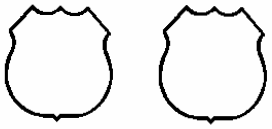
PART III: EXHIBITS

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.: 341-09-03

(2) Sale Name: Top Cat

(3) Contract Expiration Date: December 31, 2010 Project Completion Dates: _____

(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.
X	Temporary stream crossings.

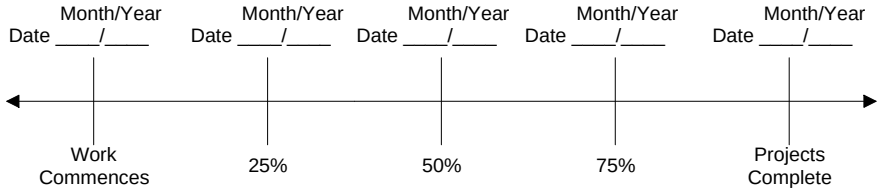
EXHIBIT B

OPERATIONS PLAN

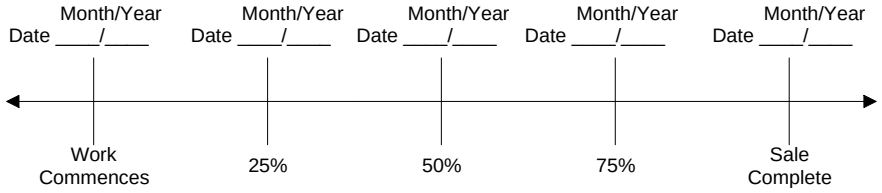
Completion Timeline

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: _____

STATE OF OREGON - DEPARTMENT OF FORESTRY

_____

Title _____

SUBMITTED BY:
PURCHASER

_____

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: West Oregon (01). Phone 541-929-3266
(State Forestry District)
Address 24533 Alsea Highway, Philomath OR

(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 Top Cat
COUNTY Lincoln

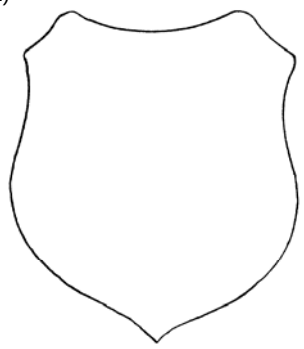
(13) STATE CONTRACT NUMBER 341-09-03

(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.

Distribution: ORIGINAL: Salem / COPIES: TPSO (4), Purchaser, District, Mgmt. Unit

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
14 feet	12 feet	A to A1	0+00 to 139+40	Ditch
14 feet	12 feet	A1 to B	0+00 to 22+30	Ditch
14 feet	12 feet	B to C	0+00 to 62+50	Ditch
14 feet	12 feet	B to D	0+00 to 140+00	Ditch
14 feet	12 feet	B1 to B2	0+00 to 16+00	No Ditch
14 feet	12 feet	B3 to B4	0+00 to 6+00	No Ditch
14 feet	12 feet	D to D1	0+00 to 23+00	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.

All clearing limits shall be marked by STATE with R/W tags and fluorescent pink flagging. 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, improvements, and re-constructions – 5 feet back from the top of the cutslope and 5 feet out from the toe of the fill.

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 3 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 1 to 3 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: As marked in the field.

GRADING	Back Slopes	Fill Slopes
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 to the dimensions posted in the field. Surface is to be crowned for drainage, with general grade no more than 3 percent.

EXHIBIT D

END-HAULING REQUIREMENTS

POINT TO POINT	STA. TO STA.	CONTAINMENT	WASTE AREA LOCATION	WASTE AREA TREATMENT
B1 to B2	0+00 to 9+50	1	1 (Waste Area 1, Waste Area 2, and sta. 113+20 on road segment B to D)	1, 2
B3 to B4	0+00 to 6+00	1	1 (Waste Area 1)	1, 2
A to A1	Salmon Creek Bridge (Sta. 11+50)	1	1 (Waste Area 3)	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

ROAD SEGMENT	A to A1							TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		
Surface rock	1 1/2-0"	Sta. 85+90 to 126+70	4	22	station	40.8	stations	898
Curve widening rock	1 1/2-0"	Sta. 85+90 to 126+70	----	----	----	----	----	70
Turnout rock	1 1/2-0"	----	----	11	turnout	2	turnouts	22
Spot rock	1 1/2-0"	A to A1	----	100	mile	1.9	miles	198

ROAD SEGMENT	A1 to B							TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		
Spot rock	1 1/2-0"	A1 to B	----	100	mile	0.42	miles	54

ROAD SEGMENT	B to C							TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		
Culvert base rock	2 1/2-0"	24+70	----	----	----	----	----	36
Culvert surface rock	1 1/2-0"	24+70	----	----	----	----	----	36

ROAD SEGMENT	B to D							TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		
Turnout rock	2½-0"	Sta. 113+20	----	18	turnout	1	turnout	36
Endhaul wear rock	1 1/2-0"	B1 to D	----	----	----	----	----	36
Spot rock	1 1/2-0"	B to D	----	100	mile	2.7	miles	270

EXHIBIT E

ROAD SURFACING

ROAD SEGMENT	B1 to B2							TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		
Base rock	2½-0"	B1 to B2	10	55	station	15.5	stations	853
Curve widening rock	2½-0"	B1 to B2	10	----	----	----	----	101
Landing rock	jaw-run	Sta. 9+50	----	27	landing	1	landing	27
Landing rock	jaw-run	B2	----	54	landing	1	landing	54
Junction patch rock	1½-0"	B1	----	9	junction	1	junction	9

ROAD SEGMENT	B1 to B2							TOTAL VOLUME (CY)
Post Harvest Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		
Turnaround rock	2½-0"	B2	----	27	turnaround	1	turnaround	27
Landing patch rock	2½-0"	Sta. 9+50	----	18	landing	1	landing	18

ROAD SEGMENT	B3 to B4							TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		
Base rock	2½-0"	B3 to B4	10	55	station	5.5	stations	303
Curve widening	2½-0"	B3 to B4	----	----	----	----	----	57
Landing rock	jaw-run	B4	----	54	landing	1	landing	54

ROAD SEGMENT	B3 to B4							TOTAL VOLUME (CY)
Post Harvest Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		
Turnaround rock	2½-0"	B4	----	27	turnaround	1	turnaround	27

EXHIBIT E

ROAD SURFACING

ROAD SEGMENT	D to D1							TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		
Culvert base rock	2½-0"	7+00	----	----	----	----	----	18
Culvert surface rock	1½-0"	7+00	----	----	----	----	----	18
Endhaul wear rock	1½-0"	0+00 to 7+00	----	----	----	----	----	9

ROAD SEGMENT	Salmon Creek Bridge							TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		
Surface rock	1½-0"	project	----	----	----	----	----	52
Base rock	2½-0"	project	----	----	----	----	----	52
Rip-rap	24"-6"	project	----	----	----	----	----	144
Sill level rock	1½-0"	project	----	----	----	----	----	18

ROAD SEGMENT	Haul Route							TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		Number of		
Maintenance rock	1½-0"	haul route	----	----	----	----	----	342

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.

End-dumping of riprap shall not be allowed, unless otherwise approved in writing by STATE.

Fifty feet have been subtracted from the total length of rock roads for the Landing rock.

Rock volumes rounded to nearest 9 or 18 CY load.

EXHIBIT E

CRUSHED ROCK SPECIFICATIONS

Materials. The material shall be well graded and consistent.

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

If material is specified as durable, it must meet the following test requirements:

Hardness - Test Method AASHTO T 96: 30% Maximum

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

For 1½"-0"	Passing	2" sieve	100%
	Passing	1½" sieve	95-100%
	Passing	3/4" sieve	55-75%
	Passing	1/4" sieve	35-50%

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

For 2½"-0"	Passing	3" sieve	100%
	Passing	2½" sieve	95-100%
	Passing	1¼" sieve	55-75%
	Passing	1/4" sieve	30-45%

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

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

For 24"-6" Riprap — 50 percent or more of the material shall measure at least 24 inches in one dimension. Material shall be clean, well graded, and free of 2"-0" fines.

Control of riprap 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 copy of the rock test sheets shall be supplied to and approved by STATE prior to rocking. PURCHASER shall obtain subgrade approval from STATE prior to rocking. Rocking shall be limited to periods when weather conditions are acceptable to STATE and when sediments will not enter streams.

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

Depth Measurement. Rock shall be spread and compacted according to the depths specified in Exhibit 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.

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 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 one or more of the approved equipment options listed below:

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

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
B1 to B2, B3 to B4	1
B to D sta. 113+20	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 one or more of the approved equipment options listed below:

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
B1 to B2, B3 to B4	1
B to C sta. 24+70, D to D1 sta. 7+00	2
B to D sta. 113+20	1
Waste Area 1, Waste Area 2, and Waste Area 3	4
A to A 1 (Salmon Creek Bridge)	1 and 2

EXHIBIT E

COMPACTION AND PROCESSING REQUIREMENTS

Crushed Rock. The rock shall be uniformly mixed and spread in layers on the approved roadbed. Each layer of crushed rock shall be moistened or dried to a uniform moisture content suitable for maximum compaction and compacted in layers not to exceed 6 inches in depth. When more than 1 layer is required, each shall be shaped and compacted before the succeeding layer is placed. Any irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and adding or removing material until the surface is smooth and uniform. Each layer shall be compacted with a minimum of 3 passes over the entire width and length of the road. A pass is defined as traveling a road section in one direction and then back over that same section again. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

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
B1 to B2, B3 to B4	1 and 3
D to D1 sta. 7+00	2
B to C sta. 24+70,	1 and 2
B to D sta. 113+20	1
Spot, patch, wear, turnaround, and maintenance rock	3
A to A1 (Salmon Creek Bridge)	1

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 Hand-Operated or Backhoe-Mounted Tamper. Vibratory hand-held or hydraulic tampers shall be used for compaction of backfill materials around culverts (and/or bridge approach embankment materials around abutments). The tamper shoe dimensions shall be a minimum of 10" X 13" and capable of a centrifugal force of 2,250 pounds.

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

(4) Crawler Tractors. D-4 Caterpillar or equivalent or larger.

EXHIBIT F

CULVERT SPECIFICATIONS

All culvert materials shall be furnished and installed by PURCHASER, unless otherwise specified in the Contract. Culverts shall be constructed of corrugated aluminized steel. Corrugated polyethylene may be used as directed by STATE. 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 drain culvert grade shall equal or exceed the ditch grade.

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 1½ times the pipe diameter with at least 2 feet working clearance on each side of the pipe. Tamping shall be done in 6-inch lifts 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 F

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.

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

CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	CULVERT GAUGE	LENGTH (Feet)	MATERIAL TYPE	ROAD SEGMENT POINT TO POINT	STATION
1	24	16	80	Aluminized	B to C	24+70
2	18	Double walled	30	Polyethylene	D to D1	7+00

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

Tamping is required.

All metal culverts scheduled for replacement shall become property of PURCHASER and be removed from STATE land in the same project period in which replacement occurred.

EXHIBIT G

BRIDGE DESIGN, BRIDGE PLANS AND BRIDGE CONSTRUCTION REQUIREMENTS

BRIDGE DESIGN. PURCHASER shall design and construct a pre-cast, pre-stressed concrete slab bridge on pre-cast concrete sills as follows:

Salmon Creek Bridge (road segment A to A1 station 11+50).

The bridge shall be of sufficient length to provide a natural stream channel width of 20 feet.

The bridge shall be designed according to the following minimum specifications:

(a) The bridge shall be designed for U-80 truck loads with full impact allowance, and occasional loading with a BU-99 yarder with a T110 tower.

(b) The bridge will conform to proposed or existing road alignment and specified gradients.

(c) Bridge abutments shall be constructed of pre-cast reinforced concrete, and shall include pre-cast concrete wing walls sufficient to contain and protect roadway embankments. Wing walls shall be skewed as necessary to protect road approach embankments.

(d) Bridge decks shall be constructed with pre-cast, pre-stressed concrete slabs constructed to Oregon Department of Transportation specifications, Slab No. 7, or equivalent.

(e) The bridge deck shall be 16 feet in width, inclusive of curbing. Curbs shall be constructed of concrete and shall be at least one foot in height. The curbs shall be located on the outside slabs of the bridge superstructure.

PURCHASER is responsible for performing all necessary site Investigations which includes, but is not limited to, subsurface exploration. Site Investigation(s) shall be made prior to any project design.

EXHIBIT G

BRIDGE DESIGN, BRIDGE PLANS AND BRIDGE CONSTRUCTION REQUIREMENTS

BRIDGE PLANS. PURCHASER shall be responsible for all surveys and on-site investigations necessary to determine actual conditions and foundation requirements. PURCHASER shall submit bridge site and design plans to STATE for approval, prior to commencement of any work on the project. Plans shall include design calculations, scaled drawings, elevations and section drawings for the structure, including sizes and dimensions of bridge components. The plans shall also include a description of special tools, equipment, the required lifting capacity and the general process to install and connect the bridge components. The plans shall be stamped and signed by a Registered Professional Engineer in accordance with OAR 820-20-020.

(a) Work shall be conducted only during periods of low water flows between July 1 and September 15, 2009. Salmon Creek Road is to be closed for a period not to exceed one week. STATE shall be notified a minimum of 48 hours prior to beginning work. STATE has prepared the required Forest Practices Act "Written Plan" for this work. Purchaser shall pump water around the construction site, or divert as necessary, to prevent sedimentation from entering Salmon Creek.

(b) Remove existing culvert and fill to accommodate the work area for bridge construction. Excavated debris and materials unsuitable for fill construction shall be end hauled to a disposal site approved by STATE. Waste materials shall be sloped for drainage as directed by STATE.

(c) Construct the bridge and the bridge approach embankments in accordance with approved bridge plans. Bridge approach embankments shall consist of select materials, hauled in where necessary, and shall be thoroughly compacted in accordance with the specifications in Exhibit E.

(d) Apply, process, and compact surfacing rock in accordance with the specifications in Exhibit E. Crushed rock shall be placed to provide a smooth and uniform transition from the existing road surfacing to and from the bridge deck.

(e) Upon completion of the project, the designing engineer shall issue written certification that construction work was completed in accordance with the approved Bridge Plan.

(f) Provide "Road Closed" signs during work periods.

State Timber Sale Contract
No. 341-09-03
Top Cat

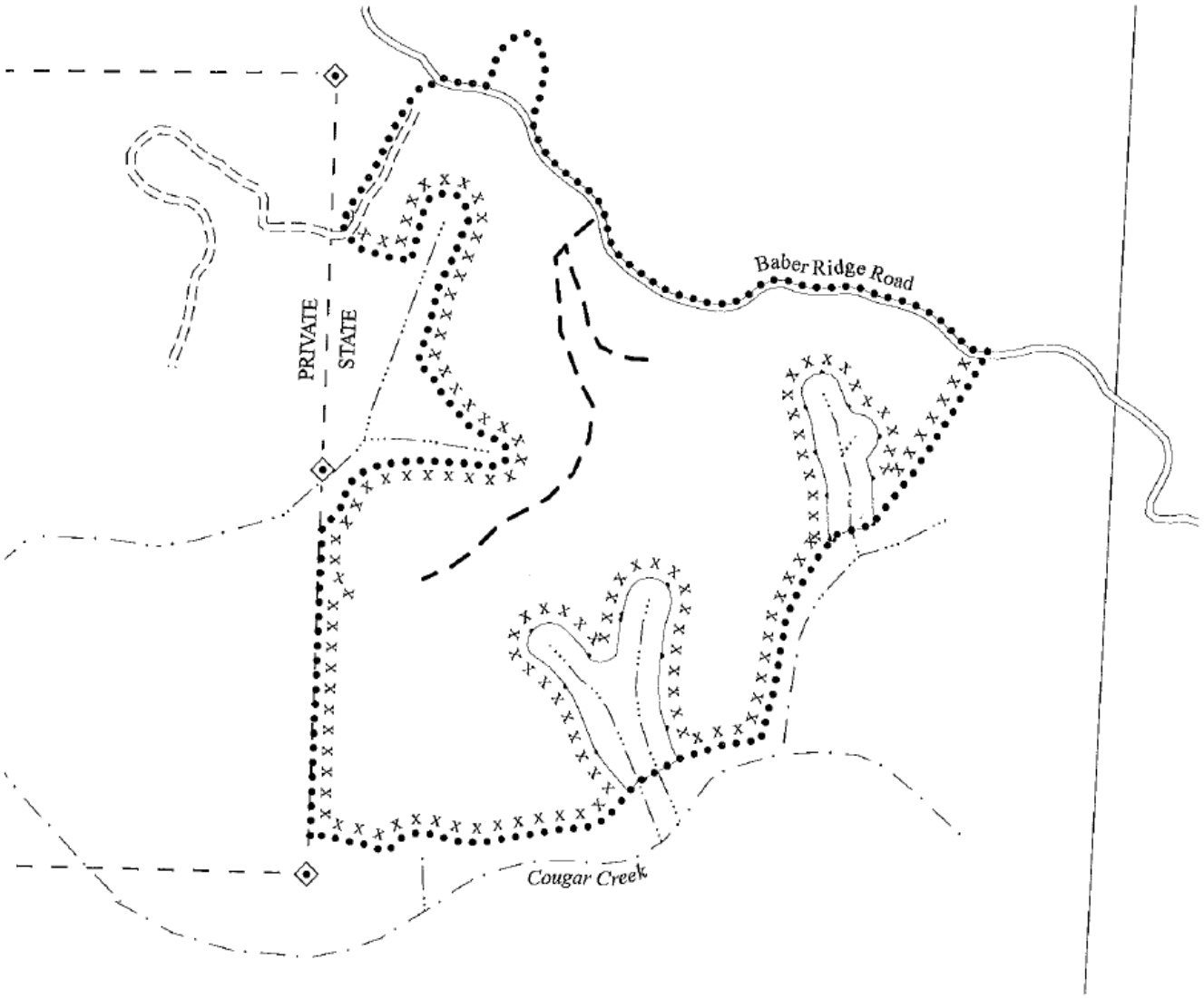


EXHIBIT H

LEGEND
- Timber Sale Boundary
- Surfaced Road
- Unsurfaced Road
- New Road Construction
- x x FireTrail
- Type F Stream
- Type N Stream
- Stream Buffer Boundary (Posted)
- Land Survey Monument
- State Forest Property Boundary

FIRE TRAILING MAP
OF TIMBER SALE # 341-09-03
TOP CAT
PORTIONS OF SECTION 26, T11S, R9W, W.M.
LINCOLN COUNTY, OREGON

N

This product is for informational use and may not have been prepared for or be suitable for legal, engineering or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

Scale
1 : 6,000
1 inch = 500 feet

250 0 250 500 Feet

PART IV: OTHER INFORMATION

State Timber Sale Contract
No. 341-09-03
Top Cat

FPA Written Plan for timber harvest
Top Cat Timber Sale
Portion of Section 26, T11S, R9W, W.M., Lincoln County, Oregon.

Protected Resource: A small Type F stream adjacent to the timber sale area.

Situation: A small Type F stream runs parallel to the south boundary of the timber sale area. A "Timber Sale" boundary is posted an average of 100 feet horizontal distance from the stream.

Resource Protection Measures:

(1) When skylines pass over the stream, pull cables out of the streamside vegetation prior to rigging the next yarding road.

(2) Do not lower skyline cables into streamside vegetation during the yarding cycle.

(3) Space skyline corridors passing over stream a minimum of 100 feet apart.

(4) Do not fell any trees within the stream buffer.

(5) Fell trees adjacent to the stream buffer so that they do not fall into the stream buffer.

(6) Yard all logs away from the stream.

(7) Tail hold stumps/equipment will be located at least 100' away from the stream.

I, the undersigned, submit this written plan in compliance with the requirements of the Forest Practices Act, regarding operations conducted within 100 feet of type F streams.

_____
PURCHASER REPRESENTATIVE DATE

_____
STATE REPRESENTATIVE DATE

Attachment: Exhibit A

State Timber Sale Contract
No. 341-09-03
Top Cat

FPA "Written Plan" for State Timber Sale Project No. 3
Top Cat Timber Sale

Sections 13, T.11S., R.9W., W.M.
Lincoln County, Oregon

Protected Resources: Salmon Creek is a medium type F tributary to the Yaquina River. A "written plan" is required for any activity within 100 feet of any type F stream.

Situation: An existing 60" by 84" multi-plate arch culvert, located at station 11+50 on Salmon Creek forest road, blocks juvenile fish passage with an outlet drop of approximately one foot. As part of the replacement work, the old arch culvert will be replaced with a bridge. The new structure is designed to allow fish passage in accordance with current FPA guidelines. The work is planned to enhance fisheries habitat.

Drainage Area and Culvert Design: Current FPA guidelines were used to design this structure. A bridge will be installed with a spread footing design that will maintain a stream channel width of 20 feet and a road width of 16 feet.

The drainage area is 1620 acres. The 50-year peak flow for this drainage is 200 cfs per square mile. Therefore, the 50-year flow for this stream crossing is 506 cfs.

The existing stream gradient is 2%. Manning's "n" for this structure is 0.020. This results in a maximum flow (with three feet of clearance below bridge) of 2200 cfs, which exceeds the required flow of 506 cfs.

Alternative locations for this stream crossing were investigated but no satisfactory alternatives were identified. The original road grade is satisfactory and will be maintained which minimizes direct runoff from the road surface into the stream.

Resource Protection Measures:

(1) All in-stream work will be performed only during dry weather periods, low water stream flows and between July 1 and September 15, 2009.

(2) The stream flow will be diverted around the construction site, minimizing sedimentation to the stream.

(3) Machine activity in stream channels will be minimized. All excavation and riprap rock placement will be performed using a 1 ½ cubic yard track mounted excavator.

(4) Selected native earth materials free from woody debris will be used for backfilling. Fill material will be thoroughly compacted.

(5) Excavated waste materials, not usable for fill, will be hauled to an approved waste area, as directed by STATE, shaped for drainage, and left in a stable condition.

(6) All bare soils and waste areas will be mulched with straw to prevent erosion.

I, the undersigned, submit this written plan in compliance with the requirements in the Forest Practices Act regarding the operations conducted within 100 feet of Type F streams.

_____
PURCHASER REPRESENTATIVE DATE

_____
STATE REPRESENTATIVE DATE