

EXHIBIT "B"

FOREST ROAD SPECIFICATIONS

SUBGRADE WIDTH	POINT TO POINT	STATION TO STATION	DRAINAGE
14 feet	A to B	0+00 to 9+63	Outslope
14 feet	B to C	0+00 to 33+57	Outslope
14 feet	C to D	0+00 to 8+50	Outslope
14 feet	G to H	0+00 to 39+30	Outslope
14 feet	I to J	0+00 to 14+21	Outslope
14 feet	N to O	0+00 to 38+16	Outslope
14 feet	O to P	0+00 to 33+37	Outslope
14 feet	O to Q	0+00 to 38+40	Outslope
14 feet	R to S	0+00 to 90+20	Ditch

CLEARING. This work shall consist of clearing, removing, and disposing of all trees, snags, down timber, brush, surface objects, and protruding obstructions within the clearing limits.

Where clearing limits have not been staked, the "Road Brushing Specifications" in Exhibit B 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 classifications are as follows:

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 through openings in the timber outside of the cleared right-of-way, except areas where end-haul is required.

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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-engineered lines, grades, dimensions, and plans when provided.

All suitable excavated material shall be used where possible 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. All fills and drainage structure backfills shall be machine compacted according to the specifications in Exhibit B.

Unless road design 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.

Excess excavation shall not be sidecast where material will enter a stream course or where material will accumulate in areas deemed a high-risk site by STATE.

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 follows: 400 divided by the radius of the curve equals the amount of extra width.

DRAINAGE

Ditch. Construct "V" ditch 3 feet wide and to a depth of 1 foot below subgrade. Subgrade shall be crowned at 4 to 6 percent.

Outslope. Road subgrade shall be outsloped at 4 to 6 percent.

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.

GRADING

	<u>Back Slopes</u>	<u>Fill Slopes</u>
Rock	Vertical to 1/4:1	Not steeper
Common - side slopes 50% and over	1/2:1	than 1½:1
Common - side slopes less than 50%	3/4:1	
Common - turnpike (level) section	2:1	

Top of cutslope shall be rounded.

LANDINGS. Landings shall be constructed no less than 50 feet wide and no more than 70 feet wide. Surface is to be crowned for drainage, with general grade no more than 3 percent.

EXHIBIT "B"

ADDITIONAL INSTRUCTIONS FOR PROJECT WORK

Project No. 1

Points A to B, B to C, C to D, I to J, N to O, and O to Q:

Remove brush in road prism according to the specifications in Exhibit B, "Road Brushing Specifications." Slough material shall be removed from the cutbank side, placed in the roadway, and worked in with a cat. Smooth road surface with a grader.

Points G to H and O to P:

Remove brush in road prism according to the specifications in Exhibit B, "Road Brushing Specifications." Remove slough material and small slides from cutbank to gain adequate width, according to the specifications in Exhibit B, "Forest Road Specifications." Haul material to waste areas as designated by STATE, according to the specifications in Exhibit B, "End-Hauling Requirements." Smooth road surface with a grader.

Point R to S:

Smooth road surface with a grader to improve drainage.

Project No. 3

Remove 2 stream crossing culverts at Point Q. The culverts are less than 100 feet apart.

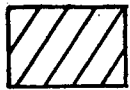
Culvert No. 1: This culvert has extensive damage as the result of an old debris flow. Remove debris material above the inlet of the culvert. Remove the culvert and the road fill over the culvert. The stream channel shall be restored to the approximate channel that existed prior to the debris flow. Channel sides shall be sloped back at a 2:1 slope.

Culvert No. 2: This culvert is still functioning and shall be excavated from the road fill. This stream shall be restored to the approximate channel prior to the culvert installation. Channel sides shall be sloped back at a 2:1 slope.

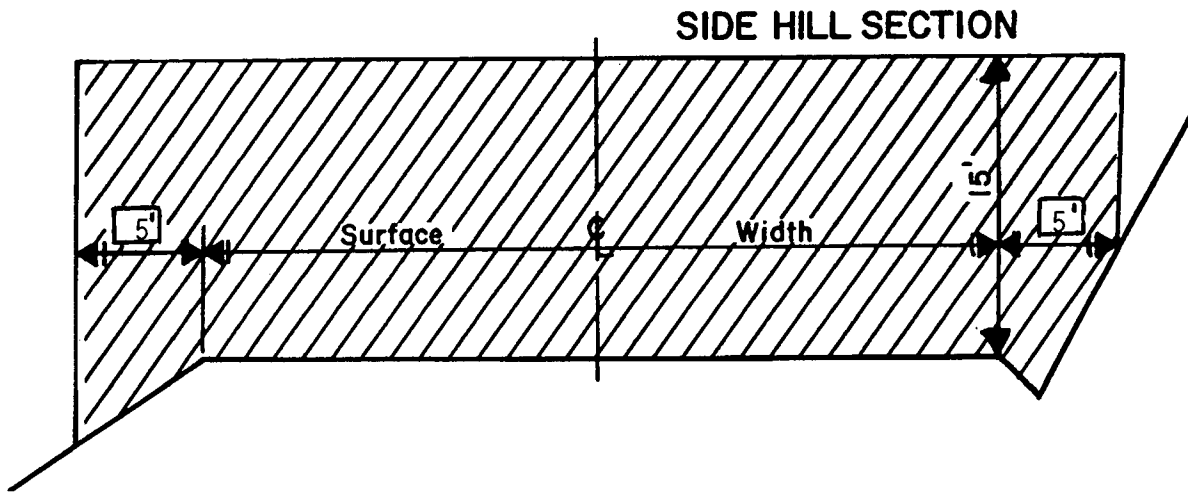
The excavated material for both culverts shall be deposited on adjacent roadbeds. The material shall be placed against the cutbank side of the road and shall not be allowed to encroach within 5 feet of the outside edge of the roadbed. The material shall be graded and sloped to drain.

The culvert remains shall be crushed and disposed of as directed by STATE.

EXHIBIT "B"
ROAD BRUSHING SPECIFICATIONS



Clearing Limits



REQUIREMENTS

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, cutslope, ditches, and water courses within 72 hours and may be scattered downslope from the road or placed in other stable locations, unless otherwise approved in writing by STATE.

EXHIBIT "B"
END-HAULING REQUIREMENTS

POINT TO POINT	STATION TO STATION	WASTE AREA LOCATION
G to H	0+00 to 39+30	(2)
O to P	0+00 to 33+37	(1), (2)

End-Haul Areas General Requirements

Material shall not be intentionally sidecast.

Clearing and grubbing debris shall be end-hauled.

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

Containment

Full containment: The amount of material lost over the outside edge of the road shall not exceed 6 inches in depth measured perpendicular to the natural ground slope. Pioneer excavation shall be removed by digging, loading, and hauling rather than by pushing or scraping methods.

Trees and stumps may have up to 12 inches of material directly above them. 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) As directed by STATE.

Waste Area Treatment

Deposit at waste area, spread evenly, compact, and provide adequate drainage.

EXHIBIT "C"
 ROAD SURFACING

TYPE OF ROCK	SIZE OF ROCK	POINT	STATION TO STATION	APPROX. TOTAL TRUCK MEASURE VOLUME
Hard Crushed Quarry	1½"-0"	F	Spot Rock	72 CY

Additional rock for curve widening is required and has been included in the volume estimates.

Roads shall be uniformly graded and approved by STATE prior to rocking. For typical cross section, see Forestry Department Drawing Nos. 351-C and 351-D at the Forestry Department district office.

CRUSHED ROCK SPECIFICATIONS

Materials. The material shall be fragments of rock or other hard, durable particles crushed to the required size and a filler of finely crushed stone, sand, or other finely divided mineral matter. The material shall be free from vegetation and lumps of clay.

Quality and Grading Requirements. The stone base materials shall be crushed rock, including sand. River gravel shall not be used.

The material from which base material is produced or manufactured shall conform to the general requirements of Section 2630 of the "Standard Specifications for Highway Construction" prepared by the Highway Division, Oregon Department of Transportation, and shall meet the following test requirements:

Hardness - Test Method AASHTO T 96 35% Maximum

Durability - Test Method ODOT TM 208
 Passing No. 20 Sieve: 30% Maximum
 Sediment Height: 6" Maximum

<u>For 1½"-0"</u>	Passing	2" sieve	100%
	Passing	1½" sieve	95-100%
	Passing	¾" sieve	55-75%
	Passing	¼" sieve	35-50%

Of the fraction passing ¼" sieve, 40% to 60% shall pass the No. 10 sieve.

EXHIBIT "C"

ROCK ACCOUNTABILITY

The rock shall meet the quality and size specifications in Exhibit C. A sample of the rock shall be supplied to STATE for testing and approval prior to rocking. PURCHASER shall obtain subgrade approval from STATE prior to rocking. Rocking shall be limited to when weather conditions are acceptable to STATE and when sediments will not enter streams.

Rock accountability shall be determined by depth measurement. 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 C. 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. If additional rock is required because of insufficient depth, it shall be added by truck measure to those areas that were slighted. The conversion from compacted yardage to truck yardage is 1.3 multiplied by the compacted yardage equals truck yardage.

The depth of compacted aggregates shall not vary more than 1 inch from the depth specified in Exhibit C. The average depth for each road segment shall be the specified depth or greater.

COMPACTION AND PROCESSING REQUIREMENTS

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 a 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. A pass is defined as traveling a road section in one direction and then back over that same section again. Compaction shall be accomplished by using the approved equipment listed below or others approved by STATE:

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

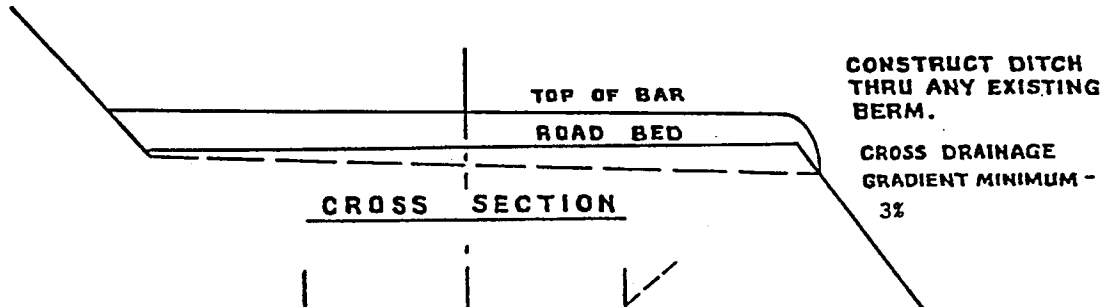
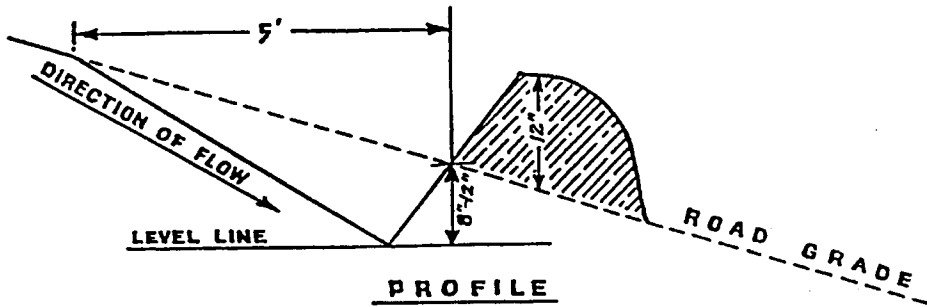
ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
Point F	Dump Truck

COMPACTION EQUIPMENT OPTIONS

Rock Trucks. Rock spreading shall begin at the nearest point to the rock source and progress toward the end of the project. Rock trucks shall be routed over the entire cross section of rock layers.

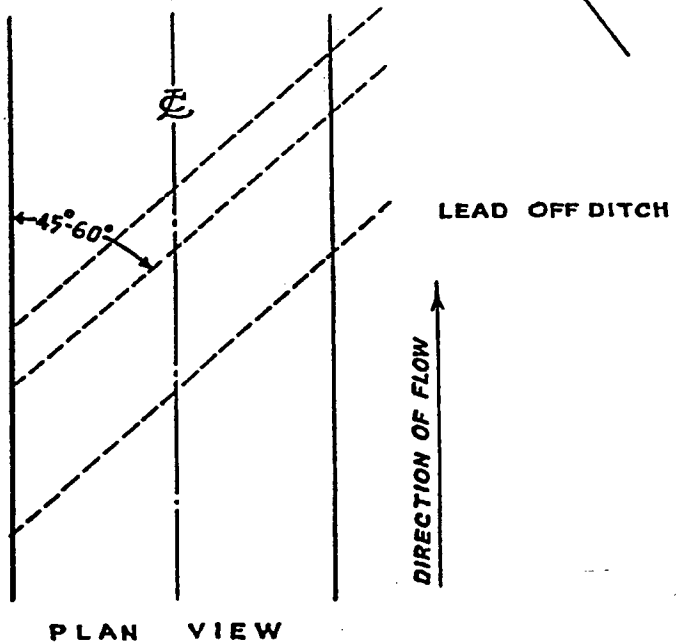
EXHIBIT "D"

WATERBAR SPECIFICATIONS



SPACING OF WATERBARS

ROAD GRADE	DISTANCE
≤ 5%	400'
6-10%	300'
11-15%	200'
16-20% or greater	100'



**WATERBAR SPECIFICATIONS
 FOR CROSS DITCHING #298**

State Timber Sale Contract
No. 341-02-41
Benson Thin

EXHIBIT "E"

SPECIFICATIONS FOR GROUP SELECTION AREAS

Group Selection Areas are not posted. A total of 18 acres of Group Selection Areas averaging between 1 acre and 2 acres in size shall be created. Group Selection Areas are clearings no larger than 2 acres with retained green trees as described in the table below. Proposed locations of the Group Selection Areas shall be marked on the ground and approved by STATE prior to felling. Green trees shall be selected and approved by STATE prior to cutting (Section 57). If disease pockets are discovered, the specifications may be modified with prior STATE approval.

AREA	TOTAL GROUP SELECTION ACREAGE	GREEN TREE RETENTION
I	4	Retain 5-20 of the largest conifer trees with the best crowns
II	1	Retain 5-20 of the largest conifer trees with the best crowns
III	1	Retain 5-20 of the largest conifer trees with the best crowns
IV	2	Retain 5-20 of the largest conifer trees with the best crowns
V	8	Retain 5-20 of the largest conifer trees with the best crowns
VI	2	Retain 5-20 of the largest conifer trees with the best crowns
VII	0	No Group Selection Areas in Area VII

State Timber Sale Contract
No. 341-02-41
Benson Thin

EXHIBIT "F"

WINTER AND WET WEATHER OPTION

Crushed Rock Specifications: See Exhibit C of the contract.

<u>For 2½"-0"</u>	Passing	3" sieve	100%
	Passing	2½" sieve	95-100%
	Passing	1¼" sieve	55-75%
	Passing	¾" sieve	30-45%

Distribution and Quantity:

<u>Road Segment</u>	<u>Rock Size</u>	<u>Length</u>	<u>Surface Width</u>	<u>Comp. Depth</u>	<u>Rate of Spread</u>
Point A to B	2½"-0"	963 feet	12 feet	4 inches	23 yds./sta.

Grader, roller, and water truck shall be required in order to process road rock.

Any area that becomes soft or breaks through during wet weather hauling operations shall be repaired at PURCHASER's expense.

Culvert Material:

40 feet of 18-inch culvert with 1 band to be installed at a location designated by STATE.

Culverts shall meet STATE specifications.

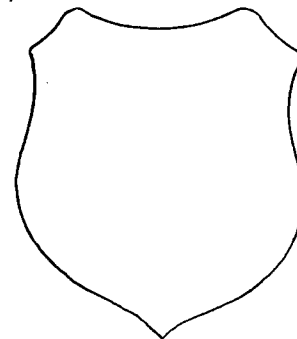
EXHIBIT "G"
OREGON DEPARTMENT OF FORESTRY

SCALING INSTRUCTIONS -- LOCATION APPROVAL -- BRAND INFORMATION

- (1) ORIGINAL REGISTRATION Date _____
 REVISION NUMBER _____ Date _____
 CANCELLATION Date _____
- (2) TO: _____
 (Third Party Scaling Organization)
- (3) FROM: Coos Phone (541) 267-4136
 (State Forestry District)
 Address 63612 Fifth Road, Coos Bay, OR 97420
- (4) PURCHASER: _____
 Address _____

- (12) SALE NAME Benson Thin
 COUNTY Coos and Douglas
- (13) STATE CONTRACT NUMBER 341-02-41
- (14) SCALE: westside eastside cubic foot
- (15) STATE BRAND REGISTRATION NUMBER _____
- (16) BUREAU BRAND CODE NUMBER _____
- (17) STATE BRAND INFORMATION:

(COMPLETE) ↘



(5) MINIMUM SCALING SPECIFICATIONS			CLASS		
SPECIES	SCALING DIAMETER INCHES	*NET SCALE VOLUME	PER MBF	** SUM	SUB
Conifers	--	10	X		
Hardwoods	--	10	X		

* Apply minimum volume test to whole logs over 40' Westside; 20' Eastside.
 ** Sum (if indicated): see instructions and explain in Item (19).

- (6) WESTSIDE SCALE: YES NO
 Actual taper all logs over 40' scaling length
- (7) EASTSIDE SCALE: YES NO
 *Actual taper butt logs over 40' scaling length
- (8) PENCIL BUCK YES NO
 back to Minimum Scaling Diameter 5"
- (9) ADD-BACK VOLUME -- YES NO
 Deductions due to delay

- (18) PAINT REQUIRED: YES
 COLOR Orange

(19) SPECIAL SCALES
PEELABLE CULL (all species)
UTILITY/PULP (all species)
NO DEDUCTIONS ALLOWED FOR MECHANICAL DAMAGE
OTHER: _____
OTHER: _____

(10) APPROVED SCALING LOCATIONS	Species	Yard	Truck

- (20) REMARKS: STATE may approve scale by the load for hardwoods at 2.8 MBF per load conversion. No weight scale.

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

- (21) SIGNATURES:

 Purchaser or Authorized Representative Date

 State Forester Representative Date

- (11) NOTICE OF CANCELLATION OF BRAND:
 Effective Date: _____

 State Forester's Representative

INSTRUCTIONS FOR FORM 343-307 (rev. 5/01)

- (1) Check appropriate box. REVISION NUMBER requires comments. CANCELLATION requires Item (21). Complete date.
- (2) Designate Third Party Scaling Organization (TPSO). Send 4 copies to TPSO, 1 to purchaser, 1 to Salem, and keep such copies as to district needs.
- (3) State District office, address and phone.
- (4) Enter Purchaser's business name and address as it appears on the contract.
- (5) Minimum Scaling Specifications. Review Section 45, "Log Removal," of the contract. Species, or combined species can be separate entries. Information serves as a basis for scaling (see also Items (13) thru (17)), and is required to show existence on the sale. **PerM** (per mbf). **SUM** (lump sum material). **SUB** (submerchantable material). SUB, as used by the State, references that material containing at least 10 bf (net) but less than the lower merchantable net volume limit or grade requirements for other merchantable (PerM) entries. PerM, SUM, and SUB must be indicated by checking the appropriate column. Species with the same specifications and value are combined into one entry. PerM and SUB require scaling therefore complete specifications. SUM need not be scaled, hence no specifications. Loads containing only SUM are to be ticketed if so instructed in Item (19). Mixed loads of SUM, PERM and/or SUB species will always be scaled.
- (6) Westside -- 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) Eastside -- actual taper/taper table segment scale. Special Service Rules on file with TPSO. See: Segment Scaling and Grading of Long Logs -- All Species -- State Forestry Department Scaling Practices (Eastside). Items with * follow U.S. Forest Service Eastside rules.
- (8) Pencil Buck. Check NO if a westside sale, optional for eastside sales.
- (9) Add-Back Volume. Add-Back is normally checked YES. Scaler records deductions (sap rot, weather checks, etc.) caused by an abnormal delay in removal. Enter separately on scale ticket. TPSO provides State with summaries that include this as a net volume by species. Salvage sales and certain other circumstances may require that "NO" be checked.
- (10) Show scaling locations only applicable to TPSO. Not necessary to list markets. If all species are scaled at same location, enter "ALL."
- (11) When logging is complete, recall branding hammers, date and sign where indicated, check CANCELLATION box at top of form, and send to TPSO.
- (12) Enter sale name and county.
- (13) Enter sale contract number.
- (14) Check Westside or Eastside log scale. Cubic foot refers to Northwest Log Rules Cubic Foot Scale.
- (15) Oregon Forest Products Brand Registry Number (optional).
- (16) DO NOT USE -- TPSO will fill in when applicable.
- (17) Show one brand only. Complete drawing. If more than one brand is assigned to the sale, (1) make separate form for each brand, and (2) on each form, explain and show other brand(s) under REMARKS, Item 19.
- (18) Check YES and designate orange.
- (19) Special Scales. These are the Special Scales that will be applied. If "Other" is indicated, please describe. Give comments in Item (19).
- (20) Use this space to designate weight conversion factors, or any other explanations to clarify scaling requirements. If additional scaling locations are approved, prepare another form showing all (old and new) locations. Check REVISION box at top of form and explain under remarks. Route as indicated.
- (21) Require purchaser to sign and date completed form.