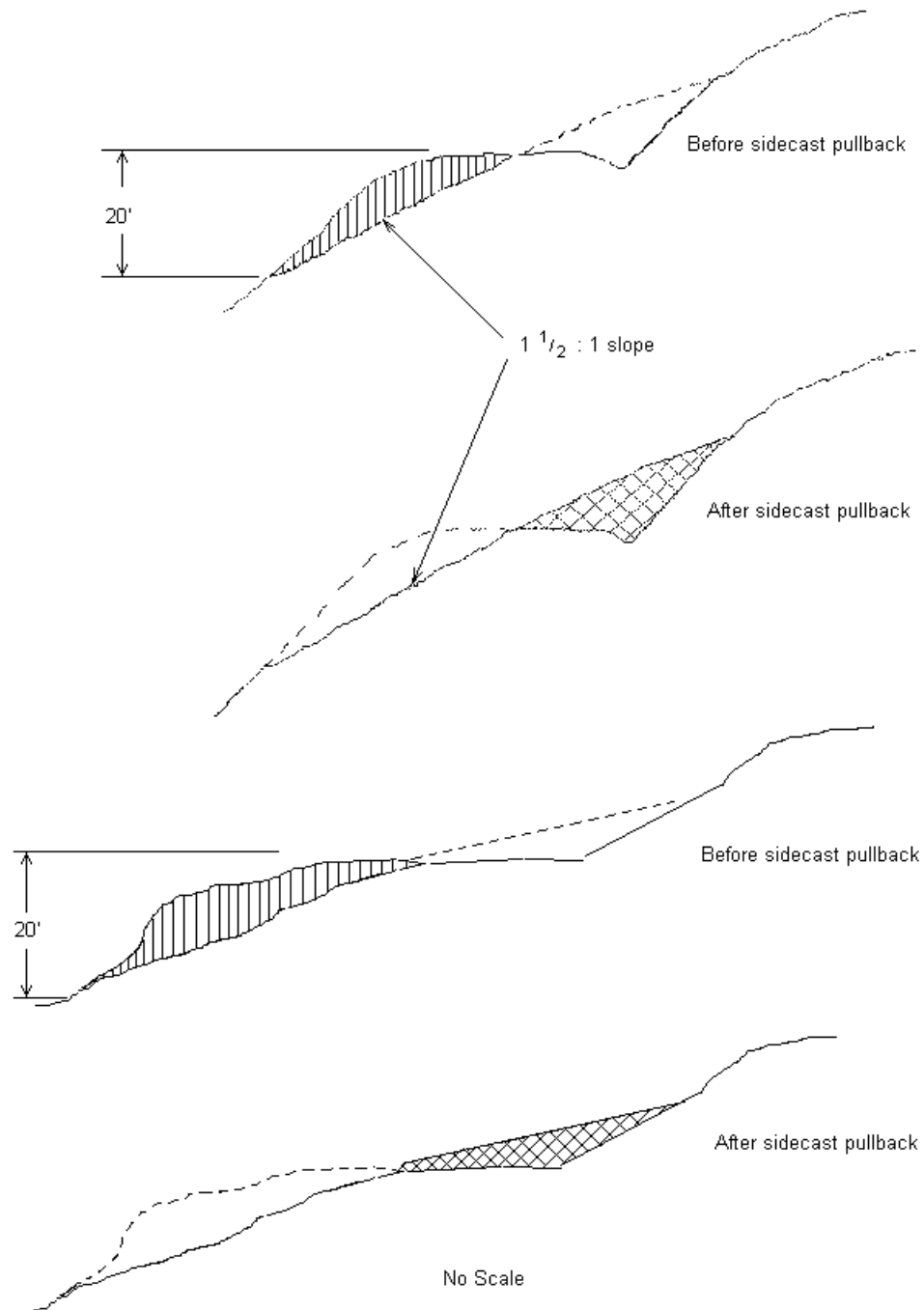


EXHIBIT I

SEEDING AND MULCHING

This work shall consist of preparing seedbeds and furnishing and placing required seed, fertilizer, and straw mulch. Straw mulch shall consist of straw that is free of noxious weeds. Apply seed, fertilizer, and straw mulch to all waste areas, and bare soils resulting from Project Nos. 1, 4, 5 and 6.

Seeding Seasons. Seeding shall be performed only from March 1 through June 15 and August 15 through October 31. 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.

APPLICATION METHODS FOR SEED AND FERTILIZER

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

APPLICATION RATES FOR SEED AND FERTILIZER

The seed mixture listed below shall be applied at 100 lbs. per acre. The seed mixture shall be comprised of the following:

SPECIES	MIXTURE	PURE LIVE SEED	GERMINATION
Annual Rye	33%	95%	>90%
Orchard Grass	33%	95%	>90%
Perennial Rye	34%	95%	>90%

Fertilizer: Chemical analysis shall be 16-20-0 and shall be applied at the rate of 200 pounds per acre. Fertilizer shall not be applied within 100 feet of streams.

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

APPLICATION RATES FOR MULCH

Place straw mulch to a reasonably uniform thickness of 1½ to 2½ inches. This rate requires between 2 and 3 tons of dry mulch per acre.

Application Locations:

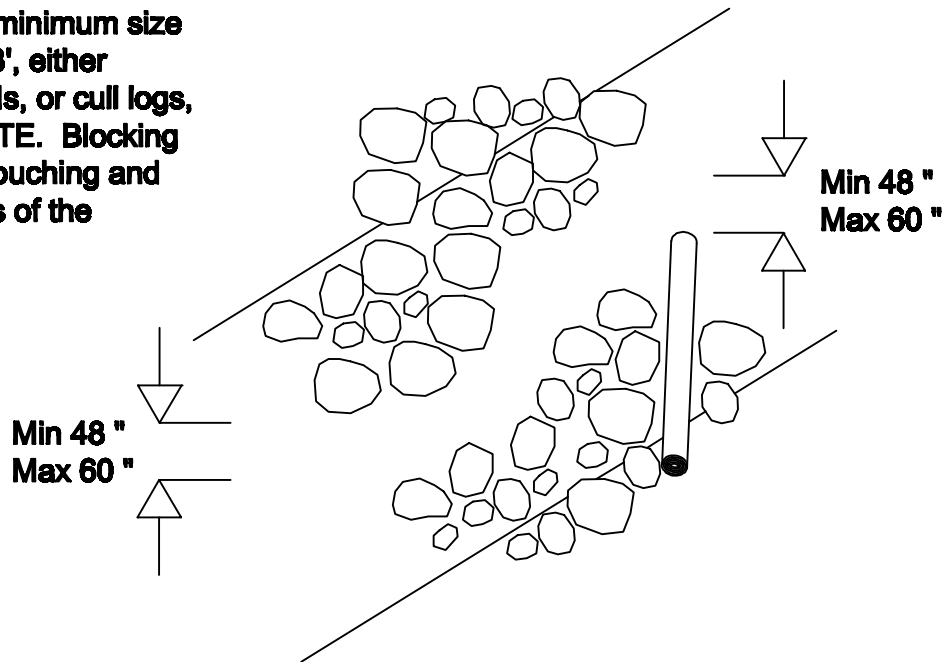
ROAD SEGMENT	LOCATION
Project No. 1 H to I	Culvert No. 3
Project No. 4 H to I	Culvert No. 3
Project No. 4 G to H	2+90
Project No. 4 H to T	0+00 to 7+75
Project No. 4 S to G	13+60 to 35+80

EXHIBIT J
OHV TRAIL FILTER

No Scale

PLAN VIEW

Blocking materials minimum size should be 3' x 3' x 3', either boulders, roots wads, or cull logs, as directed by STATE. Blocking materials shall be touching and extend to the edges of the roadway.



PROFILE

Filter maximum 60 inches spacing through path entrance and exit. 6' - 8' curve radius through filter. Overall length of filter should be 15'. Boulders used as blocking material should be buried 1/3 of original height.

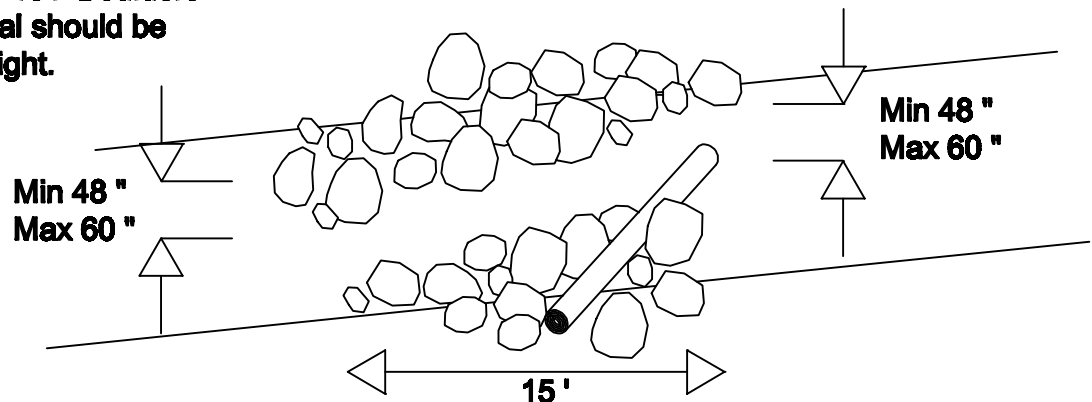


EXHIBIT K

SPECIFICATIONS FOR BRUSH AND SLASH TREATMENT

Operation Area: The Timber Sale Area shown on Exhibit A.

Equipment Type, Equipment Operation, and Conduct of Work

Equipment- shall be a track-mounted machine with a ground-pressure rating of not more than 6.8 PSI and a net horsepower of 85 or more. The machine shall be capable of a minimum horizontal reach of 26 feet and a minimum vertical reach of 16 feet.

The bucket shall be of a hydraulically controlled "clamshell" style equipped with rake teeth and capable of 360-degree continuous rotation. The tooth length on the rake teeth shall be at least 14 inches unless otherwise approved in writing by STATE.

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

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

Work Scheduling

Work shall not begin until PURCHASER has arranged to have the equipment operators meet with STATE to review the requirements specified in Section 2365, "Progressive Operations", Section 2560, "Slash Disposal", and this Exhibit. Once begun, operations shall be continuous until contract work is completed, unless interrupted by poor weather, fire closures, or other uncontrollable circumstances. Equipment breakdowns shall be repaired without undue delay, and provision shall be made for replacement of equipment to prevent prolonged delays. Brush and slash treatment operation shall be accomplished only during dry weather conditions and shall not be allowed when operations might damage sites or affect stream flows. Any exception to these instructions must be authorized in writing by STATE.

Description of Work to be Done

Move brush and/or woody slash to create openings as planting spots in the slash and brush. Planting spots shall be a minimum of 1 foot by 1 foot in size and shall be on a 10 foot spacing. Care shall be taken to avoid creating a depression in the soil of the planting spot. Spacing may be varied to accommodate stumps, large woody material, rocky areas, etc., but 435 planting spots per acre are still required.

Piling should be avoided but may be done only as needed to create the required planting spots. If piling is necessary, piles should not exceed 10 feet in width or length. Each pile whose length and width dimensions exceed 10 feet shall be covered with 100 square feet of polyethylene plastic sheeting. The plastic sheeting shall be no more than 4 mil gauge. Additional woody debris shall be piled on top of the plastic sheeting to complete the piling, as directed by STATE. PURCHASER shall supply the materials used for covering the piles. Work specifications may be modified or waived only upon written notice from STATE.

PART IV: OTHER INFORMATION

State Timber Sale Contract
No. 341-12-35
Treebeard

WRITTEN PLAN FOR INSTREAM ACTIVITIES – TREEBEARD TIMBER SALE SALE NO. 341-13-35

CULVERT INSTALLATION AND FILL VACATING

PROJECT DESCRIPTION:

- 1) Installation of a fish passage culvert at the following location: Project Point U – SW 1/4, SE 1/4, Section 31, T2N, R5W, W.M.
- 2) The vacating of a culvert and fill that are barriers to fish passage at the following location: SE 1/4, SE 1/4, Section 31, T2N, R5W, W.M.

The Oregon Forest Practices Act requires a written plan for operations within 100 feet of a Type F stream. This Written Plan addresses the installation of a culvert that meets current fish passage guidelines, the removal of a fish barrier culvert and fill, and the protection measure that will be applied to minimize impact to the streams and associated riparian areas.

PROTECTED RESOURCES:

The culvert to be installed under this Written Plan will replace a damaged, nonfish passable culvert. The culvert and entire fill will be removed and the stream channel opened to its full width. Both will provide fish passage for an unnamed stream that is small type F, which is a tributary to the Devil's Lake Fork Wilson, a large type F stream. This project site is within the Forest Practices Coast Range Region.

DESCRIPTION OF THE AREA:

The stream's drainage area is 242 acres, or 0.38 square miles, with a mean elevation of 1680 feet. The predicted 100-year peak flow, based on Campbell's equations, is 130.8 cubic feet per second. A waterway area of 5 square feet is required to pass this flow. Average active channel width at normal high water is estimated to be approximately 8 feet.

CULVERT DESIGN STRATEGY:

In order to provide upstream passage of juvenile fish, a countersunk pipe-arch culvert is designed. This design provides a 112" span X 75" rise X 16' length pipe-arch culvert to be installed at an 8.7% gradient.

The culvert will have pit-run style material placed inside the pipe to a depth of 1 ½ feet, simulating a natural stream channel through the culvert.

The resulting waterway area is 35.05 sq ft, sufficient to pass the 100-year peak flow. The resultant channel width through the culvert will be 9.3 feet.

PROTECTION MEASURES:

All in stream work associated with this plan will be accomplished from July 1 to September 15, annually. In water work will be limited to the minimum necessary to adequately prepare the site for installation of the structure. To minimize impact to the resource during all in water work, the stream will be pumped or diverted around the project site. Upon completion of installation of the structure all areas of disturbed soil will be seeded and mulched within project site. The exposed fill slopes around the structure will be armored with rip rap to protect the fill from erosion and scour.

Reviewed by: _____

NOTICE OF TRANSFER OF STATE TIMBER

Instructions

629:-Form-301-010

Complete Section 1. Mark the box which applies to you/your company in Section 2. Complete Section 3 and obtain signatures.

SECTION 1

On _____, state timber sale purchaser (Transferor)
_____, sold, exchanged or otherwise transferred to
_____, (Transferee) state timber originating from State
Timber Sale Contract No. _____.

Transferee hereby certifies that they:

- (a) Will not export the unprocessed state timber which is the subject of this transaction;
- (b) Will not sell, transfer, exchange or otherwise convey the unprocessed timber which is the subject of this transaction to any other person without first obtaining a like certification from that person; and
- (c) Are not prohibited by OAR's 629-31-005 through 045 from purchasing state timber or logs directly from the State Forester, or this is a sale of Western Red Cedar for domestic processing.

SECTION 2

- ☐ Have not exported unprocessed timber originating from private lands in Oregon in the last 24 months.
- ☐ This is a sale of hardwood logs for domestic processing.
- ☐ This is a sale of Western Red Cedar for domestic processing.
- ☐ This is a sale of pulp logs or cull logs processed at domestic pulp mills, domestic chip plants or other domestic operations for the purpose of conversion of the logs into chips.

SECTION 3

The parties understand that falsely entering into this certification, or failure to comply with the terms of this certification is a violation of the Forest Conservation and Shortage Relief Act of 1990 and OAR Chapter 629, Division 31, and is subject to any and all penalties contained therein.

Transferor:

Transferee:

Signed

Signed

Title

Title

Dated

Dated

[Note: For the purpose of this form, the definition of unprocessed timber is the same as in OAR 629-31-005]

Mail To: State Forester
2600 State Street
Salem, OR 97310