

PART III: EXHIBITS

State Timber Sale Contract
No. 341-09-30
Joe Cockeran

EXHIBIT B

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

OREGON DEPARTMENT OF FORESTRY

TIMBER SALE OPERATIONS PLAN

(See Page 2 for instructions)



Date Received by STATE: _____

(5) State Brand Information (complete):

(1) Contract No.: 341-09-30

(2) Sale Name: Joe Cockeran

(3) Contract Expiration Date: October 31, 2010

Project Completion Dates: N/A

(4) Purchaser: _____

(6) Purchaser Representatives:

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

(7) State Representatives:

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

(8) Name of Subcontractors & Starting Dates:

Projects: No(s) _____ - _____	Date: _____	Phone: _____
No(s) _____ - _____	Date: _____	Phone: _____
No(s) _____ - _____	Date: _____	Phone: _____
No(s) _____ - _____	Date: _____	Phone: _____

Logging: Felling _____	Date: _____	Phone: _____
Yarding: _____	Date: _____	Phone: _____

(9) Comments: _____

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

EXHIBIT B

INSTRUCTION SHEET FOR OPERATIONS PLAN

SUBMIT ONE COPY OF PLAN TO STATE

Operations shall be limited to the work shown in the plan until a revised plan or supplemental plan is submitted covering additional work. Compliance with this plan is not in lieu of compliance with any federal requirements related to the federal Endangered Species Act. If STATE has prepared a required Forest Practices Act (FPA) "Written Plan" for operations, PURCHASER shall comply with all provisions of the Written Plan.

Explanation of Item No. (from Page 1)

- (5) All sales require you to use a brand furnished by STATE. If the State brand has not been assigned when the plan is submitted, it will be furnished and assigned later. Complete drawing. If more than one brand is assigned to the sale, complete both drawings.
- (6) The contract requires you to have a designated representative available on the sale area or work location who is authorized to receive in your behalf any notice or instruction given by STATE and to take action in regard to performance under the contract. If logging and project work is widely separated, a representative is required for each.
- (7) The STATE representative will be designated when your plan is approved and is the person who will inspect and issue instructions regarding performance.
- (8) Show names of subcontractors to be used for any or all phases of the operations. If subcontractors are not known, or are changed later, give notification to the STATE representative prior to commencement of work by subcontractor.

Show projected dates for commencement of both projects and logging. If projected dates need to be changed at a later date, notification must be given to the STATE representative by supplemental plan or otherwise, prior to commencement of such operations.

- (10) The STATE representative will furnish extra copies of Exhibit A of the contract for your use in preparing the operations map. The map shall use the following legend and show:
 1. Landing locations, approximate setting boundaries, and probable sequence of logging the settings. Number the settings in sequence.
 2. Locations of spur roads planned for construction, other than those required by the timber sale contract. Provide spur road specifications.
 3. Location of proposed tractor yarding roads. Show if and how marked on the ground.
 4. Location of temporary stream crossings.
 5. List the sequence of performing project work.
 6. Location of rock sources - attach pit development plans.



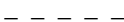
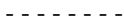


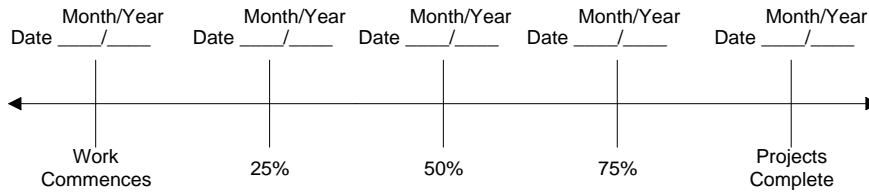
	Cable landing, with numbers for sequence.
	Tractor landing with alphabetical sequence.
	Approximate setting boundary.
	Spur truck roads.
	Tractor yarding roads.
	Temporary stream crossings.

EXHIBIT B
 OPERATIONS PLAN

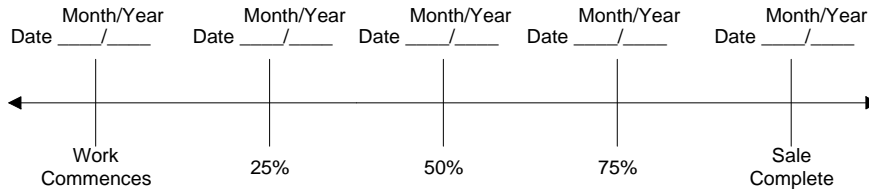
Completion Timeline

Indicate on the appropriate timeline below, the dates by which you plan to complete the work as required under this contract. The purpose of this section is to develop a plan that will ensure you complete the work as required, and meet the interim completion date(s) and contract expiration date. This plan is incorporated and made a part of the contract. When, in the opinion of STATE, operations are not commencing in a manner that meets the intent of this plan, you may be placed in violation of contract and your operations suspended until an amended plan is submitted and approved by STATE.

Projects



Harvest & Other Requirements



The Federal Endangered Species Act (ESA) prohibits a person from taking any federally listed threatened or endangered species. Taking under the federal ESA may include alteration of habitat. STATE's approval of this plan does not certify that PURCHASER's operation under the plan is lawful under the federal ESA. As provided in the timber sale contract, PURCHASERS must comply with all applicable state, federal, and local laws.

PURCHASER's compliance with this plan is not in lieu of compliance with any federal requirements related to the federal Endangered Species Act.

APPROVED: Date: _____

SUBMITTED BY:
 PURCHASER

STATE OF OREGON - DEPARTMENT OF FORESTRY

 Title _____

 Title _____

Original: Salem
 cc: District File
 Purchaser

EXHIBIT C

SCALING INSTRUCTIONS -- LOCATION APPROVAL -- BRAND INFORMATION

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

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

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

(4) PURCHASER: _____
 Address _____

(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

(10) APPROVED SCALING LOCATIONS	Species	Yard	Truck

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

 State Forester's Representative

(12) SALE NAME Joe Cockeran

COUNTY Tillamook

(13) STATE CONTRACT NUMBER 341-09-30

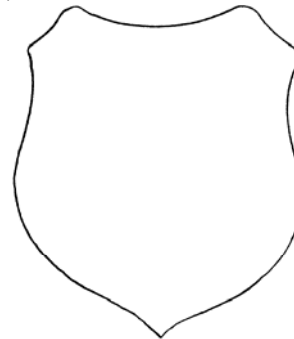
(14) SCALE: westside eastside cubic foot

(15) STATE BRAND REGISTRATION NUMBER _____

(16) BUREAU BRAND CODE NUMBER _____

(17) STATE BRAND INFORMATION:

(COMPLETE) →



(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: _____

(20) REMARKS _____

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

(21) SIGNATURES:

 Purchaser or Authorized Representative Date

 State Forester Representative Date

Notify the District within one hour when branding or painting is inadequate for quick identification, the receipts are missing, not correctly or completely filled out, and/or when logs presented for scaling are impossible to scale accurately.

EXHIBIT C

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 2040 or 2045, "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 subspecies 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 (Northwest Log Rules 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.

EXHIBIT D
 FOREST ROAD SPECIFICATIONS

SUBGRADE WIDTH	SURFACED WIDTH	POINT TO POINT	STATION TO STATION	DRAINAGE
16 feet	12 feet	A to B	0+00 to 7+00	Ditch
16 feet	12 feet	C to D	0+00 to 21+30	Ditch
16 feet	12 feet	E to F	0+00 to 2+80	Ditch
16 feet	12 feet	G to H	0+00 to 7+60	Ditch
16 feet	12 feet	I to J	0+00 to 22+20	Ditch
16 feet	12 feet	K to L	0+00 to 1+60	Ditch
16 feet	12 feet	M to N	0+00 to 1+75	Ditch
16 feet	12 feet	O to P	0+00 to 15+25	Ditch
16 feet	12 feet	Q to R	0+00 to 2+15	Ditch

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

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

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

GRUBBING. This work shall consist of the removal or digging out of stumps and protruding objects.

All stumps shall be completely removed within the limits of required grubbing. Stumps overhanging cutslopes shall be removed. Grubbing debris shall not be placed or permitted to remain in or under any road embankment sections. Grubbing debris shall not be left lodged against standing trees. Grubbing 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.

EXHIBIT D
FOREST ROAD SPECIFICATIONS

EXCAVATION. Excavation and grading shall not be done when weather and/or ground conditions are such that damage will result to existing subgrade or cause excessive erosion.

Excavation shall conform to STATE-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 E.

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 2 feet wide and to a depth of 1 foot below subgrade. Subgrade shall be crowned at 4 to 6 percent. Construct ditchouts away from subgrade at locations marked in the field.

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

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

Location: Intervisible but not greater than 750 feet.

GRADING

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

Top of cutslope shall be rounded.

LANDINGS. Landings shall be constructed as posted in the field, no less than 50 feet wide and no more than 70 feet wide, unless otherwise approved by STATE. Surface is to be crowned for drainage, with general grade no more than 3 percent. Surface as shown on Exhibit E.

TURNAROUNDS. Increase subgrade width an additional 20 feet for a length of 20 feet.

EXHIBIT D

ROAD CONSTRUCTION AND IMPROVEMENT INSTRUCTIONS

<u>SEGMENT</u>	<u>STATION</u>	<u>WORK DESCRIPTION</u>
A to B	0+00	Point A. Begin new road construction, crown road, begin ditch construction.
	3+00	Install Culvert No. 1 (18" x 34")
	4+50	Begin constructing the road fill using overburden material from the rock pit in order to build a gentle junction with Giveout Mountain Road.
	7+00	Point B. Junction with Giveout Mountain Road. Construct a two-way junction. Widen Giveout Mountain Road in order to construct a minimum 60-foot radius curve by excavating the bank and drifting material into the fill at the junction. Excavate the existing culvert and reinstall it north 50 feet up the road.
C to D	0+00	Point C. Begin new road construction, crown road, begin ditch construction. Install Culvert No. 2 (18" x 30') across Cochran Road on the west side of the junction. Begin constructing the road using material drifted from Stations 1+00 through 3+00.
	3+00	End drift.
	8+00	Install Culvert No. 3 (18" x 40').
	11+00	Point E. Spur to the right.
	13+00	Install Culvert No. 4 (18" x 34').
	15+00	Construct Landing on the left.
	18+50	Install Culvert No. 5 (18" x 36').
	21+30	Point D. Constructing Landing.
E to F	0+00	Pont E. Begin new road construction, crown road, begin ditch construction.
	0+50	Install Culvert No. 6 (18" x 30').
	2+80	Point F. Construct Landing.
G to H	0+00	Point G. Begin new road construction, crown road, begin ditch construction. Install Culvert No. 7 (18" x 30') across Cochran Road on the west side of the junction.
	7+60	Point H. Construct Landing.

EXHIBIT D

ROAD CONSTRUCTION AND IMPROVEMENT INSTRUCTIONS

<u>SEGMENT</u>	<u>STATION</u>	<u>WORK DESCRIPTION</u>
I to J	0+00	Point I. Begin new road construction, crown road, begin ditch construction. Begin constructing the road using material drifted from Stations 1+00 through 4+00. Add an additional lift of 1½" rock on the steep portion of the road as specified in Exhibit E.
	0+40	Install Culvert No. 8 (18" x 30').
	3+00	Install Culvert No. 9 (18" x 30').
	13+20	Install Culvert No. 10 (18" x 34').
	16+00	Install Culvert No. 11 (18" x 40').
	19+70	Point K. Spur to the left.
	22+20	Point J. Construct Landing.
<hr/>		
K to L	0+00	Point K. Begin new road construction, crown road, begin ditch construction.
	1+60	Point L. Construct Landing.
<hr/>		
M to N	0+00	Point M. Begin constructing loaded log truck turnaround.
	1+75	Point N.
<hr/>		
O to P	0+00	Point O. Begin new road construction, crown road, begin ditch construction. Begin drifting material ahead to Station 1+00 to construct road fill. Install Culvert No. 12 (18" x 60').
	11+55	Point Q. Spur to the right.
	15+25	Point P. Construct Landing.
<hr/>		
Q to R	0+00	Point Q. Begin new road construction, crown road, begin ditch construction.
	2+15	Point R. Construct Landing.
<hr/>		
S	0+00	Point S. Rock Landing.
<hr/>		
T	0+00	Point T. Rock Landing.

EXHIBIT D
END-HAULING REQUIREMENTS

POINT TO POINT	CONTAINMENT	WASTE AREA LOCATION	WASTE AREA TREATMENT
Howdy Doty Rock Pit	1	1	1,2

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

- (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.

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 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.

EXHIBIT E
 ROAD SURFACING

TYPE OF ROCK	SIZE OF ROCK	COMPACTED DEPTH	POINT TO POINT	STATION TO STATION	APPROX. TOTAL TRUCK MEASURE VOLUME
Pit-run	6"-0"	10"	A to B	0+00 to 7+00	406 CY
Crushed	1½"-0"	4"	A to B	0+00 to 7+00	160 CY
Pit-run	6"-0"	10"	C to D	0+00 to 21+30	1,236 CY
Pit-run	6"-0"	10"	E to F	0+00 to 2+80	163 CY
Pit-run	6"-0"	10"	G to H	0+00 to 7+60	441 CY
Pit-run	6"-0"	10"	I to J	0+00 to 22+20	1,288 CY
Pit-run	6"-0"	10"	K to L	0+00 to 1+60	93 CY
Pit-run	6"-0"	10"	M to N	0+00 to 1+75	102 CY
Pit-run	6"-0"	10"	O to P	0+00 to 15+25	885 CY
Pit-run	6"-0"	10"	Q to R	0+00 to 2+15	125 CY
CURVE WIDENING:			STATIONS OF CURVE WIDENING	POINT TO POINT	
Pit-run	6"-0"	10"	2	A to B	40 CY
Pit-run	6"-0"	10"	2	C to D	40 CY
Pit-run	6"-0"	10"	2	M to N	40 CY
Pit-run	6"-0"	10"	2	O to P	40 CY
TURNOUTS:			NO. OF T.O.		
Pit-run	6"-0"	10"	2	C to D	58 CY
Pit-run	6"-0"	10"	1	G to H	29 CY
Pit-run	6"-0"	10"	3	I to J	87 CY
Pit-run	6"-0"	10"	2	O to P	58 CY

EXHIBIT E
 ROAD SURFACING

TYPE OF ROCK	SIZE OF ROCK	COMPACTED DEPTH	NO. OF T.A.	STATION TO STATION	APPROX. TOTAL TRUCK MEASURE VOLUME
TURNAROUNDS:					
Pit-run	6"-0"	10"	2	C to D	32 CY
Pit-run	6"-0"	10"	1	G to H	16 CY
Pit-run	6"-0"	10"	1	I to J	16 CY
Pit-run	6"-0"	10"	1	O to P	16 CY
Pit-run	6"-0"	10"	1	Q to R	16 CY
Pit-run	6"-0"	10"	1	C to D (15+00)	80 CY
Pit-run	6"-0"	10"	1	Point D	80 CY
Pit-run	6"-0"	10"	1	Point F	80 CY
Pit-run	6"-0"	10"	1	Point H	80 CY
Pit-run	6"-0"	10"	1	Point J	80 CY
Pit-run	6"-0"	10"	1	Point L	80 CY
Pit-run	6"-0"	10"	1	Point P	80 CY
Pit-run	6"-0"	10"	1	Point R	80 CY
Crushed	1½"-0"	4"	1	Point S	40 CY
Crushed	1½"-0"	4"	1	Point T	40 CY
JUNCTIONS:			NO. OF JCTS.	LOCATION	
Pit-run	6"-0"	10"	1	Point A	58 CY
Pit-run	6"-0"	10"	1	Point E	40 CY
Pit-run	6"-0"	10"	1	Point I	40 CY
Pit-run	6"-0"	10"	1	Point K	40 CY
Pit-run	6"-0"	10"	1	Point O	40 CY
MISCELLANEOUS:		POINT TO POINT	LOCATION	USE	
Crushed	1½"-0"	I to J	Point I	Spot Rock	80 CY
Pit-run	6"-0"	A to B	5+00 to 7+00	Fill Widening	15 CY

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

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

Any additional turnarounds or turnouts created during any operation associated with this timber sale shall be rocked at PURCHASER's expense and as instructed by STATE.

Turnouts and turnarounds shall be rocked concurrently with the road.

EXHIBIT E

CRUSHED ROCK SPECIFICATIONS

Grading Requirements

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

Control of pit-run gradation shall be by visual inspection by STATE.

The referenced sieve shall have square openings as set forth in AASHTO M 92, Woven Cloth Series. The determinations of size and gradings shall be as set forth in AASHTO T 27.

EXHIBIT E

ROCK ACCOUNTABILITY

The rock shall meet the quality and size specifications in Exhibit E. A sample of the rock shall be supplied to STATE for testing and approval prior to spreading or stockpiling. 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. Surfacing rock shall be spread and compacted according to the depths specified in Exhibit E. 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 E. The average depth for each road segment shall be the specified depth or greater.

Junctions shall have a surfaced area of at least 20 square yards each as marked in the field at the compacted depths specified in Exhibit E.

Turnouts shall have a surfaced area of at least 70 square yards each at the depths shown in Exhibit E.

Turnarounds shall have a surfaced area of at least 44 square yards each at the depths shown in Exhibit E.

Landings shall have a surfaced area of at least 280 square yards each at the depths shown in Exhibit E.

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 E.

EXHIBIT E

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." 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 shall be crowned at 4 to 6 percent unless otherwise specified.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
All 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." At least 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 Segments	1, 3

EXHIBIT E

COMPACTION AND PROCESSING REQUIREMENTS

Pit-Run Rock. Pit-run surfacing rock shall be spread on roads with a crawler tractor and continuously walked-in. Rock spreading shall begin at nearest point from the rock source and progress toward the end of the project, unless otherwise approved in writing by STATE. 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 shall be crowned at 4 to 6 percent unless otherwise specified.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
O to P and Q to R	2

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 shall be crowned at 4 to 6 percent unless otherwise specified.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
A to B and I to J	1

EXHIBIT E

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 mile to 1.8 miles per hour as directed by STATE.

(2) Vibratory Grid Compactors. The roller shall have a grid surface and have an operating weight of 32,000 pounds or more. The rock shall be worked with a grader weighing at least 20,000 pounds during the grid rolling process.

All rock shall come in contact with the vibratory grid compactor. A minimum of 10 passes shall be made with the grader and vibratory grid compactor over the entire length of the road, unless STATE requires fewer passes.

(3) Crawler Tractors. D-7 Caterpillar or equivalent or larger.

EXHIBIT F

ROCK PIT DEVELOPMENT AND USE

- (1) 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."
- (2) Where overburden removal limits have not been staked, they shall extend for a distance of at least 20 feet beyond the developed rock source. Overburden and woody debris shall be hauled to a designated waste area. Overburden shall be spread evenly, grass seeded, and compacted at the waste area and woody debris stacked separately. Prior to drilling or rock removal, completion of overburden removal shall be approved in writing by STATE.
- (3) The rock pit floor shall be developed to provide drainage away from the rock pit. Rock pit drainage ditches shall be developed and maintained. 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.
- (4) Blasting shall be accomplished using timing devices, delay charges, low intensity shots, or other suitable means to contain as much material as possible in the rock pit prism.
- (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) 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.
- (8) Upon completion of use, the pit site and access roads shall be left in a condition free from overburden and debris. Rock pit roads shall be waterbarred to provide drainage and blocked as directed by STATE.

EXHIBIT G

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 or aluminized steel. Corrugated polyethylene may be used for sizes up to 36 inches in diameter. All culverts shall conform to the material and fabricating requirements 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.

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.

Cross drains on road grade in excess of 3 percent shall be skewed at least 30 degrees from perpendicular to the road centerline, except cross-drain culverts at the low point of dips in roads shall not be skewed.

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

Culverts less than 36 inches in diameter shall be installed with the lock seam on the inlet end placed within 45 degrees of the bottom of the trench.

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.

A bedding of granulated material or crushed rock as specified 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.

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.

Polyethylene joints shall be made with split couplings, corrugated to engage the pipe corrugations, and shall engage a minimum of 4 corrugations, 2 on each side of the pipe joint.

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

EXHIBIT G

CULVERT SPECIFICATIONS

Minimum height of cover over top of culvert to subgrade when road is to be rocked shall be as follows: 12" for culverts 18" to 36" and 18" for culverts 42" to 96" (add 6" for roads which will not be rocked). Minimum vertical cover for other designs shall be as specified by STATE.

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

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

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.

Dia.	Steel Pipe Gauge	Band Gauges	Band Widths (")		Hugger Band Widths (")	
			Annular	Helical	Annular	Helical
12-15	--	--	7	12	13 1/8	10 1/2
18-24	--	--	12	12	13 1/8	10 1/2
30-36	--	--	12	12	13 1/8	10 1/2
42	14	16	12	12	13 1/8	10 1/2
48	14	16	24	24	13 1/8	10 1/2
54	14	16	24	24	13 1/8	10 1/2
60	12	16	24	24	13 1/8	10 1/2
66-72	12	16	24	24	13 1/8	10 1/2
78	12	16	24	24	13 1/8	10 1/2
84	12	16	24	24	14 3/4	10 1/2
90-120	12	16	26	26	N/A	N/A

Culverts larger than 60" in diameter shall have 3" x 1" corrugations.

Polyethylene culverts shall be double walled and meet the requirements of AASHTO M-294-901, Type S.

EXHIBIT G
 CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	MATERIAL TYPE	CULVERT GAUGE	ROAD SEGMENT POINT TO POINT	STATION
1	18	34	CPP	N/A	A to B	3+00
2	18	30	CPP	N/A	C to D	0+00
3	18	40	CPP	N/A	C to D	8+00
4	18	34	CPP	N/A	C to D	13+00
5	18	36	CPP	N/A	C to D	18+50
6	18	30	CPP	N/A	E to F	0+50
7	18	30	CPP	N/A	G to H	0+00
8	18	30	CPP	N/A	I to J	0+40
9	18	30	CPP	N/A	I to J	3+00
10	18	34	CPP	N/A	I to J	13+20
11	18	40	CPP	N/A	I to J	16+00
12	18	60	CPP	N/A	O to P	0+00

* Default gauges used if no choice is made

** Galvanized (Default if no choice is made), Aluminized, Polyethylene

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.

EXHIBIT H
SEEDING AND FERTILIZING

This work shall consist of preparing seedbeds and furnishing and placing required seed and fertilizer.

Seeding Seasons. Seeding shall be performed only from March 1 through June 15 and August 15 through October 31. Seeding materials shall not be applied during windy weather or when the ground is excessively wet or frozen. Areas of disturbed soil shall be seeded by the end of the project period in which work was started. PURCHASER shall notify STATE 24 hours prior to seeding.

Soil Preparation. Areas to be seeded that have been damaged by erosion or other causes shall be restored prior to seeding. All areas to be seeded shall be finished and then cultivated to provide a reasonably firm, but friable seedbed. A minimum of 1/2 inch of surface soil shall be in a loose condition.

Application Methods for Seed and Fertilizer

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

Application Rates for Seed and Fertilizer

Seed listed below shall be applied at the following rates per acre:

<u>Species</u>	<u>Lb./Acre</u>	<u>Mixture</u>	<u>Pure Live Seed</u>	<u>Poison and/or Repellent</u>
Highland Bentgrass	12	40%	98%	0
Annual Ryegrass	6	20%	98%	0
Perennial Ryegrass	9	30%	98%	0
White Dutch Clover	3	10%	98%	0

Fertilizer: Chemical analysis shall be 16-20-0 and shall be applied at the rate of 300 pounds per acre.

EXHIBIT H

MULCHING

This work shall consist of furnishing and placing required mulch. Only areas of disturbed soil within 100 feet of streams are required to have mulch applied. Mulch shall consist of straw that is free of noxious weeds.

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

Application Rates for Mulch

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

PART IV: OTHER INFORMATION

State Timber Sale Contract
No. 341-09-30
Joe Cockeran



Oregon

Theodore R. Kulongoski, Governor

WRITTEN PLAN Timber Harvesting

Department of Forestry
Forest Grove District
801 Gales Creek Road
Forest Grove, OR 97116
(503) 357-2191
FAX (503) 357-4548

SALE NAME: Joe Cockeran

SALE NUMBER: 341-09-30

LEGAL DESCRIPTION: Portions of Section 17 and 20, T03N, R06W, W.M., Tillamook County, OR.

AREA DESCRIPTION AND RESOURCES TO PROTECT: The streams of concern are the Salmonberry River (Large-Type F) and roughly three unnamed tributaries (Small, Perennial- Type N).

The Salmonberry River flows adjacent to Area 4. Area 4 is a moderate partial cut and will retain a relative density of >30. Harvesting may occur within 25 feet of the high water mark. Slopes in the sale area are moderate to steep. The stand is well stocked 60 year old Douglas-fir with a minor component of other conifers and alder along the stream banks.

All streams are shown on the attached map.

PROTECTION MEASURES RELATED TO YARDING ACTIVITIES:

1. The Salmonberry River has been posted outside the sale area.
2. Average buffer width along the river is 50 – 75 feet.
3. Inner gorges and old slumps have been posted out of the sale area.
4. Logging equipment will not operate within 25 feet of any seasonal or perennial streams within the sale area.
5. Logging layout shall minimize yarding across all streams.
6. Skyline corridors across any stream will be limited to a standing skyline; line will be pulled into and out of the corridors when moving to another corridor location.
7. No logs shall be yarded across Type F streams.
8. All logs will have at least one end of suspension when yarding across all Type N streams shown on Exhibit A within Area 4.
9. Trees will be directionally felled away from streams, and in such a manner as to avoid any trees from sliding into the streams.

Reviewed by:


Erik Marcy, Unit Forester

Date: 6-27-08

