

EXHIBIT "B"
FOREST ROAD SPECIFICATIONS

SUBGRADE WIDTH	SURFACED WIDTH	ROAD	STATION TO STATION	DRAINAGE
16 feet	12 feet	Chicken Ridge	0+00 to 12+07	Ditched
16 feet	12 feet	Chicken Ridge	12+07 to 37+40	Outsloped
16 feet	N/A	Spur 1	0+00 to 1+90	Outsloped
16 feet	12 feet	Spur 2	0+00 to 1+23	Outsloped
16 feet	12 feet	Spur 3	0+00 to 2+43	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 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.

CLEARING AND GRUBBING DISPOSAL. Scatter through openings in the timber outside of the cleared right-of-way, even in areas where sidecast of excavated dirt and rock is prohibited.

GRADES. Grades on the Chicken Ridge Road shall not exceed 12 percent around the curves at Stations 0+00, 23+94, and 31+28, and shall not exceed 16 percent elsewhere.

CURVES. Minimum curve radius is 50 feet on the Chicken Ridge Road.

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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. The Chicken Ridge Road has been slope staked and referenced.

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 on slopes over 50 percent.

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 and sloped 2:1 from shoulder to ditch bottom.

Ditched Roads. Road subgrade and surface shall both be crowned at 6 percent.

Outsloped Roads. Road subgrade shall be outsloped at least 6 percent.

TURNOUTS. Increase roadbed width an additional 12 feet for both subgrade and surfacing. Length shall be at least 35 feet, or as staked on the ground, plus 25-foot approaches at each end.

Location: As marked in the field.

GRADING

Shot Rock
Common - side slopes 50% and over
Common - side slopes less than 50%
Common - turnpike (level) section

Back Slopes

Vertical to 1/4:1
1/2:1
3/4:1
2:1

Fill Slopes

Not steeper
than 1 1/3:1

EXHIBIT "B"
END-HAULING REQUIREMENTS

ROAD	STATION TO STATION	COMMENTS
Chicken Ridge	0+00 to 3+28	----
Chicken Ridge	3+28 to 4+03	North end of waste area. End-haul not required.
Chicken Ridge	4+03 to 35+59	Where waste may be deposited on slopes over 50 percent.
Spur 3	0+00 to 2+41	----

End-Haul Areas General Requirements

Waste dirt and rock may not be sidecast in the areas shown above, or on any other slopes over 50 percent.

Woody debris may be sidecast.

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

Containment

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.

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

As marked in the field and shown on Exhibit A, or other areas approved by STATE.

The waste area shown on Exhibit A shall be constructed as shown on Exhibit B.

Waste Area Treatment

Deposit at waste area, spread evenly, compact, and provide adequate drainage. Waste areas do not need to be cleared of stumps and slash before use.

A hand-drawn engineering sketch of a road layout. The sketch includes the following elements:

- 3+28**: A stationing label at the top left, with a vertical dashed line extending downwards from it.
- South**: A label with an arrow pointing to the right, indicating the orientation.
- 6%**: A label indicating a 6% grade, positioned near a vertical dashed line.
- 25'**: A dimension line indicating a 25-foot distance, located near a horizontal dashed line.
- 60' @ 6%**: A label indicating a 60-foot segment at a 6% grade, positioned near a diagonal dashed line.
- 11/8:1**: A label indicating a 11/8:1 slope, positioned near a diagonal dashed line.
- East**: A label with an arrow pointing upwards, indicating the orientation.
- Property Line**: A label with an arrow pointing to a horizontal line at the bottom of the sketch.

EXHIBIT "B"
ROAD SURFACING

TYPE OF ROCK	SIZE OF ROCK	COMPACTED DEPTH	APPROX. YDS./STA.	ROAD	LOCATION	APPROX. CU. YDS.
Crushed Quarry	3"-0"	8"	44	Chicken Ridge Road	0+00 to 37+40	1,646
Crushed Quarry	3"-0"	6"	33	Spur 2	0+00 to 1+23	41
Crushed Quarry	3"-0"	8"	44	Spur 3	0+00 to 2+41	106
CAP:						
Crushed Quarry	¾"-0"	3"	17	Chicken Ridge Road	2+82 to 11+34 and 16+58 to 21+00	220
TURNOUTS:						
Crushed Quarry	3"-0"	8"	20 yards per Turnout	Chicken Ridge Road	6, as marked in the field	120
CURVE WIDENING:						
Crushed Quarry	3"-0"	8"	40 yards per Curve	Chicken Ridge Road	Curves at 0+00, 23+94, and 31+28	80
TOTAL:						
Crushed Quarry	3"-0"	--	--	--	--	1,993
Crushed Quarry	¾"-0"	--	--	--	--	220

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

EXHIBIT "B"

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: 3" Maximum

<u>For 3/4"-0"</u>	Passing	1" sieve	100%
	Passing	3/4" sieve	90-100%
	Passing	3/8" sieve	55-75%
	Passing	1/4" sieve	40-60%

Of the fraction passing 1/4" sieve, 40% to 60% shall pass the No. 10 sieve.

<u>For 3"-0"</u>	Passing	3 1/2" sieve	100%
	Passing	3" sieve	95-100%
	Passing	1 1/2" sieve	55-75%
	Passing	1/4" sieve	30-45%

Of the fraction passing 1/4" sieve, 40% to 60% shall pass the No. 10 sieve.

EXHIBIT "B"

ROCK ACCOUNTABILITY

The rock shall meet the quality and size specifications in Exhibit B. 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 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 B. 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 B. The average depth for each road segment shall be the specified depth or greater.

Curve Surfacing. Extra surface width shall be required for the inside of all curves as follows: 400 divided by the radius of the curve equals the amount of extra width to be surfaced at the depths shown in Exhibit B.

EXHIBIT "B"

COMPACTION AND PROCESSING REQUIREMENTS

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 visible deformation ceases, or in the case of a sheepfoot roller, the roller "walks out." At least 3 passes shall be made 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:

Subgrade of ditched roads shall be crowned at 6 percent.

Subgrade of outsloped roads shall be outsloped at least 6 percent.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
Chicken Ridge Road, Spur 2, and Spur 3	Vibratory Roller

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 sheepfoot 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
All Roads	D-7 Caterpillar or larger
Waste Area	D-7 Caterpillar or larger

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.

Rock on ditched roads shall be crowned at 6 percent.

Rock on outsloped roads shall be outsloped at least 6 percent.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
Chicken Ridge Road, Spur 2, and Spur 3	Vibratory Roller

EXHIBIT "B"

COMPACTION EQUIPMENT OPTIONS

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 mile to 1.8 miles per hour, as directed by STATE.

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

EXHIBIT "C"
CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	CULVERT GAUGE	MATERIAL TYPE	ROAD	STATION
1	18	32	16	Galvanized	Chicken Ridge	Across Weyerhaeuser Road
2	18	28	16	Galvanized	Chicken Ridge	3+10
3	18	28	16	Galvanized	Chicken Ridge	5+75

The intake ends of culverts shall be marked by driving or placing 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.

Tamping is required.

EXHIBIT "C"

CULVERT SPECIFICATIONS

All culvert materials shall be furnished and installed by PURCHASER, unless otherwise specified in the contract. Culverts shall be constructed of corrugated galvanized steel or aluminized steel, and shall conform to the material and fabricating requirements of Sections 2410 and 2420 of the "Standard Specifications for Highway Construction" prepared by the Highway Division of the Oregon State Department of Transportation. Corrugation types and shapes other than those meeting the above minimum Highway requirements, shall be approved in writing by STATE.

The STATE Representative shall determine final culvert locations prior to installation.

Culvert grade shall slope away from ditch grade at least 5 percent unless otherwise specified.

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 pipe. The culvert trench shall be excavated 3 pipe diameters wide to permit compaction and working on each side of the pipe. Tamping shall be done in 6-inch lifts, 1 pipe diameter each side of the pipe to 95 percent density or over. Bedrock shall be excavated as required to provide a uniform foundation for the full length of the culvert.

Backfill shall consist of granulated material, crushed rock, or job-excavated soil free of stumps, limbs, rocks, or other objects which would damage the pipe.

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

Joining shall be done with bands of like material and corrugations. Manufacturers' instructions shall be followed for prefabricated pipe assembly.

EXHIBIT "C"

CULVERT SPECIFICATIONS

Minimum height of cover over top of culvert to subgrade when road is to be rocked shall be as follows: 12" for galvanized or aluminized steel culverts 18" to 36".

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

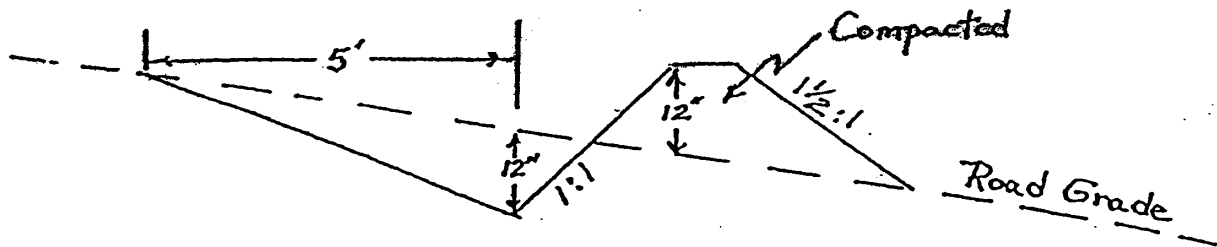
The ends of each culvert shall be free of logs and debris which would restrict the free flow of water. The intake end of relief culverts shall be provided with a sediment catching basin 3 feet in diameter at the bottom. The outlet end of any culvert which would allow water to erode embankment soil shall be provided with a half round or other approved slope protection device. Construct the lead-off ditch away from the culvert outlet where the slope gradient restricts the free flow of water.

Following are the minimum standard gauges for pipe and coupling bands. Some culverts may require different gauges and may be found in the culvert listing.

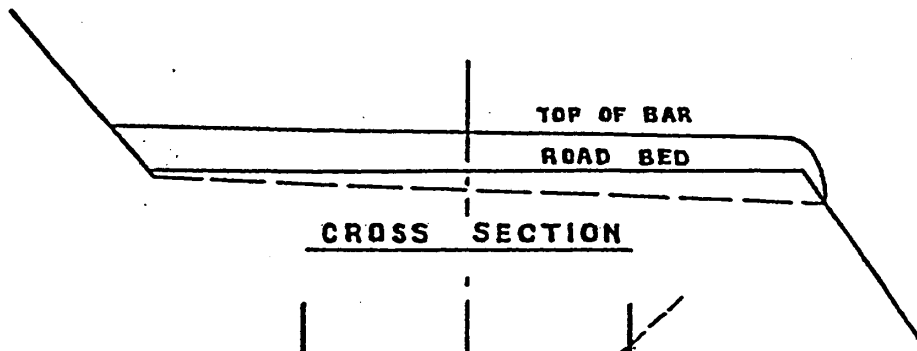
<u>Dia.</u>	<u>Steel Pipe Gauge</u>	<u>Band Gauges</u>	<u>Band Widths (")</u>			<u>Hugger Band Widths (")</u>	
	<u>Galvanized or Aluminized</u>		<u>Annular</u>	<u>Helical</u>	<u>Dimpled</u>	<u>Annular</u>	<u>Helical</u>
18	16	16	12	12	12	13 1/8	10 1/2

EXHIBIT "D"

WATERBAR SPECIFICATIONS



PROFILE

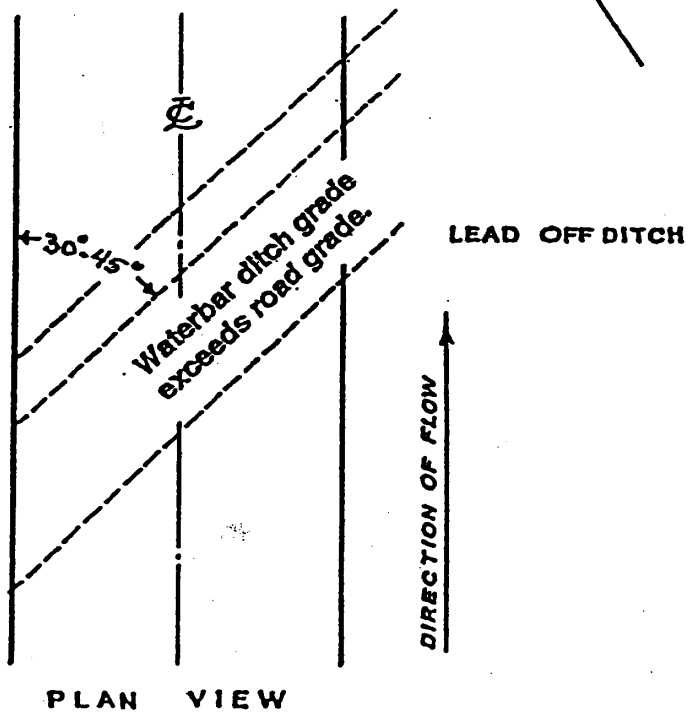


CROSS SECTION

Block the ditch(es) with the waterbar. Extend the waterbar ditch as far as necessary outside the right-of-way to keep water from flowing back onto the road.

SPACING OF WATERBARS

ROAD GRADE	DISTANCE
≤ 5%	200'
6-10%	200'
11-15%	130'
16-20% or greater	100'



PLAN VIEW

WATERBAR SPECIFICATIONS
 FOR CROSS DITCHING #298

EXHIBIT "E"
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: Western Lane (03) Phone (541) 935-2283

(State Forestry District)

Address PO Box 157, Veneta, OR 97487

(4) PURCHASER: _____
Address _____

(12) SALE NAME Chicken Ridge

COUNTY Lane

(13) STATE CONTRACT NUMBER 341-05-30

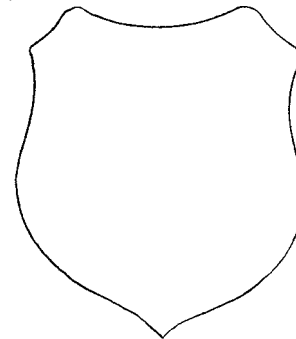
(14) SCALE: westside ☒ eastside ☐ cubic foot ☐

(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 (20).

(6) WESTSIDE SCALE: YES ☒ NO ☐
Actual taper all logs over 40' scaling length

(7) EASTSIDE SCALE: ☐ ☒
*Actual taper butt logs over 40' scaling length

(8) PENCIL BUCK ☐ ☒
back to Minimum Scaling Diameter _____

(9) ADD-BACK VOLUME -- ☒ ☐
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: _____

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

(21) SIGNATURES:

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

State Forester's Representative

Purchaser or Authorized Representative Date

State Forester Representative Date

EXHIBIT "E"

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.