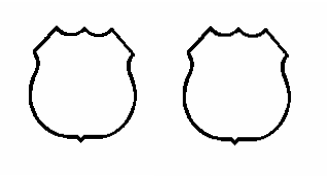
PART III: EXHIBITS

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.: 341-06-23

(2) Sale Name: Toll

(3) Contract Expiration Date: October 31, 2008 Project Completion Dates: _____

(4) Purchaser: _____ _____

(6) Purchaser Representatives:

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

(7) State Representatives:

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

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.

(1)	Cable landing, with numbers for sequence.
[A]	Tractor landing with alphabetical sequence.
_ _ _ _ _	Approximate setting boundary.
- - - - - - - -	Spur truck roads.
~~	Tractor yarding roads.
X	Temporary stream crossings.

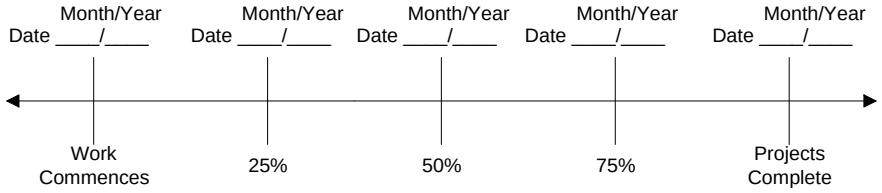
EXHIBIT B

OPERATIONS PLAN

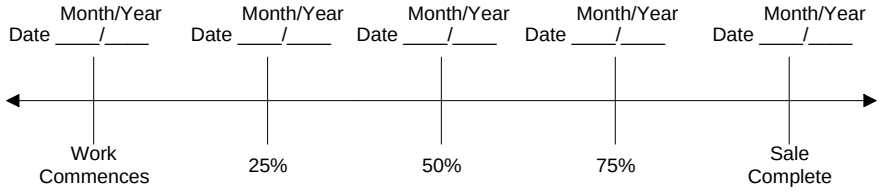
Completion Timeline

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: Tillamook - 06 Phone 503-842-2545
(State Forestry District)
Address 5005 Third Street, Tillamook, OR 97141

(4) PURCHASER: _____
Address _____

(5) **MINIMUM SCALING SPECIFICATIONS**			**CLASS**		
SPECIES	SCALING DIAMETER INCHES	*NET SCALE VOLUME	PER MBF	** SUM	SUB
Conifers	--	10	X		
Hardwoods	--			X	

* Apply minimum volume test to whole logs over 40' Westside; 20' Eastside.
** Sum (if indicated): see instructions and explain in Item (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 Toll
COUNTY Tillamook

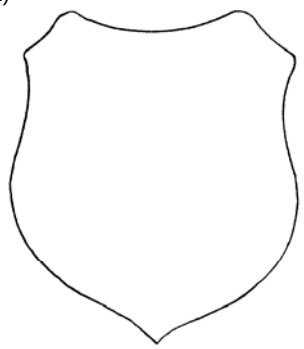
(13) STATE CONTRACT NUMBER 341-06-23

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

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

(21) SIGNATURES:

_____
Purchaser or Authorized Representative Date

_____
State Forester 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, Operator, 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 (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	DITCH WIDTH (Feet)	DITCH DEPTH FROM FINISHED SURFACE (Feet)	DITCH DEPTH FROM SUBGRADE (Feet)
14 feet	12 feet	A to B	0+00 to 7+05	Ditch	3	---	1.5
14 feet	12 feet	A to B	7+05 to 9+60	Inslope	---	---	---
14 feet	12 feet	A to B	9+60 to 14+30	Ditch	3	---	1.5
14 feet	12 feet	A to B	14+30 to 19+55	Inslope	---	---	---
14 feet	12 feet	A to B	19+55 to 33+10	Ditch	3	---	1.5
14 feet	12 feet	A to B	33+10 to 40+75	Outslope	---	---	---
14 feet	12 feet	A to B	40+75 to 47+25	Ditch	3	---	1.5
14 feet	12 feet	A to B	47+25 to 51+00	Inslope	---	---	---
14 feet	12 feet	A to B	51+00 to 56+30	Ditch	3	---	1.5
16 feet	12 feet	A to B	56+30 to 94+65	Ditch	3	---	1.5
16 feet	12 feet	A to B	94+65 to 97+65	Outslope	---	---	---
16 feet	12 feet	A to B	97+65 to 107+10	Ditch	3	---	1.5
16 feet	12 feet	A to B	107+10 to 111+80	Outslope	---	---	---
16 feet	12 feet	A to B	111+80 to 118+30	Ditch	3	---	1.5
16 feet	12 feet	A to B	118+30 to 120+10	Outslope	---	---	---
16 feet	12 feet	A to B	120+10 to 127+20	Ditch	3	---	1.5
16 feet	12 feet	A to B	127+20 to 131+60	Outslope	---	---	---
16 feet	12 feet	A to B	131+60 to 135+50	Ditch	3	---	1.5
16 feet	12 feet	A to B	135+50 to 140+10	Outslope	---	---	---
14 feet	12 feet	C to D	0+00 to 14+55	Outslope	---	---	---
14 feet	12 feet	E to F	0+00 to 23+05	Ditch	3	---	1.5
14 feet	12 feet	G to H	0+00 to 33+75	Ditch	3	---	1.5
14 feet	12 feet	I to J	0+00 to 126+05	Ditch	3	1.5	---
14 feet	12 feet	K to L	0+00 to 148+10	Ditch	3	1.5	---
14 feet	12 feet	M to N	0+00 to 70+65	Ditch	3	1.5	---

EXHIBIT D

FOREST ROAD SPECIFICATIONS

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 “Road Brushing Specifications" in Exhibit D shall apply. 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 the ditch, whichever is widest, or as marked in the field.

Trees outside the clearing limits shall not be felled unless approved in writing by STATE.

Sidecast pullback – From top of pullback to toe of pullback.

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.

Bank excavation and sidecast pullback on a project road segment shall be completed prior to subgrade approval.

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 "U" shaped ditch as specified in Exhibit D. 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.

Inslope. Road subgrade shall be insloped at 4 to 6 percent.

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

Location: As marked in the field.

JUNCTIONS. Increase roadbed width to allow a curve radius of at least 50 feet, as marked in the field.

GRADING	Back Slopes	Fill Slopes
Rock	Vertical to 1/4:1	Not steeper
Common -	3/4:1	than 1 ½:1

Top of cutslope shall be rounded.

TURNAROUNDS. Increase subgrade width an additional 30 feet for a length of 16 feet with 20’ radius returns at locations marked in the field.

EXHIBIT D

ADDITIONAL ROAD IMPROVEMENT INSTRUCTIONS

A to B

- Move centerline 7 feet to the right between Stations 2+00 and 3+45 as marked in the field.
- Widen 14 feet to the right to improve alignment between Stations 4+40 and 5+15. Widen 12 feet to the left to improve alignment between Stations 40+75 and 43+15.
- Widen 6 feet to the left to improve alignment between Stations 48+05 and 50+55.
- Remove buried logs from subgrade and place logs perpendicular to roadway outside of right-of-way between Stations 17+35 and 17+65.
- Retrieve sidecast material between Stations 48+30 and 50+25 according to specifications in Exhibit L, and as marked in the field.
- Stabilize road prism by placing riprap at the toe of the right fill slope between Stations 17+50 and 17+95 according to Exhibits E and J, and as marked in the field.
- Place crushed rock and install ground water drain between Stations 47+25 to 51+00 according to specifications in Exhibits E and Q.
- Cut large stumps on fill slope edge of roadway at least 6 inches below existing subgrade at Stations 39+50 and 40+00.

C to D

- Widen 8 feet to the left to improve alignment between Stations 9+25 and 10+80.

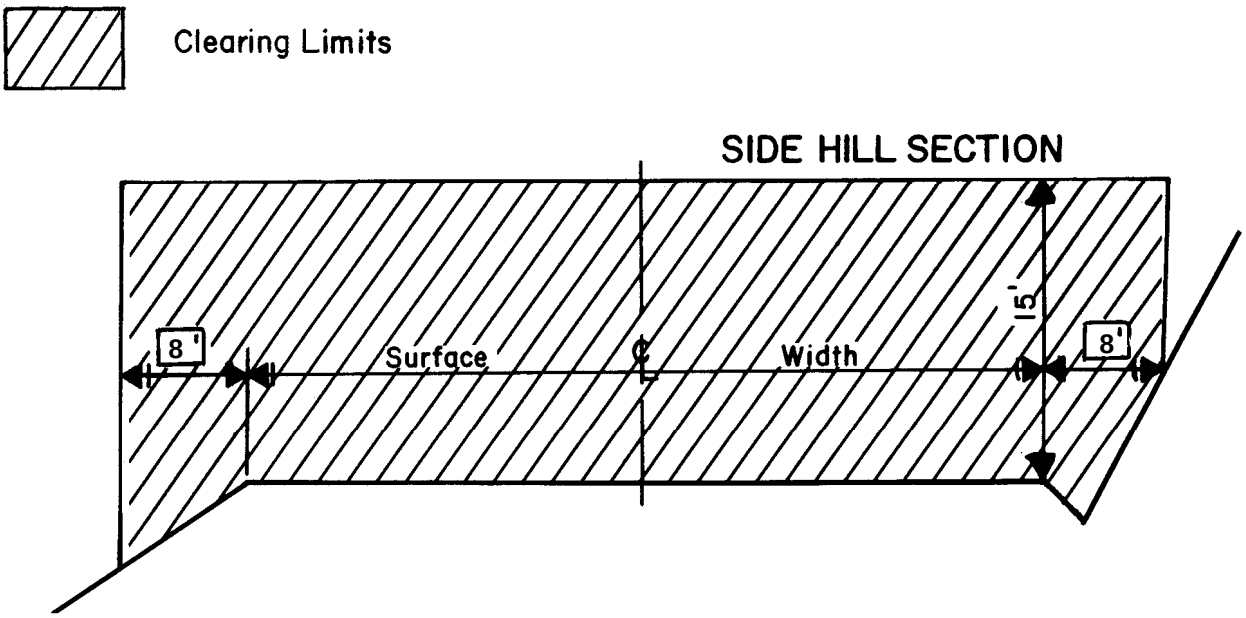
ADDITIONAL ROAD CONSTRUCTION INSTRUCTIONS

G to H

- Place geotextile fabric on subgrade prior to rocking between Stations 8+80 and 22+35 according to specifications in Exhibit N.

EXHIBIT D

ROAD BRUSHING SPECIFICATIONS



REQUIREMENTS

Except between Points A and B, Stations 0+00 to 56+30, and Points C and D, all brush and all trees less than 8 inches DBH shall be cut to a height of 6 inches or less above the ground surface or obstructions such as rocks or existing stumps. Trees 8 inches DBH or larger shall not be felled unless otherwise specified or approved in writing by STATE. All brush and all trees shall be felled between Points A and B, Stations 0+00 to 22+10 and 37+40 to 56+30, and Points C and D, unless otherwise approved in writing by STATE. No brush and no trees shall be cut between Points A and B, Stations 22+10 to 37+40. Brushing on project road segments shall be completed prior to subgrade approval.

Debris resulting from the brushing operation shall be removed from the roadway, cutslope, ditches, and water courses within 72 hours and may be scattered downslope from the road or placed in other stable locations, unless otherwise approved by STATE.

Trees outside the clearing limits shall not be felled unless approved in writing by STATE.

EXHIBIT D

END-HAULING REQUIREMENTS

POINT TO POINT	STA. TO STA.	WASTE AREA LOCATION	WASTE AREA TREATMENT
A to B	0+00 to 40+75	1	1
A to B	40+75 to 43+15	1, 2	1, 2
A to B	43+15 to 56+30	1	1
A to B	56+30 to 140+10	1, 3	1, 2
C to D	9+25 to 10+80	1	1
E to F	0+00 to 9+85	1, 4	1, 2
E to F	17+35 to 20+00	1	1
G to H	0+00 to 33+75	1, 5	1, 2
I to J	0+00 to 126+05	1	1
K to L	0+00 to 148+10	1	1
M to N	0+00 to 70+65	1	1

End-Haul Areas General Requirements

Material shall not be intentionally side cast.

Clearing and grubbing debris shall be end-hauled on slopes greater than 50 percent.

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

Tree bases 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.

EXHIBIT D

END-HAULING REQUIREMENTS

Waste Area Location

(1) As shown on Exhibit A and as marked in the field.

(2) Points A to B, Stations 4+40 to 5+15.

(3) Points A to B, Stations 56+30 to 140+10.

(4) Points E to F, Stations 1+85 to 9+85.

(5) Points G to H, Stations 25+00 to 28+05.

Waste Area Treatment

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

(2) Suitable material to be used for fill construction.

EXHIBIT E

ROAD SURFACING

Note: The conversion from compacted yardage to truck yardage is 1.2 multiplied by the compacted yardage equals truck yardage.

TYPE OF ROCK	SIZE OF ROCK	COMPACTED DEPTH	POINT TO POINT	STATION TO STATION	APPROX. TOTAL TRUCK MEASURE VOLUME
Crushed	2 ½”-0”	8"	A to B	0+00 to 47+25	1,890 CY
Crushed	2 ½”-0”	**	A to B	47+25 to 51+00	165 CY
Crushed	2 ½”-0”	8"	A to B	51+00 to 56+30	222 CY
Crushed	4”-0”	12"	A to B	56+30 to 140+10	5,204 CY
Crushed	2 ½”-0”	4"	A to B	56+30 to 85+45	559 CY
Crushed	2 ½”-0”	6"	C to D	0+00 to 14+55	433 CY
Crushed	4”-0”	12"	E to F	0+00 to 23+05	1,431 CY
Crushed	4”-0”	12"	G to H	0+00 to 33+75	2,096 CY
Crushed	2”-0”	4"	I to J	0+00 to 126+05	2,416 CY
Crushed	2”-0”	4"	K to L	0+00 to 148+10	2,839 CY
Crushed	2”-0”	4"	M to N	0+00 to 70+65	1,354 CY
TURNOUTS:			**NO. OF T.O.**	**POINT TO POINT**	
Crushed	2 ½”-0”	8"	11	A to B 0+00 to 56+30	143 CY
Crushed	4”-0”	12"	11	A to B 56+30 to 140+10	224 CY
Crushed	2 ½”-0”	4"	4	A to B 56+30 to 85+45	25 CY
Crushed	2 ½”-0”	6"	4	C to D 0+00 to 14+55	38 CY
Crushed	4”-0”	12"	5	E to F 0+00 to 23+05	102 CY
Crushed	4”-0”	12"	5	G to H 0+00 to 33+75	102 CY
Crushed	2”-0”	4"	16	I to J 0+00 to 126+05	99 CY
Crushed	2”-0”	4"	21	K to L 0+00 to 148+10	130 CY
Crushed	2”-0”	4"	13	M to N 0+00 to 70+65	81 CY

EXHIBIT E

ROAD SURFACING

TYPE OF ROCK TURNAROUNDS:	SIZE OF ROCK	COMPACTED DEPTH	NO. OF T.A.	STATION TO STATION	APPROX. TOTAL TRUCK MEASURE VOLUME
Crushed	4”-0”	12"	3	A to B 81+95 to 140+10	97 CY
Crushed	2 ½”-0”	6"	3	C to D 0+00 to 13+20	46 CY
Crushed	4”-0”	12"	2	E to F 20+00 and 21+80	65 CY
Crushed	4”-0”	12"	1	G to H 33+00	32 CY
JUNCTIONS:			**NO. OF JCTS.**		
Crushed	2 ½”-0”	8"	1	A to B	80 CY
Crushed	2 ½”-0”	6"	1	C to D	40 CY
Crushed	4”-0”	12"	1	E to F	40 CY
Crushed	4”-0”	12"	1	G to H	30 CY
Crushed	2”-0”	4"	1	I to J	30 CY
Crushed	2”-0”	4"	4	K to L	100 CY
Crushed	2”-0”	4"	1	M to N	30 CY
MISCELLANEOUS:			**LOCATION**	**USE**	
Crushed	2 ½”-0”	---	A to B 2+00 to 50+55	Leveling Rock	*280 CY
Riprap	48”-36”	---	A to B 17+50 to 17+95	Slope Stabilization	120 CY
Riprap	48”-24”	---	A to B 5+05	Energy Dissapator	30 CY
Riprap	48”-24”	---	A to B 43+30	Energy Dissapator	20 CY
Riprap	48”-24”	---	A to B 43+85	Energy Dissapator	30 CY
Drain Rock	3”-1”	**	A to B 47+25 to 51+00	Ground Water Drain	75 CY
Crushed	2 ½”-0”	---	C to D 8+15 to 9+15	Leveling Rock	*20 CY
Riprap	48”-36”	---	O to P 0+00	Access Block	70 CY

EXHIBIT E

ROAD SURFACING

TYPE OF ROCK MISCELLANEOUS:	SIZE OF ROCK	COMPACTED DEPTH	LOCATION	USE	APPROX. TOTAL TRUCK MEASURE VOLUME
Riprap	48”-36”	---	O to P 5+50	Access Block	10 CY
Riprap	48”-36”	---	O to P 80+95	Access Block	50 CY
Riprap	48”-36”	---	Q to R 0+00	Access Block	20 CY
Riprap	48”-36”	---	S to T 0+00	Access Block	20 CY
Riprap	48”-36”	---	Point U	Access Block	20 CY

* Marked in the field.
** As shown on Exhibit Q.

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.

Turnouts, turnarounds, landings and junctions shall be rocked concurrently with the road.

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

Obtain approval from STATE for 4”-0” rock prior to spreading 2 ½”-0” crushed rock on segment A to B between Stations 56+30 and 85+45.

Obtain approval from STATE for leveling rock prior to spreading road rock.

Roads shall be uniformly graded and approved by STATE prior to rocking. For typical cross section, turnout and turnaround see Forestry Department Drawing Nos. 351-C, 351-D and TOTA-1 at the Forestry Department District Office.

EXHIBIT E

CRUSHED ROCK SPECIFICATIONS

Materials. The material shall be fragments of rock or other hard, durable particles crushed to the required size and a filler of finely crushed stone, sand, or other finely divided mineral matter. The material shall be free from vegetation and lumps of clay. All rock material shall be screened for crushing and shall not pass a 1 inch sieve prior to crushing. All rejected material passing the 1 inch sieve shall be hauled to the waste area.

Quality and Grading Requirements. The stone base materials shall be crushed rock, including sand.

River gravel shall not be used.

The material from which base material is produced or manufactured shall meet the following test requirements:

Hardness - Test Method AASHTO T 96 35% Maximum

Durability - Test Method ODOT TM 208
Passing No. 20 Sieve: 30% Maximum
Sediment Height: 3" Maximum

The rock crusher shall be calibrated to produce rock as specified in Exhibit E. Prior to the commencement of production crushing, PURCHASER shall sample, test, and provide rock test results meeting STATE specifications. STATE may then sample and test crushed rock for approval to proceed. PURCHASER shall take one sample of each 1,000 cubic yards of crushed rock material produced thereafter, using approved AASHTO sampling procedures. PURCHASER shall submit samples to a certified laboratory or shall perform testing for gradation requirements using AASHTO T 11 and AASHTO T 27 testing procedures. Prior to testing, each sample shall be split, making one-half of the sample, with proper identification, available for testing by STATE. Each sample and the results of PURCHASER testing shall be made available to STATE within 24 hours of sampling. Any rock crushed prior to STATE approval to proceed shall not be credited to the required rock quantity. Any subsequent rock tests not meeting STATE specifications shall be reason for rejection of that portion of crushed rock produced after that test and shall not be credited to the required rock quantity. STATE may sample the crushed rock at any time during the operation. Results of STATE's tests shall prevail over all other test results.

For 2"-0"	Passing	2½" sieve	100%
	Passing	2" sieve	95-100%
	Passing	1" 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 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 4"-0"	Passing	4½" sieve	100%
	Passing	4" sieve	95-100%
	Passing	2" sieve	55-75%
	Passing	1/4" sieve	30-45%

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

EXHIBIT E

CRUSHED ROCK SPECIFICATIONS

48” – 24” Riprap	50% or more of the rock shall be at least one cubic yard in volume. 100% of the rock shall be at least four cubic feet in volume.		
48” – 36” Riprap	50% or more of the rock shall be at least one cubic yard in volume. 100% of the rock shall be at least one half cubic yard in volume.		
For 3” – 1” Drain Rock	Passing	3" sieve	100%
	Passing	1.5" sieve	40-60%
	Passing	1" sieve	0%

Control of riprap gradation shall be by visual inspection by STATE. Pit run shall be reasonably free of organic material and shall not contain an excessive amount of oversized (cobbles or boulders) or undersized (clay, silt or sand) particles.

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

PURCHASER shall obtain STATE approval for subgrades 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.

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

Depth Measurement. Road 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 1.2 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 as marked in the field at the compacted depths specified in Exhibit E.

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

Turnarounds shall have a surfaced area of at least 73 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:

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
All listed in Project Number 1	Vibratory Roller

Proof-Rolling. Prior to placing the road rock surfacing, the Purchaser shall proof roll the compacted subgrade of the road segments listed below with a tandem-wheeled dump truck loaded with a least 10 cubic yards of soil and approved by the STATE. Proof rolling shall consist of at least two complete passes with one pass being in the opposite direction to preceding one. To obtain subgrade approval, PURCHASER shall perform proof-rolling when STATE is present. PURCHASER shall notify STATE a minimum of 48 hours prior to beginning proof-rolling. Areas that deflect, rut, or pump more than two inches during proof-rolling shall be corrected prior to placing the road rock surfacing. Subgrade shall be maintained until succeeding operation has been accomplished.

ROAD SEGMENT
A to B, C to D, E to F, and G to H

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	Crawler Tractor

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 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
All	Vibratory Roller

COMPACTION EQUIPMENT OPTIONS

Vibratory Rollers. The drum shall have a smooth surface, a diameter not less than 48 inches, a width not less than 58 inches, and a turning radius of 15 feet or less. Vibration frequency shall be regulated in steps to 1400, 1500, and 1600 VPM, corresponding to engine speeds of 1575, 1690, and 1800 RPM. The centrifugal force developed shall be 7 tons at 1600 VPM. It shall be activated by a power unit of not less than 25 horsepower. The vibratory roller shall be self-propelled and operated at speeds ranging from 0.9 miles to 1.8 miles per hour, as directed by STATE.

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 marked, they shall extend for a distance of at least 20 feet beyond the developed rock source. Overburden removal limits, when marked, are designated by orange right-of-way boundary tags. Overburden and woody debris shall be hauled to a designated waste area. All merchantable timber shall be felled and decked. 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. All benches shall have an access road to them. Said benches shall be easily accessible with tractors.

(4) Controlled blasting techniques shall be utilized for any blasting operations, and shall be accomplished using timing devices, delayed charges, low intensity shots, or other suitable means to contain all material in the rock pit prism (full containment). Each low intensity shot shall be shot into the previous shots' void in order to contain all the material in the rock pit prism. Each shot shall also have a "tattle-tale" end cap so that it is known if all charges were detonated. The PURCHASER shall detonate or remove all non-detonated explosives from STATE LANDS. PURCHASER shall maintain a comprehensive log that contains all pertinent data for all blasting operations. The blasting log shall be submitted to the STATE after the completion of all blasting activity. The blasting log is intended for STATE record keeping purposes only.

(5) Pit face shall be developed in a uniform manner.

(6) Oversized material that is not utilized for crushing shall be reduced to less than one cubic yard in volume and shall be piled in the vicinity of the pit separate form other materials. 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.

(c) Time lines for rock quarry use.

(d) Erosion control measures.

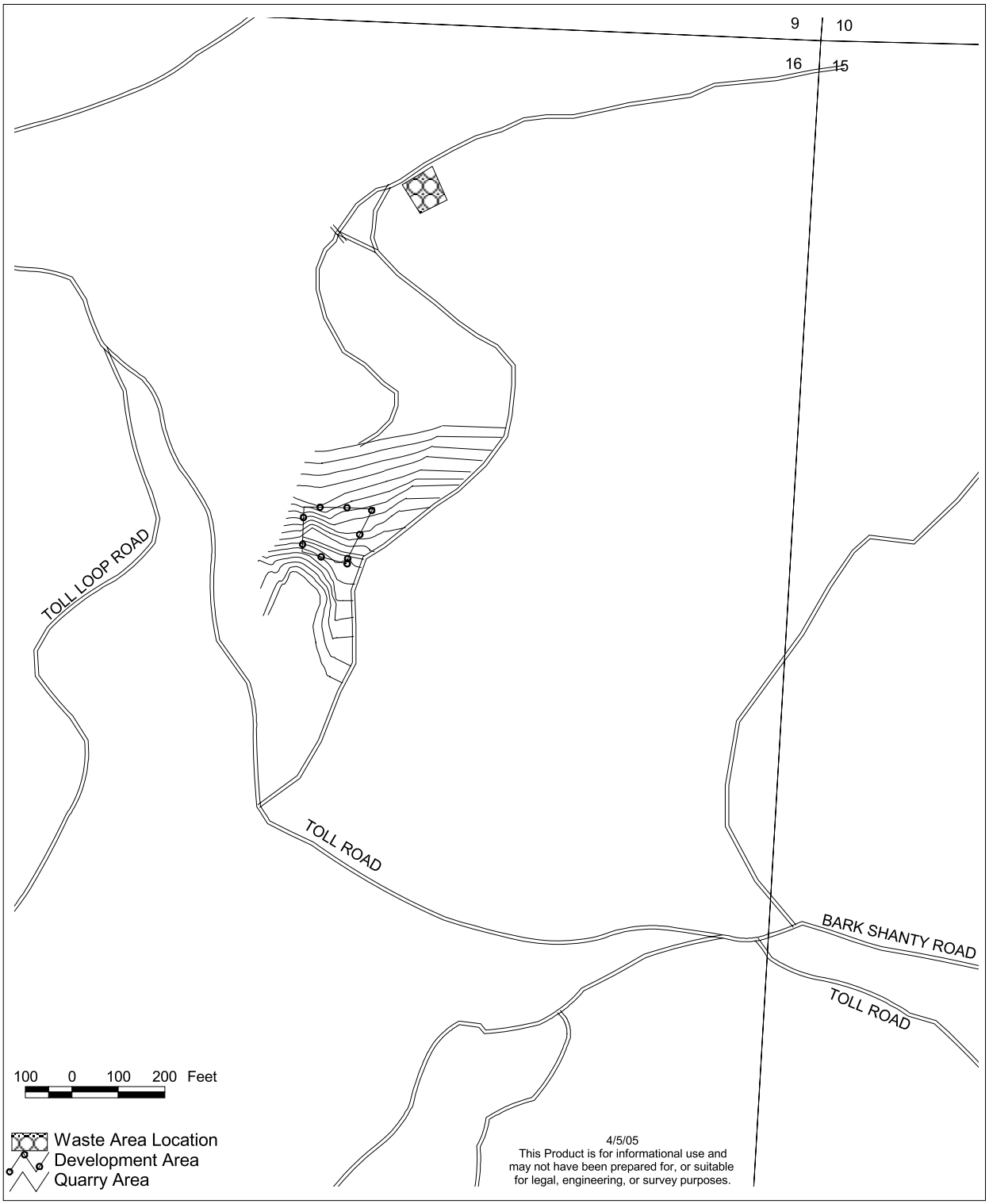
(e) Oversized material location.

(8) PURCHASER shall schedule and coordinate quarry and stockpile usage with other existing or planned STATE contracts requiring quarry and stockpile usage.

(9) PURCHASER shall notify STATE 5 days prior to the start of quarry development activities.

(10) 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 as specified in Exhibit H and blocked as directed by STATE.

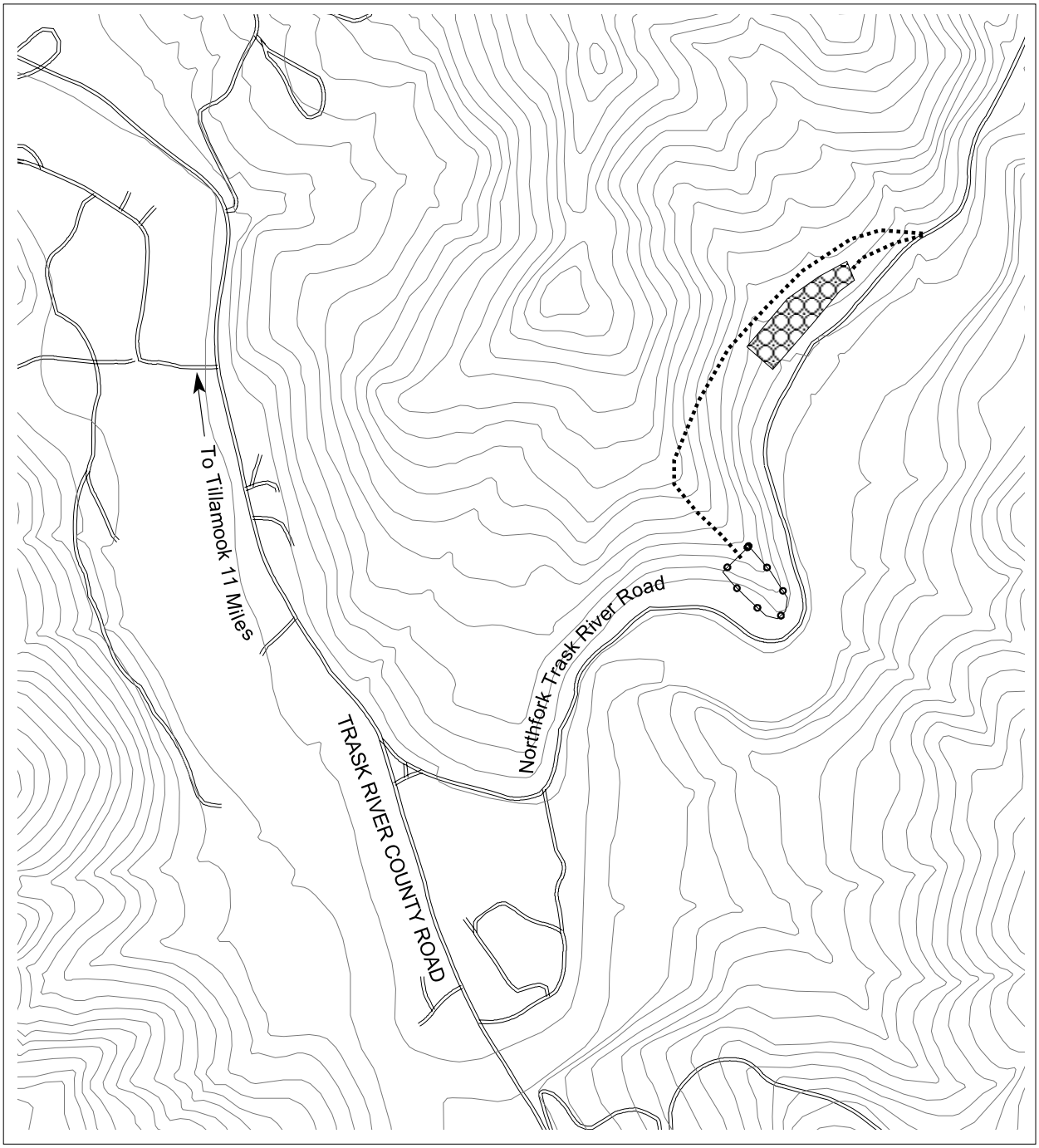
EXHIBIT F
TOLL PIT DEVELOPMENT



Oregon Department Of Forestry
Tillamook District
Engineering Unit

Toll Quarry
N 1/2 NE 1/4 Section 16 T2S R7W W.M.
Tillamook County, Oregon

N



Development Area
Waste Area
Access Roads

500 0 500 1000 Feet

4/5/05
This Product is for informational use and may not have been prepared for,or suitable for legal,engineering,or surveying purposes.

Oregon Department Of Forestry
Tillamook District
Engineering Unit

"STEWARDSHIP IN FORESTRY"

Northfork Trask River Quarry
SE 1/4 SE 1/4 Section 25 T1S R8W W.M.
Tillamook County, Oregon

N

EXHIBIT G

CULVERT SPECIFICATIONS

All culvert materials shall be furnished and installed by PURCHASER, unless otherwise specified in the Contract. Culverts 36 inches in diameter and smaller shall be constructed of corrugated polyethylene. Culverts larger than 36 inches in diameter shall be constructed of corrugated aluminized steel. 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. Polyethylene culverts shall also be double walled and 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 5 percent unless otherwise specified.

The foundation and trench walls for all culverts shall be free from logs, stumps, limbs, stones, and other objects which would dent or damage the pipe. The culvert trench shall be excavated 3 pipe diameters wide to Permit compaction and working on each side of the pipe. Tamping shall be done in 6-inch lifts, 1 pipe diameter each side of the pipe to 95 percent density or over. Bedrock shall be excavated as required to provide a uniform foundation for the full length of the culvert. Minimum bedding depth shall be 6 inches.

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.

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 24” in diameter, 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.

EXHIBIT G

CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	ROAD SEGMENT POINT TO POINT	STATION
1	18	34	A to B	2+10
2	24	42	A to B	5+05
3	18	28	A to B	7+05
Half Round	21	20	A to B	7+05
4	18	30	A to B	9+60
Half Round	21	10	A to B	9+60
5	18	30	A to B	16+55
Half Round	21	10	A to B	16+55
6	18	30	A to B	21+70
Half Round	21	20	A to B	21+70
7	18	32	A to B	26+20
8	18	34	A to B	32+10
9	24	28	A to B	43+30
10	24	28	A to B	43+85
11	24	48	A to B	46+75
12	18	26	A to B	51+00
Half Round	21	20	A to B	51+00
13	18	30	A to B	55+55
Half Round	21	20	A to B	55+55
14	18	40	A to B	62+25
15	18	36	A to B	68+70
16	18	26	A to B	77+85
Half Round	21	20	A to B	77+85
17	18	26	E to F	6+90
Half Round	21	20	E to F	6+90
18	18	30	G to H	4+80
Half Round	21	20	G to H	4+80
19	18	30	G to H	11+00
Half Round	21	20	G to H	11+00

EXHIBIT G

CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	ROAD SEGMENT POINT TO POINT	STATION
20	18	26	G to H	14+70
Half Round	21	20	G to H	14+70
21	18	26	G to H	20+30
Half Round	21	20	G to H	20+30

The intake end of culverts smaller than 48 inches in diameter shall be marked by installing a 5 foot long, painted steel fence post two feet into the ground, within 6 inches of the inlet on the downgrade side.

Tamping is required on all culverts.

All metal culverts scheduled for replacement or removal shall become property of PURCHASER, except as specified in Exhibit K, and be removed from State land in the same project period in which replacement occurred.

Half rounds shall be installed within 72 hours of culvert installation, unless otherwise approved in writing by STATE. Steel posts used with half round installation shall be painted with rust preventative paint.

EXHIBIT G

TYPICAL HALF ROUND CULVERT INSTALLATION

(no scale)

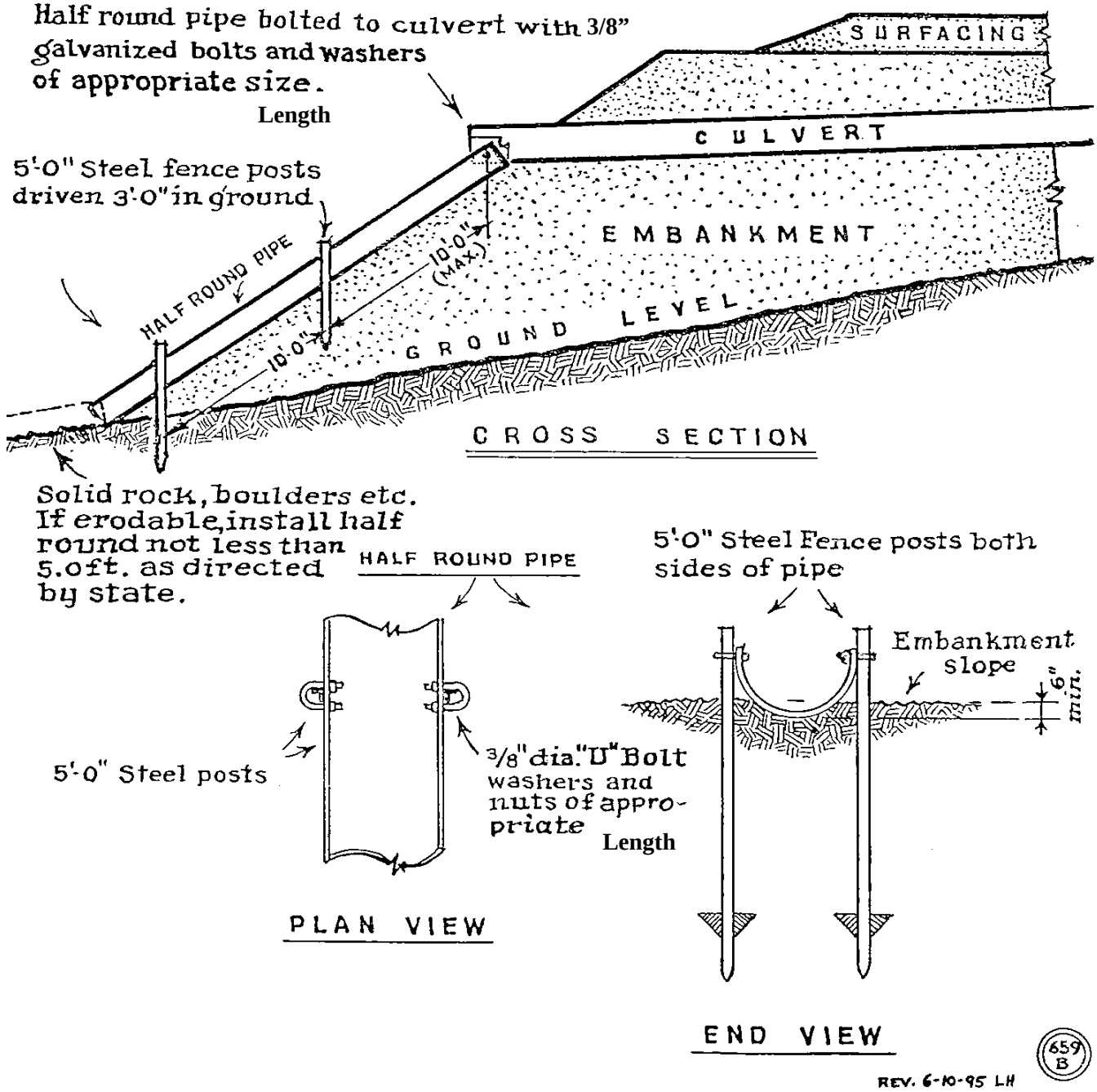
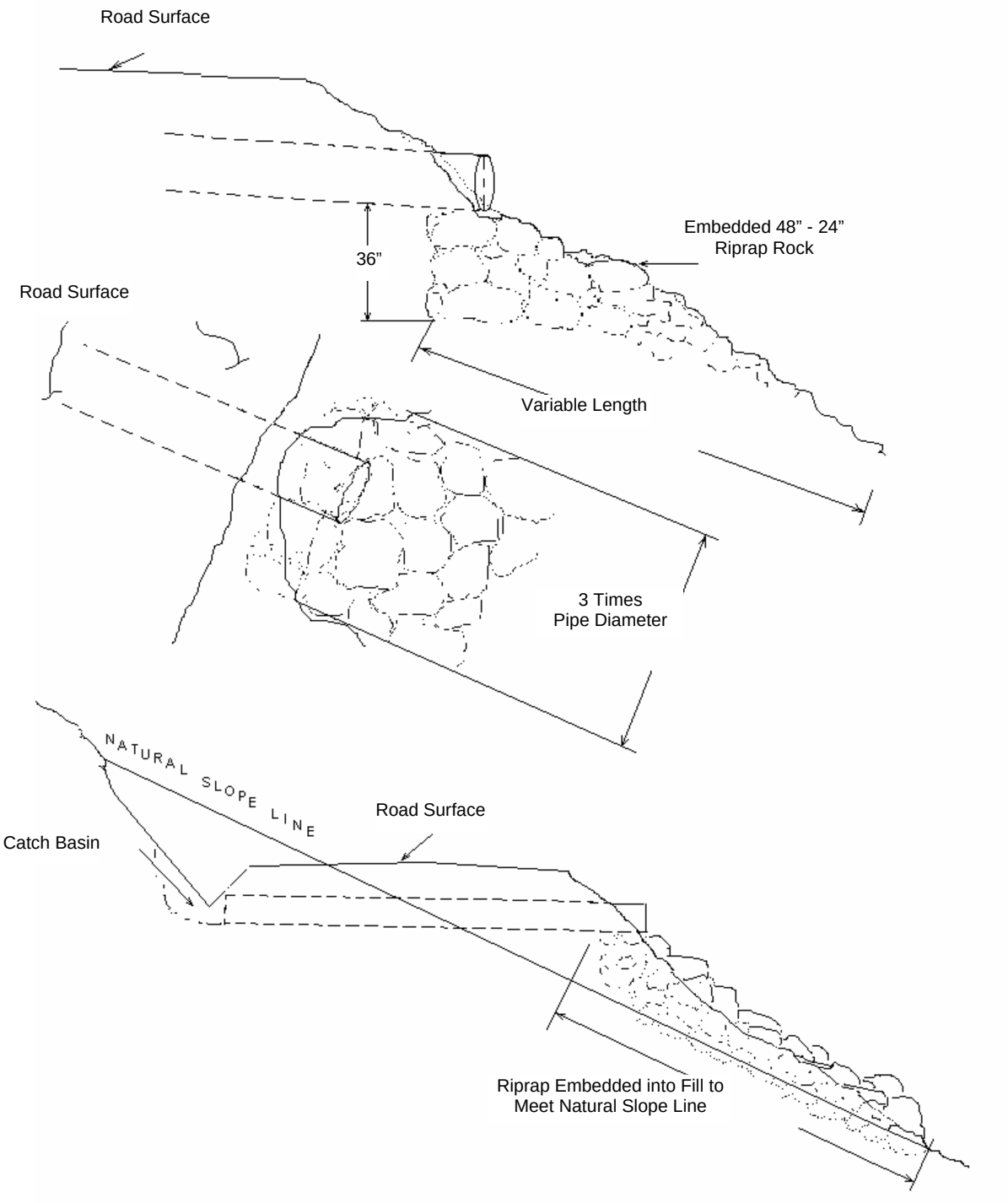


EXHIBIT G

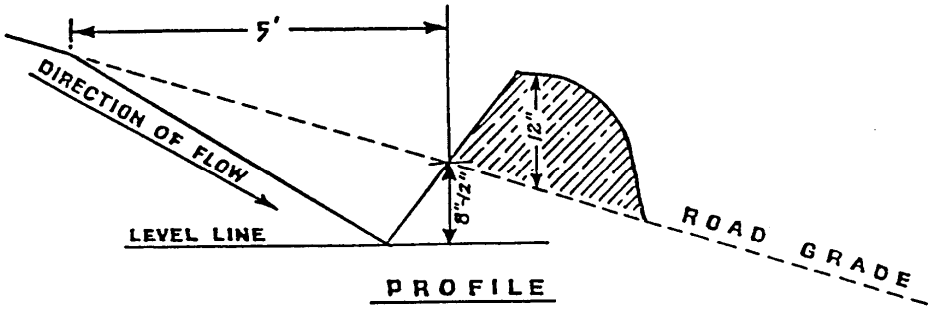
TYPICAL EMBEDDED ENERGY DISSIPATOR

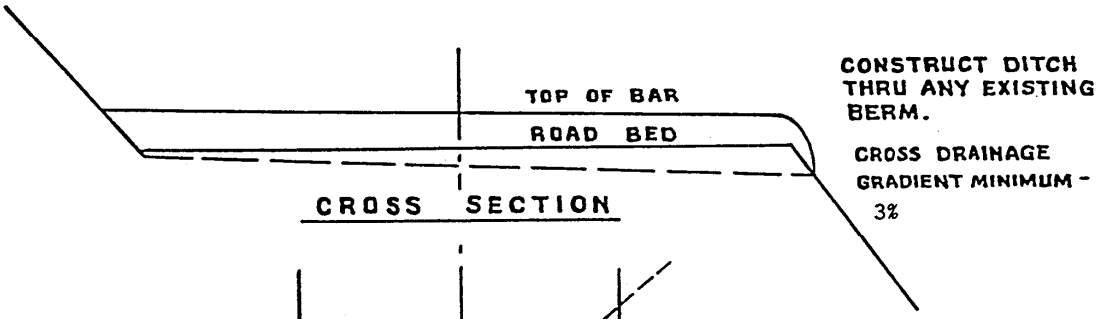


State Timber Sale Contract
No. 341-06-23
Toll

EXHIBIT H

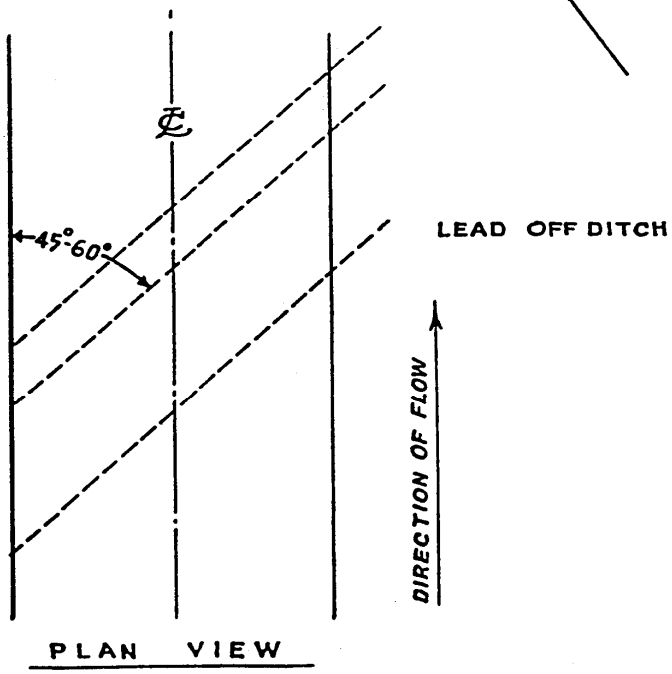
WATERBAR SPECIFICATIONS





SPACING OF WATERBARS

ROAD GRADE	DISTANCE
≤ 5%	600'
6-10%	300'
11-15%	150'
16-20% or greater	100'

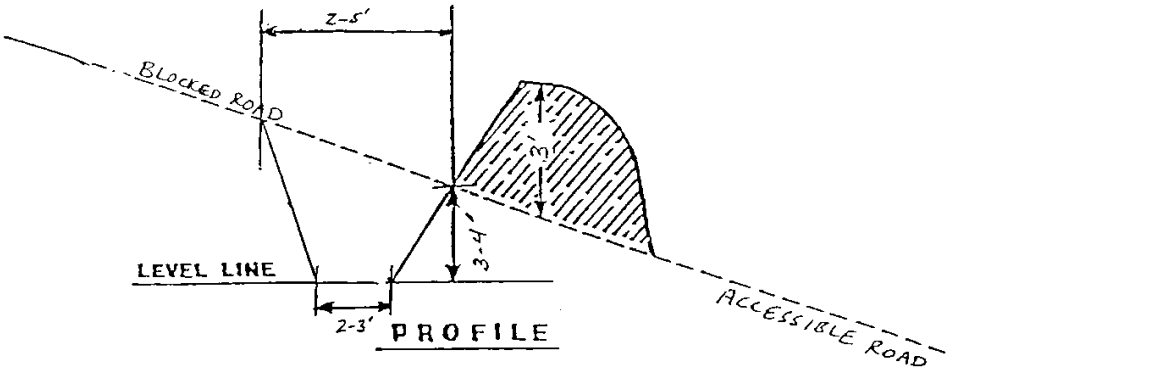


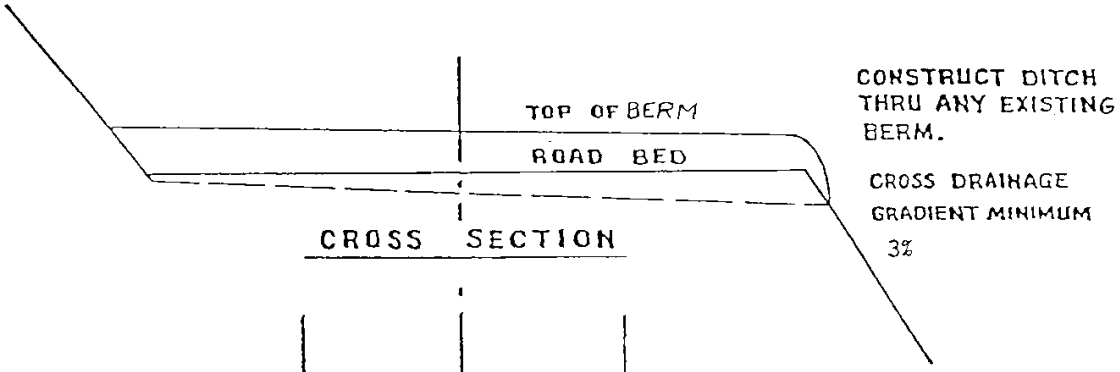
WATERBAR SPECIFICATIONS
FOR CROSS DITCHING #298

State Timber Sale Contract
No. 341-06-23
Toll

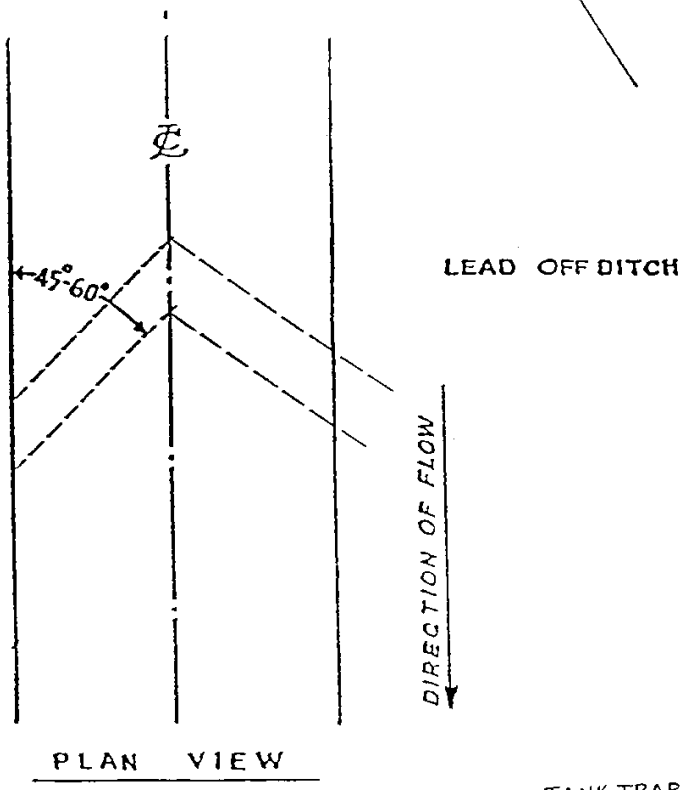
EXHIBIT I

TANK TRAP SPECIFICATIONS





Tank trap shall be installed in a "V" shape. It should be sloped to drain with a relief ditch through the down slope edge of the road. The trench shall be behind the berm for approaching traffic.



TANK TRAP
SPECIFICATIONS

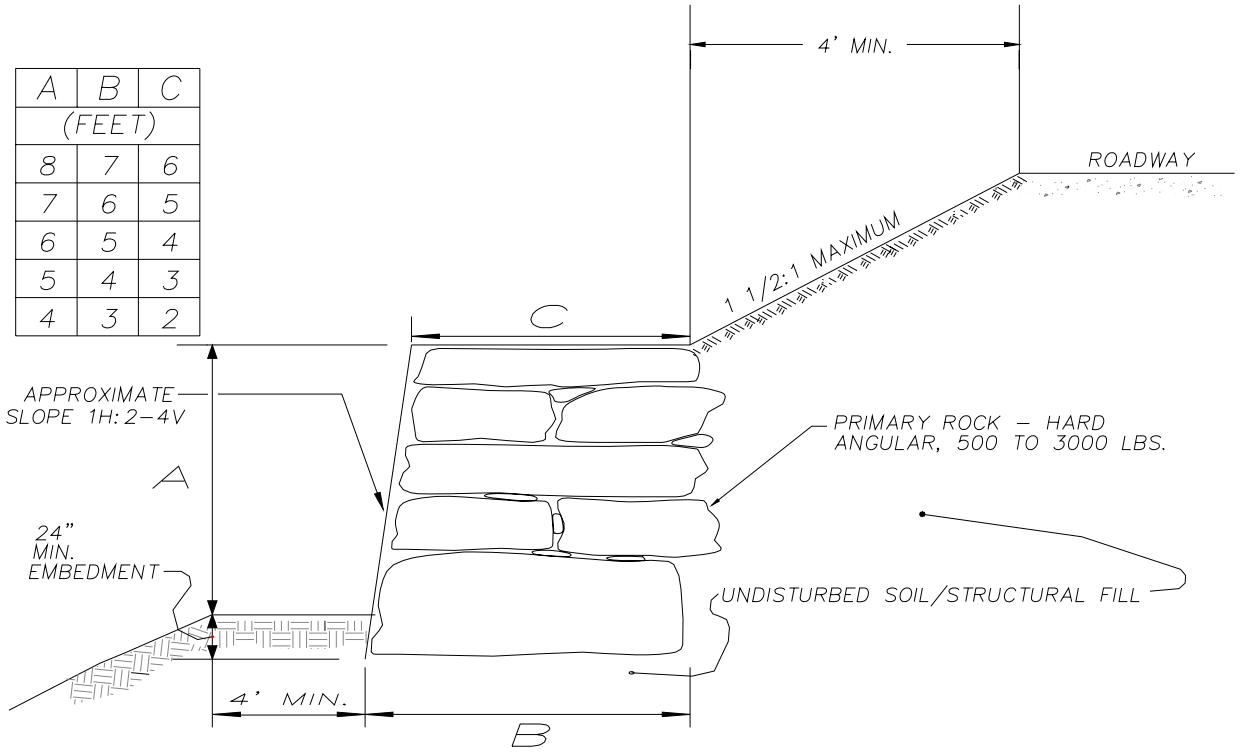
State Timber Sale Contract
No. 341-06-23
Toll

EXHIBIT J

FILL SLOPE STABILIZATION

NTS

A	B	C
(FEET)		
8	7	6
7	6	5
6	5	4
5	4	3
4	3	2



ALL ROCKS TO BE SOUND, UNWEATHERED ANGULAR ROCK. PRIMARY ROCK SHALL BE 500-3000 LBS AND SHALL NOT BE MOVABLE WITH A PRY BAR. ROCKS SHALL BE TIGHTLY NESTED (LOCKED TOGETHER) WITH ALTERNATING JOINTS AND WITH LARGER ROCKS AT BOTTOM. RIPRAP SHALL BE FREE DRAINING THROUGH SMALLER RIPRAP FILLED VOIDS. EACH ROCK SHOULD REST ON AT LEAST TWO ROCKS BELOW IT.

EXHIBIT K

SPECIFICATIONS FOR ROAD VACATING

All culverts removed from stream channels shall have the following excavation specifications: The original stream gradient and orientation shall be reestablished. Excavate the channel banks to 1 ½:1 side slopes and place material on road prism adjacent to excavated channel. Divert all live water during vacating process.

All removed culverts shall be visually inspected by STATE. Culverts that are not damaged during removal shall be hauled to the culvert storage facility at the Tillamook District Office. All other culverts shall become property of the Purchaser and be removed from State Land in the same project period in which removal occurred.

Rip the entire road prism to a depth of one foot.

Construct water bars so that water is carried across the road and deposited on stable locations. Water bars shall be angled across the road, deep enough to intercept water from any road ditchline and carry it across the road.

ADDITIONAL VACATING INSTRUCTIONS:

Between Points O to P:

PURCHASER shall remove culverts and/or fill material from stream channels at Stations 6+70, 24+25, 25+30, 27+20, 28+10, 28+30, 45+20, 48+10, 53+40, 55+60, 65+50, 66+65, and 72+00.

Remove cross-drains at Stations 4+65, 21+80, 32+35, 37+35, 52+05, 59+75, and 77+80.

Excavate a 4’ wide x 2’ deep ditchline between Stations 60+90 and 63+15.

Construct waterbars at Stations 8+50, 13+05, 17+15, 21+80, 24+25, 30+70, 32+35, 37+35, 38+75, 40+30, 43+35, 46+55, 48+10, 49+75, 52+05, 53+40, 54+10, 55+60, 56+20, 59+75, 60+90, 61+45, 63+15, 65+50, 68+30, 69+55, 75+55, and 77+80, as specified in Exhibit H.

Scatter brush and trees across the entire road width of adjacent roadways at Stations 0+00, 5+50, 40+30, 46+55, and 79+30, as marked in the field, to close the road to all vehicular traffic.

Close road by constructing tank traps at Stations 1+95, 40+30, and 80+95, as specified in Exhibit I and as marked in the field.

Place riprap across the entire road width, as specified in Exhibit E and as marked in the field, to close the road to all vehicular traffic.

Between Points Q to R:

Close road by constructing tank traps at Stations 0+00 and 18+95, as specified in Exhibit I and as marked in the field.

Construct waterbars at Stations 2+05, 5+60, 8+80, 11+75, 12+65, 15+30, and 19+00, as specified in Exhibit H.

Remove cross-drains at Stations 5+60, 11+75, and 15+30.

Place riprap across the entire road width at Station 0+00, as specified in Exhibit E and as marked in the field, to close the road to all vehicular traffic.

Scatter brush and trees across the entire road width at Stations 0+00 and 18+90, as marked in the field, to close the road to all vehicular traffic.

EXHIBIT K

SPECIFICATIONS FOR ROAD VACATING

Between Points S to T:

Remove cross-drain at Station 3+25.

Remove culvert and/or fill material from stream channel at Station 14+00.

Place riprap at Station 0+00 across the entire road width, as specified in Exhibit E and as marked in the field, to close the road to all vehicular traffic.

Construct waterbars at Stations 1+20, 2+65, 3+25, 5+95, 8+40, and 12+00, as specified in Exhibit H.

Close road by constructing a tank trap at Station 0+10, as specified in Exhibit I and as marked in the field.

Point U:

Place riprap across the entire road width as specified in Exhibit E and as marked in the field to close the road to all vehicular traffic.

State Timber Sale Contract
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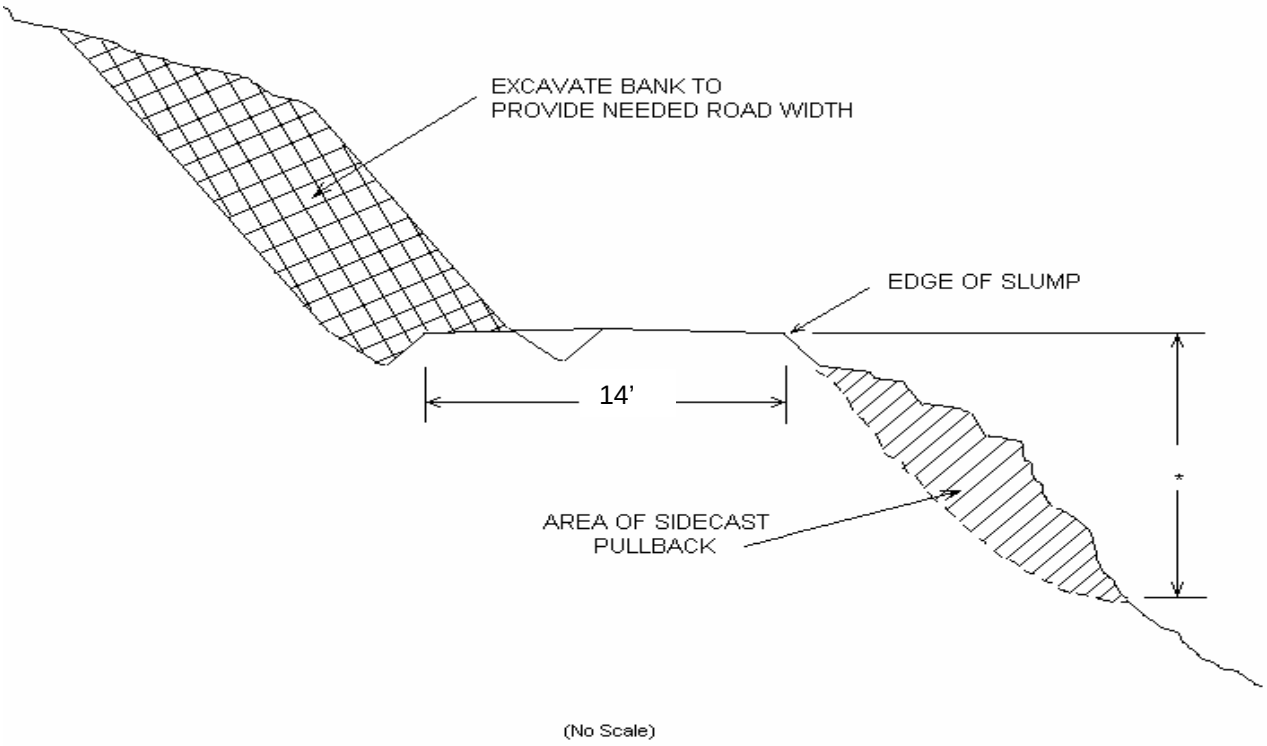
Toll

EXHIBIT L

TYPICAL CROSS SECTION VIEW OF SIDECAST PULLBACK AND ROAD REALIGNMENT



(No Scale)

* As marked in field

State Timber Sale Contract
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EXHIBIT M

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 15. 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:

Species	Lb./Acre	Mixture	Pure Live Seed	Poison and/or Repellent
Fine Fescue	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.

Seeding will be considered acceptable when all other specified requirements in Exhibits M and O have been completed and a healthy, uniform, close stand of grass has been established, unless otherwise approved in writing by STATE.

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EXHIBIT N

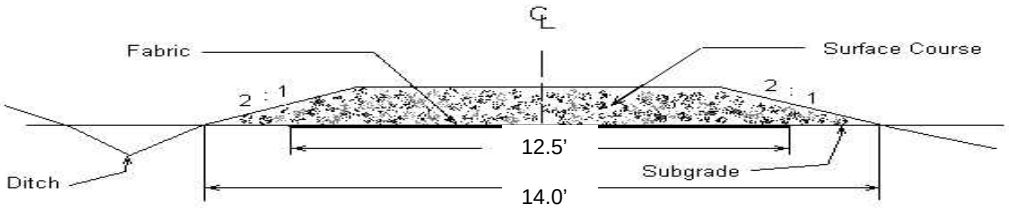
FABRIC SPECIFICATIONS

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 D4632
(2)	Puncture Strength	110 lbs.	ASTM D4833
(3)	Mullen Burst	600 lbs./in	ASTM D3786
(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.

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EXHIBIT O

MULCHING

This work shall consist of furnishing and placing required mulch. 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 3/4 to 1 ¼ inches. This rate requires between 1 and 1 ½ tons of dry mulch per acre.

EXHIBIT P

STREAM ENHANCEMENT INSTRUCTIONS

GENERAL INSTRUCTIONS:

(a) Work shall be conducted only between July 1 and September 15, annually unless otherwise approved in writing by STATE. STATE shall be notified a minimum of 48 hours prior to beginning work. STATE has prepared the required FPA "Written Plan" for this work.

(b) Stream crossings will be limited to those necessary to access the sites and whenever possible, equipment will operate from the banks to minimize stream disturbance. Turbidity shall not exceed 10% above natural stream turbidities as a result of work. The turbidity may be exceeded for a limited duration (per OAR 340-41), provided all practicable erosion control measures have been implemented. Oil spill response materials shall be on site before work begins.

(c) Trees required for stream enhancement work shall be obtained from locations on the Potholes Road as marked in the field, or at other locations acceptable to STATE. Trees are marked with an orange painted "S."

(d) Trees shall be uprooted, cut to length, and delivered to the project site, as directed by STATE.

(e) Access routes will be selected to minimize disturbance to the riparian area, and equipment transporting trees to the sites will take care to avoid damage to existing in-stream logs, riparian or other trees. Trees that are cleared to gain access will be placed in the creek or used to block access trails.

(f) All areas of bare or disturbed soils shall be seeded with an approved grass seed mix. Fertilizer shall not be used. All access trails will be blocked, water barred, de-compacted, and mulched upon completion, as directed by STATE.

MINIMUM EQUIPMENT SPECIFICATIONS:

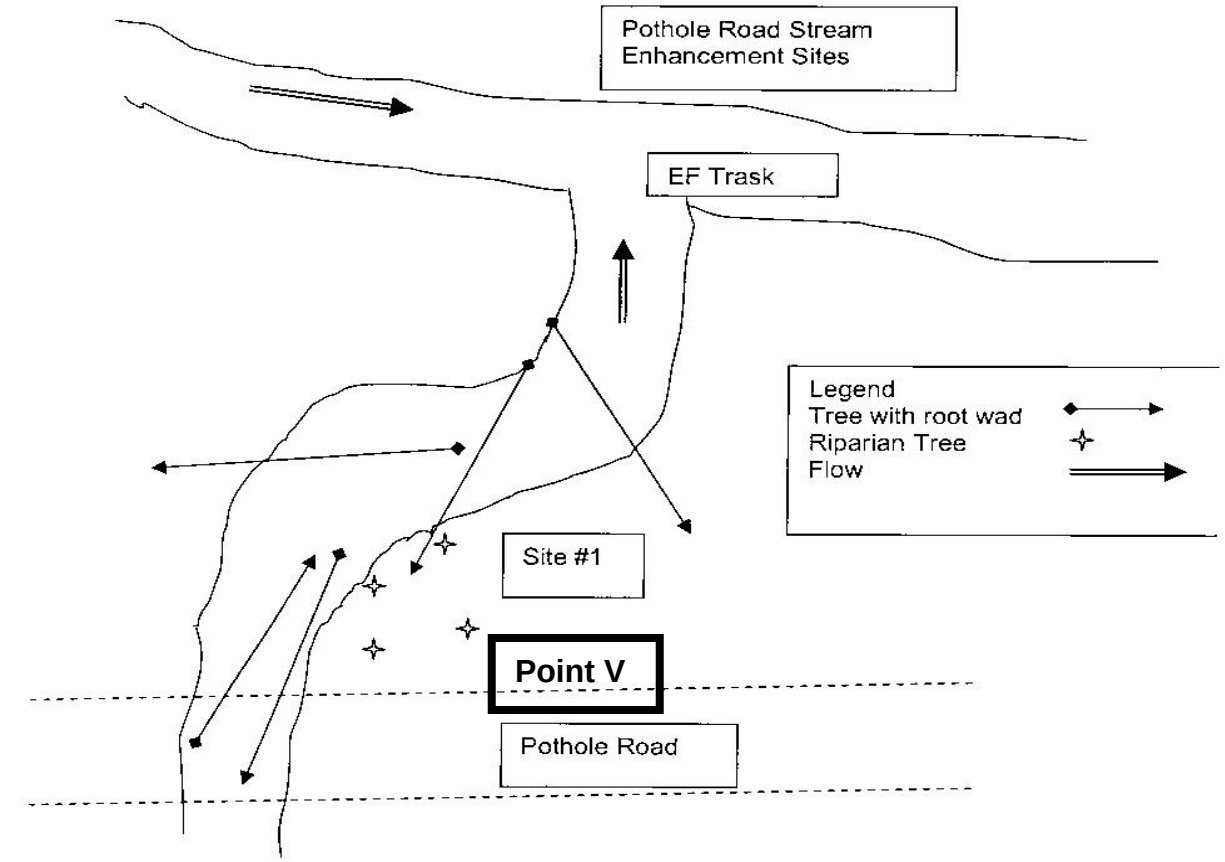
Track-mounted excavator with a 1½ cubic yard bucket.

SPECIFIC INSTRUCTIONS:

Location	Work Description
Site at Point "V"	Materials: Five trees with a DBH of at least 16 inches and at least 40 feet long with attached root wads. The largest diameter portion of five tree tops at least 30 feet long. Starting at downstream end of site, place the small end of the first tree into existing woody debris with root wad against north bank. Place the small end of tow trees into alders on south bank with root wad ends angled upstream. Place two additional trees into area excavated by culvert removal. Place the five tree tops between and under the five previously placed trees.
Site at Point "W"	Materials: Five trees with a DBH of at least 16 inches and at least 40 feet long with attached root wads. The largest diameter portion of five tree tops at least 30 feet long. Place the root wad of the first tree immediately downstream of the existing culvert with the small end angled downstream. Place the root wad end of the second tree over the small end of the first tree with the top wedged between alders on west bank. Place the root wad end of the third tree against the east bank with the top extending onto the west bank. Place two additional trees into area excavated by culvert removal. Place the five tree tops between and under the five previously placed trees.

EXHIBIT P

STREAM ENHANCEMENT INSTRUCTIONS



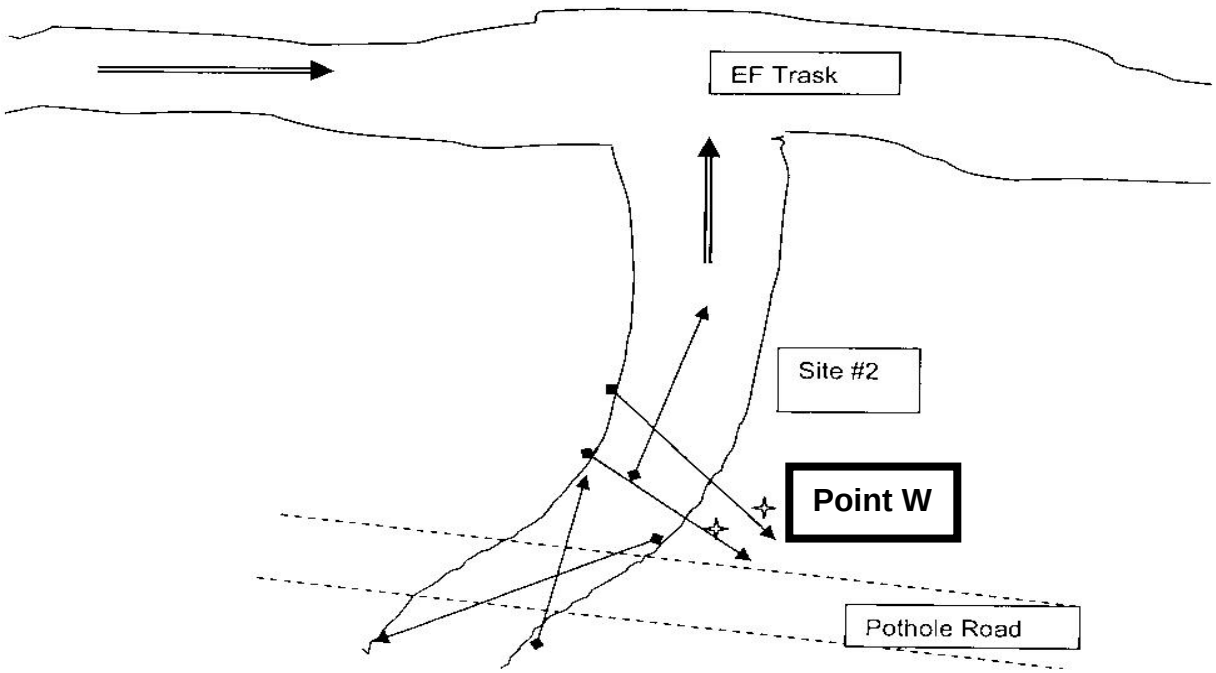
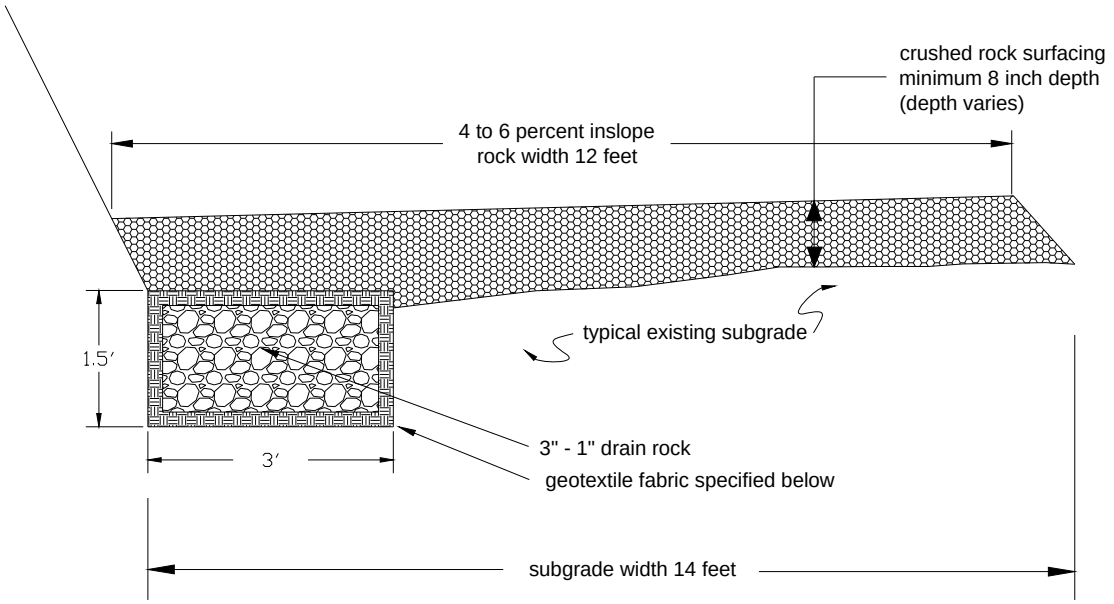


Exhibit " Q "

Typical Road Section With Ground Water Drain

(not to scale)



A - B, Station 47+25 to 51+00

Geotextile Fabric Specifications:

Nonwoven drainage fabric designed for subsurface drain purposes shall meet or exceed the following specifications:

Mechanical Properties	Test Method	Minimum Average Roll Value
Flow Rate	ASTM D 4491	75 gal/min/ft^2
Permeability	ASTM D 4491	0.20 cm/sec
Grab Tensile Strength	ASTM D 4632	250 lb
Mullen Burst Strength	ASTM D 3786	500 psi
Permittivity	ASTM D 4491	1.0 sec^{-1}
Grab Tensile Elongation	ASTM D 4632	50%
UV Resistance (at 500 hours)	ASTM D 4355	70% strength retained
Puncture Strength	ASTM D 4833	155 lbs
Trapezoid Tear Strength	ASTM D 4533	100 lbs
Apparent Opening Size (AOS)	ASTM D 4751	100 (U.S. Sieve)

Physical Properties	Test Method	Minimum Average Roll Value
Weight	ASTM D 5261	10.3 oz/yd^2
Thickness	ASTM D 5199	100 mills

Any longitudinal and/or traverse drainage fabric joints shall be overlapped at least 2 feet.

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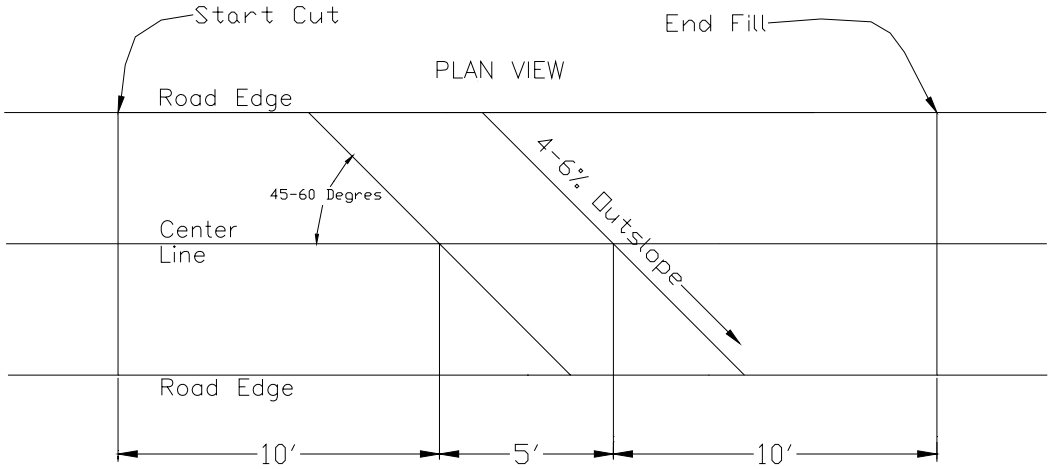
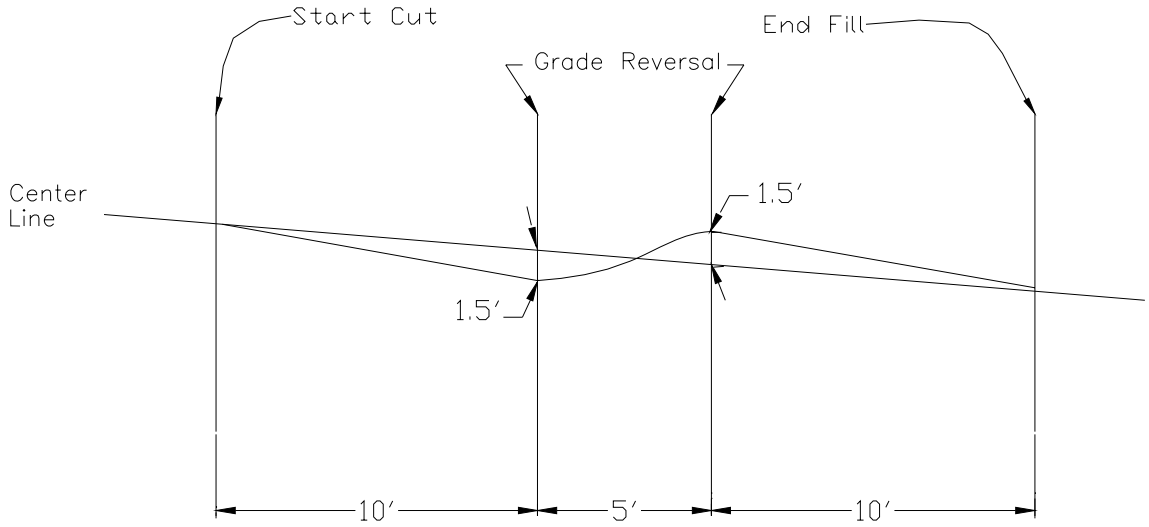
EXHIBIT R

OHV DIP

(Not to Scale)



PROFILE VIEW



PART IV: OTHER INFORMATION

"STEWARDSHIP IN FORESTRY"

Oregon Department of Forestry

WRITTEN PLAN

SALE NAME: **Toll**

PROTECTED WATERS: Unnamed tributaries of Steampot and Barkshanty Creeks.

LOCATION: Portions of Sections 10,14,15,16,21,22,and 23, T2S, R7W, W.M., Tillamook County, Oregon.

Riparian Management Area:
The area measured 100 feet slope distance from the high water mark on the unnamed tributaries of Steampot and Bark Shanty Creeks, both Type F streams.

Protection Measures:

Yarding Systems, Layout, and Stream Protection

When yarding with cables hanging within or across the streams, cables will be pulled out of the Riparian Management Area prior to rigging the next yarding road. Yarding roads will be spaced an average of 150 feet apart where they extend over or through the riparian management area.

Date: March 8, 2005
By: Ed Wallmark

OREGON DEPARTMENT OF FORESTRY
WRITTEN PLAN
FOR PROJECT WORK ROAD SEGMENTS: A to B, O to P, Q to R, S to T, Point U, Point V, and W ONLY

SALE NAME: Toll

PROTECTED WATERS: Type F: East Fork Trask River, Joyce Creek, and Pothole Creek.
Type N: One Unnamed Tributary of Joyce Creek. Two Unnamed Tributaries of East Fork Trask River.

LOCATIONS: Portions of the following: Sections 14 T2S, R8W, W.M., Sections 26, 27, and 28 T2S, R7W, W. M.Tillamook County, Oregon.

ACTIVITIES: Culvert installation and rip-rap placement, road reconstruction, road vacating, placing logs in creeks to enhance streams.

PROTECTION MEASURES:

- No in stream activity will be conducted prior to July 1st or after September 15th without prior approval.
- All necessary measures will be taken to prevent sediment from entering "live" streams, including but not limited to:
  - Machine activity in the stream and disturbance of existing vegetation will be kept to a minimum.
  - Work will be performed only during dry weather periods and low water stream flows.
  - Operations will cease when rain or periods of high stream flows result in a visual increase in turbidity.
  - Stream water will be diverted around the work areas when water quality is likely to be jeopardized.
  - Ditchouts and culvert leadoff ditches will be constructed to direct water with sediment away from streams.
  - Sediment catch basins will be constructed to remove sediment from ditchline water.
  - Fill material will be placed and compacted in 8 inch lifts. Fill slopes will be constructed at a 1 ½:1 fill width to height ratio.
  - Waste material will be end-hauled to stable locations marked in the field.
  - Riprap rock will be placed by a track mount excavator to minimize erosion.
  - Waterbars will be constructed on road vacating so that water is carried across the road and deposited on stable locations.
  - On road vacating all culverts removed from stream channels will have the original stream gradient and orientation shall be reestablished. Channel banks will be constructed to 1 ½:1 side slopes and excavated material will be placed on road prism adjacent to excavated channel.
  - All disturbed soil will be grass seeded, fertilized and mulched to minimize erosion.

PREPARED BY: David L. Stone, Road Specialist
April 28, 2005