

EXHIBIT "B"  
FOREST ROAD SPECIFICATIONS

SUBGRADE WIDTH	SURFACED WIDTH	POINT TO POINT	STATION TO STATION	DRAINAGE
14 feet	12 feet	A to B	0+00 to 34+25	Ditch
14 feet	--	B to C	0+00 to 13+75	Outslope
14 feet	12 feet	F to H	0+00 to 10+00	Ditch
14 feet	--	H to G	10+00 to 19+00	Outslope

**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 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 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: As marked in the field.

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.

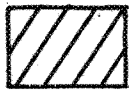
LANDINGS. Landings shall be constructed no less than 50 feet wide and no more than 70 feet wide. Surface is to be crowned for drainage, with general grade no more than 3 percent.

EXHIBIT "B"

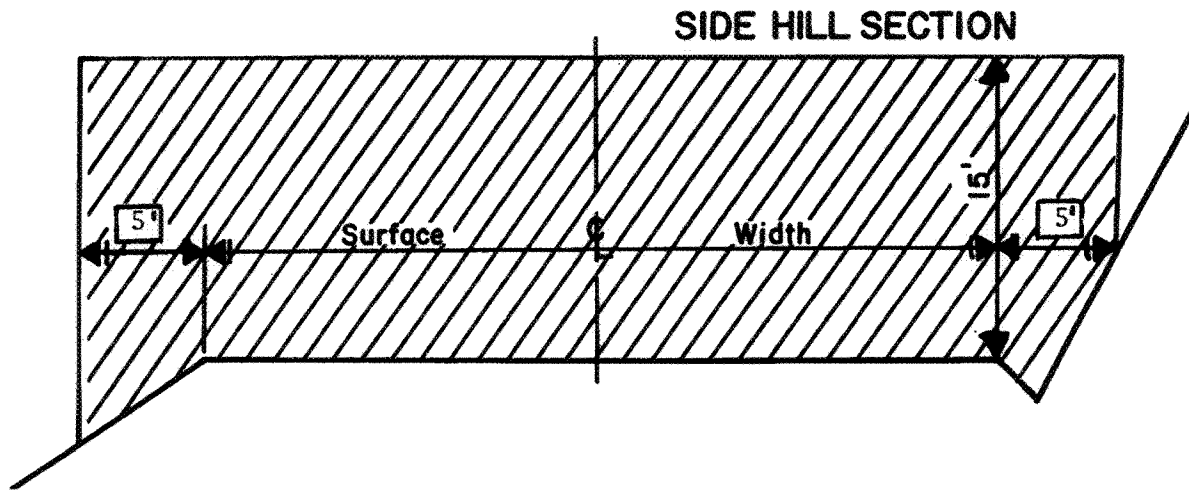
ADDITIONAL ROAD IMPROVEMENT INSTRUCTIONS

- Point A to B - Road shall be graded to achieve a smooth running surface.
- Point F to H - Road shall be graded to achieve a smooth running surface.
- Point H to G - Road shall have small alder trees removed along the sides of the road. The cutbank slough shall be removed to gain adequate road width. A large slide in the road prism shall be removed. All material removed from the cutbank slough and the slide shall be hauled to a waste area at Point H.

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	STA. TO STA.	CONTAINMENT	WASTE AREA LOCATION	WASTE AREA TREATMENT
B to C	5+00 to 13+30	1	2	1
H to G	10+00 to 20+00	1	3	1

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

- (1) 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.
- (2) Average 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.

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) Portion of end-haul shall be used as fill in road segment B to C (0+00 to 3+00). Remaining end-haul shall be deposited at Points D and E.
- (3) Point H.

Waste Area Treatment

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

EXHIBIT "C"  
ROAD SURFACING

TYPE OF ROCK	SIZE OF ROCK	AMOUNT	POINT TO POINT	STATION TO STATION	APPROX. TOTAL TRUCK MEASURE VOLUME
MISCELLANEOUS:					
Hard Crushed Quarry	1½"-0"	1,000 CY	Stockpile	Y-Creek	1,200 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

EXHIBIT "C"

CRUSHED ROCK SPECIFICATIONS

Grading Requirements

<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.

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 periods when weather conditions are acceptable to STATE and when sediments will not enter streams.

Rock accountability shall be determined by stockpile measurement. STATE shall be given 24 hours' notice prior to rocking.

Stockpile Measurement. Volume determination for rock stockpiles will be based on measurement by the STATE. Stockpiles shall be shaped for accurate measurement as directed by STATE.

EXHIBIT "C"

WINTER AND WET WEATHER OPTION

If winter or wet weather operations are planned, PURCHASER shall provide road rock as follows:

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

**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	1½"-0"	3425 feet	12 feet	6 inches	35 yds/sta
Point B to C	2½"-0"	1375 feet	12 feet	10 inches	61 yds/sta
Point F to G	1½"-0"	1185 feet	12 feet	6 inches	35 yds/sta
Landing Pt. C, D, E	Jaw Run			6 inches	

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

**Crushed Rock Specifications:** See Exhibit C of the contract.

<u>For 1½"-0"</u>	Passing	2" sieve	100%
	Passing	1½" sieve	95-100%
	Passing	¾" sieve	55-75%
	Passing	¼" sieve	30-50%

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

<u>For 2½"-0"</u>	Passing	3" sieve	100%
	Passing	2½" sieve	95-100%
	Passing	1¼" sieve	55-75%
	Passing	¼" sieve	30-45%

Of the fraction passing ¼" sieve, 40% to 69% shall pass the No. 10 sieve.

For Jaw Run	Passing	6" sieve	100%
	Passing	3" sieve	45-65%



State Timber Sale Contract  
No. 341-02-64  
Lower Beaver

EXHIBIT "D"

COMPACTION AND PROCESSING REQUIREMENTS

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 or, in the case of a sheepsfoot roller, the roller "walks out." At least of 3 passes shall be made over the entire width and length of each layer. A pass is defined as traveling a fill layer in one direction and then back over that same layer again.

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 the approved equipment listed below or others approved by STATE:

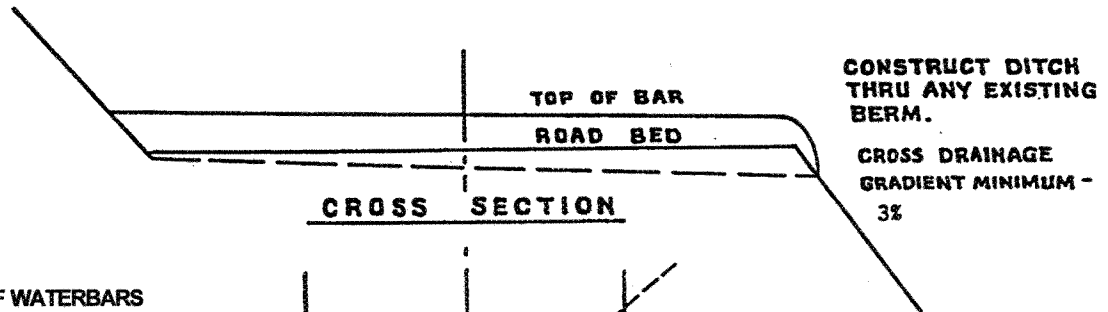
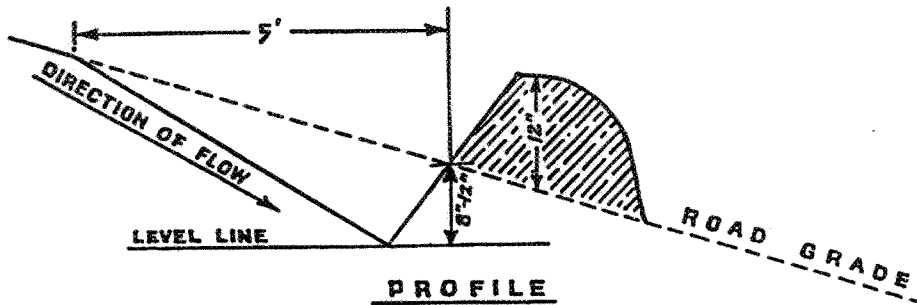
ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
B to C	Crawler Tractor
B to C	Dump Truck

COMPACTION EQUIPMENT OPTIONS

Crawler Tractors. D-7 Caterpillar or equivalent or larger.

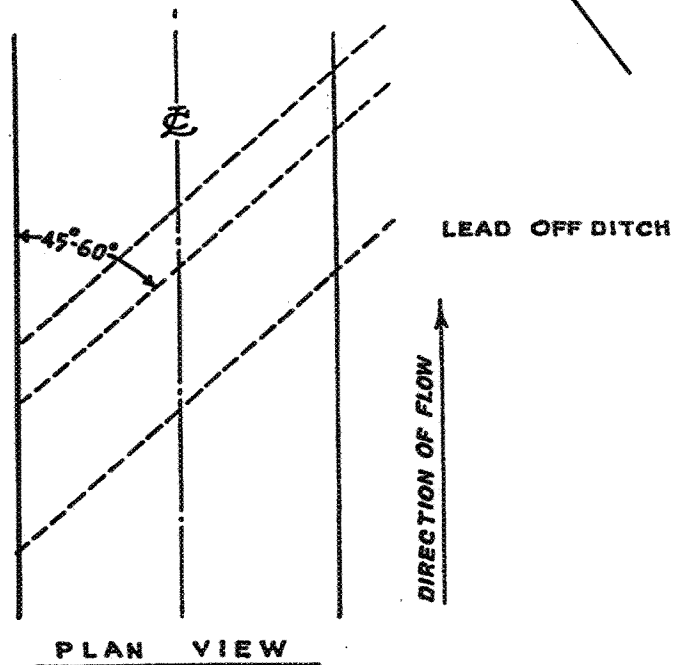
Dump Trucks. Dump trucks shall be routed over the entire cross section of fill layers.

EXHIBIT "E"  
 WATERBAR



SPACING OF WATERBARS

ROAD GRADE	DISTANCE
≤ 5%	300'
6-10%	200'
11-15%	100'
16-20% or greater	50'



WATERBAR SPECIFICATIONS  
 FOR CROSS DITCHING #298

EXHIBIT "F"  
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 Bay Phone (541) 267-4136  
 (State Forestry District)

Address 63612 Fifth Road, Coos Bay, OR 97420

(4) PURCHASER: \_\_\_\_\_  
 Address \_\_\_\_\_

(12) SALE NAME Lower Beaver

COUNTY Coos

(13) STATE CONTRACT NUMBER 341-02-64

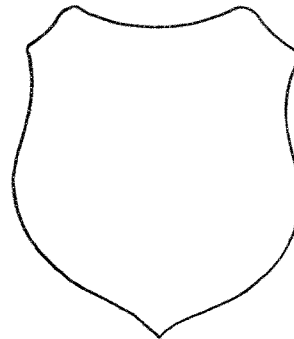
(14) SCALE: westside  eastside  cubic foot

(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				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 \_\_\_\_\_

(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)
<b>NO DEDUCTIONS ALLOWED FOR MECHANICAL DAMAGE</b>
OTHER: _____
OTHER: _____

(10) APPROVED SCALING LOCATIONS	Species	Yard	Truck

(20) REMARKS: Loads containing only SUM material need not be accounted for by scale ticket.

Operator's Name (Optional inclusion by District): \_\_\_\_\_

(21) SIGNATURES:

\_\_\_\_\_  
 Purchaser or Authorized Representative Date

\_\_\_\_\_  
 State Forester's Representative

\_\_\_\_\_  
 State Forester Representative Date

## EXHIBIT "F"

## 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.