

EXHIBIT "B"

FOREST ROAD SPECIFICATIONS

SUBGRADE WIDTH	SURFACED WIDTH	POINT TO POINT	STATION TO STATION	DITCH REQUIRED	OUTSLOPE
16 feet	12 feet	2A to 2B	0+00 to 5+90	Yes	No
16 feet	12 feet	6A to 6B	0+00 to 23+80	Yes	No
16 feet	12 feet	6C to 6D	0+00 to 1+00	Yes	No
16 feet	12 feet	8A to 8B	0+00 to 7+70	Yes	No
16 feet	12 feet	8C to 8D	0+00 to 5+40	Yes	No
16 feet	12 feet	11 to 12	0+00 to 8+90	Yes	No
16 feet	12 feet	13 to 14	0+00 to 112+40	Yes	No
16 feet	12 feet	15 to 16	0+00 to 7+75	Yes	No
16 feet	12 feet	17 to 18	0+00 to 55+90	Yes	No
16 feet	12 feet	19 to 110	0+00 to 4+27	Yes	No
16 feet	12 feet	19 to 110	4+27 to 8+90	No	Yes
16 feet	12 feet	19 to 110	8+90 to 22+50	Yes	No
16 feet	12 feet	111 to 112	0+00 to 41+30	Yes	No
16 feet	12 feet	113 to 114	0+00 to 1+95	Yes	No
16 feet	12 feet	115 to 116	0+00 to 28+20	Yes	No
16 feet	12 feet	117 to 118	0+00 to 7+70	Yes	No

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.

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

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 landslide hazard location 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 6 to 8 percent.

TURNOUTS. Increase roadbed width an additional 8 feet for both subgrade and surfacing. Length shall be at least 50 feet, or as staked on the ground, plus 25-foot approaches at each end.

Location: Intervisible but not greater than 750 feet and 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. Surface as shown on Exhibit B.

TURNAROUNDS. Increase subgrade width an additional 20 feet for a length of 20 feet at locations listed in Exhibit B, and/or as marked in the field.

SEASONAL WINTERIZATION: All unrocked roads or unfinished subgrades shall be waterbarred in accordance with specifications in Exhibit G, and blocked to vehicular traffic, prior to October 1, annually, and as directed by STATE.

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ROAD IMPROVEMENT INSTRUCTIONS

GENERAL ROAD IMPROVEMENT INSTRUCTIONS

- (1) Timber Removal. Remove all trees within the posted Right-of Way Boundary, as specified in Section 55, Designated Timber.
- (2) Roadside Brushing. Complete Project No. 2. Roadside Brushing.
- (3) Excavated Materials. Excavated materials shall be utilized for road and fill construction and hauled in where necessary. Fills shall be compacted in accordance with Exhibit B.
- (4) Culvert Replacement, Culvert Installation, Fill Reconstruction, and Fill Removal. 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. Fill reconstruction backfill shall consist of select materials and be obtained from borrow pits, as directed by STATE. Backfill materials shall be hauled in where necessary and thoroughly compacted in accordance with Exhibit B. 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 to an approved refuse site off of STATE land.
- (5) Riprap Rock Use. Where rock is specified for fill armor, rock shall be placed and tamped at a 1½:1 slope, beginning at the fill toes. Where rock is used for an energy dissipater, rock shall be placed below the culvert outlet and embedded for a minimum of 3 feet.
- (6) Equipment. All excavation and riprap placement shall be performed using a minimum 1½ cubic-yard, track-mounted excavator.
- (7) Drainage Ditches. Restore or construct ditchlines, including ditchouts, 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. Markers shall meet specifications in Exhibit C. Excavated materials shall be placed in a stable location, as directed by STATE.
- (8) Subgrade Preparation and Application of New Surfacing Rock.
 - (a) Complete culvert installations, fill reconstructions, and other specified work prior to the application of new surfacing rock.
 - (b) Cut out all chuckholed and/or washboarded sections from the existing surfacing.
 - (c) Apply required base and leveling rock, as directed by STATE.
 - (d) Process (grade and mix) the existing surfacing and added base rock. Provide for a crown of ½ inch per foot, and compact in accordance with Exhibit B.
 - (e) Upon completion of above required work, apply, process, and compact surfacing rock in accordance with specifications in Exhibit B.
- (9) Grass Seeding and Mulching. Seed and mulch all exposed soils (including cut slopes, fill slopes, ditchlines, and waste areas) resulting from road improvement, in accordance to specifications in Exhibit J.

EXHIBIT "B"

ROAD IMPROVEMENT INSTRUCTIONS

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS

<u>SEGMENT</u>	<u>STATION</u>	<u>WORK DESCRIPTION:</u>
I3 to I4	0+00	Point I1.
	9+40	Install Culvert. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding. Construct energy dissipator utilizing 10 cubic yards of 24"-6" riprap rock.
	14+90	Install Culvert. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding. Construct energy dissipator utilizing 10 cubic yards of 24"-6" riprap rock.
	16+80	Install Culvert. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding.
	22+40	Install Culvert. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding.
	37+15	Culvert Replacement. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding. Construct energy dissipator utilizing 10 cubic yards of 24"-6" riprap rock.
	48+00	Culvert Replacement. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding.
	93+00	Begin road realignment. Begin sidecast pullback.
	94+00	Utilize 50 cubic yards of 24"-6" riprap rock to armor lower slope.
	93+00 to 95+00	Install fabric in accordance to specifications in Exhibit F.
	95+00	End road realignment. End sidecast pullback.
I7 to I8	112+40	Point I4.
	0+00	Point I7.
	9+05	Culvert Replacement. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding. Construct energy dissipator utilizing 10 cubic yards of 24"-6" riprap rock.
	11+45	Culvert Replacement. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding.
	32+95	Culvert Replacement. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding. Construct energy dissipator utilizing 10 cubic yards of 24"-6" riprap rock.
55+90	Point I8.	

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ROAD IMPROVEMENT INSTRUCTIONS

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS

<u>SEGMENT</u>	<u>STATION</u>	<u>WORK DESCRIPTION:</u>
I9 to I10	0+00	Point I9.
	4+27	Begin outslope road reconstruction. Begin removal of loose cutslope debris.
	7+90	Remove culvert. Backfill trench with suitable material from outslope reconstruction.
	8+90	End outslope road reconstruction. End removal of loose cutslope debris.
	22+50	Point I10.
I11 to I12	0+00	Point I11.
	16+90	Culvert Replacement. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding.
	21+10	Culvert Replacement. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding.
	28+15	Culvert Replacement. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding.
	29+90	Culvert Replacement. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding.
I15 to I16	41+30	Point I12.
	0+00	Point I15.
	11+80	Culvert Replacement. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding.
I17 to I18	28+20	Point I16.
	0+00	Point I17.
	3+20	Culvert Replacement. Utilize 24 cubic yards of 1½"-0" crushed rock for culvert bedding.
	7+70	Point I18.

EXHIBIT "B"
END-HAULING REQUIREMENTS

POINT TO POINT	STA. TO STA.	WASTE AREA LOCATION	WASTE AREA TREATMENT
13 to 14	93+00 to 95+00	1	1, 2, 3
17 to 18	0+00 to 55+90	2	1, 2, 3
19 to 110	0+00 to 22+50	2	1, 2, 3

End-Haul Areas General Requirements

Material shall not be intentionally side cast.

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) Waste Areas 1 and 2, as shown on Exhibit A and as marked in the field.
- (2) Waste Area 3, as shown on Exhibit A and as marked in the field.

Waste Area Treatment

- (1) Deposit at waste area, spread evenly, compact, and provide adequate drainage.
- (2) Pile woody debris separate from other waste material.
- (3) Apply grass seed and straw mulch in accordance to specifications in Exhibit J.

EXHIBIT "B"
 ROAD SURFACING

ROAD SEGMENT: 2A to 2B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	2A to 2B		0+00 to 5+90		
				Volume (CY) per		Number Of		
Base Rock	4"-0" Crushed		8	station	50	stations	5.90	295
Turn Outs	4"-0" Crushed	2+80	8	turnout	22	turnouts	1	22
Turn-Arounds	4"-0" Crushed	5+00	N/A	TA	20	TAs	1	20
Junctions	4"-0" Crushed	2A	8	junction	20	junctions	1	20
Junctions	1 1/2"-0" Crushed	2A	N/A	junction	24	junctions	1	24
Landings	6"-0" Pit-run	2B	N/A	Landing	60	Landings	1	60
Total Rock for Road Segment:				2A to 2B				441
ROAD SEGMENT: 6A TO 6B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	6A to 6B		0+00 to 23+80		
				Volume (CY) per		Number Of		
Base Rock	4"-0" Crushed		8	station	50	stations	23.80	1,190
Turn Outs	4"-0" Crushed	9+80	8	turnout	22	turnouts	1	44
Turn-Arounds	4"-0" Crushed	8+90	N/A	TA	20	TAs	1	20
Junctions	4"-0" Crushed	6A	8	junction	20	junctions	1	20
Junctions	1 1/2"-0" Crushed	6A	N/A	junction	24	junctions	1	24
Total Rock for Road Segment:				6A TO 6B				1,298
ROAD SEGMENT: 6C TO 6D				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	6C to 6D		0+00 to 1+00		
				Volume (CY) Per		Number of		
Base Rock	4"-0" Crushed		8	Station	50	stations	1.00	50
Junctions	4"-0" Crushed	6C	8	Junction	20	junctions	1	20
Landings	6"-0" Pit-run	6D	N/A	Landing	60	Landings	1	60
Total Rock for Road Segment:				6C TO 6D				130
ROAD SEGMENT: 8A TO 8B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	8A to 8B		0+00 to 7+70		
				Volume (CY) Per		Number of		
Base Rock	4"-0" Crushed		8	Station	50	stations	7.70	385
Turn Outs	4"-0" Crushed	4+00	8	Turnout	22	turnouts	1	22
Junctions	4"-0" Crushed	8A	8	Junction	20	junctions	1	20
Turn-Arounds	4"-0" Crushed		N/A	TA	20	TAs	1	20
Landings	6"-0" Pit-run	8B	N/A	Landing	60	Landings	1	60
Total Rock for Road Segment:				8A TO 8B				507

EXHIBIT "B"
 ROAD SURFACING

ROAD SEGMENT: 8C TO 8D				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	8C to 8D		0+00 to 5+40		
				Volume (CY) Per		Number of		
Base Rock	4"-0" Crushed		8	Station	50	stations	5.40	270
Turn Outs	4"-0" Crushed	1+50	8	Turnout	22	turnouts	1	22
Junctions	1 1/2"-0" Crushed	8A	8	Junction	24	junctions	1	24
Turn-Arounds	4"-0" Crushed		N/A	TA	20	TAs	1	20
Landings	6"-0" Pit-run	8B	N/A	Landing	60	Landings	1	60
Energy Dissipator	24"-6" Riprap	5+00	N/A		10		1	10
Total Rock for Road Segment:				8C TO 8D				406
ROAD SEGMENT: I1 to I2				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	I1 to I2		0+00 to 8+90		
				Volume (CY) Per		Number of		
Surface Rock	3/4"-0" Crushed		3	Station	19	stations	8.90	169
Subgrade Leveling	3/4"-0" Crushed		N/A					20
Total Rock for Road Segment:				I1 to I2				189
ROAD SEGMENT: I3 to I4				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	I3 to I4		0+00 to 112+40		
				Volume (CY) Per		Number Of		
Surface Rock	1 1/2"-0" Crushed		3	Station	19	stations	112.40	2,136
Base Rock Restoration	4"-0" Crushed	93+00-95+00	10	Station	63	stations	2.00	126
Turn Outs	1 1/2"-0" Crushed		3	Turnout	10	turnouts	14	140
Junctions	1 1/2"-0" Crushed		3	Junction	24	junctions	1	24
Subgrade Leveling	1 1/2"-0" Crushed		N/A					480
Culvert Backfill	1 1/2"-0" Crushed	9+40	N/A					24
Energy Dissipator	24"-6" Riprap	9+40	N/A					10
Culvert Backfill	1 1/2"-0" Crushed	14+90	N/A					24
Energy Dissipator	24"-6" Riprap	14+90	N/A					10
Culvert Backfill	1 1/2"-0" Crushed	16+80	N/A					24
Culvert Backfill	1 1/2"-0" Crushed	22+40	N/A					24
Culvert Backfill	1 1/2"-0" Crushed	37+15	N/A					24
Energy Dissipator	24"-6" Riprap	37+15	N/A					10
Culvert Backfill	1 1/2"-0" Crushed	48+00	N/A					24
Curve Widening	1 1/2"-0" Crushed							96
Fill Slope Armor	24"-6" Riprap	94+00	N/A					50
Total Rock for Road Segment:				I3 to I4				3,226

EXHIBIT "B"
 ROAD SURFACING

ROAD SEGMENT: I5 to I6				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	I5 to I6		0+00 to 7+75		
				Volume (CY) per	Number Of	Number Of	Number Of	
Surface Rock	3/4"-0" Crushed		3	station	19	stations	7.75	147
Turn Outs	3/4"-0" Crushed		3	turnout	10	turnouts	2	20
Junctions	1 1/2"-0" Crushed		3	junction	24	junctions	1	24
Subgrade Leveling	1 1/2"-0" Crushed		N/A					60
Curve Widening	1 1/2"-0" Crushed		3					12
Total Rock for Road Segment:				I5 to I6				263
ROAD SEGMENT: I7 to I8				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	I7 to I8		0+00 to 55+90		
				Volume (CY) per	Number Of	Number Of	Number Of	
Subgrade Leveling	1 1/2"-0" Crushed	42+50	N/A					24
Culvert Backfill	1 1/2"-0" Crushed	9+05	N/A					24
Energy Dissipator	24"-6" Riprap	9+05	N/A					10
Culvert Backfill	1 1/2"-0" Crushed	32+95	N/A					24
Energy Dissipator	24"-6" Riprap	32+95	N/A					10
Culvert Backfill	1 1/2"-0" Crushed	11+45	N/A					24
Total Rock for Road Segment:				I7 to I8				116
ROAD SEGMENT: I9 to I10				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	I9 to I10		0+00 to 22+50		
				Volume (CY) per	Number Of	Number Of	Number Of	
Base Rock	1 1/2"-0" Crushed	4+27 to 8+90	3	station	19	Stations	4.63	88
Subgrade Leveling	1 1/2"-0" Crushed	2+00	N/A					24
Total Rock for Road Segment:				I9 to I10				112
ROAD SEGMENT: I11 to I12				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	I11 to I12		0+00 to 41+30		
				Volume (CY) per	Number of	Number of	Number of	
Culvert Backfill	1 1/2"-0" Crushed	16+90	N/A					24
Culvert Backfill	1 1/2"-0" Crushed	21+10	N/A					24
Culvert Backfill	1 1/2"-0" Crushed	28+15	N/A					24
Culvert Backfill	1 1/2"-0" Crushed	29+90	N/A					24
Total Rock for Road Segment:				I11 to I12				96
ROAD SEGMENT: I13 to I14				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	I13 to I14		0+00 to 1+95		
				Volume (CY) per	Number of	Number of	Number of	
Base Rock	4"-0" Crushed		8	station	50	Stations	1.95	98
Junctions	1 1/2"-0" Crushed		3	junction	24	Junctions	1	24
Total Rock for Road Segment:				I13 to I14				122

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ROAD SEGMENT: I15 to I16				POINT TO POINT	Sta. to Sta.	TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	I15 to I16	0+00 to 28+20	
				Volume (CY) per	Number of	
Culvert Backfill	1 1/2"-0" Crushed	11+80	N/A			24
Total Rock for Road Segment:				I15 to I16		24
ROAD SEGMENT: I17 to I18				POINT TO POINT	Sta. to Sta.	TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	I17 to I18	0+00 to 7+70	
				Volume (CY) per	Number of	
Culvert Backfill	1 1/2"-0" Crushed	3+20	N/A			24
Total Rock for Road Segment:				I17 to I18		24

ROCK TOTALS (CY)	24"-6"	6"-0"	4"-0"	1 1/2"-0"	3/4"-0"
6,954	110	240	2,684	3,564	356

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.

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ROCK ACCOUNTABILITY

Subgrades must be approved by STATE prior to rocking. Rocking must be done only when weather conditions are acceptable to STATE, and must be suspended when muddy water could enter streams from runoff.

Rock accountability shall be determined by the following methods, as directed by STATE. STATE shall be given 24 hours' notice prior to rocking.

Rock Checking. All rock spreading shall be done only when a STATE representative is present. STATE shall issue a receipt for each load delivered, and rock shall be measured without allowance for shrinkage or shakedown during hauling. Total truck measure volume for each road segment shall be as shown on Exhibit B. Deliver at least 500 cubic yards per 8-hour shift, unless otherwise approved by STATE. A penalty of \$10.00 for each 10 cubic yards which are not delivered during a single shift shall be billed, and payment shall be required prior to final acceptance of the project by STATE.

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. Surfacing areas shall be staked by STATE.

Load Records. Notify STATE before spreading the rock and maintain a record of all rock delivered for spreading. Make the record available for STATE inspection. A report listing the amount of rock delivered the prior month must be submitted no later than the 15th of each month.

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 sheepsfoot roller, the roller "walks out." A minimum of 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 one or more of the approved equipment options listed below:

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
All Road Construction and Road Improvement 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 or, in the case of a sheepsfoot roller, the roller "walks out." A minimum 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 one or more of the approved equipment options listed below:

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
All Road Construction and Road Improvement Segments	1 or 2 or 3; and 4

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 8 inches in depth except where installation of road fabric is required. 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 one or more of the approved equipment options listed below:

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
All Road Construction and Road Improvement Segments	1

EXHIBIT "B"

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 or sheepsfoot 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) Rubber-Tired Skidders. A rubber-tired skidder weighing a minimum of 20,000 pounds shall be operated over the fill layers so that the entire surface comes into contact with the tires. Skidders with oversized tires (high floatation) are not acceptable for compaction.
- (4) Vibratory Hand-Operated or Backhoe-Mounted Tamper. Vibratory hand held or hydraulic tampers shall be used for compaction of backfill around culverts. The tamper shoe dimensions shall be a minimum of 10" X 13" and capable of a centrifugal force of 2,250 pound.

EXHIBIT "C"

CULVERT SPECIFICATIONS

All culvert materials shall be furnished and installed by PURCHASER, unless otherwise specified in the contract. Culverts 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. All culverts shall be constructed with of double-walled polyethylene. Double-walled polyethylene pipe shall meet the requirements of AASHTO M-294-901, Type S. Corrugation types and shapes other than those meeting the above minimum Highway requirements, shall be approved in writing by STATE.

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 stipulated in special instructions.

The STATE Representative shall determine final culvert locations and stake the locations in the field prior to installation.

Culvert grade shall slope away from ditch grade at least 2 percent unless otherwise specified.

The foundation and trench walls for all culverts shall be free from logs, stumps, limbs, stones over 3 inches, and other objects which would dent or damage the pipe during installation or use. If tamping is required, the trench shall be excavated wide enough to permit working on each side of pipe. Bedrock shall be excavated as required to provide a uniform foundation for the full length of the culvert.

A bedding of granulated material or job-excavated soil shall be placed to provide a wide band of support and to transmit the load from above evenly over the entire length of the pipe.

Transporting of the pipe shall be done carefully. Dragging or allowing free fall from trucks or into trenches shall not be permitted. Damage to bituminous coating shall be repaired before the pipe is covered.

On new installations, joining shall be done with bands of like material and corrugations. Manufacturers' instructions shall be followed for prefabricated pipe assembly.

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

Tamping is required as specified in Exhibit B and shall be done in 8-inch lifts, 1 pipe diameter each side of the pipe to 85 percent density or over, and to the minimum fill height as specified below. Additional fill shall be embankment material.

Fill heights, if not shown on a road plan and profile, shall be in accordance with those shown in Drawing No. 2094, "Fill Height Tables," prepared by the Highway Division of the Oregon State Department of Transportation. Any deviation must be approved by STATE.

Minimum height of cover over top of culvert to subgrade when road is to be rocked shall be as follows: 12" for aluminized steel culverts 18" to 36", 18" for aluminized steel culverts 42" to 96", and 12" for polyethylene culverts (add 6" for roads which will not be rocked). Minimum vertical cover for other steel 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. Culverts in Type F streams must allow free passage of fish as provided in the Oregon Forest Practice Rules. 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 into waters of the State shall be provided with a downspout or other approved slope protection device.

EXHIBIT "C"

CULVERT SPECIFICATIONS

All coupling band designs shall be in accordance with the minimum requirements of the Highway Division (Drawing Nos. 2091-A and B), or as approved by STATE.

Polyethylene culverts between 3" to 10" in diameter shall meet the requirements of AASHTO M-252-851. Polyethylene culverts between 10" to 36" in diameter shall be double walled and meet the requirements of AASHTO M-294-901, Type S.

The intake ends of all culverts (new and existing) on road segments identified in Project Nos. 1 and 3 shall be marked by driving white fiberglass posts within 6 inches of the downgrade side. Posts shall be a minimum of 6 feet long, and be a minimum of 2½ inches in width, with the spade driven 2 feet into the ground.

Tamping is required.

All removed culverts shall be hauled to an approved refuse site off of State land.

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	ROAD SEGMENT POINT TO POINT	STATION
1	18	30	6A to 6B	10+20
2	18	30	6A to 6B	17+00
3	18	30	8A to 8B	6+00
4	18	30	8C to 8D	5+40
5	18	40	I3 to I4	9+40
6	18	40	I3 to I4	14+90
7	18	40	I3 to I4	16+80
8	18	40	I3 to I4	22+40
9	18	40	I3 to I4	37+15
10	18	30	I3 to I4	48+00
11	18	40	I7 to I8	9+05
12	18	40	I7 to I8	32+95
13	18	40	I11 to I12	16+90
14	18	40	I11 to I12	21+10
15	18	40	I11 to I12	28+15
16	18	30	I11 to I12	29+90
17	18	40	I15 to I16	11+80
18	18	30	I17 to I18	3+20

EXHIBIT "D"

ROCK PIT DEVELOPMENT AND USE

- (1) PURCHASER shall prepare a written development plan for the pit area. The plan shall be submitted to STATE for approval prior to conducting any operation in the pit area.

The plan shall include, but not be limited to:
 - (a) Location of benches and roads to benches.
 - (b) Disposal site for debris and overburden.
 - (c) Erosion control measures.
- (2) PURCHASER shall conduct the operations relative to the disposal of waste material in such manner that silt, rock, debris, dirt, or clay shall not be washed, conveyed, or otherwise deposited in any stream. All waste shall be deposited at an approved "waste disposal site."
- (3) All overburden shall be hauled to the designated waste area as directed by STATE.
- (4) The quarry floor shall be developed to provide drainage away from the rock pit. Benches shall be constructed at intervals of 40 feet or less in height and shall be a minimum of 20 feet in width. Any gravel or talus slopes shall be left with a working face at an angle of 60 degrees or less. There shall be a minimum of 1 bench with an access road to it. Said bench shall be easily accessible with tractors.
- (5) Pit face shall be developed in a uniform manner.
- (6) Oversized material that is produced shall be piled in a designated area adjacent to the pit. It shall not be wasted.
- (7) Upon completion of use, the pit site and access roads shall be left in a condition free from overburden and debris. Access roads to the pit, and the pit floor, shall be cleared at the termination of use. Rock pit access roads shall be blocked upon completion of rock pit use as directed by STATE. Rock pit roads shall be waterbar constructed to provide drainage as specified in Exhibit G and be blocked as directed by STATE.
- (8) Proper winterization and storm-water control measures such as waterbarring, drainage, utilization of filter bales, mulching and/or blocking access shall be constructed and maintained to protect the watershed and project work, as directed by STATE.

PIT-RUN AND RIPRAP ROCK SPECIFICATIONS

Grading Requirements

<u>For 6"-0" Pit-Run</u>	Passing	10" sieve	100%
	Passing	6" sieve	65%

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 "E"

TYPICAL EMBEDDED ENERGY DISSIPATOR

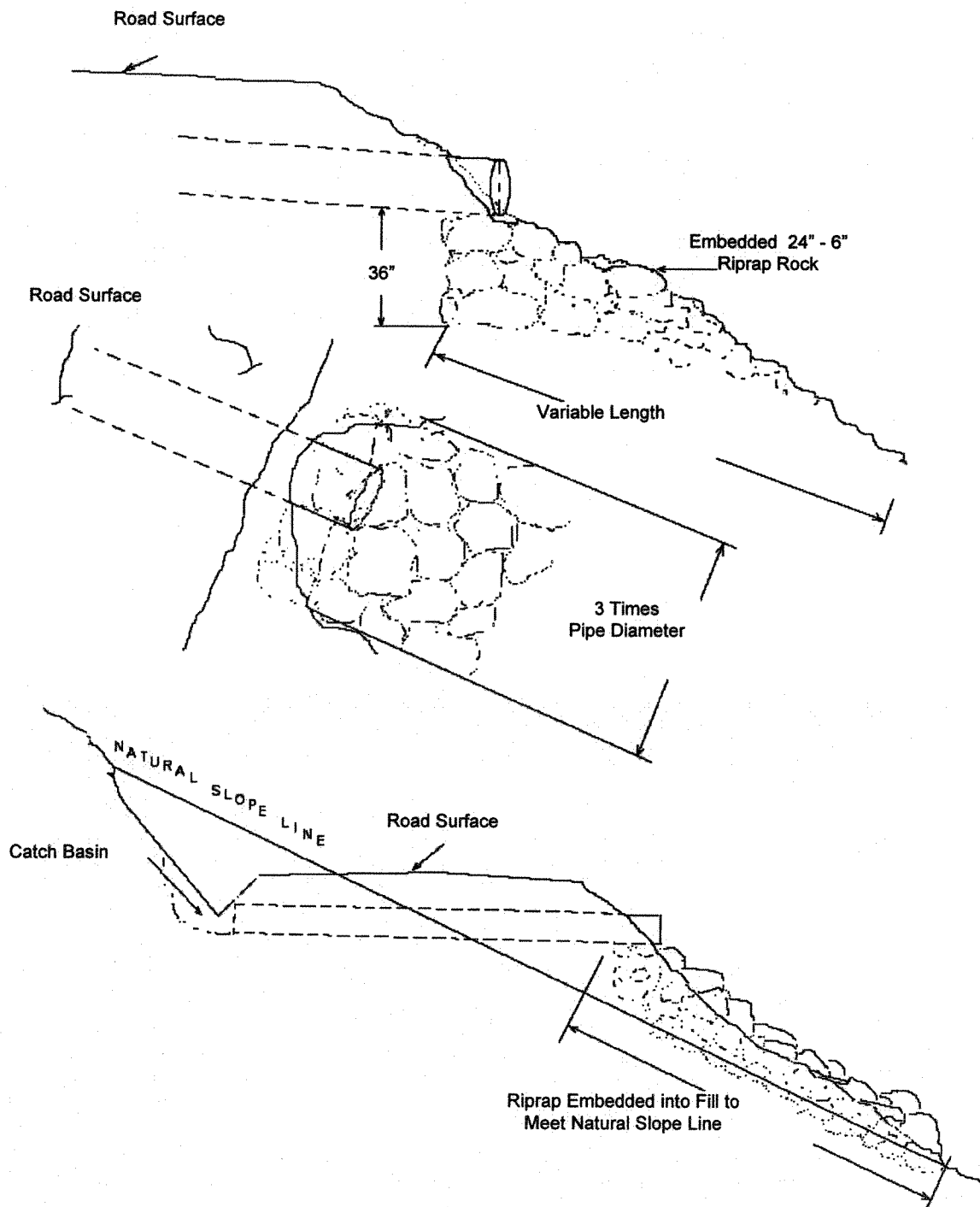


EXHIBIT "F"

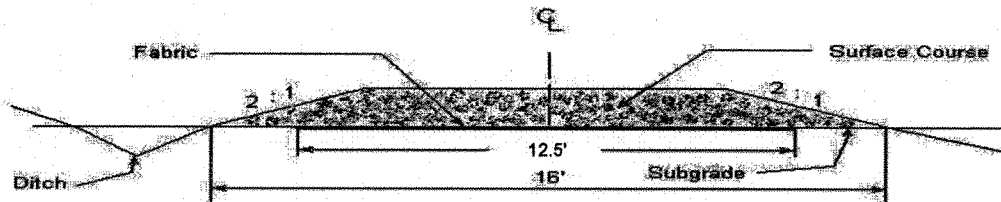
FABRIC SPECIFICATIONS

FABRIC SPECIFICATIONS - shall be woven fabric designed for forest road subgrade surfacing purposes and shall meet or exceed the following requirements, unless otherwise approved in writing by STATE:

- | | | | |
|-----|--------------------------------|----------|------------|
| (1) | Grab Tensile | 300 lbs. | ASTM D1682 |
| (2) | Modulus Load at 10% Elongation | 140 lbs. | ASTM D1682 |
| (3) | Mullen Burst | 600 lbs. | ASTM D751 |
| (4) | Width - 12.5 feet | | |

INSTALLATION REQUIREMENTS - fabric shall be installed according to the following requirements:

- (1) Typical cross section:



- (2) Subgrade surface shall be leveled and smoothed to remove humps and depressions which exceed 6 inches in height and depth. Small pieces of woody debris shall be removed or pushed below subgrade surface. Light vegetation (grass, weeds, leaves, and fine woody debris) may be left in place.
- (3) Fabric shall be installed directly on the prepared surface. Longitudinal and traverse joints shall be overlapped at least 3 feet.
- (4) Surfacing course material shall be placed to the designated thickness in one lift and spread in the direction of fabric overlap. Hauling and spreading equipment shall not be operated on the fabric until the total thickness of surfacing course material is placed.
- (5) Torn, punctured, or separated sections of the fabric shall be repaired by installing a fabric patch over the break prior to placing the surfacing course material. The patch shall be at least 4 feet larger in horizontal dimensions than the break to be repaired.

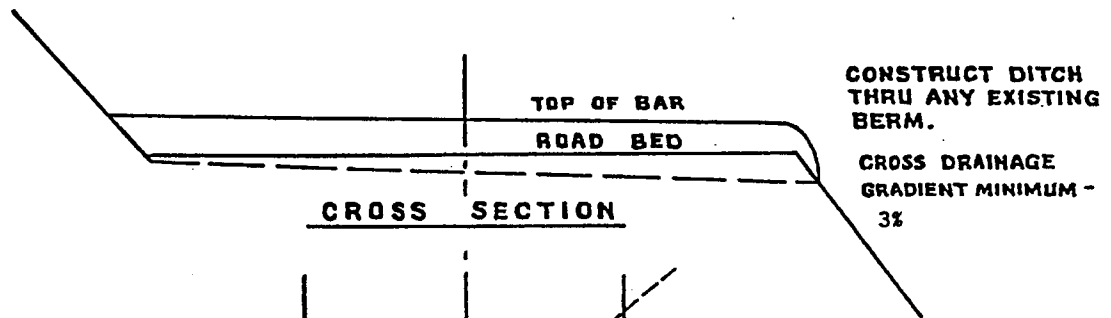
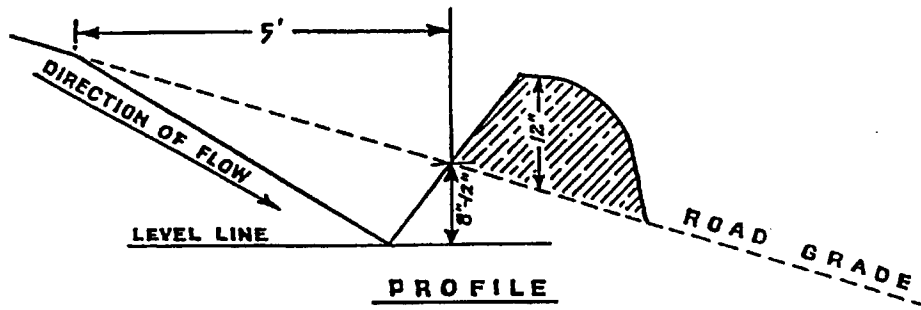
Fabric failures resulting after rock placement and as evidenced by subgrade pumping or roadbed distortion shall be corrected. Correction measures shall consist of: (1) removing at least three-quarters the depth of surfacing course material in the affected area, (2) placing a fabric patch over the affected area with a minimum 4-foot overlap around the circumference of the area, and (3) replacing enough rock to cover the patch and blend in with the rest of the road.

- (6) Install fabric at the following location:

SEGMENT	STA. TO STA.	LENGTH (feet)	WIDTH (feet)
I3 to I4	93+00 to 95+00	220	12

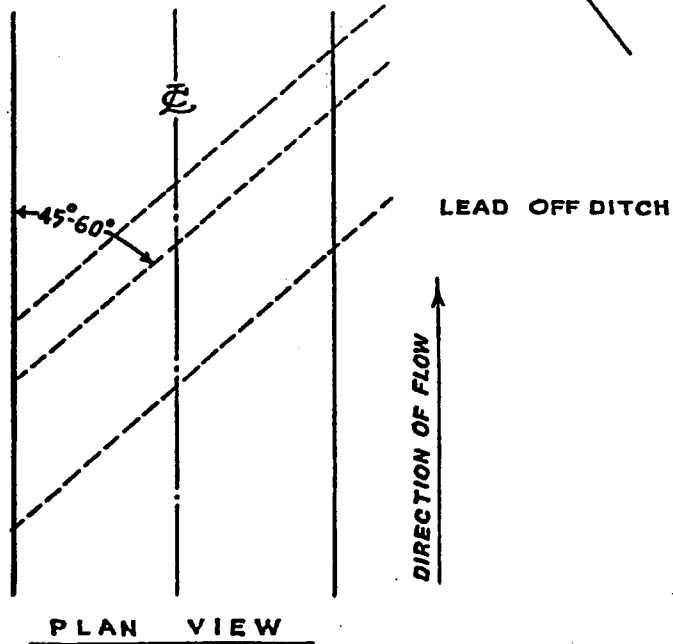
EXHIBIT "G"

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 "H"

ROAD VACATING AND FILL REMOVAL SPECIFICATIONS: V1 to V2

- (1) Timber Removal. Remove all trees within the posted Right-of Way Boundary, as specified in Section 55, Designated Timber.
- (2) Culvert Removal. Remove drainage structures and/or culvert at 3+60. The removed culvert shall be hauled to an approved refuse site off State Land.
- (3) 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.
- (4) Use of Excavated Materials.
 - (a) Sidecast Pullback. All excavated materials shall be placed and compacted on the interior (cut) side of the road, and utilized to restore the cutslope to natural contours or to a minimum 10% outslope for drainage, and in accordance to specifications in Exhibit H, page 2.
 - (b) Woody Debris shall be placed on the surface of compacted embankment material.
- (5) Construct Waterbars at designated locations and as directed by STATE. Construct waterbars according to the specifications in Exhibit G, and as directed by STATE.
- (6) Block Roads. Use excavated material from fill removals areas to block roads from vehicle access, as directed by STATE.
- (7) Erosion Control. Apply grass seed and mulch to all exposed excavation areas and waste materials, in accordance to specifications in Exhibit J. Applied straw mulch shall be a minimum of 2 inches deep and provide a uniform cover.
- (8) 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. All work shall be performed during dry conditions acceptable to STATE.

EXHIBIT "H"

TYPICAL CROSS SECTION VIEW OF ROAD VACATING
SIDECAST PULLBACK

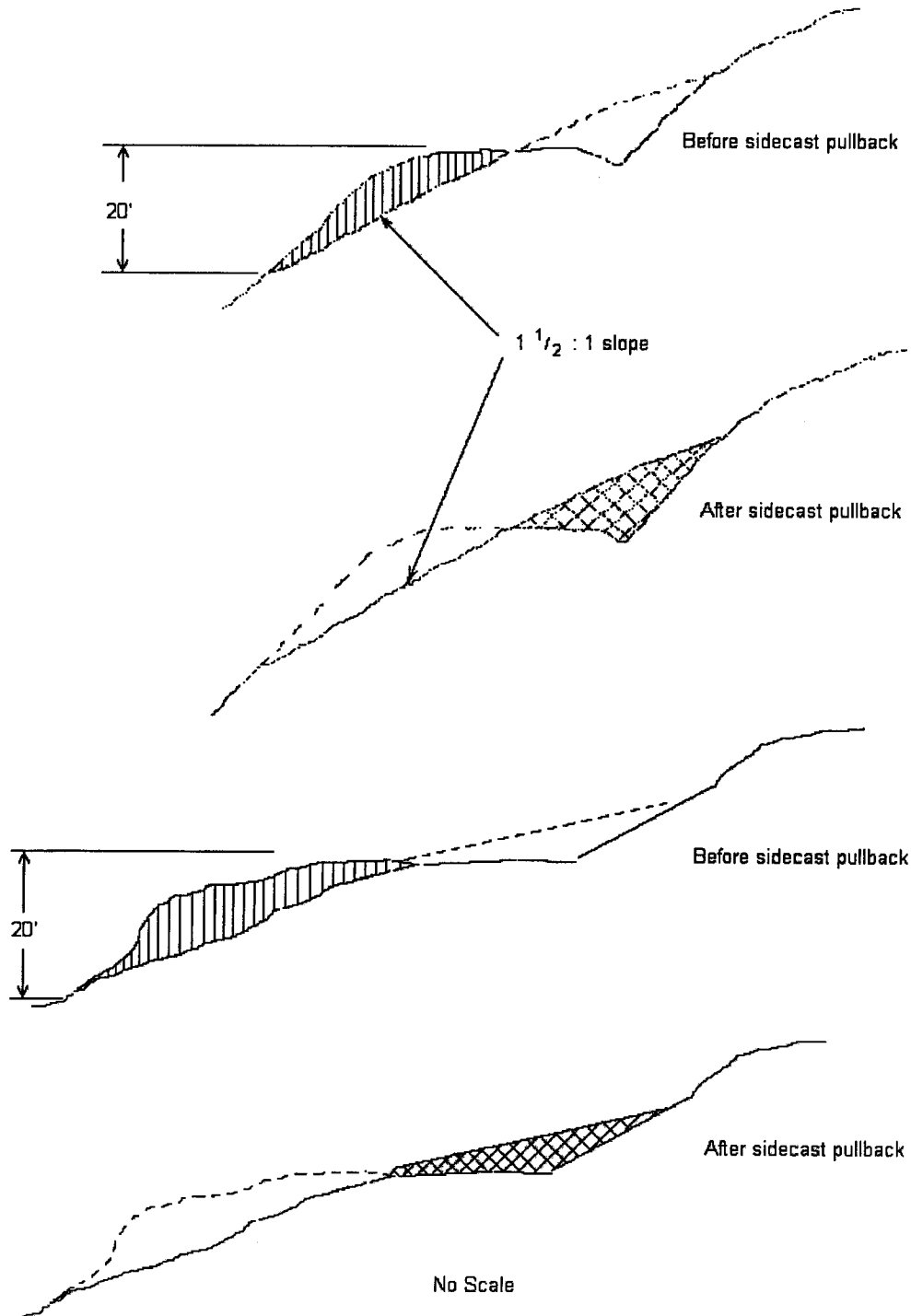
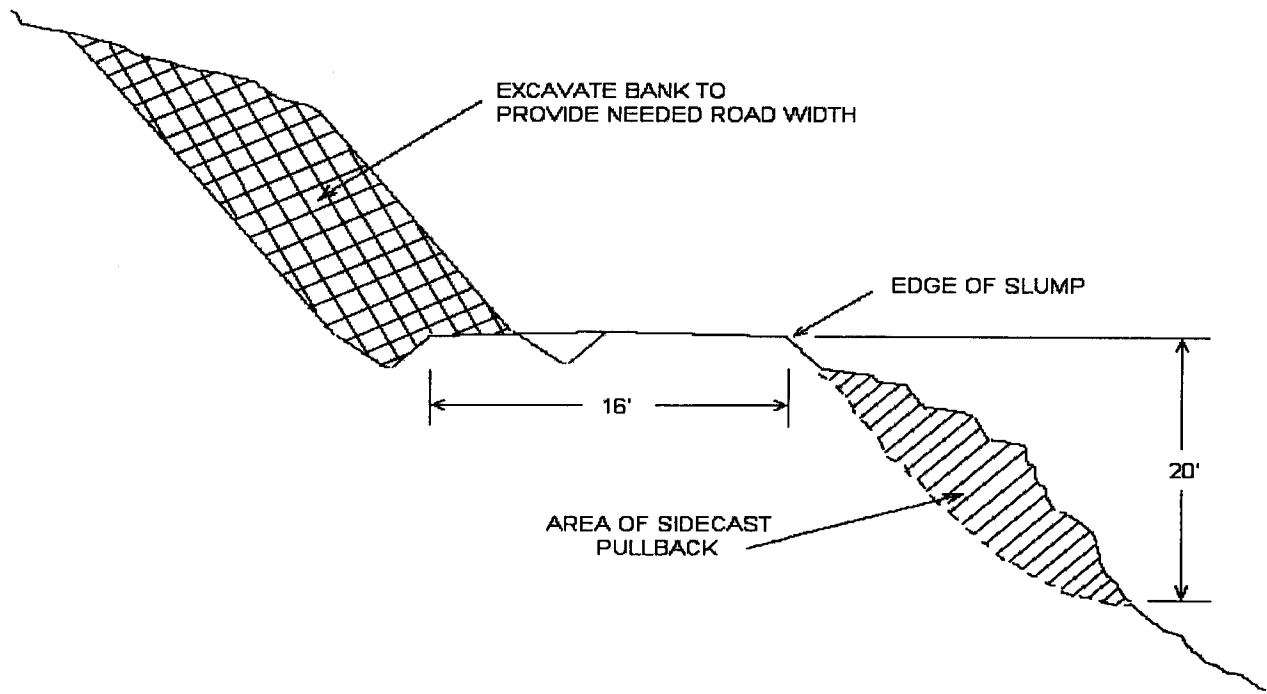


EXHIBIT "I"

TYPICAL CROSS SECTION VIEW OF SIDECAST PULLBACK AND ROAD REALIGNMENT



(No Scale)

State Timber Sale Contract
No. 341-03-91
West Creek Combination

EXHIBIT "J"

GRASS SEEDING AND MULCHING

This work shall consist of furnishing and placing required grass seed and straw mulch.

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. Work shall be performed during each specified seeding season on all completed and previously untreated sections. PURCHASER shall notify STATE 24 hours prior to seeding.

Application Methods for Grass Seed

Dry Method. Hand-operated seeding devices may be used when seed is applied in dry form.

APPLICATION RATES FOR SEED

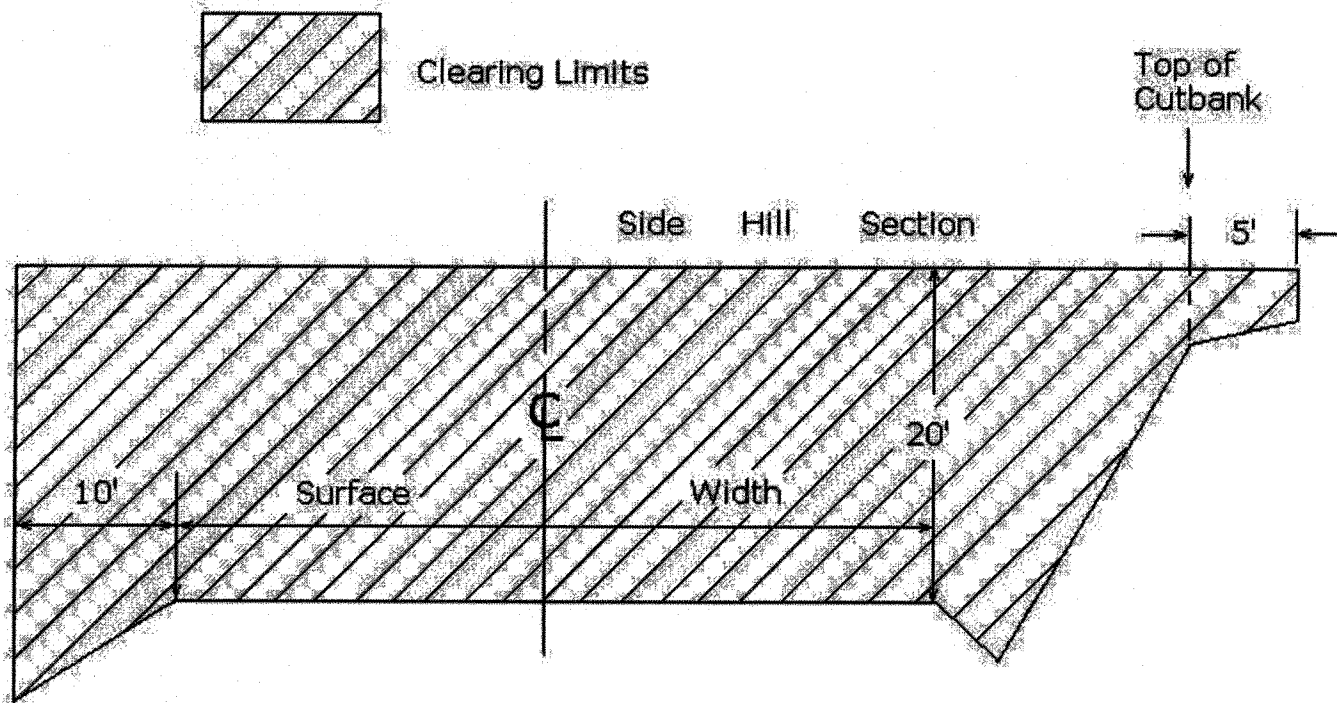
Seed listed below shall be applied at the following rate per acre: 100 lbs.

SPECIES	MIXTURE	PURE LIVE SEED	POISON AND/OR REPELLENT	GERMINATION
Annual Rye	33%	95%	0	>90%
Orchard Grass	33%	95%	0	>90%
Perennial Rye	34%	95%	0	>90%

Seeding and Mulching. Apply grass seed and straw mulch to all waste areas, and bare soils resulting from Project Nos. 1, 3, and 4. Applied straw mulch shall be a minimum of 2 inches deep and provide a uniform cover.

EXHIBIT "K"

LOGGING ROAD BRUSHING SPECIFICATIONS



REQUIREMENTS

Clear roadside brush between Points B1 to B2, B3 to B4, B5 to B6, B7 to B8, B9 to B10, B11 to B12, B13 to B14, B15 to B16, B17 to B18, B19 to B20, B21 to B22, B23 to B24, B25 to B26, B27 to B28, B29 to B30, B31 to B32, B33 to B34, and B35 to B36.

The minimum height of clearing shall be 20 feet, and the minimum width of clearing on the cutslope side of the road shall be 5 feet beyond the top of the cutbank.

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 and may be scattered downslope from the road or placed in other stable locations. Large debris, 6 inches or larger in diameter, shall be cut into lengths of 6 feet or less to facilitate rapid decay, unless otherwise approved by STATE.

Conifer trees larger than 6 inches in diameter at stump height, located within clearing limits but outside of the ditchline or shoulder, shall not be cut down, but shall be limbed for road visibility.

All brush and trees shall be removed from road fill from 14+90 to 16+80 on I3 to I4.

EXHIBIT "L"

WATERSHED REGULATIONS

PURCHASER shall take precautions necessary to protect the watershed from damage and to prevent pollution to the water supply. Precautions shall include, but not be limited to, the following regulations.

Laws, Rules, and Regulations. Comply with Oregon laws and with the rules and regulations of the Oregon State Board of Health relative to protection of watersheds and sanitation of public water supply.

Debris in Streams. Prevent, insofar as possible, logs, chunks, and other debris, resulting from logging and road building operations, from being deposited in streams. If such material should become deposited in streams, immediately remove the material to restore normal stream flow, using necessary care to prevent unnecessary damage to the stream channel and banks.

General Sanitary Conditions. Do not create any conditions which may permit breeding of flies or mosquitoes. Machinery, equipment, soil, and fuel storage shall not be located near streams. Waste oil shall be removed from the watershed. Camping shall not be permitted.

Privies. Place a clean, sanitary, and usable privy at each landing and other main points of operation and require all personnel to use the privies. Privies shall be placed at locations approved by STATE not closer than 100 feet to any stream. The privies shall be constructed as follows, unless other types are approved by STATE prior to being placed in use:

The housing shall be waterproof and flyproof, and the toilet shall be equipped with a seat and cover. A receptacle shall be provided for all refuse and the privy shall be equipped with a separate urinal draining into the receptacle. The receptacle shall be not less than 45-gallon capacity and the refuse shall be removed from the receptacle and disposed of off the watershed area. The receptacle shall be vented through the roof of the privy housing.

Pit type privies shall not be permitted on the watershed.

Personnel. Persons with a history of typhoid fever, amoebic dysentery, or infectious hepatitis shall not be employed on the watershed. All personnel shall be required to use the privies. PURCHASER shall verbally instruct all personnel employed on the watershed in the required sanitary precautions to be observed and shall give each such person a copy of these regulations.

Overnight Camping Prohibited. No person shall remain on the watershed overnight, unless authorized in writing by STATE.

EXHIBIT "M"

SPECIFICATIONS FOR BRUSH AND SLASH SHOVEL PILING

Description of Work to be Done

Areas designated for work under the contract shall be treated according to the specifications given below:

Clearing - Brush, logging slash, and other debris shall be cleared from planting sites and piled in windrows or piled so that 80 percent or more of the soil organic layer is exposed. All woody vegetation (other than conifer trees) is defined as brush in this exhibit.

Piles - shall be located at least 75 feet apart and shall be no more than 75 feet long. Piles shall be located inside the project area designated for piling and shall be more than 75 feet from any edge or standing conifer tree. Piles shall be built to a height of 3 to 4 feet and then covered to prevent water from reaching the slash. STATE shall supply the materials used for covering the slash. Additional woody debris shall be piled on top of the covered piles to complete the piling, as directed by STATE. Logs and chunks which are suitable for firewood shall be piled separately from slash, near roads and landings and alongside the road in locations designated by STATE.

Conifer Trees - shall be saved, unless otherwise directed by STATE.

Skid Trails - shall be ripped to a depth of 12 inches.

Protective Measures - shall comply with Oregon Forest Practice Rules issued per ORS 527.610 to 527.992.

Examples of protective measures are: (1) waterbarring tractor trails where necessary to prevent runoff toward streams; (2) not windrowing in streams or streamways; and (3) leaving stream buffers along designated streams.

Work specifications may be modified or waived only upon written notice from STATE.

EXHIBIT "M"

SPECIFICATIONS FOR BRUSH AND SLASH SHOVEL PILING

Equipment Type, Equipment Operation, and Conduct of Work

The specifications given below are requirements for equipment type, equipment operation, and conduct of work under the contract.

Shovel - 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.

- Excavator-shovel: Bucket shall be a hydraulically controlled, 4 to 5-foot wide, "clamshell-style bucket with rake arms," with a 360-degree continuous rotation, and tooth length on rake arm shall be greater than 14 inches long, unless otherwise approved in writing by STATE. "Clamshell-style bucket with rake arms" shall be hydraulically controlled to operate bucket in a horizontal position (**fixed position: positive control**) for piling slash.
- Log Loader – shovel: Bucket shall be a hydraulically controlled, 4 to 5 foot wide, "clamshell-style bucket with rake arms," with a 360-degree continuous rotation, and tooth length on rake arm shall be greater than 14 inches long, unless other wise approved in writing by STATE. "Clamshell-style bucket with rake arms" shall be hydraulically controlled to operate bucket in a vertical position (**free swinging**) for piling slash.

Equipment	Rate	Hours	Appraised Value
Excavator	\$ 95.00 / hour	15	\$1,425.00
Log Loader	\$ 70.00 / hour	20.3	\$1,425.00

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 be accomplished only during dry weather conditions, and started within 14 calendar days after completion of yarding activities on Area 1. Operations shall provide for continual operation 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. Piling operation 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.

STATE Representative - shall provide directions for the conduct of work according to specifications.

EXHIBIT "N"
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: Astoria Phone (503) 325-5451
 (State Forestry District)
 Address 92219 Hwy. 202, Astoria, OR 97103

(4) PURCHASER: _____
 Address _____

(12) SALE NAME West Creek Combination

COUNTY Clatsop

(13) STATE CONTRACT NUMBER 341-03-91

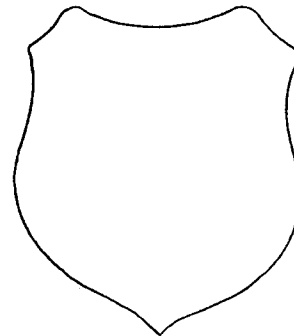
(14) SCALE: westside eastside cubic foot

(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: 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)
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:

 Purchaser or Authorized Representative Date

 State Forester Representative Date

 State Forester's Representative

EXHIBIT "N"

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.